THE INDUSTRIAL ARTS INDEX

1953

List of Periodicals Indexed

A M A Archives Ind Hygiene & Occup Med—A.M.A. Archives of Industrial Hygiene and Occupational Medicine
A S M E Trans—Transactions of the American Society of Mechanical Engineers
Acoustical Soc Am J—Journal of the Acoustical Society of America
Adv Agency—Advertising Agency and Advertising and Selling
Weekly news supplement included in monthly subscription, began January 16, 1953
Adv & Sell. See Adv Agency
Advanced Management—Advanced Management
Aero Digest—Aero Digest
Aeronautical Eng R—Aeronautical Engineering Review
Air Transport. See Aviation W
Am Assn of Textile Chemists and Colorists. Proceedings. Published in American Dyestuff Reporter
Am Assn Pet Geologists Bul—Bulletin of the American Association of Petroleum Geologists
Am Bankers Assn J. See Banking
Am Bld—American Builder
Am Bsns—American Business
Am Cer Soc Bul—Bulletin of the American Ceramic Society
Am Cer Soc J—Journal of the American Ceramic Society
Am Chem Soc J—Journal of the American Chemical Society
Am Concrete Inst J—Journal of the American Concrete Institute
Am Dyestuff Rep—American Dyestuff Reporter
Am Gas Assn Mo—American Gas Association Monthly
Am Gas Assn Proc—American Gas Association Proceedings
Am Gas J—American Gas Journal
Am Inst Chem Eng Trans. See Chem Eng Prog
Am Inst E E J. See Elec Eng
Am Inst of Mining and Metallurgical Engineers. See Min Eng
Am J Sci—American Journal of Science
Am Mach—American Machinist
Am Pet Inst Proc—American Petroleum Institute Proceedings
Am Soc C E Proc—Proceedings of the American Society of Civil Engineers
Am Soc for Metals Trans—Transactions of the American Society for Metals
Am Soc Heat & V E J. See Heating-Piping
Am Soc M E J. See Mech Eng
Am Soc M E Trans. See A S M E Trans
Am Soc T M Proc—American Society for Testing Materials. Proceedings
Am Stat Assn J—Journal of the American Statistical Association
Am Water Works Assn J—Journal of the American Water Works Association
Anal Chem—Analytical Chemistry
Ann Am Acad—Annals of the American Academy of Political and Social Science
Arch Forum—Architectural Forum, The Magazine of Building
Through 1952 title appeared as Magazine of Building Architectural Forum
Arch Rec—Architectural Record
Archives Ind Hygiene & Occup Med. See A M A Archives Ind Hygiene & Occup Med
Aslib Proc—Aslib Proceedings
Assn of Sp Lib & Inf Bur Proc. See Aslib Proc
Automobile Eng—Automobile Engineer
Automotive Ind—Automotive Industries
Aviation W—Aviation Week

Bankers Mo—Bankers Monthly
Banking—Banking; Journal of the American Bankers Association
Barron's—Barron's
Bell System Tech J—Bell System Technical Journal
Blast F & Steel Pl—Blast Furnace and Steel Plant
Brick & Clay Rec—Brick and Clay Record
Bsns W—Business Week
Burroughs Clearing House—Burroughs Clearing House
Bus Transportation—Bus Transportation

Can Chem & Process Ind—Canadian Chemistry and Process Industries
Name changed to Canadian Chemical Processing, June, 1951
Can Chem Process—Canadian Chemical Processing
Can Min J—Canadian Mining Journal
Cer Ind—Ceramic Industry
Chem Age (Lond)—The Chemical Age
Chem & Eng N—Chemical and Engineering News
Chem & Ind—Chemistry and Industry
Chem & Met Eng. See Chem Eng
Chem Eng—Chemical Engineering (formerly Chemical and Metallurgical Engineering)
Chem Eng Prog—Chemical Engineering Progress
Chem Ind—Chemical Industries
Name changed to Chemical Industries Week January 20, 1951; changed to Chemical Week June 2, 1951
Chem R—Chemical Reviews
Chem Soc J—Journal of the Chemical Society
Chem W—Chemical Week
Civil Eng—Civil Engineering
Coal Age—Coal Age
Comm & Fin Chr—Commercial & Financial Chronicle
Commun Eng—Communication Engineering
Formerly Radio Communication; name changed January, 1953
Communications—Communications
Title changed to Communication Engineering January, 1953
Comp Air Mag—Compressed Air Magazine
Concrete—Concrete
Constr Methods—Construction Methods and Equipment
Consumers Res Bul—Consumers' Research Bulletin (Not Confidential)
Credit & Fin Management—Credit and Financial Management

Diesel Power—Diesel Power and Diesel Transportation
Dom Eng—Domestic Engineering
Dun's R—Dun's Review
Merged with Modern Industry, August, 1953

East Underw—Eastern Underwriter
Econ Geol—Economic Geology
Economist—Economist
Ed & Pub—Editor & Publisher, the Fourth Estate
Edison Elec Inst Bul—Edison Electric Institute Bulletin
Elec Com—Electrical Communication
Elec Eng—Electrical Engineering
Elec J—Electrical Journal
Formerly Electrician; changed October 17, 1952
Elec R (Lond)—Electrical Review
Elec West—Electrical West
Elec World—Electrical World
Electrician—Electrician
Name changed to Electrical Journal October 17, 1952
Electrochem Soc J—Journal of Electrochemical Society
Electronics—Electronics
Eng & Min J—Engineering and Mining Journal
Eng Educ. See J Eng Educ
Eng N—Engineering News-Record
Engineer—Engineer
Engineering—Engineering
Explosives Eng—The Explosives Engineer

Factory Management—Factory Management and Maintenance
Fed Res Bul—Federal Reserve Bulletin
Food Eng—Food Engineering
Food Ind—Food Industries
Name changed to Food Engineering April 1951
For Comm W—Foreign Commerce Weekly
Fortune—Fortune
Foundry—Foundry
Franklin Inst J—Journal of the Franklin Institute

LIST OF PERIODICALS INDEXED

Gas Age—Gas Age
Gen Elec R—General Electric Review
Geol Soc Bul—Bulletin of the Geological Society of America
Geol Soc Proc—Proceedings volume of Geological Society of America
Glass Ind—Glass Industry

Harvard Bsns R—Harvard Business Review
Heat & Ven—Heating and Ventilating
Heating-Piping—Heating, Piping and Air Conditioning
House & Home—House & Home
Formerly Magazine of Building, House & Home; title changed September, 1952

Ill U Eng Exp Sta Bul—Illinois University Engineering Experiment Station. Bulletin
Ill U Eng Exp Sta Circ—Illinois University Engineering Experiment Station. Circular
Illum Eng—Illuminating Engineering, The Journal of the Illuminating Engineering Society
Ind & Eng Chem—Industrial and Engineering Chemistry
Ind & Eng Chem Anal ed. See Anal Chem
Ind Marketing—Industrial Marketing
Ind Med—Industrial Medicine and Surgery
Ind Stand. See Standardization
India Rubber World—India Rubber World
Inland Ptr—Inland Printer
Inst E E J. See Inst E E Proc
Inst E E Proc—Proceedings of the Institution of Electrical Engineers
Inst Mech Eng Proc—Institution of Mechanical Engineers. Proceedings
Inst Pet J—Journal of the Institute of Petroleum
Inst Radio Eng Proc—Proceedings of the Institute of Radio Engineers
Instruments—Instruments
Int Labour R—International Labour Review
Int Labour R Stat Sup—International Labour Review Statistical Supplement
Iron Age—Iron Age
Iron & Steel Eng—Iron and Steel Engineer
Iron & Steel Inst J—Journal of the Iron and Steel Institute

J Account—Journal of Accountancy
J Aeronautical Sci—Journal of the Aeronautical Sciences
J Ap Chem—Journal of Applied Chemistry
Formerly Society of Chemical Industry Journal; name changed January, 1951
J Ap Phys—Journal of Applied Physics
J Bsns—Journal of Business of the University of Chicago
J Chem Educ—Journal of Chemical Education
J Chem Phys—Journal of Chemical Physics
J Doc—Journal of Documentation
J Eng Educ—Journal of Engineering Education
J Fr Inst. See Franklin Inst J
J Ind Hygiene—The Journal of Industrial Hygiene and Toxicology
Name changed to Archives of Industrial Hygiene and Occupational Medicine January, 1950. Now A.M.A. Archives. q.v.
J Land & Pub Util Econ. See Land Econ
J Marketing—The Journal of Marketing
Publication of the American Marketing Association
J Metals—Journal of Metals
Formerly Metals Technology; name changed January, 1949
J Phys & Colloid Chem—Journal of Physical and Colloid Chemistry
Name changed to Journal of Physical Chemistry beginning January, 1952
J Phys Chem—The Journal of Physical Chemistry
J Res Nat Bur Stand—Journal of Research of the National Bureau of Standards
J Retailing—Journal of Retailing
J Sci Instr—Journal of Scientific Instruments

Land Econ—Land Economics
Life Ins Courant—Life Insurance Courant
Light Metal Age—Light Metal Age

Mach—Machinery
Machine Design—Machine Design
Mag of Bldg Arch Forum. See Arch Forum
Mag of Bldg House & Home. See House & Home
Mag of Wall St—Magazine of Wall Street
Management R—Management Review
Manuf Rec—Manufacturers Record
Marine Eng—Marine Engineering
Materials & Methods—Materials and Methods
Mech Eng—Mechanical Engineering
Metal Finishing—Metal Finishing
Metal Prog—Metal Progress
Metallurgia—Metallurgia, the British Journal of Metals
Metals Tech. See J Metals
Midwest Eng—Midwest Engineer
Mill & Factory—Mill & Factory
Min & Met. See Min Eng
Min Cong J—Mining Congress Journal
Min Eng—Mining Engineering
Mo Labor R—Monthly Labor Review
Mo U Sch Mines & Met Bul tech ser—Bulletin of the University of Missouri, School of Mines and Metallurgy. Technical Series. irr Univ. of Mo. Rolla
Mod Ind—Modern Industry
Merged with Dun's Review, August, 1953
Mod Packaging—Modern Packaging
Mod Plastics—Modern Plastics
Mod Textiles Mag—Modern Textiles Magazine.
Formerly Rayon and Synthetic Textiles; changed September, 1952
Munic Util—Municipal Utilities
Formerly Water and Sanitation; name changed September, 1950

N A C A Bul—N.A.C.A. Bulletin
N Y Pub Lib Bul—New York Public Library Bulletin
Nat City Bank—National City Bank of New York
Nat Pet N—National Petroleum News
Nat Research Council Pub—National Research Council Publication
Nat Safety N—National Safety News
Nat Underw—National Underwriter
Nat Underw (Life ed)—National Underwriter Life Insurance Edition

Oil & Gas J—Oil and Gas Journal
Oil Paint & Drug Rep—Oil Paint and Drug Reporter
Opt Soc Am J—Journal of the Optical Society of America

Paint Oil & Chem R—Paint, Oil and Chemical Review
Paper Ind—Paper Industry
Paper Tr J—Paper Trade Journal
TAPPI section now published as a separate Journal. See Tappi
Personnel—Personnel
Personnel J—Personnel Journal
Pet Eng—Petroleum Engineer
Pet Processing—Petroleum Processing
Pet Refiner—Petroleum Refiner
Phys R—The Physical Review
Power—Power
Power Eng—Power Engineering (formerly Power Generation)
Product Eng—Product Engineering
Ptr Ink—Printers' Ink
Pub Health Rep—Public Health Reports
Pub Roads—Public Roads
Pub Util—Public Utilities Fortnightly
Pub Works—Public Works
Pulp & Pa of Can—Pulp and Paper Magazine of Canada

Q S T—QST

RCA R—RCA Review
R Econ & Stat—Review of Economics & Statistics
R Sci Instr—Review of Scientific Instruments
Radio & Tv N—Radio and Television News
Radio Com—Radio Communication
Name changed to Communication Engineering January, 1953
Radio N. See Radio & Tv N
Rayon—Rayon and Synthetic Textiles
Name changed to Modern Textiles Magazine September, 1952
Ref Shelf—The Reference Shelf
Refrig Eng—Refrigerating Engineering
Review of Economics and Statistics. See R Econ & Stat
Review of Scientific Instruments. See R Sci Instr
Reviews of Modern Physics. See Rs Mod Phys
Roads & Bridges—Roads and Bridges
Name changed to Roads and Construction January, 1950
Roads & Constr—Roads and Construction
Name changed to Roads and Engineering Construction June, 1950

LIST OF PERIODICALS INDEXED

Roads & Eng Constr—Roads and Engineering Construction
Roads & Sts—Roads and Streets
Rock Prod—Rock Products
Rough Notes—Rough Notes
Roy Aeronautical Soc J—Journal of the Royal Aeronautical Society
Rs Mod Phys—Reviews of Modern Physics
Rubber Age—Rubber Age
Ry Age—Railway Age
Regular issue alternates with a News Edition beginning March 2, 1953
Ry Loco & Cars—Railway Locomotives and Cars
Formerly Railway Mechanical and Electrical Engineer; changed January, 1953
Ry Mech & Elec Eng—Railway Mechanical and Electrical Engineer
Name changed to Railway Locomotives and Cars January, 1953

S A E J—S.A.E. Journal
Safety Eng—Safety Engineering
Name changed to Safety Maintenance and Production October, 1950
Safety Maint & Prod—Safety Maintenance and Production
Sales Management—Sales Management
Sci Am—Scientific American
Science—Science
Sewage & Ind Wastes—Sewage and Industrial Wastes
Sewage Works J—Sewage Works Journal
Name changed to Sewage and Industrial Wastes January, 1950
Sheet Metal Worker—Sheet Metal Worker
Soap & San Chem—Soap and Sanitary Chemicals
Soc Chem Ind J—Journal of the Society of Chemical Industry
Name changed to Journal of Applied Chemistry January, 1951
Soc Dyers & Col J—Journal of the Society of Dyers and Colourists
Soc for Advan of Management J. See Advanced Management
Soc Motion Picture & Tv Eng J—Journal of the Society of Motion Picture and Television Engineers
Soc Motion Picture Eng J—Journal of the Society of Motion Picture Engineers
Name changed to Journal of the Society of Motion Picture and Television Engineers January, 1950
Society of Automotive Engineers Journal. See S A E J
Special Lib—Special Libraries
Spectator—The Spectator
Standardization—Standardization
Formerly Industrial Standardization; name changed January, 1949
Steel—Steel
Survey of Cur Bsns—Survey of Current Business

Tappi—Tappi
Tech R—Technology Review
Tele-Tech—Tele-Tech
Tele-Vision Eng. See Tv Eng
Textile Col. See Am Dyestuff Rep
Textile Inst J—Journal of the Textile Institute
Published in two parts: Transactions; Proceedings, Standardisation and Abstracts
Textile Res J—Textile Research Journal
Textile World—Textile World
Tool Eng—Tool Engineer
Transactions of the American Society of Mechanical Engineers. See A S M E Trans
Trusts & Estates—Trusts and Estates. The Fiduciary Journal
Tv Eng—Tele-Vision Engineering
Title changed to Communication Engineering January, 1953

U S Bur Labor Statistics Bul
U S Bur Mines Bul
U S Bur Mines Information Circ
U S Bur Mines Rep of Invest
U S Bur Mines Tech Pa
Now included in Bulletin series
U S Geol S Bul
U S Geol S Professional Pa
U S Nat Advisory Com for Aeronautics—United States National Advisory Committee for Aeronautics. Annual Reports
U S Nat Bur Stand—United States National Bureau of Standards
U S Naval Inst Proc—United States Naval Institute Proceedings
U S Women's Bur Bul—United States. Women's Bureau. Bulletin

Water & San. See Munic Util
Water & Sewage Works—Water & Sewage Works
Weekly Underw—Weekly Underwriter
Welding J—Welding Journal
Western Soc E J. See Midwest Eng
Westinghouse Eng—Westinghouse Engineer
Wireless Eng—Wireless Engineer
World Oil—World Oil

Key to General Abbreviations

+	continued on later pages of the issue
abr	abridged
Ag	August
Ap	April
arch	architect
bibliog	bibliography
comp	compiled or compiler
cond	condensed
cont	continued
D	December
diag	diagram
ed	edited or edition or editor
F	February
i	index
il	illustrations
inc	incorporated
Ja	January
Je	June
Jl	July
Mr	March
My	May
n s	new series
N	November
no	number
O	October
p	page
pl	plate
por	portrait
pseud	pseudonym
pt	part
rev	revised
S	September
sup	supplement
tr	translated or translation or translator
v	volume
yrbk	yearbook

Sample entry: Incriminating stains. C. E. O'Hara and J. W. Osterburg. il Sci Am 188:58-60+ F '53

Explanation: An illustrated article with the title given above will be found in Scientific American, volume 188, pages 58-60 (continued on later pages of the same issue) the February 1953 number

UNIVERSITY OF ILLINOIS
UNDERGRADUATE DIVISION
CHICAGO
LIBRARY

THE
INDUSTRIAL ARTS INDEX

FORTY-FIRST ANNUAL VOLUME

1953

SUBJECT INDEX TO A SELECTED LIST OF ENGINEERING,
TRADE AND BUSINESS PERIODICALS

EDITED BY
LEONE BAKER, MARION E. POTTER,
ROBERTA PURDY

MANAGING EDITOR
CHARLOTTE TRILLING

U. OF I.
LIBRARY

NEW YORK
THE H. W. WILSON COMPANY
1954

PRINTED IN THE UNITED STATES OF AMERICA

Library of Congress Catalog Card No. (14-5408)

This volume has been supplied on a contract which provides that it is not to be sold or given away without the permission of the publishers.

Z
7913
I7
1953
n/c

PREFACE

This volume, completing the forty-first year of the Industrial Arts Index, cumulates the monthly issues published from December 1952 to and including November 1953. No new periodicals were added during this period, and none were discontinued. Changes of name and other changes were noted as they occurred in the announcement pages of the monthly numbers of the Index and in the List of Periodicals Indexed.

The year was saddened by the passing away in June 1953, of Marion E. Potter, the H. W. Wilson Company's first employee and the first editor of the Industrial Arts Index, who continued her activity in the work to which she had contributed so much, until her last illness.

During the year, Elsa Toom, Mary B. Turner and Samuel C. Sager became members of the staff.

We owe an ever increasing debt of gratitude to Doris Dart for her contribution to the chemistry and physics indexing.

L. B.

6/17/54

48745

Magazine Notes

Compiled with the aid of Johanna Kramm and Jessie Van Strander

(Reprinted from monthly issues of 1953)*

Advertising Agency and Advertising and Selling began January 16, 1953, to publish a weekly news supplement, furnished to subscribers without charge. It may be obtained separately at 10 cents a copy.

Advertising Requirements, Production, Promotion, Merchandising, is a new monthly, first issue February 1953, published by Advertising Publications, 200 East Illinois Street, Chicago 11, publishers also of *Industrial Marketing* and *Advertising Age.* It promises to show short cuts and better ways of handling non-media advertising problems. Subscription $3 a year; single copy 50 cents.

Agricultural Research is issued by the Agricultural Research Administration, United States Department of Agriculture, Washington 25, D.C. Publication began with a January-February 1953 issue and will appear bi-monthly till July 1953, when it will become a monthly. It may be obtained from United States Superintendent of Documents $1 a year; single copies 15 cents. It will be added to the Agricultural Index for "occasional" indexing.

American Geriatrics Society, Journal, is the monthly organ of the Society, beginning with a January 1953 issue. The editor is Willard O. Thompson, M.D., 700 North Michigan Avenue, Chicago 11. Published by Williams & Wilkins Company, Mt Royal & Guilford Avenues, Baltimore 2. Subscription $10 a year; foreign 50 cents extra; single copies $1.25.

American Journal of Tropical Medicine and Hygiene, is the official organ of two societies which were merged in 1952: namely, The American Society of Tropical Medicine and the National Malaria Society, combining under the name of American Society of Tropical Medicine and Hygiene. The Journal, a bimonthly, began publication January 1952 as volume 1, number 1, continuing volume 31 of the American Journal of Tropical Medicine. Published by Williams & Wilkins Company, Mt Royal & Guilford Avenues, Baltimore 2. Subscription $10 a year; single numbers $2.

For some years the demand for back numbers of *The Analyst,* monthly journal of the Society of Public Analysts and Other Analytical Chemists, has been continuous and insistent. All volumes of *The Analyst,* except that for 1952 are now out of print, and it is proposed to reprint the whole series from Volume I (1876) to Volume 76 (1951). If support proves adequate it is hoped to start production in the Autumn of 1953, and complete it one year later. A complete set of volumes 1-76 will cost £300. For republishing purposes, the volumes have been divided into groups, some of which, for recent years, will be sold as separate volumes. The financial responsibility for the undertaking will be borne by the publishers, W. Heffer & Sons, Ltd., Petty Cury, Cambridge.

Applied Microbiology, a bimonthly, beginning with a January 1953 issue, is published under the sponsorship of the Society of American Bacteriologists. H. B. Woodruff is editor. Published by Williams and Wilkins Company, Mt Royal and Guilford Avenues, Baltimore 2. Subscription $7.50 a year; single copies $1.50.

Applied Statistics, a Journal of the Royal Statistical Society, edited by Leonard H. C. Tippett, began publication in March 1952. It is published three times a year, intended for the everyday consumers and users of statistics, as well as for the producers. Published by Oliver and Boyd Limited, 98 Great Russell Street, W.C.1. Subscription 25 shillings a year; $4 in the United States; single issue 10 shillings.

Atlante, a Quarterly Review, published by the Hispanic and Lusco-Brazilian Councils, 2 Belgrave Square, London, S.W.1., began with a January 1953 issue. Subscription United Kingdom 15s; Portugal 60 Escudos; Spain 83 Pesetas; United States $2.10.

Atomic Digest, a small size quarterly, began publication with an October 1952 number. Its purpose is the dissemination of information on atomic energy in non-technical language for the layman. It is the organ of the Institute of Atomic Information for the Layman, founded in 1948 by Muriel Howorth. Professor Frederick Soddy, Nobel Laureate, is its president and Albert Einstein its patron. Published by New World Publications, 320 Regent Street, London, W.I. Annual subscription 20 shillings; single copy 5 shillings.

Audio Visual Communication Review is published quarterly, beginning with a Winter, 1953 issue, by Department of Audio-Visual Instruction, National Education Association, 1201 Sixteenth Street, Washington 6. Subscription $4 a year; single copy $1.25.

---

* These notes have been reprinted by request.

Australian & New Zealand Book Guide, a bi-monthly began publication in August, 1953. It is, as its name implies, a trade paper for Australian publishers. Published by Keith Winser, 351 Elizabeth Street, Melbourne. Annual subscription 12s 6d, single copy 2s.

Australian Journal of Botany began publication with a March 1953 number. It is to be a medium for the publication of results of original scientific research in botany with special emphasis on descriptive aspects. The *Journal* will not be issued at set periods, but as the accumulation of suitable material dictates. Published by the Commonwealth Scientific and Industrial Research Organization in collaboration with the Australian National Research Council, 315 Albert Street, East Melbourne C.2, Victoria. Subscription 7s 6d per issue.

Australian Journal of Zoology began with a January, 1953 issue. It is to be a medium for the publication of results of original scientific research in zoology, with special emphasis on the descriptive phases. It is not intended to issue the *Journal* at set periods but as the material becomes available. Published by the Commonwealth Scientific and Industrial Research Organization, 314 Albert Street, East Melbourne, C.2, Victoria. Price 7s 6d a copy.

Auto Age, published bi-monthly, made its first appearance with a February, 1953 number. It is a magazine for the car owner, the sports car enthusiast, the antique car fancier, in short, for all those to whom the automobile is more than just a means of transportation. Published by Lion Books, 270 Park Avenue, New York. Subscription, twelve issues, $3.25; single numbers 25c.

Bihar Academy of Agricultural Sciences, Proceedings, published three times a year, began with a January 1952 issue. Correspondence should be addressed to S. C. Mandal, Secretary of the Academy, Agricultural Research Institute, P.O. Sabour (Bihar), India. Subscription Rs. 10 a year; single copy Rs. 3-8.

Boston University Graduate Journal; a Review of Current Graduate and Research Activities, began with an April 1952 issue. It is published monthly except July and August by Boston University Graduate School, 725 Commonwealth Avenue, Boston 15, Massachusetts.

British Insurance, a Digest for Industry and Commerce is a small size monthly devoted to insurance interests. It began with an October, 1952 number. Published by Insurance Publishing and Printing Company, 5 New Bridge Street, London, E.C.4. Subscription 14 shillings a year; single copies 1 shilling.

The British Journal of Animal Behaviour, a quarterly, beginning with a January 1953 issue, is intended for the publication of papers on all aspects of animal behaviour and cognate subjects. Articles are by specialist workers in behaviour and comparative psychology; by ornithologists, marine biologists, entomologists, physiologists, endocrinologists, agriculturists and veterinarians. Official journal of the Association for the Study of Animal Behaviour. Published by Ballière, Tindall and Cox, 7-8 Henrietta Street, London, W.C.2. Annual subscription 27s 6d or $5.

British Journal of Educational Studies began with a November 1952 issue and will for the present be published twice yearly, May and November. Published by Faber and Faber, 24 Russell Square, London, W.C.1. Subscription 16s 8d ($2.35); single issues 10 shillings.

Bulletin of the American Anthropological Association replaces the former *News Bulletin,* the last number of which was volume seven, number one January, 1953. Volume one of the *Bulletin* will be published in three numbers during 1953, beginning with an April number. Published by the American Anthropological Association, Box 71, Andover, Massachusetts. Free to members.

Caravan Times, a pocket size monthly began publication with a July 1953 number. It is devoted to those who enjoy living or vacationing in automobile trailers—called caravans in England. The articles include personal experiences in trailer—or caravan—living, advice and guidance on various aspects, clothing, camping sites, laws governing such vehicles, etc. Published at 25 Trinity Street, Colchester, Essex. Annual subscription $6 in the United States.

Cargo Handling, a monthly, made its initial appearance with a May, 1953 number. Its pages are devoted to articles on shipping and the various aspects of cargo handling. Published by Terminus Publications, 331 Gray's Inn Road, London, W.C.1. Annual subscription 30s; single copy 2s 6d.

Carrousel, a small-size illustrated magazine, is intended "to make it easier for English boys and girls and men and women to understand France and to learn to speak the French language naturally and without fear." It is published by Meiklejohn and Son, 15 Bedford Street, London, W.C.2. Its junior counterpart is *La Revue des Jeunes.* Published six times a year in September, November, January, March, May and June. One shilling a single issue; United States and Canada 25 cents.

Ceramics Monthly began publication in January, 1953. It is devoted exclusively to the ceramic art and craft field; for the ceramic art teacher, student and hobbyist, the studio operator, the artware manufacturer and supplier Published by Ceramics Monthly, 3494½ N. High Street, Columbus 14, Ohio. Annual subscription $4.

Challenge Magazine; Economics in Action, a small sized monthly, beginning with an October 1952 issue, is published by the Institute of Economic Affairs, New York University. Address all correspondence to Challenge Magazine, 32 Broadway, New York 4. Subscription $2 a year; single copy 25 cents.

Chanticleer, to publish poems, short stories, and critical essays, particularly from new writers, began with an Autumn 1952 issue. Published by Chanticleer, 38 Lupus Street, London, S.W.1. Subscription 10s 6d a year; single copies 2s 6d.

Circulation Research; Journal of the American Heart Association; Carl J. Wiggers, editor; began publication with a January 1953 issue. Published bi-monthly by Grune & Stratton, 381 Fourth Avenue, New York 16. Subscription $7.50; single copies $2.

Colby Scholar, quarterly journal published by the faculty of Colby College, began with an October 1952 issue. Its primary function is to serve and implement classroom teaching in this college. Address Mr. Millard Trott, Manager, Colby College Bookstore, Waterville, Maine.

The Collector, a bi-monthly, enters the periodical field with a July-August 1953 number. Its appeal is to collectors of antiques, books, art and oddities. Published by Kenneth Graham Publications, 6 Duke Street, St. James's, London, S.W. 1. Annual subscription 12s; single copy 2s.

Collector and Dealer is a small size monthly beginning with a January 1953 issue. Published at 97 Moore Park Road, London, S.W.6. Subscription 7s 6d or $1.50 a year; single copy 9d or 15 cents.

College and Research Libraries, in its October number, contains the first part of its annual list of New Periodicals. Published by the American Library Association, 50 East Huron Street, Chicago 11.

Colorado Quarterly began with a Summer 1952 issue. Articles, short stories and poems in the first issue are by members of Colorado University staff, Colorado University graduates and native Coloradans; but, states the editorial foreword, "does not mean that contributors to the *Quarterly* will be drawn on from members of our own faculty—the names of others who find the pages of a university magazine a congenial outlet will also be present." Published by the University of Colorado, Boulder. Subscription $3 a year; $5 for two years; single copies 75 cents.

Conservation, the Journal of the International Institute for the Conservation of Museum Objects, began publication with an October, 1952 number. Two numbers will be issued every twelve months or so. Published by Thomas Nelson and Sons, Parkside Works, Edinburgh 9. Free to Fellows of the I.I.C., 14s a copy to Associates, 21s a copy to the general public.

Consulting Engineer, a new magazine published specifically for consulting engineers, began regularly monthly publication with a March 1953 issue, following a pilot issue published in December, 1952. Published by Industry and Power Publishing Company, 420 Main Street, St Joseph, Michigan. Subscription $5 a year; single copy 50 cents.

Cuba Bibliotecologica, the quarterly journal of the Asociacion Nacional de Profesionales de Biblioteca, began publication with a January-March 1953 issue. Address is Pocito N°452, Habana, Cuba. Subscription $1.50 a year; single issues 50 cents.

Current Translations is a new publication of the Harmon Institute, the first number of which, published as volume one, number three of *World Research* is dated March, 1953. Its purpose is to bring together and publish translations on record at the Institute as a means of making known current output in this field with the least possible delay. Published by Harmon Institute, 5705-38th Avenue, Hyattsville, Maryland.

Democratic Digest, newly launched small size monthly, beginning with an August 1953 number, is the official publication of the Democratic National Committee. Published by the Democratic Digest Corporation, 1001 Connecticut Avenue, N.W., Washington 6. Subscription, one year $3; two years $5.

Deutscher Export, foreign trade monthly of the German Democratic Republic began publication with an April 1953 number. The pages of the first number are largely given over to the description of German products available for export; machine tools and other industrial equipment, cameras, office appliances, paper products, sporting goods, furs, textiles, ceramics, etc. Published by Chamber of Foreign Trade of the German Democratic Republic, Unter den Linden 40, Berlin NW 7. Subscription $4 a year; single copies 40 cents.

Diabetes, The Journal of the American Diabetes Association, is published bimonthly, beginning with a January-February 1952 issue, by the Association, 11 West 42d Street, New York 36. Subscription $9 a year in United States, U.S. Possessions, Canada and the Pan-American Union; elsewhere $10; single copies $2.

Diogenes is the quarterly publication of the International Council for Philosophy and Humanistic Studies. The first issue is dated February 1953. It is published in French, Spanish, German, and English editions. The Anglo-American edition is published for the Council by Intercultural Publications, Inc., 655 Madison

Avenue, New York 21. It is distributed in Great Britain and the British Empire by Hamish Hamilton, Ltd., 90 Great Russell Street, London, W.C.1., and in the United States by Paragon Mailing Service, 347 Adams Street, Brooklyn 1, New York. Subscription (4 numbers) $2.75; 75 cents a copy. The American edition is published quarterly in December, March, June and September. The translation and publication of the Anglo-American edition has been made possible thru a grant from The Ford Foundation to Intercultural Publications, Inc.

Dun & Bradstreet announces that the merger of the magazine *Modern Industry* with *Dun's Review* will begin with the August 1953 issue. The merged magazine will be titled *Dun's Review and Modern Industry.*

Economic Abstracts, a semi-monthly review of abstracts on economics, finance, trade and industry, management and labor, began publication with a June 1, 1953 number. Prepared by the Library of Economic Information Service (Ministry of Economic Affairs) with the collaboration of the Library of the Netherlands School of Economics and the Library of the Ministry of Social Affairs. Published by Martinus Nijhoff, 9 Lange Voorhout, The Hague. Annual subscription Gld. 27.50.

Economic and Technical Monthly, Japan, began with a June 1952 number, devoted to articles describing Japanese technical processes and equipment mainly of chemical interest. Published by the Society for Economic Cooperation in Asia, c/o Tokyo Chamber of Commerce and Industry, 3-chome, Marunouchi, Chiyodaku, Tokyo, Japan. Annual subscription $5.

Electrician changes its name to *Electrical Journal* with the October 17, 1953 issue.

Essex Countryside, an illustrated quarterly, began with an Autumn 1952 issue. Published by Letchworth Printers Ltd, Norton Way North, Letchworth, England. Subscription 5 shillings.

Estate Planners Quarterly began with a March 1952 issue and is published by Farnsworth Publishing Company, 11 West Prospect Avenue, Mount Vernon, New York. Subscription $10 a year.

Family Shopper, a bimonthly, is distributed free of charge to charge account customers of franchised furniture stores thruout the country. It is published by Family Shopper, 611 Third Avenue, New York 16. Subscription $2 a year; single issue 35 cents.

Fantastic Worlds, processed quarterly, is edited by Edward W. Ludwig. Published at 1942 Telegraph Avenue, Stockton, California. Subscription $1 a year; single issue 25 cents.

Die Farbe, a new German scientific journal, has begun publication of papers on the different problems of color science, such as color vision and its testing, color matching, light and color, evaluation of fastness, color photography, television and reproduction, color psychology and color conditioning, color standardization work and color nomenclature and terminology. In addition to original papers, *Die Farbe* publishes reviews of other articles, book reviews, and news of events, persons and organizations concerned with color problems. Short abstracts in German and English at the beginning of each article. For further information, write to Verlag für Angewandte Wissenschaften GmbH, Wiesbaden, Rheinstrasse 79, Germany.

Four Winds, a small size quarterly is dedicated to creative literary effort. Its first issue is dated Summer 1952. Published at 3 Liberty Street, Gloucester, Massachusetts. Subscription $3; single copies 75 cents.

Frozen Food Age, a monthly, began with an August 1952 issue. Its subtitle is "the all-industry magazine for packers and marketers." Published by the Frozen Food Age Publishing Company, 220 East 42d Street, New York 17. Subscription $5 a year; 65 cents a copy.

Fuel Economist, a fortnightly, "intended primarily to encourage efficient fuel usage based on practical considerations," began with a December 12, 1952 issue. The second issue is dated January 23, 1953. Published by Arrow Press Limited, 157 Hagden Lane, Watford, Hertfordshire, England. Subscription 25 shillings a year.

General Motors Corporation has just published the first issue of a bi-monthly technical magazine to keep educators and engineering college students advised of its latest technical developments. The new publication, titled the *GM Engineering Journal,* is edited by Arvid F. Jouppi, formerly of Sperry Gyroscope Company and the Associated Press's Detroit Bureau.

Home Guard and Civil Defense Review, a monthly publication, states its object as that of providing a magazine that will report the outstanding activities, and the personalities behind them, of all branches of the British home guard and civilian defense organizations. It began publication September 1952. Published by Pennon Publications, Ltd., Montagu House, 20 Hand Court, Holborn, London, W.C.1. Annual subscription 12 shillings. Single copy 1 shilling.

Improving College and University Teaching began publication in February 1953, and is to be issued three times yearly, in February, May and November. As the name implies, it is dedicated to the improvement of teaching in colleges and universities, featuring contributions on teaching, written by teachers. Published by the Graduate School of Oregon State College, Corvallis, Oregon. Annual subscription $1.50.

Impulso, a small size monthly is printed in Spanish for circulation primarily in the Spanish speaking countries of South America, for the encouragement of Anglo-Latin American trade Its first number was dated March, 1952. Published by the Latin American Industrial Press, Ltd, 9 Grosvenor Street, London, W.1. Subscription £1. 10s or $4.25 a year

Industrial Photography, a quarterly, began publication with a Fall, 1952 number. Its field embraces all application of photography in industry, sales, commerce, business, industrial research, etc. Published by Photography in Business, 1114 First Avenue, New York 21. Annual subscription $4.

Ireland of the Welcomes is the official journal of Fógra Fáilte, the National Tourist Publicity Organisation for Ireland. Published bimonthly by Fógra Fáilte, 93 Pembroke Road, Dublin. Subscription 10 shillings a year; United States $1.50; single issue 1s 6d; United States 25 cents.

Irish Journal of Hygiene and Sanitation began publication November 1952 as *Public Health and Sanitation.* It is published monthly by the Parkside Press, 43 Parkgate Street, Dublin. Subscription 10s/6d a year; single copy one shilling.

Journal of Agricultural and Food Chemistry, an illustrated biweekly of the American Chemical Society, made its appearance April 1, 1953 to provide a common meeting ground for all the scientists and technologists concerned with food, clothing, shelter, and industrial products from agriculture. Published by the American Chemical Society, 1155 Sixteenth Street, N.W, Washington 6, D.C. Subscription $6 a year; single copies 50 cents.

Journal of Clinical and Experimental Hypnosis, a quarterly research publication of the Society for Clinical and Experimental Hypnosis, began with a January, 1953 number. "There are many reasons and purposes for having a journal devoted solely to research in scientific hypnosis. In part, it is expressive of the present trend to perceive hypnosis not only as a legitimate scientific phenomena but also to recognize its value in studying problems within the behavior sciences. To this extent, the quality and significance of contemporary hypnosis work and research has reached a level of productivity probably never before obtained. Scientific hypnosis today is capable of standing on its own objective merits in relation to criteria of methodology, significance, usefulness, productivity and the capacity for permitting workers in the behavior sciences to move toward a more holistic frame of reference." Published by the Woodrow Press, 227 East 45th Street, New York 17. Annual subscription $6; single copies $2.

Journal of Clinical Nutrition, a bimonthly, is an "international journal, reporting the practical application of our newer knowledge of nutrition." It began with September-October 1952 issue. Editor-in-chief is S. O. Waife. Published by the Nutritional Press, 1631 Walnut Street, Allentown 1, Pennsylvania. Subscription $6 a year.

Journal of Communication, now in its second volume, is published in May and November by the National Society for the Study of Communication. Subscription, including membership in the Society, $3.50 a year; single copies $1; library orders, $2 a year. Remittances for memberships should be made to Joseph H. Baccus, Executive Secretary, Department of Speech, Redlands University, Redlands, California. Correspondence in regard to manuscripts for the Journal and orders for single issues or library subscriptions, should be directed to Thomas R. Lewis, Department of Speech, Florida State University, Tallahassee.

Journal of East Asiatic Studies, a quarterly, began with an October, 1951 issue. Published by University of Manila, 105 Alejandro VI, Manila, Philippines. Subscription $6 a year; single copies $2.

Journal of Histochemistry and Cytochemistry; Official Journal of the Histochemical Society, a bimonthly, began with a January 1953 issue. Published by Williams and Wilkins Company, Mt. Royal and Guilford Avenues, Baltimore 2. Subscription $7 a year; single copies $1.50.

Journal of Industrial Economics will be issued three times a year; the first number is Autumn 1952. A year's issue will total 240 pages. Subscription one guinea or $3.40, post free. Single issue 10s. or $1.40. Remittance should be sent to Messrs. Basil Blackwell (& Mott Ltd.), Broad Street, Oxford, England.

Journal of Photographic Science which started publication with a January-February 1953 number, is Section B of the *Photographic Journal,* official publication of the Royal Photographic Society of Great Britain and the Photographic Alliance. Its contents are devoted to the scientific and technical aspects of photography. Published bi-monthly by the Royal Photographic Society of Great Britain, 16 Princes Gate, Kensington, London, S.W. 7. Annual subscription 25s.

Journal of Rational Mechanics and Analysis, edited by T. Y. Thomas and C. Truesdell, with the assistance of D. Gilbarg, V. Hlavatý and E. Hopf, is published by the Graduate Institute for Applied Mathematics, Indiana University, Bloomington, Indiana. The prospectus announces that there will be about one volume a year, containing approximately 600 pages. Subscription price will be $18 a volume but a reduced rate of $6 is offered to teachers and individuals engaged in research.

Journal of Research in Music Education, a publication of the Music Educators National Conference begins with a Spring, 1953 issue. The second issue of the *Journal* will be released in the Fall of 1953 and at least two issues are planned for 1954. Published by the Music Educators National Conference, 64 East Jackson Boulevard, Chicago 4. Single copy $2. Orders accepted for the two 1953 issues at $3.75.

Journal of the Albert Einstein Medical Center is intended to make available to the medical profession the results of the scientific experience and research of the Center, which is a consolidation of the Jewish, Mt. Sinai and Northern Liberties Hospitals. It is published quarterly at York and Tabor Roads, Philadelphia 41, Pennsylvania.

Journal of the American Geriatrics Society, a monthly, began publication in January, 1953. Its articles are devoted to medical and psychiatric aspects of aging. Published by Williams and Wilkins Company, Mount Royal and Guilford Avenues, Baltimore 2. Annual subscription $10 ($7.50 to members of the American Geriatrics Society); single copies $1.25.

Journal of the American Psychoanalytic Association, a quarterly, began publication with a January 1953 number. It will publish the proceedings of the American Psychoanalytic Association and will also include well selected psychoanalytic papers. Published by the International Universities Press, 227 West 13th Street, New York 11. Subscription $8 a year to non-members.

Journal of the Audio Engineering Society, a quarterly, began publication with a January, 1953 issue. It is to be a medium for the publication of papers on broadcast audio equipment, recording and reproduction of sound and music and related subjects. The first number carries the thirty papers presented at the annual meeting of the Audio Engineering Society, held in October, 1952. Published by the Audio Engineering Society, P.O. Box 12, Old Chelsea Station, New York 11. Free to members. To non-members the annual subscription is $8.

Journal of the Mechanics and Physics of Solids, a quarterly, edited by W. M. Baldwin, Junior, and Rodney Hill, began publication in October 1952. Published by Pergamon Press, 2-5 Studio Place, Kinnerton Street, London, S.W.1. Subscription £4, 10s. ($12.60). Distributed in United States by Lange, Maxwell and Springer, 122 East 55th Street, New York 22.

Journal of the Operations Research Society of America, a quarterly, the purpose of which is to make available the steadily increasing amount of material on the methods and techniques of this new science. Published by Operations Research Society of America, 6410 Connecticut Avenue, Chevy Chase, Maryland. Annual subscription $6; single number $1.50.

Korean Survey (Volume 1, Number 1, September, 1952) is a complimentary service, published monthly by Korean Pacific Press, 1828 Jefferson Place, N.W., Washington 6.

Laboratory Investigation, a Journal of Technical Methods and Pathology, is the official organ of the International Association of Medical Museums. It is issued quarterly in March, June, September and December. Publication office is 1217 Cherry Street, Philadelphia 7. Subscription $8 a year in the United States, its possessions and countries of the Pan American Union; $8.50 elsewhere; single copies $2.50.

Looking Ahead, a four to eight page monthly (processed), is a new service of the National Planning Association to its members, beginning with a February 10, 1953 issue. It aims to be a guide to policy planning and research. Published monthly except July and August by the National Planning Association, 1606 New Hampshire Ave., N.W., Washington 9.

McGill Law Journal began publication in autumn, 1952. It is the Journal of the Law Undergraduate Society of McGill University, 3544 Peel Street, Montreal. "It is devoted to discussion of all legal problems, public or private, with emphasis on issues peculiar to the Province of Quebec." Subscription $4 a year.

Magazine Week, the Business Paper of Periodical Publishing, began with a January 10 issue. It is tabloid format. It covers all phases of the magazine business: general magazine management, advertising, circulation, editing, promotion, subscription fulfillment, distribution and transportation. Published at White Deer Plaza, Box 772, Sparta, New Jersey. Subscription $5 a year; single copy 15 cents.

Maryland State Medical Journal, the official monthly publication of the Medical and Chirurgical Faculty of the State of Maryland, began with a January 1952 issue. Secretary's Office is 1211 Cathedral Street, Baltimore. Subscription $5 a year; single issues fifty cents.

The Metal Showman, a monthly publication, the purpose of which is to promote and develop interest in the products and services of the Metal Show exhibitors, is in its first year. Published by American Society for Metals, 7301 Euclid Avenue, Cleveland 3.

Modern and Traditional Lamps combines the Lamps section of *Lighting and Lamps* and *Modern Lamps.* Published monthly by Krieger Publications, 114 East 32d Street, New York 16. Subscription $3 a year; single copies 60 cents; Canada $3.50; foreign $4.

Monthly Labor Review has been provided with a "Subject Index of Volume 52-71, January 1941 to December 1950." It is published as Bulletin 1080 of United States Bureau of Labor Statistics. This volume is based on the six months indexes which were prepared in large part by Jeannett M. Watson and Mary G. Macomber, of the Office of Publications. Elizabeth L. Black, assistant editor of the Monthly Labor Review, had final responsibility for the content and form of this ten-year index. It is for sale by Superintendent of Documents, Washington 25, for $1.

Montjoie is described on its cover as "an independent quarterly journal about France and French culture." Its first issue is dated May, 1953. Its pages contain critical articles and essays on French literature and the other arts, educational matters and book reviews. Both French and English articles are included. Published by Montjoie, 10 Highgate West Hill, London, N.6. Annual subscription 10 shillings; single copies 3 shillings.

Mothers' Bulletin, a small size quarterly, is published by Mothers Research Group of the Theosophical Society in America, Ojai, California. Subscription $1 a year.

N.Y.L.A. Bulletin is the bi-monthly journal of the New York Library Association, 74 Chapel Street, Albany 7, New York. It began publication in February, 1953. It is edited by Karl Brown, 255 West 4th Street, New York 14.

Names, Journal of the American Name Society, a quarterly, beginning March 1953, is devoted to the dissemination of the results of study and research in the etymology, origin, meaning, and application of all classes of names—geographical, personal, scientific, commercial, popular. Published by the American Name Society, University of California Press, Berkeley 4, California.

National Association of Opticians, Journal, new series, a quarterly, began publication in April 1952, at 8 Victoria Street, Liverpool 2, England. Subscription 12 shillings a year.

National Petroleum News and *Petroleum Processing* were purchased by McGraw-Hill Publishing Company from Warren C. Platt as of April 1, 1953.

New Products of Britain, a monthly publication, is sponsored by Overseas Trade News. Distribution guaranteed to leading wholesalers and buyers for department stores and chain stores thruout the world as well as to resident buyers for both overseas and home markets in the principal buying houses of Britain. Subscription £1 10s a year; overseas £1 15s. Published at 30 Fleet Street, London, E.C.4.

The *New York Journal of Commerce* will change its three-year-old monthly International Edition to a weekly newspaper, beginning with the issue of October 11.

Organizations' Bureau of Information, 45 East 65th Street, New York 21, publishes a monthly *News Bulletin* to give the members of the Conference Group of United States National Organizations on the United Nations an opportunity to exchange information on their activities and publications. It carries items of general interest from the United Nations, items from the United States Department of State, and items from the United States Mission to the United Nations. Processed, $1 a year.

North Carolina Audio-Visualist, is a small-size quarterly, the official organ of the Audio-Visual Department of the North Carolina Education Association. The editor is Kenneth M. McIntyre, Bureau of Visual Education, University of North Carolina, Chapel Hill, North Carolina. Subscription $1 a year.

The North East Industrialist, a new monthly publication devotes its pages to the chief industries of the North East coast of England. Published by Cliffe, Stobart Company (Great Britain) Ltd., Pandon Buildings, Melbourne Street, Newcastle-on-Tyne, 1. Annual subscription 24 shillings.

Obstetrics and Gynecology is the official monthly journal of the American Academy of Obstetrics and Gynecology. "It aims also to report new developments in the field, promptly, accurately, and completely; to offer an additional publishing outlet to investigators both in our specialty and in allied fields." January 1951 is first issue. Published by Paul B. Hoeber, Medical Book Department of Harper & Brothers, 49 East 33d Street, New York 16, Subscription $12 a year; single copies $1.50.

Paris Review, published quarterly by La Table Ronde, 8 rue Garancière, Paris 6ᵉ, began with a February 1953 issue. It is a literary magazine in the English language, distributed in the United States by H. L. Humes, 2 Columbus Circle, New York 19. Subscription $4 for six issues; 75 cents a copy.

Past & Present announces itself as a journal of scientific history and its first issue is dated February, 1952. It will appear, for the time being, twice a year and will publish articles, reviews and shorter communications on topics of interest to historians. Published by John Morris, c.o. Titus Wilson, 28 Highgate, Kendal, Westmorland, England. Subscription 15 shillings a year; single copy 9 shillings.

Perspecta, the Yale Architectural Journal, is published at intervals by students in the Schools of Architecture and Design, Yale University, New Haven. Norman Carver is editor. Subscription for three issues $3.75; single issue $1.50.

Perspectives USA is published quarterly by Paragon Mailing Service, 347 Adams Street, Brooklyn 1, New York. It is published also in British, French, German, and Italian editions.

A list of distributors in every country is available on request. Distribution to bookstores is handled by The Viking Press, 18 East 48th Street, New York 17 and to newsstands by Selected Outlets, P.O. Box 761, Hoboken, New Jersey. Subscription $5 a year; single copies $1.50.

The Philatelic Folio, a quarterly beginning March, 1952, is published by L. F. Livingston, 2435 North Charles Street, Baltimore 18. Subscription $2 a year.

Political Studies began publication with a February 1953 issue. It is the journal of the Political Studies Association of the United Kingdom, which was founded in 1950. *Political Studies* will be published three times a year, in February, June and October, free to members. Annual subscription to non-members, 27s 6d or $3.95. Single copies 10s 6d or $1.50. Published by Geoffrey Cumberlege, Oxford University Press, Amen House, London, E.C.4

Practical Crafts, a small size monthly, made its first appearance with a July, 1953 number. It is a magazine for the craftsman and the hobbyist filled with practical how-to-do articles. Published by Schohen Publications, 74 Holland Park, London, W. 11. Annual subscription 14 shillings, $2 in the United States. Single copy 1 shilling.

Proceedings of the American Association for Cancer Research volume one, number one, April, 1953, contains abstracts of papers presented at the forty-fourth annual meeting, held in Chicago, April 9-11, 1953. Originally issued annually as the regular April issue of *Cancer Research.* Present plans call for publication separately each year in lieu of the April issue of *Cancer Research,* but plans are not definite. Published by the University of Chicago Press. Free to subscribers to *Cancer Research.* To others $1.25.

Proceedings of the Glasgow Mathematical Association began publication in January, 1952. The *Proceedings* are published in parts and issued twice a year, in January and in July. Four parts will complete a volume. Published by Oliver and Boyd, Tweeddale Court, Edinburgh, 1. Subscription for each volume 40 shillings or $6. Single parts 10 shillings and 6 pence or $1.50.

Productionwise, a small size monthly, beginning publication with a February, 1953 issue, is intended as a "companion piece to Graphic Arts Production Yearbook" published by Colton Press, 468 4th Avenue, New York 16. Subscription $3 a year; single copy 35 cents.

Railway Age, with a March 2 issue, inaugurated a new publishing policy under which all issues will, as heretofore, present the week's railway news; but the longer "feature" articles will be concentrated in alternate weeks, instead of being spread out thru all fifty-two issues.

Reader's Almanac, a monthly, processed, is issued by the Library of the Y M H A and Y W H A, 92nd Street and Lexington Avenue, New York 28. An important anniversary of an event or person, associated with each day, has a brief comment and in the case of authors a quotation may be included—a sonnet from Edna St Vincent Millay for instance.

Research Quarterly, volume 23, December, 1952, part 2, is a ten year Cumulative Index (1930-39) of the *Quarterly,* prepared by the Index Committee of the Research Council of the American Association for Health, Physical Education and Recreation, 1201 Sixteenth Street, N.W., Washington 6, D.C. Single copies $1.25.

Revista de la Facultad de Ingeniería Agronomica is the official organ of the faculty of agricultural engineering of Universidad Central de Venezuela. It began with a June 1952 issue. Published by Facultad de Ingeniería Agronomica, Apartado 4579, Maracay, Venezuela.

The Rose, Quarterly Journal for All Rose Lovers, began with an Autumn 1952 issue. It is a small size illustrated magazine, published by the Whitefriars Press, 26 Bloomsbury Way, London, W.C.1. Subscription 8s 6d; United States and Canada $1.50; single issue 2 shillings.

Saint Detective Magazine, an anthology of the best in crime stories, old and new is published bi-monthly by King-Size Publications, 471 Park Avenue, New York City. Subscription 6 issues $2.50; single copies 50 cents

Salesman's Digest, a pocket size monthly, begins with an August 1953 number. A magazine for professional salesmen, its make-up follows the usual digest style, with original short articles, quotations, condensations from magazine articles and books, all on the theme of salesmanship. Published by Salesman's Digest, 21 W. Huron Street, Chicago 10. Annual subscription $5; single copy 50 cents.

Science and Film, a small size quarterly journal of the International Scientific Film Association began publication with a March 1952 issue. It is devoted to the application of moving pictures in medicine, industry, popularization of science, education, research, etc. Published by Science and Film, c/o Scientific Film Association, 164 Shaftesbury Avenue, London, W.C.2. Annual subscription 12s 6d.

Science-Fiction Plus, an illustrated monthly, with subtitle, "preview of the future," began with a March, 1953 issue. Published by Gernsback Publications, 25 West Broadway, New York 7. Subscription $4 a year; single copies 35 cents.

Scottish Journal, a monthly, began publication September, 1952. Its purpose is to provide information on the economic, political and cultural life and international relations of Scotland. Its appeal is to the modern Scot, the millions of people of Scottish descent and the friends of Scotland everywhere who love things Scottish. Published by William MacLellan, 240 Hope Street, Glasgow, C.2. Annual subscription 13s 6d; monthly 1 shilling.

Simulation Council Newsletter is published monthly and is of interest to persons working with electronic computers, particularly in the field of simulation. "The Simulation Council was formed in November, 1952 by representatives of 13 organizations in search of a way to keep informed concerning improved techniques and equipment for simulation, and to minimize duplication of effort in the solution of common problems." Published by Simulation Council, Box 731, Camarillo, California. Subscription $6 a year.

Sociological Abstracts, a quarterly, edited by Leo P. Chall, began publication with a November, 1952 number. About thirty-five sociological journals are covered. Book abstracts and an extensive book review bibliography are included. Published by Leo P. Chall, 218 East 12th Street, New York 3. Annual subscription for mimeographed copies $2 a year plus 30 cents postage. Single copies 50 cents plus 8 cents postage.

Sociological Bulletin, the official journal of the Indian Sociological Society, began in 1952. It is published by John Vincent Ferreira, Office of the Indian Sociological Society, Jamnalal Bajaj Nagar, Kurla Road, Andheri, India.

Studies in Bibliography and Booklore is devoted to research in the field of Jewish bibliography. Volume one, number one is dated June 1953. Published by the Library of Hebrew Union College-Jewish Institute of Religion, 3101 Clifton Avenue, Cincinnati 20. Subscription price $1 a copy.

Technical Valuation, published by American Society of Appraisers, began with a February 1952 issue. New York address is 119 West 57th Street, New York 19. Office of Vice president and editor, Joseph A. Gallagher, is 1937 Hillhurst Avenue, Los Angeles 27. Subscription 3 numbers a year $5; single number $1.75.

Texture; a Review of Textile Practices and Values, a quarterly, began with a June 1953 number, and concerns itself with cultural as well as with scientific and industrial expressions of the textile industry. Edited and published by Percy Ripley, Fairfax, Wilderness Road, Chislehurst, Kent, England. Annual subscription 24s or $4

Theology Digest, dealing with Catholic theology, will be published three times a year, Winter, Spring and Autumn, by St Mary's College, School of Divinity, St Louis University, 1015 Central, Kansas City 5, Missouri. Subscription $2; single copies 75 cents.

Time and Motion Study, Incorporating *Time Study Engineer*, is the small-size monthly journal of the Institute of Industrial Technicians. Published by Sawell Publications, 4 Ludgate Circus, London, E.C.4. Subscription 30 shillings a year; single copies 2s 6d.

Trace, comprising annual directories of (English language) poetry and small literary magazines appearing thruout the world, is produced by Villiers Publications, 290 West End Lane, London, N.W.6, England. Published in February, June, and October. Edited at Villiers' Hollywood office by James Boyer May, Box 1068, Hollywood 28, California. Subscription (5 issues) 3s 9d; United States $1.

The University Film Journal, a small size periodical, began with a Spring 1953 number and is devoted to appraisal and discussion of films, still and moving, used for educational purposes. It is to have three issues a year. Published by British Universities Film Council. For subscriptions, address Business Editor C. J. Duncan, Department of Photography, Medical School, King's College, Newcastle upon Tyne, England. Annual subscription 5s; single number 1s 6d.

Vital Notes on Medical Periodicals, volume 1, number 1, October 1952, typewritten, 36 pages, is a list of births, deaths, marriages and name changes of medical periodicals from 1950. It is a project of the Medical Library Association, Periodicals and Serial Publications Committee, Lora-Frances Davis, Chairman, Florida State Board of Health Library, P.O. Box 210, Jacksonville 1.

Vocational Guidance Quarterly is published in September, December, February, and May, by the National Vocational Guidance Association, 1534 O Street, N.W., Washington 5. Editor is Max F. Baer. Subscription $2 a year. Outside United States additional 50 cents; single copies 50 cents.

W A S U News-Service, a processed monthly, is issued by the Editorial Board of the West African Students Union, 13 Chelsea Embankment, London, S.W.3. It began with an August 1952 issue. 6 shillings a copy.

Water and Sewage Works, according to an announcement in the August number of that magazine, has been purchased from the Gillette Publishing Company by E. Scranton Gillette, and will henceforth be published by him under the name of the Scranton Publishing Company, 185 North Wabash Avenue, Chicago 1.

World Freight is an illustrated monthly devoted to freight and transportation. It began with a December 1952 issue. Published by World Freight, 185 Regent Street, London, W.1. Subscription 20 shillings a year.

World Science Review, a small size monthly, is a review of topics of scientific interest, written in non-technical language for the benefit of those who have little or no knowledge of scientific terminology. Published at Alderbourne Manor, Gerrards Cross, Bucks, England. Annual subscription 33 shillings a year in United Kingdom; in North America $6.

Young Mechanic, a quarterly, began with a Winter 1952 issue. Published by Ziff-Davis Publishing Company, 366 Madison Avenue, New York 17. 10 cents a copy.

List of Periodicals Indexed

A M A Archives Ind Hygiene & Occup Med—A.M.A. Archives of Industrial Hygiene and Occupational Medicine. $8; single numbers $1. m American Medical Association, 535 N Dearborn St, Chicago 10 (2v:Ja,Jl v7-8;i-s)

Published as Journal of Industrial Hygiene and Toxicology until January 1950; as Archives of Industrial Hygiene and Occupational Medicine, January 1950-October 1950

A S M E Trans—Transactions of the American Society of Mechanical Engineers. $12; single numbers $1.50. m (except Mr, Je, S, D) American Society of Mechanical Engineers, 29 W 39th St, New York 18 (1v:Ja v75;i-l)

$6 to members and affiliates

Acoustical Soc Am J—Journal of the Acoustical Society of America. $12; single numbers $2.50. bi-m American Institute of Physics, 57 E 55th St, New York 22 (1v:Ja v25;i-s)

Adv Agency—Advertising Agency and Advertising and Selling. $4; single numbers 50c. m Moore Pub. Co, Inc, 48 W 38th St, New York 18 (1v:Ja v46;i-l)

Weekly news supplement included in monthly subscription, began January 16, 1953

Adv & Sell. See Adv Agency

Advanced Management—Advanced Management $8; single numbers $1. m Society for the Advancement of Management, Inc, 74 Fifth Av, New York 11 (1v:Ja v18;i-s)

Formerly Society for the Advancement of Management Journal, a bi-monthly

Aero Digest—Aero Digest. $3; single numbers 50c. m Aeronautical Digest Pub. Corp, 515 Madison Av, New York 22 (2v:Ja,Jl v66-67; i-s)

Annual Directory issue March $1

Aeronautical Eng R—Aeronautical Engineering Review. $3; single numbers 50c. m Institute of the Aeronautical Sciences, Inc, 2 E 64th St, New York 21 (1v:Ja v12;i-s)

Formerly Journal of the Aeronautical Sciences, Aeronautical Review Section

Air Transport. See Aviation W

Am Assn of Textile Chemists and Colorists. Proceedings. Published in American Dyestuff Reporter

Am Assn Pet Geologists Bul—Bulletin of the American Association of Petroleum Geologists. $18; single numbers $2. (F, Mr, Je each $3) m American Association of Petroleum Geologists, Inc, Box 979, Tulsa 1, Oklahoma (1v:Ja v37;i-s)

Am Bankers Assn J. See Banking

Am Bld—American Builder. $3.50; single numbers 75c. m Simmons-Boardman Pub. Corp, 30 Church St, New York 7 (1v:Ja v75;i-none)

Am Bsns—American Business. $4. single numbers 35c. m Dartnell Publications, Inc, 4660 Ravenswood Av, Chicago 40 (1v:Ja v23;i-none)

Am Cer Soc Bul—Bulletin of the American Ceramic Society. $6; single numbers $1.50. m American Ceramic Society, 2525 N High St, Columbus 2, Ohio (1v:Ja v32;i-s)

Am Cer Soc J—Journal of the American Ceramic Society; Ceramic Abstracts. $14; single numbers $1.50. m American Ceramic Society, 2525 N High St, Columbus 2, Ohio (1v:Ja v36;i-s)

Am Chem Soc J—Journal of the American Chemical Society. $14; single numbers $1. s-m American Chemical Society, 1155 16th St, N.W, Washington 6, D.C. (1v:Ja v75;i-s)

Changed from monthly to semi-monthly January, 1952

Am Concrete Inst J—Journal of the American Concrete Institute. $12; single numbers $1.50. m (except Jl and Ag) American Concrete Institute, 18263 W. McNichols Road, Detroit 19, Mich. (1v:S v25;i-s)

Am Dyestuff Rep—American Dyestuff Reporter Incorporating Textile Colorist and Converter. $5. bi-w Howes Pub. Co, 44 E 23d St, New York 10 (1v:Ja v42;i-s)

Includes Proceedings of American association of textile chemists and colorists

Am Gas Assn Mo—American Gas Association Monthly. $3. m (bi-m Jl-Ag) American Gas Assn, Inc, 420 Lexington Av, New York 17 (1v:Ja v35;i-s)

Am Gas Assn Proc—American Gas Association Proceedings. Annual convention proceedings. American Gas Association, Inc, 420 Lexington Av, New York (34th annual convention, 1952)

Am Gas J—American Gas Journal. $3; single numbers 50c. m American Gas Journal, Inc, 205 E 42d St, New York 17 (2v:Ja,Jl v178-179; i-l)

Two issues in October. The second issue is American Gas Handbook

Am Inst Chem Eng Trans. See Chem Eng Prog

Am Inst E E J. See Elec Eng

Am Inst of Mining and Metallurgical Engineers. See Min Eng

Am J Sci—American Journal of Science. $8; single numbers 75c. m American Journal of Science, Sterling Tower, Yale University, New Haven, Conn. (1v:Ja v251;i-s)

Bowen Volume, 2 parts, free to Journal subscribers as of October 1, 1952. Price to others $6

Am Mach—American Machinist. $5; single numbers 50c. bi-w McGraw-Hill Pub. Co, Inc, 330 W 42d St, New York 36 (1v:Ja v97;i-r)

40th Annual Review number, January 19, price $1

Extra number published in Mid-November $2

Am Pet Inst Proc—American Petroleum Institute Proceedings. 50 W 50th St, New York

Published annually in 5 sections

Am Soc C E Proc—Proceedings of American Society of Civil Engineers; single numbers 50c. m American Society of Civil Engineers, 33 W 39th St, New York 18 (1v:Ja v79;i-none)

Publication as monthly journal discontinued with the January 1950 issue. Published thereafter [volume 76] as separate papers. Annual subscription: Nonmembers $10; Libraries $5

Am Soc for Metals Trans—Transactions of the American Society for Metals. v44 '52 American Society for Metals, 7301 Euclid Av, Cleveland 3, Ohio

Volume 44 indexed in 1954

Am Soc Heat & V E J. See Heating-Piping

Am Soc M E J. See Mech Eng

Am Soc M E Trans. See A S M E Trans

Am Soc T M Proc—American Society for Testing Materials. Proceedings. annual American Society for Testing Materials, 1916 Race St, Philadelphia 3 (1v:50)

Am Stat Assn J—Journal of the American Statistical Association. $8. q American Statistical Association, 1108 16th St, N.W, Washington 6, D.C. (1v:Mr v48;i-l)

Publications of societies, institutions, etc. are listed under the names of the organizations. i-l=index sent loose; i-r=index sent upon request; i-s=index stitched in volume.

Month abbreviation followed by volume number=Month in which new volume begins and the number of the new volume beginning in 1953.

Am Water Works Assn J—Journal of the American Water Works Association. $7; single numbers 85c, to members 50c. m American Water Works Assn, 521 Fifth Av, New York 17 (1v:Ja v45;i-s)

Anal Chem—Analytical Chemistry. $4; single numbers 50c. m American Chemical Society, 1155 16th St, N.W, Washington 6, D.C. (1v:Ja v25;i-s)

Formerly Industrial and Engineering Chemistry Analytical Edition

Combination with Industrial and Engineering Chemistry $8

Ann Am Acad—Annals of the American Academy of Political and Social Science. $5; single numbers $2. bi-m American Academy of Political and Social Science, 3937 Chestnut St, Philadelphia 4 (6v:Ja,Mr,My,Jl,S,N v285-290; i-s)

Published also in cloth $10; single numbers $2.50

Arch Forum—Architectural Forum. The Magazine of Building. $7; single numbers $2. m Time, Inc, 9 Rockefeller Plaza, New York 20 (2v:Ja,Jl v98-99;i-r)

Through 1952 title appeared as Magazine of Building Architectural Forum

Arch Rec—Architectural Record. $5.50; single numbers $2. m F. W. Dodge Corp, 119 W 40th St, New York 18 (2v:Ja,Jl v113-114;i-s)

Archives Ind Hygiene & Occup Med. See A M A Archives Ind Hygiene & Occup Med

Aslib Proc—Aslib Proceedings. 40s; single numbers 10s 6d. q Aslib, 4 Palace Gate, London, W. 8 (1v:F v5;i-l)

Assn of Sp Lib & Inf Bur Proc. See Aslib Proc

Automobile Eng—The Automobile Engineer. £2 11s 6d; U.S. $8; Canada $7.50; single numbers 3s 6d. m Iliffe & Sons, Ltd, Dorset House, Stamford St, London, S.E. 1 (1v:Ja v43;i-r; cost 6d)

Annual extra number published in November

Automotive Ind—Automotive Industries. $2; single numbers 25c. s-m Chilton Company, Chestnut & 56th Sts, Philadelphia 39 (2v:Ja, Jl v108-109;i-none)

Statistical issue, March 15, price $1

Aviation W—Aviation Week. $6; single numbers 50c. w McGraw-Hill Pub. Co, Inc, 330 W 42d St, New York 36 (2v:Ja,Jl v58-59; i-none)

Bankers Mo—Bankers Monthly. $5; single numbers 50c. m Rand McNally & Co, P.O. Box 7600, Chicago 80 (1v:Ja v70;i-none)

Formerly Rand McNally Bankers Monthly

Banking—Banking; Journal of the American Bankers Association. $4.50; single numbers 50c. m American Bankers Association, 12 E 36th St, New York 16 (1v:Jl v46;i-s)

Formerly American Bankers Association Journal

Barron's—Barron's. $15; single numbers 35c. w Barron's Pub. Co. Inc, 40 New St, New York 4 (1v:Ja v33;i-s)

Bell System Tech J—Bell System Technical Journal. $3; single numbers 75c. bi-m American Telephone and Telegraph Co, 195 Broadway, New York 7 (1v:Ja v32;i-l)

Changed from quarterly to bi-monthly January, 1952

Blast F & Steel Pl—Blast Furnace and Steel Plant. $2.50; single numbers 50c. January and August numbers $1 ea. m Steel Publications, Inc, 4 Smithfield St, Pittsburgh 30, Pa. (1v: Ja v41;i-s)

Brick & Clay Rec—Brick & Clay Record. $5; single numbers 50c. m Industrial Publications, Inc, 5 So. Wabash Av, Chicago 3 (2v: Ja,Jl v122-123;i-s)

Bsns W—Business Week. $6; single numbers 25c. w McGraw-Hill Pub. Co, Inc, 330 W 42d St, New York 36 (without v no;i-none)

Burroughs Clearing House—Burroughs Clearing House. m Burroughs Adding Machine Co, Second Blvd. and Burroughs Av, Detroit 32, Mich. (1v:O v38;i-none)

Bus Transportation—Bus Transportation. $3; single numbers 50c. m McGraw-Hill Pub. Co, Inc, 330 W 42d St, New York 36 (1v:Ja v32; i-r)

CAA J—Civil Aeronautics Administration Journal; issued by the Civil Aeronautics Administration. 75c. m Superintendent of Documents, Washington 25, D.C. (1v:Ja v13;i-s)

Formerly Civil Aeronautics Journal; name changed with April 15, 1945 number

Discontinued with the July 20, 1952 issue

Can Chem & Process Ind—Canadian Chemistry and Process Industries. $5; single numbers 50c. m Westman Publications, Ltd, 137 Wellington St, West, Toronto, Ont. 1 (1v:Ja v35; i-r)

Formerly Canadian Chemistry and Metallurgy

Name changed to Canadian Chemical Processing, June, 1951

Can Chem Process—Canadian Chemical Processing. $4; $5 in U.S; single numbers 50c. m Westman Publications, Ltd, 195 Bartley Drive, Toronto, Ont. 1 (1v:Ja v37;i-s)

Two numbers published in June

Can Min J—Canadian Mining Journal. $5; $7.50 in U.S; single numbers 50c; $1 in U.S. m National Business Publications, Ltd, Gardenvale, Que. (1v:Ja v74;i-s)

Cer Ind—Ceramic Industry. $4; single numbers 50c. m Industrial Publications, Inc, 5 So. Wabash Av, Chicago 3 (2v:Ja,Jl v60-61;i-s)

Price of January issue $2

Chem Age (Lond)—The Chemical Age. 42s; single numbers 1s 3d. w Benn Brothers, Ltd, Bouverie House, 154 Fleet St, London, E.C. 4 (2v:Ja,Jl v68-69;i-r)

Chem & Eng N—Chemical and Engineering News. $6; single numbers 15c. w American Chemical Society, 1155 16th St, N.W, Washington 6, D.C. (1v:Ja v31;i-s)

Chem & Ind—Chemistry & Industry. £4. single numbers 4s. w Society of Chemical Industry, 56 Victoria St, London, S.W. 1 (without v no;i-s)

Chem & Met Eng. See Chem Eng

Chem Eng—Chemical Engineering. $3; single numbers $1. m McGraw-Hill Pub. Co, Inc, 330 W 42d St, New York 36 (1v:Ja v60;i-s)

Chem Eng Prog—Chemical Engineering Progress. $6; single numbers 75c. m American Institute of Chemical Engineers, 120 E 41st St, New York 17 (1v:Ja v49;i-s)

Chem Ind—Chemical Industries. $5; single numbers 60c. m Maclean-Hunter Pub. Corp, 309 W Jackson Blvd, Chicago 6; 522 5th Av, New York 18 (2v:Ja,Jl v66-67;i-r)

Name changed to Chemical Industries Week January 20, 1951; changed to Chemical Week, June 2, 1951

Chem R—Chemical Reviews. $12 ($10 to members of American Chemical Society) bi-m Williams & Wilkins Co, Mount Royal and Guilford Avs, Baltimore 2, Md. (2v:F,Ag v52-53; i-s)

Chem Soc J—Journal of the Chemical Society. £10. m The Chemical Society, Burlington House, Piccadilly, London, W. 1 (without v no;i-l)

Chem W—Chemical Week. $5; single numbers 35c. w McGraw-Hill Pub. Co, Inc, 330 W 42d St, New York 36 (2v:Ja,Jl v72-73;i-r)

Published as Chemical Industries until December 1950; as Chemical Industries Week, January 20, 1951-May 26, 1951

November 1, 1952, part 2 is Buyers' Guide issue

Civil Eng—Civil Engineering, the Magazine of Engineered Construction. $5; single numbers 50c. m American Society of Civil Engineers, 33 W 39th St, New York 18 (1v:Ja v23;i-r)

Coal Age—Coal Age. $3; single numbers 50c. m McGraw-Hill Pub. Co, Inc, 330 W 42d St, New York 36 (1v:Ja v58;i-r)

Comm & Fin Chr—Commercial and Financial Chronicle. $48; single numbers Monday ed. $1, Thursday ed. 40c. s-w William B. Dana Co, 25 Park Pl, New York 7 (2v:Ja,Jl v177-178;i-l)

Annual Review and Outlook issue, January 22 in two sections $1.50

Commun Eng—Communication Engineering. $3; single numbers 65c. bi-m The Publishing House, Great Barrington, Massachusetts (1v: Ja v13;i-s)
Formerly Radio Communication; name changed January, 1953

Communications—Communications. $2; single numbers 25c. m Bryan Davis Pub. Co, Inc, 52 Vanderbilt Av, New York 17 (1v:Ja v29; i-s)
Name changed to Tele-Vision Engineering, January, 1950
Merged with Radio Communication, May, 1952
Title changed to Communication Engineering January, 1953

Comp Air Mag—Compressed Air Magazine. $3; single numbers 35c. m Compressed Air Magazine Co, Phillipsburg, New Jersey (1v:Ja v58; i-r)

Concrete—Concrete. $4; single numbers 50c. m Concrete Pub. Corp, Daily News Plaza, 400 W Madison St, Chicago 6 (1v:Ja v61;i-s)

Constr Methods—Construction Methods and Equipment. $3; single numbers 50c. m McGraw-Hill Pub. Co, Inc, 330 W 42d St, New York 36 (1v:Ja v35;i-none)
Equipment Maintenance Directory issue July $1

Consumers Res Bul—Consumers' Research Bulletin (Not Confidential). $3; single numbers 30c. m Consumers' Research, Inc, Washington, New Jersey (2v:Ja,Jl v31-32;i-s)

Credit & Fin Management—Credit and Financial Management. $3; single numbers 25c. m National Association of Credit Men, 229 4th Av, New York 3 (1v:Ja v55;i-s)

Diesel Power—Diesel Power and Diesel Transportation. $3; single numbers 35c. m Diesel Publications, Inc, 192 Lexington Av, New York 16 (1v:Ja v31;i-s)

Dom Eng—Domestic Engineering. $5; single numbers 50c. m Domestic Engineering Co, 1801 Prairie Av, Chicago 16 (2v:Ja,Jl v181-182;i-none)

Dun's R—Dun's Review. $4; single numbers 35c. m Dun & Bradstreet, Inc, 99 Church St, New York 8 (1v:Ja v61;i-r)
Formerly Dun & Bradstreet Monthly Review
Merged with Modern Industry, August, 1953

East Underw—Eastern Underwriter. $5; single numbers 25c. w Eastern Underwriter Co, 93 Nassau St, New York 38 (1v:Ja v54;i-none)

Econ Geol—Economic Geology and the Bulletin of the Society of Economic Geologists. $6.50; single numbers $1.25. s-q Economic Geology Pub. Co, M. M. Leighton, Business Mgr, Urbana, Ill. (1v:Ja v48;i-s)

Economist—Economist. £3; single numbers 1s. w Economist Newspaper, Ltd, 22 Ryder St, St James's, London, S.W. 1 (4v:Ja,Ap,Jl,O v166-169;i-l)

Ed & Pub—Editor & Publisher, the Fourth Estate. $6.50; single numbers 20c. w Editor & Publisher, 1475 Broadway, New York 36 (1v: Ja v86;i-r) Bound in two volumes a year; cost $2.50 ea or $5 a year
Additional issue published in January; International Year Book Number, included in annual subscription

Edison Elec Inst Bul—Edison Electric Institute Bulletin. $2. m Edison Electric Institute, 420 Lexington Av, New York 17 (1v:Ja v21;i-l)

Elec Com—Electrical Communication. $2; single numbers 50c. q International Telephone and Telegraph Corp, 67 Broad St, New York 4 (1v:Mr v30;i-s)

Elec Eng—Electrical Engineering $12; single numbers $1.50. m American Institute of Electrical Engineers, 500 5th Av, New York 36 (1v:Ja v72;i-l)

Elec J—Electrical Journal. 50s; single numbers 1s. w Benn Bros, Ltd, Bouverie House, 154 Fleet St, London, E.C. 4 (2v:Ja,Jl v150-151; i-l)
Formerly Electrician; changed to Electrical Journal October 17, 1952

Elec R (Lond)—Electrical Review. £3 6d; U.S. and Canada $11; single numbers 1s. w Electrical Review, Dorset House, Stamford St, London, S.E. 1 (2v:Ja,Jl v152-153;i-r)

Elec West—Electrical West. $2; single numbers 25c. m McGraw-Hill Co, of California, 68 Post St, San Francisco 4, Calif. (2v:Ja,Jl v110-111;i-r)

Elec World—Electrical World. $6; single numbers 35c. w McGraw-Hill Pub. Co, Inc, 330 W 42d St, New York 36 (2v:Ja,Jl v139-140;i-r)
Regular issue alternates with a News Edition

Electrician—Electrician. 50s; single numbers 1s. w Benn Bros, Ltd, Bouverie House, 154 Fleet St, London, E.C. 4 (2v:Ja,Jl v148-149; i-l)
Name changed to Electrical Journal October 17, 1952

Electrochem Soc J—Journal of Electrochemical Society. $15; single numbers $1.50 m Electrochemical Society, 216 W. 102d St, New York 25 (1v:Ja v100;i-s)

Electronics—Electronics. $6; single numbers 75c. m McGraw-Hill Pub. Co, Inc, 330 W 42d St, New York 36 (1v:Ja v26;i-s)
Price of Annual Buyers' Guide issue $2

Eng & Min J—Engineering and Mining Journal. $3; single numbers 50c. m McGraw-Hill Pub. Co, Inc, 330 W 42d St, New York 36 (1v:Ja v154;i-s)
Mining's Greatest Era issue July $1

Eng Educ. See J Eng Educ

Eng N—Engineering News-Record $6; single numbers 35c. w McGraw-Hill Pub. Co, Inc, 330 W 42d St, New York 36 (2v:Ja,Jl v150-151;i-r)

Engineer—Engineer. £5 10s; Canadian subs £5 5s; single numbers 2s. w Engineer, 28, Essex St, Strand, London, W.C. 2 (2v:Ja,Jl v195-196;i-l)

Engineering—Engineering. £5 10s; Canadian subs £5 5s; single numbers 2s 3d. w Engineering, Ltd, 35 and 36 Bedford St, Strand, London, W.C. 2 (2v:Ja,Jl v175-176;i-r)

Explosives Eng—The Explosives Engineer, $1.50; single numbers 30c. bi-m Explosives Engineer, 913 Delaware Trust Bldg, Wilmington 99, Delaware (1v:Ja v31;i-l)

Factory Management—Factory Management and Maintenance. $3; single numbers 50c. m McGraw-Hill Pub. Co, Inc, 330 W 42d St, New York 36 (1v:Ja v111;i-r)

Fed Res Bul—Federal Reserve Bulletin. $2; single numbers 20c (to non-members). m Board of Governors of the Federal Reserve System, Constitution Av at 20th St, Washington 25, D.C. (1v:Ja v39;i-s)

Food Eng—Food Engineering. $2; single numbers 35c. m McGraw-Hill Pub. Co, Inc, 330 W 42d St, New York 36 (1v:Ja v25;i-s)

Food Ind—Food Industries. $2; single numbers 35c. m McGraw-Hill Pub. Co, Inc, 330 W 42d St, New York 18 (1v:Ja v23;i-s)
Name changed to Food Engineering April, 1951

For Comm W—Foreign Commerce Weekly. Issued by U.S. Department of Commerce. $3.50; single numbers 10c. w Superintendent of Documents, Washington 25, D.C. (2v:Ja,Jl v49-50;i-none)

Fortune—Fortune. $10; single numbers $1.25. m Time, Inc, Kittredge Building, Denver 2 (2v;Ja,Jl v47-48;i-r)

Foundry—Foundry. $5; single numbers 75c. m Penton Pub. Co, Penton Bldg, Cleveland 13, O. (1v:Ja v81;i-r)

Franklin Inst J—Journal of the Franklin Institute. $10; single numbers $1. m Franklin Institute, Benjamin Franklin Parkway at 20th St, Philadelphia 3 (2v:Ja,Jl v255-256;i-s)

Gas Age—Gas Age combining Natural Gas, Gas Age, Gas Record. $4; single numbers 50c. bi-w Moore Pub. Co, Inc. 48 W 38th St, New York 18 (2v:Ja,Jl v111-112;i-r)

Gen Elec R—General Electric Review. bi-m General Electric Co. 1 River Road, Schenectady 5, N.Y. (1v:Ja v56;i-l)
Changed from monthly to bimonthly January, 1952

Geol Soc Bul—Bulletin of the Geological Society of America. $15. m Geological Society of America, H. R. Aldrich, sec, 419 W 117th St, New York 27 (1v:Ja v64;i-s)

Geol Soc Proc—Proceedings volume of Geological Society of America for 1952. Geological Society of America, H. R. Aldrich, sec, 419 W 117th St, New York 27

Glass Ind—Glass Industry. $4; single numbers 40c. m Ogden Pub. Co, 55 W 42d St, New York 36 (1v:Ja v34;i-s)

Harvard Bsns R—Harvard Business Review. $8; single numbers $2. bi-m Harvard Business Review, Gallatin House, Soldiers Field, Boston 63 (1v:Ja v31;i-s)

Heat & Ven—Heating and Ventilating. $3; single numbers 30c. m Industrial Press, 148 Lafayette St, New York 13 (1v:Ja v50;i-none)

Heating-Piping—Heating, Piping and Air Conditioning. $3; single numbers 35c. m Keeney Pub. Co, 6 N Michigan Av, Chicago 2 (1v:Ja v25;i-r)

Includes American Society of Heating and Ventilating Engineers Journal section

Directory and Show number January, $1.50

House & Home—House & Home. $6; single numbers $1. m Time, Inc, 9 Rockefeller Plaza, New York 20 (2v:Ja,Jl v3-4;i-r)

Formerly Magazine of Building, House & Home; title changed September, 1952

Ill U Eng Exp Sta Bul—Illinois University Engineering Experiment Station. Bulletin. irr Univ. of Ill, Urbana

Ill U Eng Exp Sta Circ—Illinois University Engineering Experiment Station. Circular. irr Univ. of Ill, Urbana

Illum Eng—Illuminating Engineering, The Journal of the Illuminating Engineering Society. $12; single numbers $1. m Illuminating Engineering Society, 1860 Broadway, New York 23 (1v:Ja v48;i-l)

Ind & Eng Chem—Industrial and Engineering Chemistry. $5; single numbers 75c. m American Chemical Society, 1155 16th St, N.W, Washington 6, D.C. (1v:Ja v45;i-s)

Ind & Eng Chem Anal ed. See Anal Chem

Ind Marketing—Industrial Marketing. $3; single numbers 25c. m (s-m during Je) Advertising Publications, Inc, 200 East Illinois St, Chicago 11 (1v:Ja v38;i-s)

June 25th issue not sold separately

Ind Med—Industrial Medicine and Surgery. $6; single numbers 75c. m Industrial Medicine Pub. Co, 605 North Michigan Av, Chicago 11 (1v:Ja v22;i-s)

Ind Stand. See Standardization

India Rubber World—India Rubber World. $5; single numbers 50c. m Bill Brothers Publishing Corporation, 386 4th Av, New York 16 (2v:Ap,O v128-129;i-s)

Inland Ptr—Inland Printer. $5; single numbers 50c. m Maclean-Hunter Pub. Corp, 309 W Jackson Blvd, Chicago 6; 522 5th Av, New York 36 (2v:Ap,O v131-132;i-none)

Inst E E J. See Inst E E Proc

Inst E E Proc—Proceedings of the Institution of Electrical Engineers. £3 13s 6d; single numbers pt 1 6s; pt 2 7s 6d; pt 3 7s 6d. The Institution, Savoy Place, Victoria Embankment, London, W.C. 2 (1v:Ja v100;i-l)

Published in 3 parts: pt 1, General, bi-m (Ja); pt 2, Power Engineering, bi-m (F); pt 3, Radio and Communication Engineering, bi-m (Ja)

Inst Mech Eng J & Proc—Institution of Mechanical Engineers Journal and Proceedings. Institution of Mechanical Engineers, Storey's Gate, St. James's Park, London, S.W. 1

Published separately beginning 1950. Proceedings quarterly; Journal monthly (except July and August) Beginning April, 1952 the Journal will be distributed only to members

Inst Mech Eng Proc—Institution of Mechanical Engineers Proceedings. q Institution of Mechanical Engineers, Storey's Gate, St. James's Park, London, S.W. 1 (1v:v167;i-s)

Inst Pet J—Journal of the Institute of Petroleum. £4 14s 6d; single numbers 10s. m Institute of Petroleum, 26 Portland Pl, London, W. 1 (1v:Ja v39;i-s)

Formerly Journal of the Institution of Petroleum Technologists

Inst Radio Eng Proc—Proceedings of the Institute of Radio Engineers. $18; single numbers $2.25. m Institute of Radio Engineers, Inc, 1 East 79th St, New York 21 (1v:Ja v41;i-s)

Instruments—Instruments, the Magazine of Measurement, Inspection, Testing, Control. $4. m Instruments Pub. Co, Inc, 845 Ridge Av, Pittsburgh 12 (1v:Ja v26;i-s)

Int Labour R—International Labour Review. $6; single numbers 60c. m International Labour Office, 1262 New Hampshire Av, N.W, Washington 6, D.C. (2v:Ja,Jl v67-68;i-s)

Int Labour R Stat Sup—International Labour Review Statistical Supplement

Published separately as a monthly supplement beginning July, 1952

Iron Age—Iron Age. $8; single numbers 35c. w Chilton Co, Inc, Chestnut & 56th Sts, Philadelphia 39; 100 E 42d St, New York 17 (2v:Ja,Jl v171-172;i-r)

Iron & Steel Eng—Iron and Steel Engineer. $7.50; single numbers $1.50. m Association of Iron and Steel Engineers, 1010 Empire Bldg, Pittsburgh 22 (1v:Ja v30;i-s)

Iron & Steel Inst J—Journal of the Iron and Steel Institute, £5; single numbers 10s. m Iron and Steel Institute, 4, Grosvenor Gardens, London, S.W. 1 (3v:Ja,My,S v173-175; i-r)

J Account—Journal of Accountancy. $7; single numbers 75c. m American Institute Pub. Co, Inc, 270 Madison Av, New York 16 (2v:Ja,Jl v95-96;i-s)

J Aeronautical Sci—Journal of the Aeronautical Sciences. $12; single numbers $1.50. m Institute of the Aeronautical Sciences, Inc, 2 E 64th St, New York 21 (1v:Ja v20;i-s)

Review section now published as Aeronautical Engineering Review

J Ap Chem—Journal of Applied Chemistry. £2 10s; single numbers 5s. m Society of Chemical Industry, 56 Victoria St, London, S.W. 1 (1v:Ja v3;i-s)

Formerly Society of Chemical Industry Journal; name changed January, 1951

J Ap Phys—Journal of Applied Physics. $12; single numbers $1.25. m American Institute of Physics, 57 E 55th St, New York 22 (1v:Ja v24;i-s)

$10 to members and associate members of the American Institute of Physics

J Bsns—Journal of Business of the University of Chicago. $6; single numbers $1.75. q University of Chicago Press, 5750 Ellis Av, Chicago 37 (1v:Ja v26;i-s)

J Chem Educ—Journal of Chemical Education. $3.50; single numbers 50c. m Journal of Chemical Education, 20th and Northampton Sts, Easton, Pa. (1v:Ja v30;i-s)

J Chem Phys—Journal of Chemical Physics. $15; single numbers $1.50. m American Institute of Physics, 57 E 55th St, New York 22 (1v:Ja v21;i-s)

J Doc—Journal of Documentation. 40s; single numbers 10s 6d. q Aslib, 4 Palace Gate, London W. 8 (1v:Mr v9;i-l)

J Eng Educ—Journal of Engineering Education. $6; single numbers $1.25. m (except Jl and Ag) American Society for Engineering Education, A. B. Bronwell, Sec, Northwestern University, Evanston, Ill. (1v:S v44;i-s)

J Fr Inst. See Franklin Inst J

J Ind Hygiene—The Journal of Industrial Hygiene and Toxicology. $8; single numbers $1.50. bi-m Williams & Wilkins Co, Mt Royal & Guilford Avs, Baltimore 2, Md. (1v:Ja v31; i-l)

After January 1950, appeared as Archives of Industrial Hygiene and Occupational Medicine; now A.M.A. Archives, q.v.

J Land & Pub Util Econ. See Land Econ

J Marketing—The Journal of Marketing. $6. q Thomas J. McGann, Business manager, Iona College, New Rochelle, N.Y. (1v:Jl v18; i-l)

Publication of the American Marketing Association

J Metals—Journal of Metals. $8; single numbers 75c. m American Institute of Mining and Metallurgical Engineers, Inc, 29 W 39th St, New York 18 (1v:Ja v5;i-l)

Special issues $1.50

J Phys & Colloid Chem—The Journal of Physical and Colloid Chemistry. $10; single numbers $1.25. m except (Jl, Ag and S) Williams & Wilkins Co, Mt. Royal & Guilford Avs, Baltimore 2, Md. (1v:Ja v55:i-s)

Name changed to Journal of Physical Chemistry beginning January 1952

J Phys Chem—The Journal of Physical Chemistry. $10; single numbers $1.25. m except (Jl, Ag and S) American Chemical Society, 1155 16th St, N.W, Washington 6, D.C. (1v:Ja v57;i-s)

J Res Nat Bur Stand—Journal of Research of the National Bureau of Standards. $5.50. m Superintendent of Documents, Washington 25, D.C. (2v:Ja,Jl v50-51;i-l)

J Retailing—Journal of Retailing. $2.50; single numbers 75c. q New York University School of Retailing, 100 Washington Square East, New York 3 (1v:Spring v29;i-r)

Index published every two years

J Sci Instr—Journal of Scientific Instruments. £4 ($11.50 in U.S.); single numbers 8s ($1.15 in U.S.). m Institute of Physics, 47 Belgrave Square, London, S.W. 1 (1v:Ja v30;i-s)

Land Econ—Land Economics. $6; single numbers $2. q Sterling Hall, University of Wisconsin, Madison 6, Wis. (1v:F v29;i-s)

Life Ins Courant—Life Insurance Courant. $4; single numbers 50c. m Flitcraft, Inc, 75 Fulton St, New York 38 (1v:Ja v58;i-s)

Light Metal Age—Light Metal Age. $3; single numbers 60c. bi-m Roy Fellom, jr, 220 South State St, Chicago 4 (1v:F v11;i-r)

Mach—Machinery. $4; single numbers 40c. m Industrial Press, 148 Lafayette St, New York 13 (1v:S v60;i-r)

Machine Design—Machine Design. $10; single numbers $1. m Penton Pub. Co, Penton Bldg, Cleveland 13, O. (1v:Ja v25;i-s)

Mag of Bldg Arch Forum. See Arch Forum

Mag of Bldg House & Home. See House & Home

Mag of Wall St—Magazine of Wall Street and Business Analyst. $20; single numbers 85c. bi-w Ticker Pub. Co, Inc, 90 Broad St, New York 4 (2v:Ap,O v92-93;i-s)

Management R—Management Review. single numbers 75c. m American Management Association, 330 W 42d St, New York 36 (1v:Ja v42;i-s)

Membership required for annual subscription

Manuf Rec—Manufacturers Record. $3; single numbers 35c. m Manufacturers Record Publishing Co, 109 Market Place, Baltimore 3, Md. (1v:Ja v122;i-none)

Marine Eng—Marine Engineering. $3; single numbers 75c. m Simmons-Boardman Pub. Corp, 30 Church St, New York 7 (1v:Ja v58; i-r)

Mariner Ship number May $1

Materials & Methods—Materials and Methods, the Magazine of Materials Engineering. $2; single numbers 50c. m Reinhold Pub. Corp, 330 W 42d St, New York 36 (2v:Ja,Jl v37-38; i-s)

Mech Eng—Mechanical Engineering. $7; single numbers 75c. m American Society of Mechanical Engineers, 29 W 39th St, New York 18 (1v:Ja v75;i-r)

Metal Finishing—Metal Finishing. $4; single numbers 45c. m Finishing Publications, Inc, 381 Broadway, Westwood, New Jersey (1v:Ja v51;i-s)

Formerly Metal Industry

Metal Prog—Metal Progress. $7.50; single numbers $1.50. m American Society for Metals, 7301 Euclid Av, Cleveland 3, O. (2v:Ja,Jl v63-64;i-s)

Metallurgia—Metallurgia, the British Journal of Metals. 24s; single numbers 2s. m Kennedy Press, Ltd, 31 King Street West, Manchester, 3 (2v:Ja,Jl v47-48;i-l)

Metals Tech. See J Metals

Midwest Eng—Midwest Engineer. $4; single numbers 50c. m Western Society of Engineers, 84 E Randolph St, Chicago 1 (1v:Je v6;i-none)

February, part 2 is Year Book of the Western Society of Engineers, 1952-1953

Mill & Factory—Mill & Factory. $5; single numbers 50c. m Conover-Mast Publications, Inc, 205 E 42d St, New York 17 (2v:Ja,Jl v52-53;i-none)

Min & Met. See Min Eng

Min Cong J—Mining Congress Journal. $3; single numbers 30c. m American Mining Congress, 1102 Ring Bldg, Washington 6, D.C. (1v:Ja v39;i-r)

Min Eng—Mining Engineering. $8; single numbers 75c. m American Institute of Mining and Metallurgical Engineers, Inc, 29 W 39th St, New York 18 (1v:Ja v5;i-l)

Special issues $1.50

Mo Labor R—Monthly Labor Review. $6.25; single numbers 55c. m Superintendent of Documents, Washington 25, D.C. (2v:Ja,Jl v76-77;i-l)

Free to labor departments and bureaus and other offices connected with the administration of labor laws

Mo U Sch Mines & Met Bul tech ser—Bulletin of the University of Missouri, School of Mines and Metallurgy. Technical Series. irr Univ. of Mo. Rolla

Mod Ind—Modern Industry. $4; single numbers 50c. m Magazines of Industry, Inc, 99 Church St, New York 8 (2v:Ja,Jl v25-26;i-none)

Merged with Dun's Review August, 1953

Mod Packaging—Modern Packaging. $6; single numbers 75c. m Modern Packaging Corp, 575 Madison Av, New York 22 (1v:S v27;i-r)

Mod Plastics—Modern Plastics. $6; single numbers 75c. m Modern Plastics, Inc, 575 Madison Av, New York 22 (1v:S v31;i-l)

Formerly Plastic Products

Mod Textiles Mag—Modern Textiles Magazine. $5; single numbers 60c. m Rayon Pub. Corp, 303 Fifth Av, New York 16 (1v:Ja v34;i-s)

Formerly Rayon and Synthetic Textiles; changed September, 1952

Munic Util—Municipal Utilities. $3; $5 in U.S; single numbers 50c; 75c in U.S. m Monetary Times Printing Co. of Canada, Ltd, 341 Church St, Toronto 2, Ont. (1v:Ja v91;i-none)

Published as Water and Sewage until January 1950; as Water and Sanitation, January 1950-September 1950

N A C A Bul—N.A.C.A. Bulletin. $10. m National Association of Cost Accountants, 505 Park Av, New York 22 (1v:S v35;i-r)

N Y Pub Lib Bul—New York Public Library. Bulletin. $3; single numbers 25c. m New York Public Library, 5th Av & 42d St, New York 18 (1v:Ja v57;i-s)

Bibliographies of interest to special libraries are indexed

Nat City Bank—National City Bank of New York. m 55 Wall St, New York 15 (without v no;i-none)

Nat Pet N—National Petroleum News. $7; single numbers 35c. w McGraw-Hill Pub. Co, Inc, 330 W 42d St, New York 36 (1v:Ja v45;i-none)

Nat Res Council Bul—National Research Council Bulletin. irr National Research Council, 2101 Constitution Av, Washington 25, D.C.

Individual numbers variously priced. Pricelist sent on request

National Research Council Bulletin and Reprint and Circular series have been discontinued, and future publications will appear in one series numbered from 201

Nat Research Council Pub—National Research Council Publication. irr National Research Council, 2101 Constitution Av, Washington 25, D.C.

Individual numbers variously priced. Pricelist sent on request

Nat Safety N—National Safety News. $7.50; single numbers 75c. m National Safety Council, Inc, 425 N Michigan Av, Chicago 11 (2v: Ja,Jl v67-68;i-r)

Nat Underw—National Underwriter. $7; single numbers 30c. w National Underwriter Co, 175 W Jackson Blvd, Chicago (1v:Ja v57;i-none)

Nat Underw (Life ed)—National Underwriter Life Insurance Edition. $7; single numbers 30c. w National Underwriter Co, 175 W Jackson Blvd, Chicago (1v:Ja v57;i-none)

Oil & Gas J—Oil and Gas Journal. $4; single numbers 50c. w Petroleum Pub. Co, 211 South Cheyenne St, Tulsa 1, Oklahoma (1v:My v52; i-r)

Oil Paint & Drug Rep—Oil, Paint and Drug Reporter. $5; single numbers 25c. w Schnell Pub. Co, Inc, 30 Church St, New York 7 (2v: Ja,Jl v163-164;i-r)

January 26, section 2 is Annual Review issue

Opt Soc Am J—Journal of the Optical Society of America. $8.50; single numbers $1. m American Institute of Physics, Inc, 57 E 55th St, New York 22 (1v:Ja v43;i-s)

Paint Oil & Chem R—Paint, Oil and Chemical Review. $3; single numbers 20c. bi-w Trade Review Co, 1607 Howard St, Chicago 26 (1v:Ja v116;i-none)

Paper Ind—Paper Industry. $3. m Fritz Publications, Inc, 431 South Dearborn St, Chicago 5 (1v:Ap v35;i-s)

Paper Tr J—Paper Trade Journal. $7.50; single numbers 25c. w Lockwood Trade Journal Co, Inc, 15 W 47th St, New York 36 (2v:Ja,Jl v136-137;i-s)

TAPPI section now published as separate Journal. See Tappi

Personnel—Personnel. single numbers $1. bi-m American Management Association, 330 W 42d St, New York 36 (1v:Jl v30;i-s)

Membership required for annual subscription

Personnel J—Personnel Journal. $5; single numbers 75c. m (Jl and Ag issues combined) Personnel Journal, Inc, Swarthmore, Pa. (1v: My v32;i-s)

Pet Eng—Petroleum Engineer. $5; single numbers 50c. m Petroleum Engineer Pub. Co, 1700 Commerce St, Dallas 1, Texas (1v:Ja v25;i-l)

Extra number [Ref annual] published July 15

Pet Processing—Petroleum Processing. $2; single numbers 35c. m McGraw-Hill Pub. Co, Inc, 330 W 42d St, New York 36 (1v:Ja v8;i-r)

Formerly monthly technical section of National Petroleum News

Pet Refiner—Petroleum Refiner. $2; single numbers 50c. m Gulf Pub. Co, Box 2608, Houston 1, Texas (1v:Ja v32;i-s)

Phys R—The Physical Review. Second Series. $30; single numbers $1.50. s-m American Institute of Physics, Inc, 57 E 55th St, New York 22 (4v:Ja,Ap,Jl,O v89-92;i-s)

Power—Power. $4; single numbers 50c. m McGraw-Hill Pub. Co, Inc, 330 W 42d St, New York 36 (1v:Ja v97;i-r)

Extra number published in Mid-September $1

Power Eng—Power Engineering. $10; single numbers $1. m Technical Pub. Co, 110 S. Dearborn St, Chicago 3 (1v:Ja v57;i-none)

Product Eng—Product Engineering. $5; single numbers 50c. m McGraw-Hill Pub. Co, Inc, 330 W 42d St, New York 36 (1v:Ja v24;i-s)

Annual Handbook of Product Design published in 1953

Ptr Ink—Printers' Ink. $5; single numbers 25c. w Printers' Ink Pub. Co, Inc, 205 E 42d St, New York 17 (4v:Ja,Ap,Jl,O v242-245;i-none)

Pub Health Rep—Public Health Reports. $4.25. m Superintendent of Documents, Washington 25, D.C. (1v:Ja v68;i-r)

Distributed gratuitously to state and municipal health officers, etc., by the Surgeon general of the United States public health service, Washington, D.C.

Changed from weekly to monthly January, 1952

Pub Roads—Public Roads. $1; single numbers 20c. bi-m Superintendent of Documents, Washington 25, D.C. (1v [12 nos] Ap v27 '52; i-l)

Pub Util—Public Utilities Fortnightly. $15; single numbers $1. bi-w Public Utilities Reports, Inc, Munsey Bldg, Washington 4, D.C. (2v:Ja,Jl v51-52;i-s)

Pub Works—Public Works. $5; single numbers 50c. m Public Works Journal Corp, 310 E 45th St, New York 17 (1v:Ja v84;i-r)

Pulp & Pa of Can—Pulp and Paper Magazine of Canada. $5; $10 in U.S.; single numbers 50c; $1 in U.S. m National Business Publications, Ltd, Gardenvale, Que. (1v:Ja v54; i-s)

Extra Convention number published in February, price $1; $2 in U.S.

Q S T—QST; $4; single numbers 40c. m American Radio Relay League, Inc, 38 La Salle Road, West Hartford 7, Conn. (1v:Ja v37;i-s)

RCA R—RCA Review. $2; single numbers 75c. q Radio Corporation of America, RCA Laboratories Division, Princeton, New Jersey (1v: Mr v14;i-s)

R Econ & Stat—Review of Economics and Statistics. $6; single numbers $2. q Harvard University Press, 322 Littauer Center, Cambridge 38, Mass. (1v:F v35;i-s)

R Sci Instr—Review of Scientific Instruments. $8; single numbers $1. m American Institute of Physics, 57 E 55th St, New York 22 (1v: Ja v24;i-s)

$6 to members of scientific societies

Radio & Tv N—Radio & Television News. $4; single numbers 35c. m Ziff-Davis Pub. Co, 366 Madison Av, New York 17 (2v:Ja,Jl v49-50;i-s)

Radio Com—Radio Communication. $3; single numbers 35c. m Radiocom, Inc, Great Barrington, Massachusetts

Incorporating Tele-Vision Engineering May, 1952

Name changed to Communication Engineering January, 1953

Radio N. See Radio & Tv N

Rayon—Rayon and Synthetic Textiles. $5; single numbers 60c. m Rayon Pub. Corp. 303 Fifth Av, New York 16 (1v:Ja v33;i-s)

Name changed to Rayon and Synthetic Textiles beginning September, 1948; changed name to Modern Textiles Magazine September, 1952

Ref Shelf—The Reference Shelf. irr The H. W. Wilson Co, 958 University Av, New York 52

Refrig Eng—Refrigerating Engineering $4; single numbers 50c. m American Society of Refrigerating Engineers, 234 Fifth Av, New York 1 (1v:Ja v61;i-s)

Review of Economics and Statistics. See R Econ & Stat

Review of Scientific Instruments. See R Sci Instr

Reviews of Modern Physics. See Rs Mod Phys

Roads & Bridges—Roads and Bridges. $3; $6 in U.S; single numbers 50c; $1 in U.S. m Monetary Times Printing co. of Canada, Ltd, 341 Church St, Toronto 2, Ont. (1v:Ja v87;i-none)
Name changed to Roads and Construction, January, 1950

Roads & Constr—Roads and Construction. $3; $6 in U.S; single numbers 50c; $1 in U.S. m Monetary Times Printing Co. of Canada, Ltd, 341 Church St, Toronto 2, Ont. (1v:Ja v88;i-none)
Name changed to Roads and Engineering Construction June, 1950

Roads & Eng Constr—Roads and Engineering Construction. $3; $5 in U.S; single numbers 50c; 65c in U.S. m Monetary Times Printing Co. of Canada, Ltd, 341 Church St, Toronto 2, Ont. (1v:Ja v91;i-none)
Annual Directory number June, price $3 in Canada; $4 in U.S.

Roads & Sts—Roads and Streets. $5. m Gillette Pub. Co, 22 West Maple St, Chicago 10 (1v:Ja v96;i-none)

Rock Prod—Rock Products. $2; single numbers 25c. m Maclean-Hunter Pub. Corp, 309 W Jackson Blvd, Chicago 6 (1v:Ja v56;i-s)

Rough Notes—Rough Notes. $3; single numbers 35c. m Rough Notes Co, Inc, 1142 N. Meridian St, Indianapolis 6, Ind. (1v:Ja v96;i-s)

Roy Aeronautical Soc J—Journal of the Royal Aeronautical Society. £6 6s; single numbers 10s 6d. m Royal Aeronautical Society, 4 Hamilton Place, Piccadilly, London, W. 1 (1v:Ja v57:i-s)

Rs Mod Phys—Reviews of Modern Physics. $4. q American Institute of Physics, Inc, 57 E 55th St, New York (1v:Ja v25;i-s)

Rubber Age—Rubber Age. $5; single numbers 50c. m Palmerton Pub. Co, Inc, 250 W 57th St, New York 19 (2v:Ap,O v73-74;i-s)

Ry Age—Railway Age. $14; single numbers 50c. w Simmons-Boardman Pub. Corp, 30 Church St, New York 7 (2v:Ja,Jl v134-135;i-r)
Annual Review and Outlook number, January 12, price $1
Regular issue alternates with a News Edition beginning March 2, 1953

Ry Loco & Cars—Railway Locomotives and Cars. $7; single numbers 50c. m Simmons-Boardman Pub. Corp, 30 Church St, New York 7 (1v:Ja v127;i-r)
Formerly Railway Mechanical and Electrical Engineer; changed January, 1953

Ry Mech & Elec Eng—Railway Mechanical and Electrical Engineer. $4; single numbers 50c. m Simmons-Boardman Pub. Corp, 30 Church St, New York 7 (1v:Ja v126;i-r)
Formerly Railway Mechanical Engineer; name changed to Railway Locomotives and Cars January, 1953

S A E J—S.A.E. Journal. $10; single numbers $1. m Society of Automotive Engineers, Inc, 29 W 39th St, New York 18 (1v:Ja v61;i-r)

Safety Eng—Safety Engineering. $4; single numbers 50c. m Alfred M. Best Co, Inc, 75 Fulton St, New York 7 (2v:Ja,Jl v99-100;i-s)
Name changed to Safety Maintenance and Production October, 1950

Safety Maint & Prod—Safety Maintenance and Production. $4; single numbers 50c. m Alfred M. Best Co, Inc, 75 Fulton St, New York 38 (2v:Ja,Jl v105-106;i-s)

Sales Management—Sales Management. $8; single numbers 50c. s-m Sales Management, Inc, 386 4th Av, New York 16 (2v:Ja,Jl v70-71;i-none)
Published semi-monthly except in May and November when it is published three times a month

Sci Am—Scientific American. $5; single numbers 50c. m Scientific American, Inc, 2 W 45th St, New York 36 (2v:Ja,Jl v188-189;i-s)

Science—Science. $7.50; single numbers 25c. w American Association for the Advancement of Science, 1515 Massachusetts Av. N.W. Washington 5, D.C. (2v:Ja,Jl v117-118;i-s)

Sewage & Ind Wastes—Sewage and Industrial Wastes. $7.50; single numbers $1. m Federation of Sewage and Industrial Wastes Associations, 325 Illinois Bldg, Champaign, Ill. (1v:Ja v25;i-s)

Sewage Works J—Sewage Works Journal. $5; single numbers $1. bi-m Federation of Sewage Works Associations, 325 Illinois Bldg, Champaign, Ill. (1v:Ja v21;i-s)
Name changed to Sewage and Industrial Wastes, January, 1950

Sheet Metal Worker—Sheet Metal Worker. $4; single numbers 40c. m Edwin A. Scott Pub. Co, 92 Martling Av, Tarrytown, New York (1v:O v45;i-s)

Soap & San Chem—Soap and Sanitary Chemicals. $4. m MacNair-Dorland Co, Inc, 254 W 31st St, New York 1 (1v:Ja v29)
Annual index appears in Soap Blue Book which is sent to all subscribers

Soc Chem Ind J—Journal of the Society of Chemical Industry. £2; single numbers 4s. m Society of Chemical Industry, 56 Victoria St, London, S.W. 1 (1v:Ja v69;i-s)
Name changed to Journal of Applied Chemistry January, 1951

Soc Dyers & Col J—Journal of the Society of Dyers and Colourists. £4. m Society of Dyers and Colourists, Dean House, 19 Piccadilly, Bradford 1, Yorkshire, England (1v:Ja v69;i-l)

Soc for Advan of Management J. See Advanced Management

Soc Motion Picture & Tv Eng J—Journal of the Society of Motion Picture and Television Engineers. $12.50; single numbers $1.50. m Society of Motion Picture Engineers, 40 W 40th St, New York 18 (2v:Ja,Jl v60-61;i-l)

Soc Motion Picture Eng J—Journal of the Society of Motion Picture Engineers. $12.50; single numbers $1.50. m Society of Motion Picture Engineers, 342 Madison Av, New York 17 (2v:Ja,Jl v52-53;i-l)
Name changed to Journal of the Society of Motion Picture and Television Engineers January, 1950

Society of Automotive Engineers Journal. See S A E J

Special Lib—Special Libraries. $7; single numbers 75c. m (S-Ap) bi-m (My-Ag) Special Libraries Association, 31 E 10th St, New York 3 (1v:Ja v44;i-l)

Spectator—The Spectator. $3; single numbers 50c. m Chilton Co, Inc, Chestnut & 56th Sts, Philadelphia 39 (1v:Ja v161;i-s)
Life edition and Property edition merged, January 1952. Continues volume number of Life edition

Standardization—Standardization. $4; single numbers 35c. m American Standards Association. 70 E 45th St, New York 17 (1v:Ja v24;i-l)
Formerly Industrial Standardization; name changed January, 1949

Steel—Steel. $7.50; single numbers 50c. w Penton Pub. Co, Penton Bldg, Cleveland 13, O. (2v:Ja,Jl v132-133;i-r)

Survey of Cur Bsns—Survey of Current Business. U.S. Department of commerce, Office of Business Economics. $3.25; single numbers 30c. m Superintendent of Documents, Washington 25, D.C. (1v:Ja v33;i-none)

Tappi—Tappi. $7.50; single numbers $1. m Technical Association of the Pulp and Paper Industry, 155 E 44th St, New York 17 (1v:Ja v36;i-s)

Tech R—Technology Review. $3.50; single numbers 50c. m except (Ag, S, O) Massachusetts Institute of Technology, room 1-281, Cambridge 39, Mass. (1v:N v56;i-r)

Tele-Tech—Tele-Tech. $7; single numbers 75c. m Caldwell-Clements, Inc, 480 Lexington Av, New York 17 (1v:Ja v12;i-s)

Tele-Vision Eng. See Tv Eng

Textile Col. See Am Dyestuff Rep

Textile Inst J—Journal of the Textile Institute. £3 10s; single numbers 6s. m Textile Institute, 10 Blackfriars St, Manchester 3, England (1v:Ja v44;i-l)
Published in two parts: Transactions; Proceedings, Standardisation and Abstracts

Textile Res J—Textile Research Journal. $15; single numbers $1.50. m Textile Research Institute, Inc, 10 E 40th St, New York 16 (1v: Ja v23;i-s)

Textile World—Textile World. $3; single numbers 50c. m McGraw-Hill Pub. Co, Inc, 330 W 42d St, New York 36 (1v:Ja v103;i-s)

Tool Eng—Tool Engineer. $6. m American Society of Tool Engineers, 10700 Puritan Av, Detroit 21 (2v:Ja,Jl v30-31;i-s)

Transactions of the American Society of Mechanical Engineers. See A S M E Trans

Trusts & Estates—Trusts and Estates. $5; single numbers 60c. m Fiduciary Publishers, Inc, 50 E 42d St, New York 17 (1v:Ja v92;i-s)

Tv Eng—Tele-Vision Engineering. $3; single numbers 50c. m Bryan Davis Pub. Co, Inc, 52 Vanderbilt Av, New York 17 (1v:Ja v3;i-s)

Formerly Communications; name changed January, 1950

Merged with Radio Communication May, 1952

Title changed to Communication Engineering January, 1953

U S Bur Labor Statistics Bul—United States Bureau of Labor Statistics. Bulletin. Distributed free of charge. U.S. Bureau of Labor Statistics, Washington, D. C.

U S Bur Mines Bul—United States. Bureau of † Mines. Bulletin. U.S. Bureau of Mines, Washington, D.C.

U S Bur Mines Information Circ—United † States. Bureau of Mines. Information Circular. U.S. Bureau of Mines, Washington, D.C.

U S Bur Mines Rep of Invest—United States. † Bureau of Mines. Reports of Investigations. U.S. Bureau of Mines, Washington, D.C.

U S Bur Mines Tech Pa—United States. Bu- † reau of mines. Technical Paper. U.S. Bureau of Mines, Washington, D.C.

Now included in Bulletin series, beginning with Bulletin 481

U S Geol S Bul—United States Geological Survey. Bulletin. U.S. Geological Survey, Washington, D.C.

U S Geol S Professional Pa—United States Geological Survey. Professional Paper. U.S. Geological Survey, Washington, D.C.

U S Nat Advisory Com for Aeronautics—United States National Advisory Committee for Aeronautics, Washington, D.C. Annual reports.

Thirty-fifth annual report, 1949 including Technical Reports nos. 922-950; Thirty-sixth annual report, 1950 including Technical Reports nos. 951-1002

U S Nat Bur Stand—United States. National ‡ Bureau of Standards, U.S. National Bureau of Standards, Washington, D. C.

U S Naval Inst Proc—United States Naval Institute Proceedings. $5; single numbers 50c. m United States Naval Institute, Annapolis, Md. (1v:Ja v79;i-r)

U S Women's Bur Bul—United States. Women's Bureau. Bulletin. U.S. Women's Bureau, Washington, D.C.

Water & San. See Munic Util

Water & Sewage Works—Water & Sewage Works. $2; single numbers 25c. m Scranton Pub. Co, 185 N Wabash Av, Chicago 1 (1v: Ja v100;i-l)

Reference and Data edition May 50 cents

Weekly Underw—Weekly Underwriter. $5; single numbers 25c. w Underwriter Printing and Publishing Co, 116 John St, New York 38 (2v:Ja,Jl v168-169;i-l)

Welding J—Welding Journal. $6; single numbers $1. m American Welding Society, 33 W 39th St, New York 18 (1v:Ja v32;i-s)

Western Soc E J. See Midwest Eng

Westinghouse Eng—Westinghouse Engineer. $2.50; single numbers 50c. bi-m Westinghouse Engineer, 401 Liberty Av, P.O. Box 2278, Pittsburgh 30, Pa. (1v:Ja v13;i-r)

Wireless Eng—Wireless Engineer. £2 7s; U.S. and Canada $7.50; single numbers 3s 6d. m Iliffe & Sons, Ltd, Dorset House, Stamford St, London, S.E. 1 (1v:Ja v30;i-l)

World Oil—World Oil. $2; single numbers 50c. m Gulf Pub. Co, 3301 Buffalo Drive, Houston 6, Texas (2v:Ja,Jl v136-137;i-r)

Two issues February and August; second issues $1 each

† United States Bureau of Mines Publications for sale by Superintendent of Documents, Government Printing Office, Washington, D.C. Reports of Investigations and Information Circulars distributed by Bureau.

‡ The official (free) distribution of publications of the Bureau is limited to government offices, public libraries, educational institutions, scientific societies, and cooperating experts. Others may purchase them from the Superintendent of Documents, Government Printing Office, Washington, D.C.

Key to General Abbreviations

+	continued on later pages of the issue
abr	abridged
Ag	August
Ap	April
arch	architect
bibliog	bibliography
comp	compiled or compiler
cond	condensed
cont	continued
D	December
diag	diagram
ed	edited or edition or editor
F	February
i	index
il	illustrations
inc	incorporated
Ja	January
Je	June
Jl	July
Mr	March
My	May
n s	new series
N	November
no	number
O	October
p	page
pl	plate
por	portrait
pseud	pseudonym
pt	part
rev	revised
S	September
sup	supplement
tr	translated or translation or translator
v	volume
yrbk	yearbook

Sample entry: Incriminating stains. C. E. O'Hara and J. W. Osterburg. il Sci Am 188:58-60+ F '53

Explanation: An illustrated article with the title given above will be found in Scientific American, volume 188, pages 58-60 (continued on later pages of the same issue) the February 1953 number

Industrial Arts Index

A Cumulative Subject Index to Engineering, Trade and Business Periodicals

1953

A.B.E.G.S. See United States—Advisory board on economic growth and stability

ACTH

ACTH in pure form isolated by Armour laboratories. F. W. Specht. Oil Paint & Drug Rep 162:5 D 1 '52

Action of ACTH on adrenal slices. R. Haynes and others. Science 116:690-1 D 19 '52

Audiogenic seizure and the adrenal cortex. W. P. Hurder and A. F. Sanders. bibliog Science 117:324-6 Mr 27 '53

Binding of metal ions by ACTH; a property correlated with biological activity. J. E. Carr and others. bibliog Science 116:566-8 N 21 '52

Countercurrent distribution of sheep adrenocorticotropic protein preparations. G. P. Hess, F. H. Carpenter and Choh Hao Li. bibliog Am Chem Soc J 74:4956-7 O 5 '52

Danish research contributes to Canadian pharmaceutical industry. il Can Chem Process 37:46+ F '53

Pituitary hormones; the nature of corticotropin-B. N. G. Brink and others. bibliog Am Chem Soc J 75:1960-2 Ap 20 '53

Pituitary hormones; the preparation of potent concentrates of corticotropin and corticotropin-B. A. W. Bazemore and others. bibliog Am Chem Soc J 75:1949-51 Ap 20 '53

Pituitary hormones; the purification of corticotropin-B by countercurrent distribution. F. A. Kuehl, jr. and others. bibliog Am Chem Soc J 75:1955-9 Ap 20 '53

Pituitary hormones; the purification of corticotropin-B by ion-exchange techniques. J. W. Richter and others. bibliog Am Chem Soc J 75:1952-5 Ap 20 '53

Studies on adrenocorticotropin; the isolation of corticotropin-A. W. F. White. Am Chem Soc J 75:503-4 Ja 20 '53

Studies on pituitary adrenocorticotropin; an N-terminal sequence of corticotropin-A. W. A. Landmann, M. P. Drake and W. F. White. bibliog Am Chem Soc J 75:4370 S 5 '53

Studies on pituitary adrenocorticotropin; differentiation of three active types on XE-97 resin. W. F. White and W. L. Fierce. Am Chem Soc J 75:245-6 Ja 5 '53

Analysis

Chromatographic separation of the adrenocorticotropic hormone on partition columns. G. P. Hess and F. H. Carpenter. Am Chem Soc J 74:4971-2 O 5 '52

AD-X2

AD-X2; will it prolong battery life. W. V. Packard. Iron Age 171:39-40 Ja 22 '53

Are policy changes coming up? Bureau of standards is charged with condemning battery additive wrongly. Iron Age 171:82-3 Ap 9 '53

Astin case continues to simmer. Chem & Eng N 31:1986+ My 11 '53

Astin uproar. Fortune 47:108+ My '53

Battery rejuvenator vs. the Bureau of standards. Consumers Res Bul 31:2+ My; 2+ Je '53

Bureau of standards case. Sci Am 188:53 My '53

Case of AD-X2. Bsns W p48+ Ja 10 '53

M.I.T. gives ok to battery additive. il Eng N 150:96 Ja 22 '53

NBS reaffirms previous stand on value of battery additives. Chem & Eng N 31:786+ F 23 '53

Senate committee assails NBS stand on battery additive; battery AD-X2. Chem & Eng N 30:5449-50 D 29 '52

Weeks keeps Astin as NBS head until new tests are completed. Chem & Eng N 31:1752-4 Ap 27 '53

AANDAHL, Fred G.

Assistant Interior secretaries named. por Eng N 150:23 F 12 '53

ABACA

Mechanics of elastic performance of textile materials; factors affecting the translation of certain mechanical properties of cordage fibers into cordage yarns. M. M. Platt and others. bibliog diags Textile Res J 22:641-67 O '52; Discussion. 22:827-9 D '52

ABANDONED wells. See Wells—Abandoned wells

ABBEY national building society

Statement by the chairman. H. Bellman. Economist 166:674 Mr 7 '53

ABBREVIATIONS, French

German and French abbreviations and terms used in serial publications and in bibliographical citations. J. E. Allerding. Special Lib 43:358-63 N '52

ABBREVIATIONS, German

German and French abbreviations and terms used in serial publications and in bibliographical citations. J. E. Allerding. Special Lib 43:358-63 N '52

ABDULLAH as-Salim as-Sabah, sheik of Kuwait, 1895-

Portrait. Fortune 47:49 My '53

ABERRATION (optics)

Computation of spherical-mirror systems by means of finite-difference equations. L. P. Raitiere. diags Opt Soc Am J 42:960-5 D '52

Method for the measurement of spherical aberration of an electrostatic electron lens. D. W. Shipley. bibliog il diags J Ap Phys 23:1310-16 D '52

Reducing aberrations in rotating-prism compensators for nonintermittent motion pictures. G. Schwesinger. bibliog diags Opt Soc Am J 42:923-30 D '52

ABILITIES, inc.

Abilities, inc., new hope for new help. W. M. Stocker, jr. il Am Mach 97:188-90 Ap 13 '53

ABILITY tests

Case study in testing supervisors. M. L. Rock. Personnel 29:170-4 S '52

4-A exams a valuable tool when used right. L. F. Thomann. il Ptr Ink 242:41-2 F 6 '53

How good are employment tests? W. H. Conant. Am Bsns 23:12-13+ S '53

How to inventory vocational assets and liabilities. R. L. Bradley. Foundry 80:118-19+ N '52

Psychologist examines 64 eminent scientists. A. Roe. il Sci Am 187:21-5 N '52

Selection and appraisal of engineering graduates; a case study. D. Adamson. Personnel 29:175-93 S '52

ABILITY tests—*Continued*

Tests; psychology sifts out misfits; Armco uses tests to streamline selection of new employees. J. B. Delaney. Iron Age 171:61-2 F 19 '53

Validation of tests. E. N. Hay. Personnel 29:500-7 My '53

See also

Personality tests

ABRAMS, Norman R.

Portrait. Bsns W p98 Je 27 '53

ABRASION

Abrasion-resistant linings; cast basalt. il Elec R (Lond) 152:940-2 Ap 24 '53

Effect of severity of service on the relative abrasion resistance of natural rubber, GR-S-10, and GR-S-100. C. C. Biard and J. F. Svetlik. India Rubber World 127:363-4 D '52

Evaluating abrasion resistance of resin paper laminates by the Armstrong abrader. F. L. Graves. il diag Tappi 36:sup28A+; Discussion. sup34A+ Je '53

Method for studying the resistance of enamels to abrasion by rapidly moving particles suspended in high-temperature flames. N. E. Poulos. il diags Am Cer Soc Bul 31:380-3 O 15 '52

Relative abrasiveness of the cast surfaces of various gray-iron castings on single-point tools of high-speed steel. J. Datsko and O. W. Boston. il A S M E Trans 75:103-8 Ja '53; Abstract. Metal Prog 63:180+ My '53

ABRASIVE belts

Abrasive-belt form-generating machine for grinding gas-turbine blades and buckets; Planet products corp. il diag Mach 59:232-3 My '53; Automotive Ind 108:58 Je 15 '53; Iron Age 171:141-4 Ap 16 '53

Abrasive-belt grinding. il Metal Prog 63:95 Je '53

Abrasive belt replaces diamond wheel sharpener. il Product Eng 24:203 F '53

Abrasive belts grind carbide. G. H. DeGroat. il Am Mach 96:102-4 D 8 '52

Abrasive belts speed production. D. Olton. il Am Mach 97:101-3 Mr 2; 136-9 Mr 16; 106-10 Mr 30 '53

Belt sharpens carbide tools. il Iron Age 170:25 D 25 '52; Mill & Factory 52:137-8 Mr '53; Tool Eng 30:82 Mr '53; Mech Eng 75:152-3 F '53

Bucket airfoils finished by abrasive belts. il diag Am Mach 96:166-7 O 27 '52

Centerless belt grinds extruded stock. il Steel 131:102 D 8 '52

Centerless grinder; abrasive belts speed production of extruded tubing. Iron Age 171:189 F 5 '53; il Machine Design 25:341+ Ap '53

Convert to belts for lower polishing costs. J. J. Durnan. il Iron Age 171:133-5 F 12 '53

Diamond savers and substitutes. il Mill & Factory 53:128-31 O '53

How to taper aluminum plate by abrasive belt grinding. P. J. Queyrel. il diag Iron Age 170:174-6 D 4 '52

Practical hint for the polisher. il Metal Finishing 51:109 Je '53

Sharpener lengthens carbide tool life; Fenlind micro-finisher. il Aviation W 58:31 Ja 19 '53; Steel 132:90+ Ja 19 '53

Stronger belts; abrasive belts reinforced with backing tape last longer. il diags Iron Age 170:112 O 2 '52

Surface grinding; consider coated abrasives. W. K. Seward. il Steel 132:126-8+ Je 22 '53

3M; Hammond abrasive-belt machine finish grinds carbide tools. il Am Mach 97:212 My 11 '53; Mach 59:231 Je '53

Turbine blade profiles generated by new method. il diag Machine Design 25:136-7 Je '53

Two-belt grinding doubles output; Behr-Manning corp. il Tool Eng 31:103 Jl '53

Wet belt grinding speeds production of extruded cylindrical stock. D. Olton and H. N. Dyer. il diag Am Mach 96:106-7 D 8 '52

You can cut costs with portable belt grinding. R. T. Argy. il Iron Age 171:120-3 Je 11 '53

ABRASIVES

Abrasives for tumbling; tabulation; reference book sheet. Am Mach 97:155 Je 22 '53

Cutting abrasive costs in body plant. J. R. O'Neil and W. J. Swallow. il Automotive Ind 109:66-8+ S 1 '53

Developments in the abrasives industry in the Niagara area, 1945 to 1953. G. R. Finlay and J. A. Upper. il map Electrochem Soc J 100:sup61C-4C Mr '53

Effects of solid inclusions in sleeve-bearing oil supply. H. G. Rylander. il diags Mech Eng 74:963-6 D '52

Eight ways to cut costs on coated abrasives; data sheet. W. T. Conway. Factory Management 111:96, 98 My '53

Mechanical cleaning gives higher luster at lower cost; abrasive scouring. W. G. Patton. il Iron Age 170:155-7 D 11 '52

Metal surfaces improved with new blasting process; Metablast process. il Materials & Methods 38:180+ O '53

Wet blasting with fine particles; based on papers by W. I. Gladfelter and others. il diag S A E J 61:63-8 O '53

What's ahead the next ten years in tools and tooling. Am Mach 96:C4-5 Mid-N '52

See also

Abrasive belts

Corundum

Diamond powder

ABSCISSION (botany)

See also

Defoliation

ABSENTEEISM (labor)

Dental aspects of industrial absenteeism. J. M. Dunning. bibliog Ind Med 21:431-2 S '52

How ten companies control absenteeism. W. Norris. Am Bsns 22:10-11+ O '52

Industrial sickness absenteeism; rates for specific causes in 1951 and half of 1952. Pub Health Rep 68:353-7 Mr '53

What makes people absent? il Mod Ind 25:47-50 Je '53

ABSORPTIOMETER

Photoelectric absorptiometer. il Engineering 174:191 Ag 8 '52

Specification for Hilger Spekker absorptiometer H 760. R. Taylor and others. Chem & Ind p 1051-2 O 25 '52

Use of the Spekker photoelectric absorptiometer for the determination of *pH*. T. B. Smith and others. Chem Soc J p3848-54 O '52

ABSORPTIOMETRIC analysis

Absorptiometric determination of tungsten in steel. Iron & Steel Inst J 172:413-15 D '52

ABSORPTION

Absorption of hydrogen fluoride in a limestone-packed tower. N. Gilbert and others. il diags Chem Eng Prog 49:120-7 Mr '53

Absorption refrigeration system may be your answer. C. L. Rescorla. diags Refrig Eng 61:276-9 Mr '53

Black liquor oxidation and the absorption of non-condensable digester gases. M. A. Schoening and others. il Tappi 36:176-9 Ap '53

Electrolytic interaction of nylon with sodium hydroxide solutions at different temperatures. F. T. Wall and P. M. Saxton. bibliog J Phys Chem 57:370-5 Mr '53

Gas absorption; absorption of carbon dioxide from air by sodium and potassium hydroxides. H. A. Blum, L. F. Stutzman and W. S. Dodds. bibliog flow sheets Ind & Eng Chem 44:2969-74 D '52

Hexane-plus fractions serve as absorbent in absorption-refrigeration gasoline plant. D. H. Stormont. flow sheet il Oil & Gas J 51:210-12 Ap 27 '53

Mechanism of sulphur dioxide absorption in aqueous media. R. P. Whitney and others. bibliog Tappi 36:172-5 Ap '53

Selective absorption of hydrogen sulfide. F. E. Miller and A. L. Kohl. flow diag Oil & Gas J 51:175-6+ Ap 27 '53

Selective absorption of optical antipodes by proteins. W. Bradley and G. C. Easty. Chem Soc J p 1519-24 My '53

Vapor sorption of cellulose at high relative humidities. G. A. Richter, L. E. Herdle and W. E. Wahtera. bibliog diag Ind & Eng Chem 44:2883-93 D '52

See also

Adsorption

ABSORPTION apparatus

Design for ammonia-base sulphite raw-acid towers. R. P. Whitney and S. T. Han. bibliog diag Tappi 35:569-76 D '52

ABSORPTION apparatus—*Continued*

How Warren Petroleum applies hydrocarbon stripping in its operations. R. L. Lane and B. J. Thompson. flow diag il diags Oil & Gas J 50:174-5+ My 5 '52; Same. Pet Refiner 31:120-3 Je '52; Same. Pet Eng 24: C37-9 N '52

Mechanism of mass transfer on bubble plates; plate efficiencies. F. B. West, W. D. Gilbert and T. Shimizu. bibliog flow sheet il diags Ind & Eng Chem 44:2470-8 O '52

Process design and operation of multicomponent hydrocarbon stripping. R. H. Parekh. flow diag Pet Refiner 31:99-103 N '52

Take this short-cut in computing absorber material balance. R. B. Thompson and E. D. Frigar. flow plans Pet Refiner 32:145-8 Ap '53

See also

Absorptiometer

ABSORPTION coefficients

Absorption coefficients of gases in the vacuum ultraviolet. K. Watanabe and others. bibliog J Chem Phys 20:1969-70 D '52

Effect of a low absorption coefficient on X-ray spectrometer measurements. D. T. Keating and B. E. Warren. diag R Sci Instr 23:519-22 O '52

ABSORPTION of rays

Absorption by pyrimidines of plane polarized ultraviolet light. L. E. Lyons. bibliog J Chem Phys 20:1814 N '52

Absorption mean free path of large hard showers in air. H. K. Ticho. bibliog diags Phys R 88:236-41 O 15 '52

Absorption of 5.3-Mev, 10.3-Mev, and 17.6-Mev gamma-rays. E. S. Rosenblum and others. bibliog diags Phys R 88:612-17 N 1 '52

Absorption of infrared light by free carriers in germanium. H. B. Briggs and R. C. Fletcher. bibliog il diag Phys R 91:1342-6 S 15 '53

Absorption of light by trapped electrons. R. C. O'Rourke. bibliog Phys R 91:265-70 Jl 15 '53

Colour and constitution; aromatic hydrocarbons. M. J. S. Dewar. Chem Soc J p3532-44 S '52

Colour and constitution; polyphenyls, polyenes, and phenylpolyenes; and the significance of cross-conjugation. M. J. S. Dewar. Chem Soc J p3544-50 S '52

Contribution to the theory of light absorption of symmetrical polymethine dyes. K. Fukui and others. J Chem Phys 21:186-7 Ja '53

Correction for absorption and fluorescence in the determination of molecular weights by light scattering. B. A. Brice, G. C. Nutting and M. Halwer. bibliog Am Chem Soc J 75:824-8 F 20 '53

Determination of complex dielectric constants of absorptive liquids by microwave interferometry. F. H. Branin, jr. bibliog diag J Ap Phys 23:990-7 S '52

Effect of methylation on the light absorption of phenols; monophenylazophenols. A. Burawoy and J. T. Chamberlain. Chem Soc J p3734-40 O '52

Induced infrared absorption in hydrogen and hydrogen foreign gas mixtures at pressures up to 1500 atmospheres. D. A. Chisholm and others. Phys R 88:957-8 N 15 '52

Ionization chamber measurements of the absorption of the *N*-component of cosmic rays in lead. H. S. Bridge and R. H. Rediker. bibliog diags Phys R 88:206-24 O 15 '52

Method for the determination of atmospheric transmission functions from laboratory absorption measurements. G. N. Plass. Opt Soc Am J 42:677-83 N '52

Microwave absorption and molecular structure in liquids; measurement in organic halides at 10-cm wavelength. F. H. Branin, jr. and C. P. Smyth. bibliog diag J Chem Phys 20:1121-8 Jl '52

Optical absorption of sulfur. A. M. Bass. bibliog J Chem Phys 21:80-2 Ja '53

Radiation-absorbing glasses. G. F. Brewster and N. J. Kreidl. bibliog Am Cer Soc J 35:259-64 O 1 '52

Self-absorption phenomena in the measurement of the radioactivity of nickel-63. G. K. Schweitzer, B. R. Stein and J. W. Nehls. J Phys Chem 56:692-3 Je '52

Temperature dependence of the optical absorption of β-Ag_2S. K. Lehovec. bibliog J Chem Phys 21:54-7 Ja '53

Ultrasonic absorption in liquid mixtures and structural effects. D. Sette. bibliog J Chem Phys 21:558 Mr '53

See also

Beer's law

Sound—Absorption

X rays—Absorption

ABSTRACTS

Abstracting services for foreign scientific periodicals. T. S. Shaw. Special Lib 43: 352-3 N '52

Costly chemical service has a cheaper offspring. Bsns W p44 Ap 4 '53

See also

Chemical abstracts (periodical)

ACADEMIC dissertations. See Dissertations, Academic

ACADEMIC freedom

Academic freedom. W. Chamberlain. Comm & Fin Chr 177:2185+ My 21 '53

ACALA. See Cotton

ACCELERATION

Acceleration testing centrifuge. H. A. Price. diag Machine Design 25:182 Ag '53

Measures true mass flow; making practical use of the effect known as Coriolis acceleration. il diag Chem Eng 60:124+ Mr '53

ACCELERATORS (particles)

Cockcroft-Walton voltage multiplying circuit. E. Everhart and P. Lorrain. bibliog diags R Sci Instr 24:221-6 Mr '53

Double focusing of charged particles with a wedge-shaped, non-uniform magnetic field. R. M. Sternheimer. R Sci Instr 23: 629-34 N '52

Giant atom smashers ready to probe the nucleus. il Product Eng 24:201-2 F '53

High-energy accelerators. Mech Eng 74:909 N '52

Ion optics in long, high voltage accelerator tubes. M. M. Elkind. bibliog diags R Sci Instr 24:129-37 F '53

Radial focusing in the linear accelerator. J. P. Blewett. Phys R 88:1197-9 D 1 '52

Radiofrequency ion source for Bartol Van de Graaff generators. C. P. Swann and J. F. Swingle, jr. diag R Sci Instr 23: 636-8 N '52

Recovery and purification of tritium and He^3 used in ion accelerators. K. W. Allen and E. Almqvist. bibliog diags R Sci Instr 24: 70-1 Ja '53

Telemetering system for a large electrostatic accelerator. C. W. Johnstone and others. il diags Inst Radio Eng Proc 40:1664-74 D '52

See also

Betatron

Electron accelerators

Proton accelerator

Synchrotron

Insurance aspects

Protection of atom smashers from fire loss now big problem. Nat Underw 57:14 F 19 '53; Same. East Underw 54:33 Mr 13 '53

ACCELEROMETERS

Reciprocity calibration of piezoelectric accelerometers. M. Harrison and others. diags Acoustical Soc Am J 24:384-9 Jl '52

Reduction of flight test data from linear accelerometers. A. Mokrzycki. diag Roy Aeronautical Soc J 57:415 Je '53

Self-generating accelerometers. G. K. Guttwein and A. I. Dranetz. bibliog il diags Electronics 24:120-3 O '51; Same cond. Product Eng Hdbk p I 26-8 '53

Strain gage accelerometers and pressure transmitters. G. O. Haglund. il diags Product Eng Hdbk p I 22-5 '53

Unbonded wire resistance strain gauge accelerometers. J. R. Bristow and F. G. Ellames. diags J Sci Instr 29:288-9 S '52

ACCEPTANCES

Banking policies in foreign trade credit. A. M. Strong. Comm & Fin Chr 178:264+ Jl 23 '53

Commercial paper and bankers' acceptances outstanding, Dec. 1946-Nov. 1952. Fed Res Bul 39:34 Ja '53 [cont monthly]

ACCIDENT and health underwriters, Brooklyn association of. See Brooklyn association of accident and health underwriters

ACCIDENT and health underwriters, Bureau of. See Bureau of accident and health underwriters

ACCIDENT and health underwriters, International association of. See International association of accident and health underwriters

ACCIDENT insurance. See Insurance, Accident

ACCIDENTS

Are accident victims human? J. D. Dorsett. Safety Maint & Prod 104:60+ O '52

Laxity of accident prevention in government. L. Saltonstall. il Safety Maint & Prod 106:19-20+ O '53

Light, vision and accidents. H. L. Logan. il Nat Safety N 66:112-13+ O '52

Off-the-job accidents cost three billion dollars a year. A. S. Johnson. Am Mach 96: 148-50 O 13 '52

See also

Airlines—Accidents
Automobile accidents
Aviation—Accidents
Building accidents
Burns and scalds
Electric utilities—Accidents
Electricity, Injuries from
Elevators—Accidents
Explosions
Fires
First aid in illness and injury
Gas companies—Accidents
Grade crossing accidents
Insurance, Accident
Motor trucks—Accidents
Negligence
Petroleum industry and trade—Accidents
Railroads—Accidents
Safety devices and measures

Statistics

Accident barometer. Published in monthly numbers of National safety news

Accidents in 1952. Nat Safety N 67:299 Mr '53

Death rate down one per cent; fatality rates for 1952. A. D. Battey. map Nat Safety N 68:18-19+ Jl '53

Sample survey of home injuries. F. M. Hemphill. Pub Health Rep 67:1026-34 O '52

Tennessee accident fatalities, 1946-50. A. L. Sullivan. Pub Health Rep 68:301-3 Mr '53

ACCIDENTS, Industrial

Accident prevention among the brass. J. W. Carpenter. il Nat Safety N 68:112-13+ O '53

Accident repeaters may not be accident prone. H. G. Miller. Nat Safety N 67:6 Mr '53

Bill for fatalities and major industrial injuries. Safety Maint & Prod 105:74 Ja '53

Breakdown of employe injuries show that hands take a beating. il Mill & Factory 52: 130 My '53

Cases for comment. R. D. Gidel, comp. Nat Safety N 68:32+ Jl; 34 Ag; 66+ S; 140+ O '53

Control chart tests effect of industrial safety programs. W. C. Soudriette. Chem Eng 60: 212 Ap '53

Corrected vision aids plant safety, survey reveals. J. C. Stennett. Weekly Underw 168:512 F 21 '53

Eliminate lost time accidents; A.G.A. laboratories. Am Gas Assn Mo 35:12-13+ Mr '53

How good is our performance? D. N. Edwards. bibliog Nat Safety N 68:36-7+ Ag '53

Injury frequency rates. H. G. Miller. il Nat Safety N 68:130-1+ O '53

Job accidents set up chain reaction. Roads & Sts 96:86 F '53

Machine and maintenance accidents to rise; abstract. L. P. Walters. Safety Maint & Prod 104:46 D '52

NSC reports seven per cent drop in accidents in '52. Safety Maint & Prod 106:40 S '53

Only one in 100 employees in the automotive industry was injured in 1952. il Safety Maint & Prod 106:37-8 S '53

Pin down safety program results; nomograph. Mill & Factory 52:96 Ja '53

Preventable accidents, or where was the foreman? Constr Methods 35:210+ Jl '53

Reducing accident costs in small industrial plants. Sheet Metal Worker 44:98-9 Je '53

Small companies said most accident prone. A. M. Baltzer. Midwest Eng 5:14 O '52

Target, small plant accident losses; National safety council's small business program. H. F. Reinhard. il Nat Safety N 68:30-1+ S '53

Trunk injuries highest in '51. F. E. Frazier. Safety Maint & Prod 104:36 N '52

What really causes accidents? S. R. Carr. Safety Maint & Prod 106:13+ Jl '53

See also

Building accidents
Burns and scalds
Coal mines and mining—Safety measures
Disabled—Rehabilitation
Electricity, Injuries from
Employers' liability
Explosions
First aid in illness and injury
Mine accidents
Safety devices and measures
Workmen's compensation

also subdivision Accidents under special subjects, e.g.

Carpentry
Coal mines and mining
Lumbering
Paper mills
Petroleum industry and trade
Railroads
Rubber factories

Cost

Rising compensation costs in the gas utility industry. G. J. Stone. Am Gas Assn Proc 1952:116-22

What does it cost? how much does it save? summary of accident and safety program costs. J. A. De Luca. Nat Safety N 67: 30-1 Ja '53

Psychological aspects

Fatigue cause of 2,000,000 casualties. J. V. Grimaldi. Weekly Underw 168:1499 My 30 '53

Industry's problem children. G. Gordon. Nat Safety N 67:32-3+ F '53

Phenomenon of accident proneness; abstract. A. G. Arbous and J. E. Kerrich. Nat Safety N 68:60 Jl '53

Psychology of industrial accidents. G. K. Cotts. Pulp & Pa of Can 54:192, 198+ Ag '53; Same cond. Paper Ind 35:556-7 Ag '53

What makes them tired? J. V. Grimaldi. bibliog Nat Safety N 67:24-5+ Ja '53

See also

Safety devices and measures—Psychological aspects

Records

Accidents; how to plan against them; Butler mfg. co. K. W. Bennett. Iron Age 171:113 Mr 5 '53

Easy-to-keep records like these tell exactly how much accidents cost us; Barber-Colman co. H. K. Hilton. Factory Management 111:84-6 Ag '53

Recent rulings on unusual accidents by Z16 committee of judges (cont). Standardization 24:57-9, 87-9 F-Mr '53

Stopping little injuries stops big ones; Otis elevator co. il Factory Management 111: 67-9 My '53

Statistics

Accidents to all workers, 1950-1951; tabulation. Iron Age 171:485 Ja 1 '53

Incidence of accidents in relation to the annual cycle. M. S. Schulzinger. bibliog Ind Med 22:49-55 F '53

Injuries and accident causes in plumbing operations. F. S. McElroy and others. U S Bur Labor Statistics Bul 1079:1-34; pa 25c Supt. of doc. '52

Injury rates by industry, 1951; tabulation. Iron Age 171:484 Ja 1 '53

Injury rates in manufacturing, second quarter, 1952. Mo Labor R 75:644-7 D '52

Manufacturing injuries in fourth quarter 1952. Safety Maint & Prod 105:30 My '53

1952 all-industry safety record shows improvement; pulp, paper down. Paper Ind 35: 579 Ag '53

1952 record. Safety Maint & Prod 105:52-3 Je '53

Steel industry accident rates down to new lows; other industry rates. Iron Age 171: 158 Ap 23 '53

Work injuries in 1952 still at two million mark. Safety Maint & Prod 105:83 Mr '53

ACCIDENTS, Industrial—Statistics—*Cont.*

Work injuries in the United States during 1950. F. S. McElroy and R. S. Barker. U S Bur Labor Statistics Bul 1098:1-33; pa 25c Supt. of doc. '52

Work injuries in the United States during 1951. F. S. McElroy and R. S. Barker, comp. U S Bur Labor Statistics Bul 1137:1-41; pa 25c Supt. of doc. '53; Excerpts. Mo Labor R 74:271-2; 75:510-15 Mr, N '52

ACCIDENTS in the home

Deaths from accidents by automobile and in the home, 1949-1950; tabulation. Spectator 161:104-6 Ap '53

Gas ups home safety record. C. G. Segeler. Am Gas Assn Mo 35:17-18+ F '53

Home is a dangerous workplace. T. J. Berk. Nat Safety N 67:22-3+ Ja '53

Sample survey of home injuries. F. M. Hemphill. Pub Health Rep 67:1026-34 O '52

ACCOMMODATION coefficients

Accommodation coefficient technique applied to a study of molecular oxygen film on tungsten. J. L. Morrison and W. E. Grummitt. bibliog J Chem Phys 21:654-8 Ap '53

ACCOUNTANTS

Accountants as impartial experts hold strategic spot to fight for American way. Credit & Fin Management 54:20-1 N '52

Is there a doctor of business in the house? N. A. Coan. N A C A Bul 34:18-34 S '52

See also

Accounting departments

Accounting ethics

Working papers

Review of working papers and auditor's reports; abstract. W. Powell. J Account 94:715-16 D '52

ACCOUNTANTS, Public

Management practices especially adapted to the growing medium-sized accounting firm. H. F. Hinderer. J Account 95:198-205 F '53

Paper; how to specify, plan and buy economically for use in the accounting office. E. J. McDevitt. J Account 95:460-4 Ap '53

Place of the C.P.A. in probate court accounting. L. L. Tanguy. Trusts & Estates 92:174-6 Mr '53

Procedures to organize preparation of individual tax returns in the CPA's office. S. J. Lasser. J Account 95:190-7 F '53

Technical considerations for the public accountant in changing client to a natural business year. J Account 95:325-31 Mr '53

Employees

How to organize a staff training program to teach actual working audit procedures. W. C. Wilson. J Account 94:624+ N '52

Ethics

See Accounting ethics

Examination

Uniform certified public accountant examination, Nov. 1952. J Account 94:754-68 D '52

Law

Accountant's responsibility for events occurring after the statement date; the Shonts case. L. H. Rappaport. J Account 95:332-5 Mr '53

Constitutionality of New York CPA law upheld. J Account 95:164-5 F '53

SEC accounting series release no.73; the Thomascolor case. J Account 95:83-96+ Ja '53; Discussion (Accountants held not guilty of gross negligence by AIA committee on ethics). 95:723-4 Je '53

Service

Three challenges to every CPA serving small local clients. R. E. Witschey. J Account 95:320-4 Mr '53

ACCOUNTANTS as witnesses

Preparation and courtroom presentation of the accounting part of a case in litigation. H. L. Hoffman. J Account 94:434-41 O '52

ACCOUNTANTS' reports

Accountant's opinion, or lack of it, should be made clear on interim reports. R. W. Ruggles. J Account 95:51-5 Ja '53

Accountants, reports, and words. M. Huebsch. N A C A Bul 34:558-64 D '52

Banker says some audit reports are still not good enough; detrimental to borrower and CPA. A. L. Nash. J Account 94:560-4 N '52

Can denial of opinion be avoided by clear explanation? J Account 94:606 N '52

Caution is advisable in signing opinion on special forms. J Account 95:74-5 Ja '53

Importance of business audits. J. L. Carey. Banking 45:114+ Mr '53

Poll of Texas banks gives information about independent accountants' reports. J Account 95:467-9 Ap '53

ACCOUNTING

Current accounting and auditing problems. C. G. Blough, ed. Published in monthly numbers of Journal of accountancy

Frontal attack on the scrap accounting problem. J. G. Barrett. N A C A Bul 34:791-6 F '53

Historical highlights in accounting reviewed. J Account 94:486-7 O '52

Internal reports; too much paper work? abstract. Management R 41:807 D '52

Simplified accounting system; Multi-Matic system, developed by Remington Rand. il Nat Pet N 45:72 Ja 21 '53

Some perspectives on the valuation of commercial assets. L. Kennett. J Account 95:68-70 Ja '53

Troubles that arise when government control agencies try to prescribe accounting procedures. H. F. Taggart. J Account 95:296-304 Mr '53

See also

Accountants, Public
Accounts receivable
Amortization
Assets, Fixed
Auditing
Bank accounting
Billing
Budget, Business
Capital
Cost accounting
Depletion
Depreciation
Financial ratios
Financial statements
Fiscal year
Foundry accounting
Good will (in business)
Government accounting
Microfilm records
Municipal accounting
Punched card system
Time keeping

also subdivision Accounting under special subjects, e.g.

Building trades
Contractors
Contracts, Government
Electric utilities
Factories
Gas companies
Income
Income tax
Industrial research
Insurance companies
Inventories
Labor cost
Machine shops
Newspapers
Payrolls
Pensions, Industrial
Petroleum—Well drilling
Petroleum industry and trade
Petroleum refineries
Public utilities
Railroads
Textile mills
Time keeping
Trusts and trustees

Bibliography

Accountants' index, tenth supplement; a bibliography of accounting literature, Jan. 1951-Dec. 1952 (inclusive). 499p American institute of accountants, 270 Madison av, New York 16 '53 ($10)

Accounting and what to read in order to understand it. A. M. Cannon. Harvard Bsns R 31:131+ S '53

Current books and articles of interest to accountants. Published in monthly numbers of Journal of accountancy

Dictionaries

Dictionary for accountants. E. L. Kohler. 453p $7.50 Prentice-Hall, 70 Fifth av, New York 11 '52

Inflation problems

Depreciation and inflation; impact of inflation on the law governing depreciation accounting. G. J. Eder. bibliog Pub Util 50:617-25 O 23 '52

Depreciation and the depreciating dollar. F. F. Tannery. N A C A Bul 34:211-19 O '52

How good are paper-dollar company reports? F. Pick. Comm & Fin Chr 176:1729 N 6 '52

How inflation is being recognized in financial statements in the Netherlands. A. Goudeket. J Account 94:448-52 O '52

ACCOUNTING—Inflation problems—*Continued*

Proposal for the adoption of standards of disclosure for changing price levels. P. Grady. J Account 94:565-9 N '52

Relationship between depreciation allowance and maintenance of capital during inflation. J. E. Kane. J Account 94:697-701 D '52

Responsibility of utility management with respect to depreciation. C. H. Ross. Pub Util 50:602-17 O 23 '52

Laws and regulations

Securities and exchange commission 17th annual report; section dealing with activities in accounting and auditing. J Account 94:507-8+ O '52

Mechanical aids

Big question in electronics; Utility electronic accounting system. J. H. W. Roper. diags Am Gas Assn Mo 35:25-6 S '53

Centralized machine car accounting; Santa Fe. flow chart il Ry Age 135:62-71 O 5 '53

Company mails 180,000 statements each month with modern office equipment; Merrill Lynch, Pierce, Fenner & Beane. F. Bohne. il Am Bsns 23:10-11 Ja '53

Cudahy accounts electronically. il Food Eng 25:81+ S '53

Electronic equipment simplifies and speeds Columbia's huge accounting operations. il Am Gas J 179:18-19+ S '53

Electronic tally provides pushbutton inventory control. il Factory Management 111:138-9 O '53

Electronics in the modern office. R. W. Fairbanks. flow chart il diags Harvard Bsns R 30:83-98 S '52

Home office efficiency improves service to customers; Minute maid corp. L. Stemp. Am Bsns 23:36-7 Ja '53

How six employees do work of 20 in accounting office. J. W. Bergman. Am Bsns 22:36+ O '52

Insurance enters its electronic age. T. O. Carlson. il Spectator 161:26-7+ My '53

Job that required 40 man days now completed in eight hours. E. J. Cunningham. il Am Bsns 23:24+ Ja '53

Machines play big role in jobber's credit program. C. O. Lyddon. il Nat Pet N 45:64-6 My 20 '53

Mechanized accounting aids major drilling contractor. J. A. Kornfeld. il Oil & Gas J 51:76-7 F 2 '53

Mechanizing the small office. K. H. Goss. Am Gas Assn Mo 35:21-2+ My '53

New accounting system combines several separate operations; Crump, inc. F. J. Baker. Am Bsns 23:40 F '53

Payroll for 2,000 employees completed in ten hours; Dormeyer corp. F. J. Cummings. il Am Bsns 23:24 O '53

Planning today for tomorrow's electronics; Peoples gas light and coke co. Am Gas Assn Mo 35:26-7 S '53

Punching their way out of a paper snag; accounting department of Wisconsin electric power co. il Elec World News ed 139:16-17 F 16 '53

Put a machine on that general ledger! D. W. Hogan, jr. il Bankers Mo 70:32-4 My '53

Rectangular motion to produce accurate stepping movements; AMA Accounting Center reader. il diags Machine Design 25:113 Ja '53

These mechanical jobs replaced manual ones; customer billing and accounting procedure at Michigan consolidated gas co. il Am Bsns 22:24+ D '52

Toy maker eases Christmas rush with simplified accounting; A. C. Gilbert co. B. Jones. il Am Bsns 22:28-30 D '52

See also

Punched card system

Tabulating machines

Terminology

Wanted; a clear, unambiguous, unequivocal replacement for the term earned surplus. A. P. Wendt. J Account 95:206-9 F '53

When making cost estimates, watch your language. R. D. Beattie and J. E. Vivian. Chem Eng 60:172-5 Ja '53

Japan

How Japanese accounting systems for coöperatives have been revised under the allied occupation. J. C. Essene. J Account 95:336-44 Mr '53

Netherlands

How inflation is being recognized in financial statements in the Netherlands. A. Goudeket. J Account 94:448-52 O '52

ACCOUNTING departments

Accountant's natural advantages in developing work simplification programs. K. H. Bergstrom. J Account 95:449-53 Ap '53

Improving accounting department effectiveness through better methods. R. F. Neuschel. N A C A Bul 34:123-37 sec 3 S '52

Improving accounting department effectiveness through organization, administration and training. H. A. McKinnon. N A C A Bul 34:138-56 sec 3 S '52

ACCOUNTING ethics

Rules of professional conduct of the American institute of accountants. J Account 95:465-6 Ap '53

SEC accounting series release no.73; the Thomascolor case. J Account 95:83-96+ Ja '53; Discussion (Accountants held not guilty of gross negligence by AIA committee on ethics). 95:723-4 Je '53

ACCOUNTS receivable

Accounts receivable and unbilled costs in personal service businesses. J Account 95:75-6 Ja '53

Auditing receivables purchased without notice. J Account 95:223-4 F '53

Capital from receivables; specialized finance companies co-operate with banks by servicing receivables. T. H. Silbert. Bankers Mo 69:7-8+ D '52

Holding the account receivable in line. Credit & Fin Management 55:8-9+ Jl '53

Some cases where attempts to use receivables as a tax-saving device have failed. R. Deutsch. J Account 94:576-9 N '52

Which? open invoice or ledger sheets; symposium. E. L. Porter and others. Credit & Fin Management 55:8-11+ Je '53

ACCOUNTS receivable insurance. See Insurance. Accounts receivable

ACENAPHTHENE

Acenaphthene series; the three isomeric *tert.*-butylacenaphthenes; migration of *tert.*-butyl groups and disproportionation; preparation and orientation of 1 : 3 : 6-tri-*tert.*-butylacenaphthene. E. Illingworth and A. T. Peters. Chem Soc J p2730-5 Jl '52

New synthesis of acenaphthene. E. D. Bergmann and J. Szmuszkovicz. bibliog Am Chem Soc J 75:2760-1 Je 5 '53

ACENAPHTHENEACETIC acid

5-Acenaphtheneacetic acid. H. J. Richter. bibliog Am Chem Soc J 75:2774-5 Je 5 '53

ACENAPHTHYLENE

Formation of a spiro compound by the action of diazofluorene on acenaphthylene. A. Schönberg, A. Mustafa and N. Latif. Am Chem Soc J 75:2267 My 5 '53

ACETALDEHYDE

Electronic orbitals, shapes, and spectra of polyatomic molecules; a note on the near-ultra-violet spectrum of acetaldehyde. A. D. Walsh. Chem Soc J p2318-20 Ag '53

Induced decomposition of acetaldehyde by radicals. R. K. Brinton and D. H. Volman. bibliog J Chem Phys 20:1053-4 Je '52

Inhibition of acetaldehyde oxidation by hydrocarbons of various molecular structures. N. J. H. Small and A. R. Ubbelohde. diags Chem Soc J p637-42 F '53

Mannich reactions involving the use of acetaldehyde, monochloroacetaldehyde and dichloroacetaldehyde. A. V. Logan and W. D. Schaeffer. Am Chem Soc J 74:5538-9 N 5 '52

Photolysis of acetaldehyde. R. E. Dodd. bibliog J Chem Phys 21:748-9 Ap '53

Photolysis of acetaldehyde. G. O. Pritchard and others. bibliog J Chem Phys 21:748 Ap '53

Reactions of free radicals with aldehydes; the reactions of methyl and *t*-butoxy radicals with acetaldehyde and acrolein. D. H. Volman and R. K. Brinton. bibliog J Chem Phys 20:1764-8 N '52

ACETALS

Acetylated thioacetals of D-glucosamine. M. L. Wolfrom and K. Anno. Am Chem Soc J 74:6150-1 D 5 '52

Cyclic ketals of 4-androstene-3,17-dione. H. L. Herzog and others. bibliog Am Chem Soc J 75:4425-7 S 20 '53

Explanation of the preferential formation of certain rings in acetals of the polyhydric alcohols. S. A. Barker, E. J. Bourne and D. H. Whiffen. Chem Soc J p3865-70 O '52

Hydroxymethylene ketones; the preparation of β-ketodimethylacetals and methoxymethylene ketones. E. E. Royals and K. C. Brannock. bibliog Am Chem Soc J 75:2050-3 My 5 '53

Ketene acetals; alkylation of dimethylketene dimethylacetal. S. M. McElvain and C. L. Aldridge. bibliog Am Chem Soc J 75:3987-93 Ag 20 '53

Ketene acetals; dimethylketene ethyleneacetal. S. M. McElvain and C. L. Aldridge. bibliog Am Chem Soc J 75:3993-6 Ag 20 '53

n-Propyl and *iso*propyl acetals of glyoxal; reaction of commercial aqueous glyoxal solutions with propan-1- and -2-ols. B. Duval, R. H. Hall and B. K. Howe. bibliog J Ap Chem 2:546-50 S '52

Open-chain acylals, formals and ethers containing terminal double bonds. C. D. Hurd and others. Am Chem Soc J 74:5128-30 O 20 '52

Reactions of ketene diethylacetal with 1,1,1-trichloro-2-methyl-2-propene. D. G. Kundiger and K. H. Froman. Am Chem Soc J 75:1744-5 Ap 5 '53

Reactions of the monoethylene ketal of 1,3-cyclohexanedione. M. W. Cronyn and G. H. Riesser. bibliog Am Chem Soc J 75:1247-8 Mr 5 '53

Steroidal cyclic ketals; the conversion of 11-keto- to 11α-hydroxysteroids; the preparation of 11-*epi*-hydrocortisone, and Δ^4-androstene-11α-ol-3,17-dione. S. Bernstein, R. Littell and J. H. Williams. bibliog Am Chem Soc J 75:1481-2 Mr 20 '53

Studies in organic sulfur compounds; cyclic ethylene and trimethylene hemithioketals. C. Djerassi and M. Gorman. bibliog Am Chem Soc J 75:3704-8 Ag 5 '53

Studies of hemiacetal formation in alcohol-aldehyde systems; refraction studies. F. E. McKenna, H. V. Tartar and E. C. Lingafelter. bibliog Am Chem Soc J 75:604-7 F 5 '53

Synthesis and polymerization of 6-hydroxy-4-hydroxymethylhexanal diethyl acetal and 5-hydroxy-4-hydroxymethylpentanal diethyl acetal. C. S. Marvel and J. J. Drysdale. Am Chem Soc J 75:4601-2 S 20 '53

ACETAMIDE

Binary freezing-point diagrams for acetamide with oleic and elaidic acids. R. R. Mod and E. L. Skau. J Phys Chem 56:1016-17 N '52

Preparation of N-bis-(2-cyanoethyl)-acetamide. H. Feuer and S. M. Pier. Am Chem Soc J 74:4706-7 S 20 '52

ACETAMIDINE

Confirmation of the structure of 2 : 6-dimethyl-4-pyrimidyl-methyl-lithium and some observations on the condensation of 1 : 3-diketones with acetamidine. J. C. Roberts. Chem Soc J p3065-8 Ag '52

ACETAMIDOMETHOXYTOLUENE

Nitration of 2-acetamido-5-methoxytoluene. J. MacMillan. Chem Soc J p4019-24 O '52

ACETAMIDOPHENAZINE

1-Acetamidophenazine, 5 : 8 : 13 : 14-tetra-aza-pentaphene, and 5 : 6 : 8 : 13 : 14-penta-aza-pentaphene. G. H. Cookson. Chem Soc J p 1328-31 My '53

ACETANILIDE

Aromatization and rearrangement of cyclic ketones; substituted acetanilides from cyclohexenone oximes. F. M. Berlinger and I. Ugelow. bibliog Am Chem Soc J 75:2635-9 Je 5 '53

ACETATE fibers

Celaperm, the acetate with sealed-in colour. A. F. Tesi. Can Chem Process 37:68 Ag '53

Cellulose acetate from raw material to haute couture. D. Finlayson. bibliog il Textile Inst J 44:P307-26; Discussion. P326-7 Ag '53

Cure water spotting on off-loom acetates. C. F. Bishop. Mod Textiles Mag 34:58 Ap '53

Ironing temperatures for rayon and acetate. il diags Mod Textiles Mag 34:36+ O '53

Modern textiles handbook. L. Mauer and H. Wechsler. il diag Mod Textiles Mag 33:42-5 N '52

Progress in acetate. G. Boyo. il Mod Textiles Mag 34:45 S '53

Rayon and acetate output revived strongly in 1952. Mod Textiles Mag 34:82 F '53

Ready for the loom; co-operation between research, engineering and production departments at Canadian celanese limited. E. A. Murphy. il diag Can Chem Process 37:40+ Ag '53

Silicone resins add more pluses to your acetate. P. Duggan and F. Fortess. il Mod Textiles Mag 34:31+ Mr '53

ACETATES

Acetobrominolysis of di- and polysaccharide acetates. A. Jeanes, C. A. Wilham and G. E. Hilbert. bibliog Am Chem Soc J 75:3667-73 Ag 5 '53

Acyclic acetates of dialdoses. M. L. Wolfrom and E. Usdin. bibliog Am Chem Soc J 75:4318-20 S 5 '53

Anomerization of sugar acetates; glucose pentaacetates in acetic acid-acetic anhydride mixtures catalyzed by sulfuric perchloric acids. E. P. Painter. bibliog Am Chem Soc J 75:1137-46 Mr 5 '53

Dextran triacetates. A. Jeanes and C. A. Wilham. bibliog Am Chem Soc J 74:5339-41 N 5 '52

Incorporation of acetate into cholesterol. W. G. Dauben and others. bibliog Am Chem Soc J 75:3038 Je 20 '53

N-substituted glycosylamines; acetates, benzoates, and methyl ethers. G. P. Ellis and J. Honeyman. Chem Soc J p2053-7 Je '52

Oxidation of glycols by aryl iodosoacetates; a kinetic study. K. H. Pausacker. Chem Soc J p 107-9 Ja '53

Reaction of saturated steroid 3-enol acetates with N-bromosuccinimide. M. Rubin and B. H. Armbrecht. bibliog Am Chem Soc J 75:3513-16 Jl 20 '53

Steroid 17(α)-acetates. Huang-Minlon and others. bibliog Am Chem Soc J 74:5394-6 N 5 '52

Studies in organic sulfur compounds; synthesis of 21-thiolacetates of adrenal cortical hormones. C. Djerassi and A. L. Nussbaum. bibliog Am Chem Soc J 75:3700-3 Ag 5 '53

See also

Cellulose acetate
Mercury acetate
Silver acetate

ACETIC acid

Acetic acid-ammonium acetate reactions; 2-isoimidazoles as intermediates in imidazole formation. M. Weiss. bibliog Am Chem Soc J 74:5193-5 O 20 '52

Acid-base equilibria in glacial acetic acid. T. L. Smith and J. H. Elliott. bibliog Am Chem Soc J 75:3566-71 Jl 20 '53

Action of acid chlorite on wheat straw. V. D. Harwood. bibliog(34 ref) Tappi 35:549-55 D '52

Characterization and degradation of isotopic acetic and lactic acids. S. Roseman. bibliog Am Chem Soc J 75:3854-6 Ag 5 '53

Composition of acetic acid-water mixtures. J. J. Kipling. Chem Soc J p2858-62 Jl '52

Conversion of arylacetic acids into ketones. G. L. Buchanan and J. McArdle. Chem Soc J p2944-5 Jl '52

Dissociation constants of acids in salt solutions; acetic acid. M. Kilpatrick and R. D. Eanes. bibliog Am Chem Soc J 75:586-7 F 5 '53

Distribution of acetic acid carbon in high fatty acids synthesized from acetic acid by the intact mouse. W. G. Dauben, E. Hoerger and J. W. Petersen. bibliog Am Chem Soc J 75:2347-51 My 20 '53

Entropy of ionization of protonic solvents. W. L. Jolly. bibliog Am Chem Soc J 74:6199-201 D 20 '52

Equilibrium between protium, deuterium and tritium in the system; hydrogen-acetic acid; isotopic fractionation factors in a catalytic hydrogenation. M. L. Eidinoff and others. bibliog Am Chem Soc J 74:5280-4 N 5 '52

ACETIC acid—*Continued*
- High energy helium ion irradiation of aqueous acetic acid solutions. W. M. Garrison and others. bibliog diag Am Chem Soc J 75:2459-64 My 20 '53
- High field conductance of acetic acid from 5 to 55° relative to hydrochloric acid. F. E. Bailey, jr. and A. Patterson, jr. bibliog Am Chem Soc J 74:4756-9 O 5 '52
- Isotopic exchange reactions in acetic acid and acetic anhydride. E. A. Evans, J. L. Huston and T. H. Norris. bibliog diags Am Chem Soc J 74:4985-91 O 20 '52
- Polymorphism of solid acetic acid in the acetic acid-benzene system. W. Tan, K. A. Krieger and J. G. Miller. bibliog Am Chem Soc J 74:6181-3 D 20 '52
- System acetic acid-water-dimethyl-aniline; liquid phase behavior and analysis. L. Garwin and P. O. Haddad. bibliog Anal Chem 25:435-7 Mr '53

See also
- Trichlorophenoxyacetic acid
- Trifluoroacetic acid

ACETIC anhydride
- Acetic oxalic anhydride. W. R. Edwards, jr. and W. M. Henley. bibliog Am Chem Soc J 75:3587-9 Jl 20 '53
- Dehydration and racemisation of *N*-acyl-L-aspartic acids by acetic anhydride. C. C. Barker. Chem Soc J p453-6 F '53
- Hydrolysis of acetic anhydride; catalysis by pyridine. S. L. Bafna and V. Gold. Chem Soc J p 1406-9 My '53
- Hydrolysis of acetic anhydride; the catalytic efficiency of a series of tertiary amines. V. Gold and E. G. Jefferson. Chem Soc J p 1409-15 My '53
- Isotopic exchange reactions in acetic acid and acetic anhydride. E. A. Evans, J. L. Huston and T. H. Norris. bibliog diags Am Chem Soc J 74:4985-91 O 20 '52
- Production of acetic anhydride from acetone; abstract and discussion. W. G. Daroux. Chem & Ind p237-8 Mr 14 '53
- Quantitative studies of the reactivities of mixed carboxylic anhydrides; the hydrolysis and decomposition of acetic formic anhydride. V. Gold and E. G. Jefferson. Chem Soc J p 1416-18 My '53
- Reaction between indole and acetic anhydride. J. E. Saxton. Chem Soc J p3592-4 S '52

ACETOACETATES
- Acetoacetyl coenzyme A as intermediate in the enzymatic breakdown and synthesis of acetoacetate. J. R. Stern, M. J. Coon and A. Del Campillo. bibliog Am Chem Soc J 75:1517-18 Mr 20 '53

ACETOACETIC acid
- Crystalline acetoacetic acid. R. C. Krueger. Am Chem Soc J 74:5536 N 5 '52
- Preparation and reactions of fluorine-containing acetoacetic esters. E. T. McBee and others. bibliog Am Chem Soc J 75:3152-3 Jl 5 '53
- Sodium dispersions in acetoacetic ester condensation. W. D. Frampton and J. F. Nobis. bibliog diags Ind & Eng Chem 45:404-10 F '53

ACETOBACTER
- Infrared spectra of bacterial cellulose. H. G. Shirk and G. A. Greathouse. bibliog Anal Chem 24:1774-5 N '52
- Oxidation of disaccharide alcohols by acetobacter suboxydans. D. French and others. bibliog Science 117:100 Ja 30 '53

ACETOIN. See Hydroxybutanone

ACETOLYSIS
- Role of neighboring groups in replacement reactions; polarimetric acetolysis rate of *trans*-2-acetoxycyclohexyl *p*-toluenesulfonate. S. Winstein and R. Heck. bibliog Am Chem Soc J 74:5584-6 N 20 '52
- Steroids and Walden inversion; acetolysis of the coprostanyl halides. R. J. Bridgewater and C. W. Shoppee. Chem Soc J p 1709-15 Je '53

ACETONAPHTHALIDE. See Naphthylacetamide

ACETONE
- Acetone plant to reduce France's dependence on solvent imports. il Chem & Eng N 31:1554-5 Ap 13 '53
- Anomalous diffusion of acetone into cellulose acetate. F. A. Long and others. bibliog J Chem Phys 21:1412-13 Ag '53
- Binary and ternary mechanisms in the iodination of acetone. R. P. Bell and P. Jones. Chem Soc J p88-92 Ja '53
- Diffusion of acetone into polyvinyl acetate above and below the second-order transition. R. J. Kokes and others. bibliog J Chem Phys 20:1711-16 N '52
- Electrokinetic relations in the quartz-acetone system. P. B. Lorenz. bibliog diags J Phys Chem 57:430-4 Ap '53
- Extraction of aluminum soap with acetone. K. J. Mysels, H. H. Pomeroy and G. H. Smith. bibliog Anal Chem 25:173-4 Ja '53
- High-quality rubber by acetone deresination of guayule. F. E. Clark and others. bibliog Ind & Eng Chem 45:572-6 Mr '53
- Intermolecular forces in acetone and methyl alcohol. V. Myers. J Chem Phys 20:1806 N '52
- Liquid-liquid equilibrium data for the system carbon tetrachloride-acetone-water. R. H. Buchanan. Ind & Eng Chem 44:2449-50 O '52
- Mechanism of acetone pyrolysis. J. R. McNesby and others. J Chem Phys 21:956 My '53
- Mechanism of acetone vapor fluorescence. H. J. Groh, jr. and others. bibliog J Chem Phys 21:115-18 Ja '53
- Mechanism of hydrolysis of acid chlorides; the effect of *p*-substituents in 95 per cent aqueous acetone. D. A. Brown and R. F. Hudson. Chem Soc J p883-7 Mr '53
- Photochemical reactions in the gas phase systems; di-*t*-butyl peroxide, peroxide-butadiene and acetone-butadiene. D. H. Volman and W. M. Graven. bibliog Am Chem Soc J 75:3111-16 Jl 5 '53
- Photochemical studies; liquid acetone-oxygen and liquid acetone-heptane-oxygen. P. E. Frankenburg and W. A. Noyes, jr. bibliog Am Chem Soc J 75:2847-50 Je 20 '53
- Production of acetic anhydride from acetone; abstract and discussion. W. G. Daroux. Chem & Ind p237-8 Mr 14 '53
- Reactions of methyl radicals with acetone. M. T. Jaquiss, J. S. Roberts and M. Szwarc. Am Chem Soc J 74:6005-7 D 5 '52
- Specific effects in acid catalysis by ion exchange resins; hydrolysis of esters in 70 per cent aqueous acetone. S. A. Bernhard and L. P. Hammett. bibliog Am Chem Soc J 75:1798-800 Ap 20 '53
- Spectrophotometric determination of uranium by thiocyanate method in acetone medium. C. E. Crouthamel and C. E. Johnson. bibliog Anal Chem 24:1780-3 N '52
- Vapor-liquid equilibria for ethyl alcohol binary systems. L. R. Hellwig and M. Van Winkle. bibliog Ind & Eng Chem 45:624-9 Mr '53

Analysis
- Rapid test for water in acetone. A. E. Bender and others. Chem & Ind p293-4 Mr 28 '53

Manufacture
- Phenol and acetone via cumene oxidation. il Can Chem Process 37:50+ My '53

ACETONEDICARBOXYLIC acid. See Oxoglutaric acid

ACETONITRILE
- Polarographic studies in acetonitrile; behavior of inorganic salts. S. Wawzonek and M. E. Runner. bibliog Electrochem Soc J 99:457-9 N '52
- Production of acetonitrile and other low molecular weight nitriles. W. I. Denton and R. B. Bishop. bibliog flow diag Ind & Eng Chem 45:282-6 F '53
- Spectrophotometric study of the tetrachloroiodide complex in acetonitrile. A. I. Popov and J. N. Jessup. bibliog Am Chem Soc J 74:6127-8 D 5 '52
- Stereochemistry of arylidenecyanoacetic acids and arylarylideneacetonitriles. W. Baker and C. S. Howes. Chem Soc J p 119-24 Ja '53

ACETOPHENONE
- Acetophenone. H. J. Sanders, H. F. Keag and H. S. McCullough. bibliog flow sheets il diags Ind & Eng Chem 45:2-14 Ja '53
- 2 : 5-Dihydroxy-3 : 6-dimethoxyacetophenone and its degradation by bromine. G. R. Ramage and C. V. Stead. Chem Soc J p 1393-5 My '53

ACETOPHENONE—*Continued*

Infrared spectra of lignin and related compounds; characteristic carbonyl and hydroxyl frequencies of some flavanones, flavones, chalcones and acetophenones. H. L. Hergert and E. F. Kurth. bibliog Am Chem Soc J 75:1622-5 Ap 5 '53

Mannich bases derived from α-phenoxyacetophenones. J. B. Wright and E. H. Lincoln. bibliog Am Chem Soc J 74:6301-2 D 20 '52

Structure of the diphenacyl halides. H. H. Wasserman, N. E. Aubrey and H. E. Zimmerman. bibliog Am Chem Soc J 75:96-8 Ja 5 '53

Ultraviolet absorption and fluorescence spectra of acetophenone. R. D. Vanselow and A. B. F. Duncan. bibliog Am Chem Soc J 75:829-32 F 20 '53

p-Vinylacetophenone; the disproportionation of *p*-acetophenylmethylcarbinol. J. L. R. Williams. Am Chem Soc J 75:2779-81 Je 5 '53

ACETOXYCHOLESTENEDIOL

4β-Acetoxy-Δ^5-cholestene-3β,7α-diol. R. W. Jailer, D. K. Fukushima and S. Lieberman. Am Chem Soc J 74:5220-1 O 20 '52

ACETYLACETONE

Preparation of tris-acetylacetone-rhodium(III) and -iridium(III). F. P. Dwyer and A. M. Sargeson. Am Chem Soc J 75:984-5 F 20 '53

ACETYLAMINOFLUORENE

Analogs of the carcinogen 2-acetylaminofluorene; the isomeric 4-acetylaminofluorene. J. H. Weisburger, E. K. Weisburger and H. P. Morris. bibliog Am Chem Soc J 74:4540-3 S 20 '52

ACETYL chloride

Addition reactions of quinones; the so-called uncatalysed addition of acetyl chloride to benzoquinone and tolu-2 : 5-quinone. H. Burton and P. F. G. Praill. Chem Soc J p2546-8 Jl '52

Reactions of acetyl chloride with zirconium alkoxides. D. C. Bradley and others. Chem Soc J p4609-12 D '52

Studies on 4-hydroxycoumarins; the mechanism for the reaction of 4-hydroxycoumarin with aliphatic acid chlorides. H. R. Eisenhauer and K. P. Link. bibliog Am Chem Soc J 75:2044-5 My 5 '53

Uncatalyzed condensation of 1,1-diphenylethylene with chlorinated acetyl chlorides. F. Bergmann and J. Klein. Am Chem Soc J 75:4333-4 S 5 '53

ACETYLCHOLINE

Influence of peripheral cholinergic blocking drugs on survival time in X-ray irradiated mice. T. J. Haley and B. M. Rhodes. bibliog Science 117:139-40 F 6 '53

ACETYLCHOLINESTERASE

Method for the preparation of a stable brain fraction containing acetylcholinesterase. H. Tauber. bibliog Am Chem Soc J 75:326-8 Ja 20 '53

Reactivation of acetylcholinesterase inhibited by alkylphosphates. I. B. Wilson and E. K. Meislich. Am Chem Soc J 75:4628-9 S 20 '53

ACETYL compounds

2-Acetyl*cyclo*hexane-1 : 3-dione. H. Smith. Chem Soc J p803-10 Mr '53

Vapor pressure of acetylated amino acid ethyl esters. E. F. Mellon, S. J. Viola and S. R. Hoover. J Phys Chem 57:607-8 Je '53

ACETYL group

Stability of the acetyl radical. A. J. C. Nicholson. bibliog J Chem Phys 20:1811 N '52

ACETYLIMIDAZOLE

Enzymatic synthesis of N-acetylimidazole. E. R. Stadtman and F. H. White, jr. bibliog Am Chem Soc J 75:2022 Ap 20 '53

ACETYLMETHYL carbinol

Accumulation of acetylmethylcarbinol (3-hydroxy-2-butanone) by acetate-requiring mutants of neurospora crassa. B. S. Strauss. bibliog Am Chem Soc J 75:1012 F 20 '53

ACETYL pantetheine

S-acetyl pantetheine (acetyl LBF). T. E. King and others. bibliog Science 117:439-40 Ap 17 '53

ACETYL perchlorate

Acylation and allied reactions catalysed by strong acids; a comparison of the action of acetyl and benzyl perchlorates on benzene and related compounds. H. Burton and P. F. G. Praill. diag Chem Soc J p827-32 Mr '53

ACETYLSERINE

Synthesis of poly-(*O*-acetyl-DL-serine) and of poly-DL-serine. M. Frankel, S. Cordova and M. Breuer. Chem Soc J p 1991-4 Jl '53

ACETYLATION

Acetylation of amylaceous polysaccharides. A. Jeanes and R. W. Jones. bibliog Am Chem Soc J 74:6116-18 D 5 '52

Acetylation of imidazole. J. H. Boyer. Am Chem Soc J 74:6274-5 D 20 '52

Analytical acetylation; application to coal hydrogenation products. C. W. DeWalt, jr. and R. A. Glenn. bibliog Anal Chem 24:1789-95 N '52

Enzymatic mechanism of coenzyme A acetylation with adenosine triphosphate and acetate. M. E. Jones and others. bibliog Am Chem Soc 75:3285-6 Jl 5 '53

Friedel-Crafts acetylation of *p-tert.*-butyltoluene. E. P. Taylor and G. E. Watts. Chem Soc J p5054 D '52

Reaction of indane and tetralin with excess of acetylating agent. G. Baddeley, E. Wrench and R. Williamson. Chem Soc J p2110-15 Jl '53

Relative rates of acetylation of the hydroxyl groups in cellulose acetate. C. J. Malm and others. bibliog Am Chem Soc J 75:80-4 Ja 5 '53

Studies on cellulose acetate; combination of sulfuric acid during the acetylation of cellulose and the mechanism of acetylation. T. Araki. bibliog Textile Res J 22:630-6 O '52

Treatment of cellulose prior to acetylation. C. J. Malm and others. bibliog Ind & Eng Chem 44:2904-9 D '52

ACETYLENE

Acetylene and ethylene esters; recent synthetic work in Italy. Chem Age (Lond) 67:539-40 O 18 '52

Acetylene; its production and uses. C. Bordenca. Can Chem Process 37:58+ Jl '53

Acetylene studies; dehydration of dialkylethynylcarbinols. E. D. Bergmann and Y. Sprinzak. bibliog J Ap Chem 3:97-8 Mr '53

Acetylene studies; preparation and reactions of the acetyldialkylcarbinols. E. D. Bergmann and D. F. Herman. bibliog J Ap Chem 3:42-8 Ja '53

Acetylene studies; the condensation of acetylene with aldehydes and ketones. E. D. Bergmann, M. Sulzbacher and D. F. Herman. bibliog J Ap Chem 3:39-42 Ja '53

Distribution of alpha ray energy in radiation chemistry. S. C. Lind. J Phys Chem 56:920 O '52

Excited states of acetylene; description and analysis of the near-ultra-violet absorption spectra of acetylene and dideuteroacetylene; nature of the excited state. C. K. Ingold and G. W. King. pl diags Chem Soc J p2725-44 S '53

Excited states of acetylene; experimental methods of recording the near-ultra-violet absorption spectra of acetylenes. C. K. Ingold and G. W. King. Chem Soc J p2704-7 S '53

Excited states of acetylene; measured and calculated frequencies in the near-ultra-violet absorption spectra of acetylene and dideuteroacetylene; vibrational and rotational energies of the *trans*-bent excited state. C. K. Ingold and G. W. King. Chem Soc J p2745-55 S '53

Excited states of acetylene; possibilities of interaction between σ-bond hybridisation and π-electron excitation with resulting changes of shape during transitions. C. K. Ingold and G. W. King. diags Chem Soc J p2702-4 S '53

Excited states of acetylene; theoretical methods for analysis of near-ultra-violet band-systems of acetylenes. C. K. Ingold and G. W. King. diags Chem Soc J p2708-24 S '53

Hydrogen transfer reactions accompanying the cobalt catalyzed synthesis from acetylene, carbon monoxide and methanol. P. Pino and A. Miglierina. bibliog Am Chem Soc J 74:5551 N 5 '52

Investigation of the production of acetylene by flames of methane and oxygen. P. H. Kydd. Am Chem Soc J 74:5536-7 N 5 '52

ACETYLENE—*Continued*

Kinetics of OH radicals from flame emission spectra; a study of the acetylene-oxygen flame. K. E. Shuler and H. P. Broida. bibliog il J Chem Phys 20:1383-8 S '52

Kinetics of the gas phase reaction between acetylene and ozone. R. D. Cadle and C. Schadt. J Chem Phys 21:163 Ja '53

Metal-catalysed reaction between acetylene and hydrogen; the reaction over rhodium and iridium. J. Sheridan and W. D. Reid. Chem Soc J p2962-6 Ag '52

New plant, new process, new price. il Chem W 72:44-6+ F 14 '53

Reaction mechanisms; hydrazine from ammonia and acetylene from methane; abstract. M. Burton. Chem & Eng N 31:1405-6 Ap 6 '53

Reaction of acetylene with acrylic compounds. T. L. Cairns and others. bibliog Am Chem Soc J 74:5636-40 N 20 '52

Reaction of trifluoroacetone with acetylene. P. Tarrant, D. A. Warner and R. E. Taylor. bibliog Am Chem Soc J 75:4360-2 S 5 '53

Symposium on acetylene chemistry; abstracts. Chem & Ind p239-42 Mr 14 '53

See also

Oxyacetylene cutting

Oxyacetylene flame

Oxyacetylene welding

Manufacture

Aliphatic building blocks for petrochemical textiles. P. W. Sherwood. bibliog il Pet Processing 7:1633-8 N '52

Back of the Wulff process. F. Breese. il Pet Processing 8:383 Mr '53

Now acetylene joins petrochemicals. C. F. Ruebensaal. diag Chem Eng 59:159-62 N '52

What acetylene costs; comparison between carbide and Wulff process. T. Weaver. flow diag diags Pet Refiner 32:151-6 My '53; Excerpts. Chem Eng Prog 49:35-9 Ja '53

Wulff process for acetylene from hydrocarbons. M. J. P. Bogart and others. flow diag il diag Pet Processing 8:377-82 Mr '53

ACETYLENE compounds

Acetylene studies; preparation and reactions of the acetyldialkylcarbinols. E. D. Bergmann and D. F. Herman. bibliog J Ap Chem 3:42-8 Ja '53

Acetylene studies; the condensation of acetylene with aldehydes and ketones. E. D. Bergmann, M. Sulzbacher and D. F. Herman. bibliog J Ap Chem 3:39-42 Ja '53

Acetylenic compounds from plants of the compositae family; abstract. N. A. Sörensen. bibliog Chem & Ind p240-1 Mr 14 '53

Acetylenic silicon derivatives. K. C. Frisch and R. B. Young. Am Chem Soc J 74:4853-6 O '52

Acetylenic strained hydrocarbons. W. Weltner, jr. bibliog diags Am Chem Soc J 75:4224-31 S 5 '53

Preparation of some acetylenic primary amines. G. F. Hennion and E. G. Teach. bibliog Am Chem Soc J 75:1653-4 Ap 5 '53

Reactions of acetylenic primary amines. G. F. Hennion and E. G. Teach. bibliog Am Chem Soc J 75:4297-300 S 5 '53

Reactions of fluorocarbon radicals; addition to trifluoromethyl-substituted acetylenes. R. N. Haszeldine. Chem Soc J p3490-8 S '52

Reactions of fluorocarbon radicals; the hydration of trifluoromethyl- and pentafluoroethyl-substituted acetylenes. R. N. Haszeldine and K. Leedham. Chem Soc J p3483-90 S '52

Researches on acetylenic compounds; a new method for the introduction of the acetylenic linkage. G. Eglinton, E. R. H. Jones and M. C. Whiting. Chem Soc J p2873-82 Jl '52

Researches on acetylenic compounds; further studies on the synthesis of diacetylenic glycols. J. B. Armitage and others. Chem Soc J p 1998-2005 Je '52

Researches on acetylenic compounds; general routes to aliphatic polyacetylenic hydrocarbons and glycols. C. L. Cook, E. R. H. Jones and M. C. Whiting. Chem Soc J p2883-91 Jl '52

Researches on acetylenic compounds; the influence of propargylic substituents on the ultra-violet absorption of diacetylenes. J. B. Armitage and M. C. Whiting. Chem Soc J p2005-10 Je '52

Researches on acetylenic compounds; the preparation of monosubstituted derivatives of diacetylenes. J. B. Armitage, E. R. H. Jones and M. C. Whiting. Chem Soc J p 1993-8 Je '52

Researches on acetylenic compounds; the synthesis of conjugated tetra-acetylenic compounds. J. B. Armitage, E. R. H. Jones and M. C. Whiting. Chem Soc J p2014-18 Je '52

Researches on acetylenic compounds; the synthesis of symmetrical conjugated tri-acetylenic compounds. J. B. Armitage and others. Chem Soc J p2010-14 Je '52

Stereochemistry of reduction of the acetylenic bond. B. S. Rabinovitch and F. S. Looney. bibliog Am Chem Soc J 75:2652-4 Je 5 '53

Studies in the polyene series; acetylenic alcohols from methoxyacetone, and their conversion into unsaturated aldehydes. R. Ahmad and B. C. L. Weedon. Chem Soc J p2125-9 Jl '53

Synthesis of long-chain αω-dihalides by means of acetylenic compounds. A. W. Nineham. Chem Soc J p2601-7 S '53

ACHESON medal

Introduction with comments on the medalist's achievements. C. M. Slack. Electrochem Soc J 100:sup39C-40C F '53

ACHROMYCIN. See Antibiotic substances

ACID containers

Polyethylene shippers gaining favor in chemical industry. il Mod Packaging 27:132-5 O '53

Square for acids; box-shaped polyethylene carboy. il Mod Packaging 26:113 Ja '53

ACID gel fracturing. See Petroleum—Production methods

ACID handling

Venting drum plug employing a carbon disk. T. W. Rodes. il diags Ind & Eng Chem 44: sup 137A-8A+ N '52

See also

Carboys

ACID resisting materials

Acidproof cement lining halts corrosion in vacuum flasher column. D. H. Stormont. il Oil & Gas J 51:255-7 Mr 23 '53

Chart shows corrosion of copper bearing Hi-resist by H_2SO_4 as function of temperature and concentration. M. G. Fontana. Ind & Eng Chem 45:sup91A-2A+ Mr '53

Clay flue liners for unusual venting system. il Heat & Ven 50:110 O '53

Corrosion of 18-8S by nitric acid as a function of temperature. M. G. Fontana. Ind & Eng Chem 44:sup 101A-2A+ N '52

Corrosion resistance to H_2SO_4 under non-oxidizing conditions. M. G. Fontana. Ind & Eng Chem 45:sup93A-5A Ap '53

Embrittlement of zirconium and tantalum in hydrochloric acid. L. B. Golden, I. R. Lane, jr. and W. L. Acherman. bibliog il Ind & Eng Chem 45:782-6 Ap '53

Holding down corrosion; special corrosion-resistant stainless steel. Steel 132:96 F 9 '53

Influence of carbon content on the acid resistance of titanium- and niobium-stabilized 18 Cr, 8-14 Ni steels. H. T. Shirley and J. E. Truman. 2pls Iron & Steel Inst J 172:377-80 D '52

Making concrete pipe acid-resistant. il Concrete 61:30 Jl '53

Three classes of metals and alloys for handling straight nitric acid. M. G. Fontana. Ind & Eng Chem 44:sup 101A-2A+ O '52

See also

Corrosion resisting materials

Glass lining

Nickel alloys

Steel, Stainless

Testing

Uniform test procedures evaluate corrosion resistance of titanium. G. C. Kiefer. Iron Age 170:170-3 D 4 '52

ACID waste

Acid waste problem put into perspective; problem of steel pickling wastes. Eng N 149:38 D 25 '52

How to avoid stream pollution from acid mine drainage. il diag Coal Age 58:96-101 F '53

ACID waste—*Continued*

Preventing formation of acid waters in Pennsylvania strip coal mines. H. R. Murdock. Ind & Eng Chem 45:sup 101A-3A F '53

Analysis

Analysis of sulfuric acid and acid sludges from petroleum processes. F. T. Weiss and others. bibliog Anal Chem 25:277-84 F '53

ACIDATION of oil wells. See Petroleum—Acidation of wells

ACIDIMETRY

Determination of polythionic acids. R. R. Jay. bibliog Anal Chem 25:288-90 F '53

ACIDITY

Acid-base equilibria in glacial acetic acid. T. L. Smith and J. H. Elliott. bibliog Am Chem Soc J 75:3566-71 Jl 20 '53

Acid strength of halogens. R. L. Scott. bibliog Am Chem Soc J 75:1550-2 Ap 5 '53

Acid strength of iodine monochloride, antimony trichloride and picric acid with reference to the bases pyridine and aniline in nitrobenzene. I. M. Kolthoff, D. Stŏcesocá and T. S. Lee. bibliog Am Chem Soc J 75:1834-9 Ap 20 '53

Acidity and basicity scale in the system ethanol-water; the evaluation of degenerate activity coefficients for single ions. B. Gutbezahl and E. Grunwald. bibliog Am Chem Soc J 75:565-74 F 5 '53

Acidity and infrared absorption of fluorinated alcohols. A. L. Henne and W. C. Francis. Am Chem Soc J 75:991-2 F 20 '53

Comparative effect of oil acidity and resin acidity in aluminum vehicles, by the Pittsburgh club. Paint Oil & Chem R 115:95-6 D 4 '52; Abstract. Oil Paint & Drug Rep 162:78 D 1 '52

Dependence of the rate of hydration of isobutene on the acidity function, H_0, and mechanism for olefin hydration in aqueous acids. R. W. Taft, jr. bibliog Am Chem Soc J 74:5372-6 N 5 '52

Influence of acidity function and water concentration on the rate of hydrolysis of *p*-nitrobenzophenone diethylketal in aqueous ethanol. W. W. Kaeding and L. J. Andrews. bibliog Am Chem Soc J 74:6189-93 D 20 '52

Relative acidity of water, methanol and other weak acids in isopropyl alcohol solution. J. Hine and M. Hine. bibliog Am Chem Soc J 74:5266-71 N 5 '52

Significance of basicity and acidity of nuclei in cyanine type condensations. L. G. S. Brooker and others. bibliog Am Chem Soc J 75:4335-6 S 5 '53

See also

Hydrogen ion concentration

ACIDS

Acid-base catalysis in non-aqueous solvents; the depolymerisation of paraldehyde in ethereal solutions of proton acids and Lewis acids. R. P. Bell and B. G. Skinner. Chem Soc J p2955-9 Ag '52

Evidence for the existence of radicals in the presence of Lewis acids. J. M. Hirshon, D. M. Gardner and G. K. Fraenkel. bibliog Am Chem Soc J 75:4115 Ag 20 '53

Mechanical properties of cotton fibers; effect of acids on fibers under tension. J. A. Lasater and others. bibliog Textile Res J 23:481-8 Jl '53

Mechanism of the benzidine rearrangement; general acid catalysts. M. D. Cohen and G. S. Hammond. bibliog Am Chem Soc J 75:880-3 F 20 '53

Mechanism of the reaction of aniline with furfural in the presence of acid. W. M. Foley, jr., G. E. Sanford and H. McKennis, jr. bibliog Am Chem Soc J 74:5489-91 N 5 '52

New method for the preparation of thio acids and application to peptide chemistry. M. W. Cronyn and J. Jiu. Am Chem Soc J 74:4726 S 20 '52

Rates of ionization of pseudo acids; relation between rates and equilibria. R. G. Pearson and R. L. Dillon. bibliog Am Chem Soc J 75:2439-43 My 20 '53

Salt and acid effects on the thallous-thallic exchange reaction. R. W. Dodson. bibliog Am Chem Soc J 75:1795-7 Ap 20 '53

Some acid figures for Canada. Can Chem Process 37:20 Je 1 '53

See also names of acids, e.g.

Acetic acid	Nitric acid
Hydrochloric acid	Phosphoric acid
Hydrocyanic acid	Sulfuric acid

Analysis

Determination of free acid in the presence of hydrolyzable ions. L. P. Pepkowitz, W. W. Sabol and D. Dutina. bibliog diags Anal Chem 24:1956-9 D '52

See also

Carboxylic acids—Analysis

ACIDS, Fatty

Agent from E. coli causing hemorrhage and regression of an experimental mouse tumor; the component fatty acids of the phospholipide moiety. M. Ikawa and others. bibliog Am Chem Soc J 75:1035-8 Mr 5 '53

Anodic syntheses; chain extension of fatty acids by an isoprene unit. R. P. Linstead and others. Chem Soc J p3621-4 S '52

Application of the Arndt-Eistert reaction to halogenated aliphatic acids. F. Brown and W. K. R. Musgrave. Chem Soc J p2087-9 Jl '53

Condensation of long-chain fatty acids with polysaccharides and proteins. A. S. Jones, M. A. G. Kaye and M. Stacey. Chem Soc J p5016-20 D '52

Countercurrent distribution of methyl esters of higher fat acids. J. A. Cannon, K. T. Zilch and H. J. Dutton. bibliog Anal Chem 24:1530-2 O '52

Distilling fatty acid; four suggestions. R. H. Potts. Chem Eng 59:344+ D '52

Distribution of acetic acid carbon in high fatty acids synthesized from acetic acid by the intact mouse. W. G. Dauben, E. Hoerger and J. W. Petersen. bibliog Am Chem Soc J 75:2347-51 My 20 '53

Fatty acid ketones. Chem Eng 60:266+ Mr '53

Formation of radioactive cholesterol and fatty acids from C^{14}-labeled acetate by rat liver homogenates. N. L. R. Bucher. bibliog Am Chem Soc J 75:498 Ja 20 '53

Investigation of the collecting effects of fatty acids in tall oil on oxide minerals, particularly on ilmenite. R. T. Hukki and O. Vartiainen. bibliog il Min Eng 5:Trans 818-20 Ag '53

Isolation from shark (galeorhinus australis) liver oil of a multi-branched C_{18} saturated fatty acid fraction. I. M. Morice and F. B. Shorland. bibliog Chem & Ind p 1267-8 D 27 '52

Oxidation of monoethenoid fatty acids and esters; catalytic oxidation of elaidic acid, methyl elaidate, and *n*-propyl elaidate; the oxidation products. J. H. Skellon and M. N. Thruston. Chem Soc J p 138-42 Ja '53

Oxidation of monoethenoid fatty acids and esters; the preparation and catalytic oxidation of highly purified brassidic acid by gaseous oxygen. J. H. Skellon and C. G. Taylor. Chem Soc J p 1433-5 My '53

Recent advances in fatty acid technology. B. J. Henderson. il Can Chem Process 36:44+ D '52

Reconstruction of the fatty acid oxidizing system of animal tissues. H. Beinert and others. bibliog Am Chem Soc J 75:4111-12 Ag 20 '53

Self-sterilization of human skin; abstract. C. R. Ricketts and others. Soap & San Chem 28:148+ O '52

Some new metallic compounds of unsaturated fatty acids; their preparation and properties. J. H. Skellon and J. W. Spence. bibliog J Ap Chem 3:10-14 Ja '53

Synthesis of fatty acids and fats in ripening oilseeds; abstract. T. P. Hilditch. Chem & Ind p320 Ap 4 '53

Unsaturated fatty acids; the synthesis of erythrogenic (isanic) and other acetylenic acids. H. K. Black and B. C. L. Weedon. Chem Soc J p 1785-93 Je '53

See also

Amino acids	Palmitic acid
Linoleic acid	Stearic acid
Oleic acid	

ACIDS, Fatty—*Continued*

Analysis

Determination of fatty acids by potentiometric titration; microgram analysis. B. W. Grunbaum, F. L. Schaffer and P. L. Kirk. bibliog diag Anal Chem 25:480-2 Mr '53

Quantitative isolation of fatty acids in petroleum oils. L. R. Dickson and R. R. Jay. Pet Eng 25:C45-6 Mr '53

Manufacture

Fatty acids tailored for Canadian alkyd industry. J. V. Lang. il Can Chem Process 37:42-3 My '53

Novel still design pays off; Wurster & Sanger unit gets more and better refined fatty acids. il diag Chem Eng 59:228+ N '52

Statistics

Fatty acids production during 1952. Oil Paint & Drug Rep 164:7 Ag 10 '53

ACIDS, Organic

Base-catalyzed condensation reactions of *p*-hydroxybenzaldehyde and higher keto acids. G. M. Picha. Am Chem Soc J 75:3155-9 Jl 5 '53

Decomposition of organic acids in the presence of lead tetraacetate. W. A. Mosher and C. L. Kehr. bibliog Am Chem Soc J 75:3172-6 Jl 5 '53

Elimination reactions of esters. R. P. Linstead, L. N. Owen and R. F. Webb. Chem Soc J p 1211-31 Ap '53

Nonfixation of carbon dioxide into organic acids in blood. M. A. Williams and others. Science 117:502-4 My 8 '53

Preparation and isomerisation of aromatic ketones and keto-acids. G. Baddeley and R. Williamson. Chem Soc J p2120-5 Jl '53

See also

Acetic acid
Acids, Fatty
Amino acids
Carboxylic acids
Dicarboxylic acids

Analysis

Identification of some organic acids by paper chromatography. A. R. Jones, E. J. Dowling and W. J. Skraba. bibliog Anal Chem 25:394-6 Mr '53

Rapid method for paper chromatography of organic acids. F. W. Denison, jr. and E. F. Phares. bibliog diag Anal Chem 24:1628-9 O '52

ACONITIC acid

Coupling of aconitic acid and itaconic acid with certain diazonium chlorides. K. B. L. Mathur, M. Krishnamurti and U. K. Pandit. bibliog Am Chem Soc J 75:3240-1 Jl 5 '53

ACOUSTIC filter. See Sound filters

ACOUSTIC impedance

Apparatus for absolute measurement of analogous impedance of acoustic elements. G. B. Thurston. il diags Acoustical Soc Am J 24:649-52 N '52

Periodic fluid flow through circular orifices. G. B. Thurston and C. E. Martin, jr. bibliog il diag Acoustical Soc Am J 25:26-31 Ja '53

Physical interpretation of the expression for an outgoing wave in cylindrical coordinates. M. C. Junger. diags Acoustical Soc Am J 25:40-7 Ja '53

Small-signal impedance of short tubes. A. W. Nolle. bibliog Acoustical Soc Am J 25:32-9 Ja '53

ACOUSTIC interferometer. See Interferometers, Sonic

ACOUSTIC laboratories. See Sound laboratories

ACOUSTICAL society of America

Meeting, 44th, San Diego, Nov. 13-15; with abstracts of papers. Acoustical Soc Am J 25:180-94 Ja '53

ACOUSTICS. See Sound

ACOUSTICS, Architectural

Accuracy of reverberation time measurements with warble tones and white noise. W. Furrer and A. Lauber. Acoustical Soc Am J 25:90-1 Ja '53

Acoustic significance of the amplitude and phase of harmonics present in a source of sound in a room. J. G. Robbins. il Acoustical Soc Am J 24:380-3 Jl '52

American and European standard methods for measurement of sound transmission in buildings. P. H. Parkin. Acoustical Soc Am J 24:542-3 S '52

Calculating sound-absorbing effect of acoustical baffles in lighting systems. E. H. Church. bibliog il diags Illum Eng 48:489-94 S '53

See also

Sound absorbent materials

ACRIDINE

Catalytic synthesis of heterocycles; dehydrocyclization of anils to acridine and carbazole. C. Hansch, F. Gschwend and J. Bamesberger. bibliog Am Chem Soc J 74:4554-5 S 20 '52

Rates of hydrolysis of some acridine antimalarials. D. L. Hammick, S. F. Mason and G. W. Meacock. Chem Soc J p4745-7 D '52

Reduction potentials and unsaturation energy changes in electrode reactions leading to the formation of acridyl radicals. N. S. Hush. bibliog J Chem Phys 20:1660-1 O '52

ACRIDONE

Bromination of acridone. R. M. Acheson and M. J. T. Robinson. Chem Soc J p232-8 Ja '53

Bromination product of acridone. S. Kruger. Chem Soc J p3648-9 S '52

ACRILAN. See Textile fibers, Synthetic

ACROLEIN

Reactions of acrolein and related compounds; preparation of sultones. C. W. Smith, D. G. Norton and S. A. Ballard. bibliog Am Chem Soc J 75:748-9 F 5 '53

Reactions of acrolein and related compounds; reactions with ketimines. C. W. Smith, D. G. Norton and S. A. Ballard. bibliog Am Chem Soc J 75:3316-18 Jl 20 '53

Reactions of free radicals with aldehydes; the reactions of methyl and *t*-butoxy radicals with acetaldehyde and acrolein. D. H. Volman and R. K. Brinton. bibliog J Chem Phys 20:1764-8 N '52

ACRYLATES

Acrylates development; abstract. E. H. Riddle. Oil Paint & Drug Rep 163:5+ Je 8 '53

Acrylates of difficultly esterified alcohols. A. H. Ahlbrecht and D. W. Codding. Am Chem Soc J 75:984 F 20 '53

Acrylic elastomers; preparation and properties of vulcanizable acrylic ester-acrylonitrile copolymers. E. M. Filachione and others. bibliog Rubber Age 72:631-7 F '53

Liquid polymers of acrylic esters. C. E. Rehberg and J. Siciliano. bibliog Ind & Eng Chem 44:2864-6 D '52

Lower cost acrylics from Rohm & Haas process. il Chem & Eng N 31:560+ F 9 '53

New plant, new process, new price. il Chem W 72:44-6+ F 14 '53; Oil & Gas J 51:161 Mr 23 '53; Chem Eng 60:114-15 Ap '53

Pyrolysis of poly-(*sec.*-butyl α-chloroacrylate). J. W. C. Crawford and D. Plant. Chem Soc J p4492-5 N '52

Reaction of acetylene with acrylic compounds. T. L. Cairns and others. bibliog Am Chem Soc J 74:5636-40 N 20 '52

Structure of the polymers of α-haloacrylates. C. S. Marvel and others. bibliog Am Chem Soc J 75:2326-30 My 20 '53

See also

Ethyl acrylate
Methyl acrylate

ACRYLIC acid

β-Bromo-α-chloro-β-formylacrylic acid. E. Kuh and R. L. Shepard. Am Chem Soc J 75:4597-9 S 20 '53

Electrolytic properties of aqueous solutions of polyacrylic acid and sodium hydroxide; the rate of sodium ion exchange between polyacrylate and free sodium ions. F. T. Wall and others. J Chem Phys 20:1206-11 Ag '52

β-(*p*-Nitrobenzoyl-acrylic acid and *p*-nitro acrylophenone. H. F. Ginsberg, I. Lederman and D. Papa. bibliog Am Chem Soc J 75:4587-9 S 20 '53

Preparation and isomerisation of β-aroylacrylic acids. G. Baddeley, G. Holt and S. M. Makar. Chem Soc J p3289-92 Ag '52

Reaction of polyacrylic acid with nylon. A. C. Nuessle and R. F. Crawford. Textile Res J 23:462-8 Jl '53

ACRYLIC plastics. See Methacrylates; Plastic materials

ACRYLONITRILE

Acrylic elastomers; preparation and properties of vulcanizable acrylic ester-acrylonitrile copolymers. E. M. Filachione and others. bibliog Rubber Age 72:631-7 F '53

Aliphatic building blocks for petrochemical textiles; the monomers. P. W. Sherwood. bibliog il Pet Processing 7:1804-7+ D '52

Solvent action of organic substances on polyacrylonitrile. E. E. Walker. bibliog J Ap Chem 2:470-81 Ag '52; Discussion. Chem & Ind p320-2 Ap 4 '53

Studies on the gamma-radiation-induced polymerization of acrylonitrile. I. A. Berstein and others. bibliog J Chem Phys 21:1303-4 Jl '53

T-7 holds promise for cotton textiles. il Manuf Rec 122:29 S '53

See also

Krilium

ACTINIDE series

Stabilities of +4 and +5 oxidation states of the actinide elements; the Np(IV)-Np(V) couple in perchloric acid solution. L. B. Magnusson and J. R. Huizenga. bibliog Am Chem Soc J 75:2242-6 My 5 '53

ACTINIUM K. See Francium

ACTINOMETERS

Calorimetric calibration of gamma-ray actinometers. C. J. Hochanadel and J. A. Ghormley. bibliog diags J Chem Phys 21:880-5 My '53

ACTINOMETRY. See Ultraviolet rays—Measurement

ACTINOMYCETES

Actinomycetes in the Oklahoma City water supply. J. K. G. Silvey and A. W. Roach. bibliog il Am Water Works Assn J 45:409-16 Ap '53

ACTINOMYCIN

Actinomycin; studies on the chromophoric grouping. A. W. Johnson, A. R. Todd and L. C. Vining. Chem Soc J p2672-9 Jl '52

ACTIVATED carbon. See Carbon, Activated

ACTIVATED charcoal. See Carbon, Activated

ACTIVATED sludge method. See Sewage disposal—Activated sludge method

ACTIVATION

Influence of the solvent on rates of ionization, entropies, and heats of activation. R. G. Pearson. bibliog J Chem Phys 20:1478-80 S '52

Separation of relative free energies of activation to three basic contributing factors and the relationship of these to structure. R. W. Taft, jr. bibliog Am Chem Soc J 75:4534-7 S 20 '53

Variable activation energy and the motion of lattice defects. G. J. Dienes. Phys R 91:1283-4 S 1 '53

Viscoelastic properties as functions of the distribution of activation energies. W. J. Lyons. bibliog J Ap Phys 24:217-21 F '53

See also

Radioactivity

ACTIVITY coefficients

Activity coefficients of nonelectrolyte solutes in aqueous salt solutions. F. A. Long and W. F. McDevit. Chem R 51:119-69 bibliog (180 ref, p 154-7) Ag '52

Effect of dipolar ions upon the activity coefficients of neutral molecules. A. P. Altshuller. bibliog J Phys Chem 57:375-6 Mr '53

Ionization constants of taurine and its activity coefficient in hydrochloric acid solutions from electromotive forces measurements. E. J. King. bibliog Am Chem Soc J 75:2204-9 My 5 '53

Thermodynamic functions from Mayer's theory of ionic solutions. J. C. Poirier. bibliog J Chem Phys 21:965-85 Je '53

ACTOMYOSIN

Effect of estrogen on the isometric tension of rabbit uterine strips. A. I. Csapo and G. W. Corner. bibliog Science 117:162-4 F 13 '53

ACTORS and actresses

Who's who in show business; the national directory of show people, 1951-52. 2d ed 190p Who's who in show business, 150 W. 57th st, New York 19 '52 ($20)

ACYL group

Acyl migration during dephosphorylation and a suggested mechanism. T. H. Bevan and others. Chem Soc J p 127-9 Ja '53

Cylisation, ring-fission, and acylmigration reactions in the thiazoline field. J. C. Crawhall and D. F. Elliott. Chem Soc J p3094-102 Ag '52

ACYLASE

Hydrolytic action of acylase I on N-acylamino acids. S. J. Fu and S. M. Birnbaum. bibliog Am Chem Soc J 75:918-20 F 20 '53

ACYLATION

Acylation and allied reactions catalysed by strong acids. H. Burton, P. F. G. Praill and G. W. H. Cheeseman. diag Chem Soc J p827-39 Mr '53

Acylation and allied reactions catalysed by strong acids; evidence for the existence of sulphonyl cations ($R{\cdot}SO_2^+$). H. Burton and H. B. Hopkins. Chem Soc J p4457-61 N '52

Acylation and allied reactions catalysed by strong acids; the dismutation of diphenylmethanol by perchloric acid. H. Burton and G. W. H. Cheeseman. Chem Soc J p986-9 Mr '53

Acylation of 17-hydroxy-20-ketosteroids. R. B. Turner. bibliog Am Chem Soc J 75:3489-92 Jl 20 '53

Halogen migration in the Friedel-Crafts acylation of olefins. C. L. Stevens and E. Farkas. bibliog Am Chem Soc J 75:3306-8 Jl 20 '53

Intramolecular acylation; the preparation and ring closure of the α-methoxyphenylglutaric acids. D. H. Hey and K. A. Nagdy. Chem Soc J p 1895-9 Je '53

Study of acid catalysis in ketone acylations. B. M. Perfetti and R. Levine. bibliog Am Chem Soc J 75:626-8 F 5 '53

ACYLOINS

Acyloin condensation of aralkyl esters. E. Van Heyningen. bibliog Am Chem Soc J 74:4861-4 O 5 '52

Formation of five- and six-membered rings by the acyloin condensation; cyclization of diethyl 2-carboxy-2-methylcyclohexane-1-acetate. J. C. Sheehan and R. C. Coderre. bibliog Am Chem Soc J 75:3997-9 Ag 20 '53

Steroid ring closures using the acyloin condensation. J. C. Sheehan and others. Am Chem Soc J 74:6155-6 D 5 '52

ADAMS, Avery C.

Pittsburgh Steel branches out for steady growing. pors Bsns W p76-80+, cover Jl 25 '53

ADAMS, Cedric M. 1920-

Cedric Adams' secret called nose for news. R. Ellard. Ed & Pub 86:38 F 21 '53

ADAMS, James R.

James R. Adams. W. A. P. John. por Adv Agency 46:80 Ap '53

ADAMS, Joseph P.

CAB member who gets around. R. H. Wood. por Aviation W 58:102 Ap 13 '53

ADAMS, Sherman, 1899-

Eisenhower's Cabinet; a gamble. por Bsns W p31 N 29 '52

Portrait. Bsns W p29 D 6 '52

ADDAMS, Homer, 1873-1953

Sketch. por Heating-Piping 25:143-4 Ag '53

ADDING machines

Here's a new time-saving method of calculating orifice-meter charts. C. Hoot. il Oil & Gas J 51:106-7 Mr 9 '53

ADDITION compounds

Addition compounds of alkali metal hydrides; sodium trimethoxyborohydride and related compounds. H. C. Brown and others. bibliog Am Chem Soc J 75:192-5 Ja 5 '53

Addition compounds of chromium(VI) oxide with heterocyclic nitrogen bases; reactions with the lutidines, vinylpyridines, 2,4,6-collidine and α-picoline. H. H. Sisler and others. bibliog Am Chem Soc J 75:446-8 Ja 20 '53

Addition reactions of quinones; the reaction of cysteine and thiourea and its derivatives with some quinones. H. Burton and S. B. David. Chem Soc J p2193-6 Je '52

Antimony(III) fluoride-dioxane addition compound. H. M. Haendler, R. H. Glazier and D. W. Breck. bibliog Am Chem Soc J 75:3845-6 Ag 5 '53

ADDITION compounds—*Continued*

Dissociation of the addition compounds of trimethylboron with branched-chain primary amines; the effects of chain-branching. H. C. Brown and G. K. Barbaras. bibliog diag Am Chem Soc J 75:6-9 Ja 5 '53

Dissociation of the addition compounds of trimethylboron with *n*-butyl- and neopentyldimethylamines; interaction of trimethylboron and boron trifluoride with highly hindered bases. H. C. Brown and R. B. Johannesen. bibliog diag Am Chem Soc J 75:16-20 Ja 5 '53

Molecular addition compounds of dinitrogen tetroxide; reactions with tertiary amines. D. A. Davenport, H. J. Burkhardt and H. H. Sisler. Am Chem Soc J 75:4175-8 S 5 '53

Quinone imides; addition reactions of *p*-quinonedibenzimide and related compounds. R. Adams and D. S. Acker. bibliog Am Chem Soc J 74:5872-6 D 5 '52

Reaction of the boron halides with the alkali metal hydrides and with their addition compounds; a new synthesis of diborane. H. I. Schlesinger and others. bibliog diag Am Chem Soc J 75:195-9 Ja 5 '53

Reactions of diborane with alkali metal hydrides and their addition compounds; new syntheses of borohydrides; sodium and potassium borohydrides. H. I. Schlesinger and others. bibliog diags Am Chem Soc J 75:199-204 Ja 5 '53

Strained homomorphs; general summary. H. C. Brown and others. bibliog diags Am Chem Soc J 75:1-6 Ja 5 '53

Thermal decomposition of $MeCl_4 \cdot 2C_6H_5COOR$ type compounds. F. W. Chapman and others. bibliog Am Chem Soc J 74:5277-9 N 5 '52

Titanium tetrachloride as a catalyst in the Friedel-Crafts reaction; addition compounds. N. M. Cullinane, S. J. Chard and D. M. Leyshon. Chem Soc J p4106-8 N '52

ADDRESSING machines

Electronic addressing aids publishers. J. M. Carroll. il diag Electronics 26:98-100 F '53

ADENAUER, Konrad, 1876-

Dr Adenauer and the EDC. Economist 167:376 My 9 '53

Dr Adenauer and the parties. Economist 167:644-6 Je 6 '53

Old fox comes to call. por Bsns W p 148+ Ap 11 '53

Portrait. Bsns W p28 Je 27 '53

ADENOSINE phosphates

Identification of the isomeric adenylic acids *a* and *b* as the 2′- and 3′-adenosine phosphates, respectively. J. X. Khym and others. bibliog Am Chem Soc J 75:1262-3 Mr 5 '53

Nucleotides; the preparation of cyclic 2′:3′-phosphates of adenosine, cytidine, and uridine. D. M. Brown, D. I. Magrath and A. R. Todd. Chem Soc J p2708-14 Jl '52

Nucleotides; the synthesis and properties of adenosine-5′ uridine-5′ phosphate. D. T. Elmore and A. R. Todd. Chem Soc J p3681-6 O '52

ADENOSINE triphosphatase

Lack of effect of 2-desoxy-D-glucose on rat liver adenosinetriphosphatase and pyrophosphatase. M. H. Ross and J. G. Archer. Franklin Inst J 255:161-2 F '53

ADENOSINE triphosphate

ATP. P. K. Stumpf. il diag Sci Am 188:85-6+ Ap '53

Enyzmatic mechanism of coenzyme A acetylation with adenosine triphosphate and acetate. M. E. Jones and others. bibliog Am Chem Soc J 75:3285-6 Jl 5 '53

Participation of ATP and coenzyme A in the enzymatic decarboxylation of malonic acid. O. Hayaishi. bibliog Am Chem Soc J 75:4367 S 5 '53

Rates and energetics of activation of the acid-catalyzed hydrolysis of adenosine triphosphate. S. L. Friess. bibliog Am Chem Soc J 75:323-6 Ja 20 '53

ADENYLIC acid

Identification of the isomeric adenylic acids *a* and *b* as the 2′- and 3′-adenosine phosphates, respectively. J. X. Khym and others. bibliog Am Chem Soc J 75:1262-3 Mr 5 '53

ADHESION

Adhesion of lacquers to nonferrous metals. L. R. Brantley, A. Woodward and G. Carpenter. bibliog il Ind & Eng Chem 44:2386-9 O '52

Adhesion of liquids to solids; molecular interaction between metal oxides and adsorbed vapors. E. H. Loeser, W. D. Harkins and S. B. Twiss. bibliog J Phys Chem 57:251-4 F '53

Bonding of thin films. H. P. Meissner and J. Byrne. bibliog diag J Ap Phys 23:1170-3 O '52

Electrochemical method of measurement of the adhesion of plated coatings; abstract. A. T. Vagramyan and Y. S. Tsareva. Metal Finishing 51:80 S '53

Evaluation of adhesion of organic coatings by ultracentrifugal and other methods. A. M. Malloy and others. bibliog il diags Paint Oil & Chem R 116:14-19 Ag 27; 26-32+ S 10 '53

Evaporation technique is key to adhesion studies. Franklin Inst J 254:350 O '52

Influence of a direct-current electric field on the adhesion tension. Z. László. diag J Chem Phys 20:1807 N '52

Measurement of small forces, particularly in a vacuum. G. C. Curtis. diag J Sci Instr 29:410-11 D '52

Plating adhesion and base-metal surface condition; abstract. H. Reininger. Metal Finishing 51:111-12 Je '53

Streaming potential measurements and the adhesion of phosphors on cathode ray screens. J. F. Hazel and G. L. Schnable. bibliog diags Electrochem Soc J 100:65-71 F '53

Study of some phenomena associated with the adherence of sheet iron ground coats. H. F. Patrick and others. bibliog il Am Cer Soc J 36:305-13 S 1 '53

ADHESIVE tape

Air-operated tape dispenser delivers metered lengths. il Machine Design 25:136 Jl '53

Building a new market; Mystik adhesive products. il Mod Packaging 26:104-7 Jl '53

Lead-backed masking tape solves special plating problems; Pratt & Whitney aircraft division. W. J. Dyber. il Automotive Ind 108:82+ My 15 '53

New taping method ups production 39 per cent; Ronan & Kunzl, inc. il Mill & Factory 52:124-5 Je '53

Productive teamwork between manufacturer and distributor; Polyken. G. C. Stineback. il Sales Management 69:40+ O 15 '52

Tape cutting techniques. il Electronics 26:279+ Je '53

Tape saves time; drilling operation speeded by solving chip problem. il Iron Age 170:103 O 30 '52

ADHESIVE tape, Plastic

Comparison of plastic tape and hot enamels for protective coatings of pipe. N. P. Peifer. il Gas Age 111:41-3+ My 21 '53

Make your own shower curtains; vinyl tapes coated with adhesive. il Mod Plastics 30:94 Ap '53

Polyvinyl chloride tape approaches ideal material for pipe protection. G. M. Carter, jr. and T. J. Skotnicki. il Am Gas J 179:14-15+ Jl '53

ADHESIVES

Adhesive joining of wood-to-steel increases tv cabinet production. il Materials & Methods 37:82-4 Ja '53

Adhesives for bonding wood to metal. H. W. Eickner and R. F. Blomquist. Product Eng 24:251-2+ Ja '53

Adhesives for reinforced plastics. H. A. Perry. diags Product Eng 24:288+ Ap '53

Air filter adhesive developed in laboratory and field tests; Diesel-engine filtration study. A. W. Hardy and others. il Ry Loco & Cars 127:65-71 Mr '53

Aircraft specialties; coatings and sealers. F. H. Jankowski. il Can Chem Process 37:80+ Mr '53

Automotive adhesives; panel discussion; abstracts of papers. Rubber Age 73:209-10 My '53

Bonding methods for adhering rubber to metal. J. H. Gerstenmaier. il diags Rubber Age 73:495-500 Jl '53

Check-list of packaging adhesives and their uses; abstract. H. E. Smith. Mod Packaging 26:141-2 Je '53

ADHESIVES—*Continued*

Convair pushes metal adhesive studies. il Aviation W 58:40-1+ F 23 '53

Design of glued joints. S. Gunthorp. il diags Machine Design 25:193-7 O '53

Development of adhesives for the glued lap joint on fiber containers. F. R. Di Franco. Tappi 36:sup 185A-6A My '53

Fast sticker. Ind & Eng Chem 44:sup20A D '52

For a wooden wedding: demand for plywood adhesives. il Chem W 72:69-70+ Ja 17 '53

How to bond fibrous glass to other materials. W. J. Clayton. il Glass Ind 34:490-2+ S '53

Industrial adhesive laboratory services 3-M clients. F. H. Jankowski. il Can Chem Process 37:68-9 Je 1 '53

New demands lead to new directions in engineering materials; welding and joining. T. C. Du Mond. Materials & Methods 37:95-6 Je '53

Polybutenes and adhesives; abstract. G. P. Mack. Rubber Age 72:652 F '53

Properties and uses of 43 adhesives classified according to chemical type. N. J. DeLollis. Product Eng Hdbk p G6-9 '53

Properties, processing and uses of metal-bonding adhesives. O. W. Loudenslager. bibliog il diags Rubber Age 73:641-7 Ag '53; Same abr. Tool Eng 30:78-84 Ap '53; Excerpt. Automotive Ind 108:85-6 Ap 15 '53

Rubber-like adhesives and sealants. W. J. Clayton and R. K. Humke. Machine Design 25:260-2+ Ag '53

Tissue-to-metal adhesive useful in Geiger counting. H. B. Locksley and others. Science 116:572-3 N 21 '52

Water emulsion adhesives. Paper Tr J 135:26 N 28 '52

See also

Cements
Glue
Resinous products—Adhesives

Bibliography

Rubber division library bibliography: drying of adhesive-coated fabrics. 5 l Rubber division lib, Univ. of Akron, Akron 4, Ohio '52

Testing

Harnden-McLaurin test (T 463m-52). R. C. Williams. Tappi 36:sup 120A-1A Ap '53

Measurement of dynamic modulus in adhesive joints at ultrasonic frequencies. A. G. H. Dietz and others. il diags Am Soc T M Proc 50:1414-27 '50

ADIPAMIDES

Alicyclic diamines; polyadipamides of bis-(4-aminocyclohexyl)-methane. A. E. Barkdoll and others. Am Chem Soc J 75:1238-9 Mr 5 '53

ADIPIC acid

Amino acids; *dl*-β-aminoadipic acid; preparation and oxidation of 2-, 3- and 4-acetamidocyclohexanols. J. H. Billman and J. A. Buehler. Am Chem Soc J 75:1345-6 Mr 20 '53

ADMINISTRATION, Military. See Military administration

ADMINISTRATION, Public

Accounting alternatives, and their consequences, in handling charges for depreciation under certificates of necessity. W. H. Harrison, jr. J Account 94:716-18 D '52

Ten years' progress in management; federal administrative management. D. C. Stone. A S M E Trans 75:702-8 My '53

Use and misuse of authority by federal agencies. T. W. Christopher. Harvard Bsns R 30:48-58 N '52

See also

Agricultural administration
Highway administration
Metropolitan districts
Municipal government
Public health administration
Public officials
United States—Executive departments

Bibliography

Bibliography on public administration, annotated. C. Seckler-Hudson. 4th ed 131p $3.50 American univ. press, 1901 F st, N.W, Washington 6, D.C. '53

ADMIRALTY

See also

Collisions at sea

ADOBE

Here is a harmonious combination of adobe, glass and brick; house in Palos Verdes, Calif. il diags Am Bld 74:86-7 S '52

ADRENAL glands

Action of ACTH on adrenal slices. R. Haynes and others. Science 116:690-1 D 19 '52

Adrenal hypertrophy in the white leghorn cockerel after treatment with thiouracil and thyroidectomy. D. M. Morris. Science 117:61-2 Ja 16 '53

Hormones

Studies in organic sulfur compounds; synthesis of 21-thiolacetates of adrenal cortical hormones. C. Djerassi and A. L. Nussbaum. bibliog Am Chem Soc J 75:3700-3 Ag 5 '53

ADRENALIN

Destruction of epinephrine by the DOPA-oxidase system of ocular tissue. W. J. Angenent and G. B. Koelle. bibliog Science 116:543-4 N 14 '52

O^3,O^4,N-triacetyl-(—)-epinephrine. L. H. Welsh. Am Chem Soc J 74:4967-8 O 5 '52

Potential chemical sympathectomy indicated by amino research; abstract. W. G. Clark. Chem & Eng N 31:1401 Ap 6 '53

ADRENERGIC blocking. See Nerves—Blocking

ADRENOCORTICOTROPIC hormone. See ACTH

ADRENOSTERONE

11-Oxygenated steroids; partial syntheses of 11-ketotestosterone and of adrenosterone. H. L. Herzog and others. bibliog Am Chem Soc J 75:266-9 Ja 20 '53

ADSORBENTS

Adsorption; bigger role lies ahead. C. L. Mantell. il Chem Eng 59:166-8 O '52

Adsorption; liquid phase processes are important. W. A. Helbig. bibliog il Chem Eng 59:153-7 O '52

Preparation of specific adsorbents. S. A. Bernhard. Am Chem Soc J 74:4946-7 O 5 '52

Refining with adsorbents. V. A. Kalichevsky and K. A. Kobe. flow chart diags Pet Refiner 32:95-100 bibliog(197 ref, p99-100) Je; 119-22 Jl; 135-7 Ag; 215-18 S; 141-4 O '53

ADSORPTION

Active magnesia; adsorption in preferred positions. W. C. Walker and A. C. Zettlemoyer. bibliog diags J Phys Chem 57:182-6 F '53

Adsorption at water-helium, -methane and -nitrogen interfaces at pressures to 15,000 p.s.i.a. E. W. Hough, B. B. Wood, jr. and M. J. Rzasa. bibliog il J Phys Chem 56:996-9 N '52

Adsorption; Chemical Engineering report. il diags Chem Eng 59:149-68 O '52

Adsorption from binary mixtures; determination of individual adsorption isotherms. J. J. Kipling and D. A. Tester. Chem Soc J p4123-33 N '52

Adsorption in capillaries. C. Pierce and R. N. Smith. bibliog J Phys Chem 57:64-8 Ja '53

Adsorption of ammonia on Fuller's earth and gas-adsorbent carbon. G. L. Bridger and R. D. Sinner. Ind & Eng Chem 45:581-2 Mr '53

Adsorption of calcium and sodium on pyrite. A. M. Gaudin and W. D. Charles. bibliog Min Eng 5:Trans 195-200 F '53

Adsorption of carbon dioxide by glass. J. B. Thompson, E. S. Washburn and L. A. Guildner. diag J Phys Chem 56:979-81 N '52

Adsorption of cobalt and barium ions by hydrous ferric oxide at equilibrium. J. E. Duval and M. H. Kurbatov. J Phys Chem 56:982-4 N '52

Adsorption of flexible macromolecules. R. Simha, H. L. Frisch and F. R. Eirich. bibliog J Phys Chem 57:584-9 Je '53

Adsorption of hydrogen and carbon monoxide and their mixtures by cobalt Fischer-Tropsch catalysts. J. C. Ghosh, M. V. C. Sastri and K. A. Kini. bibliog diag Ind & Eng Chem 44:2463-70 O '52

Adsorption of hydrogen and carbon monoxide on iron surfaces. H. H. Podgurski and P. H. Emmett. bibliog J Phys Chem 57:159-64 F '53

ADSORPTION—*Continued*

Adsorption of ions from buffer solutions by silica, alumina and silica-alumina gels. C. J. Plank. bibliog diag J Phys Chem 57:284-90 Mr '53

Adsorption of sensitizing dyes in photographic emulsions. W. West, B. H. Carroll and D. H. Whitcomb. bibliog J Phys Chem 56:1054-67 D '52

Adsorption of serum lipids by montmorillonite. E. Nikkilä and N. Oker-Blom. bibliog Science 116:685-6 D 19 '52

Adsorption of water vapor on acetyl derivatives of collagen and of silk fibroin. R. W. Green and K. P. Ang. bibliog Am Chem Soc J 75:2733-6 Je 5 '53

Adsorption on monolayers; adsorption of the isomeric hexanes on condensed stearic acid monolayers and on clean water surfaces. K. E. Hayes and R. B. Dean. bibliog J Phys Chem 57:80-3 Ja '53

Adsorption on proteins and interactions between protein molecules in solution. T. L. Hill. J Chem Phys 21:1395-6 Ag '53

Adsorption on proteins, the grand partition function and first-order phase changes, according to approximate statistical mechanical theories. T. L. Hill. bibliog J Phys Chem 57:324-9 Mr '53

Adsorption studies on clay minerals; a formulation of the thermodynamics of exchange adsorption. G. L. Gaines, jr. and H. C. Thomas. diag J Chem Phys 21:714-18 Ap '53

Adsorption studies on metals; physical and chemical adsorption of gases on molybdenum. F. H. Healey, J. J. Cressick and A. C. Zettlemoyer. bibliog J Phys Chem 57:178-82 F '53

Analysis of multilayer gas adsorption isotherms using the concept of surface heterogeneity. J. M. Honig. bibliog J Phys Chem 57:349-51 Mr '53

Anion exchange studies; adsorption of hydrochloric acid by a strong base anion exchanger. K. A. Kraus and G. E. Moore. bibliog Am Chem Soc J 75:1457-60 Mr 20 '53

Application of the cathode-ray oscilloscope to polarographic phenomena; adsorption-desorption relationships exhibited by alcohols at aqueous saline solution-mercury interfaces. J. W. Loveland and P. J. Elving. bibliog il diag J Phys Chem 56:935-48 N '52

Calculation of diffusion coefficients from sorption data. Jenn Lin Hwang. bibliog J Chem Phys 20:1320-3 Ag '52

Carbon-oxygen exchange in chemisorbed carbon monoxide. R. P. Eischens and A. N. Webb. J Chem Phys 20:1048-9 Je '52

Carbon thermometer-heaters for use at low temperatures; effects of particle size and adsorption of hydrogen or helium. T. H. Geballe and others. bibliog R Sci Instr 23:489-92 S '52

Charge-transfer no-bond adsorption of inert atoms or molecules on metals. J. C. P. Mignolet. J Chem Phys 21:1298 Jl '53

Chemical engineering unit operations. B. L. Harris. il Ind & Eng Chem 45:24-31 bibliog (315 ref, p28-31) Ja '53

Computation of pore sizes from physical adsorption data. C. Pierce. bibliog J Phys Chem 57:149-52 F '53

Development of stepwise isotherms on carbon black surfaces. M. H. Polley, W. D. Schaeffer and W. R. Smith. bibliog J Phys Chem 57:469-71 Ap '53

Dynamic gas adsorption methods of surface area determination. H. G. Blocker, S. L. Craig and C. Orr, jr. J Phys Chem 57:517-20 My '53

Effect of sorption on the structure of surfaces of solids; magnetic susceptibility of sorbed NO_2-N_2O_4 on rutile; the stoichiometry of rutile. L. H. Reyerson and J. M. Honig. bibliog Am Chem Soc J 75:3920-2 Ag 20 '53

Effect of sorption on the structure of surfaces of solids; sorption of NO_2-N_2O_4 on rutile. L. H. Reyerson and J. M. Honig. bibliog Am Chem Soc J 75:3917-19 Ag 20 '53

Effect of steam activation on multilayer adsorption from solution by carbon. R. S. Hansen, R. D. Hansen and R. P. Craig. bibliog J Phys Chem 57:215-19 F '53

Effects of electronic charge transfer between adsorbate and solid on chemisorption and catalysis. P. B. Weisz. bibliog diags J Chem Phys 21:1531-8 S '53

Electronic barrier layer phenomena in chemisorption and catalysis. P. B. Weisz. J Chem Phys 20:1483-4 S '52

Equilibrium exchange rates of adsorbed species with unadsorbed species in solution. R. N. Smith, C. F. Geiger and C. Pierce. J Phys Chem 57:382-4 Mr '53

Equilibrium sorption data for polyisobutylene-hydrocarbon systems. S. Prager, E. Bagley and F. A. Long. bibliog Am Chem Soc J 75:2742-5 Je 5 '53

Field emission microscope and flash filament techniques for the study of structure and adsorption on metal surfaces. J. A. Becker and C. D. Hartman. bibliog il diags J Phys Chem 57:153-9 F '53

Heat conduction and isotherms of adsorbed helium on silica gel. D. White and others. bibliog J Chem Phys 20:1819-20 N '52

Improved protective colloid for use with dichlorofluorescein adsorption indicator. R. B. Dean and others. Anal Chem 24:1638-9 O '52

Magnetic properties of adsorbed vapors. W. O. Milligan and H. B. Whitehurst. bibliog J Phys Chem 56:1073-7 D '52

Mannangalactan gums; the mechanism of retention by paper fibers. N. S. Gruenhut. bibliog Tappi 36:297-301 Jl '53

Mathematics of adsorption in beds; effect of intraparticle diffusion in flow systems in fixed beds. P. R. Kasten, L. Lapidus and N. R. Amundson. J Phys Chem 56:683-8 Je '52

Mathematics of adsorption in beds; the effect of longitudinal diffusion in ion exchange and chromatographic columns. L. Lapidus and N. R. Amundson. J Phys Chem 56:984-8 N '52

Mechanism of cation and anion exchange capacity. M. A. Cook and others. bibliog J Phys Chem 57:1-6 Ja '53

Method for studying the mobility of chemisorbed films; oxygen on tungsten. R. Gomer and J. K. Hulm. Am Chem Soc J 75:4114-15 Ag 20 '53

Molecular interaction between *n*-propyl alcohol and iron or iron oxides. E. H. Loeser, W. D. Harkins and S. B. Twiss. bibliog J Phys Chem 57:591-7 Je '53

New separation process; ion exclusion. diags Chem Eng 59:234+ O '52

Permeation through and sorption of organic vapors by high polymers. J. A. Cutler and A. D. McLaren. bibliog Tappi 36:423-5 S '53

Physical adsorption from mixtures of gases; ethane and carbon dioxide on chromic oxide gel at -78°. L. White, jr., C. H. Schneider and W. W. Robinson, jr. bibliog Am Chem Soc J 74:5796-8 N 20 '52

Physical adsorption of gases on anatase. H. L. Pickering and H. C. Eckstrom. bibliog diag Am Chem Soc J 74:4775-7 O 5 '52

Physical adsorption on cadmium oxide. F. H. Healey, J. M. Fetsko and A. C. Zettlemoyer. bibliog J Phys Chem 57:186-8 F '53

Physical adsorption on single crystal zinc surfaces. T. N. Rhodin. bibliog diag J Phys Chem 57:143-8 F '53

Prediction of gas-adsorbent equilibria. F. D. Maslan, M. Altman and E. R. Aberth. bibliog J Phys Chem 57:106-9 Ja '53

Properties of freshly formed surfaces; an examination of the use of dynamic surface potentials in the study of adsorption rates. C. C. Addison and D. Litherland. Chem Soc J p 1155-9 Ap '53

Properties of freshly formed surfaces; dynamic surface potentials and the adsorption process; molecular orientation in soluble films of decyl alcohol. C. C. Addison and D. Litherland. diag Chem Soc J p 1143-50 Ap '53

Proposed method of test for hydrocarbon type analysis of Diesel fuels by silica gel adsorption. diag Am Soc T M Proc 50:271-5 '50

Rate of adsorption of cobalt ions on hydrous ferric oxide. M. H. Kurbatov and G. B. Wood. J Phys Chem 56:698-701 Je '52

ADSORPTION—*Continued*

Reversibility of the adsorption of catalyst poisons; the revival of poisoned catalysts by simple washing. E. B. Maxted and G. T. Ball. Chem Soc J p4284-8 N '52

Selective adsorption of hydrocarbons. G. Spengler and K. Krenkler. bibliog diag Pet Refiner 31:111-14 Jl; 133-6 O '52

Separation factors for expressing the relative adsorbabilities of liquids on adsorbents. R. W. Schiessler and C. N. Rowe. Am Chem Soc J 75:4611-12 S 20 '53

Some adsorption colors and their significance for thermochromic and tautomeric effects; experiments with anthrone derivatives, nitrotoluenes, spiropyrans and xanthhydrols. A. Schönberg, A. Mustafa and W. Asker. bibliog Am Chem Soc J 74:5640-3 N 20 '52

Sorption of amines by silica gels. M. J. Brown and A. G. Foster. bibliog J Phys Chem 56:733-7 Je '52

Sorption of ammonia by silk fibroin. P. A. Marshall and W. J. Moore. bibliog Am Chem Soc J 74:4779-83 O 5 '52

Sorption of GR-S type of polymer on carbon black; sorption by commercial blacks. I. M. Kolthoff and R. G. Gutmacher. bibliog J Phys Chem 56:740-5 Je '52

Sorption of gases on metal powders and subsequent change in metal reactivity at room temperature. Hung Li Wang and N. Hackerman. bibliog J Phys Chem 56:771-4 Je '52

Sorption of hydrogen chloride by wool. P. Larose. bibliog Textile Res J 23:91-8 F '53

Sorption of synthetic surface-active compounds by textile fibers. A. S. Weatherburn and C. H. Bayley. bibliog Textile Res J 22:797-804 D '52

Sorption of vapors by monolayers; the differential heats of adsorption of *n*-hexane on stearic acid monolayers. R. B. Dean and K. E. Hayes. bibliog Am Chem Soc J 74:5982-4 D 5 '52

Sorption of water by viscose rayon at low humidities. J. B. Taylor. bibliog(34 ref) diag Textile Inst J Trans 43:T489-515 S '52

Statistical mechanics of polymer adsorption. H. L. Frisch and others. J Chem Phys 21:365-6 F '53

Study of physical adsorption at low coverages. S. Chu Liang. bibliog J Phys Chem 57:84-7 Ja '53

Surface areas of proteins; the mechanism of water sorption. J. M. Seehof, B. Keilin and S. W. Benson. bibliog Am Chem Soc J 75:2427-30 My 20 '53

Surface complexes on carbon blacks; the adsorption of NH_3, C_2H_2, C_4H_{10}, CH_3NH_2 and water vapor. R. B. Anderson and P. H. Emmett. bibliog J Phys Chem 56:756-61 Je '52

Theory of percolation for the case of two solutes. H. Fujita. bibliog J Phys Chem 56:949-53 N '52

Use of radioactive alpha-recoil in the study of soluble ionized surface layers. G. Aniansson and N. H. Steiger. diag J Chem Phys 21:1299-300 Jl '53

See also
Adsorbents
Chromatographic analysis

ADSORPTION, Heat of

Heats of adsorption; adsorption on a homogeneous surface. C. Pierce and R. N. Smith. bibliog Am Chem Soc J 75:846-8 F 20 '53

Heats of adsorption of nitrogen and argon on porous and on non-porous carbon adsorbents at −195°. R. A. Beebe, B. Millard and J. Cynarski. bibliog Am Chem Soc J 75:839-45 F 20 '53

ADSORPTION apparatus

Adsorption; bigger role lies ahead. C. L. Mantell. il Chem Eng 59:166-8 O '52

Adsorption; fixed bed design more empirical than moving bed. R. Merims. bibliog diag Chem Eng 59:161-3 O '52

Apparatus for the simultaneous determination of adsorption isotherms and magnetic susceptibility. W. O. Milligan and H. B. Whitehurst. il diag R Sci Instr 23:618-20 N '52

Saturation performance of ion-exchange and adsorption columns. N. K. Hiester and T. Vermeulen. bibliog Chem Eng Prog 48:505-16 O '52

Simple and multiple gas microintroductors for adsorption studies. J. C. P. Mignolet. diags J Sci Instr 30:15-17 Ja '53

See also
Hypersorbers

ADVENTURE (periodical)

Adventure latest pulp to join class magazines. il Ptr Ink 242:15 F 6 '53

ADVERTISED brands. See Advertising, National

ADVERTISEMENTS

How we got out of our advertising rut. M. Cantillon. il Adv Agency 46:78-80 Ap '53

See also
Calendars

Books and booklets

Ceco booklet, ads turn product handicap into a promotion. il Ind Marketing 38:52+ F '53

Company promotes trade show exhibit with triple-invitation. il Ind Marketing 37:124 N '52

Crucible learns customers' trade lingo for booklet series. il Ind Marketing 38:104+ F '53

Fan blade maker stirs sales for air-moving industry; Torrington mfg. co. C. Downes. il Ind Marketing 37:62+ S '52

Full-page pictures with captions tell Girdler product story in booklet. il diag Ind Marketing 38:50 F '53

How Crucible's booklets talk user-benefits. W. H. Wiewel. diags Sales Management 70:114+ F 15 '53

How to get a dozen uses out of one omnibus piece; simultaneous planning of all advertising; Homasote co. and Nova sales co. F. V. Wilson. il Ptr Ink 241:40-1 N 14 '52

New promotion is good for hard or soft selling; Crucible Steel industry booklets. N. Keine. il Ptr Ink 241:34-5 O 24 '52

Coupons

Sketch-the-product coupon offer finds new product applications; Elastic stop nut corp. of America. C. Downes. il Ind Marketing 37:158+ N '52

Design

Design for point of sale, by L. Sutnar. Review, by L. Fellows. il Adv Agency 45:62-3+ D '52

How advertising can add to your product's quality. J. E. Gallagher. il Ptr Ink 241:90-1 O 17 '52

How to give your ads a new look. J. E. Gallagher. il Ptr Ink 241:38-9 O 31 '52

Why ad men like the editorial style. C. J. Swan. il Ptr Ink 241:35-7 N 14 '52

Inserts

G-E breaks unusual 16-page inserts this week. N. Keine. il Ptr Ink 242:36 Ja 23 '53

How to make news with an eight-page insert. il Ptr Ink 241:35 D 5 '52

Pop-ups and planning build Threadwell distributors, sales. il Ind Marketing 38:92 S '53

Tying ads and displays together. J. Harger. il Ptr Ink 242:45 F 6 '53

Layout

Clipping Board's 50 most outstanding layouts in magazine advertisements in 1952. il Adv Agency 46:52-5 Ja '53

Do your ads try to do too much and by sheer weight, fall flat? il Ind Marketing 37:89-90+ D '52

Don't let space cramp your style. J. E. Gallagher. il Ptr Ink 241:62-3 N 14 '52

How retailer can help in keeping ad cost down. D. J. Swann. Ed & Pub 85:15+ N 15 '52

How to keep the product up front in your ads. J. E. Gallagher. il Ptr Ink 242:36-7 Mr 6 '53

Surface division is the first step in layout. J. E. Gallagher. il Ptr Ink 241:34-5 D 19 '52

Too much emphasis is no emphasis. J. E. Gallagher. il Ptr Ink 241:46-7 N 28 '52

ADVERTISEMENTS—Layout—*Continued*

What shape will your layouts take this year? J. E. Gallagher. il Ptr Ink 242:40-1 Ja 2 '53

Position

Media man's viewpoint. D. B. Arnold. Adv Agency 46:106-7 F '53

Printing

Four keys to better newspaper production. M. J. Sutter. Ptr Ink 242:37 Mr 6 '53
Four pointers toward better color reproduction. R. Pliskin. Adv Agency 45:84+ N '52
Why silk-screen printing is versatile. A. H. Baum. il Ptr Ink 242:50-1 Ja 30 '53

Rating

Use this check list on your advertisements. M. Shepard. Adv Agency 46:74 F '53

Readership

Best-read magazine advertisements. D. Starch. il Published in monthly numbers of Advertising agency and advertising and selling
Best-read newspaper advertisements. D. Starch. il Published in monthly numbers of Advertising agency and advertising and selling
Hikes readership, traces sales of $200,000 to wire rope drive. il Ind Marketing 37:144 S '52
How advertisers can measure business paper readers. G. W. N. Riddle. Adv Agency 45:78-9+ D '52
How to guard against distortion in readership surveys. A. H. Dix. Ptr Ink 241:52 N 21 '52
How to increase readership of business paper advertisements. D. W. Twedt. Adv Agency 46:72-4 Mr '53
New readership study licks variables, gives data on ads. H. G. Sawyer. il Ind Marketing 37:68-9+ S '52
Vanadium sales message attracts unusual readership. il Ind Marketing 37:152 N '52
What's in a photo? Gulf finds out and boosts readers. il Ind Marketing 38:60-1 O '53

Repetition

Six ways to stretch your advertising dollar; Youngstown kitchens. M. Adams. il Ptr Ink 242:29-30 Mr 27 '53

Reprints

To correct public's impression of bigness in business. N. Keine. il Ptr Ink 242:40-2 F 13 '53
Why this ad has now passed the quarter-million mark for reprints. J. W. Dragonetti. il Ptr Ink 241:72-3 N 21 '52

Size

Macy's 64-page Times ad called largest ever run. il Ed & Pub 85:24 N 29 '52
Switch from half to full columns, and to editorial style pays off; Griffin Wellpoint ads. il Ptr Ink 241:40 D 5 '52
Which ad pulled best? il Ptr Ink 241:71+ O 17; 38+ N 21 '52; 242:52+ Ja 9 '53
See also
Advertisements, Small space

Testing

Ad test urged to increase effectiveness. H. McCord. Ed & Pub 86:16 Ja 24 '53
What you should know about split-run tests. H. C. Levinson. Ptr Ink 241:31-2+ D 26 '52
See also
Advertisements—Readership

Typography

In preparing ads for export. S. Mazarin. il Ptr Ink 242:54-5 Mr 20 '53
Trend in type faces is toward modern look and readability. T. B. Stanley. il Ptr Ink 241:46-8+ N 14 '52
12-point rule is too good for Harrington real estate ads. il Ind Marketing 38:72 Je '53

ADVERTISEMENTS, Classified

Agency man's view of classified. C. E. Widney. Ed & Pub 85:14+ S 20 '52
ANCAM board sees bright '53 outlook. D. L. Lionel. Ed & Pub 86:28 Ja 17 '53
CAMs can help get more national classified. D. L. Lionel. Ed & Pub 85:30 N 22 '52
Classified helps boost national ad linage. D. L. Lionel. Ed & Pub 86:26 F 14 '53
Classified is ally of display. C. W. Horn. Ed & Pub 85:29 N 15 '52
Classified overtaking local display linage; Classified clinic of Pennsylvania newspaper publishers' association. J. W. Dragonetti. Ed & Pub 85:14+ S 20 '52
Linage harvest seen in black dot ads. D. L. Lionel. Ed & Pub 85:28 N 29 '52
More CAMs comment on classified teaching. D. L. Lionel. Ed & Pub 85:40 O 4 '52
Need statistics to sell national classified. D. L. Lionel. Ed & Pub 86:32 Ja 10 '53
Private ads are the guts of classified. D. L. Lionel. Ed & Pub 85:32 N 8 '52
Urges new look at classified's power. R. Witte. Ed & Pub 86:24 Ja 31 '53
Want ad copy desk can be boon to salesman. D. L. Lionel. Ed & Pub 85:28 D 6 '52

Want ads

Sees want ads as bouillon cubes. O. S. Wespe. Ed & Pub 85:32 O 18 '52
See also
Employment systems—Advertising aids

ADVERTISEMENTS, Humorous

Can humor in advertising help sell industrial goods? B. Aitchison. Ind Marketing 38:16 F '53
Desoutter breaks all the rules and looks good doing it. il Ind Marketing 38:184-5 O '53
How to add the light touch in pictures. J. E. Gallagher. il Ptr Ink 242:56-7 Mr 20 '53
Should trade ads be funny? P.I. study of humor in current trade-paper advertising shows why it must be handled with care. N. Keine. il Ptr Ink 242:41-2+ Ja 9 '53
See also
Advertisements, Pictorial—Cartoons

ADVERTISEMENTS, Pictorial

Beware the trite expression in art, too! S. Baker. Ptr Ink 241:54+ D 5 '52
Clipping Board's 50 most outstanding layouts in magazine advertisements in 1952. il Adv Agency 46:52-5 Ja '53
How to add the light touch in pictures. J. E. Gallagher. il Ptr Ink 242:56-7 Mr 20 '53
How to get more readers for your ad sales messages. J. W. DeWolf. il Ind Marketing 38:56-8 My '53
How to plan a field photo trip. W. F. Weimer. il Ptr Ink 241:32-3 O 31 '52
Which illustration's wrong? il Sales Management 70:100 Mr 1 '53
See also
Television advertising

Animal pictures

Animals, real ones, identify Gould with customer benefits. il Ind Marketing 38:150 S '53
Hippos, anteaters turn talents to industrial advertising; Battle Creek bread wrapping machine co. il Ind Marketing 38:56 Je '53

Cartoons

Cartoon testimonials boost air freight sales of Flying Tigers. J. Collins. il Ind Marketing 37:132+ D '52
Good humor in ads gives service edge over competition; Navajo freight lines, cartoons in trade journals and mail. L. F. Thomann. il Ptr Ink 242:25 Ja 2 '53
Small budget, little copy, big sales; Angostura cartoons. T. M. Jones. il Ptr Ink 242:52+ F 20 '53
Stop-and-go campaign hits snag then gets results for Nopco. P. E. Moreton. il Ind Marketing 37:136+ D '52
Why they don't forget Angostura. il Sales Management 69:92-4 N 20 '52

Photographs

Allegheny solves illustration problem with Flexichrome. il Ind Marketing 38:126 Ja '53
Gradall gets an on-the-job photo on the spur of the moment. il Ind Marketing 38:106 S '53
How to get better field photographs from your salesmen. S. L. Smith. Ptr Ink 242:54+ Mr 6 '53
How to make good photographs for industrial advertising. il Ind Marketing 37:42-3+ N '52
How to sharpen the photos in your industrial advertising. il Ind Marketing 38:58+ F '53

ADVERTISEMENTS, Pictorial—Photographs— *Continued*

Insley salesmen shoot photos for industrial campaign. il Ind Marketing 38:186-7 O '53

Leading product-in-use photos sharpen industrial ads. il Ind Marketing 37:78-9+ D '52

Nichols tells its sales story with a microphotograph. il Ind Marketing 38:132-3 Ag '53

Photographic realism plays major role in International Harvester ad campaign. il Ind Marketing 38:62-3+ Ag '53

Standard Oil puts the salesman in ads; sells him and buyer. il Ind Marketing 38:62 My '53

Unfaked photos, true facts, no tricks make best-read ads. C. F. Mitchell. il Ind Marketing 38:60+ Je '53

Westinghouse's big photos go after elevator market. il Ind Marketing 38:65 Mr '53

What's in a photo? Gulf finds out and boosts readers. il Ind Marketing 38:60-1 O '53

ADVERTISEMENTS, Small space

Small space ads help build small customers for Ace Drill. A. A. Fisher. il Ind Marketing 38:43+ F '53

Small space testimonial ads sell for Viking, distributors. il Ind Marketing 37:65+ O '52

ADVERTISERS

Leading business paper advertisers in 1952. Adv Agency 46:84 Ap '53

100 leading national advertisers. Adv Agency 46:61 Ap '53

See also

Advertising agencies—Client relations

ADVERTISING

Ad practices examined at Iowa university meeting. Ed & Pub 85:18 N 22 '52

Advertising; is the pump self-priming? Bsns W p48 My 2 '53

Advertising, number one whipping boy. L. Valenstein. Adv Agency 45:74 D '52

Business quiz. L. Carson. Dun's R 61:84-6, 99 Ap '53

Faith in advertising pays, banker proves. L. E. Townsend. Ed & Pub 85:18+ O 18 '52

50 gorgeous girls, 50; merchandizing extravaganzas. R. S. Lammers. Ptr Ink 242:73-4 Mr 6 '53

If I were a prospect; review of How I learned secrets of success in advertising, by G. L. Sumner. M. Sackheim. Ptr Ink 241:48+ D 19 '52

It's art, not science. D. Bland. Adv Agency 46:70 Ja '53

Less government spending and our standard of living; advertising should play major role in guiding consumers' decisions. A. H. Johnson. Comm & Fin Chr 176:1736+ N 6 '52

More advertising needed. Ind Marketing 38:130 F '53

Never underestimate the power of advertising. J. P. Cunningham. Ed & Pub 85:11+ O 4 '52

1953 looks even bigger. Bsns W p60+ F 14 '53

Scientific advertising; reprint of book published in 1923. C. Hopkins. Adv Agency 45:60-3 N; 64-7 D '52; 46:60-3 Ja; 66-9 F; 66-9 Mr; 81-3 Ap '53

Signed ads for advertising agencies. Bsns W p 101-2 Jl 11 '53

Some differences between advertising and selling. N. Samstag. Adv Agency 46:75-7 Ap '53

Static advertising means static sales. G. J. Abrams. Ptr Ink 241:132 N 7 '52

Story of Metropolitan's health advertising. il Adv Agency 45:76-7+ N '52

Top executives tell how to use social sciences in advertising. H. E. Green. Ptr Ink 242:35-7+ F 27 '53

See also

Advertising agencies and other headings beginning Advertising
Airplanes in advertising
Association of national advertisers
Bank advertising
Billboards
Catalogs
Christmas advertising
Color in advertising
Employment systems—Advertising aids
Exhibits
House organs
Labels
Merchandizing
Money raising campaigns
Moving pictures in advertising
Municipal advertising
Premiums (merchandizing)
Publicity
Radio advertising
Safety advertising
Sales letters
Show windows
Television advertising
Women in advertising

also subdivision Advertising under special subjects, e.g.

Air conditioning industries
Air freight service
Airlines
Building trades
Correspondence schools and courses
Domestic appliances
Electric apparatus industry
Fountain pens
Motor bus lines
Office equipment industry
Printing trade
Products, New
Railroads

Continuity

Continuity of public relations ads in plant cities vital. H. W. Allen. il Ed & Pub 86:62+ F 21 '53

Why advertise when everybody knows us? W. R. Dix. Ptr Ink 242:37 Ja 30 '53

Contractors, Appeal to

Switch from half to full columns, and to editorial style pays off; Griffin Wellpoint ads. il Ptr Ink 241:40 D 5 '52

Cost

Ad production costs high hurdle. J. T. Pirie, jr. Ed & Pub 85:22 S 27 '52

Forecast 6.9 per cent gain in 1953 for business paper ad volume. A. Venezian. Ind Marketing 38:66+ Ag '53

How retailer can help in keeping ad cost down. D. J. Swann. Ed & Pub 85:15+ N 15 '52

Survey gives national ads' reader costs. Ed & Pub 85:20 S 27 '52

What 641 firms spend in business papers, 1952; tabulation. Ind Marketing 38:118-19+ My '53

Where to start cutting ad costs in 1953. M. Adams. Ptr Ink 241:25-7 D 19 '52

See also

Television advertising—Cost

Dealer cooperation

Fashion as reason for related selling is new theme of this advertiser; Simtex tablecloth. M. Beuick. il Ptr Ink 241:43-5 N 14 '52

How dealers capitalize on your publicity; Detectron co. il Sales Management 69:27 D 1 '52

National advertising must be geared ever closer to retailing. Ptr Ink 241:102+ D 12 '52

Pay-off for a low-budget campaign; Viking residential window fans. Sales Management 69:80+ N 1 '52

30 ways to merchandise your ads. L. B. Dunning. il Ptr Ink 241:47-9 O 17 '52

Dealer helps

ABC's of direct mail through dealers. A. M. Andersen. Sales Management 69:84+ O 1 '52

Armco Steel increases sales by selling salesmen. Ind Marketing 38:65 Ap '53

How to get more mileage out of your ad mats. M. Dechter. Ptr Ink 242:39 Ja 23 '53

How to make ad plates do double duty; Drott routes ad plates among dealers. R. Reynolds. il Ptr Ink 242:60+ F 27 '53

How to save $15,000 on ad mats. M. Almada. Ptr Ink 242:35 F 6 '53

Now it's Doof month, dealer aids put it across. il Ind Marketing 38:90 Jl '53

Retail plan book sparks '53 carpet fashion bazaar. R. B. McIntyre. Ed & Pub 85:20 N 1 '52

Should dealer helps be charged for? Ptr Ink 242:90+ Ja 16 '53

Ten ways to back your dealer; promotion kit uses them all. il Ind Marketing 37:116+ O '52

ADVERTISING—Dealer helps—*Continued*

Twelve rules for planning a high-spot retail promotion. J. V. Keim. il Sales Management 70:50+ F 15 '53

Valuable sales helps in OHI treasury of advertising. il Sheet Metal Worker 44:17-18 My '53

When you help dealers, they'll help you; Sylvania contractor campaign. E. J. Dever, jr. il Ptr Ink 241:92-6+ O 17 '52

Why new advertiser is upping the budget again this spring; Swan garden hose. M. W. Miller. il Ptr Ink 242:33-5 Mr 6 '53

Dealers, Appeal to

Before this ad runs; these three big steps create national brand demand; Omega watches. il Ptr Ink 241:28 D 26 '52

How to team advertising with selling; Haspel bros. salesmen sell promotion package and product line together. N. Kelne. il Ptr Ink 241:40-1 N 21 '52

Should trade ads be funny? P.I. study of humor in current trade-paper advertising shows why it must be handled with care. N. Kelne. il Ptr Ink 242:41-2+ Ja 9 '53

Sylvania bombards dealers with mail, persuades 980 of them to push mail drive. il Ind Marketing 38:168-70 O '53

This slide film sells retail brass; Union underwear co. N. Kelne. il Ptr Ink 242:39 Mr 13 '53

Twelve rules for planning a high-spot retail promotion. J. V. Keim. il Sales Management 70:50+ F 15 '53

Why new advertiser is upping the budget again this spring; Swan garden hose. M. W. Miller. il Ptr Ink 242:33-5 Mr 6 '53

Economic aspects

Employment, prices, and monopolistic competition. H. Brems. diags R Econ & Stat 34:314-25 N '52

How has inflation affected advertising? Adv Agency 46:51 Mr '53

Employees, Appeal to

House organ in the local newspaper; Geo. D. Roper corp. R. Newcomb. il Mill & Factory 52:128 Mr '53

Newspaper ad tells news. Am Bsns 22:48-9 N '52

Planned newspaper ads key to GE's plant city relations; success dependent on employes. L. R. Boulware. Ed & Pub 86:64+ F 21 '53

Farmers, Appeal to

How long does it take to change habits? answer for farm market, shows importance of repetition. Ptr Ink 242:93-4 Ja 16 '53

$200,000 promotion by G&T co-op and its members wins farmers. il Elec World 138:94-6 O 6 '52

Finance

Start a funded reserve for advertising; here's how. J. K. Lasser. Ind Marketing 38:49-51 Jl '53

High school students, Appeal to

Question-answer ads to students build industrial relations; Pitney-Bowes, Stamford, Conn. il Ind Marketing 37:110 S '52

Industries, Appeal to

See Advertising, Industrial

Inquiries

Are inquiries a measure of advertising effectiveness? J. C. Spurr. Adv Agency 45:98 N '52

Six salesmen get help from ad staff in inquiry follow up. P. A. Wilks, jr. il Ind Marketing 38:64+ F '53

See also

Advertising, Industrial—Inquiries

Follow-up systems

Jobber cooperation

How to make your ads click with distributors. L. H. Brendel. Sales Management 69:80+ O 15 '52

Jobbers, Appeal to

Salesmen's ad requests induce chain reaction; Hoffman Candy focused promotion on tencent bar, sell thru cash-and-carry jobbers. J. H. Collins. Sales Management 69:102-3 N 1 '52

You'll get extra impact in distributor mailings. L. H. Brendel. Sales Management 70:104+ Mr 15 '53

Laws and regulations

Chesterfield wins in court against FTC's ad charge. J. Shoenfeld. Sales Management 69:46+ D 15 '52

Fur law changes fur ads; but not enough! K. R. Gillespie. bibliog J Retailing 28:145-54+ Winter '52

In Europe they sue over competitive media claims; Belgian case of Reader's digest. I. W. Digges. Ptr Ink 242:38 Mr 6 '53

Leaders

Salesmen's ad requests induce chain reaction; Hoffman Candy focused promotion on tencent bar, sell thru cash-and-carry jobbers. J. H. Collins. Sales Management 69:102-3 N 1 '52

Measurement

What's wrong with men's wear advertising? neglects to build up brand names. J. Freedman. il Adv Agency 46:59+ F '53

Men, Appeal to

Drive urged to educate male on milady's hats. Ed & Pub 86:22 Ja 10 '53

How Mennen uses dailies to sell products to men. R. B. McIntyre. il Ed & Pub 85:18 O 11 '52

See also

Men's furnishing goods—Advertising

Mothers, Appeal to

Introducing a new baby product locally. K. Groesbeck. Adv Agency 46:100 Ja '53

Objectives

Ad chart offer hits objectives for Master chrome service. B. Enos. il Ind Marketing 38:50-1+ Ja '53

Difference between objectives and approaches. W. R. Dix. Ptr Ink 242:64 Ja 16 '53

Do agencies have a common end? D. Perrill. Ptr Ink 242:90 F 6 '53

Do your ads try to do too much and by sheer weight, fall flat? il Ind Marketing 37:89-90+ D '52

Song of the shirt (circa 1952); attention getters. R. L. Sines. Ptr Ink 241:88 D 5 '52

Stop, look and think. D. Perrill. Ptr Ink 241:58-9 O 24 '52

What do you want your advertising to accomplish? W. R. Dix. Ptr Ink 242:24 Ja 2; 32 Ja 9 '53

What's wrong with men's wear advertising? neglects to build up brand names. J. Freedman. il Adv Agency 46:59+ F '53

Physicians, Appeal to

Why this copy switch is paying off. E. H. Ericson. il Ptr Ink 241:50+ N 28 '52

Planning

18 ways to cut waste when you buy point-of-purchase advertising. D. Bland. Sales Management 69:28-9 N 10 '52

How advertising appropriations are made. G. J. Abrams. Adv Agency 45:76+ D '52

How to get a dozen uses out of one omnibus piece; simultaneous planning of all advertising; Homasote co. and Nova sales co. F. V. Wilson. il Ptr Ink 241:40-1 N 14 '52

How we present our ad budgets to management; a symposium. Ind Marketing 37:41-8 D '52

Twelve rules for planning a high-spot retail promotion. J. V. Keim. il Sales Management 70:50+ F 15 '53

Prize contests

Grand'mère posts sold out sign after sweater queen contest. J. C. Cumming. il Sales Management 69:89-90+ O 15 '52

How to ring fresh change on an old sales theme; Old stove roundup. A. D. Schrodt. il Sales Management 70:65-8 F 1 '53

ADVERTISING—Prize contests—*Continued*

Kid contest pays off again for Bauer & Black. il Sales Management 70:118 F 15 '53

Psychology

Product with a plus will be the winner this year. W. H. Kearns. il Ptr Ink 242:34-5+ Ja 2 '53

Red herrings of advertising. H. M. Mitchell. Ptr Ink 241:152 O 17 '52

Scientific advertising; reprint of book published in 1923; psychology. C. Hopkins. Adv Agency 45:66-7 D '52

Unique human motivation library is center of thought in this agency; Weiss & Geller social science library. E. H. Weiss. Ptr Ink 242:36-7 F 6 '53

What psychology offers to advertising. H. D. Hadley. il Adv Agency 46:70-1+ Ap '53

Public attitude

I don't know anything about advertising, but. K. Boucher. Ptr Ink 242:120 F 13 '53

P.I. platform of advertising principles is endorsed by more than 500. Ptr Ink 241:48+ O 10; 78-80 N 21 '52

Unprovable superlatives criticized. Ptr Ink 242:69+ Ja 23 '53

Rates

Ad men express views on newspapers' rates. R. B. McIntyre. il Ed & Pub 85:17-18 N 8 '52

Admen say they take rate boosts in stride. M. C. Wallis. Ed & Pub 85:15 O 4 '52

Business paper rates rising. Ind Marketing 37:26+ S '52

Dailies answer queries on rates and practices. R. B. McIntyre. Ed & Pub 85:15-16+ D 6 '52

Four-A, ANA take middle of road on rate question. R. B. McIntyre. Ed & Pub 85:15+ N 15 '52

IAMA gets rate fracas details; Atlantic City press-union. N. Mitchell. Ed & Pub 86:15 Ja 17 '53

167 dailies in appeal from unit ad rate ban. J. Walker. Ed & Pub 86:10 F 21 '53

Rates, widths, rebates; abstract. F. Updike. Ed & Pub 86:18 Ja 24 '53

Unclean hands' defense no good in ad rate case. A. W. Gray. Ed & Pub 85:53 D 20 '52

WGN halves evening rate; all-day price. Ed & Pub 85:45 O 25 '52

Research

See Advertising research

Returns

Birth of a million-dollar advertiser; Lewal Instant dip magic silver cleaner. N. Kelne. il Ptr Ink 242:42-4 Ja 2 '53

Florida finds that advertising pays well! tax income from tourists. R. J. Flood. il Ptr Ink 242:45 F 20 '53

Ten ways to improve returns on mailed questionnaires. K. M. Davee. il Ind Marketing 37:81+ O '52

Schedules

Bureau cold barometer proves accurate in test; predicting prevalence of colds. Ed & Pub 86:28 F 7 '53

Bureau extends tests of health barometer. Ed & Pub 85:28 O 4 '52

New Bureau pitch sparks dailies' linage push. il Ed & Pub 85:26 O 18 '52

RCA warms up drive for its air conditioner. Ed & Pub 86:24 Ap 11 '53

Schools, Appeal to

Now Chiquita Banana goes to school. C. W. Moore. il Sales Management 69:88+ D 15 '52

Why 1.5 million teen-agers are likely Toni buyers; materials supplied to some 30,000 home economics teachers. il Sales Management 70:28-9 F 1 '53

Statistics

Advertising, Nov.-Dec. 1951-Jan.-Nov. 1952. Survey of Cur Bsns 33:S7-8 Ja '53 [cont monthly]

Advertising volume in business papers. Published in monthly numbers of Industrial marketing

Agencies that handle accounts for 100 leading magazine advertisers. Adv Agency 45:78 N '52

Business paper volume may hit third annual record in 1952. A. R. Venezian. Ind Marketing 37:41-3+ S '52

Canadian advertising volume. Ind Marketing 38:150-1 Ja '53

Dailies in 162 markets got $11.49 per family. Ed & Pub 85:26 N 22 '52

52-city papers close '52 with 1.1 per cent ad gain. Ed & Pub 86:54-6 Ja 31 '53

479 advertising agencies place 470,022 business paper pages, 1952. Ind Marketing 38:47+ Ap '53

Here is how agencies rank by newspaper billings; national advertising in newspapers by over 450 agencies. Adv Agency 45:78-80 O '52

Industrial advertising investments by 489 concerns. Sales Management 69:125 O 1 '52

Leading national advertisers. Ptr Ink 242:80 Mr 20 '53

Leading national advertisers for first six months of 1952; table. Adv Agency 45:88 O '52

National newspaper dollars in metropolitan area cities. Sales Management 69:150+ N 10 '52

1952 magazine advertising volume in pages; tabulation. Ind Marketing 38:114 My '53

1952 U.S. advertising volume tops seven billion dollars. Ptr Ink 242:32 Ja 30 '53

339 top advertisers in farm papers. Ptr Ink 242:52+ Mr 13 '53

Trends in industrial advertising, NIAA 1952 national survey. Adv Agency 45:74-5 N '52

What 489 biggest advertisers spent on business papers in '51. Ind Marketing 37:126+ O '52; Excerpt. Adv Agency 45:122+ N '52

Where national advertising originates. Adv Agency 45:118 D '52

Study and teaching

Ad courses should include classified. D. L. Lionel. Ed & Pub 85:38 S 20 '52

Classified is taught in Missouri school. R. W. Haverfield. Ed & Pub 85:62 N 8 '52

Experiences in teaching a class in ad writing. J. Caples. Adv Agency 46:16+ Mr '53

Imagine me teaching at Columbia! J. Caples. Adv Agency 46:16+ F '53

More CAMS comment on classified teaching. D. L. Lionel. Ed & Pub 85:40 O 4 '52

Spokane club sets up pilot college project in advertising career training. L. F. Thomann. Ptr Ink 242:65-6 Mr 13 '53

26 ad execs plan to attend API seminar. Ed & Pub 86:56 F 14 '53

Suppliers, Appeal to

Today it's important to cultivate suppliers as well as customers. J. A. Cairns. Ptr Ink 242:29-31 Ja 30 '53

Tax problems

Management disagrees on merits of tax-free reserve for advertising. Ind Marketing 38:138+ O '53

Tax aid for advertising. Bsns W p48+ Jl 4 '53

Testing

Sales tests as a measure of advertising effectiveness. C. Benesch. J Marketing 17:178-81 O '52

Women, Appeal to

Opportunities in appeals to women buyers expand; abstract. M. C. Husted. Ed & Pub 85:15 O 18 '52

Which ad pulled best? man, or woman in the dark room? il Ptr Ink 241:45+ D 5 '52

Canada

Canadian advertising volume. Ind Marketing 38:150-1 Ja '53

Tempo of agency trek to Canada growing. J. Montagnes. Ed & Pub 85:17+ D 27 '52

Great Britain

Trend in British ad volume is up. Ptr Ink 241:44-6 D 26 '52

ADVERTISING, Association

Advertising expands this business by tapping present customers; 23-year-old international travel service of AAA. il Ptr Ink 242:39-40 Ja 9 '53

A.G.A. dealer sales program nears completion. W. D. Williams. il Am Gas Assn Mo 35:14-15+ Jl-Ag '53

ADVERTISING, Association—*Continued*

Campaigns for promoting printing to buyers should be sponsored by industry groups. F. Rundell. Inland Ptr 129:68-9+ S '52

Dailies' role in helping florists' sales to bloom; Florists' telegraph delivery association. R. B. McIntyre. il Ed & Pub 85:18+ D 13 '52

Electrical contractors launch $500,000 campaign for new business. il Ind Marketing 38:54-6 Je '53

Fly time is incinerator time; American gas association promotion of gas-fired incinerators. il Gas Age 112:40-1 Jl 2 '53

Santa leaves potential linage for local dailies; Hardware week. R. B. McIntyre. Ed & Pub 85:20 D 27 '52

ADVERTISING, Cooperative

Fan blade maker stirs sales for air-moving industry; Torrington mfg. co. C. Downes. il Ind Marketing 37:62+ S '52

Let's take the train; how a Kansas City department store tied in displays with Santa Fe. il Ry Age 135:19 S 21 '53

Small company goes national by joining forces with competition. N. Kelne. il Ptr Ink 242:39-41 F 27 '53

Vehicle name goes on the label as Goodyear advertisements back maker's sales. Paint Oil & Chem R 116:6D Jl 2 '53

Manufacturers and dealers

Co-op advertising praised, damned by ad industry. R. B. McIntyre. Ed & Pub 85:20+ N 22 '52

Handbook for salesmen hits co-op ad problem. Ed & Pub 85:16 S 20 '52

How some firms hold co-op woes to minimum. R. B. McIntyre. Ed & Pub 85:17+ N 29 '52

Now manufacturers rep gets into co-op ads. Sales Management 70:114+ Ja 15 '53

This co-op ad plan solves eight headaches; Beatty washing machines. D. B. Beatty. il Ptr Ink 241:33-4 N 7 '52

Why Polaroid now splits 50-50 for every kind of promotion. B. G. Priestley. il Sales Management 70:76+ F 15 '53

Tie-in advertisements

Promotion of hidden component boosts rubber-based paint sales. il Ind Marketing 38:144-7 Je '53

ADVERTISING, Direct mail. See Advertising, Mail

ADVERTISING, Educational

Ads open Brooklyn's homes to gas men; conversion to natural gas. Ed & Pub 85:22 S 20 '52

Case study of successful public relations advertising. R. M. Winsborough. Ed & Pub 86:54 F 21 '53

Ceco booklet, ads turn product handicap into a promotion. il Ind Marketing 38:52+ F '53

Don't be a goose; reducing honking of automobile horns. Aesop Glim. Ptr Ink 241:64 O 24 '52

How do users rate Atlantic's advertorials? Sales Management 70:94 F 15 '53

How Liberty Mutual is helping to reduce industrial accidents. il Sales Management 70:56+ Mr 1 '53

To correct public's impression of bigness in business. N. Kelne. il Ptr Ink 242:40-2 F 13 '53

Weekly newspaper ads bring Northern into the community. il Ind Marketing 38:64+ My '53

See also

Advertisements—Books and booklets

Advertising, Association

Advertising, Institutional

Publicity

ADVERTISING, Foreign

Export advertising accounts. Adv Agency 45:87+ O '52

How to improve your export advertising, a golden opportunity. B. Pollard. il Ind Marketing 38:52-3 Mr '53

In preparing ads for export. S. Mazarin. il Ptr Ink 242:54-5 Mr 20 '53

ADVERTISING, Industrial

Ad contests break out all over. il Ind Marketing 38:30+ My '53

Alcoa works with museums; ads go after ceramics market. J. M. Reeves. il Ind Marketing 37:74-5+ O '52

Are you sure you can identify your real buyers and prospects? W. Kuswa. Sales Management 70:42+ Mr 1 '53

ABP honors six outstanding industrial campaigns. H. Hoffman. il Ind Marketing 38:78-81 My '53

Business paper drive finds new uses for industrial paper; Riegel paper corp. C. Downes. il Ind Marketing 37:41+ O '52

Can humor in advertising help sell industrial goods? B. Aitchison. Ind Marketing 38:16 F '53

Can industrial advertisers use outdoor successfully? B. Aitchison. il Ind Marketing 38:52+ O '53

Can women fill executive posts in industrial advertising? B. Aitchison. Ind Marketing 38:16+ Ap '53

Copy chasers. Published in monthly numbers of Industrial marketing

Does Uncle Sam read your story? Sales Management 69:105 O 15 '52

Do's and don'ts of creating a good industrial ad. B. Aitchison. Ind Marketing 38:16+ Je '53

Electro-Alloys combines folders, booklet for unique promotion. il Ind Marketing 38:81 Ag '53

Expenditures and sales to rise but markets more competitive; forecasts by executives of industrial advertising agencies. Ind Marketing 38:49 Ja '53

How Crucible's booklets talk user-benefits. W. H. Wiewel. diags Sales Management 70:114+ F 15 '53

How do women executives fit into industrial advertising? il Ind Marketing 37:136+ O '52

How Hewitt-Robins advertises hose and conveyor equipment. il Ind Marketing 38:52-3 Je '53

How industrial advertising paid off; case histories (cont). G. Van Alstyne and others. Ind Marketing 37:120 S; 140 O; 144 N; 127 D '52

How to make good photographs for industrial advertising. il Ind Marketing 37:42-3+ N '52

How to sharpen the photos in your industrial advertising. il Ind Marketing 38:58+ F '53

Importance of writing advertising from the customer's point of view. W. R. Dix. Ptr Ink 242:32 Mr 13 '53

Industrial ad budgets average 2.28 per cent of expected sales in '53. M. Kingman. Ind Marketing 38:47-8 Ja '53

Industrial advertising investments by 489 concerns. Sales Management 69:125 O 1 '52

Inside story of Goodrich drive told by IM's adman of the year. H. E. Van Petten. Ind Marketing 38:96+ Ja '53

Is direct mail used wrongly? NIAA study. A. R. Tofte. il Ind Marketing 38:52-4 Jl '53

Is industrial promotion going sissy? art, mobiles used. il Ind Marketing 38:130-1 Ag '53

Koppers doubles its industrial advertising, boosts sales 66.2 per cent. il Ind Marketing 37:41+ N '52

Leading product-in-use photos sharpen industrial ads. il Ind Marketing 37:78-9+ D '52

Lots of copy, no pictures make successful ad for Koppers. il Ind Marketing 38:65 Je '53

Modern art, merchandising help build a distributor force, Littlefuse, inc. B. Enos. il Ind Marketing 38:80-1+ Ap '53

NIAA budget study lists ad expenditures in 11 industries. Ind Marketing 37:148+ N '52

New promotion is good for hard or soft selling; Crucible Steel industry booklets. N. Kelne. il Ptr Ink 241:34-5 O 24 '52

Shortages lose customers for Calumet; mail campaign wins them back. D. Brown. il Ind Marketing 37:44-5+ O '52

60 years of industrial ads show advances in techniques. il Ind Marketing 38:60 Ag '53

Solutions, not products, pace Cochrane's industrial campaign. il Ind Marketing 38:84 Ap '53

Standard Oil puts the salesman in ads; sells him and buyer. il Ind Marketing 38:62 My '53

Tomorrow's advertising needs fresh approach. il Ind Marketing 37:95+ O '52

Trade character gives new industrial product a symbolic personality; Harnischfeger power crane and shovel. H. E. Green. il Ptr Ink 242:37-8 Ja 23 '53

ADVERTISING, Industrial—*Continued*
Trends in industrial advertising, NIAA 1952 national survey. Adv Agency 45:74-5 N '52
Well-known components can boost sales, most management heads agree. Ind Marketing 38:76-8 Je '53
What advertisers should know about industrial copy. M. Stumm. Ind Marketing 37:134+ N '52
What management expects from industrial ad managers. T. Fort. Ind Marketing 38:58+ Jl '53
What research shows about industrial advertising effectiveness. J. C. Spurr. Adv Agency 45:77+ D '52
Where to get facts on your industrial market. A. H. Dix. il Ptr Ink 242:35-8 Mr 13 '53
Which ad attracted more readers? (cont). il Ind Marketing 37:130, 134 S; 56, 191 O; 202, 206 N; 56, 120 D '52; 38:58, 70 Ja; 142, 144 F; 150, 156 Mr; 78, 150 Ap; 76, 152 My; 80, 152 Je; 140, 168 Jl; 64, 144 Ag; 65, 176 S; 65, 192 O '53
Women earn place in industrial advertising, watch your step, men! F. Borden. il Ind Marketing 38:68-9+ O '53
You are now entering the industrial merchandising era! G. D. Crain, jr. il Ind Marketing 38:52-5 My '53
You'll get extra impact in distributor mailings. L. H. Brendel. Sales Management 70:104+ Mr 15 '53
See also
Advertising mediums—Trade journals
Shoveling machines—Advertising
Wire rope—Advertising

Inquiries

Blotter-data sheet cuts lag in inquiry follow-up for Cuno. il Ind Marketing 38:68-9 Je '53
Classifying inquiries saves time and money for your sales force. B. Aitchison. Ind Marketing 37:22+ N '52
Four steps to evaluating inquiries, whether duds or hot ones. S. Clayton. flow chart Ind Marketing 37:46-8+ N '52
How advertisers can measure business paper readers. G. W. N. Riddle. Adv Agency 45:78-9+ D '52
Industrial advertisers lose sales via inquiry neglect; Industrial Marketing study. Ind Marketing 37:52+ S '52
Six salesmen get help from ad staff in inquiry follow up. P. A. Wilks, jr. il Ind Marketing 38:64+ F '53
$6,000, three-week drive pulls 2,197 inquiries for Fairchild. H. K. Yulke. il Ind Marketing 38:76+ S '53
Snap-a-part form helps Sola answer inquiries fast, cheaply. S. Clayton. il Ind Marketing 37:42-3+ O '52
$250 publicity drive pulls seven inquiries a day for year; Buchanan electrical products corp. il Ind Marketing 38:84+ O '53

ADVERTISING, Institutional
Best campaigns of 1952. B. Tyler. il Adv Agency 46:84 F '53
Coal firm uses dailies to tell management tale. J. W. Dragonetti. Ed & Pub 85:16 D 20 '52
Faith proves a potent, new campaign theme; Texas and Pacific railway. il Ptr Ink 242:45 Ja 16 '53
Firm satisfied with paid space house organ; George D. Roper corp. Ed & Pub 85:17 O 11 '52
He makes every copy writer a little taller; Redmond's John Hancock ads. S. H. Margolis and M. Silverstein. il Ptr Ink 241:29-30+ D 19 '52

ADVERTISING, Mail
ABC's of direct mail through dealers. A. M. Andersen. Sales Management 69:84+ O 1 '52
Can direct mail help contractors sell? il Elec West 110:107 Ap '53
Capital transit company proves direct mail can bring new riders. il Bus Transportation 32:50-1 O '53
Four big cards, one brochure, develop new business for dealers in one-month test. N. Kelne. il Ptr Ink 242:46+ Mr 6 '53
Gift promotion works; 1,288 belts prove it; News and observer, Raleigh, N. C. Sales Management 70:136 Mr 15 '53
How secretary screening affects your mailings. P. Ransier. Adv Agency 45:93 O '52
Is direct mail used wrongly? NIAA study. A. R. Tofte. il Ind Marketing 38:52-4 Jl '53
Postman rings for sales. Fortune 47:134-7+ F '53
Set screw co. uses miniature for direct mail piece. il Ind Marketing 38:64 Jl '53
Shortages lose customers for Calumet; mail campaign wins them back. D. Brown. il Ind Marketing 37:44-5+ O '52
Sylvania bombards dealers with mail, persuades 980 of them to push mail drive. il Ind Marketing 38:168-70 O '53
Three-piece mailing campaign draws a 67 per cent return. il Ptr Ink 242:38 Mr 13 '53
Towmotor president covers big territory with mail piece. il Ind Marketing 38:90 O '53
Ways to sell printing. O. Arbogust. Inland Ptr 130:39 F '53
You'll get extra impact in distributor mailings. L. H. Brendel. Sales Management 70:104+ Mr 15 '53
See also
Advertisements—Books and booklets
Follow-up systems
Mailing lists
Sales letters

Printing

Sell better printing by comparison and suggestion. P. R. Russell. Inland Ptr 130:29+ Mr '53

ADVERTISING, Municipal. See Municipal advertising

ADVERTISING, National
Ad execs forecast more advertising as result of self-service. Ptr Ink 242:31-3 F 6 '53
Before this ad runs; these three big steps create national brand demand; Omega watches. il Ptr Ink 241:28 D 26 '52
Classified helps boost national ad linage. D. L. Lionel. Ed & Pub 86:26 F 14 '53
Frenzied merchandising is due for a comeback. E. B. Weiss. Ptr Ink 242:63 Ja 23 '53
Let the critics of advertising ponder this one; it helps to maintain standards. H. B. LeQuatte. Ptr Ink 242:122 Ja 16 '53
National advertising must be geared ever closer to retailing. E. F. Braden. Ptr Ink 241:102+ D 12 '52
New national advertiser in the making; Whitney & co.'s salmon. L. F. Thomann. il Ptr Ink 241:37 N 28 '52
Republic takes exception; producing line of steel kitchens under its own name, as well as on a contract basis. il Bsns W p41-2 Ja 17 '53
Small company goes national by joining forces with competition. N. Kelne. il Ptr Ink 242:39-41 F 27 '53
There's new business in the apparel industry. W. R. Mason. Adv Agency 46:67+ Ap '53
What's wrong with men's wear advertising? neglects to build up brand names. J. Freedman. il Adv Agency 46:59+ F '53
Why new national advertiser plans all ads with retailer in mind. N. Kelne. il Ptr Ink 242:33-4 Mr 27 '53

Local tie-in

Canadians spell out tie-in ad solicitation. T. S. Irvin. Ed & Pub 85:46 O 11 '52
Retailers will help in national ad drive. Ed & Pub 86:14 Ja 31 '53
Seven ways to put retail sell into national ads. P. Schofield. Ptr Ink 242:27-8 Mr 6 '53
Tie-ins help build paper's food section. Ed & Pub 85:26 O 11 '52

ADVERTISING, Outdoor
Art of advertising outdoors. H. Stebbins. il Ptr Ink 241:79-81+ D 5; 53-7+ D 19 '52
Can industrial advertisers use outdoor successfully? B. Aitchison. il Ind Marketing 38:52+ O '53
H. J. Fitzgerald new OAAA head. Ptr Ink 242:68 Ja 2 '53

ADVERTISING, Outdoor—*Continued*
Look at your signs, your customers do. il Dom Eng 182:118+ O '53
See also
Billboards
Electric signs
Posters

ADVERTISING, Point of sale
Build sales at the point-of-purchase; abstract. Management R 41:685-6 O '52
Design for point of sale, by L. Sutnar. Review, by L. Fellows. il Adv Agency 45:62-3+ D '52
18 ways to cut waste when you buy point-of-purchase advertising. D. Bland. Sales Management 69:28-9 N 10 '52
How to increase use of display material; General Foods' answer. P. Lillard. il Ptr Ink 241:36-8 O 24 '52
Letters from an agency man to his son. D. Bennett. Adv Agency 46:110 Ja '53
Point-of purchase advertising in action. il Ptr Ink 242:43-6+ Mr 27 '53
Tying ads and displays together. J. Harger. il Ptr Ink 242:45 F 6 '53

Mobile displays
Mobiles give advertisers a new medium. il Bsns W p46-8 F 28 '53

ADVERTISING, Political. See Political advertising

ADVERTISING, Public relations. See Advertising, Educational

ADVERTISING, Radio. See Radio advertising

ADVERTISING, Soliciting of
Ad man backs claims with own cold cash. W. L. Thompson. Ed & Pub 86:28 Ja 10 '53
Agency man tells reps what info agencies want. Ed & Pub 86:20 F 14 '53
ANA survey critical of newspaper selling. Ed & Pub 86:15 Ja 31 '53
Classified salesmen leave ad agency cold. D. L. Lionel. Ed & Pub 85:36 N 1 '52
Newspapers need better trained ad salesmen. G. A. Brandenburg. Ed & Pub 86:17 F 21 '53
Space buyers look at media salesmen. N. Wedding. Ptr Ink 242:36-8 Ja 30 '53
Surrounds ad sales resistance. R. E. Goodale. Ed & Pub 86:56 Ja 24 '53
What factors determine the choice of media? N. Wedding. Ptr Ink 242:33-5 Ja 23 '53
What makes a successful media rep? R. A. Baker. Ptr Ink 241:103-4 O 17 '52
See also
Newspaper representatives

ADVERTISING agencies
Czech and double-check Prochazka. S. H. Margolis and M. Silverstein. Ptr Ink 242:46+ F 27 '53
Declining emphasis on the creative side. B. Tyler. il Adv Agency 45:68-9 N '52
Defendants argue Duane Jones decision in appellate court. B. Tolk. Ptr Ink 242:33+ Mr 13 '53
Defendants in Duane Jones case will ask dismissal of verdict for lack of evidence. B. Tolk. Ptr Ink 241:35 N 7 '52
Did they conspire to destroy the Duane Jones agency? verbatim testimony. B. Tolk and R. Webster. Ptr Ink 241:32-32D, 33+ O 24; 36-7+ O 31 '52
Duane Jones case; an appraisal. G. H. Weil. Ptr Ink 241:36+ D 19 '52
Foote, Cone & Belding drop $4 million Toni account March 1. Ed & Pub 85:17 D 13 '52
479 advertising agencies place 470,022 business paper pages, 1952. Ind Marketing 38:47+ Ap '53
Guy that looks at the advertising with a client's point of view; Biow co. Ptr Ink 242:35-7+ F 13 '53
How 158 agencies profit through seven cooperative networks. T. M. Jones. il Ptr Ink 242:46-8+ Ja 16 '53
How Thompson handles Florida citrus advertising for Florida citrus commission. S. Robin. il Adv Agency 45:59-61+ D '52
Justices emphasize three points in hearing $300,000 appeal. B. Tolk. Ptr Ink 242:32 Mr 27 '53
Man with account in hand. K. Groesbeck. Adv Agency 46:104 Ap '53
Story of Ted Bates & co. Adv Agency 45:65-7+ N '52
Why those mergers on Madison avenue? Bsns W p43-4 D 6 '52

Account executives
Holding on to our people. K. Groesbeck. Adv Agency 46:104+ Ap '53
How agencies service accounts. I. Graham. Adv Agency 45:80+ N '52
How to get the most out of a field trip. R. R. Degen. il Adv Agency 46:62-3 Ap '53
See also
Greenbaum, Marjorie

Advertising
Concerning agency house organs. K. Groesbeck. Adv Agency 45:81 N '52
Which ad pulled best? il Ptr Ink 242:52+ Ja 9 '52

Art directors
What do art directors think of copy writers? G. Moses. Adv Agency 46:88+ Ap '53

Client relations
Ad manager suggests how to improve the agency relation. R. P. Wiggers. Ind Marketing 38:50-1+ Ap '53; Discussion. 38:8+ Je; 51-4 S; 78+ O; 8+ N '53
Agencies should specialize in smart clients. A. H. Edelson. Adv Agency 46:132+ Ap '53
Agency management sees ways to better the client relation. F. Adams and others. Ind Marketing 38:48-9 Ap '53
Are you selling clients or customers? S. Baker. Ptr Ink 241:50 O 17 '52
Come clean with your agency, and get better advertising. J. C. Cumming. Sales Management 70:86+ Mr 15 '53
How to get the most out of a field trip. R. F. Degen. il Adv Agency 46:62-3 Ap '53
How we got out of our advertising rut. M. Cantillon. il Adv Agency 46:78-80 Ap '53
Is client interference good or bad? H. P. Bridge. Ptr Ink 242:38 Ja 9 '53
No ivory towerists in C&W ad agency; employees serve behind the counter. J. L. Collings. il Ed & Pub 86:15 F 14 '53
Today it's important to cultivate suppliers as well as customers. J. A. Cairns. Ptr Ink 242:29-31 Ja 30 '53
See also
Advertising agencies—Account executives

Commissions
Agency standards continue to improve; house agencies and rebating of commissions. K. Groesbeck. Adv Agency 46:55+ Mr '53

Employees
Ad agencies need more characters! L. Owen. Ptr Ink 242:70+ F 27 '53
Ad agency hiring squads don't want any more characters. R. E. Will. Ptr Ink 241:73 N 7 '52
Copy function and how it is organized. I. Graham. Adv Agency 46:148+ Ap '53
4-A exams a valuable tool when used right. L. F. Thomann. il Ptr Ink 242:41-2 F 6 '53
How much do agency people earn? W. A. Lowen. Adv Agency 46:64-6 Ap '53
No ivory towerists in C&W ad agency; employees serve behind the counter. J. L. Collings. il Ed & Pub 86:15 F 14 '53
Practical plan for getting more work out of agency people. I. W. Rubel. Ptr Ink 242:29-32 Mr 13; 58+ Mr 20 '53
Problems of the small agency; people. K. Groesbeck. Adv Agency 45:82-3+ O '52
Should copy and contact be the same man? R. E. Will. Ptr Ink 241:52 D 26 '52

Fees
Charging for special services. K. Groesbeck. Adv Agency 46:100+ Ja '53
How much should small agency charge its small accounts? B. Aitchison. Ind Marketing 38:16+ Mr '53

Finance
How small an agency makes money? K. Groesbeck. Adv Agency 46:96+ Mr '53

ADVERTISING agencies—*Continued*

Foreign branches

Tempo of agency trek to Canada growing. J. Montagnes. Ed & Pub 85:17+ D 27 '52

U.S. advertising firms expanding in Canada. Barron's 33:41 Mr 23 '53

Libraries

Unique human motivation library is center of thought in this agency; Weiss & Geller social science library. E. H. Weiss. Ptr Ink 242:36-7 F 6 '53

Management

Copy function and how it is organized. I. Graham. Adv Agency 46:148+ Ap '53

How to expand an ad agency. il Bsns W p 150 F 21 '53

How to operate your agency more efficiently. D. D. Connah. Adv Agency 46:100+ Mr '53

Practical plan for getting more work out of agency people. I. W. Rubel. Ptr Ink 242:29-32 Mr 13; 58+ Mr 20 '53

Problems of the small agency. K. Groesbeck. Adv Agency 45:66-7+ S; 82-3+ O; 70-1+ N; 71+ D '52; 46:66+ Ja '53

Small agency can act big. W. Weir. Ed & Pub 86:24 Ja 24 '53

Story of Gardner advertising co. il Adv Agency 46:52-5+ F '53

Story of Robert W. Orr and associates. il Adv Agency 45:64-6+ O '52

20 steps to more efficient advertising, agency traffic and production. M. J. Sutter. il diags Ptr Ink 242:38-40 F 20 '53

See also

Advertising, Soliciting of

Medium departments

Find changes needed in media departments. M. C. Wallis. Ed & Pub 85:16 N 1 '52

What are the requisites of a good media director? Adv Agency 46:51 Ja '53

See also

Advertising agencies—Space buyers

Medium relations

Agency-newspaper relations discussed; Newspaper advertising managers association of eastern Canada. Ed & Pub 85:18+ S 27 '52

Survey shows agency role in media lists. Ed & Pub 85:14 O 25 '52

What makes a successful media rep? R. A. Baker. Ptr Ink 241:103-4 O 17 '52

New business

Ethics in new business procedure. K. Groesbeck. Adv Agency 46:90+ Mr '53

How to get new business. K. Groesbeck. Adv Agency 45:70-1+ N '52

Ten rules for new business getting. K. Groesbeck. Adv Agency 46:70 F '53

Offices

Blueprint for efficiency. il plan Ptr Ink 242:38 F 27 '53

There's no general office area here; Bozell & Jacobs, inc. P. Eastman. il Am Bsns 23:30 My '53

Why we moved into a building all our own. J. F. Arndt. flow plan il Ptr Ink 241:38-9 D 5 '52

With space to spare. il plan Adv Agency 46:70-1 Mr '53

Publicity departments

Setting up a publicity department. Adv Agency 45:86-7 O '52

Radio departments

What do you think are the requisites of a good radio-tv department head? Adv Agency 46:51 F '53

Records

20 steps to more efficient advertising, agency traffic and production. M. J. Sutter. il diags Ptr Ink 242:38-40 F 20 '53

Service

Admen weigh agency service for retailers. M. C. Wallis. Ed & Pub 85:17 O 11 '52

Agency in an adverse economy. K. Groesbeck. Adv Agency 45:81+ N '52

How good can small agency service be? K. Groesbeck. Adv Agency 46:66+ Ja '53

Marketing problems and agency services highlighted at unique Agency quiz down. H. E. Green. Ptr Ink 241:26 D 26 '52

New profit opportunity for agencies. H. Chamberlain. Adv Agency 46:59-61 Ap '53

On thumb-twiddling clients. Adv Agency 46:100 F '53

There's new business in the apparel industry. W. R. Mason. Adv Agency 46:67+ Ap '53

Space buyers

Space buyers look at media salesmen. N. Wedding. Ptr Ink 242:36-8 Ja 30 '53

Standards

Agency standards continue to improve; house agencies and rebating of commissions. K. Groesbeck. Adv Agency 46:55+ Mr '53

Statistics

Agencies that handle accounts for 100 leading magazine advertisers. Adv Agency 45:78 N '52

Here is how agencies rank by newspaper billings; national advertising in newspapers by over 450 agencies. Adv Agency 45:78-80 O '52

Television departments

Should you set up a tv department? T. MacWilliams. il Adv Agency 46:58+ F '53

Canada

U.S. advertising firms expanding in Canada. Barron's 33:41 Mr 23 '53

Great Britain

Young & Rubicam's Bryson shows British the U.S. way. Ed & Pub 85:51 N 29 '52

ADVERTISING allowances

Frenzied merchandising is due for a comeback. E. B. Weiss. Ptr Ink 242:63 Ja 23 '53

ADVERTISING and employees

Planned newspaper ads key to G E's plant city relations; success dependent on employes. L. R. Boulware. Ed & Pub 86:64+ F 21 '53

ADVERTISING and salesmen

Airmaid hosiery salesmen select their own advertising media. M. M. Donosky. il Sales Management 69:44+ D 1 '52

How to present your ad program to the sales force. L. B. Dunning. Ptr Ink 242:19-21 Ja 2 '53

How to team advertising with selling; Haspel bros. salesmen sell promotion package and product line together. N. Kelne. il Ptr Ink 241:40-1 N 21 '52

Playing cards and a contest boost lift-truck battery sales; Electric storage battery co. Ind Marketing 38:51 My '53

Six salesmen get help from ad staff in inquiry follow up. P. A. Wilks, jr. il Ind Marketing 38:64+ F '53

Some differences between advertising and selling. N. Samstag. Adv Agency 46:75-7 Ap '53

What do salesmen really think about industrial advertising? R. Winslow. il Ind Marketing 38:63-4 S '53

ADVERTISING appropriations

Advertising expenditures by industries, Jan.-Dec. 1952 and 1951; tabulation. Adv Agency 46:112 Mr '53

Determination of advertising expenditure. A. Rasmussen. J Marketing 16:439-46 Ap '52; Discussion. J. M. Parrish and J. M. Ryan. 17:277-80 Ja '53

Expenditures and sales to rise but markets more competitive; forecasts by executives of industrial advertising agencies. Ind Marketing 38:49 Ja '53

Hertz ups '53 budget; bulk set for local ads. Ed & Pub 85:24 D 6 '52

How advertising appropriations are made. G. J. Abrams. Adv Agency 45:76+ D '52

How soap makers are spending their advertising dollars. Adv Agency 45:67+ O '52

How to stretch a $4,000 ad budget. N. Kelne. il Ptr Ink 241:34-5 D 5 '52

How we present our ad budgets to management; a symposium. Ind Marketing 37:41-3 D '52

ADVERTISING appropriations—*Continued*

Industrial ad budgets average 2.28 per cent of expected sales in '53. M. Kingman. Ind Marketing 38:47-8 Ja '53

Industrial advertising investments by 489 concerns. Sales Management 69:125 O 1 '52

Justifying the appropriation. K. Groesbeck. Adv Agency 46:108 Ap '53

Motorola to spend bulk of budget in newspapers. Ed & Pub 86:26 Ja 10 '53

NIAA budget study lists ad expenditures in 11 industries. Ind Marketing 37:148+ N '52

Who'll buck a trend? G. Burck. Fortune 46:134-5+ O '52

ADVERTISING art

Art gallery merchandises CCS four-color campaign; Continental copper & steel industries. il Ind Marketing 38:150 Je '53

Clipping board. C. Coiner. il Published in monthly numbers of Advertising agency

Graphis annual, 1953/54. W. Herdeg and C. Rosner. 209p $12.50 Farrar, Straus and Young, 101 Fifth av, New York 3 '53

Is industrial promotion going sissy? art, mobiles used. il Ind Marketing 38:130-1 Ag '53

Modern art, merchandising help build a distributor force, Littelfuse, inc. B. Enos. il Ind Marketing 38:80-1+ Ap '53

Modern publicity, 1953-1954. F. A. Mercer, ed. v23 134p $8.50 Studio publications, 432 Fourth av, New York 16 '53

31st annual of national advertising and editorial art. Pellegrini and Cudahy, 41 E. 50th st, New York 22 '52 ($10)

See also

Advertisements, Pictorial

Posters

Exhibitions

New ideas from the old world invade U.S. il Inland Ptr 131:47-8 Ap '53

ADVERTISING as a profession

Advertising-ulcer myth, can it explode? J. E. Sorrell. Ind Marketing 37:129-30 D '52

Agency man's story (cont). J. Caples. Adv Agency 45:20+ N '52; 46:18+ Ja '53

Necessity is the mother of convention. R. S. Oppenheim. Ptr Ink 242:96 Ja 9 '53

No golden sheen. A. H. Eaton. Ptr Ink 241:132 N 14 '52

Passing the buck. M. Klapper. Ptr Ink 241:40 N 7 '52

See also

Advertising copywriters

ADVERTISING awards

Ad contests break out all over. il Ind Marketing 38:30+ My '53

ABP honors six outstanding industrial campaigns. H. Hoffman. il Ind Marketing 38:78-81 My '53

DMAA annual awards. Adv Agency 45:166 N '52

First presentation of advertising awards to agents features I.A.C. meet. Nat Underw 57:15 Ap 2 '53

Printers and lithographers' self-advertising award winners. il Inland Ptr 130:52-3 N '52

Printers' Ink awards dinner. Ptr Ink 242:40-2 Ja 16 '53

Printers' ink presents its first annual advertising awards. il Ptr Ink 242:29-32 Ja 9 '53

Three newspaper advertisers get awards. Ed & Pub 85:24 D 27 '52

ADVERTISING booklets. See Advertisements—Books and booklets

ADVERTISING campaigns

Ad chart offer hits objectives for Master chrome service. B. Enos. il Ind Marketing 38:50-1+ Ja '53

Allegheny solves illustration problem with Flexichrome. il Ind Marketing 38:126 Ja '53

Best campaigns of 1952. B. Tyler. il Adv Agency 46:60-3+ F '53

Business paper drive finds new uses for industrial paper; Riegel paper corp. C. Downes. il Ind Marketing 37:41+ O '52

Columbia campaign boosts buyer recognition of new name. il Ind Marketing 37:78+ O '52

Delta launches four big ways to merchandise the advertising. il Ind Marketing 38:58-9+ S '53

Electrical contractors launch $500,000 campaign for new business. il Ind Marketing 38:54-6 Je '53

Getting ready for new 1953 campaigns? il Ind Marketing 37:101+ N '52

How advertising that introduced new type product is now selling it; Melmac dinnerware. M. Beuick. il Ptr Ink 242:44-5 F 13 '53

How to top a topper. N. Keine. il Ptr Ink 241:23-5 D 26 '52

Inside story of Goodrich drive told by IM's adman of the year. H. E. Van Petten. Ind Marketing 38:96+ Ja '53

Instant-Dip; a success story with silver lining. H. Wessel, jr. il Ed & Pub 86:18+ F 21 '53

Pay-off for a low-budget campaign; Viking residential window fans. Sales Management 69:80+ N 1 '52

Photographic realism plays major role in International Harvester ad campaign. il Ind Marketing 38:62-3+ Ag '53

$6,000, three-week drive pulls 2,197 inquiries for Fairchild. H. K. Yulke. il Ind Marketing 38:76+ S '53

16 million reached by NCPMI ad campaign. N. Malone. il Brick & Clay Rec 122:78 Mr '53

Solutions, not products, pace Cochrane's industrial campaign. il Ind Marketing 38:84 Ap '53

Stop-and-go campaign hits snag then gets results for Nopco. P. E. Moreton. il Ind Marketing 37:136+ D '52

Superior Tube on target with dramatic case history ads. il Ind Marketing 38:118 F '53

Test tube campaign boosts Western sales tenfold. il Ind Marketing 37:112+ O '52

Tractor brake manufacturer hikes sales $6,000,000 in farm drive. B. Enos. il Ind Marketing 38:44-5 F '53

When a long strike sends all of your customers to competitors; Pacific Greyhound sales campaign, intensive advertising. G. G. Magnuson. il Sales Management 69:72+ N 1 '52

Why new advertiser is upping the budget again this spring; Swan garden hose. M. W. Miller. il Ptr Ink 242:33-5 Mr 6 '53

See also

Money raising campaignings

Printing week

Special weeks and days

Merchandising days and weeks for 1953. Ptr Ink 241:46+ D 5 '52

Testing

How Ronson plans to test dailies in 30 key cities. R. B. McIntyre. Ed & Pub 85:18+ S 20 '52

Tie-in advertisements

Fashion as reason for related selling is new theme of this advertiser; Simtex tablecloth. M. Beuick. il Ptr Ink 241:43-5 N 14 '52

ADVERTISING characters

He'll double as a top-notch salesman. il Bsns W p43-4 Mr 21 '53

Mutual's Mister Plus. il Adv Agency 45:82-3+ N '52

Trade character comes to life; Teddy Snow Crop. E. J. Dever, jr. il Ptr Ink 242:42-4 F 20 '53

Trade character gives new industrial product a symbolic personality; Harnischfeger power crane and shovel. H. E. Green. il Ptr Ink 242:37-8 Ja 23 '53

Trade characters in promotion programs. C. A. Kirkpatrick. J Marketing 17:366-71 Ap '53

What's in a name? millions! W. Boyd. il Adv Agency 46:56-7+ F '53

ADVERTISING copy

Admen urged to use new methods to savvy people. Ed & Pub 86:26 Ap 11 '53

Agency man's view of classified. C. E. Widney. Ed & Pub 85:14+ S 20 '52

Case-study in copy research. R. D. Crisp. J Marketing 17:347-56 Ap '53

Copy chasers. Published in monthly numbers of Industrial marketing

Copy clinic. B. Tyler. il Published in monthly numbers of Advertising agency and advertising and selling

ADVERTISING copy—*Continued*

Expert outlines ads that sell real estate. J. C. Tysen. Ed & Pub 85:32 N 15 '52

Here's one vote for today's advertising. E. W. Whitney. Adv Agency 45:87 O '52

Horse is tired, too! irrelevant approach. D. W. Gibson. Adv Agency 46:74-6 F '53

Is the old-time copy as good as the graybeards claim? Elbert Hubbard ads. C. J. Swan. Ptr Ink 241:55-7 O 17 '52

Lots of copy, no pictures make successful ad for Koppers. il Ind Marketing 38:65 Je '53

Make your ads interesting. B. Pendergast. Adv Agency 45:98 N '52

Middle tone. Aesop Glim. Ptr Ink 241:63 D 19 '52

New study contrasts auto copy of the 1930s and today. E. Callenbach. il Ptr Ink 242:47-50 Ja 2 '53

Product with a plus will be the winner this year. W. H. Kearns. il Ptr Ink 242:34-5+ Ja 2 '53

Purdon, the monotheist; advertising invariably the result of teamwork. S. H. Margolis and M. Silverstein. il Ptr Ink 242:38+ Mr 27 '53

Reward your reader. C. D. Murphy. Ptr Ink 241:148 D 12 '52

Statistical copy-content research. Ptr Ink 241:85 N 7 '52

Surplus commercial candor. Fortune 46:215 D '52

What advertisers should know about industrial copy. M. Stumm. Ind Marketing 37:134+ N '52

Which are the most backward fields? cigaret, book, automobile and media advertising. Aesop Glim. Ptr Ink 241:63 D 19 '52

Who's to blame for poor copy? G. Moses. Adv Agency 46:72+ Ja '53

See also

Advertising—Psychology
Advertising ethics
Sales letters
Television advertising—Copy

Capitalism theme

Economics of capital; ads of the month. il Trusts & Estates 92:10, 271, 347, 465, 536 Ja, Ap-Jl '53

Competitive copy

Hubbub in the washtub; detergent advertising eliminates need for bleaches. il Chem W 72:52 Ja 31 '53

Credibility

Unprovable superlatives criticized. Ptr Ink 242:69+ Ja 23 '53

Dealer listing

Skil helps 'em find it in the telephone book. C. McWade. il Sales Management 69:104+ N 1 '52

Editorial style

Editorial style ads are good in farm and trade papers, too. C. J. Swan. Ptr Ink 241:34-6 N 28 '52

How do users rate Atlantic's advertorials? Sales Management 70:94 F 15 '53

How to make editorial style ads more effective. C. J. Swan. il Ptr Ink 241:42-4+ N 21 '52

Switch from half to full columns, and to editorial style pays off; Griffin Wellpoint ads. il Ptr Ink 241:40 D 5 '52

Why ad men like the editorial style. C. J. Swan. il Ptr Ink 241:35-7 N 14 '52

Fashion appeal

Fashion as reason for related selling is new theme of this advertiser; Simtex tablecloth. M. Beuick. il Ptr Ink 241:43-5 N 14 '52

It's the ad that sells cosmetics. il Bsns W p62-4+ D 13 '52

Make the male animal more style conscious. R. Mohr. il Ptr Ink 242:74+ Ja 23 '53

Free offers

Which ad pulled best? Book-of-the-month club ad. il Ptr Ink 242:50+ Ja 23 '53

Gift appeal

How Ronson plans to test dailies in 30 key cities. R. B. McIntyre. Ed & Pub 85:18+ S 20 '52

Guarantees

NBBB warns advertisers on guarantees. Ed & Pub 85:20 D 6 '52

Headlines

Scientific advertising; reprint of book published in 1923; headlines. C. Hopkins. Adv Agency 45:65-6 D '52

What makes a good headline? Aesop Glim. Ptr Ink 241:60 D 5 '52

Health appeal

Insurance ads pave the way for dietary and health foods. il Bsns W p46+ D 6 '52

Language, style, etc.

Advertising copy; hit or miss? L. C. Keyes. Harvard Bsns R 31:71-82 My '53

Here's how to raise hell in your industrial advertising. il Ind Marketing 38:91-2+ Ap '53

Letters from an agency man to his son; magic of words. D. Bennett. Adv Agency 46:82 F '53

New credo for copy writers. L. C. Keyes. Ptr Ink 241:29-31 O 24 '52

Question for copywriters; how's your fog index today? il Ind Marketing 37:89+ S '52

What psychology offers to advertising. H. D. Hadley. il Adv Agency 46:70-1+ Ap '53

Why ad men like the editorial style. C. J. Swan. il Ptr Ink 241:35-7 N 14 '52

Why this copy switch is paying off. E. H. Ericson. il Ptr Ink 241:50+ N 28 '52

Length

How brief? Aesop Glim. il Ptr Ink 242:93 Mr 27 '53

How much can you do in a single ad? W. R. Dix. Ptr Ink 242:32 Mr 6 '53

Moving picture tie-in

Walt Disney's Peter Pan; merchandising tie-in with 12 national advertisers. C. Day. il Ptr Ink 242:34 F 6 '53

Premium offers

Dailies held best means of pre-testing premium. Ed & Pub 85:15+ S 20 '52

Price appeal

Which ad pulled best? il Ptr Ink 241:43+ N 7 '52

Price quoting

Steel distributor solves catalog price problem. il Ind Marketing 37:106+ D '52

Quality appeal

How advertising can add to your product's quality. J. E. Gallagher. il Ptr Ink 241:90-1 O 17 '52

Is the direct appeal the most effective? H. D. Hadley. il Adv Agency 45:85+ O '52

Revision

Is client interference good or bad? H. P. Bridge. Ptr Ink 242:38 Ja 9 '53

Testimonials

Cartoon testimonials boost air freight sales of Flying Tigers. J. Collins. il Ind Marketing 37:132+ D '52

On behalf of testimonials. M. F. Dreher. il Ptr Ink 242:47-50 Mr 20 '53

Small space testimonial ads sell for Viking, distributors. il Ind Marketing 37:65+ O '52

Theme

Daisy, daisy; it's a winning promotion theme! Oxford filing supply co. il Ptr Ink 242:49-50 F 20 '53

Trial offers

Which ad pulled best? c.o.d. ten-day refund privilege, or approval ten day return privilege. il Ptr Ink 242:64+ F 27 '53

Use appeal

Business paper drive finds new uses for industrial paper; Riegel paper corp. C. Downes. il Ind Marketing 37:41+ O '52

11 copy themes to promote new uses for products. T. M. Jones. il Ptr Ink 241:30-3 N 28 '52

15 ways to boost sales by promoting new uses for products. T. M. Jones. il Ptr Ink 241:33-5+ N 21 '52

ADVERTISING copy editors

Copy editing; a personal equation. N. Samstag. Ptr Ink 242:43-5 Ja 16 '53

ADVERTISING copy writers

Compleat copy chief. Aesop Glim. Ptr Ink 242:82-3 F 13 '53

Copy function and how it is organized. I. Graham. Adv Agency 46:148+ Ap '53

Copy writer's role. Aesop Glim. Ptr Ink 242:102 Ja 16 '53

Dr Heckle and Mr Tide. S. H. Margolis and M. Silverstein. Ptr Ink 241:36-8 N 21 '52

For creative men only; time, copy writer's worst enemy. G. Moses. Adv Agency 46:78+ Mr '53

From experience comes great advertising copy. S. H. Margolis and M. Silverstein. il Ptr Ink 242:46+ F 13 '53

Hail to thee, blithe spirits! or, it takes a flock of writers. N. Samstag. il Adv Agency 46:58-9+ Ja '53

Happy time in the life of a copy writer. J. Caples. Adv Agency 45:20+ D '52

Heart-stopping adventures of Trager the intrepid; youthful copy writer on Canadian Club. S. H. Margolis and M. Silverstein. il Ptr Ink 242:40+ Ja 30 '53

How a faux pas made me popular. J. Caples. Adv Agency 45:20+ N '52

How to get out of advertising alive. F. Denman. Ptr Ink 242:54+ Ja 23 '53

How to revamp your copy file for use. R. R. Maxwell. diag Ptr Ink 242:26-7 Ja 2 '53

Man in the red suit; Ed Zern. S. H. Margolis and M. Silverstein. il Ptr Ink 241:36-7+ N 7 '52

New credo for copy writers. L. C. Keyes. Ptr Ink 241:29-31 O 24 '52

What do art directors think of copy writers? G. Moses. Adv Agency 46:88+ Ap '53

What do you think are the requisites of a good copy chief? Adv Agency 45:63+ O '52

What's the idea of paying a sick girl so much for a layout? so Marjorie Greenbaum quit. S. H. Margolis and M. Silverstein. Ptr Ink 242:78+ Ja 16 '53

Which are the copy writers? general and industrial copy. Aesop Glim. Ptr Ink 242:51 Ja 2 '53

Why C & W copywriters get out and get under. il Sales Management 70:127-8 F 15 '53

Why Les Pearl is happy to be a space writer. S. H. Margolis and M. Silverstein. Ptr Ink 241:41-2+ D 5 '52

See also

Bernbach, Bill
Purdon, Roger
Redmond, Louis

ADVERTISING council

Who finances the Advertising council? K. Groesbeck. Adv Agency 46:90 Mr '53

ADVERTISING departments

See also

Advertising managers

Records

Follow up those advertising inquiries! C. P. Adams. Ptr Ink 241:60+ O 17 '52

ADVERTISING displays

See also

Advertising, Point-of-sale

ADVERTISING ethics

Ask for proof of cigarette and filter advertising! Consumers Res Bul 30:10 D '52

ABBB makes scattered gains in fight against bait advertising. C. Day. il Ptr Ink 242:51+ Mr 20 '53

Does cigarette advertising need further self-regulation? C. B. Larrabee; R. Norr. Ptr Ink 241:52+ O 31 '52

FTC and the advertising industry exploring closer liaison to fight false advertising. il Ptr Ink 242:10-11 Mr 27 '53

I like Coke. E. B. Weiss. Ptr Ink 241:36 N 28 '52

Importance of being earnest (with apologies to Oscar Wilde). C. Barlow. Ptr Ink 241:72 O 17 '52

Manufacturers should furnish proof of claims. Consumers Res Bul 31:27 Ap '53

Off the editor's chest. Consumers Res Bul 30:2+ N '52

P.I. platform of advertising principles is winning world-wide support. Ptr Ink 241:48+ O 10; 78-80 N 21 '52; 242:56-7 Ja 30 '53

Truth is stronger than fiction. G. Moses. Adv Agency 45:75+ N '52

We've been gypped by bait advertising; food freezer plans and slick tv repair deals. Sales Management 70:97-8 F 1 '53

See also

Newspapers—Advertising policies

ADVERTISING libraries

See also

Advertising agencies—Libraries

ADVERTISING literature

How to keep sales literature in order and up to date. B. Aitchison. Ind Marketing 37:20+ S '52

Bibliography

Catalogs and bulletins. Published in monthly numbers of Food engineering

Important new free catalogs. Published in monthly numbers of Factory management and maintenance

New literature to help cut costs. Published in monthly numbers of Mill and factory

Showcase of new bulletins. Power 97:251-6+ Mid-S '53

ADVERTISING managers

Ad manager isolates a problem, sells budget to management. il Ind Marketing 37:146+ S '52

How to plan a field photo trip. W. F. Weimer. il Ptr Ink 241:32-3 O 31 '52

Ten ways for admen to benefit indirectly from trade shows. G. Wedereit. il Ind Marketing 38:48-9 F '53

What management expects from industrial ad managers. T. Fort. Ind Marketing 38:58+ Jl '53

See also

Association of newspaper classified advertising managers

ADVERTISING managers association, Interstate. See Interstate advertising managers association

ADVERTISING mediums

Delta launches four big ways to merchandise the advertising. il Ind Marketing 38:58-9+ S '53

How new study sharpens choice of media; Remington Rand continues research project. R. Manville. Ptr Ink 242:38-40 F 6 '53

How to make a little budget go a long, long way. B. Aitchison. il Ind Marketing 38:44+ Jl '53

Mobiles give advertisers a new medium. il Bsns W p46-8 F 28 '53

Parking meter ads. il Bsns W p50-1 Ap 11 '53

See also

Advertising, Soliciting of
Advertising agencies—Medium departments
Advertising as a profession
Advertising novelties
Audit bureau of circulations
Controlled circulation audit
Moving pictures in advertising
Radio advertising
Slide films
Television advertising

Advertising

In Europe they sue over competitive media claims; Belgian case of Reader's digest. I. W. Digges. Ptr Ink 242:38 Mr 6 '53

Which are the most backward fields? cigaret, book, automobile and media advertising. Aesop Glim. Ptr Ink 241:63 D 19 '52

Farm papers

Editorial style ads are good in farm and trade papers, too. C. J. Swan. Ptr Ink 241:34-6 N 28 '52

Farm publication advertising in '52. Adv Agency 46:96 Mr '53; Same. Ptr Ink 242:60 Mr 6 '53

339 top advertisers in farm papers. Ptr Ink 242:52+ Mr 13 '53

ADVERTISING mediums—*Continued*

Match books

Billions of matches; but the bright economic light comes from other sources. H. Murphy. Barron's 32:11-12 N 3 '52

Diamond Match visuals cut costs, expand sales volume. W. M. Howard. il Sales Management 70:30-1 Mr 1 '53

Motor buses

Louisville Transit cashes in on traveling billboard idea. il Bus Transportation 32:52-3 O '53

Traveling billboard buses can boost your revenues. il Bus Transportation 32:28-9 My '53

Newspapers

Abundant opportunities seen for '53. H. V. Manzer. Ed & Pub 86:17-18 Ja 3 '53

Classified helps boost national ad linage. D. L. Lionel. Ed & Pub 86:26 F 14 '53

Dailies answer queries on rates and practices. R. B. McIntyre. Ed & Pub 85:15-16+ D 6 '52

Dailies fail to convince on power as ad medium; Ohio state university's ninth advertising conference. Ed & Pub 85:18+ O 25 '52

Daily called the salesman with brains. Ed & Pub 85:30 N 1 '52

Dubs daily our number one medium. W. E. Fish. Ed & Pub 85:18 D 27 '52

52-city papers close '52 with 1.1 per cent ad gain. Ed & Pub 86:54-6 Ja 31 '53

Heinz buys three-fourths total Sunday readership. Ed & Pub 85:28 N 22 '52

Here is how agencies rank by newspaper billings; national advertising in newspapers by over 450 agencies. Adv Agency 45:78-80 O '52

How Antell adapted tv sales pitch to newspapers. C. D. Kasher. Ed & Pub 85:16 O 25 '52

Inlanders preview ad selling tools. G. A. Brandenburg. Ed & Pub 86:9+ F 21 '53

Mat releases bring publicity for industrial companies. B. Aitchison. il Ind Marketing 38:36+ S '53

National newspaper dollars in metropolitan area cities. Sales Management 69:150+ N 10 '52

Newspaper ads first with Mrs Housewife. Ed & Pub 86:32 Ja 24 '53

Newspaper is basic says Kroger adman. W. J. Sanning. Ed & Pub 85:15+ D 20 '52

Papers can do better job. A. Dimond. Ed & Pub 85:15+ S 27 '52

Selectivity of newspapers. D. B. Arnold. Adv Agency 46:124-5 Mr '53

Sheaffer Pen points up Sunday supplements. R. B. McIntyre. Ed & Pub 86:16 Ja 10 '53

Sponsored radio listings hand daily plus linage. R. B. McIntyre. Ed & Pub 86:18 Ap 11 '53

Trends in national newspaper advertising. Adv Agency 46:96 Ja '53 [cont monthly]

Why insurance companies advertise in newspapers. il Adv Agency 45:75+ O '52

Why newspapers rate high with Sagner's son. R. B. McIntyre. il Ed & Pub 86:20 Ja 17 '53

See also

American newspaper publishers association—Bureau of advertising

Audit bureau of circulations

Newspaper representatives

Periodicals

Editorial directory. 232p pa $27 Galub pub. co, 516 Fifth av, New York 36 '53

1952 magazine advertising volume in pages; tabulation. Ind Marketing 38:114 My '53

See also

Advertisements—Inserts

Selection

Airmaid hosiery salesmen select their own advertising media. M. M. Donosky. il Sales Management 69:44+ D 1 '52

Creative approach to media should be encouraged. L. N. Brockway. Adv Agency 45:131 D '52

Evaluating editorial content. Adv Agency 45:128+ O '52

How to select media in today's competitive conditions. H. A. Wilt. Ind Marketing 38:57-9 O '53

Large dose of common sense. C. R. Palmer. Ptr Ink 242:72 Ja 2 '53

Sales presentation outline is step toward better media facts. K. J. Bayer. Ind Marketing 37:68+ D '52

Sales research aids media buying. T. N. Tveter. Ed & Pub 86:22 Ja 31 '53

What factors determine the choice of media? N. Wedding. Ptr Ink 242:33-5 Ja 23 '53

Service

Let your media handle ad sessions at meetings. G. Vallender. Sales Management 70:59-61 pt 2 Ja 1 '53

Telephone directories

Case for multiple listings; they shop by phone! Dom Eng 182:110+ O '53

Skil helps 'em find it in the telephone book. C. McWade. il Sales Management 69:104+ N 1 '52

Trade journals

Advertising volume in business papers. Published in monthly numbers of Industrial marketing

Business paper rates rising. Ind Marketing 37:26+ S '52

Business paper volume may hit third annual record in 1952. A. R. Venezian. Ind Marketing 37:41-3+ S '52

Business publication ad lands a new customer and an $80,000 sale; A. O. Smith corp. il Ind Marketing 37:44-5+ D '52

Editorial style ads are good in farm and trade papers, too. C. J. Swan. Ptr Ink 241:34-6 N 28 '52

Forecast 6.9 per cen gain in 1953 for business paper ad volume. A. Venezian. Ind Marketing 38:66+ Ag '53

479 advertising agencies place 470,022 business paper pages, 1952. Ind Marketing 38:47+ Ap '53

How advertisers can measure business paper readers. G. W. N. Riddle. Adv Agency 45:78-9+ D '52

How publication advertising methods can help your show exhibits. A. Lowell. il Ind Marketing 38:46-7+ F '53

How to increase readership of business paper advertisements. D. W. Twedt. Adv Agency 46:72-4 Mr '53

Is your brand slipping? new ABP survey among dealers. Ptr Ink 241:51 O 17 '52

Oil and gas journal leads again; leading industrial publications, their rank and pages, 1951 and 1952; tabulation. Ind Marketing 38:128 Ja '53

Should trade ads be funny? P.I. study of humor in current trade-paper advertising shows why it must be handled with care. N. Kelne. il Ptr Ink 242:41-2+ Ja 9 '53

What 489 biggest advertisers spent on business papers in '51. Ind Marketing 37:126+ O '52; Excerpt. Adv Agency 45:122+ N '52

What 641 firms spend in business papers, 1952; tabulation. Ind Marketing 38:118-19+ My '53

ADVERTISING men

Let's show some respect for the young. R. Nash. Ptr Ink 242:96 Mr 6 '53

Mr Printer, you need an advertising man. R. A. Stevens. il Inland Ptr 130:38-9 Mr '53

See also

Ewald, Henry Theodore

Purdon, Roger

Robinson, Ed

ADVERTISING novelties

Give-away calculator can help your customer anywhere. V. W. Palen. il Ind Marketing 38:64 Ap '53

ADVERTISING policies

Emerson tunes-in dailies at national, local levels. D. J. Hopkins. il Ed & Pub 85:16+ O 18 '52

Merchandise your advertising but don't fool your customers. R. A. Picard. Adv Agency 46:69+ Ja '53

$1,000,000 hoist in sales when Gossard digs in at point-of-purchase. W. Baudette. il Sales Management 70:42-5 Mr 15 '53

Self-liquidating mail-order campaign gets money for educational advertising program; Rayex nite glasses. N. Kelne. il Ptr Ink 241:40+ O 31 '52

ADVERTISING policies—*Continued*

Six ways to stretch your advertising dollar; Youngstown kitchens. M. Adams. il Ptr Ink 242:29-30 Mr 27 '53

ADVERTISING research

Case-study in copy research. R. D. Crisp. J Marketing 17:347-56 Ap '53

How to guard against distortion in readership surveys. A. H. Dix. Ptr Ink 241:52 N 21 '52

New study checks results of Ad council booklet. Ptr Ink 242:88 Ja 16 '53

Printers' Ink awards dinner; medal winners urge advertising to push social and economic gains; Brophy wants profits of enterprise widely distributed; Sterling stresses research. Ptr Ink 242:40-2 Ja 16 '53

Research backs Bureau studies, presentations. M. C. Wallis. Ed & Pub 86:24+ F 21 '53

Top executives tell how to use social sciences in advertising. H. E. Green. Ptr Ink 242:35-7+ F 27 '53

What research shows about industrial advertising effectiveness. J. C. Spurr. Adv Agency 45:77+ D '52

See also

Advertisements—Readership

Market research

ADVERTISING reserves. See Advertising—Finance

ADVERTISING specialties

GE pocket diary tells all. Ind Marketing 38:72 F '53

See also

Brown and Bigelow

ADVISORY board on economic growth and stability. See United States—Advisory board on economic growth and stability

AERATION

Effect of aeration on citric acid production in 50-gallon tanks. G. H. Buelow and M. J. Johnson. bibliog il diag Ind & Eng Chem 44:2945-6 D '52

AERATION of sewage. See Sewage disposal—Aeration

AERIAL mapping. See Mapping, Aerial

AERIAL photography. See Photography, Aerial

AERIAL surveying. See Surveying, Aerial

AERIAL tramways. See Cableways

AERIAL warfare. See Aeronautics, Military

AERIALS, Radio. See Radio antennas

AEROBACTER

DPN specific glycerol dehydrogenase from aerobacter aerogenes. R. M. Burton and N. O. Kaplan. bibliog Am Chem Soc J 75:1005-6 F 20 '53

Some physical investigations of the behaviour of bacterial surfaces; the electrophoretic mobility of aerobacter aerogenes. P. J. Barry and A. M. James. Chem Soc J p3340-5 S '52

Some physical investigations of the behaviour of bacterial surfaces; the variation of the electrophoretic mobility of aerobacter aerogenes with the age of the culture and the nature of the culture medium. P. J. Barry and A. M. James. Chem Soc J p 1264-7 Ap '53

Water quality yardsticks. W. L. Mallmann. bibliog Am Water Works Assn J 45:917-25; Discussion. 925-6 S '53

AERODYNAMIC laboratories

See also

Wind tunnels

AERODYNAMICS

Aerodynamic coefficients of an oscillating airfoil in two-dimensional subsonic flow. R. Timman and others. bibliog J Aeronautical Sci 18:797-802+ D '51; Discussion. 19:353-4, 790-1; 20:362-3 My, N '52, My '53

Aerodynamic coefficients of an oscillating airfoil with control surface in two-dimensional subsonic flow. A. I. van de Vooren. bibliog J Aeronautical Sci 20:153-9 Mr '53

Aerodynamic forces on low aspect ratio wings oscillating in an incompressible flow. H. R. Lawrence and E. H. Gerber. bibliog diags J Aeronautical Sci 19:769-81 N '52; Correction. 20:296 Ap '53

Aerodynamic forces on slender plane- and cruciform-wing and body combinations. J. R. Spreiter. bibliog diags U S Nat Advisory Com for Aeronautics 1950:271-87 '51

Aerodynamic research with rocket-propelled models at the Pilotless aircraft research station of the National advisory committee for aeronautics. il Engineer 194:254-5 Ag 22 '52

Aerodynamic stability of suspension bridges; progress report of the Advisory board on the investigation of suspension bridges. bibliog diags Am Soc C E Proc 78[no 144A-144B]:1-63 Ag '52

Amateur scientist. A. G. Ingalls. diags Sci Am 188:112-14 Ap '53

Application of Busemann's formula to a simple two-dimensional curved aerofoil section. J. A. Dunsby. diags Roy Aeronautical Soc J 57:600-3 S '53

Asymptotic solutions for the heat transfer at varying wall temperatures in a laminar boundary layer with Hartree's velocity profiles. H. Schuh. bibliog J Aeronautical Sci 20:146-7 F '53

Boundary-layer stability and transition in subsonic and supersonic flow. C. Gazley, jr. bibliog(43 titles) J Aeronautical Sci 20:19-28 Ja '53

Calculation of the aerodynamic loading of swept and unswept flexible wings of arbitrary stiffness. F. W. Diederich. bibliog diag U S Nat Advisory Com for Aeronautics 1950:909-37 '51

Comparative drag measurements at transonic speeds of rectangular and sweptback NACA 65-009 airfoils mounted on a freely falling body. C. W. Mathews and J. R. Thompson. il diag U S Nat Advisory Com for Aeronautics 1950:685-91 '51

Compressible flow past a cascade of thin airfoils. G. V. R. Rao. diag J Aeronautical Sci 20:217-18 Mr '53

Curved shocks in steady plane flow of an ideal fluid. C. Truesdell. J Aeronautical Sci 19:826-8 D '52

Dynamic stability of a missile in rolling flight. R. E. Bolz. bibliog diags J Aeronautical Sci 19:395-403 Je '52; Discussion. A. E. Bryson, jr. 20:69-71 Ja '53; Reply. 20:356-7 My '53

Effects of variations in Reynolds number between $3.0\text{X}10^6$ and $25.0\text{X}10^6$ upon the aerodynamic characteristics of a number of NACA 6-series airfoil sections. L. K. Loftin, jr. and W. J. Bursnall. bibliog U S Nat Advisory Com for Aeronautics 1950:307-26 '51

Experimental investigation of convective heat transfer to air from a flat plate with a stepwise discontinuous surface temperature. S. Scesa and F. M. Sauer. bibliog il diag A S M E Trans 74:1251-5 O '52

IAS summaries. Aviation W 58:44+ F 16; 32-3 F 23 '53

Interferometer-Schlieren instrument for aerodynamic investigations. R. E. Blue and J. L. Pollack. il diags R Sci Instr 23:754-5 D '52

Investigation of a systematic group of NACA 1-series cowlings with and without spinners. M. R. Nichols and A. L. Keith, jr. bibliog il diags U S Nat Advisory Com for Aeronautics 1949:585-684 '51

Laboratory simulation of aerodynamic heating for transient temperature measurements. L. H. Wilson and J. B. Falk. diags Aeronautical Eng R 12:39-41 F '53

Leakage of air through labyrinth glands of staggered type. W. J. Kearton and T. H. Keh. bibliog diags Inst Mech Eng Proc (A) 166 no 2:180-8; Discussion. 189-95 '52

Lift of highly swept wings. H. Mirels. bibliog diag J Aeronautical Sci 20:210-11 Mr '53

Linearized compressible-flow theory for sonic flight speeds. M. A. Heaslet and others. bibliog diags U S Nat Advisory Com for Aeronautics 1950:195-210 '51

Local heat-transfer coefficients on the surface of an elliptical cylinder in a high-speed air stream. R. A. Seban and R. M. Drake. bibliog il A S M E Trans 75:235-9; Discussion. 239:40 F '53

NACA charts transonic progress; Langley laboratory inspection. R. McLarren. il Aero Digest 66:96-8+ Je '53

Noncirculatory flow about a two-dimensional airfoil at subsonic speeds. B. Mazelsky. J Aeronautical Sci 19:848-9 D '52

AERODYNAMICS—*Continued*

Penetration and deflection of jets oblique to a general stream. F. F. Ehrich. diags J Aeronautical Sci 20:99-104 F '53

Potential and field of flow (induced velocity) of a plane vortex. J. L. Taylor. Roy Aeronautical Soc J 57:179-80 Mr '53

Potential limit in transonic flow. Pei Chi Chou. diag J Aeronautical Sci 20:68-9 Ja '53

Pressure distribution on low aspect ratio wings in steady or unsteady incompressible flow. H. R. Lawrence. bibliog J Aeronautical Sci 20:218-19 Mr '53

Production of high temperature gases in shock tubes. E. L. Resler and others. il diags J Ap Phys 23:1390-9 D '52

Quadruple velocity correlations and pressure fluctuations in isotropic turbulence. M. S. Uberoi. bibliog J Aeronautical Sci 20:197-204 Mr '53

Resolution of velocity for the swept-back wing at incidence. C. H. McKeon. diags Roy Aeronautical Soc J 57:177-9 Mr '53

Reverse-flow and variational theorems for lifting surfaces in nonstationary compressible flow. A. H. Flax. bibliog diags J Aeronautical Sci 20:120-6 F '53

Reversibility theorem for thin airfoils in subsonic and supersonic flow. C. E. Brown. bibliog U S Nat Advisory Com for Aeronautics 1950:669-71 '51

Similarity laws for stressing heated wings. H. S. Tsien. diags J Aeronautical Sci 20:1-11 Ja '53

Some NACA research on centrifugal compressors. I. A. Johnsen and A. Ginsburg. bibliog il diags A S M E Trans 75:805-15; Discussion. 815-17 Jl '53

Stability of free laminar boundary layer between parallel streams. M. Lessen. bibliog diag U S Nat Advisory Com for Aeronautics 1950:571-9 '51

Statistical aspects of dynamic loads. Y. C. Fung. bibliog il J Aeronautical Sci 20:317-30 My '53

Study of compressible flow through cascades using a linear pressure-volume relationship. D. C. Prince, jr. J Aeronautical Sci 19:782-3 N '52

Subsonic calculation of circulatory spanwise loadings for oscillating airfoils by lifting-line techniques. M. A. Dengler and M. Goland. bibliog diags J Aeronautical Sci 19:751-9 N '52

Theodorsen function in incompressible flow and C-function in supersonic flow. C. Chang. bibliog diags J Aeronautical Sci 19:717-18 O '52

Two-dimensional compressible flow in turbomachines with conic flow surfaces. J. D. Stanitz. bibliog diags U S Nat Advisory Com for Aeronautics 1949:279-303 '51

See also

Aeronautics
Air flow
Airplane stability and stabilizers
Airplanes—Design
Boundary layer
Flame propagation
Shock waves
Turbulence
Wind tunnels

Electric analogies

Wright's analogs simulate engines and controls. W. C. Schaffer. il S A E J 60:20-3 D '52

Mechanical analogies

New mechanical analogy for the flow of compressible fluid. N. Inoue. bibliog diag J Aeronautical Sci 19:783-4 N '52

AERODYNAMICS, Supersonic

Analysis of supersonic aerodynamic heating with continuous fluid injection. E. B. Klunker and H. R. Ivey. bibliog U S Nat Advisory Com for Aeronautics 1950:701-10 '51

Application of Green's theorem to the solution of boundary-value problems in linearized supersonic wing theory. M. A. Heaslet and H. Lomax. bibliog diags U S Nat Advisory Com for Aeronautics 1950:257-70 '51

Approximate calculation of axisymmetric flow near the vertex of a body traveling at high supersonic speeds. A. J. Eggers, jr. and S. Kraus. bibliog J Aeronautical Sci 20:215-17 Mr '53

Boundary-layer equations in hypersonic flow and their approximate solutions. L. Lees. bibliog J Aeronautical Sci 20:143-5 F '53

Busemann coefficients for a supersonic airfoil. D. Naylor. J Aeronautical Sci 20:219-20 Mr '53

Calculation of downwash behind supersonic wings with an application to triangular plan forms. H. Lomax and others. bibliog diags U S Nat Advisory Com for Aeronautics 1950:211-29 '51

Calculation of the stability of the laminar boundary layer in a compressible fluid on a flat plate with heat transfer. E. R. Van Driest. bibliog J Aeronautical Sci 19:801-12+ D '52

Characteristics of low-aspect-ratio wings at supercritical Mach numbers. J. Stack and W. F. Lindsey. il diags U S Nat Advisory Com for Aeronautics 1949:63-8 '51

Conical potential solutions in linearized supersonic flow. G. Morikawa. bibliog diags J Aeronautical Sci 20:283-5 Ap '53

Development of cambered airfoil sections having favorable lift characteristics at supercritical Mach numbers. D. J. Graham. bibliog U S Nat Advisory Com for Aeronautics 1949:507-28 '51

Direct measurement of supersonic skin friction. D. Coles. J Aeronautical Sci 19:717 O '52

Effect of torsional flexibility on the rolling characteristics at supersonic speeds of tapered unswept wings. W. A. Tucker and R. L. Nelson. diags U S Nat Advisory Com for Aeronautics 1950:425-52 '51

Effects of angle of attack on local skin-friction coefficients at $M_0=4$. J. J. Martin. J Aeronautical Sci 20:211-12 Mr '53

Effects of density fluctuations on the turbulent skin friction of an insulated flat plate at high supersonic speeds. T. Y. Li and H. T. Nagamatsu. J Aeronautical Sci 18:696-7 O '51; Discussion. E. R. Van Driest. 20:360-2 My '53

Experimental study of a hypersonic wind-tunnel diffuser. P. P. Wegener and R. K. Lobb. bibliog il diag J Aeronautical Sci 20:105-10 F '53

Experiments with large pitot tubes in a narrow supersonic wake. N. H. Johannesen and W. A. Mair. J Aeronautical Sci 19:785-7 N '52

Flow behind an attached curved shock. S. I. Pai. diag J Aeronautical Sci 19:734-42 N '52

Free-flight investigation of the possibility of high Reynolds number supersonic laminar boundary layers. J. Sternberg. bibliog il diags J Aeronautical Sci 19:721-33 N '52

Heat transfer from spheres to a rarefied gas in supersonic flow. R. M. Drake, jr. and G. H. Backer. bibliog il diags A S M E Trans 74:1241-9 O '52

Heat transfer in a nozzle at supersonic speeds. O. A. Saunders and P. H. Calder. bibliog diags Inst Mech Eng Proc (B) 1B no 6:232-7 '52; Same. Engineering 174:281-4 Ag 29 '52; Discussion. Inst Mech Eng Proc (B) 1B no 6:237-9 '52

Investigation with an interferometer of the turbulent mixing of a free supersonic jet. P. B. Gooderum and others. bibliog il diags U S Nat Advisory Com for Aeronautics 1950:289-305 '51

Laminar mixing of a compressible fluid. D. R. Chapman. bibliog diag U S Nat Advisory Com for Aeronautics 1950:231-7 '51

Line-vortex theory for calculation of supersonic downwash. H. Mirels and R. C. Haefeli. bibliog diags U S Nat Advisory Com for Aeronautics 1950:635-50 '51

Longitudinal stability of elastic swept wings at supersonic speed. C. W. Frick and R. S. Chubb. bibliog diags U S Nat Advisory Com for Aeronautics 1950:327-38 '51

Measurement of turbulent boundary-layer profiles and heat-transfer coefficient at M=7. P. P. Wegener and others. bibliog J Aeronautical Sci 20:221-2 Mr '53

Mixing theory for the interaction between dissipative flows and nearly isentropic streams. L. Crocco and L. Lees. bibliog diags J Aeronautical Sci 19:649-76 O '52

NACA research goal; Mach five tunnels. H. L. Dryden. Aviation W 58:14-15 Mr 23 '53

One-dimensional flows of an imperfect diatomic gas. A. J. Eggers, jr. bibliog U S Nat Advisory Com for Aeronautics 1950:239-49 '51

AERODYNAMICS, Supersonic—*Continued*

Pure rolling motion of winged and/or finned missiles in varying supersonic flight. J. D. Nicolaides and R. E. Bolz. bibliog il diags J Aeronautical Sci 20:160-8 Mr '53

Recovery factor for hypersonic flow with a self-induced pressure gradient. R. F. Probstein and L. Lees. J Aeronautical Sci 20:291-2 Ap '53

Second-order solution for an oscillating two-dimensional supersonic airfoil. A. Wylly. bibliog diags J Aeronautical Sci 19:685-96+ O '52

Shock-wave effects on the laminar skin friction of an insulated flat plate at hypersonic speeds. T. Li and H. T. Nagamatsu. bibliog J Aeronautical Sci 20:345-55 My '53; Discussion. M. Z. v. Krzywoblocki. 20:799-800 N '53

Some aspects of noise from supersonic aircraft. G. M. Lilley and others. bibliog il diags Roy Aeronautical Soc J 57:396-414 Je '53

Stability derivatives at supersonic speeds of thin rectangular wings with diagonals ahead of tip Mach lines. S. M. Harmon. bibliog diags U S Nat Advisory Com for Aeronautics 1949:101-14 '51

Supersonic axial-flow compressor. A. Kantrowitz. diags U S Nat Advisory Com for Aeronautics 1950:473-81 '51

Temperature-sensitive phosphor used to measure surface temperatures in aero dynamics. L. C. Bradley, 3d. il diags R Sci Instr 24:219-20 Mr '53

Theoretical characteristics in supersonic flow of two types of control surfaces on triangular wings. W. A. Tucker and R. L. Nelson. bibliog diags U S Nat Advisory Com for Aeronautics 1949:371-86 '51

Theoretical determination of the minimum drag of airfoils at supersonic speeds. R. T. Jones. bibliog diags J Aeronautical Sci 19:813-22 D '52

Theoretical lift and damping in roll at supersonic speeds of thin sweptback tapered wings with streamwise tips, subsonic leading edges, and supersonic trailing edges. F. S. Malvestuto, jr. and others. bibliog diags U S Nat Advisory Com for Aeronautics 1950:395-410 '51

Theoretical pressure recovery through a normal shock in a duct with initial boundary layer. G. McLafferty. diags J Aeronautical Sci 20:169-74 Mr '53

Theoretical stability derivatives of thin sweptback wings tapered to a point with sweptback or sweptforward trailing edges for a limited range of supersonic speeds. F. S. Malvestuto, jr. and K. Margolis. diags U S Nat Advisory Com for Aeronautics 1950:411-24 '51

Turbulent boundary-layer characteristics at supersonic speeds. R. J. Monaghan. J Aeronautical Sci 20:142 F '53

Two-dimensional airfoils at moderate hypersonic velocities. W. H. Dorrance. bibliog diags J Aeronautical Sci 19:593-600 S '52; Discussion. L. E. Flanagan, jr. 20:150-1 F '53

Two-dimensional unsteady lift problems in supersonic flight. M. A. Heaslet and H. Lomax. bibliog diags U S Nat Advisory Com for Aeronautics 1949:469-77 '51

Use of source distributions for evaluating theoretical aerodynamics of thin finite wings at supersonic speeds. J. C. Evvard. bibliog diags U S Nat Advisory Com for Aeronautics 1950:71-102 '51

Vacuum facilities for the study of supersonic flow. G. J. Maslach. bibliog il diag Chem Eng Prog 48:594-8 D '52

AERONAUTIC charts. See Air navigation—Charts

AERONAUTIC engineering

Automatic computers go to work on design problems. il S A E J 60:17-20 D '52

IAS papers reflect complexity; summaries of technical papers. Aviation W 58:36-8+ F 2; 58 F 9; 43-4+ F 16; 32-5 F 23; 29+ Mr 9 '53

I.A.S. 21st annual meeting, New York, June 26-29; abstracts of papers. Aeronautical Eng R 12:28-44 Ap '53

Making commercial aircraft pay. G. Du Merle. Roy Aeronautical Soc J 57:429-48 Jl '53

New frontiers of aeronautic engineering. D. A. Anderton. diags Aviation W 57:21-2+ N 17 '52

Progress in aeronautical science and engineering. B. Lockspeiser. diags Engineering 174:317-19, 357-9 S 5-12 '52; Same cond. Engineer 194:349-51 S 12 '52

SAE National aeronautic meeting, Los Angeles. Automotive Ind 107:48-9+ N 1 '52

SAE National aeronautic meeting, New York, April 20-23; with abstracts of papers. S A E J 61:69-85 Je '53

Technical trends in air transport. W. Littlewood. il diags J Aeronautical Sci 20:225-68; Discussion. 268-79 Ap '53

See also

Aerodynamics
Aerodynamics, Supersonic
Aeronautic research
Airplane engines
Airplanes—Design
Airplanes, Military—Design
Airports
Airships
Airways

Bibliography

Aeronautical reviews; periodical articles, government publications, books. Aeronautical Eng R 12:91-2+ Ja '53 [cont monthly]

Study and teaching

Procedure for teaching fundamentals. F. W. Ross. diag J Eng Educ 43:79-84 O '52

Tables, calculations, etc.

Aeroplane tail loads for longitudinal manoeuvres. G. W. Smith and J. B. Rea. diag Roy Aeronautical Soc J 56:789-800 O '52

Application of carpet and lattice plotting. R. Tatham. Roy Aeronautical Soc J 57:107-10 F '53

Computing machines in aircraft engineering. C. R. Strang. diags Elec Eng 72:43-8 Ja '53

Curtiss-Wright Propeller division computes stresses and vibration. F. B. Stulen and J. A. DeVries. il diag S A E J 60:26-7 D '52

Determination of modes and frequencies above the fundamental by matrix iteration. P. Cicala. J Aeronautical Sci 19:719-20 O '52

General algebraic method applied to control analysis of complex engine types. A. S. Boksenbom and R. Hood. bibliog diags U S Nat Advisory Com for Aeronautics 1950:581-92 '51

Method for reducing the analysis of complex redundant structures to a routine procedure. L. B. Wehle, jr. and W. Lansing. bibliog diags J Aeronautical Sci 19:677-84 O '52

Method of calculating space free resonance modes of an aircraft. B. A. Hunn. diag Roy Aeronautical Soc J 57:420-2 Je '53

Pratt & Whitney compares digital computer and analog. K. E. Fransson. S A E J 60:28 D '52

Realistic approach to structural weight estimation. A. Schnitt and W. H. Buckley. bibliog Aero Digest 66:76+ F '53

Recommendations for numerical solution of reinforced-panel and fuselage-ring problems. N. J. Hoff and P. A. Libby. bibliog diags U S Nat Advisory Com for Aeronautics 1949:249-77 '51

Some effects of surface curvature on laminar boundary-layer flow. J. S. Murphy. bibliog diags J Aeronautical Sci 20:338-44 My '53

Temperature distribution along a semi-infinite sweat-cooled plate. N. Ness. diags J Aeronautical Sci 19:760-8 N '52

AERONAUTIC engineers

Aeronautical engineers, 1952 supply and demand. K. D. Wood. J Eng Educ 43:99-102 O '52

It pays to have engineers production-minded; shop-familiarization courses; Northrop aircraft, inc. T. A. Dickinson. il Mill & Factory 52:94-5 Ja '53

Plan for stretching engineer supply. Aviation W 57:21-2+ D 1 '52

See also

Pierson, Reginald Kirshaw

AERONAUTIC instruments

Compass-swinger mounts on belly. il Aviation W 57:71-2 N 3 '52

Computer erects its own vor, dme; airborne device provides course, distance data. P. Klass. il diags Aviation W 57:41+ D 15 '52

AERONAUTIC instruments—*Continued*
Inertial navigation system. diags Tele-Tech 11:53+ D '52
Kinorama, a device for evaluating airport approach lights. Franklin Inst J 255:237-40 Mr '53; Same. Elec Eng 72:376-7 Ap '53
Landing speed indicator tells pilot best airspeed. G. L. Christian. il diag Aviation W 58:67+ My 25 '53
Lifing of aircraft equipment and instruments. W. Tye and H. B. Cundall. Roy Aeronautical Soc J 57:391-5 Je '53; Discussion. 57:597-600 S '53
Meter measures fuel flow in pounds. il Aviation W 58:62+ Ap 6 '53
New gyro simplifies polar navigation. P. Klass. il Aviation W 58:49-52 Ja 19 '53
Pressure sensing calculations for aircraft and guided missiles. J. D. Humphreys. il diags Tele-Tech 12:82-3+ Ap '53
Sperry cutoff monitors A-12 autopilot. P. Klass. il diag Aviation W 57:35-8 D 22 '52
Treatise on pictorial computer. R. C. Robson. il Aviation W 57:100 N 24 '52
Two-in-one unit for yaw, attack angles. P. Klass. il Aviation W 58:49-50 Ja 5 '53
Unit measures slight pressure changes. il Aviation W 57:58 D 22 '52
See also
Accelerometers
Airplanes—Instrument boards
Altimeters
Aviation—Instrument flying
Direction finding apparatus
Radio aids to aviation
Radio apparatus on aircraft

Testing

Radar method of calibrating airspeed installations on airplanes in maneuvers at high altitudes and at transonic and supersonic speeds. J. A. Zalovcik. diags U S Nat Advisory Com for Aeronautics 1950:661-7 '51

AERONAUTIC laboratories
Aircraft engine test-house for Swissair at Zürich. il plans Engineering 175:769-72, pl 23 Je 19 '53
Aircraft-structure testing equipment. il Engineering 175:48, 55-6 Ja 9 '53
Airframe test house and wind tunnel. il plan diag Engineer 196:146-8 Jl 31 '53; Engineering 176:144, 150-1 Jl 31 '53
Airframe test rig. il Engineer 194:794-5 D 12 '52
Altitude test facilities for aircraft engine research; Lewis flight propulsion laboratory. J. N. Vivien and B. R. Leonard. il diags Chem Eng Prog 49:8-14 Ja '53
Environmental testing at Sperry. R. Brown. il Aero Digest 66:54-6 Je '53
F2H parts tested in new altitude chamber. Aviation W 58:30 F 23 '53
McDonnell adds climate chamber. il Aviation W 58:36 Mr 9 '53
McDonnell opens jet test facility. il Aviation W 58:44 Ap 27 '53
NACA opens lab for giant jets. il Aviation W 58:22+ Ja 26 '53
Swiss complete new test plant. il Aviation W 57:78 D 8 '52
See also
United States—Air service—Arnold engineering development center
Wind tunnels

AERONAUTIC literature
Aeronautical information conference, 2d, Cranfield, March 27-30. Engineering 175:459-60 Ap 10 '53
Report of the ASLIB aeronautical group. Engineer 194:668 N 14 '52

AERONAUTIC meteorology. See Meteorology, Aeronautic

AERONAUTIC research
Flight lab learns to tame stalls; Cornell aeronautical laboratory's Flight research department. S. H. Reiniger. Aviation W 57:29+ D 22 '52
Four planes from two YF-93As; fast jets supplement windtunnels in NACA studies on inlets for missiles and high-speed aircraft. il Aviation W 57:18 N 3 '52
High altitude research. E. Burgess. il diags Engineer 194:338-40, 370-3 S 12-19 '52
IAS papers reflect complexity; summaries of technical papers. Aviation W 58:36-8+ F 2; 68 F 9; 43-4+ F 16; 32-5 F 23; 29+ Mr 9 '53
Lift raiser; boundary layer control studied in Cessna 309. il diags Aviation W 58:22+ Ja 19 '53
More process research urged. R. T. Hurley. Aviation W 58:38+ My 11 '53
Motion of a tumbling body; airplanes incorporating releasable nose sections to facilitate pilot escape. A. M. O. Smith. il diags J Aeronautical Sci 20:73-84 F '53
NACA charts our spheres of ignorance. D. A. Anderton. il Aviation W 58:36-8+ My 25 '53
NACA charts transonic progress; Langley laboratory inspection. R. McLarren. il Aero Digest 66:96-8+ Je '53
NACA reports; abstracts (cont). Aviation W 58:26+ Ja 19; 33-4 Mr 16 '53
NACA reports new techniques. il Aero Digest 66:17-20 F '53
NACA research goal; Mach five tunnels. H. L. Dryden. Aviation W 58:14-15 Mr 23 '53
NACA's role in guided missile research. J. A. Shortal. il S A E J 60:17-19 N '52
Research on aerodynamic noise from jets and associated problems. E. J. Richards. bibliog il diags Roy Aeronautical Soc J 57:318-42 My '53
Research pinpoints our ignorance. Aviation W 58:147-8 Mr 2 '53
Rocket shoots mammals to 200,000 feet. il Electronics 25:180+ D '52
Some aspects of research at the Royal aircraft establishment. Engineer 194:466-7 O 3 '52
Transonic data demands swamp NACA. R. Hotz. il Aviation W 58:16-17 My 18 '53
U.S. research aircraft; tabulation. Aviation W 58:49 Mr 2 '53
See also
Aeronautic laboratories
United States—Air service—Air research and development command
United States—Air service—Arnold engineering development center
Wind tunnels

Bibliography

National advisory committee for aeronautics. research publications. U S Nat Advisory Com for Aeronautics 1949:48-56 '51
Research publications, National advisory committee for aeronautics. U S Nat Advisory Com for Aeronautics 1950:54-61 '51

Australia

Aeronautical research in Australia. Engineering 175:587-8 My 8 '53

AERONAUTIC workers
See also
Airlines—Employees
Airplane factories—Employees

AERONAUTICS
Air and the future. F. R. Banks. Engineering 174:799-800, 835-6 D 19-26 '52; Excerpts. Engineer 194:836 D 19 '52
Books; review of Aeronautics at the mid-century, by J. C. Hunsaker. C. Warner. Sci Am 188:74-6 Ja '53
Future trends in aviation. C. C. Furnas. Midwest Eng 5:7-8+ Ja '53
Progress in aeronautical science and engineering. B. Lockspeiser. diags Engineering 174:317-19, 357-9 S 5-12 '52; Same cond. Engineer 194:349-51 S 12 '52
See also
Aerodynamics
Aeronautic laboratories
Air navigation
Air power
Air travel
Airlines
Airplane engines
Airplane propellers
Airplanes
Airports
Airships
Airways
Aviation
Aviators
Flying boats
Flying saucers
Gliders
Guided missiles
Helicopters
Interplanetary flight
Meteorology, Aeronautic
Photography, Aerial
Radio aids to aviation

Bibliography

Aeronautical reviews; periodical articles, government publications, books. Aeronautical Eng R 12:91-2+ Ja '53 [cont monthly]

AERONAUTICS—Bibliography—*Continued*

I.A.S. previews; summaries of current papers accepted for I.A.S. publications (cont). Aeronautical Eng R 11:61-3 N '52; 12:59-61 Ja; 59-60 Mr; 85-6 Ap; 99-100 My '53

Library reviews; new books, reports. Published in monthly numbers of Journal of the Royal aeronautical society

Dictionaries

Lexicon of terms used in connexion with international civil aviation, English-French-Spanish. 197p pa $1 International civil aviation organization, Dominion square bldg, Montreal, Canada '52

Exhibitions

Britain's new military and civilian planes; 1952 flying display and exhibition by the Society of British aircraft constructors. W. F. Bradley. il Automotive Ind 107:34-7+ O 15 '52

International air salon, 20th, Paris, June 25-July 5. il diag Engineering 176:42-4, 73-6, pl 5-6 Jl 10-17 '53

New British planes; Society of British aircraft constructors' 14th exhibition and flying display, Farnborough, Sept. 7-13. W. F. Bradley. il Automotive Ind 109:60-1+ O 1 '53

SBAC design details. D. A. Anderton. il diag Aviation W 57:30-2+ O 13 '52

S.B.A.C. flying display and static exhibition. il Engineer 194:324-6, 354-6, 376-9 S 5-19 '52; Engineering 174:304, 309-10, 340, 346-8 S 5-12 '52

History

Experiments with flat planes, 1866-1890. J. L. Pritchard. Roy Aeronautical Soc J 57:147-50 Mr '53

50th anniversary of powered flight. il Aero Digest 65:66-7 D '52

Hodgson-Cuthbert aeronautical collection. J. L. Pritchard. il Roy Aeronautical Soc J 57:351-74 Je '53

Laws and regulations

Pentagon and U.S. over-regulation. G. Loening. Aviation W 58:35-6+ Ja 19 '53

See also

Airlines—Regulation

Social aspects

Air world changing global minds. J. H. Furbay. Comm & Fin Chr 177:1646 Ap 16 '53

Social aspects of aeronautics. J. C. Hunsaker. il Tech R 55:309-13+ Ap '53; Excerpts. Aeronautical Eng R 11:20-1+ D '52

Standards

Proposed revision of American standard letter symbols for aeronautical sciences. R. C. Hopgood. Aeronautical Eng R 12:41-55 Ja '53

Study and teaching

See also

Aeronautic engineering—Study and teaching
Aviators—Training

Tables, calculations, etc.

Powerless glides along zero curvature flight paths. V. W. Bolie. diag Franklin Inst J 255:127-32 F '53

Australia

Australian aviation marks time. M. J. Grobtuch. Aviation W 58:286-8+ Mr 2 '53

Brazil

Brazil looks to 1954 for its jets. L. J. Holmes. Aviation W 58:301-3 Mr 2 '53

Canada

Aviation looms large in Canada budget. J. Montagnes. il Aviation W 58:277+ Mr 2 '53

Germany

German aviation willing, waiting. G. W. Schroder. Aviation W 58:291-2+ Mr 2 '53

Mexico

Mexican carriers report traffic gain. J. Wilhelm. Aviation W 58:296-7 Mr 2 '53

Netherlands

Dutch air force, transport grows. P. Catz. Aviation W 58:299-300 Mr 2 '53

South Africa

South Africa getting jet fighters. G. M. Thain. Aviation W 58:297-9 Mr 2 '53

United States

Industry heads for new peak; sales boom. R. Hotz. Aviation W 58:40-1 Mr 2 '53

Outlook for aviation under Republicans. K. Johnsen. Aviation W 57:10-12 N 17 '52

Outlook on GOP air appointees. Aviation W 57:14 D 15 '52

See also

Civil aeronautics board

AERONAUTICS, Bureau of (navy). See United States—Aeronautics, Bureau of (navy)

AERONAUTICS, Commercial

Influence of military aviation on civil air transport. F. H. Page. Engineer 195:677-9 My 8 '53

International civil aviation organisation assembly, Brighton, June 16-July 6. Engineer 196:174 Ag 7 '53

Making commercial aircraft pay. G. Du Merle. Roy Aeronautical Soc J 57:429-48 Jl '53

See also

Air freight service
Air mail service
Airlines
Airplane industry and trade
Airports
Airways
Photography, Aerial

International aspects

New Mexican air treaty talks set; U.S. also ready to seek bilateral agreements with Venezuela, Colombia. Aviation W 57:84-5 O 27 '52

U.S. disagrees on air damage liability. Aviation W 58:17 Ja 26 '53

Wings for world trade. R. S. Damon. Comm & Fin Chr 177:1970 My 7 '53

See also

International air transport association

Subsidies

Subsidy accord; transportation segments agree aid must end. K. Johnsen. Aviation W 57:85-7 O 27 '52

Canada

Airplane use opens up Canadian northland. J. Montagnes. Barron's 33:18 Je 1 '53

Great Britain

Civil aviation in the second Elizabethan era. G. N. Roberts. Roy Aeronautical Soc J 56:849-53 N '52

Expansion of aviation in Great Britain. Engineer 195:906 Je 26 '53

AERONAUTICS, Military

See also

Air bases, Military
Air power
Air raids
Airplane carriers
Airplanes, Military
Guided missiles
Helicopters—Military use
Korean war—Aerial operations
United States—Air service

France

French air buildup hangs on U.S. aid. R. Hazeltine. il diags Aviation W 58:264+ Mr 2 '53

See also

Airplanes, Military—France

Germany

RAF offers to train German air force. Aviation W 58:15 F 23 '53

Great Britain

Britain stakes its future on air lead. N. McKitterick. il Aviation W 58:248-53+ Mr 2 '53

See also

Airplanes, Military—Great Britain
Great Britain—Air force

Italy

Italy eager to help NATO in air. D. Straniero. Aviation W 58:270-2+ Mr 2 '53

AERONAUTICS, Military—*Continued*

Japan

How much air power for Japan? R. P. Martin. Aviation W 57:17-18 D 29 '52

USAF tightens Japanese air defenses. R. P. Martin. il Aviation W 58:13-16 F 16 '53

Russia

Red air forces. il Fortune 47:120-1+ F '53

Sweden

Sweden delays air force buildup. G. H. Smith. il Aviation W 58:303-4 Mr 2 '53

United States

Defense fight; Congress opposes new plane procurement cuts. Aviation W 58:15 My 18 '53

Defense report; study urges $16-billion air barrier buildup. Aviation W 58:15-16 Mr 23 '53

Giant brains could aid air defense. P. Klass. il Aviation W 58:67-8+ My 11 '53

Military aircraft appropriations and expenditures, 1934-1954; tabulation. Aviation W 58:47 Mr 2 '53

Military airlift merger urged. W. Tunner. Aviation W 58:22+ Mr 23 '53

New air policy. R. M. Kyes. Aviation W 58:15 My 4 '53

New cutbacks hit aircraft program. R. Hotz. il Aviation W 57:14-15 N 24 '52

Record postwar air spending predicted. R. Hotz. Aviation W 58:12-14 Ja 19 '53

Red tape blocks air defense. E. V. Huggins. Aviation W 58:24+ My 11 '53

Senators to probe military plane buying. K. Johnsen. Aviation W 58:13-14 My 4 '53

Stage set for defense shakeup. K. Johnsen. Aviation W 58:14 Ja 12 '53

Systems approach to air weapons development. D. L. Putt. S A E J 61:60+ F '53

U.S. military aircraft procurement program. il maps Aero Digest 65:18-22 O '52

See also

Airplanes, Military—United States

United States—Air service

AEROQUIP corporation

Sales up 42 per cent to new peak. Barron's 32:18 D 15 '52

AEROSOL bombs

See also

Containers, Dispensing

AEROSOLS

Adsorption of surface active materials in aerosol droplets. G. A. H. Elton. Chem & Ind p407 Ap 25 '53

Aerosol lacquer problems; abstract. F. S. Palmer. Paint Oil & Chem R 116:45 Je 4 '53

Bag filtration of aerosols. R. T. Pring. diags Heat & Ven 49:97-9 D '52

Boom in aerosols. il Mod Packaging 26:91-7+ D '52

Dielectric properties of dispersed liquids; the theory of the dielectric constants. H. C. Thacher, jr. bibliog J Phys Chem 56:795-7 Je '52

Diffusional processes in the growth of aerosol particles. H. L. Frisch and F. C. Collins. bibliog diags J Chem Phys 20:1797-803 N '52; Correction. 21:1116 Je '53

Edge and variable compression filters for aerosols. L. Silverman and M. W. First. bibliog il diags Ind & Eng Chem 44:2777-83 N '52

First glass aerosol; Larvex mothproofing spray. il diags Mod Packaging 26:90-3+ Ja '53

Method for determining pressure and consistency of aerosol coatings. R. W. Morrow and F. S. Palmer. diags Soap & San Chem 28:139-40+ S '52

Preparation and utilization of metallic aerosols for filter paper testing. J. Kohl and R. D. Zentner. bibliog diag J Phys Chem 57:68-72 Ja '53

Statistics of liquid spray and dust electrification by the Hopper and Laby method. E. E. Dodd. bibliog il J Ap Phys 24:73-80 Ja '53

Thermal force on an aerosol particle in a temperature gradient. R. L. Saxton and W. E. Ranz. bibliog diags J Ap Phys 23:917-23 Ag '52

AEROTHERMODYNAMICS. See Thermodynamics

AETNA life insurance company

Aetna Life plans to increase its capital to 30 million dollars. East Underw 53:1+ D 5 '52

Entering centenary year. East Underw 54:3 Ja 9 '53; Same. Weekly Underw 168:162 Ja 10 '53

Only four presidents in 100 years of the Aetna Life. East Underw 54:1+ Je 19 '53; Weekly Underw 168:1695-6 Je 20 '53

AFFILIATED gas equipment, inc.

Affiliated gas equipment expands in field of air conditioning. Barron's 33:25-6 Ja 26 '53

AFGHANISTAN

Economic conditions

Economic conditions abroad. For Comm W 48:9 D 8 '52

AFRICA

Africa's great divide. map Economist 166:424-5 F 14 '53

Making a continent a research project. map Bsns W p 154-6+ Je 27 '53

Politics and government

Federation and moderation. Economist 166:857-8 Mr 28 '53

Policy for Africa. Economist 167:198-200 Ap 25 '53

Who rules in Africa; a summary. maps Economist 167:421-3 My 16 '53

AFRICA, British East

Commerce

British East African trade expanding. For Comm W 49:6 My 18 '53

AFRICA, Central

Central Africa holds exhibition to celebrate Rhodes centenary. For Comm W 49:20 Ap 27 '53

Decision for federation. Economist 167:140 Ap 18 '53

Federation in committee. Economist 167:725 Je 13 '53

Hearing the African; federation debate. Economist 167:342-3 My 9 '53

AFRICA, French West

See also

Railroads—Africa, French West

AFRICA, North

North Africa; how long can U.S. straddle the fence? il map Bsns W p 110-12 D 20 '52

Violence in North Africa. Economist 165:737 D 13 '52

Western stakes in North Africa. map Economist 165:286-7 N 1 '52

AFRICA, South. See South Africa

AFTER burners. See Gas turbines, Aircraft—After burners

AFTERGLOWS. See Electric discharges

AGE

Experiments in aging. A. I. Lansing. il diag Sci Am 188:38-42 Ap '53

See also

Old age

AGE, Geological. See Geological time

AGE and employment

Bird in the hand; importance of proper development of older men. A. H. Moffat. Life Ins Courant 58:35-7 My '53

Dependent age groups gaining on workers. Comm & Fin Chr 177:1433 Ap 2 '53

Elderly engineer. C. E. R. Sams. Engineer 196:198-9 Ag 14 '53

Employment of the older worker. T. G. Klumpp. bibliog Pub Health Rep 68:20-2 Ja '53

It costs too much. Bsns W p 178 My 9 '53

Maintenance of health in the elderly work force. C. T. Olson. Ind Med 21:581-2 D '52

Old age is no barrier to employment; Consolidated Vultee Aircraft. H. Waterman. il Am Bsns 23:32+ S '53

Older workers. Safety Maint & Prod 104:69 D '52

Older workers; study of the absenteeism and injury experience. Safety Maint & Prod 105:60 Mr '53

Social security benefits and deferred retirement; a plan for improved manpower utilization. E. L. Olrich. Personnel 29:361-8 Ja '53

AGE and employment—*Continued*

Utilization of older workers; preserving social and economic values. J. W. McConnell. Personnel 29:314-21 Ja '53

See also

Retirement

AGE determination by radioactivity. See Archeology

AGED, Homes for. See Old age homes

AGENCY (law)

See also

Exclusive agencies

AGGREGATES

Aggregate production for Canadian dams; Kenney dam on Nechako river. il Rock Prod 55:120-1 D '52

Building material; glass balloons offer lightweight aggregate for plaster, concrete; made by blowing up grains of clay in a special furnace. Iron Age 170:114-15 O 2 '52

Current practices in use of quarry fines in bituminous concrete; abstract. J. E. Gray. Rock Prod 56:81-3 Mr '53

Experimental stone-crushing plant; Underwood quarry. F. G. Taylor. flow diag il Engineering 176:281-3 Ag 28 '53

How to design a bituminous concrete mixture with graded aggregates. J. E. Myers. il Pub Works 84:63-4 Jl '53

Indiana mineral aggregates association annual meeting, Indianapolis, March 19-20. Rock Prod 56:91 My '53

Lightweight aggregates from argillaceous raw materials. F. O. Anderegg. Rock Prod 55:122 D '52

Making bubbles from clay; Kanamite. il diags Chem Eng 59:247-8 D '52

New lightweight aggregate; Kanamite. Rock Prod 55:120 N '52

Processing aggregates for Folsom dam. W. B. Lenhart. flow sheet il diag Rock Prod 56:72-7+ Mr '53

Two-man crew operates aggregate plant; Light aggregate, inc. il Brick & Clay Rec 122:48-50 Mr '53

Winter stockpiling aggregate blending speeded Minnesota hot mix job. il Roads & Sts 96:120-2 My '53

See also

Concrete—Aggregate

Specifications

Plotting aggregate gradation specifications for bituminous concrete. J. B. Dalhouse. Pub Roads 27:155-8 Ap '53; Same. Roads & Eng Constr 91:129-31+ Ap '53

Testing

Method of petrographic examination of aggregates for concrete. K. Mather and B. Mather. il Am Soc T M Proc 50:1288-312 bibliog(p 1308-12); Discussion. 1312-13 '50

Test for the apparent specific gravity and absorption of coarse aggregate. F. A. Shergold. J Ap Chem 3:110-17 Mr '53

AGING. See Old age

AGITATION

Effects of air agitation in sulfuric acid anodizing. R. C. Spooner. il diag Metal Finishing 51:78-81 Mr '53

Shaking of high pressure vessels according to the resonance principle. A. Björkman. bibliog il diags Ind & Eng Chem 44:2459-63 O '52

AGITATORS

See also

Mixers

AGRARIAN question. See Land tenure

AGRICULTURAL administration

Agricultural advisory unit established by Eisenhower. Oil Paint & Drug Rep 164:3+ Jl 27 '53

Agriculture and big government. E. L. Butz. Comm & Fin Chr 176:1930 N 20 '52

Bravo, Cousin Ezra! he promises a sane new day for agriculture. Barron's 33:1 F 16 '53

Drought, tough but no dust bowl. maps Bsns W p27-8 Jl 25 '53

Facing up to farm forces. Bsns W p30-1 F 14 '53

Farmers, everyone's headache again. Bsns W p29 Jl 18 '53

Fertilizer and lime spending by US set. Oil Paint & Drug Rep 163:5 Je 22 '53

How farm laws tie in with politics. il Bsns W p96+ Je 20 '53

New agricultural policy. E. T. Benson. Comm & Fin Chr 177:786+ F 19 '53

Our farm price problems. E. T. Benson. Comm & Fin Chr 177:998-9 Mr 5 '53

Root of the evil; price supports. Barron's 33:1 Jl 27 '53

Great Britain

Farmers and free markets. Economist 166:259-60 Ja 31 '53

AGRICULTURAL and food chemistry (periodical)

Advisory board

Agricultural and food advisory board appointed; sketches and portraits. Chem & Eng N 30:5178-81 D 8 '52

AGRICULTURAL chemicals

Agricultural chemicals. Chem Eng 60:199-200 Mr '53

American agricultural chemicals field. Chem Age (Lond) 68:425-6 Mr 21 '53

Chemical market research association studies current farm chemical trends. Oil Paint & Drug Rep 163:5+ Mr 2 '53

Modern chemical methods of plant protection; abstract. E. Holmes. Chem & Ind p82 Ja 24 '53

Pesticides; C&EN annual review. L. S. Hitchner. Chem & Eng N 31:31-2 Ja 5 '53

Research and development still needed in ag chemicals. Chem & Eng N 31:994-5 Mr 9 '53

Sizing up ag chems. il Chem W 72:52+ Mr 21 '53

See also

Fertilizers

Insecticides

Krilium

Statistics

Agricultural chemicals. Published in weekly numbers of Oil, paint and drug reporter

AGRICULTURAL chemicals association, Canadian. See Canadian agricultural chemicals association

AGRICULTURAL chemicals association, National. See National agricultural chemicals association

AGRICULTURAL chemistry

ACS Division of agricultural and food chemistry national meeting, Los Angeles. Chem & Eng N 31:1283-4 Mr 30 '53

AGRICULTURAL clubs

See also

4-H clubs

AGRICULTURAL credit

American bankers association National agricultural credit conference, 1st, Louisville; with abstracts of papers. Banking 45:66-7+ D '52

American bankers association's National agricultural credit conference, Louisville, Nov. 13-14. Burroughs Clearing House 37:13-14 D '52

Bank-farm trend. Burroughs Clearing House 37:18-19 N '52

Bank loan policy in livestock crisis. Burroughs Clearing House 37:28-9 Ap '53

Bank policies on conservation farming credit. R. D. Hale. Banking 45:79-82 Je '53

Banks and the farm price decline; reports and discussions at annual meeting of Agricultural commission of American bankers association. Banking 45:64+ Ap '53

Banks outdistance others in farm credit; annual survey by A.B.A. agricultural commission. Banking 45:68-9 S '52

Cattle loans spark prosperity; pioneering by Alexandria, La., bank. J. W. Beasley. il Bankers Mo 69:7-8+ O '52

Financial look at agriculture. N. J. Wall. map Burroughs Clearing House 37:30-1 F '53

Financing truck crops. R. J. Castille. Banking 45:61+ Mr '53

How a big bank helps small banks with farm machinery loans. A. B. Rose. Banking 45:78-9 My '53

How sound is our farm credit? E. J. Dignan. Comm & Fin Chr 177:1744+ Ap 23 '53; Excerpts. Banking 45:77 My '53

International farm credit conference. H. Bratter. Banking 45:45 N '52

Public relations opportunities and tools; agriculture. Banking 45:42-3 Mr '53

AGRICULTURAL credit—*Continued*

Short term demand promises all time high. J. W. Tapp. Banking 45:56+ S '52

Soil conservation service farm plans; asset to country bankers. J. C. Rogers. map Banking 45:66+ N '52

See also

Banks and banking—Agricultural machinery purchase financing

Mortgages, Farm

Study and teaching

Hoosiers study farm credit at Purdue. H. G. Diesslin. il Banking 45:76+ My '53

AGRICULTURAL engineering

Technology takes over the farm and the farmer. Bsns W p 116-18+ Je 6 '53

See also

Agricultural machinery

Electricity on the farm

Irrigation

AGRICULTURAL experiment stations

E.R.A. field station. il Elec J 150:1625-6 My 8 '53

Electrical research and agriculture. il Engineer 195:707-8 My 15 '53; Engineering 175: 619-21 My 15 '53

Research in rural electrification; E.R.A. field station, Shinfield. il Elec R (Lond) 152: 1130-2 My 15 '53

AGRICULTURAL insurance. See Insurance, Agricultural

AGRICULTURAL insurance company

Agricultural marks 100th anniversary; started as farm company. East Underw 54:1+ Ap 3 '53; Nat Underw 57:33 Ap 16 '53

AGRICULTURAL laboratories

New uses for prairie crops. K. L. Phillips. il Can Chem Process 37:82-3 Ja '53

AGRICULTURAL libraries

Reporting literature in an experiment station library. R. J. Poulin. Special Lib 44:99-100 Mr '53

AGRICULTURAL limestone institute, National. See National agricultural limestone institute

AGRICULTURAL machinery

Attitudes relating to mechanization and farm labor changes in the Yazoo-Mississippi delta. H. A. Pedersen. Land Econ 28:353-61 N '52

Diesels in the Palouse. R. H. Forbes. il Diesel Power 31:48-50 Je '53

Ductile iron makes good; based on papers by H. L. Day and others. il S A E J 61: 45-8 O '53

Farm machinery design; abstract. D. Ransome. Engineer 195:245 F 13 '53

Farms turn mechanical. il Steel 132:55 Je 29 '53

Latest in farm electrical equipment. W. D. Hemker. il Elec World News ed 138:38-9 D 22 '52

National institute of agricultural engineering. il Engineering 174:144, 148-9 Ag 1 '52

National institute of agricultural engineering. W. H. Cashmore. il Engineering 175:414-15, 441-2 Mr 27-Ap 3 '53; Same abr. Engineer 195:308-10 F 27 '53

Range of agricultural tractors. il Engineering 175:464 Ap 10 '53

Role of castings in the agricultural industry. W. G. Gude. il Foundry 80:114-17+ N '52

Technology takes over the farm and the farmer. Bsns W p 116-18+ Je 6 '53

See also

Harvesting machinery

Plows

Seeding machinery

Tractors

Bibliography

Rubber division library bibliography; uses of rubber in agriculture. 3 l Rubber division lib, Univ. of Akron, Akron 4, Ohio '52

Exhibitions

Royal agricultural society's annual show, Blackpool, July 7-10. il Engineer 196:9-11, 41-3, 76-7 Jl 3-17 '53; Engineering 176: 22-3, 44-5, 48, 80, 85-7, 105-8, 112 Jl 3-24 '53

Smithfield show and agricultural machinery exhibition, London, Dec. 8-12. Elec R (Lond) 151:1291-2 D 12 '52

Smithfield show and agricultural machinery exhibition, London, Dec. 8-12. il Engineer 194:750-2, 790-2, 828-30 D 5-19 '52; Engineering 174:724-5, 756-7, 760, 787, 792 D 5-19 '52

Manufacture

Troubles down, output up with welded studs; farm machinery rasp bars; International harvester co. il Steel 132:110 Mr 9 '53; Welding J 32:631-2 Jl '53

AGRICULTURAL machinery industry

Agriculture and the farm equipment industry. G. J. Eger. Comm & Fin Chr 177: 1336-7 Mr 26 '53

Competition in the farm-machinery industry. M. Conant. bibliog J Bsns 26:26-36 Ja '53

Drop in farm income spells trouble for equipment makers. J. A. McWethy. Barron's 33:9-10 F 16 '53

Farm equipment; tabulations. Steel 132:190-3 Ja 5 '53

Farm machinery; 1952 sales. Steel 131:68-9 D 8 '52

See also

Dearborn motors corporation

International harvester company

Tractor industry and trade

Advertising

Tractor brake manufacturer hikes sales $6,000,000 in farm drive. B. Enos. il Ind Marketing 38:44-5 F '53

Statistics

Selected farm machinery manufactured in the U.S., 1931-1951; tabulation. Iron Age 171:442 Ja 1 '53

France

Power farming in France; abstract. J. Perichon. Engineer 195:245 F 13 '53

Great Britain

Engineering outlook. Engineering 175:453-6 Ap 10 '53

AGRICULTURAL machinery insurance. See Insurance, Agricultural machinery

AGRICULTURAL products

See also

Cotton

Crops

Farm produce

Flax

Grain

Rice

Straw

Tobacco

Wheat

AGRICULTURAL research

Cereal agronomy. F. R. Horne. Chem & Ind p46-51 Ja 17 '53

AGRICULTURAL statistics. See Agriculture—Statistics

AGRICULTURAL workers. See Farm labor

AGRICULTURE

From cave to village; birth of agriculture and animal husbandry. R. L. Braidwood. il map Sci Am 187:62-6 O '52

See also

Agricultural machinery

Airplanes in agriculture

Crops

Electricity on the farm

Farm labor

Farm produce

Farmers

Feeding and feeding stuffs

Fertilizers

Food supply

Forests and forestry

Irrigation

Land tenure

Livestock

Rain making

Rice

Rubber plants and planting

Soils

Wheat

Bibliography

Agricultural index, Sept. 1948-Aug. 1951. v 12 2041p H. W. Wilson co, New York '52

New serial publications of the United States Department of agriculture and the state experiment stations. W. M. Alleman. Special Lib 44:66-9 F '53

Economic aspects

Agricultural outlook for 1953. T. D. Morse. Comm & Fin Chr 177:897+ F 26 '53

Bravo, Cousin Ezra! he promises a sane new day for agriculture. Barron's 33:1 F 16 '53

Down on the farm. Fortune 46:30 D '52

Economic climate for agriculture. E. L. Butz. Comm & Fin Chr 176:2130 D 4 '52; Same. Banking 45:74-5 Ja '53

AGRICULTURE—Economic aspects—*Cont.*
Farm capital outlays and stock. J. W. Kendrick and C. E. Jones. Survey of Cur Bsns 33:16-23 Ag '53
Farm policy in the making. Economist 166: 847-9 Mr 28 '53
Farmers, everyone's headache again. Bsns W p29 Jl 18 '53
Financial look at agriculture. N. J. Wall. map Burroughs Clearing House 37:30-1 F '53
Future for agriculture; abstract. T. D. Morse. Oil Paint & Drug Rep 163:7 Je 22 '53
How farm laws tie in with politics. il Bsns W p96+ Je 20 '53
Less prosperous farm economy. Bsns W p64+ F 7 '53
Major issues of 1953. C. B. Shuman. Comm & Fin Chr 177:471+ Ja 29 '53
Need farmers fear a depression? J. K. Galbraith. Comm & Fin Chr 177:1001+ Mr 5 '53
Problem of surplus farm production. H. H. Gordon. Comm & Fin Chr 177:2190+ My 21 '53
Recession in farm income; graphs. Fortune 46:26 D '52
What's ahead in agriculture? C. R. Hope. Comm & Fin Chr 177:1114+ Mr 12 '53
See also
Agricultural credit
Farm income
Farm market
Farm produce—Prices

Statistics

Agricultural outlook charts from Department of agriculture's fact book, Agricultural outlook charts, 1953. Banking 45:76-7 F '53
Yearbook of food and agricultural statistics, 1951; pt 1, Production. v 5 298p $3.50 Food and agriculture organization of the United nations; for sale by Columbia univ. press, 2960 Broadway, New York 27 '52
Yearbook of food and agricultural statistics, 1952; part 1, Production. v6 319p $3.50 Food and agriculture organization of the United nations; for sale by Columbia univ. press, 2960 Broadway, New York 27 '53

Alabama

Alabama story. il Manuf Rec 122:79-82 Je '53

Argentina

It's farmer Peron now. Bsns W p 159+ O 25 '52

Chile

U.S. group reports on study in Chile. For Comm W 48:2 D 22 '52

Europe

See also
European agricultural community (proposed)

Formosa

Land utilization in Taiwan. T. Chang. Land Econ 28:362-8 N '52

Great Britain

Farm policy in the making. Economist 166: 847-9 Mr 28 '53
Farmers and free markets. Economist 166: 259-60 Ja 31 '53
Liberalising agriculture. Economist 167:138-9 Ap 18 '53

Mississippi

See also
Cotton growing—Mississippi

Nigeria

Nigeria learns about itself. Economist 165:832 D 20 '52

Pakistan

Pakistan gets wheat crop from the desert; Thal reclamation program. il Bsns W p 138-40 Ja 24 '53

Tennessee

Tennessee story; agriculture. il Manuf Rec 121:92-6 N '52

United States

Agricultural production and income in 1952; with figures for the years 1945-1952. Survey of Cur Bsns 33:14-16 F '53

Yugoslavia

Surprise for Jugoslav farmers. Economist 167: 141-2 Ap 18 '53
Tito's agricultural hodge-podge. A. W. May. Comm & Fin Chr 178:349+ Jl 30 '53
Yugoslavia to adopt farm cooperatives. For Comm W 49:5 Mr 30 '53
Yugoslavia's crops below 1950 level. For Comm W 48:7 O 13 '52

AGRICULTURE, Cooperative
Yugoslavia to adopt farm cooperatives. For Comm W 49:5 Mr 30 '53

AGSTONE. See Lime as fertilizer

AIKEN, George David, 1892-
Portrait. Bsns W p28 N 8 '52

AILERONS
Apparatus for varying effective dihedral in flight with application to a study of tolerable dihedral on a conventional fighter airplane. W. M. Kauffman and others. bibliog il diags U S Nat Advisory Com for Aeronautics 1949:529-44 '51
Problem of aileron reversal at transonic speeds. B. A. Hunn. bibliog Roy Aeronautical Soc J 57:237-40 Ap '53

AIR
Charge states of a helium beam in hydrogen, helium, air, and argon. E. Snitzer. bibliog diags Phys R 89:1237-44 Mr 15 '53
Constants in the equation for atmospheric refractive index at radio frequencies. E. K. Smith, jr. and S. Weintraub. bibliog Inst Radio Eng Proc 41:1035-7 Ag '53
Dielectric constant of dry air. J. V. Hughes and H. L. Armstrong. bibliog il diag J Ap Phys 23:501-4 My '52
Electrical fields in the Crookes dark space of a low pressure glow discharge in air and N_2. R. P. Stein. bibliog diags Phys R 89:134-42 Ja 1 '53
Experimental investigation of convective heat transfer to air from a flat plate with a stepwise discontinuous surface temperature. S. Scesa and F. M. Sauer. bibliog il diag A S M E Trans 74:1251-5 O '52
Measuring air-density for aircraft gunnery computers. H. F. Colvin, 3d. diags Tele-Tech 12:68-70+ S '53
Velocity measurements of air-water mixtures. L. G. Straub and others. il diags Am Soc C E Proc 79 [no 193]:1-14 My '53
Viscosity, thermal conductivity and specific heat of dry air at elevated pressures and temperatures. I. Granet and P. Kass. bibliog Pet Refiner 31:113-14 O '52
See also
Aerodynamics
Air conditioning
Atmosphere
Atmosphere, Upper
Compressed air
Dust
Humidity
Oxygen
Ventilation

Analysis

Analysts seek solutions to air pollution problems. il Chem & Eng N 31:1392-3 Ap 6 '53
Automatic control of carbon monoxide; New York city's municipal omnibus garage and maintenance center. il Safety Maint & Prod 104:45-6 N '52; Same cond. Heat & Ven 49:99 D '52
Chemical exploration of the stratosphere. F. A. Paneth. bibliog map diags 4pls Chem Soc J p3651-62 S '52
Detector monitors vapor concentration; abstract. C. S. Presenz. il diags Electronics 26:198+ Ag '53
Determination of lindane in air. I. Hornstein and W. N. Sullivan. bibliog Anal Chem 25:496-8 Mr '53
Determination of small amounts of hydrocarbons in the atmosphere. P. P. Mader and others. bibliog il diags Anal Chem 24: 1899-902 D '52
Improved photometric determination of carbon monoxide by means of palladious chloride. E. W. Rice. A M A Archives Ind Hygiene & Occup Med 6:487-90 D '52
Measurement of the (n,H^3) cross section in nitrogen and its relationship to the tritium production in the atmosphere. E. L. Fireman. bibliog Phys R 91:922-6 Ag 15 '53
Pollen counts and the hay fever problem. N. Dingle. Science 117:64-5 Ja 16 '53
Problems encountered in field use of Thomas autometer. P. M. Giever. A M A Archives Ind Hygiene & Occup Med 6:445-9 N '52

AIR—Analysis—*Continued*

Rapid analytical method for air-pollution surveys; the determination of total particulates and the rapid semiquantitative spectrographic method of analysis of the metallic constituents in high-volume samples. R. G. Keenan and D. H. Byers. A M A Archives Ind Hygiene & Occup Med 6: 226-30 S '52

Removal and recovery of traces of ethylene in air by silica gel. F. Stitt and Y. Tomimatsu. bibliog diag Anal Chem 25:181-3 Ja '53

Spectrographic monitor for metallic dust. I. B. N. Evans. il diag Electronics 26:210+ S '53

Test cell protection at Westinghouse jet engine plant; vapor analyzing and alarm instruments. il Automotive Ind 107:33+ O 15 '52

Bibliography

Rubber division library bibliography; determination of ozone in air. 11 l Rubber division lib, Univ. of Akron, Akron 4, Ohio '52

Bacteriology

Bacteria and odor control problem in occupied spaces. R. L. Kuehner. bibliog(31 titles) diags Heating-Piping 24:113-19 D '52: Abstract. Heat & Ven 50:86 Mr '53; Discussion. Heating-Piping 25:143-6 Mr '53

Numbers of fungi and bacteria in transatlantic air. S. M. Pady and C. D. Kelly. bibliog Science 117:607-9 My 29 '53

AIR, Compressed. See Compressed air

AIR bases, Military

Air base utilities, Minn.; unit prices. Eng N 149:69 N 27 '52

Airfield pavement vibrated full-depth; U.S. air force base just outside Lincoln, Neb. il Eng N 150:39 Je 18 '53

Air force counters charges of extravagant construction. Eng N 150:26 Ja 8 '53

AF opens Andrews to scheduled airlines. Aviation W 58:17 Je 1 '53

Aluminum put to good use at Greenland air base. Materials & Methods 36:194+ D '52

At Safety's Morocco base. il Nat Safety N 67:18-19+ My '53

Construction details bared on Thule air base project. V. B. Smith. il Eng N 149:21-3 O 2 '52

$11-million control center planned. il Eng N 149:108 D 11 '52

Facilities and equipment for testing high-speed aircraft at Air force flight test center. J. S. Holtoner and F. J. Ascani. il map S A E J 61:56-61 Ja '53

Great safety record in building Arctic base. East Underw 54:33 F 6 '53

Naval air station, Patuxent river, Maryland. il U S Naval Inst Proc 78:1126-39 O '52

Navy airfields expand for jets. il plan Arch Rec 112:186-7 S '52

Navy buildings; airfield control tower and operations buildings. plans diag Arch Rec 112:194-5 S '52

Navy to build $12 million facilities at Oceana jet base; runways finished. Eng N 150:27 F 26 '53

Prefabricated structures speed building of Greenland air base. il Civil Eng 23:198 Mr '53

Reports on Morocco show odd contrast. Eng N 149:24-5 O 9 '52

Soil cement streets for expanding air base; Edwards air force base. il Roads & Sts 96: 48+ Je '53

Spain; next stop for U.S. airbase builders? W. G. Bowman. il maps Eng N 150:33-5+ My 14 '53

Steel frames; Thule air base buildings go up fast with standard frames. il Iron Age 171:179-80 F 5 '53

Tar-rubber base paving tests set. Eng N 150: 26 Ap 23 '53

U.S. builders to supervise French airbase construction. Eng N 149:120-1 N 6 '52

Fires and fire protection

Fire hazards found at AF fuel bases. Aviation W 58:17 Mr 9 '53

AIR-blast circuit breakers. See Electric circuit breakers—Oilless

AIR brake association

Annual meeting, 44th, Chicago, Sept. 15-17; with abstracts of papers and committee reports. Ry Mech & Elec Eng 126:85-93 N '52

Meeting, Chicago, Sept. 14. Ry Age 135: 98-100 S 21 '53

AIR brakes

Brake cylinder release valve L. A. Stanton. Ry Mech & Elec Eng 126:91 N '52

Brakes and brake equipment; A.A.R. Mechanical division committee report. Ry Loco & Cars 127:68-9 Ag '53

How can charging air reservoirs in freight trains be speeded? G. L. Cotter. il Ry Age 133:71 N 10 '52

I.C.C. urges immediate angle cock inspection; Union station, Washington. il Ry Age 134:18-19 F 23 '53

Power brake conditions deteriorating. W. J. Patterson. Ry Loco & Cars 127:63-4 Ag '53

Release control retainer as a means for better braking; report of Air brake association. Ry Mech & Elec Eng 126:85-7 N '52

Schedule 24RL air brakes (cont). Ry Mech & Elec Eng 126:76 D '52; [cont as] Ry Loco & Cars 127:72-3 Ja; 66 F; 92 Mr; 93 Ap; 86+ My; 104 Je; 78 Jl; 89-90 O '53

Southern Pacific air-brake shop. il plan Ry Loco & Cars 127:55-9 F '53

Standards

Standardization on Diesel and turbo locomotives; report of Air brake association. Ry Mech & Elec Eng 126:91-3 N '52

Testing

Air leakage on the individual car. M. J. Alger. diags Ry Mech & Elec Eng 126: 88-91 N '52

Give air brakes a fair break with this step-by-step check; illustrated instructions. Bus Transportation 32:54-7 Je; 32-4 Jl '53

Measurement of system leakage; report of Air brake association. Ry Mech & Elec Eng 126:87-8 N '52

AIR bubbles. See Bubbles

AIR cargo. See Air freight service

AIR carriers

Outstanding developments during past year affecting air carriers. H. L. Russell. Pub Util 52:545-8 O 8 '53

State regulation of air carriers. E. C. McKeage. Pub Util 50:596-601 O 23 '52

See also

Airlines

Non-scheduled operations

Alaskan nonsked pushes court fight. Aviation W 58:90 F 2 '53

Atomic airline from Albuquerque to Los Alamos. Fortune 46:231 N '52

Board may delay nonsked action two years. L. Moore. Aviation W 58:85-6 Ap 13 '53

Carriers make poor showing at hearing; nonsked investigation. Aviation W 57:72+ D 1 '52

Nonsked probe; three more dismissals asked by CAB examiners. Aviation W 58:14-15 Ja 5 '53

Nonsked role; CAB terms the irregulars supplementary carriers. Aviation W 58:89-90 Ap 13 '53

Nonskeds find favor at hearing. Aviation W 58:85-6 My 18 '53

Report says CAB is strangling nonskeds. Aviation W 58:64 Mr 16 '53

AIR cleaners

Advantages of a well chosen air cleaner system; abstract. R. E. Larson. diags S A E J 61:46-7 Mr '53

Control and recovery of dust and fume in industry. R. Ashman. bibliog il diags Inst Mech Eng Proc (B) 1B no 5:157-68 '52

Electronic barrier against invisible dirt. il Can Chem Process 37:50+ Je 1 '53

High efficiency air cleaning process. I. M. Davidson and D. R. Whittet. il diag Engineer 196:211-13 Ag 14 '53

New methods of securing improved air clean-efficiency; abstract. D. P. Eastman. diags S A E J 61:44-5 Mr '53

AIR cleaners—*Continued*

Separation of airborne dust and particles. C. N. Davies. bibliog diags Inst Mech Eng Proc (B) 1B no 5:185-98; Discussion. il 199-213 '52

See also

Air filters

AIR cleaning

Air laundry will pay for itself in three years; Boeing airplane co. il Factory Management 110:109 D '52

Clean, constant air for instruments. D. J. Pearse. diags Mill & Factory 53:127-8 S '53

Cleaner air simplifies air conditioning. N. Sharpe. Nat Safety N 68:102+ S '53

DEP curtain-type dust collector used as filter, dryer, cooler, or scrubber. L. C. McCabe. diags Ind & Eng Chem 44:sup 123A-5A N '52

Keep air clean for your controls. diags Power Eng 57:84-5+ Je '53

AIR compressors

Air-compressor intercooler pressures; data sheet. B. G. A. Skrotzki. Power 97:101 S '53

Air compressor is vital, don't neglect it. C. Boyd, jr. Nat Pet N 45:67-9 Mr 18 '53

Air plants need proper auxiliaries. il diag Roads & Sts 96:56-8 Je '53

Application of radial-equilibrium condition to axial-flow compressor and turbine design. C. Wu and L. Wolfenstein. diags U S Nat Advisory Com for Aeronautics 1950:165-94 '51

Arpic two-stage air compressor. il Engineer 195:701 My 15 '53

Blade adjustment in axial-flow compressor stages. A. W. McCoy and A. V. Hooper. diag J Aeronautical Sci 20:43-8 Ja '53

Compact compressor-hoists of welded design speed Montreal tunnel job. A. R. Jacobs. il Roads & Eng Constr 91:126+ Ag '53

Compressed air rectifier; Hymatic engineering co. il Engineer 195:256-7 F 13 '53

Compressed air troubles. C. T. Baker. diag Heating-Piping 24:98-9 D '52

Compressible flow past a cascade of thin airfoils. G. V. R. Rao. diag J Aeronautical Sci 20:217-18 Mr '53

Compressing air. T. Hicks. il diags Power 97:85-104 Je '53

Compressor units for garages and small workshops; Hymatic engineering co. il Engineering 174:743 D 5 '52

Design and development of a broad-range, high-efficiency centrifugal compressor for a small gas-turbine-compressor unit. I. E. Speer. bibliog il diags A S M E Trans 75: 395-404; Discussion. 404-7 Ap '53

Do plant air systems need a new look? L. B. Schramm. il plans diags Power 97: 75-7+ Ja '53

Electric drive provides dependable air. G. C. Jamison. Elec World 139:108 My 4 '53

Gas bending stress on a blade in an axial-flow compressor. J. M. Stephenson. diags J Aeronautical Sci 20:357-9 My '53

How to design compressor accessories. L. J. Murphy. il diags Pet Refiner 32:137-40 Mr '53

How to estimate air compressor cooling water; nomograph. Mill & Factory 51:80 D '52

How to select compressors. L. J. Murphy. il Pet Refiner 32:115-18 F '53

Instrumentation for axial-flow-compressor research. C. A. Meyer and R. P. Benedict. bibliog il diags A S M E Trans 74:1327-36 N '52

Intrinsic efficiency of a flow type air compressor. B. Downs. diags Engineer 196: 101-2 Jl 24 '53

Latest features of the Pneumatractor. il diag Automotive Ind 108:54-5 My 15 '53

LeRoi develops V-8 compressor. J. M. Connolly. il Constr Methods 34:112+ N '52

Meshing screws compress air. il Chem Eng 60:206 Ja '53

Portable compressors in role of stationary units; Fairchild engine & airplane corp. R. R. Reinheimer. il diag Comp Air Mag 58:15-16 Ja '53

Power Jets' gas-turbine patents. il diags Engineering 175:609-12 My 15 '53

Practical solution of a three-dimensional flow problem of axial-flow turbomachinery. L. H. Smith, jr. and others. bibliog diags A S M E Trans 75:789-99; Discussion. 799-803 Jl '53

Radial-flow compressors and turbines for the simple small gas turbine. L. R. Wosika. bibliog il diags A S M E Trans 74:1337-45; Discussion. 1345-7 N '52

Rotating machine. il Mech Eng 75:156 F '53

Some investigations with wet compression. J. T. Hamrick and W. L. Beede. bibliog il diags A S M E Trans 75:409-18; Discussion. 418-20 Ap '53

Some NACA research on centrifugal compressors. I. A. Johnsen and A. Ginsburg. bibliog il diags A S M E Trans 75:805-15; Discussion. 815-17 Jl '53

Starting jet engines with turbo-compressor. O. H. Jacobson and P. Volkmar. diags Automotive Ind 109:50-2+ O 1 '53

Stretching the St Louis gas supply; Laclede company increases propane-air system to supplement natural gas. L. M. Liberman. il map Comp Air Mag 58:34-9 F '53

Supersonic axial-flow compressor. A. Kantrowitz. diags U S Nat Advisory Com for Aeronautics 1950:473-81 '51

Trouble-shooting on compressed air systems. diag Mill & Factory 52:127-9 Ja '53

Two-dimensional compressible flow in centrifugal compressors with straight blades. J. D. Stanitz and G. O. Ellis. diags U S Nat Advisory Com for Aeronautics 1950: 141-63 '51

Wind tunnels require largest motors, compressors. il Machine Design 25:218 Mr '53

Fires and fire protection

Top care and right lube oil chase air-compressor fires. G. I. Teasley and B. N. Dunham. il Power 97:118-19 F '53

Maintenance and repair

Eliminate compressor operating problems. L. J. Murphy. il diags Pet Refiner 32:173-5 Ap '53

Good trouble shooting saves air compressor. H. L. Livingston. Power 97:138-9 O '53

Hints on repairing locomotive air compressors. Ry Mech & Elec Eng 126:62-4 D '52

Mine air compressor maintenance. il Min Cong J 39:112-13+ Ap '53

AIR compressors, Portable

Compact portable compressor aids utilities; Gyro-Flo 105 model. il Comp Air Mag 58:195-6 Jl '53

Muntz free-piston portable air compressor. il diag Engineer 195:364 Mr 6 '53

Portable compressor; Gyro-Flo. il Blast F & Steel Pl 41:964+ Ag '53

Portable turbo-compressors and industrial gas turbines. il Engineering 175:801-2, pl 25 Je 26 '53

AIR conditioning

Air conditioning existing building, Corning glass center. H. E. Peck and J. Owen. il Heating-Piping 25:98-101 S '53

Air conditioning favored in contemporary home design. Heat & Ven 50:106 O '53

Air conditioning for residences designed for low cost. J. F. Sandfort. plans diag Heat & Ven 50:76-9 Jl '53

Air flow through ceiling pans. A. H. Gipson. il diags Heat & Ven 50:79-81 Je '53

Air pollution control eases air conditioning. N. Sharpe. Safety Maint & Prod 106:46 Ag '53; Same. Heating-Piping 25:79 O '53

Application of residential air conditioning. R. Follansbee. Sheet Metal Worker 44:60-1+ N '52

Blend-air conditioning. J. Kice. Sheet Metal Worker 44:sup 19-20 Jl '53

Builder looks at air conditioning. E. M. Spiegel. Refrig Eng 61:842 Ag '53

Building conservation report stresses ASHVE research need; Building research advisory board for the Defense production administration. Heating-Piping 24:123 N '52

Building construction plans should provide separate category for refrigeration and air conditioning. Refrig Eng 60:1179+ N '52

Case for home air conditioning. il plan diag Am Bld 75:93-8 F '53

Climate control through ionization. T. L. Martin, jr. bibliog diag Franklin Inst J 254:267-80 O '52

AIR conditioning—*Continued*

Climatic factors measure air conditioning potentials. J. R. Hertzler and V. T. Kartorie. maps Heating-Piping 25:77-84 My; 93-7 Je; 102-6 Jl '53

Field trial results of three air to air residential heat pumps. G. L. Biehn. il diags Refrig Eng 61:628-31+ Je '53

Graphical method of analysis in air conditioning design. N. Rosenberg. Heat & Ven 50:105-6 O '53

Health and ventilation in an air conditioned shop; Humble oil and refining co. J. W. Hammond and R. J. Davis. il Heat & Ven 50:93-5 Ja '53

Heating engineer's view of the coronation. il Heating-Piping 25:84-5 Je '53

Information available, what and where. G. R. Wachter. Sheet Metal Worker 44:sup 11-13 Ag '53

Manual 11 ties cooling estimate to warm air heating. Sheet Metal Worker 44:74+ Jl '53

Market possibilities for air conditioning; air conditioned chicken hatchery. il Dom Eng 181:97 Ap '53

Measuring the weather. A. D. Hay. il diags Heating-Piping 25:98-101 Mr; 93-6 Ap; 104-5 My '53

Method for determining the need of comfort air conditioning. W. T. Smith. il Refrig Eng 61:974-6+; Discussion. 1016+ S '53

One year with the air source heat pump. D. W. Lynch. map Refrig Eng 61:858-61+ Ag '53

Pushing houses. Bsns W p31 Ja 24 '53

Refrigerant piping for air conditioning systems. S. C. Deitrick. diags Heat & Ven 50:95-110 Mr '53

Residential air conditioning conference, Bethlehem, Pa. April 24-25. Sheet Metal Worker 44:55 Je '53

Residential air conditioning primer. C. H. Burkhardt. diags Sheet Metal Worker 43:61-3 Jl; 68+ Ag; 78+ S; 44:60+ O; 71-2 N '52

Room air distribution research for year-round air conditioning; abstract. S. F. Gilman and others. Heat & Ven 50:86+ Mr '53

Seminar clears the air for air conditioning. A. Stout. il Sheet Metal Worker 44:56-7+ Mr '53

Simple analysis indicates saving or profit due to air conditioning. Heating-Piping 25:110 Je '53

Sizing the expansion valve in air conditioning systems. F. Y. Carter. diags Heat & Ven 50:93-6 Ap '53

Special factors in residential air conditioning. S. J. Levine. Sheet Metal Worker 44:sup 16-19 Jl '53

$30,000 sample home to boost residential air conditioning. R. Latimer. Sheet Metal Worker 44:60 Ap '53

Trends in heating and air conditioning. S. Konzo. diags Arch Rec 113:167-8 Ja '53

Year 'round residential air conditioning conference, Bethlehem, Pa., April 24-25; abstracts of papers. Heating-Piping 25:132-4 Je '53

Year-round residential conditioning by reflective radiation. C. A. Mills. il plan diags Refrig Eng 61:862-6; Discussion. 866+ Ag '53

Your stake in air conditioning. il Dom Eng 181:86+ Je '53

See also

Air filters
Air purification
Cold storage
Cooling
Electricity in air conditioning
Exhaust systems
Gas in air conditioning
Heating
Humidity
Ventilation

also subdivision Air conditioning under special subjects, e.g.

Airplane factories
Airport buildings
Apartment houses
Auditoriums
Automobiles
Cars
Churches
Factories
Hotels
Moving picture theaters
Newspaper offices
Office buildings
Office buildings, Industrial
Restaurants
Ships
Store buildings
Submarine boats
Television studios
Textile mills

Cost

Air conditioning gives you fast money return; Rotor tool co.; with cost data. H. P. Bailey. il diag Power 97:73-5 Je '53

Does it pay to air condition your plant? H. P. Bailey. il diag Am Mach 97:115-19 F 2 '53

Estimates

Estimating and installing residence air conditioning. L. A. Miles. Sheet Metal Worker 44:42-4 F; 48-9+ Ap '53

Hygienic aspects

Sleeping comfort in humid atmospheres; Panama Canal zone. J. A. McKinley. bibliog Refrig Eng 61:168-70+ F '53

Study and teaching

Air conditioning and refrigeration courses in vocational schools. N. N. Wolpert. Heat & Ven 50:103-4 O '53

Air conditioning, refrigeration, and heating and ventilating courses offered by colleges; tabulations. N. N. Wolpert. il Heat & Ven 50:87-90 Ag; 99-102 S '53

Tables, calculations, etc.

Easy figuring helps you check out refrigeration for air conditioning. D. K. Chapman. il Power 97:122-3 Jl '53

24-hour load calculation method. S. F. Shawhan. Sheet Metal Worker 44:sup3-7 Ag '53

Unit checking factors for commercial air conditioning; table; reference data. Heat & Ven 49:144a-144b D '52

Use of cooling degree day as index of air conditioning energy consumption. S. L. Pappas and F. R. O'Brien. Refrig Eng 61:867-9+ Ag '53

Therapeutic aspects

Air conditioning a must for some heart cases. il Heating-Piping 25:103 O '53

How temperature affects efficiency. C. W. Wing, jr. Heating-Piping 25:80-2 O '53

AIR conditioning, Industrial

Air conditioned chemical conveyor solves water treatment problem. F. L. Andreoli. il Water & Sewage Works 100:227-8 Je '53

Air conditioning. Food Eng 25:131-2+ O '53

Air conditioning design data for food industries; reference data. Heat & Ven 50:178a-178b Ap '53

Antibiotics filling requires chemical dehumidification. il Can Chem Process 37:82-3 F '53

At Beaumont mfg. co. refrigerated-air system improves carding and spinning. E. D. White. il Textile World 103:126-7+ My '53

Better V-belt is made with humidity control; B.F. Goodrich co. W. G. Davidson. il Refrig Eng 60:1186-7+ N '52; Discussion. 61:61-2 Ja '53

Comfort is incidental in vast factory cooling job; Lockheed aircraft corp. il Refrig Eng 60:1284-5 D '52

Controlled humidification is a must. H. Miedendorp. Mod Textiles Mag 34:92-3 Je '53

Dehumidification helps to process sticky sweets; Kroger company's candy manufacturing plant. R. G. Flohr. il diag Refrig Eng 61:292+ Mr '53

Humidity conditioning essential to safety glass manufacture. G. A. Kelley. flow diags il plan Glass Ind 34:22-6+ Ja '53

Humidity control necessary for production of antibiotic drugs; Schenley laboratories, inc. il diag Refrig Eng 61:180+ F '53

Industrial air conditioning. S. M. Miner. bibliog il Heating-Piping 24:84-9 D '52

Making industrial air conditioning surveys; reference data. J. Partington, jr. Heat & Ven 50:162a-162b My '53

Meeting varying needs for air conditioning; Marlin Rockwell corp. J. M. Brown and M. Y. Huyett. il Heating-Piping 25:97-8 Ag '53

Moisture control with closed hoods. S. Lukianovitch. Pulp & Pa of Can 54:126-31 S '53

New fibers need complete mill air conditioning. A. H. Bahnson, jr. il Mod Textiles Mag 33:72+ D '52

AIR conditioning, Industrial—*Continued*

Optimum cheesemaking assured by air units; Lake to lake dairy cooperative. T. Torgerson. il Food Eng 25:129+ My '53

Plant air conditioning sends costs down, morale up; Airtemp division of Chrysler corp. W. G. Patton. il Iron Age 171:159-63 Je 18 '53

Special report on air conditioning and refrigeration in automotive and aviation plants. T. Mac New. il diag Automotive Ind 107:52-61+ D 1 '52

Storage room for laminated acrylic; dehumidifier supplies ultra-dry air. F. M. Johnson. flow diag il Mod Plastics 30:111+ D '52

See also

Humidification
Humidifiers
Printing offices—Air conditioning

AIR conditioning and refrigeration machinery association

REMA and ACRMA plan to merge. Heat & Ven 50:83 My '53; Same. Refrig Eng 61:535 My '53

AIR conditioning equipment

Advantages of gas clearly demonstrated by House of enchantment; Ohio fuel gas co. il Gas Age 111:40+ Ap 9 '53

Air-conditioning in higher priced homes. H. G. Clarke. il Sheet Metal Worker 44:94 My '53

Air-conditioning plant for a departmental store. il Engineering 174:171 Ag 8 '52

Air conditioning YMHA health center. plan diags Sheet Metal Worker 44:130 Ja '53

Air cooled residential units. R. Gonzalez. Sheet Metal Worker 44:sup20-1 Jl '53

Answers to some questions on air conditioning; models of fourteen prominent manufacturers. il Consumers Res Bul 31:5-11 Ap '53

Combining summer and winter air conditioning units. R. M. Thompson. il Refrig Eng 61:843-5 Ag '53

Compactness features this air-conditioning system. R. Kinkaid. il Power Eng 57:86 Je '53

Dehumidifier in today's home. C. F. Alsing. il diag Refrig Eng 61:157-9+ F '53

Depreciation rates for air conditioning and heating; data sheet. Heating-Piping 25:106 F '53

Do we make it or buy it? Hotpoint co., International harvester co. and others. il Bsns W p 117-18 F 28 '53

Dual responsibility; selection and sizing of equipment. S. J. Levine. Sheet Metal Worker 44:sup 10-11 Ag '53

Heat pump; G.E. puts it on the assembly line. N. Willatt. Barron's 33:13-14 Ja 5 '53

Heating, piping, and air conditioning equipment for industry and large buildings; trade names. Heating-Piping 25:sup 100d-16d Ja '53

Miniature air conditioner. il Instruments 25:1756 D '52

One way to sell an air conditioner. il Bsns W p 156+ My 9 '53

Precast frame for air conditioners. P. V. Taylor. il Concrete 60:26 D '52

Preventing corrosion of air conditioning equipment. P. O. Blackmore. il diags Refrig Eng 61:733-7+ Jl '53

Problems of power supply for three-phase packaged air-conditioner units. B. M. Gallaher. Edison Elec Inst Bul 21:11-15 Ja '53

Room air conditioners; papers presented at conference on engineering planning. L. F. Jones and others. diags Refrig Eng 61:147-56+ F '53

Sizing equipment for continuous operation. G. R. Wachter. Sheet Metal Worker 44:sup21-3 Jl '53

Special features of room units; abstract. W. L. McGrath. Heating-Piping 25:179-80 Ja '53

Specialize in precast window frames; Livesay window co. P. V. Taylor. il Rock Prod 56:259+ Ag '53

Suburban stores need air conditioning; Famous-Barr's Southtown store in St Louis. A. G. Hillen. il Heating-Piping 25:89-91 Mr '53

Successful showroom merchandising methods; Stevens, inc. R. Latimer. il Sheet Metal Worker 44:42-3 Je '53

Use of cooling towers with unitary equipment. H. A. Blair. il diag Heat & Ven 50:77-81 My '53

What's ahead for room conditioners? R. W. Morgan. Refrig Eng 60:1273-5+ D '52

What's new in air conditioners; illustrations with text. Food Eng 25:88-9 Mr '53

What's new that's unusual in heating, ventilating and air conditioning fields. T. W. Reynolds. il diags Heat & Ven 49:83-7 N; 100-4 D '52; 50:96-8 Ja; 111-12 F '53

Which are cheaper, window or central units? Sheet Metal Worker 44:sup25-6 Jl '53

See also

Air filters
Air pipes
Cold storage
Cooling equipment
Gas in air conditioning
Heat pump
Humidifiers

Control

Air conditioning tv stations; air distribution and control problems. F. F. Stevenson. il diag Heating-Piping 25:77-80 Ag '53

Control of the combination heating and cooling system. F. Y. Carter. diags Refrig Eng 61:848-50 Ag '53

Control systems for cooling and dehumidifying. diags Dom Eng 182:86-7+ O '53

Heating, ventilating and air conditioning controls; Instrument society of America's Chicago section symposium; abstracts of papers. Heating-Piping 25:113-15 Mr; 104-7 Ap '53

New control regulates air conditioning; Los Angeles Statler Center hotel. il Heating-Piping 25:91 O '53

Zone control in Helena Rubinstein plant. L. E. Johnsen. il diag Refrig Eng 61:379-80+ Ap '53

Design

Design and installation; panel discussion. Sheet Metal Worker 44:sup3-32 Ag '53

Installation

Air conditioning; what got left out? C. T. Baker. il Power Eng 57:97+ Ag '53

Conditioners installed within building line. il Heating-Piping 25:108 O '53

Design and installation; panel discussion. Sheet Metal Worker 44:sup3-32 Ag '53

Estimating and installing residence air conditioning. L. A. Miles. Sheet Metal Worker 44:42-4 F; 48-9+ Ap '53

Hotel air conditioning planned; Commodore in New York. H. B. Matzen. il Heating-Piping 25:110-12 Mr '53

Installing packaged conditioners in existing homes. W. B. Cooper. diags Refrig Eng 61:845-8 Ag '53

Problems in residential air conditioning. W. R. Yeary. il diags Heat & Ven 50:77-81 Ag '53

Maintenance and repair

Equipment good, air conditions bad; how were they cured? C. T. Baker. diag Power Eng 56:73-4 D '52

Good operation, maintenance assured at Naval ordnance laboratory for the air conditioning and refrigeration systems. C. E. Mandley. il Heating-Piping 25:136-9 Ja '53

Operation and maintenance of air conditioning equipment. F. E. Ince. il Heat & Ven 49:80-2 D '52

Quick check for car cooling and heating system. il diag Ry Loco & Cars 127:72-3 Jl '53

See also

Air conditioning industries—Maintenance contracts

Manufacture

Quantity up, quality too; Carrier corp. il diag Steel 132:90-1 Je 15 '53

Noise

Air conditioning tv stations; sound control poses problems. F. F. Stevenson. il Heating-Piping 25:108-11 Jl '53

Check of air conditioning noises in television studios. T. W. Reynolds. Heat & Ven 50:111 Mr '53

How air intake was silenced at Lever House. M. Hirschorn. il Heating-Piping 25:92-3 Ag '53

How do you eliminate noise in air conditioning installations? R. L. Miller. diag Refrig Eng 61:738-41+ Jl '53

AIR conditioning equipment—Noise—*Cont.*

Noise reduction unit operates at Lever House. Sheet Metal Worker 44:46 Je '53

Room air conditioner problems. Refrig Eng 61:839 Ag '53

Rating

Proposed revision of ASRE standard; methods of rating and testing air conditioners. diags Refrig Eng 61:sup 1-24 F '53 (reprints $1)

Specifications

Facts on 1953 window coolers; specifications. Refrig Eng 61:392, insert Ap '53

Testing

Air distribution studies for louvered or egg-crate ceiling, Detroit Edison co.'s new office building. R. V. Martelli and H. O. Scarlett. il plans diags Heating-Piping 24:77-82 N '52; Discussion. W. O. Huebner. 25:119-20 Ja '53

Large diameter tube provides a testing enclosure. il Heat & Ven 49:82 D '52

Proposed revision of ASRE standard; methods of rating and testing air conditioners. diags Refrig Eng 61:sup 1-24 F '53 (reprint $1)

Room air distribution research for year 'round air conditioning. S. F. Gilman and others. bibliog il diags Heating-Piping 25:121-31 Ap '53

Water requirements

Demand charge approved for water service in air-cooling. J. R. Pierce. Water & Sewage Works 100:314 Ag '53; Same. Am Water Works Assn J 45:870-2 Ag '53

Problem of air-conditioning water use; committee report. Am Water Works Assn J 45:867-9 Ag '53

Sealed water saver for hermetic conditioners. P. W. Wyckoff. il diag Refrig Eng 61:855-8 Ag '53

Water conservation devices. R. E. Holmes. bibliog il Refrig Eng 61:850-5+ Ag '53

AIR conditioning industries

Air conditioning and mass market. A. Glenn. Barron's 33:11-12 Ap 20 '53

Air conditioning; biggest year yet. Bsns W p43-4+ Je 27 '53

Air-conditioning boom. G. Burck. Fortune 47:118-21+ My '53

Air conditioning contractor finds owning sheet metal shop economical; Nuckols-Cathey co. il Sheet Metal Worker 44:52-4 Je '53

Air conditioning heats up new boom. G. G. Carr. diags Iron Age 171:89-90 Ap 2 '53

Air conditioning is a year 'round business. il Dom Eng 182:104-6 Jl '53

Air conditioning sales set records. Steel 132:68-9 Je 1 '53

Air conditioning; some enlightening facts and figures. C. Wampler. Mech Eng 75:32 Ja '53

All-industry residential air conditioning conference, Chicago; with abstracts of papers and proceedings of panel discussions. Sheet Metal Worker 44:40-1+ Je; sup 1-32 Jl; sup 1-32 Ag; sup 1-16 S '53

Can peep show sell hard goods? Viking tries it, says yes. B. Enos. il Ind Marketing 38:104-5+ Mr '53

Case for home air conditioning. il plan diag Am Bld 75:93-8 F '53

Concentration on low cost air conditioning creates profitable volume; Kay co. R. Latimer. il Sheet Metal Worker 45:38-40 O '53

Future of room air-conditioning sales, a vast business. J. M. Otter. Edison Elec Inst Bul 21:163-4 My '53

Future of the refrigeration industry and air-conditioning industry. C. H. Linder. Comm & Fin Chr 178:199+ Jl 16 '53

How hot is air conditioning? Bsns W p46 Mr 7 '53

How small town dealer develops volume air conditioning sales. R. Latimer. Sheet Metal Worker 44:127+ Ja '53

Law and your profits (cont). W. H. Hillyer. Heating-Piping 24:107-8 N; 110 D '52; 25:171 Ja; 107 F; 122 Mr; 113-14 Ap; 107+ My; 105+ Je; 107 Jl; 103 Ag; 110-11 S; 100+ O '53

Muntz keeps branching out. Bsns W p99-100+ Jl 25 '53

Second look at last summer's boom in air conditioner sales. P. B. Nortman. Sales Management 69:24-6 O 15 '52

Successful plans for selling year-round air conditioning. il Sheet Metal Worker 44:44-5+ D '52

Tailor-made promotional program. W. W. Kuenn. Sheet Metal Worker 44:53 D '52

What's ahead for room conditioners? R. W. Morgan. Refrig Eng 60:1273-5+ D '52

Advertising

RCA warms up drive for its air conditioner. Ed & Pub 86:24 Ap 11 '53

Small space testimonial ads sell for Viking, distributors. il Ind Marketing 37:65+ O '52

Directories

Air conditioning product directory. il Dom Eng 181:87+ Je '53

1953 directory; heating, piping and air conditioning equipment for industrial, commercial, institutional and public buildings; classified by products, trade names, and manufacturers' addresses. Heating-Piping 25:sup 1d-134d Ja '53

Product-tradename directory; manufacturers of products and equipment used in warm air heating, air conditioning, ventilating, sheet metal work. Sheet Metal Worker 44:183-211 Ja '53

Finance

Financing air conditioning through the open-end mortgage. G. Barker. Sheet Metal Worker 44:sup3-6 S '53

Maintenance contracts

Save money with preventive maintenance; purchased maintenance plans. G. H. Walker. il Refrig Eng 60:939-42+ S '52; Same cond. Power Eng 57:85-6 Ja '53

Statistics

Air conditioning, commercial refrigeration equipment; shipments, 1940-1951; tabulation. Steel 132:180 Ja 5 '53

1952 shipments of air conditioning and refrigeration equipment; tabulations. Refrig Eng 61:871-3+ Ag '53; Excerpts. Heat & Ven 50:132+ S '53

Southern states

South makes rapid strides in use, production of air-conditioning. S. Fish. Manuf Rec 122:38-9 O '53

AIR conditions

See also

Air conditioning
Air pollution
Dust
Humidity
Smoke prevention
Ventilation

AIR coordinating committee. See United States—Air coordinating committee

AIR defense. See Air raids—Protective measures

AIR diffusers

Air distribution studies for louvered or egg-crate ceiling, Detroit Edison co.'s new office building. R. V. Martelli and H. O. Scarlett. il plans diags Heating-Piping 24:77-82 N '52; Discussion. W. O. Huebner. 25:119-20 Ja '53

Modern trends in air distribution. R. D. Tutt. il diags Refrig Eng 61:509-13+ My '53

Out-of-sight air diffuser works with ceiling plenum or duct systems; Multi-Vent's modular air diffuser. il diags Arch Forum 97:218 S '52

AIR engines

Air mules; compressed-air locomotives for mine haulage. il Comp Air Mag 57:351 D '52

Air-starting cuts cost of electrical maintenance on Mesabi operator's off-highway trucks. il Eng & Min J 153:118 S '52; Same. Constr Methods 35:128+ Ja '53

AIR entrainment. See Concrete—Air entrainment

AIR filters

Air filter adhesive developed in laboratory and field tests; Diesel-engine filtration study. A. W. Hardy and others. il Ry Loco & Cars 127:65-71 Mr '53

AIR filters—*Continued*

Air-Maze oil-bath filter adapted to Diesels. il Ry Age 134:35-6 Je 29 '53

Air sampling with membrane filters. M. W. First and L. Silverman. bibliog il diags A M A Archives Ind Hygiene & Occup Med 7:1-11 Ja '53

Bag filtration of aerosols. R. T. Pring. diags Heat & Ven 49:97-9 D '52

Cleaning the air is a three-way job; report on round table on Diesel engine air cleaners. S A E J 61:43-6 F '53

Dust was an explosion hazard, but now this plant clears the air with automatic continuous filtering. il diag Factory Management 111:100-1 Ap '53

Effectiveness of the fog filter. F. A. Thomas, jr. diags Heat & Ven 50:113-15 F '53

Maintenance of internal combustion engines; filtration of air and oil. P. H. Moore. il diags Pet Eng 24:C21+ N '52

New air filter code. A. Nutting and R. F. Logsdon. diags Heating-Piping 25:77-82 Je '53; Discussion. 25:83 Jl; 69-70 Ag; 73-4 S '53

New Hemeon low cost automatic air filter. L. C. McCabe. il Ind & Eng Chem 44:sup 99A-100A+ D '52

Recent developments in resin-wool air cleaners. H. C. Murphy. Heating-Piping 25:108 Ap '53

Tailor-made promotional program. W. W. Kuenn. Sheet Metal Worker 44:53 D '52

Cleaning

High production air-filter cleaning. il Ry Loco & Cars 127:84-5 Mr '53

Testing

Filter efficiency and standardization of test dust. H. Heywood. bibliog Inst Mech Eng Proc (B) 1B 5:169-74, pl 1-2; Discussion. il diags 175-84 '52

Filter test code for panel or unit type air cleaners adopted by Air filter institute. il Heat & Ven 50:134+ My '53

AIR flow

Air-cooling nomograph; reference sheet. E. Slusser. Electronics 25:164 N '52

Air flow method of measuring the specific surface of jute; study of chemically treated fibres. M. M. Roy. bibliog Textile Inst J Trans 44:T90-4 Mr '53

Air flow through ceiling pans. A. H. Gipson. il diags Heat & Ven 50:79-81 Je '53

Air velocities in ventilating jets. G. L. Tuve. bibliog(25 titles) il diags Heating-Piping 25:181-91 Ja '53

Discharge of air through orifices; data sheet. diag Heating-Piping 25:123-4 Jl '53

Distributing air from a luminous plastic ceiling. L. G. Seigel and W. L. Bryan. il diags Heating-Piping 25:107-9 S '53

Effect of screens in wide-angle diffusers. G. B. Schubauer and W. G. Spangenberg. bibliog il diags U S Nat Advisory Com for Aeronautics 1949:545-84 '51

Flow and fan; principles of moving air through ducts. C. H. Berry. diags Heat & Ven 50:81-7 Ja; 93-8 F; 87-94 Mr; 103-10 Ap; 88-94 My; 91-6 Je; 85-90 Jl; 103-6 Ag; 103-6 S; 90-4 O; 88-93 N; 102-7 D '53

Further experiments on the flow and heat transfer in a heated turbulent air jet. S. Corrsin and M. S. Uberoi. bibliog il diag U S Nat Advisory Com for Aeronautics 1950:859-75 '51

Instrument for regulating metered air supplies; Pneumerstat. il diag Engineering 176:63 Jl 10 '53

Interferometric analysis of airflow about projectiles in free flight. F. D. Bennett and others. bibliog il diags J Ap Phys 23:453-69 Ap '52

Leakage of air through labyrinth glands of staggered type. W. J. Kearton and T. H. Keh. bibliog diags Inst Mech Eng Proc (A) 166 no 2:180-8; Discussion. 189-95 '52

Maximum downward travel of heated jets from standard long radius ASME nozzles. L. Helander and others. il diags Heating-Piping 25:123-32 Mr '53

Measurement of air flow. J. G. Withers. Engineer 196:227-8 Ag 21 '53

Mixing and distribution of liquids in high-velocity air streams. J. P. Longwell and M. A. Weiss. bibliog il diags Ind & Eng Chem 45:667-77 Mr '53

Mixing theory for the interaction between dissipative flows and nearly isentropic streams. L. Crocco and L. Lees. bibliog diags J Aeronautical Sci 19:649-76 O '52

Perimeter air delivery for cooling. R. Follansbee. Sheet Metal Worker 44:sup9-10 Ag '53

Pressure loss characteristics of small diameter round duct systems. G. R. Whitnah and J. V. Borry. diags Heating-Piping 24:111-16 N '52

Pressure losses in four-inch diameter galvanized metal duct and fittings. H. G. Conn and others. diags Heating-Piping 25:201-5 Ja '53; Abstract. Heat & Ven 50:166+ Ap '53

Rand McNally uses new method for delivering air to press rooms. F. F. Stevenson. il diag Heating-Piping 25:77-9 S '53

Resistance to air flow of wire gauzes. W. J. D. Annand. bibliog diags Roy Aeronautical Soc J 57:141-6 Mr '53

Room air distribution research for year 'round air conditioning. S. F. Gilman and others. bibliog il diags Heating-Piping 25:121-31 Ap '53

Temperature gradients in turbulent gas streams; measurement of temperature, energy, and pressure gradients. W. G. Schlinger and others. bibliog diags Ind & Eng Chem 45:864-70 Ap '53

Velocities; control, slot, and carrying; abstract. J. Baliff. Heating-Piping 25:91 Ap '53

Velocity-pressure chart for air flow. B. Briskin. Heating-Piping 25:107-8 Ag '53

What's right air movement in offset press rooms? F. F. Stevenson. il Heating-Piping 25:102-3 Ap '53

See also

Aerodynamics	Pneumatic conveying
Anemometers	Turbulence

AIR freight forwarders. See Forwarding companies (air freight)

AIR freight service

Air cargo boom forecast by CAA. Aviation W 58:78-9 Ja 26 '53

Air cargo business. Aviation W 58:209 Mr 2 '53

Airfreight carriers pool their problems. Aviation W 58:87-8 F 2 '53

Air freight flies high. il Steel 131:46-7 D 29 '52

Airfreight handling needs cited. Aviation W 57:88+ D 8 '52

Air freight; new potentials for industry. J. C. Emery. Harvard Bsns R 31:82-90 Jl '53

Air freight prospects. R. A. Norden. Comm & Fin Chr 175:1536+ Ap 9 '53; Excerpts. East Underw 54:30+ Mr 27 '53

Air freight reaches new traffic highs as marketing tool. C. Day. il Ptr Ink 241:33+ D 5 '52

Air freight shipments zoom, will double by '54, says Lockheed. Sales Management 69:85 D 15 '52

Airplane use opens up Canadian northland. J. Montagnes. Barron's 33:18 Je 1 '53

Atlantic cargo route fight begins. Aviation W 58:16-17 Mr 9 '53

CAB approval forecast in cargo merger; Flying Tiger-Slick consolidation appears assured. L. Moore. map Aviation W 58:91-2 Ap 6 '53

CAB wants airlifts freed of fixed rates. Aviation W 58:14 Ap 20 '53

Copters haul cargo between airports. Aviation W 58:79 Ja 26 '53

Development of car-ferry air services. il Engineering 176:169 Ag 7 '53

Evaluating air freight; abstract. Management R 41:609-10 S '52

Five-fold air cargo gain seen by 1959. L. Moore. Aviation W 57:85-6 N 24 '52

Future of air freight. R. A. Norden. Comm & Fin Chr 176:2500-1 D 25 '52; Abstract. Aviation W 58:17 Ja 5 '53

Operation of English Channel air ferry. G. J. Powell. il S A E J 60:39-42 O '52

Predictability, that's what the shipper wants; interview with John C. Emery. il Ry Age 133:63-5 N 10 '52

Six cargo carriers in trans-Atlantic case. Aviation W 57:87 N 3 '52

Small business in the air; six freight lines vie for the transatlantic run. Barron's 33:3 Ap 6 '53

AIR freight service—*Continued*

10½ ton air drop. il Aero Digest 66:25 Je '53

See also

Airplanes, Freight

Flying tiger lines, inc

Advertising

Cartoon testimonials boost air freight sales of Flying Tigers. J. Collins. il Ind Marketing 37:132+ D '52

Rates

PanAm has another plan; tourist rate for cargo. Bsns W p 171-2 F 21 '53

PAA sets sights on air cargo rate cut. Aviation W 58:82 F 16 '53

AIR gages. See Gages, Pneumatic

AIR jets

Air jet operates environmental controls in test chamber. il diags Product Eng 24:152-3 Ja '53

Air velocities in ventilating jets. G. L. Tuve. bibliog(25 titles) il diags Heating-Piping 25:181-91 Ja '53

Blow out the empty inspection device. il Mod Packaging 26:126 Ja '53

Cleaning by air minimizes fiber damage; abstract. A. L. Vandergriff. Textile World 103:133+ My '53

Further experiments on the flow and heat transfer in a heated turbulent air jet. S. Corrsin and M. S. Uberoi. bibliog il diag U S Nat Advisory Com for Aeronautics 1950:859-75 '51

Local coefficients of mass transfer by evaporation of water into an air jet. M. Spielman and M. Jakob. bibliog il A S M E Trans 75:385-92; Discussion. 392-4 Ap '53

Maximum downward travel of heated jets from standard long radius ASME nozzles. L. Helander and others. il diags Heating-Piping 25:123-32 Mr '53

Overfire air limits underfeed stoker smoke. il diags Power Eng 57:102-3 Ag '53

AIR lifts

Effective use of air-lifts. P. S. Cross. diags Can Min J 73:66 O '52

AIR lines. See Airlines

AIR mail parcel post

Flying Tiger service speeds parcel post. Aviation W 58:82-3 F 16 '53

New York copter service starts this week; first scheduled helicopter air mail and parcel post service. Aviation W 57:18 O 13 '52

AIR mail service

Airmail service loss totals $56 million. Aviation W 58:103 My 11 '53

Air-mail subsidies; recent court rulings may trim carriers' take. S. Altschul. Barron's 33:13-14 My 25 '53

Aviation; C.A.B. regulation a stabilizing factor. J. H. Lewis. Trusts & Estates 92:341-4+ My '53

Braniff asks big subsidy boost. Aviation W 58:93-4 Ap 6 '53

CAB okays NWA Stratocruiser subsidy. L. Moore. Aviation W 58:77-8 Ja 26 '53

Court upsets CAB airmail rate formula. L. Moore. Aviation W 58:83-4 My 18 '53

Final mail rate puts Northeast out of red. Aviation W 58:102 My 25 '53

Helicopter mail rings bell in Chicago. G. L. Christian. il map Aviation W 58:56+ Ja 5 '53

Mail rates, U.S. international carriers; local service airline mail rates; tabulations. Aviation W 58:199 Mr 2 '53

Majority of airlines get final mail rates. Aviation W 58:25 My 18 '53

New York copter service starts this week; first scheduled helicopter air mail and parcel post service. Aviation W 57:18 O 13 '52

Pioneer subsidy; CAB turns down higher mail rate for Martins. Aviation W 58:73-5 Mr 23 '53

P.O. wants to cut airmail rates. L. Moore. Aviation W 58:17-18 My 25 '53

S-55 proving run a success, LAA says. W. J. Coughlin. il Aviation W 57:49-51+ O 20 '52

Senators push mail subsidy separation. Aviation W 58:26 Mr 30 '53

Three-cent mail will go by air; experimental shift of New York-Chicago and Washington-Chicago business from the railroads. Ry Age News ed 135:9-10 S 14 '53

What airmail decision can mean. S. Altschul Aviation W 58:78-9 My 25 '53

AIR navigation

Inertial navigation system. diags Tele-Tech 11:53+ D '52

Visual aids to air navigation. W. H. Floyd. Midwest Eng 5:7-8+ N '52

See also

Aeronautic instruments

Decca navigation system

Radio aids to aviation

Charts

Aeronautical charting and mapping. C. A. Schanck. Am Soc C E Proc 79 [no 172]: 1-7 F '53

AIR pipes

Constructing ventilation systems for radioactive work. W. W. McIntosh. il Heating-Piping 25:98-102 Je; 98-102 Jl '53

Duct access through beams; data sheet. W. A. Stahl. il diags Heating-Piping 24:103 N '52

Duct expansion joint and damper insulated together. il diag Sheet Metal Worker 44: 19+ S '53

Economical duct layouts. P. Franck. plans Heating-Piping 24:100-3 D '52

Flow and fan; principles of moving air through ducts. C. H. Berry. diags Heat & Ven 50:81-7 Ja; 93-8 F; 87-94 Mr; 103-10 Ap; 88-94 My; 91-6 Je; 85-90 Jl '53

Friction losses in round aluminum ducts. F. W. Hutchinson. bibliog il Heating-Piping 25:119-24 My '53

Installing ducts for higher pressures. L. O. Paul. il Heating-Piping 25:98-101 Ap '53

Modern trends in air distribution. R. D. Tutt. il diags Refrig Eng 61:509-13+ My '53

Plastic ducting. H. J. Stark. il Machine Design 25:172 Jl '53

Pressure loss characteristics of small diameter round duct systems. G. R. Whitnah and J. V. Borry. diags Heating-Piping 24: 111-16 N '52

Pressure losses in four-inch diameter galvanized metal duct and fittings. H. G. Conn and others. diags Heating-Piping 25: 201-5 Ja '53; Abstract. Heat & Ven 50:166+ Ap '53

Stitched fiber replaces sheet metal; air ducts in automobiles. il Machine Design 25:131 S '53

Tables, calculations, etc.

Static pressure losses in duct elements; reference data. diags Heat & Ven 50:160a-160b Ja; 174a-174b F '53

Velocity-pressure chart for air flow. B. Briskin. Heating-Piping 25:107-8 Ag '53

AIR pollution

Abating air pollution; what causes a smog? Chem Eng 59:322+ O '52

Absorption and excretion of inhaled fluorides. G. H. Collings, jr. and others. A M A Archives Ind Hygiene & Occup Med 6:368-73 O '52

Air pollution abatement in the U.S.A. Chem Age (Lond) 68:457-60 Mr 21 '53

Air pollution by hydrogen sulfide in Poza Rica, Mex. L. C. McCabe and G. D. Clayton. bibliog flow chart il maps A M A Archives Ind Hygiene & Occup Med 3:199-213 S '52

Air pollution control association 46th annual meeting, Baltimore, May 25-28; with abstracts of papers. Oil Paint & Drug Rep 163:7+ Je 1 '53

Air pollution control eases air conditioning. N. Sharpe. Safety Maint & Prod 106:46 Ag '53; Same. Heating-Piping 25:79 O '53

Air pollution control symposium; abstracts of papers. Heat & Ven 50:140+ F '53

Air pollution control unit set up by New York. Eng N 149:45 D 4 '52

Air pollution prevention in electric generating stations. H. A. Bauman. bibliog diag Elec Eng 72:200-4 Mr '53

Air pollution problem. J. F. Barkley. bibliog(29 titles) Am Gas Assn Proc 1952:537-42

AIR pollution—*Continued*

Air pollution problem needs long research; abstract. C. R. Williams. Pub Health Rep 68:241-2 F '53

Alkali works report for 1952. Engineering 176: 266 Ag 28 '53

ASME session on air pollution control. Heating-Piping 25:143 Ja '53

Analysts seek solutions to air pollution problems. il Chem & Eng N 31:1392-3 Ap 6 '53

Bad air in southern California. Sci Am 188: 32+ Ja '53

Battle report on pollution control. il diag Power 97:73-6+ Ap '53

Behavior of mercury in the animal organism following inhalation. W. F. Ashe and others. bibliog diag A M A Archives Ind Hygiene & Occup Med 7:19-43 Ja '53

Cat catches fume for McDougall-Butler. M. E. Schleicher. il diags Paint Oil & Chem R 116:13-14+ Mr 12 '53

Catalyst can end coffee plant odours and many other pollution problems. il diag Can Chem Process 37:48+ Ag '53

Catalyst curbs air pollution; Eppens, Smith co. il diag Food Eng 25:63+ Ag '53

Catalyzing air pollution problems. il diags Safety Maint & Prod 106:53-5 S '53

Chemical industry can solve its own air pollution problems. Chem & Eng N 31:995-6 Mr 9 '53

Clean air for clear sailing. il Mod Ind 25: 75-6 Ap '53

Clinic of power engineers apply know-how to solve their city's stubborn air-pollution problems. il Power 97:114-15 F '53

Concentrations of particulates found in air. M. W. First and P. Drinker. A M A Archives Ind Hygiene & Occup Med 5:387-8 Ap '52; Same. Heat & Ven 49:92 N '52

Design factors in catalytic fume elimination. R. J. Ruff. il Heat & Ven 50:84-6 S '53

Dravo is manufacturer's representative for air-pollution, heat-recovery device. il Eng N 150:115 Mr 5 '53

Effect of climate and atmospheric pollution on corrosion. J. C. Hudson and J. F. Stanners. il J Ap Chem 3:86-96 F '53; Abstract and discussion. Chem & Ind p 168 F 21 '53

Electrolytic refining of magnesium may discharge chlorine, hydrochloric acid, and sulfur dioxide to the atmosphere. L. C. McCabe. Ind & Eng Chem 44:sup 123A-4A+ O '52

Exhaust nuisance abatement with activated carbon; Ace wire mills. K. B. Magee. il diag Sheet Metal Worker 44:83-4 F '53; Same. Heat & Ven 50:107 My '53; Abstract. Iron Age 170:170 D 18 '52

Exhaust nuisance stopped in wire mill; Ace wire mill. J. Bartol. il diag Power 97: 120-1 Je '53

Fumes and gases in arc welding. E. Thrysin and others. bibliog il A M A Archives Ind Hygiene & Occup Med 6:381-403 N '52

Industrial hygiene foundation air pollution conference annual meeting, Pittsburgh, Nov. 19. Mech Eng 75:97-8 Ja '53

Inhalation of sulfuric acid mist by human subjects. M. O. Amdur and others. bibliog A M A Archives Ind Hygiene & Occup Med 6:305-13 O '52

It's up to industry now; M.C.A.'s 9th air pollution conference, Detroit. Chem W 72:69-70+ Mr 14 '53

Major air pollution control bureaus in the United States and Canada spent $2,373,949 during 1952. L. C. McCabe. Ind & Eng Chem 45:sup 112A-14A Ja '53

Manufacturing chemists' association conference maps advances in air pollution abatement fight. Oil Paint & Drug Rep 163:7+ Mr 2 '53

New York air. L. Greenberg. Heat & Ven 50: 138+ Jl '53

Odd pollution problem; Dow Chemical styrene control. E. M. Adams and E. J. Schneider. Chem Eng 60:327-8 F '53

Rapid analytical method for air-pollution surveys; the determination of total particulates and the rapid semiquantitative spectrographic method of analysis of the metallic constituents in high-volume samples. R. G. Keenan and D. H. Byers. A M A Archives Ind Hygiene & Occup Med 6:226-30 S '52

Reduction of atmospheric pollution from sulphuric acid recovery processes; abstract. N. W. Clauss. Nat Safety N 67:46+ Je '53

Research on chronic toxic effects from long exposure to vapors of pure gasoline. A. Amorati and others. Ind Med 21:466-8 O '52

Results of a five-year investigation of air pollution in Cincinnati. J. Cholak and others. map A M A Archives Ind Hygiene & Occup Med 6:314-25 O '52

Some experiences with air pollution abatement in the steel industry. C. A. Bishop. diag Blast F & Steel Pl 40:1448-53 D '52; Same abr. Iron & Steel Eng 29:122-6 D '52; Abstract. Steel 130:177+ Mr 10 '52

Study of effect of air pollution on health to be undertaken in the Windsor-Detroit area. P. Martin. Munic Util 91:42+ Mr '53

We still smell a little. H. C. Hosford. diag Chem Eng 59:328+ N '52

See also

Beryllium poisoning
Blast furnace gas
Dust
Fumes
Gases, Asphyxiating and poisonous
Respiratory apparatus
Smoke prevention

Bibliography

Air pollution abatement manual; chapter 12, bibliography. C. A. Gosline, ed. pa 50c Manufacturing chemists' assn, 246 Woodward bldg, 15th & H sts, N.W, Washington 5 '52

Laws and regulations

Air pollution; demand for control measures spreads. Heat & Ven 50:126-7 Je '53

Air pollution ordinances. J. M. Kane. il Foundry 80:104-7+ O '52

Check list of air pollution control ordinances. Iron Age 171:456 Ja 1 '53

Rational approach to air-pollution legislation. G. E. Best. bibliog A M A Archives Ind Hygiene & Occup Med 5:517-26 Je '52; Discussion. T. C. Wurts. 7:255-7; Reply. 257-8 Mr '53

Smog law adopted; oil firms with gasoline storage near Los Angeles must control escaping vapors. D. H. Stormont. Oil & Gas J 52:219 My 18 '53

AIR power

Air power and new weapons. H. S. Vandenberg. il Aeronautical Eng R 12:18-19+ Ap '53

Britain to ask NATO air slash. N. McKitterick. Aviation W 57:18 D 22 '52

Industry heads for new peak; sales boom. R. Hotz. Aviation W 58:40-1 Mr 2 '53

NATO air power; a staff report. Aviation W 57:12 N 3 '52

NATO air power growing fast. R. Hazeltine. Aviation W 58:78+ Mr 2 '53

AIR preheaters

Air-preheater design as affected by fuel characteristics. H. Karlsson and W. E. Hammond. bibliog il diags A S M E Trans 75: 711-18; Discussion. 718-22 Jl '53

Rotary regenerative air preheater for gas turbines. A. T. Bowden and W. Hryniszak. bibliog diags A S M E Trans 75:767-77 Jl '53

Steam air heaters for marine water-tube boilers; abstract. W. S. Glass. Engineer 194:698 N 21 '52

Tubular air-heater problems. E. F. Rothemich and G. Parmakian. il diags A S M E Trans 75:723-7 Jl '53; Abstract. Power 97: 110-11 S '53; Discussion. A S M E Trans 75:727-8 Jl '53

AIR purification

Bacteria and odor control problem in occupied spaces. R. L. Kuehner. bibliog(31 titles) diags Heating-Piping 24:113-19 D '52; Abstract. Heat & Ven 50:86 Mr '53; Discussion. Heating-Piping 25:143-6 Mr '53

Economies of air purification. N. Sharpe. bibliog Refrig Eng 61:959-63+ S '53

Fume washing tower. il Metal Finishing 51: 80-1 Jl '53

Ozone, nature's air freshener. Westinghouse Eng 13:141-2 Jl '53

Sanitization of air by ultraviolet radiations. R. Nagy and others. il Westinghouse Eng 13:66-9 Mr '53

See also

Air conditioning
Air filters
Air pollution
Ventilation

AIR raid shelters
Navy buildings; personnel shelters for blast protection. il plan diags Arch Rec 112:181-2 S '52

AIR raids
Protective measures
CONELRAD alert receiver. M. M. Mitchum. il diag Electronics 25:110-11 O '52
CONELRAD; FCC and air force plan controls station operation to prevent use of signals as navigational aid to enemy aircraft. diags Tele-Tech 12:85+ Mr '53
If the bomb strikes, Tulsa plant is ready. R. V. Devlin. il World Oil 136:78-9 My '53
New push on air defense. il Bsns W p 182+ Ap 18 '53
See also
Air raid shelters
Air raids and building
Atomic bombs—Protective measures

AIR raids and building
Bombings; plants were still there; German industry's survival under World war II bombings no assurance in A-bomb era. Iron Age 170:44-5 O 16 '52
Civil defense called feasible and urgent; project East River calls for vast program of urban planning and structural protection. diag Arch Rec 113:16 F '53
See also
Atomic bombs and building

AIR receivers
Underground receiver at Rödsand provides steady mine air supply. C. C. Austin. il diag Eng & Min J 154:92-3 Ag '53

AIR reduction company
Airco; its new plant breeds other new plants. il map Bsns W p 148-50+ Ap 18 '53
Five attractive stocks for capital gains; with comparative balance sheet items. Mag of Wall St 91:469 Ja 24 '53
12 promising specialties. P. Dobbs. Mag of Wall St 92:94-5 Ap 18 '53

AIR sampling
Air sampling with membrane filters. M. W. First and L. Silverman. bibliog il diags A M A Archives Ind Hygiene & Occup Med 7:1-11 Ja '53
High speed absorber for the determination of toxic substances in air. J. C. Gage. diag J Sci Instr 29:409 D '52
Rapid analytical method for air-pollution surveys; the determination of total particulates and the rapid semiquantitative spectrographic method of analysis of the metallic constituents in high-volume samples. R. G. Keenan and D. H. Byers. A M A Archives Ind Hygiene & Occup Med 6:226-30 S '52

AIR showers. See Cosmic rays—Showers

AIR taxi service. See Airlines—Air taxi service

AIR transport association, International. See International air transport association

AIR transport association of America
Rickenbacker calls off ATA withdrawal. Aviation W 57:80 D 15 '52

AIR transportation. See Air carriers; Air freight service; Airlines

AIR travel
Building air tour trade. il Bsns W p84+ Jl 25 '53
Coach future may dominate air travel. D. Nyrop. Aviation W 57:17-18 O 20 '52

AIR turbines
Operation problems of air-turbine accessory drives. T. E. Abraham. Elec Eng 72:530-3 Je '53

AIR washers
Air washer performance analyzed on the psychrometric chart. H. M. Hendrickson. bibliog diags Heat & Ven 50:91-103 Jl '53
It's important to clean your air washers. Textile World 102:212+ N '52

AIRCRAFT
See also
Airplanes
Airships
Flying boats
Gliders
Guided missiles
Helicopters

AIRCRAFT gas turbines. See Gas turbines, Aircraft

AIRCRAFT guns. See Guns, Aircraft

AIRFLEETS, inc.
Airfleets; profits far afield. Bsns W p94+ Je 27 '53

AIRFOILS
Attainable circulation about airfoils in cascade. A. W. Goldstein and A. Mager. bibliog diags U S Nat Advisory Com for Aeronautics 1950:117-39 '51
Busemann coefficients for a supersonic airfoil. D. Naylor. J Aeronautical Sci 20:219-20 Mr '53
Centre of shear of aerofoil sections. J. A. Jacobs. bibliog diags Roy Aeronautical Soc J 57:235-7 Ap '53
Compressible flow past a cascade of thin airfoils. G. V. R. Rao. diag J Aeronautical Sci 20:217-18 Mr '53
Development of cambered airfoil sections having favorable lift characteristics at supercritical Mach numbers. D. J. Graham. bibliog U S Nat Advisory Com for Aeronautics 1949:507-28 '51
Heat transfer over a sweat-cooled surface in laminar compressible flow with a pressure gradient. M. Morduchow. bibliog J Aeronautical Sci 19:705-12 O '52
Lift and circulation of airfoils in some unsteady-flow problems. N. H. Kemp. J Aeronautical Sci 19:713-14 O '52
Method of designing cascade blades with prescribed velocity distributions in compressible potential flows. G. R. Costello. bibliog diags U S Nat Advisory Com for Aeronautics 1950:559-69 '51
Noncirculatory flow about a two-dimensional airfoil at subsonic speeds. B. Mazelsky. J Aeronautical Sci 19:848-9 D '52
Reversibility theorem for thin airfoils in subsonic and supersonic flow. C. E. Brown. bibliog U S Nat Advisory Com for Aeronautics 1950:669-71 '51
Second-order supersonic flow past a slowly oscillating airfoil. M. D. Van Dyke. J Aeronautical Sci 20:61 Ja '53
Summary of section data on trailing-edge high-lift devices. J. F. Cahill. diags U S Nat Advisory Com for Aeronautics 1949:341-70 bibliog(p369-70) '51
Theory of oscillating airfoils of finite span in subsonic compressible flow. E. Reissner. bibliog U S Nat Advisory Com for Aeronautics 1950:969-77 '51
Two-dimensional airfoils at moderate hypersonic velocities. W. H. Dorrance. bibliog diags J Aeronautical Sci 19:593-600 S '52; Discussion. L. E. Flanagan, jr. 20:150-1 F '53
Wind tunnel investigations on rotating blades of aerofoil section. K. H. Khalil. bibliog il diags Inst Mech Eng Proc (A) 166 no 4: 419-26 '52; Same cond. Engineer 194:221-3 Ag 15 '52; Discussion. Inst Mech Eng Proc (A) 166 no 4:426-8 '52
See also
Airplane wings

AIRGLOW. See Sky

AIRLIFT TCC process. See Gasoline—Manufacture

AIR line pilots association, International
ALPA enunciates safety policy. Aviation W 58:54+ F 2 '53
ALPA sets jet liner standards. Aviation W 58:20 Ap 13 '53
New constitution adopted by ALPA. Aviation W 57:16-17 N 3 '52
New leader, new look for pilots. Bsns W p 144+ N 8 '52
Pilot congress; ALPA takes new step in setting safety policy. A. McSurely. Aviation W 57:17 N 3 '52
Sayen victory assured in ALPA. Aviation W 57:15 O 27 '52

AIRLINES
Automatic teletype system handles air-line communications operations. il Elec Eng 72: 466-7 My '53; Same cond. Pub Util 51:630-1 My 7 '53
CAB policy. O. Ryan. Aviation W 58:81 Mr 30 '53
See also
Aeronautics, Commercial
Air carriers—Nonscheduled operations
Air freight service
Air mail service
Airports
Airways
American airlines, inc.
Pan American world airways
Railroads—Airline competition
Trans World airlines

AIRLINES—*Continued*

Accidents

Accidents decrease as air travel grows. B. W. Ashmead. Nat Safety N 68:110-12 S '53
Air-travel hazard 6½ times rail in 1952. Ry Age 134:16 Ap 20 '53
CPA Comet crash causes are sought. Aviation W 58:64-5 Mr 16 '53
Canadian Pacific airlines Comet took off nose high; jet crash at Karachi. Aviation W 58:14 Ap 6 '53
CAB accident investigation report; National airlines, inc., Elizabeth, N.J. Feb. 11, 1952. Aviation W 57:68+ O 20 '52
CAB accident investigation report on PAA Puerto Rico crash. Aviation W 57:64+ N 24 '52
CAB lauds crew in liner crash. A. McSurely. Aviation W 57:14-15 O 10 '52
CAB report on PAA door blowout near Rio. Aviation W 58:45-7+ Mr 30 '53
Comet crash. N. McKitterick. Aviation W 58:17 My 11 '53
Comet crash; flight from Calcutta to Delhi. Economist 167:837 Je 20 '53
Details on NEA Flushing crash. Aviation W 58:76-8+ Ja 5 '53
Domestic air carriers had low accident rate. Weekly Underw 168:1007 Ap 11 '53
Engine failed on crashed airliner. Aviation W 57:15 D 15 '52
Full report on Comet crash in Rome. plan diag Aviation W 58:58+ Ja 19 '53
Holds government is jointly liable in big Eastern air crash. Nat Underw 57:21 My 14 '53
Pilot error blamed in Comet crash. N. McKitterick. Aviation W 57:52-3 D 29 '52
Prop reversal; Ham Standard refutes CAB crash findings. Aviation W 57:91-2 D 8 '52
Prop reversal probed in crash. il Aviation W 58:18 F 16 '53
Propeller reversed in NEA crash. Aviation W 58:60 Mr 16 '53
Sand spit crash; pilots, NWA officials dispute CAB findings. Aviation W 57:18 O 27 '52
Structural problem probed in DC-6 crash. Aviation W 58:15 F 23 '53
See also
Aviation—Accidents

Advertising

How to sell a mid-winter specialty in midsummer; air travel to Miami. il Ptr Ink 242:66+ Ja 23 '53
Movie is successful sales aid; American airlines. J. A. Dearborn. il Ptr Ink 242:42+ Mr 6 '53
United schedules dailies on almost exclusive basis. il Ed & Pub 85:24 N 8 '52
See also
Air freight service—Advertising

Air taxi service

Taxi plane; missing link in air travel. il Bsns W p 142-3+ Ja 31 '53

Consolidation

Chicago & Southern-Delta merger gets final approval. Aviation W 58:83 Ja 12 '53; Manuf Rec 122:50 Ja '53
CAB approval forecast in cargo merger: Flying Tiger-Slick consolidation appears assured. L. Moore. map Aviation W 58:91-2 Ap 6 '53
CAB may force Alaskan route mergers. L. Moore. map Aviation W 58:75-6 My 4 '53
Colonial merger with Eastern air lines. Bsns W p92 Je 27 '53
Delta-Chicago & Southern merger expected Jan. 20. Aviation W 57:48 D 29 '52
Delta-Chicago & Southern operating as Nation's fifth largest domestic airline. map Manuf Rec 122:40 My '53
Marriage of convenience; Flying tiger line merger with Slick airways. il Bsns W p 172+ Ap 11 '53
New giant hopes to invade East. map Bsns W p66+ Ap 18 '53

Employees

Airlines pool bargaining. Bsns W p 172+ Ap 25 '53
Average pilot pay, 1940-1951; captains' pay scale, 1947-1951; tabulations. Aviation W 58:198 Mr 2 '53
Employment outlook in air transportation. il U S Bur Labor Statistics Bul 1128:435-56; pa 20c Supt. of doc. '53
Women keep planes in the air; California central airlines. R. M. Harmer. il Am Bsns 23:32+ Je '53
See also
Air line pilots association, International
Airlines—Stewardesses

Fares

Aircoach future. Aviation W 58:94-5 Ap 27 '53
Aircoach grows. Aviation W 57:17 O 27 '52
Aircoach growth will highlight 1953. map Aviation W 58:203-6 Mr 2 '53
AA sets its sights on long-range coach. F. L. Moore. Aviation W 57:87-8 O 20 '52
Atlantic carriers threaten price war. Aviation W 58:82-3 Ap 20 '53
Aviation; C.A.B. regulation a stabilizing factor. J. H. Lewis. Trusts & Estates 92:341-4+ My '53
Boom for trans-Atlantic aircoach travel. L. Moore. Aviation W 58:12-13 Mr 16 '53
Charter snafu; IATA agreements strand many GIs in Europe. Aviation W 57:68-9 D 22 '52
Cheaper flying; British European airways to replace almost all its first class air services by tourist services. Economist 166:166+ Ja 17 '53
CAB denies UAL's low-fare service. Aviation W 58:18 Ja 12 '53
CAB splits on airline fare investigation. L. Moore. Aviation W 58:68+ Mr 23 '53
Coach future may dominate air travel. D. Nyrop. Aviation W 57:17-18 O 20 '52
Competition in the air; agreement on a world-wide extension of second-class air fares. Economist 165:718+ D 6 '52
Eastern clashes with United on aircoach; Rickenbacker files formal complaint questioning Patterson's sincerity in challenging safety. Aviation W 58:12-13 F 2 '53
Enforcement action on UAL coach begins. Aviation W 58:77-8 F 9 '53
Europe plans all-out switch to aircoach. N. McKitterick. Aviation W 58:14 Ja 26 '53
Fares hearings up to new CAB member. L. Moore. Aviation W 58:91-2 Ap 27 '53
History of UAL's coach policy. Aviation W 58:77 Ja 19 '53
Pacific aircoach; plane travel to Hawaii. S. Altschul. Aviation W 58:86+ Ap 13 '53
PAA's Hawaii coach gets heavy play. Aviation W 57:68 D 22 '52
Patterson takes aircoach fight to public. Aviation W 58:76 Ja 19 '53
Skeds bid for mass trade; how air coach is gaining. Bsns W p 106+ N 15 '52
Switch to coach may alter plane design. L. Moore. Aviation W 57:87-8+ N 10 '52
Western to increase Coast coach fares. Aviation W 57:67 D 22 '52

Federal aid

CAB cuts estimated subsidies. Aviation W 57:89 O 20 '52
U.S. airline subsidy payments; tabulation. Aviation W 58:197 Mr 2 '53

Feeder airlines

Bonanza strikes gold on Coast; its fight with WAL may alter CAB policy on feeders. W. J. Coughlin. Aviation W 57:92+ O 13 '52
Western faces new route setback. il Aviation W 57:90-1 O 20 '52

Finance

Air pockets; coach service gives carrier profits a bumpy ride. R. P. Cooke. Barron's 33:9-10 Je 22 '53
Airline 1953 forecast; record revenues. Aviation W 58:79-81 Ap 20 '53
Airline profits drop; with tabulated domestic, international airlines incomes 1952, and incomes of irregular, cargo and local service carriers for 1952. Aviation W 57:50-1 D 29 '52
CAB holds key to future airline profits. L. Moore. Aviation W 58:79-82 Ja 12 '53
CAB kills investigation of airline profits. L. Moore. Aviation W 58:96 My 25 '53

AIRLINES—Finance—*Continued*

CAB splits on airline fare investigation. L. Moore. Aviation W 58:68+ Mr 23 '53

Continued rise seen in air curve. S. Altschul. Aviation W 57:33-4 D 1 '52

Finds little grist in new aviation financing; report of IBA aviation securities committee. Comm & Fin Chr 176:2351+ D 18 '52

High ceiling; airline passenger mileage climbs to new record. S. Altschul. Barron's 32:11 D 29 '52

PAA '52 profits hinge on new mail rate. Aviation W 58:99-100 My 11 '53

Traffic rise bolsters carrier net; with airline income in the third quarter, 1951 and 1952. S. Altschul. Aviation W 57:52+ D 15 '52

Trunk airline business boom continues; with tabulated first quarter earnings. L. Moore. Aviation W 58:79-81 Je 1 '53

See also

Airlines—Federal aid

Airlines—Securities

Eastern air lines, inc.

United air lines

Food service

Skygalleys for American's DC-6As. Aviation W 58:65 Ja 5 '53

Freight service

See Air freight service

Interchange agreements

South American route fight up to President; CAB turns over case for two parallel New York-South America interchange route agreements. L. Moore. Aviation W 58:80 F 16 '53

Maintenance and repair

British European Airways docking facilities. il Engineer 195:433 Mr 20 '53

LST base keeps Chennault line flying. G. L. Christian. il Aviation W 58:64-6+ F 2 '53

See also

Airlines—Shops

Management

Eastern air lines builds jet-propelled managers. L. M. Hughes. Sales Management 69:24-7+ D 15 '52; 70:31-4+ Ja 1 '53

How airline keeps costs low, employee morale high; American airlines. L. Stemp. Am Bsns 23:40-1 My '53

Making commercial aircraft pay. G. Du Merle. Roy Aeronautical Soc J 57:429-48 Jl '53

Responsibilities of effective leaders; management in TWA. R. S. Damon. il Dun's R 60:1+ D '52

Running phantom jet transports. Bsns W p92+ My 30 '53

Military use

Airlines set mobilization buildup. il Aviation W 58:212-14+ Mr 2 '53

See also

Airlines in war

Officials

Salaries, bonuses and holdings reported. Aviation W 58:62 Mr 16; 21, 93 Ap 6; 88-9 Ap 13; 22+ Ap 20; 95 Ap 27; 23-4+ My 4; 21-2 My 18; 26+ Je 1 '53

Radio communication

Civil aviation communications; new Ministry of civil aviation centre at Croydon. il Elec R (Lond) 152:419-20 F 20 '53

Regulation

Airlines protest arbitrary regulation; scheduled and nonsked carriers against CAB proposal for reserve safety fund. Aviation W 58:91-2 Ja 5 '53

Reservation systems

Air line agents answer calls faster with Lazy Susan filing device. il Am Bsns 22:30+ O '52

Flightmaster; British European airways reservation system. il Elec J 150:869-70 Mr 13 '53

Reservisor; memory drum-computer checks seat availability. C. Andrews. il diags Tele-Tech 11:57+ O '52

Routes

Big four route outlook; more competition. Aviation W 58:79-80 Mr 30 '53

Safety measures

ATA rejects UAL coach safety charges. L. Moore. il Aviation W 57:63-4 D 22 '52

ALPA enunciates safety policy. Aviation W 58:54+ F 2 '53

CAB revises airline safety regulations. Aviation W 58:106 My 11 '53

Eastern clashes with United on aircoach; Rickenbacker files formal complaint questioning Patterson's sincerity in challenging safety. Aviation W 58:12-13 F 2 '53

Miner's lamps aid airplane maintenance. il Safety Maint & Prod 104:33-4 N '52

Two dramatic safety records; Capital airlines, North Atlantic constructors. Safety Maint & Prod 105:46-7 Ap '53

See also

Aviation—Safety measures

Securities

Aircrafts and airlines; essential factors behind the present high level of activity; with statistical data and comments on leading aircraft and airline companies. S. Devlin. Mag of Wall St 92:176-9+ My 2 '53

Aviation stock transactions. Aviation W 58:18 My 18 '53

Bankers look at air financing; report presented to recent convention of Investment bankers association. Aviation W 57:38-40 D 29 '52

Carrier dividends reach new high. S. Altschul. Aviation W 58:46 Ja 26 '53

SEC lists aviation stock transactions. Aviation W 57:82 D 15; 18 D 29 '52; 58:18-19 Ja 26; 21 F 9; 21-2 Mr 9; 24+ Mr 23 '53

Trusts show big shift to aircraft. S. Altschul. Aviation W 58:79 F 16 '53

Shops

B.O.A.C. overhaul base for aircraft engines and propellers. il plan diags Engineering 174:129-33, pl 6-7 Ag 1 '52

Engineering-base building for British European airways. il plans Engineering 174:521-4, 556-8 O 24-31 '52

Hong Kong aviation trio serves Orient. G. L. Christian. il map Aviation W 57:64+ O 27 '52

Prestressed concrete hangars at London airport. il diags Engineer 194:579-81 O 31 '52

UAL expands maintenance base. il Aviation W 57:48 D 29 '52

Statistics

Airlines set safety record. Aviation W 58:12 Ja 5 '53

Airlines transport more passengers than ships. Weekly Underw 168:653 Mr 7 '53

Scheduled air carrier operation statistics, 1938-1951; tabulations. Automotive Ind 108:243 Mr 15 '53

U.S. civil aircraft in scheduled air carrier service, July 31, 1952; tabulation. Automotive Ind 108:242 Mr 15 '53

U.S. scheduled air transport industry, 1952; tabulation. Aviation W 58:211 Mr 2 '53

Stewardesses

How air line sells job applicants on company. M. French. il Am Bsns 23:14-15+ Ja '53

Taxation

Airline tax benefits broadened by ODM. Aviation W 58:62+ Mr 16 '53

Terminals

Airlines sign Idlewild leases. Aviation W 58:78 Ja 19 '53

Modern airlines terminal in Mexico for fast-growing passenger traffic. il Eng N 150:43 Ap 2 '53

See also

Airport buildings

Airports

Ticket agents

CAB moves to curb agency deceptions. Aviation W 57:84-5 D 15 '52

Ticket offices

Drive-in ticket office opens. Am Bsns 22:44 D '52

Tickets

Air lines ticket is tab card. il Am Bsns 23:46 Mr '53

AIRLINES—*Continued*

Transoceanic lines

Airlines fight for Far East routes. Aviation W 57:80 D 15 '52
Atlantic cargo route fight begins. Aviation W 58:16-17 Mr 9 '53
Atlantic carriers threaten price war. Aviation W 58:82-3 Ap 20 '53
Boom for trans-Atlantic aircoach travel. L. Moore. Aviation W 58:12-13 Mr 16 '53
Hellenic airline; Transocean may operate Greek-U.S. carrier. Aviation W 58:81 Ap 20 '53
Pacific aircoach; plane travel to Hawaii. S. Altschul. Aviation W 58:86+ Ap 13 '53
Six cargo carriers in trans-Atlantic case. Aviation W 57:87 N 3 '52
Small business in the air; six freight lines vie for the transatlantic run. Barron's 33:3 Ap 6 '53
Tokyo by Comet. Economist 167:114-15 Ap 11 '53
TWA Pacific bid; airline wants overseas and inland Asia routes. Aviation W 58:94-5 Ja 5 '53
Wings for world trade. R. S. Damon. Comm & Fin Chr 177:1970 My 7 '53

Transpolar lines

Polar route approval predicted. Aviation W 57:75 D 1 '52
SAS flies polar routes to Tokyo. map Aviation W 58:17 Je 1 '53

Africa, West

Some problems in the development of air transport in west Africa. H. Walker. il maps Roy Aeronautical Soc J 57:477-90 Ag '53

Alaska

Alaskan nonsked pushes court fight. Aviation W 58:90 F 2 '53
CAB may force Alaskan route mergers. L. Moore. map Aviation W 58:75-6 My 4 '53

Asia, Southeastern

Air facilities buildup planned in South Pacific. Aviation W 58:82 Mr 30 '53

Canada

Air transport boom noted in Canada. Aviation W 57:76 D 1 '52
Northern flight; Canada is expanding its air services. J. Montagnes. Barron's 32:13-14 D 15 '52

Europe

Europe plans all-out switch to aircoach. N. McKitterick. Aviation W 58:14 Ja 26 '53

Far East

Airlines fight for Far East routes. Aviation W 57:80 D 15 '52
Hong Kong aviation trio serves Orient. G. L. Christian. il map Aviation W 57:64+ O 27 '52

Germany

German airline courted by allies. Aviation W 57:91 O 20 '52
Lufthansa prepares to resume operation. Aviation W 58:100 My 11 '53

Great Britain

Battle for traffic; summary of BOAC's latest report. Economist 164:774 S 27 '52
British European airways' loss. Economist 165:52+ O 4 '52
Cheaper flying; British European airways to replace almost all its first class air services by tourist services. Economist 166:166+ Ja 17 '53
Operating statistics of the airways corporations. Engineering 174:773 D 12 '52
Tokyo by Comet. Economist 167:114-15 Ap 11 '53
See also
British European airways
British overseas airways corporation

India

India's airlines face government operation. Aviation W 58:93 Ap 27 '53
Nationalization hits India's airlines. G. Graham. Aviation W 58:217-18 Mr 2 '53
Nationalisation of airlines. Engineer 196:282-3 Ag 28 '53

Japan

JAL plans flights to San Francisco. Aviation W 58:83-4 Ja 12 '53
Japan to announce Pacific air service. Aviation W 57:74 D 1 '52

Mexico

Mexican carriers report traffic gain. J. Wilhelm. Aviation W 58:296-7 Mr 2 '53
New Mexican air treaty talks set; U.S. also ready to seek bilateral agreements with Venezuela, Colombia. Aviation W 57:84-5 O 27 '52

Norway

Nineteen airlines serve in Norway. A. Solem. Aviation W 58:219 Mr 2 '53

Scandinavia

See also
Scandinavian airlines system

South America

South American airlines use lightplanes. A. McSurley. il Aviation W 57:47 D 29 '52

Spain

Spain's airlines; 1953 looks bright. J. Bush. Aviation W 58:218-19 Mr 2 '53

United States

Aviation; C.A.B. regulation a stabilizing factor. J. H. Lewis. Trusts & Estates 92:341-4+ My '53
Carriers face big year, big problems. F. L. Moore. il Aviation W 58:190-1+ Mr 2 '53
CAB expects rise in air traffic. S. Altschul. Aviation W 57:66-7 N 3 '52
Fight opens on big four monopoly routes; smaller airlines seek permission to compete with major carriers. L. Moore. map Aviation W 58:75-6 F 9 '53
Jet transports; why U.S. holds back. il Bsns W p77+ Ap 18 '53
Let investors share air profits. R. S. Damon. Aviation W 58:14-15 Ap 27 '53
Progress and problems of aviation industry. W. A. Patterson. Comm & Fin Chr 176:2345+ D 18 '52
Shake-up in airline routes. Bsns W p 176+ My 23 '53
See also
Civil aeronautics board

AIRLINES, Conference of local. See Conference of local airlines

AIRLINES in war

Airlines set plans for M-day fleet. Aviation W 57:15 N 10 '52
M-day plans; procedure of airline in emergency undecided. Aviation W 57:87 O 27 '52

AIRPLANE accessories industry

Directories

Builders and suppliers; names, addresses and officers of the entire U.S. aircraft manufacturing industry. Aero Digest 65:120+ O '52
Propeller manufacturers; accessories, equipment and supplies. il Aero Digest 66:98+ Mr '53

AIRPLANE brakes. See Brakes, Airplane

AIRPLANE carriers

Administration of the electrical department of an aircraft carrier; abstracts. J. C. Turnbull. Electrician 149:1096 O 10 '52; Elec R (Lond) 151:845 O 17 '52
Aircraft carrier with angled deck. il Engineering 176:52-3 Jl 10 '53
Flight deck arrangement for aircraft carriers. Engineer 194:689 N 21 '52
Increase in fighting power of carriers. il Engineer 194:773 D 5 '52
Launch of H.M.S. Hermes. il Engineer 195:280-1 F 20 '53; Engineering 175:246 F 20 '53
Motion of an aircraft carrier at sea in relation to the operation of naval aircraft; abstract. J. L. Bartlett. Engineering 175:581; Discussion. 581-3 My 8 '53; Engineer 195:536-7 Ap 10 '53
New angle for carrier landings. il Aviation W 57:18 N 24 '52

AIRPLANE engines

Alvis Leonides Major aircraft engine. Engineering 175:187 F 6 '53
Application of the Ramjet to aircraft propulsion. M. Harned. il Aero Digest 66:44-6+ F '53
Atom fusion engine seen for spaceships. J. H. Fremlin. Aviation W 58:36-7 Mr 9 '53
By-pass engine promises fuel economy. J. H. Stevens. diag Aviation W 57:23-4+ N 24 '52
Continental packs 225 hp. in new small engine. il Aviation W 58:18 Ja 26 '53
Engines; abstracts of SAE annual meeting papers. S A E J 61:75-80A F '53
Engines; illustrations with brief descriptions. Aero Digest 66:80+ Mr '53
Icing-protection requirements for reciprocating-engine induction systems. W. D. Coles and others. bibliog il diags U S Nat Advisory Com for Aeronautics 1950:611-34 '51
New frontiers of aeronautic engineering; by-pass engines. D. A. Anderton. diag Aviation W 57:21-2 N 17 '52
New valve design extends life of pulse jet engine. il diags Product Eng 24:150-1 Ja '53
Performance of conical jet nozzles in terms of flow and velocity coefficients. R. E. Grey, jr. and H. D. Wilsted. diags U S Nat Advisory Com for Aeronautics 1949:239-47 '51
Ramjet favored for Mach two-four range. il Aviation W 57:21-2+ D 15 '52
Reciprocating engine in the helicopter; abstract. J. J. Shields and J. T. Bowling. Automotive Ind 108:46-7 F 15 '53
Rolls-Royce and Westinghouse agreement. Economist 167:836 Je 20 '53
Silicon-based cermets may be useful in aircraft engines; abstract. B. C. Weber. Chem & Eng N 31:1976 My 11 '53
Technical trends in air transport. W. Littlewood. il J Aeronautical Sci 20:231-6 Ap '53
World's most powerful jet engine. Franklin Inst J 254:446-7 N '52

See also
Gas turbines, Aircraft
Rocket engines

Compounding

Diesel-turbine plane engine; Nomad. il Mech Eng 75:399 My '53
New Nomad's fuel appetite is small; redesigned Diesel-turbine engine. il diags Aviation W 58:30-2+ Ap 6 '53
Nomad compounded Diesel engine. il Engineer 195:422-4 Mr 20 '53; Engineering 175:388-9 Mr 27 '53
Power recovery wheels for Curtiss-Wright turbo-compounds. E. Altholz. il Mach 59:210-13+ Jl '53
Turbo-compound Super Connie debut. il Aviation W 57:85-6 N 3 '52
Wright modifies Turbo Compound for safety. Aviation W 58:87 My 18 '53

Control

Electronics; adaptability to aircraft engine control. J. D. Peterson and R. W. Curran. il diags Aeronautical Eng R 12:70-4 My '53; Excerpts. Product Eng 24:284-6+ Ap '53

Cooling

Correlation of cylinder-head temperatures and coolant heat rejections of a multicylinder, liquid-cooled engine of 1710-cubic-inch displacement. B. T. Lundin and others. bibliog diags U S Nat Advisory Com for Aeronautics 1949:207-29 '51

Cowlings

Investigation of a systematic group of NACA 1-series cowlings with and without spinners. M. R. Nichols and A. L. Keith, jr. bibliog il diags U S Nat Advisory Com for Aeronautics 1949:585-684 '51

Deposits

Service experience with TCP fuel additive. C. R. Johnson and D. N. Harris. il S A E J 61:36-41 S '53

Design

Fatigue in engine design. F. M. Owner. Roy Aeronautical Soc J 57:580-4; Discussion. 589-91 S '53

Detonation

Runaway preignition; abstract. S. D. Heron. Automotive Ind 109:130+ Jl 1 '53

Exhaust

Magnetic inspection unit cuts exhaust system checking. il Iron Age 170:178 D 4 '52

Failure

Engine failures hit BOAC stratocruisers. Aviation W 58:17 F 2 '53

Fuel

Avgas demand exceeds supply. Aviation W 58:21 My 4 '53
Aviation fuel economy and quality; abstract. H. E. Alquist and others. S A E J 61:78+ Je '53
Constant-pressure combustion charts including effects of diluent addition. L. R. Turner and D. Bogart. bibliog U S Nat Advisory Com for Aeronautics 1949:315-39 '51
How to improve alkylate feed stock for more and better avgas. J. D. Wall. flow diag Pet Processing 7:1438-43 O '52
National annual survey of aviation gasoline and aviation jet fuel, 1952 production. O. C. Blade. 5pls U S Bur Mines Rep of Invest 4982:1-15 '53
Net heat of combustion of petroleum hydrocarbons. R. S. Fein, H. I. Wilson and J. Sherman. bibliog Ind & Eng Chem 45:610-14 Mr '53
Service experience with TCP fuel additive. C. R. Johnson and D. N. Harris. il S A E J 61:36-41 S '53
SAE national fuels and lubricants meeting, Tulsa, Nov. 6-7. il S A E J 60:80C-80G D '52
Utilization of kerosene stocks for jet fuels by treatment with urea. H. J. Hepp, E. O. Box, jr. and G. C. Ray. bibliog Ind & Eng Chem 45:112-15 Ja '53
What happens to the dissolved water in aviation fuels; abstract. A. B. Crampton and others. S A E J 61:48 O '53

See also
Airplanes—Refueling
Gas turbines, Aircraft—Fuel

Fuel consumption

Meter measures fuel flow in pounds. il Aviation W 58:62+ Ap 6 '53

Fuel feeding

Aircraft powerplant seals; report of round table discussion. diags S A E J 61:23-9 Jl '53
Fuel systems get lab flight check. Aviation W 58:21-2 Ja 12 '53
Hot fuel priming for cold weather starting; abstract. E. Rowland. diag Automotive Ind 109:59-60 Jl 1 '53

Gearing

Tolerance charts control production machining; Pratt & Whitney aircraft. C. J. Marks. diags Am Mach 97:114-16 Mr 2 '53

Ignition devices

Plug problems analyzed by Spark plug and ignition conference, Toledo. Aviation W 57:64+ N 10 '52
Shock ignition engine. F. F. Rand, jr. il diags Aeronautical Eng R 11:22-7+ O '52

Lubrication

Deaerating cold weather oil systems; abstract. F. E. Carroll, jr. diag Automotive Ind 109:61-2 Jl 1 '53
Development of rust preventive lubricating oils for reciprocating aircraft engines; abstract. E. F. H. Pennekamp and others. S A E J 61:125-6 F '53
SAE national fuels and lubricants meeting, Tulsa, Nov. 6-7. S A E J 60:80C-80G D '52

Manufacture

Assembly line fabrication methods for aircraft exhaust systems; Ryan aeronautical co. il diag Automotive Ind 107:54-5+ O 1 '52
Broaching arms on aircraft engine spiders. il Mach 59:215 Je '53
Curtiss-Wright boosts output with machinability data. R. LeGrand. il diags Am Mach 96:141-8 N 24 '52

U. OF I.
LIBRARY

AIRPLANE engines—Manufacture—*Continued*

Experimental plating of internal engine parts. G. W. Grupp. Metal Finishing 51:53-5 Jl '53

Ford amasses 5000 machine tools to build P & W aircraft engines. J. Geschelin. il Automotive Ind 107:64-7+ N 1 '52

Internal contours of aircraft engine parts broached. il Iron Age 171:150+ Mr 26 '53; Mach 59:175 Ap '53; Steel 132:112 Mr 30 '52

Lead-backed masking tape solves special plating problems; Pratt & Whitney aircraft division. W. J. Dyber. il Automotive Ind 108:82+ My 15 '53

Rolling up cone seams. il Steel 132:102+ Je 29 '53

Short-term training program in an aircraft engine plant. il U S Women's Bur Bul 245: 1-11; pa 10c Supt. of doc. '53

Temporary tooling breaks production bottleneck; aircraft engine production; Ford motor co. E. C. Beaudet. il Iron Age 171: 138-42 Mr 26 '53

Unusual hydraulic press designed to make ramjet parts. il Iron Age 171:148-9+ Mr 19 '53

Unusual materials handling speeds exhaust system output; Ryan aeronautical co. R. L. Clark. flow diag il Iron Age 170:116-18 O 23 '52

Mounting

Case for pod-mounted jet engines. G. Schairer. il Aviation W 58:29-30+ My 18 '53

Noise

Acoustic wall for aero-engine tests. plan diags Engineering 176:201 Ag 14 '53

Aero-engine noise. F. B. Greatrex. Engineer 195:775 My 29 '53

Problem; how to make jet engines quieter. il Bsns W p 124-6+ D 6 '52

Research on aerodynamic noise from jets and associated problems. E. J. Richards. bibliog il diags Roy Aeronautical Soc J 57: 318-42 My '53

Unsolved problems in the field of aircraft noise. R. O. Fehr. bibliog Acoustical Soc Am J 24:772-5 N '52

See also

Gas turbines, Aircraft—Noise

Protection

Navy studies anti-corrosion gels. Aviation W 58:58 Mr 23 '53

Specifications

1953 U.S. aircraft engines; tabulation. Automotive Ind 108:246-7 Mr 15 '53

U.S. reciprocating engines; tabulation. Aviation W 58:232+ Mr 2 '53

Starting

Aircraft starting unit. il Engineer 195:876 Je 19 '53; Engineering 175:780 Je 19 '53; Elec J 150:2215-16 Je 19 '53; Elec R (Lond) 152:1437-8 Je 19 '53

Recent developments in sub-zero engine-starting. F. A. Traino. il Automotive Ind 109:52-3+ Ag 15 '53

Self-contained starters for jet planes. Comp Air Mag 58:55 F '53

Small gas turbines start jets. diag Machine Design 25:230 Ja '53

See also

Gas turbines, Aircraft—Starting

Temperature

Correlation of cylinder-head temperatures and coolant heat rejections of a multicylinder, liquid-cooled engine of 1710-cubic-inch displacement. B. T. Lundin and others. bibliog diags U S Nat Advisory Com for Aeronautics 1949:207-29 '51

Testing

Aircraft engine test-house for Swissair at Zürich. il plans Engineering 175:769-72, pl 23 Je 19 '53

Altitude test facilities for aircraft engine research; Lewis flight propulsion laboratory. J. N. Vivien and B. R. Leonard. il diags Chem Eng Prog 49:8-14 Ja '53

As high as you like. il Bsns W p 127 Je 13 '53

Faster delivery; new inspection of engines cuts costs and time. Aviation W 57:17-18 D 8 '52

Mobile units speed engine testing. Aviation W 57:74 D 8 '52

Modern engine test plant. B. Hoffstrom. plan diags S A E J 61:68-72 Ja '53

Modern methods of power analysis. J. A. Wahle. il diags Aero Digest 66:64+ My '53

NACA opens lab for giant jets. il Aviation W 58:22+ Ja 26 '53

Simulated flight for engines at AEDC; abstract. G. W. Newton. S A E J 61:78 Je '53

Swiss complete new test plant. il Aviation W 57:78 D 8 '52

Valves

Coating alloy for high-temperature use; C.26. Engineer 195:274 F 20 '53; Engineering 175: 248 F 20 '53

AIRPLANE factories

All-welded factory extensions, Fairchild Aircraft, Hagerstown, Md. C. L. Kreidler. il Welding J 32:846-9 S '53

Designed to be a good neighbor; Stratos division, Fairchild engine & airplane corp. il Factory Management 111:B 14-15 pt 2 My '53

Good fabrication and erection ideas; Fairchild aircraft corp. il diags Constr Methods 35:126-8+ My '53

See also

Automobile factories—Airplane manufacture

Accounting

Cost analysis aids Douglas foreman. H. M. Coverdale. Am Mach 97:166-7 Ap 13 '53

Air conditioning

Comfort is incidental in vast factory cooling job; Lockheed aircraft corp. il Refrig Eng 60:1284-5 D '52

Special report on air conditioning and refrigeration in automotive and aviation plants. T. Mac New. il diag Automotive Ind 107:52-61+ D 1 '52

Costs

Engineers must consider production costs; Lockheed aircraft corp. R. H. Luders. diags Am Mach 97:116-19 Jl 6 '53

Forum on economics of tooling. R. A. Peterson. S A E J 61:42-5 Ag '53

Why do modern aircraft cost so much? J. W. Barton. Aviation W 58:46+ My 25 '53

Employees

Aircraft and parts wages, 1948-1952; tabulation. Iron Age 171:443 Ja 1 '53

Employment in aircraft and engine plants, 1951-1952; tabulations. Automotive Ind 108: 240 Mr 15 '53

Family party that worked; photo visit. Mod Ind 24:19-20+ D '52

How to run a successful recreation program; Northrop Aircraft. il Factory Management 110:90-1 O '52

It pays to have engineers production-minded; shop-familiarization courses; Northrop aircraft, inc. T. A. Dickinson. il Mill & Factory 52:94-5 Ja '53

Labor; Republic trains jig makers. W. B. Olson. il Iron Age 171:37 Ja 22 '53

Mechanics of the learning curve. W. A. Raborg, jr. il Aero Digest 65:17-21 N '52

New aircraft worker benefits set by UAW. Aviation W 58:44+ Ap 20 '53

New classroom methods keep trainees off plant floor; Boeing airplane co. il Am Mach 97:110 Ag 17 '53

New twist on charity check-off; Fairchild aircraft division. J. H. Baylis. Factory Management 111:121 Ag '53

Old age is no barrier to employment; Consolidated Vultee Aircraft. H. Waterman. il Am Bsns 23:32+ S '53

Policies and practices in job evaluation; survey of 17 aircraft manufacturing companies. E. Lanham. Personnel 29:492-9 My '53

Severance pay demand set by UAW for aircraft industry. Bsns W p 150 N 8 '52

Union settles with Lockheed. Bsns W p 160 N 15 '52

UAW asks probe of aircraft wages. Aviation W 57:16-17 N 10 '52

AIRPLANE factories—*Continued*

Equipment

Advanced tooling; Ryan aeronautical co. il Automotive Ind 108:74+ Je 15 '53

Aero industry eager to christen monster presses; report of panel on large forgings and castings. S A E J 61:49-54 O '53

Aircraft machine tools. A. Kastelowitz. Tool Eng 31:137-8 O '53

Assembly train; Lockheed uses tractor to keep line moving. il Iron Age 171:177-8 F 5 '53

Bending thin-wall tubing; North American aviation, inc. F. Pesak. il diags Mach 60: 147-51 S '53

Big doings mark coming of monster presses; based on papers presented at symposium on heavy presses for eight metal forgings and extrusions. il diag S A E J 61:31-7 My '53

Big presses tax design ingenuity. M. D. Stone. il diags Iron Age 171:99-103 Ja 8 '53

Big squeeze; heavy press program. il S A E J 61:29-32 Ja '53

Boeing produces small turbo-jet engines. il Mach 59:149-55 N '52

Boeing takes no chances on quality. R. Bloomberg. il Mill & Factory 52:98-9 Mr '53

Briton's view; A. V. Roe & co.; illustrations with text. Mod Ind 25:17-18+ F '53

Carbide cutters; made and maintained at home; Solar aircraft co. M. S. Schlegel. il Steel 132:82-3 F 23 '53

Cases in methods improvement; Ryan aeronautical co. il Factory Management 110: 131-3 D '52

Cold storage smooths aircraft parts forming. il Steel 132:99 F 23 '53

Compressed air steps up production at Ryan aeronautical co. il Steel 131:76-7 O 27 '52

Controversy rages over air force's justification for drastic cutback in heavy press program. il Am Mach 97:170-1 Jl 6 '53

Convair tools up to produce world's first delta-wing airplane. A. P. Higgins. il Mach 59:202-5 Jl '53

Conveyor boosts press operations; North American aviation, inc. L. Boarts and E. Searcy. il Steel 132:100-1 F 2 '53

Coordinate setting machine; optical tooling equipment. il diags Aero Digest 66:26-32 Ja '53

Custom-tailored racks cut damage to coated parts; Ryan aeronautical co. il Cer Ind 61:63 S '53

Extruding giants coming along. I. Stone. il Aviation W 57:42+ D 1 '52

Fixture multiplies drill's capacity; Ryan aeronautical co. il Steel 132:117 Je 1 '53

Ford amasses 5000 machine tools to build P & W aircraft engines. J. Geschelin. il Automotive Ind 107:64-7+ N 1 '52

Giant Douglas planes built with huge machines. C. O. Herb. il Mach 59:188-93 Jl '53

Heavy press program. C. Ayres. il Light Metal Age 11:8-9+ F '53

Heavy press program moves forward; progress report. Automotive Ind 108:40 Ja 15 '53

Heavy press program pushed for forged aircraft parts. il Materials & Methods 37:7-8 Ja '53

Heavy presses step up aircraft output. il Machine Design 24:244 O '52; Mech Eng 74:912-13 N '52

High-speed mill flies into aircraft parts; Consolidated Vultee aircraft corp. il Steel 132: 116-17 My 25 '53

How compressed air serves the aircraft industry. E. C. Powers. il Aero Digest 66: 26-7 Je '53

How Douglas keeps its pressure up. C. M. Vigil. il Mill & Factory 52:108-12 Je '53

Integrally-stiffened skin milling. J. Daugherty and J. M. Delfs. il diag Aero Digest 66: 90-102+ Ap '53

Jet-engine aft frames by Ryan production methods. L. M. Limbach. il diags Mach 59:172-81 Jl '53

Lockheed develops giant techniques. I. Stone. il Aviation W 58:44-6 Mr 16 '53

Machine tools and tooling; panel discussion. S A E J 61:35-6 Ag '53

Machine tools in aviation. T. Berna. il Aero Digest 66:17-19 Ja '53

Manufacturing shift slashes production time; Solar aircraft co. J. A. Logan. il diag Steel 131:64-5+ D 22 '52

Modifications speed short-run operations; Douglas' El Segundo plant. D. G. McConnell and R. C. Beaver. il Steel 132:98-101 Mr 9 '53

New approach to big press design. il Aviation W 58:50+ Ja 26 '53; Steel 132:76 Ja 12 '53

New rotary saw gives planes close shaves; Boeing airplane co. H. E. Jackson. il Mill & Factory 52:127-8 Je '53

Parts forged by collision hammer. I. Stone. il Aviation W 57:32+ D 8 '52

Planting of AF's press giants begins. I. Stone. il Aviation W 58:29-30 Ja 19 '53

Plastic tooling comes of age. L. R. Miller. il Aero Digest 66:37-8+ Ja '53

Portable compressors in role of stationary units; Fairchild engine & airplane corp. R. R. Reinheimer. il diag Comp Air Mag 58:15-16 Ja '53

Precision lofting table. diags Engineer 195: 527 Ap 10 '53; Engineering 175:703 My 29 '53

Presses; giant program moving fast. W. V. Packard. il Iron Age 170:101-2 D 11 '52

Pressing business; heavy presses for defense aircraft plants. F. Hamlin. il Aero Digest 66:20-5 Ja '53

Progress made in heavy forge-press art. I. Stone. il Aviation W 57:50-2+ N 17 '52

Radial forming gets added muscle. il Steel 132:112-13 Je 29 '53

Redesign and aluminum combine to save work; Northrop Aircraft's Hawthorne plant. il Tool Eng 31:102 Jl '53

Refrigeration helps Lockheed build planes. P. E. Hunt. il Aero Digest 66:21 Ap '53

Ryan's intermixed conveyors move job lots; illustrations with text. Am Mach 97:198-9 My 11 '53

75,000-ton throatless forging press being planned for future planes. R. LeGrand. il diags Am Mach 97:122-4 Ja 5 '53

Space shrinker expands production in close quarters; Ryan aeronautical co. il Mill & Factory 52:85 Je '53

Special camera expedites aircraft projects; Consolidated Vultee aircraft corp. C. L. Pogorel. il Automotive Ind 109:52-3 S 15 '53

Special machines fabricate jet-engine frames; Ryan aeronautical co.; illustrations with text. Am Mach 97:132-4 Jl 20 '53

Stretch forming machine shapes extruded aluminum parts; Consolidated Vultee aircraft corp.'s San Diego plant. il Iron Age 170:137-9 D 18 '52

Super carriers cut congestion and cost; Douglas Aircraft. J. Shinn. il Am Mach 97:138-9 My 11 '53

Symposium on heavy presses for light metal forging and extrusion. Metal Prog 63:111-14+ Mr '53

Turbo-jet engines require modern machine tools. E. W. Bartle. il diags Mach 59:154-65 Jl '53

Unique drilling duplicator developed by Northrop tool engineers. L. Donner. il diags Mach 59:214-17 Jl '53

Weld seam roller speeds production; Ryan aeronautical co. il Mill & Factory 52:100 F '53

Where AF heavy press program stands. I. Stone. diags Aviation W 58:98-100+ Mr 2 '53

Heating and ventilation

Air laundry will pay for itself in three years; Boeing airplane co. il Factory Management 110:109 D '52

Layout

Plant layout and plant engineering; panel discussion. S A E J 61:55-60 Ag '53

Lighting

Fluorescent mercury aids jig assembly. F. E. Cooper. il diag Elec World 139:129-30 Ap 6 '53

Management

Aircraft cost reduction. W. G. Bain. S A E J 61:46-7 Ag '53

Big tooling job completed in record time; Jonco aircraft corp. D. K. Andrews. il Steel 131:80-2 O 6 '52

AIRPLANE factories—Management—*Cont.*

Crew charting tells workers what to do, when to do it; Temco aircraft corp. G. N. Brown. il Factory Management 111:128-9 S '53

Developing managerial talent is a continuing process; report of panel on manufacturing management. S A E J 61:32-4 S '53

Even unskilled operators set up their own machines; rubber stamps on setup sheet, pictures proper tool arrangement; sheet lists operations, proper feeds, speeds, etc.; Temco aircraft corp. P. F. Young. il diags Am Mach 97:109-13 Ja 5 '53

Flexibility; careful planning gives best return on space, equipment; Ryan aeronautical co. Iron Age 171:260+ My 7 '53

Fool-proof machinery lubrication; North American aviation, inc. J. Joseph. il Mill & Factory 53:118-19 S '53

Getting a new angle on aircraft production. il Bsns W p48-50 Ap 18 '53

How materials engineering works at Northrop. C. M. Miller. il Materials & Methods 37:83-5 Ap '53

How Northrop saved materials, time. il Mod Ind 24:93-4 N '52

It pays to look at your scrap pile; Consolidated Vultee aircraft corp. Factory Management 111:268+ O '53

Manufacturing costs can be reduced; report of panel on manufacturing cost control. J. Gronemeyer. S A E J 61:66-8 Je '53

Newsreels aid to production; Consolidated Vultee aircraft corp. il Manuf Rec 122:36-7 F '53

Plant layout and plant engineering; panel discussion. S A E J 61:55-60 Ag '53

Production control; panel discussion. S A E J 61:69-70 Ag '53

Quality competition; Allison division of General Motors. D. G. Baird. Mill & Factory 52:111-13 Ap '53

Republic finds way to beat engineer shortage; break it down, make things simple. I. Stone. il diag Aviation W 58:35-6+ Ap 13 '53

Schedule board at Lockheed saves 180 machine-hours a month. il Factory Management 111:139 F '53

Purchasing

Coordinating procurement; case study from the aircraft industry. H. T. Lewis. Harvard Bsns R 31:91-100 S '53

Distributors aid in the phenomenal growth of Republic Aviation; illustrations with text. map Mill & Factory 52:135-50 Ap '53

Engineer does the buying. il Aero Digest 65:23-5 O '52

Here's how procurement can shed four of its shackles; report on panel on procurement, SAE aircraft production forum. S A E J 61:68-70 Mr '53

What makes production procurement click! report of panel on production procurement. S A E J 61:42-4 O '53

Quality control

Boeing takes no chances on quality. R. Bloomberg. il Mill & Factory 52:98-9 Mr '53

How to attain results with quality control; report of panel discussion. S A E J 61:37-40 Jl '53

Inspection and quality control; panel discussion. S A E J 61:30-4 Ag '53

Inspection methods keep output of flying boxcars on target; Fairchild engine and airplane co. A. H. Allen. il Metal Prog 64:97-104 S '53

Records

Here's how procurement can shed four of its shackles; report on panel on procurement, SAE aircraft production forum. S A E J 61:68-70 Mr '53

Safety measures

50 years of powered flight. L. D. Webb. Nat Safety N 67:18-19+ Je '53

Safety, jet propelled; North American Aviation. W. G. Johnson. il Nat Safety N 68:18-19+ Ag '53

This way to safety! this way to injury! Grumman aircraft engineering corp. il Safety Maint & Prod 105:28-9 F '53

Two answers to accidents; McDonnell aircraft corp. il Safety Maint & Prod 106:37-8 O '53

Waste

Chemical wastes disposal at Pratt & Whitney Aircraft. A. J. Burdoin. flow diags il Sewage & Ind Wastes 25:435-58; Discussion. 458-61 Ap '53

AIRPLANE industry and trade

Accelerated activity ahead for the aircraft industry. D. C. Ramsey. il Automotive Ind 108:60-1+ Ja 1 '53; Same cond. Aero Digest 66:21-3 F '53

AF aircraft deliveries hit postwar high. R. Hotz. Aviation W 57:13-14 D 22 '52

Aircraft backlog tops $15 billion. Aviation W 58:13 F 2 '53

Aircraft defense expansion nears peak. il Aviation W 58:13-15 Mr 30 '53

Cessna scents a boom, gives it a boost. il Bsns W p32-3 Mr 7 '53

50 years of powered flight. L. D. Webb. Nat Safety N 67:18-19+ Je '53

GM air giant stirring again? S. Altschul. Aviation W 57:60+ O 27 '52

Lightplane sales in '52. Aviation W 58:18 F 16 '53

New defense facilities; list of certificates of necessity authorizing new or expanded facilities for the manufacture of automotive and aviation war goods (cont). Automotive Ind 107:134+ N 1; 146+ N 15; 142+ D 15 '52; 108:76+ Ja 15; 136+ Ap 15; 86+ Je 15; 109:118+ Jl 15; 102+ Ag 15; 126+ S 15; 130+ O 15 '53

ODM shuffles aircraft production setup. A. McSurely. Aviation W 58:12-13 F 23 '53

Progress and problems of aviation industry. W. A. Patterson. Comm & Fin Chr 176:2345+ D 18 '52

Services blueprint dual-economy plants. R. Hotz. Aviation W 57:13 D 29 '52

Standardization in the aircraft industry. C. C. Hurlburt. diags Standardization 24:104-7 Ap '53

$35 billions more available for defense. K. Rannells. Automotive Ind 109:45+ Ag 15 '53

Turning an old workhorse into a flying lounge. il Bsns W p 112-13+ Mr 21 '53

Two-year aircraft sales boom predicted. R. Hotz. Aviation W 58:13 Ja 12 '53

See also

Airfleets, inc.
Boeing airplane company
Consolidated Vultee aircraft corporation
Douglas aircraft company
Lockheed aircraft corporation
Martin, Glenn L., company
Republic aviation corporation
United aircraft corporation

Directories

Airframe manufacturers; helicopter and engine manufacturers. Aero Digest 66:94+ Mr '53

Builders and suppliers; names, addresses and officers of the entire U.S. aircraft manufacturing industry. Aero Digest 65:120+ O '52

Directory of manufacturers of complete motor vehicles, tractors, aircraft, industrial trucks, and all types of gasoline and Diesel engines. Automotive Ind 108:346+ Mr 15 '53

Finance

Aircraft earnings continue climb. Aviation W 58:72+ Je 1 '53

Aircraft earnings double in year. S. Altschul. Aviation W 58:76+ My 11 '53

Aircraft industry; low profit margins may widen next year. R. P. Cooke. Barron's 32:7+ D 29 '52

Aircraft profits at postwar high; summaries of annual reports. Aviation W 58:16-18 Ap 6; 16 Ap 13 '53

Beech corp. billings triple in year. S. Altschul. Aviation W 57:46+ D 22 '52

Behind the figures; aircraft earnings, data for 1952. S. Altschul. Barron's 33:11-12 My 11 '53

Continued rise seen in air curve. S. Altschul. Aviation W 57:33-4 D 1 '52

Convair, where flight makes might. I. U. Cobleigh. Comm & Fin Chr 177:1111 Mr 12 '53

Finds little grist in new aviation financing; report of IBA aviation securities committee. Comm & Fin Chr 176:2351+ D 18 '52

AIRPLANE industry and trade—Finance—*Continued*

Net, sales up for North American. S. Altschul. Aviation W 58:67 F 23 '53

United aircraft corporation profits reach all-time high. S. Altschul. Aviation W 58:46-7 Ap 6 '53

Officials

Executive salaries of air firms listed. Aviation W 58:18 Ap 6; 23 Ap 27; 22+ My 18 '53

Securities

Aircrafts and airlines; essential factors behind the present high level of activity; with statistical data and comments on leading aircraft and airline companies. S. Devlin. Mag of Wall St 92:176-9+ My 2 '53

Aviation stock transactions. Aviation W 58:18 My 18 '53

SEC lists aviation stock transactions. Aviation W 57:82 D 15; 18 D 29 '52; 58:18-19 Ja 26; 21 F 9; 21-2 Mr 9; 24+ Mr 23 '53

Trusts show big shift to aircraft. S. Altschul. Aviation W 58:79 F 16 '53

Value of aircraft stocks goes up. S. Altschul. Aviation W 58:42+ F 2 '53

Why investors turn to air shares. S. Altschul. Aviation W 58:18 Ja 5 '53

Statistics

Aircraft and aircraft engine production, by years, 1927-1952; shipments of complete civil aircraft and other products of their plants; shipments of civil aircraft engines and other products of their plants, 1952-1951; tabulations. Automotive Ind 108:239 Mr 15 '53

Aircraft backlog; $17.6 billion; final quarter of 1952. Aviation W 58:18 Mr 16 '53

Aviation industry statistics tabulated. Aviation W 58:64-5 Mr 2 '53

Civil aircraft, 1951-1952; tabulation. Steel 132:185 Ja 5 '53

Personal and transport aircraft shipments, 1952-1951; civil aircraft shipments by months, 1952-1951; airframe weights (excluding spares) of civil aircraft shipments, 1945-1952; total engine hp of civil aircraft engine shipments, 1948-1952; tabulations. Automotive Ind 108:240 Mr 15 '53

Plane production tops 1,000 monthly. Aviation W 58:12-13 Ja 5 '53

Registrations of civil aircraft by make, by year of manufacture, engine classification, single-engine, two-engine, three-engine and four-engine aircraft; tabulations. Automotive Ind 108:241 Mr 15 '53

U.S. civil aircraft registrations by states, 1951-1952; tabulations. Automotive Ind 108:242 Mr 15 '53

Taxation

How EPT end will affect aircraft. S. Altschul. Aviation W 58:56-7 My 18 '53

California

West Coast aircraft industry sees peak production through '53. Am Mach 97:168-9 My 25 '53

Canada

Survey of Canada's aviation history. J. Montagnes. il Automotive Ind 108:52+ My 15 '53

See also

Canadair, ltd.

France

French air buildup hangs on U.S. aid. R. Hazeltine. il diags Aviation W 58:264+ Mr 2 '53

Latest European aviation developments. W. F. Bradley. il Automotive Ind 109:60-2+ Ag 1 '53

Germany

German aircraft plans. Economist 167:504 My 23 '53

Great Britain

Aircraft production. Economist 166:593-4 F 28 '53

Austerity again hits British air industry. N. McKitterick. Aviation W 57:17 D 15 '52

Britain stakes its future on air lead. N. McKitterick. il Aviation W 58:248-53+ Mr 2 '53

Britain's new military and civilian planes; 1952 flying display and exhibition by the Society of British aircraft constructors. W. F. Bradley. il Automotive Ind 107:34-7+ O 15 '52

Engineering outlook; the aircraft industry. Engineering 175:359-61 Mr 20 '53

Jet airliners; year of decision. J. McDonald. il Fortune 47:124-9+ Ap; 128-31+ My '53

New British planes; Society of British aircraft constructors' 14th exhibition and flying display, Farnborough, Sept. 7-13. W. F Bradley. il Automotive Ind 109:60-1+ O 1 '53

Vickers pushes Viscount sales. il Aviation W 58:81-2 F 16 '53

Italy

Italy eager to help NATO in air. D. Straniero. Aviation W 58:270-2+ Mr 2 '53

Japan

Japanese infant taking first steps. R. P. Martin. Aviation W 58:300-1 Mr 2 '53

Sweden

Sweden's aircraft industry operates underground. H. G. Tonndorf. il Automotive Ind 109:54-7+ O 15 '53

United States

Bark and bite; Wilson budget and the aircraft makers. R. P. Cooke. Barron's 33:3+ Je 15 '53

'Copter makers; military cutbacks lower visibility. J. C. Perham. Barron's 33:3 Je 22 '53

Temco fights for slow cutbacks. A. McSurely. Aviation W 58:15-16 Je 1 '53

AIRPLANE models

Ship and plane testing models; production techniques, using polyester-glass. il Mod Plastics 30:125-6+ N '52

See also

Airplane wings—Models

Airplanes—Model testing

AIRPLANE parts

Aircraft casting expands. A. C. Williams and J. H. Massa. Steel 131:120+ N 17 '52

Bushings from tubing have finer finish, cost less. il Iron Age 170:81 D 25 '52

Castings play important part in developing air strength. W. T. Hefley. Foundry 81:190-1+ Mr '53

Defense proposes new fastener specs. Aviation W 58:22+ My 11 '53

Douglas mass-produces plastic airframe parts. G. C. Close. il Mach 59:196-8 Ap '53

Effect of di-ester lubricants on aircraft rubber parts. R. M. Harper. Rubber Age 73:355-8 Je '53

How to make impact extrusions of high-strength aluminum; Lockheed aircraft corp. J. D. Shoemaker. il diags Am Mach 97:129-40 Jl 6 '53

Huge forging press for producing aluminum, magnesium, aircraft parts. il Automotive Ind 107:92 N 1 '52

New components for air-frame construction. J. F. Faulkner and J. H. Alden. il diags Aeronautical Eng R 11:28-35 O '52

New techniques for forging aircraft parts. G. W. Motherwell and others. Automotive Ind 108:146+ Ja 15 '53

Northrop tooling technique reduces aircraft part cost. il diags Automotive Ind 108:40-2 Je 15 '53

Precision machining of aircraft control parts. C. H. Wick. il diags Mach 59:165-9 Ap '53

Rolled T-sections cut aircraft part costs. T. A. Dickinson. il Steel 131:104 D 8 '52

Spar mill tooling. J. M. Stolz. il diags Tool Eng 31:63-5 Jl '53

Special saws used for trimming aircraft parts. R. Kautz. il Automotive Ind 108:32-3+ Je 15 '53

Specially tooled press saves time in assembling filters. il Automotive Ind 108:70 F 1 '53

Thread inserts protect new jets; growing use of aluminum and magnesium opens way for Heli-Coil applications. G. L. Christian. il diags Aviation W 58:58+ My 4 '53

AIRPLANE parts—*Continued*

Truck trailers bridge gap in airplane assembly line; Chrysler corp. Plymouth plant. il Automotive Ind 107:94 D 1 '52

Washing dollars out of deburring; Ryan aeronautical co. G. B. Ashmead. il Metal Finishing 51:71-3 O '53

What makes production procurement click! report of panel on production procurement. S A E J 61:42-4 O '53

Willys-Overland's aluminum forge. W. Rudolph. il Metal Prog 64:106-11 O '53

Willys' reactivated aluminum forge plant. J. H. Pargeter. il Automotive Ind 109:50-3 Jl 15 '53

Transportation

Automotive and aviation packaging wins awards; 7th annual Industrial packaging and materials handling exposition, Chicago. il Automotive Ind 107:40-1+ N 15 '52

AIRPLANE propellers

Actuator disc theory for compressible flow and a subsonic correction for propellers. E. V. Laitone. J Aeronautical Sci 20:365-6 My '53

Aerodynamic profile as acoustic noise generator. M. Kramer. J Aeronautical Sci 20:280-2+ Ap '53

Application of Theodorsen's theory to propeller design. J. L. Crigler. diags U S Nat Advisory Com for Aeronautics 1949:83-99 '51

Big new blade for T34 engine. il Aviation W 58:16 F 23 '53

CAA orders fix on H-S prop assembly. Aviation W 58:15 Ap 13 '53

Curtiss-Wright Propeller division computes stresses and vibration. F. B. Stulen and J. A. DeVries. il diag S A E J 60:26-7 D '52

Effect of propeller-control parameters on gas-turbine power ratings and flight efficiency. R. C. Treseder and others. Aeronautical Eng R 11:29-33 N '52

Free-space oscillating pressures near the tips of rotating propellers. H. H. Hubbard and A. A. Regier. bibliog il diag U S Nat Advisory Com for Aeronautics 1950:785-805 '51

Investigation of a systematic group of NACA 1-series cowlings with and without spinners. M. R. Nichols and A. L. Keith, jr. bibliog il diags U S Nat Advisory Com for Aeronautics 1949:585-684 '51

Method of designing cascade blades with prescribed velocity distributions in compressible potential flows. G. R. Costello. bibliog diags U S Nat Advisory Com for Aeronautics 1950:559-69 '51

New approach to prop reversal. il diags Aviation W 58:15-16 F 2 '53

New prop reversal safeguard. A. McSurely. Aviation W 58:18 Mr 9 '53

New safeguard against prop reversal; Hamilton Standard hydraulic device. A. McSurely. il Aviation W 57:76+ N 17 '52

Prediction of the effects of propeller operation on the static longitudinal stability of single-engine tractor monoplanes with flaps retracted. J. Weil and W. C. Sleeman, jr. bibliog diags U S Nat Advisory Com for Aeronautics 1949:399-418 '51

Prop reversal; Ham Standard refutes CAB crash findings. Aviation W 57:91-2 D 8 '52

Prop reversal probed in crash. il Aviation W 58:18 F 16 '53

Prop reversal; vital aviation problem. Aviation W 58:39 Mr 2 '53

Propeller reversed in NEA crash. Aviation W 58:60 Mr 16 '53

Proteus prop changes pitch fast. il Aviation W 57:30 N 24 '52

Technical trends in air transport. W. Littlewood. il J Aeronautical Sci 20:236-8 Ap '53

Tough props; shot-up Aeroprops bring pilots back in Korea. il diag Aviation W 58:18 My 4 '53

Manufacture

Photographic inspection spots defective brazing. M. A. Slairetam. il Materials & Methods 38:94-5 Ag '53

Rigidmils fashion aircraft propellers. il Mach 59:193-5 Ja '53

Spotting-in propeller tooling with special die set. il Mach 59:180-1 Ap '53

Testing

CdS detector checks propeller thickness. J. F. Howell. il diags Electronics 26:159-61 My '53

Investigation of the NACA 4-(3)(08)-03 and NACA 4-(3)(08)-045 two-blade propellers at forward Mach numbers to 0.725 to determine the effects of compressibility and solidity on performance. J. Stack and others. bibliog il diag U S Nat Advisory Com for Aeronautics 1950:877-908 '51

Wind tunnel investigations on rotating blades of aerofoil section. K. H. Khalil. bibliog il diags Inst Mech Eng Proc (A) 166 no 4:419-26 '52; Same cond. Engineer 194:221-3 Ag 15 '52; Discussion. Inst Mech Eng Proc (A) 166 no 4:426-8 '52

AIRPLANE races

London-New Zealand air race. Engineer 196:242 Ag 21 '53

AIRPLANE seats. See Airplanes—Seats

AIRPLANE stability and stabilizers

Appreciation and prediction of flying qualities. W. H. Phillips. bibliog diags U S Nat Advisory Com for Aeronautics 1949:123-66 '51

Effect of afterbody length and keel angle on minimum depth of step for landing stability and on take-off stability of a flying boat. R. E. Olson and N. S. Land. il diags U S Nat Advisory Com for Aeronautics 1949:69-81 '51

Electronic control and stabilization of aircraft; symposium. il diags Aeronautical Eng R 12:38-55; Discussion. 55-69 My '53

Flight investigation of the effect of various vertical-tail modifications on the directional stability and control characteristics of a propeller-driven fighter airplane. H. I. Johnson. il diags U S Nat Advisory Com for Aeronautics 1950:453-71 '51

Investigation at low speeds of the effect of aspect ratio and sweep on rolling stability derivatives of untapered wings. A. Goodman and L. R. Fisher. bibliog il diags U S Nat Advisory Com for Aeronautics 1950:367-77 '51

Lear damper steadies F-86D. P. Klass. il Aviation W 58:59-60 F 16 '53

Longitudinal stability of elastic swept wings at supersonic speed. C. W. Frick and R. S. Chubb. bibliog diags U S Nat Advisory Com for Aeronautics 1950:327-38 '51

Method for determining the frequency-response characteristics of an element or system from the system transient output response to a known input function. H. J. Curfman, jr. and R. A. Gardiner. bibliog diags U S Nat Advisory Com for Aeronautics 1950:651-60 '51

Prediction of the effects of propeller operation on the static longitudinal stability of single-engine tractor monoplanes with flaps retracted. J. Weil and W. C. Sleeman, jr. bibliog diags U S Nat Advisory Com for Aeronautics 1949:399-418 '51

Radii of gyration of aircraft. J. P. Chawla. J Aeronautical Sci 19:718-19 O '52

Simple rolling method for l_p. P. T. Fink. il Roy Aeronautical Soc J 57:419-20 Je '53

Simplified method for the determination and analysis of the neutral-lateral-oscillatory-stability boundary. L. Sternfield and O. B. Gates, jr. bibliog diag U S Nat Advisory Com for Aeronautics 1949:443-54 '51

Stability derivatives at supersonic speeds of thin rectangular wings with diagonals ahead of tip Mach lines. S. M. Harmon. bibliog diags U S Nat Advisory Com for Aeronautics 1949:101-14 '51

Theoretical stability derivatives of thin sweptback wings tapered to a point with sweptback or sweptforward trailing edges for a limited range of supersonic speeds. F. S. Malvestuto, jr. and K. Margolis. diags U S Nat Advisory Com for Aeronautics 1950:411-24 '51

Use of the neutral point as a stability parameter. J. R. Baron. diag J Aeronautical Sci 20:145-6 F '53

See also

Airplanes—Tail buffeting

AIRPLANE struts

Better landing gear strut for the Boeing B-47 bomber. il Automotive Ind 109:96+ Jl '53

AIRPLANE struts—*Continued*

Close control of all variables in heat treating landing gear struts; Landing gear division, Willys-Overland motors, inc. M. W. McLaughlin. il Automotive Ind 108:53+ My 15 '53

Designing cylinders and struts for maximum strength. B. Saelman. il diags Machine Design 25:133-8 Ag '53

Landing gear struts induction preheated before arc welding. M. W. McLaughlin. il Automotive Ind 109:40-1 S 15 '53

Liquid spring offers strut gains. G. L. Christian. il diags Aviation W 58:48+ Mr 23 '53

AIRPLANE tires. See Tires, Airplane

AIRPLANE wings

Apparatus for varying effective dihedral in flight with application to a study of tolerable dihedral on a conventional fighter airplane. W. M. Kauffman and others. bibliog il diags U S Nat Advisory Com for Aeronautics 1949:529-44 '51

Application of Busemann's formula to a simple two-dimensional curved aerofoil section. J. A. Dunsby. diags Roy Aeronautical Soc J 57:600-3 S '53

Application of Green's theorem to the solution of boundary-value problems in linearized supersonic wing theory. M. A. Heaslet and H. Lomax. bibliog diags U S Nat Advisory Com for Aeronautics 1950: 257-70 '51

Calculation of downwash behind supersonic wings with an application to triangular plan forms. H. Lomax and others. bibliog diags U S Nat Advisory Com for Aeronautics 1950:211-29 '51

Calculation of the aerodynamic loading of swept and unswept flexible wings of arbitrary stiffness. F. W. Diederich. bibliog diag U S Nat Advisory Com for Aeronautics 1950:909-37 '51

Chan-O-Seal for modern aircraft; abstract. B. Gross. il S A E J 61:54-5 Ja '53

Characteristics of low-aspect-ratio wings at supercritical Mach numbers. J. Stack and W. F. Lindsey. il diags U S Nat Advisory Com for Aeronautics 1949:63-8 '51

Comparative drag measurements at transonic speeds of rectangular and sweptback NACA 65-009 airfoils mounted on a freely falling body. C. W. Mathews and J. R. Thompson. il diag U S Nat Advisory Com for Aeronautics 1950:685-91 '51

Delta wing wins wide acceptance. Aviation W 58:154-5 Mr 2 '53

Design criterion for fatigue of wings. P. B. Walker. Roy Aeronautical Soc J 57:12-18 Ja '53

Development of cambered airfoil sections having favorable lift characteristics at supercritical Mach numbers. D. J. Graham. bibliog U S Nat Advisory Com for Aeronautics 1949:507-28 '51

Drag reduction method for wings of fixed plan form. E. W. Graham. bibliog diags J Aeronautical Sci 19:823-5 D '52

Durestos plastic glider wing. il Engineering 175:730 Je 5 '53

Effect of torsional flexibility on the rolling characteristics at supersonic speeds of tapered unswept wings. W. A. Tucker and R. L. Nelson. diags U S Nat Advisory Com for Aeronautics 1950:425-52 '51

Effects of variations in Reynolds number between 3.0×10^6 and 25.0×10^6 upon the aerodynamic characteristics of a number of NACA 6-series airfoil sections. L. K. Loftin, jr. and W. J. Bursnall. bibliog U S Nat Advisory Com for Aeronautics 1950: 307-26 '51

Elastic and plastic buckling of simply supported solid-core sandwich plates in compression. P. Seide and E. Z. Stowell. bibliog diags U S Nat Advisory Com for Aeronautics 1950:357-66 '51

Engineering comparison of wing planforms for supersonic speeds. K. E. Van Every. bibliog diags Automotive Ind 108:60-3+ F 1 '53; Same abr. S A E J 61:48-54 S '53

Fatigue life of wing components for civil aircraft. K. Williams. bibliog Roy Aeronautical Soc J 56:842-8 N '52

Influence functions for computing lift and rolling moment of a twisted narrow delta wing. B. Beane. bibliog J Aeronautical Sci 20:138-40 F '53

Lift of highly swept wings. H. Mirels. bibliog diag J Aeronautical Sci 20:210-11 Mr '53

Line-vortex theory for calculation of supersonic downwash. H. Mirels and R. C. Haefeli. bibliog diags U S Nat Advisory Com for Aeronautics 1950:635-50 '51

Linearized compressible-flow theory for sonic flight speeds. M. A. Heaslet and others. bibliog diags U S Nat Advisory Com for Aeronautics 1950:195-210 '51

Longitudinal stability of elastic swept wings at supersonic speed. C. W. Frick and R. S. Chubb. bibliog diags U S Nat Advisory Com for Aeronautics 1950:327-38 '51

Metalbond wing for Super Connie. il Aviation W 57:43 O 20 '52

NACA structural research on wings. Aero Digest 66:52+ My '53

New frontiers of aeronautic engineering. D. A. Anderton. diags Aviation W 57:22+ N 17 '52

Pressure distribution on low aspect ratio wings in steady or unsteady incompressible flow. H. R. Lawrence. bibliog J Aeronautical Sci 20:218-19 Mr '53

Putting a wing to work. G. A. Dom. il Aero Digest 66:56-7 My '53

Resolution of velocity for the swept-back wing at incidence. C. H. McKoen. diags Roy Aeronautical Soc J 57:177-9 Mr '53

Reverse-flow and variational theorems for lifting surfaces in nonstationary compressible flow. A. H. Flax. bibliog diags J Aeronautical Sci 20:120-6 F '53

Shape of wings to come. D. Keith-Lucas. il diags Engineering 174:349-53 S 12 '52

Similarity laws for stressing heated wings. H. S. Tsien. diags J Aeronautical Sci 20: 1-11 Ja '53

Slender-body theory; review and extension. M. C. Adams and W. R. Sears. bibliog(42 titles) diags J Aeronautical Sci 20:85-98 F '53

Some theoretical low-speed span loading characteristics of swept wings in roll and sideslip. J. D. Bird. bibliog diags U S Nat Advisory Com for Aeronautics 1950:379-93 '51

Stability derivatives at supersonic speeds of thin rectangular wings with diagonals ahead of tip Mach lines. S. M. Harmon. bibliog diags U S Nat Advisory Com for Aeronautics 1949:101-14 '51

Structural analysis of swept, low aspect ratio, multispar aircraft wings. H. U. Schuerch. bibliog il diags Aeronautical Eng R 11:34-41 N '52

Summary of section data on trailing-edge high-lift devices. J. F. Cahill. diags U S Nat Advisory Com for Aeronautics 1949: 341-70 bibliog(p369-70) '51

Theoretical characteristics in supersonic flow of two types of control surfaces on triangular wings. W. A. Tucker and R. L. Nelson. bibliog diags U S Nat Advisory Com for Aeronautics 1949:371-86 '51

Theoretical determination of the minimum drag of airfoils at supersonic speeds. R. T. Jones. bibliog diags J Aeronautical Sci 19:813-22 D '52

Theoretical lift and damping in roll at supersonic speeds of thin sweptback tapered wings with streamwise tips, subsonic leading edges, and supersonic trailing edges. F. S. Malvestuto, jr. and others. bibliog diags U S Nat Advisory Com for Aeronautics 1950:395-410 '51

Theoretical stability derivatives of thin sweptback wings tapered to a point with sweptback or sweptforward trailing edges for a limited range of supersonic speeds. F. S. Malvestuto, jr. and K. Margolis. diags U S Nat Advisory Com for Aeronautics 1950:411-24 '51

Two-dimensional unsteady lift problems in supersonic flight. M. A. Heaslet and H. Lomax. bibliog diags U S Nat Advisory Com for Aeronautics 1949:469-77 '51

Use of source distributions for evaluating theoretical aerodynamics of thin finite wings at supersonic speeds. J. C. Evvard. bibliog diags U S Nat Advisory Com for Aeronautics 1950:71-102 '51

AIRPLANE wings—*Continued*

Why Gloster gave Javelin a delta wing. D. A. Anderton. il diags Aviation W 57:21-2+ O 20 '52

See also

Airfoils

Airplanes, Flying wing

Flutter

Aerodynamic coefficients of an oscillating air-foil in two-dimensional subsonic flow. R. Timman and others. bibliog J Aeronautical Sci 18:797-802+ D '51; Discussion. 19: 353-4, 790-1; 20:362-3 My, N '52, My '53

Aerodynamic coefficients of an oscillating airfoil with control surface in two-dimensional subsonic flow. A. I. van de Vooren. bibliog J Aeronautical Sci 20:153-9 Mr '53

Aerodynamic forces on low aspect ratio wings oscillating in an incompressible flow. H. R. Lawrence and E. H. Gerber. bibliog diags J Aeronautical Sci 19:769-81 N '52; Correction. 20:296 Ap '53

Design of a simple electronic flutter simulator. F. Smith and W. D. T. Hicks. il diags Roy Aeronautical Soc J 57:29-38 Ja '53

Flutter of a uniform wing with an arbitrarily placed mass according to a differential-equation analysis and a comparison with experiment. H. L. Runyan and C. E. Watkins. bibliog U S Nat Advisory Com for Aeronautics 1950:339-55 '51

Kirchhoff solution for an oscillating wing in subsonic compressible flow. J. W. Miles. J Aeronautical Sci 19:785 N '52

Second-order solution for an oscillating two-dimensional supersonic airfoil. A. Wylly. bibliog diags J Aeronautical Sci 19:685-96+ O '52

Single degree of freedom flutter of an aileron. K. P. Abichandani and R. M. Rosenberg. J Aeronautical Sci 19:503-4 Jl '52; Discussion. 20:213-14; Reply 214-15 Mr '53

Subsonic calculation of circulatory spanwise loadings for oscillating airfoils by lifting-line techniques. M. A. Dengler and M. Goland. bibliog diags J Aeronautical Sci 19: 751-9 N '52

Theory of oscillating airfoils of finite span in subsonic compressible flow. E. Reissner. bibliog U S Nat Advisory Com for Aeronautics 1950:969-77 '51

Manufacture

Bends aluminum alloy wing beams. il Machine Design 25:170 Ja '53; Iron Age 171: 113-14 Ja 8 '53; Steel 132:82 Ja 26 '53; Aviation W 58:54 F 16 '53

High-speed routing equipment is remote controlled; North American aviation, inc. il Mach 59:197-9 D '52

How glass-plastic wing is fabricated. I. Stone. il diags Aviation W 58:50-4 Je 1 '53

How to taper aluminum plate by abrasive belt grinding. P. J. Queyrel. il diag Iron Age 170:174-6 D 4 '52

Integrally-stiffened skin milling. J. Daugherty and J. M. Delfs. il diag Aero Digest 66:90-102+ Ap '53

Pushbutton control shifting for contoured skin panels; Temco aircraft corp. R. McCulloch. il Light Metal Age 10:14-15+ O '52

Rolling tapered aluminum isn't easy. J. H. Alden. il Steel 132:118-19 My 25 '53

Models

Manufacture and inspection of aerofoil models. R. S. Marriner. diags Engineer 196: 202-3 Ag 14 '53; Same. Engineering 176: 218-19 Ag 14 '53

Testing

Complete wing tests on the Britannia air liner. il Engineer 194:188-90 Ag 8 '52; Engineering 174:166-7 Ag 8 '52

Fatigue in aircraft design. B. E. Stephenson. diags Roy Aeronautical Soc J 57:584-8 S '53; Abstract. Engineering 175:571 My 1 '53; Discussion. Roy Aeronautical Soc J 57: 589-91 S '53

French glider tests wings. il Aviation W 58: 40 My 11 '53

Investigation at low speeds of the effect of aspect ratio and sweep on rolling stability derivatives of untapered wings. A. Goodman and L. R. Fisher. bibliog il diags U S Nat Advisory Com for Aeronautics 1950: 367-77 '51

Investigation in the Langley 19-foot pressure tunnel of two wings of NACA 65-210 and 64-210 airfoil sections with various type flaps. J. C. Sivells and S. H. Spooner. il diags U S Nat Advisory Com for Aeronautics 1949:419-41 '51

AIRPLANES

Adjustable-wing aircraft. Engineering 175: 285 F 27 '53

Aeronautics in 1952. il diags Engineer 195: 24-6, pl 6-7, 55-7, 91-2 Ja 2-16 '53

Air transport; abstracts of SAE annual meeting papers. S A E J 61:80H-80K+ F '53

AA favors turboprop airliners. C. R. Smith. Aviation W 58:102 My 11 '53

Bristol offers bigger faster Britannias. Aviation W 58:40 My 18 '53

Britain's new military and civilian planes; 1952 flying display and exhibition by the Society of British aircraft constructors. W. F. Bradley. il Automotive Ind 107:34-7+ O 15 '52

Design and operation of commercial air transports; abstract. W. Littlewood. S A E J 61:104 My '53

Douglas DC-7 makes maiden test flight. W. J. Coughlin. il diag Aviation W 58:99-102 My 25 '53

Economics of new aircraft selection. A. Baltensweiler and W. Guldimann. S A E J 60: 33-7 D '52

Fokker's play for DC-3 market. il diags Aviation W 58:38 Ja 5 '53

H.D. 31 tests beat expectations. R. Hazeltine. il Aviation W 58:40 Ap 20 '53

Latest European aviation developments. W. F. Bradley. il Automotive Ind 109:60-2+ Ag 1 '53

Maiden flight of Bristol Britannia. il Engineer 194:264 Ag 22 '52

Medium-range air-liner project. Engineering 176:218 Ag 14 '53

Modified C-46 passes first test. il Aviation W 58:21+ Je 1 '53

Short S.B./5. adjustable swept wing research aircraft. il Engineer 195:281 F 20 '53

S.B.A.C. flying display and static exhibition. il Engineer 194:354-6, 376-9 S 12-19 '52; Engineering 174:304, 309-10, 340, 346-8 S 5-12 '52

Technical trends in air transport. W. Littlewood. il diags J Aeronautical Sci 20:225-68; Discussion. 268-79 Ap '53

Transport planes; illustrations and drawings with brief descriptions. Aero Digest 66:48-53 Mr '53

TWA likes Super Connie handling ease. G. L. Christian. il diags Aviation W 57:67+ O 13 '52

U.S. turboprop transport future. C. R. Smith. il Aero Digest 66:17-19 Je '53

Vickers pushes Viscount sales. il Aviation W 58:81-2 F 16 '53

Viscount service; BEA starts turboprops on scheduled flights. Aviation W 58:76 My 4 '53

See also

Aeronautics

Airfoils

Airplane engines

Airplane propellers

Airships

Aviation

Flying boats

Gliders

Hangars

Helicopters

Loading and unloading—Airplanes

Refrigeration on airplanes

Acceleration

Relation of force, acceleration, and momentum for a body whose mass is varying. H. W. Sibert. J Aeronautical Sci 20: 141-2 F '53

Air conditioning

Hamilton Standard cold-air unit for aircraft cabins. il diag Engineering 176:255 Ag 21 '53

More air, more cooling for AA DC-7s. G. L. Christian. il diag Aviation W 58:66+ Ap 13 '53

AIRPLANES—Air conditioning—*Continued*

Separator spins water out of B-47 air; centrifugal unit, designed to keep cabins fog-free in fast descents. G. L. Christian. il diag Aviation W 57:67-8+ D 8 '52

Taking the fog out of jet planes; compressed air helps Boeing engineers design equipment for removing moisture from cabins. J. Starr. il diag Comp Air Mag 57:314-15 N '52

Airworthiness

British blast CAA Comet stand; U.S. set to re-open talks. N. McKitterick. Aviation W 58:18 My 11 '53

CAA ready to talk with ARB in early certification of the Comet 3. A. McSurely. Aviation W 58:32 Ap 13 '53

Comet and airworthiness. Economist 167:47-8 Ap 4 '53

Comet and the CAB. Economist 167:322 My 2 '53

Maintaining airworthiness in operation. R. E. Hardingham. il diags Roy Aeronautical Soc J 56:819-40 N '52; Abstract. Engineering 174:551-2 O 24 '52

No shortcuts; CAA stands ground on Comet 3 certification. A. McSurely. Aviation W 58:84-6 F 16 '53

PAA Comet certification battle looms. Aviation W 57:13 N 10 '52

PanAm reopens Comet contract; certification deadline will probably be extended. N. McKitterick. Aviation W 58:22+ Ap 13 '53

When is a jet airworthy? British, CAA disagree. Bsns W p29 Ja 24 '53

Auxiliary power

C-124s get solar turbine power sets. Aviation W 58:64 Ja 5 '53

Operation problems of air-turbine accessory drives. T. E. Abraham. Elec Eng 72:530-3 Je '53

Bearings

Airframe control bearing selection. Machine Design 25:168 My '53

Bearings; system helps select smallest bearing for desired bearing life. il diags Iron Age 171:114 Ja 22 '53

Small bearing carries big load; new roller-type aircraft units. G. L. Christian. il Aviation W 58:61-2 Ap 20 '53

Cabins

Stratos units cool hot Sabre cabins. il Aviation W 57:59 O 20 '52

Temperature control of jet-engined aircraft. E. W. Still. il diags Roy Aeronautical Soc J 57:89-102 F '53

Supercharging

Local coefficients of mass transfer by evaporation of water into an air jet. M. Spielman and M. Jakob. bibliog il A S M E Trans 75:385-92; Discussion. 392-4 Ap '53

PAA 240s get new stratos supercharger. il Aviation W 57:57 D 22 '52

Supercharger tester uses P-39 nose case. il Aviation W 58:72 Ap 13 '53

Chartering

Charter snafu; IATA agreements strand many GIs in Europe. Aviation W 57:68-9 D 22 '52

Cleaning

Cleaner, safer, faster! il Safety Maint & Prod 106:44-8 Jl '53

Cockpits

CAB adopts airliner cockpit standard. A. McSurely. Aviation W 58:13-14 Ap 27 '53

Cockpit design and safety. W. I. Stieglitz. bibliog diags Aeronautical Eng R 11:36-41+ O '52

Convair B-36H flight deck. il Aviation W 57:32 D 1 '52

Cold weather operation

Deaerating cold weather oil systems; abstract. F. E. Carroll, jr. diag Automotive Ind 109:61-2 Jl 1 '53

Hot fuel priming for cold weather starting; abstract. E. Rowland. diag Automotive Ind 109:59-60 Jl 1 '53

Silicones help Convair B-36 fight cold. il Aviation W 58:38-9+ Mr 30 '53

Control

Apparatus for varying effective dihedral in flight with application to a study of tolerable dihedral on a conventional fighter airplane. W. M. Kauffman and others. bibliog il diags U S Nat Advisory Com for Aeronautics 1949:529-44 '51

Appreciation and prediction of flying qualities. W. H. Phillips. bibliog diags U S Nat Advisory Com for Aeronautics 1949:123-66 '51

Are automatic controls too complex? P. Klass. il Aviation W 58:35-6+ Mr 16 '53

Automatic flight control with air force device; Automatic master sequence selector. il Tele-Tech 12:80 Jl '53

Developing the navy G-3 automatic pilot. C. G. Yates. il diags Aero Digest 65:78-80+ N '52

Electronic control and stabilization of aircraft; symposium. il diags Aeronautical Eng R 12:38-55; Discussion. 55-69 My '53

Free-wheeling thyratrons cut autopilot weight. C. G. Yates. il diags Electronics 26:103-5 Mr '53

Fundamental aspects of a hydraulic-type-powered flight-control system. H. M. DeGroff and others. bibliog il diags Aeronautical Eng R 11:42-55 N '52

L-5 autopilot gets nod for DC-6A, B. Aviation W 57:14 D 15 '52

Method for determining the frequency-response characteristics of an element or system from the system transient output response to a known input function. H. J. Curfman, jr. and R. A. Gardiner. bibliog diags U S Nat Advisory Com for Aeronautics 1950:651-60 '51

New device enables aircraft to fly without human aid; device called Automatic master sequence selector. Elec Eng 72:468-9 My '53

Pilot is the limit; aircraft performance is exceeding ability of the human pilot to control it; the answer may be the gyroscope. A. V. Sommer. il diag Aero Digest 65:17-25 D '52

Powered flying-controls; some design considerations. F. J. Bradbury and S. M. Parker. diags Inst Mech Eng Proc (B) 1B no 4:99-105 '52; Abstract. Engineering 173:183 F 8 '52; Discussion. il Inst Mech Eng Proc (B) 1B no 4:106-13 '52

Radar orders fly W-3A autopilot. P. Klass. il Aviation W 57:46+ O 13 '52

Servo mechanisms in aircraft. F. W. Meredith. diags Engineering 174:481-2, 515-17 O 10-17 '52

Sperry cutoff monitors A-12 autopilot. P. Klass. il diag Aviation W 57:35-8 D 22 '52

Theoretical characteristics in supersonic flow of two types of control surfaces on triangular wings. W. A. Tucker and R. L. Nelson. bibliog diags U S Nat Advisory Com for Aeronautics 1949:371-86 '51

See also

Airplane stability and stabilizers	Airplanes, Light—Control

Cost of operation

Economics of new aircraft selection. A. Baltensweiler and W. Guldimann. S A E J 60:33-7 D '52

Effect of engine weight, drag, and fuel consumption on direct operating cost of a commercial airplane; abstract. J. E. Steiner. S A E J 61:36-7 O '53

Optimum conditions for the operation of airline aircraft. A. H. Stratford. Roy Aeronautical Soc J 57:524-7 Ag '53

Design

Aerodynamic forces on slender plane- and cruciform-wing and body combinations. J. R. Spreiter. bibliog diags U S Nat Advisory Com for Aeronautics 1950:271-87 '51

Aircraft design as related to airport standards. M. W. Arnold. plan Am Soc C E Proc 77 [no 93]:1-8 O '51; Discussion. J. H. Geisse. 78 [no D-93]:1-3 D '52

Analysis of elastic structures by matrix transformation with special regard to semi-monocoque structures. B. Langefors. bibliog diags J Aeronautical Sci 19:451-8 Jl '52; Discussion. H. Falkenheiner. 20:293-4 Ap '53

AIRPLANES—Design—*Continued*

Analysis of stiffened curved panels under shear and compression. M. A. Melcon and A. F. Ensrud. bibliog diags J Aeronautical Sci 20:111-19+ F '53

Application of the statistical theory of extreme values to gust-load problems. H. Press. bibliog U S Nat Advisory Com for Aeronautics 1950:711-26 '51

Appreciation and prediction of flying qualities. W. H. Phillips. bibliog diags U S Nat Advisory Com for Aeronautics 1949: 123-66 '51

Bending of some common beam sections into the plastic range. A. J. Barrett. diags Roy Aeronautical Soc J 47:110-15 F '53

Bristol Britannia propeller-turbine air-liner. il diags Engineering 174:240, 245-7, 257-61, pl 11-12 Ag 22-29 '52

Buckling design charts. W. A. Welch. diags Aero Digest 65:74+ N '52

Calculation method for three-dimensional rotationally symmetrical laminar boundary layers with arbitrary free-stream velocity and arbitrary wall-temperature variation. R. M. Drake, jr. bibliog diag J Aeronautical Sci 20:309-16+ My '53

Column allowables. W. L. Vaughan. Aero Digest 65:42+ N '52

Computing critical loads by splitting the rigidity of composite systems. F. Buckens. J Aeronautical Sci 19:787 N '52

Critical stress of ring-stiffened cylinders in torsion. M. Stein and others. bibliog diags U S Nat Advisory Com for Aeronautics 1950:693-9 '51

Design criterion for fatigue of wings. P. B. Walker. Roy Aeronautical Soc J 57:12-18 Ja '53

Design problems of large aluminum forgings; abstracts. C. W. Andrews. diags Automotive Ind 109:32-3 Ag 15 '53; Machine Design 25:334+ O '53

Development of cambered airfoil sections having favorable lift characteristics at supercritical Mach numbers. D. J. Graham. bibliog U S Nat Advisory Com for Aeronautics 1949:507-28 '51

Differential shear-flow analysis for nonprismatic semimonocoque beams. W. B. King and W. R. Garrison. diags J Aeronautical Sci 20:127-35 F '53

Dimensions required for inspection. G. A. G. Saywell. diags Roy Aeronautical Soc J 57:463-4 Jl '53

Douglas DC-7. R. McLarren. il diags Aero Digest 66:26-32+ My '53

Drag reduction method for wings of fixed plan form. E. W. Graham. bibliog diags J Aeronautical Sci 19:823-5 D '52

Dynamic buckling of thin elastic plates. G. A. Zizicas. bibliog A S M E Trans 74: 1257-66; Discussion. 1267-8 O '52

Effect of engine weight, drag, and fuel consumption on direct operating cost of a commercial airplane; abstract. J. E. Steiner. S A E J 61:36-7 O '53

Effect of the torsional rigidity of a single stiffener on the buckling characteristics of a panel subjected to axial compression with large deflections. T. K. Steele and C. T. Wang. diags J Aeronautical Sci 20: 12-18 Ja '53

Elastic stability of simply supported flat rectangular plates under critical combinations of longitudinal bending, longitudinal compression, and lateral compression. R. G. Noel. diags J Aeronautical Sci 19:829-34 D '52; Correction 20:440 Je '53

Engineers must consider production costs; Lockheed aircraft corp. R. H. Luders. diags Am Mach 97:116-19 Jl 6 '53

Frequency response of linear systems from transient data. M. E. LaVerne and A. S. Boksenbom. bibliog diags U S Nat Advisory Com for Aeronautics 1950:547-57 '51

Graphical shear and moment calculations. W. S. Beller. Aero Digest 66:21-4 Je '53

H factor in engineering design. C. Seitz. bibliog Aeronautical Eng R 12:42-3 Mr '53; Same cond. Machine Design 25:318+ My '53

Integral construction; its application to aircraft design and its effect on production methods. E. D. Keen. il diags Roy Aeronautical Soc J 57:215-27 Ap '53; Discussion. 57:461-2 Jl '53

Lateral instability of rectangular beams of strain-hardening material under uniform bending. W. H. Wittrick. bibliog diags J Aeronautical Sci 19:835-43 D '52

Matrix methods for redundant structures. B. Langefors. J Aeronautical Sci 20:292-3 Ap '53

Method for reducing the analysis of complex redundant structures to a routine procedure. L. B. Wehle, jr. and W. Lansing. bibliog diags J Aeronautical Sci 19:677-84 O '52

Normal functions of beam vibration in series solutions of static problems. R. E. D. Bishop. bibliog Roy Aeronautical Soc J 57:527-9 Ag '53

Plastic buckling of a rectangular plate under edge thrusts. G. H. Handelman and W. Prager. bibliog U S Nat Advisory Com for Aeronautics 1949:479-506 '51

Plush is the pitch for airlines. il Bsns W p29 D 13 '52

Problems of servicing and reliability. G. M. Buxton. diag Roy Aeronautical Soc J 56: 869-76 D '52

Radii of gyration of aircraft. J. P. Chawla. J Aeronautical Sci 19:718-19 O '52

Reciprocity relations in wing-body systems. W. M. Bleakney and G. K. Morikawa. J Aeronautical Sci 19:784-5 N '52

Requirements for large, light-metal forgings and extrusions in the aircraft industry. G. W. Papen. bibliog il plan diags Aeronautical Eng R 12:24-33 Ja '53; Excerpts. Automotive Ind 108:41-4 Ja 15 '53

Simplified method for the determination and analysis of the neutral-lateral-oscillatory-stability boundary. L. Sternfield and O. B. Gates, jr. bibliog diag U S Nat Advisory Com for Aeronautics 1949:443-54 '51

Slender-body theory; review and extension. M. C. Adams and W. R. Sears. bibliog(42 titles) diags J Aeronautical Sci 20:85-98 F '53

Small bending and stretching of sandwich-type shells. E. Reissner. bibliog diags U S Nat Advisory Com for Aeronautics 1950: 483-508 '51

Some theoretical low-speed span loading characteristics of swept wings in roll and sideslip. J. D. Bird. bibliog diags U S Nat Advisory Com for Aeronautics 1950:379-93 '51

Stability in bending of slightly corrugated plates. D. G. Ashwell. diags Roy Aeronautical Soc J 56:782-8 O '52

Statistical aspects of dynamic loads. Y. C. Fung. bibliog il J Aeronautical Sci 20: 317-30 My '53

Structural modifications in redundant structures. H. F. Michielsen and A. Dijk. J Aeronautical Sci 20:286-8 Ap '53

Summary of information relating to gust loads on airplanes. P. Donely. bibliog il diags U S Nat Advisory Com for Aeronautics 1950:806-57 '51

Switch to coach may alter plane design. L. Moore. Aviation W 57:87-8+ N 10 '52

Technical trends in air transportation. W. Littlewood. Aviation W 57:17-18 D 22 '52

Transport trends. W. Littlewood. Aviation W 58:24-5+ F 9; 21-4+ F 16 '53

Two-dimensional unsteady lift problems in supersonic flight. M. A. Heaslet and H. Lomax. bibliog diags U S Nat Advisory Com for Aeronautics 1949:469-77 '51

Unsymmetrical bending and bending combined with axial loading of a beam of rectangular cross section into the plastic range. A. J. Barrett. diags Roy Aeronautical Soc J 57:503-9 Ag '53

What's different about a turboprop? il diag Aviation W 58:28-9+ My 11 '53

See also

Airplane propellers
Airplane wings
Airplanes, Amphibious
Airplanes, Flying wing
Airplanes, Light—Design
Airplanes, Military—Design

Convertaplanes

Army cool toward convertiplane. A. McSurely. diags Aviation W 57:15-16 D 22 '52

Convertiplane group plans policy report. Aviation W 58:53 Mr 9 '53

Introduction to convertible aircraft. N. C. New. il Aero Digest 65:48+ N '52

AIRPLANES—*Continued*

Doors

CAB report on PAA door blowout near Rio. Aviation W 58:45-7+ Mr 30 '53

Drawings

Douglas DC-7. Aero Digest 66:28-9 My '53

Electric equipment

Airborne generator. il Aviation W 58:71-2 Je 1 '53

AIEE engineers told; don't overlook the human factor; session on Complexity in electronics equipment. P. Klass. il Aviation W 58:50+ Ap 13 '53

Automatic cruise-control computer for long-range aircraft. J. R. Shull. diags Elec Eng 72:309-12 Ap '53

Automatic factory near for electronics; General Electric developing machinery for manufacture of printed-circuit electronic assemblies. P. Klass. il Aviation W 57:36+ N 17 '52

Avionics plays key role in air power. P. Klass. il Aviation W 58:118-19+ Mr 2 '53

Boeing makes complex electrical circuits without wires. J. McMaster. il Mach 59:206-9 Jl '53

Consideration of off-on modulated reversing clutch servo system. T. R. Stuelpnagel and J. P. Dallas. bibliog diags Elec Eng 72:430-4 My '53

Core materials for small transformers. C. C. Horstman. il Tele-Tech 11:40-2+ O '52

Development of the electrical system on the Bristol Brabazon I Mark I aircraft. M. J. J. Cronin. il diags Inst E E Proc 98 pt 1:269-80 S '51; Discussion. 98 pt 1:280-8; 99 pt 1:285-6 S '51, N '52

Effects of electronic equipment standardization on aircraft performance; abstract. G. C. Sumner. Product Eng 24:302+ My '53

Electronic equipment for aircraft; report of production forum discussion on electronics, SAE national aeronautic meeting. C. H. Hansen. S A E J 61:34-7 Mr '53

Electronic reliability in aircraft. A. W. Rebard. il diags Aero Digest 66:64+ F '53

Electronics for Nato; British-built electronic equipment exhibition, Farnborough. Economist 167:465 My 16 '53

Engineering highlights of 1952; aviation. C. A. Scarlott. il Westinghouse Eng 13:34-7 Ja '53

Gavco develops new regulator. P. Klass. il Aviation W 58:38 Mr 9 '53

GE capacitor is small but rugged. il Aviation W 58:48 F 23 '53

Heat transfer in subminiature electronic equipment. D. T. Drake. il diag Tele-Tech 12:111-13+ Je '53

Magnetic amplifiers for airborne applications. J. K. McKendry. diags Tele-Tech 12:32-4+ Jl '53

Maintenance of electric equipment in modern aircraft. A. J. Mustard. Elec Eng 72:312-17 Ap '53

New transistors beat the heat; developments of designers at national convention of the Institute of radio engineers. P. Klass. il Aviation W 58:42+ My 4 '53

New-type a.c. regulator shown; Westinghouse mag-amplifier voltage unit. P. Klass. il diag Aviation W 57:63-41+ O 20 '52

Nickel-cadmium batteries for navy. Aviation W 58:16 Mr 30 '53

Novel connectors aid miniaturization; GE Novacon units may remove the last obstacle to automatic-factory assembly of printed circuits. P. Klass. il Aviation W 57:54+ N 10 '52

Quality control of airborne equipment. B. Hecht. Tele-Tech 21:119+ Je '53

Research and engineering progress, 1952; aviation. il Gen Elec R 56:37-9 Ja '53

S.B.A.C. Farnborough; details of electrical exhibits. il Electrician 149:675-9 S 5 '52; Elec R (Lond) 151:552-5 S 12 '52

Story of the AN connector. G. R. Lawson. il Gen Elec R 56:51-2 Mr '53

Study of aircraft cooling systems for rotating electric equipment; abstract. C. G. Martin. Elec Eng 71:1112 D '52

Subminiature switch. il Aero Digest 66:62 My '53

Systematic cooling of air-borne electronic equipment. W. Robinson. bibliog il diags Aeronautical Eng R 12:81-91 My '53

Transistors; key to electronic simplicity. L. E. Tomlinson. il diags Aero Digest 66:22-7 Ap '53

Unit tests plane circuit breakers. Aviation W 57:68+ N 3 '52

What magnetic amplifiers can do to increase aircraft reliability. G. F. Schroeder. diags Aeronautical Eng R 12:92-5 My '53; Excerpt. Product Eng 24:265-6+ Mr '53

Equipment

Bristol Britannia propeller-turbine air-liner. il Engineering 174:257-61, pl 11-12 Ag 29 '52

Leak-tight fitting. il Aviation W 58:71 My 4 '53

Lifing of aircraft equipment and instruments. W. Tye and H. B. Cundall. Roy Aeronautical Soc J 57:391-5 Je '53; Discussion. 57:597-600 S '53

New setup to test air accessories; Hydro-Aire's new facility. W. J. Coughlin. il Aviation W 57:68 N 3 '52

Plug-in stands to speed servicing. il Aviation W 58:80+ Ap 6 '53

See also

Aeronautic instruments
Airplanes—Electric equipment
Airplanes—Hydraulic equipment
Airplanes, Military—Equipment
Radio apparatus on aircraft

Fires and fire protection

EAL super Connies use Fenwal fire units. il diag Aviation W 57:76+ O 27 '52

Flexible hose survives trial by fire. G. L. Christian. il diags Aviation W 57:54+ D 22 '52

Stabilized CB for fire extinguishers. Aviation W 58:65-6 Ja 5 '53

Fuel tanks

Ingenious machines weld thin-wall stainless tanks; Bell aircraft corp. R. L. Brown. il diags Am Mach 96:125-8 N 24 '52

Plastic tanks will save aluminum. Aviation W 58:59-60+ My 18 '53

Progress report; how to purge fuel tanks. Product Eng 23:202-3 O '52

Radial forming of sheet metal aircraft parts; Ryan aeronautical co. il Automotive Ind 109:48-9+ O 15 '53

Rubber-base coating resists abrasion at high aircraft speeds. B. G. Floersch. il Materials & Methods 36:184+ N '52

Smooth is word for B-47 tanks. il Aviation W 57:39-40 D 8 '52

World's largest wing tanks. W. P. Brotherton. Aero Digest 65:90+ D '52

Fuselage

Fuselage lift distribution for a swept-back wing aircraft. W. Taylor. diags Roy Aeronautical Soc J 57:464-7 Jl '53

Recommendations for numerical solution of reinforced-panel and fuselage-ring problems. N. J. Hoff and P. A. Libby. bibliog diags U S Nat Advisory Com for Aeronautics 1949:249-77 '51

Ryan doubles C-97 aft fuselage output. il Aviation W 58:58-9 My 18 '53

Stress analysis of circular frames in a non-tapering fuselage. K. J. Dallison. bibliog diags Roy Aeronautical Soc J 57:151-76 Mr '53

Gearing

Aircraft gears; Pratt & Whitney aircraft. E. Tucker. il Am Mach 97:138-40 F 16 '53

Heating and ventilation

Airtemp unit cools and heats airplanes. il Refrig Eng 61:537 My '53

Hoisting

KLM saves sand-bound DC-4 in desert. il Aviation W 58:66-8 F 16 '53

Hydraulic equipment

Design and development of aircraft hydraulic components for increased reliability. J. W. Kelly. diags Machine Design 25:266-8+ S '53

AIRPLANES—Hydraulic equipment—*Cont.*

Design and testing of hydraulic controls for aircraft. il diags Engineering 175:117-19 Ja 23 '53

Designing cylinders and struts for maximum strength. B. Saelman. il diags Machine Design 25:133-8 Ag '53

First report on Comet hydraulics. G. L. Christian. il Aviation W 57:56+ D 1 '52

Flexible hose survives trial by fire. G. L. Christian. il diags Aviation W 57:54+ D 22 '52

Fluid flow synchroniser. il diag Engineer 195: 708 My 15 '53

Fundamental aspects of a hydraulic-type-powered flight-control system. H. M. DeGroff and others. bibliog il diags Aeronautical Eng R 11:42-55 N '52

Hydraulic experts study pumps, fluids; Vickers, inc., Transport hydraulic aircraft conference. Aviation W 57:56+ D 15 '52

Hydraulic motor; British Messier, ltd. il diags Engineer 195:114-15 Ja 16 '53

Integrated designs for solenoid operated shutoff valves. K. Jones. il diags Product Eng 24:186-90 My '53

Light alloy jack tests. R. G. Hoare. il diags Roy Aeronautical Soc J 57:592-3 S '53

Making the hydraulic system reliable. L. M. Chattler. Aviation W 58:43-4+ My 18 '53

New safeguard against prop reversal; Hamilton Standard hydraulic device. A. McSurely. il Aviation W 57:76+ N 17 '52

New tubing fittings cut leakage. G. L. Christian. il Aviation W 58:66 Mr 30 '53

New valve simplifies hydraulic systems. diags Aviation W 58:41 Mr 9 '53

Powered flying-controls; some design considerations. F. J. Bradbury and S. M. Parker. diags Inst Mech Eng Proc (B) 1B no 4:99-105 '52; Abstract. Engineering 173: 183 F 8 '52; Discussion. il Inst Mech Eng Proc (B) 1B no 4:106-13 '52

Problems with hydraulic systems for tomorrow's planes; based on papers by E. L. Carlotta and others. il diag S A E J 61:71-6 Ag; 29-31 S '53

Slide-valve hydraulic motor for aircraft systems. il diags Engineering 175:396 Mr 27 '53

Solenoid operated shutoff valves for aircraft hydraulic circuits. K. Jones. diags Product Eng 24:175-7 Mr '53

Some problems of fluids for hydraulic power transmission. A. E. Bingham. Inst Mech Eng Proc 165 (W.E.P. no69):254-61 '51; Same. Engineering 173:213-15, 254-5 F 15-22 '52; Discussion. Inst Mech Eng Proc 165 (W.E.P. no 69):266-77 '51; Engineer 192: 799-801 D 21 '51

Ice protection

Equilibrium temperature of an unheated icing surface as a function of air speed. B. L. Messinger. bibliog diag J Aeronautical Sci 20:29-42 Ja '53

Ice prevention as related to airframe design, 1952: abstract. B. L. Messinger. S A E J 61:40 F '53

Icing-protection requirements for reciprocating-engine induction systems. W. D. Coles and others. bibliog il diags U S Nat Advisory Com for Aeronautics 1950:611-34 '51

NACA learning how to break the ice; new research attacks freezing on airfoils. il plan diags Aviation W 58:20-1 Ja 12 '53

New de-icer boot effective on jets. Aviation W 57:38 O 13 '52

New de-icing setup for Ice Wagon. Aviation W 57:30 D 8 '52

Power, thrust, and ice. A. A. Brown. il diags S A E J 61:44-7 Je '53

Technical trends in air transport. W. Littlewood. il diags J Aeronautical Sci 20:238-42 Ap '53

Temperature control of jet-engined aircraft. E. W. Still. il diags Roy Aeronautical Soc J 57:89-102 F '53

Instrument boards

Aircraft instrument integral lighting; abstract. J. H. Achilich. S A E J 61:120+ S '53

Cockpit setup; new instrument panels proposed for transports. diags Aviation W 58: 61-2 Mr 16 '53

Psychology and the instrument panel. A. Chapanis. il diags Sci Am 188:74-6+ Ap '53

Jet propulsion

See Airplanes, Jet propelled

Landing

Dynamic loads in landing. A. Zahorski. bibliog J Aeronautical Sci 19:258-64 Ap '52; Discussion. 19:639; 20:212-13 S '52, Mr '53

Effect of afterbody length and keel angle on minimum depth of step for landing stability and on take-off stability of a flying boat. R. E. Olson and N. S. Land. il diags U S Nat Advisory Com for Aeronautics 1949:69-81 '51

Instrument approach system steering computer. W. G. Anderson and E. H. Fritze. il diags Inst Radio Eng Proc 41:219-28 F '53

Lift raiser; boundary layer control studied in Cessna 309. il diags Aviation W 58:22+ Ja 19 '53

Summary of section data on trailing-edge high-lift devices. J. F. Cahill. diags U S Nat Advisory Com for Aeronautics 1949: 341-70 bibliog(p369-70) '51

Touchdown; navy's TRODI calculator gives prompt correction data. il Iron Age 170: 212-13 N 6 '52

Landing gear

Avro delta bomber landing gear design. il Aviation W 57:29-30 N 17 '52

Drop testing a large airplane; abstract. J. W. Gaines and F. V. Wagner. il S A E J 61:53-4 Ag '53

Fifty years of undercarriage development. bibliog il diags Engineer 196:243-7, 275-8, 295-9 Ag 21-S 4 '53

Friction surfaces for spin-up simulation in landing-gear drop tests. D. W. Drake. il A S M E Trans 74:1269-79; Discussion. 1279-81 O '52

Honing used for greater, faster stock removal; Pratt & Whitney division of Niles-Bement-Pond co. E. C. Beaudet. il Iron Age 170:170-1 D 11 '52

Impulse-momentum method for calculating landing-gear impact conditions in unsymmetrical landings. R. T. Yntema. bibliog J Aeronautical Sci 19:743-50 N '52

Landing gear cylinders machined on automatic double-end unit. il Automotive Ind 109:65 Jl 15 '53

Liquid spring offers strut gains. G. L. Christian. il diags Aviation W 58:48+ Mr 23 '53

Much special tooling needed for landing gear production. R. E. Reiter. il Mach 60:157-61 S '53

Special equipment for testing landing gear. W. F. Bradley. il Automotive Ind 107:61+ O 1 '52

Supersonic plane to use hydro-ski gear. il Aviation W 57:13-14 D 1 '52

Tester meets tough specs; modified machine has 600,000 pound compression capacity for aircraft landing gear. il Steel 131:97 O 6 '52

Lighting

Aircraft instrument integral lighting; abstract. J. H. Achilich. S A E J 61:120+ S '53

Capital evaluates safety lights. G. L. Christian. il Aviation W 58:74-5 Ap 6 '53

Exterior lighting. R. C. Robson. Aviation W 58:96 My 18 '53

Load

Aeroplane tail loads for longitudinal manoeuvres. G. W. Smith and J. B. Rea. diag Roy Aeronautical Soc J 56:789-800 O '52

Application of the statistical theory of extreme values to gust-load problems. H. Press. bibliog U S Nat Advisory Com for Aeronautics 1950:711-26 '51

Dynamic loads in landing. A. Zahorski. bibliog J Aeronautical Sci 19:258-64 Ap '52; Discussion. 19:639; 20:212-13 S '52, Mr '53

Fuselage lift distribution for a swept-back wing aircraft. W. Taylor. diags Roy Aeronautical Soc J 57:464-7 Jl '53

Measurement of gust loads in aircraft. J. Taylor. il diags Roy Aeronautical Soc J 57: 78-88 F '53

AIRPLANES—Load—*Continued*

Subsonic calculation of circulatory spanwise loadings for oscillating airfoils by lifting-line techniques. M. A. Dengler and M. Goland. bibliog diags J Aeronautical Sci 19:751-9 N '52

Summary of information relating to gust loads on airplanes. P. Donely. bibliog il diags U S Nat Advisory Com for Aeronautics 1950:806-57 '51

Maintenance and repair

Aircraft docking facilities. il Engineer 194: 201 Ag 8 '52

Aircraft maintenance dock of unit construction. il diags Engineering 175:89 Ja 16 '53

B.O.A.C. overhaul base for aircraft engines and propellers. il plan diags Engineering 174:129-33, pl 6-7 Ag 1 '52

Miner's lamps aid airplane maintenance. il Safety Maint & Prod 104:33-4 N '52

See also

Airlines—Maintenance and repair

Manufacture

Aircraft production number. il diags Mach 59:153-219 Jl '53

Bonded joints in the construction of metal aircraft; abstract. Product Eng 23:276+ O '52

Bristol Britannia propeller-turbine air-liner. il diags Engineering 174:240, 245-7, 257-61, pl 11-12 Ag 22-29 '52

Cases in methods improvement; Ryan aeronautical co. il Factory Management 110: 131-3 D '52

Chips from the machining panel, SAE national aeronautic meeting. H. W. Ingalls. S A E J 61:78-80 My '53

Colossal press spearheads Lockheed's skin program. R. B. Scott and R. L. Vaughn. il diags Mach 59:166-71 Jl '53

Doubles welding speeds with fast roll-spot technique; Ryan aeronautical co. il Welding J 32:148-9 F '53

Forming; panel discussion. il diag S A E J 61:80-3 Ag '53

How a new design is put into production; report of panel on experimental manufacturing. S A E J 61:60-2 O '53

Hydraulic clamping accelerates spar milling. il diags Mach 59:180-1 Ja '53

Integral construction; its application to aircraft design and its effect on production methods. E. D. Keen. il diags Roy Aeronautical Soc J 57:215-27 Ap '53; Discussion. 57:461-2 Jl '53

Low cost blanking dies for light gage aircraft parts. G. V. Rutkoskie. il Automotive Ind 107:66-8 O 1 '52

Metal-to-metal bonding in aircraft; Redux process. N. A. de Bruyne. il Engineer 195: 511 Ap 3 '53

Optical methods simplify tooling problems. A. E. Rylander. il diags Tool Eng 31: 42-6 S '53

Pop rivet fasteners for aircraft. G. C. Bailey and P. C. Ergler. il diags Product Eng 24:191-8 My '53

Press-extruded forgings; Northrop aircraft corp. L. M. Christensen. il diag Machine Design 25:124-7 Jl '53

Properties, processing and uses of metal-bonding adhesives. O. W. Loudenslager. bibliog il diags Rubber Age 73:641-7 Ag '53; Same abr. Tool Eng 30:78-84 Ap '53

Removing wrinkles in formed aluminum sheets; North American aviation, inc. G. C. Close. il diags Mach 60:188-90 S '53

Republic finds way to beat engineer shortage; break it down, make things simple. I. Stone. il diag Aviation W 58:35-6+ Ap 13 '53

Rubber-forming kink cuts wrinkles at Convair. R. B. Stanton. il Am Mach 97:132 My 25 '53

Sheet magnesium problem licked. il diag Aviation W 58:40 Ja 12 '53

Spinning non-circular aircraft components; Boeing airplane co. J. S. Walker. il Mach 60:194-6 O '53

Stainless steel aircraft nacelles present many production problems; Solar aircraft co. J. A. Logan. il Automotive Ind 107:48-9+ D 1 '52

Tips on forming and joining sheet metal; report of panel on precision forming and joining. S A E J 61:31-3 O '53

Unitized designs are replacing built-up assemblies. C. F. Marschner. il diags Product Eng 24:199-201 My '53

Use of rivets and other fasteners; report of panel on fastening and mechanical joining. R. L. Hand. il S A E J 61:41-3 Je '53

See also

Airplane factories

Airplanes—Welding operations

Airplanes, Military—Manufacture

Automobile factories—Airplane manufacture

Materials

Accelerating new material use; titanium in current and future aircraft. J. Van Hamersveld. Machine Design 25:318+ O '53

Air industry use of titanium booms. Aviation W 57:15 N 10 '52

Aircraft industry gets steady flow of nickel. Aviation W 58:41-2 Ap 6 '53

Aircraft makers study use of Redux. I. Stone. il diags Aviation W 58:48+ Ap 6 '53

Aluminum honeycomb sandwich structures. il diags Product Eng 24:184-91 F '53

Application of titanium sheet-strip limited by presently available alloys. J. W. Sweet. il J Metals 5:143-5 F '53

Convair pushes metal adhesive studies. il Aviation W 58:40-1+ F 23 '53

Determination of plate compressive strengths at elevated temperatures. G. J. Heimerl and W. M. Roberts. il U S Nat Advisory Com for Aeronautics 1950:251-6 '51

Ductile iron applications expand. il Automotive Ind 108:42-3 Mr 1 '53

Elastomers; rubberlike materials. C. M. Miller. S A E J 61:32-5 Je '53; Same cond. Machine Design 25:270+ Mr '53

Experimental titanium applications. D. I. Brown. il Iron Age 170:264-7 O 9 '52

Fatigue. H. L. Cox. il diags Roy Aeronautical Soc J 57:559-65 S '53; Abstract. Engineering 175:570 My 1 '53; Discussion. Roy Aeronautical Soc J 57:589-91 S '53

Fatigue properties of *Z*-section test pieces completely machined from an aluminium alloy extrusion conforming to D.T.D. 364B. G. Forrest and others. il diags Roy Aeronautical Soc J 57:103-7 F '53

Flexural fatigue strength of anodized 24ST aluminum-alloy sheet. C. B. Cliett. diags Aeronautical Eng R 11:29-30+ D '52

Industry-government meeting hears what to do about materials shortages. I. Stone. il Aviation W 58:28-30+ Ap 20 '53

Large magnesium castings for the airframe industry; abstract. R. H. Osbrink. Light Metal Age 10:19-20 D '52

Magnesium finishes for aircraft evaluated. H. D. Childers. il diags Iron Age 170:157-61 D 4 '52

Magnesium gains favor as plane metal. I. Stone. il Aviation W 57:31-4 D 29 '52

New components for air-frame construction. J. F. Faulkner and J. H. Alden. il diags Aeronautical Eng R 11:28-35 O '52

New materials; abstracts of SAE annual meeting papers. S A E J 61:80A-80H F '53

New materials and methods for aircraft construction. H. J. Pollard. bibliog il diag Roy Aeronautical Soc J 57:277-93 My '53; Excerpts. Engineer 195:366-8 Mr 6 '53; Abstract. Engineering 175:539 Ap 24 '53; Discussion. Roy Aeronautical Soc J 57:293-300 My '53

New materials forms required for high speed planes of the future. T. E. Piper. il diags Automotive Ind 107:42-5+ S 15 '52; Same. Aero Digest 65:64+ N '52; Abstract. Product Eng 23:198-9 O '52

New materials in air picture. Aviation W 58:104+ Mr 2 '53

New materials in limelight at annual SAE meeting. Materials & Methods 37:8+ Mr '53

NAA reveals titanium experience. il Aviation W 58:21-2+ F 2 '53

Present and future requirements of rubber-like materials for a global air force. E. R. Bartholomew. bibliog Rubber Age 72:64-8 O '52

Production of titanium aircraft parts. W. L. Finlay. diags Tool Eng 31:131-2 O '53

AIRPLANES—Materials—*Continued*

Protective finishing of aluminum for aircraft. D. Armstrong. il Metal Prog 63:104-8 Je '53

Tensile properties of some aircraft structural materials at various rates of loading. R. F. Klinger. il diags Am Soc T M Proc 50:1035-50; Discussion. 1051-3 '50

Titanium alloys for aircraft engine forgings; abstract. L. R. Frazier. Automotive Ind 108:86 F 15 '53

Titanium in airframes; abstract. F. R. Kostoch. Automotive Ind 108:90+ F 15 '53

Titanium is vital to the air force. J. N. Dick. J Metals 5:133-5 F '53

Titanium tests; Ryan studies new uses in aircraft structures. il Aviation W 58:41 My 4 '53

Titanium, today and tomorrow; based on papers by C. I. Bradford and others. il diags S A E J 61:20-4 My; 56-65 Je '53

Today's aluminum aircraft alloys. J. A. Nock, jr. S A E J 61:65-7 Mr '53

U.S. air force rubber development program. W. Postelnek. il Chem & Eng N 31:1958-60 My 11 '53

Use of castings in airframe design. A. H. Petersen. il diags Metal Prog 62:67-72 N '52

Working titanium at North American. G. A. Fairbairn. il Mach 59:182-7 Jl '53

Plastics

Aircraft designer analyzes reinforced plastics. N. C. Parrish. diags Automotive Ind 108:38-40+ Mr 1 '53

Designers seek plastics knowhow. W. E. Braham. il Aviation W 58:42-4 Mr 23 '53

Douglas mass-produces plastic airframe parts. G. C. Close. il Mach 59:196-8 Ap '53

Durestos plastic glider wing. il Engineering 175:730 Je 5 '53

Effects of moderate biaxial stretch-forming on tensile and crazing properties of acrylic plastic glazing. B. M. Axilrod and others. bibliog il diag J Res Nat Bur Stand 49: 331-42 N '52; Same cond. Mod Plastics 30: 117-18+ D '52

Flak won't shatter new canopy. il Aviation W 58:45 My 11 '53

Foam plastic adds strength to aircraft structures. il Product Eng 23:199 N '52

Foam plastic is lightweight stiffener. il Aviation W 57:35-6+ O 27 '52

Glazing of aircraft. E. W. Russell. il diags Mod Plastics 30:119-20+ Mr '53

High temperature phenolics; abstract. W. E. Braham. Automotive Ind 108:53-4 Ap 1 '53

How glass-plastic wing is fabricated. I. Stone. il diags Aviation W 58:50-4 Je 1 '53

Improvement of acrylic aircraft glazing by stretch-forming. Franklin Inst J 254:326-8 O '52

Lightweight foamed plastic strengthens aircraft components; Lockfoam. il Automotive Ind 108:41+ Mr 1 '53

Lockfoam filled-in-place structures. J. M. Gerschler. il S A E J 61:24-8 F '53

Low-pressure laminates. R. King. il diags Machine Design 25:112-22 Mr '53

New transparent plastics for aircraft enclosures; abstract. G. E. Hughes. S A E J 61:38 Ja '53

Planes take on plastics. R. L. Whann and others. S A E J 60:43 D '52

Plastic foam replaces ribs in airplane control surfaces. il Automotive Ind 107:92 D 1 '52

Plastic tanks will save aluminum. Aviation W 58:59-60+ My 18 '53

Plexiglas craze-resistance raised. G. L. Christian. Aviation W 58:53-4 Ja 19 '53

Reinforced plastics in aircraft design; abstract. W. G. Ramke. Automotive Ind 108: 92+ Ap 1 '53

Storage room for laminated acrylic; dehumidifier supplies ultra-dry air. F. M. Johnson. flow diag il Mod Plastics 30:111+ D '52

Where plastics are used in air liners. H. H. Rosenbaum. il Materials & Methods 38:100-1 Ag '53

Model testing

Differential inductance telemeter equipment for force and moment measurements. R. W. F. Gould. diags Roy Aeronautical Soc J 57: 416-19 Je '53

Supersonic props tested on model. il Aviation W 57:16 O 20 '52

Models

See Airplane models

Noise

Acoustic screening by an experimental running-up pen. J. D. Hayhurst. il plan Roy Aeronautical Soc J 57:3-11 Ja '53

Aerodynamic profile as acoustic noise generator. M. Kramer. J Aeronautical Sci 20: 280-2+ Ap '53

Aeronautical acoustics; joint discussion by Royal aeronautical society and Physical society Acoustics group, London, May 21. Engineering 175:733-4 Je 5 '53

External aircraft noise. K. D. Swartzel. bibliog Aeronautical Eng R 12:49-54 Mr '53

Hawker theory explains sonic bang; boom builds up from noise of jet aircraft. Aviation W 58:21-2+ F 23 '53

Noise, a problem in air transport and in ground operation. J. E. Lett. diag Aeronautical Eng R 12:65-8 Ap '53

Problem; how to make jet engines quieter. il Bsns W p 124-6+ D 6 '52

Some aspects of noise from supersonic aircraft. G. M. Lilley and others. bibliog il diags Roy Aeronautical Soc J 57:396-414 Je '53; Abstract. Engineering 175:439-40 Ap 3 '53

Sound-level measurements of a light airplane modified to reduce noise reaching the ground. A. W. Vogeley. bibliog il U S Nat Advisory Com for Aeronautics 1949: 115-20 '51

Unsolved military noise problems. L. L. Beranek. bibliog Acoustical Soc Am J 24: 769-72 N '52

See also

Airplane engines—
Noise

Passenger load

ATA rejects UAL coach safety charges. L. Moore. il Aviation W 57:63-4 D 22 '52

Seat reduction; only part of the story. R. C. Robson. Aviation W 57:100 D 8 '52

UAL presents case against coach seating. L. Moore. map Aviation W 57:13-15 D 8 '52

Performance

Effects of electronic equipment standardization on aircraft performance; abstract. G. C. Sumner. Product Eng 24:302+ My '53

Engineering comparison of wing planforms for supersonic speeds. K. E. Van Every. bibliog diags Automotive Ind 108:60-3+ F 1 '53; Same abr. S A E J 61:48-54 S '53

ICAO plans new transport yardstick. Aviation W 58:21 My 18 '53

Pneumatic equipment

Pneumatic actuating systems in the U.S. air force. R. R. Bayuk. diag S A E J 61:72-5 O '53

Pneumatics in the sky. il Comp Air Mag 58: 226-7 Ag '53

Pneumatics threaten hydraulic supremacy in aircraft design. il Product Eng 24:199 Ja '53

Pressure sensing calculations for aircraft and guided missiles. J. D. Humphreys. il diags Tele-Tech 12:82-3+ Ap '53

Prices

Why do modern aircraft cost so much? J. W. Barton. Aviation W 58:46+ My 25 '53

Private ownership

Turning an old workhorse into a flying lounge. il Bsns W p 112-13+ Mr 21 '53

Radio equipment

See Radio apparatus on aircraft

Reconstruction

C-46 fire safety, power updated. il Aviation W 58:80-2 Ja 19 '53

Refueling

Development of probe and drogue refuelling. P. S. MacGregor. il diags Roy Aeronautical Soc J 57:510-19 Ag '53

Electro-pneumatic fuel transfer system. diag Engineering 176:151 Jl 31 '53

AIRPLANES—Refueling—*Continued*

In-flight refueling for airlines. I. Stone. Aviation W 57:65 D 22 '52

Pit refueler cuts apron hazards. il Aviation W 58:76 Ap 13 '53

Probe-and-drogue inflight refueling. G. L. Christian. il Aviation W 58:26-8+ Ja 26 '53

Registration

Registered aircraft and pilot certifications, 1927-1951; tabulations. Automotive Ind 108:241 Mr 15 '53

Safety measures

See Aviation—Safety measures

Seats

Breather pilot seat eases long flights. Aviation W 57:15 D 22 '52

Crash protection in air transports. J. P. Stapp. bibliog il diags Aeronautical Eng R 12:71-8 Ap '53

Explosive seats; Stratojet now being fitted with escape devices. Aviation W 58:13 Ja 5 '53

Good seat engineering saves lives. A. McSurely. il diag Aviation W 57:87-9 N 24 '52

Plane seating; restrictions on design scored. W. L. Littlewood. Aviation W 57:15-16 N 3 '52

Protective design in forward- and rearward-facing seats in transport aircraft; abstract. H. De Haven. S A E J 61:85 Jl '53

Rearward- and forward-facing seats. H. De Haven. Aeronautical Eng R 12:40-1 Mr '53

Specifications

Foreign military and civil aircraft; tabulation. Aviation W 58:236-7+ Mr 2 '53

U.S. and foreign civil aircraft; tabulations. Automotive Ind 108:254-6 Mr 15 '53

See also

Airplanes, Light—Specifications

Speed

Cochran sets sights on 700-mph. record. Aviation W 58:18 My 18 '53

Equilibrium temperature of an unheated icing surface as a function of air speed. B. L. Messinger. bibliog diag J Aeronautical Sci 20:29-42 Ja '53

Landing speed indicator tells pilot best air-speed. G. L. Christian. il diag Aviation W 58:67+ My 25 '53

Minimum comfortable cruising speed. C. F. Toms. Roy Aeronautical Soc J 57:180-2 Mr '53

Problem of aileron reversal at transonic speeds. B. A. Hunn. bibliog Roy Aeronautical Soc J 57:237-40 Ap '53

Radar method of calibrating airspeed installations on airplanes in maneuvers at high altitudes and at transonic and supersonic speeds. J. A. Zalovcik. diags U S Nat Advisory Com for Aeronautics 1950:661-7 '51

See also

Airplanes, Jet propelled

Stalling

Flight lab learns to tame stalls; Cornell aeronautical laboratory's Flight research department. S. H. Reiniger. Aviation W 57:29+ D 22 '52

Standards

CAB adopts airliner cockpit standard. A. McSurely. Aviation W 58:13-14 Ap 27 '53

Storage

Packing the Princess flying boats for storage. Engineering 175:203 F 13 '53

Stresses

Analysis of stiffened curved panels under shear and compression. M. A. Melcon and A. F. Ensrud. bibliog diags J Aeronautical Sci 20:111-19+ F '53

Centre of shear of aerofoil sections. J. A. Jacobs. bibliog diags Roy Aeronautical Soc J 57:235-7 Ap '53

Counting strain gauge. J. B. Lamble. il diags Engineering 174:168-70 Ag 8 '52

Creep collapse viscoelastic columns with initial curvatures. H. H. Hilton. bibliog diag J Aeronautical Sci 19:844-6 D '52

Deformations and stresses in symmetrically loaded circular plates of varying thickness. D. C. Boston. diags Roy Aeronautical Soc J 57:449-54 Jl '53

Elastic and plastic buckling of simply supported solid-core sandwich plates in compression. P. Seide and E. Z. Stowell. bibliog diags U S Nat Advisory Com for Aeronautics 1950:357-66 '51

Fatigue life of wing components for civil aircraft. K. Williams. bibliog Roy Aeronautical Soc J 56:842-8 N '52

Flexural centre or centre of shear. W. J. Duncan. bibliog Roy Aeronautical Soc J 57:594-7 S '53

Graphical shear and moment calculations. W. S. Beller. diags Aero Digest 66:21-4 Je '53

Inelastic instability and incremental theories of plasticity. E. T. Onat and D. C. Drucker. bibliog diags J Aeronautical Sci 20:181-6 Mr '53

Influence of edge conditions and initial deflections of a plate under normal pressure. S. Eggwertz and A. Norr. il diag Roy Aeronautical Soc J 57:343-4 My '53

Plastic buckling of a rectangular plate under edge thrusts. G. H. Handelman and W. Prager. bibliog U S Nat Advisory Com for Aeronautics 1949:479-506 '51

Recommendations for numerical solution of reinforced-panel and fuselage-ring problems. N. J. Hoff and P. A. Libby. bibliog diags U S Nat Advisory Com for Aeronautics 1949:249-77 '51

Scope and limitations of the photoelastic method of stress analysis. H. T. Jessop. bibliog il diags Roy Aeronautical Soc J 57:125-32 Mr '53; Same cond. Engineering 174:833-4 D 26 '52; Abstract. Aviation W 58:34+ Ja 12 '53; Discussion. Roy Aeronautical Soc J 57:132-40 Mr '53

Similarity laws for stressing heated wings. H. S. Tsien. diags J Aeronautical Sci 20:1-11 Ja '53

Simple gage shows plane stress. il Aviation W 57:33 N 17 '52

Solution for the rectangular membrane. S. F. Borg. bibliog J Aeronautical Sci 20:220-1 Mr '53

Statistical aspects of dynamic loads. Y. C. Fung. bibliog il J Aeronautical Sci 20:317-30 My '53

Strain energy proof of the elastic centre method for the analysis of frames. D. R. Samson. diag Roy Aeronautical Soc J 57:344-5 My '53

Stress analysis of circular frames in a non-tapering fuselage. K. J. Dallison. bibliog diags Roy Aeronautical Soc J 57:151-76 Mr '53

Stresses and deflection in a flat plate with clamped edges under normal pressure. J. K. Oaks. diags Roy Aeronautical Soc J 57:244-6 Ap '53

Struts

See Airplane struts

Tail buffeting

Application of statistical concepts to the buffeting problem. H. W. Liepmann. bibliog diag J Aeronautical Sci 19:793-800+ D '52

Tail surfaces

Aeroplane tail loads for longitudinal manoeuvres. G. W. Smith and J. B. Rea. diag Roy Aeronautical Soc J 56:789-800 O '52

Flight investigation of the effect of various vertical-tail modifications on the directional stability and control characteristics of a propeller-driven fighter airplane. H. I. Johnson. il diags U S Nat Advisory Com for Aeronautics 1950:453-71 '51

Take-off

Assisted take-off rocket motor; de Havilland aircraft co. Engineer 196:252 Ag 21 '53

Effect of afterbody length and keel angle on minimum depth of step for landing stability and on take-off stability of a flying boat. R. E. Olson and N. S. Land. il diags U S Nat Advisory Com for Aeronautics 1949:69-81 '51

FJ-2 nose gear. il Aero Digest 65:38 N '52

Lift raiser; boundary layer control studied in Cessna 309. il diags Aviation W 58:22+ Ja 19 '53

AIRPLANES—Take-off—*Continued*

Summary of section data on trailing-edge high-lift devices. J. F. Cahill. diags U S Nat Advisory Com for Aeronautics 1949:341-70 bibliog(p369-70) '51

Testing

Aircraft-structure testing equipment. il Engineering 175:48, 55-6 Ja 9 '53
Airframe test rig. il Engineer 194:794-5 D 12 '52
C-46 safety; recertification tests slated for all models. Aviation W 58:13 F 23 '53
Carrier amplifier has zero drift; stress and strain recording oscillographs for aircraft testing. A. Perone. il diags Electronics 25:131-3 D '52
Progress on the Britannia airliner. il Engineer 195:222-3 F 6 '53; Engineering 175:170 F 6 '53
Rate-of-descent indicator speeds aircraft tests. M. V. Barasch. il diag Electronics 26:190-2 Ag '53
Training of test pilots. A. E. Clouston. il Roy Aeronautical Soc J 57:39-44 Ja '53

See also

Aeronautic laboratories
Airplane engines—Testing
Airplanes, Military—Testing
Wind tunnels

Undercarriage

See Airplanes—Landing gear

Vibration

Experimental study of natural vibrations of cantilevered triangular plates. P. N. Gustafson and others. bibliog il diags J Aeronautical Sci 20:331-7 My '53
Method of calculating space free resonance modes of an aircraft. B. A. Hunn. diag Roy Aeronautical Soc J 57:420-2 Je '53
Tabular methods for flexural vibrations. W. T. Thomson. diags J Aeronautical Sci 20:62-4 Ja '53

Weight

Airplane weight and cost can be reduced. E. H. Heinemann. il Aeronautical Eng R 12:20-3 Ja '53
Realistic approach to structural weight estimation. A. Schnitt and W. H. Buckley. bibliog Aero Digest 66:76+ F '53

Welding operations

Fast roll-spot technique doubles welding speeds; Ryan aeronautical co. J. R. Fullerton. il Automotive Ind 109:46-7+ Ag 15 '53
Fusion welding of light-gage alloys; Rohr aircraft corp. J. T. Maloney. il Welding J 32:966-9 O '53
How we weld titanium; Rohr aircraft corp. T. R. Bradley. il Am Mach 96:123-5 O 13 '52
Novel methods arc weld high-strength alloys; Solar aircraft co. F. G. Harkins and H. C. Thompson. il diags Am Mach 96:119-24 D 8 '52
Resistance welding applications in aircraft stainless steels. D. O. Samuelson. il Welding J 32:603-11 Jl '53
Resistance welding in aircraft industry. il Aero Digest 66:42 Ja '53
Resistance welding in aircraft production: Ryan aeronautical co.; illustrations with text. Mach 59:174-5 Ja '53
Resistance welding of aircraft structures. J. Starr. il Aero Digest 65:50+ D '52
Rotating electrode simplifies handling of big wing tanks. il Iron Age 171:159-60 Ap 23 '53; Welding J 32:630 Jl '53
Solar rollwelder cuts jet costs. il Aviation W 58:62+ My 25 '53
Studies of the crack sensitivity of aircraft steels. A. W. Steinberger and J. Stoop. bibliog il Welding J 31:sup527-42 N '52; Discussion. 32:sup 157-60 Mr '53
Telescoping tubes spotwelded faster. il Aviation W 57:28+ O 27 '52
Weld seam roller speeds production; Ryan aeronautical co. il Mill & Factory 52:100 F '53

Windows

Conducting films on glass. Elec R (Lond) 152:1069-72 My 8 '53

AIRPLANES, Amphibious

High speed water-based aircraft. E. G. Stout. il diags S A E J 61:17-19 Mr '53
ROK float plane improvisation. E. L. Barker. il Aero Digest 66:44+ My '53

AIRPLANES, Flying wing

Avro Atlantic delta transport project. il Engineer 195:859 Je 19 '53; Engineering 175:819 Je 26 '53
Avro Delta 707C. il Engineer 196:84 Jl 17 '53
Avro Vulcan; evolution of a delta bomber. D. A. Anderton. il diags Aviation W 58:28-30+ My 4 '53

AIRPLANES, Freight

Better ground equipment need of air cargo operators. S A E J 61:90-1 Ja '53
Inspection methods keep output of flying boxcars on target; Fairchild engine and airplane co. A. H. Allen. il Metal Prog 64:97-104 S '53
Major aspects in the evolution of the modern transport airplane; abstract. M. G. Beard. S A E J 60:107-8 D '52
New Bristol freighter beefed up. il plans Aviation W 57:38 N 3 '52
New planes assigned to reserve fleet. Aviation W 57:87 N 24 '52
Ryan doubles C-97 aft fuselage output. il Aviation W 58:58-9 My 18 '53

Specifications

U.S. civil and military transport aircraft; tabulation. Aviation W 58:223 Mr 2 '53

AIRPLANES, Industrial

Florida Power & Light prefers a small plane. L. Inabnit. il Elec World News ed 139:16-17 Mr 30 '53

AIRPLANES, Jet propelled

Aero-engine noise. F. B. Greatrex. Engineer 195:775 My 29 '53
Aeronautics in 1952. il diags Engineer 195:24-6, pl 6-7, 55-7, 91-2 Ja 2-16 '53
AF Stratojet flies 12,000 mi. nonstop. Aviation W 58:19 My 25 '53
ALPA sets jet liner standards. Aviation W 58:20 Ap 13 '53
Application of the Ramjet to aircraft propulsion. M. Harned. il Aero Digest 66:44-6+ F '53
Boeing jet liner. Aviation W 57:18 D 1 '52
Boeing jet transport to cost $4 million. Aviation W 58:14 My 4 '53
Britain announces new jet liner; Vickers 1000. N. McKitterick. il Aviation W 58:16 F 9 '53
BOAC says Comets now pay own way. R. Hotz. il plans Aviation W 57:83-5 N 3 '52
British raising jet transport production. Aviation W 58:46+ Ap 27 '53
Cessna jet; new AF trainer. il Aviation W 58:15-16 Ja 12 '53
Civil jet operations. A. M. A. Majendie. il Roy Aeronautical Soc J 57:539-55; Discussion. 555-8 S '53
Comet and airworthiness. Economist 167:47-8 Ap 4 '53
Comet problem; complications develop as U.S. approval is sought. Aviation W 58:15-16 F 9 '53
Crash delays CPA Comet plans. Aviation W 58:17 Mr 9 '53
De Havilland Comet. C. T. Wilkins. Engineer 194:767-8 D 5 '52; Abstract. Engineering 174:735-6 D 5 '52
Evolution of the F-86 Sabre jet fighter. R. Rice. il diags Automotive Ind 108:45-8+ Ap 15 '53
Firebee engines; new Fairchild J44 and Marbore power drone. il Aviation W 58:17 F 23 '53
Flight testing and operational problems of an afterburner-equipped turbojet installation. R. R. Templeton. il diags Aeronautical Eng R 11:32-7 D '52
Flying a jet bomber in combat. D. Wood. il Aviation W 58:20-1+ Ap 27 '53
Four planes from two YF-93As; fast jets supplement windtunnels in NACA studies on inlets for missiles and high-speed aircraft. il Aviation W 57:18 N 3 '52
French develop new jet braking system. Aviation W 57:14-15 D 22 '52
Future of jet propulsion. F. K. Teichmann. Mech Eng 75:322 Ap '53; Same cond. Iron Age 171:193-4 Mr 5 '53
Future of the Comet. Engineer 194:564 O 24 '52

AIRPLANES, Jet propelled—*Continued*

Hawker theory explains sonic bang; boom builds up from noise of jet aircraft. Aviation W 58:21-2+ F 23 '53

Intercontinental jetliner. Mech Eng 74:912 N '52

Italian jet plane aims at economy. il diags Aviation W 57:25-6 D 8 '52

Jet airliners; year of decision. J. McDonald. il Fortune 47:124-9+ Ap; 128-31+ My '53

Jet autopilot locates target, fires, goes home. R. Kutzler. Elec Eng 72:355 Ap '53

Jet liner ground problems discussed. Aviation W 57:83 D 15 '52

Jet transport airplane. B. Salmon. Aviation W 58:34+ My 18 '53

Jet transport in policy muddle. Aviation W 58:17-18 Ap 20 '53

Jet transports; why U.S. holds back. il Bsns W p77+ Ap 18 '53

Lear raises Lodestar performance. il Aviation W 58:51 Mr 16 '53

Major aspects in the evolution of the modern transport airplane; abstract. M. G. Beard. S A E J 60:107-8 D '52

Meeting the jet transport challenge. J. G. Borger. S A E J 61:17-19 O '53

MATS still hoping for jet transport. Aviation W 57:79 D 15 '52

Money for jets; airlines will have relatively little trouble raising it. R. P. Cooke. Barron's 32:5 N 3 '52

New de-icer boot effective on jets. Aviation W 57:38 O 13 '52

Newer Comets; first mark two production versions on the line. N. McKitterick. Aviation W 58:17-18 Mr 30 '53

Nod to Hunter; Hawker entry beats out Swift for MSA funds. N. McKitterick. il Aviation W 58:15 Ja 19 '53

Operational aspects of jet transport design. E. C. Wells. il diag Aero Digest 66:17-21 My '53

PAA Comet certification battle looms. Aviation W 57:13 N 10 '52

PAA signs firm contract for Comet 3. il Aviation W 57:13-14 O 27 '52

Pan Am buys British jets for U.S. overseas runs. Bsns W p33 O 25 '52

Pan American details jet transport needs. J. Borger. Aviation W 58:59-60 Mr 16 '53

Research on aerodynamic noise from jets and associated problems. E. J. Richards. bibliog il diags Roy Aeronautical Soc J 57:318-42 My '53

Rolls-Royce Avons show 600-hour life. il Aviation W 58:36+ Je 1 '53

Running phantom jet transports. Bsns W p92+ My 30 '53

Serviceability of the Comet airliner. Engineering 175:745-6 Je 12 '53

Some aspects of high performance jet aircraft. W. A. Waterton. Roy Aeronautical Soc J 57:375-86 Je '53; Excerpts. Engineer 195:507-10 Ap 3 '53; Abstract. Engineering 175:396-7 Mr 27 '53; Discussion. Roy Aeronautical Soc J 57:386-90 Je '53

Some aspects of jet transport work. E. M. G. MacGill. Midwest Eng 5:7-8+ D '52

Speed record; F-86D tops 700 mph. il Aviation W 57:17 D 1 '52

Taking the fog out of jet planes; compressed air helps Boeing engineers design equipment for removing moisture from cabins. J. Starr. il diag Comp Air Mag 57:314-15 N '52

Target; airfields that can take it. il Chem W 72:24 F 21 '53

Temperature control of jet-engined aircraft. E. W. Still. il diags Roy Aeronautical Soc J 57:89-102 F '53

Unhappy landings; high-flying jets are having trouble on the ground. R. P. Cooke. Barron's 33:5 F 23 '53

U.S.-British talks seek jet standards. Aviation W 58:88-9 F 2 '53

U.S. plans jet liner ceiling. Aviation W 58:36 Mr 2 '53

U.S. sets jet liner sights high; ATA specs. F. L. Moore. Aviation W 57:15-16 O 13 '52

When is a jet airworthy? British, CAA disagree. Bsns W p29 Ja 24 '53

Why Boeing undertook Project X. W. E. Beall. il Aero Digest 66:24-5 F '53

See also

Gas turbines, Aircraft

Rocket propulsion

AIRPLANES, Light

Camera closeups of new Cessna 180. il Aviation W 58:18 F 23 '53

Cessna opens 1953 sales drive. A. McSurely. il diag Aviation W 57:18 D 15 '52

Cessna scents a boom, gives it a boost. il Bsns W p32-3 Mr 7 '53

Distributors see 1953 Pipers. il Aviation W 57:16 N 10 '52

Ducted fan jet; powerplant for future light aircraft; based on papers by C. F. Bachle and W. Collins. il S A E J 60:26-8 N '52

Glider-copter-bike-plane planned. diag Aviation W 58:41 Ja 5 '53

Lightplane sales in '52. Aviation W 58:18 F 16 '53

New Aeronca; company re-enters civil field with twin transport. Aviation W 58:15 Mr 9 '53

Prediction of the effects of propeller operation on the static longitudinal stability of single-engine tractor monoplanes with flaps retracted. J. Weil and W. C. Sleeman, jr. bibliog diags U S Nat Advisory Com for Aeronautics 1949:399-418 '51

Sound-level measurements of a light airplane modified to reduce noise reaching the ground. A. W. Vogeley. bibliog il U S Nat Advisory Com for Aeronautics 1949:115-20 '51

South American airlines use lightplanes. A. McSurely. il Aviation W 57:47 D 29 '52

Twin-Bonanza built for safety. A. McSurely. il diag Aviation W 58:16-17 Ja 5 '53

Utility planes; illustrations and drawings with brief descriptions. Aero Digest 66:54-6+ Mr '53

Control

Automatic rudder in production; Javelin's autopilot for lightplanes. P. Klass. il diag Aviation W 58:34+ Mr 23 '53

Design

Safety built in; feature claimed for all-metal Helioplane. Aviation W 57:17 N 24 '52

Specifications

U.S. personal and executive aircraft; tabulation. Aviation W 58:224+ Mr 2 '53

AIRPLANES, Military

Aeronautics in 1952. il diags Engineer 195:55-7, 91-2 Ja 9-16 '53

Aircraft cost reduction. W. G. Bain. S A E J 61:46-7 Ag '53

Aircraft weight and cost can be reduced; abstract. E. H. Heinemann. Aviation W 57:17 O 20 '52

Castings play important part in developing air strength. W. T. Hefley. Foundry 81:190-1+ Mr '53

Chance Vought builds last Corsair. il Aviation W 58:16 Ja 26 '53

Combat-ready aircraft. B. A. Schriever. Aeronautical Eng R 12:34-8 F '53

Combat tire report from Korea. R. P. Martin. Aviation W 57:36 D 29 '52

FJ-2 nose gear. il Aero Digest 65:38 N '52

Flush-mounted antennas for military aircraft; illustrations with text. diags Tele-Tech 11:58-9+ O '52

Flying a jet bomber in combat. D. Wood. il Aviation W 58:20-1+ Ap 27 '53

Green light for titanium aircraft. Steel 131:52-3 D 1 '52

How NAA revitalizes our war-weary combat F-86s from Korea. il Aviation W 58:22-3 Mr 9 '53

Influence of military aviation on civil air transport. F. H. Page. Engineer 195:677-9 My 8 '53

International air salon, 20th, Paris, June 25-July 5. il diag Engineering 176:42-4, 73-6, pl 5-6 Jl 10-17 '53

Jet age problems; Air force association 6th annual convention, Detroit, Aug. 30-Sept. 1; symposium. Automotive Ind 107:49+ O 1 '52

Lear damper steadies F-86D. P. Klass. il Aviation W 58:59-60 F 16 '53

Magnesium in military aircraft; abstract. D. H. Black. il Light Metal Age 10:20-1 D '52

Navy's patrol planes. il U S Naval Inst Proc 78:1356-65 D '52

Nod to Hunter; Hawker entry beats out Swift for MSA funds. N. McKitterick. il Aviation W 58:15 Ja 19 '53

AIRPLANES, Military—*Continued*

NATO aircraft; contract terms near on Hawker, Mystere buying. R. Hazeltine. Aviation W 58:22+ Mr 30 '53

NATO orders five jet fighter types. Aviation W 58:17 My 4 '53

Off-shore buying team near decision; Pentagon awaits report of industry-AF group. R. B. Hotz. Aviation W 57:13-14 O 13 '52

Physiological problems of high performance military aircraft; abstracts. W. K. Stewart. Engineer 194:357-8 S 12 '52; Engineering 174:370 S 19 '52

Pilot is the limit; aircraft performance is exceeding ability of the human pilot to control it; the answer may be the gyroscope. A. V. Sommer. il diag Aero Digest 65:17-25 D '52

Prone flight vision. G. O. Emerson. Aero Digest 66:98-101 My '53

Rocket firing device in the F-86D Sabre jet interceptor. il Mech Eng 75:399-400 My '53

Sabres still rule skies over MiG alley. R. P. Martin. il Aviation W 57:13-15 N 3 '52

Silicones help Convair B-36 fight cold. il Aviation W 58:38-9+ Mr 30 '53

S.B.A.C. flying display and static exhibition. il Engineer 194:324-6 S 5 '52; Engineering 174:304, 309-10 S 5 '52

Titanium is vital to the air force. J. N. Dick. J Metals 5:133-5 F '53

Will prone flight lick high G-loads? D. A. Anderton. il diags Aviation W 57:21-2+ D 29 '52

See also

Airplanes, Military transport

Guns, Aircraft

Helicopters—Military use

Conversion

Canberra conversion. R. S. Williams. il Aero Digest 65:22-5 N '52

Design

Avro Vulcan; evolution of a delta bomber. D. A. Anderton. il diags Aviation W 58:28-30+ My 4 '53

Complexity problem. J. K. Northrop; A. U. Houle. Aviation W 57:98 N 3; 102 N 10; 90 N 17; 102 D 8; 94 D 15 '52

Designer's view of combat aircraft reliability. I. H. Driggs and J. E. Forry. S A E J 61:61-4 F '53

Evolution of the F-86 Sabre jet fighter. R. Rice. il diags Automotive Ind 108:45-8+ Ap 15 '53

Exclusive report on M.D. 452 Mystere. D. A. Anderton. il diags Aviation W 57:21-2+ N 10 '52

Flight investigation of the effect of various vertical-tail modifications on the directional stability and control characteristics of a propeller-driven fighter airplane. H. I. Johnson. il diags U S Nat Advisory Com for Aeronautics 1950:453-71 '51

Fugitive MiG closeup shows new details; with notebook sketches. il Aviation W 58:17-19 Ap 13 '53

Interim interceptor; an analysis. D. A. Anderton. il Aviation W 58:28-30+ Mr 23 '53

Production details on Republic F-84F. I. Stone. il diags Aviation W 57:31-2+ D 15 '52

Two paths to day fighter superiority. D. A. Anderton. il Aviation W 58:30-2+ Ap 27 '53

Vought Corsair. il Aero Digest 65:26-32+ D '52

Why Gloster gave Javelin a delta wing. D. A. Anderton. il diags Aviation W 57:21-2+ O 20 '52

Drawings

Chase C-123B. Aero Digest 66:30-1 Je '53

Convair B-36H flight deck. il Aviation W 57:32 D 1 '52

Douglas C-124A Globemaster II. Aero Digest 65:28-9 N '52

Lockheed P2V-6 Neptune. Aero Digest 66:30-1 Ap '53

Vought Corsair AU-1. Aero Digest 65:28-9 D '52

Equipment

Apparatus for varying effective dihedral in flight with application to a study of tolerable dihedral on a conventional fighter airplane. W. M. Kauffman and others. bibliog il diags U S Nat Advisory Com for Aeronautics 1949:529-44 '51

Automatic focusing device improves reliability of searchlights. Elec Eng 71:1100 D '52

Automatic rocket-firing device for jet interceptors. il Elec Eng 72:397 My '53

Avionics puts fighter on target. il Aviation W 58:139-40+ Mr 2 '53

Complexity or necessity? W. R. Enyart. il Aero Digest 66:17-20 Ap '53

Digital computer trend seen; airborne gunnery, bombing, and navigation computers. P. Klass. il Aviation W 57:27+ D 29 '52

Electronic equipment in fighter aircraft. A. R. Andersen. Elec Eng 72:64-7 Ja '53

Equipment, heart of the airplane. il diag Aero Digest 65:84-6+ O '52

Measuring air-density for aircraft gunnery computers. H. F. Colvin, 3d. diags Tele-Tech 12:68-70+ S '53

Radar orders fly W-3A autopilot. P. Klass. il Aviation W 57:46+ O 13 '52

Slide-in subassemblies simplify wiring and soldering of navy aircraft computer. W. F. Weber. il Electronics 25:292+ N '52

Two-in-one unit for yaw, attack angles. P. Klass. il Aviation W 58:49-50 Ja 5 '53

Manufacture

Application of integral construction to aircraft design and its effect on production methods; abstract. E. D. Keen. Engineering 175:393 Mr 27 '53

Experts analyze heavy press problems. I. Stone. il plan diags Aviation W 58:20-1+ Ja 5 '53

Honeycomb construction used for dive brake door on North American F-86 Sabrejets. il Machine Design 25:192-3 Ag '53

Lockheed's subcontracting program. il diags Automotive Ind 107:90 O 1 '52

Massive fixtures required for making C-123B transport. il Automotive Ind 108:62-3 Je 1 '53

Northrop tooling technique reduces aircraft part cost. il diags Automotive Ind 108:40-2 Je 15 '53

Progress made in heavy forge-press art. I. Stone. il Aviation W 57:50-2+ N 17 '52

Seventeen heavy presses to speed air force production. Tool Eng 29:90 N '52

300-ton stretch press for increasing Canberra production. il diag Automotive Ind 107:52-3 O 15 '52

Reconstruction

How to make B-26 a luxury ship. il Aviation W 58:82-3 My 11 '53

Specifications

U.S. and foreign military aircraft; tabulation. Automotive Ind 108:250-2 Mr 15 '53

U.S. military aircraft; tabulations. Aviation W 58:220-1 Mr 2 '53

Testing

Facilities and equipment for testing high-speed aircraft at Air force flight test center. J. S. Holtoner and F. J. Ascani. il map S A E J 61:56-61 Ja '53

Flying boats tested in huge steel dock. il Automotive Ind 109:49 Jl 15 '53; Machine Design 25:184 S '53

Canada

Survey of Canada's aviation history. J. Montagnes. il Automotive Ind 108:52+ My 15 '53

France

Exclusive report on M.D. 452 Mystere. D. A. Anderton. il diags Aviation W 57:21-2+ N 10 '52

French announce Mach 1.5 interceptor. R. Hazeltine. il Aviation W 58:15 Mr 16 '53

Great Britain

Bomber for Christmas; Handley Page bomber. il Economist 166:43-4 Ja 3 '53

Britain gets set to produce its aces. D. A. Anderton. il Aviation W 57:20-2+ O 27 '52

British set sights on subsonic jet bomber force. N. McKitterick. il Aviation W 58:18 Ja 12 '53

Crescent wing bomber aircraft; Handley Page H.P.80. il diags Engineering 175:21 Ja 2 '53

Select committee in the clouds. Economist 167:764-5 Je 13 '53

Why Gloster gave Javelin a delta wing. D. A. Anderton. il diags Aviation W 57:21-2+ O 20 '52

AIRPLANES, Military—*Continued*

Italy

Italian jet plane aims at economy. il diags Aviation W 57:25-6 D 8 '52

Russia

Allies get look at intact MiG. il Aviation W 58:16-17 Mr 16 '53

Curtain is raised on red Ilyushin jets. D. A. Anderton. il Aviation W 58:30-1+ Mr 30 '53

Fugitive MiG closeup shows new details; with notebook sketches. il Aviation W 58:17-19 Ap 13 '53

Polish pilot describes improved MiG. W. J. Coughlin. Aviation W 58:14 Je 1 '53

Red air forces. il Fortune 47:120-1+ F '53

Sweden

Sweden's aircraft industry operates underground. H. G. Tonndorf. il Automotive Ind 109:54-7+ O 15 '53

United States

AF plans $15-million F-89 fix. Aviation W 57:16 D 1 '52

B-47 workout. il Aviation W 58:17 Ap 27 '53

Chase C-123B. il Aero Digest 66:28-32+ Je '53

Developing the navy G-3 automatic pilot. C. G. Yates. il diags Aero Digest 65:78-80+ N '52

Explosive seats; Stratojet now being fitted with escape devices. Aviation W 58:13 Ja 5 '53

F-86D's rocket launcher shown. il Aviation W 58:16 Mr 23 '53

F3Ds outfly red night fighters in Korea. R. Hotz. il Aviation W 58:13-14 F 9 '53

High speed water-based aircraft. E. G. Stout. il diags S A E J 61:17-19 Mr '53

Higher, faster, farther. il Fortune 46:116-20 O '52

Lockheed P2V Neptune. il diags Aero Digest 66:28-32+ Ap '53

Military planes; illustrations and drawings with brief descriptions. Aero Digest 66:18-32+ Mr '53

Naval aircraft; new designs promise more business for plane makers. R. P. Cooke. Barron's 33:9-10 Mr 16 '53

Naval combat airplane. il Aero Digest 65:62-4+ O '52

Plane fastener fight nears end; military may accept Camloc quick-release type. A. McSurely. Aviation W 58:17-18 F 9 '53

Planes head new want list. il Bsns W p28-9 D 27 '52

Reds fly captured Sabres in combat. W. J. Coughlin. il Aviation W 58:13-15 My 18 '53

Rockets push XF-91 past Mach one. il Aviation W 57:17 D 15 '52

Supersonic plane to use hydro-ski gear. il Aviation W 57:13-14 D 1 '52

Temco fights for slow cutbacks. A. McSurely. Aviation W 58:15-16 Je 1 '53

This week; illustrations with text. Bsns W p33 D 13 '52

U.S. air force combat airplane. il Aero Digest 65:26-32+ O '52

USAF orders F-100 into production. Aviation W 57:17 N 3 '52

Vought fighter wins navy competition. Aviation W 58:18 Je 1 '53

AIRPLANES, Military transport

Assault transport details; illustrations with text. Aviation W 58:45 My 25 '53

C-119 fuselage, tail sections beefed up. Aviation W 58:17 Mr 16 '53

C-124 passing combat test in Korea. R. P. Martin. il Aviation W 57:62-4+ N 17 '52

Details of new Turboprop C-130. il Aviation W 58:14 F 23 '53

Douglas C-124A Globemaster II. C. W. Davies. il diags Aero Digest 65:26-32+ N '52

MATS still hoping for jet transport. Aviation W 57:79 D 15 '52

New Chase carrier makes debut. H. Lefer. il Aviation W 58:15-16 Ap 27 '53

Specifications

U.S. civil and military transport aircraft; tabulation. Aviation W 58:223 Mr 2 '53

AIRPLANES, Pilotless

Air force's newest pilotless aircraft. Tele-Tech 12:155 Ap '53; Elec Eng 72:473-4 My '53; il Mech Eng 75:398-9 My '53

Firebee engines; new Fairchild J44 and Marbore power drone. il Aviation W 58:17 F 23 '53

Jet pilotless drones collect data on radiological hazards in atomic clouds. il Elec Eng 72:567 Je '53

Pilotless jet planes recovered by parachute at 600 mph speeds. Elec Eng 72:470-1 My '53

AIRPLANES, Private. See Airplanes—Private ownership

AIRPLANES, Target

Air force's newest pilotless aircraft. Tele-Tech 12:155 Ap '53; Elec Eng 72:473-4 My '53; il Mech Eng 75:398-9 My '53

Drone saver; Q-2's parachute system recovers target jets. il Aviation W 58:28-9 Mr 9 '53

Pilotless drone aircraft used as target for defense weapons. Elec Eng 72:473-4 My '53

AIRPLANES, Training

AF orders 500 Beech trainers. il Aviation W 58:21 Mr 30 '53

Cessna jet; new AF trainer. il Aviation W 58:15-16 Ja 12 '53

Italian jet plane aims at economy. il diags Aviation W 57:25-6 D 8 '52

NAA sells T-28B trainer to navy. Aviation W 57:18 O 13 '52

Ryan reveals jet trainer design. il Aviation W 58:19 My 25 '53

AIRPLANES, Transport. See Airplanes, Military transport

AIRPLANES in advertising

Neon in the sky; form of aerial advertising in which neon lighting is employed. Electrician 149:1086 O 10 '52

AIRPLANES in agriculture

Business, farm flying continue growth. Aviation W 58:163+ Mr 2 '53

AIRPLANES in business

And they're back home by Friday. il Sales Management 69:27 O 15 '52

Business builds air fleet; company-owned airplane; many uses. H. F. Weeks. il Dun's R 61:25-6+ Ap '53

Business, farm flying continue growth. Aviation W 58:163+ Mr 2 '53

Chemical businessmen in the air. il Chem W 71:70-1+ D 13 '52

Flying high; company owned planes; Youngstown airways, inc. has a service plan. Steel 131:74 N 24 '52

AIRPLANES in construction work

Airborne construction equipment; abstract. R. G. Alexander. S A E J 60:54 N '52

AIRPLANES in engineering

Cotton cord and biplane lay line on tough terrain. Elec World 139:118+ Mr 9 '53

AIRPLANES in insect control

Aerial spraying hazardous for pilots, nerve racking for ground crews. F. Lowe. Pulp & Pa of Can 54:164 Jl '53

Budworms frustrated, softwood stands saved in 1953's $3 million air-spray assault. il map Pulp & Pa of Can 54:136-7 S '53

Effective New Brunswick spraying spurs plans for further operations. Paper Ind 34:958 N '52; Same cond. Pulp & Pa of Can 53:140 O '52

New Brunswick attack on spruce budworm declared successful. il Paper Ind 35:541-2 Ag '53

AIRPLANES in mining

Airborne exploration methods. F. W. Hinrichs. il map diags Min Cong J 39:46-9 My '53

AIRPORT buildings

Airport building has nose-in dock; Miami international airport. il Eng N 149:57-9 O 2 '52

Airport terminal building bids sought. il Eng N 150:52 Ja 29 '53

Entirely architect-designed; municipal airport, Shreveport, La. il plans diags Arch Rec 113:123-31 F '53

New terminal under way for Newark airport. il Arch Rec 112:26+ N '52

Unique use of revenue bonds at Denver's growing airport. il plan Eng N 150:57-60 Ja 1 '53

See also

Hangars

Air conditioning

Air conditioning terminal building; Greater Pittsburgh airport. T. F. Rockwell. il Heating-Piping 25:79-83 F '53

AIRPORT buildings—*Continued*

Heating and ventilation

Heating airport terminal building; Greater Pittsburgh airport. T. F. Rockwell. il diag Heating-Piping 24:77-80 D '52

AIRPORTS

Activity booms on Nation's new airports. il Eng N 150:48 Je 18 '53

Aircraft design as related to airport standards. M. W. Arnold. plan Am Soc C E Proc 77[no 93]:1-8 O '51; Discussion. J. H. Geisse. 78 [no D-93]:1-3 D '52

Airports by class and by type; tabulation. Aviation W 58:166-7 Mr 2 '53

Expansion of two airports may cost more than $12.2 million. il Eng N 150:52+ Mr 26 '53

Final approach visibility studies at airports in the United States. B. C. Haynes. bibliog il map diags Aeronautical Eng R 12:44-8 Mr '53

Target; airfields that can take it. il Chem W 72:24 F 21 '53

See also
Hangars

Bibliography

Highway and airport digest. diags Published in monthly numbers of Public works

Construction

At Safety's Morocco base. il Nat Safety N 67:18-19+ My '53

Control towers

See Airports—Traffic control towers

Cost

Airport paving, Detroit; unit prices. Eng N 150:77 Je 25 '53

Airport paving, Louisiana; unit prices. Eng N 150:92 Je 11 '53

Hangar paving and utilities, N.Y.; unit prices. Eng N 149:69 N 27 '52

Runway extensions, Kansas; unit prices. Eng N 150:56 Ja 1 '53

Design

Aerodrome to guard against jet blasts. il Eng N 150:71 Je 4 '53

Entirely architect-designed; municipal airport, Shreveport, La. il plans diags Arch Rec 113:123-31 F '53

Recent airport design and development. P. A. Hahn. Am Soc C E Proc 79 [no 196]: 1-8 Je '53

Equipment

Acoustic screening by an experimental running-up pen. J. D. Hayhurst. il plan Roy Aeronautical Soc J 57:3-11 Ja '53

Aircraft maintenance dock of unit construction. il diags Engineering 175:89 Ja 16 '53

British European Airways docking facilities. il Engineer 195:433 Mr 20 '53

Civil aviation communications; new Ministry of civil aviation centre at Croydon. il Elec R (Lond) 152:419-20 F 20 '53

New TVOR sells under $10,000. il Aviation W 57:42+ N 17 '52

Passengers come first; gangplanks for weather protection; illustrations with text. H. M. Henion. S A E J 61:77 Ag '53

Proposed mobile gate house. E. W. Fuller. plans diag S A E J 61:36-9 Ap '53

Federal aid

Airport aid boost requested. Eng N 149:72 O 30 '52

Airport aid cut. Eng N 150:27 My 7 '53

Airport funds; mayors fight proposed cut. Aviation W 58:18 Mr 30 '53

CAA airport aid fund is budget target. L. Moore. Aviation W 58:51 Mr 9 '53

CAA lists renewed airport aid projects. Aviation W 58:23 My 4 '53

Congress fights airport cuts. Aviation W 58: 16-17 My 4 '53

House opens fire on airport aid. K. Johnsen. Aviation W 58:14 Ap 20 '53

Local airports await U.S. funds. Aviation W 57:17 N 10 '52

Finance

Airport financing plan faces legal obstacle. Eng N 150:83 Ja 29 '53

Novel airport financing proposed for Toledo. Eng N 149:149 N 13 '52

Unique use of revenue bonds at Denver's growing airport. il plan Eng N 150:57-60 Ja 1 '53

Fires and fire protection

Pit refueler cuts apron hazards. il Aviation W 58:76 Ap 13 '53

Lighting

Airplane pilots turn on lights. il Elec West 111:97 Ag '53

Airport apron lighting. H. N. McIntyre. il Illum Eng 47:585-6 N '52

Centerline lights get big ICAO vote. Aviation W 57:14 D 1 '52

Fluorescent floodlights solve airport apron lighting problem; Logan international airport, Boston. H. N. McIntyre. il Elec World 138:144+ D 15 '52

Kinorama, a device for evaluating airport approach lights. Franklin Inst J 255:237-40 Mr '53; Same. Elec Eng 72:376-7 Ap '53

Kinorama as an evaluator in aviation lighting. F. C. Breckenridge. bibliog il Illum Eng 47:561-6 O '52

Lighting the loading apron at greater Pittsburgh airport. D. H. Tuck. il plan diags Illum Eng 48:3-5 Ja '53

Pittsburgh airport lighting designed for comfort and efficiency. D. H. Tuck. il Elec World 139:82-3 Ap 6 '53

Visual aids to air navigation. W. H. Floyd. Midwest Eng 5:7-8+ N '52

Location

Urges airports near noisy areas. Aviation W 58:82 Ja 12 '53

Zoning maps for airports. B. E. Beavin. diags Am Soc C E Proc 79 [no 174]:1-9 F '53

Runways

AF to test new jet-resistant runway. Aviation W 58:64-5 Je 1 '53

Asphalt membranes; their potential uses in highway and airfield pavement design. J. R. Benson. diags Roads & Sts 95:78-80 D '52

CAA adopts new runway markings. Aviation W 58:23 Je 1 '53

Coal-tar pavements containing rubber show promise for jet-plane runways. Eng N 150: 42 Mr 5 '53

Comparison of design methods for airfield pavements; progress report. bibliog diag Am Soc C E Proc 78 [no 163]:1-37 D '52

Design and construction of airfield pavements. M. J. Tomlinson. bibliog diags Roy Aeronautical Soc J 56:877-84 D '52

Jet aircraft offer new use for the Postonway road. il Brick & Clay Rec 121:50 O '52

Jet fuel damages at fields not serious. G. McFadden. Midwest Eng 5:27-8 Mr '53; Same abr. Pub Works 84:125-6 My '53

Jet liner ground problems discussed. Aviation W 57:83 D 15 '52

Lightweight joint cuts slab cost; Atlantic City naval air station. il Constr Methods 35:66-7 Ag '53

Methods of soil stabilisation and their application to the construction of airfield pavements; abstract. D. Maclean and P. J. M. Robinson. Engineering 175:342 Mr 13 '53

New jet-resistant asphalt carpet may solve some airfield runway problems. Roads & Eng Constr 90:86 N '52

New runway for Newark airport. il diags Roads & Sts 96:50-6 F '53

Safety measures

CAA blasted on tower hazard; obstruction on a runway approach path at Youngstown airport. A. McSurely. Aviation W 58:15-16 Ja 26 '53

New flight rules for Newark airport. Aviation W 57:17 N 17 '52

United keeps 500-ft. ceiling at Youngstown. Aviation W 58:89 F 2 '53

Surfaces

Soil densification by vibrator-compactor was feature of Killaloe airport job. F. R. Inglis. il Roads & Eng Constr 90:87-8+ D '52

Traffic control

Air traffic control today and tomorrow. V. A. M. Hunt. il maps plans diags Roy Aeronautical Soc J 57:301-17 My '53

AIRPORTS—Traffic control—*Continued*
CAA seeks $45-million aid fund for buildup of navigation and traffic control aids on military, civil airports. Aviation W 58:78-80 F 9 '53
Radar breaks bad-weather jams at Washington national airport. R. Hotz. il Aviation W 58:14-16 Mr 16 '53
Training apparatus for air-traffic control by radar. il diags Engineering 175:572-3 My 1 '53

Traffic control towers

Luton airport; new control tower opened. il Elec R (Lond) 151:733 O 3 '52; Electrician 149:996 O 3 '52
Measure runway visibility; Transmissometer. il Nat Safety N 68:76 S '53
Tower operators now see better; photo-electric system; Transmissometer. il diag Aviation W 58:87-8 My 11 '53
Tower system speeds Aussie airport traffic. il Aviation W 57:71-2 N 17 '52

Denver

Unique use of revenue bonds at Denver's growing airport. il plan Eng N 150:57-60 Ja 1 '53

Great Britain

Development of Gatwick airport. plan Engineer 194:515-16; 196:140 O 17 '52, Jl 31 '53
London's airports. Engineering 176:139 Jl 31 '53

Los Angeles

Highway subway constructed under runways of Los Angeles international airport. L. Aldrich. il diags Civil Eng 23:236-40 Ap '53
L.A. airport expansion faces vote. il Aviation W 58:104-5 My 11 '53

New York (city)

New York air traffic exceeds target. Aviation W 58:80-1 Ja 26 '53

Newark, New Jersey

New flight rules for Newark airport. Aviation W 57:17 N 17 '52

Ontario

Soil densification by vibrator-compactor was feature of Killaloe airport job. F. R. Inglis. il Roads & Eng Constr 90:87-8+ D '52

Philadelphia

Philadelphia airport work criticized. Eng N 150:63 F 12 '53

Texas

Air battle in Texas. Bsns W p 136-7 My 16 '53

Washington, D.C.

Andrews field; joint civilian-military use agreed. Eng N 150:27 Je 4 '53

AIRPORTS, Military. See Air bases, Military

AIRPORTS, Municipal
How to perk up an airport; Buffalo's James Hanlon. Bsns W p80+ N 22 '52

AIRSHIPS
Navy builds anti-submarine blimp fleet. il Aviation W 58:50-1 Ap 20 '53

AIRWAYS
See also
Airports

Traffic control

Air traffic control today and tomorrow. V. A. M. Hunt. il maps plans diags Roy Aeronautical Soc J 57:301-17 My '53
CAA builds traffic control test center. Aviation W 58:86 F 16 '53
Remote vhfs to speed N.Y. traffic. P. Klass. il map Aviation W 58:38+ Ja 26 '53

AIRWORTHINESS of airplanes. See Airplanes—Airworthiness

AISLES, Factory. See Factories—Aisles

ALABAMA
Alabama story; recreation, state parks. il Manuf Rec 122:101-4 Je '53
See also
Iron mines and mining—Alabama
Petroleum—Alabama

Industries and resources

Alabama story. il Manuf Rec 122:63-106 Je '53

ALABAMA gas corporation
Public utility securities. O. Ely. Comm & Fin Chr 177:2657 Je 18 '53

ALABAMA power company
Alabama Power and Birmingham merge. il map Elec World News ed 138:16-18 D 8 '52
Bonds offered. Comm & Fin Chr 177:2125 My 18 '53

ALANINE
Amino-acids and peptides; γ-L-glutamyl-L-alanine, -L-valine, and -L-leucine. D. A. Rowlands and G. T. Young. Chem Soc J p3937-40 O '52
B complex market shifts; beta-alanine derived vitamin B complex. il Chem Eng 60:116 Ja '53
Condensation of oxalic esters with esters of β-alanine and N-substituted β-aminopropionic acids; synthesis of some derivatives of 2,3-dioxopyrrolidine and 2-oxo-3-methoxy-3-pyrroline. P. L. Southwick and R. T. Crouch. bibliog Am Chem Soc J 75:3413-17 Jl 20 '53
Diffusion of α-alanine in water at 25°. F. J. Gutter and G. Kegeles. bibliog il Am Chem Soc J 75:3893-6 Ag 20 '53
Synthesis of (+)-β-aminobutyric acid from L-alanine. K. Balenović, D. Cerar and Z. Fuks. Chem Soc J p3316-17 Ag '52

ALARMS
Automatic alarms use plastic name plates and lenses. il Mod Plastics 30:167 D '52
CONELRAD alert receiver. M. M. Mitchum. il diag Electronics 25:110-11 O '52
Plant protection; American district telegraph co. fire and bell alarm system. Steel 131:72 O 20 '52
Pressure rate alarms. P. Hart and R. C. King. diag Oil & Gas J 51:141 My 4 '53

ALARMS, Electric. See Electric alarms

ALASKA
See also
Airlines—Alaska
Building—Alaska
Geology—Alaska
Petroleum—Alaska
Public health—Alaska

Industries and resources

Alaska booms despite climate. T. M. Rohan. Iron Age 170:101 D 18 '52

ALASKA freight lines, inc.
Barge service on a timetable; Alaska, Panama, Great Lakes. il Bsns W p33 N 22 '52
Hauling barges from Seattle to St Louis. il Bsns W p 108-10 My 9 '53

ALASKA highway
Late quaternary geology and frost phenomena along Alaska highway, northern British Columbia and southeastern Yukon. C. S. Denny. maps diags Geol Soc Bul 63:883-921, pl 1-12 bibliog(p920-1) S '52
Maintaining the Alaskan highway. il map Roads & Sts 95:106-9+ D '52
Maintenance of the Alaska highway requires constant vigilance. il Roads & Eng Constr 91:83-6+ Jl '53

ALBASPIDIN
Constituents of filix mas; albaspidin. A. McGookin, A. Robertson and T. H. Simpson. Chem Soc J p 1828-9 Je '53

ALBEMARLE paper manufacturing company
Security I like best. B. Williams. Comm & Fin Chr 177:2510+ Je 11 '53
Stock offering. Comm & Fin Chr 177:2781 Je 29 '53

ALBERTA
See also
Gas, Natural—Alberta
Petroleum—Alberta
Petroleum industry and trade—Alberta
Roads—Alberta

Sanitary affairs

Increase in waterworks and sewerage systems. W. A. Dexter. Munic Util 91:25-6+ Jl '53

ALBITE
Optical studies on alkali feldspars. O. F. Tuttle. bibliog diags Am J Sci Bowen vol p553-67 '52

ALBUMIN
Anomaly among interactions involving certain azo dye anions and bovine serum albumin. R. K. Burkhard, B. E. Burgert and J. S. Levitt. bibliog Am Chem Soc J 75:2977-80 Je 20 '53

ALBUMIN—*Continued*

Electrophoresis-convection applied to substances forming soluble complexes. S. J. Singer, S. N. Timasheff and J. G. Kirkwood. bibliog Am Chem Soc J 74:5985-8 D 5 '52

Free amino groups of crystalline bovine plasma albumin. L. E. McClure, L. Schieler and M. S. Dunn. bibliog Am Chem Soc J 75:1980-2 Ap 20 '53

Interaction of dinitrobenzene derivatives with bovine serum albumin. M. E. Carsten and H. N. Eisen. bibliog Am Chem Soc J 75:4451-6 S 20 '53

Interaction of the aminobenzoate ions and serum albumin. R. K. Burkhard. Am Chem Soc J 75:229-30 Ja 5 '53

Interactions of metal ions with the sulfhydryl group of serum albumin. I. M. Klotz, J. M. Urquhart and H. A. Fiess. Am Chem Soc J 74:5537-8 N 5 '52

Interactions of some neutral organic molecules with proteins. I. M. Klotz and J. Ayers. bibliog Am Chem Soc J 74:6178-80 D 20 '52

Irreversible polarographic reduction of simple metal ions in the presence of acid serum albumin. C. Tanford. bibliog Am Chem Soc J 74:6036-9 D 5 '52

Preparation and properties of serum and plasma proteins; an X-ray study of crystalline human serum albumin preparations. B. W. Low. bibliog il diags Am Chem Soc J 74:4830-4 O 5 '52

Presence of citrate in commercial crystallized bovine serum albumin. I. Feldman and J. R. Havill. bibliog Science 116:691-2 D 19 '52

Analysis

Chromatography of thiohydantoins on paper; determination of the C-terminal amino-acid of bovine plasma albumin. J. T. Edward and S. Nielsen. bibliog Chem & Ind p 197 F 28 '53

Isolation of crystalline α-lactalbumin from milk. W. G. Gordon and W. F. Semmett. bibliog Am Chem Soc J 75:328-30 Ja 20 '53

Polarographic analysis of the serum albumin-mercury and zinc complexes. H. A. Saroff and H. J. Mark. bibliog Am Chem Soc J 75:1420-6 Mr 20 '53

ALCHEMY

Alchemy and alchemists. J. Read. il Sci Am 187:72-4+ O '52

ALCOHOL

Acidity and basicity scale in the system ethanol-water; the evaluation of degenerate activity coefficients for single ions. B. Gutbezahl and E. Grunwald. bibliog Am Chem Soc J 75:565-74 F 5 '53

Action of light on diazoaminobenzene dissolved in ethanol. H. C. Freeman and R. J. W. Le Fèvre. Chem Soc J p2932-4 Jl '52

Application of a fast-scanning infrared spectrometer to a kinetic study of the NO_2-C_2H_5OH reaction. R. E. Nightingale and others. diag J Chem Phys 21:1398-9 Ag '53

Behavior of tetraborane toward trimethylamine and ethanol. A. B. Burg and F. G. A. Stone. bibliog diag Am Chem Soc J 75:228-9 Ja 5 '53

Bubble-plate efficiencies in ethanol-water fractionation. G. D. Shilling and others. bibliog flow diag diags Chem Eng Prog 49:128-34 Mr '53

Chlorination of ethyl alcohol; studies by Rhode Island state college. Chem Age (Lond) 67:661-3 N 15 '52

Dehydration of ethyl alcohol over alumina. H. Feilchenfeld. bibliog Ind & Eng Chem 45:855-7 Ap '53

Ethylene and ethyl alcohol as quenching agents in external-cathode Geiger counters. R. L. Chasson and M. L. MacKnight. R Sci Instr 24:212-13 Mr '53

Heat capacity, gas imperfection, infrared spectra, and internal rotation barriers of ethyl alcohol. G. M. Barrow. bibliog J Chem Phys 20:1739-44 N '52

Pentaphenylethanol. W. A. Mosher and M. L. Huber. bibliog Am Chem Soc J 75:4604-5 S 20 '53

Rate of deuterium exchange between ethanol and water; a reinvestigation. J. Hine and C. H. Thomas. bibliog Am Chem Soc J 75:739-40 F 5 '53

Reaction sequences in alcohol-boron trichloride-pyridine systems. M. F. Lappert. Chem Soc J p667-73 F '53

Solubility of the copper salts of aromatic carboxylic acids in benzene-ethanol mixtures. M. Crawford and F. H. C. Stewart. Chem Soc J p288-92 Ja '53

Studies on coordination compounds; measurements of chelation in ethanol solution. L. G. Van Uitert, W. C. Fernelius and B. E. Douglas. bibliog Am Chem Soc J 75:3577-8 Jl 20 '53

Thermal analysis of the systems hydrazine-methanol and hydrazine-ethanol. J. M. Corcoran, H. W. Kruse and S. Skolnik. bibliog J Phys Chem 57:435-7 Ap '53

Vapor-liquid equilibria at 760 mm. pressure; 2-propanol-methanol, 2-propanol-ethyl alcohol, 2-propanol-propanol, and 2-propanol-2-butyl alcohol systems. L. H. Ballard and M. Van Winkle. bibliog Ind & Eng Chem 44:2450-3 O '52

Vapor-liquid equilibria for ethyl alcohol binary systems. L. R. Hellwig and M. Van Winkle. bibliog Ind & Eng Chem 45:624-9 Mr '53

Manufacture

Ethyl alcohol from waste liquor sulphite. il diag Can Chem Process 36:32-4 O '52

Improvements in the manufacture of industrial alcohol from sulfite waste liquor during the last ten years; abstract. H. G. Joseph. Sewage & Ind Wastes 25:705 Je '53

Natural gas to ethane to ethylene. D. J. Stark. bibliog diags Pet Processing 8:897-9 Je '53; Same abr. flow diag Oil & Gas J 52:85-7 Je 1 '53

Testing

Improved permanganate time test for control of ethyl alcohol quality. F. T. Weiss and E. D. Peters. diag Anal Chem 24:1658-60 O '52

ALCOHOL, Denatured

Operation of vinegar generators. R. J. Allgeier, R. T. Wisthoff and F. M. Hildebrandt. bibliog Ind & Eng Chem 45:489-94 F '53

ALCOHOL as fuel

See also

Gasoline—Alcohol mixtures

ALCOHOL industry

Alcohol run-down. Chem W 71:61-2 N 15 '52

Switching brands; users shifting to synthetic. Bsns W p78 N 8 '52

France

France has new alcohol setup. Oil Paint & Drug Rep 164:3 O 12 '53

ALCOHOLATES

Structural chemistry of the alkoxides; normal alkoxides of silicon, titanium, and zirconium. D. C. Bradley and others. Chem Soc J p2025-30 Jl '53

ALCOHOLIC employees. See Employment management—Alcohol problem

ALCOHOLISM

Alcoholics in industry; New York university-Bellevue consultation clinic. Sci Am 188:48+ Ap '53

Problem drinking and industry; five years with a company program. S. C. Franco. Edison Elec Inst Bul 21:109-11 Ap '53

See also

Employment management—Alcohol problem

Liquor problem

ALCOHOLS

Acidity and infrared absorption of fluorinated alcohols. A. L. Henne and W. C. Francis. Am Chem Soc J 75:991-2 F 20 '53

Action of alcohols on zirconium tetrachloride and zirconium chloride alkoxides. D. C. Bradley and others. Chem Soc J p4960-3 D '53

Addition of bromine to (+)-1-phenylallyl alcohol and the oxidation of the (+)-dibromo-alcohol. C. L. Arcus and H. E. Strauss. Chem Soc J p2669-71 Jl '52

ALCOHOLS—*Continued*

Alkyl-oxygen fission in carboxylic esters; reactions of secondary alcohols containing the 2 : 4 : 6-trimethoxyphenyl radical. J. Kenyon and R. F. Mason. Chem Soc J p4964-9 D '52

Allylic bromination of unsaturated terpene hydrocarbons, and the synthesis of αβ-unsaturated alcohols. A. K. Macbeth, B. Milligan and J. S. Shannon. Chem Soc J p2574-6 S '53

αβ-Unsaturated aldehydes and related compounds; the addition of alcohols to the dimers of acraldehyde and α-methylacraldehyde. R. H. Hall. Chem Soc J p 1398-402 My '53

αβ-Unsaturated aldehydes and related compounds; the reaction of αβ-unsaturated aldehydes with unsaturated alcohols in the presence of alkali. R. H. Hall and E. S. Stern. Chem Soc J p4083-5 O '52

Anionotropic systems; the effect of a nitro-substituent on equilibrium and mobility in the 1 : 3-diphenylallyl alcohol system. E. A. Braude and E. S. Waight. Chem Soc J p419-24 F '53

Application of the cathode-ray oscilloscope to polarographic phenomena; adsorption-desorption relationships exhibited by alcohols at aqueous saline solution-mercury interfaces. J. W. Loveland and P. J. Elving. bibliog il diag J Phys Chem 56:935-48 N '52

Carbon-oxygen absorption band in the infrared spectra of alcohols. H. H. Zeiss and M. Tsutsui. bibliog Am Chem Soc J 75:897-900 F 20 '53

Chlorination of fluorine-containing alcohols. E. T. McBee, O. R. Pierce and W. F. Marzluff. bibliog Am Chem Soc J 75:1609-10 Ap 5 '53

Chloromycetin (chloroamphenicol) related compounds; some tertiary alcohols. M. C. Rebstock and A. C. Moore. bibliog Am Chem Soc J 75:1685-8 Ap 5 '53

Complexes of iodine with an ether and an alcohol. J. S. Ham. bibliog J Chem Phys 20:1170 Jl '52

Condensation of 1-alkanols to dialkylcarbinols. E. E. Burgoyne and F. E. Condon. bibliog Am Chem Soc J 74:5592-5 N 20 '52

Derivatives of sulfenic acids; the reaction of 2,4-dinitrobenzenesulfenyl chloride with alcohols. N. Kharasch, D. P. McQuarrie and C. M. Buess. bibliog Am Chem Soc J 75: 2658-60 Je 5 '53

Effect of hydrogen bonding on the hindered rotation of the hydroxyl group in alcohols. A. V. Stuart and G. B. B. M. Sutherland. J Chem Phys 20:1977 D '52

Emmert reaction in the synthesis of alkyl- and cycloalkylpyridines. H. L. Lochte, P. F. Kruse, jr. and E. N. Wheeler. bibliog Am Chem Soc J 75:4477-81 S 20 '53

Epimeric alcohols of the *cyclo*hexane series; (±)-*cis*-3-methyl*cyclo*hexylmethanol and (±)*cis*-3-methyl*cyclo*hexanecarboxylic acid. L. H. Darling, A. K. Macbeth and J. A. Mills. Chem Soc J p 1364-8 My '53

Epoxy glycitols; synthesis and properties of 3,4-anhydro-2,5-methylene-1,6-ditrityl-D-talitol (=D-altritol). S. B. Baker and G. Kohanyi. bibliog Am Chem Soc J 75:2140-3 My 5 '53

Equilibrium constants for the interaction of halogens with alcohols and ethers. R. M. Keefer and L. J. Andrews. bibliog Am Chem Soc J 75:3561-4 Jl 20 '53

Evaluation of polyhydric alcohols. bibliog il diag Paint Oil & Chem R 116:12-13+ Mr 26; 24+ Ap 9 '53

Extractive distillation of close-boiling alcohols; patent. diag Chem Eng 60:384-5 Ap '53

Fluorinated esters; diesters of carboxylic acids with fluorine-containing alcohols and glycols. R. Filler and others. bibliog Am Chem Soc J 75:2693-5 Je 5 '53

Formation of sulphites, phosphites, and phosphates of alcohols containing an aryl group. W. Gerrard and B. D. Shepherd. Chem Soc J p2069-74 Jl '53

Heat capacity of organic vapors; data for some aliphatic alcohols using an improved flow calorimeter requiring only 25 ml. of sample. G. C. Sinke and T. De Vries. bibliog Am Chem Soc J 75:1815-18 Ap 20 '53

Hypotensive agents; alicyclic amino alcohols. L. M. Rice and others. Am Chem Soc J 75:1092-3 Mr 5 '53

Importance of polyhydric alcohols in the chemical industry; abstract. H. Rose. Paint Oil & Chem R 116:26 Jl 2 '53

Interaction of phosphorus trichloride with alcohols and with hydroxy-esters. W. Gerrard and others. Chem Soc J p 1920-6 Je '53

Intramolecular hydrogen bonds in 2-aminoalkanols and N-alkylidene-2-aminoalkanols. E. D. Bergmann, E. Gil-Av and S. Pinchas. bibliog Am Chem Soc J 75:68-71 Ja 5 '53

Migration ratios in the rearrangement of 2,2-diarylethanols. J. G. Burr, jr. and L. S. Ciereszko. bibliog Am Chem Soc J 74: 5426-30 N 5 '52

Molecular rearrangements; the retropinacolone rearrangement of 2,2,-diphenylcycloalkanols. R. E. Lyle, N. B. Martin, jr. and H. L. Fielding. bibliog Am Chem Soc J 75:4089-90 Ag 20 '53

Now, fatty alcohols from tallow. diag Chem Eng 60:118 Mr '53

Oxidation of disaccharide alcohols by acetobacter suboxydans. D. French and others. bibliog Science 117:100 Ja 30 '53

Peroxide- and light-induced reactions of alcohols with olefins. W. H. Urry and others. Am Chem Soc J 75:250-1 Ja 5 '53

Polyhydric alcohols. bibliog Paint Oil & Chem R 116:12-21 F 26 '53

Polyhydric alcohols as protective coating intermediates. bibliog il Paint Oil & Chem R 116:12-18+ My 7 '53

Properties of freshly formed surfaces; the influence of chain length and structure on the surface potentials of aqueous solutions of alcohols. C. C. Addison and D. Litherland. Chem Soc J p 1159-67 Ap '53

Proposed mechanism for the conversion of alcohols to allophanates. W. J. Close and M. A. Spielman. bibliog Am Chem Soc J 75:4055-6 Ag 20 '53

Reaction of diazonium salts with alcohols. N. Kornblum and A. E. Kelley. bibliog Science 117:379-80 Ap 10 '53

Reaction of methanesulfonyl chloride with alcohols in the presence of pyridine. C. R. Noller and others. bibliog Am Chem Soc J 75:3851-2 Ag 5 '53

Reaction rates by distillation; the effect of changes in structure on the basicity of selected ketones, esters, ethers and alcohols. E. F. Pratt and K. Matsuda. bibliog Am Chem Soc J 75:3739-44 Ag 5 '53

Reactions catalyzed by anion exchange resins; cyanoethylation of alcohols. M. J. Astle and R. W. Etherington. bibliog Ind & Eng Chem 44:2871-2 D '52

Reduction of some enolizable β-dicarbonyl compounds to unsaturated alcohols by lithium aluminum hydride; monocyclic β-ketoesters and α-hydroxymethylene ketones. A. S. Dreiding and J. A. Hartman. bibliog Am Chem Soc J 75:939-43 F 20 '53

Resinous polyhydric alcohols. bibliog Paint Oil & Chem R 116:24-6+ Ag 13 '53

Sodium perborate as a reagent in organic chemistry; oxidation of polyhydric alcohols. S. M. Mehta and R. S. Iyer. Am Chem Soc J 74:5541-2 N 5 '52

Specific influence of solvents on the infrared spectra of alcohols. A. V. Stuart. J Chem Phys 21:1115 Je '53

Studies in spectroscopy; the ionisation constants and infra-red spectra of some primary and secondary halogen-containing alcohols. R. N. Haszeldine. Chem Soc J p 1757-63 Je '53

Studies in the polyene series; acetylenic alcohols from methoxyacetone, and their conversion into unsaturated aldehydes. R. Ahmad and B. C. L. Weedon. Chem Soc J p2125-9 Jl '53

Studies of hemiacetal formation in alcohol-aldehyde systems; refraction studies. F. E. McKenna, H. V. Tartar and E. C. Lingafelter. bibliog Am Chem Soc J 75:604-7 F 5 '53

Study of the kinetics of the reaction between nitrogen dioxide and alcohols. A. M. Fairlie, jr., J. J. Carberry and J. C. Treacy. Am Chem Soc J 75:3786-9 Ag 5 '53

ALCOHOLS—*Continued*

Symposium on polyhydric alcohols. Chem & Eng N 30:4479-80 O 27 '52

Synthesis of alcohols by hydrogenation of carbon monoxide. R. B. Anderson, J. Feldman and H. H. Storch. bibliog Ind & Eng Chem 44:2418-24 O '52

Viscosities of some lower aliphatic alcohols at constant volume. A. Jobling and A. S. C. Lawrence. bibliog J Chem Phys 20:1296-8 Ag '52

See also

Alcohol
Amyl alcohol
Benzyl alcohol
Butyl alcohol
Esters
Fusel oil
Isocamphenilanol
Methanol
Quebrachitol
Sorbitol

Analysis

Components of wool wax; the aliphatic alcohols. J. Tiedt and E. V. Truter. Chem Soc J p4628-30 D '52

Spectrophotometric determination of the hydroxyl contents of aliphatic and alicyclic alcohols. J. P. Riley. Chem Soc J p2108-10 Je '52

ALCOHOLYSIS

Relationship between hyperconjugation and intramolecular configuration; the ethyl alcoholysis of some derivatives of diphenylmethyl chloride. G. Baddeley and M. Gordon. Chem Soc J p2190-3 Je '52

ALDEHYDES

αβ-Unsaturated aldehydes and related compounds; the addition of alcohols to the dimers of acraldehyde and α-methylacraldehyde. R. H. Hall. Chem Soc J p 1398-402 My '53

αβ-Unsaturated aldehydes and related compounds; the reaction of αβ-unsaturated aldehydes with unsaturated alcohols in the presence of alkali. R. H. Hall and E. S. Stern. Chem Soc J p4083-5 O '52

Chemistry of the perfluoro acids and their derivatives; the perfluoro aldehydes. D. R. Husted and A. H. Ahlbrecht. bibliog Am Chem Soc J 74:5422-6 N 5 '52

Condensations of aromatic aldehydes and aryl carbinols with aluminum chloride and aromatic systems. H. E. Ungnade, E. F. Kline and E. W. Crandall. bibliog Am Chem Soc J 75:3333-6 Jl 20 '53

Free radical rearrangements in the decarbonylation of aldehydes. D. Y. Curtin and M. J. Hurwitz. bibliog Am Chem Soc J 74:5381-7 N 5 '52

Interaction of quinolines with aldehydes and ketones. F. Bell. Chem Soc J p348-9 Ja '53

New synthesis of indole-3-aldehydes; the reaction of hexamethylenetetramine with some Mannich bases. H. R. Snyder, S. Swaminathan and H. J. Sims. bibliog Am Chem Soc J 74:5110-13 O 20 '52

Olefin-aldehyde condensation; the Prins reaction. E. Arundale and L. A. Mikeska. Chem R 51:505-55 bibliog(p550-5) D '52

Properties and reactions of free alkyl radicals in solution; the direct reaction between alkyl radicals and aliphatic aldehydes. E. F. P. Harris and W. A. Waters. Chem Soc J p3108-13 Ag '52

Reaction of aldehydes and aromatic amines with 8-quinolinol. J. P. Phillips, R. Keown and Q. Fernando. Am Chem Soc J 75:4306-7 S 5 '53

Reaction of αβ-unsaturated cyclic aldehydes and ketones; (±)-*cis*- and (±)-*trans*-piperitol. A. K. Macbeth, B. Milligan and J. S. Shannon. Chem Soc J p901-2 Mr '53

Reactions of αβ-unsaturated cyclic aldehydes and ketones; (—)-*cis*- and (+)-*trans*-piperitol from (—)-piperitone. A. K. Macbeth and J. S. Shannon. Chem Soc J p2852-6 Jl '52

Reactions of αβ-unsaturated cyclic aldehydes and ketones; (+)-*trans*-pulegol and a (–)-pulegol from (+)-pulegone. A. K. Macbeth and J. S. Shannon. Chem Soc J p4748-51 D '52

Reactions of free radicals with aldehydes; the reactions of methyl and *t*-butoxy radicals with acetaldehyde and acrolein. D. H. Volman and R. K. Brinton. bibliog J Chem Phys 20:1764-8 N '52

Reduction of lactones to hydroxyaldehydes with lithium aluminum hydride. G. E. Arth. bibliog Am Chem Soc J 75:2413-15 My 20 '53

Ring-chain tautomerism of hydroxy aldehydes. C. D. Hurd and W. H. Saunders, jr. bibliog diag Am Chem Soc J 74:5324-9 N 5 '52

Sommelet reaction; *N*-heteroaromatic aldehydes. S. J. Angyal, G. B. Barlin and P. C. Wailes. Chem Soc J p 1740-1 Je '53

Sommelet reaction; the preparation of aliphatic aldehydes. S. J. Angyal, D. R. Penman and G. P. Warwick. Chem Soc J p 1737-9 Je '53

Studies of hemiacetal formation in alcohol-aldehyde systems; refraction studies. F. E. McKenna, H. V. Tartar and E. C. Lingafelter. bibliog Am Chem Soc J 75:604-7 F 5 '53

Thiophen derivatives of potential biological interest; the chemistry of 5-substituted thiophen-2-aldehydes. N. P. Buu-Hoï, N. Hoán and D. Lavit. Chem Soc J p4590-3 D '52

See also

Acetaldehyde
Aldol
Benzaldehyde
Formaldehyde
Furfural
Glyoxal
Salicylaldehyde

ALDIMINES. See Imines

ALDOL

Nickel-catalyzed hydrogenation of commercial aldol. C. K. Hancock and D. D. Henson. bibliog Ind & Eng Chem 45:629-32 Mr '53

ALDOL condensation. See Condensation, Chemical

ALDOLASE

Transaldolase; the formation of fructose-6-phosphate from sedoheptulose-7-phosphate. B. L. Horecker and P. Z. Smyrniotis. Am Chem Soc J 75:2021-2 Ap 20 '53

ALDONIC acids

Nitrated aldonic acids. M. L. Wolfrom and A. Rosenthal. bibliog Am Chem Soc J 75:3662-4 Ag 5 '53

ALDOSES

Acyclic acetates of dialdoses. M. L. Wolfrom and E. Usdin. bibliog Am Chem Soc J 75:4318-20 S 5 '53

Direct reduction of aldoses and ketoses by Raney nickel. J. V. Karabinos and A. T. Ballun. bibliog Am Chem Soc J 75:4501-2 S 20 '53

ALDOXIMES. See Oximes

ALDRICH, Winthrop Williams, 1885-

Aldrich to London; McCloy to Chase National. por Bsns W p48 D 13 '52

Eisenhower is still naming names. por(p29) Bsns W p30 D 6 '52

ALETHEINE

β-Aletheine and pantetheine. T. E. King, C. J. Stewart and V. H. Cheldelin. bibliog Am Chem Soc J 75:1290-2 Mr 20 '53

ALEUTIAN ISLANDS

See also

Geology—Aleutian Islands

ALFALFA

Preparation of carotene concentrates from dehydrated alfalfa meal. H. L. Mitchell, W. G. Schrenk and R. E. Silker. bibliog il Ind & Eng Chem 45:415-17 F '53

ALFIN catalysts. See Catalysts

ALFIN rubber. See Rubber, Artificial

ALGAE

Algae (chlorella) as a source of nutrients for the chick. G. F. Combs. Science 116:453-4 O 24 '52

Algae control in the smaller waterworks. D. H. Matheson. Munic Util 91:54+ Ap '53

Algae symbiosis in oxidation ponds; growth characteristics of chlorella pyrenoidosa cultured in sewage. W. J. Oswald and others. bibliog Sewage & Ind Wastes 25:26-37 Ja '53

Algae symbiosis in oxidation ponds; photosynthetic oxygenation. W. J. Oswald and others. bibliog diag Sewage & Ind Wastes 25:692-705 Je '53

Amino-acids and peptides; the nitrogenous constituents of some marine algae. D. M. Channing and G. T. Young. Chem Soc J p2481-91 Ag '53

Balking algae in beverage water. N. F. Insalata. il Food Eng 24:72-4+ D '52

Chlorine and chlorine dioxide for control of algae odors. C. R. Harlock and M. R. Dowlin. Water & Sewage Works 100:74-5 F '53

ALGAE—*Continued*

Incorporation of tritium oxide into growing chlorella pyrenoidosa cells. D. Weinberger and J. W. Porter. Science 117:636-8 Je 5 '53

Manufacture of algal chemicals; laboratory-scale isolation of D-glucose from laminarin and laboratory-scale isolation of L-fucose from brown marine algae; abstract and discussion. W. A. P. Black and others. Chem & Ind p235 Mr 14 '53

Occurrence of δ-tocopherol in seaweed. F. Brown. bibliog Chem & Ind p 174 F 21 '53

Useful algae. F. J. Weiss. il Sci Am 187: 15-17 D '52; Discussion. C. V. Ripple. 188: 4+ F '53

See also

Chlorella

Laminarin

Analysis

Investigation of the polysaccharide components of certain fresh-water algæ. L. Hough, J. K. N. Jones and W. H. Wadman. Chem Soc J p3393-9 S '52

ALGEBRA

Finding an empirical equation algebraically. R. F. Nielsen. Oil & Gas J 51:183 O 20 '52

Sketch for an algebra of switchable networks. J. Shekel. bibliog diags Inst Radio Eng Proc 41:913-21 Jl '53

See also

Matrices

ALGERIA

See also

Petroleum industry and trade—Algeria

ALGINATES

Alginate fibers; the position to date; abstract. Am Dyestuff Rep 41:750-1 N 10 '52

See also

Sodium alginate

ALGONQUIN gas transmission company

Gas compromise; Tennessee Gas offers to split New England market at a price. Bsns W p28-9 Jl 11 '53

ALIEN labor

Indianisation for foreign firms. Economist 167:450-1 My 16 '53

ALIEN property. See Enemy property

ALINEMENT charts. See Nomographs

ALINEMENT of machinery

Aligning couplings and other handy indicator checks; drawings with text. S. Elonka. Power 97:112-13 Ap '53

Axial shaft alignment. W. H. Weaver. diags Pet Eng 24:C44 D '52

How to check the alignment of your lathe; illustrated instructions. H. A. Roy. diags Mill & Factory 51:94-6 N '52

Practical way to line up shafting. il Power 96:133 D '52

Punch and die setup utilizes alignment pilot. C. Y. Lee. diags Am Mach 97:117 Ag 31 '53

Seamless tubing aligns teeth. il Machine Design 25:135 Ja '53

Tool aligns miller spindle for boring oversize parts. A. J. Rasys. diags Am Mach 97:184 F 16 '53

ALIPHATIC acids. See Acids, Fatty; Acids, Organic

ALIPHATIC compounds

Grignard reactions; the synthesis of aliphatic ketones. W. C. Percival, R. B. Wagner and N. C. Cook. bibliog Am Chem Soc J 75:3731-4 Ag 5 '53

ALIZARIN blue

Alizarin blue as a selective reagent for traces of copper; abstract. F. Feigl. Chem Age (Lond) 67:563-4 O 25 '52

ALKA SELTZER

Alka Seltzer bundles; cellophane wraps. il Mod Packaging 26:120 F '53

ALKALI bromides

Some optical properties of molten silver bromide-alkali bromide solutions. C. D. Thurmond. bibliog Am Chem Soc J 75:3928-32 Ag 20 '53

ALKALI halides

Color centers in alkali halides at 5°K. W. H. Duerig and J. J. Markham. bibliog Phys R 88:1043-9 D 1 '52

Paramagnetic resonance absorption in additively colored crystals of alkali halides. C. A. Hutchison, jr. and G. A. Noble. bibliog Phys R 87:1125-6 S 15 '52

Photocurrent, space-charge buildup, and field emission in alkali halide crystals. A. von Hippel and others. bibliog diags Phys R 91: 568-79 Ag 1 '53

Radiofrequency spectrum of the components of a sodium chloride beam; the dimerization of the alkali halides. S. A. Ochs and others. bibliog diags J Chem Phys 21:459-66 Mr '53

See also

Potassium iodide

ALKALI metal borates

Density and expansivity of alkali borates and density characteristics of some other binary glasses. L. Shartsis and others. bibliog Am Cer Soc J 36:35-43 F 1 '53

Surface tension of molten alkali borates. L. Shartsis and W. Capps. bibliog Am Cer Soc J 35:169-72 Jl 1 '52

Viscosity and electrical resistivity of molten alkali borates. L. Shartsis and others. bibliog diag Am Cer Soc J 36:319-26 O 1 '53

ALKALI metal chlorides

Electrical conductivity of molten cryolite and potassium, sodium, and lithium chlorides. J. D. Edwards and others. bibliog il diag Electrochem Soc J 99:527-35 D '52; Discussion. 100:294-5 Je '53

ALKALI metal compounds

Symmetry change in the high-temperature alkali-feldspar series. G. Donnay and J. D. H. Donnay. bibliog Am J Sci Bowen vol p 115-32 '52

Analysis

Photometric determination of sulfide and reducible sulfur in alkalies. M. S. Budd and H. A. Bewick. bibliog diag Anal Chem 24: 1536-40 O '52

ALKALI metal halides

Condensations by sodium; the effect of alkali metal halides upon amylsodium. A. A. Morton and E. F. Cluff. bibliog Am Chem Soc J 75:134-6 Ja 5 '53

Thermochemistry of the alkali and alkaline earth metals and halides in liquid ammonia at -33°. L. V. Coulter. bibliog J Phys Chem 57:553-8 Je '53

See also

Salt

ALKALI metal hydrides

Addition compounds of alkali metal hydrides; sodium trimethoxyborohydride and related compounds. H. C. Brown and others. bibliog Am Chem Soc J 75:192-5 Ja 5 '53

Preparation of other borohydrides by metathetical reactions utilizing the alkali metal borohydrides. H. I. Schlesinger, H. C. Brown and E. K. Hyde. bibliog diag Am Chem Soc J 75:209-13 Ja 5 '53

Reaction of the boron halides with the alkali metal hydrides and with their addition compounds; a new synthesis of diborane. H. I. Schlesinger and others. bibliog diag Am Chem Soc J 75:195-9 Ja 5 '53

Reactions of diborane with alkali metal hydrides and their addition compounds; new syntheses of borohydrides; sodium and potassium borohydrides. H. I. Schlesinger and others. bibliog diags Am Chem Soc J 75:199-204 Ja 5 '53

ALKALI metal phosphides

Alkali metal phosphides; electrolysis studies in liquid ammonia. E. C. Evers and J. M. Finn, jr. bibliog J Phys Chem 57:559-63 Je '53

ALKALI metals

Cohesive energy of alkali metals. H. Brooks. Phys R 91:1027-8 Ag 15 '53

First-aid devices protect alkali-metal workers. P. C. Ziemke. diag Chem Eng 60:210 Ap '53

Organometallic compounds of the alkali metals; the metallation and dimetallation of benzene. D. Bryce-Smith and E. E. Turner. Chem Soc J p861-7 Mr '53

Self-diffusion in the alkali metals. D. K. C. MacDonald. J Chem Phys 21:177-8 Ja '53

Thermochemistry of the alkali and alkaline earth metals and halides in liquid ammonia at -33°. L. V. Coulter. bibliog J Phys Chem 57:553-8 Je '53

See also

Cesium

Lithium

Potassium

Rubidium

Sodium

ALKALI metals—*Continued*

Analysis

See also
Lithium—Analysis

ALKALIES

Decomposition of toluene-*p*-sulphonylhydrazones by alkali. W. R. Bamford and T. S. Stevens. Chem Soc J p4735-40 D '52

Degradation of carbohydrates by alkali; α-alkoxy-ketones. J. Kenner and G. N. Richards. Chem Soc J p2240-4 Ag '53

Degradation of carbohydrates by alkali; lactose. W. M. Corbett and J. Kenner. Chem Soc J p2245-7 Ag '53

Effect of alkali and strong acid on the ultraviolet absorption spectrum of lignin and related compounds. O. Goldschmid. bibliog Am Chem Soc J 75:3780-3 Ag 5 '53

Interaction of the alkali ions with some linear polyelectrolytes. A. Veis. bibliog J Phys Chem 57:189-94 F '53

Kinetic study of the alkaline scission of 4-hydroxy-3-methoxy-β-nitrostyrene. R. Stewart. bibliog Am Chem Soc J 74:4531-4 S 20 '52

Mechanism of exchange of hydrogen gas and aqueous alkali. W. K. Wilmarth, J. C. Dayton and J. M. Flournoy. bibliog Am Chem Soc J 75:4549-53 S 20 '53

Rearrangement and cleavage of benzoin and α-substituted benzoins by alkali. D. B. Sharp and E. L. Miller. bibliog Am Chem Soc J 74:5643-6 N 20 '52

See also
Ammonia
Concrete, Effect of alkalies on
Enamel and enameling—Alkali resistance
Glass—Alkali content
Potassium hydroxide
Sodium hydroxide

Analysis

Photometric determination of silica in alkalies. O. A. Kenyon and H. A. Bewick. bibliog Anal Chem 25:145-8 Ja '53

ALKALINE earth carbonates

Analysis

Flame photometric determination of calcium, strontium, and barium in a mixture. O. N. Hinsvark, S. H. Wittwer and H. M. Sell. Anal Chem 25:320-2 F '53

ALKALINE earth compounds

Enhancement of X-ray induced absorption bands in alkaline earth compounds. J. H. Schulman and others. bibliog J Chem Phys 20:1966-7 D '52

ALKALINE earth halides

Spectral location of the absorption due to color centers in alkaline earth halide crystals. H. F. Ivey. bibliog Phys R 89:322 Ja 1 '53

Thermochemistry of the alkali and alkaline earth metals and halides in liquid ammonia at -33°. L. V. Coulter. bibliog J Phys Chem 57:553-8 Je '53

ALKALINE earth metals

Thermochemistry of the alkali and alkaline earth metals and halides in liquid ammonia at -33°. L. V. Coulter. bibliog J Phys Chem 57:553-8 Je '53

See also
Barium
Calcium
Strontium

ALKALINE earth oxides

Thermionic emission from oxide-coated tungsten filaments. C. P. Hadley. bibliog J Ap Phys 24:49-52 Ja '53

ALKALINITY

Effects of alkalinity on the flotation of lead minerals. M. G. Fleming. bibliog Min Eng 4:Trans 1231-6 D '52; Discussion. 5:Trans 1121 N '53

ALKALOIDS

Alkaloid of dioscorea hispida, Dennstedt; Hofmann degradation. A. R. Pinder. Chem Soc J p 1825-8 Je '53

Alkaloid of dioscorea hispida, Dennstedt; the lactone ring. A. R. Pinder. Chem Soc J p2236-40 Je '52

Alkaloids from tripterygium wilfordii Hook; isolation and structure of wilforzine. M. Beroza. bibliog Am Chem Soc J 75:2136-8 My 5 '53

Alkaloids from tripterygium wilfordii Hook; the structure of wilforine, wilfordine, wilforgine and wilfortrine. M. Beroza. bibliog Am Chem Soc J 75:44-9 Ja 5 '53

Alkaloids of daphnandra species; an examination of the alkaloidal content of D. micrantha and of D. tenuipes; isolation of some minor daphnandra alkaloids. I. R. C. Bick, W. I. Taylor and A. R. Todd. Chem Soc J p695-700 F '53

Alkaloids of daphnandra species; observations on repanduline. I. R. C. Bick and others. Chem Soc J p692-5 F '53

Alkaloids of gelsemium sempervirens. G. Jones and T. S. Stevens. Chem Soc J p2344-50 Ag '53

Alkaloids of senecio ruwenzoriensis. M. L. Sapiro. Chem Soc J p 1942-3 Je '53

Alkaloids of veratrum eschscholtzii Gray; the glycosides. M. W. Klohs and others. bibliog Am Chem Soc J 75:2133-5 My 5 '53

Chemistry of the mitragyna genus; derivatives of harman. G. G. Doig, J. D. Loudon and P. McCloskey. Chem Soc J p3912-16 O '52

Chemistry of the mitragyna genus; synthesis of a degradation product of mitragynine. J. W. Cook, J. D. Loudon and P. McCloskey. Chem Soc J p3904-12 O '52

Constitution and synthesis of glycosin, the new alkaloid of glycosmis pentaphylla, Retz. DC. A. Chatterjee and S. G. Majumdar. Am Chem Soc J 75:4365-6 S 5 '53

Conversion of tetrahydroharman alkaloids into derivatives of linear pyrroquinolones. B. Witkop and S. Goodwin. bibliog Am Chem Soc J 75:3371-6 Jl 20 '53

Fission of phaeanthine and bebeerine dimethyl ether with sodium in liquid ammonia. D. A. A. Kidd and J. Walker. bibliog Chem & Ind p243-4 Mr 14 '53

Hypotensive alkaloids from veratrum album protoveratrine A, protoveratrine B and germitetrine B. H. A. Nash and R. M. Brooker. bibliog Am Chem Soc J 75:1942-8 Ap 20 '53

Infrared spectrophotometric study of veratrum alkaloids. G. Papineau-Couture and R. A. Burley. bibliog Anal Chem 24:1918-21 D '52

Isolation of desacetylneoprotoveratrine from veratrum viride Ait. M. W. Klohs and others. bibliog Am Chem Soc J 75:3595-6 Jl 20 '53

Isolation of novacine, an alkaloid from strychnos nux-vomica, L. and its identification as *N*-methyl-*sec.-pseudo*brucine. W. F. Martin and others. Chem Soc J p3603-4 S '52

*iso*Quinoline alkaloids; the oxidation of tetrahydropapaveroline. J. Harley-Mason. Chem Soc J p 1465-6 My '53

Minor alkaloids of gelsemium sempervirens. H. Schwarz and L. Marion. Am Chem Soc J 75:4372 S 5 '53

New alkaloid from amianthium muscaetoxicum Gray. N. Neuss. Am Chem Soc J 75: 2772-3 Je 5 '53

Senecio alkaloids; the synthesis and resolution of 3 : 4-dihydroxy-2-methylpentane-3-carboxylic acids; viridifloric and trachelantic acids. L. J. Dry and F. L. Warren. Chem Soc J p3445-8 S '52

Sodium borohydride reduction of quaternary Schiff bases and alkaloids. B. Witkop and J. B. Patrick. bibliog Am Chem Soc J 75:4474-6 S 20 '53

Solanum alkaloids; solamargine, a new alkaloid from solanum marginatum. L. H. Briggs and others. Chem Soc J p3587-91 S '52

Solanum alkaloids; the mode of linkages in the trisaccharide moiety of solamargine. L. H. Briggs and E. G. Brooker. Chem Soc J p2833-4 S '53

Solanum alkaloids; the mode of linkages in the trisaccharide moiety of solanine and solasonine. L. H. Briggs and L. C. Vining. Chem Soc J p2809-15 S '53

Solanum alkaloids; the relation between constitution and basicity in solasodine, its derivatives, and solanidine. H. Bloom and L. H. Briggs. Chem Soc J p3591-2 S '52

Steroidal alkaloids; the functional groups of cevine. D. H. R. Barton and J. F. Eastham. Chem Soc J p424-8 F '53

ALKALOIDS—*Continued*

Studies on the degradation of kopsine, the alkaloid of kopsia fruticosa. A. Bhattacharya. Am Chem Soc J 75:381-3 Ja 20 '53

Veratrine alkaloids; the structure of isorubijervine; conversion to solanidine. S. W. Pelletier and W. A. Jacobs. bibliog Am Chem Soc J 75:4442-6 S 20 '53

Veratrine alkaloids; veracevine, the alkanolamine of cevadine and veratridine. S. W. Pelletier and W. A. Jacobs. bibliog Am Chem Soc J 75:3248-52 Jl 5 '53

Veratrobasine and geralbine, two new alkaloids isolated from veratrum album. A. Stoll and E. Seebeck. Am Chem Soc J 74:4728-9 S 20 '52

Zygadenus alkaloids; active principles of zygadenus venenosus; veratroylzygadenine and vanilloylzygadenine. S. M. Kupchan and C. V. Deliwala. bibliog Am Chem Soc J 75:1025-9 Mr 5 '53

See also

Carpaine
Colchicine
Consessine
Corlumine
Dicrotaline
Isorubijervine
Lupinine
Lysergic acid
Nicotine
Pilocereine
Scopolamine
Thebainone
Tropine
Valeroidine
Yohimbine

ALKANES. See Paraffins

ALKENES. See Olefins

ALKOXIDES. See Alcoholates

ALKOXY group

Determination of alkoxyl groups; abstract. G. Gran. il diags Paper Ind 34:884+ O '52

ALKYD resins. See Resinous products

ALKYL bromides

Hot atom chemistry of the alkyl bromides; absence of effects due to high radiation density; isotope separation in solids. F. S. Rowland and W. F. Libby. bibliog J Chem Phys 21:1495-9 S '53

Unimolecular decompositions of some alkyl bromides. J. H. S. Green and others. bibliog J Chem Phys 21:178 Ja '53

ALKYL chlorides

Formation of organo-phosphorus compounds by the reaction of alkyl chlorides with phosphorus trichloride in the presence of aluminium chloride. A. M. Kinnear and E. A. Perren. Chem Soc J p3437-45 S '52

Rates of solvolysis of some alkyl fluorides and chlorides. C. G. Swain and C. B. Scott. Am Chem Soc J 75:246-8 Ja 5 '53

ALKYL fluorides

Rates of solvolysis of some alkyl fluorides and chlorides. C. G. Swain and C. B. Scott. Am Chem Soc J 75:246-8 Ja 5 '53

ALKYL group

Dealkylation and hydrolysis of alkyl phosphites, phosphates, and phosphonates. W. Gerrard, W. J. Green and R. A. Nutkins. Chem Soc J p4076-8 O '52

Disproportionation of alkylbenzenes; mechanism of alkyl-group transfer. D. A. McCaulay and A. P. Lien. bibliog Am Chem Soc J 75:2411-13 My 20 '53

Effect of alkyl substitution on absorption spectra. H. C. Barany and M. Pianka. Chem Soc J p2217-24 Ag '53

Effect of structure of the alkyl group on the rates of decomposition of alkyl substituted benzenediazonium salts. E. S. Lewis and E. B. Miller. bibliog Am Chem Soc J 75:429-32 Ja 20 '53

Effect of the medium upon Hammett's sigma values of *p*-alkyl groups and hyperconjugation. H. Kloosterziel and H. J. Backer. bibliog Am Chem Soc J 74:5806 N 20 '52

Elimination of non-angular alkyl groups in aromatisation reactions. W. Cocker and others. Chem Soc J p2355-62 Ag '53

Properties and reactions of free alkyl radicals in solution; a study of the reactions of the 2-cyano-2-propyl radical with quinones. F. J. Lopez Aparicio and W. A. Waters. Chem Soc J p4666-74 D '52

Properties and reactions of free alkyl radicals in solution; some reactions with organic halogen compounds. M. C. Ford and W. A. Waters. Chem Soc J p2240-5 Je '52

Properties and reactions of free alkyl radicals in solution; the direct reaction between alkyl radicals and aliphatic aldehydes. E. F. P. Harris and W. A. Waters. Chem Soc J p3108-13 Ag '52

Reaction of diborane with the alkyl derivatives of some group VB elements. F. Hewitt and A. K. Holliday. Chem Soc J p530-4 F '53

t-Alkyl groups; orientation of *t*-alkylation products of toluene and ethylbenzene. M. J. Schlatter and R. D. Clark. bibliog Am Chem Soc J 75:361-9 Ja 20 '53

Thermal cracking of alkyl phenols; mechanism of dealkylation. B. W. Jones and M. B. Neuworth. bibliog diag Ind & Eng Chem 44:2872-6 D '52

ALKYL halides

Coupling of lithium alkyls and alkyl halides; metal-halogen exchange reactions. H. D. Zook and R. N. Goldey. bibliog Am Chem Soc J 75:3975-6 Ag 20 '53

Fast electron on X-ray decomposition of the alkyl halides. R. H. Schuler and W. H. Hamill. bibliog diag Am Chem Soc J 74:6171-4 D 20 '52

Organic chemistry of phosphorus; some new methods for the preparation of alkyl halides. S. R. Landauer and H. N. Rydon. Chem Soc J p2224-34 Ag '53

Quantitative correlation of relative rates; comparison of hydroxide ion with other nucleophilic reagents toward alkyl halides, esters, expoxides and acyl halides. C. G. Swain and C. B. Scott. bibliog Am Chem Soc J 75:141-7 Ja 5 '53

Studies in stereochemistry; differences in the reactivity of diastereomerically related alkyl halides and sulfonates in the SN2 and E_2 reactions. D. J. Cram and F. A. A. Elhafez. bibliog Am Chem Soc J 74:5851-9 D 5 '52

Analysis

6-Nitro-2-mercaptobenzothiazole reagent for the identification of alkyl dihalides. H. B. Cutter and A. Kreuchunas. Anal Chem 25:198 Ja '53

4-Nitrophthalimides; derivatives of alkyl halides giving a saponification equivalent. J. H. Billman and R. V. Cash. Am Chem Soc J 75:2499-501 My 20 '53

ALKYL iodides

Identification of the products of thermal exchange between alkyl iodides and molecular iodine by the wash out carrier technique. R. G. Badger, C. T. Chmiel and R. H. Schuler. bibliog Am Chem Soc J 75:2498-9 My 20 '53

Influence of structure, phase and added iodine on the organic yields of the I^{127} (n,γ)I^{128} reaction in alkyl iodides. G. Levey and J. E. Willard. bibliog Am Chem Soc J 74:6161-7 D 20 '52

Neopentyltrimethylammonium ion as a strained homomorph; the rates of reaction of neopentyldimethylamine with alkyl iodides. H. C. Brown and W. H. Bonner. bibliog Am Chem Soc J 75:14-16 Ja 5 '53

ALKYL isocyanides. See Isocyanides

ALKYL nitrates

Quaternary ammonium nitrates; preparation from alkyl nitrates and from αω-polymethylene dinitrates. E. S. Lane. Chem Soc J p 1172-5 Ap '53

ALKYL nitrites

Rotational isomerism as a general property of alkyl nitrites. P. Tarte. bibliog J Chem Phys 20:1570-5 O '52

ALKYL phenols. See Phenols

ALKYL phosphites

Alkyl phosphites. Chem Eng 60:227 Ja '53

Alkyl phosphites now set to go. il diag Chem Eng 60:126+ F '53

ALKYL pyridine picrates

Picrates of alkylpyridines; identification by X-ray diffraction powder patterns. G. J. Janz and R. Solomon. bibliog Anal Chem 25:454-7 Mr '53

ALKYLATION

Alkylation of aromatic hydrocarbons by optically active secondary butyl methyl ether in the presence of boron trifluoride. R. L. Burwell, jr., L. M. Elkin and A. D. Shields. bibliog Am Chem Soc J 74:4570-2 S 20 '52

Alkylation of gramine and of indole-N-methylgramine. A. P. Gray. bibliog Am Chem Soc J 75:1252-3 Mr 5 '53

Alkylation of malonic ester by ethylene oxide catalyzed by anhydrous $AlCl_3$. C. Raha. bibliog Am Chem Soc J 75:4098 Ag 20 '53

ALKYLATION—*Continued*

Alkylation of 2-naphthol by esters of aliphatic acids. S. Patai and M. Bentov. Am Chem Soc J 74:6118 D 5 '52

Alkylation of phenylacetones. E. M. Schultz and others. bibliog Am Chem Soc J 75:1072-4 Mr 5 '53

Anhydrous $AlCl_3$-catalyzed alkylation of ethyl cyanacetate by ethyl chloroacetate. C. Raha. Am Chem Soc J 75:4098-9 Ag 20 '53

Dialkylaminoalkylation of some 5-monosubstituted tetrazoles. B. Elpern. bibliog Am Chem Soc J 75:661-2 F 5 '53

Effect of alkyl substitution on antioxidant properties of phenols. J. I. Wasson and W. M. Smith. bibliog Ind & Eng Chem 45:197-200 Ja '53

Effect of promoters on the alkylation of benzene by secondary butyl methyl ether in the presence of boron trifluoride. R. L. Burwell, jr., L. M. Elkin and A. D. Shields. bibliog Am Chem Soc J 74:4567-70 S 20 '52

Isomerization accompanying alkylation; the reaction of benzene with *n*- and isopropylcyclopropane; the synthesis of *n*- and isopropylcyclopropane. H. Pines, W. D. Huntsman and V. N. Ipatieff. bibliog Am Chem Soc J 75:2311-15 My 20 '53

Mechanism of the alkylation of paraffins; the reaction of isobutane with 2-chloro-4,4-dimethylpentane, 3-chloro-5,5-dimethylhexane and 2- and 3-chloro-3,4,4-trimethylpentane. L. Schmerling and J. P. West. Am Chem Soc J 75:4275-7 S 5 '53

Novel N-alkylation reaction. I. A. Kaye, C. L. Parris and N. Weiner. bibliog Am Chem Soc J 75:744-5 F 5 '53

Producing monoalkylated benzenes. P. W. Sherwood. bibliog Pet Refiner 32:97-102 Ja '53

Reactions of aliphatic nitro compounds; alkylation by allyl-type halides. R. N. Boyd and R. J. Kelly. Am Chem Soc J 74:4600-2 S 20 '52

Silico-alkylation of sodio esters with trimethylchlorosilane to form silyl esters. C. R. Hance and C. R. Hauser. bibliog Am Chem Soc J 75:994-5 F 20 '53

Unsymmetrical quaternary carbon compounds; the alkylation of ethyl 2-cyano-3-methyl-2-pentenoate with aliphatic Grignard reagents. F. S. Prout. bibliog Am Chem Soc J 74:5915-17 D 5 '52

See also

Methylation

ALLEGHANY corporation

Alleghany corp., durable financial pyramid. I. U. Cobleigh. Comm & Fin Chr 177:2193 My 21 '53

ALLEGHENY and western railway

Good yields in guaranteed rails. R. Carleson. Mag of Wall St 92:112 Ap 18 '53

ALLEGHENY county, Pennsylvania

Travel by spider web. map Bsns W p94+ Ap 18 '53

ALLEGHENY Ludlum steel corporation

Five medium priced growth stocks; with comparative balance sheet items. Mag of Wall St 91:73 O 18 '52

New rolling mill spurring Allegheny Ludlum's profits. Barron's 33:25 Ap 13 '53

ALLEN, Harold

Businessmen in the news. por Fortune 47:53 F '53

ALLEN, John C.

Portrait. Bsns W p98 Je 27 '53

ALLEN, William M. 1900-

Businessmen in the news. por Fortune 46:57 O '52

ALLENE

Haloallenes. T. L. Jacobs and W. F. Brill. bibliog Am Chem Soc J 75:1314-17 Mr 20 '53

Rotation-vibration spectra of allene and allene-d_4. R. C. Lord and P. Venkateswarlu. bibliog J Chem Phys 20:1237-47 Ag '52

ALLERGY

See also

Antigens and antibodies

Antihistamines

ALLETHRIN

Allethrin production now full-scale at USI. il Chem & Eng N 31:338-9 Ja 26 '53; Chem Eng Prog 49:sup34 F '53

Allethrin seen hitting 600,000 pounds by '54. Oil Paint & Drug Rep 162:3 N 3 '52

Leading up to allethrin. il Chem W 72:38-9 Ja 24 '53

ALLETHROLONE

Dimerized cyclopentadienones from esters of allethrolone. F. B. LaForge, N. Green and M. S. Schechter. bibliog Am Chem Soc J 74:5392-4 N 5 '52

ALLIED chemical and dye corporation

Allied Chemical & Dye drops an old taboo. Bsns W p 117-18 F 14 '53

Annual report. Comm & Fin Chr 177:1045 Mr 9 '53

Offering of debentures oversubscribed. Comm & Fin Chr 177:1469-70 Ap 6 '53

$200-million deal unites feuding houses. Bsns W p 142 Mr 28 '53

ALLIED stores corporation

Sharp earnings recovery likely for Allied Stores. Barron's 33:19 F 23 '53

ALLIS-CHALMERS manufacturing company

Seven companies likely to increase dividends in 1953; with comparative balance sheet items. Mag of Wall St 91:398 Ja 10 '53

Ten potential market leaders for 1953; with comparative balance sheet items. Mag of Wall St 91:639 Mr 7 '53

ALLOCATIONS. See Priorities and allocations, Industrial

ALLOPHANATES

Allophanates. H. W. Blohm and E. I. Becker. diag Chem R 51:471-504 bibliog(p499-504) D '52

Proposed mechanism for the conversion of alcohols to allophanates. W. J. Close and M. A. Spielman. bibliog Am Chem Soc J 75:4055-6 Ag 20 '53

ALLOTROPY

Purple sulfur, a new allotropic form. F. O. Rice and C. Sparrow. bibliog Am Chem Soc J 75:848-50 F 20 '53

ALLOXAN

Colorimetric determination of thiophen in pure benzoles by the alloxan and isatin reagents. K. H. V. French. J Ap Chem 2:664-6 N '52

Constitution of products formed from *o*-phenylenediamines and alloxan in neutral solution; Rudy and Cramer's bisbarbiturylidene ether. F. E. King and J. W. Clark-Lewis. Chem Soc J p 172-7 Ja '53

ALLOYS

Annual handbook of product design for 1953; metals and alloys. il Product Eng Hdbk p B 1-31+ '53

Atomic moments in alloys. J. E. Goldman. bibliog diags Rs Mod Phys 25:108-13 Ja '53

Coercive force of precipitation alloys. A. H. Geisler. il Rs Mod Phys 25:316-22 Ja '53

Corrosion of alloys; abstract of Institute of metals papers. Engineering 175:534 Ap 24 '53

Forum on technical progress; materials and metallurgy. il diag Steel 132:280-2+ Ja 5 '53

Grain size, key to mechanical properties. H. A. Unckel. bibliog il Iron Age 170:148-52 D 18 '52

Improving stainless steel; three new alloy products; Simplex ferrochrome, electrolytic manganese and electrolytic chromium. il Bsns W p92+ Je 6 '53

Intermediate phases in the Mo-Fe-Co, Mo-Fe-Ni, and Mo-Ni-Co ternary systems. D. K. Das and others. bibliog il diags J Metals 4:Trans 1071-5 O '52

Kirkendall effect in alloy systems. H. N. Hersh. J Ap Phys 23:1055-6 S '52

Metals and alloys review and forecast. bibliog il Iron Age 171:282-5 Ja 1 '53

New thermal resistivity maximum in superconducting alloys. R. J. Sladek. bibliog Phys R 91:1280-1 S 1 '53

Proposed tentative recommended practice for codification of light metals and alloys, cast and wrought; data sheet. Foundry 80:170 N '52

Review of metallurgical developments. L. B. Pfeil. Engineer 195:739-40 My 22 '53; Same. Engineering 175:651-2 My 22 '53

Selecting forging alloys. L. Spencer. bibliog il Product Eng 24:202-7 My '53

Selecting materials to meet mechanical design requirements. J. R. Hunt. diags Materials & Methods 38:102-7 S '53

ALLOYS—*Continued*

Statistical theory of order-disorder equilibrium at high temperatures. P. Schwed and G. Groetzinger. bibliog J Chem Phys 21:963-4 Je '53

Supercooling and dendritic freezing in alloys; abstract. W. C. Winegard and B. Chalmers. Metal Prog 64:202+ O '53

Thermal conductivity data presented for various metals and alloys up to 900°C. L. Silverman. J Metals 5:631-2 My '53

See also

Aluminum alloys
Amalgams
Bearing metals
Beryllium alloys
Brass
Bronze
Cobalt alloys
Copper alloys
Iron alloys
Lead alloys
Magnesium alloys
Monel metal
Nickel alloys
Permalloy
Solutions, Solid
Steel alloys
Tin alloys
Zinc alloys

Analysis

Analysis of high temperature alloys by X-ray fluorescence. R. M. Brissey. il Anal Chem 25:190-2 Ja '53

Intensity calculation for determining weight percentage in a binary alloy by X-ray fluorescent analysis. P. K. Koh and others. J Ap Phys 23:698 Je '52

ALLOYS, Hard facing

Hard-facing alloys of the chromium carbide type. H. S. Avery and H. J. Chapin. bibliog il Welding J 31:917-30 O '52; Abstract. Metal Prog 63:136+ Mr '53

Tooling applications of hard facing alloys. L. V. LaRou. il Tool Eng 30:65-9 Je '53

ALLOYS, Heat resisting

Coating alloy for high-temperature use; C.26. Engineer 195:274 F 20 '53; Engineering 175:248 F 20 '53

Copper-aluminium heat exchanger tube alloy; Narglas B. Metallurgia 48:44 Jl '53

Gas turbine alloys, ten years later. H. Scott. bibliog Metal Prog 58:503-11 O '50; Same cond. Product Eng Hdbk p B 16-20 '53

High-temperature jet-engine alloys; popular grades listed in order of their descending strategic alloy tabulation. Iron Age 171:452 Ja 1 '53

High temperature metallurgy; jetomic age demands it. B. P. Planner. il Steel 131:98-100+ N 3 '52

Hot-cold work improves 16-25-6 properties. M. Fleischmann. il diags Iron Age 170:123-7 N 20 '52

How to solve fabricating problems of high-temperature alloys. H. Brown. il Iron Age 171:121-5 Ap 16 '53

Influence of chemical composition on rupture test properties at 1500° F. of forged chromium-cobalt-nickelt-iron base alloys; abstract. J. W. Freeman and others. Metal Prog 63:164+ Ap '53

Machining of high temperature alloys. P. G. DeHuff and D. C. Goldberg. il Aero Digest 65:92-100 N '52; Same cond. Automotive Ind 106:46-9+ My 1 '52; Same cond. Machine Design 24:270+ S '52; Same cond. Steel 130:76-8 Ap 28 '52

Magnesium-rare earth casting alloys. J. C. McDonald. il J Metals 4:242-4 Mr '52; Same cond. Product Eng Hdbk p B 14-15 '53

Metals in the jetomic age. A. G. Gray. bibliog il Steel 131:148-53 O 13 '52

Microconstituents in chromium-base chromium-iron-molybdneum alloys and their behavior with heat treatment. J. P. Hammond and others. bibliog il J Metals 4: Trans 1329-42 D '52

Microconstituents in high-temperature alloys; abstract. H. J. Beattie and F. L. VerSnyder. Metal Prog 62:132-3 N '52

New alloy; high temperature metal developed to meet unusual needs; Rynalloy. il Iron Age 171:172+ Je 18 '53

New alloy tough in the hot spots; NA22H. M. N. Ornitz and R. H. English. il Steel 131:90-1 N 17 '52; Abstract. Iron & Steel Eng 29:127 S '52

Nimonic 95. Engineer 194:184 Ag 8 '52; Engineering 174:182 Ag 8 '52

Nominal compositions of typical high strength heat resisting alloys and limited stress rupture data; tabulation; engineering file facts. J. B. Meierdirks, jr. Materials & Methods 38:139 S '53

Scaling characteristics make or break a high temperature metal. D. D. Cubicciotti. bibliog diag Iron Age 171:144-6 My 21 '53

Spray and sinter to make high temperature alloy parts. J. E. Cline and others. Product Eng 24:272+ F '53

Strong, heat resistant alloys and metallic combinations. A. Michel. il Metal Prog 63:120-4 Ja '53

Welded jet engine parts cut weight, increase power; with table of principal high-temperature alloys used for jet engine components. K. H. Koopman. Iron Age 171:110-12 Ja 22 '53

Testing

Aluminum-six per cent magnesium alloys for elevated-temperature service. L. W. Eastwood and others. Am Soc T M Proc 50:1013-34 '50

Chromium-base alloys. W. L. Havekotte and others. il diags Am Soc T M Proc 50:1101-26; Discussion. 1127-30 '50

Creep tests on Nimonic alloys. Engineering 174:415 S 26 '52

Creep tests on Nimonic alloys under varying stress and temperature. D. C. Herbert and D. J. Armstrong. diag Engineering 175:605-6 My 8 '53

Effect of rate of strain on the flow stress of gas turbine alloys at 1200 and 1500 F. M. J. Manjoine. il diags Am Soc T M Proc 50:931-48; bibliog(p947-8); Discussion. 949-50 '50

Laboratory investigation of superheater-tubing materials in contact with synthetic combustion atmospheres at 1350 F. C. J. Slunder and others. diag A S M E Trans 75:1015-19 Ag '53

Magnesium-cerium wrought alloys for elevated-temperature service. K. Grube and others. il diags Am Soc T M Proc 50:965-88 '50

New high temperature alloy; NA22H. M. N. Ornitz and R. H. English. bibliog il diags Iron & Steel Eng 30:102-12; Discussion. 112-17 F '53

ALLWÖRDEN reaction. See Wool

ALLYL alcohol

Reactions of allyl alcohol-1-C^{14}. R. F. Nystrom and J. C. Leak. Am Chem Soc J 75:3039 Je 20 '53

ALLYL benzene

Allylbenzene compounds; pyrolysis of methyl 2-allyloxy-3 : 4-dimethoxybenzoate. M. Michael, D. E. White and M. C. Woods. Chem Soc J p4589-90 D '52

ALLYL chloride

Studies on unimolecular chlorohydrocarbon decompositions. K. E. Howlett. Chem Soc J p945-7 Mr '53

ALLYL compounds

Polymerization of allyl compounds; the polymerization of allyl-1-d_2 acetate and the mechanism of its chain termination. P. D. Bartlett and F. A. Tate. bibliog diag Am Chem Soc J 75:91-5 Ja 5 '53

ALLYL ethers. See Ethers

ALLYL iodide

Kinetics of the photochemical exchange between iodine and allyl iodide. D. J. Sibbett and R. M. Noyes. bibliog Am Chem Soc J 75:763-7 F 20 '53

Kinetics of the thermal exchange between iodine and allyl iodide. D. J. Sibbett and R. M. Noyes. Am Chem Soc J 75:761-3 F 20 '53

ALMONDS

Electronic separation cuts labor, boosts quality; John F. Renshaw co. E. Grosz. il Food Eng 25:95+ Ag '53

French output of almonds high. For Comm W 48:22 O 20 '52

Naples almond crop increased. For Comm W 48:21 O 13 '52

Portugal has record almond production. For Comm W 49:20 F 23 '53

South Italy's almond crop larger; markets changing. For Comm W 49:13 F 2 '53

ALNICO

Effects of macrostructure on the performance of Alnico permanent magnets. D. G. Ebeling and A. A. Burr. bibliog il diags J Metals 5:Trans 537-44 Ap '53

Magnetic separator recovers Alnico from grinder. il diag Electronics 26:228+ F '53

Magnetostriction in Alnico V magnets. J. R. Ireland. Electronics 26:234+ My '53

ALNICO—*Continued*

Optimum design of permanent magnets; abstract. H. K. Ziegler. Elec Eng 72:445 My '53

ALOPECIA. See Baldness

ALPHA rays

Alpha-branching of AcK and the presence of astatine in nature. E. K. Hyde and A. Ghiorso. bibliog Phys R 90:267-70 Ap 15 '53

α-Energy systematics and proton shells for heavier nuclei. S. Sengupta. bibliog Phys R 87:1136-7 S 15 '52

Alpha-gamma angular correlation in radiothorium. J. Battey and others. bibliog Phys R 89:182-5 Ja 1 '53

Alpha-particle induced phosphorescence of silver-activated sodium chloride. C. E. Mandeville and H. O. Albrecht. bibliog Phys R 90:25-8 Ap 1 '53

Alpha-particle ionization in mixtures of the noble gases. W. P. Jesse and J. Sadauskis. Phys R 88:417-18 O 15 '52

Alpha-particle ionization in pure gases and the average energy to make an ion pair. W. P. Jesse and J. Sadauskis. bibliog Phys R 90:1120-1 Je 15 '53

Alpha-particles of radium. F. Asaro and I. Perlman. bibliog Phys R 88:129-31 O 1 '52

Alpha-radiation damage in zircon. P. M. Hurley and H. W. Fairbairn. J Ap Phys 23:1408 D '52

Alpha-radioactivity in the 82-neutron region. J. O. Rasmussen, jr. and others. bibliog Phys R 89:33-48 Ja 1 '53

Alpha-spectra of Pu^{239} and Pu^{240}. F. Asaro and I. Perlman. bibliog diag Phys R 88:828-31 N 15 '52

Angular distribution of alpha-particles from the reaction of deuterons with tritons. T. F. Stratton and G. D. Freier. Phys R 88:261-3 O 15 '52

Angular distribution of gamma-rays and short-range alpha-particles from $N^{15}(p,\alpha\gamma)C^{12}$. A. A. Kraus, jr. and others. Phys R 89:299-301 Ja 1 '53

Calculation of range-energy relations for alpha-particles in photographic emulsions. M. Bogaardt and B. Koudijs. bibliog Phys R 87:1129-30 S 15 '52

Disproportionation equilibria and rates in perchloric and hydrochloric acid solutions of plutonium; influence of α-particles. R. E. Connick and W. H. McVey. bibliog Am Chem Soc J 75:474-9 Ja 20 '53

Distribution of alpha ray energy in radiation chemistry. S. C. Lind. J Phys Chem 56:920 O '52

Distributions-in-energy for alpha-particles and protons from U^{235} fission. D. L. Hill. diag Phys R 87:1049-51 S 15 '52

Elastic scattering of alpha-particles by carbon. R. W. Hill. bibliog Phys R 90:845-8 Je 1 '53

Elastic scattering of alpha-particles by oxygen. J. R. Cameron. bibliog diag Phys R 90:839-44 Je 1 '53

Energy levels in Si^{28} excited by alpha-particles on Mg^{24}. S. G. Kaufmann and others. Phys R 88:673-6 N 1 '52

Energy per ion pair for 5-Mev alpha-particles in helium. T. E. Bortner and G. S. Hurst. Phys R 90:160 Ap 1 '53

Excitation curves for α particles from B^{11} bombarded with protons. O. Beckman and others. bibliog Phys R 91:606-9 Ag 1 '53

Fluorescent light yields with alpha, beta, and gamma radiations. M. Furst and H. Kallmann. bibliog Phys R 91:766-7 Ag 1 '53

Gamma-ray resonances in the alpha-particle bombardment of beryllium and boron. F. L. Talbott and N. P. Heydenburg. bibliog Phys R 90:186-7 Ap 15 '53

Geiger-Nuttal relation and α-ray spectra. M. L. Chaudhury. Phys R 88:137 O 1 '52

Ionization of fluorocarbon gases by U-234 α-particles. M. E. Steidlitz and others. diag J Phys Chem 56:1010-12 N '52

Lyman-alpha radiation in the solar spectrum. E. T. Byram and others. bibliog Phys R 91:1278-9 S 1 '53

Patterns in alpha spectra of even-even nuclei. F. Asaro and I. Perlman. Phys R 91:763-4 Ag 1 '53

Range-energy relations for alpha-particles and deuterons in the Kodak NTB emulsion. O. Gailar and others. bibliog diags R Sci Instr 24:126-8 F '53

Range of alpha-particles in water. H. G. de Carvalho and H. Yagoda. bibliog il diag Phys R 88:273-8 O 15 '52

Scintillations produced by alpha particles in CsI. B. Hahn. Phys R 91:772-3 Ag 1 '53

Secondary particles resulting from 375-Mev alpha-bombardment of nuclei. R. W. Deutsch. Phys R 90:499-500 My 1 '53

Specific alpha-activities and half-lives of U^{234}, U^{235}, and U^{236}. E. H. Fleming, jr. and others. bibliog diags Phys R 88:642-52 N 1 '52

Spontaneous fission versus alpha-decay. A. Kramish. Phys R 88:1201 D 1 '52

Surface effect of sodium iodide scintillators. E. der Mateosian and L. C. L. Yuan. Phys R 90:868-9 Je 1 '53

Test of the charge symmetry hypothesis; positive to negative pion production ratio obtained in bombarding carbon with alpha-particles and protons. H. W. Wilson and W. H. Barkas. diag Phys R 89:758-9 F 15 '53

Theory of alpha decay. J. J. Devaney. bibliog Phys R 91:587-93 Ag 1 '53

Use of radioactive alpha-recoil in the study of soluble ionized surface layers. G. Aniansson and N. H. Steiger. diag J Chem Phys 21:1299-300 Jl '53

ALPHABET

Deseret alphabet; noble experiment. R. R. Karch. il Inland Ptr 130:44-5 F '53

ALSCO, inc.

One way to sell an air conditioner. il Bsns W p 156+ My 9 '53

ALSDORF, James W.

How one company president budgets his time; president of Cory corp. W. Norris. pors Am Bsns 23:16-17+ My '53

ALSTONIA

Triterpenoids of alstonia verticillosa. O. C. Musgrave and H. M. Wagner. Chem Soc J p2937 Jl '52

ALTERNARIA

Alternaria within pericarp of wheat seed. S. R. Bose. Science 117:16 Ja 2 '53

ALTERNARIC acid

Alternaric acid; purification and characterisation. J. F. Grove. Chem Soc J p4056-9 O '52

ALTERNATING current motors. See Electric motors, Alternating current

ALTIMETERS

Flush-mounted altimeter slot radiators. L. E. Raburn. bibliog il diags Tele-Tech 12:73-5+ Ap '53

ALTITUDE

Pulse recording system for research at high altitude. J. Linsley. il R Sci Instr 24:181-2 F '53

Wear of carbon brushes at high altitudes. R. F. Sims. diags Inst E E Proc 100 pt 1:183-8 Jl '53

Measurement

Hypsometric (area-altitude) analysis of erosional topography. A. N. Strahler. bibliog maps diags Geol Soc Bul 63:1117-41, pl 1 N '52

ALTITUDE meters. See Altimeters

ALTSCHUL, Frank

Frank Altschul and the Overbrook press. P. K. Thomajan. Inland Ptr 131:43-5+ Je '53

ALUMINA

Adsorption of ions from buffer solutions by silica, alumina and silica-alumina gels. C. J. Plank. bibliog diag J Phys Chem 57:284-90 Mr '53

Application of additives to fuel oil and their use in steam-generating units. J. B. McIlroy and others. il diag Power 97:86-8 Mr '53

Catalytic behavior of 2-amino-2-methyl-1-propanol vapor over alumina. D. M. Clarke, F. T. J. O'Leary and J. V. Karabinos. bibliog Am Chem Soc J 74:5587-8 N 20 '52

Compression strength of porous sintered alumina and zirconia; ninth communication to ceramography. E. Ryshkewitch. il Am Cer Soc J 36:65-8 F 1 '53

Control of physical structure of silica-alumina catalyst. K. D. Ashley and W. B. Innes. bibliog il Ind & Eng Chem 44:2857-63 D '52

Corpus Christi; from bauxite to alumina to pig metal, Reynolds metals co. J. A. Lee. il Eng & Min J 153:80-3 D '52

ALUMINA—*Continued*

Dehydration of ethyl alcohol over alumina. H. Feilchenfeld. bibliog Ind & Eng Chem 45:855-7 Ap '53

Dehydration of methylcyclopropylcarbinol over alumina; a synthesis of vinylcyclopropane. V. A. Slabey. bibliog Am Chem Soc J 74:4930-2 O 5 '52

Effect of alumina and lime upon the solubility of lithium silicates. R. M. Williams and H. E. Simpson. bibliog Cer Ind 60:137-8+ Ap '53

Factors governing hardness and transparency of alumina gels. B. P. Gyani. bibliog J Phys Chem 56:762-3 Je '52

Influence of Al_2O_3, ZnO, and K_2O on the opacity of fluoride-opacified glasses. R. J. Callow. Am Cer Soc J 35:120-2 My 1 '52; Excerpts. Glass Ind 33:661+ D '52

Kinetics of the catalytic vapor-phase addition of hydrogen chloride to propylene. L. E. Swabb, jr. and H. E. Hoelscher. bibliog plan Chem Eng Prog 48:564-9 N '52

Oil additive developed to relieve boiler slagging. il diag Blast F & Steel Pl 40:938-40 Ag '52; Steel 131:120-2+ Jl 21 '52; Heat & Ven 49:134+ S '52; Iron Age 170:178-9 S 11 '52; Marine Eng 57:59-62 N '52; Power Eng 56:83-4 D '52

Polymorphs of alumina and gallia. R. Roy, V. G. Hill and E. F. Osborn. bibliog Ind & Eng Chem 45:819-20 Ap '53

Standard refractory tubes in recrystallised alumina, mullite and aluminous porcelain. Metallurgia 47:321-2 Je '53

Studies in the terpene series; skeletal isomerization and hydrogen transfer of cyclic olefins in the presence of alumina-hydrogen chloride and silica-alumina catalysts. H. Pines, R. C. Olberg and V. N. Ipatieff. bibliog Am Chem Soc J 74:4872-6 O 5 '52

Thermal stress failure of pure refractory oxides. B. Schwartz. bibliog il diags Am Cer Soc J 35:325-33 D 1 '52

Time-resolved spectroscopy of ultraspeed pellet luminosity. W. A. Allen and E. B. Mayfield. il J Ap Phys 24:131-3 F '53

Use of free energy data in the construction of phase diagrams. W. J. Knapp. bibliog Am Cer Soc J 36:43-7 F 1 '53

X-ray diffraction studies in the system Al_2O_3-SnO_2-TiO_2. W. O. Milligan and B. G. Holmes. bibliog J Phys Chem 57:11-14 Ja '53

See also
Bauxite
Corundum
Gibbsite

Analysis

Direct determination of aluminum oxide in portland cement; a chemical method. C. L. Ford. bibliog Anal Chem 24:1934-41 D '52

Spectrographic method for analysis of cracking catalysts. C. W. Key and G. D. Hoggan. bibliog Anal Chem 24:1921-5 D '52

ALUMINA brick

Urge proper application of hi-alumina refractories. Brick & Clay Rec 123:69 Jl '53

ALUMINATES

See also
Spinels

ALUMINIUM, limited

Aluminum agreement cancellation requested. Oil Paint & Drug Rep 164:4+ Jl 27 '53

Heavy expansion for light metal. I. U. Cobleigh. Comm & Fin Chr 178:200 Jl 16 '53

Reports lower net. Barron's 33:43 Mr 30 '53

Twenty stocks acting best, poorest; with tables. J. S. Williams. Mag of Wall St 92:225-6 My 16 '53

ALUMINUM

Aluminium and its alloys in 1952. E. Elliott. bibliog(96 titles) Metallurgia 47:73-80 F '53

Aluminum auto radiators. Mech Eng 75:403-4 My '53

Anion exchange studies; separation of iron and aluminum in sulfate solutions. K. A. Kraus and F. Nelson. Am Chem Soc J 75:3273-4 Jl 5 '53

Bright picture of aluminum. C. A. Scarlott. il Westinghouse Eng 13:92-7 My '53

Electrochemical behavior of aluminum; in buffered and alkaline solutions of potassium ferricyanide and in sodium hydroxide. J. V. Petrocelli. Electrochem Soc J 99:513-19 D '52

Engineered for outdoor lines; new, low-cost aluminum jacketing now used in 567 processing plants; illustrations with text. Food Eng 25:106 My '53

Large angle scattering of negative pions in aluminum, copper, and lead. H. H. Heckman and L. E. Bailey. bibliog diags Phys R 91:1237-42 S 1 '53

Magnetoresistance of Mg, Cu, Sb, and Al at liquid helium temperatures. G. B. Yntema. bibliog Phys R 91:1388-94 S 15 '53

Marine Diesel engines used aluminum extensively. il Machine Design 24:236 S '52; Light Metal Age 10:12 O '52; diags Product Eng 23:144-5 D '52

Mechanism by which aluminum ions alter the electrokinetics of the zinc sulfide-water interface. M. Bender. bibliog J Phys Chem 57:466-8 Ap '53

More aluminum in process plants. il Chem W 71:51-2 N 29 '52

More aluminum predicted in automobiles. J. H. Dunn. Materials & Methods 37:178+ F '53

Multiplicity of neutrons from the interaction of μ^- mesons at rest in Pb, Bi, Sn, and Al. M. Widgoff. bibliog diag Phys R 90:891-9 Je 1 '53

New demands lead to new directions in engineering materials; aluminum and magnesium. T. C. Du Mond. il Materials & Methods 37:83-5 Je '53

Scattering and absorption of π^+ mesons by aluminum. J. F. Tracy. bibliog il diags Phys R 91:960-71 Ag 15 '53

Soft mold technique for growing single crystals of aluminum. T. S. Noggle. il diag R Sci Instr 24:184-5 F '53

Solid solubility of silver in aluminum; abstract. L. Rotherham and L. W. Larke. Metal Prog 63:208+ My '53

Some acoustical properties of lead and other substances at liquid nitrogen temperature. P. J. Ernst and P. Zayon. Acoustical Soc Am J 25:152-3 Ja '53

Sterling silver containing aluminium. G. E. Gardam. il Metallurgia 47:29-33 Ja '53

Structural and energy relationships in the formation of iron and aluminum oxides, hydroxides, and silicates. T. Tamura and M. L. Jackson. bibliog Science 117:381-3 Ap 10 '53

Use of porcelain enamel on aluminum. E. C. Woodland. Cer Ind 59:116+ O '52

Variation of the elastic constants of crystalline aluminum with temperature between 63°K and 773°K. P. M. Sutton. bibliog diag Phys R 91:816-21 Ag 15 '53

What's ahead the next ten years in materials and components. Am Mach 96:A5 Mid-N '52

See also
Bauxite

Analysis

Photometric determination of aluminum in alkalies. O. A. Kenyon and H. A. Bewick. bibliog Anal Chem 24:1826-7 N '52

Review of analytical chemistry; nonferrous metallurgy. M. L. Moss. bibliog Anal Chem 25:37-8 Ja '53

Spectrophotometric determination of aluminum in thorium; extraction of aluminum with 8-quinolinol in chloroform. D. W. Margerum, W. Sprain and C. V. Banks. bibliog Anal Chem 25:249-52 F '53

See also
Aluminum alloys—
Analysis

Coloring

Coloring of aluminum; abstract. W. W. G. Hübner. Am Dyestuff Rep 41:585 S 15 '52

Corrosion

Aluminum corrosion prevention. G. W. Orton. il Light Metal Age 10:10-11+ Ap; 18-20 Je; 20 Ag; 17 O '52

Aluminum for copper; greater corrosion risks? H. A. Liebhafsky and E. W. Balis. il diags Gen Elec R 56:12-16, 61 Mr '53

Aluminum; its application as a cable sheathing material and as a conductor. D. McAllister. Elec J 150:1230-2 Ap 10 '53

Corrosion of aluminum by carbon tetrachloride. M. Stern and H. H. Uhlig. bibliog il diags Electrochem Soc J 99:381-8 O '52

ALUMINUM—Corrosion—*Continued*

Corrosion of aluminum by nitric acid as a function of temperature. M. G. Fontana. Ind & Eng Chem 45:sup93A-5A F '53

Corrosion resistance of aluminium to coal gas; aluminium roof over purification plant, Sevenoaks, Kent, gasworks. Engineer 195: 365 Mr 6 '53; Engineering 175:377 Mr 20 '53; Metallurgia 47:246 My '53

Intergranular corrosion of high-purity aluminum. M. J. Lavigne. il Metal Prog 64: 84-6 S '53

See also

Aluminum—Protection

Electrotechnical uses

Aluminium as a cable sheathing material. D. McAllister. bibliog il diags Engineer 194: 819-23, 854-7 D 19-26 '52; Abstract. Metal Prog 63:208-11 Ap '53

Aluminum bus duct speeds installation. il Elec West 110:102 Ap '53

Aluminium cable sheathing. il diags Engineer 194:410-12 S 26 '52; Engineering 174: 404-5, 408 S 26 '52; Elec R (Lond) 151:691-3 S 26 '52; Electrician 149:909-12 S 26 '52; Metallurgia 46:175-8 O '52

Aluminum conductor has price advantage over copper. K. Johnson. Elec World 139: 63-4 My 4 '53

Aluminum conductors in busway systems. J. St Andre. il Factory Management 111:110-12 F '53

Aluminum in electrical applications. R. M. Leedy and S. A. Rosecrans. il Materials & Methods 37:89-91 F '53

Aluminum in the electrical industry. R. M. Leedy and S. A. Rosecrans. il diag Westinghouse Eng 13:98-102 My '53

Aluminum; its application as a cable sheathing material and as a conductor. D. McAllister. il Elec J 150:1225-32, 1301-5 Ap 10-17 '53

Aluminum windings in transformers. J. W. St Andre. il Factory Management 110:136-7 D '52

Connectors retard use of aluminum wire. C. Baugh. il Elec West 109:72-5 D '52

Corrugated aluminium-sheathed cable; Pirelli-General cable works, ltd. il Metallurgia 46: 237-40 N '52; Engineer 194:548-9 O 24 '52; Engineering 174:614-15 N 7 '52; Elec J 149:1257-8 O 24 '52; Elec R (Lond) 151: 915-16 O 24 '52

GE's new aluminum alloy; Cond-Al. il Elec World 138:176 S 8 '52; Mech Eng 74:918 N '52

Have Europeans solved Al-Cu connection problem? diags Elec World News ed 138: 32-4 N 10 '52

How Consolidated Edison installed New York's first aluminum cable. A. F. Newman and F. J. Johnson. il diags Elec World 138:90-2 D 1 '52

How to install high capacity aluminum buses. J. E. Housley. il Elec World 138:112-14 D 15 '52

How to select connectors for aluminum conductors. H. Dupre. il Materials & Methods 38:96-9 Ag '53

Investigation of the performance of power connectors for use outdoors with aluminum conductors. H. R. Harrison and R. W. Honebrink. il diags Elec Eng 72:393-7 My '53

Large overhead line cable. il Elec R (Lond) 151:362 Ag 15 '52

Overhead distribution scheme; economics of an all-aluminium low voltage network. A. E. Somers. il Elec R (Lond) 152:742-4 Ap 3 '53

They spin their own aluminum cable; Arizona public service co. T. A. Phillips. il Elec West 110:90-2 Ap '53

What you need to know about connectors for aluminum wire and cable. J. St Andre. il diags Factory Management 110:120-3 O '52

Finishing

Aluminum polishing; Alchemize. Light Metal Age 11:31 Ap '53

Characteristics of Alzak aluminum as used in the lighting industry. H. Lyons and W. Weibel. bibliog flow sheet il Illum Eng 48: 135-9 Mr '53

Cleveland artist pioneers in vitreous enameled aluminum; Edward Winter. il Cer Ind 61: 49+ O '53

Electropolishing of pure aluminum by repeated Eloxal anodizing and dissolving of the Eloxal coating; abstract. R. Lattey. Metal Finishing 51:84 Mr '53

Embossed aluminum sheet; British aluminium co. il Metallurgia 48:145 S '53

Enameling aluminum in seven easy steps. Cer Ind 61:73 O '53

Finishes for aluminum. R. V. Vanden Berg. il Machine Design 25:177-86 O '53; Abstract. S A E J 61:55 Jl '53

Finishing of aluminium and its alloys. A. P. Fenn. Metallurgia 47:70-2+ F '53

Pickling, buffing and coloring of aluminum and alloys before anodizing; abstract. R. Erdmann. Metal Finishing 51:83 Ap '53

Plating on aluminum; zincate immersion pretreatment. W. G. Zelley. il Steel 132:76-8 F 16 '53

Racking; prerequisite to good chemical finishing of aluminum. W. W. Moss and B. Jones. il Light Metal Age 10:16+ Ag; 16+ O '52

Rapid expansion of aluminum enameling is imminent. Cer Ind 61:62 S '53

Sequestering agents in aluminum etching. F. J. Prescott and others. bibliog il Metal Finishing 51:65-7 O '53

Isotopes

Absolute determination of resonant energies for the radiative capture of protons by boron, carbon, fluorine, magnesium, and aluminum in the energy range below 500 kev. S. E. Hunt and W. M. Jones. diag Phys R 89:1283-7 Mr 15 '53

Cross section for the reaction $Al^{27}(\alpha,\alpha 2pn)Na^{24}$ from threshold to 380 Mev. M. Lindner and R. N. Osborne. Phys R 91:342-4 Jl 15 '53

Excitation function for the $Al^{27}(d,\alpha p)Na^{24}$ reaction. R. E. Batzel and others. Phys R 91:939-42 Ag 15 '53

Hyperfine structure of the $3p\ ^2P_{1/2}$ state of Al^{27}. H. Lew and G. Wessel. bibliog diag Phys R 90:1-3 Ap 1 '53

Levels of Al^{25} from the $Mg^{24}(d,n)Al^{25}$ reaction. E. Goldberg. bibliog Phys R 89:760-5 F 15 '53

Magnetic analysis of the $Al^{27}(d,p)Al^{28}$ reaction. H. A. Enge and others. bibliog diag Phys R 88:963-8 D 1 '52

Mass difference Si^{27}-Al^{27}. J. D. Kington and others. bibliog Phys R 89:530 Ja 15 '53

Nuclear gamma-rays from low energy proton bombardment of sodium, magnesium, and aluminum. H. Casson. bibliog diags Phys R 89:809-20 F 15 '53

Second-order effects in nuclear electric quadrupole interaction of Al^{27} in spodumene. H. E. Petch and others. Phys R 88:1201-2 D 1 '52

Triton-induced activities in magnesium and aluminum. E. Iwersen and others. Phys R 91:1229-31 S 1 '53

Joining to steel, etc.

Aluminum bonding. Automobile Eng 43:262 Je '53

Aluminum-on-steel bearings. J. B. Mohler. il Diesel Power 31:38-41 S '53

Applications extended for aluminum bonding. il Product Eng 23:134-7 D '52

Coat skirts with aluminum. N. P. Harvey. il Power 96:111 N '52

Joining aluminum to other metals. M. A. Miller. bibliog il Welding J 32:730-40 Ag '53; Same cond. Materials & Methods 38:96-9 S '53

Strength joints to steel with aluminum bronze filler metals. W. G. Groth and R. E. Maersch. il diags Welding J 31:1042-8 N '52

Metallography

Creep of the grain boundary in high purity aluminum. H. C. Chang and N. J. Grant. bibliog il diag J Metals 4:Trans 619-25 Je '52; Discussion. 5:Trans 732-3 sec 2 My '53

Directional properties of 2S aluminum. K. T. Aust and F. R. Morral. bibliog il J Metals 5:Trans 431-6 Mr '53

Dynamic formation of slip bands in aluminum. N. K. Chen and R. B. Pond. bibliog il diags J Metals 4:Trans 1085-92 O '52; Discussion. 5:Trans 733-5 sec 2 My '53

ALUMINUM—Metallography—*Continued*

Formation of deformation bands in Al-3 per cent Mg monocrystals during cold rolling. J. Herenguel and others. bibliog il diags J Metals 5:Trans 559-64 Ap '53

Grain boundary sliding and migration and intercrystalline failure under creep conditions. H. C. Chang and N. J. Grant. bibliog il diags J Metals 5:Trans 305-12 sec 2 F '53; Discussion. 5:Trans 1579-81 sec 2 N '53

Revealing the subgrain structure of aluminum. M. S. Hunter and D. L. Robinson. il J Metals 5:Trans 717-22 sec 2 My '53

Slip and grain boundary sliding as affected by grain size. N. J. Grant and others. il J Metals 5:Trans 217-18 sec 2 F '53

Study of grain shape in an aluminum alloy and other applications of stereoscopic microradiography. W. M. Williams and C. S. Smith. bibliog il diags J Metals 4:Trans 755-65 Jl '52; Discussion. 5:Trans 741-3 sec 2 My '53

Subgrain formation during creep in high purity aluminum. I. S. Servi and others. bibliog il J Metals 4:Trans 965-71 S '52; Discussion. 5:Trans 730-2 sec 2 My '53

Paint

Aluminum paint. H. L. Warnecke. Paint Oil & Chem R 115:50 O 9 '52

Aluminum soap powder in paint vehicles. M. L. Stumpf. Paint Oil & Chem R 116:16-17+ Ja 1 '53

Comparative effect of oil acidity and resin acidity in aluminum vehicles, by the Pittsburgh club. Paint Oil & Chem R 115:95-6 D 4 '52; Abstract. Oil Paint & Drug Rep 162:78 D 1 '52

Here's low-down on aluminum paint. M. C. Davis. il Power 96:123-5 D '52

Reflectivity of aluminum pigments and paint. G. M. Babcock and F. B. Rethwisch. Paint Oil & Chem R 115:53 N 20 '52; 116:22+ N 19 '53

Reynolds to push aluminum paint at the national consumer level. il Paint Oil & Chem R 116:19 Ap 9 '53

Silicone-aluminum paints stretch high-temperature life of steel. A. E. Durkin and A. H. Horner. il Materials & Methods 38: 114-16 S '53

Prices

Nonferrous prices; tabulation. Steel 132:173 Ja 5 '53

Protection

Aluminum corrosion prevention. G. W. Orton. il Light Metal Age 10:10-11+ Ap; 18-20 Je; 20 Ag; 17 O '52

Anodizing aluminum with sulfamic acid. S. Tajima and others. bibliog il diag Metal Finishing 50:67-71 O; 65-9+ N '52

Cast aluminum alloys for electropolished and Eloxal processed parts; abstract. M. Buckeley-Liesegang and A. Buckeley. Metal Finishing 51:82-3 Ap '53

Effect of oxide films on the reaction of aluminum with carbon tetrachloride. M. Stern and H. H. Uhlig. il Electrochem Soc J 99:389-92 O '52

Effects of air agitation in sulfuric acid anodizing. R. C. Spooner. il diag Metal Finishing 51:78-81 Mr '53

Effects of anodic coatings on the fatigue strength of aluminum alloys. G. W. Stickley and F. M. Howell. il diags Am Soc T M Proc 50:735-43 '50

Flexural fatigue strength of anodized 24ST aluminum-alloy sheet. C. B. Cliett. diags Aeronautical Eng R 11:29-30+ D '52

Hard aluminum finishes resist wear and abrasion. R. V. Vanden Berg. il Iron Age 170:81-3 O 30 '52

Lead clad copper solves an anodizing problem. il Metal Finishing 50:65-6+ D '52

Manufacturing name plates; etching, anodizing and plating operations; Chicago thrift-etching corp. R. E. Pettit. il Metal Finishing 51:60-4+ Mr '53

Organic finishes for aluminum and magnesium aircraft alloys; abstract. A. E. Mallory. Metal Prog 63:108 Je '53

Plating on aluminum; zincate immersion pretreatment. W. G. Zelley. il Steel 132:76-8 F 16 '53

Protective anodizing of highly reflective aluminum. S. Tajima and others. bibliog il Metal Finishing 51:69-73 S '53

Protective finishing of aluminum for aircraft. D. Armstrong. il Metal Prog 63:104-8 Je '53

Recent developments in protective coatings. A. G. Gray. il Metal Prog 62:90-3 N '52

Testing of anodic films on aluminum; abstract. W. Ruff. Metal Finishing 51:110-11 Je '53

Testing

Residual stresses introduced during metal fabrication. K. R. Van Horn. bibliog (38 titles) il J Metals 5:Trans 405-22 Mr '53

Textile uses

All that glitters is not gold; it's aluminum; Metlon, a non-tarnishing yarn. il Sales Management 70:56-9+ Mr 15 '53

Metallic-yarn making problems include laminating, slitting; Melton corp. R. C. Scott. il Textile World 103:134-6 S '53

They're doing things with metallic yarns! Metlon corp. A. Brucks. il Mod Textiles Mag 34:34-5 S '53

Uses

Aluminum courts oil, gas markets. R. L. Hatschek. il Iron Age 171:102 Je 18 '53

Aluminium heating block. Can Chem Process 37:71 Jl '53

Aluminum; key to revolutionary gas turbine engine being developed. il Light Metal Age 11:10-11 F '53

Aluminum marine furniture. il Light Metal Age 10:13 O '52

Aluminum shaking conveyor. H. Davis. il Coal Age 58:78-80 Jl '53

Engineering uses of aluminium alloys. il Metallurgia 47:312-14 Je '53

Lighter trucks for heavy hauling; illustrations with text. C. L. Burton and E. P. White. S A E J 61:34-5 F '53

More aluminum use; oil and gas industry predicted to become high consumer. il Light Metal Age 10:22-4 D '52

Warmley aluminium pig truck. il Engineer 196:186 Ag 7 '53

Welding

Aircomatic welding process for aluminium. il Engineering 175:397 Mr 27 '53

Aluminum trailers. il Welding J 32:333-4 Ap '53

Aluminum; weld tubes from strips. W. V. Packard. il Iron Age 170:40 N 27 '52

Automatic heliarc welding. il Elec Com 30:83 Je '53

Automatic welding of aluminum pistons. il Ry Loco & Cars 127:76-7 F '53

Correct welding procedure; welding of aluminum base alloys. L. F. Spencer. il Sheet Metal Worker 45:61-2+ O '53

Factors which determine the performance of aluminum alloy weldments. W. R. Apblett, jr. and others. bibliog il diags Welding J 31:sup596-606 D '52

Fusion welding of light-gage alloys; Rohr aircraft corp. J. T. Maloney. il Welding J 32:966-9 O '53

Joining aluminum by spot welding. C. Raphael. il diags Product Eng Hdbk p G 18-23 '53

Joining aluminum to other metals. M. A. Miller. bibliog il Welding J 32:730-40 Ag '53; Same cond. Materials & Methods 38:96-9 S '53

Joining of aluminium and its alloys. W. V. Binstead. il Metallurgia 47:81-8 F '53

Oil industry tries out aluminum for pipe lines. Welding J 32:740-1 Ag '53

Putting the squeeze on cold welding. N. Grossman. il diags Product Eng 24:176-81 F '53

Semiautomatic inert-gas metal-arc welding of aluminum alloys. C. T. Gayley and others. il diags Welding J 32:sup 179-90 Ap '53; Discussion. 32:sup385-6 Ag '53

Some considerations on weldability of aluminum alloys. J. Zoziarski. bibliog(57 ref) il diags Welding J 32:970-86 O '53

Thoriated tungsten electrodes pay; three ways to boost aluminum welding production. H. A. Huff, jr. il Iron Age 171:146-7 Je 4 '53

ALUMINUM—Welding—*Continued*
- Vacuum tightness of welded and brazed aluminum containers. M. A. Miller and A. S. Russell. diags Welding J 32:116-18 F '53
- Welded heat exchangers. il Steel 131:116+ N 3 '52; Mech Eng 74:1015-16 D '52
- Welded light alloy yacht. il Engineer 196:138-9 Jl 31 '53; Engineering 176:180-2 Ag 7 '53
- Welding aluminum and copper without heat. A. Stout. il Sheet Metal Worker 44:27-8 D '52
- Welding of thick plates of high-strength aluminum alloys. D. C. Martin and others. bibliog il diags Welding J 32:sup 161-71 Ap '53

ALUMINUM, Cold treatment of
- Refrigeration helps Lockheed build planes. P. E. Hunt. il Aero Digest 66:21 Ap '53

ALUMINUM, Copper clad
- New fabricating materials from rubber and copper-clad aluminum. Can Chem Process 37:54 F '53

ALUMINUM, Molten
- Effect of molten aluminum on alumina-silica refractories. K. J. Brondyke. il diags Am Cer Soc J 36:171-4 My 1 '53
- We've learned to handle molten aluminum; Reynolds metals co. T. L. Fritzlen. il Nat Safety N 67:24-5+ Je '53

ALUMINUM, Powdered
- Aluminum powder products compared. E. Gregory and N. J. Grant. bibliog il Iron Age 170:69-73 D 25 '52
- Excellent products of aluminum powder metallurgy. J. P. Lyle, jr. bibliog il Metal Prog 62:108-12 D '52
- Reduction by aluminum powder in aqueous solution; volumetric determination of iron. E. R. Riegel and R. D. Schwartz. bibliog Anal Chem 24:1803-6 N '52
- Sintered aluminium with high strength at elevated temperatures. R. Irmann. il diag Metallurgia 46:125-33 S '52; Abstract. Metal Prog 63:188+ Ap '53

ALUMINUM, Structural
- Aluminum alloys in civil engineering practice. S. K. Ghaswala. il Light Metal Age 10:18-20+ Ap; 17+ Je; 21 Ag; 18+ O '52
- Aluminium as a structural material. M. Bridgewater. il diags Engineering 175:762-5, 793-5, pl 24 Je 12-19 '53; Abstract. Metallurgia 48:11-17 Jl '53
- Aluminum for building; key metal of the twentieth century promises to compete with steel. il Arch Forum 97:152-5 S '52
- Aluminum, from rare metal to architectural material; Alcoa building. il Metal Finishing 51:109-10 O '53
- Aluminum grain silo. il Engineer 195:108 Ja 16 '53; Engineering 175:86 Ja 16 '53
- Aluminum house and components easily assembled on site. il Iron Age 171:192 Mr 5 '53
- Aluminum mine props save labor, last longer, improve safety in German coal mines. M. Stern. il Min Eng 5:492-3 My '53
- Aluminum panels; Thule air base keeps Arctic cold out with unusual insulator. Iron Age 170:192 N 6 '52; Materials & Methods 36:194+ D '52
- Aluminium passenger-landing pontoons. il Metallurgia 48:91 Ag '53
- Aluminium roof girders. il Engineer 195:530 Ap 10 '53; Engineering 175:569 My 1 '53
- Aluminum towers get backing. Elec World News ed 139:9 My 25 '53
- Aluminum trusses carry hangar roof. il Eng N 150:66 Mr 12 '53
- Aluminum; 234,000 sq. ft. of stamping; office building of the Aluminum company of America in Pittsburgh. il Light Metal Age 11:12-15 Ap '53
- Aluminum used for main girder of emergency dam at Morgantown. il Eng N 149:26 N 13 '52
- Cost and stress factors in aluminum structural design. E. R. Baetzel. Product Eng 24:256+ Ja '53
- Engineering uses of aluminium alloys. il Metallurgia 47:312-14 Je '53
- First customer; Tishman realty & construction co. Bsns W p 133 D 20 '52
- Forms of sections for struts. C. G. Watson. diags Engineer 196:133-6 Jl 31 '53
- Portable aluminium test masts. il diag Engineer 196:87 Jl 17 '53; Engineering 176:127 Jl 24 '53; Elec J 151:204 Jl 17 '53; Metallurgia 48:104 S '53
- Profits in aluminum gates; Alprodco, inc. Fortune 47:215 My '53
- Spinning an aluminum spiderweb; Ford rotunda. H. W. Richardson. il diags Constr Methods 35:60-4 Je '53
- 200 ft span aluminum hangar; de Havilland aircraft co. il diags Engineer 195:127-9 Ja 23 '53; Engineering 175:97-9 Ja 23 '53
- Uses of aluminium in building construction. Engineering 176:120 Jl 24 '53

See also
Domes, Aluminum
Roofs, Aluminum
Towers, Aluminum

ALUMINUM alcoholates
- Reductions with aluminium alkoxides; the kinetics of the racemization of optically active alkoxides by their corresponding ketones. L. M. Jackman and A. K. Macbeth. diag Chem Soc J p3252-60 Ag '52

ALUMINUM alloys
- Aluminum advances in brazed castings, plaster castings, die castings, wiring, finishes. J. H. Dunn and E. P. White. diags Product Eng 24:246+ Ja '53
- Aluminum alloy enables manufacture of more powerful steam turbine-generators. il Elec Eng 71:1052 N '52; Elec World 138:178 O 6 '52
- Aluminum alloys in civil engineering practice. S. K. Ghaswala. il Light Metal Age 10:18-20+ Ap; 17+ Je; 21 Ag; 18+ O '52
- Aluminium and its alloys in 1952. E. Elliott. bibliog(96 titles) Metallurgia 47:73-80 F '53
- Aluminum bodies cut truck fleet costs. il Elec World 139:128 F 23 '53
- Aluminum soldering alloy. il Electronics 26:272+ F '53
- Buying quality in light metal castings. Metallurgia 47:243-4 My '53
- Chemical engineering materials of construction. H. W. Fritts. bibliog(76 ref) il Ind & Eng Chem 44:2289-92 O '52
- Cond-Al; tailor-made aluminum alloy of high creep strength and conductivity. R. H. Harrington and others. il Metal Prog 63:90-4 My '53
- Corrosion-resistant alloys; XA54S and XC56S. Mech Eng 75:154-5 F '53
- Distribution of sodium in modified Al-Si alloys. A. B. Michael and M. B. Bever. bibliog il J Metals 5:Trans 679-80 My '53
- Effect of temperature on the high-temperature strength of alloys in the aluminum-magnesium system; abstract. I. I. Kornilov and L. I. Pryakhina. Metal Prog 64:140+ Ag '53
- Europeans refine aluminum scrap by alloying. H. Loevenstein. il Light Metal Age 11:18-20 F '53
- Factors which determine the performance of aluminum alloy weldments. W. R. Apblett, jr. and others. bibliog il diags Welding J 31:sup596-606 D '52
- Flow and fracture characteristics of the aluminum alloy 24S-T4 as affected by strain thermal history. S. I. Liu and E. J. Ripling. bibliog diags J Metals 5:Trans 66-8 Ja '53
- GE's new aluminum alloy; Cond-Al. il Elec World 138:176 S 8 '52; Mech Eng 74:918 N '52
- High aluminum zinc-base die-casting alloys. O. A. Carson. Can Min J 74:70-3 Jl '53
- Light alloy bodywork; review of mass production practice in France. il Automobile Eng 43:200-4 My '53
- Light alloy jack tests. R. G. Hoare. il diags Roy Aeronautical Soc J 57:592-3 S '53
- Machining aluminum alloys on automatics. L. F. Spencer. diags Tool Eng 30:55-64 Ja '53
- Machining practices affect mechanical properties of aluminum. Iron Age 171:151 Ap 23 '53
- Mechanical properties of high purity Ti-Al alloys. H. R. Ogden and others. J Metals 5:Trans 267-72 sec 2 F '53
- Metal solidification studies; radioactive tracer methods. Tech R 55:88 D '52
- New aluminum-magnesium metals highly corrosion resistant. Iron Age 170:196-7 D 4 '52

ALUMINUM alloys—*Continued*

New high purity aluminum alloys; Lurium. il Materials & Methods 37:110-11 Je '53

Premixed alloy. Bsns W p50+ Mr 28 '53

Semiautomatic inert-gas metal-arc welding of aluminum alloys. C. T. Gayley and others. il diags Welding J 32:sup 179-90 Ap '53; Discussion. 32:sup385-6 Ag '53

Structure and properties of wrought copper-aluminium-nickel-iron alloys; abstract and discussion. M. Cook and others. Engineering 174:414 S 26 '52

Study of grain shape in an aluminum alloy and other applications of stereoscopic microradiography. W. M. Williams and C. S. Smith. bibliog il diags J Metals 4:Trans 755-65 Jl '52; Discussion. 5:Trans 741-3 sec 2 My '53

Symposium on aluminum-alloy castings. il Engineering 174:719-21 D 5 '52; Engineer 194:697-8 N 21 '52

Today's aluminum aircraft alloys. J. A. Nock, jr. S A E J 61:65-7 Mr '53

Transformation kinetics and mechanical properties of titanium-aluminum-chromium alloys; abstract. H. D. Kessler and M. Hansen. Metal Prog 64:174+ O '53

Transformation kinetics and mechanical properties of titanium-aluminum-molybdenum alloys; abstract. H. D. Kessler and M. Hansen. Metal Prog 64:168+ O '53

Typical Brinell hardness numbers of some nonferrous alloys; data sheet. Foundry 81:175-6 Je '53

Welding of thick plates of high-strength aluminum alloys. D. C. Martin and others. bibliog il diags Welding J 32:sup 161-71 Ap '53

Wrought aluminum alloys; data sheet. H. S. Jerabek, comp. Metal Prog 64:96B Ag '53

Analysis

Comparison of some simple condensed spark circuits in the spectrographic analysis of aluminium and magnesium alloys and pure magnesium. E. C. Mills and S. E. Hermon. Metallurgia 46:213-15 O '52

Determination of small amounts of zinc in aluminum alloys; rapid electrogravimetric method utilizing isotope dilution technique. K. Theurer and T. R. Sweet. bibliog diag Anal Chem 25:119-21 Ja '53

Polarographic determination of nickel in aluminium alloys. E. C. Mills and S. E. Hermon. Metallurgia 46:259-62 N '52

Rapid determination of bismuth, copper and lead in aluminium alloys by electrodeposition. G. Norwitz. Metallurgia 47:157 Mr '53

Semi-quantitative spot test for tin in magnesium and aluminium alloys. J. Clark and W. Stross. Metallurgia 46:215-16+ O '52

Testing

Aluminum-six per cent magnesium alloys for elevated-temperature service. L. W. Eastwood and others. Am Soc T M Proc 50:1013-34 '50

Combined tension-torsion creep-time relations for aluminum alloy 2S-O. J. Marin and others. bibliog il diag Am Soc T M Proc 50:1054-70; Discussion. 1071-2 '50

Determination of plate compressive strengths at elevated temperatures. G. J. Heimerl and W. M. Roberts. il U S Nat Advisory Com for Aeronautics 1950:251-6 '51

Dull tools cut aluminum strength; tests by Harvey engineers. Am Mach 97:209 My 11 '53

Effect of stress amplitude on statistical variability in fatigue life of 75S-T6 aluminum alloy. G. M. Sinclair and T. J. Dolan. bibliog A S M E Trans 75:867-70; Discussion. 870-2 Jl '53

Effects of anodic coatings on the fatigue strength of aluminum alloys. G. W. Stickley and F. M. Howell. il diags Am Soc T M Proc 50:735-43 '50

Fatigue notch-sensitivities of some aircraft materials. H. J. Grover. bibliog Am Soc T M Proc 50:717-29; Discussion. 730-4 '50

Fatigue properties of *Z*-section test pieces completely machined from an aluminium alloy extrusion conforming to D.T.D. 364B. G. Forrest and others. il diags Roy Aeronautical Soc J 57:103-7 F '53

Flexural fatigue strength of anodized 24ST aluminum-alloy sheet. C. B. Cliett. diags Aeronautical Eng R 11:29-30+ D '52

Pressure tests on flat aluminium alloy panels. C. J. Dickinson and H. R. Hadley. il diags Roy Aeronautical Soc J 57:46-9 Ja '53

Properties of some binary aluminium alloys at elevated temperatures. J. V. Lyons and W. I. Pumphrey. bibliog il Metallurgia 46:219-26, 299-304 N-D '52

Tensile properties of some aircraft structural materials at various rates of loading. R. F. Klinger. il diags Am Soc T M Proc 50:1035-50; Discussion. 1051-3 '50

Validity of assumptions made in theories of plastic flow for metals. J. Marin and L. W. Hu. bibliog il diags A S M E Trans 75:1181-6; Discussion. 1186-90 Ag '53

ALUMINUM alloys, Heat treatment of

Aluminium alloys; heat-treatment equipment. Automobile Eng 43:390 S '53

Flash annealing of light alloys. R. T. Staples. Metal Prog 63:208+ Ja '53

Furnace treats 110-ft pieces. Steel 132:86 Ja 12 '53

Heat treating aluminum alloys; tempering oils for aging 75S. G. C. Close. il Light Metal Age 10:8-9 D '52

ALUMINUM barges. See Barges, Aluminum

ALUMINUM boats. See Boats, Aluminum

ALUMINUM bromide

Phase rule studies in anhydrous aluminum bromide. J. J. Burbage and A. B. Garrett. bibliog diags J Phys Chem 56:730-3 Je '52

System benzene-hydrogen bromide-aluminium bromide. D. D. Eley and P. J. King. diags Chem Soc J p2517-22, 4972-6 Jl, D '52

ALUMINUM bronze

Aluminum bronze; classification, engineering properties, processing and fabrication, etc. J. L. Everhart. bibliog il Materials & Methods 36:119-34 D '52 (reprints 25c)

Huge aluminum-bronze casting requires 25,000 pounds of metal. il Foundry 81:208 My '53

New bolting material good for the tough spots. J. F. Klement. il Steel 132:92 F 16 '53

Propellers now made of nickel-aluminum bronze. T. H. Addie. Marine Eng 58:79-80 O '53

Simplifies casting of aluminum bronze pins. F. R. Capps. il diag Foundry 81:208 O '53

Strength joints to steel with aluminum bronze filler metals. W. G. Groth and R. E. Maersch. il diags Welding J 31:1042-8 N '52

Structure and properties of wrought copper-aluminium-nickel-iron alloys; abstract and discussion. M. Cook and others. Engineering 174:414 S 26 '52

ALUMINUM cans. See Cans, Aluminum

ALUMINUM chloride

Action of aluminium chloride on derivatives of *o*-benzoylbenzoic acid. G. Baddeley, G. Holt and S. M. Makar. Chem Soc J p2415-20 Je '52

Alkylation of malonic ester by ethylene oxide catalyzed by anhydrous $AlCl_3$. C. Raha. bibliog Am Chem Soc J 75:4098 Ag 20 '53

Aluminum chloride-catalyzed condensation of γ-butyrolactone with benzene. W. E. Truce and C. E. Olson. Am Chem Soc J 74:4721 S 20 '52

Anhydrous $AlCl_3$-catalyzed alkylation of ethyl cyanacetate by ethyl chloroacetate. C. Raha. Am Chem Soc J 75:4098-9 Ag 20 '53

Condensations of aromatic aldehydes and aryl carbinols with aluminum chloride and aromatic systems. H. E. Ungnade, E. F. Kline and E. W. Crandall. bibliog Am Chem Soc J 75:3333-6 Jl 20 '53

Conductance of aluminum chloride in sulfuryl chloride on adding benzophenone or sulfur monochloride. A. R. Pray and C. R. McCrosky. bibliog Am Chem Soc J 74:4719-21 S 20 '52

Dealkylation of dialkylhydroquinone diacetates with aluminum chloride. J. L. R. Williams. Am Chem Soc J 74:6132-3 D 5 '52

Exchange reaction between hydrogen chloride and aluminum chloride. M. Blau, W. T. Carnall and J. E. Willard. bibliog Am Chem Soc J 74:5762-3 N 20 '52

ALUMINUM chloride—*Continued*

Formation of organo-phosphorus compounds by the reaction of alkyl chlorides with phosphorus trichloride in the presence of aluminium chloride. A. M. Kinnear and E. A. Perren. Chem Soc J p3437-45 S '52

Friedel-Crafts reactions between gaseous benzene and ethyl chloride on solid aluminum chloride. M. Blau and J. E. Willard. bibliog Am Chem Soc J 75:3330-3 Jl 20 '53

Inhibition of side reactions during aluminum chloride-catalyzed pentane isomerization. E. E. Sensel and A. R. Goldsby. bibliog Ind & Eng Chem 44:2716-21 N '52

Interaction of aromatic ketones with aluminium chloride. G. Baddeley, G. Holt and W. Pickles. Chem Soc J p4162-6 N '52

Interaction of naphthalene and maleic anhydride through the agency of aluminium chloride. G. Baddeley and others. Chem Soc J p3605-7 S '52

Kinetics of catalytic polymerizations; the kinetics and mechanism of the polymerization of α-methylstyrene catalyzed by aluminium chloride. D. O. Jordan and A. R. Mathieson. Chem Soc J p2354-8 Je '52

Kinetics of catalytic polymerizations; the molecular-weight distribution of poly-(α-methylstyrene) prepared by the aluminium chloride-catalyzed polymerization. D. O. Jordan and A. R. Mathieson. Chem Soc J p2363-6 Je '52

New cholestene diols; the simultaneous action of aluminium hydride and aluminium chloride on the enol acetate of cholest-4-en-3-one. B. R. Brown. Chem Soc J p2756-9 Jl '52

Reaction between ferric oxide and anhydrous aluminium chloride. R. C. Croft. bibliog J Ap Chem 2:562-5 O '52

Reactions in fused aluminium chloride-sodium chloride. D. B. Bruce, A. J. S. Sorrie and R. H. Thomson. Chem Soc J p2403-6 Ag '53

Separation of the anhydrous chlorides of iron and aluminium by formation of graphite complexes. R. C. Croft. J Ap Chem 2:557-62 O '52

Use of aluminum chloride in melamine-treated papers. F. W. Boughton and K. J. Mackenzie. bibliog Tappi 36:268-70 Je '53

ALUMINUM coating

Aluminum coating; process named Aldip. Mech Eng 74:823-4 O '52

Aluminum coatings applied to steel by many methods. E. M. Smith. bibliog il Materials & Methods 36:105-8 D '52

Coating metals with aluminum by the mollerizing process. B. E. Haight. il Automotive Ind 107:39+ N 15 '52

Coating steel by the Aldip process. D. K. Hanink and A. L. Boegehold. flow chart il S A E J 61:40-5 Ap '53; Abstract. Automotive Ind 108:76+ F 15 '53; Discussion. S A E J 61:46 Ap '53

Hot dip aluminising. M. L. Hughes and D. P. Moses. bibliog il diags Metallurgia 48:105-22 S '53

Steel protection by sprayed aluminium. il Engineering 175:158 Ja 30 '53

ALUMINUM company of America

Aluminum agreement cancellation requested. Oil Paint & Drug Rep 164:4+ Jl 27 '53

American aluminum industry makes record growth in '52 and is still behind demand. I. W. Wilson. Paint Oil & Chem R 116:20-1 Ja 1 '53

Annual wage. Bsns W p 139-40 Je 27 '53

Chapman's nod enhances Alcoa's chances of breaking ground at Taiya next spring. il Eng & Min J 153:126+ N '52

Frank Magee; from A to Z for Alcoa. Bsns W p70-3+ Je 6 '53

Is it legal for Alcoa to buy in Canada? Bsns W p26 Jl 25 '53

It remains the leader of the industry; with financial data, 1942-1951. G. P. Edgar. Barron's 32:15-18 N 10 '52

ALUMINUM compounds

Aluminum monochlorodilaurate, a non-thickener for hydrocarbons. K. J. Mysels and D. M. Chin. bibliog Am Chem Soc J 75:1750-1 Ap 5 '53

Extraction of aluminum soap with acetone. K. J. Mysels, H. H. Pomeroy and G. H. Smith. bibliog Anal Chem 25:173-4 Ja '53

Monovalent aluminum. J. P. McGeer. bibliog J Chem Educ 29:534-8 N '52

ALUMINUM containers. See Containers, Aluminum

ALUMINUM domes. See Domes, Aluminum

ALUMINUM fluoride

Emission spectrum of aluminum monofluoride. S. M. Naudé and T. J. Hugo. Phys R 90:318 Ap 15 '53

Heats and entropies of successive steps in the formation of AlF_6^{---}. W. M. Latimer and W. L. Jolly. bibliog Am Chem Soc J 75:1548-50 Ap 5 '53

ALUMINUM foil

Foil liner for lettuce; crate liner of aluminum foil backed by wet-strength kraft delivers a premium crop. il Mod Packaging 26:130-2 D '52

Foil-wrapped ice cream; Central ice cream co. il Mod Packaging 27:138 S '53

Heating Arctic buildings; use of reflective interior finishes. M. H. LaJoy and G. R. Whitnah. plan diag Heating-Piping 25:90-3 S '53

Meadow Gold butter; nominated to packaging's Hall of fame. il Mod Packaging 27:120-4+, cover O '53

Oven-baking cartons; foil-lined display package becomes baking pan. il Mod Packaging 27:110-12 O '53

Production of aluminum foil. W. B. Hackett. il diags Iron & Steel Eng 30:914 Ag '53

Protection against radiant heat. A. M. Wallach. bibliog il Nat Safety N 67:30-1+ Je '53

Self defense for your product; protective packaging with aluminum foil. W. J. Faymonville. il diags Tappi 36:sup 18A+ Ja '53

Siamese twins; packaging of developer powders at the Charles Bruning co. il Mod Packaging 26:112-14 Jl '53

Top-of-basket display; simple aluminum foil tray for top layer. il Mod Packaging 26:112-13 Ag '53

What's inside Reynolds' trailers? aluminum foil military and industrial packaging, and farm building products. il Sales Management 69:89-90+ N 1 '52

Testing

Mullen bursting strength test as a means of determining the strength of annealed aluminum foil. W. C. Aber and F. M. Howell. diag Am Soc T M Proc 50:425-9 '50

ALUMINUM founding

Aluminum castings. F. A. Lewis. il Foundry 81:124-9 My '53

Aluminum; continuous casting gaining. R. L. Hatschek. il diag Iron Age 171:77-8 Ap 23 '53

Aluminum die casting. il Light Metal Age 11:15 F '53

Aluminum die castings up. Steel 131:81 N 24 '52

Aluminum Diesel body castings; Packard motor car co. il Materials & Methods 37:90 Ja '53

Brazing offers economy in making aluminum castings. W. G. Gude. il Foundry 80:124-5 O '52

Cast aluminum alloys for electropolished and Eloxal processed parts; abstract. M. Buckeley-Liesegang and A. Buckeley. Metal Finishing 51:82-3 Ap '53

Cause of surface porosity in seven per cent silicon aluminum castings. C. F. Zabriskie. il Foundry 81:112-13 F '53

Continuous aluminium casting and rolling installation; Hunter Douglas corp., California. il Engineer 194:465-6 O 3 '52

Grain refinement of aluminium-alloy castings by additions of titanium and boron; abstract and discussion. A. Cibula. Engineering 174:461-2 O 10 '52

How to buy aluminum castings. F. A. Lewis. il Aeronautical Eng R 12:34-40+ Ja '53; Same cond. Automotive Ind 108:179-80+ Ja 15 '53; Same cond. Materials & Methods 37:95-100 Ja '53

Light metals; American foundrymen's society annual meeting, Chicago; abstracts of papers. Foundry 81:160+ Je '53

Making intricate aluminum castings; Acme aluminum alloys, inc. R. H. Herrmann. il Foundry 81:108-13 Ap '53

ALUMINUM founding—*Continued*

Metallurgy and production of suitable aluminum alloy ingots for large forgings and extrusions; abstract. T. L. Fritzlen. il Metal Prog 63:112-14 Mr '53

Plaster cores formed in plastic corebox. G. C. Close. il Foundry 81:132+ F '53

Production control at Alcan's aluminum foundry. V. J. Zabec. il Can Chem Process 37:66-7 Jl '53

Production of cast aluminum molds for forming foam rubber products. R. F. Dalton. il Rubber Age 73:211-12 My '53

Quality in light-metal castings. Engineering 175:533 Ap 24 '53

Rapid advances made in casting light-metal alloys; Rolle mfg. co. J. H. Hall. il Foundry 81:114-17+ Je '53

Revisions of ASTM tentative specifications; aluminum-base alloy sand castings (B 26-50T), aluminum-base alloy permanent mold castings (B 108-50T); data sheet. Foundry 80:180 D '52

Symposium on aluminium-alloy castings. il Engineering 174:719-21 D 5 '52; Engineer 194:697-8 N 21 '52

Tolerances and specifications for aluminum and magnesium castings. W. D. Stewart. Machine Design 25:284+ Ja '53

ALUMINUM freight cars. See Freight cars, Aluminum

ALUMINUM halides

Hydrazine; complex halides of aluminium and hydrazine. W. Pugh and M. C. B. Hotz. Chem Soc J p2493-5 Ag '53

Isomerization of saturated hydrocarbons; the isomerization of alkylcyclopropanes and alkylcyclobutanes in the presence of aluminum halide catalysts. H. Pines, W. D. Huntsman and V. N. Ipatieff. bibliog Am Chem Soc J 75:2315-17 My 20 '53

Organosilicon compounds; the reaction between organofluorosilanes and aluminium halides. C. Eaborn. Chem Soc J p494-501 F '53

ALUMINUM hydride

New cholestene diols; the simultaneous action of aluminium hydride and aluminium chloride on the enol acetate of cholest-4-en-3-one. B. R. Brown. Chem Soc J p2756-9 Jl '52

ALUMINUM hypophosphite

Aluminium hypophosphite. D. A. Everest. Chem Soc J p2945 Jl '52

ALUMINUM industry and trade

Additional Canadian aluminum to be diverted from U.K. to U.S. For Comm W 48:23 N 10 '52

Aluminum; another firm wants in; Wheland co. R. M. Stroupe. Iron Age 170:38 O 30 '52

Aluminium development in relation to supply. E. G. West. il maps Metallurgia 47:63-9 F '53

Aluminum expansion expected. Elec World News ed 138:46 S 29 '52

Aluminium in plenty. Economist 167:48-9 Ap 4 '53

Aluminum industry expands for war and peace. S. W. Anderson. il J Metals 5:388-94 Mr '53

Aluminum industry viewed now on competitive basis. Oil Paint & Drug Rep 163:3+ Ja 12 '53

Aluminum, 1952. G. P. Lutjen. il Eng & Min J 154:88-9 F '53

Aluminum, 1952. D. M. White. il Min Cong J 39:112-13 F '53

Aluminum outlook; with tabulation, world production of primary aluminum, 1939-1955. il Eng & Min J 154:120-9+ Jl '53

Aluminum; set third round goal. A. K. Rannells. Iron Age 170:200 O 9 '52

Aluminum; today and tomorrow. Chem W 72:22 F 14 '53

American aluminum industry makes record growth in '52 and is still behind demand. I. W. Wilson. Paint Oil & Chem R 116:20-1 Ja 1 '53

Another taker; Wheland co. Bsns W p29 F 7 '53

Industry previews and reviews. Automotive Ind 108:53 Ja 15 '53

More aluminum. il Steel 132:58-9 Mr 23 '53

National association of aluminum distributors 2d annual meeting, Pebble Beach, Calif. Oct. 30-31; abstracts of papers. Light Metal Age 10:14-16+ D '52

Olin enters field as DPA okays third round of aluminum expansion. Eng N 149:71 N 27 '52

Olin's debut as aluminum producer. Bsns W p34 N 29 '52

Predicts strong aluminum market. R. S. Reynolds, jr. Manuf Rec 122:31 My '53

Progress in the aluminum industry. J. D. Edwards. il Metal Prog 63:94-8 Ja '53

Relief sign in aluminum field. S. W. Anderson. Tool Eng 30:100-1 Ja '53

Second chance at aluminum. Bsns W p 122+ F 7 '53

Special study of the aluminum industry. J. D. C. Weldon. Mag of Wall St 91:530-2+ F 7 '53

U.S.-Canadian contract means more aluminum. Bsns W p 128-31 Je 13 '53

Youngstown catches a new industry on the rise. il Bsns W p 182-4+ Mr 21 '53

See also

Aluminium, limited	Aluminum foil
Aluminum company of America	Nails, Aluminum

Statistics

Aluminum production ranks swelled to seven. Oil Paint & Drug Rep 163:4 F 9 '53

Aluminum production, recovery, imports and exports, shipments of foil and wrought products, secondary and scrap prices; tabulations. Iron Age 171:416-17 Ja 1 '53

Primary and secondary aluminum production; aluminum wrought products; tabulations. Steel 132:176 Ja 5 '53

Shipments of aluminum wrought products; U.S. primary aluminum production; total shipments of aluminum castings; tabulations. Automotive Ind 108:336 Mr 15 '53

Arkansas

Aluminum leads, promotes diversity in Arkansas' industrial growth. il Manuf Rec 122:28-9 My '53

Canada

Alcoa stalled in Yukon. Bsns W p29 Ja 10 '53

Germany

German aluminum output expected to increase. For Comm W 49:23 Ap 13 '53

Gold Coast, Africa

Giant aluminum plant planned on Gold Coast. map Bsns W p 150 D 6 '52

Great Britain

Aluminium returns to private trade. Economist 167:927 Je 27 '53; For Comm W 50:15 Jl 20 '53

Texas

Cashing in on cheap power. Bsns W p94+ D 13 '52

Texas aluminum; state moves up to number two production spot. H. Murphy. Barron's 33:15 Jl 20 '53

ALUMINUM metallurgy

Corpus Christi; from bauxite to alumina to pig metal, Reynolds metals co. J. A. Lee. il Eng & Min J 153:80-3 D '52

Europeans refine aluminum scrap by alloying. H. Loevenstein. il Light Metal Age 11:18-20 F '53

Half century of aluminum developments. J. D. Edwards. il Electrochem Soc J 99:sup 298C-300C N '52

Bibliography

Recent developments in alumina electrolysis as found in French and Italian publications. F. V. Andreae. bibliog diag Electrochem Soc J 99:sup300C-3C N '52

Electrometallurgy

Coal for electrodes in the aluminum industry. R. J. Campbell, jr. and others. Coal Age 58:86-7 Ag '53

Pot stretching adds capacity to produce vital aluminum. Chem Eng 59:222 N '52

ALUMINUM nails. See Nails, Aluminum

ALUMINUM nitride

Steel strengthened with aluminum nitride; abstract. K. A. Krekeler. Welding J 32: 43 Ja '53

ALUMINUM ores

See also

Bauxite

ALUMINUM oxide. See Alumina

ALUMINUM phosphate

Raman spectrum and cathodo-luminescence spectrum of aluminum phosphate. B. D. Saksena and L. M. Pant. bibliog il J Chem Phys 21:1414 Ag '53

ALUMINUM pipes. See Pipes, Aluminum

ALUMINUM plating

Hydride bath for the electrodeposition of aluminum. D. E. Couch and A. Brenner. bibliog il diags Electrochem Soc J 99:234-44 Je '52; Abstract. Metal Prog 64:126+ Jl '53

Recent developments in protective coatings. A. G. Gray. il Metal Prog 62:90-3 N '52

ALUMINUM research

Fulmer research institute. il Engineer 194: 496 O 10 '52; Engineering 174:514-15 O 17 '52

ALUMINUM ships. See Ships, Aluminum

ALUMINUM silicates

See also

Anorthite

Bentonite

Feldspar

Halloysite

Pyrophyllite

Sericite

Staurolite

Ultramarine

ALUMINUM stearate

Aluminum soap powder in paint vehicles. M. L. Stumpf. Paint Oil & Chem R 116: 16-17+ Ja 1 '53

ALUMINUM sulfate

Surface properties of rosin size precipitate. E. F. Thode and others. bibliog Tappi 36: 310-19 Jl '53

System $Al_2(SO_4)_3$-H_2SO_4-H_2O. D. Taylor and H. Bassett. Chem Soc J p4431-42 N '52

Tentative standard specifications for aluminum sulfate. Am Water Works Assn J 44:1075-84 N '52

ALUMINUM trimethyl

Electron deficient compounds; the structure of the trimethylaluminum dimer. P. H. Lewis and R. E. Rundle. bibliog il diags J Chem Phys 21:986-92 Je '53

ALUMINUM ware

Boy meets girl; boy sells girl kitchenware. il Bsns W p92-4+ Ja 10 '53

ALUMINUM waste

Europeans refine aluminum scrap by alloying. H. Loevenstein. il Light Metal Age 11:18-20 F '53

ALUMINUM window frames. See Window frames, Aluminum

ALUMINUM work

Aluminum film cans automatically formed and finished. S. M. Tucker. il Materials & Methods 36:168+ D '52

Aluminum honeycomb sandwich. P. O'Keefe. il Materials & Methods 36:96-8 D '52

Aluminum honeycomb sandwich structures. il diags Product Eng 24:184-91 F '53

Bending of aluminum alloy sheet; tabulations; engineering file facts. H. M. Jensen. Materials & Methods 36:143 N '52

Bends aluminum alloy wing beams. il Machine Design 25:170 Ja '53; Iron Age 171: 113-14 Ja 8 '53; Steel 132:82 Ja 26 '53; Aviation W 58:54 F 16 '53

Better landing gear strut for the Boeing B-47 bomber. il Automotive Ind 109:96+ Jl 1 '53

Design problems of large aluminum forgings; abstracts. C. W. Andrews. diags Automotive Ind 109:32-3 Ag 15 '53; Machine Design 25:334+ O '53

Dip and etch simplify aluminum forging inspection. A. H. Pope. il Iron Age 170:102-3 O 2 '52

Dip-brazing speeds aluminum work. Aviation W 57:24 D 22 '52

Dull tools sap aluminum alloy strength. Steel 132:133 Ap 13 '53

Extrusion experience yields new design. il Steel 132:137 Ap 6 '53

Forming aluminum sheet and plate; reference book sheet. E. V. Sharpnack, jr. diags Am Mach 97:165, 167 Ap 27 '53

Forming of aluminum. E. V. Sharpnack. Metal Prog 63:166+ Je '53

High strength aluminum impact extrusions. M. P. Meinel. il diags Materials & Methods 36:110-13 N '52

How to make impact extrusions of high-strength aluminum; Lockheed aircraft corp. J. D. Shoemaker. il diags Am Mach 97: 129-40 Jl 6 '53

How to taper aluminum plate by abrasive belt grinding. P. J. Queyrel. il diag Iron Age 170:174-6 D 4 '52

How ultrasonic soldering works. L. Walter. diags Am Mach 97:126-8 S 14 '53

Induction heating; large aluminum ingot heated to 750° F in 50 min. Iron Age 171: 152 Ap 9 '53

Induction heating of aluminium alloy billets at mains frequencies. R. H. Barfield. il Metallurgia 47:305-6 Je '53

Joining of aluminium and its alloys. W. V. Binstead. il Metallurgia 47:81-8 F '53

Large extrusion-press operation and production problems in aluminum. T. F. McCormick. il Aeronautical Eng R 12:27-33 F '53; Same cond. Iron Age 170:158-61 D 11 '52; Same cond. Machine Design 25:184-5+ My '53; Abstract. Metal Prog 63:114+ Mr '53

Machining aluminum alloys on automatics. L. F. Spencer. diags Tool Eng 30:55-64 Ja '53

Machining aluminum; reference sheet. diags Tool Eng 30:71-2 F '53

Machining practices affect mechanical properties of aluminum. Iron Age 171:151 Ap 23 '53

Metallurgy and production of suitable aluminum alloy ingots for large forgings and extrusions; abstract. T. L. Fritzlen. il Metal Prog 63:112-14 Mr '53

New components for air-frame construction. J. F. Faulkner and J. H. Alden. il diags Aeronautical Eng R 11:28-35 O '52

Progress in the aluminum industry. J. D. Edwards. il Metal Prog 63:94-8 Ja '53

Residual stresses introduced during metal fabrication. K. R. Van Horn. bibliog(38 titles) il J Metals 5:Trans 405-22 Mr '53

Rolling tapered aluminum isn't easy. J. H. Alden. il Steel 132:118-19 My 25 '53

Shipbuilding uses low temperature joining method. il Light Metal Age 11:22 F '53

Stretch forming aluminum. E. V. Sharpnack. diags Sheet Metal Worker 44:109 Jl '53

Stretch forming machine shapes extruded aluminum parts; Consolidated Vultee aircraft corp.'s San Diego plant. il Iron Age 170:137-9 D 18 '52

Ultrasonic tinning techniques for aluminum. A. E. Crawford. bibliog il plan diags Electronics 25:102-5 D '52

Ultrasonics, the answer to aluminum soldering? L. Walter. il diags Materials & Methods 38:59-61 Jl '53

Use impact forging for tough-to-machine parts. L. R. Denny. il diags Iron Age 171: 149-52 Ap 2 '53

Willys-Overland's aluminum forge. W. Rudolph. il Metal Prog 64:106-11 O '53

Willys' reactivated aluminum forge plant. J. H. Pargeter. il Automotive Ind 109:50-3 Jl 15 '53

See also

Aluminum—Finishing

Aluminum—Welding

Aluminum founding

ALUMINUM workers

Etiology of corundum smelter's lung; bauxite worker's lung, Shaver's disease. H. Gärtner. A M A Archives Ind Hygiene & Occup Med 6:339-43 O '52

ALUMINUM works

Alcoa expands operations. Elec World News ed 138:43-4 D 22 '52

Alcoa starts up another new plant. il Eng N 149:28 D 4 '52

Aluminum outlook; with tabulation, world production of primary aluminum, 1939-1955. il Eng & Min J 154:120-9+ Jl '53

Kaiser announces completion of huge Chalmette plant. il Manuf Rec 122:54 S '53

$35 million alumina works planned for The Dalles by Harvey machine co. Eng N 150: 23 Ja 29 '53

Volta River aluminium scheme. map Engineer 194:811-12 D 12 '52; Elec J 149:1761-2 D 5 '52; Elec R (Lond) 151:1209-10 D 5 '52

ALUMINUM works—*Continued*

Wheland to make aluminum. Eng N 150:124 F 5 '53

When big business comes to a country town. J. Garth. il Am Bsns 23:26-7+ Mr '53

Wisco Aluminum expands. Steel 132:70 My 25 '53

Electric equipment

Modern electrical controls in a continuous aluminium strip mill; Rogerstone works. P. E. Peck. il plans diags Metallurgia 47:119-26 Mr '53

Equipment

Continuous aluminium casting and rolling installation; Hunter Douglas corp., California. il Engineer 194:465-6 O 3 '52

Corpus Christi; from bauxite to alumina to pig metal, Reynolds metals co. J. A. Lee. il Eng & Min J 153:80-3 D '52

Giant pots feature integrated aluminum plant; Reynolds metals co. il Chem Eng 60:128+ Ap '53

Power

Aerial tramway serves Kemano tunnels; Aluminum company of Canada's powerhouse construction. il Eng N 149:42-3 N 20 '52

Alcan, British Columbia power project under construction. W. G. Huber. il maps diag Civil Eng 22:938-43 N '52

Alcoa stalled in Yukon. Bsns W p29 Ja 10 '53

Aluminum producers get low-cost radial engine power. diag Power Eng 57:80-1+ Ap '53

Automatic regulation of generators overcomes rapid load fluctuations. M. P. Roller and H. B. Ruud. diags Elec World 139:94-6 Ap 6 '53

Cashing in on cheap power. Bsns W p94+ D 13 '52

Chapman's nod enhances Alcoa's chances of breaking ground at Taiya next spring. il Eng & Min J 153:126+ N '52

Cooling ½ billion heat units per hour; Reynolds metals company's aluminum reduction plant. il Mill & Factory 52:112-13 Mr '53

Gas-burning radial engines offer low cost, efficient power generation; aluminum industry. R. W. Bayerlein. il diags Gas Age 111:46-50+ Mr 12 '53

Hard rock mining job at Kitimat power site. il Min Eng 4:1044-5 N '52

How to maintain radial engines. il diag Power Eng 57:64-5 My '53

Low-cost power from char? Elec World 138: 62-3 D 29 '52

On-site generator plants study shows aluminum reduction at over-all power cost of $168/kw. il diag Light Metal Age 11:16-17+ Ap '53

Power deficit affects Alcoa; Harvey machine co. aluminum enterprises in Northwest. Elec World 138:124 D 29 '52

Progress on the Aluminum company's half billion dollar project in British Columbia. il maps diag Roads & Eng Constr 91:94-9+ Ja '53

Shipshaw power development. il Elec J 149: 1409-13 N 7 '52

World's largest underground power plant in northern British Columbia. L. L. Wise. il plans diags Eng N 149:31-2+ N 13 '52

Safety measures

We've learned to handle molten aluminum; Reynolds metals co. T. L. Fritzlen. il Nat Safety N 67:24-5+ Je '53

Waste

Triple-threat fume disposal system; Kaiser aluminum and chemical plant. il Chem Eng 59:262-3 D '52

ALUMINUM yarn. See Aluminum—Textile uses

ALUMS

Adiabatic demagnetization of chromium methylamine alum. D. de Klerk and R. P. Hudson. bibliog Phys R 91:278-81 Jl 15 '53

Alums; a study of the alums by measurement of their aqueous dissociation pressures. J. R. I. Hepburn and R. F. Phillips. Chem Soc J p2569-78 Jl '52

Alums; a theory of hydrate dissociation and aqueous dissociation pressure, with particular reference to the alums. R. F. Phillips. Chem Soc J p2578-83 Jl '52

Crystalline field in chrome alum. W. H. Kleiner. bibliog diag J Chem Phys 20:1784-91 N '52

Low temperature heat capacities of inorganic solids; heat capacity of ammonium chromium alum. H. L. Johnston, J. Hu and W. S. Horton. Am Chem Soc J 75:3922-4 Ag 20 '53

Properties of the Cr^{+++} ion in the paramagnetic alums at low temperatures. R. P. Hudson. bibliog Phys R 88:570-2 N 1 '52

ALWEG system. See Railroads, Single rail

AMADORI rearrangement. See Molecular rearrangements

AMALGAMATED roadstone corporation, limited

Annual general meeting, 17th, London, May 27. Economist 167:631 My 30 '53

AMALGAMS

Diffusion coefficients of certain metals in mercury. W. C. Cooper and N. H. Furman. bibliog Am Chem Soc J 74:6183-6 D 20 '52

Examination of Joule's work on the metallurgy of amalgams. H. J. Axon. Metallurgia 47:27-8 Ja '53

Extension of sensitivity of polarographic analysis with rotating amalgam electrodes. W. D. Cooke. bibliog diag Anal Chem 25: 215-18 F '53

See also

Sodium amalgam

AMALGAMS, Dental. See Dental amalgams

AMBER glass. See Glass, Colored

AMBULANCES, Airplane

MATS tests copter-ambulance shuttle. L. Moore. il Aviation W 57:71-2 D 1 '52

AMBURGY, Kash Day

House-and-Bible salesman. por Fortune 46: 206 N '52

AMEBICIDES

Amebacidal agents; 5-acyl- and 5-alkyl-7-dialkylaminomethyl-8-quinolinols. W. H. Edgerton and J. H. Burckhalter. Am Chem Soc J 74:5209-10 O 20 '52

Chemical constitution and amoebicidal action; synthesis of 2-(1 : 2 : 3 : 4-tetrahydro-6 : 7 - dimethoxy - 2 - methyl - 1 - *iso*quinolylmethyl) - 1 - (1 : 2 : 3 : 4 - tetrahydro - 6 : 7-dimethoxy-1-*iso*quinolyl) butane and -pentane and other analogues of emetine. J. M. Osbond, J. D. Fulton and D. F. Spooner. Chem Soc J p4785-92 D '52

Pyridazine derivatives; some amebacidal 3-pyridazones. E. A. Steck, R. P. Brundage and L. T. Fletcher. bibliog Am Chem Soc J 75:1117-19 Mr 5 '53

AMERADA petroleum company

Security I like best; Williston Basin oil royalties. T. J. Hughes. Comm & Fin Chr 176:2114 D 4 '52

AMERICA

Antiquities

First Americans. Sci Am 188:54 Mr '53

AMERICA fore insurance group

America fore group reports excellent progress in 1952. East Underw 54:1+ Ja 30 '53

Continental and Fidelity-Phenix joining ranks of century old insurance companies. C. Axman. East Underw 54:19-20 Ja 16 '53

AMERICAN air filter company, inc.

Expansion of air conditioning benefiting American Air Filter. Barron's 33:27-8 Ap 13 '53

AMERICAN airlines, inc.

American airlines; accounts for a quarter of U.S. passenger miles; with financial data, 1940-51. H. F. Condon, jr. Barron's 32:13-16 N 17 '52

AA sets its sights on long-range coach. F. L. Moore. Aviation W 57:87-8 O 20 '52

Low-priced stocks headed for higher levels. J. S. Williams. Mag of Wall St 91:237 N 29 '52

Two big four airlines report top salaries. Aviation W 58:88-9 Ap 13 '53

AMERICAN and foreign power company

Exchange troubles seen temporary. Barron's 32:19-20 N 17 '52

Security I like best. A. H. Deuble. Comm & Fin Chr 177:774 F 19 '53

AMERICAN anthropological association

Annual meeting, 51st, Philadelphia, Dec. 28-30. Science 117:318-19 Mr 27 '53

AMERICAN arbitration association

Arbitration; don't go to court. E. C. Kellogg. Iron Age 171:59-60 Ap 16 '53

AMERICAN assembly

Solving problems by stages. il Bsns W p30-2 D 13 '52

AMERICAN association for the advancement of science

American association for the advancement of science. D. W. Bronk and others. Science 117:sup3 My 29 '53

AAAS general officers, 1953. Science 117:sup3 Ja 16 '53

AAAS symposia, St Louis, Dec. 27-30. Science 116:550-2 N 14 '52

Annual meeting, 119th, St Louis, Dec. 26-31, 1952. Science 117:189-92 F 20 '53

Annual meeting, 120th, Boston, Dec. 26-31; preliminary announcement. Science 117:613-16 My 29 '53

Association affairs. Science 117:117-20 Ja 30 '53

Association business. Science 117:183-8 F 20 '53

Howard A. Meyerhoff resigns. Science 117:319 Mr 27 '53

Meeting, 119th, St Louis. Sci Am 188:34-6 F '53

Preview of the 119th meeting, St Louis, Dec. 26-31. Science 116:607-25 D 5 '52

Putting science together. H. A. Meyerhoff. Science 116:sup3 D 5 '52

Revision of the AAAS constitution and by-laws. Science 116:575-8 N 21 '52

Science library. R. L. Taylor. Science 117:413 Ap 17 '53

Secretary resigns. Sci Am 188:54 My '53

AMERICAN association of economic entomologists

National entomological societies merge. C. F. W. Muesebeck. Science 117:546-7 My 22 '53

AMERICAN association of managing general agents

Managing general agents expand regional groups. Weekly Underw 168:568+ F 28 '53

AMERICAN association of museums

Directory of professional and lay members. American assn. of museums, Smithsonian inst., Washington 25 '53

AMERICAN association of newspaper representatives

Annual meeting, Chicago. Ed & Pub 85-7+ D 6 '52

AMERICAN association of oilwell drilling contractors

Annual meeting, 12th, Oklahoma City. Pet Eng 24:B 114+ N '52

Annual meeting, 12th, Oklahoma City, Sept. 29-30. Oil & Gas J 51:70-1 O 6 '52

AMERICAN association of passenger traffic officers

Annual meeting, 89th, San Antonio, Oct. 12-15. Ry Age 133:55-9 O 27 '52

AMERICAN association of petroleum geologists

AAPG moves into new headquarters in Tulsa. il World Oil 136:88 Ap '53

Building dedicated. il Oil & Gas J 51:60-1 Mr 30 '53

Constitution and by-laws. Am Assn Pet Geologists Bul 36:1867-77 S '52

Joint annual meeting with Society of exploration geophysicists and Society of economic paleontologists and mineralogists, Houston, March 23-26. World Oil 136:76-8+ Ap '53

Joint annual meeting with Society of exploration geophysicists and Society of economic paleontologists and mineralogists, Houston, March 23-26; abstracts of papers. Oil & Gas J 51:174-9 Mr 30 '53

Membership list. Am Assn Pet Geologists Bul 37:599-600, sup 1-138 Mr '53

AMERICAN association of railroad superintendents

Annual meeting, 57th, Chicago, June 2-4. Ry Age 134:127-31 Je 15 '53

AMERICAN association of railroad ticket agents

Annual meeting, 29th, Miami Beach, Nov. 10-11. Ry Age 133:11-12 N 24 '52

AMERICAN association of railway surgeons

Officers, 1952-53. pors Ind Med 21:451-2 S '52

AMERICAN association of state highway officials

AASHO presidency goes to Ziegler. Eng N 149:53 D 25 '52

Annual meeting, Kansas City, Mo. Dec. 10. Roads & Sts 96:72-3 Ja '53

Annual meeting, 38th, Kansas City. Eng N 149:23 D 18 '52

AMERICAN association of textile chemists and colorists

Annual convention, Boston; exhibition and abstracts of papers. Textile World 102:134-9+ D '52

Annual convention, 31st, Boston, Nov. 6-8. plans Am Dyestuff Rep 41:629-67 O 13 '52

Annual meeting, Boston, Nov. 6-8. Mod Textiles Mag 33:56+ D '52

Annual meeting, 32d, Chicago, Sept. 17-19; list of exhibitors. Mod Textiles Mag 34:72+ S '53; plan Textile World 103:157-9 S '53

Annual meeting, 32d, Chicago; with abstracts of papers. Oil Paint & Drug Rep 164:7+ S 21 '53

Bonnar elected to presidency; Linberg, Etchells, Hays, Brainerd vice-presidents. Am Dyestuff Rep 41:863-4 D 22 '52

Committee on research

Meeting, 173d, Philadelphia, Sept. 12. Am Dyestuff Rep 41:694-5 O 27 '52

AMERICAN association of textile technologists

Annual symposium, 2d, New York, Feb. 3; abstracts of papers. Mod Textiles Mag 34:48-9+ Mr '53

Meeting, New York, Feb. 3. Chem & Eng N 31:666 F 16 '53

AMERICAN association of university teachers of insurance

Annual meeting, Chicago. East Underw 54:22 Ja 2 '53; Nat Underw 57:15+ Ja 1 '53; Nat Underw (Life ed) 57:1+ Ja 2 '53

AMERICAN automobile association

Advertising expands this business by tapping present customers; 23-year-old international travel service of AAA. il Ptr Ink 242:39-40 Ja 9 '53

AMERICAN bankers association

A.B.A.'s long-range livestock program. Banking 45:60+ Mr '53

Annual convention, 78th, Atlantic City; program. Burroughs Clearing House 36:33-5+ S '52

Annual convention, 78th, Atlantic City, Sept. 28-Oct. 1; program, portraits, etc. plans Banking 45:169-92+ S '52

Annual convention, 78th, Atlantic City; with abstracts of addresses. Burroughs Clearing House 37:29-33+ O '52; Banking 45:71-6, 81-3+ N '52

National agricultural credit conference, 1st, Louisville; with abstracts of papers. Banking 45:66-7+ D '52

National agricultural credit conference, Louisville, Nov. 13-14. Burroughs Clearing House 37:13-14 D '52

Public relations opportunities and tools; what is the American bankers association doing? il Banking 45:35-50 Mr '53

Six A.B.A. leaders; 1952-1953. Banking 45:78-9 N '52

Western regional trust conference, Seattle, Aug. 13-15. Banking 45:108+ O '52; Trusts & Estates 91:620-3+ S '52

Credit policy commission

National credit conference, 5th, Chicago, Jan. 26-28; with abstracts of papers. Banking 45:107-12 Mr '53

Savings and mortgage division

Annual conference, New York, March 3-4. Banking 45:100-2+ Ap '53

Annual savings and mortgage conference, Los Angeles, Feb. 9-10. Banking 45:95-8 Mr '53

Savings and mortgage picture; work of Savings and mortgage division. W. T. Burns. Comm & Fin Chr 176:1828-9 N 13 '52

Trust division

Annual meeting, Atlantic City, Sept. 29th. Trusts & Estates 91:696-7 O '52

Mid-continent trust conference, 21st, Dallas, Nov. 13-14. Trusts & Estates 91:884-6 D '52

Midwinter trust conference, New York. Trusts & Estates 92:184-6 Mr '53

AMERICAN bankers association—Trust division —*Continued*

Mid-winter trust conference, New York, Feb. 9-11; with abstracts of papers. Banking 45:100-5+ Mr '53

Mid-winter trust conference, 34th, New York, Feb. 9-11. Trusts & Estates 92:78-9+ F '53

AMERICAN bar association

Public utility law section

Annual meeting, Boston, Sept. 24-25; addresses. Pub Util 52:515-68, 605-35 O 8-22 '53

Public utility law section meeting, San Francisco, Sept. 15-16; addresses on legal, economic, financial, and other problems. Pub Util 50:581-666 O 23 '52

Real property, probate and trust law section

Annual meeting, San Francisco, Sept. 15-17. Trusts & Estates 91:692-3, 724-8+ O '52

AMERICAN barge line company

Outlook is favorable. Barron's 32:21 O 6 '52

AMERICAN broadcasting company

Movies, tv join hands. Bsns W p34 N 22 '52

AMERICAN broadcasting-Paramount theaters, inc.

Edward J. Noble; his golden touch pans out again. Bsns W p82+ Mr 14 '53

Merger of ABC and Paramount. J. D. C. Weldon. Mag of Wall St 91:644-5+ Mr 7 '53

New giant. Bsns W p31-2 F 14 '53

AMERICAN bureau of shipping

ABS explains its special surveys. S. Swan. il Marine Eng 58:60-3 Jl '53

Annual meeting, 91st, New York, Jan. 27. Marine Eng 58:59-62 Mr '53

Annual meeting, 91st, New York, Jan. 27; annual report by W. I. Green. East Underw 54:30 F 6; 34 F 13 '53

Board of managers semi-annual meeting, New York, July 28. Marine Eng 58:86-7 S '53

AMERICAN bus lines, inc.

ICC examiner's report calls for disapproval of Continental purchase of American system. Bus Transportation 32:66 Ap '53

AMERICAN can company

Can, can; review of the two major units in the metal container industry. I. U. Cobleigh. Comm & Fin Chr 178:348 Jl 30 '53

Canco's head sees outlook bright in '53. W. C. Stolk. Paint Oil & Chem R 116:9 Ja 1 '53

Stolk of American Can. Fortune 46:148-9 O '52

AMERICAN central insurance company of St Louis

American Central of St Louis is 100 years old. East Underw 54:23 F 20 '53

AMERICAN ceramic society

Annual meeting, 55th, New York, April 26-30. Am Cer Soc Bul 32:186-91 My 15 '53; Cer Ind 60:147 Je '53

Annual meeting, 55th, New York, April 26-30; program and abstracts of papers. plans Am Cer Soc Bul 32:129-40+ Ap 15 '53

Fall division meetings have successful programs. Am Cer Soc Bul 31:473-6+ N 15 '52

Membership roster. Am Cer Soc Bul 31:411-16+ O 15 '52

Membership roster. Am Cer Soc Bul 32: sup 1-75 O 15 '53

Outlook for the American ceramic society. R. R. Danielson. Am Cer Soc Bul 32:290 Ag 15 '53

Pacific Coast regional meeting, Seattle, Oct. 16-18. Cer Ind 59:62+ D '52; Brick & Clay Rec 121:51+ D '52

Pacific Coast regional meeting, 6th, San Francisco, Oct. 22-24; program. Am Cer Soc Bul 32:318-23 S 15 '53

Glass division

Annual meeting, 55th, New York, April 26-30. Glass Ind 34:303-8+ Je '53

Fall meeting, Bedford Springs, Pa. Oct. 10-11; with abstracts of papers. Cer Ind 59: 75+ N '52; Glass Ind 33:586-7 N '52

Pacific Coast regional meeting, 5th, Seattle, Oct. 16-18. Glass Ind 33:588+ N '52

Publications

Report of the committee on publications for 1951-1952. Am Cer Soc Bul 31:402-3 O 15 '52

AMERICAN chemical society

ACS candidates for 1953. Chem & Eng N 30:4497-8 O 27 '52

Board of directors minutes, Dec. 6-7. Chem & Eng N 31:238-45 Ja 19 '53

Fall meeting; reports. Ind & Eng Chem 44:sup 11A+ N '52

National meeting, 122d, Atlantic City; official reports. Chem & Eng N 30:4500-45 O 27 '52

National meeting, 123d, Los Angeles. Chem & Eng N 31:1274-300+, 1384-408 Mr 30-Ap 6 '53

National meeting, 123d, Los Angeles, March 15-19; official reports. Chem & Eng N 31: 1766-92 Ap 27 '53

National meeting, 123d, Los Angeles, March 15-19; preliminary program. Chem & Eng N 30:5036-41 D 1 '52

National meeting, 123d, Los Angeles, March 15-19; program. Chem & Eng N 31:516-50 F 9 '53

National meeting, 124th, Chicago; abstracts of papers. Can Chem Process 37:110+ S '53

New subscription policies. Chem & Eng N 31: 800+ F 23 '53

Officers, committees, and chapters of student affiliates. Chem & Eng N 30:4538-45 O 27 '52

Officers, committees, and chapters of student affiliates. Chem & Eng N 31:757-63 F 23 '53

Official reports for 1952. Chem & Eng N 31: 897-920 Mr 2 '53

Southwest regional meeting, 8th, Little Rock, Ark. Chem & Eng N 30:5250+ D 15 '52

Southwest regional meeting, 8th, Little Rock, Ark. Dec. 4-6; abstracts of papers. Anal Chem 24:2015-18 D '52

Advances in chemistry board

Advances in chemistry board announced. Chem & Eng N 30:5286 D 15 '52

Advisory board

New Advisory board members appointed. Chem & Eng N 30:5380-1 D 22 '52

Industrial and engineering chemistry division

Ceramics and glass symposium; abstracts of papers. Glass Ind 34:199-201 Ap '53

Local sections

Chemistry vs. geography. E. W. Shand. maps Chem & Eng N 30:4942-4 N 24 '52

Paint, plastics and printing ink division

Meeting, Chicago, Sept. 6-11; with abstracts of papers. Paint Oil & Chem R 116:12-13+ S 24 '53

Rubber division

Annual meeting, 61st, Buffalo, Oct. 29-31. Rubber Age 72:228-9 N '52

Meeting, 61st, Buffalo, Oct. 29-31; abstracts of papers. Rubber Age 72:71-6 O '52; India Rubber World 127:86-90, 378+ O, D '52

Meeting, 62d, Los Angeles, March 18-19. Rubber Age 73:88-9 Ap '53

Meeting, 62d, Los Angeles, March 18-19; abstracts of papers. Rubber Age 72:493-6 Ja '53; India Rubber World 127:658-61 F '53

Meeting, 63d, Boston, May 27-29; with abstracts of papers. Rubber Age 73:213-17, 376-7 My-Je '53; India Rubber World 128: 214-17, 498-500 My, Jl '53

Meeting, 64th, Chicago, Sept. 9-11; with abstracts of papers. Rubber Age 73:501-5; 74: 94-6 Jl, O '53; India Rubber World 128: 636-9; 129:77-9 Ag, O '53

Library

Rubber division library recaps activities for last 18 months. Rubber Age 72:651 F '53

AMERICAN chicle company

Five stocks with unusually stable earnings; with comparative balance sheet items. Mag of Wall St 92:170 My 2 '53

12 promising specialties. P. Dobbs. Mag of Wall St 92:95 Ap 18 '53

AMERICAN college of life underwriters

CLU movement in perspective. J. H. Wood. East Underw 53:3+ O 17 '52

AMERICAN commission on stratigraphic nomenclature

Report; nature, usage, and nomenclature of time-stratigraphic and geologic-time units. Am Assn Pet Geologists Bul 36:1627-38 Ag '52

AMERICAN concrete agricultural pipe association

Annual meeting, 3d, Dallas. Eng N 150:23 Mr 5 '53

AMERICAN concrete institute

Annual meeting, Boston, Feb. 16-19. Rock Prod 56:154+ Ap '53

Annual meeting, 49th; abstracts of papers. Concrete 61:20+ Ap '53

Annual meeting, 49th, Boston. Eng N 150:25 F 26 '53

Annual meeting, 49th, Boston, Feb. 16-19; with abstracts of papers. Am Concrete Inst J 24:sup3-5+ Ap '53

Services of the American concrete institute. A. T. Goldbeck. Am Concrete Inst J 24:697-700 Ap '53

AMERICAN concrete pipe association

Annual meeting, 45th, Dallas. Eng N 150:23 Mr 5 '53

Annual meeting, 45th, Dallas, Feb. 25-28. Concrete 61:20 My '53

Annual meeting, 45th, Dallas, Feb. 25-28; with abstracts of papers. Rock Prod 56:223-5+ Ap '53

AMERICAN concrete pressure pipe association

Annual meeting, 4th, Dallas. Eng N 150:23 Mr 5 '53

AMERICAN congress of labor medicine

Petroleum industry session, 2d, Rio de Janeiro, Sept. 20-28, 1952. Ind Med 22:24-8 Ja '53

AMERICAN congress on surveying and mapping

Annual meeting, 12th, Washington, June 11-13. Science 116:681-2 D 19 '52

AMERICAN construction company

Builder wins first round in claim case; American construction co. awarded $59,000 in a suit against the government. Eng N 149:88 O 16 '52

AMERICAN council on education

Government research in colleges. Sci Am 188:53-4 My '53

AMERICAN cyanamid company

Five outstanding investments for the future; with comparative balance sheet items. Mag of Wall St 92:331 Je 13 '53

AMERICAN district telegraph company

Bad news for burglars. B. Clark. Banking 45:54+ Je '53

Plant protection; American district telegraph co. fire and bell alarm system. Steel 131:72 O 20 '52

AMERICAN drug manufacturers association

Annual meeting, 41st, Boca Raton, April 13-16. Oil Paint & Drug Rep 163:55-67 Ap 20 '53

FDA inspection power gets backing of ADMA. Oil Paint & Drug Rep 162:5 D 22 '52

AMERICAN electroplaters' society

Annual meeting, 40th, Philadelphia, June 15-18. Metal Finishing 51:48-52 Jl '53

Annual meeting, 40th, Philadelphia, June 15-18; program and abstracts of papers. Metal Finishing 51:86-91 Je '53

AMERICAN encaustic tiling company, inc.

Annual report. Comm & Fin Chr 177:1045 Mr 9 '53

AMERICAN export lines

Ship owners accept terms; government-American export lines settlement is in right direction, but more is needed. Steel 132:42 Ja 12 '53

AMERICAN farm bureau federation

Farm bureau federation backs pretesting of chemical additives. Oil Paint & Drug Rep 163:3 Ap 13 '53

AMERICAN federation of labor

AFL, CIO sign no-raid agreement. Bsns W p 162-3 Je 13 '53

AFL tells dockers to clean up or get out. Bsns W p 114-15 F 7 '53

Big labor eyes the future. il Bsns W p 128-9 Ja 31 '53

Building trades veteran heads AFL. J. Gambatese. Eng N 149:29+ D 4 '52

Docks; blowup may bring reform at last. il Bsns W p 132-3 My 30 '53

Meeting, 71st, New York. Mo Labor R 75:499-501 N '52

New chief, new era for AFL. Bsns W p 114 N 29 '52

Prudential clerks are unionization target of AFL. Nat Underw (Life ed) 56:8 N 14 '52

Splitup in Detroit worries AFL; revolt of the locals. Bsns W p 154 Je 6 '53

Unionism on a plateau. Fortune 46:78+ N '52

Unity; talks but no real urge. Bsns W p 154+ Ap 11 '53

Waterfront mess. Fortune 47:94+ Ap '53

AMERICAN federation of medical centers, inc.

Group medicine. Bsns W p 122+ N 1 '52

Propose insured medical care through team practice. Nat Underw 56:27 N 6 '52; Same. Nat Underw (Life ed) 56:8 N 7 '52

AMERICAN forest products industries

Meeting, Chicago, June 25-26. Paper Tr J 137:21 Jl 17 '53

AMERICAN foundrymen's society

Annual meeting, 57th, Chicago, May 4-8; program, chapter committees, awards. Foundry 81:150-61 My '53

Annual meeting, 57th, Chicago, May 4-8; with abstracts of papers. Foundry 81:102-7+ Je; 98-9+ Jl '53

AMERICAN gas and electric company

Builds its 330-kv network. il map Elec World News ed 138:22-4 O 13 '52

Five outstanding entrenched stocks; with comparative balance sheet items. Mag of Wall St 91:181 N 15 '52

Has record earnings. Comm & Fin Chr 177:1470 Ap 6 '53

Public utility securities. O. Ely. Comm & Fin Chr 178:33 Jl 2 '53

Stock offered. Comm & Fin Chr 177:2565-6 Je 15 '53

AMERICAN gas association

Accident prevention committee 5th annual conference, Buffalo, Sept. 17-18. Am Gas Assn Mo 35:18-20+ O '53

Accounting merit awards made; Accounting section. Am Gas Assn Mo 34:23 N '52

Accounting section national purchasing and stores conference, Milwaukee, April 13-15. Am Gas Assn Mo 35:29-30 My '53

A.G.A. constitution and by-laws streamlined. Am Gas Assn Mo 34:4 N '52

American gas association executive safety committee, its aims and ultimate goals. E. H. Eacker. Am Gas Assn Proc 1952:122-5

AGA seeks broad industry support for expanded public relations program. Am Gas J 178:31 Ja '53

Annual meeting, 34th, Atlantic City. Oil & Gas J 51:72-4 N 3 '52; Am Gas J 177:14-15 N '52

Annual meeting, 34th, Atlantic City, Oct. 27-30; with abstracts of papers. Gas Age 110:39-58 N 20 '52; Pub Util 50:803-6 N 20 '52; Am Gas Assn Mo 34:2-8+ D '52

Cite A.G.A. research cooperation. R. A. Cattell. Am Gas Assn Mo 35:17+ My '53

Distribution, motor vehicles and corrosion conference, Chicago, April 13-16. Am Gas Assn Mo 35:36-41+ My '53; Gas Age 111:45-51 My 21 '53

General management section organized. Am Gas Assn Mo 35:39 Jl-Ag '53

Initiates new promotional service. Am Gas Assn Mo 35:36 Jl-Ag '53

Reorganize operating section. Am Gas Assn Mo 35:32-4 Je '53

Research and utilization conference, 8th, Cleveland, April 7-8. Am Gas Assn Mo 35:6-9+ My '53; Gas Age 111:54-6+ My 21 '53

Transmission and storage conference, 1st, Chicago, April 30-May 1. Gas Age 111:37-40+ My 21 '53; Am Gas Assn Mo 35:4-7 Je '53

Utilities, manufacturers launch joint action program; appliance merchandising. Gas Age 111:27-30+ My 7 '53

Appliance testing laboratory

A.G.A. laboratories at new peak. Am Gas Assn Mo 35:9+ Je '53

Eliminate lost time accidents; A.G.A. laboratories. Am Gas Assn Mo 35:12-13+ Mr '53

AMERICAN gear manufacturers' association

Annual meeting, 37th, Hot Springs, Va. May 31-June 3. Am Mach 97:172 Je 22 '53; Automotive Ind 109:68-9+ Jl 1 '53; Mach 59:228 Jl '53

Annual meeting, 37th, Hot Springs, Va. May 31-June 3. Steel 132:52 Je 8 '53

Semi-annual meeting, Chicago. Automotive Ind 107:54 N 15 '52; Mach 59:179 D '52; Am Mach 96:190 N 10 '52

AMERICAN helicopter society

American helicopter society news. Published in monthly numbers of Aeronautical engineering review

AMERICAN hide and leather company

May clear preferred arrears in 1953. Barron's 32:19 N 24 '52

AMERICAN home products corporation

Five stocks best suited to resist downtrend; with comparative balance sheet items. Mag of Wall St 91:27 O 4 '52

AMERICAN industrial hygiene association

Annual meeting, Los Angeles. Heating-Piping 25:91 Jl '53

AMERICAN institute for property and liability underwriters

21 CPCU's honored at all-industry luncheon. East Underw 53:30+ O 17 '52

AMERICAN institute of architects

Annual meeting, 85th, Seattle. Eng N 150:25 Je 25 '53

Regional conferences. Arch Rec 112:11-13 N '52

AMERICAN institute of banking

A.I.B. abroad; letters from foreign students. Banking 45:69-70 Je '53

A.I.B. in uniform. Banking 45:61+ My '53

Annual meeting, 51st, Cleveland, June 8-12. Banking 46:98-100+ Jl '53

Expanding graduate courses service. Banking 45:154+ F '53

Public relations opportunities and tools; the Institute. Banking 45:49-50 Mr '53

AMERICAN institute of biological sciences

Meeting, 3d, Ithaca, N.Y. Sept. 8-10. Science 116:651-2 D 12 '52

AMERICAN institute of chemical engineers

Annual meeting, 45th, Cleveland. Chem & Eng N 30:5360-2 D 22 '52

Annual meeting, 45th, Cleveland, Dec. 7-10; with abstracts of papers. Oil Paint & Drug Rep 162:7+ D 15 '52

Meeting, Biloxi, March 8-11; technical program. Chem Eng Prog 49:sup31-2+ F '53

AMERICAN institute of chemists

Annual meeting, Philadelphia. Chem & Eng N 31:2180-2 My 25 '53; Oil Paint & Drug Rep 163:7+ My 18 '53

AMERICAN institute of electrical engineers

AIEE officers and committees for 1953-1954. Elec Eng 72:825-48 S '53

AIEE progress. D. A. Quarles. Elec Eng 72:189-91 Mr '53

AIEE section and student branch meetings, 1951-1952. Elec Eng 71:1045-6 N '52

Board of directors meeting, Atlantic City, June 18. Elec Eng 72:815-16 S '53

Engineering societies of America. H. H. Henline. il Gen Elec R 55:34-6 N '52

Evolution of the A.I.E.E. M. D. Hooven. Elec Eng 71:973-7 N '52

Fall general meeting, New Orleans, Oct. 13-17. Elec World 138:105-8 N 3 '52

Fall meeting, New Orleans, Oct. 13-17. Elec Eng 71:1141-5 D '52

Fellows elected. Elec Eng 72:560-3, 648-50 Je-Jl '53

Northeastern district meeting, Boston, April 29-May 1. Elec World News ed 139:8 My 11 '53

Progress and problems. D. A. Quarles. Elec Eng 72:667-9 Ag '53

Redefinition of membership grades. C. W. Franklin. Elec Eng 72:281-4 Ap '53

Report of the board of directors for 1952-1953. Elec Eng 72:721-56 Ag '53

Report to the membership. D. A. Quarles. Elec Eng 72:477-9 Je '53

Special conference on machine tools, 5th, Albany; abstracts of papers. Automotive Ind 107:174+ N 15 '52

Student branches and their activities. D. D. Ewing. Elec Eng 72:28-31 Ja '53

Summer general meeting, Atlantic City; with summaries of papers. Elec Eng 72:707-17 Ag '53

Summer meeting, Atlantic City, June 15-19; program. Elec Eng 72:544-9 Je '53

Winter general meeting, New York, Jan. 19-23; program. Elec Eng 72:75-84 Ja '53

Winter general meeting, New York, Jan. 19-23; with list of papers. Elec Eng 72:257-66 Mr '53

Winter meeting, New York, Jan. 19-23. Power Eng 57:86+ Mr '53

Winter meeting, New York, Jan. 19-23; abstracts of papers. Elec World 139:85-91+ F 9 '53

AMERICAN institute of marine underwriters

Zeller heads Institute of marine underwriters. Weekly Underw 167:1505+ D 6 '52

AMERICAN institute of mining and metallurgical engineers

AIME continues to strengthen financial position as 1952 surplus of $18,000 more than doubles previous year. Min Eng 5:Trans 429-30 Ap '53; Same. J Metals 5:575-6 Ap '53

Annual meeting, Los Angeles, Feb. 16-19; program. Min Eng 5:53-6 Ja '53

Annual meeting, 175th, Los Angeles, Feb. 16-19. Min Eng 5:Trans 419-26 Ap '53; Same. J Metals 5:578-85 Ap '53

Electrical furnace steel conference doubles attendance in ten years. J Metals 5:96-7 Ja '53

Engineering societies of America. E. H. Robie. il Gen Elec R 56:48-50 Jl '53

Fall meeting, Chicago. Min Eng 4:1046-7 N '52

Meeting, 175th, Los Angeles, Feb. 16-19. Min Cong J 39:68 My '53

Industrial minerals division

Meeting, 175th, Los Angeles, Feb. 15-19; with abstracts of papers. Rock Prod 56:140-4+ Ap '53

Midyear meeting, Chicago, Sept. 3-6; abstracts of papers. Rock Prod 55:118+ O '52

Petroleum division

Annual meeting, Houston, Oct. 1-3; with abstracts of papers. Oil & Gas J 51:66-70 O 6; 169-70 O 13 '52

AMERICAN institute of plumbing and heating supply associations, inc.

Annual meeting, 1st, Atlantic City, Oct. 19-22. Dom Eng 180:122+ D '52

AMERICAN institute of sanitary engineers (proposed)

Sanitary engineers group proposed. Eng N 150:28 F 12 '53

AMERICAN institute of steel construction

National engineering conference, 5th, Detroit. Eng N 150:25 Ap 30 '53

AMERICAN international underwriters corporation

International underwriters corporation donates sum of $10,000 to Holland flood sufferers. Weekly Underw 168:508 F 21 '53

AMERICAN iron and steel institute

Annual meeting, 61st, New York, May 27-28. Iron Age 171:88-9 Je 4 '53; Steel 132:66-7 Je 1 '53

AMERICAN law institute

Untangling the tax laws. Bsns W p 164+ D 13 '52

AMERICAN life convention

Executive personnel. D. F. Barrett. East Underw 54:3-4+ Je 5 '53

Financial section meeting, Chicago. Nat Underw (Life ed) 56:1+ O 17 '52

Medical section annual meeting, White Sulphur Springs. Nat Underw (Life ed) 57:1+ Je 19 '53

Ralph Kastner and Blanche signally honored on A.L.C. anniversary. Nat Underw (Life ed) 57:6+ Mr 27 '53

Standing committee chairmen appointed for 1953. Nat Underw (Life ed) 57:8 Ja 23 '53

AMERICAN locomotive company

At American Locomotive, Perry T. Egbert elected president. Ry Age 133:85 D 8 '52

AMERICAN machine and foundry company

Consolidates operations of research unit. Comm & Fin Chr 177:829 F 23 '53

Security I like best. H. J. Low. Comm & Fin Chr 177:886+ F 26 '53

AMERICAN machine tool distributors association

Annual meeting, 28th Virginia Beach, Sept. 29-30. Mach 59:202 N '52

Annual meeting, 29th, White Sulphur Springs, W.Va. Sept. 14-15. Am Mach 97:169 S 28 '53

AMERICAN machine tool distributors association—*Continued*

Meeting, Cincinnati, April 16-17. Am Mach 97:172 Ap 27 '53

Spring meeting, 29th, Cincinnati, April 16-17. Mach 59:212 My '53

AMERICAN machinist (periodical)

First 75 years. Am Mach 96:L-L9 Mid-N '52

AMERICAN management association

Management conference, New York, June 17-19. Iron Age 171:74-5 Je 25 '53

Marketing conference, New York. Iron Age 171:60 F 19 '53

Insurance division

Conference, New York, May 18-20. East Underw 54:32-3 My 22 '53; Nat Underw 57:4+, 7, 9 My 21 '53; Weekly Underw 168:1404-5, 1487-94+ My 23-30 '53

Meeting, Chicago, Nov. 13-14. East Underw 53:1+ N 14 '52; Nat Underw 56:4+ N 20 '52; Weekly Underw 167:1292-6, 1440-2, 1444-9 N 15, 29 '52

Manufacturing division

Conference on new management techniques, New York, April 8-10; abstracts of papers. Paper Tr J 136:42+ Ap 17 '53

Packaging conference and exposition

National packaging conference and exposition, 22d, Chicago, April 20-23; with abstracts of papers. Mod Packaging 26:136-46 Je '53

AMERICAN marketing association

National conference, Chicago. Ed & Pub 86:24+ Ja 10 '53

AMERICAN meat institute

Annual meeting, Chicago, Oct. 2-6; list of exhibitors and plan. Food Eng 25:99 S '53

Annual meeting, 47th, Chicago; abstracts of papers. Food Eng 24:199-200 N '52

AMERICAN mining congress

Annual business meeting, 54th, New York, Dec. 4. Min Cong J 39:53 Ja '53

Coal division annual conference of committees, Pittsburgh, Nov. 20; with abstracts of papers. Min Cong J 38:64-74 D '52

Coal division annual meeting, Cleveland, May 11-14; program, committee members, list of exhibitors. Min Cong J 39:38-43 Mr; 54-77 Ap '53

Coal division annual meeting, Cleveland, May 11-14; with abstracts of papers. Coal Age 58:96-105+ Je '53; Min Cong J 39:54-9, 65-85 Je '53

Metal mining show, Denver. Min Eng 4:1048 N '52

Western division

Annual meeting, Denver, Sept. 22-25. Eng & Min J 153:125+ N '52

Annual meeting, Denver, Sept. 22-25; with abstracts of papers. Rock Prod 55:96-7 N '52

Annual meeting, Denver, Sept. 22-25; with declaration of policy and abstracts of papers. Min Cong J 38:64-76+ O '52

Annual meeting, Seattle, Sept. 21-24. Eng & Min J 154:130+ O '53

Metals and nonmetallic mining convention, Seattle; chairmen, committees, program. Min Cong J 39:46-58 Ag '53

AMERICAN national finance corporation

Stock offered. Comm & Fin Chr 177:2449 Je 8 '53

AMERICAN natural gas company

Higher profits shaping up. Barron's 32:25 D 8 '52

AMERICAN newspaper guild

Alternate severance in Cleveland contract; guild contracts. Ed & Pub 85:9 D 6 '52

AMERICAN newspaper publishers association

Bureau of advertising

Organization and services of the Bureau of advertising. M. C. Wallis. Ed & Pub 86:15-16 Ja 24; 30 Ja 31; 15 F 7; 16 F 14; 24+ F 21; 16 F 28; 16 Mr 7; 16+ Mr 14; 16+ Mr 21 '53

What the Bureau of advertising does for agencies and advertisers. il Adv Agency 45:68-71+ O '52

Mechanical committee

Gibbons heads mechanical committee. Ed & Pub 85:58 O 25 '52

AMERICAN oil chemists' society

Annual meeting, 44th, New Orleans, May 4-6. Chem & Eng N 31:2066-8 My 18 '53

Fall meeting, Cincinnati, Oct. 20-22. Chem & Eng N 30:4614-15 N 3 '52; Oil Paint & Drug Rep 162:7+ O 27 '52

AMERICAN paper and pulp association

Annual meeting, 76th, New York, Feb. 15-20. Paper Tr J 136:64-5 F 20 '53

Annual meeting, 76th, New York, Feb. 15-20; with abstracts of papers. Paper Ind 34:1466-8+ Mr '53

Workings of a trade organization. S. Ferguson. Pulp & Pa of Can 54:96-7 Ap '53

AMERICAN petroleum institute

Activities of the electrical equipment subcommittee, Refiining division. L. M. Goldsmith. Elec Eng 72:407-9 My '53

API marketing aids gain momentum at Dallas. Nat Pet N 45:37-9 My 6 '53

Annual meeting, Chicago, Nov. 10-13. Nat Pet N 44:24-5 N 12; 37-40 N 19 '52; Chem & Eng N 30:4946-7 N 24 '52

Annual meeting, 32d, Chicago. Oil Paint & Drug Rep 162:4+ N 17 '52

Annual meeting, 32d, Chicago, Nov. 10-13. Pet Eng 24:A41-4 N '52

Annual meeting, 32d, Chicago, Nov. 10-13; officers, chairmen, speakers. Oil & Gas J 51:70-3 N 10 '52

Annual meeting, 32d, Chicago, Nov. 10-13; with abstracts of papers. Oil & Gas J 51:228-45 N 17 '52

Division of refining meeting, New York. Chem & Eng N 31:2188-9 My 25 '53

Jobber subcommittee now a reality. Nat Pet N 44:17-18 S 24 '52

Lube committee overhauls oil change rules; with text of recommendations. Nat Pet N 45:29-31+ F 25 '53

Mid-continent district of Production division spring meeting, Tulsa, March 18-20. Oil & Gas J 51:164-7 Mr 23 '53

New API marketing research committee boon to marketers. Nat Pet N 45:37-8 Ap 15 '53

Oil policy endorsed. Oil & Gas J 51:98 F 16 '53

Products pipe line conference, Kansas City. Oil & Gas J 51:122-3 Ap 27 '53

Refining division 18th annual meeting, New York; with abstracts of papers. Oil & Gas J 52:75-6 My 11; 216-17 My 18; 143 My 25 '53

Refining division midyear meeting program; committee activities. Pet Processing 8:526-38 Ap '53

Rocky Mountain district of Production division spring meeting, Casper, Wyo. May 7-8. Oil & Gas J 52:87 My 11 '53

Southwestern district of Production division meeting, Fort Worth, March 4-6. Oil & Gas J 51:71-2 Mr 9 '53

AMERICAN pharmaceutical association

Annual meeting, Salt Lake City. Oil Paint & Drug Rep 164:5+ Ag 24 '53

Century of American pharmacy. R. P. Fischelis. Science 116:sup3 O 17 '52

AMERICAN pharmaceutical manufacturers' association

Annual meeting, 46th, White Sulphur Springs, March 30-April 1. Oil Paint & Drug Rep 163:7+ Ap 6 '53

Eastern scientific section meeting, New York, Feb. 2-4. Chem & Eng N 31:672+ F 16 '53

AMERICAN physical society

Proceedings, annual meeting, Cambridge, Jan. 22-24; with abstracts of papers. Phys R 90:333-89 Ap 15 '53

Proceedings, 5th annual conference on gaseous electronics, Princeton, Sept. 4-6, 1952; with abstracts of papers. Phys R 89:335-40 Ja 1 '53

Proceedings, meeting, Durham and Chapel Hill, N.C. March 26-28; with abstracts of papers. Phys R 91:203-48 Jl 1 '53

Proceedings, meeting of the Division of fluid dynamics, State College, Pa. July 1-3; with abstracts of papers. Phys R 91:1029-33 Ag 15 '53

Proceedings, meeting of the Ohio section, Columbus, April 24-25; abstracts of papers. Phys R 90:1131-2 Je 15 '53

Proceedings, meeting, St Louis, Nov. 28-29; with abstracts of papers. Phys R 89:888-915 F 15 '53

Proceedings, meeting, Washington, April 30-May 2; with abstracts of papers. Phys R 91:428-500 Jl 15 '53

AMERICAN physical society—*Continued*
Proceedings, New England section meeting, Durham, N.H. Oct. 25, 1952; with abstracts of papers. Phys R 89:340 Ja 1 '53
Proceedings, New England section meeting, Medford, Mass. May 24; abstracts of papers. Phys R 88:153-4 O 1 '52
Proceedings, Ohio section meeting, Akron, Oct. 31-Nov. 1, 1952; with abstracts of papers. Phys R 89:341-2 Ja 1 '53
Summer meeting, Denver, June 30-July 3; with abstracts of papers. Phys R 88:155-77 O 1 '52

AMERICAN physiological society
Autumn meeting, New Orleans, Sept. 4-6. Science 116:625 D 5 '52

AMERICAN plant food council
Annual meeting, 8th, Hot Springs, Va. Oil Paint & Drug Rep 163:4+ Je 15 '53

AMERICAN portable irrigation company
Number one irrigation man. Fortune 47:172 Ja '53

AMERICAN power and light company
American Power & Light, former utility giant, nears dissolution. Barron's 33:18 My 25 '53
Dissolution approved. Comm & Fin Chr 177:1577 Ap 13 '53

AMERICAN power conference
Annual meeting, 2d, Chicago, March 25-27. Heat & Ven 50:136+ My '53
Annual meeting, 2d, Chicago, March 25-27. Power Eng 57:93+ My '53
Annual meeting, 2d, Chicago, March 25-27; abstracts of papers. Heating-Piping 25:86-7+ My '53
Conference, Chicago, March 25-27. Elec World 139:84-5 Ap 6 '53

AMERICAN press institute
27 editors to attend API's Columbia meet. Ed & Pub 86:49 Ja 17 '53
27 to attend API seminar for city desks. Ed & Pub 85:15 N 29 '52

AMERICAN public health association
Annual meeting, 80th, Cleveland. Safety Maint & Prod 104:65+ N '52
Community organization for health; practice and precept. Pub Health Rep 68:86-90 Ja '53
Origins of the American public health association, 1872-1873. Pub Health Rep 68:sup2+ Ja '53
Public health, 1952; topical and selected report of the American public health association and related organizations 80th annual meeting, Cleveland, Oct. 20-24, 1952. Pub Health Rep 68:81-139, 197-280 Ja-F '53

AMERICAN public works association
APWA news. Published in monthly numbers of Public works
Annual meeting, 58th, Los Angeles, Aug. 24-27; with abstracts of papers. Roads & Sts 95:103-4 O '52
Annual meeting; plan, list of exhibitors. Pub Works 84:108-9 O '53
Getting acquainted with the APWA. il Pub Works 83:67-8+ N '52

AMERICAN pulp and paper mill superintendents association
Annual meeting, 34th, Atlanta, June 9-11. Paper Tr J 136:50+ Je 19 '53; Paper Ind 35:462-6 Jl '53

AMERICAN pulpwood association
Technical sessions. Paper Tr J 136:110+ F 20 '53

AMERICAN radio relay league, inc.
Rules and regulations of the Communications department. Q S T 37:74-5+ Ap '53

AMERICAN railway bridge and building association
Annual meeting, Chicago, Sept. 15-17. Ry Age 135:106+ S 21 '53

AMERICAN railway engineering association
Annual meeting, 52d, Chicago. Eng N 150:25 Mr 26 '53
Annual meeting, 52d, Chicago; with abstracts of papers and committee reports. Ry Age 134:94-7, 103+ Mr 23 '53

AMERICAN railway magazine editors association
Annual meeting, 30th, Santa Fe, Oct. 13-15. Ry Age 133:11-12 O 27 '52
Annual meeting, 31st, New Orleans, Oct. 7-9. Ry Age 135:13-15 O 19 '53

AMERICAN republics corporation
Pipeline plan. Bsns W p 136 Ap 18 '53

AMERICAN research and development corporation
Prudent Boston gamble. F. Bello. il Fortune 46:124-5+ N '52
They're products of the future. il Bsns W p99-101 F 28 '53

AMERICAN road builders association
Annual meeting, Boston, Feb. 9-11. Roads & Sts 96:70-2+ Mr '53
Officers, 1953. Roads & Eng Constr 91:80 F '53

AMERICAN short line railroad association
Annual meeting, 39th, San Francisco, Oct. 2-3. Ry Age 133:44-6 O 20 '52

AMERICAN snuff company
Five timely selections in risk free stocks; with comparative balance sheet items. Mag of Wall St 92:278 My 30 '53

AMERICAN society for engineering education
Meeting, Washington, D.C. Nov. 13. J Eng Educ 43:342-6 Ja '53
Officers and council members, divisions, committees for 1952-53; with list of members. J Eng Educ 43:19-275 F '53

Atomic energy education committee

Report of committee on atomic energy education. J Eng Educ 43:149-50 N '52

AMERICAN society for metals
Technical sessions, Philadelphia, Oct. 20-24; abstracts of papers. Steel 131:78+ O 27 '52
Western metals exposition and congress, Los Angeles, March 23-27; abstracts of papers. Light Metal Age 11:18-19+ Ap '53

AMERICAN society for testing materials
ASTM committee on petroleum products and lubricants. Anal Chem 24:2010-13 D '52
Annual meeting, Atlantic City, June 28-July 3; with abstracts of papers on castings. Foundry 81:159+ Ag '53
Annual meeting, 56th, Atlantic City, June 28-July 3. Oil Paint & Drug Rep 164:7 Jl 6 '53
Annual meeting, 56th, Atlantic City, June 28-July 3; with abstracts of papers on cement and concrete. Rock Prod 56:182+ Ag '53
Committee meetings on concrete, Detroit, March 2-6. Rock Prod 56:154+ Ap '53
Engineering societies of America. R. J. Painter. il Gen Elec R 56:34-6 S '53

AMERICAN society of body engineers
Annual meeting, Detroit, Oct. 29-31; with abstracts of papers. Automotive Ind 107:70-2+ D 1 '52

AMERICAN society of civil engineers
Convention, San Francisco, March 3-6; program. Civil Eng 23:42-7 Ja '53
Convention sponsored by the Miami section, Miami Beach, June 16-19; program. Civil Eng 23:322-6 My '53
Inter-American convention of civil engineers, sponsored by the Puerto Rico section, San Juan, Puerto Rico, Nov. 12-16; program. Civil Eng 22:889-91 O '52
Inter-American convention, Puerto Rico, Nov. 12-16. Eng N 149:55-6 N 27 '52
New officers for 1953. Civil Eng 22:959-62 N '52
1952-1953 committee personnel. Civil Eng 22:965-6 N '52
Second century of service begins. W. L. Huber. Civil Eng 22:932-3+ N '52
Spring meeting, San Francisco, March 3-6; with abstracts of papers. Civil Eng 23:252-5 Ap '53; Eng N 150:23-4 Mr 12 '53
Study of expanding society services reported by ASCE task committee. Civil Eng 23:259-60 Ap '53

Sanitary engineering division

Sanitary engineering division expands its program. Civil Eng 23:257 Ap '53

AMERICAN society of heating and ventilating engineers
Annual meeting, Chicago; abstracts of papers. Dom Eng 181:102+ Ap '53
Annual meeting, 59th, Chicago, Jan. 26-29. Heating-Piping 25:134-56 Mr; 140-6 Ap '53
Annual meeting, 59th, Chicago, Jan. 26-29; with abstracts of papers. Heat & Ven 50:85-6+ Mr; 164+ Ap '53

AMERICAN society of heating and ventilating engineers—*Continued*
New design data for heating and cooling; compiled from practical research by the American society of heating and ventilating engineers and other groups, and presented at annual meeting, Chicago. Dom Eng 181: 102+ Ap; 94-5+ My '53.
Semi-annual meeting, Denver, June 29-July 1; abstracts of papers. Dom Eng 182:99+ Ag; 160-1+ S '53
Semi-annual meeting, Denver, June 29-July 1; with discussions of papers. Heating-Piping 25:128-35 Ag '53

AMERICAN society of mechanical engineers
ASME boiler code committee and its work. A. M. Greene, jr. Standardization 23:376 N '52
ASME elects eight fellows. Mech Eng 75:262-3 Mr '53
ASME research; editorial. Mech Eng 75:189-90 Mr '53
ASME vigorously active in 1952; ASME Council summarizes the activities and the results. Mech Eng 75:45-53 Ja '53
Annual meeting, New York, Nov. 30-Dec. 5; program. Mech Eng 74:841-6, 935-6 O-N '52
Annual meeting, 73d, New York, Dec. 1-5; with abstracts of papers. Am Mach 96: 134-5 D 22 '52
Annual meeting, 73d, New York, Dec. 1-5; with list of papers. Mech Eng 75:54-82 Ja '53
Elects four fellows. Mech Eng 75:427-8 My '53
Engineering societies of America. G. A. Stetson. il Gen Elec R 56:41-3 My '53
Fall meeting, Chicago, Sept. 7-11; held in conjunction with the Centennial of engineering. Mech Eng 74:937-41 N '52
Semi-annual meeting, Los Angeles, June 28-July 2; technical program. Mech Eng 75: 421-5 My '53

Rubber and plastics division

Annual meeting, New York, Dec. 4-5; abstracts of papers. India Rubber World 127: 523-4 Ja '53; Rubber Age 72:502-3 Ja '53
Meeting, Columbus, Ohio, April 28-30; abstracts of papers. India Rubber World 128: 361-2 Je '53

AMERICAN society of refrigerating engineers
Annual meeting, 48th, New York; abstracts of papers. Heating-Piping 25:179-80 Ja '53
Annual meeting, 48th, New York, Dec. 1-3. Heat & Ven 50:136+ Ja '53
Constitution and by-laws. Refrig Eng 61:sup 1-8 Ja '53
Financial statements, Sept. 1, 1951-Aug. 31, 1952. Refrig Eng 60:1313 D '52
Semi-annual meeting, 40th, Lake Placid, June 28-July 1. Heating-Piping 25:116 Ag '53; Heat & Ven 50:140+ Ag '53

AMERICAN society of sanitary engineering
Annual meeting, 46th, Miami. Dom Eng 181:106-7+ Ja '53

AMERICAN society of tool engineers
ASTE award winners announced. Tool Eng 30:91-2 Je '53
ASTE scholarship fund established at on-campus tool engineering conference. N. L. Morgan. il Tool Eng 30:88-9 Je '53
Annual meeting, Detroit, March 18-20; program, speakers, chairmen, panel members, entertainment plans. Tool Eng 30:90-5 Mr '53
Annual meeting, 21st, Detroit, March 18-20. Tool Eng 30:80-2 My '53
Annual meeting, 21st, Detroit, March 18-20; abstracts of papers. Automotive Ind 108: 42-4+ Ap 15 '53
Annual meeting, 21st, Detroit, March 18-20; with abstracts of papers. Am Mach 97: 140-1 Mr 30 '53
Annual report. Tool Eng 30:83-90 My '53
Semi-annual meeting, 20th, Buffalo, Oct. 10-11. Tool Eng 29:77-9 N '52

AMERICAN standards association
Metal thicknesses revised. Standardization 23:405 D '52
New officers help spark work on standards. Standardization 24:78-80+ Mr '53
Proposed changes in ASA procedures. Standardization 24:15-16 Ja '53

AMERICAN steel foundries
Sand in their shoes; the story of American steel foundries. F. M. Reck. Foundry 81: 126-7+ S '53

AMERICAN stock exchange (formerly New York curb exchange)
American stock exchange governing board approves corporate membership. Comm & Fin Chr 177:1344 Mr 26 '53
American stock exchange; New York curb exchange. il Burroughs Clearing House 37: 6-7 F '53
Little Mac's big job. il Bsns W p 118+ Mr 28 '53
Suspends trading in Adolph Goebel stock. Comm & Fin Chr 177:1212 Mr 19 '53
What must be done to save securities exchanges. E. T. McCormick. Comm & Fin Chr 177:101 Ja 8 '53

AMERICAN telephone and telegraph company
AT&T long lines moves from New York. Pub Util 50:922 D 18 '52
AT&T shares crowd earnings. Bsns W p94-5 Mr 7 '53
Annual report, 1952. Pub Util 51:374-5 Mr 12 '53
Earnings, period ending Dec 31, 1952. Comm & Fin Chr 177:233 Ja 19 '53
Earnings, period ending June 30, 1953. Comm & Fin Chr 178:237 Jl 20 '53
Five outstanding entrenched stocks; with comparative balance sheet items. Mag of Wall St 91:182 N 15 '52
Five stocks with unusually stable earnings; with comparative balance sheet items. Mag of Wall St 92:171 My 2 '53
Teletype redeal. Bsns W p57-8 Jl 4 '53

AMERICAN tramp shipowners association
Tramp ship owners form permanent organization. Weekly Underw 168:264 Ja 24 '53

AMERICAN transit association
Annual convention, 71st, Atlantic City, Sept. 22. Pub Util 50:523 O 9 '52
Annual meeting, 72d, Los Angeles. Bus Transportation 32:32-9 S '53
Meeting, Washington, May 12-14. Bus Transportation 32:82-3+ Je '53
Regional meeting, Chicago, March 24-25. Bus Transportation 32:56-7+ My '53

AMERICAN trucking associations
Annual meeting, New York, Oct. 6-10. Eng N 149:26 O 16 '52

AMERICAN water works association
A.W.W.A. directory; membership lists. Am Water Works Assn J 44:1-191 pt 2 N '52
AWWA directory; membership totals, etc. Am Water Works Assn J 45:1-126 pt 2 S '53
Annual meeting, 72d, Kansas City, May 4-9; with awards and list of papers. Am Water Works Assn J 44:1175-84 D '52
Annual meeting, 73d, Grand Rapids, May 11-15; program, list of exhibitors. Munic Util 91:24-5+ Mr '53
Annual meeting, 73d, Grand Rapids, Mich. Eng N 150:23-4 My 21 '53
Annual meeting, 73d, Grand Rapids, Mich. May 10-15. Am Water Works Assn J 45: sup 33-4+ Je '53
Annual meeting, 73d, Grand Rapids, Mich. May 10-15; with abstracts of papers. Munic Util 91:27+ Je; 26-7+ Ag '53
Annual meeting, 73d, Grand Rapids, Mich. May 10-15; with abstracts of papers. Water & Sewage Works 100:263-71, 302-9, 344-51 Jl-S '53
Board of directors annual meeting, New York, Jan. 18-20. Water & Sewage Works 100:88 F '53
Board of directors meeting, New York, Jan. 18-20. Munic Util 91:20-1+ F '53
New officers and directors, biographical sketches. Am Water Works Assn J 45: sup33-4+ My '53
Report of the audit of funds for the year ending Dec. 31, 1952. Am Water Works Assn J 45:313-20 Mr '53
Report of the committee on water works administration for the year ending Dec. 31, 1952. Am Water Works Assn J 45:296-300 Mr '53
Report of the committee on water works practice for the year ending Dec. 31, 1952. Am Water Works Assn J 45:301-8 Mr '53
Report on publications for the year ending Dec. 31, 1952. Am Water Works Assn J 45:309-12 Mr '53

Canadian section

Annual meeting, 33d, Buffalo, April 6-8; with abstracts of papers. Munic Util 91:27-35+ Ap '53

AMERICAN welding society

Fall meeting, Cleveland, Oct. 19-23; program. Welding J 32:634+ Jl '53

Spring meeting, Houston, June 16-19; program, list of exhibitors. Welding J 32:424-8 My '53

Welding goes out on its own; exposition and convention, Houston. Bsns W p 132+ Jl 4 '53

AMERICAN window glass company

American window glass company opens new research center. il Glass Ind 34:20-1 Ja '53

AMERICAN wood preservers association

Annual meeting, 49th, Cleveland, April 28-30. Ry Age 134:83+ My 4 '53

AMERICAN zinc institute

Annual meeting, 35th, St Louis. Iron Age 171:147 My 7 '53

Annual meeting, 35th, St Louis. Oil Paint & Drug Rep 163:7+ My 4 '53

AMERICANS in France

Americans in France. Economist 166:286-7 Ja 31 '53

AMERICIUM

Solution absorption spectra of americium (III), (V), and (VI). S. E. Stephanou and others. bibliog J Chem Phys 21:42-5 Ja '53

Isotopes

Gamma-radiation from Am^{241}. J. O. Newton and B. Rose. Phys R 89:1157 Mr 1 '53

Nuclear spin of $_{95}$Am^{241}. M. Fred and F. S. Tomkins. Phys R 89:318 Ja 1 '53

AMERICIUM chloride

Absorption spectrum of hydrated americium chloride. B. J. Stover and J. G. Conway. diag J Chem Phys 20:1490-1 S '52

AMERICIUM compounds

Crystal structures of americium compounds. D. H. Templeton and C. H. Dauben. bibliog Am Chem Soc J 75:4560-2 S 20 '53

AMIANTHIUM muscaetoxicum

New alkaloid from amianthium muscaetoxicum Gray. N. Neuss. Am Chem Soc J 75:2772-3 Je 5 '53

AMICETIN. See Antibiotic substances

AMIDES

Action of formaldehyde on proteins; some reactions of *N*-hydroxymethylamides. R. D. Haworth and others. Chem Soc J p2972-80 Ag '52

Amides of vegetable origin; stereoisomeric *N*-*iso*-butylnona-1 : 5-diene-1-carboxyamides and the structure of pellitorine. L. Crombie. Chem Soc J p4338-46 N '52

Amides of vegetable origin; stereoisomeric *N*-*iso*butylundeca-1 : 7-diene-1-carboxyamides and the structure of herculin. L. Crombie. Chem Soc J p2997-3008 Ag '52

Antispasmodics; basic esters and amides of some heterocyclic N-carboxylic acids. A. W. Weston, R. W. DeNet and R. J. Michaels, jr. Am Chem Soc J 75:4006-8 Ag 20 '53

Antituberculous compounds; some reactions of quaternary compounds derived from *NN*-disubstituted thioamides. D. A. Peak and F. Stansfield. Chem Soc J p4067-75 O '52

Bolaform electrolytes; conductance of bis-quaternary salts of dicarboxylic acid bis-β-tertiaryaminoalkyl amides in methanol. H. Eisenberg and R. M. Fuoss. bibliog il diags Am Chem Soc J 75:2914-17 Je 20 '53

Complexes of boron trifluoride with amides. E. L. Muetterties and E. G. Rochow. Am Chem Soc J 75:490-1 Ja 20 '53

Electric moments and intermolecular hydrogen bonds of cyclic amides and oxazolidones. E. Fischer. Chem Soc J p4525-7 N '52; Correction. p2836 S '53

Extrusion plasticity of a butadiene-acrylonitrile rubber; effect of amide-type compounds. A. W. Campbell and P. F. Tryon. bibliog Ind & Eng Chem 45:125-30 Ja '53

Heats of hydrolysis of amide and peptide bonds. J. M. Sturtevant. Am Chem Soc J 75:2016-17 Ap 20 '53

Hofmann reaction with α- and β-hydroxyamides; reactions of the intermediate *iso*cyanates. C. L. Arcus and D. B. Greenwood. Chem Soc J p 1937-40 Je '53

Hydrolysis of amides of dibasic acids; the acid hydrolysis of malonamide and malonamic acid. H. G. Ivory and others. Chem Soc J p3264-8 Ag '52

Hydrolysis of amides of dibasic acids; the acid hydrolysis of oxamide and oxamic acid. J. Packer, A. L. Thomson and J. Vaughan. Chem Soc J p4516-18 N '52

Infra-red spectra of some thio-amides. M. S. Flett. Chem Soc J p347-8 Ja '53

Involvement of thymidine in the utilization of 5-amino-4-imidazole-carboxamide. J. M. Weaver and W. Shive. bibliog Am Chem Soc J 75:4628 S 20 '53

N,N′-dialkyloxamides. L. M. Rice, C. H. Grogan and E. E. Reid. Am Chem Soc J 75:242-3 Ja 5 '53

Nucleotides; *N*-chloroamides as reagents for the chlorination of diesters of phosphorous acid; a new synthesis of uridine-5′ pyrophosphate. G. W. Kenner, A. R. Todd and F. J. Weymouth. Chem Soc J p3675-81 O '52

Polyene acids; half methyl esters and amides of the muconic acids. J. A. Elvidge, R. P. Linstead and P. Sims. Chem Soc J p 1793-9 Je '53

Preparation and stabilities of some β-dialkylaminopropionamides. J. G. Erickson. bibliog Am Chem Soc J 74:6281-2 D 20 '52

Reactions of vanillin and its derived compounds; amides of vanillic and 3-ethoxy-4-hydroxybenzoic acids. I. A. Pearl and D. L. Beyer. bibliog Am Chem Soc J 75:2627-30 Je 5 '53

Some amide derivatives of certain aminomethylpyridines. J. D. Sculley and C. S. Hamilton. bibliog Am Chem Soc J 75:3400-3 Jl 20 '53

Some amides of piperazines. C. B. Pollard and B. S. Gray. Am Chem Soc J 75:491 Ja 20 '53

Some α-arylsulfonamido acids and amides. R. H. Wiley, N. R. Smith and J. P. Johansen. Am Chem Soc J 74:6298-9 D 20 '52

Spectra of simple amides in the vacuum ultraviolet. H. D. Hunt and W. T. Simpson. bibliog diag Am Chem Soc J 75:4540-3 S 20 '53

Steric inhibition of amide resonance and its possible significance in enzyme action. R. W. Holley. bibliog Science 117:23-5 Ja 9 '53

Studies in hydrogen-bond formation; detection of the interaction of phenols with amido- and azo-groups, etc., by dielectric-constant measurement. C. H. Giles, T. J. Rose and D. G. M. Vallance. diag Chem Soc J p3799-805 O '52

Synthesis of N,N-dialkyl-β-hydroxyamides from N,N-dialkylamides and ketones using lithium reagents. W. H. Puterbaugh and C. R. Hauser. bibliog Am Chem Soc J 75:2415-17 My 20 '53

2 : 4 : 5-Trimethyl D-arabonamide. P. W. Kent and M. W. Whitehouse. Chem Soc J p2501-2 Ag '53

Use of phosphite amides in peptide syntheses. G. W. Anderson and others. bibliog Am Chem Soc J 74:5304-6 N 5 '52

See also

Sulfonamides

AMIDINES

Ortho esters, imidic esters and amidines; the acid-catalyzed hydrolysis of N,N′-diphenylformamidine in aqueous dioxane solutions. R. H. DeWolfe and R. M. Roberts. bibliog Am Chem Soc J 75:2942-7 Je 20 '53

Preparation of *N*-substituted amidines. F. C. Cooper and M. W. Partridge. Chem Soc J p255-60 Ja '53

Synthesis of aryl and aralkyl amidines of pharmacologic interest. G. L. Webster and J. S. Rodia. bibliog Am Chem Soc J 75:1761-2 Ap 5 '53

AMINATION

Aminization of cotton. W. A. Reeves and J. D. Guthrie. bibliog Textile Res J 23:522-7 Ag '53

Chemical and physical properties of aminized cotton. W. A. Reeves and others. bibliog Textile Res J 23:527-32 Ag '53

Rearrangement amination of *o*-chloro-and *o*-bromophenyl methyl sulfides and *o*-bromophenyl methyl sulfone in liquid ammonia. H. Gilman and G. A. Martin. bibliog Am Chem Soc J 74:5317-19 N 5 '52

AMINES

Antispasmodics; secondary and tertiary amines which contain an ω-(2-thienyl)-alkyl group. F. F. Blicke and F. Leonard. bibliog Am Chem Soc J 74:5105-6 O 20 '52

Aryl-2-halogenoalkylamines; the preparation of some derivatives of 1-aryl-3 : 4-dihalogenopyrrolidines and 1 : 4-bisarylamino-2 : 3-dihalogenobutanes. J. J. Roberts and W. C. J. Ross. Chem Soc J p4288-95 N '52

Aryl-2-halogenoalkylamines; the reaction of *NN*-di-2′-chloroethyl-2-naphthylamine with some phosphoric acid derivatives. W. Davis and W. C. J. Ross. Chem Soc J p4296-300 N '52

Attempts to resolve racemic amines by means of optically active, acidic synthetic polymers. J. F. Bunnett and J. L. Marks. bibliog Am Chem Soc J 74:5893-7 D 5 '52

Chemistry of epoxy compounds; reaction of *cis*-9,10-epoxystearic acid with ammonia and amines. D. Swern and T. W. Findley. Am Chem Soc J 74:6139-41 D 5 '52

Compounds containing the pyrrolidine ring; analogs of sympathomimetic amines. R. V. Heinzelman and B. D. Aspergren. bibliog Am Chem Soc J 75:3409-13 Jl 20 '53

Dielectric polarisation of solutions; the polarisations and apparent dipole moments of various primary, secondary, and tertiary amines in solutions in non-polar solvents and in the liquid state. E. G. Cowley. Chem Soc J p3557-70 S '52

Direct halogenation of some aromatic amines. G. M. Kosolapoff. Am Chem Soc J 75:3596-7 Jl 20 '53

Dissociation of the addition compounds of trimethylboron with branched-chain primary amines; the effects of chain-branching. H. C. Brown and G. K. Barbaras. bibliog diag Am Chem Soc J 75:6-9 Ja 5 '53

Dissociation of the addition compounds of trimethylboron with *n*-butyl- and neopentyldimethylamines; interaction of trimethylboron and boron trifluoride with highly hindered bases. H. C. Brown and R. B. Johannesen. bibliog diag Am Chem Soc J 75:16-20 Ja 5 '53

Effects of structure on the viscosities of perfluoroalkyl ethers and amines. T. J. Brice and R. I. Coon. bibliog Am Chem Soc J 75:2921-5 Je 20 '53

Enamine derivatives of steroidal carbonyl compounds. F. W. Heyl and M. E. Herr. bibliog Am Chem Soc J 75:1918-20 Ap 20 '53

Equilibria of several reactions of aromatic amines. G. N. Vriens and A. G. Hill. bibliog Ind & Eng Chem 44:2732-5 N '52

Extension of the Leuckart synthesis of tertiary amines, including its application to α,β-unsaturated carbonyl compounds. J. F. Bunnett, J. L. Marks and H. Moe. bibliog Am Chem Soc J 75:985-7 F 20 '53

Far ultraviolet absorption spectra of simple alkyl amines. E. Tannenbaum and others. bibliog J Chem Phys 21:311-18 F '53

Heterocycles containing *p*-phenylene units; amines. R. C. Fuson and H. O. House. bibliog Am Chem Soc J 75:1327-9 Mr 20 '53

Heterocyclic nitrogen compounds; the condensation of phthalaldehydic acids and diamines. E. F. M. Stephenson. Chem Soc J p5024-7 D '52

Hydrolysis of acetic anhydride; the catalytic efficiency of a series of tertiary amines. V. Gold and E. G. Jefferson. Chem Soc J p 1409-15 My '53

Influence of conjugation on the ionization of aromatic amines. N. S. Hush. Chem Soc J p684-91 F '53

Kinetic studies in the phosphinyl chloride and phosphorochloridate series; reactions with amines. I. Dostrovsky and M. Halmann. Chem Soc J p511-15 F '53

Modified Hinsberg procedure. F. O. Ritter. J Chem Educ 29:506 O '52

Molecular addition compounds of dinitrogen tetroxide; reactions with tertiary amines. D. A. Davenport, H. J. Burkhardt and H. H. Sisler. Am Chem Soc J 75:4175-8 S 5 '53

N-fluoroacetyl derivatives of carcinogenic amines. E. Sawicki and F. E. Ray. bibliog Am Chem Soc J 75:4346 S 5 '53

N-trifluoroacetyl derivatives of carcinogenic amines. E. Sawicki and F. E. Ray. Am Chem Soc J 75:2266-7 My 5 '53

Neopentyltrimethylammonium ion as a strained homomorph; the rates of reaction of neopentyldimethylamine with alkyl iodides. H. C. Brown and W. H. Bonner. bibliog Am Chem Soc J 75:14-16 Ja 5 '53

New reaction of aliphatic diazo-compounds. W. R. Bamford and T. S. Stevens. Chem Soc J p4675-8 D '52

Oxidations with phenyl iodosoacetate; the oxidation of primary aromatic amines. K. H. Pausacker. Chem Soc J p 1989-90 Jl '53

Peroxide and light induced reactions of amines with olefins; a one-step synthesis of *d,l*-coniine. W. H. Urry, O. O. Juveland and F. W. Stacey. Am Chem Soc J 74:6155 D 5 '52

Physiologically active amines; tertiary amines and quaternary salts related to β-(*o*-methoxyphenyl)-isopropyl-N-methylamine. R. V. Heinzelman and B. D. Aspergren. Am Chem Soc J 75:925-7 F 20 '53

Physiologically active secondary amines; β-(*o*-methoxyphenyl)-isopropyl-N-methylamine and related compounds. R. V. Heinzelman. bibliog Am Chem Soc J 75:921-5 F 20 '53

Polarographic examination of diazotized amines; additional coulometric data. E. R. Atkinson, C. E. Garland and A. F. Butler. Am Chem Soc J 75:983-4 F 20 '53

Polyphosphoric acid as a reagent in organic chemistry; conversion of aromatic acids and their derivatives to amines. H. R. Snyder, C. T. Elston and D. B. Kellom. Am Chem Soc J 75:2014-15 Ap 20 '53

Preparation of bis-2-cyanoethyl derivatives of aromatic primary amines, and their conversion into 1 : 6-diketojulolidines. J. T. Braunholtz and F. G. Mann. Chem Soc J p3046-51 Ag '52

Preparation of bis-2-cyanoethyl derivatives of aromatic primary amines, and their conversion into 1 : 6-diketojulolidines. J. T. Braunholtz and F. G. Mann. Chem Soc J p 1817-24 Je '53

Preparation of primary amines by reduction of oximes with lithium aluminum hydride and by the Leuckart reaction. C. R. Walter, jr. bibliog Am Chem Soc J 74:5185-7 O 20 '52

Preparation of some acetylenic primary amines. G. F. Hennion and E. G. Teach. bibliog Am Chem Soc J 75:1653-4 Ap 5 '53

Reaction of aldehydes and aromatic amines with 8-quinolinol. J. P. Phillips, R. Keown and Q. Fernando. Am Chem Soc J 75:4306-7 S 5 '53

Reaction of amine oxides with aqueous potassium dichromate. P. J. Scheuer, W. I. Kimoto and K. Ohinata. bibliog Am Chem Soc J 75:3029-30 Je 20 '53

Reaction of diazonium salts with amines. S. Kruger. Chem Soc J p700-2 F '53

Reaction of diphenyldichlorosilane with ammonia and amines. E. Larsson and L. Bjelerup. bibliog Am Chem Soc J 75:995-7 F 20 '53

Reactions of acetylenic primary amines. G. F. Hennion and E. G. Teach. bibliog Am Chem Soc J 75:4297-300 S 5 '53

Reactions of aliphatic amines with sugars. J. G. Erickson. Am Chem Soc J 75:2784 Je 5 '53

Reactivity of 5-bromoisocytosine with some amines. A. P. Phillips. Am Chem Soc J 75:4092 Ag 20 '53

Reductions with hydrazine hydrate catalyzed by Raney nickel; aromatic nitro compounds to amines. D. Balcom and A. Furst. bibliog Am Chem Soc J 75:4334 S 5 '53

Resinous condensation products from humic acids and glycols or diamines. G. H. Thomson. bibliog J Ap Chem 2:603-8 O '52

Restricted rotation in aryl amines; stereoisomeric diglutarimidomesitylenes. R. Adams and D. C. Blomstrom. bibliog Am Chem Soc J 75:2375-7 My 20 '53

Rotations within crystalline trimethylamine sulfur trioxide. H. Shimizu and D. McLachlan, jr. bibliog diags Am Chem Soc J 75:4352-4 S 5 '53

Scope of the Knoevenagel synthesis of aromatic secondary amines. N. P. Buu-Hoï. Chem Soc J p4346-9 N '52

AMINES—*Continued*

Some factors influencing the solubility of amine sulphates; abstract. M. Kapel. Chem Age (Lond) 67:495 O 11 '52

Sommelet reaction; methyleneamines; a proposed mechanism for the reaction. S. J. Angyal, D. R. Penman and G. P. Warwick. Chem Soc J p 1743-7 Je '53

Sorption of amines by silica gels. M. J. Brown and A. G. Foster. bibliog J Phys Chem 56:733-7 Je '52

Stereochemistry of the Leuckart reaction. D. S. Noyce and F. W. Bachelor. bibliog diag Am Chem Soc J 74:4577-9 S 20 '52

Structure of the products of condensation between primary β-hydroxyamines and aliphatic carbonyl compounds. E. D. Bergmann, E. Gil-Av and S. Pinchas. bibliog Am Chem Soc J 75:358-61 Ja 20 '53

Sulfatoalkyl amines. W. A. Reeves and J. D. Guthrie. bibliog Am Chem Soc J 75:4101-2 Ag 20 '53

Synthesis of some tertiary carbinamines as vasopressor agents. K. E. Hamlin and M. Freifelder. bibliog Am Chem Soc J 75:369-73 Ja 20 '53

Tautomerism of *N*-heteroaromatic amines; infra-red spectroscopic evidence. C. L. Angyal and R. L. Werner. Chem Soc J p2911-15 Jl '52

Vacuum ultraviolet spectra of cyclic compounds; amines. L. W. Pickett and others. bibliog Am Chem Soc J 75:1618-22 Ap 5 '53

See also

Ethanolamine

Methylamine

Analysis

Characterisation of primary aliphatic amines by reaction with *o*-acetoacetylphenol and by paper chromatography. W. Baker, J. B. Harborne and W. D. Ollis. Chem Soc J p3215-17 Ag '52

Differential titration of amines. J. S. Fritz. bibliog Anal Chem 25:407-11 Mr '53

Partition studies; silver complexes of aromatic amines. C. Golumbic. bibliog Am Chem Soc J 74:5777-8 N 20 '52

AMINOACETOPHENONE

Carbethoxylation products of *p*-aminoacetophenone and *p*-dimethylaminoacetophenone. H. S. Broadbent and C. Chu. Am Chem Soc J 75:226-7 Ja 5 '53

AMINO acids

Amino acid composition of γ-casein. W. G. Gordon, W. F. Semmett and M. Bender. bibliog Am Chem Soc J 75:1678-9 Ap 5 '53

Amino acid contamination in preparations of hog blood group substances. S. Leskowitz, H. Van Vunakis and E. A. Kabat. Am Chem Soc J 74:5538 N 5 '52

Amino acid content of dehydrated giant African snails (achatina fulica Bowdich). A. R. Mead and A. R. Kemmerer. bibliog Science 117:138-9 F 6 '53

Amino acid derivatives of D-glucosamine. D. G. Doherty, E. A. Popenoe and K. P. Link. bibliog Am Chem Soc J 75:3466-8 Jl 20 '53

Amino acids; *dl*-β-aminoadipic acid; preparation and oxidation of 2-, 3- and 4-acetamidocyclohexanols. J. H. Billman and J. A. Buehler. Am Chem Soc J 75:1345-6 Mr 20 '53

Amino-acids and peptides; γ-L-glutamyl-L-alanine, -L-valine, and -L-leucine. D. A. Rowlands and G. T. Young. Chem Soc J p3937-40 O '52

Amino-acids and peptides; the nitrogenous constituents of some marine algae. D. M. Channing and G. T. Young. Chem Soc J p2481-91 Ag '53

Aminos spell opportunity. Chem W 72:46+ Mr 7 '53

α-Chymotrypsin catalyzed synthesis of the phenylhydrazides of certain acylated α-amino acids. W. H. Schuller and C. Niemann. bibliog Am Chem Soc J 74:4630-4 S 20 '52

Cyanoethylation of α-amino acids; N 2-carbalkoxyethyl derivatives. L. L. McKinney and others. Am Chem Soc J 74:5183-5 O 20 '52

Effect of ultraviolet radiation on sulfhydryl and disulfide containing amino acids. K. Schocken. bibliog Science 116:544-6 N 14 '52

Effect of xanthylation on the recovery of DNP-amino acids from acid protein hydrolysates. S. R. Dickman and R. O. Asplund. bibliog Am Chem Soc J 74:5208-9 O 20 '52

Electrostatic effects in the combination of cobalt with amino acids. C. Tanford and W. S. Shore. bibliog Am Chem Soc J 75:816-19 F 20 '53

Hydrolytic action of acylase I on N-acylamino acids. S. J. Fu and S. M. Birnbaum. bibliog Am Chem Soc J 75:918-20 F 20 '53

Influence of amino acids upon incidence of tumors in tu^{50j} stock of D. melanogaster. S. Mittler. bibliog Science 116:657-9 D 12 '52

Ion exchange behavior of some neutral amino acids. M. E. Carsten and R. K. Cannan. bibliog Am Chem Soc J 74:5950-4 D 5 '52

Ionisation of guanidine and of amino-acids in sulphuric acid. G. Williams and M. L. Hardy. Chem Soc J p2560-3 S '53

Molecular size distribution in the copolymerization of N-carboxyamino acid anhydrides. L. Gold. bibliog J Chem Phys 21:1190-2 Jl '53

New sulfur-containing amino acid from subtilin. G. Alderton. bibliog Am Chem Soc J 75:2391-2 My 20 '53

p-Nitrobenzyloxycarbonyl derivatives of amino acids. D. T. Gish and F. H. Carpenter. bibliog Am Chem Soc J 75:950-2 F 20 '53

Peptides; selective degradation by removal of the terminal amino-acid bearing a free amino-group; the use of alkyl alkoxydithioformates (dialkyl xanthates). G. W. Kenner and H. G. Khorana. Chem Soc J p2076-81 Je '52

Preparation of some N-carbethoxyamino acids. M. R. Vernsten and M. B. Moore. bibliog Am Chem Soc J 75:1320-1 Mr 20 '53

Production of amino acids under possible primitive earth conditions. S. L. Miller. il diag Science 117:528-9 My 15 '53

Resolution of DL-tryptophan by paper chromatography. K. Closs and C. M. Haug. il Chem & Ind p 103 Ja 31 '53

Reversible catalytic cleavage of hydroxyamino acids by pyridoxal and metal salts. D. E. Metzler, J. B. Longenecker and E. E. Snell. bibliog Am Chem Soc J 75:2786-7 Je 5 '53

Sequence of four amino acids at the amino end of the single polypeptide chain of lysozyme. W. A. Schroeder. bibliog Am Chem Soc J 74:5118-24 O 20 '52

Sodium hydride as a condensing agent with acylaminomalonates in the synthesis of amino acids. J. Shapira, R. Shapira and K. Dittmer. bibliog Am Chem Soc J 75:3655-7 Ag 5 '53

Study of the quantitative dinitrophenylation of amino acids and peptides. W. A. Schroeder and J. LeGette. bibliog Am Chem Soc J 75:4612-15 S 20 '53

Synthesis and reactions of N-acyl thiol amino acids. J. C. Sheehan and D. A. Johnson. Am Chem Soc J 74:4726-7 S 20 '52

Synthesis of N-phosphoryl amino acid esters. S. Li. bibliog Am Chem Soc J 74:5959-61 D 5 '52

Synthesis of some O-glucuronides and O-glucosides of phenolic amino acids. A. Taurog, S. Abraham and I. L. Chaikoff. bibliog Am Chem Soc J 75:3473-7 Jl 20 '53

Vapor pressure of acetylated amino acid ethyl esters. E. F. Mellon, S. J. Viola and S. R. Hoover. J Phys Chem 57:607-8 Je '53

See also

Cystine

Ethylenediamine tetraacetic acid

Lysine

Tyrosine

Analysis

Application of ion exchange chromatography to the enzymatic resolution of amino acids. C. G. Baker and H. A. Sober. bibliog Am Chem Soc J 75:4058-60 Ag 20 '53

Modified Van Slyke method for micro-quantitative determination of aliphatic amino groups. A. S. Hussey and J. E. Maurer. diags Anal Chem 24:1642-4 O '52

Optical resolution of aromatic amino-acids on paper chromatograms. C. E. Dalgliesh. Chem Soc J p3940-2 O '52

AMINO acids—Analysis—*Continued*

Paper chromatography of the 3-phenyl-2-thiohydantoin derivatives of amino acids with application to end group and sequence studies. W. A. Landmann, M. P. Drake and J. Dillaha. bibliog Am Chem Soc J 75:3638-40 Ag 5 '53

Procedure for the ion exchange chromatography of the amino acids of urine. M. E. Carsten. bibliog Am Chem Soc J 74:5954-9 D 5 '52

Some factors influencing the quantitative determination of amino acids separated by circular paper chromatography. K. V. Giri, A. N. Radhakrishnan and C. S. Vaidyanathan. Anal Chem 24:1677-8 O '52

Two-dimensional chromatography of amino acids on buffered papers. A. L. Levy and D. Chung. bibliog il Anal Chem 25:396-9 Mr '53

Nomenclature

A.C.S. committee on nomenclature, spelling, and pronunciation; nomenclature of natural amino acids and related substances. Chem & Eng N 30:4522-6 O 27 '52

AMINOACRIDINE

Hydrogen bonding and structural problems in the aminoacridines and -quinolines; infrared studies. L. N. Short. Chem Soc J p4584-9 D '52

Some reactions of 5-aminoacridine and related compounds. E. P. Taylor. Chem Soc J p5048-9 D '52

AMINOADIPIC acid

New synthesis of DL-lysine-6-C^{14} and DL-α-aminoadipic acid-6-C^{14}. M. Rothstein and C. J. Claus. bibliog Am Chem Soc J 75:2981-2 Je 20 '53

Optical enantiomorphs of α-aminoadipic acid. J. P. Greenstein, S. M. Birnbaum and M. C. Otey. bibliog Am Chem Soc J 75:1994-5 Ap 20 '53

AMINO alcohols. See Alcohols

AMINOAZO compounds. See Azo compounds

AMINOBENZENEPHOSPHONIC acid

Phosphanilic acid and related compounds; alkylamino-substituted phosphonic and phosphinic acids. G. O. Doak and L. D. Freedman. Am Chem Soc J 75:683-5 F 5 '53

AMINOBENZENESULFONIC acid

Ultraviolet spectrophotometric determination of nitrites with 4-aminobenzenesulfonic acid. J. M. Pappenhagen and M. G. Mellon. bibliog Anal Chem 25:341-3 F '53

AMINOBENZOATES

Interaction of the aminobenzoate ions and serum albumin. R. K. Burkhard. Am Chem Soc J 75:229-30 Ja 5 '53

AMINOBENZOIC acid

Reversal of *p*-aminobenzoic acid inhibition of growth of rickettsiae by *p*-hydroxybenzoic acid in agar-slant tissue culture. N. Takemori and M. Kitaoka. bibliog Science 116:710-11 D 26 '52

AMINOBENZOIC acid, Analogs of

Some aggregate analogs of *p*-aminobenzoic acid and dimethyldiaminobenzene possessing unusual biological properties. D. W. Woolley. bibliog Am Chem Soc J 74:5450-3 N 5 '52

AMINOBENZOSUBERENE

Analogs of Windaus' anhydride; synthesis of 2,3 - dimethoxy - 9 - benzoylaminobenzosuber-5-ene-5,6-dicarboxylic anhydride. J. Koo. bibliog Am Chem Soc J 75:723-5 F 5 '53

AMINOBENZOTRIFLUORIDE. See Trifluorotoluidine

AMINOBUTANOL

2-Propyl-4-ethyl-3-nitrosoöxazolidine, a novel product from the nitrous acid deamination of 2-amino-1-butanol. H. R. Nace and M. H. Gollis. bibliog Am Chem Soc J 74:5189-92 O 20 '52

AMINOBUTYRIC acid

Stereochemistry of the four α-amino-β,γ-dihydroxybutyric acids. E. E. Hamel and E. P. Painter. bibliog Am Chem Soc J 75:1362-8 Mr 20 '53

Synthesis of (+)-β-aminobutyric acid from L-alanine. K. Balenović, D. Cerar and Z. Fuks. Chem Soc J p3316-17 Ag '52

AMINO compounds

Analgesics; esters of 4-dialkylamino-1,2-diphenyl-2-butanols. A. Pohland and H. R. Sullivan. bibliog Am Chem Soc J 75:4458-61 S 20 '53

Antitubercular studies; 4-aminobenzamides and 4-aminobenzenesulfonamides. P. Truitt, G. Sammons and D. Zachry. bibliog Am Chem Soc J 74:5961-3 D 5 '52

Chemical interactions of amino compounds and sugars; *p*H dependency. M. L. Wolfrom, D. K. Kolb and A. W. Langer, jr. bibliog Am Chem Soc J 75:3471-3 Jl 20 '53

Chemical interactions of amino compounds and sugars; the repeating unit in browning polymers. M. L. Wolfrom and others. Am Chem Soc J 75:1013 F 20 '53

Compounds of alkylamines with esters of azodicarboxylic acid. G. W. Kenner and R. J. Stedman. Chem Soc J p2089-94 Je '52

Electrolytic reduction of bicyclic α-aminoketones; a new method for the synthesis of medium rings containing nitrogen. N. J. Leonard, S. Swann, jr. and J. Figueras, jr. bibliog Am Chem Soc J 74:4620-4 S 20 '52

Nitration of phenoxathiin and some new amino derivatives. J. F. Nobis, A. J. Blardinelli and D. J. Blaney. bibliog Am Chem Soc J 75:3384-7 Jl 20 '53

Reaction of amino-compounds with sugars; the action of ammonia on glucose, maltose, and lactose. L. Hough, J. K. N. Jones and E. L. Richards. Chem Soc J p2005-9 Jl '53

Reaction of phosphorus pentachloride with epimeric 2-aminocycloalkanol hydrochlorides. E. E. van Tamelen and R. S. Wilson. bibliog Am Chem Soc J 74:6299-301 D 20 '52

Reactions of some *p*-aminotriphenylmethyl ions with methanol and methylate ion. H. Walba and G. E. K. Branch. Am Chem Soc J 75:2149-52 My 5 '53

Rearrangement of α-aminoketones during Clemmensen reduction; influence of phenyl substitution. N. J. Leonard, G. Fuller and H. L. Dryden, jr. bibliog Am Chem Soc J 75:3727-30 Ag 5 '53

Rearrangement of α-aminoketones during Clemmensen reduction; the fate of asymmetry at the α-carbon. N. J. Leonard, R. C. Sentz and W. J. Middleton. Am Chem Soc J 75:1674-5 Ap 5 '53

Synthesis of some tertiary amine derivatives of mixed phenyl alkyl sulfides. M. H. Kim and R. D. Schuetz. Am Chem Soc J 74:5102-4 O 20 '52

Use of various aminomalonates in the synthesis of α-substituted tryptophans. H. M. Kissman and B. Witkop. bibliog Am Chem Soc J 75:1967-74 Ap 20 '53

D-Xylosamine. M. L. Wolfrom and K. Anno. bibliog Am Chem Soc J 75:1038-9 Mr 5 '53

See also

Ethanolamine

AMINOCYCLOHEXYL methane

Alicyclic diamines; preparation of bis-(4-aminocyclohexyl)-methane. A. E. Barkdoll and others. bibliog Am Chem Soc J 75:1156-9 Mr 5 '53

AMINODIMETHYLANILINE

p-Aminodimethylaniline; some cationoid halogenations *meta* to a dimethylamino-group. J. H. Gorvin. Chem Soc J p 1237-41 Ap '53

AMINODIMETHYLDIPHENYL

Orienting influence of the methyl group in toluene in the Gomberg reaction. R. H. Wilson. bibliog J Ap Chem 3:37-9 Ja '53

AMINODIPHENYL

Hydrophilic derivatives of 4-aminodiphenyl. J. N. Baxter, J. Cymerman-Craig and W. S. Gilbert. Chem Soc J p2400-3 Ag '53

AMINODURENE

Molecular polarisation and molecular interaction; the apparent dipole moments of mesidine, aminodurene, and methylmesidine in benzene and dioxan solutions. J. W. Smith. Chem Soc J p 109-13 Ja '53

AMINOETHYLSULFURIC acid

Aminization of cotton. W. A. Reeves and J. D. Guthrie. bibliog Textile Res J 23:522-7 Ag '53

AMINOFLUORENE. See Fluorenamine

AMINO group

Absorption spectra of free NH and NH_2 radicals produced by the flash photolysis of hydrazine. D. A. Ramsay. bibliog il J Phys Chem 57:415-17 Ap '53

AMINO group—*Continued*
Free amino groups of crystalline bovine plasma albumin. L. E. McClure, L. Schieler and M. S. Dunn. bibliog Am Chem Soc J 75:1980-2 Ap 20 '53
Free amino groups of γ-globulins of different species. M. L. McFadden and E. L. Smith. bibliog Am Chem Soc J 75:2784-5 Je 5 '53
Reaction of 2,4-dinitrobenzenesulfonic acid with free amino groups of proteins. H. N. Eisen, S. Belman and M. E. Carsten. bibliog Am Chem Soc J 75:4583-5 S 20 '53
Replacement of the primary aromatic amino group by hydrogen using diazonium fluoborates. A. Roe and J. R. Graham. bibliog Am Chem Soc J 74:6297-8 D 20 '52
Roles of the amino and hydroxyl groups of collagen in its reactions with formaldehyde, tannic acid and quinone. R. W. Green. bibliog Am Chem Soc J 75:2729-32 Je 5 '53
Terminal amino groups of α- and β-caseins. E. F. Mellon, A. H. Korn and S. R. Hoover. bibliog Am Chem Soc J 75:1675-8 Ap 5 '53

AMINOGUANIDINE
Some ketonic derivatives of triamino-guanidine. F. L. Scott, M. Cashman and J. Reilly. Am Chem Soc J 75:1510-11 Mr 20 '53

AMINOLEPIDINE
Reactions of methazonic acid; a novel reaction of 3-aminolepidine. D. W. Ockenden and K. Schofield. Chem Soc J p 1915-19 Je '53

AMINOLYSIS. See Ammonolysis

AMINOMALONIC acid
New synthesis of aminomalonic acid. J. H. R. Beaujon and W. H. Hartung. Am Chem Soc J 75:2499 My 20 '53

AMINOMETHYL propanol
Catalytic behavior of 2-amino-2-methyl-1-propanol vapor over alumina. D. M. Clarke, F. T. J. O'Leary and J. V. Karabinos. bibliog Am Chem Soc J 74:5587-8 N 20 '52

AMINOMETHYL pyridine
Some amide derivatives of certain aminomethylpyridines. J. D. Sculley and C. S. Hamilton. bibliog Am Chem Soc J 75:3400-3 Jl 20 '53

AMINONITRILES
Studies in the azole series; the interaction of α-amino-nitriles and alkyl or aryl *iso*cyanates. A. H. Cook and G. D. Hunter. Chem Soc J p3789-96 O '52

AMINOPENTANE
2,2-Dimethyl-3-aminopentane and its reaction with nitrosyl chloride. W. A. Mosher, J. C. Cox, jr. and J. Kreitzer. bibliog Am Chem Soc J 75:4605 S 20 '53

AMINOPHENOLS
Chelate ion exchange resins. H. P. Gregor and others. bibliog Ind & Eng Chem 44:2834-9 D '52

AMINOPHENOXAZINE
Aminophenoxazines as possible antitubercular agents. B. Boothroyd and E. R. Clark. Chem Soc J p 1499-508 My '53

AMINOPHENYLALANINE
p-Amino- and *p*-fluoro-β-phenylalanine. E. D. Bergmann. bibliog Am Chem Soc J 74:4947-8 O 5 '52

AMINOPHENYLBENZOTRIAZOLE
Experiments on the preparation of indolocarbazoles; compounds from two of the amino-1-phenylbenzotriazoles. A. R. Katritzky and S. G. P. Plant. Chem Soc J p412-16 F '53

AMINOPROPYLSULFURIC acid
Synthesis and alkaline decomposition of γ-aminopropylsulfuric acid. H. W. Heine and others. Am Chem Soc J 75:2505-6 My 20 '53

AMINOPTERIN
Quantitative study of folic acid requirements and reversal of aminopterin inhibition in drosophila. T. Hinton. Science 116:708-10 D 26 '52

AMINOPYRIDINE
Structure of the aminopyridines. J. D. S. Goulden. Chem Soc J p2939-40 Jl '52
Ultraviolet spectra and structures of the pyrido[1,2-a]pyrimidones. R. Adams and I. J. Pachter. bibliog Am Chem Soc J 74:5491-7 N 5 '52
Use of 2-aminopyridine in the Voigt reaction. I. A. Kaye, C. L. Parris and W. J. Burlant. bibliog Am Chem Soc J 75:746-8 F 5 '53

AMINOPYRIMIDINE
New syntheses based on 5-aminopyrimidines. F. L. Rose. Chem Soc J p3448-64 S '52
Simple pyrimidines; spectroscopic studies. D. J. Brown and L. N. Short. Chem Soc J p331-7 Ja '53

AMINOQUINOLINE
Hydrogen bonding and structural problems in the aminoacridines and -quinolines; infra-red studies. L. N. Short. Chem Soc J p4584-9 D '52
Physiological disposition of pentaquine labeled in the side chain with N^{15}. R. C. Elderfield and L. L. Smith. bibliog Am Chem Soc J 75:1022-4 Mr 5 '53
Reaction of 6-methoxy-8-aminoquinoline with alkylamino-alkyl halides. R. C. Elderfield and L. E. Rubin. bibliog Am Chem Soc J 75:2963-70 Je 20 '53
Some 6-alkyl-5- and 7-alkyl-8-aminoquinolines. R. Long and K. Schofield. Chem Soc J p2350-4 Ag '53
Synthesis of pentaquine labeled in the quinoline ring with N^{15}. R. C. Elderfield, L. L. Smith and E. Werble. bibliog Am Chem Soc J 75:1245 Mr 5 '53
Synthesis of pentaquine labeled in the side chain with N^{15}. A. H. Blatt and N. Gross. bibliog Am Chem Soc J 75:1245-7 Mr 5 '53
Synthesis of trypanocides; some pyrimidylaminoquinoline derivatives. P. A. Barrett, F. H. S. Curd and W. Hepworth. Chem Soc J p50-8 Ja '53
Thieno[3,2-b]pyridine; the preparation of some dialkylaminoalkyl derivatives of an S-isosteric 8-aminoquinoline. J. T. Sheehan. bibliog Am Chem Soc J 74:5504-5 N 5 '52

AMINOSALICYLIC acid
4-Aminosalicylic acid and its derivatives; some reactions of 2-acetoxy-4-nitrobenzoyl chloride and the synthesis of some aryl esters of 4-aminosalicylic acid. P. R. Banerjea and others. Chem Soc J p3861-4 O '52
6-Aminosalicylic acid; the hydrolysis of 2-carboxytrinitrodiphenyl ethers. A. A. Goldberg and H. A. Walker. Chem Soc J p2049-52 Jl '53
N-substituted glycosylamines derived from sulphanilamide and *p*-aminosalicylic acid. R. Bognár and P. Nánási. Chem Soc J p 1703-8 Je '53

AMMETERS
Calibrating ammeters above 100 mc. H. R. Meahl and C. C. Allen. bibliog il diags Inst Radio Eng Proc 41:152-9 Ja '53
Combined current integrator and sensitive microammeter. H. A. Enge. diag R Sci Instr 23:599-600 N '52
New feeder ammeters with linear scale. J. H. Miller. il Elec World 139:122 F 9 '53
Non-contact d.c. ammeter. W. H. Bailey. il diags Elec R (Lond) 153:397-400 Ag 21 '53
Tv troubleshooting with an ammeter. N. B. Cook. Radio & Tv N 49:90 Mr '53

AMMINES
Complex-ion formation; a general discussion of factors influencing the stability of metal ammines and complex ions. W. S. Fyfe. Chem Soc J p2018-23 Je '52
Complex-ion formation; the entropies of formation of some metal ammines. W. S. Fyfe. Chem Soc J p2023-7 Je '52

AMMONIA
Abnormal chichibabin reactions; the condensation of phenylacetaldehyde and homoveratric aldehyde with ammonia. E. L. Eliel, R. T. McBride and S. Kaufmann. bibliog Am Chem Soc J 75:4291-6 S 5 '53
Absolute entropies in liquid ammonia. W. M. Latimer and W. L. Jolly. bibliog Am Chem Soc J 75:4147-8 S 5 '53
Absorption refrigeration system may be your answer. C. L. Rescorla. diags Refrig Eng 61:276-9 Mr '53
Adsorption of ammonia on Fuller's earth and gas-adsorbent carbon. G. L. Bridger and R. D. Sinner. Ind & Eng Chem 45:581-2 Mr '53
Ammonia; ammonium carbonate leaching of low grade zinc ores. W. J. Wendt. bibliog flow sheet Eng & Min J 154:84-90 S '53
Ammonia versus calcium in acid making, cooking, and screening. L. A. LaFond. Tappi 36:sup 131A-2A Ag '53
Catalytic hydrolysis of hydrogen cyanide to ammonia. J. D. F. Marsh, W. B. S. Newling and J. Rich. bibliog J Ap Chem 2:681-4 D '52

AMMONIA—*Continued*

Chemical actions of ionising radiations in solutions; the action of X-rays on ammonia in aqueous solution. T. Rigg. G. Scholes and J. Weiss. Chem Soc J p3034-8 Ag '52

Chemistry of epoxy compounds; reaction of *cis*-9,10-epoxystearic acid with ammonia and amines. D. Swern and T. W. Findley. Am Chem Soc J 74:6139-41 D 5 '52

CCDA official reviews markets for three DPA-goal chemicals. Chem & Eng N 31: 1318-20 Mr 30 '53

Disproportionation in deuterated ammonia. J. Bigeleisen. J Chem Phys 20:1495-6 S '52

Effect of chip dimensions on penetration of ammonia-base cooking acid; abstract. C. M. Howell and E. L. Cunningham. Paper Tr J 136:14 Je 5 '53

Effect of 1470A irradiation of nitrogen-hydrogen mixtures and of ammonia. M. H. J. Wijnen and H. A. Taylor. bibliog diag J Chem Phys 21:233-6 F '53

Equilibrium in the exchange of deuterium between ammonia and hydrogen. M. Perlman and others. bibliog diag J Chem Phys 21:70-2 Ja '53

Evaporation and recovery of ammonia-base waste sulphite liquor. L. C. Jenness and others. bibliog diags Tappi 36:337-42 Ag '53; Abstract. Paper Tr J 136:103 F 20 '53

Exchange reaction between deuterium and ammonia on the surface of metal powders. J. R. Gutmann. bibliog diag J Phys Chem 57:309-12 Mr '53

Guanidine from urea and ammonia. G. W. Watt and R. G. Post. bibliog Ind & Eng Chem 45:846-9 Ap '53

Infrared spectra of HCl, DCl, HBr, and NH_3 in the region from 40 to 140 microns. R. L. Hansler and R. A. Oetjen. bibliog J Chem Phys 21:1340-3 Ag '53

Irradiation of liquid ammonia. R. Roberts and A. O. Allen. bibliog Am Chem Soc J 75:1256-7 Mr 5 '53

Kinetics of reaction between ammonia and oxygen in a quartz vessel. H. Wise and M. F. Frech. J Chem Phys 21:948-9 My '53

Liquid ammonia chemistry of the methyl phosphines. R. I. Wagner and A. B. Burg. bibliog diags Am Chem Soc J 75:3869-71 Ag 20 '53

Making the most of superheat in ammonia and Freon-12 systems. L. Buehler. diags Refrig Eng 61:617-19+ Je '53

Mechanism of the exchange of hydrogen gas with solutions of potassium amide in liquid ammonia. W. K. Wilmarth and J. C. Dayton. Am Chem Soc J 75:4553-6 S 20 '53

Microwave absorption spectrum of ND_3. R. G. Nuckolls and others. bibliog Phys R 89:1101 Mr 1 '53

Model of metal-ammonia solutions, with reference to electron spin resonance experiments. J. Kaplan and C. Kittel. bibliog diag J Chem Phys 21:1429-33 S '53

ν_3 Raman band of ammonia. C. Cummin and H. L. Welsh. bibliog J Chem Phys 21:1119-20 Je '53

Operating engineer looks at the common refrigerants. E. L. Forbes. Refrig Eng 60: 1182-4+ N '52

Organization and implementation of an ammonia-base mill trial. J. L. Horton. bibliog diags Pulp & Pa of Can (Convention no) 54:205-9+ [F] '53

Paramagnetic resonance absorption in solutions of K in liquid NH_3. C. A. Hutchison, jr. and R. C. Pastor. bibliog Rs Mod Phys 25:285-90 Ja '53

Reaction mechanisms; hydrazine from ammonia and acetylene from methane; abstract. M. Burton. Chem & Eng N 31: 1405-6 Ap 6 '53

Reaction of amino-compounds with sugars; the action of ammonia on D-glucose. L. Hough, J. K. N. Jones and E. L. Richards. Chem Soc J p3854-7 O '52

Reaction of dihaloanisoles with sodium amide in liquid ammonia. R. A. Benkeser and G. Schroll. bibliog Am Chem Soc J 75:3196-7 Jl 5 '53

Reaction of diphenyldichlorosilane with ammonia and amines. E. Larsson and L. Bjellerup. bibliog Am Chem Soc J 75:995-7 F 20 '53

Reaction of sodium cyanide on cupric ammonia. R. K. McAlpine. bibliog Anal Chem 25:331-4 F '53

Rearrangement amination of *o*-chloro- and *o*-bromophenyl methyl sulfides and *o*-bromophenyl methyl sulfone in liquid ammonia. H. Gilman and G. A. Martin. bibliog Am Chem Soc J 74:5317-19 N 5 '52

Reduction of potassium hexacyanomanganate (III) by potassium in liquid ammonia. V. J. Christensen, J. Kleinberg and A. W. Davidson. bibliog diag Am Chem Soc J 75: 2495-7 My 20 '53

Sherritt Gordon uses ammonia leach for Lynn Lake Ni-Cu-Co sulphides. flow sheet il Min Eng 5:576-81 Je '53

Solutions of sodium in liquid ammonia. W. N. Lipscomb. bibliog J Chem Phys 21:52-4 Ja '53

Sorption of ammonia by silk fibroin. P. A. Marshall and W. J. Moore. bibliog Am Chem Soc J 74:4779-83 O 5 '52

Studies of *N*-halogeno-compounds; the reaction between ammonia and chlorine in aqueous solution and the hydrolysis constants of chloramines. R. E. Corbett, W. S. Metcalf and F. G. Soper. Chem Soc J p 1927-9 Je '53

Studies on the behaviour of halides of the transition metals with ammonia; the reaction of niobium pentachloride with ammonia. G. W. A. Fowles and F. H. Pollard. Chem Soc J p4938-42 D '52

Studies on the behaviour of halides of the transition metals with ammonia; the reaction of titanium tetrachloride with ammonia. G. W. A. Fowles and F. H. Pollard. diag Chem Soc J p2588-93 S '53

Symposium on liquid ammonia chemistry, Atlantic City. J Phys Chem 57:545-75 Je '53

Systems ammonia-sulfamide and sulfuric acid-sulfamide. H. H. Sisler and D. M. Rosenbaum. diag Am Chem Soc J 74:6130-1 D 5 '52

Thermochemistry of calcium and calcium iodide in ammonia at -33°. S. P. Wolsky, E. J. Zdanuk and L. V. Coulter. bibliog diag Am Chem Soc J 74:6196-9 D 20 '52

Thermodynamic properties of ammonia at high temperatures and pressures. E. R. Grahl. bibliog Pet Processing 8:562-5 Ap '53

Utilization of ammonia-base sulphite liquor. J. B. Martin. Tappi 36:sup 175A-6A Je '53

Viscosity of liquid ammonia at high pressures. L. T. Carmichael and B. H. Sage. bibliog diags Ind & Eng Chem 44:2728-32 N '52

What's best way to remove ammonia in emergency. diags Power 97:132+ S '53

Manufacture

Ammonia synthesis at 1000 atmospheres. H. L. Thompson and others. bibliog flow diag diag Chem Eng Prog 48:468-76 S '52

Ammonia, urea from new petrochemical plant. Pet Eng 25:C47 My '53

Application of low-temperature processes to hydrogen-rich gases. J. S. Bardin and D. W. Beery. diags Pet Refiner 32:99-102 F '53

Boom in ammonia. K. B. Barnes. il Oil & Gas J 51:95-7 F 16 '53

Commercial solvents corp., Sterlington, La. F. L. Resen. flow diag il Oil & Gas J 51: 298+ S 29 '52

Comparative cost study of ammonia plants using either natural gas or coal gasification as a source of synthesis gas. L. C. Skinner, H. R. Batchelder and S. Katell. map Ind & Eng Chem 44:2381-5 O '52

Grace chemical venture based on these processes; Texaco's partial oxidation, Casale ammonia, Pechiney urea. Pet Refiner 32:146 My '53

Operating problems in ammonia synthesis. A. V. Slack and others. Oil & Gas J 51: 82-3 D 15 '52

Petrochem report; Grace Chemical will make ammonia, urea. il diag Oil & Gas J 52: 246-7 My 25 '53

Synthesis of ammonia at low pressure. L. B. Hein. bibliog flow diag il diags Pet Processing 7:1462-7 O '52

AMMONIUM

Rotation of the ammonium ion in the high temperature phase of ammonium iodide. C. C. Stephenson and others. J Chem Phys 20:1044-5 Je '52

AMMONIUM acetate

Acetic acid-ammonium acetate reactions; 2-isoimidazoles as intermediates in imidazole formation. M. Weiss. bibliog Am Chem Soc J 74:5193-5 O 20 '52

Influence of impurities on the solubilities of high molecular weight amine acetates. C. W. Hoerr and H. J. Harwood. bibliog Ind & Eng Chem 44:2923-8 D '52

AMMONIUM bromide

Neutron diffraction determination of the crystal structure of ammonium bromide in four phases. H. A. Levy and S. W. Peterson. bibliog diags Am Chem Soc J 75:1536-42 Ap 5 '53

Neutron diffraction study of the NaCl-type modification of ND_4Br and ND_4I. H. A. Levy and S. W. Peterson. J Chem Phys 21:366 F '53

Substituted alkyltrimethylammonium bromides. N. Rabjohn and P. D. Strickler. bibliog Am Chem Soc J 75:3852-4 Ag 5 '53

Transition temperatures in solid solutions of ammonium chloride and ammonium bromide; a new transition in pure ammonium bromide. C. C. Stephenson and H. E. Adams. J Chem Phys 20:1658-9 O '52

AMMONIUM carbonates

Ammonia; ammonium carbonate leaching of low grade zinc ores. W. J. Wendt. bibliog flow sheet Eng & Min J 154:84-90 S '53

AMMONIUM chloride

Conductivities and densities of the system ammonium chloride-zinc chloride-methanol from -50° to 20°C. L. R. Dawson and others. bibliog Electrochem Soc J 99:536-41 D '52

Diffusion coefficients of calcium chloride and ammonium chloride in concentrated aqueous solutions at 25°. J. R. Hall, B. F. Wishaw and R. H. Stokes. bibliog diags Am Chem Soc J 75:1556-60 Ap 5 '53

Infrared spectra of three solid phases of methyl ammonium chloride. R. D. Waldron. J Chem Phys 21:734-41 Ap '53

Nature of the gradual transition in NH_4Cl and ND_4Cl. C. C. Stephenson and others. J Chem Phys 20:1046-7 Je '52

Transition temperatures in solid solutions of ammonium chloride and ammonium bromide; a new transition in pure ammonium bromide. C. C. Stephenson and H. E. Adams. J Chem Phys 20:1658-9 O '52

AMMONIUM compounds

Alkylene bis-(2-thenylquaternaryammonium) salts. D. R. Smith and C. J. Cavallito. Am Chem Soc J 75:3033-4 Je 20 '53

Antituberculous compounds; some reactions of quaternary compounds derived from *NN*-disubstituted thioamides. D. A. Peak and F. Stansfield. Chem Soc J p4067-75 O '52

Decomposition of quaternary ammonium salts. N. R. Easton and others. bibliog Am Chem Soc J 75:3751-3 Ag 5 '53

Degradation of quaternary ammonium salts; attempts to prepare presumed intermediates having co-ordinately linked carbon. W. R. Bamford, T. S. Stevens and J. W. Wright. Chem Soc J p4334-8 N '52

Effect of solvent on equilibrium and rate constants; the measurement and correlation of acid dissociation constants of anilinium and ammonium salts in the system ethanol-water. B. Gutbezahl and E. Grunwald. bibliog Am Chem Soc J 75:559-65 F 5 '53

Electrolyte-solvent interaction; quaternary salts in methanol-nitromethane and methanol-benzene mixtures. R. C. Miller and R. M. Fuoss. bibliog Am Chem Soc J 75:3076-80 Jl 5 '53

Estimation of bis-quaternary ammonium compounds. H. Campbell and D. F. Muggleton. Chem & Ind p 1244 D 20 '52

Infrared spectra of quaternary methiodides of *NN*-disubstituted thioamides. J. D. S. Goulden. Chem Soc J p997-8 Mr '53

Linear polymetaphosphates; quaternary ammonium salts. R. K. Iler. bibliog J Phys Chem 56:1086-9 D '52

Neopentyltrimethylammonium ion as a strained homomorph; the rates of reaction of neopentyldimethylamine with alkyl iodides. H. C. Brown and W. H. Bonner. bibliog Am Chem Soc J 75:14-16 Ja 5 '53

Physiologically active amines; tertiary amines and quaternary salts related to β-(*o*-methoxyphenyl) - isopropyl - N - methyl - amine. R. V. Heinzelman and B. D. Aspergren. Am Chem Soc J 75:925-7 F 20 '53

Quaternary ammonium compounds with bactericidal properties. H. Sturm and others. Ind & Eng Chem 45:186-8 Ja '53

Quaternary ammonium nitrates; preparation from alkyl nitrates and from αω-polymethylene dinitrates. E. S. Lane. Chem Soc J p 1172-5 Ap '53

Quaternary ammonium salts. W. Tadros and A. Latif. Chem Soc J p 189-91 Ja '53

Solubilities of quaternary ammonium salts in certain organic solvents. V. L. Hughes and A. A. Vernon. J Phys Chem 56:927-8 O '52

Some bisquaternary salts. D. D. Libman, D. L. Pain and R. Slack. Chem Soc J p2305-7 Je '52

Sparingly soluble hexamethonium salt and its applications; some observations on allied quaternary ammonium salts. H. J. Barber and K. Gaimster. bibliog J Ap Chem 2:565-75 O '52

Stereoisomeric quaternary ammonium derivatives of tropine having a pseudoasymmetric nitrogen atom. S. P. Findlay. bibliog Am Chem Soc J 75:3204-8 Jl 5 '53

AMMONIUM dihydrogen phosphate. See Ammonium phosphates

AMMONIUM fluoride

Complex fluorides; the structural chemistry of some complex fluorides of potassium, rubidium, cæsium, ammonium, and thallium. B. Cox and A. G. Sharpe. Chem Soc J p 1783-4 Je '53

AMMONIUM hydroxide

Ammonium oxide and ammonium hydroxide; heat capacities and thermodynamic properties from 15 to 300°K. D. L. Hildenbrand and W. F. Giauque. bibliog Am Chem Soc J 75:2811-18 Je 20 '53

Kinetic salt effects on the decomposition of diacetone alcohol in solutions of tetra-alkylammonium hydroxides. E. S. Halberstadt and J. E. Prue. Chem Soc J p2234-6 Je '52

AMMONIUM iodide

Evidence for one-dimensional rotation in ammonium iodide. R. C. Plumb and D. F. Hornig. bibliog J Chem Phys 21:366-7, 1113 F, Je '53

Neutron diffraction study of the NaCl-type modification of ND_4Br and ND_4I. H. A. Levy and S. W. Peterson. J Chem Phys 21: 366 F '53

Rate of nucleation of ammonium iodide on mica. R. S. Bradley. diag Chem Soc J p4530-2 N '52

Rotation of the ammonium ion in the high temperature phase of ammonium iodide. C. C. Stephenson and others. J Chem Phys 20:1044-5 Je '52

AMMONIUM lactate

Preparation and properties of pure ammonium DL-lactate. E. J. Costello and E. M. Filachione. bibliog Am Chem Soc J 75: 1242-4 Mr 15 '53

AMMONIUM nitrate

Ammonium nitrate; staff-industry collaborative report. W. H. Shearon, jr. and W. B. Dunwoody. bibliog flowsheet il diags Ind & Eng Chem 45:496-504 Mr '53

Stress-corrosion cracking of mild steels in nitrate solution. R. N. Parkins. bibliog 2pls diags Iron & Steel Inst J 172:149-62 O '52; Discussion. 174:140-2 Je '53

Manufacture

Solution to the caking problem of ammonium nitrate and ammonium nitrate explosives. J. Whetstone. bibliog il Ind & Eng Chem 44:2663-7 N '52

AMMONIUM oxide

Ammonium oxide and ammonium hydroxide; heat capacities and thermodynamic properties from 15 to 300°K. D. L. Hildenbrand and W. F. Giauque. bibliog Am Chem Soc J 75:2811-18 Je 20 '53

AMMONIUM phosphates

$(NH_4)_2HPO_4$ provides automatic pH control in chrome dyeing. Chem & Eng N 30:5160 D 8 '52

Pacific mills DAP process improves wool dyeing. G. M. Moisson. il Textile World 103:110-11+ F '53

Piezoelectric, dielectric, and elastic properties of $ND_4D_2PO_4$ (deuterated ADP). W. P. Mason and B. T. Matthias. bibliog diag Phys R 88:477-9 N 1 '52

Properties of a tetragonal antiferroelectric crystal. W. P. Mason. Phys R 88:480-4 N 1 '52

AMMONIUM sulfate

Ammonium sulphate crystallizer. diag Chem Eng 60:338+ Ja '53

Manufacture

Production of ammonium sulfate from refinery waste. E. D. Fox. flow diag il Oil & Gas J 51:113-15+ O 6 '52; Same abr. Pet Refiner 31:123-6 N '52

AMMONIUM thiosulfate

Radioactivity helps study of silver brighteners. S. E. Eaton and others. Metal Finishing 50:63-4 D '52; Discussion. D. Wood. 51:68+ Ap '53

AMMONIUM zirconates

Ammonium pentafluorozirconate(IV) and its monohydrate. H. M. Haendler and D. W. Robinson. Am Chem Soc J 75:3846 Ag 5 '53

AMMONOLYSIS

Effect of structure on reactivity; catalysis in the ammonolysis and hydrolysis of methyl acetate. T. A. Koch, J. G. Miller and A. R. Day. Am Chem Soc J 75:953-5 F 20 '53

Effect of structure on reactivity; the energies of activation and the entropies of activation for the ammonolysis of esters. F. H. Wetzel, J. G. Miller and A. R. Day. bibliog Am Chem Soc J 75:1150-3 Mr 5 '53

Studies on model compounds for coenzyme A; a kinetic study of aminolysis and hydrolysis of ethyl thioacetate and β-acetaminoethyl thioacetate in aqueous solution. P. J. Hawkins and D. S. Tarbell. bibliog Am Chem Soc J 75:2982-5 Je 20 '53

AMMUNITION

Canister; modern weapon evolved from Civil War grape shot. il Iron Age 170:190-1 N 13 '52

Pentagon and the Korean shell shortage. C. J. V. Murphy. il Fortune 47:93-4+ Mr '53

Shot and shell. Fortune 47:90 My '53

Why are they short of shells? il Bsns W p 152-4 Mr 21 '53

AMORTIZATION

Accounting for amortization of bond premiums. F. W. Manke. Banking 45:60-1 F '53

Accounting treatment of accelerated amortization by state public service commissions. Elec World 138:42-3 O 13 '52; 139:77 Ja 12; 93-4 Mr 9 '53; Elec World News ed 139:44-5 Ap 27 '53

Amortization fight shaping up. Elec World News ed 139:42 Mr 16 '53

Analysts view fast amortization. M. H. Cruthers. Elec World 138:117-18 O 20 '52

Brake on tax write-off. Bsns W p 192+ Ap 18 '53

Defense department policy in use of accelerated amortization as a cost in contracts. H. W. Bordner. J Account 95:179-89 F '53

Easing depreciation rules. Bsns W p28 Mr 21 '53

Government's fast tax amortization nears end as goals are approached. Eng N 149:145 N 13 '52

No stampede for faster tax writeoffs. Bsns W p30-1 Mr 28 '53

Paradise for planners; quickie certificate should be written off. R. M. Bleiberg. Barron's 33:3 My 25 '53

Public power group assails tax certificate award. Pub Util 52:457-9 S 24 '53

Rapid tax write-off debate on accelerated amortization and rates. Elec World News ed 139:7 Mr 30 '53

Revenue bureau relaxes depreciation policy. Bsns W p28 My 16 '53

Should industrial equipment be amortized more quickly? Mill & Factory survey. Mill & Factory 53:69-70 O '53

Statement of principles in accelerated amortization; Edison electric institute and American gas association. Elec World 138:111 N 3 '52

Tax savings from accelerated amortization should be explained. Pub Util 50:729-31 N 6 '52; Discussion. 51:45-6 Ja 1 '53

Tax write-offs; Pacific P&L receives PSC order on how to handle accelerated amortization. Elec World 139:94-5 Mr 9 '53

What should commissions regulating public utilities do about accelerated tax amortization? A. J. G. Priest. Pub Util 52:118-21 Jl 16 '53

Why purchased goodwill should be amortized on a systematic basis. G. T. Walker. bibliog J Account 95:210-16 F '53

AMOSS, W. J.

Portrait. Fortune 47:99 Mr '53

AMPHIBIA

Disposition of intraperitoneally injected foreign matter in amphibia. T. W. Easton. Science 117:8-9 Ja 2 '53

AMPHIBIOUS airplanes. See Airplanes, Amphibious

AMPHIBIOUS motor trucks. See Motor trucks, Amphibious

AMPHIBIOUS warfare. See Military art and science—Amphibious warfare

AMPHOTERIC substances

Synthesis of a reversibly contractile amphoteric polypeptide. H. Tani and others. Am Chem Soc J 75:3042-3 Je 20 '53

AMPLIDYNE generator

Contouring with heavy machine tools; amplidyne contouring drive. J. L. Dutcher. il diags Am Mach 96:117-19 O 27 '52

Development of a modern amplidyne voltage regulator for large turbine generators; abstracts. W. A. Hunter and M. Temoshok. il Elec Eng 72:289 Ap '53; Power Eng 57:96+ Jl '53

Transition between metadyne and amplidyne modes in a d.c. cross-field generator. E. J. Davies. bibliog diag Inst E E Proc 100 pt 2:191-5 Ap '53

AMPLIFIERS

Automatic process control; simple, reliable, versatile. il diag Mill & Factory 53:103-4 S '53

Common-collector transistor amplifier at carrier frequencies. F. R. Stansel. diags Inst Radio Eng Proc 41:1096-102 S '53

Complementary symmetry transistor circuits. R. D. Lohman. il diags Electronics 26:140-3 S '53

Compound characteristics from shunt wound machines. H. D. James. diags Product Eng 24:164-6 Mr '53

Contactor amplifiers for automatic control. S. Davis. diags Product Eng 24:186-94 Mr '53

Effect of commutation on the stability of magnetic amplifiers; abstract. M. Sakamoto. Elec Eng 72:165 F '53

Ferroelectric amplifier. H. Urkowitz. diags Franklin Inst J 254:517-30 D '52

Figure of merit of magnetic amplifiers; abstract. J. T. Carleton and W. F. Horton. diags Elec Eng 72:229 Mr '53

High-frequency transistor tetrode. R. L. Wallace, jr. and others. diags Electronics 26:112-13 Ja '53

How magnetic amplifiers work; simple hydraulic analogy. diags Power Eng 57:74-5 O '53

Improved magnetic servo amplifier; abstract. C. W. Lufcy and others. diag Elec Eng 72:308 Ap '53

Influence of materials on magnetic amplifiers; abstract. R. A. Ramey. diags Machine Design 25:284+ Mr '53

Junction fieldistors. O. M. Stuetzer. il diags Inst Radio Eng Proc 40:1377-81 N '52

Magamp regulation for synchronous machines. J. E. Barkle and others. diag Westinghouse Eng 12:204-7 N '52; Same abr. Mech Eng 74:915-16 N '52; Same cond. Power Eng 56:92-3+ O '52; Abstract. Elec World 138:104-5 O 6 '52

Magnetic amplifier. W. C. Johnson. diags Elec Eng 72:583-8 Jl '53

Magnetic amplifier. V. J. Louden. il diags Gen Elec R 56:22-4 Mr '53

Magnetic amplifier and its application in the steel industry. W. E. Miller. il diags Iron & Steel Eng 30:65-75; Discussion. 75-9 My '53

AMPLIFIERS—*Continued*

Magnetic amplifier circuits. L. W. Buechler. il diags Product Eng Hdbk p I 2-9 '53

Magnetic amplifier circuits and applications. R. A. Ramey. bibliog diags Elec Eng 72:791-5 S '53

Magnetic-amplifier gapless-core tests. J. R. Conrath. il diags Electronics 25:119-21 N '52

Magnetic amplifier in control circuits. R. W. Moore. il diags Iron & Steel Eng 30:67-73 Jl '53

Magnetic amplifier symposium. R. A. Ramey and others. Automotive Ind 109:63 Ag 15 '53

Magnetic amplifier transient analyzer. W. A. Geyger. bibliog il diag Electronics 26:189-91 Jl '53

Magnetic amplifier with reset control. G. M. Attura. diags Electronics 26:161-3 Je '53

Magnetic amplifiers. Elec West 109:95 O '52

Magnetic amplifiers. S. R. Hoh. diags Tele-Tech 12:68-70+ My; 114-15+ Je '53

Magnetic amplifiers. R. W. Roberts. il diags Machine Design 25:171-9 Ap '53

Magnetic amplifiers for airborne applications. J. K. McKendry. diags Tele-Tech 12:32-4+ Jl '53

Magnetic amplifiers in paper mill controls. M. H. Fisher. il diags Paper Ind 34:1450-3 Mr '53; Same. Westinghouse Eng 13:59-63 Mr '53

Magnetic amplifiers of the self-balancing potentiometer type; abstract. W. A. Geyger. diag Elec Eng 72:294 Ap '53

Magnetic amplifiers provide new means of automatic control. Mach 59:206 Ag '53

Mathematical analysis of a dielectric amplifier. L. A. Pipes. bibliog diags J Ap Phys 23:818-24 Ag '52

Mathematical analysis of an inductively loaded parallel-connected magnetic amplifier. L. A. Pipes. diag J Ap Phys 23:1358-61 D '52

Mathematical analysis of parallel-connected magnetic amplifiers with resistive loads. L. A. Pipes. J Ap Phys 23:625-9 Je '52; Discussion. H. S. Kirschbaum. 23:1278-9; Rejoinder. 1279 N '52

Methods of magnetic amplifier analysis. L. A. Finzi and G. F. Pittman, jr. bibliog diags Elec Eng 72:690-4 Ag '53

New-type a.c. regulator shown; Westinghouse mag-amplifier voltage unit. P. Klass. il diag Aviation W 57:63-4+ O 20 '52

New type of magnetic servo amplifier; abstract. W. A. Geyger. diag Elec Eng 72:250 Mr '53

Noise in transistor amplifiers. E. Keonjian and J. S. Schaffner. diag Electronics 26:104-7 F '53

Power control with magnetic amplifiers. E. L. Harder. il diags Electronics 25:115-17 O '52

Radio progress during 1952; industrial electronics. bibliog Inst Radio Eng Proc 41:472-3 Ap '53

Regenerative amplifier for digital computer applications. J. H. Felker. bibliog il diags Inst Radio Eng Proc 40:1584-96 N '52

Rotary amplifiers in servomechanisms. G. Lehmann. il diags Elec Com 30:12-25 Mr '53

Selective detector amplifier for 10-10,000 c/s. G. H. Rayner. bibliog diags J Sci Instr 30:17-20 Ja '53

Standardized magamps. R. W. Roberts. il diag Westinghouse Eng 12:195-6 N '52

Study of a magnetic inverter for amplification of low-input-power d.c. signals. E. H. Frost-Smith. diags Inst E E Proc 100 pt 2:362-71 Ag '53; Excerpts. Elec R (Lond) 152:620 Mr 20 '53; Discussion. Inst E E Proc 100 pt 2:371-5 Ag '53; Elec J 150:879-80 Mr 13 '53

Theory of magnetic amplifiers with square-loop core materials; abstract. H. F. Storm. diag Elec Eng 72:777 S '53

Three-phase transductor circuits for magnetic amplifiers. A. G. Milnes. bibliog diags Inst E E Proc 99 pt 2:615-19 D '52

Transductor magnetic amplifiers measure high direct currents. Westinghouse Eng 13:80 Mr '53

Transient analysis of junction transistor amplifiers. W. F. Chow and J. J. Suran. diags Inst Radio Eng Proc 41:1125-9 S '53

Transistor-controlled magnetic amplifier. R. H. Spencer. il diags Electronics 26:136-40 Ag '53

Transistorize your audio amplifiers. C. W. Martel. diags Radio & Tv N 49:40-1+ Mr '53

Voltage regulator; uses magnetic amplifier; patent. diags Electronics 26:256+ S '53

What magnetic amplifiers can do to increase aircraft reliability. G. F. Schroeder. diags Aeronautical Eng R 12:92-5 My '53; Excerpt. Product Eng 24:265-6+ Mr '53

See also

Transistors

Testing

Masking tape holds meters. il Electronics 26:268+ F '53

AMPLIFIERS, Vacuum tube

All-purpose super-selective i.f. amplifier. B. Goodman. il diags Q S T 37:23-8+ Mr '53

All push-pull amplifier. E. R. Gaines. diags Radio & Tv N 49:78 Ap '53

Amplifier for $20. A. J. Gassan. il diags Radio & Tv N 49:44-5+ Ja '53

Amplifier for very low frequencies. Engineering 175:127 Ja 23 '53

Analysis of a single-ended push-pull audio amplifier. Chai Yeh. diags Inst Radio Eng Proc 41:743-7 Je '53

Analysis of a transmission-line type of thermionic-amplifier valve; abstract. I. A. D. Lewis. bibliog Inst E E Proc 100 pt 3:114-15 Mr '53

Battery-operated remote amplifier. J. Evans. il diag Tele-Tech 12:35+ Jl '53

Bipolar logarithmic corona-current amplifier. S. Chapman and L. Bogdan. bibliog il diags Electronics 26:136-7 Ja '53

Carrier amplifier has zero drift; stress and strain recording oscillographs for aircraft testing. A. Perone. il diags Electronics 25:131-3 D '52

Cathode-drift compensation in d-c amplifiers; abstract. J. W. Rittenhouse. diags Elec Eng 72:299 Ap '53

Class C power-amplifier design. H. J. Scott. diag Inst Radio Eng Proc 40:1250 O '52

Coaxial cable driver with gain. K. Enslein. R Sci Instr 23:644-5 N '52

Conductance curves speed pentode r-c amplifier design. K. A. Pullen. Tele-Tech 12:44-6+ Jl '53

Conductance curves speed triode r-c amplifier design. K. A. Pullen. Tele-Tech 12:80-1+ My '53

Constant-current audio power amplifiers. H. T. Sterling and A. Sobel. il diag Electronics 26:122-5 Mr '53

Coupling analog for nonlinear systems with more than one degree of freedom. C. A. Ludeke and R. T. Evans. diags J Ap Phys 24:119-22 F '53

Deflection amplifier covering range up to 100 kc. R. G. Vaughn, jr. diags Radio & Tv N 48:112+ N '52

Design of thermocouple transformers for infra-red chopped beam systems. T. S. Robinson. bibliog J Sci Instr 29:311-13 O '52

Development of a uhf grounded-grid amplifier. C. E. Horton. il diags Inst Radio Eng Proc 41:73-9 Ja '53

D.c. amplifiers with low-pass feedback. J. A. Colls. diags Wireless Eng 29:321-5 D '52

Distributed amplifier theory. D. V. Payne. diags Inst Radio Eng Proc 41:759-62 Je '53

Distributed amplifiers; mutual-inductance-coupled type. B. Murphy. bibliog il diags Wireless Eng 30:39-47 F '53

Economy audio amplifier. G. Philactos. il diag Radio & Tv N 48:56-7 N '52

Electrically tuned rc oscillator or amplifier. O. G. Villard, jr. and F. S. Holman. il diags Inst Radio Eng Proc 41:368-72 Mr '53

Electron-microscope power monitor. F. W. Bishop. il diag Electronics 26:124-5 Ja '53

Equalizer-preamp. A. J. Rose. il diags Radio & Tv N 49:43-6+ Je '53

Fast differential pulse-height selector circuit. E. Fairstein and F. M. Porter. diags R Sci Instr 23:650-1 N '52

Feedback-amplifier design; abstract. R. J. D. Reeves. bibliog diags Inst E E Proc 100 pt 3:43 Ja '53

Feedback amplifiers with stabilized output impedances. N. C. Hekimian. diags Tele-Tech 12:103-5+ Je '53

AMPLIFIERS, Vacuum tube—*Continued*

Feedback theory; some properties of signal flow graphs. S. J. Mason. diags Inst Radio Eng Proc 41:1144-56 S '53

Four-quadrant calibrator for calibrating deflection amplifiers. E. Gaynor and H. J. Tate. il diags Electronics 26:236+ S '53

40-db feedback audio amplifier. B. B. Drisko and R. D. Darrell. il diags Electronics 25: 130-2 Mr '52; Discussion. 25:420+ O '52; 26: 362+ Ja '53

G curves and impedance amplifiers. K. A. Pullen. Tele-Tech 12:71+ S '53

High-power klystron amplifier. J. Jasberg. il diag Electronics 26:244+ Jl '53

High-powered amplifier for 50, 28 and 21 mc. E. P. Tilton. il diag Q S T 36:11-14+ D '52

High-quality record reproduction at low cost. F. H. Yonker. il diag Radio & Tv N 50:64-5 Ag '53

Improved lock-in amplifier. H. L. Cox, jr. diags R Sci Instr 24:307-8 Ap '53

Improving the Williamson amplifier. D. Hafler and H. I. Keroes. il diags Radio & Tv N 49:43-5+ F '53

Instrument electronics. M. H. Aronson. diags Instruments 25:1572-5+ N '52

Isolation circuits for analog computers. R. D. McCoy and F. R. Bradley. il diags Electronics 25:162-4 O '52

Linear power amplifier. F. T. C. Brewer. il diag Radio & Tv N 49:64-5 Ap '53

Low-noise amplifiers for 200 mc. R. Lowell. bibliog il diags Tele-Tech 12:106-7+ Je '53

Midget standby remote amplifier. A. H. Smith. il diag Tele-Tech 12:92 Ja '53

Miniature plug-in broadcast amplifiers. J. Stork. il diags Tele-Tech 11:60-1+ D '52

Modified Childs' amplifier-power supply. E. C. Loomis. il diags Radio & Tv N 49:57-60+ Ap '53

Multiband tuning for the 6146 amplifier. D. H. Mix. il diags Q S T 37:33-5+ My '53

Parallel-T d.c. amplifier; low-drift amplifier with wide frequency response. P. S. T. Buckerfield. bibliog diags Inst E E Proc 99 pt 2:497-506 O '52; Abstract. Elec J 150: 879 Mr 13 '53; Discussion. Inst E E Proc 100 pt 2:375-6 Ag '53; Elec J 150:879-80 Mr 13 '53

Photocell amplifier for infra-red spectroscopy. D. A. H. Brown. diag J Sci Instr 29:292-4 S '52

Plural-beam growing-wave tube; patent. Electronics 26:246+ S '53

Portable preamplifier for vibration analysis. R. K. Vinycomb and L. D. Crawley. il diag Electronics 26:164-5 Jl '53

Preamp. bibliog il diags Radio & Tv N 48: 50-2+ N '52

Preamp for magnetic pickups. W. Creviston. bibliog il diags Radio & Tv N 48:34-5+ D '52

Push-pull amplifiers for increased video output. A. Newton. diags Electronics 26:228+ S '53

Rc or direct-coupled power stage. E. F. Good. diags Wireless Eng 30:54-7 Mr '53

Resistive-wall amplifier. C. K. Birdsall and others. bibliog il diags Inst Radio Eng Proc 41:865-75 Jl '53

Simplified horizontal deflection generator. A. Newton. diags Electronics 26:170-1 Jl '53

Single-channel remote broadcast amplifier. L. A. Wortman. il diags Radio & Tv N 49: 62-3+ F '53

Stabilization of nonlinear feedback control systems. R. L. Cosgriff. bibliog diags Inst Radio Eng Proc 41:382-5 Mr '53

Stephens otl amplifier. F. H. Gilbert. il diags Radio & Tv N 49:45-7 Mr '53

Subminiaturization of servo amplifiers. A. C. Smith. il diags Tele-Tech 11:45-7+ N '52

Survey of the limits in dc amplification. C. M. Verhagen. bibliog diags Inst Radio Eng Proc 41:615-30 My '53

Theory of the large signal behavior of traveling-wave amplifiers. A. Nordsieck. Inst Radio Eng Proc 41:630-7 My '53

Vibration-pick-up amplifier. L. E. Garner, jr. il diags Radio & Tv N 49:48-9+ Ja '53

Voice frequency tone signaling for mobile radio systems. C. L. Rouault. diags Tele-Tech 11:66-8+ N '52

X-ray image amplifier for medical use. Franklin Inst J 255:264-5 Mr '53; Electronics 26:218+ Ap '53

See also

Electrometers

Vacuum tubes

AMPOULES. See Ampuls

AMPULS

Type of large-volume vacuum ampul. Chen Lu-Ao. diags Science 117:363-4 Ap 3 '53

AMPUTATION

See also

Causalgia

AMSTERDAM, Netherlands

Sewerage

Anionic syndets in Amsterdam sewage. P. N. Degens, jr. and others. Sewage & Ind Wastes 25:20-5 Ja '53

AMUREX oil development company

Stock offering underwritten. Comm & Fin Chr 178:49 Jl 6 '53

AMUSEMENT industries

See also

Moving picture industry

AMYL acetate

Amyl acetate; hazards and precautions; data sheet. il Nat Safety N 68:30-1+ Ag '53

AMYL alcohol

Kinetics of reaction of bromine with *t*-amyl alcohol. L. J. Andrews and R. M. Keefer. bibliog Am Chem Soc J 75:3557-61 Jl 20 '53

AMYL chloride, Tertiary. See Chloromethyl butane

AMYL compounds

Polymerization; the reactions of amylsodium with α- and β-methylstyrenes. A. A. Morton and E. Grovenstein, jr. bibliog Am Chem Soc J 74:5437-40 N 5 '52

Structural chemistry of the alkoxides; amyloxides of silicon, titanium, and zirconium. D. C. Bradley, R. C. Mehrotra and W. Wardlaw. Chem Soc J p2027-32 Je '52

AMYLASES

Action of crystalline β-amylase on some glycogens. D. J. Bell and D. J. Manners. bibliog Chem Soc J p3641-5 S '52

Additional studies of the properties of taka amylase. V. M. Hanrahan and M. L. Caldwell. bibliog Am Chem Soc J 75:4030-4 Ag 20 '53

Failure of cyanide to inhibit β-amylase. M. Nakamura. bibliog Science 117:629-31 Je 5 '53

Study of the action of taka amylase. V. M. Hanrahan and M. L. Caldwell. bibliog Am Chem Soc J 75:2191-7 My 5 '53

Study of the influence of a number of factors upon the stability and upon the activity of pancreatic amylase. M. L. Caldwell and J. Tung Kung. bibliog Am Chem Soc J 75:3132-5 Jl 5 '53

AMYLOLYSIS. See Starch

AMYLOPECTINS

Acid reversion in relation to isomaltose as a starch hydrolytic product. A. Thompson, M. L. Wolfrom and E. J. Quinn. bibliog Am Chem Soc J 75:3003-4 Je 20 '53

Molecular weight of potato amylopectin as determined by light, scattering. L. P. Witnauer and others. J Chem Phys 20:1978-9 D '52

AMYLOSES

Effect of disaggregation of amylose on the properties of the iodine complex. J. F. Foster and E. F. Paschall. bibliog Am Chem Soc J 75:1181-3 Mr 5 '53

Some factors which influence the iodine affinity of amylose as shown by potentiometric titration. E. F. Paschall and J. F. Foster. bibliog Am Chem Soc J 75:1177-80 Mr 5 '53

ANACOM. See Calculating machines

ANACONDA copper mining company

Anaconda officials. Min Eng 4:1163 D '52

ANACONDA wire and cable company

Higher sales, earnings seen. Barron's 33:25 Je 15 '53

ANALCITE

Hydrothermal chemistry of silicates; reactions of analcite and leucite. R. M. Barrer, L. Hinds and E. A. White. Chem Soc J p 1466-75, pl 1-7 My '53

ANALCITE—*Continued*

Ion-exchange in crystals of analcite and leucite. R. M. Barrer and L. Hinds. pl Chem Soc J p 1879-88 Je '53

ANALGESIA

Use of analgesia opposed in premature labor; abstract. R. A. Nelson and F. E. Barry. Pub Health Rep 68:219 F '53

ANALGESICS

Analgesics; esters of 4-dialkylamino-1,2-diphenyl-2-butanols. A. Pohland and H. R. Sullivan. bibliog Am Chem Soc J 75:4458-61 S 20 '53

Synthetic analgesics and related compounds; 2-imino-3 : 3-diphenylpyrrolidines. W. Wilson. Chem Soc J p3524-9 S '52

See also

Aspirin

Demerol

ANALOG computers. See Calculating machines

ANALYSIS of variance. See Variation (statistics)

ANALYTIC chemists. See Chemists, Analytic

ANATASE

Physical adsorption of gases on anatase. H. L. Pickering and H. C. Eckstrom. bibliog diag Am Chem Soc J 74:4775-7 O 5 '52

ANATOMICAL models

Indestructible anatomical models. il Mod Plastics 30:90-3 Mr '53

ANCHOR bolts. See Bolts and nuts

ANCHORAGES, Bridge. See Bridges, Suspension—Anchorages

ANDERSON, Sir David, 1880-1953

Sketch. por Engineer 195:500 Ap 3 '53; Engineering 175:436 Ap 3 '53

ANDERSON, Frohman

Plastic forming of metals. Fortune 46:138-41+ N '52

ANDERSON, Harold

Anderson finds the quick way up in grain elevators; Anderson truck terminal, Maumee, Ohio. Bsns W p52-4+ Jl 4 '53

ANDERSON, Robert B. 1915-

Winner of the Ipatieff prize. por(cover) Chem & Eng N 31:778 F 23 '53

ANDERSON, Indiana

Small industries keep down city's fire loss. il Nat Safety N 68:24-5 Jl '53; Safety Maint & Prod 106:65-6 Ag '53

Streets

City starts all-weather street maintenance. il Roads & Sts 96:111 Jl '53

ANDREWS, Hardage Lane, 1889-

Portrait. Bsns W p32 Je 13 '53

ANDROGENS

Experiments on the synthesis of substances related to the sterols; completion of the syntheses of androgenic hormones and of the cholesterol group of sterols. H. M. E. Cardwell and others. Chem Soc J p361-84 F '53

ANDROSTANEDIOL

Direct introduction of oxygen into the steroid nucleus; chromic anhydride oxidation of isoandrosterone acetate and androstanediol diacetate. H. B. MacPhillamy and C. R. Scholz. bibliog Am Chem Soc J 74:5512-14 N 5 '52

ANDROSTANEDIONE

Dipole moments and conformations of androstane-3,17-dione and of etiocholane-3,17-dione. H. R. Nace and R. B. Turner. bibliog il Am Chem Soc J 75:4063-6 Ag 20 '53

ANDROSTENEDIONE

Cyclic ketals of 4-androstene-3,17-dione. H. L. Herzog and others. bibliog Am Chem Soc J 75:4425-7 S 20 '53

ANECHOIC laboratories. See Sound laboratories

ANEMOCLINOMETER

IMFL anemoclinometer; an instrument for the investigation of a fluctuating velocity vector. A. Martinot-Lagarde and others. bibliog il diags R Sci Instr 23:661-6 D '52

ANEMOMETERS

Technique for cleaning hot-wires used in anemometry. L. A. Wyatt. diag J Sci Instr 30:13-14 Ja '53

See also

Anemoclinometer

ANESTHETICS

Local anesthetics; aminoesters of chlorobenzoic and chlorocinnamic acids. E. R. Andrews, M. G. Van Campen and E. L. Schumann. bibliog Am Chem Soc J 75:4003-6 Ag 20 '53

See also

Analgesics

Chloroform

Ethyl ether

ANESTHETICS, Local

Local anesthetic is more active, less toxic than procaine. Chem & Eng N 31:1098 Mr 16 '53

Local anesthetics; modifications of β′-4-methylphenoxyethyl β-N-methylbenzylaminoethyl ether. H. B. Wright and M. B. Moore. Am Chem Soc J 75:1770-1 Ap 5 '53

Physiologically active amines; tertiary amines and quaternary salts related to β-(*o*-methoxyphenyl) - isopropyl - N - methyl - amine. R. V. Heinzelman and B. D. Aspergren. Am Chem Soc J 75:925-7 F 20 '53

Physiologically active secondary amines; β-(*o*-methoxyphenyl) - isopropyl - N - methyl - amine and related compounds. R. V. Heinzelman. bibliog Am Chem Soc J 75:921-5 F 20 '53

See also

Nerves—Blocking

ANEURIN. See Vitamins—Vitamin B_1

ANGELIC acid

Ultraviolet-induced isomerization of tiglic acid to angelic acid. S. W. Pelletier and W. L. McLeish. bibliog Am Chem Soc J 74:6292-3 D 20 '52

ANGLES

Assembled polygon for the calibration of angle blocks. C. E. Haven and A. G. Strang. il J Res Nat Bur Stand 50:45-50 Ja '53

Measure your angles with a square. F. E. Riley. il Power Eng 57:77 My '53

Precise angular standard made from gageblocks. il Mach 59:200-1 Ag '53

Tolerances for angles; reference book sheet. V. H. Russell. diags Am Mach 97:193, 195 My 11; 155, 157 My 25 '53

ANGLO-AMERICAN corporation of South Africa, limited

Statement by the chairman. E. Oppenheimer. Economist 167:781 Je 13 '53

ANGLO-IRANIAN oil company, limited

A.I.O.C. sues in Japan. Oil & Gas J 52:228-9 My 18 '53

Injunction denied; Anglo-Iranian loses second round in test to see who owns Iranian oil. Oil & Gas J 51:90 Mr 16 '53

Pressed for capital; Anglo-Iranian turns to the public for needed expansion funds. Oil & Gas J 51:74 Ja 12 '53

Search accelerated; Anglo-Iranian conducting exploratory operations in five widely separated areas. D. M. Duff. Oil & Gas J 52:88 Je 15 '53

Statement by the chairman. W. Fraser. Economist 167:553-8 My 23 '53

Surveys completed. Comm & Fin Chr 177:1253-4 Mr 23 '53

See also

Petroleum industry and trade—Iran

ANGLO-NEWFOUNDLAND development company

Statement by the president. E. M. Little. Economist 167:483 My 16 '53

ANGLO-PORTUGUESE telephone company, limited

Statement by the chairman. A. Roger. Economist 167:474-6 My 16 '53

ANGOLA, West Africa

Commerce

Angola's imports up, exports in downtrend. For Comm W 49:5 My 11 '53

ANGUILLA

Geology of St Bartholomew, St Martin, and Anguilla, Lesser Antilles. R. A. Christman. bibliog maps Geol Soc Bul 64:65-96, pl 1-4 Ja '53

ANHEUSER-BUSCH, inc.

Stock offered. Comm & Fin Chr 176:1665 N 3 '52

Three by nine analysis of some unlisted stocks. H. J. King. Comm & Fin Chr 177:1208 Mr 19 '53

ANHYDRIDES

Bimolecular dianhydrides of L-sorbose. M. L. Wolfrom and H. W. Hilton. bibliog Am Chem Soc J 74:5334-6 N 5 '52

N-carboxy-anhydrides of *O*-acetyl- and *O*-carbobenzyloxy-serine. M. Frankel and M. Halmann. Chem Soc J p2735-7 Jl '52

Preparation of ketones and their enol esters by the base-catalyzed condensation of acids and acid derivatives with anhydrides. G. G. Smith. bibliog Am Chem Soc J 75:1134-7 Mr 5 '53

Use of diester chlorophosphites in peptide syntheses; mixed anhydrides. G. W. Anderson and R. W. Young. bibliog Am Chem Soc J 74:5307-9 N 5 '52

See also

Acetic anhydride

Maleic anhydride

ANHYDROECGONINE

Structure of anhydroecgonine ethyl ester. S. P. Findlay. bibliog Am Chem Soc J 75:1033-5 Mr 5 '53

ANHYDROGULITOL

Crystalline tetrabenzoyl-β-D-fructopyranosyl bromide and its reduction by lithium aluminum hydride to 1,5-anhydro-D-mannitol and 1,5-anhydro-L-gulitol. R. K. Ness and H. G. Fletcher, jr. bibliog Am Chem Soc J 75:2619-23 Je 5 '53

ANHYDROMANNITOL

Crystalline tetrabenzoyl-β-D-fructopyranosyl bromide and its reduction by lithium aluminum hydride to 1,5-anhydro-D-mannitol and 1,5-anhydro-L-gulitol. R. K. Ness and H. G. Fletcher, jr. bibliog Am Chem Soc J 75:2619-23 Je 5 '53

ANHYDROMETHYL lyxoside

Preparation of 2 : 3-anhydromethyl-D-lyxoside from 2-toluene-*p*-sulphonyl methyl-D-xylofuranoside, and synthesis of 2-methyl D-xylose, 3-methyl D-arabinose, and 3 : 5-dimethyl D-arabinose. E. E. Percival and R. Zobrist. Chem Soc J p564-6 F '53

ANHYDROPHENACETYLGLUTAMIC acid

Anhydrophenacetylglutamic acid. J. A. King, F. H. McMillan and J. D. Genzer. bibliog Am Chem Soc J 74:5202-3 O 20 '52

ANILIDES

Enzymic synthesis of peptide bonds; instances of protease-controlled specificity in the synthesis of acylamino acid anilides and acylpeptide anilides. F. Janssen, M. Winitz and S. W. Fox. bibliog Am Chem Soc J 75:704-7 F 5 '53

Tetraethyl pyrophosphite as a reagent for the preparation of anilides. J. Blodinger and G. W. Anderson. Am Chem Soc J 74:5514-15 N 5 '52

ANILINE

Acid strength of iodine monochloride, antimony trichloride and picric acid with reference to the bases pyridine and aniline in nitrobenzene. I. M. Kolthoff, D. Stŏcesocá and T. S. Lee. bibliog Am Chem Soc J 75:1834-9 Ap 20 '53

Aniline accelerates. Chem W 72:65-6 Mr 14 '53

Aniline; industry's first synthetic. Can Chem Process 37:76 Mr '53

Cleavage of the carbon-sulfur bond; kinetics of the reaction of thiobenzoic acid with aniline. P. J. Hawkins, D. S. Tarbell and P. Noble, jr. bibliog Am Chem Soc J 75:4462-5 S 20 '53

Effect of solvent on equilibrium and rate constants; the measurement and correlation of acid dissociation constants of anilinium and ammonium salts in the system ethanol-water. B. Gutbezahl and E. Grunwald. bibliog Am Chem Soc J 75:559-65 F 5 '53

Effect of substituents on the protolytic constants of anilinium type protolytes. M. Kilpatrick and C. A. Arenberg. bibliog Am Chem Soc J 75:3812-21 Ag 5 '53

Effect of the medium upon Hammett's sigma values of *p*-alkyl groups and hyperconjugation. H. Kloosterziel and H. J. Backer. bibliog Am Chem Soc J 74:5806 N 20 '52

Equilibria of several reactions of aromatic amines. G. N. Vriens and A. G. Hill. bibliog Ind & Eng Chem 44:2732-5 N '52

Mechanism of the reaction of aniline with furfural in the presence of acid. W. M. Foley, jr., G. E. Sanford and H. McKennis, jr. bibliog Am Chem Soc J 74:5489-91 N 5 '52

Preparation of some *m*- and *p*-alkylanilines. R. Long and K. Schofield. Chem Soc J p2066-8 Jl '53

Reaction of propiolactone with aniline derivatives. C. D. Hurd and S. Hayao. Am Chem Soc J 74:5889-93 D 5 '52

Reactivity of the halogen in some halogenated anilines. A. Rosenthal, R. Melby and R. B. Sandin. bibliog Am Chem Soc J 74:5790-1 N 20 '52

Rearrangement of *NN*-diacylanilines and the nuclear benzoylation of anilines. J. F. J. Dippy and V. Moss. Chem Soc J p2205-10 Je '52

Study of diazo-compounds by use of nitrogen isotopes; the reduction of mixed diazonium salts of anthranilic acid and aniline. P. F. Holt and B. I. Hopson-Hill. Chem Soc J p4251-4 N '52

ANILINE black

Aniline black. Can Chem Process 36:65-6 O '52

ANILINE point

Cetane number from aniline point. O. M. Duncan. diag Pet Eng 25:C37 F '53

Net heat of combustion of petroleum hydrocarbons. R. S. Fein, H. I. Wilson and J. Sherman. bibliog Ind & Eng Chem 45:610-14 Mr '53

ANILS

Catalytic synthesis of heterocycles; dehydrocyclization of anils to acridine and carbazole. C. Hansch, F. Gschwend and J. Barnesberger. bibliog Am Chem Soc J 74:4554-5 S 20 '52

New pyrolytic route to certain keto-anils. E. W. Drew and P. D. Richie. bibliog Chem & Ind p 1104 N 8 '52

Studies on bond type in certain cobalt complexes; the constitution of cobalt complexes with salicylaldehyde anils. B. West. Chem Soc J p3123-9 Ag '52

ANIMAL behavior. See Animals, Habits and behavior of

ANIMAL experimentation

Development of strains of albino mice with predictable susceptibilities to audiogenic seizures. H. Frings and M. Frings. bibliog Science 117:283-4 Mr 13 '53

Metabolism unit designed for radioisotope balance studies with dogs. S. L. Hansard. bibliog il diag Science 117:301-2 Mr 20 '53

ANIMAL products

Tallow market slump hits renderers hard. Oil Paint & Drug Rep 164:5 Ag 17 '53

See also

Milk

ANIMALS

See also

Fresh water fauna

Diseases

APHA conference report; importance of animal diseases to the health of man. Pub Health Rep 68:263-7 F '53

See also

Foot-and-mouth disease

Leptospirosis

Transportation

Express rates or animals? W. Hegener. Science 117:234 F 27 '53

Shipping small animals. B. Stern. Science 116:714 D 26 '52

ANIMALS, Habits and behavior of

Curious behavior of the stickleback. N. Tinbergen. il Sci Am 187:22-6 D '52

Induced emigrations among small mammals. J. B. Calhoun and W. L. Webb. Science 117:358-60 Ap 3 '53

ANIONOTROPY

Anionotropic systems; syntheses and rearrangements in the *cyclo*heptenyl series. E. A. Braude, W. F. Forbes and E. A. Evans. Chem Soc J p2202-7 Ag '53

Anionotropic systems; the effect of a nitro-substituent on equilibrium and mobility in the 1 : 3-diphenylallyl alcohol system. E. A. Braude and E. S. Waight. Chem Soc J p419-24 F '53

ANIONS

Application of the Bjerrum ion association theory to the binding of anions by proteins. J. A. Schellman. bibliog J Phys Chem 57:472-5 Ap '53

ANIONS—*Continued*

China clay in aqueous suspension; effect of anions on flow properties. T. W. Alton and O. J. Schierholtz. bibliog Pulp & Pa of Can 54:67-72 F '53

Effect of the anion on the conductive properties of triphenylmethane dye salts. R. C. Nelson. J Chem Phys 20:1327-8 Ag '52

Empirical considerations of entropy; the entropies of the oxy-anions and related species. J. W. Cobble. bibliog J Chem Phys 21:1443-6 S '53

Modifications of the absorption spectra of anions induced by complex formation. L. I. Katzin. bibliog J Chem Phys 20:1165-9 Jl '52

ANISILIC acid

Pyrolysis of aryl glycolic acids; the thermochromic product derived from anisilic acid. H. H. Wasserman, T. Liu and E. R. Wasserman. bibliog Am Chem Soc J 75:2056-8 My 5 '53

ANISOLE

ω-Chlorination of anisoles; abstract and discussion. H. E. Akerman and others. Chem & Ind p236 Mr 14 '53

Reaction of dihaloanisoles with sodium amide in liquid ammonia. R. A. Benkeser and G. Schroll. bibliog Am Chem Soc J 75:3196-7 Jl 5 '53

ANISOTROPY

Anisotropic dissolution and the orientation of the phosphorescent dye, trypaflavin, in the crystal of citric acid. D. Yamamoto. il diags J Chem Phys 20:1974-5 D '52

Anisotropic susceptibility of polycrystalline graphite. W. P. Eatherly and J. D. McClelland. Phys R 89:661-2 F 1 '53

Anisotropy in the paramagnetic resonance spectrum of peroxylamine disulfonate ion. S. I. Weissman and D. Banfill. bibliog Am Chem Soc J 75:2534 My 20 '53

Clausius-Mosotti equation for anisotropic crystals. H. J. Neugebauer. Phys R 88:1210 D 1 '52

Modified Silberstein model of optical anisotropy. F. Matossi. bibliog J Chem Phys 20:1934-5 D '52

Uniaxial anisotropy of a permalloy crystal. S. Kaya. bibliog Rs Mod Phys 25:49-53; Discussion. 53-5 Ja '53

See also

Magnetic properties

ANISOTROPY, Magnetic. See Magnetic properties

ANNEALING

Annealing of bombardment damage in solids. W. L. Brown and others. Phys R 90:709-10 My 15 '53

Annealing type 414 stainless steel forgings. A. A. Scafati. il Materials & Methods 38:78-9 Jl '53

Carbon solubility shown; test provides new information on annealing temperatures of austenitic stainless steel. Steel 131:153+ N 10 '52

Cold-rolling and annealing textures of molybdenum single crystals. N. K. Chen and R. Maddin. bibliog il diags J Metals 5:Trans 300-4 sec 2 F '53

Continuous annealing with carbon restoration; abstract. J. D. Armour. Metal Prog 63:188+ F '53

Continuous short-cycle anneal for spheroidization of cartridge-case steel. O. E. Cullen. il diags Metal Prog 64:79-82 Jl '53

Density and hydrogen occlusion of some ferrous metals. J. H. Keeler and H. M. Davis. bibliog J Metals 5:Trans 44-8 Ja '53

Gas-fired annealing of locomotive tubes; Ashford locomotive works. il Engineering 175:144 Ja 30 '53

Increase of high magnetostriction by magnetic anneal. H. E. Stauss and G. Sandoz. bibliog J Metals 4:Trans 1342-3 D '52

Isothermal annealing effects in irradiated copper. A. W. Overhauser. bibliog diag Phys R 90:393-400 My 1 '53

Resistance heating anneals copper tubing; Super cold corp. il Elec West 109:105 O '52

Sandblasting and annealing to improve flame-cut high-tensile steel. A. Erker. Welding J 32:sup402+ Ag '53

Stress relieving off-peak; Crawford & Doherty foundry. il Elec West 109:102 O '52

Strip annealing is high-speed, continuous in direct-fired radiant-gas mill equipment. C. A. Turner, jr. il diag Am Gas J 178:16-19 Ja '53; Same cond. Steel 130:106+ Ap 14 '52

Study of the annealing kinetics in cold worked copper. D. Bowen and others. J Ap Phys 23:630-4 Je '52

See also

Electric furnaces,
Annealing
Furnaces, Annealing

ANNEALING of glass. See Glass, Optical—Manufacture; Glass manufacture

ANNIVERSARIES, Company

New company history credits advertising's role in its leadership; Buick's first half-century. il Ptr Ink 242:41 F 27 '53

Advertising

G-E breaks unusual 16-page inserts this week. N. Kelne. il Ptr Ink 242:36 Ja 23 '53

Smith bros. and Smith boilers team up. il Ptr Ink 242:62 Mr 13 '53

ANNUAL reports. See Corporations—Reports and yearbooks

ANNUAL wage plans. See Wage payment plans—Guaranty of earnings

ANNUITIES

Baltimore & Ohio employees like annuity plan. Ry Age 134:64-5 My 4 '53

Continuing gains shown in payment of annuities; tabulation by company, 1942, 1951, 1952. Weekly Underw 168:85-9 sec 2 My 9 '53

Equity annuity plan gets benefit of dollar cost averaging. G. E. Johnson. Nat Underw (Life ed) 57:7 My 15 '53

Firm organized to handle equity annuity plans; Equity plans, inc. Nat Underw (Life ed) 57:15 My 1 '53

Gives OASI explanation; problem of trying to get the public to understand difference between social security retirement benefits and those provided by an insurance contract. M. A. Linton. Nat Underw (Life ed) 57:11+ Ja 9 '53

Immediate annuity costs; 1952 purchase price of immediate annuity of $10 monthly single premiums; males, age 65; females, age 70; table. Life Ins Courant 57:46-7 N '52

Individual and group annuities ranking by company, Dec. 31, 1952; tables. Life Ins Courant 58:66 My '53

Payments under individual annuity contracts as of Dec. 31, 1951; table by company. Spectator 160:36 N '52

Personal business; big shift in type of insurance policies people buy to provide cash for their older years. Bsns W p 155 N 1 '52

West Germany authorizes transfer of pensions and annuities abroad. For Comm W 49:7 F 2 '53

Taxation

Improvements in laws for taxing income on annuities backed by A.L.C., L.I.A. Nat Underw (Life ed) 57:2 Je 12 '53

Life insurance and annuity combinations. F. L. Morton. Spectator 161:55-6+ Ap '53

ANODES. See Electrodes

ANODIZING. See Aluminum—Protection

ANORTHITE

System diopside—forsterite—anorthite. E. F. Osborn and D. B. Tait. bibliog diags Am J Sci Bowen vol p413-33 '52

Two new crystalline phases of the anorthite composition, $CaO \cdot Al_2O_3 \cdot 2SiO_2$. G. L. Davis and O. F. Tuttle. bibliog Am J Sci Bowen vol p 107-14 '52

ANSONIA wire and cable company

Stock offering oversubscribed. Comm & Fin Chr 177:137 Ja 12 '53

ANTENNAS, Radio. See Radio antennas

ANTENNAS, Television. See Television antennas

ANTHELMINTICS

Anthelmintics; kousso; the structures of protokosin, α-kosin, and β-kosin. A. J. Birch and A. R. Todd. Chem Soc J p3102-8 Ag '52

ANTHOCHLOR pigments. See Pigments, Biological

ANTHOCYANIDINS

Analysis

Anthocyanidin of louro inamui. E. Cocker and W. Cocker. Chem Soc J p5035-6 D '52

ANTHRACENE

Absolute light emission efficiency of crystal anthracene for gamma-ray excitation. M. Furst and others. bibliog Phys R 89:416-17 Ja 15 '53

Absolute scintilation efficiency of anthracene. J. B. Birks and M. E. Szendrei. Phys R 91:197-8 Jl 1 '53

Action of lithium aluminium hydride on *NN'*-diarylsulphonyl derivatives of dianthranilide, and photo-peroxides of 9 : 10-diarylanthracene. A. Mustafa. Chem Soc J p2435-7 Je '52

Average energy of secondary electrons in anthracene due to gamma-irradiation. G. D. Prestwich and others. Phys R 87:1030-1 S 15 '52

Copolymerization of anthracene with 1,3-butadiene. C. S. Marvel and W. S. Anderson. bibliog Am Chem Soc J 75:4600-1 S 20 '53

Density effect for the ionization loss in various materials. R. M. Sternheimer. bibliog Phys R 88:851-9 N 15 '52

Friedel-Crafts succinoylation of anthracene; synthesis of 1'- and 4'-hydroxy-1 : 2-benzanthracene. R. Schoental. Chem Soc J p4403-6 N '52

Hydrogen isotope exchange between anthracene and sulfuric acid. V. Gold and F. A. Long. bibliog Am Chem Soc J 75:4543-7 S 20 '53

Neutron-proton scattering using organic crystal scintillation detectors. M. E. Remley and others. bibliog diags Phys R 89:1194-8 Mr 15 '53

State of anthracene, *sym*-trinitrobenzene and their 1 : 1 complex in liquid sulfur dioxide solution. N. N. Lichtin, R. E. Weston, jr. and J. D. White. bibliog Am Chem Soc J 74:4715-16 S 20 '52

Vapour pressure and lattice energy of some aromatic ring compounds. R. S. Bradley and T. G. Cleasby. Chem Soc J p 1690-2 Je '53

ANTHRACITE. See Coal

ANTHRANILIC acid

Study of diazo-compounds by use of nitrogen isotopes; the reduction of mixed diazonium salts of anthranilic acid and aniline. P. F. Holt and B. I. Hopson-Hill. Chem Soc J p4251-4 N '52

ANTHRAQUINONE

Aromatic keto-enols; some new 2 : 3-dihydro-1 : 4-naphthaquinones and -anthraquinones. D. B. Bruce and R. H. Thomson. Chem Soc J p2759-66 Jl '52

Spectra of anthraquinone derivatives. R. H. Peters and H. H. Sumner. Chem Soc J p2101-10 Jl '53

Analysis

New technique for polarography of water-insoluble compounds. G. E. O. Proske. bibliog Anal Chem 24:1834-6 N '52

ANTHRATUBE. See Coal burning equipment

ANTHRAX

APHA conference report; epidemiological and control aspects of anthrax. Pub Health Rep 68:205-6 F '53

Anthrax in Ohio swine; abstract. H. G. Geyer. Pub Health Rep 67:982-3 O '52

Occurrence of anthrax bacilli in the carpet-wool industry in the United States. R. S. Lloyd. bibliog A M A Archives Ind Hygiene & Occup Med 6:421-34 N '52

Recovery from anthrax meningitis. D. Kindler. bibliog il Ind Med 21:487-8 O '52

ANTHRONE

Differentiation of carbohydrates by anthrone reaction rate and color intensity. L. H. Koehler. bibliog Anal Chem 24:1576-9 O '52

Modified anthrone reagent. N. J. Fairbairn. bibliog Chem & Ind p86 Ja 24 '53

Quantitative determination of pentoses with anthrone. R. R. Bridges. bibliog Anal Chem 24:2004-5 D '52

Some adsorption colors and their significance for thermochromic and tautomeric effects; experiments with anthrone derivatives, nitrotoluenes, spiropyrans and xanthhydrols. A. Schönberg, A. Mustafa and W. Asker. bibliog Am Chem Soc J 74:5640-3 N 20 '52

Use of anthrone reaction for determination of carbohydrates in the presence of serum protein. M. R. Shetlar. bibliog Anal Chem 24:1844-6 N '52

Xanthones and thioxanthones; the preparation and properties of 9-oxa-1-aza-anthrone and 9-thia-1-aza-anthrone. F. G. Mann and J. A. Reid. Chem Soc J p2057-62 Je '52

ANTHROPOLOGICAL association, American. See American anthropological association

ANTHROPOLOGY

Fluorine content of associated human and extinct animal bones from the Conkling cavern, New Mexico. T. D. Stewart. bibliog Science 116:457-8 O 24 '52

See also

Indians of North America

ANTI-AUXINS. See Growth inhibiting substances

ANTIBIOTIC substances

Achromycin; synthetic studies; synthesis of 3-amino-D-ribose, a hydrolytic product. B. R. Baker and R. E. Schaub. Am Chem Soc J 75:3864-5 Ag 5 '53

Achromycin; the structure of the antibiotic puromycin, I. C. W. Waller and others. bibliog Am Chem Soc J 75:2025 Ap 20 '53

Amicetin, a new streptomyces antibiotic. C. DeBoer, E. L. Caron and J. W. Hinman. Am Chem Soc J 75:499-500 Ja 20 '53

Antibiotic certification regulations amended. Oil Paint & Drug Rep 164:5 S 28 '53

Antibiotic ice. Can Chem Process 37:110 S '53

Antibiotic nisin and its use in the making and processing of cheese; abstract. N. J. Berridge. Chem & Ind p374 Ap 18 '53

Antibiotics and endocrine stimulants as promoters of growth in fattening pigs. R. S. Barber and others. Chem & Ind p410 Ap 25 '53

Antibiotics assayed by serial dilution. C. R. Falk. Pub Health Rep 68:92 Ja '53

Antibiotics filling requires chemical dehumidification. il Can Chem Process 37:82-3 F '53

Antibiotics for plants. Sci Am 187:48 O '52

Antibiotics' half a law. il Chem W 72:38+ Ja 31 '53

Antibiotics in foods banned in new FDA policy stand. Oil Paint & Drug Rep 163:3 Mr 2 '53

Antispirochetal interference between antibiotics and arsenoxide. N. Ercoli and G. M. Carminati. bibliog Science 116:579-82 N 28 '52

Arylnitroalkenes; a new group of antibacterial agents. O. Schales and H. A. Graefe. bibliog Am Chem Soc J 74:4486-90 S 20 '52

Boosting food output; antibiotics have nutritional effect on animals. Bsns W p96-8+ N 22 '52

Characterization of the antibiotic thiolutin and its relationship with aureothricin. W. D. Celmer and others. bibliog Am Chem Soc J 74:6304-5 D 20 '52

Chartreusin, a new antibiotic produced by streptomyces chartreusis, a new species. B. E. Leach and others. bibliog Am Chem Soc J 75:4011-12 Ag 20 '53

FDA revises regulations for antibiotic preparations. Oil Paint & Drug Rep 162:3+ N 3 '52

Four worlds to conquer; antibiotic research. Chem W 71:28+ D 6 '52

High-speed injectables; one-shot syringe packaging of antibiotics. il diag Mod Packaging 26:94-5 Ag '53

Humidity control necessary for production of antibiotic drugs; Schenley laboratories, inc. il diag Refrig Eng 61:180+ F '53

Identification of an antibiotic polyacetylene from clitocybe diatreta as a suberamic acid ene-diyne. M. Anchel. bibliog Am Chem Soc J 75:4621-2 S 20 '53

Laboratory has share in therapeutic guidance. F. C. Fink. Pub Health Rep 68:90-1 Ja '53

Microbiologically active 4-thiazolidones. F. C. Pennington and others. bibliog Am Chem Soc J 75:109-14 Ja 5 '53

ANTIBIOTIC substances—*Continued*

Mode of action of antibiotics in animal nutrition; abstract. M. E. Coates. Chem & Ind p374 Ap 18 '53

New antibiotics classification; abstract. J. D. Dutcher. Chem & Eng N 31:1401 Ap 6 '53

Structure and synthesis of a new, thiazolidone antibiotic. W. M. McLamore and others. bibliog Am Chem Soc J 75:105-8 Ja 5 '53

Structures of aurantio- and rubro-gliocladin and gliorosein. E. B. Vischer. Chem Soc J p815-20 Mr '53

Synthesis of aurantiogliocladin. W. Baker, J. F. W. McOmie and D. Miles. Chem Soc J p820-2 Mr '53

See also

Actinomycin
Antimycin
Aspergillic acid
Aureomycin
Carbomycin
Chloromycetin
Fumagillin
Mycomycin
Neomycin
Penicillin
Streptolin
Streptomycin
Subtilin
Terramycin
Tetracycline

ANTIBODIES. See Antigens and Antibodies

ANTICHOLINESTERASE

Effect of esterification on anticholinesterases as determined by three different enzymes. H. Tauber and E. L. Petit. bibliog Am Chem Soc J 75:1257 Mr 5 '53

Preparation of some organophosphorus compounds possessing anticholinesterase activity. L. D. Freedman and others. bibliog Am Chem Soc J 75:1379-81 Mr 20 '53

ANTICOAGULANTS. See Blood—Coagulation

ANTICONVULSANTS

Anticonvulsant activity and toxicity of methylparafynol (Dormison^R) and some other alcohols. R. W. Schaffarzick and B. J. Brown. bibliog Science 116:663-5 D 12 '52

Anticonvulsant drugs; some monosubstituted isocyanurates. W. J. Close. bibliog Am Chem Soc J 75:3617-18 Ag 5 '53

Anticonvulsant drugs; some 1-substituted biurets. D. A. Dunnigan and W. J. Close. bibliog Am Chem Soc J 75:3615-16 Ag 5 '53

Anticonvulsants; a study of N,α,β-alkylsuccinimides. C. A. Miller and L. M. Long. bibliog Am Chem Soc J 75:373-5 Ja 20 '53

Hydantoins as anticonvulsants; 5-R-5-(2-thienyl)-hydantoins. J. J. Sprulock. bibliog Am Chem Soc J 75:1115-17 Mr 5 '53

ANTIDIURETICS. See Diuretics

ANTIFERROELECTRICITY. See Electric properties

ANTIFERROMAGNETISM. See Magnetism

ANTIFERTILITY factor

See also

Birth control

ANTIFIBRINOLYSIN

Existence of antifibrinolysin activity in platelets. S. A. Johnson and C. L. Schneider. bibliog Science 117:229-30 F 27 '53

ANTIFOULING paint. See Paint, Antifouling

ANTI-FREEZE solutions

Automotive antifreezes. il map U S Nat Bur Stand Circ 506:1-31 bibliog(p27-31); pa 15c Supt. of doc. '52

Dealer education on antifreeze re-use can save cooling systems, build sales. F. C. Sturtevant. Nat Pet N 45:78 My 6 '53

Now about antifreezes; worthwhile pointers to guide you in the selection and use of antifreezes. diags Diesel Power 31:36-8 Ja '53

Precautions with anti-freeze solutions. diags Heat & Ven 50:128 Mr '53

Selection and use of engine antifreezes. (Special tech. pub. no. 120) 15p pa 40c Am. soc. for testing materials, 1916 Race st, Philadelphia 3 '52

Sodium benzoate and sodium nitrite as corrosion-inhibitors in ethylene glycol antifreeze solutions. F. Wormwell, A. D. Mercer and H. C. K. Ison. bibliog il J Ap Chem 3:22-7, 133-44 Ja, Mr '53

Rating

Anti-freeze. Consumers Res Bul 30:25-6 N '52

ANTI-FRICTION bearings. See Bearings, Antifriction

ANTIGENS and antibodies

Agglutinin linkage and antibody globulins. G. W. G. Bird. bibliog Science 117:334 Mr 27 '53

Binding of simple substances to serum proteins and its effect on apparent antibody-hapten combination constants. D. Pressman and M. Siegel. bibliog diags Am Chem Soc J 75:686-93 F 5 '53

Distribution of allergic and blocking activity in human serum proteins fractionated by electrophoresis convection. M. H. Loveless and J. R. Cann. bibliog Science 117:105-8 Ja 30 '53

Reactions of antiserum homologous to the p-azohippurate ion. M. Siegel and D. Pressman. bibliog Am Chem Soc J 75:3436-9 Jl 20 '53

Theory of antibody-antigen reactions; theory for reactions of multivalent antigen with bivalent and univalent antibody. R. J. Goldberg. bibliog Am Chem Soc J 74:5715-25 N 20 '52

Theory of antibody-antigen reactions: theory for reactions of multivalent antigen with multivalent antibody. R. J. Goldberg. bibliog Am Chem Soc J 75:3127-31 Jl 5 '53

Use of infrared absorption techniques in the study of hypersensitivity diseases. J. T. Agnew and others. bibliog Opt Soc Am J 42:815-17 N '52

ANTIHISTAMINES

Antihistamines steady. Bsns W p45-6 Ja 3 '53

Role of anti-histamine compounds in clinical medicine. R. G. Evans. bibliog Chem & Ind p77-9 Ja 24 '53

Synthesis of *NN*-dialkyl-*N'*-benzyl(or -ethyl)-*N'*-1(or 2)-naphthylethylenediamines as potential histamine antagonists. N. B. Chapman, J. W. James and J. F. A. Williams. Chem Soc J p4024-6 O '52

2-Thymyloxymethylglyoxalines and related compounds as potential antihistamines. H. Bader and J. D. Downer. Chem Soc J p 1636-40 My '53

ANTIMALARIALS. See Malaria

ANTIMONY

Activation cross sections measured with antimony-beryllium photoneutrons. C. Kimball and B. Hamermesh. Phys R 89:1306 Mr 15 '53

Anodic behavior of antimony. S. E. S. El Wakkad and A. Hickling. bibliog J Phys Chem 57:203-6 F '53

Antimony imports, production, consumption; tabulations. Steel 132:176 Ja 5 '53

Antimony, 1952. J. P. Bradley. il Min Cong J 39:126-7 F '53

Antimony, 1952. A. Renick. Eng & Min J 154:92 F '53

Diffusion of antimony in silver single crystals. L. Slifkin and others. bibliog J Ap Phys 23:1405 D '52

Effect of arsenic and antimony on temper-brittleness. G. W. Austin and others. bibliog il pl diags Iron & Steel Inst J 173:376-86 Ap '53; Discussion. 174:358-72 Ag '53

Imports and world production of antimony, prices; tabulations. Iron Age 171:419-20 Ja 1 '53

Magnetoresistance of Mg, Cu, Sb, and Al at liquid helium temperatures. G. B. Yntema. bibliog Phys R 91:1388-94 S 15 '53

Polarizing effect of trace amounts of antimony(III) on the electrolytic oxidation of arsenic in acid solution. B. B. Baker and W. M. MacNevin. bibliog Am Chem Soc J 75:1473-5 Mr 20 '53

Self-cleaning antimony pH electrode. P. Hart and R. C. King. diag Oil & Gas J 52:113 Je 1 '53

Studies on some metal electrodes; the temperature coefficients of the copper and antimony electrodes in solutions initially free from their ions; the mode of oxidation of these metals. A. R. Tourky and E. M. Khairy. Chem Soc J p2626-33 Jl '52

Analysis

New reagent for the determination of antimony. R. Belcher and D. Gibbons. Chem Soc J p4775-7 D '52; Abstract. Chem Age (Lond) 67:562-3 O 25 '52

Polarography of tripositive antimony and arsenic; cathodic reduction of antimonous in strong hydrochloric acid and anodic oxidation of arsenite and stibnite in strong sodium hydroxide. G. P. Haight, jr. bibliog Am Chem Soc J 75:3848-51 Ag 5 '53

ANTIMONY—Analysis—*Continued*

Separation of antimony by solvent extraction. C. E. White and H. J. Rose. Anal Chem 25:351-3 F '53

Isotopes

Angular and direction-polarization correlation for Co^{60}, Cs^{124}, and Sb^{124}. R. M. Kloepper and others. bibliog il Phys R 88:695-8 N 15 '52

Disintegration of Sb^{124}. L. M. Langer and others. bibliog diag Phys R 91:338-41 Jl 15 '53

Oil products moved by radioactive tracers. R. K. Bond. il Elec West 109:88-9 O '52

Preparation of carrier-free Sb^{125} from neutron irradiated stannous chloride. J. D. Robinson and M. Kahn. bibliog Am Chem Soc J 75:2004-6 Ap 20 '53

Reinvestigation of the radioactivity of Sb^{124}. D. R. Hutchinson and M. L. Wiedenbeck. Phys R 88:699-700 N 15 '52

Prices

Nonferrous prices; tabulation. Steel 132:173 Ja 5 '53

ANTIMONY alloys

Microsegregation in the lead-antimony alloys. A. C. Simon and E. L. Jones. bibliog il diags Electrochem Soc J 100:1-10 Ja '53

Relation of the anodic corrosion of lead and lead-antimony alloys to microstructure. J. B. Burbank and A. C. Simon. bibliog il diag Electrochem Soc J 100:11-14 Ja '53

Replica method for study of the structure of lead-antimony alloys. J. Burbank. il J Metals 5:Trans 55-6 Ja '53

System InAs-InSb. C. Shih and E. A. Peretti. Am Chem Soc J 75:608-9 F 5 '53

Transistors, new use for antimony? Eng & Min J 154:99 Je '53

ANTIMONY chlorides

Acid strength of iodine monochloride, antimony trichloride and picric acid with reference to the bases pyridine and aniline in nitrobenzene. I. M. Kolthoff, D. Stŏcesocá and T. S. Lee. bibliog Am Chem Soc J 75:1834-9 Ap 20 '53

ANTIMONY compounds

Configuration of heterocyclic antimony compounds; symmetric and enantiomorphic 9-stibiafluorenes. I. G. M. Campbell. Chem Soc J p4448-53 N '52

Hydrazine; the hydrazinium salts of complex fluoro-acids of tin, antimony, and bismuth. W. Pugh. Chem Soc J p 1934-6 Je '53

ANTIMONY fluoride

Antimony(III) fluoride-dioxane addition compound. H. M. Haendler, R. H. Glazier and D. W. Breck. bibliog Am Chem Soc J 75:3845-6 Ag 5 '53

ANTIMONY mines and mining

Idaho

Hermada antimony deposit, Elmore county, Idaho. C. C. Popoff. bibliog 10pls U S Bur Mines Rep of Invest 4950:1-28 '53

ANTIMONY poisoning

Antimony poisoning in industry. L. E. Renes. bibliog plans A M A Archives Ind Hygiene & Occup Med 7:99-108 F '53

ANTIMYCIN

Chemistry of antimycin A; degradation studies. G. M. Tener and others. bibliog Am Chem Soc J 75:1100-4 Mr 5 '53

Chemistry of antimycin A; the structure of antimycic acid. G. M. Tener, E. E. van Tamelen and F. M. Strong. bibliog Am Chem Soc J 75:3623-5 Ag 5 '53

ANTIOXIDANTS

Antioxidant for waxes di-tertiary-butyl-para-cresol. R. F. Seubert and E. D. Andrews. bibliog diag Mod Packaging 26:153-4 D '52

Effect of alkyl substitution on antioxidant properties of phenols. J. I. Wasson and W. M. Smith. bibliog Ind & Eng Chem 45:197-200 Ja '53

See also

Butyl hydroxyanisole

ANTISEPTIC soap. See Soap, Antiseptic

ANTISEPTICS

See also

Listerine

ANTISERUM. See Serum

ANTI-SLIP surfaces. See Floors—Anti-slip surfaces

ANTISPASMODICS

Antispasmodics; basic esters and amides of some heterocyclic N-carboxylic acids. A. W. Weston, R. W. DeNet and R. J. Michaels, jr. Am Chem Soc J 75:4006-8 Ag 20 '53

Antispasmodics; secondary and tertiary amines which contain an ω-(2-thienyl)-alkyl group. F. F. Blicke and F. Leonard. bibliog Am Chem Soc J 74:5105-6 O 20 '52

See also

Kellin

ANTI-STATIC agents. See Electricity, Static

ANTITRUST laws. See Trusts, Industrial—Law

ANTON, Mark, 1892-

To sell gas, sell appliances; Suburban propane gas corp. pors Bsns W p 190+, cover N 22 '52

ANTRYCIDE

Synthesis of trypanocides; 4-amino-6-(2-amino-1 : 6 - dimethylpyrimidinium - 4 - amino)-1 : 2-dimethylquinolinium (antrycide) salts and related compounds. A. D. Ainley and others. Chem Soc J p59-70 Ja '53

ANTS

Chemistry of ants. G. W. K. Cavill and D. L. Ford. Chem & Ind p351 Ap 11 '53

APARTMENT houses

Air conditioning

Central system for small-unit apartment house. A. I. McFarlan. il plan Refrig Eng 61:499-501+ My '53

Peripheral system for luxury class cooling. J. Anselmo. il plans diags Refrig Eng 61:501-3+ My '53

Three and one half cents per day for heating, cooling and domestic hot water in each apartment. il Dom Eng 182:98 Ag '53

Designs and plans

Multistory buildings designed to resist earthquakes. J. J. Gould. il plans Am Concrete Inst J 23:29-36 S '51; Discussion. 24:36^{1}-36^{8} pt 2 D '52

Finance

Mutual ownership apartments; how they were financed by a Chicago group; Winchester-Hood project; with cost data. il Am Bld 74:87-9 Ag; 145-8 S '52

Heating and ventilation

Largest apartment in South chooses gas for heating and cooking. W. C. Grant. il Gas Age 112:34-5 O 8 '53

APARTMENT houses, Cooperative

Mutual ownership apartments; how they were financed by a Chicago group; Winchester-Hood project; with cost data. il Am Bld 74:87-9 Ag; 145-8 S '52

APARTMENTS

Modern apartment introduced in mill town. il plan Arch Rec 113:126-7 Ja '53

APATITE

Preparation of macrocrystalline fluorapatite containing radioactive phosphorus. G. V. Elmore and E. O. Huffman. Am Chem Soc J 74:4950 O 5 '52

APHIDS. See Plant lice

APOERYTHROIDINE

Structure of apo-β-erythroidine. M. F. Grundon, G. L. Sauvage and V. Boekelheide. bibliog Am Chem Soc J 75:2541-5 Je 5 '53

Study of the Hofmann degradation of apo-β-erythroidine. M. F. Grundon and V. Boekelheide. bibliog Am Chem Soc J 75:2537-41 Je 5 '53

APPLES

Color grading by electronics; apples in Indiana. N. W. Derosier and F. W. Billerbeck. il diag Food Eng 25:52 S '53

Parathion exposure and cholinesterase response of Quebec apple growers. K. Kay and others. bibliog A M A Archives Ind Hygiene & Occup Med 6:252-62 S '52

Selecting and processing apples for top-quality pies. L. Bisno. bibliog il diag Food Eng 24:114-16+ O; 112-14+ N '52

APPLES—*Continued*

Storage

Reflective insulation; its performance in fruit storage warehouses. G. F. Sainsbury. bibliog il diags Refrig Eng 61:383-7 Ap '53

Refrigerated apples are better apples. E. P. Christopher and others. bibliog Refrig Eng 61:173-4 F '53

Roof insulating methods; fruit cold storage buildings. G. F. Sainsbury. Refrig Eng 61: 286-91+ Mr '53

This improved CO_2 control cuts apple storage costs. F. Kedenburg, jr. il diag Food Eng 25:126-7 Mr '53

APPLES, Dried

Moistureproof shipment; General Mills transcontinental bulk shipment of dehydrated apple slices. C. E. Felt and others. il map diag Mod Packaging 26:133-6+ O '52

APPLICATIONS for positions

Ad agencies need more characters! L. Owen. Ptr Ink 242:70+ F 27 '53

Ad agency hiring squads don't want any more characters. R. E. Will. Ptr Ink 241:73 N 7 '52

Job applicants inept, says magazine CAM. D. L. Lionel. Ed & Pub 85:28 D 20 '52

Weighted application form. C. W. Voris. Personnel J 31:254-8 D '52

APPLIED mechanics. See Mechanics, Applied

APPLIED psychology. See Psychology, Applied

APPRAISALS. See Real property—Valuation; Valuation

APPRENTICES

Apprentices; survey shows need. R. M. Stroupe. il Iron Age 171:36 Ja 22 '53

Current status of apprenticeship in the patternmaking industry. W. F. Patterson. Foundry 81:210 O '53

How apprentices should be trained; report of Locomotive maintenance officers' association. Ry Mech & Elec Eng 126:82-4 N '52

Lot of the learner, yesterday and today. H. L. Matthews. il Factory Management 110: 276+ O '52

Now, the perfect training plan for maintenance apprentices; Hercules powder co. D. W. Hill and W. O. Edwards. il Factory Management 111:96-9 S '53

Training apprentices in tool engineering. S. P. Burns. il Tool Eng 31:35-8 S '53

Where's the manpower coming from? Tool Eng 30:52 Ja '53

See also

Employees, Training of

APPROXIMATE computation

Approximation problem in network synthesis. A. D. Bresler. diags Inst Radio Eng Proc 40:1724-8 D '52; Correction. 41:644 My '53

Approximations in network design. W. Saraga. diag Wireless Eng 29:280-1 O '52

Splines and gears; determining allowable involute approximations. J. Silvagi. il diags Tool Eng 30:45-50 Je '53

Theory of cooperative phenomena; detailed discussions of the cluster variation method. M. Kurata and others. bibliog diags J Chem Phys 21:434-48 Mr '53

APRICOTS

Syrian apricot and fig production lower in '52. For Comm W 49:11 Ja 26 '53

AQUATION

Tracer studies in the aquation and hydrolysis of cobalt complexes. C. A. Bunton and D. R. Llewellyn. Chem Soc J p 1692-6 Je '53

AQUEDUCTS

Aqueduct spans valleys with Yokohama water. il diags Eng N 150:53-4+ Mr 19 '53

Expansion of the Colorado River aqueduct system. R. B. Diemer. map Am Water Works Assn J 45:397-404 Ap '53

Pinning up an aqueduct roof. J. C. Pierce. il map diags Comp Air Mag 58:128-30 My '53

Roof-bolting the Delaware aqueduct. D. H. Platt. 18pls U S Bur Mines Information Circ 7652:1-9 '52

San Diego aqueduct capacity restored by chlorination. L. Streicher. il map Water & Sewage Works 100:333-7 S '53

AQUIFERS. See Water, Underground

ARAB states

Defenses

Arab collective security; treaty of Joint defence and economic co-operation (Arab defence pact). Economist 167:521-2 My 23 '53

ARABIA

Mr Dulles and the Arabs. Economist 167: 340-2 My 9 '53

See also

Petroleum industry and trade—Arabia	Petroleum pipe lines —Arabia

Commercial policy

Saudi Arabia adopts new import tariff; new customs procedures inaugurated. For Comm W 49:10 F 23 '53

Foreign relations

Great Britain

Boundary trouble in Arabia. map Economist 166:881-2 Mr 28 '53

Industries and resources

Construction and industry make new strides in Saudi Arabia. For Comm W 49:13 Je 15 '53

Sanitary affairs

Oil company sanitation engineers change age-old conditions. il Eng N 150:80+ Ap 16 '53

ARABIAN American oil company

Aramco marketing policies now seen main target of Department of justice cartel barrage. Nat Pet N 44:32-3 N 5 '52

Aramco report. D. M. Duff. il Oil & Gas J 52:153-4 Je 22 '53

ARABINOSE

Hemicelluloses of esparto grass (stipa tenacissima, L.); the arabinose-rich fraction. G. O. Aspinall and others. Chem Soc J p 1631-4 My '53

Larch ε-galactan; the solation of 3-β-L-arabopyranosyl L-arabinose. J. K. N. Jones. Chem Soc J p 1672-5 Je '53

ARABONIC acid

2 : 4 : 5-Trimethyl D-arabonamide. P. W. Kent and M. W. Whitehouse. Chem Soc J p2501-2 Ag '53

ARACHIDIC acid

Synthetic long-chain aliphatic compounds; 21-methoxyheneicosanoic acid and some related compounds. R. E. Bowman and R. G. Mason. Chem Soc J p4151-2 N '52

ARACHNIDA, Fossil

Paleozoic and mesozoic arachnida of Europe. A. Petrunkevitch. (Memoir 53) 128p, 58pls bibliog(p119-22) Geological soc. of America, 419 W. 117th st, New York 27 '53 ($3)

ARAGONITE

Aragonite rafts in Carlsbad caverns, New Mexico. D. M. Black. bibliog il Science 117: 84-5 Ja 23 '53

Phase equilibrium in the system calcite-aragonite. J. C. Jamieson. bibliog diag J Chem Phys 21:1385-90 Ag '53

ARAMAYO, Carlos Víctor

Businessmen in the news. por Fortune 46: 47 D '52

ARBITRAGE

European arbitrage again for authorized banks of eight countries. Economist 167: 531-3 My 23 '53

Exchange arbitrage at work. Economist 167: 686 Je 6 '53

ARBITRATION

See also

American arbitration association	Insurance—Adjustment of claims—Arbitration

ARBITRATION, Industrial

Arbitration; getting the most out of it. il Mod Ind 24:50-2 O '52

Bigger state role is likely. Bsns W p53-4 Jl 25 '53

Fifty years of peace; New York's Building trades employers' association. Fortune 47: 84+ F '53

If you arbitrate, win. il Bsns W p46-8 Jl 25 '53

Negotiations, arbitration, and strikes. Mo Labor R 75:433-6 O '52

Pier 57's deck stringers are awarded to dockbuilders. il Eng N 150:28-30 Ja 29 '53

Settlement of industrial disputes; is compulsion the answer? J. C. Cameron. maps Can Min J 74:70-2 Mr '53

ARBITRATION, Industrial—*Continued*

They put no limits on Philadelphia's dock priest. il Bsns W p 158-61 Je 6 '53

Use of arbitration in the resolution of labor disputes; abstract. H. G. Jahncke. Rock Prod 56:218-19 Ap '53

Winning your arbitration case; steps to be taken. H. R. Nissley. Personnel 29:253-6 N '52

See also

American arbitration association

National mediation board

ARBORS and mandrels

Arbor for short run work. diags Mill & Factory 53:121 Ag '53

Arbor stabilizer for horizontal milling machine. C. H. Winterburn. diag Mach 59:203 Ja '53

Expanding arbors utilize rubber elements. E. Mosthaf. diags Mach 59:208-9 Ag '53

Expanding mandrel holds many shapes. C. T. Bower. diags Am Mach 97:151 My 25 '53

Expansion arbor for secondary lathe operations. M. U. Beg. diag Mach 59:206 Ja '53

Mechanism for varying rotation of winding mandrels. H. B. Schell. diags Mach 60:195-6 S '53

Radial forming of sheet metal aircraft parts; Ryan aeronautical co. il Automotive Ind 109:48-9+ O 15 '53

Starch solves a tooling problem. R. S. Stanton. il Tool Eng 31:66 O '53

ARC, Electric. See Electric arc

ARC lamps. See Electric lamps, Arc

ARC welding. See Electric welding, Arc

ARCHED bridges. See Bridges, Arched

ARCHEOLOGY

Chicago radiocarbon dates. W. F. Libby. Science 116:673-81 D 19 '52

For external use; vintage wines. Sci Am 188:46 Ap '53

Lamont natural radiocarbon measurements. J. L. Kulp and others. bibliog Science 114:565-8; 116:409-14 N 30 '51, O 17 '52

See also

Excavations (archeology)

ARCHER-DANIELS-MIDLAND company

Archer-Daniels-Midland company at the golden milepost. Paint Oil & Chem R 115:10-11 O 9 '52

ARCHES

High scaffolding supports heavy stone; Cathedral of the Sacred Heart in Newark, N.J. il Constr Methods 35:60-2 S '53

Horizontal thrust on a two-pinned parabolic arch. R. Hicks. diags Engineering 176:34 Jl 10 '53

See also

Bridges, Arched

ARCHES, Concrete

Arched Indian bungalow and Mexican gas station roof are unusual types of concrete arch. il Eng N 150:57 Je 25 '53

Construction aspects of thin-shell structures. A. Tedesko. il diags Am Concrete Inst J 24:505-20 F '53

Forming arches seen cheaper than reinforcing slabs; water filters in West Hartford, Conn. il diags Eng N 149:36+ N 27 '52

Limit analysis of voussoir (segmental) and concrete arches. A. Kooharian. diags Am Concrete Inst J 24:317-28 D '52; Discussion. 25:328^{1}-328^{4} pt 2 D '53

Precast concrete offers new possibilities for design of shell structures. P. L. Nervi. il diags Am Concrete Inst J 24:537-48 F '53; Same cond. Civil Eng 23:85-8 F '53

Shell design adaptable to many uses. C. S. Whitney. il diags Civil Eng 23:89-91 F '53; Same. tabs Am Concrete Inst J 24:521-36 F '53

Skew shell utilized in unusual roof. F. Candela. il plan diags Am Concrete Inst J 24:657-64 Mr '53

Something new in framing; oblique concrete arches to carry steel catenary roof; livestock judging pavilion built at the North Carolina State fair grounds. il Eng N 149:33 O 2 '52

ARCHITECTS

ENR analyzes 1951 architects' activity. Eng N 149:149-50 N 13 '52

Homebuilders' use of architects growing stronger in many areas. il House & Home 2:49-51 S '52

Seattle; exhibit A of architect-builder collaboration. il plans diags House & Home 2:85-107 S '52

See also

American institute of architects

Directories

Membership directory, 1953-1954. 371p American institute of architects, 1735 New York av. N.W., Washington 6, D.C. '53 (pa $10)

Licenses and registration

Dodges architect-engineer distinction in suit over licensing provisions. Eng N 150:26 Ja 15 '53

Licensing laws; Colorado legislates new engineer-architect acts following court upsets. Eng N 150:24 Ap 9 '53

Professional licensing laws attacked. Eng N 150:23 Mr 19 '53

ARCHITECTS' homes. See Architecture, Domestic—Architects' homes

ARCHITECTS' offices

Architects' offices; building types study. il plans diags Arch Rec 113:140-66 Ja '53

ARCHITECTURAL acoustics. See Acoustics, Architectural

ARCHITECTURAL drawing

Structural drawings should clearly indicate framing plan. J. G. Loehler. plan Civil Eng 23:320 My '53

ARCHITECTURAL lighting. See Lighting, Architectural

ARCHITECTURAL societies

See also

American institute of architects

ARCHITECTURE

Building construction plans should provide separate category for refrigeration and air conditioning. Refrig Eng 60:1179+ N '52

See also

Acoustics, Architectural
Arches
Architects' offices
Auditoriums
Brick construction
Bridges—Architecture
Building
Building materials
Concrete construction
Factories
Floors
Foundations
Gasoline service stations—Construction and design
Grain elevators
Hangars
Health centers
Hillside architecture
Hospitals
Hotels
Housing projects
Laboratories
Moving picture theaters
Municipal centers
Naval architecture
Newspaper offices
Office buildings
Pavilions
Public buildings
Railroads—Stations
Restaurants
School buildings
Shopping centers
Stadiums
Store buildings
Strength of materials
Trusses
Walls
Wood construction

also subdivision Architecture under names of cities, e.g.

Boston
Caracas, Venezuela
Honolulu
New York (city)

Competitions

Nine architects win medals in national competition sponsored by the Massey foundation and administered by the Royal architectural institute of Canada. il Arch Rec 113:24+ Ja '53

Designs and plans

Hospitals; building types study. flow charts il plans Arch Rec 113:165-88 F '53

Tourist hotel for Istanbul, Turkey. il map plans diags Arch Rec 113:103-16 Ja '53

See also

Architecture, Domestic—Designs and plans

School buildings—Designs and plans

Details

See also

Architecture, Domestic—Details

Exhibitions

Built in USA; postwar architecture at New York's Museum of modern art. il Arch Rec 113:10-12 F '53

ARCHITECTURE—*Continued*

History

End of the modern movement in architecture. O. Lancaster. il diags Arch Rec 112:115-23 S '52

Denmark

Three concrete structures in Denmark. il plan diags Arch Rec 112:202-4 N '52

Hawaii

See also
Honolulu—Architecture

Israel

Contemporary design in Israel. S. R. Mozes. il map plans Arch Rec 112:151-8+ N '52

Turkey

Tourist hotel for Istanbul, Turkey. il map plans diags Arch Rec 113:103-16 Ja '53

ARCHITECTURE, Domestic

Designed for informal living. il plans Arch Rec 113:134-6 Ja '53

It's a different house. il diags Bsns W p 136+ F 21 '53

Planned for adult privacy and supervision of children. il plans Arch Rec 113:152-5 F '53

See also
Apartment houses
Beach houses
Concrete houses
Country houses
Farmhouses
Hillside architecture
Houses
Housing projects
Storage in the home
Tourist camps, hostels, etc.
Week-end houses

Architects' homes

Architect's house built in two stages; residence of Mr and Mrs Robson Chambers, Palm Springs, Calif. il plan Arch Rec 112:142-5 D '52

Architect's house in the country; Winston Elting house, Libertyville, Ill. il plan Arch Rec 112:168-75 N '52

Architect's house is activity-zoned; residence of Mr and Mrs Joseph Marlow, Denver, Colo. il plan Arch Rec 112:146-8 D '52

Residence of Mr and Mrs William B. Wiener. il plans diag Arch Rec 112:182-7 N '52

Competitions

Gulf states A.I.A. awards. il Arch Rec 112:22 D '52

Nebraska concrete masonry homes competition winners announced. il Am Concrete Inst J 25:sup 13 O '53; Concrete 61:40, 42 O '53; Rock Prod 56:193+ O '53

Designs and plans

Advanced design features for your 1953 houses. il plans diags Am Bld 74:96-106, cover N '52

Apartment-size house, Slingerlands, N.Y. il plan diag House & Home 2:131-3 S '52

Clever economies produced this contemporary at $7.82 a square foot. il plans diags Am Bld 74:104-6 O '52

Ferryboat house that packs punch beneath a casual cover, San Francisco. il plans House & Home 2:134-9 S '52

Front patio house offers buyers a living room with private sun court. il plan diags House & Home 2:99 S '52

Functional design can be truly inexpensive; with blueprints and quantity list of materials. il Am Bld 75:137-45 Ja '53

Glass tent; a simple program translated into a poetic design; house in Montecito, Calif. il plans diag House & Home 2:114-19 S '52

Good plan for corner lot; with blueprints and quantity list of materials. il Am Bld 74:98-103 O '52

Hillside house achieves privacy, view and outdoor living. il plans diag House & Home 2:104-7 S '52

House with four levels; with blue prints and quantity list of materials. il Am Bld 74:108-13 N '52

House without a living room. il plan Arch Rec 112:188-9 N '52

Let the heart of the house be a rectangle for economy; with blueprints and quantity list of materials. il Am Bld 75:99-105 F '53

Lot-length house can offer both privacy and outdoor living on a narrow lot. il plans House & Home 2:96-8 S '52

Mississippi house designed for hospitality. il plan Arch Rec 112:150-2 S '52

Modern interpretation reminiscent of old French quarter; house in New Orleans. il plan diag Arch Rec 112:174-8 O '52

Multi-use areas bring versatility to this house. il plan Am Bld 74:104-5 S '52

National home week demonstration house; with blueprints and quantity list of materials. il Am Bld 74:98-103 S '52

One-room, split-level house, Sands Point, Long Island. il plan diags House & Home 2:120-5 S '52

Problem-lot house gets an architect's attention to solve a combination of site difficulties. il plan diag House & Home 2:102-3 S '52

Residence for Mr and Mrs Wilbur L. Carter, jr., Greensboro, N.C. il plan Arch Rec 112:190-2 N '52

Seven houses planned for special needs, preview of a book prepared by Jean and Don Graf. il plans Arch Rec 112:193-6 N '52

They're streamlining design for '53; group of typical models. il plans Am Bld 75:148-50+ Ja '53

This award winner features modern design; house in Provo, Utah. il plans diags Am Bld 74:149-51 S '52

This contemporary can grow. il plans Am Bld 74:92-3 S '52

This home has quiet dignity; two-bedroom house on a corner lot. il plan Am Bld 74:96-7 S '52

Three-level house in Massachusetts. il plans diag Arch Rec 112:176-81 N '52

Typical Home week house for 1952; with blueprints and quantity list of materials. il Am Bld 74:100-5 D '52

Winner of home builders design contest. il plan Am Bld 74:107 N '52

See also
Apartment houses—Designs and plans
Houses, Model

Details

American Builder's better detail plate. K. R. O'Neal. il plans diags Am Bld 75:226-7 Ja '53 [cont monthly]

California

Glass tent; a simple program translated into a poetic design; house in Montecito, Calif. il plans diag House & Home 2:114-19 S '52

Florida

How a Seattle plan was adapted for Florida. il plan Am Bld 74:96-7 O '52

ARCHITECTURE, Modernistic

De Stijl, a retrospective exhibition. il Arch Rec 113:10-11 Ja '53

Functionalism; keynote of today's industrial architecture. R. L. Geddes. il Gen Elec R 56:18-21 Jl '53

ARCTIC regions

Heating Arctic buildings; design data for heating systems. G. R. Whitnah and M. H. LaJoy. map Heating-Piping 25:96-9 O '53

Heating Arctic buildings; use of reflective interior finishes. M. H. LaJoy and G. R. Whitnah. plan diag Heating-Piping 25:90-3 S '53

ARCTURUS electronics, inc.

Debentures offered. Comm & Fin Chr 177:1254 Mr 23 '53

ARDIL

Ardil protein fiber blends best with wool. il Textile World 103:125+ F '53

Method for the quantitative determination of Ardil in admixture with wool. R. Preston and N. Warburton. Textile Inst J Trans 44:T298-305 Je '53

AREA measurement

Calculation of areas, volumes, surfaces reduced to simple terms. diags Water & Sewage Works 100:R 129-31 My '53

Determining weights of piping assemblies; data sheet. J. E. Brock. diags Heating-Piping 24:111-12 D '52

Dot-reading overlay for the measurement of map areas. J. M. Robinson. Pulp & Pa of Can 54:82 F '53

AREA measurement—*Continued*

Lateral area of right cones and pyramids; reference book sheet. S. R. Heller, jr. diags Product Eng 24:205 Ja '53

ARENAS. See Stadiums

ARENE (term)

A.C.S. committee on nomenclature, spelling, and pronunciation; arene and arylene. Chem & Eng N 30:4513 O 27 '52

ARGENTINA

See also

Agriculture—Argentina

Commerce

Good crops may halt Argentine slump. G. N. Sarames. For Comm W 48:18+ N 17 '52

Economic conditions

Economic conditions abroad (cont). For Comm W 48:4 O 13; 4 D 15 '52; 49:3+ Ja 12; 6 F 9; 4+ Mr 9; 6+ Ap 13; 4+ My 11; 8 Je 8; 6 Je 29 '53

Perón seeks new roads; with tables. Economist 165:548+ N 22 '52

Will Stalin or U.S. win out with Peron? V. L. Horoth. Mag of Wall St 91:635-7+ Mr 7 '53

Economic policy

It's farmer Peron now. Bsns W p 159+ O 25 '52

Peron beckons U.S. capital. Bsns W p 151-2 Ap 11 '53

Peron maps some more of the same; second five-year plan. Bsns W p 114-15 Ja 10 '53

Perón's new five-year plan. Economist 166:494-5 F 21 '53

Economic relations

No ally for Peron. Bsns W p 145 F 28 '53

Foreign relations

Will Stalin or U.S. win out with Peron? V. L. Horoth. Mag of Wall St 91:635-7+ Mr 7 '53

Politics and government

Arson in Argentina. Economist 167:234 Ap 25 '53

Perón at bay. Economist 167:133-4 Ap 18 '53

Perón, plots and the press. Economist 167:590 My 30 '53

ARGON

Broadening and shift of the second doublet of the rubidium absorption series under different pressures of argon and helium. S. Ch'en and D. A. Kohler. bibliog Phys R 90:1019-21 Je 15 '53

Characteristics of the high current tungsten arc in argon, helium, and their mixtures. M. Skolnik and T. B. Jones. bibliog il diags J Ap Phys 23:643-52 Je '52; Same. Welding J 32:sup 55-64 Ja '53

Charge states of a helium beam in hydrogen, helium, air, and argon. E. Snitzer. bibliog diags Phys R 89:1237-44 Mr 15 '53

Comparison of shielding mixtures for gas-shielded arc welding. J. W. Cunningham and H. C. Cook. il diags Welding J 32:834-41 S '53

Discharge mechanism in argon counters. L. Colli and U. Facchini. bibliog il diag Phys R 88:987-98 D 1 '52

Drift velocity of electrons in argon and argon mixtures. J. M. Kirshner and D. S. Toffolo. bibliog il diags J Ap Phys 23:594-8 My '52

Dynamic characteristics of the plasma in discharges through rare gases. H. N. Olsen and W. S. Huxford. bibliog il diags Phys R 87:922-30 S 15 '52

Effect of water on the burning velocities of cyanogen-oxygen-argon mixtures. R. S. Brokaw and R. N. Pease. bibliog Am Chem Soc J 75:1454-7 Mr 20 '53

Electric arc in argon and helium; abstract. T. B. Jones and others. Elec Eng 72:429 My '53

Enhancement of the green continuum of Hg by a rare gas. C. Kenty and D. A. Larson. bibliog Phys R 89:180-1 Ja 1 '53

Formative time lags of uniform field breakdown in argon. G. A. Kachickas and L. H. Fisher. bibliog Phys R 91:775-9 Ag 15 '53

Heats of adsorption of nitrogen and argon on porous and on non-porous carbon adsorbents at –195°. R. A. Beebe, B. Millard and J. Cynarski. bibliog Am Chem Soc J 75:839-45 F 20 '53

Liquid argon ionization chamber measurement of the shape of the beta-ray spectrum of K^{40}. J. H. Marshall. bibliog diags Phys R 91:905-9 Ag 15 '53

Microchronometric Schlieren study of gaseous expansion from an electric spark. H. L. Olsen and others. il diag J Ap Phys 23:1157-62 O '52

Physical adsorption on single crystal zinc surfaces. T. N. Rhodin. bibliog diag J Phys Chem 57:143-8 F '53

Shape and thickness of shock fronts in argon, hydrogen, nitrogen, and oxygen. E. F. Greene and D. F. Hornig. bibliog J Chem Phys 21:617-24 Ap '53

Specific primary ionization of H_2, He, Ne, and A by high energy electrons. G. W. McClure. bibliog diags Phys R 90:796-803 Je 1 '53

Spectrum of an argon-nitrogen mixture excited in an high voltage arc. R. W. Nicholls. bibliog J Chem Phys 21:568 Mr '53

Translational dispersion in monatomic gases. R. A. Boyer. Acoustical Soc Am J 24:716-17 N '52

Isotopes

Argon 38 in pitchblende minerals and nuclear processes in nature. W. H. Fleming and H. G. Thode. Phys R 90:857-8 Je 1 '53

Average charge on the daughter atoms produced in the decay of A^{37} and Xe^{131m}. M. L. Perlman and J. A. Miskel. bibliog diags Phys R 91:899-902 Ag 15 '53

Energy levels in A^{38} from the $\mathrm{Cl}(\alpha,p)$ reaction. A. Z. Kranz and W. W. Watson. bibliog Phys R 91:1472-3 S 15 '53

Inner bremsstrahlung associated with *K* capture in A^{37}. C. E. Anderson and others. bibliog Phys R 90:606-8 My 15 '53

Manufacture

Houston oxygen co. producing argon at new million dollar plant. Manuf Rec 122:59 Ag '53

ARGONAUT welding process. See Electric welding, Arc—Inert gas shielding

ARGONNE national laboratory

Control instruments. R. W. Van Valzah. Heating-Piping 25:113-15 Mr '53

Develop 70,000 psi injection press, antiswing crane at Argonne lab. il Am Mach 97:203 F 16 '53

ARGUMENTATION

Engineer and the art of persuasion. A. Anson. Pet Refiner 32:116-18 Ja '53

ARGUS cameras, inc.

Argus Cameras' profits headed for new record. Barron's 33:26 F 9 '53

ARIZONA

See also

Copper mines and mining—Arizona

Geology—Arizona

Insurance, Life—Arizona

Insurance law—Arizona

Mines and mineral resources—Arizona

Industries and resources

Arizona; industry moves in. il Bsns W p82-4+ D 13 '52

ARIZONA public service company

Stock offered. Comm & Fin Chr 177:1149-50 Mr 16 '53

ARIZONA state college, Tempe

Students counsel a county. il Bsns W p78-80+ My 16 '53

ARKANSAS

Ham Moses; the only way out is to grow. Bsns W p72-3+ My 30 '53

See also

Electric utilities—Arkansas

Petroleum—Arkansas

Industries and resources

Aluminum leads, promotes diversity in industrial growth. il Manuf Rec 122:28-9 My '53

Arkansas crop rotation; rice, fish, and sportsmen. il Bsns W p 100-3 Jl 18 '53

ARKANSAS-MISSOURI power company

Preferred stock offered. Comm & Fin Chr 177:1898, 2002 My 4, 11 '53

Sales of natural gas to increase earnings. Barron's 33:25-6 My 18 '53

ARKANSAS power and light company

Bond offering. Comm & Fin Chr 177:2669 Je 22 '53

Food and thought for the legislators; 5th biennial legislative dinner. Elec World News ed 139:22-3 F 16 '53

ARMAMENTS

Lack of standardization stalls NATO rearmament. il Product Eng 24:196-7 Ja '53

Military designs; are they too complex? il Product Eng 24:199-204 Mr '53

See also

Armor plate

Munitions

Tanks, Military

ARMATURES

Spare armature protection; storage rack used in the Silvis, Ill., electric shop of the Rock Island. C. F. Steinbrink. il Ry Mech & Elec Eng 126:82-3 D '52

ARMCO steel corporation

Armco's mills; newest and oldest in the trade. il Bsns W p30-2 My 30 '53

Earnings, etc. Comm & Fin Chr 177:830 F 23 '53

Faith in men. W. Verity. Personnel J 31: 167-72 O '52

ARMED forces, Industrial college of the. See Industrial college of the armed forces

ARMED forces chemical association

Technical manpower commission

Target; AFRA. Chem W 71:15 D 13 '52

ARMIES

See also

Water supply for armies

ARMOFOAM. See Plastic materials, Cellular

ARMOR. See Arms and armor

ARMOR plate

Armor plate quenched rapidly, uniformly in hydraulic press. G. A. Leytze. il Iron Age 170:97-9 O 16 '52

Line welding speeds new armored hulls for the army's new personnel carrier. il Am Mach 96:120-1 O 27 '52

Metallurgical effects of oxygen cutting alloy steel (armor plate). F. C. Saacke. il Welding J 32:19-30 Ja '53

Self propelled fixtures; transfer machines handle four-ton armor plate weldment; Massey-Harris co. J. S. Kis, jr. and R. M. Olsen. il Iron Age 170:108-10 O 2 '52

ARMOUR research foundation

To expand Burma institute. Midwest Eng 5:27 Mr '53

ARMS and armor

Body armor; basic ingredients, glass cloth synthetic resin. Mech Eng 75:238 Mr '53

ARMSTRONG, George Washington, 1900-

Industry speaks up. por Bsns W p 174-6 Ap 18 '53

ARMSTRONG, John Edwin, 1886-

Railroad engineers receive Julian C. Smith medal. Roads & Eng Constr 91:102 My '53

ARMSTRONG cork company

Business economist on the prowl. il Bsns W p 134-8+ Ja 10 '53

Houseful of ideas with one aim; sell the fixup market. il Bsns W p66-8 F 14 '53

ARMSTRONG investigation. See Insurance, Life—New York (state)

ARMY chemical center, Chemical engineering club

Drafted chemists and chemical engineers at the Army chemical center. D. Macrae. J Chem Educ 30:38-9 Ja '53

ARMY home town news center

Army news specialists returning to papers. Ed & Pub 86:13 Ja 17 '53

ARMY newspapers

432 newspapers keep army informed. R. P. Taffe. Ed & Pub 86:12 Ja 3 '53

ARMY transportation corps. See United States—Army—Transportation corps

ARNDT-EISTERT synthesis

Application of the Arndt-Eistert reaction to halogenated aliphatic acids. F. Brown and W. K. R. Musgrave. Chem Soc J p2087-9 Jl '53

ARNOLD, Harry W.

Sketch. por Bus Transportation 31:63+ N '52

ARNOLD engineering development center. See United States—Air service—Arnold engineering development center

ARNOTT, Edward Griffith Fleming, 1905-

Personalities in engineering. por Westinghouse Eng 13:58 Mr '53

ARO, inc.

AF supports Aro in Congress; chiefs recommend that company be continued as operator of AEDC project. Aviation W 58:16-17 F 2 '53

House approves Aro as AEDC operator. Aviation W 58:16 Mr 30 '53

AROMATIC compounds

Acetoacetylation of aromatic compounds by boron fluoride to form β-diketones; failure with boron and aluminum chlorides. H. G. Walker, jr., J. J. Sanderson and C. R. Hauser. Am Chem Soc J 75:4109-10 Ag 20 '53

Aromatic substitution at ortho-positions. R. D. Brown. bibliog Am Chem Soc J 75:4077-8 Ag 20 '53

Dimerization reactions in sunlight. A. Mustafa. Chem R 51:1-23 bibliog(100 ref, p21-3) Ag '52

Effect of solvents on the absorption spectra of aromatic compounds. H. E. Ungnade. bibliog Am Chem Soc J 75:432-4 Ja 20 '53

Homolytic aromatic substitution; competitive experiments on the phenylation of benzene, nitrobenzene, chlorobenzene, and pyridine; partial rate factors for nitrobenzene. D. R. Augood, D. H. Hey and G. H. Williams. diags Chem Soc J p2094-102 Je '52

Interaction of dienophiles with aromatic substances. L. J. Andrews and R. M. Keefer. bibliog Am Chem Soc J 75:3776-9 Ag 5 '53

Isoaromatic product from 2-methyl-3-benzofurylmethylmagnesium chloride. R. Gaertner. Am Chem Soc J 74:5319-21 N 5 '52

Kinetics of iodine-catalyzed aromatic bromination; a new rate expression. T. Tsuruta, K. Sasaki and J. Furukawa. bibliog Am Chem Soc J 74:5995-8 D 5 '52

Lipoid-water partition coefficients of some aromatic bases. J. Cymerman-Craig and A. A. Diamantis. Chem Soc J p 1619-21 My '53

Molecular association of oxygen and aromatic substances. D. F. Evans. Chem Soc J p345-7 Ja '53

Nucleophilic displacement of fluorine from aromatic compounds. C. W. L. Bevan. Chem Soc J p655-7 F '53

Observations on a class of free radicals derived from aromatic compounds. D. Lipkin and others. bibliog Science 117:534-5 My 15 '53

Organic fluorides; the synthesis of some aromatic fluoro- and chloro-compounds. L. V. Johnson and others. Chem Soc J p4710-13 D '52

Oxidation of aromatic compounds in aqueous solution by free radicals produced by photo-excited electron transfer in iron complexes. H. G. C. Bates and N. Uri. bibliog Am Chem Soc J 75:2754-9 Je 5 '53

Polyphosphoric acid as a reagent in organic chemistry; conversion of aromatic acids and their derivatives to amines. H. R. Snyder, C. T. Elston and D. B. Kellom. Am Chem Soc J 75:2014-15 Ap 20 '53

Preparation of bis-2-cyanoethyl derivatives of aromatic primary amines, and their conversion into 1 : 6-diketojulolidines. J. T. Braunholtz and F. G. Mann. Chem Soc J p3046-51 Ag '52

Researches on monolayers; the effect of mono- and di-hydric phenols on monolayers of certain aromatic compounds. C. H. Giles and E. L. Neustädter. Chem Soc J p3806-13 O '52

S_N mechanism in aromatic compounds. J. Miller, A. L. Beckwith and G. D. Leahy. Chem Soc J p3550-6 S '52

S_N mechanism in aromatic compounds. J. Miller and V. A. Williams. Chem Soc J p 1475-9 My '53

S_N mechanism in aromatic compounds; halogen substituents. R. L. Heppolette and J. Miller. bibliog Am Chem Soc J 75:4265-8 S 5 '53

AROMATIC compounds—*Continued*

Synthesis of hydroaromatic compounds containing angular methyl groups; 1,2-cyclopentanonaphthalene series. M. S. Newman, G. Eglinton and H. M. Grotta. bibliog Am Chem Soc J 75:349-52 Ja 20 '53

Ultraviolet absorption spectra of fully aromatic esters and thiolesters. G. Cilento. bibliog Am Chem Soc J 75:3748-50 Ag 5 '53

AROMATIC hydrocarbons. See Hydrocarbons, Aromatic

AROMATIZATION

Aromatization and rearrangement of cyclic ketones; 2,3,5- and 3,4,5-trimethylphenol from isophorone. F. M. Beringer and E. J. Geering. bibliog Am Chem Soc J 75:2633-5 Je 5 '53

Aromatization and rearrangement of cyclic ketones; substituted acetanilides from cyclohexenone oximes. F. M. Beringer and I. Ugelow. bibliog Am Chem Soc J 75:2635-9 Je 5 '53

Elimination of non-angular alkyl groups in aromatisation reactions. W. Cocker and others. Chem Soc J p2355-62 Ag '53

AROSORB process. See Hydrocarbons—Separation processes

AROXYL group. See Hydroxyl group

ARROYOS

Arroyos of the Southwest. S. Judson. il diags Sci Am 187:71-4+ D '52

ARSAFLUORINIC acid

Chemistry of arsafluorinic acid. R. J. Garascia and I. V. Mattei. Am Chem Soc J 75:4589-90 S 20 '53

ARSANILIC acid

New synthesis of arsonic acids; coupling of αβ-unsaturated carbonyl compounds with diazotised arsanilic acid and 4-amino-2-nitrophenylarsonic acid. W. Freund. Chem Soc J p3072-3 Ag '52

New synthesis of arsonic acids; coupling of furan, thiophen, and β-2-thienylacrylic acid with arsanilic acid. W. Freund. Chem Soc J p3073-5 Ag '52

ARSENALS

Modern power distribution system now serves Benicia arsenal. il Power Eng 57:78-9 O '53

ARSENIC

Effect of arsenic and antimony on temper-brittleness. G. W. Austin and others. bibliog il pl diags Iron & Steel Inst J 173:376-86 Ap '53; Discussion. 174:358-72 Ag '53

Effect of pre-polarization of a platinum anode on the current obtained in the controlled potential oxidation of iron and arsenic. B. B. Baker and W. M. MacNevin. Am Chem Soc J 75:1476-7 Mr 20 '53

Indium-arsenic system; abstract. T. S. Liu and E. A. Peretti. Metal Prog 62:170 N '52

Polarization effect of trace amounts of antimony(III) on the electrolytic oxidation of arsenic in acid solution. B. B. Baker and W. M. MacNevin. bibliog Am Chem Soc J 75:1473-5 Mr 20 '53

Analysis

Determination of arsenic in fruits and vegetables. J. C. Bartlet, M. Wood and R. A. Chapman. bibliog Anal Chem 24:1821-4 N '52

Polarography of tripositive antimony and arsenic; cathodic reduction of antimonous in strong hydrochloric acid and anodic oxidation of arsenite and stibnite in strong sodium hydroxide. G. P. Haight, jr. bibliog Am Chem Soc J 75:3848-51 Ag 5 '53

Isotopes

Cross section for the reaction $Br^{81}(\gamma,\alpha)As^{77}$. J. G. V. Taylor and R. N. H. Haslam. Phys R 87:1138-9 S 15 '52

Gamma-radiation from arsenic 77. S. A. Reynolds and others. bibliog Phys R 91:333 Jl 15 '53

Gamma-ray spectrum of As^{77}. F. Rasetti and E. C. Booth. bibliog Phys R 91:1192-3 S 1 '53

Genetics of the Ge^{78}-As^{78} fission chain. N. Sugarman. bibliog Phys R 89:570-2 F 1 '53

Magnetic moments of Si^{29}, S^{33}, Zn^{67}, As^{75}, Se^{77}, Te^{123}, and Te^{125}. H. E. Weaver, jr. bibliog il diags Phys R 89:923-30 Mr 1 '53

Radiations from arsenic 77 and germanium 71. B. L. Saraf and others. bibliog diags Phys R 91:1216-18 S 1 '53

Scintillation study of As^{77} and Br^{77}. M. E. Bunker and others. bibliog Phys R 91:1021-2 Ag 15 '53

ARSENIC alloys

System InAs-InSb. C. Shih and E. A. Peretti. Am Chem Soc J 75:608-9 F 5 '53

ARSENIC chlorides

Analysis

Separation of germanium tetrachloride from arsenic trichloride by fractional distillation. H. J. Cluley and R. C. Chirnside. Chem Soc J p2275-6 Je '52

ARSENIC compounds

Organometallic and organometalloidal fluorine compounds; trifluoromethyl arsenicals. H. J. Emeléus, R. N. Haszeldine and E. G. Walaschewski. Chem Soc J p 1552-64 My '53

Organometallic and organometalloidal fluorine compounds; trifluoromethyl compounds of arsenic. G. R. A. Brandt, H. J. Emeléus and R. N. Haszeldine. Chem Soc J p2552-5 Jl '52

Thermochemistry of organo-arsenic compounds; cacodyl, As_2Me_4. C. T. Mortimer and H. A. Skinner. Chem Soc J p4331-4 N '52

Thermochemistry of organo-arsenic compounds; esters of arsenious acid. T. Charnley, C. T. Mortimer and H. A. Skinner. Chem Soc J p 1181-4 Ap '53

See also

Arsine

ARSENIC trifluoride

Microwave spectrum of arsenic trifluoride. P. Kisliuk and S. Geschwind. bibliog J Chem Phys 21:828-9 My '53

ARSENOXIDES

Antispirochetal intereference between antibiotics and arsenoxide. N. Ercoli and G. M. Carminati. bibliog Science 116:579-82 N 28 '52

ARSINE

Molecular structure of arsine. H. H. Nielsen. J Chem Phys 20:1955-6 D '52

Preparation and properties of 1 : 4-dimethylethylene-*o*-phenylenediarsine and of diethylene-*o*-phenylenediarsine. F. G. Mann and F. C. Baker. Chem Soc J p4142-7 N '52

Preparation and properties of 1-phenyl-1-phospha-2 : 3-6 : 7-dibenzo*cyclo*hepta-2 : 6-diene and its arsenic analogue. F. G. Mann, I. T. Millar and B. B. Smith. Chem Soc J p 1130-4 Ap '53

Preparation of alkylarylarsines. F. G. Mann and B. B. Smith. Chem Soc J p4544-5 N '52

Studies in co-ordination chemistry; a ditertiary arsine nickel carbonyl and some halogen derivatives. R. S. Nyholm. Chem Soc J p2906-10 Jl '52

Tri-tertiary arsine and its metal complexes. G. A. Barclay and R. S. Nyholm. Chem & Ind p378-9 Ap 18 '53

ARSON

Arson convictions show 50 per cent rise in past year. L. S. Harvey. East Underw 54:29 My 15 '53; Same. Weekly Underw 168:1538 Je 6 '53

Arson problem in Louisiana woodlands. Paper Tr J 137:29-30 Jl 31 '53

Leniency helps; arson profitable at Miami Beach. Nat Underw 56:6 N 13 '52

ARSONIC acids

New synthesis of arsonic acids; coupling of αβ-unsaturated carbonyl compounds with diazotised arsanilic acid and 4-amino-2-nitrophenylarsonic acid. W. Freund. Chem Soc J p3072-3 Ag '52

New synthesis of arsonic acids; coupling of furan, thiophen, and β-2-thienylacrylic acid with arsanilic acid. W. Freund. Chem Soc J p3073-5 Ag '52

Some derivatives and analogs of 4-biguanidophenylarsonic acid. R. L. McGeachin. bibliog Am Chem Soc J 75:973-5 F 20 '53

ART

See also

Architecture
Ceramic art
Design
Photography

Exhibitions

$25-million worth of art blankets Houston. il Bsns W p32-3 D 6 '52

ART galleries and museums

Lighting

Flexible lighting for an art gallery; Mead art museum of Amherst college. il Illum Eng 47:666 D '52

ART metal construction company

Three by nine analysis of some unlisted stocks. H. J. King. Comm & Fin Chr 177: 1208 Mr 19 '53

ARTERENOL

Synthesis of radioactive noradrenaline. R. W. Schayer. Am Chem Soc J 75:1757-8 Ap 5 '53

ARTERIOSCLEROSIS

Effects of ferric chloride and bile on plasma cholesterol and atherosclerosis in the cholesterol-fed bird. M. D. Siperstein and others. Science 117:386-9 Ap 10 '53

Mast cells and susceptibility to experimental atherosclerosis. P. Constantinides. bibliog Science 117:505-6 My 8 '53

Test utilizing the *in vitro* clearing of milk to determine the presence of lipid clearing factor in plasma. L. Schwartz and others. bibliog Science 117:482-3 My 1 '53

ARTHRITIS

Arthritis and growth. Sci Am 188:58+ My '53

Experimental production of arthritis in rats by hypophyseal growth hormone. W. O. Reinhardt and Choh Hao Li. bibliog il Science 117:295-7 Mr 20 '53

Major health problem. Safety Maint & Prod 105:59-60 Mr '53

Psychogenic factors in arthritis. Ind Med 22:44 Ja '53

ARTIFICIAL heart. See Heart, Artificial

ARTIFICIAL respiration. See Respiration, Artificial

ARTIFICIAL rubber. See Rubber, Artificial

ARTISTS

Biographies

Who's who in American art. D. B. Gilbert, ed. 557p $17.50 R. R. Bowker co, 62 W. 45th st, New York 19 '53

ARTISTS, British

Who's who in art. 6th ed 618p 50s Art trade press, Salisbury square, London '52

ARYL group

Formation of sulphites, phosphites, and phosphates of alcohols containing an aryl group. W. Gerrard and B. D. Shepherd. Chem Soc J p2069-74 Jl '53

Migration ratios in the rearrangement of 2,2-diarylethanols. J. G. Burr, jr. and L. S. Ciereszko. bibliog Am Chem Soc J 74: 5426-30 N 5 '52

Migration ratios observed in the reaction of diarylethylamines with nitrous acid. L. S. Ciereszko and J. G. Burr, jr. bibliog Am Chem Soc J 74:5431-3 N 5 '52

ASBESTOPRENE. See Sealing compositions

ASBESTOS

Asbestos buying plans are completed by US. Oil Paint & Drug Rep 163:7 Ja 5 '53

Asbestos in Canada. Can Chem Process 37: 18+ S '53

Asbestos industry, southern Africa. M. C. G. Meyer. Can Min J 74:72-3 Ag '53

Asbestos, 1952. W. A. Rukeyser. Eng & Min J 154:104-6 F '53

Asbestos survey. Rock Prod 55:148+ O '52

Asbestos waste treatment solves pollution problem. R. W. Simpson and others. flow diag il diags Water & Sewage Works 100: 248-52 Je '53

Middle East's only asbestos mine operated on island of Cyprus. il Min Eng 5:879 S '53

Non-metallics. il Eng & Min J 154:162-3 Jl '53

Analysis

Analysis of cotton-glass asbestos yarn. C. L. Hilton. bibliog Textile Res J 23:401-4 Je '53

ASBESTOS cement pipes. See Pipes, Asbestos cement

ASCARIDOLE

Ascaridole glycol anhydride. M. Matic and D. A. Sutton. Chem Soc J p349-50 Ja '53

ASCORBIC acid. See Vitamins—Vitamin C

ASH handling

Handling coal and ashes economically in smaller plants. D. M. Given and C. A. Marshall. il diags Mech Eng 75:125-9+ F '53; Same cond. Min Eng 5:685-7 Jl '53

Water can carry your coal and ash. W. G. Hudson. diags Power Eng 57:92-3+ Jl '53

ASIA

Soviet central Asia. map Economist 165:310+, 394-6 N 1-8 '52

Stalin's Moslem empire. Economist 165:363-4 N 8 '52

See also

Far East

Bibliography

Bibliography on southwestern Asia. H. Field. 106p pa $3 Univ. of Miami press, Coral Gables, Fla. '53

Politics and government

Other side of the truce; must peace in Asia finally lose China to communism? J. Chamberlain. Barron's 33:5+ Ap 6 '53

ASIA, Southeastern

Selling to southeast Asia? diplomacy with dealers is key. Ind Marketing 38:51 Mr '53

See also

Airlines—Asia, Southeastern

Banks and banking—Asia, Southeastern

Insurance—Asia, Southeastern

Bibliography

Southeast Asia, an annotated bibliography of selected reference sources. C. Hobbs, comp. 163p pa $1.15 Card division, Library of Congress, Washington 25 '52

Economic conditions

Upheaval in southeast Asia. V. L. Horoth. map Mag of Wall St 92:19-21+ Ap 4 '53

ASPARAGINE

Infra-red absorptions of asparagine and glutamine. M. Davies and J. C. Evans. Chem Soc J p480-2 F '53

Syntheses of DL-aspartic acid and DL-asparagine via their N-benzyl derivatives. M. Frankel, Y. Liwschitz and Y. Amiel. Am Chem Soc J 75:330-2 Ja 20 '53

Synthesis of poly-Nβ-benzyl-*dl*-asparagine. M. Frankel, Y. Liwschitz and A. Zilkha. bibliog Am Chem Soc J 75:3270-1 Jl 5 '53

ASPARTIC acid

Dehydration and racemisation of *N*-acyl-L-aspartic acids by acetic anhydride. C. C. Barker. Chem Soc J p453-6 F '53

Enzymatic phosphorylation of *l*-aspartate. S. Black and N. M. Gray. bibliog Am Chem Soc J 75:2271-2 My 5 '53

Mannich bases of acylaminomalonates, and a synthesis of DL-aspartic acid. R. O. Atkinson. Chem Soc J p3317-18 Ag '52

2-Mercaptoglyoxalines; the preparation of di-*C*-substituted 2-mercaptoglyoxalines from aspartic acid. A. Lawson. Chem Soc J p 1046-52 Ap '53

Role of N^{15} glycine, glutamine, aspartate and glutamate in hypoxanthine synthesis. J. C. Sonne, I. Lin and J. M. Buchanan. Am Chem Soc J 75:1516-17 Mr 20 '53

Stability of metal chelates; iminopropionic-acetic and aspartic acids. S. Chaberek, jr. and A. E. Martell. bibliog Am Chem Soc J 74:6021-5 D 5 '52

Syntheses of DL-aspartic acid and DL-asparagine via their N-benzyl derivatives. M. Frankel, Y. Liwschitz and Y. Amiel. Am Chem Soc J 75:330-2 Ja 20 '53

ASPEN

Extractives of aspenwood and bark. B. L. Browning and L. O. Bublitz. bibliog Tappi 36:418-19 S '53

Hemicelluloses present in aspen wood (populus tremuloides). J. K. N. Jones and L. E. Wise. Chem Soc J p2750-6, 3389-93 Jl, S '52

Purified hardwood pulps for chemical conversion; aspen sulphite and prehydrolysis-sulphate pulps. F. A. Simmonds and others. bibliog Tappi 36:103-10 Mr '53

ASPERGILLIC acid

Pyrazine derivatives, and aspergillic acid. J. J. Gallagher and others. Chem Soc J p4870-4 D '52

ASPERGILLIN

Chemistry of fungi; asperxanthone and a preliminary examination of aspergillin. N. A. Lund, A. Robertson and W. B. Whalley. Chem Soc J p2434-9 Ag '53

ASPERGILLUS

Itaconic acid by fermentation with aspergillus terreus. V. F. Pfeifer, C. Vojnovich and E. N. Heger. bibliog flow sheet Ind & Eng Chem 44:2975-80 D '52

ASPHALT

Electricity is an efficient chore boy; heating of asphalt and fuel oil in plant of S&F construction co. W. L. King. il Elec West 109:92 O '52

Study of asphalts and asphaltic materials. G. W. LeMaire. Colorado School of Mines [Golden] Quarterly v48 no 2:1-89 bibliog(p87-9) '53 (pa $1.50)

Tall oil in asphalt products. bibliog(52 titles) Tappi 36:sup 108A-11A Ag '53

Thermostats show level of asphalt. diag Eng N 150:64 Ja 8 '53; Nat Safety N 67: 48+ Ja '53; Safety Maint & Prod 105:54 F '53

Use of asphalt emulsions in the manufacture of insulating board products. J. J. Perot. Tappi 36:69-70 F '53

See also

Bituminous materials

Bituminous sand

Analysis

Determination of asphalt content of a lube crude oil residuum. F. J. Higgins. il Pet Eng 25:C65-6 Ap '53

ASPHALT floors. See Floors, Asphalt

ASPHALT plants

Plant of Dunkirk asphalt corp. il Roads & Sts 95:82-4 N '52

Special drives, twin dryer hook-up features of this asphalt plant; Tampa sand and materials co. il Roads & Sts 96:105 S '53

ASPHALT roofing. See Roofing, Asphalt

ASPIRIN

Hydrolysis of aspirin in guinea-pig plasma. L. J. Edwards. Chem Soc J p4114-18 N '52

Internecine strife. il Chem W 71:71-2 N 29 '52

ASSAYING

Precious metal assaying. Chem Age (Lond) 68:235-40 F 7 '53

ASSEMBLING methods

Air press assembles tiny switches; Micro division, Minneapolis-Honeywell regulator co. P. R. Enzler. il diags Am Mach 97:142-3 F 16 '53

Appliance assembly; novel device up-ends refrigerators on assembly line. Iron Age 171:242+ My 7 '53

Assembly; bushings and dowel pins accurately positioned in castings. il Iron Age 171:152+ Mr 19 '53

Assembly train; Lockheed uses tractor to keep line moving. il Iron Age 171:177-8 F 5 '53

Automatic assembly of small parts saves money. W. G. Patton. il Iron Age 171:206-7 My 7 '53

Automatic machine assembles, inspects small parts; carburetor assembly lines at the Rochester products division plant of General motors corp. J. J. Obrzut. il Iron Age 171: 236-8 My 7 '53

Automation assures precision assemblies. C. F. Hautau. il diags Tool Eng 31:37-42 Ag '53

Clamp for piston assembly. Steel 131:316+ O 13 '52

Engineered fastening for reduced materials handling. L. H. Flora. il diags Tool Eng 30:57-60 Mr '53

Fasteners provide opportunity to cut assembly costs one-third. il Mill & Factory 53:152 O '53

Forum on technical progress; joining and assembling. il diags Steel 132:406-7+ Ja 5 '53

Hopper feeds needles to bearings. H. Chase. il Steel 132:79+ Ja 26 '53

Latest techniques in body assembly; Dodge division of Chrysler corp. T. MacNew. il Automotive Ind 108:32-3+ F 15 '53

Merry-go-round conveyor speeds assembly; Stewart-Warner corp. D. C. Peterson. il plan Factory Management 111:100-1 Ja '53

Multi-fixture table speeds soldered assemblies; dual carburetor floats at Rochester products division of General motors corp. il Iron Age 171:101 Ja 22 '53

Selecting materials for small assemblies; Hunter spring co. L. B. Glaser. il diags Materials & Methods 37:101-3 My '53

Simple wooden fixture is key to low-cost handling of heavy assembly; Bendix radio division. E. L. Allman. il Factory Management 111:94-5 Jl '53

Trying out prefab methods on furniture; Kroehler mfg. co. il Bsns W p 132-4+ Je 13 '53

What's ahead the next ten years in joining and assembly. Am Mach 96:F-F9 Mid-N '52

When electronic assembly goes automatic. flow chart il Factory Management 111:264+ Ja '53

See also

Automobile assembly plants

ASSESSMENT

Assessment procedure for public utilities property; panel discussion. Munic Util 91: 66+ Ap '53

ASSETS, Fixed

Fully-depreciated fixed assets in active use. J Account 95:77 Ja '53

More accurate method of accounting for fixed assets; abstract. A. B. Hossack. J Account 94:484-6 O '52

Taking emergency facilities into property accounting. J. M. Whalen. N A C A Bul 34: 670-8 Ja '53

ASSETS, Liquid

Estimated liquid asset holdings of individuals and businesses; with figures by type of holder, 1939-1952. Fed Res Bul 39:719-20 Jl '53

1952 survey of consumer finances; income, selected investments and short-term debt of consumers; with technical note and supplementary tables. Fed Res Bul 38: 974-1001 S '52

Public and private debt vs. savings; Institute of life insurance report; with table of liquid assets and debts, 1939-51. Comm & Fin Chr 176:1646 O 30 '52

ASSOCIATED equipment distributors

Annual meeting, Chicago, Feb. 1-5. Roads & Sts 96:78-9 Mr '53

Annual meeting, 34th, Chicago. Eng N 150: 60-1 F 12 '53

Annual meeting, 34th, Chicago, Feb. 1-5. Roads & Eng Constr 91:114-21+ F '53

A.E.D. and C.A.E.D. co-operation. S. J. Oechsle. Roads & Eng Constr 91:140 My '53

ASSOCIATED general contractors of America

Annual meeting, Miami. Eng N 150:23-4 Ap 2 '53

Annual meeting, 34th, Miami, March 23-26. Roads & Sts 96:66-70 My '53

Midyear meeting, White Sulphur Springs. Eng N 149:24-5 S 18 '52; Roads & Sts 95: 104+ O '52

ASSOCIATED hospital service

Pink retires as head of associated hospitals. East Underw 54:24 Ja 2 '53

ASSOCIATED press

AP editors split 52-55 on political opinion polls. R. U. Brown. Ed & Pub 85:7-8+ N 15 '52

Fewer complaints in APME reports. Ed & Pub 85:10 O 25 '52

Sprague tells global press responsibility. Ed & Pub 86:57 F 14 '53

ASSOCIATED traffic clubs of America

Annual meeting, 29th, St Paul, Oct. 20-22. Ry Age 133:91-3 N 3 '52

Annual meeting, 30th, Boston, Sept. 22. Ry Age 135:11-12 O 5 '53

ASSOCIATED transport, inc.

Overhauling puts Associated on its feet. il Bsns W p 190-3 Mr 28 '53

ASSOCIATION and associations

See also

American chemical society

Cooperative associations

Corporations

Trade associations

Trade unions

Directories

Directory of state-wide Kansas associations. R. D. Greeson, comp. 31p School of business, Bur. of business research, Univ. of Kansas, Lawrence '53

ASSOCIATION and associations—*Continued*

Kansas

Directory of state-wide Kansas associations. R. D. Greeson, comp. 31p School of business, Bur. of business research, Univ. of Kansas, Lawrence '53

ASSOCIATION of American library schools

Directory of the Association of American library schools, 1952. R. H. Shove, comp. 3d ed 45 l Univ. of Minnesota, Division of library instruction, Minneapolis '53

ASSOCIATION of American railroads

Co-operation between A.A.R. divisions. V. N. Dawson. Ry Loco & Cars 127:71 Ag '53

Highlighting the Atlantic City railroad convention. il diag Diesel Power 31:40-3 Jl '53

Hollar of the A.A.R. Ry Age 134:50-1 Je 29 '53

Accounting section

Annual meeting, 59th, Chicago, June 1-4. Ry Age 134:122-3 Je 15 '53

Communications section

Annual meeting, 29th, Edgewater Park, Miss. Oct. 21-23. Ry Age 133:98-100 N 3 '52

Electrical sections

Annual meeting, Chicago, Sept. 15-17; with committee reports. Ry Mech & Elec Eng 126:107-20 N '52

Annual meeting, 2d, Atlantic City, June 24-26. Ry Age 135:106-8 Jl 13 '53

Annual meeting, 2d, Atlantic City, June 24-26; with committee reports. Ry Loco & Cars 127:75-87+ Ag '53

Freight loss and damage prevention section

Annual meeting, 1st, Chicago, May 13. Ry Age 134:15-16 Je 1 '53

Freight station section

Annual meeting, Detroit, May 26-28. Ry Age 134:114-16 Je 15 '53

Mechanical division

Annual meeting, Atlantic City, June 22-26; with committee reports. Ry Age 135:98-103 Jl 13 '53; Ry Loco & Cars 127:55-74 Ag '53

Protective section

Annual meeting, 33d, Williamsburg, Va. May 12-14. Ry Age 134:14 Je 1 '53

Purchases and stores division

Annual meeting, 27th, Atlantic City, June 22-26. Ry Age 135:104-5 Jl 13 '53

Safety section

Annual meeting, 33d, St Louis, June 2-4. Ry Age 134:124-6 Je 15 '53

Signal section

Annual meeting, 55th, St Louis, Sept. 28-30. Ry Age 135:86+ O 5 '53

Treasury division

Annual meeting, Mackinac Island, Mich. Sept. 16-19. Ry Age News ed 135:28-31 S 28 '53

ASSOCIATION of American soap and glycerine producers

Annual meeting, 26th, New York, Jan. 27-29. Chem & Eng N 31:555 F 9 '53

Annual meeting, 26th, New York, Jan. 27-29. Oil Paint & Drug Rep 163:7 F 2 '53

Soap association defended against antitrust charges. Oil Paint & Drug Rep 162:7 D 22 '52

ASSOCIATION of asphalt paving technologists

Annual meeting, Houston. Roads & Eng Constr 91:85+ Ap '53

ASSOCIATION of bank women

Annual convention, 30th, Atlantic City, Sept. 25-28. Banking 45:97+ N '52

Annual convention, 30th, Atlantic City, Sept. 25-28. Trusts & Estates 91:698 O '52

Annual convention, 30th, Atlantic City, Sept. 25-28; program. Banking 45:134 S '52

ASSOCIATION of British chemical manufacturers

Annual general meeting and dinner, London, Oct. 8-9. Chem Age (Lond) 67:527-32 O 18 '52; Chem & Ind p 1032, 1055 O 18-25 '52

ASSOCIATION of casualty and surety companies

Annual meeting, New York, May 12. East Underw 54:38+ My 15 '53; Nat Underw 57:16 My 14 '53; Weekly Underw 168:1329+ My 16 '53

Use of motor cars creates huge problem. J. D. Dorsett. Weekly Underw 168:64+ Ja 3 '53

ASSOCIATION of Catholic trade unionists

How Catholics work in the labor movement. il Bsns W p 122-4 Jl 18 '53

ASSOCIATION of desk and derrick clubs of North America. See Women in the petroleum industry

ASSOCIATION of German foundrymen

Annual meeting, 43d, Dusseldorf, Sept. 25-27. Foundry 80:224 D '52

ASSOCIATION of insurance advertisers

Annual convention, Chicago. Nat Underw 57:36 My 28 '53; Nat Underw (Life ed) 57:12 My 29 '53

ASSOCIATION of iron and steel engineers

Annual convention and iron and steel exposition, Cleveland, Sept. 30-Oct. 3; pictorial review. Iron & Steel Eng 29:130-1 O '52

Annual meeting, Cleveland, Sept. 30-Oct. 3. Iron Age 170:102-4 O 16 '52

Annual meeting, Cleveland, Sept. 30-Oct. 3; abstracts of technical papers. Steel 131:102+ O 6 '52

Annual meeting, Pittsburgh, Set. 28-Oct. 3; program, chairman, abstracts of papers. Iron & Steel Eng 30:137-57 S '53

Newly elected officers and directors, national committees, 1953. Iron & Steel Eng 30:118-22 Ja '53

Rolling mill committee annual spring conference, Buffalo, May 18-19; program and abstracts of papers. Iron & Steel Eng 30:103-10 Ap '53

ASSOCIATION of life insurance counsel

Annual meeting, New York. Nat Underw (Life ed) 56:1+ D 19 '52; Weekly Underw 167:1662 D 20 '52

Spring meeting, Hot Springs, Va. Weekly Underw 168:1439 My 23 '53

ASSOCIATION of life insurance medical directors of America

Annual meeting, Los Angeles. Nat Underw (Life ed) 56:8 O 24; 5 O 31 '52

ASSOCIATION of national advertisers

National Advertisers plan larger budgets in 1953. Sales Management 69:60+ O 15 '52

Spring meeting, 44th, Hot Springs, Va. Ptr Ink 242:10-11, 31 Mr 27 '53

ASSOCIATION of newspaper classified advertising managers

Bill Leopard is new ANCAM president. D. L. Lionel. Ed & Pub 86:30 F 7 '53

ASSOCIATION of public lighting engineers

Annual meeting, Harrogate; abstracts of papers. Elec R (Lond) 151:615-16, 694-6 S 19-26 '52

ASSOCIATION of railroad advertising managers

Annual meeting, White Sulphur Springs, Jan. 22-24. Ry Age 134:14-15 F 9 '53

ASSOCIATION of special libraries and information bureaux

Action taken by Aslib to implement the Scientific information conference's proposals. L. Wilson. Aslib Proc 4:241-5; Discussion. 245-54 N '52

Aeronautical information conference, 2d, Cranfield, March 27-30. Engineering 175:459-60 Ap 10 '53

Annual conference, 27th, Derbyshire, Sept. 19-22. Special Lib 43:364-5 N '52

Engineering and aeronautical information services; 27th annual conference; discussion. Engineering 174:403 S 26 '52

Report of the aeronautical group. Engineer 194:668 N 14 '52

Work of ASLIB in 1952. Engineering 175:660 My 22 '53

ASSOCIATION of stock exchange firms

Exchange firms association elects officers. Comm & Fin Chr 176:1950 N 20 '52

ASSOCIATION technique maritime et aeronautique

Annual meeting, 52d, Paris, June 1-6; with abstracts of papers. Engineer 195:868-70 Je 19 '53

ASTATINE

Alpha-branching of AcK and the presence of astatine in nature. E. K. Hyde and A. Ghiorso. bibliog Phys R 90:267-70 Ap 15 '53

ASTEROIDS

Relativity precession of the asteroid Icarus. J. J. Gilvarry. Phys R 89:1046 Mr 1 '53

ASTHMA

Smoking and asthma. Safety Maint & Prod 105:45 F '53

Use of infrared absorption techniques in the study of hypersensitivity diseases. J. T. Agnew and others. bibliog Opt Soc Am J 42: 815-17 N '52

ASTIN, Allen Varley, 1904-

Astin case continues to simmer. Chem & Eng N 31:1986+ My 11 '53

Astin dismissal. Science 117:sup3 Ap 17 '53

Astin uproar. Fortune 47:108+ My '53

Bureau of standards case. Sci Am 188:53 My '53

Dismissal of NBS head. por Chem & Eng N 31:1524-6+ Ap 13 '53

Test case for career men. por Bsns W p34 Ap 11 '53

Unrest at NBS. Chem & Eng N 31:1648+ Ap 20 '53

Weeks keeps Astin as NBS head until new tests are completed. Chem & Eng N 31: 1752-4 Ap 27 '53

Weeks reinstates Astin; NBS shakeup in making. Oil Paint & Drug Rep 164:3+ Ag 31 '53

ASTRONAUTICAL federation, International. See International astronautical federation

ASTRONOMICAL instruments

Radio stars; English radio telescope. A. C. B. Lovell. il diags Sci Am 188:17-21 Ja '53

See also

Coronagraph

Spectrograph

Telescope

ASTRONOMICAL observatories

Optical problems at the Palomar observatory. I. S. Bowen. il Opt Soc Am J 42:795-800 N '52

Optimum location of a photoelectric observatory. J. B. Irwin. bibliog map Science 115: 223-6 F 29 '52; Discussion. 115:655-6; 116: 572 Je 13, N 21 '52

See also

Greenwich royal observatory

ASTRONOMICAL photography

Planets from Palomar. A. Beach. il diag Sci Am 188:17-21 F '53

ASTRONOMICAL photometry. See Photometry, Astronomical

ASTRONOMICAL research

Research at Mount Wilson and Palomar. P. W. Merrill. Science 116:sup3 N 21 '52

Soviet astronomy. Sci Am 188:56+ My '53

ASTRONOMICAL union, International. See International astronomical union

ASTRONOMY

See also

Radio astronomy

Stars

Sun

ASTROPHYSICS

Arbitrary concentrations of matter and the Schwarzschild singularity. A. Raychaudhuri. bibliog Phys R 89:417-21 Ja 15 '53

Need for accurate data on cosmic abundance of the elements cited. Chem & Eng N 30: 4949-50 N 24 '52

Spectroscopy on a cosmic scale. E. I. Stearns. il J Chem Educ 29:573-5 N '52

See also

Spectrum, Solar

Stars

ASYMPTOTIC expansions

Asymptotic expansion of the Whittaker's function $W_{k,m}(z)$ for large values of k, m, z. C. Chang and others. bibliog diags Franklin Inst J 255:215-36, 319-31 Mr-Ap '53

ATABRINE. See Atebrin

ATCHISON, Topeka and Santa Fe railway

Railroad securities. Comm & Fin Chr 177:1236 Mr 19 '53

Santa Fe's gross revenues top $600 million. Barron's 33:21 Mr 16 '53

ATEBRIN

Influence of X-irradiation and atabrine upon feathering in the chick. C. D. Douglass and others. il Science 117:274 Mr 13 '53

ATHABASCA uranium mines, ltd. (Canada)

Stock offering. Comm & Fin Chr 178:293-4 Jl 27 '53

ATHEROSCLEROSIS. See Arteriosclerosis

ATHLETICS

See also

Baseball

ATHLETICS buildings. See Gymnasiums

ATISINE

Evidence of an ethanolamine structure in the garrya alkaloids and atisine; and a partial synthesis of garryine. M. F. Bartlett and others. Chem & Ind p323 Ap 4 '53

ATLANTA

See also

Wages—Atlanta

Water supply

Water supply problems in annexed areas; Atlanta's improvement program. P. Weir. Am Water Works Assn J 45:551-5 Je '53

ATLANTIC CITY

Atlantic City to welcome twenty-first EEI convention. il Edison Elec Inst Bul 21:75-7 Mr '53

ATLANTIC coast

Recent changes in sea level along the New England coast; new archaeological evidence. E. S. Barghoorn. bibliog Science 117:597-8 My 29 '53

ATLANTIC coast line railroad

Railroad securities. Comm & Fin Chr 176: 2513 D 25 '52

ATLANTIC coastal plain. See Coastal plains

ATLANTIC ocean

Charting the greatest river in the world. F. G. W. Smith and H. Chapin. il U S Naval Inst Proc 78:972-81 S '52

Seismic refraction measurements in the Atlantic ocean; Bermuda, Bermuda rise, and Nares basin. C. B. Officer and others. maps diags Geol Soc Bul 63:777-808, pl 1-4 bibliog(p807-8) Ag '52

ATLANTIC pact. See North Atlantic treaty organization

ATLANTIC state shippers advisory board

Annual meeting, Baltimore, Jan. 14-15. Ry Age 134:52-3 Ja 26 '53

ATLAS corporation

Dividend in Airfleets stock; to acquire Italian superpower shares. Comm & Fin Chr 176: 1961 N 24 '52

Teaming up? Bsns W p 128+ Jl 25 '53

ATLASES

Collier's world atlas and gazetteer. 472p $15 P. F. Collier & son, 640 5th av, New York 19 '53

Hammond's library world atlas. rev ed 312p $5.95 C. S. Hammond & co, 515 Valley st, Maplewood, New Jersey '53

ATMOSPHERE

Air mass between an observer and outer space. E. C. Pressly. diag Phys R 89:654-5 F 1 '53

Atmospheric characteristics of greatest human significance in aviation of the next decade. P. A. Campbell. diags Aeronautical Eng R 12:50-5 Ap '53

Constants in the equation for atmospheric refractive index at radio frequencies. E. K. Smith, jr. and S. Weintraub. bibliog J Res Nat Bur Stand 50:39-41 Ja '53

Experimental study of atmospheric transmission. J. A. Curcio and others. diag Opt Soc Am J 43:97-102 F '53

Highly stable microwave oscillator and its application to the measurement of the spatial variations of refractive index in the atmosphere. L. Essen. bibliog diags Inst E E Proc 100 pt 3:19-24 Ja '53

Influence of field of view on measurements of atmospheric transmission. H. S. Stewart and J. A. Curcio. diag Opt Soc Am J 42: 801-5 N '52

Infrared transmission of atmospheric windows. T. Elder and J. Strong. Franklin Inst J 255:189-208 bibliog(p205-8) Mr '53

Method for the determination of atmospheric transmission functions from laboratory absorption measurements. G. N. Plass. Opt Soc Am J 42:677-83 S '52

See also

Air

Auroras

ATMOSPHERE, Upper

Atmospheric window, 16 to 24 microns, and the second fundamental of nitrous oxide. A. Adel. il Phys R 88:128 O 1 '52

Atmospheric winds and temperatures to 50-kilometers altitude as determined by acoustical propagation studies. J. M. Richardson and W. B. Kennedy. bibliog map diags Acoustical Soc Am J 24:731-41 N '52

Calculation of the path of a radio-ray in a given ionosphere. A. H. De Voogt. diags Inst Radio Eng Proc 41:1183-6 S '53

Chemical exploration of the stratosphere. F. A. Paneth. bibliog map diags 4pls Chem Soc J p3651-62 S '52

COZI; communication zone indicator. L. C. Edwards. il diags Electronics 26:152-5 Ag '53

Continuous layer formation in the atmosphere under the influence of solar radiation. H. K. Kallmann. bibliog Phys R 90:153-4 Ap 1 '53

Effects of the atmosphere on the penetrating cosmic radiation. R. L. Chasson. bibliog Phys R 89:1255-6 Mr 15 '53

Formation of the *D* layer. K. Watanabe and others. bibliog Phys R 90:155-6 Ap 1 '53

Heat transfer to bodies traveling at high speed in the upper atmosphere. J. R. Stalder and D. Jukoff. bibliog diag U S Nat Advisory Com for Aeronautics 1949:455-67 '51

High altitude research. E. Burgess. il diags Engineer 194:338-40, 370-3 S 12-19 '52

Ionospheric storm-warning services. C. M. Minnis. Wireless Eng 30:103-8 My '53

Jet stream. W. J. Kotsch. map diags U S Naval Inst Proc 78:1348-53 D '52

Jet stream from 10,000 to 40,000 feet above the surface of the earth. J. Namias. il diags Sci Am 187:26-31 O '52

Jet was chasing its tail; jet stream, recently discovered meteorological phenomenon. il map Gen Elec R 56:42-7 Jl '53

Low-frequency ionosphere recorder. il diag Tele-Tech 12:337 Je '53

New kind of radio propagation at very high frequencies observable over long distances. D. K. Bailey and others. diag Phys R 86:141-5 Ap 15 '52; Abstract. Electronics 25:102-3 Je '52; Discussion. H. Johnson. 26:368-9 Ja '53

Prediction of the nocturnal duct and its effect on uhf. L. J. Anderson and E. E. Gossard. Inst Radio Eng Proc 41:136-9 Ja '53

Pressures, densities, and temperatures in the upper atmosphere. bibliog Phys R 88:1027-32 D 1 '52

Production of the *E*-layer in the oxygen dissociation region in the upper atmosphere. D. C. Choudhury. bibliog Phys R 88:405-8 O 15 '52

Radiofrequency mass spectrometer for upper air research. J. W. Townsend, jr. il diags R Sci Instr 23:538-41 O '52

Reflection and absorption of radio waves in the ionosphere. W. R. Piggott. bibliog diags Inst E E Proc 100 pt 3:61-72 Mr '53

Review of present knowledge of the ionospheric propagation of very-low, low- and medium-frequency waves. F. A. Kitchen and others. Inst E E Proc 100 pt 3:100-8 bibliog(70 titles, p 107-8) Mr '53

Review of vhf ionospheric propagation. M. G. Morgan. bibliog Inst Radio Eng Proc 41:582-7 My '53

Self-consistent calculation of the dissociation of oxygen in the upper atmosphere; three-body recombinations. H. E. Moses and T. Wu. Phys R 91:1408-9 S 15 '53

Team probes radiation barrier. il Aviation W 57:28+ D 1 '52

US air force rocket experiments send mammals to 200,000 feet. Elec Eng 71:1155-6 D '52; Same cond. Electronics 25:180+ D '52

ATMOSPHERIC electricity

Earth's electricity. J. E. McDonald. il diags Sci Am 188:32-7 Ap '53

See also

Auroras

ATMOSPHERIC nucleation

Effect of halogens on the production of condensation nuclei by a heated platinum wire. B. Vonnegut. diag Science 117:108-9 Ja 30 '53

ATMOSPHERIC pressure

Pressures, densities, and temperatures in the upper atmosphere. bibliog Phys R 88:1027-32 D 1 '52

ATMOSPHERIC temperature

Atmospheric winds and temperatures to 50-kilometers altitude as determined by acoustical propagation studies. J. M. Richardson and W. B. Kennedy. bibliog map diags Acoustical Soc Am J 24:731-41 N '52

Graphical analysis of problems; temperature, humidity and insulation. H. G. Todman. Midwest Eng 5:7-9+ F '53

Heating design temperatures. A. D. Hay. map Heating-Piping 25:104-5 My '53

Industrial gases raise average temperature 1.5° F. per century; abstract. G. N. Plass. Chem & Eng N 31:2092+ My 18 '53

Minimum night temperatures at or near full moon. H. Henstock. Science 116:257-60; 117:302-4 S 5 '52, Mr 20 '53; Discussion. R. L. Edwards and others. 117:305-10 Mr 20 '53

Pressures, densities, and temperatures in the upper atmosphere. bibliog Phys R 88:1027-32 D 1 '52

ATOLLS. See Coral reefs and islands

ATOMIC battery. See Electric batteries

ATOMIC bombs

After Monte Bello. Economist 165:400-2 N 8 '52

Atomic age fires. H. Bond. Safety Maint & Prod 104:54+ O '52

Atomic bomb blast waves. E. F. Cox. il Sci Am 188:94-6+ Ap '53

Atomic energy in 1952. il Engineer 195:11-12, pl 1 Ja 2 '53

Electric power and the atomic bomb; abstract. P. Sporn. Elec Eng 72:108 F '53

Interview with Truman on A-bomb described. R. G. Nixon. Ed & Pub 86:13 Ja 31 '53

To combat radio-active water caused by atom bomb explosions. E. S. Nuspliger. il Paper Tr J 136:20-1 F 13 '53

See also

Hydrogen bomb

Protective measures

Atomic energy and fire protection. E. J. Kehoe. il Nat Safety N 67:46+ My '53

Hidden struggle for the H-bomb; scientists' campaign to reverse U.S. military strategy. Fortune 47:109-10+ My '53

New push on air defense. il Bsns W p 182+ Ap 18 '53

Report on best ways to reduce effects of bomb or other attack. Pub Works 84:88+ My '53

Radiological effect

Delayed radiation effects at Hiroshima and Nagasaki. J. C. Bugher. Nat Safety N 67:66+ Ja '53

Radioactive dangers from bomb tests. Metal Prog 63:96 Mr '53

Testing

A-bomb; test blast echoes into industry. T. Campbell. il Iron Age 171:71-3 Mr 26 '53

British bomb. Sci Am 187:34 D '52

Effects of Nevada atom test on cars studied by SAE group. il S A E J 61:102-3 Je '53

Explosion of first British atomic weapon. il Engineering 174:562 O 31 '52

Medium size atomic blast demolishes test home almost mile from explosion. R. G. Gibbs. il Chem & Eng N 31:1316-17+ Mr 30 '53

Monte Bello atomic tests. il Engineer 194:592 O 31 '52

Post-war car and the A-blast; what are the odds? A. L. Haynes. il S A E J 61:17-22 Ag '53

Royal navy's part in British atomic test. il U S Naval Inst Proc 79:194-200 F '53

ATOMIC bombs and building

Atomic test; wood-frame construction fares badly; basement shelters hold up well. L. L. Wise. il Eng N 150:23-4 Mr 26 '53

Blast resistant buildings; how practical are they? B. G. Anderson. il plans diags Arch Rec 112:173-8 D '52

Guide for A-bomb resistance of buildings; review of Civil defense booklet. diags Arch Rec 112:205-6 S '52

ATOMIC bombs and building—*Continued*

Windowless structures; a study in blast-resistant design; abstract. Arch Rec 112:17 O '52

ATOMIC energy

Glossaries

Glossary of terms in nuclear science and technology. sec 2-9 American soc. of mechanical engineers, 29 W. 39th st, New York 18 '50-52

ATOMIC energy commission (United States)

Atomic energy commission and mining; abstract. H. D. Smyth. Min Cong J 38:114 O '52

AEC bids business join the feast; Office of industrial development. Bsns W p 140+ D 20 '52

AEC buys a $400-million package of power; to serve Pike County uranium refinery. Bsns W p90-2+ O 25 '52

AEC clearing way for atomic industry. Elec World 139:106 Ap 20 '53

AEC lifts one veil. il Bsns W p48+ My 30 '53

Atomic energy commission looks at the future. T. K. Glennan. J Eng Educ 43:18-22 S '52

AEC plans $29 million plant in Illinois. map Eng N 150:125 F 5 '53

AEC report. Sci Am 188:44-5 Mr '53

Atomic energy commission reports progress of raw materials program. Oil Paint & Drug Rep 164:3+ Ag 24 '53

AEC to get 1,800 mw from Ohio Valley. plan Elec World News ed 138:7-8 O 27 '52

AEC; tough nut for savings. Bsns W p34 My 23 '53

AEC work siphons engineer graduates. Eng N 150:27 Ja 29 '53

Atomic energy gets the cream of engineering and physical science graduates. Bsns W p 120+ Ja 24 '53

Atomic-energy report; summary. Mech Eng 75:315 Ap '53

Economically feasible atomic power can be achieved. G. Dean. Comm & Fin Chr 178: 13+ Jl 2 '53; Same. Edison Elec Inst Bul 21:277-81 Jl '53

Energy for the atom; new private financing method breaks public power monopoly. O. Ely. Barron's 33:17-18 Ap 13 '53

Joppa; big plant, fast, for more AEC power. P. E. Gourdon. il diag Power Eng 56:60-3 N '52

New fuel with a big future. il Bsns W p94+ Mr 14 '53

Power; getting juice for atom plants; AEC contracts for electric power. R. M. Stroupe. Iron Age 170:67 O 23 '52

Power pact signed to supply Ohio A-bomb plant; more work mapped. map Eng N 149: 22-4 O 16 '52

Top priority to plants supplying AEC. Elec World 139:74 Mr 9 '53

Tricks from the Paducah atom plant. il Constr Methods 35:82-4+ S '53

Utility company supply for atomic energy development. G. W. Keith. Pub Util 51:364-71 Mr 12 '53

Work of the U.S. Atomic energy commission. Engineer 194:531-2; 195:609-10 O 17 '52, Ap 24 '53

Labor problems

First work stoppage hits Ohio A-plant in rash of strikes at AEC projects. Eng N 150:30 F 5 '53

Labor and the Savannah River AEC project. M. M. Smith. U S Bur Labor Statistics Bul 1100:1-41; pa 25c Supt. of doc. '52

Operating engineers' feuds are aired. Eng N 150:31 My 21 '53

Strike ends at Savannah River H-plant. Eng N 150:29 F 26 '53

Union fights own members in court as Paducah labor troubles continue. Eng N 149:30 D 11 '52

See also
Atomic energy labor relations panel

Savannah River project

Construction firm on H-bomb project sued over joint venture agreement. Eng N 150: 22 Ap 16 '53

Labor and the Savannah River AEC project. M. M. Smith. U S Bur Labor Statistics Bul 1100:1-41; pa 25c Supt. of doc. '52

Public works for a boom defense area. P. F. Seward. il map Pub Works 84:51-3+ Jl '53

ATOMIC energy education committee. See American society for engineering education —Atomic energy education committee

ATOMIC energy industries association (proposed)

Industry's next step in atomic energy. T. K. Glennan. Chem & Eng N 30:5240-3 D 15 '52

ATOMIC energy labor relations panel

Atom labor panel back but in revamped form. Bsns W p 164 Je 13 '53

Atom panel; off, on. Bsns W p 168-9 Mr 21 '53

Atomic labor panel to be reorganized in the midst of many pending disputes. Eng N 150:29 Mr 19 '53

ATOMIC heat. See Specific heat

ATOMIC industrial forum, inc.

Businessmen, scientists, and educators organize atomic industrial forum. Edison Elec Inst Bul 21:146 My '53

ATOMIC mass. See Mass (chemistry)

ATOMIC orbitals

Application of the *jj*-coupling model to moderately light nuclei. D. Kurath. bibliog Phys R 91:1430-47 S 15 '53

Atomic moments in alloys. J. E. Goldman. bibliog diags Rs Mod Phys 25:108-13 Ja '53

Atomic theory of liquid helium near absolute zero. R. P. Feynman. bibliog Phys R 91: 1301-8 S 15 '53

Effect of 3*p* atomic orbital on energy of the double bond. J. S. Dooling. J Chem Phys 21:859-62 My '53

Effective nuclear charges for atoms from self-consistent field of calculations. A. J. Freeman. Phys R 91:1410-17 S 15 '53

Participation of *f* orbitals in bonding in uranium and the transuranium elements. R. E. Connick and Z. Z. Hugus, jr. bibliog Am Chem Soc J 74:6012-15 D 5 '52

Two-center heteronuclear hybrid Coulomb-exchange integrals. R. O. Brennan and J. F. Mulligan. bibliog J Chem Phys 20:1635-44 O '52

Unified orbital theory of the excited states of the fluorine molecule. C. R. Mueller. bibliog J Chem Phys 21:1013-17 Je '53

United-atom treatment of conjugated systems. R. D. Brown and F. A. Matsen. J Chem Phys 21:1298-9 Jl '53

Use of a single scale factor in atomic wave functions. C. W. Scherr. bibliog J Chem Phys 21:1237-42 Jl '53

Wave function of a relativistic system. F. J. Dyson. Phys R 91:1543-50 S 15 '53

ATOMIC piles

Atom electricity; test run of the Atomic energy commission's homogeneous reactor; pictorial presentation. Chem & Eng N 31: 2206-7 My 25 '53

Atomic boiler works; North American Aviation's baby reactor. il Iron Age 170:166 S 4 '52; Automotive Ind 107:53 O 1 '52

Atomic power production; Oak Ridge national laboratory. Mech Eng 75:405-6 My '53

Basic facts about industrial power reactors. A. W. Kramer. il diags Power Eng 57: sup2-4 Je '53

Breeder reactor. Sci Am 187:42+ N '52

Breeder reactor; Arco breeder. il diags Sci Am 187:58-60 D '52

Building of a nuclear reactor; humorous non-technical description. B. A. Rogers. il Metal Prog 64:92-6 Jl '53

Chain reactor in the small economy size. il Chem & Eng N 31:894-5 Mr 2 '53

Enhanced reactor. F. E. O'Meara. Phys R 89:982 Mr 1 '53

Green light, almost, for power reactors. il Chem Eng 60:133-4 My '53

Industrial study groups report on power reactor feasibility. plan diags Power Eng 57: sup5-8 Je '53

Investigate ceramics for nuclear reactors. Tool Eng 31:78 Ag '53

Latest atomic reactor. Chem Eng 60:323-4 F '53

Low-cost research reactor at Oak Ridge. Engineer 194:264 Ag 22 '52

Materials and the atomic age. J. C. Robinson. Materials & Methods 38:166+ Ag '53

ATOMIC piles—*Continued*

Metallurgy for nuclear reactors. J. E. Burke. il diags Gen Elec R 56:6-9 Mr '53

More energy from the atom. il Bsns W p30-1 Je 13 '53

Neutron detectors for reactor instrumentation. T. A. J. Jaques and others. bibliog diags Inst E E Proc 100 pt 1:110-16 My '53; Abstract. Elec R (Lond) 152:87 Ja 9 '53; Discussion. Inst E E Proc 100 pt 1:116-20 My '53

New type reactor developed by Union Carbide & Carbon. Elec World News ed 139:46 Mr 16 '53

Nuclear reactors and their applications. J. Cockcroft. il diags Inst E E Proc 100 pt 1:83-9 My '53; Same cond. Engineering 175:84-5 Ja 16 '53; Abstracts. Elec J 150:215-16 Ja 16 '53; Elec R (Lond) 152:85 Ja 9 '53

Nuclear reactors for electric power generation. plans diags Engineer 196:196-8, 228-30 Ag 14-21 '53

Power from atomic soup; homogeneous reactor. il Bsns W p68+ My 2 '53

Production of fissionable isotopes in a thermal reactor. L. B. Robinson. bibliog Phys R 90:1054-7 Je 15 '53

Reactor information for U.S. industry. J. G. Beckerley. Sci Am 188:45-6 Mr '53

Report on atomic engineering. A. Tammaro. Chem Eng 60:337-8+ Ap '53

Review of ceramic material requirements for nuclear reactor use. J. F. White. bibliog diag Am Cer Soc Bul 32:301-5 S 15 '53

Spoon river; AEC plant. Bsns W p34 Ja 31 '53

Submarine reactor building. Mech Eng 75:29 Ja '53

Thermal neutron diffusion length in a heterogeneous pile. G. N. Plass. J Ap Phys 23:621-4 Je '52

Western atomic power plant design as proposed by Pacific Gas and Electric-Bechtel team. il diags Elec West 111:81-5 Jl '53

World's biggest sphere to house sub reactor. il Eng N 149:29 O 23 '52; Iron Age 170:206-7 N 6 '52; Steel 131:48 O 27 '52; Elec World News ed 138:44 O 27 '52

Zirconium, metals' sleeping beauty. W. E. Shoupp. Midwest Eng 5:11-12+ Mr '53; Excerpts. Elec Eng 74:472-3 My '53

Zirconium vital in submarine reactor. il Chem & Eng N 31:1762-3 Ap 27 '53

Control

Automatic control characteristics of thermal neutron reactors. J. H. Bowen. diags Inst E E Proc 100 pt 1:102-9 My '53; Abstract. Elec R (Lond) 152:86-7 Ja 9 '53; Discussion. Inst E E Proc 100 pt 1:116-20 My '53

Control of a thermal neutron reactor. R. V. Moore. bibliog diags Inst E E Proc 100 pt 1:90-101 My '53; Abstract. Elec R (Lond) 152:85-6 Ja 9 '53; Discussion. Inst E E Proc 100 pt 1:116-20 My '53; Elec J 150:217-18 Ja 16 '53

Nuclear power plant control considerations. M. A. Schultz. diags Elec Eng 72:505-9 Je '53

Packaged control; system monitors nuclear reactors. Iron Age 171:137 Je 11 '53

Packaged system monitors nuclear reactors. Machine Design 25:188+ S '53

Safety measures

Reactor that even looks safe; experiments for navy's second atom-powered sub. il Bsns W p76 N 8 '52

Waste

AEC steep scrap isn't hot. Steel 131:138 D 15 '52

Cleaner air; stack effluent from atom power lab cleaner than normal air. J. J. Fitzgerald. Iron Age 170:182-3 D 11 '52; Same. Mech Eng 75:231 Mr '53

Small radioactive spheres for possible use in medical or biological investigation. L. P. Hatch. A M A Archives Ind Hygiene & Occup Med 7:109-10 F '53

ATOMIC power

Aeromedical problems for nuclear-propelled aircraft. J. E. Pickering. Aeronautical Eng R 12:69-70 Ap '53

After Monte Bello. Economist 165:400-2 N 8 '52

American power conference, 15th, Chicago, March 25-27. Chem & Eng N 31:1416 Ap 6 '53

Army engineers study nuclear power. Bsns W p30 N 22 '52

Aspects of nuclear fission of interest to foundrymen and metallurgists. E. W. Colbeck. bibliog(25 titles) il diags Metallurgia 48:33-40 Jl '53; Same cond. Engineering 175:797-9 Je 19 '53

Atom for industry. Bsns W p32 Ap 11 '53

Atom progress on three fronts. il Mod Ind 26:41-3 Jl '53

Atomic energy. E. C. Fuller. Tappi 36:sup 137A-8A Mr '53

Atomic energy at the crossroads. il Chem Eng 60:214-16 Mr '53

Atomic energy; industry gets set. Iron Age 171:86-7 Ap 23 '53

Atomic energy; its history and development. A. W. Kramer. Midwest Eng 5:7-9+ My '53

Atomic energy pilot plants. diags Automotive Ind 109:67 Jl 1 '53

Atomic energy today. plans diags Power 97:89-104 Jl '53

Atomic fuel may yet supplement conventional energy sources. Heat & Ven 49:130+ D '52

Atomic industry forum formed. W. L. Cisler. Elec World 139:106-7 Ap 20 '53

Atomic plans of industry; abstracts. T. K. Glennan. Elec World 138:82 D 1 '52; Eng N 149:22 D 4 '52; Pub Util 51:49-50 Ja 1 '53

Atomic power. E. C. Fuller. Tappi 36:sup 146A-8A Ag '53

Atomic-powered industrial trucks. B. I. Ulinski. Franklin Inst J 254:556-7 D '52

Atoms in our plants; atomic work in Canada. il Can Chem Process 37:22+ Ap '53

Basic facts about industrial power reactors. A. W. Kramer. il diags Power Eng 57:sup2-4 Je '53

Can atomic energy power the world? with cost data. L. E. Reukema. il map Elec West 111:73-80 Jl '53

Changing the McMahon act. Bsns W p 112 Ja 31 '53

Cole heads atomic committee. Elec World News ed 139:18 Ap 13 '53

Committee for atomic energy to be set up, Great Britain. Economist 167:322 My 2 '53

Congress to explore ways and means of permitting industrial participation in atomic energy program. R. G. Gibbs. Chem & Eng N 30:5344 D 22 '52

Development of power from atomic energy in Canada; abstract. I. N. MacKay. Metal Prog 64:186+ S '53

Electric power from atoms. Bsns W p34 O 25 '52

Eleven companies join Dow-Edison nuclear study. Edison Elec Inst Bul 20:434 D '52; Heat & Ven 49:128+ D '52

Engineering highlights of 1952; nuclear power. C. A. Scarlott. Westinghouse Eng 13:6 Ja '53

Engineering problems in the utilization of atomic energy. W. E. Kelley. J Eng Educ 43:95-8 O '52

Explosive atom; private industry begins to harness vast potential. J. Chamberlain. Barron's 33:3+ My 4 '53

Facts about atomic power in industry. A. G. Gray. il diags Steel 132:86-92 Mr 2 '53

Federal atomic policy up for review. Elec World News ed 138:7-8 D 22 '52

Future of atomic energy in industry. W. L. Cisler. Edison Elec Inst Bul 21:41-4 F '53; diags S A E J 61:50-5 My '53

Impact of nuclear power. Can Chem Process 37:74+ F '53

Industrial applications of atomic energy. A. Tammaro. Comm & Fin Chr 176:1216+ O 2 '52; Excerpts. Metal Prog 63:83 F '53

Industrial atomic power. W. L. Cisler and A. S. Griswold. Mech Eng 75:230-1 Mr '53

Industrial look at atomic power. L. R. Groves. Comm & Fin Chr 177:1314+ Mr 26 '53

Industrial study groups report on power reactor feasibility. plan diags Power Eng 57:sup5-8 Je '53

Industrial use of atomic energy; abstract. W. L. Cisler. Heat & Ven 50:94 My '53

Metal zirconium and its place in nuclear power plants. E. C. Miller. il diag Metal Prog 63:67-74 My '53

ATOMIC power—*Continued*

More atoms for defense; illustrations with text. Mod Ind 24:83 N 15 '52

Nuclear energy for electric utilities; abstract. T. Baumeister. Pub Util 51:708 My 21 '53

Nuclear reactors and their applications. J. Cockcroft. il diags Inst E E Proc 100 pt 1: 83-9 My '53; Same cond. Engineering 175: 84-5 Ja 16 '53

Nuclear reactors for electric power generation. plans diags Engineer 196:196-8, 228-30 Ag 14-21 '53

Picking atom power plant site. L. R. Hafstad. Elec World News ed 138:15 O 27 '52

Plant tackles reactor costs and contamination problems. L. E. Johnston. Elec World 139:162 Ap 6 '53

Power from the atom. W. A. Stanbury, jr. il Coal Age 58:70-5 Ap '53

Power from the atom; industrial production of atomic power. Pub Util 51:627-8 My 7 '53

Present and prospective place of nuclear energy in electric power. P. Sporn. Comm & Fin Chr 176:1522+ O 23 '52; Same. Edison Elec Inst Bul 20:411-16 D '52; Same cond. Power 96:116-18+ D '52

Raise the lead curtain. W. N. Carey. Midwest Eng 5:20-1 Ap '53

Report of the Edison electric institute committee on atomic power. Edison Elec Inst Bul 21:292-4 Jl '53

So they named it General Dynamics. il Fortune 47:134-7+ Ap '53

Special conference on atomic energy in industry, New York. Metal Prog 62:138+ D '52

Sphere is atomic sub lab. il Eng N 150:32-4 Ap 9 '53

Status of atomic power. B. R. Prentice. Civil Eng 22:1017-21+ D '52

Technology needed to pare cost of nuclear power units. Chem & Eng N 30:5252+ D 15 '52

Three-way participation in atomic energy program open to industry. Chem & Eng N 31:1190 Mr 23 '53

U.S. restrictions seen hampering atomic development by industry. Chem & Eng N 30: 4482-3 O 27 '52

Warns of impact of atomic energy. P. J. Lovewell. Midwest Eng 5:25 N '52; Same cond. Materials & Methods 36:10 N '52

What effect will atomic energy development have on American public utilities? J. B. Nealey. il diags Gas Age 110:57-60+ O 23 '52

What is delaying industrial nuclear power? M. Benedict. il Chem & Eng N 31:986-90 Mr 9 '53

Bibliography

International bibliography on atomic energy, volume 2, Scientific aspects. (Supplement no. 1) pa $3.50 Atomic energy section, Dept. of security council affairs, United nations, New York; for sale by Columbia univ. press, 2960 Broadway, New York 27 '52

Sources of information on atomic power. A. W. Kramer. il Power Eng 57:84-6+ Jl '53

Economic aspects

AEC bids business join the feast; Office of industrial development. Bsns W p 140+ D 20 '52

AEC lifts one veil. il Bsns W p48+ My 30 '53

Atomic energy in business will place emphasis on conditions. J. J. Hopkins. Credit & Fin Management 55:18-19 Jl '53

Atomic power and the electric industry. W. L. Cisler. Comm & Fin Chr 177:2509+ Je 11 '53; Same. Edison Elec Inst Bul 21:287-91+ Jl '53

Atomic power for industry. W. L. Davidson. Dun's R 61:27-9+ Je '53

Atomic volts; Westinghouse new department. Bsns W p30 F 28 '53

Can nuclear power compete? W. H. Zinn. il diags Elec World News ed 138:32-5 S 29 '52

Coming up; an atomic policy. Bsns W p32 Mr 14 '53

Economic evaluation of the industrial use of atomic energy; abstract. W. L. Cisler. Power 97:154 Jl '53

Economically feasible atomic power can be achieved. G. Dean. Comm & Fin Chr 178: 13+ Jl 2 '53; Same. Edison Elec Inst Bul 21:277-81 Jl '53; Excerpts. Metal Prog 64: 73 S '53

Industry bids for atomic power. J. W. Irwin. diags Harvard Bsns R 31:36-50 Jl '53

Industry's hopes for atom rise. Bsns W p29 My 2 '53

Look into problems of business management in the atomic age. P. J. Lovewell. il Chem & Eng N 31:1857-9 My 4 '53

More energy from the atom. il Bsns W p30-1 Je 13 '53

New fuel with a big future. il Bsns W p94+ Mr 14 '53

Nuclear electric power; why and how? W. L. Davidson. Comm & Fin Chr 177:2194+ My 21 '53

Nuclear energy for electric utilities. T. Baumeister. Comm & Fin Chr 177:2418+ Je 4 '53

Nuclear power and state power. T. E. Murray. Edison Elec Inst Bul 21:105-7+ Ap '53

Roadblocks to peacetime atomic energy use. E. B. Stason. Comm & Fin Chr 177:2633+ Je 18 '53

ATOMIC power plants

Atomic energy plants need improved fabrication techniques. Chem & Eng N 31:1532 Ap 13 '53

Atomic equipment department; announcement by Westinghouse electric corp. G. A. Price. Mech Eng 75:405 My '53

Atomic power; Detroit Edison plan. Bsns W p64 Ja 17 '53

Atomic power in Cumberland; site for first atomic power station in Great Britain. diag Economist 167:389 My 9 '53

Atomic power plant. M. Palmieri. Midwest Eng 5:9-10+ D '52

Atomic power plants are nearer reality. W. H. Nutting and R. A. Bowman. il diags Elec West 110:67-72 Ja '53

Atoms; when will you use them? projected Westinghouse plant. J. B. Delaney. diags Iron Age 171:114 Mr 5 '53

Basic problems in central-station nuclear power; abstract. W. H. Zinn. Metal Prog 63:142-4 Mr '53

Broad aspects of use of atomic energy for generation of electric power. J. R. Dunning. flow chart diag Edison Elec Inst Bul 21:282-6 Jl '53

Capitalization of nuclear power plants. O. Ely. Pub Util 50:448+ S 25 '52

Designing a submarine power plant. W. W. Kuyper. il diag Gen Elec R 56:26-7+ S '53

Eight firms join studies on atomic power plant. Elec World News ed 139:9 My 11 '53

Feasibility of atomic power plants established by industrial surveys. il Eng N 150:26-7 Je 4 '53

Full-size atomic power plant planned. Elec World News ed 138:9 O 27 '52

Model of an atomic plant for producing electricity. il diag Mach 59:223-4 Jl '53

Nature of nuclear power. J. W. Landis. il diag Elec Eng 72:799-803 S '53

New fuel with a big future. il Bsns W p94+ Mr 14 '53

North American builds atomic power plant. Power 97:148 Ag '53

North American lands in industrial atom picture. il Steel 132:111 Je 29 '53

Nuclear power plant control considerations. M. A. Schultz. diags Elec Eng 72:505-9 Je '53

Nuclear power plants; design and performance of liquid-metal heat exchangers and steam generators. R. D. Brooks and A. L. Rosenblatt. bibliog Mech Eng 75:363-8 My '53

100 engineers evaluate atomic power plants. il plan diags Metal Prog 64:97-107 Ag '53

Power for tomorrow. J. Chamberlain. Barron's 33:3+ My 11 '53

Present feasibility of a nuclear power plant. T. G. LeClair. diags Elec Eng 72:678-83 Ag '53

Six-mill atomic power is in sight. S. Siegel. il diag Elec West 111:85-8 Ag '53

Western atomic power plant design as proposed by Pacific Gas and Electric-Bechtel team. il diags Elec West 111:81-5 Jl '53

ATOMIC reactors. See Atomic piles

ATOMIC research

Annual Rochester conference on high-energy physics, 3d, Dec. 18-20, 1952. Science 117: 474-6 My 1 '53

Atomic boom in Ohio. map Economist 166: 22-4 Ja 3 '53

AEC report. Sci Am 188:44-5 Mr '53

Atomic energy in 1952. il Engineer 195:11-12, pl 1 Ja 2 '53

Atomic policy re-stated. Economist 166:300 Ja 31 '53

Chemical process development in atomic energy. W. M. Campbell. il diag Can Chem Process 37:28+ Ap '53

Engineering highlights of 1952; nuclear energy. C. A. Scarlott. Westinghouse Eng 13:inside back cover Ja '53

Modern instrumentation will bring knowledge of nuclear structure. Chem & Eng N 30: 5048 D 1 '52

Nucleonic instruments at the British atomic energy research establishment. D. Taylor. il diags Engineering 175:449-53 Ap 10 '53

Research and engineering progress, 1952; nucleonics. il Gen Elec R 56:8-12 Ja '53

Techniques at nuclear energy lab. il Can Chem Process 37:96+ Mr '53

Tooling for atomic age research. il Chem W 72:34+ Ja 17 '53

Work of the U.S. Atomic energy commission. Engineer 194:531-2; 195:609-10 O 17 '52, Ap 24 '53

See also

Argonne national laboratory

European organisation for nuclear research

ATOMIC research laboratories

Engineer-builder looks ahead into the age of atomic power. Eng N 150:156-8 Ap 16 '53

European organisation for nuclear research. Engineer 196:151 Jl 31 '53

Hot laboratory; Bettis plant of the Atomic energy commission. il Mech Eng 75:228-30 Mr '53; Excerpts. Heat & Ven 50:117 Ja '53

Laboratory handling of fissionable material; Chalk River project of Atomic energy of Canada, limited. il Can Chem Process 37: 90+ Ap '53

Mound atomic laboratory. il Mech Eng 75: 315-17 Ap '53; Same cond. Can Chem Process 37:96+ Mr '53

Nuclear-particle laboratory at Queen Mary college. Engineering 176:91 Jl 17 '53

Piping liquid metal at the Knolls atomic power laboratory. il diag Heating-Piping 25:112-13 Jl '53

Power supply for nuclear research laboratories. C. T. Grauer. il diags Elec Eng 72: 212-18 Mr '53

ATOMIC weapons

Army gun fires atomic projectiles. il Machine Design 24:237 D '52

Army's big gun. il Metal Prog 63:94-6 F '53

Atomic artillery; artillery piece capable of firing an atomic missile. il Steel 131:121 O 13 '52

Atomic Bertha; first atomic shell. Economist 167:586 My 30 '53

Atomic gun; masterpiece of production. il Tool Eng 29:52-3 D '52; Mech Eng 74:1018-20 D '52; Welding J 32:139-41 F '53

Building carriages for the atomic gun; Dravo corp. D. A. Booth. il Mach 59:157-62 Je '53

Double recoil used on cannon. Midwest Eng 5:31 Ja '53

First A-gun carriage off the line. il Iron Age 170:201 O 9 '52

Sizing up army's new cannon. Bsns W p29 My 30 '53

ATOMIZATION

See also

Vaporization

ATOMIZERS

Controlled fluid-feed atomizer. J. C. Gage. diag J Sci Instr 30:25 Ja '53

Two-way nasal treatment; Sharp & Dohme atomizer-dropper. il Mod Packaging 26: 104-5 F '53

Versatile laboratory scale atomizer for use at reduced pressures. V. E. Henny and H. A. Cheetham. diags J Sci Instr 30:100 Mr '53

ATOMS

α-Energy systematics and proton shells for heavier nuclei. S. Sengupta. bibliog Phys R 87:1136-7 S 15 '52

Analysis of the energy levels of the mirror nuclei, C^{13} and N^{13}. R. G. Thomas. bibliog Phys R 88:1109-25 D 1 '52

Analytical method for the approximate determination of the eigenfunctions and energies of electrons in atoms. R. Gáspár. J Chem Phys 20:1863-5 D '52

Anelastic measurements of atomic mobility in substitutional solid solutions. A. S. Nowick. bibliog Phys R 88:925-34 N 15 '52

Angular correlations of the radiations from deuteron stripping reactions. L. C. Biedenharn and others. bibliog Phys R 88:517-19 N 1 '52

Atomic excitation and ionization accompanying orbital electron capture by nuclei. H. Primakoff and F. T. Porter. bibliog Phys R 89:930-7 Mr 1 '53

Atomic radii; dependence of interatomic distance on bond energy. M. L. Huggins. bibliog Am Chem Soc J 75:4126-33 S 5 '53

Correlation between electron and recoil nucleus in He^6 decay. B. M. Rustad and S. L. Ruby. bibliog diag Phys R 89:880-1 F 15 '53

Coulomb scattering of relativistic electrons and positrons by nuclei. H. Feshbach. bibliog Phys R 88:295-7 O 15 '52

Cross sections for the formation of the compound nucleus by charged particles. M. M. Shapiro. bibliog Phys R 90:171-82 Ap 15 '53

Decay of resonance radiation by spontaneous emission. E. J. Hellund. bibliog Phys R 89:919-22 Mr 1 '53

Discontinuities in the binding energies of neutrons and protons in light nuclei. M. G. Redlich. Phys R 88:38-9 O 1 '52

Dynamical theory of nuclear induction. R. K. Wangsness and F. Bloch. Phys R 89:728-39 F 15 '53

Effective nuclear charges for atoms from self-consistent field calculations. A. J. Freeman. Phys R 91:1410-17 S 15 '53

Effects of departures from the single particle model on nuclear magnetic moments. A. de-Shalit. bibliog Phys R 90:83-6 Ap 1 '53

Electron excitation of nuclei. J. A. Thie and others. Phys R 87:962-5 S 15 '52

Energy levels and the structure of light nuclei. D. R. Inglis. diags Rs Mod Phys 25:390-450 bibliog(p449-50) Ap '53

Energy levels in light nuclei. J. C. Arthur and others. bibliog Phys R 88:1291-5 D 15 '52

Energy levels in magnesium, vanadium, chromium and manganese. H. J. Hausman and others. bibliog Phys R 88:1296-9 D 15 '52

Energy levels of light nuclei. A. Ajzenberg and T. Lauritsen. diags Rs Mod Phys 24: 321-402 bibliog(p396-402) O '52

Energy levels of odd-odd nuclei. A. de-Shalit. bibliog Phys R 91:1479-86 S 15 '53

Evidence for a region of extra nuclear stability between the 82- and 126-neutron shells. B. G. Hogg and H. E. Duckworth. Phys R 91:1289-90 S 1 '53

Evidence for nonadditivity of nucleon moments in heavy nuclei. M. Ross. bibliog diags Phys R 88:935-42 N 15 '52

Exchange magnetic moments of nuclei with almost closed shells of nucleons. R. W. Cole. bibliog Phys R 89:883-4 F 15 '53

Exchange scattering of an electron by an atom and inverse Auger effect. T. Wu. Phys R 87:1012-15 S 15 '52

Excitation of heavy nuclei by the electric field of low-energy protons. C. L. McClelland and C. Goodman. bibliog Phys R 91: 760-1 Ag 1 '53

Excited states of even-even nuclei. G. Scharff-Goldhaber. bibliog Phys R 90:587-602 My 15 '53

Excited states of the N^{13} nucleus. H. L. Jackson and A. I. Galonsky. bibliog diag Phys R 89:370-4 Ja 15 '53

First excited states of even-even nuclei. K. W. Ford. bibliog diags Phys R 90:29-44 Ap 1 '53

Formation of a compound nucleus in neutron reactions. H. Feshbach and others. Phys R 90:166-7 Ap 1 '53

Fourth-order radiative corrections to atomic energy levels. J. Weneser and others. bibliog diags Phys R 91:1257-62 S 1 '53

ATOMS—*Continued*

Geometrical characterization of nuclear states and the theory of angular correlations. U. Fano. bibliog Phys R 90:577-9 My 15 '53

Interaction moment contributions to magnetic moments of nuclei. A. Russek and L. Spruch. bibliog Phys R 87:1111-17 S 15 '52

Interaction of closed shells. H. Margenau and P. Rosen. bibliog J Chem Phys 21:394-8 Mr '53

Interaction of 95-Mev protons with D, Li, Be, C, Al, Cu, and Pb nuclei. J. A. Hofmann and K. Strauch. bibliog diags Phys R 90:449-60 My 1 '53

Interactions of closed shell ions. G. L. Montet and others. bibliog J Chem Phys 20:1057-63 Jl '52

Interactions of high energy nucleons with nuclei. G. Bernardini and others. bibliog diags Phys R 88:1017-26 D 1 '52

Intermediate coupling as encountered in some of the *p*-shell nuclei. D. R. Inglis. bibliog. diags Phys R 87:915-21 S 15 '52

Investigation of electron distribution in atoms by electron diffraction. L. S. Bartell and L. O. Brockway. bibliog Phys R 90:833-8 Je 1 '53

Iron atoms in the service of the electrical engineer. C. Goodeve. bibliog il diags Inst E E Proc 99 pt 1:225-32 N '52; Same cond. Engineer 193:599-600 My 2 '52; Abstracts. Engineering 173:551 My 2 '52; Elec R (Lond) 150:971-2 My 2 '52; Electrician 148:1435-6 My 2 '52

Isotope shift anomalies and nuclear structure. L. Wilets and others. bibliog diags Phys R 91:1488-500 S 15 '53

Magnetic analysis of the $F^{19}(d, p)F^{20}$ and $F^{19}(d, \alpha)O^{17}$ reactions. H. A. Watson and W. W. Buechner. bibliog Phys R 88:1324-31 D 15 '52

Magnetic moments of odd-odd nuclei and the strong spin-orbit coupling shell model. H. M. Schwartz. bibliog Phys R 89:1293-4 Mr 15 '53

Many-body forces and nuclear saturation. S. D. Drell and K. Huang. bibliog diags Phys R 91:1527-42 S 15 '53

Mobility of interstitial atoms in a face-centered metal. H. B. Huntington. bibliog diags Phys R 91:1092-8 S 1 '53

New evidence concerning extreme energy interactions in heavy nuclei. C. B. A. McCusker and F. C. Roesler. bibliog Phys R 91:769-70 Ag 1 '53

Nonexistence of stable isobars with odd mass number. S. Sengupta. Phys R 89:1296-7 Mr 15 '53

Nuclear electric quadrupole spectra in solids. R. Bersohn. bibliog J Chem Phys 20:1505-9 O '52

Nuclear energy levels in the region of the 28-neutron shell. G. F. Pieper. bibliog diags Phys R 88:1299-305 D 15 '52

Nuclear gyromagnetic ratios. Yu Ting and D. Williams. bibliog Phys R 89:595-6 F 1 '53

Nuclear isomerism and shell structure. M. Goldhaber and R. D. Hill. diags Rs Mod Phys 24:179-239 bibliog(p235-9) Jl '52

Nuclear magnetic resonance multiplets in liquids. H. S. Gutowsky and others. bibliog il diag J Chem Phys 21:279-92 F '53

Nuclear photostar production. I. Reff. bibliog Phys R 91:150-5 Jl 1 '53

Nuclear spin of V^{50} by paramagnetic resonance. C. Kikuchi and others. il Phys R 88:142-3 O 1 '52

Polarized γ-rays from nuclei aligned at low temperatures. G. R. Bishop and others. bibliog Phys R 88:1432-3 D 15 '52

Processes involving ions and metastable atoms in mercury afterglows. M. A. Biondi. bibliog diag Phys R 90:730-7 Je 1 '53

Radii of mirror nuclei. R. R. Wilson. Phys R 88:350-1 O 15 '52

Relative energy levels of some *P* shell nuclei in intermediate coupling. E. A. Crosbie. bibliog Phys R 90:138-41 Ap 1 '53

Repulsive core and charge independence. E. E. Salpeter. bibliog Phys R 91:994-6 Ag 15 '53

Rotational states in even-even nuclei. A. Bohr and B. R. Mottelson. Phys R 90:717-19 My 15 '53

Search for short-lived nuclear isomers. T. C. Engelder. bibliog Phys R 90:259-60 Ap 15 '53

Shift of the 1^1S state of helium. S. Chandrasekhar and others. bibliog Phys R 91:1172-3 S 1 '53

States of light nuclei from the *jj* coupling model. D. Kurath. bibliog Phys R 88:804-8 N 15 '52

Studies of atomic self-consistent fields; calculation of Slater functions. P. Löwdin. bibliog Phys R 90:120-5 Ap 1 '53

Surface production of charged mesons by photons on nuclei. S. T. Butler. bibliog Phys R 87:1117-24 S 15 '52

Symmetric pseudoscalar theory of nuclear forces. A. Klein. Phys R 89:1158 Mr 1 '53

Symmetry requirements in electron scattering by an atom. L. E. H. Trainor and T. Wu. bibliog Phys R 89:273-4 Ja 1 '53

Theoretical view on hot atom chemistry. P. C. Capron and Y. Oshima. bibliog diags J Chem Phys 20:1403-10 S '52

Theory of complex spectra. S. Meshkov. bibliog Phys R 91:871-6 Ag 15 '53

Threshold law for single ionization of atoms or ions by electrons. G. H. Wannier. bibliog Phys R 90:817-25 Je 1 '53

Total cross sections for 14-Mev neutrons. J. H. Coon and others. Phys R 88:562-4 N 1 '52

Total cross sections of heavy nuclei for fast neutrons. D. W. Miller and others. bibliog Phys R 88:83-90 O 1 '52

X-rays from mesic atoms. M. Camac and others. bibliog Phys R 88:134 O 1 '52

See also

Atomic research
Deuterons
Electrons
Molecules
Neutrons
Nuclear spin
Positronium
Protons
Radiation
Spectrum
Stereochemistry

Disintegration

Accurate determinations of nuclear reaction energies. K. F. Famularo and G. C. Phillips. bibliog diag Phys R 91:1195-202 S 1 '53

Activation cross sections for 14-Mev neutrons. S. G. Forbes. bibliog Phys R 88:1309-11 D 15 '52

Activation energy for fission. G. T. Seaborg. bibliog Phys R 88:1429-31 D 15 '52

Alpha-gamma angular correlation in radiothorium. J. Battey and others. bibliog Phys R 89:182-5 Ja 1 '53

(α,n) and $(\alpha,2n)$ cross sections of Ag^{109}. E. Bleuler and others. bibliog Phys R 90:460-3 My 1 '53

Alpha-particles of radium. F. Asaro and I. Perlman. bibliog Phys R 88:129-31 O 1 '52

Analysis of angular correlation and angular distribution data. M. E. Rose. bibliog diag Phys R 91:610-15 Ag 1 '53

Angular correlation of the cascade gamma-rays from the decay of Au^{198}. C. D. Schrader and others. bibliog Phys R 90:159 Ap 1 '53

Angular correlations from liquid sources. R. V. Pound and A. Abragam. Phys R 90:993-4 Je 1 '53

Angular correlations in $(d,p\gamma)$ reactions. L. J. Gallaher and W. B. Cheston. bibliog Phys R 88:684 N 1 '52

Angular correlations in the reaction $F^{19}(p,\alpha\gamma)O^{16}$. J. Seed and A. P. French. bibliog diags Phys R 88:1007-16 D 1 '52

Angular distribution of $Be^9(d,t)Be^8$ at low energy. P. Cüer and J. J. Jung. bibliog Phys R 89:1151-2 Mr 1 '53

Angular distribution of fission fragments in the photofission of thorium. E. J. Winhold and others. diags Phys R 87:1139-40 S 15 '52

Angular distribution of gamma-rays and short-range alpha-particles from $N^{15}(p,\alpha\gamma)C^{12}$. A. A. Kraus, jr. and others. Phys R 89:299-301 Ja 1 '53

Angular distribution of $Li^6(n,\alpha)H^3$ for neutrons of 200, 270, 400, and 600 kev. L. E. Darlington and others. diags Phys R 90:1049-53 Je 15 '53

Angular distribution of prompt neutrons emitted in fission. J. S. Fraser. bibliog diags Phys R 88:536-41 N 1 '52

Angular distribution of the reaction $He^3(d,p)He^4$ between 240 kev and 3.56 Mev. J. L. Yarnell and others. bibliog diags Phys R 90:292-7 Ap 15 '53

ATOMS—Disintegration—*Continued*

Angular distributions of protons from the reactions $\mathrm{F}^{19}(d,p)\mathrm{F}^{20}$. D. A. Bromley and others. bibliog Phys R 89:396-8 Ja 15 '53

Argon 38 in pitchblende minerals and nuclear processes in nature. W. H. Fleming and H. G. Thode. Phys R 90:857-8 Je 1 '53

Asymmetric fission. P. Fong. bibliog Phys R 89:332-3 Ja 1 '53

Atomic number dependence of neutral meson yield from proton bombardment. R. W. Hales and B. J. Moyer. bibliog diags Phys R 89:1047-53 Mr 1 '53

Average charge on the daughter atoms produced in the decay of A^{37} and Xe^{131m}. M. L. Perlman and J. A. Miskel. bibliog diags Phys R 91:899-902 Ag 15 '53

Average electric charge of daughter atoms from β-decay and isomeric transition. S. Wexler and T. H. Davies. bibliog diags Phys R 88:1203-4 D 1 '52

Barrier penetration effects for light nuclei. B. E. Freeman and J. L. McHale. bibliog Phys R 89:223-36 Ja 1 '53

Beta-decay interaction. J. M. Blatt. bibliog Phys R 89:83-5 Ja 1 '53

Beta-decay of F^{20}. D. E. Alburger. bibliog Phys R 88:1257-61 D 15 '52

Breakup energy of Be^{8}. K. W. Jones and others. bibliog diag Phys R 91:879-82 Ag 15 '53

$\mathrm{C}^{12}(p,pn)\mathrm{C}^{11}$ cross section from threshold to 340 Mev. R. L. Aamodt and others. bibliog diags Phys R 88:739-44 N 15 '52

$\mathrm{C}^{12}(p,p)\mathrm{C}^{12}$ differential cross section. H. L. Jackson and others. bibliog diags Phys R 89:365-9 Ja 15 '53

Comparison of the values of the disintegration constant of Be^{7} in Be, BeO, and BeF_2. J. J. Kraushaar and others. bibliog Phys R 90:610-14 My 15 '53

Consequences of charge independence for nuclear reactions involving photons. M. Gell-Mann and V. L. Telegdi. bibliog Phys R 91:169-74 Jl 1 '53

Coupling of angular momenta in nuclear reactions. R. F. Christy. bibliog Phys R 89:839-42 F 15 '53

Cross section and angular distribution of the $\mathrm{D}(d,p)\mathrm{T}$ reaction. W. A. Wenzel and W. Whaling. bibliog Phys R 88:1149-54 D 1 '52

Cross section and angular distribution of the $\mathrm{He}^{3}(d,p)\mathrm{He}^{4}$ nuclear reaction. T. W. Bonner and others. bibliog diag Phys R 88:473-6 N 1 '52

Cross section for $\mathrm{Ta}^{181}(\gamma,2n)\mathrm{Ta}^{179}$ at 17.6 Mev. J. H. Carver and others. bibliog Phys R 89:658-9 F 1 '53

Cross section for the reaction $\mathrm{Al}^{27}(\alpha,\alpha 2pn)\mathrm{Na}^{24}$ from threshold to 380 Mev. M. Lindner and R. N. Osborne. Phys R 91:342-4 Jl 15 '53

Cross section for the reaction $\mathrm{Br}^{81}(\gamma,\alpha)\mathrm{As}^{77}$. J. G. V. Taylor and R. N. H. Haslam. Phys R 87:1138-9 S 15 '52

Cross section for the reaction $\mathrm{D}(d,p)\mathrm{H}^{3}$. C. F. Cook and J. R. Smith. bibliog diag Phys R 89:785-6 F 15 '53

Decay of Au^{197m}. J. W. Mihelich and A. de-Shalit. bibliog il diag Phys R 91:78-81 Jl 1 '53

Decay of Cr^{49}. B. Crasemann and H. T. Easterday. diag Phys R 90:1124-5 Je 15 '53

Decay of Ga^{64} and Ga^{65}. B. Crasemann. Phys R 90:995-6 Je 1 '53

Decay of K^{42}. B. Kahn and W. S. Lyon. Phys R 91:1212-13 S 1 '53

Decay of Rh^{104m} (4.3 min) and Rh^{104} (44 sec). W. C. Jordan and others. bibliog diag Phys R 90:862-4 Je 1 '53

Decay of Rh^{106}. D. E. Alburger. bibliog diag Phys R 88:339-43 O 15 '52

Decay of Zn^{69}. R. B. Duffield and L. M. Langer. bibliog Phys R 89:854-5 F 15 '53

Decay scheme of Ir^{192}. K. I. Roulston and R. W. Pringle. diag Phys R 87:930-1 S 15 '52

Deuteron photodisintegration at high energies. W. S. Gilbert and J. W. Rosengren. bibliog diag Phys R 88:901-5 N 15 '52

Dipole photonuclear reactions and the independent particle model. J. L. Burkhardt. Phys R 91:420-1 Jl 15 '53

Disintegration of Cr^{51}. W. S. Lyon. Phys R 87:1126 S 15 '52

Disintegration of helium by 90-Mev neutrons. P. E. Tannenwald. bibliog il diags Phys R 89:508-17 Ja 15 '53

Disintegration of I^{131}. J. R. Haskins and J. D. Kurbatov. bibliog Phys R 88:884-6 N 15 '52

Disintegration of radium D. A. A. Jaffe and S. G. Cohen. bibliog Phys R 89:454-8 Ja 15 '53

Disintegration of Sb^{124}. L. M. Langer and others. bibliog diag Phys R 91:338-41 Jl 15 '53

Disintegration of Sc^{47}. L. S. Cheng and M. L. Pool. Phys R 90:886-8 Je 1 '53

Disintegration of Sr^{91} and Y^{91m}. D. P. Ames and others. bibliog diag Phys R 91:68-74 Jl 1 '53

Disintegration of 24-minute Ag^{106}. W. L. Bendel and others. bibliog diag Phys R 90:888-90 Je 1 '53

Disintegration scheme of Fe^{59}. F. R. Metzger. bibliog diags Phys R 88:1360-7 D 15 '52

Disintegration scheme of V^{48}. P. L. Roggenkamp and others. bibliog diag Phys R 88:1262-5 D 15 '52

Distributions-in-energy for alpha-particles and protons from U^{235} fission. D. L. Hill. diag Phys R 87:1049-51 S 15 '52

Effect of charge symmetry on nuclear reactions. N. M. Kroll and L. L. Foldy. bibliog Phys R 88:1177-9 D 1 '52

Effect of final state interactions on reaction cross sections. K. M. Watson. bibliog Phys R 88:1163-71 D 1 '52

Effects of radioactive disintegrations on inner electrons of the atom. J. S. Levinger. bibliog diags Phys R 90:11-25 Ap 1 '53

Electrostatic analysis of nuclear reaction energies. D. S. Craig and others. Phys R 88:808-11 N 15 '52

Electrostatic analysis of nuclear reaction energies. D. J. Donahue and others. bibliog Phys R 89:824-6 F 15 '53

Energy levels in A^{38} from the $\mathrm{Cl}(a,p)$ reaction. A. Z. Kranz and W. W. Watson. bibliog Phys R 91:1472-3 S 15 '53

Energy levels in Be^{8} from the reaction $\mathrm{Li}^{6}(\mathrm{He}^{3},\ p)\mathrm{Be}^{8}$. W. E. Kunz and others. diag Phys R 91:676 Ag 1 '53

Energy levels in Si^{28} excited by alpha-particles on Mg^{24}. S. G. Kaufman and others. Phys R 88:673-6 N 1 '52

Energy spectrum of neutrons from thermal fission of U^{235}. B. E. Watt. diags Phys R 87:1037-41 S 15 '52

Energy spectrum of particles from stars. R. W. Waniek and T. Ohtsuka. Phys R 91:1574-5 S 15 '53

Excitation function for the $\mathrm{Al}^{27}(d,\alpha p)\mathrm{Na}^{24}$ reaction. R. E. Batzel and others. Phys R 91:939-42 Ag 15 '53

Excitation functions for proton-induced reactions with copper. J. W. Meadows. Phys R 91:885-9 Ag 15 '53

Excitation functions to 100 Mev. N. M. Hintz and N. F. Ramsey. bibliog diag Phys R 88:19-27 O 1 '52

Experimental evidence for the Fermi interaction in the β decay of O^{14} and C^{10}. R. Sherr and J. B. Gerhart. bibliog Phys R 91:909-14 Ag 15 '53

Fermi term in β-ν correlation. D. C. Peaslee. bibliog Phys R 89:1148-9 Mr 1 '53

Fission asymmetry as a function of excitation energy of the compound nucleus. J. L. Fowler and others. Phys R 88:71-2 O 1 '52

Fission cross section of uranium-234. R. W. Lamphere. diag Phys R 91:655-8 Ag 1 '53

Fission neutron spectrum of Pu^{239}. N. Nereson. Phys R 88:823-4 N 15 '52

Fission neutron spectrum of U^{235}. D. B. Nicodemus and H. H. Staub. bibliog diag Phys R 89:1288-90 Mr 15 '53

Fission-to-capture cross-section ratio. J. R. Huizenga and R. B. Duffield. Phys R 88:959-60 N 15 '52

Formation of He^{6} by 14-Mev neutron bombardment of Li and Be. M. E. Battat and F. L. Ribe. bibliog diag Phys R 89:80-3 Ja 1 '53

Further test of the shell model. J. S. King and W. C. Parkinson. Phys R 88:141-2 O 1 '52

Gallium 67. B. H. Ketelle and others. bibliog Phys R 90:567-73 My 15 '53

Gamma-gamma angular correlation in Ni^{60}. E. D. Klema and F. K. McGowan. bibliog Phys R 91:616-18 Ag 1 '53

ATOMS—Disintegration—*Continued*

$(\gamma,2n)$ Reaction in Ta. E. A. Whalin and A. O. Hanson. Phys R 89:324-5 Ja 1 '53

(γ,pn) Reaction in phosphorus. J. Halpern and others. Phys R 88:958 N 15 '52

Genetics of the Ge^{78}-As^{78} fission chain. N. Sugarman. bibliog Phys R 89:570-2 F 1 '53

Ground-state parity of N^{14}. D. A. Bromley. bibliog diags Phys R 88:565-70 N 1 '52

High energy nuclear interactions in lead and light elements. M. F. Kaplon and others. bibliog Phys R 90:716-17 My 15 '53

High energy nuclear reactions and the Goldberger model. J. W. Meadows. bibliog Phys R 88:143-4 O 1 '52

Higher spin polarizations in nuclear reactions. A. Simon. Phys R 90:326 Ap 15 '53

Hot atom recoils from $C^{12}(\gamma,n)C^{11}$. F. S. Rowland and W. F. Libby. bibliog J Chem Phys 21:1493-4 S '53

Influence of structure, phase and added iodine on the organic yields of the $I^{127}(n,\gamma)I^{128}$ reaction in alkyl iodides. G. Levey and J. E. Willard. bibliog Am Chem Soc J 74:6161-7 D 20 '52

Levels in N^{14} from the $C^{13}(p,\gamma)N^{14}$ reaction. D. Hicks and others. diag Phys R 90:163-4 Ap 1 '53

Levels of Al^{25} from the $Mg^{24}(d,n)Al^{25}$ reaction. E. Goldberg. bibliog Phys R 89:760-5 F 15 '53

Limit on repulsive core from 100-Mev deuteron photoeffect. N. Austern. Phys R 88:1207-8 D 1 '52

Linear combination in β decay. D. C. Peaslee. bibliog Phys R 91:1447-57 S 15 '53

Li^9 disintegration in a photographic emulsion. W. F. Fry. diags Phys R 89:325-6 Ja 1 '53

Long-lived delayed neutrons from fission. J. W. Kunstadter and others. diag Phys R 91:594-6 Ag 1 '53

Lower limit for the lifetime of the 665-kev excited state of Mo^{97}. F. R. Metzger and W. B. Todd. bibliog Phys R 91:1286-7 S 1 '53

Magnetic analysis of the $Al^{27}(d,p)Al^{28}$ reaction. H. A. Enge and others. bibliog diag Phys R 88:963-8 D 1 '52

Magnetic analysis of the proton groups from the $Na^{23}(d,p)Na^{24}$ reaction. A. Sperduto and W. W. Buechner. bibliog diag Phys R 88:574-9 N 1 '52

Magnetic analysis of the $Sr^{88}(d,p)Sr^{89}$ reaction. C. E. McFarland and F. B. Shull. Phys R 89:489 Ja 15 '53

Magnetic lens spectrometer measurements of the radiations from light nuclear reactions. R. G. Thomas and T. Lauritsen. bibliog diags Phys R 88:969-86 D 1 '52

Mechanism of the reaction $O^{16}+h\nu\rightarrow 4He^4$. C. A. Hsiao and V. L. Telegdi. bibliog Phys R 90:494-5 My 1 '53

Meson theory of β-decay and the ΔL-forbidden transitions. S. Nakamura. bibliog Phys R 89:16-19 Ja 1 '53

Neutron energy distribution from the proton bombardment of Li, Be, and C at 375 Mev. W. F. Goodell, jr. and others. bibliog diags Phys R 89:724-7 F 15 '53

Neutron energy spectrum from U^{235} thermal fission. D. L. Hill. diag Phys R 87:1034-7 S 15 '52

(n, γ) and $(n, 2n)$ reactions in iodine. H. C. Martin and R. F. Taschek. Phys R 89:1302-3 Mr 15 '53

N^{14} level structure from the $C^{13}(p,n)N^{13}$ reaction. J. K. Bair and others. Phys R 90:575-6 My 15 '53

$(n,2n)$ Reactions in C^{12}, Cu^{63}, and Mo^{92}. J. E. Brolley, jr. and others. bibliog diag Phys R 88:618-21 N 1 '52

Neutrons from the disintegration of phosphorus by deuterons. S. C. Snowdon. bibliog Phys R 87:1022-5 S 15 '52

New nuclides produced in chlorine spallation. M. Lindner. Phys R 91:642-4 Ag 1 '53

Nuclear constitution and the interpretation of fission phenomena. D. L. Hill and J. A. Wheeler. bibliog flow sheet diags Phys R 89:1102-45 Mr 1 '53

Nuclear gamma-rays from low energy proton bombardment of sodium, magnesium, and aluminum. H. Casson. bibliog diags Phys R 89:809-20 F 15 '53

Nuclear mass determinations from disintegration energies; oxygen to sulfur. C. W. Li. Phys R 88:1038-42 D 1 '52

Nuclear photoprocesses at high energy. J. G. Brennan and R. G. Sachs. bibliog Phys R 88:824-7 N 15 '52

Nuclear reactions in the stars; proton-proton chain. E. E. Salpeter. Phys R 88:547-53 N 1 '52

Nuclear reactions with 21-Mev He^3 in a cyclotron. D. N. Kundu and others. bibliog Phys R 89:1200-2 Mr 15 '53

Patterns in alpha spectra of even-even nuclei. F. Asaro and I. Perlman. Phys R 91:763-4 Ag 1 '53

Photodisintegration cross section of beryllium at 2.185 Mev. B. Hamermesh and C. Kimball. bibliog diag Phys R 90:1063-5 Je 15 '53

Photodisintegration of the deuteron. L. Hulthén and B. C. H. Nagel. bibliog Phys R 90:62-9 Ap 1 '53

Photodisintegration of the deuteron at 20 Mev. J. Halpern and E. V. Weinstock. bibliog diag Phys R 91:934-9 Ag 15 '53

Photofission and photoneutron emission in uranium. R. B. Duffield and J. R. Huizenga. bibliog Phys R 89:1042-6 Mr 1 '53

Photomesonic fission of bismuth. G. Bernardini and others. bibliog Phys R 90:573-4 My 15 '53

Photon-induced reactions. D. C. Peaslee. bibliog Phys R 88:812-16 N 15 '52

Photoneutron cross sections. R. Montalbetti and others. bibliog diags Phys R 91:659-73 Ag 1 '53

Physical analysis of Be and C disintegration induced by 330-Mev protons. W. H. Barkas and H. Tyren. diag Phys R 89:1-3 Ja 1 '53

π- and μ-meson-induced fission. W. John and W. F. Fry. bibliog Phys R 91:1234-6 S 1 '53

Plural theories for the shower component in high energy nuclear disintegrations. H. Messel and R. B. Potts. bibliog Phys R 88:488-92 N 1 '52

Preferred ratios of energies of excited states of nuclei. M. G. Redlich. bibliog Phys R 91:328-32 Jl 15 '53

Production of fissionable isotopes in a thermal reactor. L. B. Robinson. bibliog Phys R 90:1054-7 Je 15 '53

Production of polarized particles in nuclear reactions. A. Simon and T. A. Welton. bibliog Phys R 90:1036-43 Je 15 '53

Proton induced reactions of thorium—fission yield curves. H. A. Tewes and R. A. James. bibliog Phys R 88:860-7 N 15 '52

Pseudoscalar matrix element in beta-decay. M. Ruderman. bibliog Phys R 89:1227-30 Mr 15 '53

Radiations from arsenic 77 and germanium 71. B. L. Saraf and others. bibliog diags Phys R 91:1216-18 S 1 '53

Radiations from Rb^{86} and Rb^{86m}. R. B. Schwartz and others. bibliog Phys R 91:883-4 Ag 15 '53

Radiations from selenium^{75}. E. N. Jensen and others. bibliog Phys R 90:557-63 My 15 '53

Radiations from Zr^{89}. F. J. Shore and others. bibliog diags Phys R 91:1203-11 S 1 '53

Radiations of Pu^{243}. D. W. Engelkemeir and others. bibliog diag Phys R 90:6-10 Ap 1 '53

Radiations of Ra^{227}. J. P. Butler and J. S. Adam. bibliog Phys R 91:1219-21 S 1 '53

Radiations of U^{240} and Np^{240}. J. D. Knight and others. bibliog Phys R 91:889-93 Ag 15 '53

Radioactive decay of indium 114. M. W. Johns and others. bibliog diag Phys R 87:1134-5 S 15 '52

Radiochemical studies on the fission of Th^{232} with Li+D neutrons. A. Turkevich and others. bibliog Phys R 89:552-5 F 1 '53

Radiochemical studies on the photofission of thorium. D. M. Hiller and D. S. Martin, jr. bibliog Phys R 90:581-5 My 15 '53

Radioisotopes of osmium. J. B. Swan and R. D. Hill. bibliog diag Phys R 88:831-5 N 15 '52

Reaction energies of $Ne^{21}(d,\alpha)F^{19}$ and $Ne^{21}(d,p)Ne^{22}$ from magnetic analysis. C. Mileikowsky and W. Whaling. bibliog Phys R 88:1254-7 D 15 '52

Reactions $He^3(He^3,p)Li^5$ and $T(He^3,p)He^5$. E. Almqvist and others. bibliog Phys R 91:1022-3 Ag 15 '53

ATOMS—Disintegration—*Continued*

Reactions $T(p,n)He^3$ and $T(p,\gamma)He^4$. H. B. Willard and others. bibliog Phys R 90:865-7 Je 1 '53

Scintillation spectrometer study of the decay of Tl^{204}. E. der Mateosian and A. Smith. bibliog diag Phys R 88:1186-90 D 1 '52

Search for double beta-decay in Sn^{124} and Zr^{96}. J. A. McCarthy. bibliog diags Phys R 90:853-7 Je 1 '53

Short-lived cerium isotopes from uranium fission. A. A. Caretto, jr. and S. Katcoff. bibliog Phys R 89:1267-8 Mr 15 '53

Spallation of Cu with high energy neutrons. L. Marquez. bibliog Phys R 88:225-7 O 15 '52

Spontaneous fission versus alpha-decay. A. Kramish. Phys R 88:1201 D 1 '52

States of S^{33} and Si^{29} from (d,p) stripping. J. R. Holt and T. N. Marsham. Phys R 89:665-6 F 1 '53

Stripping and pick-up differential cross sections. S. T. Butler and E. E. Salpeter. Phys R 88:133-4 O 1 '52

Stripping and the nuclear shell model. S. T. Butler. Phys R 88:685 N 1 '52

Study of the $H^3(d,n)He^4$ reaction. J. P. Conner and others. bibliog diags Phys R 88:468-73 N 1 '52

Theory of (d,p) and (d,n) reactions. E. Gerjuoy. Phys R 91:645-9 Ag 1 '53

Upper limit for atomic orbital electron ejection accompanying K-capture in Fe^{55}. F. T. Porter and H. P. Hotz. bibliog Phys R 89:938-40 Mr 1 '53

Uranium photofission yields. R. A. Schmitt and N. Sugarman. bibliog Phys R 89:1155-6 Mr 1 '53

Yield of Xe^{133} in the thermal neutron fission of U^{235}. S. Katcoff and W. Rubinson. bibliog diags Phys R 91:1458-69 S 15 '53

$Zn^{64}(d,\alpha n)Cu^{61}$ reaction. C. S. Cook and F. T. Porter. bibliog Phys R 90:429 My 1 '53

See also

Gamma rays

Recombination

Photoelectric observation of the rate of recombination of iodine atoms. R. Marshall and N. Davidson. bibliog il diags J Chem Phys 21:659-64 Ap '53

Rate of recombination of free atoms. G. Careri. bibliog J Chem Phys 21:749-50; Reply. O. K. Rice. diag 750-1 Ap '53

ATOMS, Metastable. See Metastability

ATTENUATORS, Radio. See Radio attenuators

ATTICS

Expansion-attic truss offers new way to make small houses bigger at minimum cost. il plans diag House & Home 2:110-11 S '52

How an attic was transformed into luxury living space. il diags Am Bld 74:50+ S '52

How to install the attic fan. il diags Am Bld 75:52+ F '53

ATTITUDE surveys. See Employees—Opinion polls

AUCHTER, Eugene Curtis, 1889-1952

Sketch. F. D. Richey. Science 116:700-1 D 26 '52

AUCKLAND, New Zealand

Bridges

Auckland Harbour bridge project. map diag Engineering 174:673 N 21 '52

AUCTIONS

Auction action; Parke-Bernet goes into industrial goods and real estate. Bsns W p 179 My 16 '53

Auto auction; safety valve for the dealers. il Bsns W p48-50+ O 25 '52

15,000 fox furs go on auction block. il Bsns W p30-1 Ap 25 '53

Kentucky burley; ten seconds a sale; tobacco auction. il Bsns W p86-8+ Ja 31 '53

When blue-blooded Herefords stand for auction at Morlunda farms. il Bsns W p28-30 Je 13 '53

AUDIO-VISUAL instruction

Audio-visual aid field thrives; films hit $45,000,000 sales. il Ind Marketing 37:32+ N '52

Audio-visual aids and vocational training. H. Nozet. Int Labour R 66:338-53 O '52

Sound tape and slide films sharpen skits at Ansul sales meeting. M. Kingman. il Ind Marketing 37:44-5+ N '52

Visuals clinic; new audi-visual techniques and products; filmograph, spectrochrome magnetic board, etc. il Sales Management 70:51-4 pt 2 Ja 1 '53

AUDIT bureau of circulations

Adventure in integrity; ABC. Blast F & Steel Pl 40:1205 O '52

Agency group asks area ABC figures. Ed & Pub 85:10 D 6 '52

ABC board revises publicity by-law. Ed & Pub 85:22 O 4 '52

ABC to further study parish plan methods. G. A. Brandenburg. Ed & Pub 85:14 N 1 '52

Exhorts ABC to audit every daily. H. H. Kynett. Ed & Pub 85:7+ O 25 '52

Publisher's conscience and cop. il Bsns W p43-4+ O 25 '52

Supplements get ABC non-voting status. Ed & Pub 85:14 D 13 '52

AUDITING

Applying auditing techniques to nonaccounting activities useful to both auditor and management. D. I. Meriney. J Account 95:64-5 Ja '53

Audit aspects of pension administration. K. F. Hardy. N A C A Bul 34:500-8 D '52

Current accounting and auditing problems. C. G. Blough, ed. Published in monthly numbers of Journal of acountancy

How much reliance on work of other auditors? J Account 94:468-9 O '52

Importance of business audits. J. L. Carey. Banking 45:114+ Mr '53

Relationship of audit programs to audit; standards, principles, techniques, and procedures. C. A. Moyer. J Account 94:687-91 D '52

See also

Bank auditing

Bank examination

Internal control

Clean line of responsibility is fundamental for good internal control systems for small banks. R. W. Fischer. J Account 95:454-7 Ap '53

Developing criteria for effective internal auditing. L. P. Hourihan. Edison Elec Inst Bul 21:183-8+ Je '53

Fraud can take place in well-designed system if working rules are not followed. H. N. Schisler. J Account 95:176-8 F '53

How much auditing is enough? C. J. Nichols. Am Gas Assn Mo 35:25-6+ Jl-Ag '53

Internal auditing as an aid to management. W. T. Jerome, 3d. Harvard Bsns R 31:127-36 Mr '53

Two costs of poor internal control; fraud and unreliable accounting information. R. L. Williams. J Account 94:580-5 N '52

AUDITORIUMS

Newest New York City coliseum plan is revealed as part of redevelopment. il Eng N 149:48+ D 11 '52

Planning a stage lighting installation for a modern school auditorium. T. Fuchs. plans Illum Eng 48:348-53 Je '53

Welded frames span 328; Mexico City's huge auditorium. il plan diag Arch Forum 97:158 S '52

Air conditioning

No more shirtsleeve conventions. M. E. Fine. il Heating-Piping 24:94-5 D '52

AUDOGRAPH. See Dictating machines

AUGER effect

Auger electron intensities. R. D. Hill. bibliog Phys R 91:770-1 Ag 1 '53

Auger peaks in the energy spectra of secondary electrons from various materials. J. J. Lander. bibliog diags Phys R 91:1382-7 S 15 '53

Exchange scattering of an electron by an atom and inverse Auger effect. T. Wu. Phys R 87:1012-15 S 15 '52

Measurement and interpretation of the K Auger intensities of Sn^{113}, Cs^{137}, and Au^{198}. C. D. Broyles and others. bibliog diag Phys R 89:715-24 F 15 '53

Mesonic Auger effect. G. R. Burbidge and A. H. de Borde. bibliog Phys R 89:189-93 Ja 1 '53

AUGERS

He stayed with augers. il Fortune 46:168 O '52

AUGUSTA, Georgia

Where Eisenhower and the masters play golf. il Bsns W p30-2 Ap 18 '53

AURALIZE (term)

Do you auralize? D. W. Martin. Acoustical Soc Am J 24:416 Jl '52

AURAMINE

Polarographic reduction of crystal-violet, brilliant-green, malachite-green, and auramine. R. C. Kaye and H. I. Stonehill. Chem Soc J p3231-9 Ag '52

AURANTIOGLIOCLADIN. See Antibiotic substances

AUREOMYCIN

Aureomycin made in Canada. Can Chem Process 37:56 F '53

Degradation of aureomycin; aureomycin and anhydroaureomycin. C. W. Waller and others. Am Chem Soc J 74:4981-2 O 5 '52

Degradation of aureomycin; aureomycinic acid. B. L. Hutchings and others. Am Chem Soc J 74:4980 O 5 '52

Degradation of aureomycin; desdimethylaminoaureomycinic acid. C. W. Waller and others. Am Chem Soc J 74:4979-80 O 5 '52

Degradation of aureomycin; 3,4-dihydroxy-2,5-dioxocyclopentane-1-carboxamide. C. W. Waller and others. Am Chem Soc J 74:4978-9 O 5 '52

Degradation of aureomycin; isoaureomycin and aureomycin. C. W. Waller and others. Am Chem Soc J 74:4981 O 5 '52

Effect of fungicidin (Nystatin) in mice injected with lethal mixtures of aureomycin and candida albicans. R. Brown and others. Science 117:609-10 My 29 '53

Generic terms proposed for aureomycin, terramycin. Chem & Eng N 30:4628+ N 3 '52

Manganese reversal of aureomycin inhibition of bacterial cell-free nitro-reductase. A. K. Saz and R. B. Slie. Am Chem Soc J 75: 4626-7 S 20 '53

Syntheses of degradation products of aureomycin. S. Kushner and others. bibliog Am Chem Soc J 75:1097-100, 1732-3, 3261-4 Mr 5, Ap 5, Jl 5 '53

Terramycin; structure of aureomycin and terramycin. C. R. Stephens and others. bibliog Am Chem Soc J 74:4976-7 O 5 '52

Bibliography

Aureomycin bibliography and index, 1951 edition. 319p Lederle laboratories division, American cyanamid co, 30 Rockefeller Plaza, New York 20 '52

AUREOTHRICIN. See Antibiotic substances

AURORAS

Auroral effects on television. R. E. Thayer. il Inst Radio Eng Proc 41:161 Ja '53

Spectra

Forbidden line of N II in the aurora. W. Petrie. Phys R 87:1002 S 15 '52

Magnetic self-focusing of auroral protons. W. H. Bennett and E. O. Hulburt. Phys R 91:1562 S 15 '53

AUSTENITE

Decomposition of austenite in low carbon, Ni, Mo, steel weld metal. E. F. Bailey and W. J. Harris, jr. il diag Welding J 32:sup 134-8 Mr '53

Deformation of austenite in relation to the hardness characteristics of steel. G. R. Bish and H. O'Neill. bibliog pl diags Iron & Steel Inst J 173:398-405 Ap '53; Discussion. 174: 347-52 Ag '53

Effect of carbon on the volume fractions and lattice parameters of retained austenite and martensite. C. S. Roberts. bibliog J Metals 5:Trans 203-4 F '53

Electrolytic separation and some properties of austenite and sigma in 18-8-3-1 chromium-nickel-molybdenum-titanium steel; abstract. T. P. Hoar and K. W. J. Bowen. Metal Prog 62:136+ N '52

Modifications of an X-ray method for the measurement of retained austenite concentrations in hardened steels. K. E. Beu. J Metals 4:Trans 1327-8 D '52

Retained austenite determinations by X-ray methods. B. L. Averbach. J Metals 5:Trans 87-8 Ja '53

Retained austenite in carburized alloy steels. W. J. Jabsen. Metal Prog 62:118+ D '52

Solubility of carbon in 18-percent-chromium-ten-percent-nickel austenite. S. J. Rosenberg and C. R. Irish. bibliog il J Res Nat Bur Stand 48:40-8 Ja '52; Abstract. Metal Prog 63:164+ Mr '53

Specific heat of austenite and martensite. E. Griffiths and P. R. Pallister. diags Iron & Steel Inst J 175:30-2 S '53

Stabilization of the austenite-martensite reaction in a high chromium steel. S. C. Das Gupta and B. S. Lement. bibliog il diags J Metals 5:Trans 530-6 Ap '53

Thermal stabilization of austenite in carburizing steels. H. M. Otte and T. Ko. bibliog Iron & Steel Inst J 173:31-5 Ja '53; Discussion. 174:347-52 Ag '53

AUSTIN, Minnesota

Streets

How Austin paves streets with its own crew. P. R. Hoffman. Pub Works 84:69-70 Ja '53

AUSTIN company

Austin pushes more ideas for construction. il Eng N 149:48+ N 27 '52

AUSTRALIA

See also

Aeronautic research—Australia
Automobile industry and trade—Australia
Botany—Australia
Electric industries—Australia
Electricity supply—Australia
Forests and forestry—Australia
Hydroelectric plants—Australia
Irrigation—Australia
Mines and mineral resources—Australia
Oil shales—Australia
Petroleum industry and trade—Australia
Wood pulp—Australia

Commerce

Australia enjoys its import cuts. Economist 166:372 F 7 '53

Elasticity of demand for the exports of a single country. F. B. Horner. R Econ & Stat 34:326-42 N '52

Commonwealth forestry bureau

Commonwealth forestry bureau. Pulp & Pa of Can 53:154+ N '52

Economic conditions

Australia; price of growth. diag map Economist 166:683-6+ Mr 7 '53

Developing dominions. Economist 166:612-14 Mr 7 '53

Economic conditions abroad (cont). For Comm W 48:7 D 15 '52; 49:4+ F 16 '53

Inflation in Australia. Economist 165:218-19 O 25 '52

Economic policy

Australia; price of growth; government economic policies. Economist 166:691-2+ Mr 7 '53

Australia's pattern of development. Economist 166:428 F 14 '53

Industries and resources

Australia; price of growth; scope for expansion. diag Economist 166:684-6 Mr 7 '53

Politics and government

Australia; price of growth; next stage in politics. Economist 166:696+ Mr 7 '53

Conservatives' troubles down under. Bsns W p 164-5 N 22 '52

Swing to labour in Australia. Economist 166: 884 Mr 28 '53

AUSTRALIA and New Zealand bank, limited

Results of first year's operations. A. T. Maxwell. Economist 166:113-14 Ja 10 '53

AUSTRALIAN institute of agricultural science

Australian institute of agricultural science. J. M. Stevens. Science 117:sup3 My 8 '53

AUSTRIA

See also

Petroleum industry and trade—Austria
Railroads—Electrification—Austria

AUSTRIA—*Continued*

Economic conditions

Economic conditions abroad (cont). For Comm W 48:28 N 3; 8 N 24 '52; 49:5 Mr 16 '53

Illusion about trade-and-aid. A. W. May. Comm & Fin Chr 178:5+ Jl 2 '53

Economic relations

United States

Allotments made to Austria and Turkey. For Comm W 50:7 Jl 20 '53

Export-import bank authorizes credit for Austria. For Comm W 49:6 Mr 2 '53

MSA allots funds to west Germany, Austria. For Comm W 50:5 Jl 13 '53

Politics and government

Strange coalition in Austria. Economist 167:98 Ap 11 '53

AUTHORS

See also

Copyright

AUTHORSHIP

See also

Technical writing

AUTOCLAVE building products association

Annual meeting, 47th, Richmond, March 1-3; with abstracts of papers. Rock Prod 56:198-9 Je '53

AUTOCLAVES

Cellular calcium silicate products; preformed foamed concrete products. S. Dilnot. Rock Prod 55:110+ O '52

Lignin studies; use of high pressure autoclaves; abstract. R. Monnberg. diags Paper Ind 35:479-80 Jl '53

Small capacity plant uses autoclave steam curing; Arkhola sand & gravel co. W. B. Lenhart. il Rock Prod 55:196-7 O '52

Using plug valves to produce motion inside autoclaves. A. W. Billitzer. diags Chem Eng 60:232-3 Mr '53

AUTOFINING. See Petroleum refining—Sulfur removal

AUTOMATIC control. See Control equipment

AUTOMATIC machinery. See Machinery, Automatic

AUTOMATIC pilot. See Airplanes—Control

AUTOMATIC stop and train control. See Railroads—Automatic stop and train control

AUTOMATIC telephone. See Telephone, Automatic

AUTOMATION (term)

Automation; control by product. il Chem W 71:28+ D 27 '52

AUTOMATONS

Amateur scientist; making of simple mathematical machines. A. G. Ingalls. diags Sci Am 188:104-7 My '53

Timekeeping smithies of Nottingham. il Comp Air Mag 58:77 Mr '53

Timothy; robot electronic turtle. J. H. Kubanoff. il diags Radio & Tv N 49:35-8+ Ap '53

AUTOMOBILE accessories industry

Auto paradox; parts makers cautious despite car boom. N. Willatt. Barron's 33:9+ My 18 '53

Dealer survey leads to new package and new display program; automobile battery cables. K. R. MacLean. il Ptr Ink 241:38+ N 28 '52

Factory sales of repair parts and accessories, 1934-1952; monthly factory sales of replacement parts and accessories, 1946-1952; chart and tabulations. Automotive Ind 108:99 Mr 15 '53

How a weekly budget plan boosts sales; Henderson vulcanizing co. C. Boyd, jr. il Nat Pet N 45:80-2 Ap 1 '53

Replacement parts are a $2.5-billion business. il Steel 131:85 D 15 '52

Selling to the automakers. F. G. Lawrence. Steel 132:69-70 My 4 '53

Three leading auto accessory companies; how Bendix Aviation, Thompson Products, Borg-Warner compare. S. Devlin. il Mag of Wall St 91:402-4+ Ja 10 '53

Why do so many fail to make Turnover club? selling to Phelps-Roberts corp. auto parts wholesalers. J. Shoenfeld. Sales Management 69:70-3 O 1 '52

See also

Automobile lamps
Gasoline service stations—Automobile accessories
Tachometers
White's auto stores, inc.

AUTOMOBILE accidents

Accidents analysed; Ministry of transport's report. Economist 166:68-9 Ja 10 '53

Add to highway patrol to cut deaths. T. N. Boate. Nat Underw 57:20 Mr 12 '53

Advocates lower thruway speed limit. T. N. Boate. East Underw 54:41 My 15 '53

Are accident victims human? J. D. Dorsett. Safety Maint & Prod 104:60+ O '52

Automobile insurance's influence on accident frequency. R. H. Oppenheimer. Weekly Underw 167:1714-16 D 27 '52

Big campaign against holiday accidents. Weekly Underw 167:1689+ D 27 '52

Blames professional safety leaders for public apathy. H. P. Jackson. East Underw 53:38 O 24 '52; Same cond. Nat Underw 56:22 O 23 '52

Defends dual interest of public and industry. M. W. Heard. East Underw 54:29, 52 My 8 '53; Same. Weekly Underw 168:1231+ My 2 '53

Drive to cut winter accidents. Safety Maint & Prod 104:20+ D '52

'52 highway accidents cost $3½ billion. Safety Maint & Prod 106:40 Ag '53

France has government fund for victims of motor vehicle accidents. M. Picard. Nat Underw 57:11+ Je 18 '53

Greater interest in traffic safety needed; abstract. T. N. Boate. Safety Maint & Prod 104:47-9+ N '52

Interstate highway accident study. M. S. Raff. map Pub Roads 27:170-86 Je '53; Excerpt. Pub Works 84:79-80 Jl '53

Light and night traffic accidents. D. M. Baldwin. Illum Eng 48:515-16 O '53; Discussion. 48:635-6 D '53

Motor vehicles committee; report of subcommittee on safety and safe practices. Am Gas Assn Proc 1952:340-2

National traffic crisis. J. D. Dorsett. East Underw 53:35 N 14 '52; Same cond. Nat Underw 56:25+ N 13 '52

New Jersey turnpike acts to cut fog accidents. Eng N 149:26 N 27 '52

Speed, '52 top killer. Safety Maint & Prod 105:57 Je '53

Speed takes its toll. T. N. Boate. Safety Maint & Prod 105:48+ F '53

Studies on war and accident casualties; abstracts. T. N. Boate. East Underw 54:46 Mr 6 '53; Safety Maint & Prod 105:60+ Ap '53

Systematic road accident investigation. Engineer 196:184 Ag 7 '53

Transportation safety. Safety Maint & Prod 104:34-6 D '52

Turnpike speed reduction urged. T. N. Boate. Weekly Underw 167:1512+ D 6 '52

27 per cent of turnpike accidents involve military personnel. C. E. McCandless. Safety Maint & Prod 105:62+ Mr '53

Weak law enforcement causes more accidents. P. Blaisdell. Rough Notes 95:18+ D '52

What's ahead on the highways. T. N. Boate. Safety Maint & Prod 104:75-6 O '52

See also

Motor trucks—Accidents

Statistics

Deaths from accidents by automobile and in the home, 1949-1950; tabulation. Spectator 161:104-6 Ap '53

Tennessee accident fatalities, 1946-50. A. L. Sullivan. Pub Health Rep 68:301-3 Mr '53

Travelers prints 1952 accident data booklet. East Underw 54:43 Ap 3 '53; Same abr. Nat Underw 57:40 Ap 2 '53; Same abr. Weekly Underw 168:920 Ap 4 '53

AUTOMOBILE assembly plants

Belgium makes plans to establish more automobile assembly plants. For Comm W 49:12 Ap 6 '53

Ford erecting largest single Canadian plant. il Automotive Ind 107:90 N 1 '52; Eng N 149:51 O 9 '52

AUTOMOBILE assembly plants—*Continued*

Frame assembly cuts shipping costs; Chevrolet's assembly plants. il Steel 132:98-9 My 4 '53

Latest equipment and methods at Lincoln-Mercury's new assembly plant. J. Geschelin. il Automotive Ind 109:50-3+ O 15 '53 (to be cont)

AUTOMOBILE association, American. See American automobile association

AUTOMOBILE associations

Home touring and emergency services of the Automobile association. R. C. Evans. maps Aslib Proc 4:255-62; Discussion. 262-4 N '52

AUTOMOBILE batteries. See Storage batteries

AUTOMOBILE brakes. See Brakes, Automobile

AUTOMOBILE camps. See Tourist camps, hostels, etc.

AUTOMOBILE drivers

Elderly drivers source of concern to underwriters. Weekly Underw 168:66 Ja 3 '53

Highway boors. Safety Maint & Prod 104: 76-7 O '52

Irresponsible car operators chiefly to blame for bad writing experience. R. I. Catlin. Weekly Underw 168:798 Mr 21 '53

Role of the courts in traffic safety. H. W. Clement. Safety Maint & Prod 106:43 Ag '53

Rural area accident toll raises national average. T. N. Boate. East Underw 54:47 Mr 27 '53; Same. Weekly Underw 168:870 Mr 28 '53

Traffic safety forces now have H-bomb! suspending or revoking the driving privilege of traffic violators. P. H. Blaisdell. Safety Maint & Prod 105:61-2 Mr '53; Same. Weekly Underw 168:606 F 28 '53

Testing

Driver control program recommended. P. H. Blaisdell. Weekly Underw 168:1091 Ap 18 '53; Same cond. Safety Maint & Prod 105: 58+ Je '53

Driver speed and behavior study; abstract. B. A. Lefeve. Roads & Sts 96:66 F '53

Driving test machine helps safety efforts; Aetna Roadometer. il Ed & Pub 85:58 N 1 '52

How Lone Star tests automobile operators in its new driver's clinic. W. C. Grant. il Gas Age 112:24-5+ S 24 '53

Urges bill to enforce tests for intoxication; would curb drunken drivers. East Underw 54:41 Mr 6 '53

Training

Aetna C.&S. Drivotrainer. il East Underw 54:21 F 27 '53; Same abr. Weekly Underw 168:586+ F 28 '53

ATA backs driver training for youths. Bus Transportation 31:125 D '52

Dealers furnish cars for training of high school drivers. Safety Maint & Prod 104: 74-5 O '52

Driver education. H. J. Stack and others. Safety Maint & Prod 105:46-9 Ja '53

Driver education; abstracts. P. E. Clark. East Underw 54:44 Ap 3 '53; Weekly Underw 168:958 Ap 4 '53; Safety Maint & Prod 106:49 Jl '53

Drivotrainer. P. B. Cullen. East Underw 54: 27 Je 26 '53; Same. Weekly Underw 168:1764 Je 27 '53

Drivotrainer wins award of films committee. Weekly Underw 168:1236 My 2 '53

How to make better drivers; Pacific gas and electric co. E. F. Hockenbeamer. il plan Elec West 110:80-3 Mr '53

How to teach driving in a classroom. il Bsns W p28-9 F 28 '53

In Brooklyn, pupils drive in school, safely; Aetna loans Drivotrainers for use in schools. J. Robinson. il Spectator 161:34 Ap '53

School-trained drivers soon to be five million. Safety Maint & Prod 106:86-7 O '53

AUTOMOBILE driving

Agents promoting highway safety from coast to coast. Nat Underw 57:13 Je 11 '53

Braking distances of vehicles from high speed and tests of friction coefficients. O. K. Normann. il diags Pub Roads 27:159-69 Je '53

Highway speeds control best approach to safety. P. Blaisdell. Weekly Underw 168: 1765 Je 27 '53

Imagine the hazard. Safety Maint & Prod 104: 63+ O '52

Minimum sight distance on vertical curves should be 500 ft., New York study shows. B. A. Lefeve. Roads & Eng Constr 91:116 Mr '53; Same. Safety Maint & Prod 105:57 Ap '53

Old booklet shows 1909 motorist had to be hardy. Nat Pet N 45:25 My 27 '53

Problems of night driving. Consumers Res Bul 31:20-2 F '53

Radar checks speed of Cincinnati motorists; abstract. J. Hearn. il S A E J 61:100-1 Jl '53

Rural road speeding. Safety Maint & Prod 105:31 My '53

See your car as others see it; a shiny menace! L. P. Lyman. Safety Maint & Prod 105: 49-50 F '53

Transportation safety. Safety Maint & Prod 104:34-6 D '52

Will super-highways bring super-accidents or super-safety? P. H. Blaisdell. Safety Maint & Prod 105:44-5 Ja '53

Winter driving rules. A. H. Easton. Safety Maint & Prod 105:48 F '53

AUTOMOBILE engineering

Allison makes wide use of digital computer. J. T. Horner. il S A E J 60:24-6 D '52

Automatic computers go to work on design problems. il S A E J 60:17-20 D '52

SAE honors engineering at SAE Centennial of engineering banquet. S A E J 60:64-8 O '52

SAE national passenger car, body, and materials meeting, Detroit, March 3-5. S A E J 61:80-6 Ap '53

Solving automotive problems with automatic computers. A. W. Jacobson and others. il diags Automotive Ind 109:52-7+ S 1 '53

Statistical quality control in relation to engineering. W. S. Oliver. diags Automotive Ind 107:38-40+ D 15 '52

See also

Automobile engines

Automobile research

Automobiles

AUTOMOBILE engines

Armstrong Siddeley Sapphire. diags Automotive Ind 108:62-3 Ap 1 '53

Buick's V-8 engine and new Dynaflow for '53. J. Geschelin. il diags Automotive Ind 108:50-4 Ja 1 '53

Causes of engine wear; panel discussion. J. F. Kunc, jr. and others. S A E J 60:118+ D '52

Dodge announces 140 hp OHV, V-eight engine. il Automotive Ind 107:54-5 N 1 '52

Effects of piston pin offset. P. M. Heldt. il diags Automotive Ind 108:28-31+ Mr 1 '53; Discussion. J. B. Fisher. 108:148 My 15 '53

Engine trends, 1930-1952; tabulations. Automotive Ind 108:126 Mr 15 '53

Engines; abstracts of SAE annual meeting papers. S A E J 61:75-80A F '53

Future automotive powerplants. V. G. Raviolo. S A E J 61:109-10+ Je '53; Abstract. Automotive Ind 108:37 My 1 '53

Higher compression and premium petrol. diags Economist 165:278 O 25 '52

Horsepower race. 1953 version. J. Geschelin. Automotive Ind 108:37+ Ja 15 '53

International motor show, London. il diag Engineer 194:607-8 N 7 '52

Lanchester Leda chassis. il diags Automobile Eng 43:3-9 Ja '53

Leaky pistons; no short cut will work. Consumers Res Bul 31:25-6 Mr '53

Longest Le Mans; 24-hour road race. W. F. Bradley. il diags Automotive Ind 109:34-7+ Jl 15 '53

Mechanism of wear. W. E. Jominy. diags S A E J 61:23-5 Ag '53

More horsepower for Chrysler. Bsns W p34 N 8 '52

More octane pressure; higher compression ratios, horsepower ratings of new 1953 autos. G. Weber. Oil & Gas J 51:34-5 Mr 2 '53

New Austin seven. il diags Automobile Eng 42:373-9 O '52

New Buick V-8 engine; abstract. V. E. Matthews and J. D. Turley. Automotive Ind 108:49, 76 F 15 '53

AUTOMOBILE engines—*Continued*

New horizons in engine development; abstract. E. G. Moeller. S A E J 61:108+ Ja '53

New Humber Super Snipe. il diags Automobile Eng 43:269-71 Jl '53

Overhead valve V-8 takes over. F. G. Lawrence. il Steel 132:67-8 Mr 30 '53

Piston and ring setups for new car engines. J. Geschelin. Automotive Ind 108:65+ Ja 1 '53

Role of corrosion in engine wear. J. C. Geniesse and H. R. Jackson. bibliog Pet Processing 7:1620-2 N '52

Trends in Chrysler corporation engines; abstract. H. L. Welch. S A E J 61:122-3 F '53

V-8 engine will influence styling. F. G. Lawrence. Steel 132:73-4 Ap 6 '53

What is an over-square engine? diags Economist 165:275 O 25 '52

See also

Anti-freeze solutions

Diesel engines, Automotive

Gas turbines, Automotive

Motor bus engines

Motor truck engines

Tractors

Bearings

Latest engineering techniques in the bearing industry. E. Crankshaw and R. C. Savage. diags S A E J 61:26-30 O '53

Outlines factors in modern bearing design; abstract. E. Crankshaw. S A E J 61:114+ Ap '53

Cooling

In car cooling systems it's the little things that count, report on round table on automotive and powerplant cooling systems. S A E J 60:29-31 N '52

Volkswagen aircooled engine. L. G. Boehner. il S A E J 61:48-50 Ag '53

See also

Automobile engines—Fans

Deposits

Combustion-chamber deposition and knock; abstract. H. J. Gibson and others. S A E J 61:22 Je '53

Combustion-chamber deposition and power loss. H. J. Gibson and others. diags S A E J 60:20-3 N '52

Combustion chamber deposits; abstract. J. B. Malin. S A E J 61:128 F '53

Combustion-chamber deposits and their relationship to power loss. A. E. Cleveland and O. Enoch. il S A E J 60:57-62; Discussion. 62-3 D '52

Deposit-induced ignition; abstract. D. A. Hirschler and others. diag Automotive Ind 109:63+ Jl 1 '53

Octane buildup; tests measuring directly the effect of thermal insulation of engine deposits on octane needs. J. J. Mikita and W. E. Bettoney. Oil & Gas J 51:68+ Mr 30 '53

Design

Combustion-chamber deposition and power loss. H. J. Gibson and others. diags S A E J 60:20-3 N '52

Compact engines. il diags Automobile Eng 43:309-22 Ag '53

Earls Court exhibition; review of design trends; engines. il Automobile Eng Extra no 42:461-8 N 27 '52

Evaluation of the 90 deg. V-six engine. P. M. Heldt. diags Automotive Ind 109:42-4+ Jl 15 '53

Latest advances in combustion chamber design. J. Geschelin. il diags Automotive Ind 108:54-60+ My 1 '53

New Buick V-8 engine. V. P. Mathews and J. D. Turlay. il diags S A E J 61:27-31; Discussion. 31-3 Mr '53

Unique balancing for 60-deg. V-six engine. diags Automotive Ind 109:45+ Jl 15 '53

Detonation

Effects of fuels and lubricants on autoignition; abstract. R. K. Williams and J. R. Landis. Automotive Ind 109:130 Jl 1 '53

How combustion time affects knock. D. R. Diggs. diag Automotive Ind 108:171+ Mr 15 '53

Investigating preignition; abstract. A. O. Melby and others. Automotive Ind 109:134+ Jl 1 '53

Method for identifying preignition. R. F. Winch and F. M. Mayes. diags Automotive Ind 108:185+ Mr 15 '53; Abstract. S A E J 61:118+ S '53

Motion photography for combustion research. F. W. Bowditch. bibliog il diags Soc Motion Picture & Tv Eng J 59:472-84 D '52

Occurrence of preignition in present-day cars in normal service; abstracts. R. F. Winch. Automotive Ind 109:62-3 Jl 1 '53; Oil & Gas J 52:82 Je 15 '53

Oil industry finds fuel additives can help in controlling preignition. R. J. Greenshields. Oil & Gas J 52:71-2 Je 29 '53

Preignition; does it provide roadblock to greater efficiency in fuel utilization? J. R. Sabina and others. bibliog diags Oil & Gas J 52:66-70 Je 29 '53

Rapid gas sampler for use in research on the mechanism of engine knock. diag Mech Eng 75:31-2 Ja '53; Same. Franklin Inst J 255:61-2 Ja '53

Recent developments in knock research. D. Downs and R. W. Wheeler. bibliog il diags Inst Mech Eng Proc (Auto div pt 3):89-99 '51-52; Abstract. Engineering 173:278-9 F 29 '52; Discussion. Inst Mech Eng Proc (Auto div pt 3):121-40 '51-52

Significance of laboratory octane numbers in relation to road anti-knock performance. H. J. Eatwell and J. G. Withers. bibliog il Inst Mech Eng Proc (Auto div pt 3):111-20 '51-52; Excerpts. Engineering 173:279 F 29 '52; Discussion. Inst Mech Eng Proc (Auto div pt 3):121-40 '51-52

Some factors affecting precombustion reactions in engines; abstract. M. W. Corzilius and others. S A E J 61:82-3 Jl '53

Exhaust

Determination of combustion products. J. H. Potter. Automotive Ind 107:50-1+ O 15 '52

Ventilating system to carry off engine fumes in a repair garage. il Heat & Ven 49:107-9 D '52

Fans

New drive for radiator fan is thermostatically controlled. diag Automotive Ind 109:48+ Jl 15 '53

Fuel

Alcohol motor fuels, production and use. S. J. W. Pleeth. bibliog diag Inst Pet J 38:805-19; Discussion. 834-44 O '52

Article attacks premium gasoline use. H. Ridder. Nat Pet N 45:23 Ja 28 '53

Can all engine wear be trapped in a can? R. J. Pocock. S A E J 61:45-52 Ja '53

Factors affecting the utilization of anti-knock quality in automobile engines. J. D. Davis. Inst Mech Eng Proc (Auto div pt 3):100-10; Discussion. 121-40 '51-52

Fuel volatility requirements of vehicles at high and low temperatures; abstract. C. Bruce. S A E J 61:114+ Ja '53

High octane fuels result of team play; abstract. B. R. Jones. S A E J 61:107-8 Ja '53

1951 CRC car octane survey. S A E J 61:41-3 Jl '53

Refiners forecast volatility increase, end of pre-ignition at fuels session. Nat Pet N 45:41 My 20 '53

SAE national fuels and lubricants meeting, Tulsa, Nov. 6-7. S A E J 60:80C-80G D '52

Your engine can be cured of acid indigestion; abstract. W. G. Nostrand. S A E J 61:109-10 O '53

See also

Gasoline—Anti-knock and anti-knock mixtures

Fuel consumption

Economy run par for gasoline mileage; abstract. W. S. Mount. S A E J 61:55 Je '53

Economy runs set par for motorists; abstract. H. S. Kelly. S A E J 61:105-6 Mr '53

Ford six wins Mobilgas economy run. Nat Pet N 45:46 Ap 29 '53

Fuel consumption; investigation into the effect of benzole. L. W. Barnard and G. Claxton. Automobile Eng 43:190-2 My '53

Fuel economy. C. R. Webb and J. G. Lavender. Automobile Eng 43:142-7 Ap '53

AUTOMOBILE engines—Fuel consumption—*Continued*

Gasoline mileage; good, bad, or indifferent. H. S. White and others. diag S A E J 61:61-3 Ag '53

Great fuel savings possible with ideal engine-transmission. D. F. Caris and R. A. Richardson. Automotive Ind 107:42-6+ Ag 1 '52; Same abr. S A E J 60:32-5 N '52

Observations on 1953 economy run. M. Epps. Automotive Ind 108:44-5 Je 15 '53

Fuel feeding

Bendix electric fuel pump. il diags Automobile Eng 43:393-4 S '53

Earls Court exhibition; review of design trends; carburation and induction systems. il Automobile Eng Extra no 42:469-75 N 27 '52

Effect of fuel characteristics on vapor lock. O. C. Bridgeman. bibliog il Oil & Gas J 51:127-8+ D 1 '52

Fuel injection nozzles; investigation into causes of corrosion. W. P. Mansfield. il Automobile Eng 43:215-17 My '53; Discussion. 43:331 Ag '53

Fuels and fuel systems; petroleum viewpoint; abstract. T. W. Legatski and others. S A E J 61:30 O '53

Ignition

Deposit-induced ignition; abstract. D. A. Hirschler and others. diag Automotive Ind 109:63+ Jl 1 '53

New data on combustion in automotive engines. il Automotive Ind 109:34-5+ S 15 '53

Ignition devices

Automakers are none too enthusiastic about the 12-volt ignition system. F. G. Lawrence. Steel 132:59-60 Je 22 '53

Why 12 volts? H. L. Hartzell. Automotive Ind 107:56-8+ N 1 '52

Lubrication

API lube men hear oil-change rules; industry pushes service designations. H. Ridder. Nat Pet N 44:42-4 N 19 '52

Are motor oil additives useful? Nat Pet N 45:74-6 Ja 21 '53; Discussion. 45:39-40 F 4; 44 F 18 '53

Can all engine wear be trapped in a can? R. J. Pocock. S A E J 61:45-52 Ja '53

Car can run without oil, for a time. Consumers Res Bul 31:24 F '53

Case for synthetic lubricants in winter operation of automotive engines. J. A. Miller and H. F. Galindo. S A E J 61:33-5 Ap '53; Excerpts. Oil & Gas J 51:75-6 Mr 2 '53

Chemical addition agents for lubricating oils. W. D. Thomas. il Pet Refiner 32:103-6 Ja '53

Claims for moly lube oil additive lack proof; text of National better business bureau's bulletin. Nat Pet N 45:98-9 My 6 '53

Clean crankcase color or clean engines; abstract. H. M. Gadebusch. S A E J 61:102-3 O '53

Dollars on the dipstick. H. Ridder. il Nat Pet N 45:48-9 My 13 '53

Engine lubricating oils. J. G. Withers. bibliog il Automobile Eng 42:387-93 O '52

Engines stay young and clean with regular oil change periods. J. G. Ryan and B. W. DeLong. Nat Pet N 45:46-7 My 20 '53

How motor oil keeps engines young. H. Ridder. Nat Pet N 44:67-8 N 12 '52

How much dirt can hide in an automobile crankcase? H. Ridder. il Nat Pet N 45:30-4 F 11 '53

It costs less to buy more oil. H. Ridder. il Nat Pet N 44:55+ D 3 '52

Lost motor oil sales are serious but they can be greatly reduced. H. Ridder. Nat Pet N 44:40-3 D 24 '52

Low temperature sludging test; abstracts. J. G. McNab and others. Automotive Ind 108:85 F 15 '53; S A E J 61:88-9 Ag '53

Lube committee overhauls oil change rules; with text of recommendations. Nat Pet N 45:29-31+ F 25 '53

Lubricants; the surface savers; abstract. J. F. Kunc, jr. and J. P. Hamer. Oil & Gas J 51:64-5 Ja 19 '53

Motor oil. il Chem Eng 60:229 F '53

New-type motor oil. G. Weber. il Oil & Gas J 51:74-5 N 10 '52

Oil additives. Consumers Res Bul 31:9 F '53

Pointers on selling more motor oil. J. B. Lightburn. Nat Pet N 44:92 O 15 '52

Prevention of scuffing. Automobile Eng 42:385 O '52

Proposed method of test for pour stability characteristics of winter grade motor oils. Am Soc T M Proc 50:295-8 '50

Re-refiner device claims to eliminate oil changes. Nat Pet N 45:60 F 11 '53

Results of tests on proposed method for determining pour stability characteristics of winter grade motor oils. Am Soc T M Proc 50:264-70 '50

Service classifications for engine lubricants. Automotive Ind 107:69+ O 1 '52

SAE national fuels and lubricants meeting, Tulsa, Nov. 6-7. S A E J 60:80C-80G D '52

Sohio ads stress oil change education. H. Ridder. il Nat Pet N 45:58-61 Ja 14 '53

Tailoring lubricating oils to fit service requirements. J. A. Miller and B. M. Berry. S A E J 61:74-7; Discussion. 77-8 Mr '53

When motor oil gets dirty; it needs a change. H. Ridder. diags Nat Pet N 44:84-5 N 19 '52

See also

Oil filters, Automobile

Manifolds

Earls Court exhibition; review of design trends; carburation and induction systems. il Automobile Eng Extra no 42:469-75 N 27 '52

Manufacture

Advanced inspection equipment insures close tolerances; De Soto division of Chrysler corp. C. H. Wick. il Mach 59:151-6 Ap '53

Automation applied to engine balancing equipment; DeSoto engine plant. J. Geschelin. il Automotive Ind 109:70-2+ O 1 '53

Automation is the keynote in Ford's Cleveland foundry and engine plant; illustrations with text. S A E J 61:38-45 My '53

Better chip handling in and out of the plant; Buick V-8 engine plant. H. Chase. il diag Iron Age 171:157-9 Ap 2 '53

Better parts flow trims foundry costs; Buick's new casting cleaning plant. H. Chase. il plan Iron Age 171:97-101 Ap 30 '53

Broaching automotive castings at 200 feet per minute; Dodge Red Ram V-8 engine. J. J. Wetzel. il diags Mach 59:153-9 Ag '53

Buick's new self-contained plant for producing V-8 engines. J. Geschelin. il Automotive Ind 108:56-9+ F 1; 32-6 Mr 1; 50-4 Je 15 '53

Buick's new V-8 engine. F. G. Lawrence. il Steel 132:79-80 My 25 '53

Chip engineering vital counterpart to automated machining lines; Ford-Cleveland engine plant. il Iron Age 170:142-4 D 18 '52

Connecting rod and piston automation; Ford Cleveland engine plant. J. Geschelin. il Automotive Ind 108:64-7+ Ap 1 '53

Continuous press forging applied to crankshafts. J. Geschelin. il diag Automotive Ind 107:58-9+ O 1 '52

Dodge burnish-reams tappet holes. R. Le Grand. diags Am Mach 97:137 My 11 '53

Dodge solves tooling for new V-8 overhead valve engine. T. Mac New. il Automotive Ind 107:66-9+ D 1 '52

Dodge tools up three lines for cylinder head production. T. Mac New. il Automotive Ind 108:34-6 Ja 15 '53

Flame-hardened engine parts for high production. H. Chase. il Materials & Methods 37:90-2 Ap '53

Flame hardening machines speed treatment of engine components. A. H. Allen. il Metal Prog 64:97-102 O '53

Ford's automated engine plant. C. Winkelman. il Factory Management 110:93-108 D '52

Ford's Cleveland foundry. il plans diags Foundry 81:139-89 Mr '53

Ford's foundry; dream come true. il Steel 131:51 D 1 '52

Ford's new foundry combines automation and worker comfort. J. Geschelin. il Automotive Ind 107:42-4 D 15 '52

Handling automotive engines automatically during balancing. A. B. Pedersen. il Mach 59:188-92 Je '53

How Buick builds V-8 engines. S. J. White. il Mach 59:152-9 Mr '53

AUTOMOBILE engines—Manufacture—*Cont.*

Latest automatic equipment at De Soto engine plant. J. Geschelin. il Automotive Ind 108:52-5+ Je 1 '53

Machine arc welding; exhaust pipes for Buick V-8 overhead-valve engine. il Metal Prog 63:105-6 Mr '53

Small car production. il Automobile Eng 43: 113-24, 163-74 Mr-Ap '53

Transfer machine combines rough and finish milling. il Iron Age 171:147 Ap 23 '53

Mounting

Engine mounting. bibliog il diags Automobile Eng 43:87-94 Mr '53

Noise

Passenger-car noise; engine harshness. L. M. Ball. il diags S A E J 60:61-3 O '52

Protection

Acid neutralizer; Magna-Power not recommended. Consumers Res Bul 30:22-3 O '52

Radiators

Aluminum auto radiators. Mech Eng 75: 403-4 My '53

Brass radiators with aluminum fins; McCord corp. diag Automotive Ind 109:47 Jl 15 '53

New radiator test facilities; laboratory of Harrison division of General motors corp. J. Geschelin. il Automobile Ind 109:54-7 Jl 1 '53

See also

Automobile engines
—Fans

Specifications

1953 passenger cars; specifications; tabulations. Automotive Ind 108:129-45 Mr 15 '53

Superchargers

Construction and operation of new McCulloch supercharger. il Automotive Ind 109:58+ O 15 '53

Testing

Cylinder wear; how to measure it, how to reduce it. J. F. Kunc, jr. and others. il S A E J 60:44-50 D '52

Dust and engine wear; abstract and discussion. E. S. Dahl and K. H. Rhodes. S A E J 61:42-3 Mr '53

Precision inspection checks engine components rapidly, accurately. H. Chase. il Iron Age 170:117-19 N 27 '52

Research equipment; new apparatus developed for engine research. Automobile Eng 43:189 My '53

Valves

Cast valve tappets redesigned for formed steel. K. Rose. il Materials & Methods 37: 108 Mr '53

Cold-heading and grinding valve push-rods for Buick engines. H. Chase. il Mach 59: 186-9 Ag '53

Considerations for commercial valve maintenance. J. A. Newton and N. Hoertz. il diags S A E J 60:46-7 O '52

Exhaust valves; notes on materials. Automobile Eng 43:294 Jl '53

Hydraulic valve tappets. R. Brown-Waring. diags Automobile Eng 43:126-8 Mr '53

Many factors affect tappet face durability; abstract. R. P. Horan. S A E J 61:112+ S '53

Relationship of valve spring design to valve gear dynamics and hydraulic lifter pump-up; abstract. M. C. Turkish. S A E J 61: 122+ S '53

Steel valve tappets made by cold heading. il Automotive Ind 108:37+ Mr 1 '53

Tappet wear; adoption of cast chromium alloy tips. bibliog il Automobile Eng 42:405-8 O '52

AUTOMOBILE fabrics

Careful dyeing, finishing, and testing reduce rejects of auto fabrics. S. E. Mirgh. Textile World 103:131+ Mr '53

Synthetic fibers; what they contribute, how they are used to make finer upholstery fabrics; based on papers by W. F. Bird and G. P. Carver, jr. S A E J 61:44-7 S '53

AUTOMOBILE factories

General-Motors-Holden; little Detroit Down Under. il Am Mach 97:166-7 Jl 20 '53

See also

Automobile assembly plants

Air conditioning

Special report on air conditioning and refrigeration in automotive and aviation plants. T. Mac New. il diag Automotive Ind 107: 52-61+ D 1 '52

Airplane manufacture

Dual-purpose plant to make cars and jets! illustrations with text. J. F. Gordon. S A E J 61:17-19 Je '53

Dual-purpose plants best defense preparation; abstract. J. F. Gordon. S A E J 61: 105-6 Ja '53

Truck trailers bridge gap in airplane assembly line; Chrysler corp. Plymouth plant. il Automotive Ind 107:94 D 1 '52

Electric equipment

Making motor-car bodies. il Elec R (Lond) 152:1095-101 My 15 '53

Employees

Austin strike. Economist 167:44+ Ap 4 '53

Auto companies will spend $500,000 trying to cut down high labor turnover. F. G. Lawrence. Steel 132:61-2 Je 29 '53

Automobile industry wages, 1948-1952; tabulation. Iron Age 171:440 Ja 1 '53

Employment outlook in the automobile industry. E. E. Rings and others. il U S Bur Labor Statistics Bul 1138:1-30; pa 25c Supt. of doc. '53

Horseshoes for the auto plant; Chrysler corp. il Mod Ind 26:75 Jl '53

Job evaluation in automobile and automotive parts industries. W. R. Spriegel and E. Lanham. (Personnel study no. 5) 188p bibliog(p 185-8) pa $1 College of business administration, Bur. of business research, Univ. of Texas, Austin 12 '53

Job evaluation in automobile and parts plants. E. Lanham. Automotive Ind 108:50-3+ F 15 '53

Labor contract reopening may set precedent. Automotive Ind 108:20+ Je 15 '53

Orientation and development of junior engineers. J. F. Gordon. J Eng Educ 43:316-21 Ja '53

Selection and development of first-line supervision; Fisher body division, General motors corp. R. R. Nordyke. Personnel 29:321-32 Ja '53

Stronger, tighter UAW looks ahead. Bsns W p 170-3 Mr 28 '53

See also

United automobile workers of America

Equipment

Automatic factory. D. S. Harder and D. J. Davis. S A E J 61:25-30 My '53

Automation. D. A. Wallace. Advanced Management 18:52-6 Ja '53

Automation applied to engine balancing equipment; DeSoto engine plant. J. Geschelin. il Automotive Ind 109:70-2+ O 1 '53

Automation at Ford; illustrations with text. Automotive Ind 109:54-5 S 15 '53

Automation is the keynote in Ford's Cleveland foundry and engine plant; illustrations with text. S A E J 61:38-45 My '53

Automation; road to the robot plant. D. A. Wallace. Bsns W p55 N 22 '52

Automotive advances pace automation. J. Geschelin. il Automotive Ind 108:348+ Mr 15 '53

Axle shafts machined on special automatics. il Automotive Ind 108:68+ Ap 1 '53

Better chip handling in and out of the plant; Buick V-8 engine plant. H. Chase. il diag Iron Age 171:157-9 Ap 2 '53

Buick's new self-contained plant for producing V-8 engines. J. Geschelin. il Automotive Ind 108:56-9+ F 1; 32-6 Mr 1; 50-4 Je 15 '53

Chip engineering vital counterpart to automated machining lines; Ford-Cleveland engine plant. il Iron Age 170:142-4 D 18 '52

Chip handling is big business at DeSoto. B. C. Brosheer. il diags Am Mach 97:140-3 Mr 16 '53

AUTOMOBILE factories—Equipment—*Cont.*

Connecting rod and piston automation; Ford Cleveland engine plant. J. Geschelin. il Automotive Ind 108:64-7+ Ap 1 '53
Continuous press forging applied to crankshafts. J. Geschelin. il diag Automotive Ind 107:58-9+ O 1 '52
Crankshaft forging; Chrysler corp. il Automobile Eng 43:386-8 S '53
Dodge solves tooling for new V-8 overhead valve engine. T. Mac New. il Automotive Ind 107:66-9+ D 1 '52
Dodge tools up three lines for cylinder head production. T. Mac New. il Automotive Ind 108:34-6 Ja 15 '53
Extensive conveyor lines facilitate powerglide operations. J. Geschelin. il Automotive Ind 108:34-7 My 15 '53
Ford bet a billion on new tooling. il Am Mach 97:121-84 O 12 '53
Ford's ahead with new compressed-air system. E. C. Powers. il plan Power 96:118-19 N '52
Ford's automated engine plant. C. Winkelman. il Factory Management 110:93-108 D '52
Good handling speeds heat treating of small parts; Ford's River Rouge plant. H. Chase. il Iron Age 171:141-3 My 14 '53
High speed heating of spring leaves. il Automotive Ind 107:43 O 15 '52
How Buick builds V-8 engines. S. J. White. il Mach 59:152-9 Mr '53
How multiple nut runners save time in assembly of Ford differentials. il Automotive Ind 107:57+ O 1 '52
Increasing tool life and performance; Buick motor division. H. H. Miller. il Tool Eng 29:37-46 N '52
Insulating a plant for top efficiency; Ford engine plant. H. F. Klie. il Mill & Factory 53:102-3 Ag '53
Latest automatic equipment at De Soto engine plant. J. Geschelin. il Automotive Ind 108:52-5+ Je 1 '53
Latest improvements in press automation at Ford. M. J. Rowan. il diags Am Mach 96:109-18 D 8 '52
Machine tool control; Hilger projector and scale. il Automobile Eng 43:18 Ja '53
Made over machines, fixtures get production moving; production of army CD-80 tank transmissions at Buick motor division. D. F. Taylor. il Iron Age 170:101-4 O 23 '52
Mechanized manufacture; Ford motor co. il Automobile Eng 43:359-62 S '53
Metal stampings produced with latest handling methods at new Ford plant. J. W. Greve. il plan Tool Eng 29:37-42 D '52
Mile-long body conveyor system; Studebaker corp. il Automotive Ind 108:40-2 My 15 '53
Modern tooling turns axle shafts. R. LeGrand. il diags Am Mach 97:134-5 My 25 '53
New tooling and methods for Powerglide transmissions. J. Geschelin. il Automotive Ind 109:48-50+ Jl 1 '53
Pneumatic conveyors simplify Studebaker's chip handling. O. H. Klausmeyer and W. C. Tiedge. il diags Am Mach 97:117-21 S 28 '53
Press plant; Chrysler corp. il Automobile Eng 42:527-8 D '52
Production tomorrow. E. F. Gibian. S A E J 61:17-19 My '53
Small car production. il Automobile Eng 43:113-24, 163-74 Mr-Ap '53
Small parts hot headed in cold-heading machines; Ford's River Rouge plant. H. Chase. il Iron Age 171:124-7 F 19 '53
Studebaker's body plant redesigned for 1953 cars. J. Geschelin. il Automotive Ind 108:70-2+ Je 1 '53
Studebaker's first hundred years. C. H. Vivian. il Comp Air Mag 57:328-34 D '52
Top notch material toters; report of panel on material handling. il S A E J 61:64-5 S '53
Unusual problems in machining automatic transmission parts. H. H. Whittingham. il S A E J 61:56-9 My '53
Welding developments; Vauxhall motors, ltd. il Automobile Eng 43:247-57 Je '53

Maintenance and repair

Automation compounds maintenance problems; Ford motor co. W. Rudolph. il Mill & Factory 53:93-5 O '53
Preventive maintenance; report of panel on preventive maintenance of plant equipment. il S A E J 61:55-6 S '53

Management

Determining production cost factors; abstract. J. B. Lathrop. diags Automotive Ind 108:62-4 My 1 '53
How Ford organizes automation programs. J. McDougall. Am Mach 97:128-9 F 2 '53
Operations research as applied to industrial production and development. J. B. Lathrop. S A E J 61:46-9 My '53
Problems of the automatic factory; Ford motor co. D. S. Harder and D. J. Davis. Automotive Ind 108:40-1+ Ap 15 '53; Same cond. Machine Design 25:261-2+ Jl '53

Safety measures

Only one in 100 employees in the automotive industry was injured in 1952. il Safety Maint & Prod 106:37-8 S '53

Waste

Scrap disposal by automation; Fisher body plant. J. Geschelin. il Automotive Ind 109:38-40 Ag 15 '53

AUTOMOBILE fans. See Automobile engines—Fans

AUTOMOBILE fenders. See Automobiles—Fenders

AUTOMOBILE headlights. See Automobile lamps; Automobiles—Lighting

AUTOMOBILE industry and trade

Auto dealers gear for battle. il Bsns W p27-8 Mr 28 '53
Auto industry fights for markets. H. C. Tuttle. il Steel 132:135-6+ Ja 5 '53
Auto production highest in two years. Survey of Cur Bsns 33:3-4 Mr '53
Auto wedge; Ford may split its Lincoln-Mercury division. Bsns W p31 N 22 '52
Automotive industry; bell cow for '53 marketing. il Mod Ind 25:53-5 F '53
Automotive plans for 1953. L. Westrate. Automotive Ind 108:32-3+ Ja 15 '53
Can Cadillac keep the lead? L. M. Hughes. il Sales Management 69:24-7+ N 1 '52
Car sales boom but stocks grow too; graphs. Fortune 47:34 My '53
Cars on credit. Automotive Ind 109:52-3+ Jl 1 '53
Cradle for automation. F. G. Lawrence. il Steel 132:77-8+ Je 1 '53
Dealers' squeeze. Bsns W p29 O 25 '52
Detroit auto makers; tempo shapes a type. il Bsns W p56+ Ap 25 '53
Detroit happy, dealers worried. Bsns W p27 Jl 11 '53
Detroit scene; auto makers tool up for toughest market competition since prewar years. Am Mach 97:188-90 S 14 '53
Detroit's competitive lineup for 1953. il Bsns W p30-2 Ja 10 '53
Don't look now, but the automakers think you're somewhat of a goose in the salesroom. F. G. Lawrence. il Steel 132:61-2 Mr 23 '53
Ford meets Chevrolet for '53 title. R. D. Raddant. Iron Age 170:34+ D 25 '52
Ford pulls up. Bsns W p26 My 9 '53
It takes more than style to stay in the race; new Studebaker. il Bsns W p 104-8+ Ja 31 '53
Kaiser-Frazer absorbs Willys as new subsidiary. Automotive Ind 108:19+ My 15 '53
More cars for more people. Bsns W p25-6 D 20 '52
Motors, can industry hold fast production pace? S. H. Brams. il Trusts & Estates 92:435-9 Je '53
Packard's road back. il Fortune 46:116-19+ N '52
Speeding up. Bsns W p28 Ap 18 '53
Surge in durables. Fortune 47:24+ Mr '53
United nations' study of motor vehicle industries. D. Scott. Automotive Ind 109:64-6 Jl 1 '53
Washington outlook for the years ahead. A. K. Rannells. Automotive Ind 108:46-7+ Ja 15 '53
West expanding to fill orders. T. M. Rohan. il Iron Age 171:71-2 My 14 '53

AUTOMOBILE industry and trade—*Continued*

Why Studebaker laid off 6,200 production workers. H. O. Brayer. il Am Bsns 23: 16-17+ O '53

See also

Automobile accessories industry
Automobile factories
Chrysler corporation
Ford motor company
General motors corporation
Motor bus industry and trade
Motor truck industry
Studebaker corporation
Tractor industry and trade

Advertising

Auto linage is big potential for 1953. D. L. Lionel. Ed & Pub 86:16 Ja 3 '53

Best campaigns of 1952; Cadillac newspaper series. B. Tyler. il Adv Agency 46:62-3 F '53

Best-read newspaper advertisements. D. Starch. il Adv Agency 46:120-1 Mr '53

Dealer copy. Aesop Glim. Ptr Ink 242:60 Ja 30 '53

Debut of '53 Lincoln car due Dec. 2 in 1,285 papers. Ed & Pub 85:26 N 29 '52

50 years of Cadillac advertising. il Aesop Glim. Ptr Ink 241:87 N 21 '52

New company history credits advertising's role in its leadership; Buick's first half-century. il Ptr Ink 242:41 F 27 '53

New study contrasts auto copy of the 1930s and today. E. Callenbach. il Ptr Ink 242: 47-50 Ja 2 '53

1,609 papers carry ads announcing '53 Mercury. Ed & Pub 85:30 D 13 '52

60 seconds, to sell! G. D. Roscoe. Adv Agency 45:28+ O '52

Directories

Directory of manufacturers of complete motor vehicles, tractors, aircraft, industrial trucks, and all types of gasoline and Diesel engines. Automotive Ind 108:346+ Mr 15 '53

Finance

Automobile credit problems. T. C. Dye. Comm & Fin Chr 176:2032 N 27 '52

Credit puts America on wheels; review of Helping America buy what it wants; anniversary brochure of Commercial credit co. W. J. Brons. Bankers Mo 69:22+ N '52

See also

Banks and banking—Automobile purchase financing

Munitions manufacture

Automotive role in defense. L. Westrate. il Automotive Ind 108:164-7+ Mr 15 '53

New models

Autos; how dream models help. R. D. Raddant. il Iron Age 171:75-6 Mr 26 '53

Lincoln reveals experimental sports car. il Automotive Ind 108:169+ Mr 15 '53

New model emerges; how the new Dodge was born. H. C. Tuttle. il Steel 131:83-4+ N 24 '52

On 1953 models, builders will offer wire wheels, continental spare tire kits and other accessories. H. C. Tuttle. il Steel 131: 77-8 N 3 '52

Salesmen

Auto dealers' sons go back to school; auto industry schools for sons of dealers. D. G. Baird. il Am Bsns 23:18-19 Ag '53

Securities

Autos; downturn halted? Bsns W p71-2 Ja 24 '53

Is auto industry facing major test? with data on leading auto and truck manufacturers. G. L. Merton. Mag of Wall St 92:228-31+ My 16 '53

Statistics

Automobile production, United States and Canada, 1939-1952; tabulation. Steel 132:184 Ja 5 '53

Automotive data, 1950-52; table. Automotive Ind 108:33 Ja 15 '53

Automotive wholesalers, dealers and repair shops by years, 1930-1953; automotive wholesale and retail outlets by states; tabulations. Automotive Ind 108:105 Mr 15 '53

Car dealer franchises by population groups; retail outlets by population groups, by states. Automotive Ind 108:106 Mr 15 '53

Cars in use by makes, states, and model year; tabulation. Automotive Ind 108:112-21 Mr 15 '53

Factory sales and their wholesale value, U.S. plants, 1900-1952; monthly motor vehicle factory sales, by years, 1938-1952; chart and tables. Automotive Ind 108:93-4 Mr 15 '53

Factory sales of motor vehicles to domestic and foreign markets, 1943-1952; tabulation. Automotive Ind 108:95 Mr 15 '53

Motor vehicle production by companies, 1947-1952; tabulation. Iron Age 171:440 Ja 1 '53

Motor vehicle production in Canada, 1925-1952; by months, 1946-1952; 1951 Canadian motor vehicle registrations by provinces; tabulations. Automotive Ind 108:100 Mr 15 '53

New car registrations by months, 1948-1952; regional sales of new passenger cars, 1949-1952; tabulations. Automotive Ind 108:102 Mr 15 '53

New passenger car registrations by makes, by years, 1948-1952; tabulations. Automotive Ind 108:101 Mr 15 '53

1952 new car registrations by rank; tabulation. Automotive Ind 108:104 Mr 15 '53

1952 new passenger car registrations by makes, by states; tabulation. Automotive Ind 108:103 Mr 15 '53

1952 new registrations by price classes, by months; 1952 retail dollar volume of new car sales by price classes; tabulations. Automotive Ind 108:103 Mr 15 '53

1952 passenger car production, by makes, by months; tabulation. Automotive Ind 108: 95 Mr 15 '53

1953 survey of consumer finances; purchases of durable goods in 1952 and buying plans for 1953. J. Frechtling and T. Smith. Fed Res Bul 39:697-701 Jl '53

Number and per cent of cars in use, by age groups, 1949-1952; tabulation. Automotive Ind 108:111 Mr 15 '53

Passenger car factory sales by body types, 1949-1952; tabulation. Automotive Ind 108: 95 Mr 15 '53

Used cars

Auto auction; safety valve for the dealers. il Bsns W p48-50+ O 25 '52

Automobile industry's role in business outlook. E. G. Nourse. Comm & Fin Chr 176: 1526 O 23 '52

Dealing in cars. Economist 166:821-2 Mr 21 '53

New cars for old. Bsns W p 134 Ap 25 '53

Used car lag puzzles Detroit. Bsns W p28 My 23 '53

Australia

Australian automotive industry expanding. For Comm W 49:12 Ja 26 '53

Austria

Austria's automotive industry increases production, export. For Comm W 48:8 N 17 '52

Belgium

Belgium makes plans to establish more automobile assembly plants. For Comm W 49:12 Ap 6 '53

Current automotive activities in Belgium. W. F. Bradley. il Automotive Ind 108:34-7 F 15 '53

Canada

Canadian automotive industry expanding. For Comm W 49:11 Je 8 '53

Motor vehicle production in Canada, 1925-1952; by months, 1946-1952; 1951 Canadian motor vehicle registrations by provinces; tabulation. Automotive Ind 108:100 Mr 15 '53

Europe

European civilian, military vehicles lack coordination. W. F. Bradley. il Automotive Ind 109:36-8+ S 15 '53

European competitors. diag Economist 165: 275-6 O 25 '52

European utility cars announced to boost market. Automotive Ind 108:37 Ja 1 '53

Method in European car building. R. D. Raddant. Iron Age 170:210 O 9 '52

AUTOMOBILE industry and trade—*Continued*

Finland

Finnish motor vehicle use rising sharply. For Comm W 49:12 My 18 '53

France

French auto output attains new record. For Comm W 48:21 N 24 '52

What the French want in a car. map Automotive Ind 109:39+ S 15 '53

Germany

Challenge of the Volkswagon. Economist 166: 501-3 F 21 '53

Frankfurt motor show. K. B. Hopfinger. il diags Automobile Eng 43:205-14 My '53

German auto industry faces buyers' market. For Comm W 49:17 Ap 20 '53

International automobile show, 36th, Frankfurt. il diags Automotive Ind 108:44-5 My 15 '53

Volkswagen; Germany comes back. il Bsns W p 106-12 Jl 11 '53

Great Britain

Britain eases automotive covenant. For Comm W 49:10 Ja 12 '53

British auto industry and trade expanded. For Comm W 48:28 D 15 '52

British cars in world competition. diags Economist 165:265-6 O 25 '52

British makers introduce new models at London show. W. F. Bradley. il Automotive Ind 107:62-4+ D 1 '52

Buy it here, pick it up abroad. il Bsns W p54+ Ja 31 '53

Car prospects. Economist 167:543-4 My 23 '53

Cars and politics. Economist 167:689 Je 6 '53

Dealing in cars. Economist 166:821-2 Mr 21 '53

Engineering outlook; motor-vehicle industry. Engineering 175:328-31 Mr 13 '53

Fall in car exports; with chart of exports of cars and chassis. map Economist 165:642 N 29 '52

Making the Jaguar Britain's hot export. il Bsns W p 140-2 N 1 '52

Markets for heavy vehicles. Economist 165: 41-2 O 4 '52

More cars and less exports; confusion in the second-hand market. Economist 165:324 N 1 '52

Standard and the jeep. Economist 166:656 Mr 7 '53

See also

Ford motor company, England

Haiti

Haiti offers favorable motor vehicle market. For Comm W 49:20 F 23 '53

India

India plans new developments in automotive manufacturing industry. For Comm W 50: 7+ Jl 6 '53

Italy

New Italian cars introduced at Turin automobile show. W. F. Bradley. il Automotive Ind 108:48-50+ Je 1 '53

Japan

Vehicle production in Japan continues at high rate. il Automotive Ind 109:70-2 Jl 1 '53

Mozambique

Mozambique car sales may fall off in 1953. For Comm W 50:8 Jl 6 '53

Russia

Soviet automobile industry expanded and partially modernized. D. B. Shimkin. il Automotive Ind 108:49-51+ My 15; 64-5 Je 1 '53

Sweden

Number of vehicles in Sweden increasing at rapid rate. H. G. Tonndorf. Automotive Ind 108:51+ Je 1 '53

AUTOMOBILE insurance. See Insurance, Automobile

AUTOMOBILE laboratories

Auto research center buildings are showcase for glass, brick, lighting; Ford motor company's Research and engineering center. il plan Eng N 150:33-4 Je 4 '53

Ford forms first service laboratory. Automotive Ind 108:17 F 15 '53

Hot stuff helps build better cars; Ford lab uses radioactive materials for delicate measurements. R. D. Raddant. il Iron Age 171:106 Ap 2 '53

New radiator test facilities; laboratory of Harrison division of General motors corp. J. Geschelin. il Automotive Ind 109:54-7 Jl 1 '53

AUTOMOBILE lamps

Ford makes headlight liners in progressive dies. il Am Mach 97:169 Mr 16 '53

Selling car light replacements. F. Paeske. il Nat Pet N 44:66+ D 10 '52

See also

Automobiles—Lighting

AUTOMOBILE laws and regulations

Insurance industry group lists 12 major steps for New York traffic safety. East Underw 54:32+ Ja 23 '53

New auto liability program for '53 urged in Dewey's legislative message. East Underw 54:29 Ja 9 '53

New York agents give traffic survey results. East Underw 54:32 Ja 16 '53

New York state motorists demand more rigid laws. Weekly Underw 168:210 Ja 17 '53

See also

Insurance, Automobile—Compulsory liability

Motor vehicles—Inspection

Financial responsibility laws

Ballantine approves impoundment proposal. East Underw 54:21+ Ja 2 '53

Bills amend safety law; Wisconsin measures revise responsibility and related statutes. Weekly Underw 168:311 Ja 31 '53

New Jersey auto security law explained. G. Eichler. East Underw 54:38 Mr 13 '53

Proposes impounding of cars causing accidents. Weekly Underw 168:274 Ja 24 '53

Wisconsin judge tags financial responsibility law as unconstitutional. Nat Underw 56:22 O 23 '52

Wisconsin Supreme court upholds auto safety act; rebukes lower court for calling financial responsibility law unconstitutional. East Underw 54:36 Ja 16 '53

See also

Insurance, Automobile—Financial responsibility laws

AUTOMOBILE lighting. See Automobiles—Lighting

AUTOMOBILE oil filters. See Oil filters, Automobile

AUTOMOBILE parking

Cities fight parking snarls. il Eng N 149:46-8 O 16 '52

Cities use many methods to finance off-street parking. Pub Works 84:94-5 Ap '53

Downtown parking pushed by cities. Eng N 150:49+ Ap 23 '53

How are you handling the parking problem? G. H. Stedman. J Retailing 28:69-80 Summer '52

How banks solve parking problems for customers. il Am Bsns 23:20-1 O '53

How Philadelphia transportation co. promoted the new Quaker city parking ban. il Bus Transportation 32:45-7 F '53

Many cities are planning garages. il Eng N 150:46+ F 5 '53

Meshing platforms key to new automatic parking method. il Eng N 149:40 O 2 '52

New Milwaukee parking law arouses opposition. Eng N 150:46-7 Mr 19 '53

Parking ban cuts cost of city street cleaning. Eng N 150:55 Mr 26 '53

Parking; Chicago tackles its problem. P. Hirsch. il plan Pub Works 84:68-70 Ap '53

Parking problem solutions offered in Cincinnati and Kansas City; other cities propose construction of parking garages. Eng N 150:43 F 26 '53

Private transit and private parking have common aims. J. J. Hassett. Pub Util 52: 227-34 Ag 13 '53

Shattered dream? Greensboro, N.C. Bsns W p 140+ Ap 11 '53

32-acre soil-cement parking lot. il Roads & Sts 96:42-4 Ag '53

Traffic congestion in cities can be licked. Am Bsns 23:30+ S '53

AUTOMOBILE parking—*Continued*

Traffic problems in shopping centers; parking; parcel pick-up service. K. C. Welch and B. Funaro. il plan diags Arch Rec 112:223-6 O '52

Wanted, a yardstick for traffic control. F. X. Welch. Pub Util 52:211-18 Ag 13 '53

Where to park; municipal approaches to problem. Eng N 150:49-50 Je 18 '53

See also

Office buildings—Automobile parking space

Pittsburgh parking authority

Meters

Parking meter ads. il Bsns W p50-1 Ap 11 '53

Parking meters: demand for new units holds high. Steel 131:130 O 13 '52

Parking meters pay the bill. G. B. Arthur. il Pub Works 83:57-9+ D '52

AUTOMOBILE parts

Chromium-plated automobile parts; their materials, designs, and finishes. D. M. Bigge. diags S A E J 61:61-3 S '53

Forming exhaust pipes with timesaving equipment; Maremont automotive products, inc. il Automotive Ind 109:72+ S 1 '53

Fused die castings for car window frames and ventilating panes. H. Chase. il Materials & Methods 38:119 O '53

Increasing use of die castings for automotive components. T. MacNew. il Automotive Ind 109:38-41+ O 15 '53

Replacement parts are a $2.5-billion business. il Steel 131:85 D 15 '52

Willys-Overland's aluminum forge. W. Rudolph. il Metal Prog 64:106-11 O '53

Wire stitching speeds auto-part production. il Materials & Methods 38:130 O '53

Manufacture

Automotive hot extrusions; abstract. J. H. Friedman. Automotive Ind 108:64 My 1 '53

Cold extrusion; résumé of American developments. il Automobile Eng 43:187-9 My '53

Cold working of metals reduces waste and improves quality; Delco-Remy division, General motors corp. J. Geschelin. il Automotive Ind 108:32-5+ Ap 15 '53

How Delco-Remy cold-forms metals. R. L. Kessler and others. il diags Am Mach 97:135-42 Jl 20 '53

Making a wide variety of motor vehicle parts; Atwood vacuum machine co. il Automotive Ind 108:70-2 Ap 1 '53

Specially tooled press saves time in assembling filters. il Automotive Ind 108:70 F 1 '53

Testing

Bench tests solve field problems; GMC Truck & Coach. G. F. Roddewig. il Steel 131:102-3 N 24 '52

Testing machine setups duplicate operating conditions. il diag Automotive Ind 107:50-2 O 1 '52

Transportation

Automotive and aviation packaging wins awards; 7th annual Industrial packaging and materials handling exposition, Chicago. il Automotive Ind 107:40-1+ N 15 '52

Pre-engineered shipping package; Calnevar co. il Mod Packaging 26:107-9+ Ag '53

AUTOMOBILE racing

Engineering preview of Indianapolis. R. R. Kay. il Automotive Ind 108:49-52+ My 1 '53

Hottest 500; 1953 Indianapolis race produces sensational struggle between men, machines and heat. R. T. Jackson. il Automotive Ind 108:34-9+ Je 15 '53

Longest Le Mans; 24-hour road race. W. F. Bradley. il diags Automotive Ind 109:34-7+ Jl 15 '53

Mexican road race toughest; abstract. W. Litchult. S A E J 61:105 My '53

Pan-American race highlights. il diags Automotive Ind 107:32-3+ D 15 '52

Watkins Glen sports car meet. R. T. Jackson. il Automotive Ind 107:48-9+ O 15 '52

AUTOMOBILE research

Automotive research; trailblazer for metalworking. il Steel 131:166-8+ O 13 '52

If press can see secrets why not employes and public? Ford opens laboratories to press. il Sales Management 70:26-7 pt 2 Ja 1 '53

See also

Automobile laboratories

AUTOMOBILE sales buildings

For auto display, use an all-open front and unusual lighting. il plans diags Am Bld 74:128-9 O '52

Helping dealers modernize; Chevrolet motor division. D. G. Baird. il Am Bsns 23:20-1+ Ap '53

AUTOMOBILE seat covers. See Automobiles—Seat covers

AUTOMOBILE shops

Motor vehicles committee; report of subcommittee on shop tools and plant structures. Am Gas Assn Proc 1952:348-52

AUTOMOBILE tires. See Tires, Automobile

AUTOMOBILE touring

Home touring and emergency services of the Automobile association. R. C. Evans. maps Aslib Proc 4:255-62; Discussion. 262-4 N '52

AUTOMOBILE trailers

Bathtubs, too; home, home in the trailer il Bsns W p28-30 Mr 14 '53

House trailer; $284-million business. Steel 131:53 D 29 '52

Spotting trends in trailer facts. Steel 132:58 My 4 '53

Trailer coach industry; abstract. R. F. Kuns. S A E J 61:63 Ja '53

Trailer coach industry becomes big business. A. W. Shearer. il maps plans Automotive Ind 109:52-9+ Ag 1 '53

AUTOMOBILE workers of America, United. See United automobile workers of America (International union, United automobile, aircraft, and agricultural implement workers of America)

AUTOMOBILES

Automobile of tomorrow; big engine, heavy car, or small engine, light car? R. J. S. Pigott. il Oil & Gas J 51:66-8 Ja 5 '53

Autos; selling cars with fanfare; GM's extravaganza is worthwhile seeing. R. D. Raddant. il Iron Age 171:42 Ja 22 '53

British car, the M.G. il Consumers Res Bul 31:18-19 Ja '53

Buick's V-8 engine and new Dynaflow for '53. J. Geschelin. il diags Automotive Ind 108:50-5+ Ja 1 '53

Cadillac horsepower at all-time high. il Automotive Ind 108:38+ Ja 15 '53

Chevrolets, 1953. il Automotive Ind 108:56-8 Ja 1 '53

Conspectus of cars; with table of current British cars and American and continental cars. diags Economist 165:268+ O 25 '52

Danes design low cost auto. il diag Product Eng 24:200 Ja '53

Detroit engineer answers the seven most frequently asked questions about small, light or plastic cars, horsepower, frills and styling. H. C. Tuttle. Steel 131:49-50 D 22 '52

Detroit's competitive lineup for 1953. il Bsns W p30-2 Ja 10 '53

Dodge adds Royal V-8 model. flow diag il Automotive Ind 109:34-5 O 15 '53

Dodge gets into the '53 fight. R. D. Raddant. il Iron Age 170:60 O 23 '52

Engineering and styling features on 1953 cars. F. G. Lawrence. Steel 132:67 F 23 '53

European civilian, military vehicles lack coordination. W. F. Bradley. il Automotive Ind 109:36-8+ S 15 '53

European post-war cars. M. Olley. il diags S A E J 61:17-25; Discussion. 26 Ap '53

General Motors takes the automotive spotlight with introduction of 1953 models for Cadillac, Buick, Oldsmobile and Chevrolet. H. C. Tuttle. il Steel 132:51-2 Ja 12 '53

Hudson Jet and Super jet. il Automotive Ind 108:51 Ja 15 '53

Hudson shows dealers, press, new light car. Automotive Ind 107:33 O 1 '52

K-F takes the plunge; will bring out sports roadster seating three people. H. C. Tuttle. Steel 131:61-2 O 6 '52

Lincoln improvements, 1953. il Automotive Ind 107:65 D 1 '52

Lines drawn for sports car battle. R. D. Raddant. il Iron Age 171:128+ Mr 5 '53

AUTOMOBILES—*Continued*

Mercedes comes back. il Bsns W p 112 Jl 18 '53

Nash-Healy sports car; abstract. E. L. Monson. S A E J 61:110-11 Jl '53

Nash improvements, 1953. il Automotive Ind 108:54 Ja 15 '53

Nash motors' 1953 Rambler has higher power, new styling. il Automotive Ind 108: 170+ Mr 15 '53

New Austin seven. il diags Automobile Eng 42:371-85 O '52

New Humber Super Snipe. il plans diags Automobile Eng 43:269-82 Jl '53

New Pontiac. H. C. Tuttle. il Steel 131:79-80 D 8 '52

Novel Italian styling. il Automotive Ind 109: 50-1 S 15 '53

Oldsmobile ups horsepower and adds 12-volt system. il Automotive Ind 108:39+ Ja 15 '53

Packard to re-enter luxury car field. Automotive Ind 107:17 N 15 '52

Panhard light alloy sedan. W. F. Bradley. il diags Automotive Ind 109:36-7+ O 15 '53

Plymouth adds swank, Packard more prestige. il Bsns W p 126 N 22 '52

Post-war car and the A-blast; what are the odds? A. L. Haynes. il S A E J 61:17-22 Ag '53

Quiet newcomer; the all-purpose utility car. il Bsns W p64-6+ N 22 '52

See your car as others see it; a shiny menace! L. P. Lyman. Safety Maint & Prod 105:49-50 F '53

Sports car presages new engineering concepts for more conventional models. F. G. Lawrence. il Steel 132:71-2 Mr 2 '53

Spotlight on plastic cars at GM Motorama. il Automotive Ind 108:52-3+ F 1 '53

Studebaker is forcing the rest of the industry to sit up and take notice. H. C. Tuttle. il Steel 132:51-2 Ja 26 '53

Studebakers feature dashing continental lines. il Automotive Ind 108:64-7 F 1 '53

Unique engineering features of small French car; Citroen. W. F. Bradley. il diags Automotive Ind 109:54-6 Ag 15 '53

Volkswagen; Germany comes back. il Bsns W p 106-12 Jl 11 '53

Watkins Glen sports car meet. R. T. Jackson. il Automotive Ind 107:48-9+ O 15 '52

What oil men should know about 1953 cars. W. S. James. Nat Pet N 45:53-4 My 6 '53

What the French want in a car. map Automotive Ind 109:39+ S 15 '53

See also

Automobile engines
Automobile industry and trade
Motor buses
Motor trucks
Motor vehicles
Railroads—Motor vehicle competition
Tires, Automobile
Tractors

Acceleration

Acceleration; its influence on fuel consumption and journey time. J. G. Lavender and C. R. Webb. Automobile Eng 43:363-9 S '53

Air conditioning

Air conditioning the automobile. M. Kalfus. il diag Heat & Ven 50:97-9 Ap '53

Automobile air conditioning; papers with discussion. il diags Refrig Eng 61:31-44 Ja '53

Car coolers give auto men headaches. R. D. Raddant. Iron Age 171:88 My 21 '53

Chrysler auto air conditioning in '53. Refrig Eng 60:1199 N '52

GM air conditioner; abstract. D. C. McCoy. S A E J 61:118+ Je '53

Heat's on car makers for cars that beat the heat; based on papers by M. W. Baker and others. il S A E J 61:18-21 Jl '53

Large scale production of air-conditioned autos in offing. P. J. Kent. Comm & Fin Chr 177:1226 Mr 19 '53

Legal codes affecting car air conditioning need to be modernized. J. Geschelin. Automotive Ind 109:67+ O 1 '53

New car air cooling recommendation OK'ed. S A E J 61:93+ My '53

Service stations offer free conditioned air. il Heating-Piping 25:91 Ag '53

Symposium on automobile air conditioning; abstract. J. W. Duhn and others. Heating-Piping 25:180 Ja '53

Trends in automotive air conditioning; abstract. L. L. Kuempel. S A E J 61:110+ S '53

Axles

Axle shafts machined on special automatics. il Automotive Ind 108:68+ Ap 1 '53

Developments in the specification and testing of lubricants for hypoid axles with particular reference to a full-scale British test procedure. A. Towle. 14pls Inst Pet J 38:747-62 S '52

Earls Court exhibition; review of design trends; rear axles. il Automobile Eng Extra no 42:481 N 27 '52

How a proving ground was moved indoors. L. W. Fischer and others. il diags S A E J 61:57-60 S '53

Modern heat treating of axle components; Timken-Detroit axle co. R. F. Lutz. il Automotive Ind 108:48-9+ Ja 1 '53

Modern tooling turns axle shafts. R. LeGrand. il diags Am Mach 97:134-5 My 25 '53

New development in axle suspension; abstracts. J. W. Putt. diags Automotive Ind 107:42-3 Jl 1 '52; S A E J 60:42 O '52

Welding axle housings in automatic machines. L. E. Feeney. il Automotive Ind 109:54-5 Jl 15 '53

Bodies

Coachwork design; outstanding drawings in the I.B.C.A.M. contest. il diags Automobile Eng 43:287-94 Jl '53

Corrosion of automobile bodies. F. L. LaQue. S A E J 61:78-80 Jl '53

Cutting abrasive costs in body plant. J. R. O'Neil and W. J. Swallow. il Automotive Ind 109:66-8+ S 1 '53

Design of dies for auto bodies; drawings with text. C. R. Cory. S A E J 61:38-40 Mr '53

Earls Court exhibition; review of design trends; coachwork. il Automobile Eng Extra no 42:496-504 N 27 '52

GM showing plastic sport cars. Iron Age 171: 54+ Ja 15 '53

Latest techniques in body assembly; Dodge division of Chrysler corp. T. MacNew. il Automotive Ind 108:32-3+ F 15 '53

Light alloy bodywork; review of mass production practice in France. il Automobile Eng 43:200-4 My '53

Magnesium auto body. H. Edwards. il Light Metal Age 10:10-11 D '52

Magnesium body. il Automobile Eng 42:525-6 D '52

Metal stampings produced with latest handling methods at new Ford plant. J. W. Greve. il plan Tool Eng 29:37-42 D '52

1953 passenger cars, body dimensions; tabulations. diag Automotive Ind 108:127-8 Mr 15 '53

Plastic-bodied cars hit the roads. il Steel 132:79-80 F 16 '53

Plastics bodies. Automobile Eng 43:112 Mr '53

Plastics motor body. Automobile Eng 43:245 Je '53

Structural design. T. K. Garrett. diags Automobile Eng 43:103-11, 152-7 Mr-Ap '53

Studebaker's body plant redesigned for 1953 cars. J. Geschelin. il Automotive Ind 108: 70-2+ Je 1 '53

Welding developments; Vauxhall motors, ltd. il Automobile Eng 43:247-57 Je '53

See also

American society of body engineers

Brakes

See Brakes, Automobile

Bumpers

Bumper-wrapping machine cuts packing, shipping costs. il Iron Age 171:210 My 7 '53

Carbureters

See Carbureters

Care

Car check program goes after accidents. W. F. Hufstader. Safety Maint & Prod 106: 43 Jl '53

Chassis

Allard Palm Beach chassis. il diags Automobile Eng 43:177-86 My '53

AUTOMOBILES—Chassis—*Continued*

Lanchester Leda chassis. il diags Automobile Eng 43:3-17 Ja '53

Cleaning

Cleaner, safer, faster! il Safety Maint & Prod 106:44-8 Jl '53

Clutches

Earls Court exhibition; review of design trends; clutches. il Automobile Eng Extra no 42:475 N 27 '52

Hydraulic clutch control. diags Automobile Eng 43:151 Ap '53

Hydraulic clutch control to overcome problems of vibration, drumming and rattle. il Engineer 195:293 F 20 '53; Engineering 175:383 Mr 20 '53

NoSpin overrunning clutch. il Automotive Ind 107:92+ D 1 '52

Cold weather operation

Starting in extreme cold. J. D. Richards. Automobile Eng 42:409-13 O '52

Color

Bright car colors gain favor. D. G. Baird. il Am Bsns 23:12-13+ Jl '53

Control

Possibilities of electronic control of automobiles explored. V. K. Zworykin. il Elec Eng 72:849-50 S '53

Design

American motor car styling; conventional and sports; abstract. B. Stevens. S A E J 61:117-18 F '53

Austin 7 structural design. il diags Automobile Eng 42:507-12 D '52

Automobile dynamic loads. T. K. Garrett. diags Automobile Eng 43:60-4 F '53; Discussion. 43:330-1 Ag '53

Coachwork design; outstanding drawings in the I.B.C.A.M. contest. il diags Automobile Eng 43:287-94 Jl '53

Corvette design features; illustrations with text. Automotive Ind 109:46-7 O 15 '53

Design features of 1953 cars. il diags Product Eng 24:135-67 F '53

Earls Court exhibition; review of design trends. il Automobile Eng Extra no 42:461-504 N 27 '52

Engineering highlights of 1953 passenger cars. W. S. James. S A E J 61:49-57+ Ap '53

Indianapolis racing car design; abstract. R. T. Jackson. S A E J 61:118 Ap '53

It takes more than style to stay in the race; new Studebaker. il Bsns W p 104-8+ Ja 31 '53

Practical designing; abstract. J. F. Zimmerly. S A E J 60:86+ N '52

Structural design. T. K. Garrett. diags Automobile Eng 43:103-11, 152-7 Mr-Ap '53

Styling as a salesman; abstract. H. T. Bannister. S A E J 61:110 Ap '53

Styling in the crystal ball; illustrations. Automotive Ind 109:42-4 Ag 15 '53

What's happened to automotive streamlining? Americans want the living-room-on-wheels style. F. G. Lawrence. il Steel 132:81-2 Ap 20 '53

Door latches

Door latch rotor now stamped successfully. J. A. Leake. il Automotive Ind 107:78+ N 15 '52

Electric equipment

Earls Court exhibition; review of design trends; electrical equipment and car heating. il Automobile Eng Extra no 42:491-5 N 27 '52

Ignition; new cars get more battery power. Iron Age 170:63 O 23 '52

More miles for the battery dollar. L. E. Wells. diags Am Gas Assn Proc 1952:477-86; Abstract. Automotive Ind 107:40-1 Jl 1 '52

Motor show, London. il Elec J 149:1249-50 O 24 '52; Elec R (Lond) 151:969-71 O 31 '52

Power actuation of body equipment components; panel discussion. S A E J 61:120+ My '53

Storage batteries are best yet; charts. L. E. Wells. S A E J 61:66-7 Ja '53

12-volt electrical system will be on some 1953 cars. H. C. Tuttle. Steel 131:89 D 15 '52

What change to 12-volt batteries will mean to oil's TBA marketers. Nat Pet N 44:75+ N 5 '52

Why the secrecy on 12-volt batteries? service stations should have facts now. F. C. Sturtevant. Nat Pet N 44:74 N 5 '52

Why 12 volts? H. L. Hartzell. Automotive Ind 107:56-8+ N 1 '52; Abstract. S A E J 61:100-1 Je '53

See also

Automobile engines—Ignition devices

Storage batteries

Equipment

Power devices on way to becoming standard equipment on even lower-priced cars. F. G. Lawrence. il Steel 132:69-70 Ap 27 '53

See also

Brakes, Automobile

Oil filters, Automobile

Shock absorbers

Spark plugs

Tachometers

Tires, Automobile

Exhibitions

Annual Swiss automobile show, 23d. W. F. Bradley. il diag Automotive Ind 108:36-7+ Ap 15 '53

British makers introduce new models at London show. W. F. Bradley. il Automotive Ind 107:62-4+ D 1 '52

Current automotive activities in Belgium. W. F. Bradley. il Automotive Ind 108:34-7 F 15 '53

Frankfurt motor show. K. B. Hopfinger. il diags Automobile Eng 43:205-14 My '53

Geneva show. il diags Automobile Eng 43:131-41 Ap '53

International automobile show, 36th, Frankfurt, Germany. il diags Automotive Ind 108:44-5 My 15 '53

International motor show, Frankfurt, March 19-29. il diags Engineer 195:554-7, 590-3 Ap 17-24 '53

International motor show, London, Oct. 22-Nov. 1. il Engineer 194:576-8, 606-9, 657-60 O 31-N 14 '52; Engineering 174:540-1, 563-5 O 24-31 '52

Motorama at the Waldorf; General Motors revives an old custom. il Bsns W p 32-4 Ja 24 '53

New Italian cars introduced at Turin automobile show. W. F. Bradley. il Automotive Ind 108:48-50+ Je 1 '53

Paris automobile show. W. F. Bradley. il diags Automotive Ind 107:42-5+ N 15 '52

Paris salon. il diags Automobile Eng 42:452-8 N '52

Fabrics

See Automobile fabrics

Fenders

Automatic stamping and welding of sheet metal parts; Chrysler corp. il Automotive Ind 109:48-9 O 1 '53

Drawing and welding two-piece fenders. H. Chase. il Automotive Ind 107:68-71 N 1 '52

Pontiac's newest method for making front fenders. il Automotive Ind 108:54 F 1 '53

Frames

Earls Court exhibition; review of design trends; frames. il Automobile Eng Extra no 42:487-8 N 27 '52

Frame assembly cuts shipping costs; Chevrolet's assembly plants. il Steel 132:98-9 My 4 '53

Large-scale welding done on Chevrolet front frame members. L. E. Feeney. il Welding J 31:1154-6 D '52

No rail distortion; side rail press. il Steel 132:142+ Ap 27 '53

Gearing

Automatic heat-treating speeds gear and pinion production. H. Chase. il Iron Age 170:128-30 N 20 '52

Bevel gear cutting. il Automobile Eng 42:542 D '52

Earls Court exhibition; review of design trends; gearboxes. il Automobile Eng Extra no 42:476-80 N 27 '52

How multiple nut runners save time in assembly of Ford differentials. il Automotive Ind 107:57+ O 1 '52

Shaping 125 gears per hour; Ford motor co. il Mach 59:160-1 Mr '53

AUTOMOBILES—Gearing—*Continued*

Skip welding ring gear to flywheel. H. Chase. il Tool Eng 29:63-4 N '52

Split pin synchronizers for heavy-duty gearboxes. il diag Automobile Eng 42:545 D '52

See also

Automobiles—Steering gear

Automobiles—Transmission

Heating and ventilation

Earls Court exhibition; review of design trends; electrical equipment and car heating. il Automobile Eng Extra no 42:494-5 N 27 '52

See also

Moving picture theaters, Open air —Car heating equipment

History

50 years of Cadillac creations. il Automotive Ind 107:62-4 O 1 '52

Studebaker's first hundred years. C. H. Vivian. il Comp Air Mag 57:328-34 D '52

Insurance

See Insurance, Automobile

Leasing

Car dealers fight back. Bsns W p 140 Mr 14 '53

Debate pros and cons of owning versus leasing. S A E J 60:112+ D '52

Fleet-lease hedge. Bsns W p76 Jl 18 '53

Is it better to lease or own automotive equipment? based on papers by H. L. Willett, jr. and others. S A E J 61:20-2 Je '53

Length of service

Cars in use by makes, states, and model year; tabulation. Automotive Ind 108:112-21 Mr 15 '53

Number and per cent of cars in use, by age groups, 1949-1952; tabulation. Automotive Ind 108:111 Mr 15 '53

Lighting

Autronic eye dims headlights; abstract. D. P. Driftmier. il S A E J 61:101-3 Jl '53

Effectiveness of so-called fog lamps. M. Luckiesh. Consumers Res Bul 31:30 Mr '53

Glare and the normal eye. J. R. Cravath. Illum Eng 48:sup 19A+ S '53

Lamp for 12-volt electrical systems. V. J. Roper. Automotive Ind 107:102 N 15 '52

Photoelectric headlight dimmer. P. J. Vogelgesang. il diags Radio & Tv N 49:35+ Ja '53

Some photographic methods applied to photometry. C. Marsh. il Illum Eng 47:571-4 O '52

Lubrication

Lubricants, the surface savers. J. F. Kunc, jr. and J. P. Hamer. S A E J 61:66-8 S '53

Road and laboratory wear tests of gear oils. H. L. Bingham and J. G. Withers. diag Inst Pet J 38:718-28 S '52

Simplifying grease lubrication for automotive equipment; abstract and discussion. L. W. McLennan and E. Amott. S A E J 60:110-12 O '52

Why cars need lubrication. H. Ridder. Nat Pet N 44:46-7 N 26 '52

See also

Automobile engines—Lubrication

Gasoline service stations—Lubricating service

Manufacture

Arc-welding the Nash Rambler; illustrations with text. Mach 59:180-1 F '53

Auto engineers exchange views at SAE production forum. Am Mach 97:196 Ap 13 '53

Automatic welding spurs auto frame production. H. G. Schultz. il diag Iron Age 170:84-7 O 30 '52

Cradle for automation. F. G. Lawrence. il Steel 132:77-8+ Je 1 '53

Gas carburizing for crown wheels and pinions. il Automobile Eng 43:149-51 Ap '53

Greater emphasis on automation in stamping production; Ford motor co. T. Mac New. il Automotive Ind 107:34-8+ N 15 '52

Induction heating; automobile applications. D. W. Brown. il diags Automobile Eng 43:379-85 S '53

Plastics; auto die use growing. R. D. Raddant. Iron Age 170:79 D 18 '52

Stamping plant relies on automation; Ford motor co. il Iron Age 170:162-4 D 11 '52

What's ahead in forging; report of panel on forgings. il S A E J 61:42-3 S '53

See also

Automobile assembly plants

Automobile engines—Manufacture

Automobile factories

Materials

Aluminum advances in brazed castings, plaster castings, die castings, wiring, finishes. J. H. Dunn and E. P. White. diags Product Eng 24:246+ Ja '53

Automotive adhesives; panel discussion; abstracts of papers. Rubber Age 73:209-10 My '53

Automotive research; trailblazer for metalworking. il Steel 131:166-8+ O 13 '52

Automotive service experience with magnesium; abstract. F. H. Mason. Automotive Ind 107:74+ D 15 '52

Autos; stretching nickel thinner. R. D. Raddant. Iron Age 171:80 Ap 23 '53

Ductile iron applications expand. il Automotive Ind 108:42-3 Mr 1 '53

Joint committee on automotive rubber reports considerable progress. Rubber Age 72:368 D '52

Light alloy bodywork; review of mass production practice in France. il Automobile Eng 43:200-4 My '53

Light metals in the car of the future; abstract. J. H. Dunn. S A E J 60:120+ D '52

Magnesium auto body. H. Edwards. il Light Metal Age 10:10-11 D '52

Magnesium auto body; abstract. R. J. Cross. Mech Eng 75:322-3 Ap '53

Magnesium body. il Automobile Eng 42:525-6 D '52

More aluminum predicted in automobiles. J. H. Dunn. Materials & Methods 37:178+ F '53

New materials; abstracts of SAE annual meeting papers. S A E J 61:80A-80H F '53

New materials; inventions born of necessity; report on round table on new engineering materials. J. Gurski. il S A E J 60:43-5 O '52

Rubber products used in the automotive industry; panel discussion. India Rubber World 127:237-8 N '52

Urges search for materials substitutes; abstract. R. Cass. S A E J 61:105 Mr '53

What alloy should be used to die cast decorative automotive parts; zinc, aluminum or magnesium? M. R. Caldwell and C. Pack. S A E J 61:78-9 Ag '53

What makes an auto; materials in a 1952 four-door sedan; drawing and tabulation. Iron Age 171:439 Ja 1 '53

Plastics

Automotive advancements in plastics; American society of body engineers annual meeting, Detroit, Oct. 29-31. Automotive Ind 107:70-2 D 1 '52

British plastics exhibition. il Automobile Eng 43:283-5 Jl '53

Challenge of plastics. T. Mac New. il diag Automotive Ind 109:42-9+ S 15 '53

GM showing plastic sport cars. Iron Age 171:54 Ja 15 '53

Moulded nylon. il Automobile Eng 43:81-2 F '53

New uses for fibrous glass. il Bsns W p 114+ Ap 11 '53

Plastic car bodies; based on papers by E. S. Ebers and others. il S A E J 61:65-8 My '53

Plastic car; Kaiser-Frazer's DKF-161 sports car. il Iron Age 171:87 F 26 '53

Plastic cars in for good. Steel 132:133 Je 22 '53

Plastics and the new car. il Can Chem Process 37:36+ Mr '53; Steel 132:79-80 F 16 '53

Plastics bodies. Automobile Eng 43:112 Mr '53

Plastics motor body. Automobile Eng 43:245 Je '53

Reinforced plastics automobile bodies. il Mod Plastics 30:75-82 F '53

Reinforced plastics for car bodies. Comm & Fin Chr 177:1328 Mr 26 '53

AUTOMOBILES—Materials—Plastics—*Cont.*

Use of plastics as a body material for autos in winning renewed interest. H. C. Tuttle. Steel 131:61 O 6 '52

Meters

Mile-O-Meter. Consumers Res Bul 30:28 O '52

Models

Plastics prototypes revolutionize preparation for manufacture; abstracts. W. A. Stanley. il Automotive Ind 107:98+ Jl 1 '52; Machine Design 24:301+ O '52; diags S A E J 60:48-51 N '52

Noise

Engine harshness in passenger cars; abstract. G. Klaasen. S A E J 61:111-12 My '53

Noise in private cars. J. R. Bristow. Inst Mech Eng Proc (Auto div pt 1):9-15 '51-52; Same. Engineering 173:201-2, 252-3 F 15-22 '52; Discussion. Inst Mech Eng Proc (Auto div pt 1):16-22 '51-52

Use of binaural tape recording in automotive noise problems. D. C. Apps. il Acoustical Soc Am J 24:660-2 N '52

See also

Automobile engines
—Noise

Painting and finishing

Better paint job by automatic spray; Nash motors. il Factory Management 111:136-7 Mr '53

Electronic barrier against invisible dirt. il Can Chem Process 37:50+ Je 1 '53

Infra-red drying. il Elec J 150:699-700 F 27 '53; Elec R (Lond) 152:595-9 Mr 13 '53

Put the infrared units in the spray booth; Baron industries of Los Angeles. il Elec West 109:104 O '52

Radiant heat; efficient method of drying paint. il Automobile Eng 42:546 D '52

Robot spray gives prime primer; use of electrostatic painting at Studebaker corp. R. D. Raddant. il Iron Age 171:82 Je 25 '53

Steam spraying. Automobile Eng 42:526 D '52

Trends in better finishes for automobiles. J. Parina, jr. il Metal Prog 64:83-6 Jl '53

See also

Automobiles—Color
Motor trucks—Painting and finishing

Patents

Current patents. Published in monthly numbers of Automobile engineer

Performance

Wind effects on car stability; abstract. W. E. Lay and P. W. Lett, jr. S A E J 61:34-5 S '53

Prices

1953 four-door sedans; what you get for your money; tabulation. Steel 132:68 F 23 '53

1953 passenger cars, price, weight, bodies, tabulation. Automotive Ind 108:125 Mr 15 '53

Propeller shafts

Earls Court exhibition; review of design trends; propeller shafts. il Automobile Eng Extra no 42:480 N 27 '52

Rating

Comparative report on 48 cars. il Consumers Res Bul 31:5-20 Je '53

1953 automobiles. il Consumers Res Bul 31: 23-4 F; 5-7 Mr; 12-16 Ap; 10-18 My; 20-1 Jl '53

Repair

Cut out the old, weld in the new. L. F. Lillard. il Welding J 32:332 Ap '53

Safety measures

See also

Motor vehicles—Inspection

Seat covers

Rating

Static electricity and anti-static agents. il Consumers Res Bul 31:20-1 Ja '53

Seats

Ford seat cushions are noiseless; coating of vinyl plastisol on tension wires in cushions replaces jute wrapping. il Mod Plastics 30: 78-9 Ja '53

Support plus some softness should be goal for car seats; report of round table discussion. J. C. Gordon. il diag S A E J 61:70-2 F '53

Skidding

Study of the factors affecting the friction of tread compounds on ice. C. S. Wilkinson, jr. bibliog il diags India Rubber World 128: 475-81 Jl '53

Wet roads require driving technique. J. T. Outlaw. Safety Maint & Prod 105:70 Je '53

Small size

Cheap and fast in a pinch; Isetta. il Bsns W p 148 Je 6 '53

Specifications

Models and specifications of Soviet motor vehicles; tabulation. Automotive Ind 108: 50-1 My 15 '53

1953 passenger cars, British and other foreign cars; tabulations. Automotive Ind 108: 146-8 Mr 15 '53

1953 passenger cars; specifications; tabulations. Automotive Ind 108:129-45 Mr 15 '53

Speed

Cars travel too fast for drivers and roads. T. N. Boate. Safety Maint & Prod 106:32-3 S '53

Speed takes its toll. T. N. Boate. Safety Maint & Prod 105:48+ F '53

Springs and suspension

Automatic bar pointer improves spring production. W. G. Patton. il plan Iron Age 170:120-2 N 27 '52

Earls Court exhibition; review of design trends; front suspension and steering. il Automobile Eng Extra no 42:482-5 N 27 '52

Earls Court exhibition; review of design trends; rear suspension. il Automobile Eng Extra no 42:486-7 N 27 '52

High speed heating of spring leaves. il Automotive Ind 107:43 O 15 '52

Independent real suspension. D. Bastow. bibliog il diags Inst Mech Eng Proc (Auto div pt 2):35-44; Discussion. 44-58 '51-52

New development in axle suspension; abstracts. J. W. Putt. diags Automotive Ind 107:42-3 Jl 1 '52; S A E J 60:42 O '52

New Humber Super Snipe. il plan diags Automobile Eng 43:277-81 Jl '53

Properties of automobile suspension springs. C. J. Dadswell and others. bibliog Engineer 196:56-9 Jl 10 '53

Shock absorbers. J. W. Kinchin and C. R. Stock. diags Inst Mech Eng Proc (Auto div pt 2):67-78 '51-52; Abstract. Engineering 173:381 Mr 21 '52; Discussion. il Inst Mech Eng Proc (Auto div pt 2):78-86 '51-52

Suspension control; dynamic absorbers. il diags Automobile Eng 43:295-300 Jl '53

University of Michigan studies vehicle suspensions with analog. A. Lange and J. Dute. diags S A E J 60:23-4 D '52

Starting

Engine starter motors; some views on multipole designs. W. Subak. diag Elec R (Lond) 151:721-3 O 3 '52

Starting in extreme cold. J. D. Richards. Automobile Eng 42:409-13 O '52

Steering gear

Balanced hydraulic design for linkage steering booster. il Machine Design 25:228 O '53

Booster for steering; Monroe auto equipment co. Bsns W p 132+ Ap 11 '53

Design of the Saginaw linkage type power steering. diags Automotive Ind 109:32+ Jl 15 '53

Details of Bendix linkage type power steering. il diag Automotive Ind 109:69+ Ag 1 '53

Details of the Monroe power steering unit; drawings. Automotive Ind 108:88 Je 1 '53

Details of Warner Gear's mechanical power steering system. il diags Automotive Ind 108:38-9 Ap 15 '53

AUTOMOBILES—Steering gear—*Continued*
Differs on design agrees on safety; report on round table on power steering. S A E J 60:59-61 N '52
Earls Court exhibition; review of design trends; front suspension and steering. il Automobile Eng Extra no 42:482-5 N 27 '52
Five powder parts for power steering. C. Emerson. il diags Am Mach 97:130-2 S 28 '53
Four million Hydra Matics; abstract. W. B. Herndon. S A E J 61:118+ My '53
Gemmer linkage type hydraulic power steering. il diag Automotive Ind 109:33+ Jl 15 '53
Gemmer power steering gear simplified and improved. il Automotive Ind 108:59 Ap 1 '53
Good setups speed steering gear production; Ross gear & tool co. H. Chase. il Iron Age 170:65-7 D 25 '52
History, development, and application of power steering; abstract. F. W. Davis. S A E J 61:108 Mr '53
Monroe power steering in production. il diags Automotive Ind 108:47 Mr 1 '53
Packard-designed power steering. J. Geschelin. il Automotive Ind 107:50-1 D 1 '52
Packard develops a new power steering unit. H. C. Tuttle. il Steel 131:61-2 D 1 '52
Power boost catches on. W. G. Patton. Iron Age 171:97 Je 18 '53
Power steering. il diags Automobile Eng 42:513-20 D '52
Power steering; abstract. F. W. Davis. S A E J 61:118+ Ja '53
Power steering and braking described. D. J. Schrum. S A E J 60:108+ N '52
Powerglide governor gears produced by advanced methods. C. R. Moore. il Automotive Ind 109:68-9+ O 1 '53
Redesign for economy; Hydraguide power steering gear. C. Holt. il diags Machine Design 25:164-7 Je '53
Redesigning job on Chrysler's power steering unit. F. G. Lawrence. il Steel 132:73-4 F 9 '53
Studebaker features mechanical power steering. il diags Machine Design 25:183-4 Ap '53
Tremendous demand for power steering and automatic transmissions. J. Geschelin. Automotive Ind 109:46+ Jl 15 '53
Using new materials in design lowers production costs; Hydraguide. il diags Product Eng 24:154-7 Ap '53

Taxation

Roads; auto taxes slow building. R. M. Stroupe. Iron Age 171:79 Mr 26 '53

Testing

Chrysler building 140-mph test track. il plan Roads & Sts 96:82-3 Mr '53
Chrysler proving grounds will be world's largest. il plan Automotive Ind 108:88 Ja 1 '53
Detroit-to-Phoenix road test for the 1953 Chevrolet. il Bsns W p54-5 Ja 3 '53
Dynamometers for automotive testing. F. Slamar and C. P. Croco. il diags Westinghouse Eng 13:114-17 Jl 15 '53
Effects of Nevada atom test on cars studied by SAE group. il S A E J 61:102-3 Je '53
Endurance testing. il Automobile Eng 43:55-9 F '53
General Motors runs a super test of its own cars and others. il Steel 132:85 F 2 '53
General Motors tests own, rivals cars in torture run. il Automotive Ind 108:21+ F 15 '53
Mobile tender for road proving of vehicles. il Engineering 174:468-9 O 10 '52
New proving ground readied; Chrysler builds new test area west of Detroit. Iron Age 170:117 D 4 '52
Special tests at GM proving ground. il Automotive Ind 108:49 Ap 15 '53
Testing automobiles at Consumers' research. il Consumers Res Bul 32:22-4 Jl '53
Vehicle performance; method of determining drag, engine power output, and transmission behaviour under operating conditions. Z. Arkus-Duntov. il Automobile Eng 42:535-41 D '52

Theft

Get tough attitude urged to end motor car thefts. B. H. German. Weekly Underw 168:944 Ap 4 '53

Transmission

Automatic induction hardening of transmission shifter forks. A. A. Lyness, jr. il Automotive Ind 108:90+ Ja 1 '53
Automatic transmissions; abstract. W. D. Pidd. S A E J 61:107-8 Jl '53
Borg-Warner; trend to no-shift driving broadens its sales. J. C. Mueller. Barron's 33:15-16 F 16 '53
Buick's V-8 engine and new Dynaflow for '53. J. Geschelin. diag Automotive Ind 108:54-5 Ja 1 '53
Chevrolet transmission service change draws fire from industry lube men. Nat Pet N 45:100 My 6 '53
Cleanliness essential for Detroit Gear's automatic transmission; abstract. H. H. Whittingham. Automotive Ind 108:64+ My 1 '53
Four-speed transmission for use with torque converters. il Automotive Ind 107:69 O 1 '52
Great fuel savings possible with ideal engine-transmission. D. F. Caris and R. A. Richardson. Automotive Ind 107:42-6+ Ag 1 '52; Same abr. S A E J 60:32-5 N '52
Hydraulic transmission fluid produced by B-A for Canadian conditions. il diag Can Chem Process 37:68 Ja '53
Ideal automatic transmission. B. Edsall. Automotive Ind 108:66-7+ My 1 '53; Abstract. S A E J 60:69-70 O '52
International motor show, London. il Engineer 194:657-8 N 14 '52
Let's put in a torque converter; abstract. R. C. Zeidler. S A E J 61:50 Ag '53
Manumatic control. il diags Automobile Eng 43:70-6 F '53
New Chrysler transmission has high-ratio torque converter. J. Geschelin. il diags Automotive Ind 109:48-50+ Ag 1 '53
New Humber Super Snipe. il plan diags Automobile Eng 43:270-6 Jl '53
New Plymouth torque converter. F. G. Lawrence. Steel 132:57-8 F 16 '53
New tooling and methods for Powerglide transmissions. J. Geschelin. il Automotive Ind 109:48-50+ Jl 1 '53
New valve mechanism of the 1953 Powerglide transmission. il diags Automotive Ind 108:24-7+ Mr 1 '53
Plymouth Hy-Drive transmission. il diag Automotive Ind 108:54 Ap 15 '53
Tremendous demand for power steering and automatic transmissions. J. Geschelin. Automotive Ind 109:46+ Jl 15 '53
Unusual problems in machining automatic transmission parts. H. H. Whittingham. il S A E J 61:56-9 My '53

Transportation

Autos float where they're going. R. D. Raddant. il Iron Age 171:80 Mr 12 '53
Development of car-ferry air services. il Engineering 176:169 Ag 7 '53
Operation of English Channel air ferry. G. J. Powell. il S A E J 60:39-42 O '52

Upholstery

Molding eliminates sewing on automobile seat cushions and interior side panels. il Mod Plastics 30:105-8+ D '52
See also
Automobile fabrics
Automobiles—Seats

Vibration

Numerical analysis of damped vibrating systems. E. S. Ault and W. J. Graff, jr. diags Machine Design 25:169-74 My '53
Suspension control; dynamic absorbers. il diags Automobile Eng 43:295-300 Jl '53
Vibration measured, controlled by new test methods; Buick motor div. General motors corp. L. E. Muller. il diag Iron Age 171:137-9 F 26 '53

Weight

1953 passenger cars, price, weight, bodies; tabulation. Automotive Ind 108:125 Mr 15 '53

AUTOMOBILES, Salesmen's

Samples on the spot; they save sales for National cash register co. il Sales Management 70:102 Mr 1 '53

AUTOMOBILES, Used

See also

Automobile industry and trade—Used cars

AUTOMOTIVE fuel

Conservation and motor fuel; what's ahead? E. Ayres. Pet Refiner 31:83+ S '52

See also

Gas turbines, Aircraft—Fuel
Gasoline
Gasoline—Antiknock and antiknock mixtures

Testing

Emission spectra on autoignited heptane-air mixtures. W. J. Levedahl and H. P. Broida. bibliog il Anal Chem 24:1776-80 N '52

AUTOMOTIVE industries

Defense contract awards; list of prime contracts for various types of automotive military equipment, including tanks, motorized gun carriages, trucks, warplanes, automotive components and spare parts, automotive maintenance equipment, etc. (cont). Automotive Ind 107:166+ O 15; 160+ N 15; 130+ D 15 '52; 108:102+ Ja 15; 576+ Mr 15; 152+ Ap 15; 200+ My 15; 100+ Je 15; 109: 148+ Jl 15; 116+ Ag 15; 162+ S 15; 112+ O 15 '53

Many industries given impetus by automotive production advances. J. Geschelin. il Automotive Ind 109:32-3+ O 15 '53

New defense facilities; list of certificates of necessity authorizing new or expanded facilities for the manufacture of automotive and aviation war goods (cont). Automotive Ind 107:134+ N 1; 146+ N 15; 142+ D 15 '52; 108:76+ Ja 15; 136+ Ap 15; 86+ Je 15; 109:118+ Jl 15; 102+ Ag 15; 126+ S 15; 130+ O 15 '53

See also

Airplane industry and trade
Automobile accessories industry
Automobile assembly plants
Automobile industry and trade
Motor bus industry and trade
Motor truck industry
Tractor industry and trade

Advertising

CAMS report outlook for automotive is good. D. L. Lionel. Ed & Pub 86:32 F 21 '53

Statistics

Annual reports at a glance; cars, trucks, engines; parts, tools; aircraft; tabulations. Automotive Ind 108:111 My 1 '53

Automotive industries 1953 statistical issue. Automotive Ind 108:71-166 Mr 15 '53

U.S. exports of automotive products, 1949-1952; tabulation. Automotive Ind 108:123 Mr 15 '53

AUTOPILOT. See Airplanes—Control

AUTORADIOGRAPHY. See Radiography

AUTOSYNTHESIS. See Synthesis

AUTOTRANSFORMERS. See Electric transformers—Autotransformers

AUTOXIDATION. See Oxidation—Autoxidation

AUXIN

Crown gall suppression by anti-auxin. P. E. Waggoner and A. E. Dimond. Science 117: 13 Ja 2 '53

AVCO manufacturing corporation

In union, strength. Bsns W p142 Jl 25 '53
1953 net may top last year's $1.20 a share. Barron's 33:19-20 Ap 27 '53

AVERAGE

Statistical errors in measurements on random time functions. W. B. Davenport, jr. and others. bibliog J Ap Phys 23:377-88 Ap '52

AVERY, Sewell Lee, 1873-

Portrait. Fortune 46:116 D '52

AVGAS. See Airplane engines—Fuel

AVIARIES

Lighting a zoo bird cage; data sheet. F. Wyatt. il plan diag Illum Eng 48:201-2 Ap '53

AVIATION

Pilot's-eye view of record-breaking flight. C. F. Blair, jr. S A E J 60:110-11 N '52

See also

Aeronautics
Aeronautics, Commercial
Air navigation
Airlines
Airplanes
Airports
Airways
Aviators
Flying boats
Gliders
Insurance, Aviation
Meteorology, Aeronautic
Radar aids to aviation
Radio aids to aviation
Wind tunnels

Accidents

Aircraft accident due to wash from air liner. Engineering 174:751 D 12 '52

Aircraft casualty statistics for second half of 1952 held to be favorable. C. Christensen. Weekly Underw 168:326+ Ja 31 '53

Aircraft owners and pilots association blames airline pilots in collisions. Aviation W 58:16 F 23 '53

AA DC-6; lightplane collision; Civil aeronautics board accident report. Aviation W 58:60-4 Ap 13 '53

Analysis of accidents first step in prevention; abstract. J. O. Fluet. S A E J 61:104 Mr '53

Cargo C-46F crash near Idlewild. Aviation W 58:62-4+ Ja 12 '53

CAB accident investigation report; Robin's C-46 was flying too low. Aviation W 57: 41+ D 8 '52

CAB report on training collision between DC-4s; danger studied in hooded flights. Aviation W 58:46+ My 11 '53

Crash protection in air transports. J. P. Stapp. bibliog il diags Aeronautical Eng R 12:71-8 Ap '53

Elimination of some time losses in emergency evacuation of passengers from airplanes. B. King. bibliog Aeronautical Eng R 12:37-9 Mr '53

Four generals probe C-124 crash. il Aviation W 57:14 D 29 '52

Locked controls blamed in crash at Larson AFB, Wash., Dec. 20. Aviation W 58:15 Ja 5 '53

L-f range blamed in AF crashes. A. McSurely. Aviation W 58:17 Ja 19 '53

Near-crash reports vital. C. N. Sayen. Aviation W 58:85 Ja 12 '53

Nickel-cadmium cells hit at one cause of crashes. il Aviation W 58:77 Ap 27 '53

Nose-high takeoff cited in Comet crash. Aviation W 57:17 N 24 '52

Prop wash causes lightplane crashes. Aviation W 57:16 D 8 '52

USAF crashes. A. McSurely. Aviation W 58: 17 Ja 12 '53

U.S. disagrees on air damage liability. Aviation W 58:17 Ja 26 '53

See also

Airlines—Accidents
Survival (after airplane accidents, etc.)

Altitude flying

AF reveals high-altitude pressure suit. il Aviation W 57:17 O 13 '52

Heat transfer to bodies traveling at high speed in the upper atmosphere. J. R. Stalder and D. Jukoff. bibliog diag U S Nat Advisory Com for Aeronautics 1949:455-67 '51

New high-altitude suit developed for flying personnel. Elec Eng 72:99 Ja '53

Physiological aspects of prolonged flight at high altitudes and survival in emergencies. U. C. Luft. Aeronautical Eng R 12:56-60+ Ap '53

History

50 aeronautical years from Kitty Hawk. il Automotive Ind 108:257-9+ Mr 15 '53

Instrument flying

CAB report on training collision between DC-4s; danger studied in hooded flights. Aviation W 58:46+ My 11 '53

Medical aspects

Aeromedical problems for nuclear-propelled aircraft. J. E. Pickering. Aeronautical Eng R 12:69-70 Ap '53

Aeromedicine gets specialty status. Aviation W 58:46-7 Ap 20 '53

AVIATION—Medical aspects—*Continued*

Atmospheric characteristics of greatest human significance in aviation of the next decade. P. A. Campbell. diags Aeronautical Eng R 12:50-5 Ap '53

IAS summaries. Aviation W 58:33-5 F 23 '53

Trends and transition in aeromedical problems, with a view toward the next ten years. O. O. Benson, jr. Aeronautical Eng R 12:45-9 Ap '53

Physiological aspects

Biology of flying; abstract. K. G. Bergin. Engineering 174:369-70 S 19 '52

Closed loop controls human centrifuge. T. F. Peirce. il diags Electronics 25:132-4 O '52

Conditioning aircraft for human occupation and control; abstracts. D. G. A. Rendel. Engineer 194:358-9 S 12 '52; Engineering 174:370-1 S 19 '52

Crash protection in air transports. J. P. Stapp. bibliog il diags Aeronautical Eng R 12:71-8 Ap '53

Dummy takes beating for science's sake. il Aviation W 58:29-30 Ja 12 '53

Noise, a problem in air transport and in ground operation. J. E. Lett. diag Aeronautical Eng R 12:65-8 Ap '53

Physiological aspects of prolonged flight at high altitudes and survival in emergencies. U. C. Luft. Aeronautical Eng R 12:56-60+ Ap '53

Physiological problems of high performance military aircraft; abstracts. W. K. Stewart. Engineer 194:357-8 S 12 '52; Engineering 174:370 S 19 '52

Prone flight vision. G. O. Emerson. Aero Digest 66:98-101 My '53

Skill and the airman; abstracts. W. E. Hick. Engineer 194:358 S 12 '52; Engineering 174:370 S 19 '52

US air force rocket experiments send mammals to 200,000 feet. Elec Eng 71:1155-6 D '52; Same cond. Electronics 25:180+ D '52

Vision at high speed and altitude. V. A. Byrnes. bibliog Aeronautical Eng R 12:61-4+ Ap '53

Public health aspects

Impact of modern aviation on health. H. V. Ellingson. Aeronautical Eng R 12:79-81 Ap '53

Safety measures

ALPA studies crash, fire angles. A. McSurely. Aviation W 58:16-17 Ap 20 '53

Automatic safety belts for jet pilots. Aviation W 58:19 Ja 26 '53

Awakening to safety; editorial. R. H. Wood. Aviation W 58:78 Mr 23 '53

Bermuda air safety seminar of 1952. J. Lederer. il Aeronautical Eng R 12:24-30 Mr '53

C-46 safety; recertification tests slated for all models. Aviation W 58:13 F 23 '53

CAA orders fix on H-S prop assembly. Aviation W 58:15 Ap 13 '53

CAB gets new safety proposals. A. McSurely. Aviation W 57:16-17 O 27 '52

Cockpit design and safety. W. I. Stieglitz. bibliog diags Aeronautical Eng R 11:36-41+ O '52

Crash tests; NACA simulates accidents to study fires, structure. il Aviation W 58:74-5 Ja 26 '53

50 years of powered flight. L. D. Webb. Nat Safety N 67:18-19+ Je '53

Flight safety award winners. Aviation W 57:15 D 1 '52

Flight safety foundation safety clinic covers wide range. A. McSurely. Aviation W 57:15 D 1 '52

Fresh approach to safety urged. B. O. Howard. Aviation W 58:19-20 Mr 23 '53; Discussion. W. D. Kent. 58:42 Je 1 '53

Good seat engineering saves lives. A. McSurely. il diag Aviation W 57:87-9 N 24 '52

Incident reporting. F. W. Ellis. Aeronautical Eng R 12:32-6 Mr '53

Lightplane shoulder harnesses urged. Aviation W 58:22 Mr 16 '53

More reliability needed. R. C. Robson. Aviation W 58:72 Mr 16; 76 Mr 23 '53

New approach to prop reversal. il diags Aviation W 58:15-16 F 2 '53

New prop reversal safeguard. A. McSurely. Aviation W 58:18 Mr 9 '53

New safeguard against prop reversal; Hamilton Standard hydraulic device. A. McSurely. il Aviation W 57:76+ N 17 '52

Operation overload. R. C. Robson. Aviation W 58:92 Je 1 '53

Pilot congress; ALPA takes new step in setting safety policy. A. McSurely. Aviation W 57:17 N 3 '52

Plane seating; restrictions on design scored. W. L. Littlewood. Aviation W 57:15-16 N 3 '52

Protective design in forward- and rearward-facing seats in transport aircraft; abstract. H. De Haven. S A E J 61:85 Jl '53

Rearward- and forward-facing seats. H. De Haven. Aeronautical Eng R 12:40-1 Mr '53

Seat reduction; only part of the story. R. C. Robson. Aviation W 57:100 D 8 '52

Shoulder harness saves three pilots. Aviation W 57:15 O 13 '52

Sperry cutoff monitors A-12 autopilot. P. Klass. il diag Aviation W 57:35-8 D 22 '52

Stress on air safety is paying off. Aviation W 58:185-6+ Mr 2 '53

Transport trends; increased stress on safe design urged. W. Littlewood. il Aviation W 58:21-4+ F 16 '53

Twin-Bonanza built for safety. A. McSurely. il diag Aviation W 58:16-17 Ja 5 '53

UAL presents case against coach seating. L. Moore. map Aviation W 57:13-15 D 8 '52

U.S. plans jet liner ceiling. Aviation W 58:36 Mr 2 '53

United to cut coach seating for safety. Aviation W 57:14 D 1 '52

See also

Airlines—Safety measures
Airplanes—Fires and fire protection
Airplanes—Ice protection
Airplanes—Lighting
Cornell university—Guggenheim aviation center
Decelostat, Aircraft

Transatlantic flights

See also

Airlines—Transoceanic lines

Transpolar flights

Log of SAS' trans-polar flight. Aviation W 57:75 D 1 '52

New gyro simplifies polar navigation. P. Klass. il Aviation W 58:49-52 Ja 19 '53

See also

Airlines—Transpolar lines

AVIATION equipment corporation

New firm finances S&W Super Connies. Aviation W 58:27 My 11 '53

Securities offered. Comm & Fin Chr 177:2670 Je 22 '53

AVIATION landing stations

See also

Airports

AVIATORS

Prone flight vision. G. O. Emerson. Aero Digest 66:98-101 My '53

Registered aircraft and pilot certifications, 1927-1951; tabulations. Automotive Ind 108:241 Mr 15 '53

Skill and the airman; abstracts. W. E. Hick. Engineer 194:358 S 12 '52; Engineering 174:370 S 19 '52

See also

Air line pilots association, International
Aviation—Physiological aspects

Clothing

AF reveals high-altitude pressure suit. il Aviation W 57:17 O 13 '52

New applications for electric heat. R. F. Sambleson. il Gen Elec R 56:28-31 S '53

New high-altitude suit developed for flying personnel. Elec Eng 72:99 Ja '53

Pressure suit for high fliers. il Comp Air Mag 58:115 Ap '53

Physical examinations

Predictive diagnosis. G. J. Kidera. Aeronautical Eng R 12:31+ Mr '53

Testing

Frequency response and the transfer functions of the human pilot measured in flight. G. M. Andrew. bibliog diag J Aeronautical Sci 20:65-7 Ja '53

AVIATORS—*Continued*

Training

Flying without wings; all-electronic flight simulator. diags Automotive Ind 108:43 Je 15 '53
Modern flight simulator, electromechanical analogue computing equipment. W. W. Wood, jr. il diags Elec Eng 71:1124-9 D '52
Three airlines buy transport simulators. il Aviation W 58:77-8 My 4 '53
Training of test pilots. A. E. Clouston. il Roy Aeronautical Soc J 57:39-44 Ja '53

AVIATORS, Military

Pilots and those AF crashes. R. C. Robson. Aviation W 58:80 F 23 '53; Discussion. 58: 70+ Ap 20; 56+ My 11; 98 My 18 '53

Training

Electronic aircraft simulator for Douglas C-124A Globemaster. il Tele-Tech 12:96 Jl '53
Navy gets new instrument trainer. il Aviation W 57:45 N 17 '52
Simplifying the complex; Link's Method II packaging of air force jet trainer. il Mod Packaging 26:105-7 O '52
Simulator to train bomber crews; illustrations with text. Aviation W 58:74-5 My 25 '53
Simulator trains navy pilots with complete realism; P2V-5 flight simulator. il Iron Age 171:180-1 Je 18 '53; Machine Design 25: 194 Ag '53
Ultrasonic radar trainer used in training crews by air force. Elec Eng 72:658-9 Jl '53

AWARDS. See Rewards, prizes, etc.

AWNINGS, Plastic

Styrene-paneled awning. il Mod Plastics 30: 180 O '52

AXLES

How to road test an axle in a quiet lab. il Bsns W p 116-18 Ja 24 '53

See also
Automobiles—Axles
Motor buses—Axles
Motor trucks—Axles

Manufacture

Machine burnishes axles. Steel 132:139-40 My 18 '53
Modern heat treating of axle components; Timken-Detroit axle co. R. F. Lutz. il Automotive Ind 108:48-9+ Ja 1 '53
Timken-Detroit's new axle and gear plant. J. Geschelin. il Automotive Ind 107:50-3+ N 15 '52

Testing

Axle-testing machine simulates actual driving conditions in laboratory. il Elec Eng 72:275 Mr '53
Electronic brain controls lab tests; Timken-Detroit axle co. il diags Product Eng 24: 195-6 Mr '53
How a proving ground was moved indoors. L. W. Fischer and others. il diags S A E J 61:57-60 S '53

AZABICYCLO compounds

Azabicycloalkanes; 1,5-substituted morphan. M. W. Cronyn and G. H. Riesser. bibliog Am Chem Soc J 75:1664-8 Ap 5 '53
Synthesis of the 3,9-diazabicyclo[3.3.1.]nonane ring system. R. A. Barnes and H. M. Fales. bibliog Am Chem Soc J 75:975-7 F 20 '53

AZAPORPHINES

Conjugated macrocycles; a new type of cross-conjugated macrocycle, related to the azaporphins. J. A. Elvidge and R. P. Linstead. Chem Soc J p5008-12 D '52

AZCARRAGA, Emilio

Launching big-scale television in set-poor Mexico. por Bsns W p 116-20 Ja 10 '53

AZEOTROPES

Azeotropes of bromine; azeotropes of bromine with 1,2,2-trichloro-1,1-difluoroethane and 1,1-dichloro-2,2-difluoroethane. W. M. Spicer and H. D. R. Page. Am Chem Soc J 75:3603-4 Jl 20 '53
Boiling point and composition of methanethiol-isobutane azeotrope. F. R. Brooks and A. C. Nixon. Am Chem Soc J 75:480 Ja 20 '53
Effect of temperature on azeotropy in 1,1-difluoroethane and dichlorodifluoromethane. W. A. Pennington. bibliog Ind & Eng Chem 44:2397-401 O '52
Separation of 1- and 2-methylnaphthalenes by azeotropic distillation. J. Feldman and M. Orchin. bibliog Ind & Eng Chem 44: 2909-14 D '52

AZIDES

Azidocarbonyl compounds; a new synthesis for certain substituted imidazoles from phenacyl azides. J. H. Boyer and D. Straw. bibliog Am Chem Soc J 74:4506-8 S 20 '52
Azidocarbonyl compounds; the preparation and pyrolysis of certain ortho-substituted phenacyl azides. J. H. Boyer and D. Straw. bibliog Am Chem Soc J 75:2683-4 Je 5 '53
Formation of azides in the reaction of hydrogen azide with diarylethylenes. S. N. Ege and K. W. Sherk. bibliog Am Chem Soc J 75:354-7 Ja 20 '53
Interaction of 1,3,4,6-tetraacetyl-β-D-glucosamine with acyl amino acid azides. E. A. Popenoe, D. G. Doherty and K. P. Link. bibliog Am Chem Soc J 75:3469-71 Jl 20 '53

AZINES

Chlorostannates of dimethyl ketazine and certain hydrazones. W. Pugh and A. M. Stephen. Chem Soc J p354-5 Ja '53
Effect of alkyl substitution on absorption spectra. H. C. Barany and M. Pianka. Chem Soc J p2217-24 Ag '53
Stereochemistry of azines; cinnamalazine and phenylpentadienalazine. J. Dale and L. Zechmeister. bibliog Am Chem Soc J 75: 2379-86 My 20 '53

AZLACTONES

Absorption spectra of azlactones. F. W. Schueler and S. C. Wang. bibliog Am Chem Soc J 72:2220-5 My '50; Correction. 74:5542 N 5 '52
Spectra of azlactones; azlactones derived from substituted benzaldehydes and hippuric and nitrohippuric acids. D. A. Bassi, V. Deulofeu and F. A. F. Ortega. bibliog Am Chem Soc J 75:171-8 Ja 5 '53

AZOBENZENE

Effects of substituents and solvents on the *cis→trans* change of azobenzene. R. J. W. Le Fèvre and J. Northcott. diag Chem Soc J p867-70 Mr '53
Electric moments of some derivatives of azobenzene. T. W. Cambell, W. A. McAllister and M. T. Rogers. bibliog Am Chem Soc J 75:864-5 F 20 '53
Polarographic study of azobenzene. C. R. Castor and J. H. Saylor. bibliog Am Chem Soc J 75:1427-9 Mr 20 '53
Synthesis and ultraviolet absorption spectra of polyazobenzenes. K. Ueno. Am Chem Soc J 74:4508-11 S 20 '52

AZO compounds

Anomaly among interactions involving certain azo dye anions and bovine serum albumin. R. K. Burkhard, B. E. Burgert and J. S. Levitt. bibliog Am Chem Soc J 75: 2977-80 Je 20 '53
Aromatic azo-compounds. G. M. Badger, R. G. Buttery and G. E. Lewis. Chem Soc J p2143-58 Jl '53
Azo-bis nitriles; the decomposition of azo compounds derived from cycloalkanones; an accurate measure of differences in ring strain. C. G. Overberger and others. bibliog Am Chem Soc J 75:2078-82 My 5 '53
Electronic structures and spectra of some molecules related to oxygen. L. E. Orgel. Chem Soc J p 1276-8 Ap '53
Geometrical isomerism of azo-compounds. N. Campbell, A. W. Henderson and D. Taylor. Chem Soc J p 1281-5 Ap '53
Macrozamin; azoxymethane and some simple analogues. B. W. Langley, B. Lythgoe and L. S. Rayner. Chem Soc J p4191-8 N '52
N=N stretching frequency; abstract. R. J. W. Le Fèvre and others. bibliog Chem & Ind p378 Ap 18 '53
o-Mercapto-azo-compounds; action of thiocyanic acid on diazotised *o*-nitroarylamines. A. Burawoy and C. Turner. Chem Soc J p959-62 Mr '53
Organotin compounds containing an azo linkage. H. Gilman and S. D. Rosenberg. bibliog Am Chem Soc J 74:5580-2 N 20 '52

AZO compounds—*Continued*
Relation between the absorption spectra and the chemical constitution of dyes; effect of solvent and of temperature on the *cis-trans* isomerization of azo dyes. W. R. Brode, J. H. Gould and G. M. Wyman. bibliog Am Chem Soc J 75:1856-9 Ap 20 '53
Relation between the absorption spectra and the chemical constitution of dyes; phototropism and *cis-trans* isomerism in aromatic azo compounds. W. R. Brode, J. H. Gould and G. M. Wyman. bibliog Am Chem Soc J 74:4641-6 S 20 '52
Silicon-containing azo dyes; dyeing properties and lightfastness. S. V. Sunthankar and H. Gilman. bibliog Textile Res J 23:53-8 Ja '53
Solubilization of 4-dimethylaminoazobenzene (butter yellow) in serum. C. Wunderly. bibliog il Science 117:248-9 Mr 6 '53
Stabilities of metal derivatives of *o*-substituted azo dyes. F. A. Snavely and W. C. Fernelius. bibliog Science 117:15-16 Ja 2 '53
Structures and properties of some metal derivatives of azo and azomethine dyes. J. C. Bailar, jr. and C. F. Callis. bibliog Am Chem Soc J 74:6018-21 D 5 '52
Studies in hydrogen-bond formation; detection of the interaction of phenols with amido- and azo-groups, etc., by dielectric-constant measurement. C. H. Giles, T. J. Rose and D. G. M. Vallance. diag Chem Soc J p3799-805 O '52
Studies of metallated dye complexes; copper(II) complexes with 2-carboxyphenyl-azo-β-naphthol and 2-carboxyphenyl-azo-β-naphthylamine. H. B. Jonassen and J. S. Wilson. bibliog Am Chem Soc J 75:4201-4 S 5 '53
See also
Diazo compounds
Diazotization

Analysis

Determination of coupled aromatic nuclei in an azo protein. C. E. Weill. bibliog Anal Chem 24:1617-18 O '52
Quantitative analysis of azo and other dyes and intermediates. F. M. Arshid and others. bibliog diag Soc Dyers & Col J 69:11-18 Ja '53

AZOETHANE
Photolysis of azoethane. J. L. Weininger and O. K. Rice. bibliog Am Chem Soc J 74:6216-19 D 20 '52

AZOLE. See Pyrrole

AZOMETHANE. See Methylenimine

AZOMETHINE. See Methylenimine

AZOXYBENZENE
Absorption spectrum of an equimolecular mixture of azoxybenzene and hydrazobenzene. R. J. W. Le Fèvre and J. Northcott. Chem Soc J p4082-3 O '52

AZOXY compounds
Aromatic azo-compounds; absorption spectra of azo- and azoxy-compounds. G. M. Badger and R. G. Buttery. Chem Soc J p2156-8 Jl '53

AZULENE
Azulenes; an attempted synthesis of 1-isopropyl-4,8-dimethylazulene; migration of an isopropyl group. W. Herz. bibliog Am Chem Soc J 75:73-7 Ja 5 '53
Azulenes; 4,5-substituted azulenes. W. Herz and J. L. Rogers. bibliog Am Chem Soc J 75:4498-501 S 20 '53
Polycyclic systems; a new route to azulenes. E. A. Braude and W. F. Forbes. Chem Soc J p2208-16 Ag '53
Two-step synthesis of azulene. W. V. Doering, J. R. Mayer and C. H. DePuy. bibliog Am Chem Soc J 75:2386 My 20 '53

B

B-I-F industries, inc. (formerly Builders iron foundry)
New corporate name for Builders iron foundry. Munic Util 91:13 Ag '53

BOD test. See Sewage—Testing

BABBITT, Minnesota
Taconite brings the modern mining town. il maps Eng N 149:34-6+ O 23 '52

BABBITT metal
Lead-base babbitts; tabulations; engineering file facts. Materials & Methods 36:145, 147 N '52

BABBITTING
Babbitted bearings; reasons for troubles, and their cures. diags Power Eng 56:72-3 N '52

BABCOCK and Wilcox company
Newcomers on the New York stock exchange. J. S. Williams. Mag of Wall St 91:648 Mr 7 '53

BABCOCK and Wilcox, limited
Statement by the chairman. W. L. Fraser. Economist 167:409 My 9 '53

BABY foods. See Infants' food

BACHE and company
Bache holds brokerage office show. il Comm & Fin Chr 177:1238 Mr 19 '53

BACILLUS coli. See Escherichia coli

BACILLUS megatherium
Bacillus megatherium for biosynthesis of cobalamin. J. A. Garibaldi and others. bibliog Ind & Eng Chem 45:838-46 Ap '53

BACILLUS polymyxa
Formation of large bodies in a member of the genus bacillus. M. Schaechter. il Science 116:637-8 D 5 '52

BACK
Back strains in brickmaking. F. S. Crawford and others. U S Bur Mines Information Circ 7655:1-14 '53
Pre-placement examination program for workers assigned to heavy jobs. W. F. Becker. Ind Med 22:8-10 Ja '53; Abstract. Nat Safety N 67:60 My '53

BACKMAN, Gus P.
Chamber of commerce secretary on the loose. pors Bsns W p76-8+, cover Mr 7 '53

BACKWARD regions
Behind the world's windows. A. G. Mezerik. il maps Dun's R 61:36-7+ F; 32-4+ Mr '53
Private Point four; R. G. Le Tourneau, inc. in Liberian-development venture. Mod Ind 24:86 N '52
Public relations for industry in underdeveloped countries. W. J. Butler. Harvard Bsns R 30:63-71 S '52
Self-help for developing nations. Economist 166:261-2 Ja 31 '53
Some human problems of industrial development. R. W. Cox. Int Labour R 66:246-67 S '52
World economic report; under-developed areas. Economist 167:165-6 Ap 18 '53

BACTERIA
Alternative reaction patterns in autosynthetic systems. C. N. Hinshelwood. Chem Soc J p 1304-10 Ap '53
Bacterial aspects of the origin of petroleum. R. W. Stone and C. E. Zobell. bibliog Ind & Eng Chem 44:2564-7 N '52
Bacterial cleanability of various types of eating surfaces. Glass Ind 34:377 Jl '53
Bacterial polysaccharides; abstract. M. Stacey. Chem & Ind p318 Ap 4 '53
Bugs may hike oil yield. A. H. Krell. Oil & Gas J 51:74 Ap 6 '53
Contractility of bacterial flagellae. G. H. Barlow and J. J. Blum. bibliog Science 116:572 N 21 '52
How micro-organisms can aid search for oil. W. Schwartz and A. Mueller. bibliog World Oil 136:95-6 Mr '53
Induced and other variations in bacterial cultures; the effect of ultra-violet irradiation on bact. coli with special reference to nutritional mutants. A. C. R. Dean and C. Hinshelwood. Chem Soc J p2817-31 Jl '52
Interpretation of the b.o.d. test in terms of endogenous respiration of bacteria. S. R. Hoover and others. bibliog Sewage & Ind Wastes 25:1163-73 O '53
Luminescence in cell-free extracts of luminous bacteria and its activation by DPN. B. L. Strehler. bibliog Am Chem Soc J 75:1264 Mr 5 '53
Microbiological synthesis of vitamin B_{12} by propionic acid bacteria. A. Leviton and R. E. Hargrove. bibliog Ind & Eng Chem 44:2651-5 N '52

BACTERIA—*Continued*
Microchemical methods for the characterisation of bacteria. S. T. Cowan. Chem & Ind p 125-6 F 7 '53
Protection of bacteria against radiation effects. H. A. Whitehead. bibliog Science 116:459-60 O 24 '52
See also
Acetobacter
Aerobacter
Air—Bacteriology
Bacteriology
Escherichia coli
Fermentation
Lactic acid bacteria
Sulfur bacteria
Viruses
Water—Bacteriology

Respiration

Rate of endogenous respiration as affected by the oxidation of exogenous substrates. H. J. Blumenthal and others. bibliog Science 116:475-7 O 31 '52

BACTERIA, Pathogenic
Public health and clinical laboratories in the diagnosis of enteric bacterial infections. E. J. Tiffany. bibliog Pub Health Rep 67:1069-75 N '52
See also
Salmonella

BACTERICIDES. See Disinfection and disinfectants

BACTERIOLOGICAL laboratories
Laboratory has share in therapy guidance. F. C. Fink. Pub Health Rep 68:90-1 Ja '53
New methods and approaches in laboratory techniques. Pub Health Rep 68:108-11 Ja '53

BACTERIOLOGICAL warfare. See Biological warfare

BACTERIOLOGY
See also
Air—Bacteriology
Antigens and antibodies
Bacteria
Disinfection and disinfectants
Fermentation
Filters and filtration (bacteriology)
Food—Bacteriology
Sewage—Bacteriology
Viruses
Water—Bacteriology

Culture mediums

Lauryl tryptose broth for coli determinations in chlorinated sewage. C. T. Mudgett. Sewage & Ind Wastes 25:557-9 My '53

Laboratory methods

Method of laboratory evaluation of chemicals as potential slimicides. S. I. Cohen and M. Kalm. bibliog Tappi 35:448-54 O '52
See also
Filters and filtration (bacteriology)

Study and teaching

History of bacteriology at M.I.T. M. P. Horwood. il Tech R 55:151-4+ Ja '53

Technique

Application of partition paper chromatography to microbiology. H. Proom and A. J. Woiwod. bibliog il diags Chem & Ind p311-15 Ap 4 '53
Tissue-to-metal adhesive useful in Geiger counting. H. B. Locksley and others. Science 116:572-3 N 21 '52

BACTERIOPHAGE
Absence of photoreactivation in T1 bacteriophage irradiated with ultraviolet in the dry state. R. F. Hill and H. H. Rossi. bibliog Science 116:424-5 O 17 '52
Direct effect of X-rays on bacterial viruses, modified by physical state, in relation to the target theory. C. S. Bachofer. bibliog Science 117:280-2 Mr 13 '53
Mechanism of lysis of bacteria by bacteriophage; abstract. J. Bronfenbrenner. Science 116:517 N 14 '52
Multiplication of bacterial viruses. G. S. Stent. il diags Sci Am 188:36-9 My '53
Relation of bacteriophage to the change of corynebacterium diphtheriae from avirulence to virulence. N. B. Groman. bibliog Science 117:297-9 Mr 20 '53

BAD debts. See Collecting of accounts

BAEYER-VILLIGER rearrangement. See Molecular rearrangements

BAG filling machines
Improving bagging machine accuracy. H. Chun Hsu. diags Chem Eng 59:153 N '52

BAGASSE
Bagasse offers the South a new industry and an answer to the newsprint problem. M. Smith. Manuf Rec 121:50+ D '52
Bagasse paper mill projected in West Indies. Ed & Pub 85:12 D 6 '52
Bagasse; possibilities of making a substitute newsprint from bagasse fiber. Tappi 35: sup92A+ N '52
Closer to commerce. Chem W 72:68+ F 28 '53
Customs officials rule on bagasse board. Paper Tr J 135:24 D 26 '52
Developments in straw and bagasse pulping; abstract. R. Duce and C. B. Tabb. Pulp & Pa of Can 54:90 Ja '53
Dominican Republic to build $2.5 million bagasse plant. Paper Tr J 135:11-12 D 12 '52
Investigations on lignin and lignification; structural studies on bagasse native lignin. G. de Stevens and F. F. Nord. bibliog Am Chem Soc J 75:305-9 Ja 20 '53
Paper can be made from bagasse; W. R. Grace & co. il Pulp & Pa of Can 53: 83-6 O '52
Paper pulp from bagasse; abstract. O. Perila. Paper Ind 35:360 Je '53
Place of agricultural residues in paper making today. C. B. Tabb. Chem & Ind p960-4 O 4 '52
Production of newsprint from sugar cane bagasse considered technically and economically feasible. R. G. Gibbs. Chem & Eng N 30:4924 N 24 '52
Pulps from straw and sugarcane bagasse for manufacture of newsprint. E. C. Lathrop. Tappi 36:sup 142A-4A Ja '53
Secretary of commerce answers Kefauver on bagasse newsprint. Paper Tr J 137:76 O 16 '53
Use of bagasse for newsprint feasible. Paper Ind 34:949-50 N '52
Utilization of sugar cane bagasse in the pulp and paper industry. J. E. Atchison. il Paper Tr J 135:24+ O 17 '52; Discussion (Mr Celler gives his opinion on bagasse). 135:12+ N 28 '52

BAGGAGE
See also
Motor bus lines—Baggage

BAGGAGE and express cars
Head-end units from old passenger cars; Great northern railway. il Ry Age 133: 66-7 N 10 '52; Same. Ry Mech & Elec Eng 126:66-7 D '52

BAGS
Jute sacks and bags. H. L. Parsons. bibliog diags Textile Inst J 44:P347-84; Discussion. P384-7 Ag '53
$250,000 for a sterilizer! Eastern states farmers exchange. il Food Eng 25:51+ Je '53
See also
Paper bags

BAGS, Paper. See Paper bags

BAGS, Plastic
Flip-over bag. il Mod Packaging 26:142-3+ Ap '53
Two-component mixer; elastic dental-impression materials. il Mod Packaging 26:129 Ap '53

BAGS, Rubber. See Rubber Bags

BAILEES' customers insurance. See Insurance, Bailees' customers

BAILEY bridges. See Bridges, Prefabricated

BAILMENT
Bailment lease upheld; U.S. Court of appeals, seventh district. F. C. Fiechter, jr. Burroughs Clearing House 37:65 Jl '53
Limitation of liability in baggage ticket where no receipt is issued. H. S. Daynard. East Underw 53:34 N 14 '52

BAIN, Edgar Collins, 1891-
Businessmen in the news. por Fortune 46: 47 D '52

BAINITE. See Steel—Metallography

BAIT advertising. See Advertising ethics

BAKELITE company
Bakelite sees big future and digs in. Bsns W p41-2+ My 9 '53

BAKER, Melvin Houston, 1886-
He's betting the boom will last. pors Bsns W p182+, cover N 8 '52
Portrait. Fortune 46:116 D '52

BAKER, Robert B. 1867-

Half-century club; careers epitomizing contributions to coal-mining progress. Coal Age 58:100 Ja '53

BAKER, Walter Ransom Gail, 1892-

Baker to receive RTMA medal of honor. Electronics 26:344+ Je '53

BAKERS and bakeries

Brown 'n' serve; oven speed-up boosts sales of rolls. Bsns W p58+ N 15 '52

Freezes to level off production; Wheatality baking corp. H. Tyor. il Food Eng 25:64-5 My '53

In-can baking perfected; Interstate bakeries corp. D. N. League. il Food Eng 25:86-7+ My '53

Less waste, more dough. Bsns W p42+ Ap 4 '53

Now it's frozen bread; a boon for the bakers. il Bsns W p44-6 Ap 11 '53

Pulling as a team; Thomas' coach-and-four provides unifying trademark in coordination and clean-up of line of baked goods. il Mod Packaging 26:136-7 S '52

See also

Doughnuts

Interstate bakeries corporation

National biscuit company

Advertising

General Baking leans on dailies to debut Starlet. R. B. McIntyre. il Ed & Pub 85: 22+ N 8 '52

Not Levy's fault that man doesn't live by bread alone. R. B. McIntyre. il Ed & Pub 85:16 S 27 '52

Electric equipment

See also

Electric ovens, baking

Employees

Union wages and hours; baking industry, July 1, 1952. J. F. Laciskey. U S Bur Labor Statistics Bul 1123:1-43 '53

Equipment

Bakes better products and saves fuel with new continuous-oven control; Schaible's bakery. R. N. Brey, jr. il diag Food Eng 25:62-3+ Jl '53

Bring a barrel of your material, we'll tell you if it's pumpable. D. P. Woodlee. il Sales Management 69:52+ D 1 '52

Continuous mixing. J. A. Abbott. il plan Food Eng 25:64-5+ Ag '53

Cures dough-dusting troubles. il diag Food Eng 24:75+ D '52

From bags to process by air. E. T. Slackford. il diag Food Eng 25:69+ Ap '53

From motion-plus, output-minus to motion-minus, output-plus; Virnelson's bakery. I. C. Miller. il plan diag Food Eng 25:64-6 Ja '53

Hearth baking goes modern; Henry S. Levy & son, inc. J. V. Ziemba. il Food Eng 25: 90-2+ Ja '53

Last word dozen-oven bakery; National biscuit co's new plant in Chicago. F. W. McCarthy. il Food Eng 25:57-62 Ag '53

Makes macaroons continuously; Schoenith, inc. E. D. White. il Food Eng 24:97+ D '52

Mechanical depositor has wide icing range. il Food Eng 25:111 My '53

Modern pump system eliminates needless work; Cushman bakery co. il Mill & Factory 53:133-4 Ag '53

New one added to old five zooms output a third; Burry biscuit corp. G. W. Burry and E. Wood. il diag Food Eng 25:48-50+ Je '53

Pneumatic system solves dough-dusting problem. Comp Air Mag 58:173 Je '53

Pumping licks more problems; bakers now use versatile mover for jam, jelly, frosting, and batters. il Food Eng 24:79+ N '52

Quadruples output of pie fillings; mixer-heat-exchanger assembly; Hanscom baking corp. R. Prince. il Food Eng 25:68 F '53

Radical method of preparing doughs shortens bread making; John C. Baker Do-Maker process. il Food Eng 25:60+ Je '53

BAKERS yeast. See Yeasts

BAKING

See also

Bakers and bakeries

Bread

Cake

Yeasts

BAKING ovens. See Electric ovens, Baking; Ovens, Baking

BALANCE of payments

Almighty dollar? U.S. is losing gold to the rest of the world. K. Bloch. Barron's 33:3 Mr 2 '53

Austrian balance of payments improves. For Comm W 49:2 My 25 '53

Balance of payment trends during the second quarter of 1952; with table. Survey of Cur Bsns 32:5-7 S '52

Balance of payments; charts depicting salient features of the White Paper. Economist 165:83-4 O 11 '52

Balance of payments in 1952; with tables. W. Lederer. Survey of Cur Bsns 33:7-12 Mr '53

Balance of payments trends during the third quarter of 1952; with tables. Survey of Cur Bsns 32:4-6+ D '52

Britain's colonial sterling balances. P. Einzig. Comm & Fin Chr 176:2339 D 18 '52

Britain's consumer spending and the trade balance. P. Einzig. Comm & Fin Chr 177: 1452 Ap 2 '53

Britain's external finances show improvement. For Comm W 49:3 My 25 '53

British balance of payments shows surplus for first half of 1952. For Comm W 48:3 N 3 '52

Canadian dollar. L. Rasminsky. Comm & Fin Chr 177:1217+ Mr 19 '53

Ceylon's deficit. Economist 167:765+ Je 13 '53

Debtor nations, too, have responsibilities. A. W. May. Comm & Fin Chr 177:2737 Je 25 '53

External surplus. Economist 167:103-6 Ap 11 '53

First-quarter gold, dollar assets rise. For Comm W 49:5 Je 29 '53

Foreign dollar position improved during first quarter. Survey of Cur Bsns 33:4-8 Je '53

France's trade deficit. Economist 166:493-4 F 21 '53

German trade and payments easier; some import restrictions relaxed. For Comm W 50:4 Jl 27 '53

Gold and the gap; comment on Roy Harrod report to the International monetary fund. Economist 167:468 My 16 '53

Gold, dollar reserves abroad continue rise. For Comm W 49:4 Mr 30 '53

Gold out of season. Economist 167:680 Je 6 '53

Gold surplus. Economist 165:402+ N 8 '52

Golden tide. Economist 166:95-7 Ja 10 '53

Growth of foreign currency reserves. Nat City Bank p32-5 Mr '53

International flow of gold and dollars, 1952. Fed Res Bul 39:209-16 Mr '53

International transactions of the United States; Nov.-Dec. 1951-Jan.-Nov. 1952. Survey of Cur Bsns 33:S20 Ja '53 [cont monthly]

Irish trade deficit is being reduced. For Comm W 48:5 N 10 '52

Japan's sterling shortage. Economist 167:388 My 9 '53

Living with the dollar; delicate crusade for an Atlantic payments union. Economist 165: 580-96 N 22 '52; Discussion. 165:678-9 D 6 '52

Monetary policy in the Dominions. Economist 167:868+ Je 20 '53

No Atlantic payments union likely. P. Einzig. Comm & Fin Chr 176:2244 D 11 '52

No dollar shortage abroad. C. T. Murchison. Comm & Fin Chr 178:215 Jl 16 '53

OEEC and the dollar gap. Economist 166:29-30 Ja 3 '53

Problems of trade equilibrium. Fed Res Bul 38:1089-97 O '52

Sterling area gold and dollar reserves rise to June level. For Comm W 48:6 O 20 '52

Sterling area's gold reserves going up. For Comm W 49:5-6 Mr 30; 6 Je 1 '53

Sterling convertibility and recent U.S. gold outflow. P. Einzig. Comm & Fin Chr 177: 484 Ja 29 '53

Sterling surplus with dollar countries down. For Comm W 50:9 Jl 20 '53

BALANCE of payments—*Continued*

Trade, finance and balance of payments. D. F. Heatherington. Comm & Fin Chr 176:2035+ N 27 '52

Turn of the tide; flow of dollars abroad calls for new U.S. policies. Barron's 33:1 Jl 6 '53

Unexpected surplus; Britain's balance of payments; with tables. Economist 165:113-14 O 11 '52

United States balance of payments, 1949-51, reviewed in new report. For Comm W 48:31 D 8 '52

What can be done about the payments problem. I. Rooth. Comm & Fin Chr 176:2022-3 N 27 '52

BALANCE sheets

Balance sheet treatment of note payable in common stock of debtor corporation. J Account 94:606-7 N '52

Public utility's view of why the net-plant balance-sheet concept is wrong. H. C. Hasbrouck. J Account 94:460-7 O '52

See also

Fund statements

BALANCES

Balance. il R Sci Instr 23:510 S '52

Cylinder-symmetrical film balance with expanded possibilities of use. H. J. Rodewald. diag R Sci Instr 24:229 Mr '53

Effective radius of curvature of knife edges. G. F. Hodsman and F. A. Chappell. bibliog diag J Sci Instr 29:330-2 O '52

Historical development of the chemical balance. G. F. Hodsman. Chem Age (Lond) 68:450-3 Mr 21 '53

Improvements in design and construction of quartz helix balances. F. M. Ernsberger and C. M. Drew. bibliog il R Sci Instr 24:117-21 F '53

Magnetic weighing and gas-density balances. J. H. Simons and others. diags R Sci Instr 24:36-42 Ja '53

Modern wind tunnel balance. L. E. Leavy and C. G. Saunders. il plan diags Roy Aeronautical Soc J 57:491-502 Ag '53

New balance automatically records fast changes in weight. Iron Age 171:141-2 My 28 '53; Same abr. Steel 132:196+ My 25 '53

New Sartorius balances. Chem Age (Lond) 68:213-14 Ja 31 '53

Silica micro-balance; its construction and manipulation, and the theory of its action. R. S. Bradley. bibliog diags J Sci Instr 30:84-9 Mr '53

BALANCING machines

Automatically balanced; machine weighs pistons and automatically removes the right amount. Steel 131:123+ S 15 '52; Mach 59:240-1 O '52; Automotive Ind 107:79 N 1 '52; Machine Design 24:130-2 N '52

Balancing machine; Vibratron. il Tool Eng 29:95 N '52

Crankshaft balancing; Daimler-Benz. il Automobile Eng 42:532 D '52

Precision production balancing. G. C. Lawrie. il Tool Eng 30:48-52 Ap '53; Same abr. Machine Design 25:330+ Je '53

Trebel dynamic balancing machine. il Mach 59:213 Mr '53; Am Mach 97:216 Mr 16 '53

Wheel balancing does the trick. A. Bolan. il Bus Transportation 32:44-5 Ja '53

BALANCING of machinery

Automation applied to engine balancing equipment; DeSoto engine plant. J. Geschelin. il Automotive Ind 109:70-2+ O 1 '53

Balancing turbine-generator rotors. L. P. Grobel. il diags Gen Elec R 56:22-5 Jl '53

Balancing; what it is and how to do it. J. W. St Andre. il diags Factory Management 111:116-19 Je '53

Handling automotive engines automatically during balancing. A. B. Pedersen. il Mach 59:188-92 Je '53

How axial thrust is balanced in your centrifugal boiler feed pump. I. J. Karassik. diags Power Eng 56:94-6+ N '52

Precision balancing of rotating machine parts. S. B. Guins and J. Burmist. il diags Machine Design 24:121-6 D '52

Static balancing; data sheet. S. R. Uniechowski. diags Machine Design 25:229-32 O '53

Unique balancing for 60-deg. V-six engine. diags Automotive Ind 109:45+ Jl 15 '53

BALATA

Bibliography

Rubber division library bibliography; behavior of gutta-percha and balata toward oxygen and oxidation. 3 l Rubber division lib, Univ. of Akron, Akron 4, Ohio '52

Rubber division library bibliography; compounding of gutta-percha and balata resins. 1 l Rubber division lib, Univ. of Akron, Akron 4, Ohio '52

BALDNESS

Chemical alopecia. G. E. Morris. il A M A Archives Ind Hygiene & Occup Med 6:530-1 D '52

BALING (textiles)

See also

Wool baling

BALING presses

Fire protection system guards scrap baler. M. Lissner. il Iron Age 171:126-7 Ap 16 '53

Heenan and Froude baling presses for scrap metal. il Engineering 175:729 Je 5 '53

BALKAN states

Balkan alliance. Economist 167:910-11 Je 27 '53

Towards a Balkan entente. map Economist 166:351 F 7 '53

BALL bearings. See Bearings, Ball

BALL clay. See Clay

BALL mills

Automatic casting of steel grinding balls; National malleable and steel castings co. flow diag il Elec West 109:103 O '52

Ball milling of glazes; various grinding media. H. E. Davis. Am Cer Soc Bul 32:209-11 Je 15 '53

Ball milling of pure ceramic bodies. H. Z. Schofield. il Am Cer Soc Bul 32:49-50; Discussion. O. J. Whittemore, jr. and E. Ryshkewitch. 50-1 F 15 '53

Cuts milling costs 22 per cent by using heavy balls; Kaiser metal products, inc. W. Clay. Cer Ind 60:70 My '53

Effects of ball mill vibration. il Chem Age (Lond) 68:417-19 Mr 21 '53

Grinding ball classification; its effect on capacity and ball migration. C. M. Carman. diags Rock Prod 56:106-9+ Je '53

High-density Burundum speeds up coal crushing for laboratory analyses. W. W. Perkins. il Power 97:80-1 My '53

How to get best results from high density grinding balls. B. D. Landes. Cer Ind 60:53-4 F '53

New grinding brick wears less. il Chem Eng 59:180 O '52

Relation of ball load to clinker charge in grinding mills. R. A. Loveland. Rock Prod 55:96-9 O '52

Remarkable case of the Copperhill ball mill. Eng & Min J 154:86-9 Je '53; Discussion. diags 154:80-3+ S '53

BALL point pens. See Fountain pens

BALLAST

Ballast cleaning on British railways. il Engineer 196:280 Ag 28 '53

Crushing plant prepares Garfield slag for railroad ballast. il Min Eng 5:661 Jl '53

Smelter slag processed for ballast; Utah sand and gravel co. W. B. Lenhart. flow sheet il Rock Prod 56:70-3 F '53

BALLAST cars

Ballast cars. il Ry Age 134:99 Mr 9 '53

BALLISTIC photography. See Photography of projectiles

BALLISTICS

Microwave interferometer; employs Doppler radar technique to provide continuous record for ballistic measurements. H. C. Hanks, jr. il diags Tele-Tech 12:86-8+ F '53

Time-resolved spectroscopy of ultraspeed pellet luminosity. W. A. Allen and E. B. Mayfield. il J Ap Phys 24:131-3 F '53

See also

Guns

BALLITO hosiery mills

Statement by the chairman. C. F. Entwistle. Economist 167:190 Ap 18 '53

BALLOONS

History

Hodgson-Cuthbert aeronautical collection. J. L. Pritchard. il Roy Aeronautical Soc J 57:351-74 Je '53

BALLOONS, Meteorological
Cold brittleness of polyethylene. M. M. Renfrew and A. J. Freeman. il Mod Packaging 26:121-3+ Ag '53
Team probes radiation barrier. il Aviation W 57:28+ D 1 '52
BALLS, Steel
Carbide tool life increased by adding steel ball. W. L. Kennicott. diags Am Mach 97:156 Jl 6 '53
1,900-ton tower moves on steel balls. il plan Constr Methods 35:78+ F '53; Munic Util 91:23+ Mr '53
Rain of balls cleans economizer. diag Mill & Factory 51:125 N '52
BALSAM fir
How tree seed is procured. R. S. Carman. Pulp & Pa of Can 54:100-2+ Ja '53
BALTIC sea
Tug of war in the Baltic. W. H. Hessler. il map U S Naval Inst Proc 78:1300-9 D '52
BALTIMORE
Baltimore beltway plans revealed. Eng N 149:47 D 25 '52
Baltimore plans harbor-side heliport. il Eng N 150:51 Ja 22 '53
See also
Housing—Baltimore
Wages—Baltimore

Industries

Can Baltimore hold its top spot? map Bsns W p 150+ Mr 28 '53

Streets

Baltimore to try new traffic systems. il Eng N 150:45-7 Je 11 '53
BALTIMORE and Ohio railroad
Howard E. Simpson, salesman, heads the B&O; Roy B. White, board chairman. Ry Age 135:97-9 S 7 '53
Railroad securities. Comm & Fin Chr 176:2145; 178:366 D 4 '52, Jl 30 '53
Security I like best. W. G. Kahlent. Comm & Fin Chr 177:1630 Ap 16 '53
Security I like best. W. H. Oppenheimer. Comm & Fin Chr 177:1346-7 Mr 26 '53
BALTIMORE and Ohio transportation museum
B&O dedicates museum. il Ry Age 135:14-15 Jl 13 '53
BAMBOO
Studies on the penetration of cooking liquors into bamboo chips. K. Singh. bibliog il diags J Ap Chem 2:669-81 D '52
BAMBRICK, James J. jr.
Labor wise man. W. E. Shurtleff. Personnel J 31:145-9 S '52
BANANAS
Banana stumps found suitable paper base by Indian government's Handmade paper research center. For Comm W 48:15 N 10 '52
Better handling, better fruit; United fruit co.'s mechanical banana-unloading terminal. J. V. Ziemba. il Food Eng 25:90-1 Ag '53
Free banana. Economist 166:49 Ja 3 '53
Top banana. Fortune 47:166 My '53
United Fruit opens new banana wharf. Eng N 150:55 Ja 15 '53

Advertising

Now Chiquita Banana goes to school. C. W. Moore. il Sales Management 69:88+ D 15 '52
BANBURY mixers
Use of the Banbury to modify properties of synthetic elastomers. M. H. Reich and W. K. Taft. bibliog Rubber Age 72:619-24 F '53
BANCROFT, Wilder Dwight, 1867-1953
Portrait. J Phys Chem 57:front My '53
Sketch. A. Findlay. por(pl) Chem Soc J p2506-14 Ag '53
BAND spectra. See Spectrum—Band spectra
BANDAGES and bandaging
Spray-on surgical bandages. Comp Air Mag 58:229 Ag '53
BANK accounting
Accounting for amortization of bond premiums. F. W. Manke. Banking 45:60-1 F '53
Plan for handling Christmas club accounts. V. C. Bartels. il Burroughs Clearing House 37:32-3+ N '52
Ratios of operating expenses to deposits; Mellon national bank and trust co. F. G. DeLong. Banking 45:103 D '52
Simplicity in general ledger accounting. E. J. Hinkle. Banking 45:100+ S '52
Two-way loan payment record; Merchandise national bank of Chicago. E. H. Smith. il Bankers Mo 70:26-7 Jl '53
See also
Bank auditing
BANK advertising
Ad changes do big job for savings institution. M. C. Wallis. Ed & Pub 85:24 D 13 '52
Advertising ideas. il Burroughs Clearing House 37:25-7 My '53
Aids to money management. il Burroughs Clearing House 37:15-16 Je '53
Another bank takes ice out of advertising copy. Sales Management 70:128 F 15 '53
Bank ads that are read; Goodhue County national bank. H. Severson. Banking 45:127-8 F '53
Banking's forum in print 1953; citations for outstanding use of advertising methods during the past year. il Banking 45:35-49 My '53
Banks' advertising expenditures will hit new high in current year. Banking 45:68-9 F '53
Commercial bank accents future in drive for business; National city bank of New York. il Ind Marketing 37:65 D '52
Faith in advertising pays, banker proves. L. E. Townsend. Ed & Pub 85:18+ O 18 '52
Getting results from country bank advertising. J. W. Irwin. il Burroughs Clearing House 37:36-7+ Ap '53
Graduate school of banking students judge bank advertising. il Banking 46:44-6 Jl '53
Letters build bank business. J. B. Mack, jr. Banking 45:60-1 S '52
Newspapers called best ad medium for banks. Ed & Pub 85:22 N 1 '52
People still don't know about banks; survey results, New York area. P. W. Burton. Banking 45:72 Ap '53
Point of purchase merchandising; selling bank services. L. F. Gordon. il Banking 45:26-7+ N '52
Public relations opportunities and tools; advertising. Banking 45:40-2 Mr '53
Suggested metered test for display advertising. C. A. Hemminger. Bankers Mo 70:31+ Ap '53
Thought-nudgers in bank ads; savings ads. P. Lockwood. Bankers Mo 70:38-9 Je '53
True or false? quiz game about bank advertising. C. A. Hemminger. Bankers Mo 70:14+ F '53
See also
Trust companies—Advertising
BANK auditing
Audit control of transit; Transit division of the Guaranty trust company of New York. Banking 46:55+ Jl '53
Audit of safekeeping. N. T. Shepherd. Banking 45:58 Ja '53
Auditing instalment loans. N. T. Shepherd. Banking 45:53 O; 47+ N '52
Auditing procedures for directors. R. G. Rankin. Banking 45:35-7 Je '53
Audits and controls. R. C. Masters. Banking 45:118+ Mr '53
Clean line of responsibility is fundamental for good internal control systems for small banks. R. W. Fischer. J Account 95:454-7 Ap '53
Keeping abreast of bank audit and operations. H. J. Boone. il Burroughs Clearing House 37:36-8+ D '52
Method for auditing deposits. G. G. Robbins. Banking 45:17-18 Ja '53
NABAC offers anti-fraud kit to all banks. il Bankers Mo 70:36+ F '53
New help in safeguarding bank assets; review of booklet written for the New York state bankers association. E. H. Watson. il Burroughs Clearing House 37:36-7+ Mr '53
Prenumbered tickets for use when receiving securities in corporate trust department. G. P. Jochum. Banking 46:88 Jl '53
Smallness does not guarantee fidelity; audit control is a life-saver. H. G. Fox. il Bankers Mo 69:52-3+ S '52
Some examples of bank embezzlement resulting from poorly-organized internal control and recommendations for improving the system. L. A. Pratt. J Account 95:457-9 Ap '53

BANK auditing—*Continued*

What audit program best controls bank's secured and unsecured loans? abstract. D. M. Dickerson. J Account 94:482-4 O '52

Study and teaching

School for bank auditors, comptrollers announced; NABAC school for bank auditors and comptrollers, University of Wisconsin. Burroughs Clearing House 37:38 D '52

BANK auditors and comptrollers, National association of. See National association of bank auditors and comptrollers

BANK buildings

Better bank quarters; suggestions based on the author's 40 years of experience in building or modernizing 3,000 financial institutions. J. B. Gander. il plans diags Burroughs Clearing House 37:29-33+ Ja '53

Building parade continues. il Burroughs Clearing House 37:22+ F '53

Building scrapbook; illustrations. Banking 45:114-15 Ja '53

Drive-in facility is feature of small neighborhood bank in Osceola, Ind. il plan diag Am Bld 74:154-5 S '52

Facades of brick. il Burroughs Clearing House 37:21-3 My '53

How to acquire successful new banking quarters. J. B. Gander. il Burroughs Clearing House 37:50-9 F '53

Ideas from new banking quarters. il Burroughs Clearing House 37:21-4 Ja '53

Ideas in branch design; Bank of Toronto. J. Montagnes. il Burroughs Clearing House 37:59-60 Jl '53

Latest in lobbies. il Burroughs Clearing House 37:25-6 Je '53

Metal maintenance. Banking 45:104 Ja '53

Modern bank counters. il Burroughs Clearing House 37:17-20 Jl '53

Modernized operations; today's bank; convenient, attractive. F. Steele. il Banking 45:39-41+ S '52

New branches of the First national bank of San Jose. il Burroughs Clearing House 37:26 N '52

Outstanding features; Oakland, California, quarters of the Crocker first national bank of San Francisco. il Burroughs Clearing House 37:20 N '52

Planning a bank in a shopping center; Utica Square national bank, Tulsa. W. H. Dodson, jr. il Burroughs Clearing House 37:34-5+ Je '53

Psychology in the bank lobby decoration. F. B. Allen, jr. Banking 45:116+ N '52

Re-styling bank lobbies. il Burroughs Clearing House 37:20-1 Ap '53

Striking new quarters; Detroit, Michigan branch of the Federal reserve bank of Chicago. il Burroughs Clearing House 37:26-7 Ap '53

Theater converted into a bank; Park Avenue branch, National city bank of New York. il Bsns W p67 Je 27 '53

Typical new bank lobbies. il Burroughs Clearing House 37:22-3 Mr '53

Unit drive-in; Hudson trust co., Jersey City. il Burroughs Clearing House 37:12+ F '53

Who's behind the new look in today's banks? E. Klein. il Sales Management 70:48-50 Ja 15 '53

Fires and fire protection

How a small bank met a big emergency; First national bank of Geneva, Ill. il Banking 45:16-17 Ap '53

Lighting

Banks light up. W. C. Hoch, jr. and G. T. Anderson, jr. il Banking 45:52-3 N '52

Branch banks bank on good lighting; illustrations with text. Illum Eng 48:240-1 My '53

Coordination of lighting with architectural design; Lancaster (New York) branch of Manufacturers and traders trust co. of Buffalo. N. Jacobus. il Illum Eng 47:539 O '52

Eight-point program in bank lighting. C. H. Johnson. il Illum Eng 47:586-7 N '52

Filling a high ceiling area with light. D. A. Naftzger. il Elec World 139:138+ Mr 9 '53

High-ceiling fluorescent fixture relights banking area; Howard saving institution, Newark, N.J. il diag Elec World 138:132 D 1 '52

Installation at Markland Avenue branch, Union bank and trust company, Kokomo, Ind.; data sheet. il diag Illum Eng 48:277 My '53

Modern lighting for Renaissance architecture; Manufacturers trust co. J. F. Gunther and S. D. Snook. il Illum Eng 48:513-14 O '53

Location

Successful shopping center banks. E. R. Lucas. il Banking 45:162-3 Mr '53

BANK checks. See Checks

BANK clearings

Course of bank clearings. Published in weekly Monday numbers of Commercial and financial chronicle

BANK comptrollers

School for bank auditors, comptrollers announced; NABAC school for bank auditors and comptrollers, University of Wisconsin. Burroughs Clearing House 37:38 D '52

BANK consolidations

Merger; rights of dissenting shareholders; Maryland's Supreme court decision. Banking 46:72+ Jl '53

Still growing; Bankers Trust arranges to absorb Bayside national bank. Bsns W p56 D 27 '52

BANK credit. See Credit, Bank

BANK defalcations. See Embezzlement

BANK deposits

Deposit line-up; with table. Burroughs Clearing House 37:4 Mr '53

Insured banks' deposits at new high. Banking 45:131+ My '53

Method for auditing deposits. G. G. Robbins. Banking 45:17-18 Ja '53

Ownership of demand deposits, as of Jan. 31, 1953. C. H. Cagle. Fed Res Bul 39:469-73 My '53

See also

Savings deposits

Interest

Interest on deposits by Federal Reserve member banks; time certificate with alternate maturities. Fed Res Bul 39:721-2 Jl '53

See also

Savings deposits—
  Interest

Statistics

Fall in bank deposits. Economist 166:385 F 7 '53

BANK directors

Only informed directors can direct! D. A. Fuller. Bankers Mo 70:24+ Ap '53

Responsibilities of bankers. J. L. Robertson. Comm & Fin Chr 177:1738+ Ap 23 '53

Today's directors keep informed. Banking 45:35-50 Je '53

See also

Federal reserve
  banks—Directors

Bibliography

Director's bibliography; prepared by the Library of the American bankers association. Banking 45:49-50 Je '53

BANK employees

Bank personnel; the job is to sell banking as a career. J. S. Brown. Banking 45:44-5+ S '52

Bank program improves employee relations at Manufacturers trust co., New York city. Trusts & Estates 91:646-7 S '52

Bank salaries and wages; discontinued services, rules changes, regulations checklist. Banking 45:141 O '52

Bank's toastmasters club. R. Maclean. il (p97) Banking 45:59 S '52

Developing a program for counseling bank women. M. DeMartini. il Burroughs Clearing House 37:32-3+ Mr '53

Do you know your Joes and Marys? V. L. Sailor. Bankers Mo 70:7-8+ Ja '53

Exit interviews conserve manpower; Manufacturers trust co., New York. A. H. Planteroth. il Bankers Mo 70:5-7+ Jl '53

BANK employees—*Continued*
Good place to work; pictures showing what banks are doing by way of improving employee facilities. il Burroughs Clearing House 37:15-16 Ja '53
Invitation to think! suggestion system; Second national bank, Houston, Tex. W. L. Rapp. il Bankers Mo 70:22+ F '53
Later orientation prevents mental indigestion; Citizens and southern national bank. B. W. Cardwell. Personnel J 31:364-6 Mr '53
New step in staff relations. W. G. Rabe. il Burroughs Clearing House 37:29-31+, cover N '52
Number of women in banks increasing, survey reveals. Bankers Mo 69:55-6 O '52
Pay isn't everything! C. H. Broaded. Bankers Mo 70:40+ F '53
Plan for reducing bookkeeping turnover. F. L. Beach. il Burroughs Clearing House 36:40-2+ S '52
Profit-sharing plans. Burroughs Clearing House 37:11 F '53
School-work program helps banks to fill jobs. Banking 45:100+ Ja '53
Solving a space problem in staff facilities; Crocker first national bank, San Francisco. E. Burke. il Burroughs Clearing House 37: 36-7 My '53
Staff morale survey; Fidelity union trust co. Burroughs Clearing House 37:24-5 Je '53
Wage and salary regulations affecting random rate banks. W. Powers. Banking 45: 52-3+ D '52
Wage-hour violations costly for firms in the banking industry. W. R. McComb. Bankers Mo 70:51 Ap '53
See also
Banks and banking
—Tellers

Training

Benefits from a bank's own slide-film program; Citizens state bank, Sheboygan Wis.; staff training and public relations. H. W. Sichter. il Burroughs Clearing House 37: 30-1+ Jl '53
Bookkeepers and tellers in twenty days; job training at American trust co. L. L. Bush. il Bankers Mo 70:20-2+ My '53
Full keyboard machines mastered in ten hours. D. W. Hogan, jr. il Bankers Mo 69:66+ S '52
Headstart in business; part-time project inaugurated by Hanover bank. il Bankers Mo 70:32 Mr '53
Modern techniques in employee selection and training. K. W. McLaren. il Burroughs Clearing House 37:34-5+ D '52
New aids for bank beginners; two short A.I.B. courses. L. Gibson. Burroughs Clearing House 36:43+ S '52
School for indoctrinating new personnel. Banking 45:144 Mr '53
Tailor-made course in management development; Hanover bank of New York university. D. R. Hassell. Burroughs Clearing House 37:25 Jl '53
Wilkes-Barre orientation course proves successful. Banking 45:123 O '52

BANK equipment and supplies
Bankavision. G. A. Mooney. il Banking 45: 34+ My '53
How electronic machines speed bank paperwork. W. Norris. il Am Bsns 23:20-1+ F '53
How many copies? new duplicator eliminates work, error. F. L. Gibson. il Trusts & Estates 91:954 D '52
Put a machine on that general ledger! D. W. Hogan, jr. il Bankers Mo 70:32-4 My '53
Systems and mechanization; factors in determining application and value. L. S. Severance. Trusts & Estates 91:658-60 S '52
Use of this new RayTray makes lap posting easier. il Bankers Mo 69:44 O '52

BANK examination
Trust administration from an examiner's viewpoint. R. C. Masters. Trusts & Estates 92:170-3 Mr '53

BANK exhibits. See Banks and banking—Exhibits

BANK for international settlements
Counsel from Basle; annual report. Economist 167:834 Je 20 '53

BANK holidays
Bank holidays by states, January-June, 1953. Bankers Mo 70:38 Ja '53
Bank holidays by states, July-December, 1953. Bankers Mo 70:36 Je '53

BANK inspection. See Bank examination

BANK libraries
Library services for the asking; Continental Illinois national bank and trust company of Chicago. G. Jones. il Bankers Mo 69: 30-1 O '52

BANK loans. See Loans, Bank

BANK of America
Security I like best. H. T. Birr, jr. Comm & Fin Chr 177:1730 Ap 23 '53
Who runs Bank of America; managing committee. E. V. Burke. Burroughs Clearing House 37:27-9+ Jl '53

BANK of Arizona
America's oldest banks; Bank of Arizona, Prescott. il Trusts & Estates 92:62 Ja '53

BANK of London and South America, limited
Statement by the chairman. F. M. G. Glyn. Economist 166:673 Mr 7 '53

BANK officials
Developing bank executives; County trust company, White Plains. J. E. Hughes. Banking 45:60-1+ Ap '53
Executive training program in speed-reading; Adult reading center, Western reserve university. J. O. Jacobson. il Burroughs Clearing House 37:29 Je '53

BANK protection. See Rivers—Bank protection

BANK research
See also
Banks and banking
—Research departments

BANK reserves
Backing away from tight money. Bsns W p34 Je 27 '53
Higher reserve requirements for New York city and Chicago banks held discriminatory. J. S. Baker. Comm & Fin Chr 176:2128 D 4 '52
More money; lower reserve requirements. Barron's 33:1 Je 29 '53
Proposed changes in bank reserve requirements. C. R. Whittlesey. Comm & Fin Chr 177:194 Ja 15 '53

BANK-SHARE owners advisory league
Bank share-owners league. Burroughs Clearing House 37:16+ Mr '53
May get bank cover from London Lloyd's; Lewis issues sharp retort on plan of new Bank-share owners league. M. Lewis. East Underw 54:34 F 6 '53; Same abr. Weekly Underw 168:398+ F 7 '53; Abstract. Nat Underw 57:29, 36 F 5 '53
Scarborough plan sponsor goes after Martin Lewis. J. R. Humphreys. Nat Underw 57:1+ F 19 '53; Excerpt. Weekly Underw 168:593 F 28 '53

BANK stocks. See Banks and banking—Stock

BANK tellers. See Banks and banking—Tellers

BANK women, Association of. See Association of bank women

BANKERS
See also
Bank officials
Burgess, W. Randolph

BANKERS' associations
Public relations activities of state associations. Banking 45:37-41 Ap '53
See also
American bankers association
Investment bankers association of America

BANKERS' blanket bond
ABA reports on bank defalcation uptrend; Surety association commended for broadening of coverage. East Underw 53:36-7 N 7 '52
Blanket bond development. J. B. Dunlaevy. Weekly Underw 168:1166+ Ap 25 '53
Notice within a reasonable time construed in bankers' blanket bond case. Weekly Underw 168:493 F 14 '53

BANKERS trust company of New York
Marks semi-centennial. Trusts & Estates 92: 276-7 Ap '53

BANKERS' wives
What about the banker's wife? Bankers Mo 70:16+ Ap '53

BANKI turbine. See Turbines

BANKING hours. See Banks and banking—Hours of business

BANKING law

Bank law news. Banking 45:76+ Ja '53 [cont monthly]

Court decisions. F. C. Fiechter, jr. Published in monthly numbers of Burroughs clearing house

Review of 1952 state banking legislation. J. R. Vincens. Banking 45:82-4 D '52; 84-7+ Ja '53

What's the law? Bankers Mo 70:26+ Ja '53 [cont monthly]

See also

Banks and banking—Holding companies

BANKRUPTCY

Improved administration of Bankruptcy act expected out of new amendments. B. Weintraub and H. Levin. Credit & Fin Management 54:31-3 N '52

See also

Business failures

BANKS, Coin. See Coin banks

BANKS, Federal reserve. See Federal reserve banks

BANKS and banking

America's oldest banks. il Trusts & Estates 91:867; 92:62 N '52, Ja '53

Banking in the transition period. M. Nadler. Comm & Fin Chr 177:2066+ My 14 '53

Banking outlook reappraised; prospective shift in the business and banking scene. R. I. Robinson. Burroughs Clearing House 37:29-31+ D '52

Commercial bank's answer to the savings rate problem; 2½ per cent thrift certificate. T. A. Glenn, jr. il Burroughs Clearing House 37:34-5+ Mr '53

Financial leadership. W. H. Brenton. Comm & Fin Chr 176:2225+ D 11 '52

Formulating sound policy. J. M. Naughton. il Burroughs Clearing House 37:29-31+ Mr '53

How banking is affected by vicissitudes of railroads. D. C. Bevan. Comm & Fin Chr 176:2024+ N 27 '52

How banks solve parking problems for customers. il Am Bsns 23:20-1 O '53

How census trends affect banking; symposium. maps Banking 45:29-43 N '52

Management training; the key to unit bank survival. J. H. Donoghue. Bankers Mo 69:14+ N '52

Methods and ideas. Banking 45:57-8+ Ja '53 [cont monthly]

Responsibilities of bankers. J. L. Robertson. Comm & Fin Chr 177:1738+ Ap 23 '53

We must accept the national debt as a permanent fixture; role of banks. W. Patman. Comm & Fin Chr 176:1527+ O 23 '52

What Nation's bankers are thinking about; American bankers association 78th annual convention, Atlantic City; highlights from addresses. Credit & Fin Management 55:20-1 Ja '53

Whither business and banking. C. A. Sienkiewicz. Comm & Fin Chr 176:1732+ N 6 '52

Who runs Bank of America; managing committee. E. V. Burke. Burroughs Clearing House 37:27-9+ Jl '53

Your letters may cost more than you think. E. A. Buckley. Bankers Mo 69:30+ D '52

See also

Agricultural credit
Bank accounting
Bank advertising
Bank buildings
Bank deposits
Banking law
Checks
Christmas clubs
Credit
Federal reserve banks
Foreign exchange
Interest
Investment banking
Investment trusts
Loans, Bank
Reconstruction finance corporation
Safe deposits
Savings banks
Savings deposits
Trust companies

also American bankers association; Investment bankers association of America

Agricultural machinery purchase financing

Banks are leaders in farm equipment financing. J. Montagnes. il Burroughs Clearing House 37:65 Mr '53

Automobile purchase financing

No slip-ups in this insurance program; master policy for auto loans. C. R. Waldron. Bankers Mo 69:62-4+ S '52

Yegen auto loan plan. Burroughs Clearing House 37:4+ D '52

Bibliography

Special libraries association's 1952 best book list for small banks. Bankers Mo 70:29 Ja '53

Branch banking

Successful shopping center banks. E. R. Lucas. il Banking 45:162-3 Mr '53

Cash letter delivery service

Motorizing the delivery of cash letters. il Burroughs Clearing House 36:36-7+ S '52

Central banks

Central banks; assets and liabilities. Fed Res Bul 39:76-80 Ja '53 [cont monthly]

Government and central bank; the British experience. P. Einzig. Banking 45:64+ D '52

Recent central banking developments in Southeast Asia. Fed Res Bul 38:1276-84 D '52

Checking accounts

Aids to money management. il Burroughs Clearing House 37:15-16 Je '53

Collection charges

Nonpar banking. Bsns W p62+ F 28 '53

Par clearance; court affirms right of North Dakota banks to charge exchange on checks presented other than over-the-counter. J. R. Vincens. Banking 46:74-5 Jl '53

Correspondent banks

How a big bank helps small banks with farm machinery loans. A. B. Rose. Banking 45:78-9 My '53

Independent correspondent banking system should be preserved. O. W. Adams. Comm & Fin Chr 176:2230 D 11 '52

Country banks

A.B.A. regional Country bank operations workshop, Louisville, March 20. Banking 45:68+ Ap '53; Burroughs Clearing House 37:13-14 Ap '53

Bank-farm trend. Burroughs Clearing House 37:18-19 N '52

Building goodwill through community service; First national bank of Winona, Minn. H. Severson. Banking 46:62+ Jl '53

Case study of a revitalized country bank; First national bank of Vandalia. H. E. Rogier. il Burroughs Clearing House 37:36-8+ N '52

Community service; big job of the small-town banker; Hardwick trust co., Hardwick, Vt. G. M. Ladd. il Burroughs Clearing House 37:34-6+ Jl '53

Country banker. Banking 45:68+ Ja '53 [cont monthly]

Fieldman's star rises; building a program around an agricultural representative. J. R. Bickers. il Bankers Mo 69:7-8+ N '52

Getting results from country bank advertising. J. W. Irwin. il Burroughs Clearing House 37:36-7+ Ap '53

Guide to a farm program in easy-to-read outline. T. H. LeCroy. Banking 45:57-8 N '52

How sound is our farm credit? E. J. Dignan. Comm & Fin Chr 177:1744+ Ap 23 '53; Excerpts. Banking 45:77 My '53

Measuring the profitability of savings deposits in country banks; with table of savings departments of commercial banks with total assets under $7,500,000 for 1951. L. M. Schwartz. Burroughs Clearing House 37:32-3+ D '52

New York's Green Acres program; role of committee on agriculture, New York state bankers association. R. E. Watts. il Bankers Mo 70:14-15+ Je '53

Planning the work of a farm representative. J. I. Smith. il Burroughs Clearing House 37:38-40+ My '53

Public relations opportunities and tools; agriculture. Banking 45:42-3 Mr '53

BANKS and banking—County banks—*Cont.*

Soil conservation service farm plans; asset to country bankers. J. C. Rogers. map Banking 45:66+ N '52

Sure guide to good banker-farmer relations. W. B. Garver. il Bankers Mo 70:20+ Jl '53

We chose 4-H! First national bank of Smithton, Smithton, Pa. W. C. Knox. il Bankers Mo 70:12+ Mr '53

What to pay savings depositors; with table of savings departments of commerial banks with under $7,500,000 for 1951. Banking 45:48-9+ N '52

See also
Agricultural credit

Credit departments

See also
Banks and banking—Credit information service

Records

Big savings on small loans; Marine trust co. of western New York, Buffalo. B. G. Vann. il Bankers Mo 69:38+ N '52

Credit information service

Code for credit inquiries; credit information ethics. A. C. Whipplinger. il Burroughs Clearing House 37:31-3+ My '53

Credit service

Bankers move in on charge credit. Bsns W p43 Ap 11 '53

Charge-it plan variations. il Burroughs Clearing House 37:13-15 Je '53

Group developments in shoppers' credit. il Burroughs Clearing House 37:38-41+ Ap '53

Customer relations

Capital from receivables; specialized finance companies co-operate with banks by servicing receivables. T. H. Silbert. Bankers Mo 69:7-8+ D '52

Case for background music. D. McGrew. il Bankers Mo 70:14-16+ Jl '53

His honor, the customer. Banking 45:106+ Ja '53

Deposit service

17-hour-a-day service; Watertown (New York) national bank. il Burroughs Clearing House 37:16 N '52

See also
Banks and banking—Night and curb depositories

Dictionaries

Thomson's dictionary of banking; a concise encyclopedia of banking law and practice. R. W. Jones, ed. 10th ed 710p $15 Philosophical library, 15 E. 40th st, New York 16 '52

Educational work

Bank public relations for youth. F. M. Totton. Banking 45:45-6 F '53

Conducting an estate planning forum. R. O. Ellis. il Burroughs Clearing House 37:32-3+ Jl '53

Good-will project for trust departments; Cincinnati life underwriters and corporate trustees sponsor legal instrument drafting contest among students of law schools. E. V. Clark. Burroughs Clearing House 37:38-9+ F '53

Junior Achievement winds up another year. G. K. Rose, jr. il Bankers Mo 70:10+ My '53

Junior banks set goals. Burroughs Clearing House 37:11-12 F '53

New developments in forums. Trusts & Estates 91:924 D '52

75,000 at women's forums; medium for banking service and public relations. C. A. Bimson. Banking 45:121 N '52

Teaching thrift to the customers of the future. il Burroughs Clearing House 37:26-7 D '52

Your money's worth; Federal reserve bank of Richmond audience participation program explains the economics of inflation. il Banking 45:58-9+ F '53

Exchange charges

See Banks and banking—Collection charges

Exhibits

Presidential exhibits. il Burroughs Clearing House 37:24-5 Ja '53

Farm development service

See Banks and banking—Country banks

Finance

Bank capital and size and location of banks. J. Ryan. bibliog J Bsns 25:225-41 O '52

Bank earnings; the outlook is good, but. J. W. Wooster, jr. Banking 45:36-8 S '52

Bank profits and taxes. Burroughs Clearing House 37:10-11 Jl '53

Banker's dilemma. R. P. Chapman. Harvard Bsns R 31:51-9 Jl '53

Banks are making money. Bsns W p 106+ N 1 '52

Banks; deposits down, earnings up. Bsns W p 128-9 Jl 18 '53

Banks should build up their net worth. J. J. Rowe. Comm & Fin Chr 177:473+ Ja 29 '53

Current outlook for banking. B. F. Pope. Comm & Fin Chr 177:98 Ja 8 '53

Directors and the bank's profits. Banking 45:44-7 Je '53

Finance, Nov.-Dec. 1951-Jan.-Nov. 1952. Survey of Cur Bsns 33:S 15-16 Ja '53 [cont monthly]

Goals of banking in 1953. W. H. Brenton. Comm & Fin Chr 177:686+ F 12 '53

Member bank earnings, first half of 1952; with comparisons 1948-1952. Fed Res Bul 38:1103-4, 1159 O '52

National bank of Detroit. H. V. Keefe, jr. Barron's 33:17-19 Mr 30 '53

National City; growth record best among major eastern banks. H. V. Keefe, jr. Barron's 33:15-18 Mr 2 '53

News about banks and bankers. Published in weekly Thursday numbers of Commercial and financial chronicle

Foreign business

Banking policies in foreign trade credit. A. M. Strong. Comm & Fin Chr 178:264+ Jl 23 '53

Forms, blanks, etc.

Audit of collateral; multiple-copy form for receipt, control and delivery of loan collateral; Trust co. of Georgia. Banking 45:57 Ja '53

Savings bank money order in 12 seconds; Erie County savings bank of Buffalo. Banking 45:58 Ja '53

History

Experience builds a banking system. il Bankers Mo 69:26-8+ S '52

Twenty years ago; some early New Deal events; illustrations with text. Banking 45:33-40 Ja '53

Holding companies

Bank holding company legislation. Banking 46:40 Jl '53

Hours of business

Trends in bank hours. Burroughs Clearing House 37:14-15 D '52

Insurance, Customers'

Banks strongly back insurance to value. T. F. Glavey. East Underw 53:32-3 N 14 '52

Insurance of borrowers

Life insurance loans extended to include borrowers. Weekly Underw 168:1022 Ap 11 '53

Insurance requirements

Bank share-owners league. Burroughs Clearing House 37:16+ Mr '53

Banks, insurers confer on plans for broader cover. Nat Underw 57:4+ My 21 '53

Changes made in liability coverage on fiduciary banks. Nat Underw 57:35 Ap 9 '53; Same. Weekly Underw 168:1090 Ap 18 '53

How a bank buys insurance; Girard trust corn exchange bank, Philadelphia. R. A. Selser. il Spectator 161:16-17+ Je '53

May get bank cover from London Lloyd's; Lewis issues sharp retort on plan of new Bank-share owners league. M. Lewis. East Underw 54:34 F 6 '53; Same abr. Weekly Underw 168:398+ F 7 '53; Abstract. Nat Underw 57:29, 36 F 5 '53

BANKS and banking—Insurance requirements —*Continued*

Scarborough plan sponsor goes after Martin Lewis. J. R. Humphreys. Nat Underw 57: 1+ F 19 '53; Excerpt. Weekly Underw 168: 593 F 28 '53

Shareholders' insurance; safeguards shareholders against losses due to defalcations. J. Donoghue. Burroughs Clearing House 37:41-2 N '52

Suggests standards for marking acceptability of insurers to banks. W. F. Owens. Nat Underw 57:35-6 My 14 '53

See also

Bankers' blanket bond

Investments

Corporate bond experience re-examined; investment of savings deposits. T. A. Woodsum. Banking 45:45-6 D '52

Municipal bonds for bank investment. A. Jenner. Comm & Fin Chr 176:2222+ D 11 '52

See also

Loans, Bank

Savings banks—Investments

Law

See Banking law

Mortage departments

New look at mortgage lending; bank participation. H. T. Denyes. Comm & Fin Chr 177:2738+ Je 25 '53

Savings banks insurance buyers told of mortage protection. G. T. Cowan. Weekly Underw 168:1165+ Ap 25 '53

New business

Glamorized gift service increases deposits; Gift Magic service sponsored by The San Francisco bank. E. Burke. il Burroughs Clearing House 37:38-40+ Ja '53

Ideas from a highly successful bank opening; Manhattan Savings. E. Tyng. il Burroughs Clearing House 37:26-7 Ja '53

Night and curb depositories

Drive-ins in action. il Burroughs Clearing House 37:22-4 D '52

Periodicals

Canadian banks furnish more investment data; economic publications. J. Montagnes. Barron's 33:34 Mr 16 '53

Public relations

Bank news roundtable; handy kit of public relations ideas. il Banking 45:37-44+ F '53

Bank public relations for youth. F. M. Totton. Banking 45:45-6 F '53

Bank tour on television; Central national bank, Cleveland. Trusts & Estates 92:498 Jl '53

Banking's public relations job; program developed by Pennsylvania association; abstracts. S. H. Chelsted. Trusts & Estates 92:416-17 Je '53; Banking 46:123 Jl '53

Benefits from a bank's own slide-film program; Citizens state bank, Sheboygan Wis.; staff training and public relations. H. W. Sichter. il Burroughs Clearing House 37:30-1+ Jl '53

Better bank public relations by mail. W. H. Butterfield. Banking 45:89 D '52; 62-3 F; 72+ Mr '53

Building goodwill through community service; First national bank of Winona, Minn. H. Severson. Banking 46:62+ Jl '53

Chase humanizing campaign. Bsns W p 112 Ja 17 '53

Community service; big job of the small-town banker; Hardwick trust co., Hardwick, Vt. G. M. Ladd. il Burroughs Clearing House 37:34-6+ Jl '53

Denver banks talk to students. il Banking 45:16+ Mr '53

Here are some good public relations ideas. il Banking 45:47-52 F '53

Modern bank has a sales package; selling bank services. R. F. Bates. il Bankers Mo 69:16+ D '52

150,000 persons attend a tv bank tour; Central national bank of Cleveland, subject on Life in Cleveland series. H. J. Wills. il Burroughs Clearing House 37:28 My '53

Philanthropy, a matter of self-preservation; philosophy of a bank's relation to its community. J. A. Sibley. il Trusts & Estates 92:8-9 Ja '53

Public relations activities of state associations. Banking 45:37-41 Ap '53

Public relations opportunities and tools; what is the American bankers association doing? il Banking 45:35-50 Mr '53

Scholarship awards win public approval; Bank of America's achievement awards program, California high schools. J. Bedford. il Bankers Mo 70:30+ Je '53

Trust officer's view of public relations. R. A. Wilson. Trusts & Estates 91:892-4 D '52

Your press relations. Banking 45:18+ Ap '53 [cont monthly]

See also

Banks and banking—Customer relations

Banks and banking—Educational work

Financial public relations association

Records

From closed frontier to wide open office spaces; microfilm processing of records; Valley national bank, Phoenix. O. A. Burton. Credit & Fin Management 55:22-3 Ap '53

Terminal digit method of filing for bank use. M. C. Miller. Banking 45:72+ Je '53

Two-way loan payment record; Merchandise national bank of Chicago. E. H. Smith. il Bankers Mo 70:26-7 Jl '53

Using television in British bank operation; records produced in the country are telecast to London for viewing. F. Plachy. il Burroughs Clearing House 37:36-7+ O '52

Regulation

Banking under decontrol. J. M. Naughton. il Burroughs Clearing House 37:31-3+ Je '53

Reports

Annual report trends. il Burroughs Clearing House 37:6+ Ap '53

It promotes business; annual report of First national bank, McKeesport, Pa. il Mod Ind 25:11-12+ My '53

Only informed directors can direct! D. A. Fuller. Bankers Mo 70:24+ Ap '53

Research departments

Economic research, a tool for bank management. W. R. Lamb. il Bankers Mo 70:7-8+ Ap '53

Safe deposits

See Safe deposits

Savings certificates

Big banks adopt savings certificate idea; Pittsburgh. il Burroughs Clearing House 37:13 Je '53

Savings deposits

See Savings deposits

School relations

See Banks and banking—Public relations

Securities

See Banks and banking—Stock

Service

Bank's check reconciling plan saves time for employers. il Am Bsns 23:24+ S '53

Business year or calendar year? opportunity to the banker to render customer service. Bankers Mo 70:24+ My '53

Glamorized gift service increases deposits; Gift Magic service sponsored by The San Francisco bank. E. Burke. il Burroughs Clearing House 37:38-40+ Ja '53

New frontiers for 4-H; opportunity for bank participation. J. W. Tapp. il Bankers Mo 70:5-6+ Mr '53

Point of purchase merchandising; selling bank services. L. F. Gordon. il Banking 45: 26-7+ N '52

Retailers get rid of banking. J. M. Russakoff. J Retailing 28:107-10+ Fall '52

BANKS and banking—Service—*Continued*

We chose 4-H! First national bank of Smithton, Smithton, Pa. W. C. Knox. il Bankers Mo 70:12+ Mr '53

See also

Banks and banking—Credit information service

Banks and banking—Credit service

Banks and banking—Deposit service

Banks and banking—Educational work

Service charge

Decontrolled future of service charges. Banking 45:50+ Ap '53

Service charges in Scottish banks. F. B. Makin. Banking 45:20 D '52

Time to review service charge programs? G. R. Amy. il Burroughs Clearing House 37:34-5+ My '53

Statements of condition

See Banks and banking—Reports

Statistics

Members are bigger than ever. Bsns W p 106+ Ja 17 '53

Year-end bank data. Banking 45:130 My '53

Stock

Bank and insurance stocks. H. E. Johnson. Published in weekly Thursday numbers of Commercial and financial chronicle

Bank and insurance stocks; review and outlook. G. Geyer. Trusts & Estates 92:32-4 Ja '53

Bank earnings for the first half; with statistical data on leading bank stocks. J. S. Williams. Mag of Wall St 92:502-3+ Jl 25 '53

Case for bank stocks. H. V. Keefe, jr. Barron's 33:17-18 Je 8 '53

Demand for advances. Economist 167:863-4+ Je 20 '53

Eastern banks raise dividends. Economist 166:759-60 Mr 14 '53

1953 outlook; with statistical data on leading bank stocks. J. S. Williams. Mag of Wall St 91:476-7+ Ja 24 '53

Stockholders

How a stockholder can help his bank. Bankers Mo 69:28 D '52

Study and teaching

Graduate school of banking 19th annual summer session, Rutgers university, June 8-20; with list of students. Banking 46:90+ Jl '53

Institute of bankers' 5th annual international banking summer school, Oxford. W. Powers. Banking 45:90+ S '52

National, regional, and state educational activities for bankers; with list of annual schools sponsored by state bankers and other associations. Banking 45:42-4 Ap '53

See also

American institute of banking

Taxation

Bank profits and taxes. Burroughs Clearing House 37:10-11 Jl '53

Tellers

Thirteen reasons why tellers are unlucky. T. J. Barclay. il Burroughs Clearing House 37:36-7+ F '53

Transit operations

Audit control of transit; Transit division of the Guaranty trust company of New York. Banking 46:55+ Jl '53

See also

Banks and banking—Cash letter delivery service

Checks—Collection

Trust departments

Annual reports show many record totals. Trusts & Estates 92:92+, 211-16, 293-302, 369-70 F-My '53

Commercial banker looks at his trust department. H. H. Helm. Comm & Fin Chr 177:2410+ Je 4 '53; Same cond. Trusts & Estates 92:408-10 Je '53

Common trust funds in small banks. W. R. S. Eaton. Trusts & Estates 92:520 Jl '53

Connecticut bankers association annual trust conference, New Haven, May 13. Trusts & Estates 92:412-13 Je '53

Developing trust services. T. Mills. Trusts & Estates 92:526 Jl '53

Farm management as a trust service. N. T. Robinson. Banking 45:150 My; 104 Je '53

Good-will project for trust departments; Cincinnati life underwriters and corporate trustees sponsor legal instrument drafting contest among students of law schools. E. V. Clark. Burroughs Clearing House 37. 38-9+ F '53

Importance of trust department to the bank. L. L. Gelbach. Trusts & Estates 92:524-5 Jl '53

Management of trust department portfolios. P. B. Kelly. Comm & Fin Chr 177:189+ Ja 15 '53

Merchandising vs. selling; trust service must be sold. A. M. McNickle. Trusts & Estates 92:178-80 Mr '53

More business from better service. W. O. Heath. Trusts & Estates 91:947-8 D '52

News for trustmen. Banking 45:95-6+ Ja '53 [cont monthly]

Prenumbered tickets for use when receiving securities in corporate trust department. G. P. Jochum. Banking 46:88 Jl '53

Some aids to profitable trust operations. W. G. Cleaver. Trusts & Estates 92:123-7 F '53

Systems and mechanization; factors in determining application and value. L. S. Severance. Trusts & Estates 91:658-60 S '52

Tennessee bankers association Fiduciary section, Nashville, May 5. Trusts & Estates 92:418 Je '53

Trust administration from an examiner's viewpoint. R. C. Masters. Trusts & Estates 92:170-3 Mr '53

Trust assets, gross earnings at new high in 1951; with tables. Trusts & Estates 91:618-19 S '52

Trust department makes plans to manage a small business. R. H. Harris, jr. Trusts & Estates 92:98-100 F '53

Trust officer's view of public relations. R. A. Wilson. Trusts & Estates 91:892-4 D '52

Trust service for farmers. R. S. Davis. Trusts & Estates 91:944-6 D '52

See also

American bankers association—Trust division

Asia, Southeastern

Recent central banking developments in Southeast Asia. Fed Res Bul 38:1276-84 D '52

Bucks county, Pennsylvania

Banking boom on the Delaware; effects of the huge steel development. K. G. Hastedt. il map Burroughs Clearing House 37:34-5+ O '52

Canada

Canadian banking. J. Montagnes. Published in monthly numbers of Burroughs clearing house

Canadian banks furnish more investment data; economic publications. J. Montagnes. Barron's 33:34 Mr 16 '53

Canadian banks report big raise in revenues. J. Montagnes. Barron's 32:10 O 6 '52

Drive-in banking. J. Montagnes. il Burroughs Clearing House 37:63-4 N '52

Gigantic strides of Canada's banking. L. G. Gillett. Comm & Fin Chr 177:10+ sec 2 Je 25 '53

Chicago

Bank closings. Bsns W p 140-1 Ap 18 '53

Higher reserve requirements for New York city and Chicago banks held discriminatory. J. S. Baker. Comm & Fin Chr 176:2128 D 4 '52

China

See also

Hongkong and Shanghai banking corporation

Cleveland

Unfair to CIO; Cleveland trust workers. Bsns W p 138 Mr 7 '53

BANKS and banking—*Continued*

Colombia

Colombia authorizes bank to make loans to small industry, issue credit bonds. For Comm W 49:8 F 23 '53

Dallas

Fred Florence says, never let go of a customer; methods and policies of Republic national bank of Dallas. E. Whitmore. il Am Bsns 23:12-13+ Ap '53

Denver

Denver banks talk to students. il Banking 45:16+ Mr '53

Detroit

National bank of Detroit. H. V. Keefe, jr. Barron's 33:17-19 Mr 30 '53

Europe

European arbitrage again for authorized banks of eight countries. Economist 167: 531-3 My 23 '53

Exchange arbitrage at work. Economist 167: 686 Je 6 '53

Germany

New structure of German banking; with tables. Economist 165:501-2+ N 15 '52

Great Britain

Bank profits now. Economist 166:159-61 Ja 17 '53

British banking, 1953; annual survey of banking trends in Britain and the British Commonwealth. Economist 167:855-72 Je 20 '53

Credit control by British banks. P. Einzig. Banking 45:60-1 Ja '53

Deposits at new peak. Economist 166:296 Ja 31 '53

Fall in bank deposits. Economist 166:385 F 7 '53

Government and central bank; the British experience. P. Einzig. Banking 45:64+ D '52

See also

Barclays bank
District bank
Lloyds bank
Midland bank
National provincial bank
Westminster bank
Williams Deacon's bank

Monte Carlo

Monte Carlo; paradise of monetary freedom. F. Plachy. il Burroughs Clearing House 37:34-5+ N '52

New York (city)

Higher reserve requirements for New York city and Chicago banks held discriminatory. J. S. Baker. Comm & Fin Chr 176: 2128 D 4 '52

PHA bows to higher interest rates. Bsns W p56 D 27 '52

Still growing; Bankers Trust arranges to absorb Bayside national bank. Bsns W p56 D 27 '52

Top-hat bank woos investors; Guaranty trust co. Bsns W p50+ D 13 '52

New York (state)

Needed, a reaffirmation of functions of financial institutions; controversy over savings banks' branch extensions. E. H. Watson. Comm & Fin Chr 177:2414 Je 4 '53

Support inflation curbs and savings bank branch extension. S. A. Neilson. Comm & Fin Chr 177:2416-17 Je 4 '53

Philippine Islands

First Philippine rural credit bank opens. For Comm W 49:21 F 16 '53

Quebec (province)

Look at Canada's Caisses populaires; Quebec institutions serving as co-operative savings banks. L. Remillard. il Burroughs Clearing House 37:34-5+ Ap '53

Scotland

Service charges in Scottish banks. F. B. Makin. Banking 45:20 D '52

South Africa

Bank policies and methods in South Africa. C. M. Strydom. il Burroughs Clearing House 37:40-2+ F '53

United States

Banks are frozen in. Bsns W p66+ Je 13 '53

Cite Junior banks, firms. il Burroughs Clearing House 37:21+ Jl '53

Key to Eisenhower's economics; sound money. Bsns W p80-2+ Mr 28 '53

Opportunity returns to banking. B. F. Pope. Comm & Fin Chr 177:2747+ Je 25 '53

Restrictive credit policy and the banking outlook. F. F. Florence. Comm & Fin Chr 177:2512+ Je 11 '53

What new administration means to banking. E. S. Adams. Comm & Fin Chr 177:1744+ Ap 23 '53

BANKS and banking, Cooperative

Look at Canada's Caisses populaires; Quebec institutions serving as co-operative savings banks. L. Remillard. il Burroughs Clearing House 37:34-5+ Ap '53

BANKS and banking, International

See also

International bank for reconstruction and development

BANKS and banking, National

National bank assets; quarterly report of Comptroller of the currency. Comm & Fin Chr 176:1859 N 13 '52

BANKS and banking, State

State bank membership; amendments to Regulation H; with text. Fed Res Bul 38:1004-11 S '52

BAR associations

See also

American bar association

BAR mills. See Rolling mills

BARBITURATES

Analysis

Determination of barbiturates; ultraviolet spectrophotometric method with differentiation of several barbiturates. L. R. Goldbaum. Anal Chem 24:1604-7 O '52

BARBITURIC acid

Alkylated derivatives of ethyl *t*-butylmalonate and the corresponding barbituric acids. M. T. Bush and W. D. Beauchamp. bibliog Am Chem Soc J 75:2949-51 Je 20 '53

Reactions of some barbituric acid derivatives in concentrated sulfuric acid. E. W. Maynert and E. Washburn. bibliog Am Chem Soc J 75:700-4 F 5 '53

BARCELONA traction, light and power company, ltd.

Barcelona; Spanish lesson for investors. H. Bratter. Pub Util 51:556-68 Ap 23 '53

BARCHOFF, Herbert

Portrait. Dun's R 60:138 O '52

BARCLAYS bank (Dominion, colonial and overseas)

Barclays (D.C.&O) on the bright side. Economist 165:718 D 6 '52

Statement by the chairman. J. S. Grossley. Economist 165:725 D 6 '52

BARCLAYS bank, limited

Statement by the chairman. A. W. Tuke. Economist 166:245-8 Ja 24 '53

BARDEEN, John, 1908-

Presentation of the Stuart Ballantine medals. por Franklin Inst J 254:468-9 D '52

BARGAIN sales. See Special sales

BARGES

All-welded drill and work-over barge commissioned. il Welding J 32:549-50 Je '53

Avondale builds large pile driver for Creole Petroleum. il Marine Eng 58:50 Ja '53

Barge Blind Pass fitted for deep Gulf coast drilling. il Pet Eng 24:B 120+ N '52

Barge service on a timetable; Alaska, Panama, Great Lakes. il Bsns W p33 N 22 '52

Barges help solve Chesapeake's marine materials handling problems. il Paper Ind 34: 1240-1 Ja '53

Barges; shipment curve goes up; inland waterway cargoes increase steadily since 1930. K. W. Bennett. Iron Age 170:43 O 16 '52

Barges that turn into piers; iron-ore shipping station of the Orinoco mining co. J. Hirt. il diag Comp Air Mag 57:312-13 N '52

BARGES—*Continued*

Boats for the Royal yacht. Engineer 196:220 Ag 14 '53; Engineering 176:170 Ag 7 '53

Built-in jacks position new barge. il Oil & Gas J 52:176-7 Je 22 '53; World Oil 136: 116 Je '53

Diesel-electric drilling barge, G.P.2. plans diag Engineer 194:425-6 S 26 '52

Diesel-electric oil-well drilling barge. il Engineering 174:583-4 O 31 '52

Dock that climbs. il Mill & Factory 52:144 Je '53

Dock that jack built. il Manuf Rec 122:32-3+ My '53

Drill barge rides Everglades muck. H. W. Richardson. il Constr Methods 35:52-6 My '53

Four houses are moved by barge. il Eng N 149:48 D 4 '52

Good-weight distribution features new workover barge. il Oil & Gas J 51:143+ Ap 20 '53

Hauling barges from Seattle to St Louis. il Bsns W p 108-10 My 9 '53

Integrated drilling barge has maximum flexibility. C. F. Albright and P. L. McLaughlin. il plans World Oil 135:139-42+ D '52

Largest dock barge ever built launched by Todd shipyards. Marine Eng 58:58 Ap '53

Luxury and efficiency afloat; the Superior oil company's drilling barge, W. M. Keck, sr. P. L. McLaughlin. il World Oil 136: 164+ Ap '53

National Supply equipment on drill barge that dug four-mile hole. il Marine Eng 58:135 Je '53

New design barge to drill in Lake Maracaibo. H. Weil. il Pet Eng 25:B40+ Mr '53

New drilling barge for sulfur exploration. W. F. Rose. il Oil & Gas J 51:108-9 O 6 '52

New drilling barge now operating off Texas Gulf coast. il Oil & Gas J 51:90 D 29 '52

Oil drilling barge. il Elec J 151:421-2 Ag 7 '53

Pacific Coast Engineering builds largest barge on Coast. il Marine Eng 58:88-9 O '53

Penrod's rig 44. il Oil & Gas J 51:128-9 N 24 '52

Portable submersible tank-battery barge withstands weather's Sunday punch. G. E. McClatchey. il Oil & Gas J 51:141-5, 169 F 23 '53

Prefab dock goes to Venezuela. il Constr Methods 35:132-3+ My '53

Self-contained barge; Shell acquires new Diesel-electric unit to use in Maracaibo drilling. il Oil & Gas J 51:75 D 1 '52

Time inc. transports paper stock 1,700 miles by water. il Paper Ind 35:425 Jl '53

Time-Life seagoing barge. C. L. Stillman. il Tappi 36:sup91A-3A Jl '53

World's largest drilling barge. F. L. Resen. il Oil & Gas J 51:98-9+ F 9 '53

YF barge outfitted for South America. il Pet Eng 24:B86+ O '52

See also

Inland waterways corporation

Tank barges

BARGES, Aluminum

Aluminium alloy barges for Africa; Thorpe brothers (Bessborough works), ltd. il Engineer 194:299-300 Ag 29 '52; Engineering 174: 269 Ag 29 '52; Metallurgia 46:134 S '52

150-ton aluminium alloy barge; Fairmile construction co. il Engineer 195:257 F 13 '53; Engineering 175:208 F 13 '53

BARITE

Barite, 1952. J. Lloyd. Eng & Min J 154: 109+ F '53

BARITOSIS. See Lungs—Dust diseases

BARIUM

Adsorption of cobalt and barium ions by hydrous ferric oxide at equilibrium. J. E. Duval and M. H. Kurbatov. J Phys Chem 56:982-4 N '52

Diffusion of barium in barium oxide. R. W. Redington. bibliog diag Phys R 87:1066-73 S 15 '52

Physical processes in the *L* cathode. D. L. Schaefer and J. E. White. bibliog il diags J Ap Phys 23:669-74 Je '52

Use of radioactive isotopes in a study of evaporation from thermionic cathodes. W. F. Leverton and W. G. Shepherd. diag J Ap Phys 23:787-93 Jl '52

See also

Barite

Analysis

Flame photometric determination of calcium, strontium, and barium in a mixture. O. N. Hinsvark, S. H. Wittwer and H. M. Sell. Anal Chem 25:320-2 F '53

Isotopes

Continuous gamma-radiation accompanying internal conversion in $Ba^{137}m$. H. B. Brown and R. Stump. diag Phys R 90:1061-3 Je 15 '53

Fission asymmetry as a function of excitation energy of the compound nucleus. J. L. Fowler and others. Phys R 88:71-2 O 1 '52

Nuclear spectroscopy of Ba^{131}. M. W. Elliott and others. bibliog Phys R 88:263-5 O 15 '52

Nuclides Ba^{127}, Ba^{128}, and Cs^{128}. M. Lindner and R. N. Osborne. Phys R 88:1422-3 D 15 '52

Radiations of neutron-deficient barium and cesium nuclides. R. W. Fink and E. O. Wiig. bibliog Phys R 91:194 Jl 1 '53

BARIUM acetate

Activities of aqueous magnesium and barium acetate solutions at 25°. R. H. Stokes. Am Chem Soc J 75:3856-7 Ag 5 '53

Streaming potential measurements and the adhesion of phosphors on cathode ray screens. J. F. Hazel and G. L. Schnable. bibliog diags Electrochem Soc J 100:65-71 F '53

BARIUM adipate

Fractionation of the carbon isotopes in decarboxylation reactions; the mechanism of the pyrolysis of barium adipate. J. Bigeleisen, A. A. Bothner-By and L. Friedman. bibliog Am Chem Soc J 75:2908-10 Je 20 '53

BARIUM chloride

Apparent molal volume of barium chloride in ethanol-water mixtures. R. L. Bateman. Am Chem Soc J 74:5516 N 5 '52

Studies on coördination compounds; the chelating tendencies of β-diketones with the chlorides of copper (II), nickel and barium in water-dioxane solutions. L. G. Van Uitert, W. C. Fernelius and B. E. Douglas. Am Chem Soc J 75:457-60 Ja 20 '53

BARIUM compounds

Dissociation constants of the alkaline-earth salts of some monocarboxylic acids. C. A. Colman-Porter and C. B. Monk. Chem Soc J p4363-8 N '52

BARIUM fluoride

Comparison of the physical properties of barium fluoride and calcium fluoride. S. S. Ballard and others. Opt Soc Am J 42:684-5 S '52

BARIUM oxide

Bariated tungsten emitters. R. C. Hughes and P. P. Coppola. J Ap Phys 23:1261-2 N '52

Chemical reactions in barium oxide on tungsten emitters. R. C. Hughes and others. bibliog il diags J Ap Phys 23:635-41 Je '52

Decay and recovery of the pulsed emission of oxide-coated cathodes. R. M. Matheson and L. S. Nergaard. diags J Ap Phys 23: 869-75 Ag '52

Diffusion of barium in barium oxide. R. W. Redington. bibliog diag Phys R 87:1066-73 S 15 '52

Electrical conductivity and thermoelectric power of (BaSr)O and BaO. J. R. Young. diags J Ap Phys 23:1129-38 O '52

Growth and analysis of barium oxide crystals containing a stoichiometric excess of barium. G. G. Libowitz. diag Am Chem Soc J 75:1501-2 Mr 20 '53

Luminescence and thermionic emission of barium oxide. V. L. Stout. bibliog diags Phys R 89:310-14 Ja 1 '53

Nickel base indirectly heated oxide cathode. A. M. Bounds and P. N. Hambleton. bibliog diag Elec Eng 72:536-40 Je '53

Photoconductivity study of activation of barium oxide. H. B. DeVore. diags RCA R 13: 453-63 D '52

Solubility and diffusion coefficient of carbon in nickel; reaction rates of nickel-carbon alloys with barium oxide. J. J. Lander and others. bibliog J Ap Phys 23:1305-9 D '52

Studies of the oxide cathode. L. S. Nergaard. bibliog diags RCA R 13:464-545 D '52

BARIUM stannate

Lattice constants and dielectric properties of barium titanate, barium stannate, strontium titanate bodies. R. H. Dungan and others. bibliog Am Cer Soc J 35:318-21 D 1 '52

BARIUM strontium oxide

Electrical conductivity and thermoelectric power of (BaSr)O and BaO. J. R. Young. diags J Ap Phys 23:1129-38 O '52

Excess thermal noise due to current flow through (Ba Sr) oxide coating. K. Amakasu. diags J Ap Phys 23:1330-2 D '52

Study of the oxide-coated cathodes by X-ray diffraction method. E. Yamaka. il diag J Ap Phys 23:937-40 S '52

BARIUM sulfate

Determination of the specific surface of barium sulphate; a comparison of results by different methods. D. W. Jopling. bibliog il diag J Ap Chem 2:642-51 N '52

Improved sphere paint. W. E. K. Middleton and C. L. Sanders. bibliog diag Illum Eng 48:254-6 My '53

See also

Barite

Analysis

X-ray investigation of several contaminated barium sulfate precipitates. C. A. Streuli, H. A. Scheraga and M. L. Nichols. bibliog Anal Chem 25:306-10 F '53

BARIUM sulfide

Electronic properties of barium sulfide. W. Grattidge and H. John. diags J Ap Phys 23:1145-51 O '52

BARIUM titanate

Dielectric bodies in the quaternary system $BaTiO_3$—$BaSnO_3$—$SrSnO_3$—$CaSnO_3$. W. W. Coffeen. bibliog Am Cer Soc J 36:215-21 Jl 1 '53

Domain properties in $BaTiO_3$. W. J. Merz. il diags Phys R 88:421-2 O 15 '52

Double hysteresis loop of $BaTiO_3$ at the Curie point. W. J. Merz. bibliog il Phys R 91:513-17 Ag 1 '53

Electrical noise from instrument cables subjected to shock and vibration. T. A. Perls. bibliog il diags J Ap Phys 23:674-80 Je '52

Electromechanical properties of $BaTiO_3$ compositions showing substantial shifts in phase transition points. D. A. Berlincourt and F. Kulcsar. Acoustical Soc Am J 24:709-13 N '52

Ferro-electric materials as storage elements for digital computers and switching systems; abstract. J. R. Anderson. diags Electronics 26:204+ Jl '53

High temperature heat contents of meta- and orthotitanates of barium and strontium. J. P. Coughlin and R. L. Orr. bibliog Am Chem Soc J 75:530-1 F 5 '53

Properties of some high titania dielectric ceramics. E. G. Graf. Am Cer Soc Bul 31:279-82 Ag 15 '52

Rapid method for evaluating the activity of piezoelectric barium titanate; abstract. H. I. Oshry and J. Minkowski. diag Electronics 26:230+ Jl '53

Temperature invariant impedance point in the frequency response of circular barium titanate transducers. T. F. Hueter. Acoustical Soc Am J 25:152 Ja '53

Theoretical sensitivity of a transversely loaded, circular bimorph transducer. E. G. Thurston. diags Acoustical Soc Am J 24:656-9 N '52

Use of a Geiger counter for the measurement of X-ray intensities from small single crystals. H. T. Evans, jr. il R Sci Instr 24:156-61 F '53

BARK

Chemical composition of grand fir bark. E. F. Kurth and G. M. Tokos. bibliog Tappi 36:301-4 Jl '53

Chemical nature of cedar barks. J. E. Smith and E. F. Kurth. bibliog Tappi 36:71-8 F '53

Chemical nature of the extractives from white fir bark. H. L. Hergert and E. F. Kurth. bibliog il Tappi 36:137-44 Mr '53

Chemicals from Douglas-fir bark. E. F. Kurth. bibliog Tappi 36:sup 119A-22A Jl '53

Chemistry of western Australian plants; the essential oil of eucalyptus eudesmioides bark. A. Blumann, M. Michael and D. E. White. Chem Soc J p788-9 Mr '53

Color precursors in spruce- and western hemlockwoods and inner barks. W. Pigman and others. bibliog Tappi 36:4-12 Ja '53

Effect of bark control on production of semichemical pulp; abstract. H. Sihtola. Pulp & Pa of Can 54:137 Je '53

Extractives of aspenwood and bark. B. L. Browning and L. O. Bublitz. bibliog Tappi 36:418-19 S '53

Wood fibers and tree bark yield effective lost-circulation material. T. R. Frost and R. A. Waldron. Oil & Gas J 51:289+ S 29 '52

See also

Bast fibers

BARK beetles

Effects of beetle infestations on watersheds. D. S. Nordwall. Am Water Works Assn J 45:797-803 Ag '53

BARK peeling

Bark removal methods and machines. G. E. Bell and P. E. Martin. il diag Tappi 36:sup 38A+ S '53

Chemical debarking of trees; abstract. E. C Jahn. Pulp & Pa of Can 54:151 Ag '53

Chemical debarking research project results reported. Pulp & Pa of Can 54:158+ Ag '53

Effects of chemical treatment of pulpwood trees. D. C. McIntosh. bibliog il Tappi 36:sup 150A-60A Ag '53

How wood is handled and barked by Keyes fibre co. il diag Paper Tr J 136:14-16 My 22 '53

Mira barker. il Pulp & Pa of Can 54:152+ Ag '53

New barking equipment and methods permit utilization of sawmill waste. flow diag il Paper Ind 35:181-3 My '53

Peeling hardwood. diag Tappi 36:sup 100A Ag '53

Pneumatic debarker; Andersson debarker. il Paper Tr J 136:34 Ja 23 '53

Preparation of wood. H. J. Arnold. flow diag Paper Tr J 135:110-12 N 14 '52

Removal of bark from chips and wood pulp. L. Eberhardt. flow diag il diags Paper Tr J 135:23-4+ D 19 '52

St Regis (Pensacola) to use barked sawmill slabs. Paper Tr J 135:9-10 N 21 '52

Wood conservation step taken by St Regis; Swedish equipment installed; Andersson barker and chipper. Paper Ind 34:1205-6 Ja '53

Wood room. J. Lewis. flow diag il diag Paper Tr J 135:112-20 N 14 '52

BARKHAUSEN effect

Eliminating Barkhausen effect in television receivers. Radio & Tv N 49:94 F '53

Experimental study of Barkhausen noise in nickel-iron alloys. D. I. Gordon. diag Rs Mod Phys 25:56-7 Ja '53

BARKIE, Stross and company

Barkie partner in general agency, title now Barkie, Stross & company. East Underw 54:30 Ap 3 '53

BARLEY

News of commodities. Barron's 33:43 Mr 23 '53

Quality of cereals and their industrial uses; selection of barleys for malting. I. A. Preece. bibliog Chem & Ind p 160-2 F 21 '53

Quality of cereals and their industrial uses; some malting methods. R. M. Thomson. bibliog Chem & Ind p 112-16 F 7 '53

Quality of cereals and their industrial uses; uses of barley other than malting. S. J. Watson. Chem & Ind p95-7 Ja 31 '53

U.S. barley supplies smaller than last year. Barron's 32:35-6 N 10 '52

BARNACLES

See also

Paint, Antifouling

BARNARD, Chester Irving, 1886-

Balanced mind. por Fortune 47:140 My '53

BARNES, Henry A.

New traffic czar holds no brief for transit and Baltimore transit co. loves it. por Bus Transportation 32:56-7 O '53

BARNES, Jack Y.

Portland cement association names Barnes to head new Montana office. por Concrete 60:12-13 N '52

BARNES, Stanley Nelson, 1900-

Businessmen in the news. por Fortune 47:53 My '53

Which way will antitrust policy head now? por Bsns W p32-3 Ap 11 '53

BARNS and stables
Milking parlor barns an open market for the small town builder. il plans Am Bld 74:111-13 D '52

BAROMETERS
Barometer element for radio-sondes. H. V. Neher. il diags R Sci Instr 24:97-8 F '53

BAROTOR. See Dyeing machines

BARRACKS
Barracks erected with vacuum lift. il Constr Methods 35:65-6+ Je '53
Fabrication and erection of precast enclosure framing for one-story barracks. F. J. Twaits and M. M. Denn. il Am Concrete Inst J 24:825-32 My '53
Navy buildings; enlisted men's barracks. il plans Arch Rec 112:188-9 S '52
U.S. tests concrete panel to pare barrack costs. Eng N 149:41 O 30 '52
See also
United States—Air service—Barracks and quarters

BARREL handling
Push-button barrel handling; Richmond refinery of Standard oil co. of California. D. H. Stormont. il Oil & Gas J 51:52-3 Ja 5 '53

BARRELS, Steel
Industry gets chemically clean steel drums. il plan Iron Age 171:100-1 Ja 15 '53

BARRETT, Robert E.
Illinois governor stands up for Barrett in face of attacks. Nat Underw 57:1 Ja 29 '53; Nat Underw (Life ed) 57:2+ Ja 30 '53

BARRIGER, John Walker, 1899-
Barriger goes to New Haven from Monon. por Ry Age 133:49 D 22 '52
Businessmen in the news. por Fortune 47:54 F '53

BARRY, John H.
Retires as Knight papers' general manager. Ed & Pub 86:15 Ja 3 '53

BARTHEL, Oliver Edward, 1877-
Sketch. Mech Eng 75:262 Mr '53

BARTON, George A.
Knows boxing from ring, ringside. pors Ed & Pub 85:64 N 1 '52

BARYTES. See Barite

BASALT
Abrasion-resistant linings; cast basalt. il Elec R (Lond) 152:940-2 Ap 24 '53

BASCULE bridges. See Bridges, Bascule

BASE exchanging compounds
Effect of exchangeable bases on the colloidal properties of bentonite. F. J. Williams, M. Neznayko and D. J. Weintritt. bibliog J Phys Chem 57:6-10 Ja '53
Theory of cation exchange reactions with clay minerals. I. B. Cutler and M. A. Cook. bibliog Am Cer Soc J 36:165-70 My 1 '53

BASEBALL
Aid for ailing minor leagues. Bsns W p29 My 16 '53
Beer teams up with baseball; Anheuser-Busch purchases Cardinals. Bsns W p32 F 28 '53
In Texas they blow off home plate. il diags Comp Air Mag 58:251-2 S '53
Through the knothole; St Louis Browns' ledger. Bsns W p 140+ My 9 '53
Under pressure; or, why baseball is the national pastime. il Coal Age 57:106+ N '52

BASEBOARD heating. See Heating—Baseboard heating

BASEMENTLESS construction
Basementless buildings pose practical heating problems. S. R. Lewis. Heating-Piping 25:99 Ag '53
On-grade floors; procedures for laying concrete floor slabs. Eng N 150:71+ My 21 '53
Satisfactory method for heating basementless houses; abstract. H. T. Gilkey and others. Heat & Ven 50:119 Jl '53
Vapor barriers; roll roofing can be used as slab moisture seal. Eng N 150:68+ My 21 '53
Warm air perimeter system heats basementless church. il plan Heating-Piping 25:83 O '53

BASEMENTS
Estimating the heat loss from slab floors and basements. M. Baker and others. Heating-Piping 24:95-7 N '52
Little rig deepens cellar after entry thru window. il Constr Methods 35:61-3 Ja '53

BASES (chemistry)
See also
Alkaloids
Amines
Mannich bases
Schiff bases

BASIC magnesium, inc.
War giant comes back to life in Nevada desert. il Bsns W p 106-7+ Je 20 '53

BASIC management, inc.
War giant comes back to life in Nevada desert. il Bsns W p 106-7+ Je 20 '53

BASIC refractories, inc.
Proposed financing program. Comm & Fin Chr 177:233-4 Ja 19 '53

BASICITY
Acidity and basicity scale in the system ethanol-water; the evaluation of degenerate activity coefficients for single ions. B. Gutbezahl and E. Grunwald. bibliog Am Chem Soc J 75:565-74 F 5 '53
Base strengths of aromatic hydrocarbons relative to hydrofluoric acid in anhydrous hydrofluoric acid as the solvent. M. Kilpatrick and F. E. Luborsky. bibliog diags Am Chem Soc J 75:577-84 F 5 '53
Basicity of hydrocarbons; a theoretical treatment of conjugated hydrocarbons. V. Gold and F. L. Tye. Chem Soc J p2184-8 Je '52
Basicity of hydrocarbons; cryoscopy of conjugated hydrocarbon and carbinol solutes in sulphuric acid. V. Gold, B. W. V. Hawes and F. L. Tye. diag Chem Soc J p2167-72 Je '52
Basicity of hydrocarbons; the distribution of some conjugated hydrocarbons between acidic and inert solvents. V. Gold and F. L. Tye. Chem Soc J p2181-3 Je '52
Basicity of hydrocarbons; ultra-violet absorption spectra of conjugated hydrocarbons in sulphuric acid solution. V. Gold and F. L. Tye. Chem Soc J p2172-80 Je '52
Reaction rates by distillation; the effect of changes in structure on the basicity of selected ketones, esters, ethers and alcohols. E. F. Pratt and K. Matsuda. bibliog Am Chem Soc J 75:3739-44 Ag 5 '53
Significance of basicity and acidity of nuclei in cyanine type condensations. L. G. S. Brooker and others. bibliog Am Chem Soc J 75:4335-6 S 5 '53

BASING point system. See Price policies

BASKETBALL
Basketball sequence pix without flash. J. L. Mahler. il Ed & Pub 86:9 Ja 3 '53

BASKETS
Top-of-basket display; simple aluminum foil tray for top layer. il Mod Packaging 26:112-13 Ag '53

BAST fibers
Chemical composition of the bast fibers of Douglas-fir bark. H. J. Kiefer and E. F. Kurth. bibliog il Tappi 36:14-19 Ja '53
See also
Flax
Jute

BASTNAESITE
Concentration of bastnaesite and other cerium ores; with analytical methods. J. B. Zadra and others. U S Bur Mines Rep of Invest 4919:1-15 '52

BATES, Ted, and company
Story of Ted Bates & co. Adv Agency 45:65-7+ N '52

BATES manufacturing company
Declares ten cent dividend. Comm & Fin Chr 176:2434 D 22 '52

BATH towels. See Towels

BATHING beaches
Controls might be relaxed on bathing water quality. Pub Works 84:93-4 Jl '53

BATHING suits
When a mere upstart challenges big-name competition; Rose Marie Reid's swimsuits. B. L. Kamberg. il Sales Management 69:128-32 O 15 '52

BATHOCHROMIC effect
Hyperconjugation; bathochromic shifts resulting from methyl substitution in conjugated systems. V. A. Crawford. Chem Soc J p2061-5 Jl '53

BATHROOMS
Here are compact two-compartment bathrooms. il plans Am Bld 74:89 S '52
New ideas in bathroom, kitchen and utility room designs; Crane co. il plans diags Dom Eng 181:92-4 Mr; 112+ Ap '53

BATHROOMS—*Continued*

Start with any fixture and sell up to a complete bath! Harry E. Waters plumbing co. il Dom Eng 181:103+ Ap '53

BATHS (chemical apparatus)

Adaptable circuit for constant temperature baths. E. Levens and R. S. Cass. bibliog diags Anal Chem 24:1685-6 O '52

Aluminium heating block. Can Chem Process 37:71 Jl '53

BATHS, Shower. See Shower baths

BATHTUBS

Curious case of the President's bathtub. B. Smith. il Dom Eng 180:310-12+ N '52

Manufacture

Progressive improvements speed production, keep costs down, reduce rejects; Norris-Thermador corp. il Cer Ind 60:100-1+ Je '53

BATHTUBS, Plastic

Bath tubs of reinforced plastics. il Mod Plastics 30:96-7 F '53

BATRACHIA. See Amphibia

BAUSCH and Lomb optical company

New start for Bausch & Lomb. il Bsns W p98-100+ Mr 7 '53

BAUSCHINGER effect

Effect of slightly elevated-temperature treatment upon microscopic and submicroscopic residual stresses induced by small inelastic strains in metals. H. T. Corten and T. M. Elsesser. bibliog A S M E Trans 74:1297-302 N '52

Influence of aging on the Bauschinger effect in inelastically strained beams. T. M. Elsesser and others. bibliog diags A S M E Trans 74:1291-6 N '52

BAUXITE

Bauxite production and imports, 1944-1952; tabulation. Steel 132:176 Ja 5 '53

First shipment of bauxite leaves Kaiser's Jamaica plant. il Chem & Eng N 31:883+ Mr 2 '53; Steel 132:50 F 23 '53; Eng & Min J 154:96-8 Je '53

Transportation

American railroad in Jamaica hauls bauxite ore. B. K. Martin. il Ry Age 135:112 Jl 13 '53

Handling plant in bauxite ore carrier. diags Engineer 195:98 Ja 16 '53

BAY, Charles Ulrick, 1888-

Businessmen in the news. por Fortune 47:55 Mr '53

BAY CITY, Michigan

Bay City story; survey of the plumbing, heating and appliance needs. il Dom Eng 180:91-121+ N; 80-7+ D '52

BEACH architecture

Waikiki Beach shops. il plans Arch Rec 112:153-5 S '52

BEACH houses

California beach house. il plan Arch Rec 112:142-4 S '52

BEALL, Lester

Lester Beall, versatile designer, has keen interest in typography. L. H. Allen. pors Inland Ptr 129:44-5 S '52

BEAM system of radio communication. See Radio communication—Beam system

BEAMS and girders

Aluminium roof girders. il Engineer 195:530 Ap 10 '53; Engineering 175:569 My 1 '53

Aluminum used for main girder of emergency dam at Morgantown. il Eng N 149:26 N 13 '52

Analysis of beam-and-girder framing with known column settlements. P. M. Ferguson. diag Am Concrete Inst J 24:77-84 O '52

Analyzing beam vibration. G. Sonnemann. bibliog diags Machine Design 25:123-8 Je '53

Application of Maclaurin series to the analysis of beams in bending. M. Hetényi. diags Franklin Inst J 254:369-80 N '52

Bent beams; flames did the damage and flames correct the deflection. il Eng N 150:34 Mr 12 '53

Continuous bridge girder prestressed in a single operation. F. Leonhardt. il plan diags Civil Eng 23:18-21 Ja '53

Continuous prestressed concrete beams. F. Leonhardt. il plan diags Am Concrete Inst J 24:617-34 Mr '53; Discussion. 25:636^1-636^3 pt 2 D '53

Determining cable profiles for prestressed concrete beams. E. Geer. diags Am Concrete Inst J 24:301-4 D '52

Developments in the rolling of broad flange beams at the Cargo fleet iron company, ltd. G. B. Thomas. 4pls Iron & Steel Inst J 173:113-18 F '53; Abstract. Engineering 175:650 My 22 '53; Discussion. Iron & Steel Inst J 174:339-40 Ag '53; Engineering 175:650 My 22 '53; Engineer 195:694 My 15 '53

Differential shear-flow analysis for non-prismatic semimonocoque beams. W. B. King and W. R. Garrison. diags J Aeronautical Sci 20:127-35 F '53

Economical design of prestressed concrete beams. D. P. Billington. diags Am Concrete Inst J 25:73-87 S '53

Effect of compressive reinforcement on the plastic flow of reinforced concrete beams. G. W. Washa and P. G. Fluck. il diags Am Concrete Inst J 24:89-108 O '52; Discussion. 25:108^1-108^8 pt 2 D '53

Flexure of double cantilever beams. F. E. Wolosewick. diags Am Soc C E Proc 78 [no 158]:1-11 N '52

Garage roof of prestressed block beams. A. M. Lount and L. Schenker. il diag Concrete 61:32+ F '53

Graphical methods for determining beam deflections; data sheet. E. L. Richmond and R. H. Feng. bibliog diags Machine Design 25:177-83 S '53

Horizontally curved box beams. C. E. Cutts. bibliog il diags Am Soc C E Proc 78 [no 128]:1-18 My '52; Discussion. 79 [no D-128]: 1-10 Mr '53

How to lower prestressing costs. P. W. Abeles. il diags Eng N 149:32-4 O 30 '52

Influence lines for support moments in continuous beams. R. C. Coates. diags Engineering 174:230-1 Ag 22 '52

Influence of aging on the Bauschinger effect in inelastically strained beams. T. M. Elsesser and others. bibliog diags A S M E Trans 74:1291-6 N '52

Introduction to electrical circuit analogies for beam analysis. S. U. Benscoter and R. H. MacNeal. Machine Design 25:264+ Ja '53

Lateral instability of rectangular beams of strain-hardening material under uniform bending. W. H. Wittrick. bibliog diags J Aeronautical Sci 19:835-43 D '52

Long prestressed girder in Belgium carries 6,700 kips. G. Magnel. il Civil Eng 23:111 F '53

Low-cost warehouse with prestressed girders. il diags Eng N 150:41-3 Je 11 '53

New system for prestressing beams devised. il Civil Eng 22:907 O '52

Nomogram for determining modulus of rupture of 3 x 4 x 16-in. and 6 x 6 x 36-in. concrete beams. S. Lin. Am Concrete Inst J 24:337-9 D '52

Normal functions of beam vibration in series solutions of static problems. R. E. D. Bishop. bibliog Roy Aeronautical Soc J 57:527-9 Ag '53

Old steel tops new concrete frame. il Constr Methods 35:80-1+ Ap '53

Pier 57's girders are being cast. il Eng N 149:27 O 30 '52

Plastic strength and deflections of continuous beams. K. E. Knudsen and others. bibliog(22 titles) diags Welding J 32:sup240-55 My '53

Plywood girders and glued laminated beams; with time-saver standards. S. Howard. diags Arch Rec 113:183, 185 Ja '53

Prestressed beams using concrete blocks developed by the H.E.P.C. il diag Roads & Eng Constr 90:112-13+ O '52

Prestressed concrete girders span college hall at Manhattanville college. C. Dobell. il Am Concrete Inst J 24:457-66 Ja '53; Same. Concrete 61:3-6+ My '53

Prestressed concrete wins place in Massachusetts bridge program. J. C. Rundlett. diags Am Concrete Inst J 24:469-83 Ja '53; Same cond. il Civil Eng 23:13-17+ Ja '53

Prestressed girders support garage floor. il plan diags Eng N 149:38-9 N 13 '52

Prestressed machine-made block assemblies. il Concrete 61:6-8+ Ag '53

Prestressed roof beams span 150 ft in hangar at London airport. il Eng N 149:61-2 N 13 '52

BEAMS and girders—*Continued*

Pre-stressed tile beams; Stahlton process. L. R. Whitaker. il diags Brick & Clay Rec 122:50-1 My '53; Discussion. S. J. Galvin. 123:10 Jl '53

Quick slide-rule calculations for design of uniformly loaded beams. M. B. Shany. diags Civil Eng 22:1037 D '52

Reinforced concrete box girders solve four problems. il Pub Works 83:99-100 D '52

Repair of a cast-iron bridge girder. Engineering 174:613-14 N 7 '52

Residual stresses in beams after bending. Engineer 194:864-5 D 26 '52

Stresses in a curved beam. A. D. Richards. diag Engineering 176:103-5 Jl 24 '53

T-beam design and the 1951 ACI building code. B. A. Wasil. diags Am Concrete Inst J 24:185-91 N '52; Discussion. 25:192^{1}-192^{4} pt 2 D '53

Testing of roof-bolting systems installed in concrete beams. R. G. Wuerker. bibliog(42 titles) il diags Min Eng 5:Trans 606-14 Je '53

Tests of pre-cast prestressed concrete floor beams. il diag Engineering 174:154-5 Ag 1 '52

Torsion of I-type and H-type beams. J. E. Goldberg. diags Am Soc C E Proc 78 [no 145]:1-20 Ag '52; Discussion. 79 [no D-145]: 1-3 My '53

U-block for beams in hurricane areas. il Concrete 61:8+ My '53

Unsymmetrical bending and bending combined with axial loading of a beam of rectangular cross section into the plastic range. A. J. Barrett. diags Roy Aeronautical Soc J 57:503-9 Ag '53

Vibrations of a continuous beam under a constant moving force. E. Saibel and W. F. Z. Lee. bibliog diags Franklin Inst J 254: 499-516 D '52

World's heaviest prestressed building girders; garage building. T. Y. Lin. il plan diags Civil Eng 22:927-31 N '52

Testing

Beam made of lightweight concrete tested. il Concrete 61:26+ Mr '53

Behavior of composite T-beams with prestressed and unprestressed reinforcement. S. Revesz. il diags Am Concrete Inst J 24:585-92 F '53; Correction. 24:sup7 Mr '53

Diagonal tension in T-beams without stirrups. P. M. Ferguson and J. N. Thompson. il diags Am Concrete Inst J 24:665-75 Mr '53; Discussion. 25:676^{1}-676^{3} pt 2 D '53

Effect of sustained overload on the strength and plastic flow of reinforced concrete beams. G. W. Washa and P. G. Fluck. il Am Concrete Inst J 25:65-72 S '53

Fatigue tests of steel girders. H. Bühler. bibliog diag Welding J 32:sup52-4 Ja '53

Prestressed concrete full-scale beam test planned at Lehigh. il diags Roads & Sts 96: 86 Ap '53

Some problems in flexural testing. F. A. Blakey. bibliog diags Engineer 196:98-100 Jl 24 '53

Studies of slab and beam highway bridges; full-scale tests of channel shear connectors and composite T-beams. I. M. Viest and others. il diags Ill U Eng Exp Sta Bul 405:1-155 bibliog(112 titles, p151-5) '52 (pa $1).

Tests establish construction procedures for prestressed beams in Tampa Bay bridge. W. E. Dean. il diags Civil Eng 23:30-4 Ja '53; Same. Am Concrete Inst J 24:409-20 Ja '53

Ultimate strength and cracking resistance of lightly reinforced beams. S. D. Lash. bibliog diag Am Concrete Inst J 24:573-82 F '53; Discussion. 25:584^{1}-584^{2} pt 2 D '53

BEANS

Farm-truck to freezer in 19 min.; Biscayne frozen foods. A. L. Stahl and C. J. John. il Food Eng 24:142-3+ N '52

Pipecolic acid in phaseolus vulgaris; evidence on its derivation from lysine. N. Grobbelaar and F. C. Steward. diags Am Chem Soc J 75:4341-3 S 5 '53

See also

Castor beans

Soybeans

BEAR River formation

Age of the Bear River formation, Wyoming. T. Yen. bibliog Geol Soc Bul 63:757-63 Ag '52

BEARING metals

Aluminum-on-steel bearings. J. B. Mohler. il Diesel Power 31:38-41 S '53

Iron-silicon brass as substitute for tin bronzes and zinc alloys; abstract. V. V. Gusyev. Metal Prog 63:202+ My '53

Recent views on bearing properties; abstract. B. Lunn. Metal Prog 63:206 My '53

Sensitivity of bearing materials to abrasive dirt in oil supply. A. E. Roach. il diags Product Eng 23:155-9 D '52

Testing

Asarco continuous-cast bearing bronzes. J. S. Smart, jr. and P. J. Kranz. il diags Mech Eng 75:287-90 Ap '53

BEARING surfaces

Wear phenomena; effects of lubrication and the nature of the superficial layer. F. T. Barwell. bibliog Automobile Eng 43:77-80 F '53; Abstract. Metal Prog 63:198+ Ja '53

BEARINGS

Analysis of the pivoted-pad journal bearing. J. Boyd and A. A. Raimondi. diags Mech Eng 75:380-6 My '53

Babbitted bearings; reasons for troubles, and their cures. diags Power Eng 56:72-3 N '52

Bearing failure; with emphasis on fatigue. B. P. Robertson. Machine Design 25:318+ Je '53

Bearings for gyroscope rotors. diags Engineer 194:651 N 14 '52

Bearings, lubricants, and lubrication; digest of 1951 literature. Mech Eng 74:885-91 bibliog(137 titles, p889-91) N '52

Dry rolling bearings for heavy-duty toggle mechanisms. A. J. Roubal. il diags Machine Design 25:131-3 Je '53

How can we detect hot machine bearings? il diags Power 97:130-2 Ag '53

How does water get into fan bearings? T. Hicks. diags Power 97:130-1 Ja '53

Low friction properties of air-lubricated bearings. D. D. Fuller. il diags Machine Design 25:272-3+ Ap '53

Nomographic method for sleeve bearing design. D. F. Wilcock and M. Rosenblatt. il diag Machine Design 25:143-57 Ag '53; Correction. 25:197 O '53

Selecting and applying lubricant to plain bearings. L. Ballard. il diags Mach 59:184-7 N '52

Solution of the Reynolds equation for slider-bearing lubrication. A. Charnes and others. bibliog diag A S M E Trans 74:867-73; 75: 269-71, 507-12, 1117-21, 1125-36 Jl '52, F, My, Ag '53; Discussion. 75:271-2, 512-13, 1121-3 F, My, Ag '53

Some considerations in bearing operation. R. J. S. Pigott. Machine Design 24:296+ D '52

Wear phenomena; effects of lubrication and the nature of the superficial layer. F. T. Barwell. bibliog Automobile Eng 43:77-80 F '53; Abstract. Metal Prog 63:198+ Ja '53

Weather maps for bearing design. diag Machine Design 25:150 S '53

See also

Bearing metals

Bearings, Ball

Bearings, Roller

Bearings, Thrust

Lubrication and lubricants

also subdivision Bearings under special subjects, e.g.

Cars

Diesel engines

Paper making machinery

Rolling mills

Standards

Metal-powder sintered bearings; tentative standard; reference book sheet. Am Mach 97:287 Ja 19 '53

SAE standard sizes of sleeve type half-bearings; data sheet. Mach 60:249 S '53

Testing

Effects of solid inclusions in sleeve-bearing oil supply. H. G. Rylander. il diags Mech Eng 74:963-6 D '52; Discussion. 75:416-18 My '53

BEARINGS, Anti-friction

Airframe control bearing selection. Machine Design 25:168 My '53

BEARINGS, Anti-friction—*Continued*

Antifriction bearings; sales rolling freely as industry uses more. Steel 131:67 N 3 '52

Anti-friction bearings stabilized in sub-zero refrigerating machines. J. D. Fitzpatrick. il Automotive Ind 109:56+ Jl 15 '53

Application of lubricants to anti-friction bearings. L. Ballard. Mach 59:196-8 Ja '53

Bearings; fingerprint contamination can be eliminated. J. H. Gustafson. Iron Age 171: 203-4 Mr 5 '53

Design and construction features of pillow blocks. J. Riddle. il Mill & Factory 53:115-19 Jl '53

Evaluation of bearing packages. W. E. Ellis and others. bibliog il Mod Packaging 26: 127-32+ My '53

How to make anti-friction bearings live longer. W. F. Schaphorst. Pulp & Pa of Can 53:130 O '52

Lubrication economy. W. F. Schaphorst. Pulp & Pa of Can 54:116 Mr '53

Maintaining traction motor bearings. F. S. Ball. il diags Diesel Power 31:74-8 Ja '53

Tests for ball and roller bearing greases. H. A. McConville. il Product Eng 24:160-3 Mr '53

Trouble-shooting on anti-friction bearings. il Mill & Factory 52:123-6 Ja '53

BEARINGS, Ball

Ball bearing imports, 1939-1952; tabulation. Iron Age 171:458 Ja 1 '53

Ball bearing lubrication; reference sheet. diags Tool Eng 30:75-8 My '53

Bearings for gyroscope rotors. diags Engineer 194:651 N 14 '52

Bearings; system helps select smallest bearing for desired bearing life. il diags Iron Age 171:114 Ja 22 '53

Noisy bearings up maintenance. J. Sparks. il Power 97:147 O '53

Oscillatory occurrences in ball bearings. M. S. Frenkel. diags Roy Aeronautical Soc J 56: 885-908 D '52; Discussion. 57:530-2 Ag '53

Pillow blocks for long shafting; illustrated instructions. Power 97:120-1 F '53

See also
Bearings, Anti-friction

Manufacture

Bearing races machined at high speed. R. Brooks. il Iron Age 170:180-2 N 6 '52

Simplified ball bearing fabricated from steel tubing. E. W. Batterson. il Materials & Methods 38:62-3 Jl '53

Standards

Report of ISO committee on ball and roller bearings. Standardization 23:280-1 S '52

BEARINGS, Needle

Hopper feeds needles to bearings. H. Chase. il Steel 132:79+ Ja 26 '53

Industry gets the needle. Steel 132:52 Mr 30 '53

BEARINGS, Plastic

Laminated plastics improve precision bearing performance. H. Widdop. il diags Materials & Methods 36:99-101 D '52

Nylon bearing. il Iron Age 171:176-7 F 5 '53

Nylon for bearings and gears. R. Lurie. il Gen Elec R 55:34-5+ Jl '52; Same cond. Machine Design 25:270+ Ja '53

BEARINGS, Roller

Bearing has tapered bore. il Steel 131:282+ O 13 '52

Crane supported by spherical roller bearing. il diag Machine Design 25:246 My '53

Heavy duty high speed roll neck bearing. P. L. Haager. il diags Iron & Steel Eng 30:158-63 S '53

Operating characteristics of cylindrical roller bearings at high speeds. E. F. Macks and others. bibliog il diags A S M E Trans 74: 705-10 Jl '52; Same cond. Product Eng Hdbk p F2-6 '53; Discussion. A S M E Trans 74:711-13 Jl '52

Pillow blocks for long shafting; illustrated instructions. Power 97:120-1 F '53

Roller bearing imports, 1939-1952; tabulation. Iron Age 171:458 Ja 1 '53

Selection and application of roller bearings. K. N. Mills. il diags Machine Design 25: 248-54 Ap '53

Small bearing carries big load; new roller-type aircraft units. G. L. Christian. il Aviation W 58:61-2 Ap 20 '53

See also
Bearings, Anti-friction
Bearings, Needle

Manufacture

Special gaging for high-precision production. G. E. Durham. il Tool Eng 30:57-8 My '53

What to do for distortion control in large rings. M. Jensen. il diags Am Mach 97: 145-7 Jl 6 '53

Standards

Report of ISO committee on ball and roller bearings. Standardization 23:280-1 S '52

BEARINGS, Step. See Bearings, Thrust

BEARINGS, Thrust

Experiments with water-lubricated tapered-land thrust bearings. M. Levinsohn and N. E. Reynolds. il diags A S M E Trans 75:1137-45 Ag '53

Look at hydrostatic thrust bearings. F. R. Archibald. diags Machine Design 25:170 S '53

Solution of the Reynolds equation for slider-bearing lubrication; sector thrust bearing. A. Charnes and others. diag A S M E Trans 75:1125-32 Ag '53

Swaged housing ring grooves to retain axial thrust bearings. C. H. Avery and A. G. Brisack. il diags Product Eng 23:149-52 N '52

BEARPAW mountains

Fox Hills and Hell Creek strata in the Bearpaw mountains, Mont. Science 117:39-40 Ja 9 '53

BEATING process. See Paper making—Beating

BEATRICE foods company

Five stocks best suited to resist downtrend; with comparative balance sheet items. Mag of Wall St 91:28 O 4 '52

Sound stocks with above-average yield; with comparative balance sheet items. Mag of Wall St 91:707 Mr 21 '53

BEAVERHEAD formation

Beaverhead formation, a Laramide deposit in Beaverhead county, Montana. W. R. Lowell and M. R. Klepper. bibliog maps Geol Soc Bul 64:235-43, pl 1-2 F '53

BEBEERINE

Fission of phaeanthine and bebeerine dimethyl ether with sodium in liquid ammonia. D. A. A. Kidd and J. Walker. bibliog Chem & Ind p243-4 Mr 14 '53

BECHTEL, Stephen Davison, 1909-

Bechtel's pipe dream; natural gas from the Middle East. por Fortune 46:103-4 N '52

BECK, David, 1894-

Changeover for the Teamsters; Dave Beck top man. por Bsns W p 167-8 O 25 '52

Man to clean up New York docks? pors Bsns W p 134-7 F 14 '53

BECKER, Charles Everett, 1896-

What's behind the fantastic upsurge in sales at Franklin Life. A. R. Hahn. por Sales Management 70:24-7+ F 15 '53

BECKER, Joseph, 1887-

Retires as vice president and general manager, Engineering and construction division of Koppers co. por Blast F & Steel Pl 41: 93 Ja '53

BECKER, Sidney Bernard

Businessmen in the news. por Fortune 46: 62 O '52

BECKMAN instruments, inc.

New scientific devices build sales. Barron's 33:27+ Ja 5 '53

BECKMAN spectrophotometers. See Spectrophotometers

BECKMANN rearrangement. See Molecular rearrangements

BED bugs

Insecticides in public health; repercussions on food production. F. P. Coyne. bibliog Chem & Ind p965-8 O 4 '52

BEDDING

See also
Mattresses
Sheets

BEDPLATES. See Machinery—Bedplates

BEECH
Chemistry of the wood cell wall; the delignification of beech and spruce woods by sodium chlorite in buffered aqueous solution. W. G. Campbell and I. R. C. McDonald. Chem Soc J p2644-50 Jl '52
Chemistry of the wood cell wall; the isolation of beech and spruce acid-soluble and modified lignins. W. G. Campbell and I. R. C. McDonald. Chem Soc J p3180-3 Ag '52

BEECH aircraft corporation
Beech corp. billings triple in year. S. Altschul. Aviation W 57:46+ D 22 '52

BEECH Creek railroad
Good yields in guaranteed rails. R. Carleson. Mag of Wall St 92:112 Ap 18 '53

BEEF
Less beef shrinkage in gas ranges, AGA research group finds. il Am Gas J 179:46 Ag '53

Transportation

Dressed-beef damage reduced. il Ry Age 134:58-9 My 4 '53

BEEKMAN-DOWNTOWN hospital. See New York (city)—Hospitals

BEER
Beer mystery in Chicago. Bsns W p27 F 21 '53
Controlling the variables for a better brew. il Chem W 72:29-30 F 21 '53
Hamm's gains ground in the battle of the beers. W. C. Figge. il Sales Management 70:28-30 Ja 1 '53
Quality of cereals and their industrial uses; some malting methods. R. M. Thomson. bibliog Chem & Ind p 112-16 F 7 '53
Sound waves save ingredients in cooking operations at Schultheis brewery. G. W. Schroder. il Food Eng 25:48-50 F '53; Discussion. 25:183-4 Ap '53
See also
Breweries
Brewing

Advertising

Acme beer's tv round table; it's more than a sales builder. E. Stoutenburgh, jr. Sales Management 70:124+ Ja 15 '53

BEERS, Fred C.
F. C. Beers, 75, still in printing. por Inland Ptr 130:37 Mr '53

BEER'S law
Beer's law and spectrophotometer linearity. C. G. Cannon and I. S. C. Butterworth. Anal Chem 25:168-70 Ja '53

BEESLEY, Eugene N.
Businessmen in the news. por Fortune 47:54 My '53

BEETLES
Effects of beetle infestations on watersheds. D. S. Nordwall. Am Water Works Assn J 45:797-803 Ag '53

BEETS and beet sugar
Floc in carbonated beverages. F. G. Eis and others. bibliog diag Ind & Eng Chem 44:2844-8 D '52
Isolation and identification of O-α-D-galactopyranosyl-*myo*-inositol and of *myo*-inositol from juice of the sugar beet (beta vulgaris). R. J. Brown and R. F. Serro. bibliog Am Chem Soc J 75:1040-2 Mr 5 '53
Methanol-insoluble material in sorgo and beet juices. W. A. Harris and others. bibliog Ind & Eng Chem 44:2414-17 O '52
Precision drilling of sugar beet seed. il diag Engineer 195:603-4 Ap 24 '53
Sugar beet harvesting machinery demonstration. Engineer 194:575 O 31 '52
Sugar beet plant ranks among continent's finest. J. A. Swan. il diag Can Chem Process 36:48+ N '52

BEHLEN, Walter
Farm-belt inventor. Fortune 47:168 Ap '53

BELFAST, Ireland
See also
Electricity supply—
Belfast, Ireland

BELGIAN Congo. See Congo, Belgian

BELGIUM

Economic conditions

Economic conditions abroad. For Comm W 48:7 D 8 '52; 49:4 Ap 6 '53

BELL, Charles Heffelfinger, 1907-
Bell of General mills. por Fortune 47:150-1 Ap '53

BELL aircraft corporation
May net $4 per share in 1953. Barron's 32:22-3 D 8 '52

BELL and Howell company
Promising new products to increase profits this year. Barron's 33:19-20 My 25 '53

BELL telephone system
Bell engineers aim for an all-automatic system. il maps Bsns W p62-4+ My 23 '53
Bell System cuts backlog of phone requests; financial report. Pub Util 51:236-7 F 12 '53
Outlook for the Bell System. R. H. Hughes. Pub Util 51:172-5 Ja 29 '53

BELT conveyers. See Conveying machinery—Belt conveyors

BELT drive. See Belting

BELTING
Answers to your V-belt questions. F. H. Rumble. diags Power 96:112-13 N '52
Belting paper machine cone drives. S. L. Allen. Tappi 36:82-5 F '53
Elevator belt maintenance. diags Brick & Clay Rec 121:68-9+ D '52
Heat detector ends belt fires. diags Safety Maint & Prod 106:59-60 Jl '53; Excerpt. Refrig Eng 61:651 Je '53
How to install and maintain rubber belts. B. R. Forbes. il Paper Tr J 137:16+ Jl 10 '53
Industrial belts. Steel 132:51 Mr 23 '53
Safety factor for belt drives. Brick & Clay Rec 122:73 Je '53
Select V-belts to do a specific job. T. G. Hicks. il diags Textile World 103:128-9+ Ag '53
Timing belts drive spindles in duplicator. il diags Product Eng 24:162-5 My '53
Tooth-grip belt and axial-grooved pulley gives positive, synchronized transmission drive. il Factory Management 110:90-2 D '52
Two tips for longer flat belt life. diags Brick & Clay Rec 122:72 Je '53

Manufacture

Better V-belt is made with humidity control; B. F. Goodrich co. W. G. Davidson. il Refrig Eng 60:1186-7+ N '52; Discussion. 61:61-2 Ja '53

Tables, calculations, etc.

Approximate length of V-belts; chart; data sheet. Power 97:103 Mr '53
Belt lengths; nomograph; reference book sheet. D. E. Sweet. diag Am Mach 97:157 S 28 '53
How to determine belt gear velocity. Brick & Clay Rec 123:47 Ag '53
How to figure belting tension. Mill & Factory 52:109 F '53

BELTING, Conveyor
How to splice rubber conveyor belts; maintenance data sheet. A. F. Matheis. diags Factory Management 111:160, 162, 164 S '53
Rough-topped belting conveys heavy boxes. il Rubber Age 72:222 N '52
Selection and maintenance of rubber conveyor belting. F. Matheis. il diags Food Eng 25:72-4+ My '53; Same cond. Constr Methods 35:129-30+ Jl '53; Same cond. Eng & Min J 154:92-4+ S '53
Tips on repairing conveyor belts; with illustrated instructions. Rock Prod 55:94-5 D '52

Manufacture

Machine 41 ft long biggest producer of flat belts. il Iron Age 170:197 D 4 '52

Specifications

How to specify conveyor belting for foundry applications. R. H. Herrmann. bibliog il diags Foundry 81:86-93+ Ag '53

BELTS, Abrasive. See Abrasive belts

BELTS, Safety. See Safety belts

BENDING
Application of Maclaurin series to the analysis of beams in bending. M. Hetényi. diags Franklin Inst J 254:369-80 N '52
Axial tension and bending interaction curves for members loaded inelastically. D. O. Brush and O. M. Sidebottom. il diags A S M E Trans 75:63-71; Discussion. 71-2 Ja '53
Bending of aluminum alloy sheet; tabulations; engineering file facts. H. M. Jensen. Materials & Methods 36:143 N '52

BENDING—*Continued*

Bending of some common beam sections into the plastic range. A. J. Barrett. diags Roy Aeronautical Soc J 47:110-15 F '53

Bending strength of corrugated plate. J. B. Caldwell. il diags Engineering 174:609-12 N 7 '52

Cold-forming of channels on a vertical hydraulic press. R. Wagner. il diags Mach 59:195-8 N '52

Column strength under combined bending and thrust. R. L. Ketter and others. bibliog il diags Welding J 31:sup607-22 D '52

Determination of bending frequencies by Rayleigh's method. F. Niedenfuhr. diag J Aeronautical Sci 19:849-50 D '52

Determination of planeness and bending of optical flats. W. B. Emerson. bibliog il diags J Res Nat Bur Stand 49:241-7 O '52

Lateral instability of rectangular beams of strain-hardening material under uniform bending. W. H. Wittrick. bibliog diags J Aeronautical Sci 19:835-43 D '52

Photo-elastic research on plates in transverse bending. A. Kuske. bibliog il diags Engineering 175:20-1, 36-9 Ja 2-9 '53

Residual stresses in beams after bending. Engineer 194:864-5 D 26 '52

Stability in bending of slightly corrugated plates. D. G. Ashwell. diags Roy Aeronautical Soc J 56:782-8 O '52

Unsymmetrical bending and bending combined with axial loading of a beam of rectangular cross section into the plastic range. A. J. Barrett. diags Roy Aeronautical Soc J 57:503-9 Ag '53

See also

Tube bending

BENDING machines

Bends aluminum alloy wing beams. il Machine Design 25:170 Ja '53; Iron Age 171:113-14 Ja 8 '53; Steel 132:82 Ja 26 '53; Aviation W 58:54 F 16 '53

Combination bender and welder makes freezer cabinets. il Am Mach 97:148 S 28 '53

Combination welding and forming machine. J. Maloney. il Welding J 32:231 Mr '53

Heavy-duty plate bending machine. il Engineer 195:811 Je 5 '53; Engineering 175:828-9 Je 26 '53

Hydraulic rod bender works fast. H. M. Shuff. il Eng N 149:64 D 11 '52

Pines semi-automatic bender designed to simplify bending of serpentine coils. il Mach 59:213 F '53

Pines 20-ton tube-bending press bends two-in. tube 180°. il Am Mach 97:224+ Ap 13 '53; Tool Eng 30:142 Ap '53

Turner sheet metal bending machine. il diags Engineer 195:572 Ap 17 '53

Vertical press speeds multiple bending. il Machine Design 25:133 Je '53

See also

Rolls (bending machines)

BENDIX aviation corporation

Five stocks with better-than-average prospects; with comparative balance sheet items. Mag of Wall St 91:125 N 1 '52

Heavy defense backlog will keep its sales high; with tables of financial data, 1939-1952. J. C. Mueller. Barron's 32:17-19 D 15 '52

BENEFICIAL loan company

Sound stocks with above-average yield; with comparative balance sheet items. Mag of Wall St 91:708 Mr 21 '53

BENEFIT plans, Employees'. See Employees' benefit plans

BENEFIT societies

California rules on fraternal forms; gives societies six months' respite on filings. Weekly Underw 167:1070 O 25 '52

Examinations completed on two Polish fraternals. Nat Underw (Life ed) 56:19 O 31 '52

Fraternal orders; business of 1952 and condition, December 31, 1952; table. Weekly Underw 168:96 sec 2 My 9 '53

Official urging, life company trend leave fraternals cool to entering A.&H. Nat Underw (Life ed) 57:4 Ja 9 '53

BENELUX union

Belgium-Luxembourg has EPU deficit. For Comm W 48:5 O 6 '52

Belgium-Luxembourg trade shows deficit; Belgian output rises. For Comm W 49:4 Ap 6 '53

Benelux at breaking point? Economist 167:585-6 My 30 '53

Lessons for economic federation. Economist 165:434-5 N 15 '52

BENNETT, Irving T.

Businessmen in the news. por Fortune 47:54 My '53

BENSON, Ezra Taft, 1899-

Eisenhower's Cabinet; a gamble. por Bsns W p30-1 N 29 '52

New REA program overseer. por Elec World News ed 138:10 D 8 '52

Portrait. Bsns W p29 Mr 21 '53

Secretary of agriculture. Nat Pet N 44:40 N 26 '52

BENTONITE

Air tramway solves transport problem at Magnet Cove. D. F. Dwyer. il Eng & Min J 153:88-9 O '52; Same. Rock Prod 55:118-19 D '52

Effect of exchangeable bases on the colloidal properties of bentonite. F. J. Williams, M. Neznayko and D. J. Weintritt. bibliog J Phys Chem 57:6-10 Ja '53

Lower middle Devonian meta-bentonite in West Virginia. R. R. Flowers. map Am Assn Pet Geologists Bul 36:2036-8 O '52

New developments in the use of bentonite in cements. B. E. Morgan and G. K. Dumbauld. bibliog Oil & Gas J 51:131-2+ Ap 20 '53

Oil and bentonite lands are offered for leasing. Oil Paint & Drug Rep 163:3+ My 4 '53

Synthesis of organo-bentonite anhydrides. W. H. Slabaugh. bibliog J Phys Chem 56:748-51 Je '52

Tioga bentonite in Pennsylvania and adjacent states. C. R. Fettke. Am Assn Pet Geologists Bul 36:2038-40 O '52

See also

Montmorillonite

BENZACRIDINE

Carcinogenic nitrogen compounds; benzacridines, benzocarbazoles, and related compounds bearing ethyl and propyl groups. N. P. Buu-Hoï and others. Chem Soc J p4867-9 D '52

Carcinogenic nitrogen compounds; fluorine-containing 1 : 2- and 3 : 4-benzacridines. N. P. Buu-Hoï and P. Jacquignon. Chem Soc J p4173-5 N '52

BENZALACETOPHENONE. See Chalcones

BENZALDEHYDE

Kinetics of the base-catalyzed condensation of benzaldehyde with phenacyl chloride. M. Ballester and P. D. Bartlett. bibliog Am Chem Soc J 75:2042-3 My 5 '53

New product from benzene and blast furnace gas; carbon monoxide in blast furnace gas as a chemical reagent to convert benzene into benzaldehyde. J. L. Boyle. Blast F & Steel Pl 40:1443-7 D '52

Photochemical addition of benzaldehyde to quinones. R. F. Moore and W. A. Waters. Chem Soc J p238-40 Ja '53

Retardation of benzaldehyde autoxidation; a comparative study of the actions of *p*-cresol, *m*-2-xylenol, and their oxidation products. W. A. Waters and C. Wickham-Jones. Chem Soc J p2420-7 Je '52

Retardation of benzaldehyde autoxidation; a kinetic study of the actions of 3 : 5 : 3′ : 5′-tetramethyl-4 : 4′-diphenoquinone and the corresponding quinol. J. R. Dunn, W. A. Waters and C. Wickham-Jones. Chem Soc J p2427-31 Je '52

Retardation of benzaldehyde autoxidation; isolation of chain-termination products from 3 : 5 : 3′ : 5′-tetramethyl-4 : 4′-diphenoquinone. R. F. Moore and W. A. Waters. Chem Soc J p2432 Je '52

Spectra of azlactones; azlactones derived from substituted benzaldehydes and hippuric and nitrohippuric acids. D. A. Bassi, V. Deulofeu and F. A. F. Ortega. bibliog Am Chem Soc J 75:171-8 Ja 5 '53

BENZAMIDE

Antitubercular studies; 4-aminobenzamides and 4-aminobenzenesulfonamides. P. Truitt, G. Sammons and D. Zachry. bibliog Am Chem Soc J 74:5961-3 D 5 '52

Mechanisms of hydrogen peroxide reactions; the conversion of benzonitrile to benzamide. K. B. Wiberg. Am Chem Soc J 75:3961-4 Ag 20 '53

BENZANTHRACENE

Friedel-Crafts succinoylation of anthracene; synthesis of 1′- and 4′-hydroxy-1 : 2-benzanthracene. R. Schoental. Chem Soc J p4403-6 N '52

BENZENE

Absolute Verdet constants for benzene over a range of temperatures and visible wave lengths. R. L. Custer and C. E. Waring. bibliog Am Chem Soc J 74:5726-8 N 20 '52
Acylation and allied reactions catalysed by strong acids; a comparison of the action of acetyl and benzyl perchlorates on benzene and related compounds. H. Burton and P. F. G. Praill. diag Chem Soc J p827-32 Mr '53
Aluminum chloride-catalyzed condensation of γ-butyrolactone with benzene. W. E. Truce and C. E. Olson. Am Chem Soc J 74:4721 S 20 '52
Approximate calculation of the benzene self-complex interaction energy at high pressure. K. E. Shuler. J Chem Phys 21:765-6 Ap '53
Aromatic azo-compounds; oxidation of *cis*- and *trans*-azobenzene and substituted azobenzenes. G. M. Badger, R. G. Buttery and G. E. Lewis. Chem Soc J p2143-50 Jl '53
Boom in benzene. Oil & Gas J 51:170 S 22 '52
Catalytic hydrogenation of the benzene nucleus; the hydrogenation of benzilic acid. H. A. Smith, C. D. Shacklett and C. M. Welch. bibliog Am Chem Soc J 74:4534-6 S 20 '52
Characterization of some alkylbenzenes through their phthalic anhydride derivatives. G. F. Lewenz and K. T. Serijan. bibliog Am Chem Soc J 75:4087-9 Ag 20 '53
Copolymerization of benzene with vinyl acetate. W. H. Stockmayer and L. H. Peebles, jr. bibliog Am Chem Soc J 75:2278-9 My 5 '53
Cosden produces nitration-grade aromatics. Pet Refiner 32:90 F '53
Diffusion of benzene and methylene chloride vapors into polystyrene. F. A. Long and R. J. Kokes. bibliog Am Chem Soc J 75:2232-7 My 5 '53
Dipole moments and near ultraviolet absorption of some monosubstituted benzenes; the effect of solvents and hydrogen bonding. S. Nagakura and H. Baba. bibliog Am Chem Soc J 74:5693-8 N 20 '52
Direct cyanogenation of benzene. G. J. Janz. bibliog Am Chem Soc J 74:4529-31 S 20 '52
Disproportionation of alkylbenzenes; mechanism of alkyl-group transfer. D. A. McCaulay and A. P. Lien. bibliog Am Chem Soc J 75:2411-13 My 20 '53
Disproportionation of alkylbenzenes; product distribution and rate studies. A. P. Lien and D. A. McCaulay. bibliog Am Chem Soc J 75:2407-10 My 20 '53
Effect of promoters on the alkylation of benzene by secondary butyl methyl ether in the presence of boron trifluoride. R. L. Burwell, jr., L. M. Elkin and A. D. Shields. bibliog Am Chem Soc J 74:4567-70 S 20 '52
Electron distribution in molecules; F^{19} nuclear magnetic shielding and substituent effects in some benzene derivatives. H. S. Gutowsky and others. bibliog il diag Am Chem Soc J 74:4809-17 O 5 '52
Electronic orbitals, shapes, and spectra of polyatomic molecules; a note on the spectrum of benzene. A. D. Walsh. Chem Soc J p2330-1 Ag '53
Excited electronic state of the 2600A transition in benzene. A. C. Albrecht and W. T. Simpson. J Chem Phys 21:940 My '53
Formation of phenoxyacetic acids from alkoxybenzenes and diazoacetic ester. A. W. Johnson, A. Langemann and J. Murray. Chem Soc J p2136-40 Jl '53
Friedel-Crafts reactions between gaseous benzene and ethyl chloride on solid aluminum chloride. M. Blau and J. E. Willard. bibliog Am Chem Soc J 75:3330-3 Jl 20 '53
Halogenation in the liquid phase by chlorine trifluoride; the reaction with benzene derivatives and with carbon tetrachloride. J. F. Ellis and W. K. R. Musgrave. Chem Soc J p 1063-7 Ap '53
Higher value for benzene's resonance energy. G. Glockler. Chem & Eng N 30:4950-1 N 24 '52
Influence of σ-electrons on the lower excited electronic levels of benzene. K. Niira. J Chem Phys 20:1498-9 S '52
Isomerization accompanying alkylation; the reaction of benzene with *n*- and isopropylcyclopropane; the synthesis of *n*- and isopropylcyclopropane. H. Pines, W. D. Huntsman and V. N. Ipatieff. bibliog Am Chem Soc J 75:2311-15 My 20 '53
Kinetics of aromatic halogen substitution; relative reactivities of monosubstituted benzenes. P. W. Robertson, P. B. D. de la Mare and B. E. Swedlund. Chem Soc J p782-8 Mr '53
Molecular-orbital theory of conjugated organic compounds with application to the perturbed benzene ring. P.-O. Löwdin. bibliog diags J Chem Phys 21:496-515 Mr '53
Molecular polarisation and molecular interaction; the apparent dipole moments of mesidine, aminodurene, and methylmesidine in benzene and dioxan solutions. J. W. Smith. Chem Soc J p 109-13 Ja '53
Mononitration of benzene. K. A. Kobe and J. J. Mills. bibliog diag Ind & Eng Chem 45:287-91 F '53
New electronic state in benzene. J. S. Ham. il J Chem Phys 21:756-8 Ap '53
Nitration of monodeuterobenzene. W. M. Lauer and W. E. Noland. bibliog Am Chem Soc J 75:3689-92 Ag 5 '53
Optical dispersion of perdeuterobenzene and perdeuterocyclohexane. R. T. Davis, jr. and R. W. Schiessler. bibliog Am Chem Soc J 75:2763-4 Je 5 '53
Organometallic compounds of the alkali metals; the metallation and dimetallation of benzene. D. Bryce-Smith and E. E. Turner. Chem Soc J p861-7 Mr '53
Photochemical decomposition of benzene. G. E. Gibson and others. bibliog J Chem Phys 21:1000-4 Je '53
Polymorphism of solid acetic acid in the acetic acid-benzene system. W. Tan, K. A. Krieger and J. G. Miller. bibliog Am Chem Soc J 74:6181-3 D 20 '52
Preparation of two fluorinated *p*-dihalobenzenes. M. Hellmann and A. J. Bilbo. Am Chem Soc J 75:4590-1 S 20 '53
Producing monoalkylated benzenes. P. W. Sherwood. bibliog Pet Refiner 32:97-102 Ja '53
Rate of reaction of phenacyl halides with 4-picoline in benzene solution. D. L. Brebner and L. C. King. bibliog Am Chem Soc J 75:2330-4 My 20 '53
Rayleigh's ratio (absolute turbidity levels) for benzene, carbon tetrachloride, and toluene. R. F. Stamm and P. A. Button. bibliog diags J Chem Phys 21:1304-5 Jl '53
Rayleigh's ratio for benzene and the problem of absolute light scattering determinations. M. Halwer and others. bibliog J Chem Phys 21:1425-6 Ag '53
Resonance energies of benzene and butadiene. G. Glockler. bibliog J Chem Phys 21:1249-54 Jl '53
Rotational Raman spectrum of benzene vapor. B. Stoicheff. bibliog il J Chem Phys 21:1410-11 Ag '53
Second virial coefficient of benzene. P. G. Francis and others. bibliog J Chem Phys 20:1341 Ag '52
Solubility of the copper salts of aromatic carboxylic acids in benzene-ethanol mixtures. M. Crawford and F. H. C. Stewart. Chem Soc J p288-92 Ja '53
Some effects of cobalt gamma-radiation on aqueous benzene solutions. T. J. Sworski. bibliog J Chem Phys 20:1817-18 N '52
Spectroscopic study of the benzene-*s*-trinitrobenzene molecular complex. D. M. G. Lawrey and H. McConnell. bibliog Am Chem Soc J 74:6175-7 D 20 '52
Syntheses of benzene, toluene and benzoic acid labeled in the ring with isotopic carbon. M. Fields and others. bibliog Am Chem Soc J 74:5498-9 N 5 '52
Syntheses with isotopic traced elements; $[^{14}C_1]$benzene. H. S. Turner and R. J. Warne. diags Chem Soc J p789-95 Mr '53
System benzene-hydrogen bromide-aluminium bromide. D. D. Eley and P. J. King. diags Chem Soc J p2517-22, 4972-6 Jl, D '52

BENZENE—*Continued*

Viscosity-concentration law parameters for polystyrene in benzene. D. Cleverdon, D. Laker and P. G. Smith bibliog J Ap Chem 3:15-19 Ja '53

Analysis

Determination of benzene, cyclohexane, and methylcyclopentane by mass spectrometer. S. Meyerson. bibliog diag Anal Chem 25: 338-41 F '53

Manufacture

Aromatics recovery by hydroforming and phenol extraction. J. J. Swift and others. flow diag il diag Pet Processing 8:81-7 Ja '53

Do you need pure benzene? novel system utilizes azeotropic distillation. diag Chem Eng 60:388 Mr '53

First complete Udex benzene-toluene-xylene plant makes nitration-grade products. D. P. Thornton, jr. flow diag il Pet Processing 8:384-7 Mr '53

BENZENEBORONIC acid

Electrophilic displacement reactions; rates of brominolysis of substituted benzeneboronic acids. H. G. Kuivila and A. R. Hendrickson. bibliog Am Chem Soc J 74: 5068-70 O 20 '52

BENZENEDIAZONIUM compounds

Effect of structure of the alkyl group on the rates of decomposition of alkyl substituted benzenediazonium salts. E. S. Lewis and E. B. Miller. bibliog Am Chem Soc J 75: 429-32 Ja 20 '53

BENZENE hexachloride. See Hexachlorocyclohexane

BENZENESULFONATES

Neighboring carbon and hydrogen; participation in solvolysis of some primary benzenesulfonates. S. Winstein and others. bibliog Am Chem Soc J 75:147-55 Ja 5 '53

Some alkyl benzenesulfonates. B. L. Emling. Am Chem Soc J 74:4702-3 S 20 '52

BENZENE tetrachloride. See Tetrachlorocyclohexane

BENZIDINE

Benzidine rearrangement; kinetics and temperature coefficients of the rearrangements of hydrazobenzene and certain substituted hydrazobenzenes. L. J. Croce and J. D. Gettler. bibliog Am Chem Soc J 75:874-9 F 20 '53

3 : 6-Disubstituted fluorenes; the attempted introduction of a 6 : 6′-methylene bridge directly into 3 : 3′-diaminodiphenyl and some of its derivatives. A. Barker and C. C. Barker. Chem Soc J p2034-6 Jl '53

Mechanism of the benzidine rearrangement; general acid catalysts. M. D. Cohen and G. S. Hammond. bibliog Am Chem Soc J 75:880-3 F 20 '53

Separation of *m*- and *p*-cresols from their mixtures. S. A. Savitt and D. F. Othmer. bibliog(39 ref) flow sheet Ind & Eng Chem 44:2428-31 O '52

Substituted benzidines and related compounds as reagents in analytical chemistry; reagents for the precipitation of sulphate. R. Belcher, A. J. Nutten and W. I. Stephen. Chem Soc J p 1334-7 My '53

Substituted benzidines and related compounds as reagents in analytical chemistry; the oxidation potentials of naphthidine, 3 : 3′-dimethylnaphthidine, and their sulphonic acids. R. Belcher, A. J. Nutten and W. I. Stephen. Chem Soc J p3857-61 O '52

Substituted benzidines and related compounds as reagents in analytical chemistry; the titration of small amounts of gallium. R. Belcher, A. J. Nutten and W. I. Stephen. Chem Soc J p2438-9 Je '52

BENZIL

Polarized fluorescence of molecules of some single organic crystals. S. C. Ganguly and N. K. Choulhury. bibliog il J Chem Phys 21:554-7 Mr '53

BENZIL compounds

5-Benziloyloxymethylfurfuryltrimethylammonium chloride. A. S. Bailey, D. H. Bates and H. R. Ing. Chem Soc J p4534 N '52

BENZILIC acid

Catalytic hydrogenation of the benzene nucleus; the hydrogenation of benzilic acid. H. A. Smith, C. D. Shacklett and C. M. Welch. bibliog Am Chem Soc J 74:4534-6 S 20 '52

Preparation of substituted benzilic acids. C. D. Shacklett and H. A. Smith. bibliog Am Chem Soc J 75:2654-7 Je 5 '53

BENZIMIDAZOLE

Modified benziminazole synthesis. E. S. Lane. Chem Soc J p2238-40 Ag '53

Some benziminazole derivatives. B. N. Feitelson and others. Chem Soc J p2389-98 Je '52

Some substituted benzimidazoles. W. T. Smith, jr. and E. C. Steinle, jr. bibliog Am Chem Soc J 75:1292-4 Mr 20 '53

Vitamin B_{12}; crystalline α-ribazole phosphate and its synthesis. E. A. Kaczka and others. Am Chem Soc J 74:5549-50 N 5 '52

Vitamin B_{12}; synthesis of the 1-D-ribosides of 5,6-dimethylbenzimidazole. F. W. Holly and others. bibliog Am Chem Soc J 74:4521-5 S 20 '52

BENZIMINAZOLE. See Benzimidazole

BENZOATES

Molecular-orbital calculations on the benzoate ion. C. M. Moser. Chem Soc J p 1073-8 Ap '53

N-substituted glycosylamines; acetates, benzoates, and methyl ethers. G. P. Ellis and J. Honeyman. Chem Soc J p2053-7 Je '52

BENZOCARBAZOLE

Carcinogenic nitrogen compounds; benzacridines, benzocarbazoles, and related compounds bearing ethyl and propyl groups. N. P. Buu-Hoï and others. Chem Soc J p4867-9 D '52

BENZOCOUMARIN

Preparation of 7,8-benzocoumarin and 1-methoxynaphthalene-2-propionic acid. C. F. Koelsch and P. T. Masley. Am Chem Soc J 75:3596 Jl 20 '53

BENZOCYCLOHEPTANONE

Mannich bases and other compounds derived from benzsuberone. D. S. Tarbell, H. F. Wilson and E. Ott. bibliog Am Chem Soc J 74:6263-6 D 20 '52

Seven-membered ring compounds; benzosuberoneglyoxylates. W. J. Horton, C. E. Hummel and H. W. Johnson. bibliog Am Chem Soc J 75:944-6 F 20 '53

Syntheses in the colchicine field; the condensation of 2-isopropoxymethylenebenzsuberone and related compounds with biacetyl monoketal. E. Ott and D. S. Tarbell. bibliog Am Chem Soc J 74:6266-72 D 20 '52

BENZOCYCLOHEPTENONE

Synthesis of benzcyclohepten-6-one. G. A Page and D. S. Tarbell. bibliog Am Chem Soc J 75:2053-5 My 5 '53

BENZOFLUORANTHENE

Syntheses of benzo[*mno*]fluoranthene and dibenzo[*k*, *mno*]fluoranthene. N. Campbell and D. H. Reid. Chem Soc J p3281-4 Ag '52

BENZOFURAN

Reactions of 1,3-diphenylisobenzofuran with acetylenic dienophiles. J. A. Berson. bibliog Am Chem Soc J 75:1240-1 Mr 5 '53

BENZOFURANONE

Conversion of α-diazo-*o*-methoxyacetophenone to coumaranone. A. K. Bose and P. Yates. Am Chem Soc J 74:4703-4 S 20 '52

Probable enzymatic conversion of hydroxychalcone glycoside into hydroxybenzalcoumaranone glycoside. M. Shimokoriyama and S. Hattori. bibliog Am Chem Soc J 75:2277 My 5 '53

BENZOHYDROL

Acylation and allied reactions catalysed by strong acids; the dismutation of diphenylmethanol by perchloric acid. H. Burton and G. W. H. Cheeseman. Chem Soc J p986-9 Mr '53

Interaction of triphenylmethanol, fluoren-9-ol, and diphenylmethanol with hydrazoic acid in the presence of sulphuric acid. C. L. Arcus and R. J. Mesley. Chem Soc J p 178-81 Ja '53

BENZOIC acid

Dissociation constants of acids in salt solutions; benzoic acid. M. Kilpatrick. bibliog Am Chem Soc J 75:584-5 F 5 '53

BENZOIC acid—*Continued*

Equilibrium exchange rates of adsorbed species with unadsorbed species in solution. R. N. Smith, C. F. Geiger and C. Pierce. J Phys Chem 57:382-4 Mr '53

Kinetics of the decarboxylation of 2,4,6-trihydroxybenzoic acid in perchloric acid solution. W. M. Schubert and J. D. Gardner. bibliog Am Chem Soc J 75:1401-5 Mr 20 '53

Mass transfer from benzoic acid granules to water in fixed and fluidized beds at low Reynolds numbers. G. C. Evans and C. F. Gerald. bibliog diag Chem Eng Prog 49:135-40 Mr '53

Mechanism of the oxidation of *p,p'*-dichlorobenzyl sulfide by peroxybenzoic and *para* substituted peroxybenzoic acids. C. G. Overberger and R. W. Cummins. bibliog Am Chem Soc J 75:4250-4 S 5 '53

Precision obtained with vibrating reed electrometer in radioassaying meta- and para-substituted benzoic-alpha-carbon-14 acids. V. F. Raaen and G. A. Ropp. Anal Chem 25:174-5 Ja '53

Preparation of some alkyl-substituted benzoic acids. M. Crawford and F. H. C. Stewart. Chem Soc J p4443-7 N '52

Salt effects and the temperature coefficients of solubility of benzoic and phenylacetic acids in aqueous solutions. M. A. Paul. bibliog Am Chem Soc J 75:2513-16 My 20 '53

Solubility of the copper salts of aromatic carboxylic acids in benzene-ethanol mixtures. M. Crawford and F. H. C. Stewart. Chem Soc J p288-92 Ja '53

Syntheses of benzene, toluene and benzoic acid labeled in the ring with isotopic carbon. M. Fields and others. bibliog Am Chem Soc J 74:5498-9 N 5 '52

BENZOIN

Rearrangement and cleavage of benzoin and α-substituted benzoins by alkali. D. B. Sharp and E. L. Miller. bibliog Am Chem Soc J 74:5643-6 N 20 '52

BENZOL (commercial benzene)

Fuel consumption; investigation into the effect of benzole. L. W. Barnard and G. Claxton. Automobile Eng 43:190-2 My '53

New product from benzene and blast furnace gas; carbon monoxide in blast furnace gas as a chemical reagent to convert benzene into benzaldehyde. J. L. Boyle. Blast F & Steel Pl 40:1443-7 D '52

Analysis

Colorimetric determination of thiophen in pure benzoles by the alloxan and isatin reagents. K. H. V. French. J Ap Chem 2:664-6 N '52

BENZONAPHTHOPYRENE

8 : 9-Benzonaphtho(2′ : 3′-3 : 4)pyrene. J. F. Grove. Chem Soc J p483-5 F '53

BENZONITRILE

Mechanisms of hydrogen peroxide reactions; the conversion of benzonitrile to benzamide. K. B. Wiberg. Am Chem Soc J 75:3961-4 Ag 20 '53

Search for weak absorption bands of benzonitrile in the near utraviolet. R. C. Hirt and F. T. King. J Chem Phys 20:1821-2 N '52

BENZOPHENAZINE

Experiments with 1,2-benzophenazine-3,4-quinone; thermochromic effects based on lactam-lactim tautomerism. A. Schönberg, A. Mustafa and S. M. A. D. Zayed. bibliog Am Chem Soc J 75:4302-4 S 5 '53

BENZOPHENONE

Conductance of aluminum chloride in sulfuryl chloride on adding benzophenone or sulfur monochloride. A. R. Pray and C. R. McCrosky. bibliog Am Chem Soc J 74:4719-21 S 20 '52

Internuclear cyclisation; the cyclisation of derivatives of diphenylmethane, benzophenone, and *n*-methyldiphenylamine. D. H. Hey and R. D. Mulley. Chem Soc J p2276-87 Je '52

Phosphorescence emission of benzophenone. J. Ferguson and H. J. Tinson. Chem Soc J p3083-5 Ag '52

Reactions of triphenylsilylpotassium with benzophenone and with 4,4′-dimethylbenzophenone. H. Gilman and T. C. Wu. bibliog Am Chem Soc J 75:2935-6 Je 20 '53

BENZOPURPURINE

Absorption spectra of the direct dye benzopurpurine 4B and related structures. H. A. Standing and M. Stein. bibliog Textile Inst J Trans 44:T224-9 My '53

BENZOPYRROCOLINE

Syntheses of 7,8-benzopyrrocoline derivatives; a novel reaction of Reissert compounds. V. Boekelheide and J. C. Godfrey. bibliog Am Chem Soc J 75:3679-85 Ag 5 '53

BENZOQUINONE. See Quinone

BENZOSUBERONE. See Benzocycloheptanone

BENZOTHIAZOLE

Antituberculous compounds; benzothiazole and benzoxazole derivatives. L. Katz. bibliog Am Chem Soc J 75:712-14 F 5 '53

2-Mercaptobenzothiazole derivatives. C. G. Moore and E. S. Waight. diag Chem Soc J p4232-51 N '52

Polymorphic behavior of 2-undecyl- and 2-heptadecylbenzothiazoles in organic solvents. P. L. DuBrow, C. W. Hoerr and H. J. Harwood. bibliog Am Chem Soc J 74:6241-5 D 20 '52

BENZOTHIOPHENE. See Thionaphthene

BENZOTRIAZOLE

Benzotriazole analogs of certain naphthalene dye intermediates. M. Scalera and F. H. Adams. bibliog Am Chem Soc J 75:715-18 F 5 '53

BENZOTRIFLUORIDE. See Trifluorotoluene

BENZOTROPOLONE. See Cycloheptatrienolone

BENZOXANTHENE

3 : 4-Benzoxanthens; the synthesis and oxidation of 5-, 6-, 7-, and 8-methyl-3 : 4-benzoxanthen. M. Gindy and I. M. Dwidar. Chem Soc J p893-5 Mr '53

BENZOXATHIOLE

Benz-1 : 3-oxathioles, benz-1 : 4-oxathien, and αω-bisarylthioalkanes. D. Greenwood and H. A. Stevenson. Chem Soc J p 1514-19 My '53

BENZOXAZOLE

Antituberculous compounds; benzothiazole and benzoxazole derivatives. L. Katz. bibliog Am Chem Soc J 75:712-14 F 5 '53

Preparation of certain derivatives of benzoxazole. T. Nagano, M. Itoh and K. Matsumura. bibliog Am Chem Soc J 75:2770-1 Je 5 '53

BENZOYLBENZOIC acid

Action of aluminium chloride on derivatives of *o*-benzoylbenzoic acid. G. Baddeley, G. Holt and S. M. Makar. Chem Soc J p2415-20 Je '52

BENZOYLDITHIOCARBAZINATE

2-Benzoyldithiocarbazinic acid and related compounds. E. Hoggarth. Chem Soc J p4811-17 D '52

BENZOYL fluoride

Acid-catalysed hydrolysis of benzoyl fluoride. C. W. L. Bevan and R. F. Hudson. Chem Soc J p2187-9 Jl '53

BENZOYL peroxide

Action of benzoyl peroxide on polycyclic aromatic hydrocarbons. I. M. Roitt and W. A. Waters. Chem Soc J p2695-705 Jl '52

Effect of water on the decomposition of benzoyl peroxide. C. F. H. Tipper. Chem Soc J p2966-71 Ag '52

BENZOYLPROPIONIC acid

Steric configuration of β-benzoylpropionate ion in aqueous solution as determined by immunochemical means. D. Pressman and M. Siegel. bibliog Am Chem Soc J 75:1376-9 Mr 20 '53

BENZOYLATION

Benzoylation of quinaldine oxide. I. J. Pachter. Am Chem Soc J 75:3026-7 Je 20 '53

Iodine-catalyzed benzoylations. I. A. Kaye, H. C. Klein and W. J. Burlant. bibliog Am Chem Soc J 75:745-6 F 5 '53

Rearrangement of *NN*-diacylanilines and the nuclear benzoylation of anilines. J. F. J. Dippy and V. Moss. Chem Soc J p2205-10 Je '52

BENZYL alcohol

Stereochemistry of Raney nickel action; the stereochemical course of dehydroxylations in the benzyl alcohol series. W. A. Bonner, J. A. Zderic and G. A. Casaletto. bibliog Am Chem Soc J 74:5086-8 O 20 '52

BENZYL benzoate
Differential multicomponent spectrophotometry; spectrophotometric method for determination of benzyl benzoate and N-butyl acetanilide in clothing impregnant M-1960. M. Beroza. bibliog Anal Chem 25: 112-15 Ja '53

BENZYL compounds
Benzyl tosylates; preparation and properties. J. K. Kochi and G. S. Hammond. bibliog Am Chem Soc J 75:3443-4 Jl 20 '53
Benzyl tosylates; the application of the Hammett equation to the rates of their solvolysis. J. K. Kochi and G. S. Hammond. bibliog Am Chem Soc J 75:3445-51 Jl 20 '53
Benzyl tosylates; the relative conjugative aptitudes of the acetylenic and ethylenic bonds. J. K. Kochi and G. S. Hammond. bibliog Am Chem Soc J 75:3452-8 Jl 20 '53

BENZYLIDENEPROPIOPHENONE
α-Benzylidenepropiophenone and its halogen derivatives. R. D. Abell. Chem Soc J p2834-6 S '53

BENZYL iodide. See Iodotoluene

BENZYLISOQUINOLINE
Fission of phaeanthine and bebeerine dimethyl ether with sodium in liquid ammonia. D. A. A. Kidd and J. Walker. bibliog Chem & Ind p243-4 Mr 14 '53

BENZYLOXYINDOLE
5-Benzyloxyindole. W. R. Boehme. bibliog Am Chem Soc J 75:2502-3 My 20 '53

BENZYLPENICILLIN. See Penicillin G (benzylpenicillin)

BENZYL perchlorate
Acylation and allied reactions catalysed by strong acids; a comparison of the action of acetyl and benzyl perchlorates on benzene and related compounds. H. Burton and P. F. G. Praill. diag Chem Soc J p827-32 Mr '53

BENZYLPHENONE
Synthesis and cyclization of some o-benzylphenones. F. A. Vingiello, J. G. Van Oot and H. H. Hannabass. bibliog Am Chem Soc J 74:4546-8 S 20 '52

BENZYLSUCCINIC acid
Cyclizations of benzylsuccinic acids. E. C. Horning and G. N. Walker. bibliog Am Chem Soc J 74:5147-51 O 20 '52

BENZYL sulfide
Nature of benzyl sulphide-dibromo- and -dichloro-gold. F. H. Brain and others. diags Chem Soc J p3686-94 O '52
Rearrangement of benzyl sulfides to mercaptans and of sulfonium ions to sulfides involving the aromatic ring by alkali amides. C. R. Hauser, S. W. Kantor and W. R. Brasen. bibliog Am Chem Soc J 75: 2660-3 Je 5 '53

BEQUESTS. See Gifts (law)

BERGSTROM, Swan
NMTB president. H. Woodward. por Sales Management 69:29 D 1 '52

BERIA, Lavrentii Pavlovich, 1899-1953
Portrait. Bsns W p 162 Mr 14 '53

BERKELEY property and investment company
Statement by the chairman. P. B. Frere. Economist 165:911-12 D 27 '52

BERKSHIRE chemicals (New York)
What's in a name? Chem W 71:49 N 1 '52

BERLIN, Don R. 1898-
Businessmen in the news. por Fortune 47: 56 F '53

BERLIN
Berlin outpost. map Economist 165:694-5 D 6 '52
Up against a new blockade. il Bsns W p 138-41 F 28 '53
West Berlin needs expansion of industrial capacity to provide jobs, experts find. For Comm W 49:9 Ap 20 '53

BERLIN conference, 1945

Potsdam agreement

Secrets of Yalta and Potsdam. Economist 166:581-2 F 28 '53

BERLITZ school of languages
It pays to speak the language. il Bsns W p 130+ F 28 '53

BERMUDA conference, 1953 (proposed)
Meaning of Bermuda; proposed meeting of Big Three and problems to be discussed. Economist 167:578-9 My 30 '53
Reconstruction of policy; task of Bermuda. Economist 167:879-82 Je 27 '53

BERMUDA Islands
Seismic refraction measurements in the Atlantic ocean; Bermuda, Bermuda rise, and Nares basin. C. B. Officer and others. maps diags Geol Soc Bul 63:777-808, pl 1-4 bibliog(p807-8) Ag '52

BERNBACH, Bill
This week is really going to be something! interpretation of copy approach of Bill Bernbach. S. H. Margolis and M. Silverstein. Ptr Ink 242:28-30+ Ja 2 '53

BERNSTEIN, Michael J.
Congress tackles Taft-Hartley. por Bsns W p 174-5 F 21 '53

BERTOIA, Harry
Pure design research transforms abstract sculpture into new forms for architecture and furniture; work of Harry Bertoia. Arch Forum 97:142-7 S '52

BERYL
Beryl recovery; new flotation process will permit use of low-grade ores. Iron Age 171: 182-3 Je 18 '53

BERYLLIOSIS. See Beryllium poisoning

BERYLLIUM
Activation cross sections measured with antimony-beryllium photoneutrons. C. Kimball and B. Hamermesh. Phys R 89:1306 Mr 15 '53
Beryllium deposits of the Mount Antero region, Chaffee county, Colorado. J. W. Adams. bibliog il maps diag U S Geol S Bul 982-D:95-119; pa 15c Supt. of doc. '53
Beryllium, 1952. R. A. Griffith. Eng & Min J 154:92 F '53
Electroplating on beryllium. J. G. Beach and C. L. Faust. flow sheet Metal Finishing 51: 68-70+ O '53
Excitation curve for photomesons from beryllium. D. Luckey. Phys R 90:711-12 My 15 '53
Fabrication of beryllium metal. E. Creutz and D. Gurinsky. il Metal Prog 62:82-4 D '52
How Oak Ridge machines beryllium. J. M. Case and E. R. Watkins. il Am Mach 96: 93-7 D 22 '52
Lifetimes of the μ-mesons stopped in Li, Be, and C. W. E. Bell and E. P. Hincks. Phys R 88:1424-5 D 15 '52
Neutron energy distribution from the proton bombardment of Li, Be, and C at 375 Mev. W. F. Goodell, jr. and others. bibliog diags Phys R 89:724-7 F 15 '53
Neutron energy distributions from Be, C, and Pb bombarded by 245-Mev protons. B. K. Nelson and others. bibliog diags Phys R 88:1-8 O 1 '52
Physical analysis of Be and C disintegration induced by 330-Mev protons. W. H. Barkas and H. Tyren. diag Phys R 89:1-3 Ja 1 '53
π^0 Production cross section for 430-Mev protons on H and Be. J. Marshall and others. bibliog diags Phys R 88:632-41 N 1 '52
Strategic beryllium from domestic pegmatites. B. H. Clemmons and J. S. Browning. map Min Eng 5:786-8 Ag '53
Studies in low concentration chemistry; the radiocolloidal properties of beryllium. G. K. Schweitzer and J. W. Nehls. bibliog Am Chem Soc J 75:4354-6 S 5 '53
Thermal energy relaxation length of Ra-Be neutrons in water. J. Tittman. bibliog Phys R 90:256-7 Ap 15 '53

Analysis

Spectrographic monitor for metallic dust. I. B. N. Evans. il diag Electronics 26:210+ S '53

Isotopes

Angular dependence of inelastic scattering of protons on Be^9. K. E. Davis. bibliog diag Phys R 88:1433-4 D 15 '52
Angular distribution of $Be^9(d,t)Be^8$ at low energy. P. Cüer and J. J. Jung. bibliog Phys R 89:1151-2 Mr 1 '53
Angular distribution of deuterons from $Be^9(p,d)Be^8$. B. L. Cohen and others. Phys R 90:323-4 Ap 15 '53
Angular distributions of protons and tritons from deuteron-induced reactions on Be^9. H. W. Fulbright and others. bibliog Phys R 88:700-2 N 15 '52

BERYLLIUM—Isotopes—*Continued*
Breakup energy of Be^{8}. K. W. Jones and others. bibliog diag Phys R 91:879-82 Ag 15 '53
Comparison of the values of the disintegration constant of Be^{7} in Be, BeO, and BeF$_2$. J. J. Kraushaar and others. bibliog Phys R 90:610-14 My 15 '53
Deuteron bombardment of Be^{9} and classification of levels of B^{10}. F. Ajzenberg. bibliog Phys R 88:298-304 O 15 '52
Energy levels in Be^{8} from the reaction Li^{6}(He^{3}, p)Be^{8}. W. E. Kunz and others. diag Phys R 91:676 Ag 1 '53
Energy levels of C^{12} from the Be^{9}(α,n)C^{12} reaction. L. E. Beghian and others. bibliog Phys R 90:1129 Je 15 '53
Evidence for a new level in Be^{7}. D. M. Thomson. Phys R 88:954 N 15 '52
Formation of He^{6} by 14-Mev neutron bombardment of Li and Be. M. E. Battat and F. L. Ribe. bibliog diag Phys R 89:80-3 Ja 1 '53
Gamma-ray resonances in the alpha-particle bombardment of beryllium and boron. F. L. Talbott and N. P. Heydenburg. bibliog Phys R 90:186-7 Ap 15 '53
Investigation of the beta-spectra of Be^{10}, K^{40}, Tc^{99}, and Cl^{36}. L. Feldman and C. S. Wu. bibliog il diag Phys R 87:1091-9 S 15 '52
Magnetic analysis of the deuteron-beryllium reactions. R. W. Gelinas and S. S. Hanna. bibliog diags Phys R 89:483-8 Ja 15 '53
Neutrons from the proton bombardment of Be^{9}. F. Ajzenberg and W. W. Buechner. bibliog diag Phys R 91:674-5 Ag 1 '53
Photodisintegration cross section of beryllium at 2.185 Mev. B. Hamermesh and C. Kimball. bibliog diag Phys R 90:1063-5 Je 15 '53

BERYLLIUM alloys
Beryllium copper spot welded without change in properties. D. I. Brown. il diag Iron Age 171:142-4 Mr 12 '53
Beryllium-uranium system. R. W. Buzzard. bibliog il diag J Res Nat Bur Stand 50:63-7 F '53

Testing

Forming characteristics of beryllium copper strip. J. T. Richards and E. M. Smith. bibliog Am Soc T M Proc 50:1085-100 '50

BERYLLIUM corporation
Common shares offered. Comm & Fin Chr 177:2566 Je 15 '53

BERYLLIUM dimethyl
Dimethylberyllium; co-ordination compounds. G. E. Coates and N. D. Huck. Chem Soc J p4501-11 N '52
Dimethylberyllium; reactions with some compounds containing reactive hydrogen. G. E. Coates, F. Glockling and N. D. Huck. Chem Soc J p4512-15 N '52
Dimethylberyllium; vapour pressure and vapour-phase association. G. E. Coates, F. Glockling and N. D. Huck. Chem Soc J p4496-501 N '52

BERYLLIUM fluoride
Fluoride model systems; the binary systems CaF$_2$-BeF$_2$, MgF$_2$-BeF$_2$, and LiF-MgF$_2$. W. E. Counts and others. bibliog Am Cer Soc J 36:12-17 Ja 1 '53
Fluoride model systems; the system NaF-BeF$_2$ and the polymorphism of Na$_2$BeF$_4$ and BeF$_2$. D. M. Roy and others. Am Cer Soc J 36:185-90 Je 1 '53

BERYLLIUM oxide
Arc-melting of non-metallic materials and a re-determination of the beryllia-thoria system. G. A. Geach and M. E. Harper. bibliog il Metallurgia 47:269-71 My '53
Heat of formation of beryllium oxide. L. A. Cosgrove and P. E. Snyder. bibliog Am Chem Soc J 75:3102-3 Jl 5 '53

BERYLLIUM poisoning
Beryllium poisoning. Metal Prog 63:66 My '53
Elimination of toxic properties of fluorescent lamps. Pulp & Pa of Can 53:131 N '52
Microscope tells toxicity of dust. Nat Safety N 67:67 My '53
Report on the toxicity of beryllium; abstract. C. S. Pomelee. Water & Sewage Works 100:367-8 S '53

BERYLLIUM sulfate
Vapour pressure of aqueous solutions of beryllium sulphate and of uranyl sulphate at 25°. R. A. Robinson. Chem Soc J p4543-4 N '52

BESSEL'S functions
Property of Bessel functions and its application to the theory of two rheometers. H. Markovitz. J Ap Phys 23:1070-7 O '52

BESSEMER process
Basic Bessemer and open-hearth steels. O. Hengstenberg and W. Janiche. Engineer 196:270-1 Ag 28 '53
Blowing Thomas pig iron with pure oxygen; abstract. F. A. Springorum and others. Metal Prog 64:142+ Jl '53
Correlation of machinability with inclusion characteristics in resulphurized Bessemer steels. L. H. Van Vlack. Automotive Ind 107:132+ N 15 '52
Metallurgy of the Bessemer process. H. B. Emerick. bibliog il Blast F & Steel Pl 40:1177-83+ O '52
Silicon content of blast furnace iron lowered by oxygen injection in ladle. P. S. Leroy. bibliog diags J Metals 5:396-400 Mr '53
Welding characteristics of open hearth and Bessemer seamless steel pipe. A. B. Wilder and others. bibliog il diags Am Soc T M Proc 50:763-80; Discussion. 781-8 '50

BEST foods, inc.
12 promising specialties. P. Dobbs. Mag of Wall St 92:95 Ap 18 '53

BETA ray spectrometer. See Spectrometers

BETA rays
Angular correlation in allowed β-transitions. M. E. Rose. Phys R 91:197 Jl 1 '53
Atomic excitation in beta-decay. H. M. Schwartz. bibliog J Chem Phys 21:45-51 Ja '53
Average electric charge of daughter atoms from β-decay and isomeric transition. S. Wexler and T. H. Davies. bibliog diags Phys R 88:1203-4 D 1 '52
Beta- and gamma-induced Čerenkov radiation in water. M. A. Greenfield and others. Opt Soc Am J 43:42-3 Ja '53
Beta-decay interaction. J. M. Blatt. bibliog Phys R 89:83-5 Ja 1 '53
Beta-decay of F^{20}. D. E. Alburger. bibliog Phys R 88:1257-61 D 15 '52
β-decay of Li^{8}. D. S. Bunbury. bibliog Phys R 90:1121-2 Je 15 '53
Beta-decay of the triton. J. M. Blatt. bibliog Phys R 89:86-92 Ja 1 '53
β-Ray initiation of polymerization of styrene and methyl methacrylate. W. H. Seitzer, R. H. Goeckermann and A. V. Tobolsky. Am Chem Soc J 75:755-6 F 5 '53
Beta-spectra of Co^{56}, Co^{57}, and Co^{58}. L. S. Cheng and others. bibliog Phys R 88:887-9 N 15 '52
Beta-spectra of Pu^{239}, Pu^{240}, and Pu^{241}. M. S. Freedom and others. bibliog Phys R 88:1155-8 D 1 '52
Beta-spectrum of He^{6}. C. S. Wu and others. diag Phys R 87:1140-1 S 15 '52
Beta-spectrum of Mg^{28}. L. Marquez. Phys R 90:330-1 Ap 15 '53
Beta-spectrum of tritium and the mass of the neutrino. L. M. Langer and R. J. D. Moffat. bibliog Phys R 88:689-94 N 15 '52
Bremsstrahlung from P^{32} betas. M. Goodrich and others. bibliog Phys R 91:1225-8 S 1 '53
Continuous gamma-ray spectrum accompanying beta-decay. P. Bolgiano and others. bibliog Phys R 89:679-83 F 15 '53
Cross terms in allowed shape β spectra. J. P. Davidson and D. C. Peaslee. bibliog Phys R 91:1232-3 S 1 '53
Cross terms in β-decay. O. Kofoed-Hansen and A. Winther. diag Phys R 89:526 Ja 15 '53
Determination of gamma-ray energies from beta-ray spectroscopy and a table of critical X-ray absorption energies. R. D. Hill and others. bibliog R Sci Instr 23:523-8 O '52
Effect of the finite deBroglie wavelength in the theory of beta-decay. M. E. Rose and C. L. Perry. bibliog Phys R 90:479-82 My 1 '53

BETA rays—*Continued*
Evidence of the once-forbidden spectra for the law of β-decay. H. M. Mahmoud and E. J. Konopinski. bibliog Phys R 88:1266-75 D 15 '52
Experimental evidence for the Fermi interaction in the β decay of O^{14} and C^{10}. R. Sherr and J. B. Gerhart. bibliog Phys R 91:909-14 Ag 15 '53
Fermi term in β-ν correlation. D. C. Peaslee. bibliog Phys R 89:1148-9 Mr 1 '53
Fluorescent light yields with alpha, beta, and gamma radiations. M. Furst and H. Kallmann. bibliog Phys R 91:766-7 Ag 1 '53
Inherent half-width of K-conversion lines. H. Slätis and G. Lindström. Phys R 88:1429 D 15 '52
Investigation of the beta-spectra of Be^{10}, K^{40}, Tc^{99}, and Cl^{36}. L. Feldman and C. S. Wu. bibliog il diag Phys R 87:1091-9 S 15 '52
Linear combination in β decay. D. C. Peaslee. bibliog Phys R 91:1447-57 S 15 '53
Liquid argon ionization chamber measurement of the shape of the beta-ray spectrum of K^{40}. J. H. Marshall. bibliog diags Phys R 91:905-9 Ag 15 '53
Matrix elements of β-decay in jj coupling. I. Talmi. bibliog Phys R 91:122-5 Jl 1 '53
Meson theory of β-decay and the ΔL-forbidden transitions. S. Nakamura. bibliog Phys R 89:16-19 Ja 1 '53
O^{14} β-decay and the Fermi interaction. M. E. Rose. Phys R 90:1123-4 Je 15 '53
Pseudoscalar interaction in the theory of beta-decay. T. Ahrens. Phys R 90:974-7 Je 1 '53
Pseudoscalar matrix element in beta-decay. M. Ruderman. bibliog Phys R 89:1227-30 Mr 15 '53
Reinvestigation of the radioactivity of Sb^{124}. D. R. Hutchinson and M. L. Wiedenbeck. Phys R 88:699-700 N 15 '52
Search for double beta-decay in Sn^{124} and Zr^{96}. J. A. McCarthy. bibliog diags Phys R 90:853-7 Je 1 '53
Studies of bond rupture in the decay of RaD as tetramethyl lead. R. R. Edwards and others. bibliog J Chem Phys 21:1555-8 S '53
Use of radioactive material for the generation of high voltage. E. G. Linder and S. M. Christian. il diags J Ap Phys 23:1213-16 N '52
Very long lifetime of C^{14} β-decay. A. M. L. Messiah. Phys R 88:151-2 O 1 '52
See also
Betameters

BETACOCCUS arabinosaceous
Structure of a novel dextran synthesized by a betacoccus arabinosaceous. S. A. Barker and others. bibliog Chem & Ind p 1156 N 22 '52

BETAMETERS
Automatic control with the Betameter. J. Y. Chartrand. il diags Pulp & Pa of Can 54:108-11 Ap '53
Beta-ray gaging in the rubber industry. R. T. Stacy and S. Bernstein. il diag Rubber Age 72:350-2 D '52
Beta rays guide papermakers at Wausau paper mills co. Paper Ind 35:533 Ag '53
Beta rays now gage paper thickness. il Elec West 109:98 O '52
Betameter. D. C. Brunton. diags Pulp & Pa of Can (Convention no) 54:220-4 [F] '53
Betameter in a basis-weight-control application. G. E. Wilson. il Pulp & Pa of Can (Convention no) 54:225-9 [F] '53
Betameter used for control in paper and pulp industry. Elec Eng 72:278-9 Mr '53
Cutting costs at Hood Rubber with beta gauge control. J. Garrod. il diag Rubber Age 73:359-60 Je '53
Eastern corp. installs beta gauge at Maine mills. il Paper Ind 35:436 Jl '53
Industrial radioactivity, a new tool for the engineer. D. C. Brunton. il Can Chem Process 37:42 Ap '53
Isotope radiations control paper processing. Can Chem Process 37:24 F '53
Radioactive thickness gage controls paper weight. G. J. Leighton. il diags Electronics 25:112-13 D '52
Use of beta meters for basis weight control; abstracts of papers. D. C. Brunton and others. Paper Tr J 136:27 F 6 '53

BETATRON
Betatron monitor and integrator. R. D. England and W. E. Ogle. diags R Sci Instr 24:267-8 Ap '53
New inspection betatron at the West Allis works of the Allis Chalmers manufacturing co. diag Elec J 150:1654-5 My 8 '53
Telescoping tubes; unique answer to betatron support problems. R. J. Stamp. il diags Machine Design 25:155-6 F '53

BETHLEHEM steel company
Design group in an American shipbuilding organisation. il Engineer 194:788-9 D 12 '52

BETHLEHEM steel corporation
Bethlehem Steel and the intruder. R. A. Smith. il map Fortune 47:100-5+ Mr '53
Court approves proposed settlement in wire rope case. Comm & Fin Chr 177:41-2 Ja 5 '53
Earnings. Comm & Fin Chr 177:522 F 2 '53

BETTER business bureaus
Better business bureaus handled 90,000 insurance queries, 9,000 complaints in '52. Nat Underw 57:15 F 12 '53
Inquiries to BBBs increase, notably in fire-casualty. J. W. Rowland. Nat Underw 57:6 Ap 30 '53
She's the power behind better business in San Francisco today. il Bsns W p84-6+ Je 20 '53

BETTING
Papers differ in views about off-track race betting. Ed & Pub 86:13 Ja 3 '53

BETULIC acid
Chemistry of western Australian plants; the occurrence of betulic, oleanolic, and ursolic acids. J. R. Anstee and others. Chem Soc J p4065-7 O '52

BEVAN, Aneurin, 1897-
Can Bevan force Britain to take the plunge? V. L. Horoth. por Mag of Wall St 91:119-21 N 1 '52

BEVEL gearing. See Gearing, Bevel

BEVERAGES
Contrasts in the beverages; with statistical data on leading soft drink companies and distillers. Mag of Wall St 92:510-11+ Jl 25 '53
Dr Pepper going places. il Bsns W p 174-6+ My 16 '53
Floc in carbonated beverages. F. G. Eis and others. bibliog diag Ind & Eng Chem 44:2844-8 D '52
Kitten had to go; Grapette products co. W. E. Mankin. il Food Eng 25:60-1 S '53
New British cousin for Pepsi. il Bsns W p 112+ D 20 '52
Soft drink maker changes the label and gets more than it bargained for. il Ptr Ink 242:53 Mr 6 '53
Soft drinks and fruit juices; with comments on their nutritional value. V. L. S. Charley. bibliog Chem & Ind p 1090-7 N 8 '52
What refrigeration do you need? beverage plant cooling requirements. T. Hicks. Food Eng 25:63+ F '53
See also
Beer
Bitters
Bottling plants
Coca Cola
Coffee
Liquor traffic
Whisky
Wine

Advertising

Best-read newspaper advertisements. D. Starch. il Adv Agency 45:168-9 O '52

Manufacture

Balking algae in beverage water. N. F. Insalata. il Food Eng 24:72-4+ D '52
Here's how to nip those beverage contaminators. N. F. Insalata. il Food Eng 25:70-2 Ap '53
Improved water treatment ups beverage quality. P. S. Roller. bibliog il diag Food Eng 24:69-71+ N '52
Making good sugar-free drinks; Brookdale beverage co. R. M. Sandri. il Food Eng 25:79+ My '53
Volume higher, costs lower and product better; Squirt co. V. D. Littlefield. flow sheet(p 118-21) il diags Food Eng 25:84-8+ Ag '53

BIACETYL. See Butanedione

BIANTHRAQUINONE

Formation of 1 : 2-7 : 8-diphthaloylcarbazole by dehydrogenation of 1 : 1′-dianthraquinonylamine. W. Bradley and C. R. Thitchener. Chem Soc J p 1085-92 Ap '53

BIANTHRONE

Absorption spectra of $\Delta^{10,10'}$-bianthrone, helianthrone and mesonaphthobianthrone in concentrated sulfuric acid. R. A. Hebert, M. B. Goren and A. A. Vernon. bibliog Am Chem Soc J 74:5779-80 N 20 '52

BIANTHRONYLIDENE

1 : 1′-Difluorodianthron-9-ylidene and an attempted synthesis of 4 : 4′-dibromodianthron-9-ylidene. E. D. Bergmann and H. J. E. Loewenthal. Chem Soc J p2572-4 S '53

BIBBY, J. and sons, limited

Statement by the chairman. H. P. Bibby. Economist 167:558 My 23 '53

BIBLIOGRAPHY

Bibliographic classification; extended by systematic auxiliary schedules for composite specification and notation. 4v $30; v3, Classes L-Z. H. E. Bliss. $15 H. W. Wilson co, New York '53

Bibliographic classification; extended by systematic auxiliary schedules for composite specification and notation. 4v $30; v4, General index combining the indexes of v 1-3. H. E. Bliss. 426p $15 H. W. Wilson co, New York '53

Bibliographical style manuals; a guide to their use in documentation and research. M. R. Kinney. 21p pa 60c Assn. of college and reference libraries, c/o Univ. of Illinois library, Chicago undergraduate division, Chicago 11 '53

Reference catalogue of current literature, 1951. 2v 789;1163p $29.50 Joseph Whitaker and sons, 13 Bedford square, London, W.C. 1 '52

University of Hawaii bibliography, 1944-52. C. S. Bouslog, ed. (Bul. 30) 165p Univ. of Hawaii, Honolulu 14 '52

Whitaker's cumulative book list, Jan.-Dec. 1952. v114 503p J. Whitaker & sons, 13 Bedford square, London, W.C.1 '53 (27s 6d)

See also

Book reviews
Documentation
Indexing
Libraries
Periodicals—Indexes

also subdivision Bibliography under special subjects, e.g.

Chemistry
Government publications
Reference books
Science
Technology

Best books

A.L.A. catalog, 1942-1949; an annotated list of approximately 4500 titles. F. Boochever and M. H. Breuer, eds. 448p $7 American library assn, 50 E. Huron st, Chicago 11 '52

World's best books, Homer to Hemingway. A. D. Dickinson. v5 484p $6 H. W. Wilson co, New York '53

Terminology

German and French abbreviations and terms used in serial publications and in bibliographical citations. J. E. Allerding. Special Lib 43:358-63 N '52

BICYCLES

Bike makers roll easier with push from steel producers. Steel 132:70-1 Ap 6 '53

Manufacture

Making bicycles; Raleigh industries, ltd. il Elec R (Lond) 153:253-8, 377-81 Jl 31, Ag 21 '53

West Bengal bicycle factory. il Engineer 194:319 S 5 '52

BICYCLODECENONE

Convenient synthesis of *bicyclo* [5 : 3 : 0]dec-1(7)-en-8-one and related compounds. A. M. Islam and R. A. Raphael. Chem Soc J p2247-50 Ag '53

BICYCLOHEPTENE

Studies of the bicyclo[2,2,1]heptene-2 ring system. W. E. Parham and others. bibliog Am Chem Soc J 74:5646-8 N 20 '52

BICYCLOHEXENE

*cyclo*Propanes; a new route to some *bicyclo* [3 : 1 : 0]hexene derivatives. R. W. Kierstead, R. P. Linstead and B. C. L. Weedon. Chem Soc J p 1803-7 Je '53

BICYCLONONADIENE

Identification and vapor phase oxidation of 0,3,4-bicyclononadiene. F. T. Wadsworth and F. J. Smith. bibliog diag Ind & Eng Chem 45:217-21 Ja '53

BICYCLONONENONE

bicyclo[4 :3 : 0]non-6-en-8-one. A. M. Islam and R. A. Raphael. Chem Soc J p4086-7 O '52

BICYCLOÖCTADIENE

Cyclic polyolefins; valence tautomerism of 1,3,5-cycloöctatriene and bicyclo[4.2.0]octa-2,4-diene. A. C. Cope and others. bibliog Am Chem Soc J 74:4867-71 O 5 '52

BIDDING, Competitive. See Securities—Marketing

BIGGERS, John David, 1888-

Portrait. Bsns W p34 Ja 24 '53

BILE

Effects of ferric chloride and bile on plasma cholesterol and atherosclerosis in the cholesterol-fed bird. M. D. Siperstein and others. Science 117:386-9 Ap 10 '53

Prevention of ulcers in the Shay rat by ox bile. C. Funk and others. bibliog Science 116:638-9 D 5 '52

See also

Choleretics

Analysis

Colorimetric determination of desoxycholic acid in ox bile. C. R. Szalkowski and W. J. Mader. bibliog Anal Chem 24:1602-4 O '52

BILE acids

Steroids derived from bile acids; Barbier-Wieland degradation in the 11-keto series. R. B. Turner and others. bibliog Am Chem Soc J 74:5814-18 D 5 '52

Steroids derived from bile acids; degradation of 3α,9α-epoxy-11-ketonorcholanic acid to 3α,9α-epoxy-11-ketoetiocholanic acid. V. R. Mattox and others. Am Chem Soc J 74:5818-19 D 5 '52

Steroids derived from bile acids; introduction of the 4,5-double bond of cortisone. W. F. McGuckin and E. C. Kendall. bibliog Am Chem Soc J 74:5811-13 D 5 '52

Synthesis of 11-ketosteroids; dichromate oxidation of a bile acid $\Delta^{7,9(11)}$-diene. L. F. Fieser, W. Huang and J. C. Babcock. bibliog Am Chem Soc J 75:116-21 Ja 5 '53

See also

Desoxycholic acid

Analysis

Paper chromatography of bile acids. D. Kritchevsky and M. R. Kirk. Am Chem Soc J 74:4713 S 20 '52

BILGER, Leonora Neuffer

1953 recipient of the Garvan medal. por(cover) Chem & Eng N 31:1094 Mr 16 '53

BILIRUBIN

Analysis

Quantitative estimation of total bilirubin in serum. J. J. Quigley. Anal Chem 24:1859-60 N '52

BILL of rights

Bill of rights program urged by Bernays. Ed & Pub 85:57 D 20 '52

BILLBOARDS

Art of advertising outdoors; the painted board. H. Stebbins. il Ptr Ink 241:53-7+ D 19 '52

Billboards made of concrete masonry units. P. V. Taylor. il Concrete 61:26 S '53

BILLING

Billing and accounting practices at Louisville. B. E. Payne. Am Water Works Assn J 44:1099-106 D '52

How to install and operate a cycle billing system in a retail business. J Account 95:38-43 Ja '53

Postcard billing for water and sewage utilities. D. L. Maffitt. il Water & Sewage Works 100:217-20 Je '53

BIMETAL. See Thermostats

BIMSON, Walter Reed, 1892-

Portrait. Dun's R 60:134 O '52

BINDERS. See Insurance—Binders

BINDING materials

See also

Cements
Resinous products—Binding materials

BINGHAM, Wheelock Hayward, 1907-
New life for giant Macy's. pors Bsns W p86+, cover Ap 11 '53

BINOCULARS. See Field glasses

BINS
Bin to fit varied handling needs. il Factory Management 111:146 F '53
Catalyst bin gage has accuracy, long life. il diags Pet Processing 7:1811+ D '52
Heating aggregates in bins. W. J. Shore. diags Rock Prod 55:193-4+ O '52
Proper care of small parts saves money. J. E. Hyler. il Mill & Factory 52:100-4 Ap '53
Rabble bin feed controlled automatically; Denver, (Colo.) fire clay co. il Brick & Clay Rec 122:73 Ap '53
Silos provide advantages in storing core sand; Ferro machine & foundry, inc. M. F. Degley. il Foundry 81:192-3+ Mr '53

BINS, Concrete
Continuous pour raises silo fast. J. W. MacDonald. il Constr Methods 35:64+ Ja '53
Slipforms raise Danish brewery silo. il Eng N 149:53 O 16 '52

BIOCHEMICAL oxygen demand test. See Sewage—Testing

BIOGRAPHY

Bibliography

Biography index: a cumulative index to biographical material in books and magazines, Aug. 1949-Aug. 1952. B. Joseph and C. W. Squires, eds. v2 1274p H. W. Wilson co, New York '53

Dictionaries

Canadian who's who, 1949-1951. v5 1159p $24 Trans-Canada press, 392 Bay st, Toronto 1 '52
International year book and statesmen's who's who, 1953. 72;569;449p Burke's Peerage, 180 Fleet st, London '53 (£8 8s)
South African who's who, 1952. K. Donaldson, ed. 36th ed 752p £4 4s Ken Donaldson, Power house, Fraser st, Johannesburg, South Africa '52
Who's who in American art. D. B. Gilbert, ed. 557p $17.50 R. R. Bowker co, 62 W. 45th st, New York 19 '53
Who's who in art. 6th ed 618p 50s Art trade press, Salisbury square, London '52
Who's who in Canada, 1951-52; an illustrated biographical record of men and women of the time. B. M. Greene, ed. 40th ed 1536p Musson book co, 103-107 Vanderhoof av, Toronto 17; Macmillan co, 60 Fifth av, New York 11 '52 ($16)
Who's who in commerce and industry. 1389p A. N. Marquis co, 210 E. Ohio st, Chicago 11 '53 ($15.95)
Who's who in Egypt and the Near East, 1953. E. J. Blattner and J. E. Blattner, eds. 19th ed 644p Who's who in Egypt and the Near East, 50, Kasr-El-Nile st, Cairo '53 ($14)
Who's who in Israel, 1952. 4th ed 952p $25 Who's who in the state of Israel pub. house, Tel Aviv, Israel '52

BIOHERMS. See Coral reefs and islands; Reefs

BIOLOGICAL apparatus
Chamber for observations on living larvae of anopheline mosquitoes. J. C. Jones. Science 117:42 Ja 9 '53
Vacuum microsublimation apparatus. J. R. Maher. il Science 117:529-30 My 15 '53
See also
Homogenizers
Physiological apparatus

BIOLOGICAL assay
Microbiologic assay for niacin; effect of total volume per tube on accurancy. D. M. Hegsted and C. E. Alvistur. Anal Chem 24:1635-6 O '52
Solution of tobacco mosaic virus in the aqueous phase of a chloroform-water emulsion and application of this phenomenon in virus assay. I. R. Schneider. bibliog Science 117:30-1 Ja 9 '53
Vitamin assays; the relative roles of chemical, biological and microbiological tests; abstract. L. J. Harris. Chem & Ind p 1175 N 29 '52

BIOLOGICAL chemistry
ATP. P. K. Stumpf. il diag Sci Am 188: 85-6+ Ap '53
ACS Division of biological chemistry national meeting, Los Angeles. Chem & Eng N 31: 1285-7 Mr 30 '53
Application of partition paper chromatography to microbiology. H. Proom and A. J. Woiwod. bibliog il diags Chem & Ind p311-15 Ap 4 '53
Applications of the technique of paper chromatography to microbiology. W. G. C. Forsyth. bibliog Chem & Ind p315-16 Ap 4 '53
Autosynthesis. C. Hinshelwood. Chem Soc J p 1947-56 Je '53
Bacillus megatherium for biosynthesis of cobalamin. J. A. Garibaldi and others. bibliog Ind & Eng Chem 45:838-46 Ap '53
Blood-volume determinations by means of radioisotope-labeled red cells; an experiment in biochemistry. F. Lionetti and B. H. Sweet. J Chem Educ 30:63-6 F '53
Chemical-biological coordination center; an experiment in documentation. R. L. Beard and K. F. Heumann. Science 116:553-4 N 21 '52
Frontiers of biochemistry. R. M. Archibald. diags Chem & Eng N 30:4473-6 O 27 '52
Recent advances in microbiological methods; symposium. M. Stacey and others. Chem & Ind p 124-6 F 7 '53
Review of biochemistry. K. Rees. Chem Age (Lond) 68:79-85 Ja 10 '53
Study of mycological methylation with radioactive methyl donors or sources. F. Challenger and others. bibliog Chem & Ind p 128-9 F 7 '53
Three awards in biochemistry to be presented at the ACS Los Angeles meeting. Chem & Eng N 31:429 F 2 '53
See also
Antigens and antibodies
Bacteria
Bile
Biological materials—Analysis
Blood
Cells
Enzymes
Fermentation
Histochemistry
Hormones
Immunity
Metabolism
Nutrition
Physiological chemistry
Plant growth
Plants—Chemical analysis
Proteins
Vitamins

BIOLOGICAL materials

Analysis

Determination of barbiturates; ultraviolet spectrophotometric method with differentiation of several barbiturates. L. R. Goldbaum. Anal Chem 24:1604-7 O '52
Flame photometer for routine biochemical use. R. L. Warren. il diags J Sci Instr 29:284-6 S '52
Isotopic method determines water content. H. J. Morowitz and H. P. Broida. Franklin Inst J 254:537-8 D '52
Separation of radioactive iron from biological materials. R. E. Peterson. bibliog Anal Chem 24:1850-2 N '52
See also
Tissues—Analysis

BIOLOGICAL pigments. See Pigments, Biological

BIOLOGICAL products
Physicians desk reference to pharmaceutical specialties and biologicals, 1953. 7th ed 616p Medical economics, Rutherford, New Jersey '53 ($5)

BIOLOGICAL research
Climate control through ionization. T. L. Martin, jr. bibliog diag Franklin Inst J 254:267-80 O '52
See also
Cells
National research council—Chemical-biological coordination center

BIOLOGICAL sciences, American institute of. See American institute of biological sciences

BIOLOGICAL societies
See also Federation of American societies for experimental biology

BIOLOGICAL warfare
APHA conference report; BW defense, general services of virus laboratories. Pub Health Rep 68:199-201 F '53
Biological warfare; menace or myth. J. A. Tobey. il Tech R 55:31-3+ N '52
Psychological vs. bacteriological warfare. I. Rusznyák. Science 116:461-2 O 24 '52

BIOLOGISTS
Occupational mobility of scientists; a study of chemists, biologists and physicists with Ph.D. degrees. T. R. Shapiro. U S Bur Labor Statistics Bul 1121:1-63; pa 35c Supt. of doc. '53
See also
Federation of American societies for experimental biology
Lillie, Ralph Stayner

BIOLOGY
See also
Biological chemistry
Botany
Cell division (biology)
Cells
Genetics
Growth
Microorganisms
Mutation (biology)
Paleontology
Plants
Symbiosis

Nomenclature

Certain problems of taxonomists. J. W. Hedgpeth and others. Science 117:17-18 Ja. 2 '53
Terminology of pigment cells. T. B. Fitzpatrick and A. B. Lerner. Science 117:640 Je 5 '53

Periodicals

See also
Quarterly review of biology

BIOMATHEMATICS
Equation specifying equilibrium populations. C. C. Li. bibliog Science 117:378-9 Ap 10 '53
See also
Biological assay

BIOMECHANICS
Bio-mechanics, a new approach to music education. F. F. Polnauer. bibliog il diags Franklin Inst J 254:297-316 O '52

BIOSES. See Disaccharides

BIOSYNTHESIS. See Biological chemistry; Synthesis

BIOW, Milton H. 1892-
Guy that looks at the advertising with a client's point of view. pors Ptr Ink 242:35-7+ F 13 '53

BIPHENYL. See Diphenyl

BIPYRIDINE
Experiments in the 1,2-di-(γ-pyridyl)-ethane series. E. D. Bergmann, F. E. Crane, jr. and R. M. Fuoss. bibliog Am Chem Soc J 74:5979-82 D 5 '52

BIQUINOLINE
Optical resolution of 4 : 4′- and 5 : 5′-diquinolyl. M. Crawford and I. F. B. Smyth. Chem Soc J p4133-5 N '52

BIRCH
Effect of the cooking conditions on the viscose making properties of birch sulphite pulp; abstract. O. Perila. Pulp & Pa of Can 54:136-7 Jl '53

BIRDS as carriers of infection
Wild birds may carry encephalitis virus. F. M. Burnet. Pub Health Rep 68:102 Ja '53

BIREFRINGENCE. See Refraction, Double

BIRGE company
Waking up to do-it-yourself. il Bsns W p42-4 Jl 4 '53

BIRINGUCCIO, Vannoccio, 1480-1539
Pirotechnia of Vannoccio Biringuccio. J. R. Zietz, jr. bibliog J Chem Educ 29:507-10 O '52

BIRMINGHAM, Alabama

Industries

Birmingham's committee of 100 shows how it can be done. Manuf Rec 122:40-1 Jl '53

BIRTH certificates
Birth statistics in maternal and child health programs. W. Haenszel. bibliog Pub Health Rep 68:71-80 Ja '53

BIRTH control
Prospects of birth control in Puerto Rico. J. M. Stycos and R. Hill. Ann Am Acad 285:137-44 Ja '53

BIRTH rate
Birth rates; relationship to certain businesses. R. W. Babson. Comm & Fin Chr 176:2328 D 18 '52
Social structure as affecting fertility in Puerto Rico. A. S. Feldman and P. K. Hatt. Ann Am Acad 285:123-9 Ja '53

BISMUTH
Bismuth, 1952. A. Renick. Eng & Min J 154:95 F '53
Bismuth thermocouples. A. B. Kaufman. il Instruments 25:762+ Je '52; Abstract. Metal Prog 62:174+ D '52
Magnetoresistance of bismuth crystals at low temperatures. P. B. Alers and R. T. Webber. bibliog Phys R 91:1060-5 S 1 '53
Multiplicity of neutrons from the interaction of μ- mesons at rest in Pb, Bi, Sn, and Al. M. Widgoff. bibliog diag Phys R 90:891-9 Je 1 '53
Neutron diffraction and atomic distribution in liquid lead and liquid bismuth at two temperatures. P. C. Sharrah and G. P. Smith. bibliog J Chem Phys 21:228-32 F '53
Photoelectric effect of thin Bi films. D. J. Fourie. Phys R 91:803 Ag 15 '53
Photomesonic fission of bismuth. G. Bernardini and others. bibliog Phys R 90:573-4 My 15 '53
Photon absorption cross sections in bismuth and tantalum. J. Halpern and others. bibliog Phys R 88:679-80 N 1 '52
Relation between the de Haas-van Alphen effect and the magnetoresistance in bismuth. T. G. Berlincourt. Phys R 91:1277-8 S 1 '53
Solubility of carbon and oxygen in liquid bismuth. C. B. Griffith and M. W. Mallett. bibliog Am Chem Soc J 75:1832-4 Ap 20 '53
Thermodynamic study of liquid metallic solutions; approximate thermodynamic data from the phase diagram for the systems copper-bismuth, copper-lead and copper-thallium. O. J. Kleppa. Am Chem Soc J 74:6047-51 D 5 '52
Thermodynamic study of liquid metallic solutions; the systems zinc-bismuth and zinc-lead. O. J. Kleppa. bibliog Am Chem Soc J 74:6052-6 D 5 '52
Tracer method for the thickness measurement of thin Bi films. J. J. Antal and A. H. Weber. bibliog il R Sci Instr 23:424-6 Ag '52

Isotopes

Pure nuclear quadrupole spectrum of Bi^{209} in bismuth-triphenyl. H. G. Robinson and others. bibliog Phys R 89:1305 Mr 15 '53

BISMUTH alloys
Heat transfer to molten lead-bismuth eutectic in turbulent pipe flow. H. A. Johnson and others. bibliog diags A S M E Trans 75:1191-8 Ag '53
Thermodynamic properties of the liquid ternary system bismuth-cadmium-tin. S. Mellgren. bibliog Am Chem Soc J 74:5037-40 O 20 '52

BISMUTH chloride
Action of metallic nickel on bismuth trichloride. E. H. Cornish. bibliog J Ap Chem 3:106-9 Mr '53

BISMUTH compounds
Hydrazine; the hydrazinium salts of complex fluoro-acids of tin, antimony, and bismuth. W. Pugh. Chem Soc J p 1934-6 Je '53

BISMUTH oxide
Aids in vulcanization of lignin-natural rubber coprecipitates; lead, copper, and bismuth oxides. T. R. Griffith and D. W. MacGregor. bibliog Ind & Eng Chem 45:380-6 F '53

BISULFITES. See Sulfites

BITS
Care and treatment of cable tool bits. F. J. Spang. il Pet Eng 24:B64-6+ N '52
Current drilling practices in west Texas. D. Johnston and W. R. Johnston. il Pet Eng 25:B73+ Ap '53; Same cond. Oil & Gas J 51:337-8+ Mr 23 '53
Diamond drilling bits may lower costs in drilling hard formations. J. Sanna. il Oil & Gas J 51:127 D 15 '52
Improved rock bit lowers drilling cost in hard, abrasive formations. L. L. Payne. il Oil & Gas J 51:226+ S 29 '52; Same. Pet Eng 24:B70+ O '52; Same. World Oil 135:202+ O '52
Induction heating for better blast hole drill bits. J. H. Hearding, jr. il Min Eng 5:974-6 O '53
New bit speeds drilling in hard and brittle formations. E. G. Boice. il Oil & Gas J 51:240+ S 29 '52; Same. Pet Eng 24:B 100+ O '52; Same. World Oil 135:190-1 O '52

BITS—*Continued*

Orientation of cube diamonds in drill bits. E. P. Pfleider. il Min Eng 5:Trans 998-1003 O '53

Oriented diamond bits cut drilling costs. A. E. Ross and A. E. Long. il Min Cong J 39:71-3 Ag '53

Progress in the development of the rock drill bit; abstract. M. W. Hawkesworth. Min Cong J 38:121 O '52

Research on the cutting action of the diamond drill bit. E. P. Pfleider and R. L. Blake. bibliog il diags Min Eng 5:Trans 187-95 F '53

Selection of detachable drill bits. E. R. Borcherdt. bibliog il diags Min Eng 5:Trans 201-8 F '53

BITTERS

Advertising

Small budget, little copy, big sales; Angostura cartoons. T. M. Jones. il Ptr Ink 242:52+ F 20 '53

BITUMINOUS coal. See Coal

BITUMINOUS coal operators association

Mutiny among the coal operators. Bsns W p73 Ja 3 '53

BITUMINOUS coal research, inc.

Annual meeting, Cincinnati, March 6. Min Cong J 39:124 Ap '53

Annual meeting, Cincinnati, March 6; with abstracts of papers. Coal Age 58:142-4+ Ap '53

BITUMINOUS concrete pavements. See Pavements, Bituminous concrete

BITUMINOUS concrete roads. See Roads, Bituminous concrete

BITUMINOUS materials

Asphalt and bituminous mixing plant; Frederick Parker, ltd. Engineer 195:798-9 Je 5 '53

Study of asphalts and asphaltic materials. G. W. LeMaire. Colorado School of Mines [Golden] Quarterly v48 no 2:1-89 bibliog(p87-9) '53 (pa $1.50)

See also

Oil shales

Pavements, Bituminous

Roads, Bituminous

Color

How to apply color to bituminous surfaces. Eng N 149:41 O 23 '52

Standards

ASTM standards on bituminous materials for highway construction, waterproofing, and roofing (with related information). 1553p pa $3 Am. soc. for testing materials, 1916 Race st, Philadelphia 3 '53

Testing

Brittle fracture of tars and bitumens. P. J. Rigden and A. R. Lee. bibliog il diags J Ap Chem 3:62-70 F '53

Studies of the hardening properties of asphaltic materials. J. T. Pauls and J. Y. Welborn. il diag Pub Roads 27:187-202 Ag '53; Same cond. Roads & Eng Constr 91:100+ S '53

BITUMINOUS pavements. See Pavements, Bituminous

BITUMINOUS roads. See Roads, Bituminous

BITUMINOUS sand

Athabasca forecast. Oil & Gas J 52:151 Je 22 '53

Bituminous sands of Alberta. A. A. Peebles. il maps diags Engineering 175:229-31, 260 F 20-27 '53

Tailing disposal problems of Alberta tarsands; with cost data. L. E. Djingheuzian. bibliog il Can Min J 74:69-75 My '53

BITUMINOUS shale. See Oil shales

BIURET

Anticonvulsant drugs; some 1-substituted biurets. D. A. Dunnigan and W. J. Close. bibliog Am Chem Soc J 75:3615-16 Ag 5 '53

Molecular compound formation between substituted biurets and isocyanurates. W. J. Close. bibliog Am Chem Soc J 75:3619-20 Ag 5 '53

BLACK, James Byers, 1890-

Named by President Eisenhower as consultant. por Elec World 139:112 Mr 23 '53

BLACK

Use of sulphamic acid derivatives in the application of oxidation blacks; Solanile black. C. Zuber and B. Jomain. Soc Dyers & Col J 68:241-8 Jl '52; Abstract. Am Dyestuff Rep 41:750 N 10 '52

See also

Aniline black

Carbon black

BLACK and Decker manufacturing company

Growth of do-it-yourself market hiking income. Barron's 33:22 My 4 '53

BLACK light. See Ultraviolet rays

BLACK liquor. See Paper mills—Waste

BLACKBOARDS

Chalkboard lighting unit gives illumination without glare. H. Lazerson. Elec Eng 72:469-70 My '53

Visual requirements for chalkboard lighting. R. G. Hopkinson. il Illum Eng 48:325-33 Je '53

BLACKENING of steel. See Steel—Blackening

BLADEN, Ashby E.

Sketch. por(p135) Weekly Underw 168:155 Ja 10 '53

BLAISDELL, George Grant

Mr Zippo. por Fortune 46:220 O '52

BLAKE, John Twiss, 1901-

Dr. J. T. Blake named Charles Goodyear medalist for 1953. por Rubber Age 73:385 Je '53

BLANCHARD, Rollo Kimball, d. 1953

Sketch. por Water & Sewage Works 100:226 Je '53

BLANKETS

See also

Electric blankets

Manufacture

Blanket mill streamlines woolen-yarn processes; Lebanon woolen mills. R. B. Pressley. il Textile World 103:96-7+ Jl '53

BLAST cleaning. See Metal cleaning; Shot blasting

BLAST furnace gas

Corrected CO/CO$_2$ ratio for blast furnaces. S. T. Killian. J Metals 3:Trans 742-5 S '51; Discussion. 4:Trans 1168-72 N '52

Iron ore recovered from blast furnace gas. W. A. Walton. il Iron & Steel Eng 30:121-2 Ap '53

Lead blast furnace gas handling and dust collection. R. Bainbridge. flow sheet diags J Metals 4:Trans 1302-6 D '52

New product from benzene and blast furnace gas; carbon monoxide in blast furnace gas as a chemical reagent to convert benzene into benzaldehyde. J. L. Boyle. Blast F & Steel Pl 40:1443-7 D '52

Steam from steel; blast furnace gas. R. W. Worley and H. J. Bentson. il plans diags Power Eng 57:54-7 Jl '53

Steel plants operating at full capacity require greater power. A. D. Blake. diag Blast F & Steel Pl 41:324-5 Mr '53

Cleaning

Cleaning industrial gases. J. J. Seaver. diags Iron & Steel Eng 29:84-91 O '52

Donora has highly efficient gas cleaning system. Blast F & Steel Pl 40:1204 O '52

Eliminate air and stream pollution; American Steel and Wire, Donora, Pa. plant. il Iron Age 171:166 Je 18 '53

Ferromanganese cleaning plant starts up on Duquesne furnace; United States steel corp. il Iron & Steel Eng 30:136+ Ag '53

New blast furnace gas cleaning facilities at Donora. S. P. Kinney. il diag Iron & Steel Eng 30:139-40+ My '53; Same. Blast F & Steel Pl 41:776-9+ Jl '53

BLAST furnace slag. See Slag

BLAST furnaces

A.I.M.M.E. national open hearth steel committee and the blast furnace, coke oven and raw materials committee 36th annual conference, Buffalo, April 20-22; program. Blast F & Steel Pl 41:sup21-4+ Ap '53; J Metals 5:500-5 Ap '53

Blast-furnace at Kembla works, New South Wales. Engineer 194:872 D 26 '52

Blast furnace blowing-in and drying-out practices at Bethlehem plants; abstract. H. M. Kraner. Steel 132:122 Je 1 '53

BLAST furnaces—*Continued*

Blast furnace expansion. Mech Eng 75:158 F '53
Blast-furnace plant at Hawarden Bridge steelworks. il diag Engineering 175:652, 656, 812 My 22, Je 26 '53
Blast furnace production, Canada, 1930-1952; tabulation. Iron Age 171:427 Ja 1 '53
Blast furnaces in the U.S., materials, capacity; tabulations. Iron Age 171:426 Ja 1 '53
Corrected CO/CO_2 ratio for blast furnaces. S. T. Killian. J Metals 3:Trans 742-5 S '51; Discussion. 4:Trans 1168-72 N '52
Crucible expansion well under way. il Iron & Steel Eng 30:164+ Ja '53
Developments in the iron and steel industry during 1952. I. E. Madsen. il diag Iron & Steel Eng 30:136-7 Ja '53
Don't write off the blast furnace. C. E. Agnew. diags Steel 132:110+ Mr 16; 86+ Mr 23; 92+ Mr 30; 146+ Ap 6 '53
Experience in indefinite banking at Inland. J. S. Kapitan and M. Slifko. diag Blast F & Steel Pl 41:497-502 My '53
Experimental smelting of char-ore agglomerates in a low-shaft blast furnace; abstract. H. Kay. Steel 132:122+ Je 1 '53
Flue dust recovery plant for blast furnaces, Aliquippa works. il Engineer 195:810-11 Je 5 '53
Future of the blast furnace. Engineering 174:248 Ag 22 '52
Injection of oxygen-reformed natural gas and fuel oil into the blast furnace. J. O. Raick and J. E. Brassert. diag Iron & Steel Eng 29:75-80 D '52
Inwall temperatures of blast furnaces. S. J. Paisley. diag Instruments 25:1571+ N '52
Method of blowing-in blast furnace from bank; abstract. W. W. Durfee. Steel 132:120+ Je 1 '53
No drastic change seen in American blast furnace design. O. R. Rice. plans Steel 131:104+ O 20 '52
Old blast-furnace at Maryport, Cumberland. H. R. Schubert il Iron & Steel Inst J 172:162 O '52
Permeability of blast furnace burdens. P. B. Stubbs and R. L. Stephenson. il diag Blast F & Steel Pl 41:772-5 Jl '53
Permeability tests on blast-furnace raw materials. E. W. Nixon and F. R. Maw. plan diag Iron & Steel Inst J 174:331-5 Ag '53
Pig iron smelting without metallurgical coke; abstract. W. W. Krebs and D. J. Ram. Metal Prog 63:210-12+ My '53
Pressure drop in blast furnace and in cupola. S. Ergun. bibliog diag Ind & Eng Chem 45:477-85 F '53
Production of spiegeleisen from open-hearth slag in an experimental blast furnace. R. C. Buehl and M. B. Royer. bibliog il diag J Metals 4:Trans 1289-94 D '52
Reduction of silicon from blast furnace type slags. J. C. Fulton and others. bibliog diags J Metals 5:Trans 185-90 F '53
Rehabilitating a blast furnace and associated equipment. W. C. Daniels. il diag Iron & Steel Eng 30:57-65; Discussion. 65-6 Jl '53
Seventy-one years of blast furnacing at South works. H. E. Kaufman. bibliog il diags Blast F & Steel Pl 40:1457-64 D '52
Simplified construction of heat balances for the blast-furnace process. S. Klemantaski. il diags Iron & Steel Inst J 174:236-41 Jl '53
Some aspects of merchant iron furnacing. A. J. Macdonald. il Blast F & Steel Pl 41:646-50+ Je '53
Some aspects of the blast-furnace situation in the United States. O. R. Rice. map diags Iron & Steel Inst J 170:89-108 F '52; Same abr. Blast F & Steel Pl 40:513-21, 657-62, 787-92, 926-7 My-Ag '52; Abstract. Metal Prog 63:180+ Ja '53
U.S. blast furnace capacity by companies and by states; tabulations. Iron Age 171:405-6 Ja 1 '53
Water failures on blast furnaces. H. Goldfein. diag Blast F & Steel Pl 41:209-12 F '53
Youngstown sheet and tube company increases service to the Midwest; blast furnaces. C. Longenecker. il Blast F & Steel Pl 41:903-5 Ag '53

Air supply

Further information on high top pressure. I. Lockerbie. Engineering 175:267-8 F 27 '53
High top pressure blast furnace. E. L. Pepper. il Metal Prog 63:71-3 F '53
Progress at Republic steel corporation with the high pressure blowing of blast furnaces. J. C. Murray. diag Blast F & Steel Pl 41:49-55 Ja '53

Charging

Automatic blast furnace charging used at Belgian steelworks. il Iron Age 171:250-1 My 7 '53
Blast furnace charged with belt conveyors at the Société John Cockerill works in Seraing. L. Halbrecq. il plans diags Blast F & Steel Pl 41:743-50 Jl '53
Size distribution as a quality factor of blast-furnace coke. J. Taylor and J. D. Gilchrist. Engineering 174:805-7, 838-40 D 19-26 '52

Control

Reduction of hanging and slipping in blast furnaces by automatic control. O. J. Leone. il diag Iron & Steel Eng 30:55-72 Ap '53

Design

Construction of low-shaft blast furnace nears completion. plan diags Iron Age 171:133-7 My 21 '53
Design and construction of a carbon lined blast furnace. J. M. Stapleton and W. S. Debenham. Blast F & Steel Pl 41:1048-52+ S '53; Same cond. Iron & Steel Eng 30:112-14 Ag '53

History

Anthracite and iron; story of the early days. il Coal Age 58:93 Ja '53

Lining

Blast furnace relining record. Metallurgia 46:236 N '52
Blast furnace; test carbon lining. J. B. Delaney. il Iron Age 171:77 F 12 '53
Design and construction of a carbon lined blast furnace. J. M. Stapleton and W. S. Debenham. Blast F & Steel Pl 41:1048-52+ S '53; Same cond. Iron & Steel Eng 30:112-14 Ag '53
Progress report on carbon blast furnaces. T. J. Wilde and V. J. Nolan. Iron & Steel Eng 30:127-8 Ap '53; Same. Blast F & Steel Pl 41:505-7 My '53
Relining and enlarging number nine blast-furnace at Appleby-Frodingham. G. D. Elliot and others. il plans diags Iron & Steel Inst J 174:143-58 Je '53
Temperature distribution in carbon hearths. R. D. Westbrook. bibliog diags Iron & Steel Eng 30:141-4 Mr '53; Same. Blast F & Steel Pl 41:413-17+ Ap '53

Statistics

Annual capacity of blast furnaces as of Jan. 1, 1953; tabulation. J Metals 5:507 Ap '53

Testing

Further information on high top pressure. I. Lockerbie. Engineering 175:267-8 F 27 '53

BLASTING

Blasted bales give up secrets; checking the interior quality of purchased scrap bales. il diag Steel 132:97-8 Je 8 '53
Blasting a channel through New Jersey mud flats. P. W. Miller. il Explosives Eng 31:18-19 Ja '53
Blasting; machine-gun camera studies of quarry blasting. il Min Eng 4:1041-3 N '52
Blasting no-cut-hole raise rounds using millisecond delays. P. L. Russell and W. G. Agnew. 8pls U S Bur Mines Rep of Invest 4962:1-9 '53; Same cond. Min Cong J 39:18-22 Jl '53
Blasting research at the Bureau of mines oil-shale mine. F. D. Wright and others. 9pls U S Bur Mines Rep of Invest 4956:1-23 '53
Detecting doctored steel scrap. il Comp Air Mag 58:282 O '53
How producers use millisecond delay blasting. B. Nordberg. il diags Rock Prod 56:134-46 Ja; 104-7+ F '53
Inco sets off 64-ton blast at Frood-Strobie mine. il Min Eng 5:27 Ja '53
Isabella dam in California's Kern valley. P. Sturtevant and G. Sturtevant. il Explosives Eng 30:186-9+ N '52

BLASTING—*Continued*

Largest salt mine in the western hemisphere. B. Root. il Explosives Eng 31:49-52+ Mr '53

Measurement of blasting efficiency. H. H. White. Rock Prod 56:133+ Ja '53

Millisecond-delay blasting of bench rounds; USBM oil shale mine. F. D. Wright. il Min Cong J 39:51-3+ Je '53

Mines bureau reports on taconite-blasting experiments. Blast F & Steel Pl 41:1082 S '53

Mining copper at Bagdad, Ariz. O. Hondrum. il Explosives Eng 30:142-5+ S '52

New blasting technique adopted; igniter cord. il Min Cong J 39:79 Ag '53

Relocating a mountain highway in North Carolina. O. M. Davis. il Explosives Eng 30:146-51+ S '52

Short rounds lick mica schist on fast tunnel job. H. T. Perez. il diag Constr Methods 35: 58-61 My '53

Three-in-one tunnel blast in a Wisconsin quarry. J. C. Richards, jr. il plan Explosives Eng 30:156-9 S '52

See also

Explosives

Petroleum—Well blasting

Safety measures

Be alert for these unusual blasting hazards. Roads & Sts 96:93-4+ F '53

Keeping safety up-to-date; blasting with safety. W. H. Bennett. Coal Age 58:99-100 O '53

What's new in explosives safety? K. M. Ed. il diags Can Min J 74:92-6 S '53

BLASTING, Subaqueous

Crossing a wide, deep river with two pipe lines. J. E. McClinton. il Explosives Eng 31:7-12 Ja '53

Excavation of rock and silt from watercourses by blasting. R. Haslam and J. Hancock. il diags Engineer 195:825-7, 850-2 Je 12-19 '53

BLATTENBERGER, Raymond, 1892-

Blattenberger nominated for U.S. Public printer. por Inland Ptr 131:77 Ap '53

BLEACHERIES

Equipment

Compactness and efficiency make this bleach range novel; Pontiac division, Fruit of the loom, inc. G. M. Moisson. il diag Textile World 103:104-6 My '53

Grace bleachery gets results from control instruments. D. B. Daubert. il Textile World 103:141+ My '53

BLEACHERS (grandstands)

Folding bleachers. il Arch Rec 112:221+ S '52

BLEACHERS' association, limited

Statement by the chairman. P. L. Wright. Economist 167:940-1 Je 27 '53

BLEACHING

Bleaching the new fibers. E. Weller. Mod Textiles Mag 34:56-7 Jl '53

Hydrogen peroxide bleaching of textile materials. H. G. Smolens. Am Dyestuff Rep 41:575-7+ S 15 '52

Hydrogen peroxide; how to use it, how to figure it. H. G. Smolens. il Textile World 103:156+ S '53

Recent developments in bleaching with hydrogen peroxide. W. S. Wood and K. W. Richmond. bibliog diags Soc Dyers & Col J 68:337-44 S '52

Reversible bleaching of chlorophyll by metallic salts. W. F. Watson. Am Chem Soc J 75:2522-3 My 20 '53

See also

Decolorization

Dyes and dyeing

Paper making—Bleaching

Cotton

Compactness and efficiency make this bleach range novel; Pontiac division, Fruit of the loom, inc. G. M. Moisson. il diag Textile World 103:104-6 My '53

Linen

Bleached linen and the fluidity test. C. Garrett. Textile Inst J 43:P903-4 D '52

Testing

Bleached linen and the fluidity test. C. Garrett. Textile Inst J 43:P903-4 D '52

Wool

Measurement of damage produced by treatment of wool with solutions of hydrogen peroxide. G. Laxer and C. S. Whewell. Soc Dyers & Col J 68:256-7 Jl '52

BLEACHING materials

Application of peroxygen compounds in the textile industry. R. A. Secord. Am Dyestuff Rep 41:581-4 S 15 '52

Hubbub in the washtub; detergent advertising eliminates need for bleaches. il Chem W 72:52 Ja 31 '53

Sodium chlorite as a bleaching agent; abstract. Am Dyestuff Rep 41:787 N 24 '52

See also

Hydrogen peroxide

Sodium chlorite

BLEININGER award

Bleininger award. E. E. Marbaker. il Am Cer Soc Bul 31:255-6 Jl 15 '52

Ceramics expert, Robert Sosman, wins Bleininger award. Chem & Eng N 31:251 Ja 19 '53

BLIGH, William, 1754-1817

Captain Bligh and the breadfruit. por Sci Am 188:88-90+ Mr '53

BLIMPS. See Airships

BLIND

Clear image lens may offer hope to many of the partially blind. W. Feinbloom. Mech Eng 75:231-2 Mr '53

Meeting our blind customers. M. N. Hall. Am Gas Assn Proc 1952:237-8

That the blind may see; gas ranges make cooking easy for sightless. il Gas Age 111: 19 Ja 29 '53

Vision improvement in blind. P. J. Salmon. Nat Safety N 67:98+ My '53

Bibliography

Books about the blind; a bibliographical guide to literature relating to the blind. H. Lende. rev ed 357p $5 American foundation for the blind, 15 W. 16th st, New York 11 '53

BLIND, Books for

See also

Talking books

BLINDS

Shading of sunlit glass; experimental study of slat-type sun shades. G. V. Parmelee and others. bibliog il diags Heating-Piping 25: 192-200 Ja '53

BLINDS, Venetian. See Venetian blinds

BLOCK, Herbert Lawrence, 1909-

Cartoonists can't write? look at Herblock book. E. Knoll. por Ed & Pub 85:50 O 4 '52

BLOCK caving. See Mining methods

BLOCKSON chemical company

Blockson Chemical pursuing major expansion program. Barron's 33:29 Mr 30 '53

BLOOD

Blood-volume determinations by means of radioisotope-labeled red cells; an experiment in biochemistry. F. Lionetti and B. H. Sweet. J Chem Educ 30:63-6 F '53

Deficiency of ceruloplasmin in patients with hepatolenticular degeneration (Wilson's disease). I. H. Scheinberg and D. Gitlin. bibliog Science 116:484-5 O 31 '52

Existence of antifibrinolysin activity in platelets. S. A. Johnson and C. L. Schneider. bibliog Science 117:229-30 F 27 '53

Hydrolysis of aspirin in guinea-pig plasma. L. J. Edwards. Chem Soc J p4114-18 N '52

Immunochemical heterogeneity of human plasma β-lipoprotein. D. Gitlin. bibliog Science 117:591-3 My 29 '53

Occurrence of lymphocytes with bilobed nuclei in cyclotron personnel. M. Ingram and others. bibliog Science 116:706-8 D 26 '52

See also

Leucocytes

Analysis

Continuously recording radioactive hemoglobinometer. A. C. Guyton and others. bibliog diag R Sci Instr 23:639-41 N '52

Determination of urea nitrogen in whole blood by heating in a pressure cooker. A. C. Kibrick, M. R. Ross and S. J. Skupp. Anal Chem 25:364 F '53

Free amino groups of crystalline bovine plasma albumin. L. E. McClure, L. Schieler and M. S. Dunn. bibliog Am Chem Soc J 75: 1980-2 Ap 20 '53

BLOOD—Analysis—*Continued*

Isolation and characterization of glycoproteins from human plasma. K. Schmid. Am Chem Soc J 75:2532 My 20 '53

Isolation of fructose from beef serum. F. A. H. Rice. bibliog Am Chem Soc J 75:2262-3 My 5 '53

Nonfixation of carbon dioxide into organic acids in blood. M. A. Williams and others. Science 117:502-4 My 8 '53

Preparation and properties of serum and plasma proteins; an X-ray study of crystalline human serum albumin preparations. B. W. Low. bibliog il diags Am Chem Soc J 74:4830-4 O 5 '52

Preparation and properties of serum and plasma proteins; separation from human plasma of polysaccharides, peptides and proteins of low molecular weight; crystallization of an acid glycoprotein. K. Schmid. bibliog il Am Chem Soc J 75:60-8 Ja 5 '53

Rapid micromethod for electrometric determination of red cell cholinesterase activity in whole blood. W. E. MacDonald, jr. and others. bibliog A M A Archives Ind Hygiene & Occup Med 6:271-5 S '52

Rapid screening test for the determination of the approximate cholinesterase activity of human blood. G. Limperos and K. E. Ranta. bibliog Science 117:453-5 Ap 24 '53

Test utilizing the *in vitro* clearing of milk to determine the presence of lipid clearing factor in plasma. L. Schwartz and others. bibliog Science 117:482-3 My 1 '53

Use of infrared absorption techniques in the study of hypersensitivity diseases. J. T. Agnew and others. bibliog Opt Soc Am J 42:815-17 N '52

Circulation

Method for adjustment of the zero setting of an electromagnetic flow meter without interruption of flow. A. Kolin. il diags R Sci Instr 24:178-9 F '53

Traumatic shock. J. Fine. il diags Sci Am 187:62-6+ D '52

Coagulation

Conversion of fibrinogen to fibrin; light scattering studies on clotting systems inhibited by hexamethylene glycol. J. D. Ferry and others. bibliog Am Chem Soc J 74:5709-15 N 20 '52

Direct evidence of the influence of sulfamic acid linkages on the activity of heparin-like anticoagulants. J. Doczi, A. Fischman and J. A. King. Am Chem Soc J 75:1512-13 Mr 20 '53

Effect of toluidine blue on the coagulation of fibrinogen by thrombin. T. J. Haley and B. Rhodes. bibliog Science 117:604-6 My 29 '53

Simple and practical method for measuring and recording blood coagulation time. A. W. Richardson and J. G. Bishop. bibliog il diags Science 117:37-9 Ja 9 '53

Sulfated nitrogenous polysaccharides and their anticoagulant activity. M. L. Wolfrom, T. M. Shen and C. G. Summers. Am Chem Soc J 75:1519 Mr 20 '53

Synthetic anticoagulants. C. R. Ricketts. Chem & Ind p982 O 4 '52

Proteins

See Proteins

Sugar

Extraction of the hyperglycemic factor (HGF) of the pancreas with liquid ammonia. P. P. Foà and others. bibliog Science 117:82-4 Ja 23 '53

Purification and crystallization of hyperglycemic glycogenolytic factor (HGF). A. Staub and others. il Science 117:628-9 Je 5 '53

Synthetic hypoglycemic agents. H. L. Yale. bibliog Am Chem Soc J 75:675-8 F 5 '53

Testing

Capillary tube technique for serologic screening of syphilis. C. R. Freeble, jr. and B. Orsburn. Pub Health Rep 68:341-4 Mr '53

Transfusion

Blood donations on a local basis. Mod Ind 25: 115-16+ My '53

Blood plasma substitute; pictured flow sheet. Chem Eng 59:240-3 D '52

Blood research. R. B. Pennell. Chem & Eng N 31:420-2 F 2 '53

Dextran; staff-industry collaborative report. G. H. Bixler and others. bibliog flow sheet il plans diags Ind & Eng Chem 45:692-705 Ap '53

National blood program. C. C. Shaw. il U S Naval Inst Proc 79:50-7 Ja '53

Plasma expanders get emphasis of CDA plan. Oil Paint & Drug Rep 163:7+ Je 15 '53

See also
Dextran

BLOOD donors. See Blood—Transfusion

BLOOD groups

Amino acid contamination in preparations of hog blood group substances. S. Leskowitz, H. Van Vunakis and E. A. Kabat. Am Chem Soc J 74:5538 N 5 '52

Bioserological methods of human classification. N. Lahovary. map Science 117:259-69 Mr 13 '53

Rh and ABO blood group distributions in Japanese and Ethiopians. G. J. Stein and others. bibliog Science 117:100-2 Ja 30 '53

BLOOD pressure

Evaluation of hypertension. S. C. Franco. bibliog Ind Med 21:522-8 N '52

How research is changing the hypertension drug picture. Chem W 71:22+ D 27 '52

Hypotensive agents; alicyclic amino alcohols. L. M. Rice and others. Am Chem Soc J 75: 1092-3 Mr 5 '53

Hypotensive agents; dialkylaminoalkyl pyrrolidine derivatives. L. M. Rice, C. H. Grogan and E. E. Reid. Am Chem Soc J 75: 2261-2 My 5 '53

Hypotensive alkaloids from veratrum album protoveratrine A, protoveratrine B and germitetrine B. H. A. Nash and R. M. Brooker. bibliog Am Chem Soc J 75:1942-8 Ap 20 '53

BLOOD substitutes. See Blood—Transfusion

BLOOD vessels

Synthesis of some tertiary carbinamines as vasopressor agents. K. E. Hamlin and M. Freifelder. bibliog Am Chem Soc J 75:369-73 Ja 20 '53

See also
Vascular system

BLOOM, Alan

Copper Brite cleans up. Fortune 47:193 Mr '53

BLOOM engineering company

Bloom engineering co. expands for better customer service. il Iron & Steel Eng 29: 149+ D '52

BLOTTERS

Blotter-data sheet cuts lag in inquiry follow-up for Cuno. il Ind Marketing 38:68-9 Je '53

BLOUGH, Roger M.

They're reshuffling Big Steel. por Bsns W p27-8 D 6 '52

BLOWERS

Expression for work in a Root's blower. J. Kestin and J. A. Owczarek. diags Inst Mech Eng Proc (B) 1B no 3:91-4; Discussion. 95-8 '52

Fans and blowers. M. Van Winkle. diags Oil & Gas J 51:109 S 1; 127 S 8; 131 S 15; 133 S 22; 307 S 29; 133 O 6; 181 O 20; 135 O 27; 129 N 3; 159 N 10; 419 N 17; 133 N 24 '52

Figuring centrifugal blowers is easy. il Power Eng 57:90-1 Ag '53

How to cure pulsation in centrifugal blowers. Cer Ind 61:81 Ag '53

Miniature blower scrolls molded from alkyd plastic. il Machine Design 25:142 Mr '53

Movement of air at high velocity by electrical means. il Elec J 149:1833-5 D 12 '52

What causes pulsation in centrifugal blowers and how to stop it. Power Eng 56:81-2 D '52

Costs

Blower and fan costs. R. E. Denzler. Chem Eng 59:130-4 O '52

BLUE

See also
Ultramarine

BLUE crown petroleum, ltd. (Canada)

Stock offered. Comm & Fin Chr 178:294 Jl 27 '53

BLUEBERRIES
Quercetin and its glycosides in leaves of vaccinium myrtillus. C. H. Ice and S. H. Wender. bibliog Am Chem Soc J 75:50-2 Ja 5 '53

BLUEPRINTS
14 cost-cutting extras with shop layout blueprints; Parker appliance co. S. A. Rogers. Factory Management 111:145 O '53

BLUNT, Irene L. 1898-
Handy girl to have around. R. E. Ellsworth. pors Mod Textiles Mag 34:36+, cover My '53

BOART. See Diamonds, Industrial

BOATS, Aluminum
Aluminum boat fabrication; illustrations with text. Light Metal Age 10:17 D '52
Light alloy patrol launch. il Engineer 195:612 Ap 24 '53
Motor yacht Tonquin. il Engineer 194:157-8 Ag 1 '52; Engineering 174:188-9 Ag 8 '52
Passenger launch Ikeja. il Engineer 195:62 Ja 9 '53
Welded light alloy yacht. il Engineer 196:138-9 Jl 31 '53; Engineering 176:180-2 Ag 7 '53
See also
Barges, Aluminum

BOATS, Plastic
Four ways of building plastic boats. J. B. Alfers. il diags Mod Plastics 30:102-6 N '52

BOATS and boating
See also
Barges
Dredges
Ferryboats
Fishing boats
Freight ships
Motor boats
Shipbuilding
Ships
Steamboats
Towboats

BOBBINS
Control your vibration on high-speed twister spindles. H. H. Wormser. Textile World 103:125, 208 Mr '53
Now there's a way to relax and preshrink nylon. il Mod Textiles Mag 34:38 F '53
We increased bobbin weight by 20 per cent in warp spinning. W. M. Benson. Textile World 103:114 My '53

BODY weight. See Weight (physiology)

BOEING airplane company
Five stocks with record-breaking profits in 1952; with comparative balance sheet items. Mag of Wall St 91:240 N 29 '52
Ten potential market leaders for 1953; with comparative balance sheet items. Mag of Wall St 91:639 Mr 7 '53
Why Boeing undertook Project X. W. E. Beall. il Aero Digest 66:24-5 F '53

BOHACK, H. C., inc.
Profit margin rises as commodity prices drop. Barron's 32:21 D 29 '52

BOHLEN, Charles Eustis, 1904-
New ambassadors for Russia and Mexico. por Bsns W p26 F 28 '53

BOILER cleaning
He cleaned his boiler with gunpowder. W. F. Schaphorst. Pulp & Pa of Can 53:127 O '52

BOILER insurance. See Insurance, Boiler

BOILER plants
Both waste-heat and new boilers supply bigger steel mills. G. F. Wolfe. il Power 97:87-9 Ja '53
Development progress at Beckton; water gas unit and boiler house opened. il Chem Age (Lond) 67:489-92 O 11 '52
Double-reheat plant runs at 4500 psi. P. Sporn. Power 97:150+ Jl '53
Hospitals need mechanical know-how. C. F. Neergaard. il Power 97:77-9 My '53
Know-how plus planning expands 50-year boiler for fuel change. W. Godley. il diags Power 97:114-15 Je '53
Operating a state hospital plant; abstract. C. R. Bender. Heating-Piping 25:89 My '53
Smart insulation methods cut cost in modern station; Consumers power co. il Power 97:73-8 Jl '53
See also
Boilers
Steam plants

Costs

Can you afford combustion control in your boiler room? Power Eng 57:77 Jl '53
Cost of handling and firing coal or fuel oil. W. L. Nelson. Oil & Gas J 52:265 My 25; 118 Je 1; 141-2 Je 8 '53
Handling coal and ashes economically in smaller plants. D. M. Given and C. A. Marshall. il diags Mech Eng 75:125-9+ F '53; Same cond. Min Eng 5:685-7 Jl '53
Heating modernization pays; new central boiler plant for heating Oberlin college. L. S. Ries. Heating-Piping 25:97 Ap '53

Equipment

Cyclone dust collectors for boilers. A. J. ter Linden. diags A S M E Trans 75:433-40 Ap '53
Deaerating heater proves versatile tool in large, expanding plants. V. J. Calise and R. K. Stenard. il diags Power 97:78-80+ F '53
Handling coal and ashes economically in smaller plants. D. M. Given and C. A. Marshall. il diags Mech Eng 75:125-9+ F '53; Same cond. Min Eng 5:685-7 Jl '53
Heating airport terminal building; Greater Pittsburgh airport. T. F. Rockwell. il diag Heating-Piping 24:77-80 D '52
Heating plants modernized. E. J. Watts. il diag Heating-Piping 25:80-1 S '53
How does water get into fan bearings? T. Hicks. diags Power 97:130-1 Ja '53
Ideas for your big job file! Arcadia works of Nicholson file co. modernized heating system. il Dom Eng 181:88-9+ Je '53
Lick your storage-heater problems by proper application, auxiliaries. F. P. Lankow. il diags Power 97:108-9 Ag '53
New boiler plant takes over for old without a break in work schedule; cellophane-manufacturing plant of Canadian industries, ltd. il diags Power 96:90-3 N '52
140 per cent return on small boiler modernization; E. I. du Pont de Nemours & co. R. L. Steele. il diags Power Eng 57:96-8+ O '53
Reliability, continuity mark institutional plant; Rochester, Minn. state hospital. L. J. Neubauer. flow diag il diag Power 97:80-3 Jl '53
Replace 100,000 lb per hr in 17 weeks; Minnequa works of Colorado fuel and iron corp. W. Brill and J. F. White. il diags Power 97:81-3 F '53
Widest possible fuel flexibility gives lowest-cost steam output; Lewis flight propulsion laboratory. G. G. Reed. il Power 97:94-5 Mr '53
See also
Water gages

Maintenance and repair

Good planning gives high steam-plant efficiency; Anniston mfg. co. E. D. White. il Textile World 103:122-3 Ja '53
How to find leak with test tube. W. J. Steinert. diag Power 97:134 My '53
Poor operation brings on replacements; Baylor hospital's power plant. M. Jones. il Power 97:105-7 Ap '53
Programing; surest way to better boiler-room maintenance. D. Wood. il Power 97:106-7 Ja '53
Rehabilitating feedwater equipment. C. W. Bell. il diags Power Eng 57:94-5+ Je; 64-5+ Jl '53

Records

How shall I set up heating records? Power 97:134-5 F; 133 Mr '53

Standards

Reduce costs by applying steam production standards. A. F. DeLong. Mill & Factory 51:112-14 O '52

BOILER scale
Danger! boiler scale at work. P. Brindisi. il diags Power 97:84-6 Ja; 94-5+ Ap '53
How to find scale thickness in tubes. il Power 96:154 D '52
Ultrasonic equipment for descaling boilers; Crustex. il diag Engineer 195:638-9 My 1 '53; Engineering 175:619 My 15 '53

BOILER tubes
Boiler tube temperatures. il Heat & Ven 50:84 Jl '53
How to find scale thickness in tubes. il Power 96:154 D '52

BOILER tubes—*Continued*

Removing, rolling, beading and welding your boiler tubes; illustrated instructions. S. Elonka. Power 96:108-9 N '52

Tips for your steam boiler customers. diags Dom Eng 181:263-4+ My '53

Window welding can save your blistered boiler tubes. B. Davis. diags Power 97:150 O '53

BOILERS

Big steam plant's little brother; package type steam generator. J. F. Griffin. diags Midwest Eng 5:9-10+ Mr '53

Boilers and coal handling; some outstanding installations in 1952. il Elec J 150:613-14 F 20 '53

Correcting boiler steaming rates. F. L. Van Reed. Heat & Ven 50:82-3 My '53

Developments in steam generation. F. X. Gilg. il diags Blast F & Steel Pl 41:98-102, 220-3 Ja-F '53

Economical ways to modernize small industrial power plants. H. D. Fisher. il Power Eng 57:70-3+ Je '53

Innovations at Cromby station; new plant will have controlled circulation boilers. Elec World 139:81 Mr 9 '53

Long service boilers. il Engineer 194:564 O 24 '52

Monolithic refractories do smooth big-boiler job. il diag Power 97:98-9 Mr '53

New 4500-psi generating unit breaks through critical steam pressure barrier; Philco plant. P. Sporn. Power Eng 57:68 Jl '53; Same Elec World News ed 139:6 My 25 '53; Same. Blast F & Steel Pl 41:942-3 Ag '53; Same cond. Elec Eng 72:657 Jl '53

Nuclear power plants; design and performance of liquid-metal heat exchangers and steam generators. R. D. Brooks and A. L. Rosenblatt. bibliog Mech Eng 75:363-8 My '53

100mw unit boilers for Castle Donington. il Engineer 194:621 N 7 '52; diag Elec R (Lond) 151:1004-6 N 7 '52

Packaged steam generators in the paper industry. F. X. Gilg. il Tappi 36:324-30 Jl '53

Packaged units give you low-cost steam for many industrial needs. E. J. Clement. il diag Mill & Factory 52:112-15 F '53

Replace 100,000 lb per hr in 17 weeks; Minnequa works of Colorado fuel and iron corp. W. Brill and J. F. White. il diags Power 97:81-3 F '53

Steam for box board; Vapor-Clarkson boiler for Hoerner corp. il Power Eng 56:79 N '52

See also

Boiler cleaning and other headings beginning Boiler
Feed water
Feed water purification
Locomotive boilers
Master boilermakers' association

Blowdown

Bringing blowdown under control. diags Power 97:136-7 O '53

High-pressure boiler blowoff valves. E. E. Finsel. il diags Power 97:94-7+ S '53

High-pressure boiler blowoffs and drains. H. de Soto. diags Power Eng 56:89-90 N '52

Sunray uses boiler blowdown to neutralize condensate from its reboilers at Elton, La., plant. il diag Oil & Gas J 51:89 F 2 '53

Control

Boiler designs developed for controllability; abstract. P. R. Loughin. il diag Elec Eng 72:535 Je '53

Can you afford combustion control in your boiler room? Power Eng 57:77 Jl '53

Tried and tested automatic combustion controls reduce packaged boiler ills. diags Power 97:92-4+ F '53

We remodeled small boiler controls; Imperial paper and color corp. R. A. Starbuck. il diags Power Eng 57:82-4 Ag '53

Corrosion

Boiler-water treatment to prevent corrosion. U. R. Evans. diags Engineering 175:602-4 My 8 '53

Concentration films; their role in boiler scale and corrosion problems; abstract. H. M. Rivers. Am Water Works Assn J 44:sup 62+ N '52

Contamination of condensate by heat-exchanger-tube alloys. J. D. Ristroph and E. B. Powell. bibliog il diag A S M E Trans 75:729-38; Discussion. 738-45 Jl '53

Design

Design and operation of furnaces for burning bark and wood. W. H. D. Clark. diags Pulp & Pa of Can 54:96-100 Mr '53

Modern high-pressure high-temperature boilers. G. W. Kessler. diags Mech Eng 74:797-802, 878-84 O-N '52

Pressure operation of large pulverized-coal-fired boilers on the American gas and electric system. G. W. Bice and W. M. Yeknik. il diags A S M E Trans 75:535-45; Discussion. 545-8 My '53

Electric heating

Farm food cooking. E. C. Claydon. il Elec R (Lond) 153:296 Ag 7 '53

Pays off in more tire recaps; electric steam generator; Muligany tire shop. il Elec West 110:97 Mr '53

Equipment

See also

Boiler plants—Equipment
Water gages

Failure

Caustic cracking in boilers; prevention by chemical methods. C. D. Weir and P. Hamer. bibliog Chem & Ind p 1040-9 O 25 '52

Caustic cracking in steam boilers; caustic cracking of boilers in the United States. A. A. Berk. Chem & Ind p360-4 Ap 18 '53

Caustic cracking in steam boilers; conference. Engineer 194:725 N 28 '52

Caustic cracking in steam boilers; intercrystalline corrosion of mild steels. R. N. Parkins. bibliog Chem & Ind p 180-4 F 28 '53

Caustic cracking in water tube boilers with riveted drums. R. L. Rees. bibliog Chem & Ind p 1213-16 D 13 '52

Firing

Air-preheater design as affected by fuel characteristics. H. Karlsson and W. E. Hammond. bibliog il diags A S M E Trans 75:711-18; Discussion. 718-22 Jl '53

Ash and clinker; Institute of fuel conference. il Elec R (Lond) 151:953-5 O 31 '52

Cost of handling and firing coal or fuel oil. W. L. Nelson. Oil & Gas J 52:265 My 25; 118 Je 1; 141-2 Je 8 '53

Petroleum pitch, an excellent boiler fuel. E. J. Miller. il diags Power Eng 57:74-5+ Je '53

Power relief valve aids superheater venting in h-p, h-t boiler start-ups. J. W. Mackenzie. il diag Power Eng 57:58-9+ Mr '53

Quick starting of large hp, ht boilers. J. C. Falkner. Power Eng 57:100-1+ Ap '53

Some economic aspects of burning sulphite waste liquor. W. J. Darmstadt and F. H. Richter. Tappi 36:sup 171A-4A Je '53

Tv pictures combustion conditions inside furnaces; Port Jefferson installation of Long Island lighting co. L. M. Exley. il diag Elec World 139:92-5 F 9 '53

Tried and tested automatic combustion controls reduce packaged boiler ills. diags Power 97:92-4+ F '53

Tubular air-heater problems. E. F. Rothemich and G. Parmakian. il diags A S M E Trans 75:723-7; Discussion. 727-8 Jl '53

Widest possible fuel flexibility gives lowest-cost steam output; Lewis flight propulsion laboratory. G. G. Reed. il Power 97:94-5 Mr '53

See also

Boilers—Oil firing
Boilers—Pulverized coal firing
Boilers—Wood firing
Flue gas
Stokers, Mechanical

Foaming and priming

Old and costly danger; water carry-over. il Power Eng 57:75-6 My '53

Furnaces

See Furnaces, Boiler

BOILERS—*Continued*

Gas firing

Combined flame failure and gas pressure cut-off device. il diag Engineer 194:190-1 Ag 8 '52; Engineering 174:220-1 Ag 15 '52

Factors in the efficient operation of boilers and direct-fired heaters; abstract. O. S. Hubbard. Oil & Gas J 51:64 D 1 '52

Gas-fired boiler pays its way at Rome Hosiery. E. D. White. il Textile World 103:124+ Mr '53

Gas-fired steam boiler replaces coal in curing concrete block. il Concrete 61:34 S '53

Steam from steel; blast-furnace gas. R. W. Worley and H. J. Bentson. il plans diags Power Eng 57:54-7 Jl '53

Variation in heat absorption in a natural-gas-fired, water-cooled steam-boiler furnace. A. R. Mumford and R. C. Corey. diags A S M E Trans 74:1191-214; Discussion. 1214-15 O '52

Manufacture

Hydraulic press and drawbench installation in America; Barberton works of the Babcock and Wilcox co. il diags Engineer 195:147-9 Ja 23 '53; Same cond. Mech Eng 74:818-20 O '52

Oil firing

Application of additives to fuel oil and their use in steam-generating units. J. B. McIlroy and others. il diag Power 97:86-8 Mr '53

Auxiliary oil firing; St Pancras power station. il Elec R (Lond) 152:762-4 Ap 3 '53

Combined firing at St Pancras power station. il Engineer 195:495-7 Ap 3 '53; Engineering 175:427, 432 Ap 3 '53

Flame-failure control for oil burners. il Engineering 174:187 Ag 8 '52

Know-how plus planning expands 50-year boiler for fuel change. W. Godley. il diags Power 97:114-15 Je '53

Oil additive developed to relieve boiler slagging. il diag Blast F & Steel Pl 40:938-40 Ag '52; Steel 131:120-2+ Jl 21 '52; Heat & Ven 49:134+ S '52; Iron Age 170:178-9 S 11 '52; Marine Eng 57:59-62 N '52; Power Eng 56:83-4 D '52

Pulverized coal firing

Combustion and fine grinding with the jet mill. G. M. Croft and L. D. Bechtel. il diags Iron & Steel Eng 29:61-5 O '52

Operation of Sunbury steam-electric station using pulverized-anthracite fuel. T. B. Richards. diags A S M E Trans 75:427-32 Ap '53

Pressure operation of large pulverized-coal-fired boilers on the American gas and electric system. G. W. Bice and W. M. Yeknik. il diags A S M E Trans 75:535-45 My '53; Excerpts. Power Eng 57:92-3+ Je '53; Discussion. A S M E Trans 75:545-8 My '53

Repair

Get at the cause behind every boiler leak. H. W. Spring. il diag Power 97:114-15 Jl '53

Keep round handhole plates from leaking; illustrated instructions. S. Elonka. diag Power 97:114-15 My '53

Removing, rolling, beading and welding your boiler tubes; illustrated instructions. S. Elonka. Power 96:108-9 N '52

Stop holes don't stop crack. H. M. Spring. diags Power 96:107 N '52

Safety measures

Does your water-level alarm whistle work? L. R. Greif. diag Power Eng 57:77 Jl '53

Low-water cutoffs profit from care. diag Power 97:116-17 S '53

Safety in boiler operation. J. R. Fellows. Heating-Piping 24:90-2 D '52

See also
Safety valves

Standards

ASME boiler code. A. M. Greene, jr. Mech Eng 74:555-62, 640-6, 727-34, 897-907, 996-1004; 75:133-8, 211-26, 340-2, 551-8, 639-46 Jl-S, N-D '52, F-Ap, Jl-Ag '53

ASME boiler code committee and its work. A. M. Greene, jr. Standardization 23:376 N '52

Proposed revisions and addenda to boiler construction code. Mech Eng 73:942-3, 1027-9; 74:84-5, 250, 415, 522-3, 763-4, 934; 75:170-1, 253 N '51-Ja, Mr, My-Je, S, N '52, F-Mr '53

Sulzer boiler

Monotube comes to U.S. J. V. Santry. il Power Eng 57:69 Ag '53

Testing

Gamma radiology; application to detection of cracking in riveted seams of boiler drums. A. R. Haworth. il Elec J 149:1163-72 O 17 '52

Vibration

How to stop boiler vibration. diag Power 97:158+ O '53

Wood firing

Burning wood shavings cuts fuel bill 20 per cent, Grand Trunk Western shops. il Ry Locomotives & Cars 127:57 Ja '53

Design and operation of furnaces for burning bark and wood. W. H. D. Clark. diags Pulp & Pa of Can 54:96-100 Mr '53

Now! no more flyash; George C. Brown and co. il diag Power 97:134-5 O '53

To burn wood efficiently choose properly designed combustion chamber. M. F. Anders. il diags Power 97:90-3 Ap '53

Turbulent suspension burning as applied to steam generating units for paper mills. O. de Lorenzi. diags Tappi 36:97-102 Mr '53

Wood waste makes low cost power. D. L. Gusler. il plan diag Power Eng 57:72-5+ Ap '53

BOILERS, Heating

Boiler installation in New York office building is called world's biggest. il Dom Eng 182:108-9 O '53

Features of steel heating boilers. J. R. Collette. Heating-Piping 25:119 Mr '53

How can we convert our heating plant? Power 97:133-4+ Ap; 140+ My '53

How to choose between packaged or conventional boilers? Heating-Piping 25:119 Mr; 117+ Ap; 101 O '53

Low boiler water temperatures cause flue condensation. T. W. Reynolds. Heat & Ven 50:104-6 Jl '53

19 boilers take over heating job in guided missile plant. il Dom Eng 182:109 O '53

Water treatment for low-pressure heating boilers. L. I. Pincus. diags Power 97:118-19 Ag '53

What changes are needed to drop heating steam from 125 psi to 15 psi? Power Eng 57:79-80 Mr; 98 Ap '53

Why Consumers Power put new boilers on the roof of its building. A. D. Almquist. il Gas Age 112:28-9+ Jl 16 '53

Advertising

Smith bros. and Smith boilers team up. il Ptr Ink 242:62 Mr 13 '53

Control

Draft control for heating boilers; abstract. D. H. Cook. Heating-Piping 25:115 Mr '53

Electric heating

Off-peak heating. il Elec R (Lond) 153:404-6 Ag 21 '53

Firing

Design for coal fired plant. S. R. Lewis. Heating-Piping 25:104 Je '53

Influence of coal properties on combustion; abstract. D. C. Gunn. Engineering 176:62 Jl 10 '53

Gas firing

Largest apartment in South chooses gas for heating and cooking. W. C. Grant. il Gas Age 112:34-5 O 8 '53

Packaged gas-fired heating boiler extends Old Sol's growing season. J. Kanda. il Power 97:126-7 F '53

BOILERS, Marine

Steam air heaters for marine water-tube boilers; abstract. W. S. Glass. Engineer 194:698 N 21 '52

BOILERS, Marine—*Continued*

Welding in marine engineering. N. H. Pemberton. diags Inst Mech Eng Proc (A) 167 no 1:48-55, pl 1-3 '53; Same cond. Engineer 195:131-3 Ja 23 '53; Same cond. Engineering 175:73-6, 80 Ja 16 '53

Failure

Caustic cracking in marine scotch boilers. W. McClimont. bibliog Engineering 175:219-20 F 13 '53

Oil firing

How to get complete combustion with bunker C fuel; operation of the viscorator. J. A. Ulrich, jr. and T. M. Finnican. diag Marine Eng 58:67-9 Ja '53

Some operating characteristics of combustion in marine boilers; abstract. O. de Lorenzi. Marine Eng 58:68 Ap '53

BOILERS, Mercury

Corrosion of mercury-boiler tubes during combustion of a heavy residual oil. A. M. Hall and others. bibliog flow chart il diags A S M E Trans 75:1037-49 Ag '53

BOILERS, Waste heat

Both waste-heat and new boilers supply bigger steel mills. G. F. Wolfe. il Power 97:87-9 Ja '53

Chuquicamata, story of Chilean copper; waste heat power plant. il diag J Metals 5:31-2 Ja '53

Design and application of waste-heat boilers; abstracts. R. Cubberly and K. J. Ray. diags Mech Eng 74:480-2 Je '52; Power Eng 56:94-5+ O '52; Discussion. Mech Eng 75:83-4 Ja '53

How Tide Water Associated instruments waste-heat steam-generator system. L. L. Benthall. diag Oil & Gas J 51:110-11 Mr 9 '53

Runs on waste. Mill & Factory 52:298+ My '53

Two smelter experts exchange letters on a tough waste-heat problem. F. Benitez; R. C. Wilson. Eng & Min J 154:196+ My '53

Waste furnace heat to be used by boiler; White Pine copper smelter. Midwest Eng 5:29-30 Mr '53; diag Iron Age 171:148-9 My 14 '53; Steel 132:170+ Je 1 '53; Power Eng 57:73 Ag '53

BOILERS, Water tube

Caustic cracking in water tube boilers with riveted drums. R. L. Rees. bibliog Chem & Ind p 1213-16 D 13 '52

Field tips ease package-boiler choice. F. F. Hohnholt. il Power 97:77-9 S '53

Packaged boilers. il Blast F & Steel Pl 41:684+ Je '53

Stalactite formation in a boiler. C. H. Greener. il J Ap Chem 3:84-5 F '53

Steam air heaters for marine water-tube boilers; abstract. W. S. Glass. Engineer 194:698 N 21 '52

Steam in water-tube packages. il diags Power Eng 57:66-9+ My '53

When can I tighten manhole bolts? Power 97:135-6+ F '53

BOILING

Engines cooled by boiling heat transfer. O. B. Freeman. diags Pet Eng (Ref annual) 25:E22+ Jl 15 '53; Same cond. Oil Gas J 51:172-4+ F 23 '53

Film boiling termination mechanism. J. W. Marx and B. I. Davis. bibliog diags J Ap Phys 23:1354-7 D '52

Heat transfer film coefficients for refrigerants boiling inside tubes. M. Baker and others. bibliog flow diag diag Refrig Eng 61:986-91; Discussion. 991 S '53

Heat transfer to boiling liquids at low temperatures and elevated pressures. A. G. Monroe, H. A. S. Bristow and J. E. Newell. bibliog diags J Ap Chem 2:613-24 N '52

BOILING points

Correction of boiling points for variation in barometric pressure. R. W. Hakala. J Chem Educ 29:616-17 D '52

Metal ebulliometers for vapor pressure measurement. G. D. Oliver and J. W. Grisard. diags R Sci Instr 24:204-6 Mr '53

See also

Azeotropes

BOLES, Ewing Thomas, 1895-

Portrait. Bsns W p70 D 6 '52

BOLIVIA

See also

Roads—Bolivia

Tin industry and trade—Bolivia

Commercial policy

Bolivian control methods revised. For Comm W 49:11 F 23 '53

Economic conditions

Economic conditions abroad (cont). For Comm W 49:5+ Ap 13; 50:5 Jl 20 '53

Economic relations

United States

Shaking hands with Bolivia. Bsns W p 109-10 Jl 18 '53

Politics and government

Bolivia under Paz. Economist 167:527-8 My 23 '53

BOLOMETERS

General theory of bolometer performance. R. C. Jones. diags Opt Soc Am J 43:1-14 Ja '53

Properties of thermistor infrared detectors. E. M. Wormser. il diags Opt Soc Am J 43:15-21 Ja '53

BOLTING, Roof. See Mine roofs

BOLTS and nuts

Accessories for OBI presses; reference book sheet. diags Am Mach 96:179 O 13 '52

Bolt and nut reclamation system. il Engineer 195:475-6 Mr 27 '53

Bolt design for repeated loading; new approach to strength calculations. E. I. Radzimovsky. bibliog(43 titles) diags Machine Design 24:135-46 N '52

Caged anchor bolts make setting easy; illustrations with text. Constr Methods 34:49 N '52

Hautau automatic nut-torquing machine provides high production rates. il Am Mach 97:186 S 28 '53

High-strength bolting. diags Machine Design 25:382+ O '53

High-strength bolts, a new concept in structural connections. T. R. Higgins and E. J. Ruble. il Civil Eng 22:760-3+ S '52

High-tensile bolts gain fabricators' nods. H. O. McCully. Steel 132:95 Ja 26 '53

How to shoot studs and save costly time; illustrated instructions. Power 97:140 Ap '53

Improving fatigue resistance of bolted joints; drawings with text. J. P. Vidosic. Product Eng 24:190-1 Ap '53

Lester anti-vibration nut. il diag Engineering 175:77 Ja 16 '53

Many factors affect selection of hex bolts, cap screws, nuts. Iron Age 170:150 N 20 '52

Miniature elastic stop nuts. il Diesel Power 30:64 D '52

New bolting material good for the tough spots. J. F. Klement. il Steel 132:92 F 16 '53

Now you can tighten nuts right; with chart. Mill & Factory 53:107 Ag '53

Nut and bolt data sheet. Diesel Power 31:67 O '53

Nuts and washers. J. E. Hyler. il diags Mill & Factory 51:116-20 N '52

Select right lock nut for each problem; drawings with text. S. Elonka. Power 96:126-7 D '52

Striking savings made with large Impactool. il Comp Air Mag 58:242-3 S '53

What's ahead the next ten years in joining and assembly; bolts and screws. Am Mach 96:F7-8 Mid-N '52

When can I tighten manhole bolts? Power 97:135-6+ F '53

See also

Mine roofs

Rail fastenings

Manufacture

Automatic heat treating line with duplex quench, either oil or water; Russell, Burdsall & Ward bolt and nut co. F. C. Schaefer and R. L. Burdsall. il diags Metal Prog 62:113-16 N '52

Black-bolt heading plant with induction heating. il Engineering 175:193-5 F 13 '53

Improved Budd-Ranney bar machine has two independent spindles. il Am Mach 97:156 Ag 17 '53

BOLTS and nuts—Manufacture—*Continued*

Manufacture and characteristics of high-temperature bolts. T. W. Harker. il Metal Prog 64:125-8 O '53

Small parts barrel through plating; cold heading department of the Ford motor co.'s River Rouge plant. H. Chase. il Steel 132:88-90 F 23 '53

Standards

Ordnance corps standards for commercial safety nuts; reference book sheet. diags Product Eng 23:209 O '52

Standard pilot nuts for dies; reference book sheet. J. R. Paquin. diags Am Mach 97:147 Ag 3 '53

Testing

Lock nut and nut fatigue testing machine; Lester lock nut and washer co. il diags Engineer 194:284-5 Ag 29 '52

Testing nuts and bolts for resistance to vibration; Lester vibrator machine. il diag Engineering 175:54-5 Ja 9 '53

Tests specified for ¼-in. grade five bolts are adequate. A. S. Jameson, ed. S A E J 61:95-9 O '53

Use of torque wrench to determine load in roof bolts; slotted-type bolts. A. J. Barry and others. bibliog 4pls U S Bur Mines Rep of Invest 4967:1-7 '53

BOLTZMANN equation

Complete solution of the one-velocity diffusion problem at intermediate and large distances. L. Tonks. J Ap Phys 23:1085-8 O '52

Dynamical theory of nuclear induction. R. K. Wangsness and F. Bloch. Phys R 89:728-39 F 15 '53

BOMB, Hydrogen. See Hydrogen bomb

BOMB shelters. See Air raid shelters

BOMBAY

Water supply

Bombay tunnels complete. map Eng N 149:60 O 23 '52

Bombay water supply. map diags Engineer 194:570-1, 602-4 O 31-N 7 '52

BOMBS, Aerial

Developments in naval aircraft ordnance. W. H. Huff. il Aero Digest 66:68+ Ap '53

Experimental study of natural vibrations of cantilevered triangular plates. P. N. Gustafson and others. bibliog il diags J Aeronautical Sci 20:331-7 My '53

See also
Guided missiles
Hydrogen bomb

BOMBS, Atomic. See Atomic bombs

BOMBS, Flying. See Guided missiles

BONANZA air lines

Bonanza asks for new routes. map Aviation W 58:25 Mr 30 '53

Bonanza strikes gold on Coast; its fight with WAL may alter CAB policy on feeders. W. J. Coughlin. Aviation W 57:92+ O 13 '52

BONCHER, Hector P.

Principles and rules. por Fortune 47:139 My '53

BONDED web. See Textile fabrics—Bonded web

BONDOR, limited

Statement by the chairman. J. Goodenday. Economist 167:257 Ap 25 '53

BONDS

Accounting for amortization of bond premiums. F. W. Manke. Banking 45:60-1 F '53

Attractive tax features of discount bonds should make them useful as tax-planning instruments. A. Morris. J Account 95:305-9 Mr '53

Beckoning bonds. I. U. Cobleigh. Comm & Fin Chr 177:1852 Ap 30 '53

Birth of a bond syndicate. il Bsns W p32 D 20 '52

Bond market outlook for 1953. J. S. Williams. Mag of Wall St 91:408-9+ Ja 10 '53

Bond market review; governments, municipals, corporates; third quarter 1952. R. A. Schlumpf. Trusts & Estates 91:701-3 O '52

Corporate bond experience re-examined; symposium. Banking 45:35-50 D '52

Cost of money continues its steady rise. Bsns W p90-3 Mr 7 '53

Flexible money market policy marks 1952 bond market. H. F. Jonsson. Trusts & Estates 92:29-31 Ja '53

Have bond prices hit bottom? Bsns W p52+ Ap 11 '53

If you are holding bonds and preferreds; selling above their call prices. J. S. Williams. Mag of Wall St 91:33+ O 4 '52

Looking ahead at the capital markets. R. F. Murray. Comm & Fin Chr 177:2195+ My 21 '53

Opportunities in rail bonds. R. Carleson. Mag of Wall St 92:281+ My 30 '53

Outlook for bond market in 1953. Comm & Fin Chr 177:98 Ja 8 '53

Significant turn in new financing. L. A. Lukens. Mag of Wall St 91:696-7+ Mr 21 '53

See also
Municipal bonds
Securities

Default

Corporate bond experience re-examined; history of bond defaults. T. L. Nims. Banking 45:37-8 D '52

See also
Bonds, Government—Default

Prices

Bond price prospects. W. W. Townsend. Comm & Fin Chr 176:2217+ D 11 '52

Bond prices, 1950-1952 average; monthly Dec. 1951-Dec. 1952; weekly Dec. 1952. Fed Res Bul 39:38 Ja '53 [cont monthly]

Listed bond quotations. Published in weekly numbers of Barron's

Monthly range of prices on the New York stock exchange for year 1952. Comm & Fin Chr 177:400-8 sec 2 Ja 22 '53

Outlook for stocks and bonds. H. C. Baldwin. Comm & Fin Chr 176:2118+ D 4 '52

Recent debt issue prices reflect market uncertainty, first quarter 1953. C. D. Barnes, jr. Barron's 33:29-30 Ap 13 '53

Statistics

Security markets; Nov.-Dec. 1951-Jan.-Nov. 1952. Survey of Cur Bsns 33:S 19 Ja '53 [cont monthly]

Yields

Bond and stock yields, 1950-1952 average; monthly Dec. 1951-Dec. 1952; weekly Dec. 1952. Fed Res Bul 39:39 Ja '53 [cont monthly]

High interest rates and stock prices. E. W. Stern. Comm & Fin Chr 177:1429 Ap 2 '53

New trend in investment values and yields. W. Gates. Mag of Wall St 92:76-7+ Ap 18 '53

Yield on Japanese bonds; with table. Economist 165:123 O 11 '52

BONDS, Chemical. See Chemical bonds

BONDS, Convertible

Capital gains through convertibles. J. S. Williams. Mag of Wall St 91:348+ D 27 '52

Convertible bonds for profit. H. F. Atwater. Comm & Fin Chr 177:1972 My 7 '53

BONDS, Government

See also
Debts, Public
Municipal bonds
State bonds

Default

Austrian defaulted debt service is anticipated. L. Tanzer. Barron's 33:24 Ap 13 '53

Marketing

Free market propels our economic machinery. W. M. Martin, jr. Comm & Fin Chr 176:2343+ D 18 '52

Inflation curb in flexible Federal Reserve open market policy. G. R. Collins and M. Nadler. Comm & Fin Chr 176:2242 D 11 '52

1953's stepped-up savings bonds program. Burroughs Clearing House 37:37+ Ja '53

Treasuries responding to free market; report of IBA governmental securities committee. Comm & Fin Chr 176:2355+ D 18 '52

Redemption

The F and G maturities problem. Banking 45:131 F '53

BONDS, Government—*Continued*

Refunding

Mean legacy; the Treasury's refunding job is no picnic. R. M. Bleiberg. Barron's 33:5 Mr 23 '53
Room to move; two decisions by Snyder. Bsns W p 146-7 N 22 '52
Treasury certificate refunding. Nat City Bank p 17-18 F '53
Urge caution in large scale federal refunding operations. G. R. Collins and M. Nadler. Comm & Fin Chr 177:2325 My 28 '53

Austria

Austrian defaulted debt service is anticipated. L. Tanzer. Barron's 33:24 Ap 13 '53
Austrian Parliament passes power-loan law. For Comm W 49:8 Je 8 '53

Costa Rica

Costa Rica provides for debt settlement. For Comm W 49:21 Je 8 '53
Costa Rican congress eyes defaulted debt plan. L. Tanzer. Barron's 32:8 N 24 '52

Germany

German bonds; debt settlement plan keys investment attraction. L. Tanzer. Barron's 33:11 Ja 5 '53

Great Britain

British investors' dilemma. P. Einzig. Comm & Fin Chr 178:361 Jl 30 '53
Gilt-edged and the deficit. Economist 167:317-18 My 2 '53
More modest funding. Economist 167:834 Je 20 '53
Seasonal credit contraction. Economist 166:654-5 Mr 7 '53
Shakeout in gilt-edged. Economist 167:921 Je 27 '53

Greece

Prices of Greek bonds foreshadow settlement. Barron's 33:14 Je 1 '53

Guatemala

Guatemala bond plan draws many protests. M. Bannell. Barron's 32:22 N 17 '52
Guatemala moves to void "sterling debt" payment. M. Bannell. Barron's 32:28 O 27 '52

Japan

Dealings in Japanese bonds. Economist 165:775-6 D 13 '52
Japan pays up. Economist 165:645 N 29 '52

Mexico

Registry of Mexican debt, bonds reopened. For Comm W 49:2 Je 15 '53

Peru

Peruvian bonds; new debt plan reflects improved economic conditions. L. Tanzer. Barron's 33:21-2 Mr 23 '53

Russia

Imperial Russian bonds. Fortune 47:115 Ap '53

United States

Acting choosy; only one call issued. Bsns W p66-7 F 21 '53
Banks are frozen in. Bsns W p66+ Je 13 '53
Credit of the U.S.A. Nat City Bank p67-9 Je '53
Decline in long Treasuries is over. O. K. Burrell. Comm & Fin Chr 178:101+ Jl 9 '53
Defense bond program, 1953. Banking 45:136 Ja '53
Demonetizing the federal debt. W. E. Spahr. Comm & Fin Chr 177:1955+ My 7 '53
Good omen for the Treasury; E-bonds. Bsns W p59-60 F 28 '53
Government bond market and problems of Treasury financing. J. H. Grier. Comm & Fin Chr 177:2408+ Je 4 '53
Government bond prospects. W. W. Townsend. Comm & Fin Chr 177:2634 Je 18 '53
Government bonds. M. Olyphant. Banking 45:62-3 Ja '53 [cont monthly]
Have bond prices hit bottom? Bsns W p52+ Ap 11 '53
If you're bearish on bond prices, don't be a bear too long. A. G. Lanston. Trusts & Estates 92:441-2 Je '53
Mean legacy; the Treasury's refunding job is no picnic. R. M. Bleiberg. Barron's 33:5 Mr 23 '53
1953's stepped-up savings bonds program. Burroughs Clearing House 37:37+ Ja '53
Outlook for best-grade bonds. D. H. Stevens. Published irregularly in Barron's
Outlook for money rates and fixed income securities. R. F. Murray. Comm & Fin Chr 177:2514-15+ Je 11 '53
Ownership of United States government securities, direct and fully guaranteed; end of month figures, Dec. 1940-1945; June and December, 1946-1951; monthly Jan.-Oct. 1952. Fed Res Bul 39:42 Ja '53 [cont monthly]
Principles of Treasury policy. W. R. Burgess. Comm & Fin Chr 177:2063+ My 14 '53
Repair job needed on our government debt. T. L. Godey. Mag of Wall St 91:335-7 D 27 '52
Security I like best; United States government short-term obligations. D. L. Moffat. Comm & Fin Chr 177:1310+ Mr 26 '53
Significant turn in new financing. L. A. Lukens. Mag of Wall St 91:696-7+ Mr 21 '53
Special endorsement of U.S. savings bonds. Banking 45:133 Je '53
Strong money factors key first quarter outlook. D. H. Stevens. Barron's 32:26 D 29 '52
That 3¼ per cent bond. R. M. Bleiberg. Barron's 33:3 Ap 13 '53
That 3¼ per cent bond. W. Browne. Barron's 33:13-14 Je 15 '53
30-year 3¼s. Nat City Bank p56-9 My '53
Transition to free markets. W. M. Martin, jr. Comm & Fin Chr 177:1629+ Ap 16 '53; Same. Fed Res Bul 39:330-5 Ap '53
Treasury financing. Nat City Bank p65-7 Je '53; Excerpts. Comm & Fin Chr 177:2426 Je 4 '53
Treasury financing; 3¼ per cent 30-year fully marketable bond. J. Donoghue. Burroughs Clearing House 37:46 My '53
Treasury plays it cautious. Bsns W p31 F 7 '53
Treasury's hit. Bsns W p 142+ Ap 25 '53
Treasury's 30-year bonds significant for life insurance. Nat Underw (Life ed) 57:1 Ap 17 '53
Unions promote savings bonds. Banking 45:124 My '53
U.S. tries long-term issue. Bsns W p 135 Ap 18 '53

See also
Bonds, Government—Marketing

BONDS, Municipal. See Municipal bonds

BONDS, Revenue

Interest in revenue bonds. W. H. Tharpe. Trusts & Estates 92:262-4 Ap '53
Investment billions ride the turnpikes. il Bsns W p 110+ My 30 '53
Novel airport financing proposed for Toledo. Eng N 149:149 N 13 '52
Recent trends in highway bond financing. H. C. Duzan and others. bibliog(29 titles) il maps Pub Roads 27:57-88 O '52; Same cond. Roads & Eng Constr 90:120+ O '52
$62,000,000 California toll bridge authority, 3⅞ per cent revenue bonds publicly offered. Comm & Fin Chr 177:22 Ja 1 '53
35 million bonds sold in uneasy market. il Eng N 149:100-2 D 18 '52
Unique use of revenue bonds at Denver's growing airport. il plan Eng N 150:57-60 Ja 1 '53
Wants end of tax exemption on municipal revenue bonds issued for private purposes. H. W. Wolkstein. Comm & Fin Chr 177:1330 Mr 26 '53

BONDS, State. See State bonds

BONE

Agents diminishing skeletal accumulation of lead. N. S. MacDonald and others. A M A Archives Ind Hygiene & Occup Med 7:217-20 Mr '53
Chayen's impulse. diag Ind & Eng Chem 45: sup 11A+ Mr '53
Cold rendering displaces extraction processes; Chayen process. flow diag il Can Chem Process 36:38+ D '52
Nature of the mineral phase of bone. W. F. Neuman and M. W. Neuman. il diags Chem R 53:1-45 bibliog(p37-45) Ag '53
Shock waves expel cold fat; Chayen process. il Chem Eng 60:118+ F '53

BONE—*Continued*

Surface chemistry of bone; the hydration shell. W. F. Neuman, T. Y. Toribara and B. J. Mulryan. bibliog diags Am Chem Soc J 75:4239-42 S 5 '53

BONE black

Laboratory evaluation of granular carbons. W. R. Fetzer, E. K. Crosby and C. E. Engel. bibliog diags Anal Chem 24:1558-63 O '52

BONNEVILLE power administration

BPA sets marks. Elec World News ed 139:18 Ja 5 '53

BPA to help local projects. J. D. Davis. Elec World News ed 138:15 O 13 '52

Council asks new function for BPA. Elec World News ed 139:6-7 Mr 16 '53

House appropriations group declares policy. Elec West 110:134-5 My '53

Power contracts. Bsns W p32 Je 13 '53

Proposed contract protested in Northwest. Elec West 111:128 Jl '53

Raver wants region to control BPA; suggests formation of Interstate power commission to take over Columbia River development. Elec World 138:52-3 D 29 '52

Senate group restores part of fiscal funds. Elec West 111:129 Jl '53

Surcharges; NW storm signal. Elec World News ed 139:15 F 2 '53

BONUS system

Bonus problems and solutions. H. M. Duffy. Am Bsns 23:28 S '53

Shares of stock in other firms given as employee bonus; Automatic screw machine products co. il Am Bsns 23:30+ F '53

Work credit bonus plan; Signode steel strapping co. F. A. H. Hulick. il Mill & Factory 51:127-9 O '52

See also

Safety bonus

Salesmen—Bonuses

BOOK exhibits

AAAS Science library. R. L. Taylor. Science 117:413 Ap 17 '53

BOOK industry and trade

Lively newcomer in a ready industry; paperbound books. Bsns W p42+ Ja 3 '53

Selling books to scientists. M. Matheson. Science 117:406-9 Ap 17 '53

Advertising

Adventures in writing mail-order copy. J. Caples. Adv Agency 45:20+ O '52

Aesop Glim's clinic; This I believe. Ptr Ink 241:60 D 5 '52

Bad advertising next to good editorial hurts books. R. O. Eastman. Ind Marketing 38:131-2 Jl '53

Which ad pulled best? Book-of-the-month club ads. il Ptr Ink 242:39+ Ja 16 '53

Directories

American book trade directory. 12th ed 606p $17.50 R. R. Bowker co, 62 W. 45th st, New York 19 '52

Securities

Book values; investment merit of certain literary-product companies whose shares are publicly held. I. U. Cobleigh. Comm & Fin Chr 177:1732 Ap 23 '53

Germany

German book publishing centers are shifting. For Comm W 49:15 Je 22 '53

BOOK reviews

Book reviews. Chem & Ind p222-35, 1008-24 Mr 15, O 18 '52

See also

Newspapers—Book reviews

BOOKBINDING

Fine hand binding still requires tools of ancient craft, bindery expert claims. H. Tribolet. il Inland Ptr 131:41 My '53

Midget punch kit for bookbinding by hand. il Mod Plastics 30:193 N '52

BOOKER brothers, McConnell and company, limited

Statement by the chairman. J. M. Campbell. Economist 167:850-1 Je 20 '53

BOOKKEEPING

Simplified bookkeeping system; Shuman co. R. Howe. Sheet Metal Worker 44:71-3 S '53

BOOKKEEPING machines

New bookkeeping machine designed for local agencies. Weekly Underw 168:1002 Ap 11 '53

New machine provides mechanized accounting. il Food Eng 25:113+ Jl '53

There's no mystery about bookkeeping machines. il Nat Pet N 45:67+ My 20 '53

BOOKLETS. See Advertisements—Books and booklets

BOOTH, A. A. K.

Sketch. por Civil Eng 22:960 N '52

BOOTH, John Rudolphus

John Rudolphus Booth; story of a great personality and factor in developing Canada's industrial power. pors Pulp & Pa of Can 53:88-92 O '52

BOOTHS, Paint spraying. See Paint spraying—Booths

BOOTS, Rubber. See Shoes, Rubber, plastic, etc.

BORANE. See Boron hydrides

BORATES

Separation of sugar phosphates by ion exchange with the use of the borate complex. J. X. Khym and W. E. Cohn. bibliog Am Chem Soc J 75:1153-6 Mr 5 '53

Study of molten borates with the Cr(VI)-Cr(III) indicator. F. Irmann. bibliog Am Chem Soc J 74:4767-70 O 5 '52

BORAX

Boron compounds used as water-flood tracers. P. G. Carpenter and others. World Oil 136:214+ Ap '53

BORDEN company

Elsie Daisy; framing her in yellow daisy gives Borden's identifying symbol. il Mod Packaging 26:92-3 N '52

Five stocks with unusually stable earnings; with comparative balance sheet items. Mag of Wall St 92:171 My 2 '53

Profit margins have firmed up with ending of OPS. H. Bridgman. Barron's 33:15-16 My 25 '53

BORE hole camera. See Cameras

BORG-WARNER corporation

All under one tent. il Bsns W p 152-4 Jl 18 '53

Borg-Warner; trend to no-shift driving broadens its sales. J. C. Mueller. Barron's 33:15-16 F 16 '53

BORIC acid

Boron compounds used as water-flood tracers. P. G. Carpenter and others. World Oil 136:214+ Ap '53

Compounds of curcumin and boric acid. G. S. Spicer, J. D. H. Strickland and L. J. Bellamy. Chem Soc J p4644-56 D '52

Ionophoresis of some carbohydrate derivatives. A. B. Foster and M. Stacey. bibliog J Ap Chem 3:19-21 Ja '53

Physiological effect

Boric acid toxicity survey is now under way by FDA. Oil Paint & Drug Rep 164:3+ S 7 '53

BORIDES

Borides of some transition metals. B. Post and F. W. Glaser. bibliog J Chem Phys 20:1050-1 Je '52

Studies of compounds for superconductivity. W. T. Ziegler and R. A. Young. bibliog Phys R 90:115-19 Ap 1 '53

BORINE

Chemistry of P-B bonding; the phosphinoborines and their polymers. A. B. Burg and R. I. Wagner. bibliog Am Chem Soc J 75:3872-7 Ag 20 '53

Thermodynamic and kinetic constants for the diborane-borine equilibrium. S. H. Bauer, A. Shepp and R. E. McCoy. bibliog Am Chem Soc J 75:1003-4 F 20 '53

BORING bars

Boring bar tool bit sleeves. diags Engineer 196:283-4 Ag 28 '53; Engineering 176:286 Ag 28 '53

BORING machinery. See Drilling and boring machinery

BORNESITOL. See Quebrachitol

BORON

Measurement of the transport mean free path of thermal neutrons in D_2O by a boron poisoning method. S. W. Kash and D. C. Woods. Phys R 90:564-6 My 15 '53

BORON—*Continued*

Solid solution series, boron-boron carbide. R. D. Allen. Am Chem Soc J 75:3582-3 Jl 20 '53

See also

Plants—Boron content

Steel—Boron content

Analysis

New spectrochemical excitation unit; a key to essential control in boron steels. J. T. Rozsa and L. E. Zeeb. il diag Steel 131: 92+ O 6 '52

Isotopes

Absolute determination of resonant energies for the radiative capture of protons by boron, carbon, fluorine, magnesium, and aluminum in the energy range below 500 kev. S. E. Hunt and W. M. Jones. diag Phys R 89:1283-7 Mr 15 '53

Angular distribution of 12-Mev gamma rays from proton bombardment of B^{11}. G. L. Jenkins and others. bibliog Phys R 91:915-17 Ag 15 '53

Deuteron bombardment of Be^9 and classification of levels of B^{10}. F. Ajzenberg. bibliog Phys R 88:298-304 O 15 '52

Excitation curves for α particles from B^{11} bombarded with protons. O. Beckman and others. bibliog Phys R 91:606-9 Ag 1 '53

(γ,α) Reaction of B^{11} and B^{10}. K. Locher and P. Stoll. diags Phys R 90:164-5 Ap 1 '53

Gamma radiation from B^{11} bombarded by protons. T. Huus and R. B. Day. bibliog Phys R 91:599-605 Ag 1 '53

Gamma-ray resonances in the alpha-particle bombardment of beryllium and boron. F. L. Talbot and N. P. Heydenburg. bibliog Phys R 90:186-7 Ap 15 '53

Reaction $Li^6(\alpha,\gamma)B^{10}$. D. H. Wilkinson and G. A. Jones. bibliog Phys R 91:1575-6 S 15 '53

Reaction $Li^7(\alpha,\gamma)B^{11}$ and states of B^{11}. G. A. Jones and D. H. Wilkinson. bibliog diag Phys R 88:423-4 O 15 '52

Spins of Li^6 and B^{10} in the shell model. N. Zeldes. Phys R 90:416-19 My 1 '53

BORON carbide

Solid solution series, boron-boron carbide. R. D. Allen. Am Chem Soc J 75:3582-3 Jl 20 '53

BORON chlorides

Molecular structure of B_4Cl_4. M. Atoji and W. N. Lipscomb. diag J Chem Phys 21:172 Ja '53

New sub-chloride of boron B_4Cl_4. G. Urry, T. Wartik and H. I. Schlesinger. Am Chem Soc J 74:5809 N 20 '52

Reaction sequences in alcohol-boron trichloride-pyridine systems. M. F. Lappert. Chem Soc J p667-73 F '53

Structure of B_4Cl_4. G. H. Duffey. J Chem Phys 21:761 Ap '53

Studies with boron trichloride and organic sulphides: the preparation and properties of di-*n*-butyl sulphide-boron trichloride. M. F. Lappert. Chem Soc J p2784-8 S '53

Vibrational spectrum of tetrachlordiborine. M. J. Linevsky and others. bibliog Am Chem Soc J 75:3287-8 Jl 5 '53

BORON compounds

Fragments of chemistry. C. A. Kraus. J Chem Educ 29:548-9 N '52

Preparation of some unsaturated aliphatic derivatives of mercury and boron. E. Rothstein and R. W. Saville. Chem Soc J p2987-91 Ag '52

Thermochemistry of organo-boron compounds; esters of boric acid. T. Charnley, H. A. Skinner and N. B. Smith. Chem Soc J p2288-91 Je '52

BORON fluorides

Acetoacetylation of aromatic compounds by boron fluoride to form β-diketones; failure with boron and aluminum chlorides. H. G. Walker, jr., J. J. Sanderson and C. R. Hauser. Am Chem Soc J 75:4109-10 Ag 20 '53

Alkylation of aromatic hydrocarbons by optically active secondary butyl methyl ether in the presence of boron trifluoride. R. L. Burwell, jr., L. M. Elkin and A. D. Shields. bibliog Am Chem Soc J 74:4570-2 S 20 '52

Complexes of boron trifluoride with amides. E. L. Muetterties and E. G. Rochow. Am Chem Soc J 75:490-1 Ja 20 '53

Dissociation of the addition compounds of trimethylboron with *n*-butyl- and neopentyldimethylamines; interaction of trimethylboron and boron trifluoride with highly hindered bases. H. C. Brown and R. B. Johannesen. bibliog diag Am Chem Soc J 75:16-20 Ja 5 '53

Effect of promoters on the alkylation of benzene by secondary butyl methyl ether in the presence of boron trifluoride. R. L. Burwell, jr., L. M. Elkin and A. D. Shields. bibliog Am Chem Soc J 74:4567-70 S 20 '52

Electrochemistry of boron trifluoride co-ordination compounds. N. N. Greenwood and R. L. Martin. Chem Soc J p751-64 Mr '53

Electrochemistry of boron trifluoride co-ordination compounds; degrees of ionic dissociation in the molten state. N. N. Greenwood and R. L. Martin. Chem Soc J p 1427-32 My '53

Low temperature pyrolysis of boron trifluoride-Mannich base complexes; 2-nitro-1-alkenes. W. D. Emmons and others. Am Chem Soc J 75:1993-4 Ap 20 '53

BORON halides

Preparation of diborane from lithium hydride and boron trihalide ether complexes. J. R. Elliott, E. M. Boldebuck and G. F. Roedel. bibliog Am Chem Soc J 74:5047-52 O 20 '52

Reaction of the boron halides with the alkali metal hydrides and with their addition compounds; a new synthesis of diborane. H. I. Schlesinger and others. bibliog diag Am Chem Soc J 75:195-9 Ja 5 '53

BORON hydrides

Addition compounds of alkali metal hydrides; sodium trimethoxyborohydride and related compounds. H. C. Brown and others. bibliog Am Chem Soc J 75:192-5 Ja 5 '53

Behavior of tetraborane toward trimethylamine and ethanol. A. B. Burg and F. G. A. Stone. bibliog diag Am Chem Soc J 75:228-9 Ja 5 '53

Condensed gas calorimetry; heat capacity, heat of fusion, heat of vaporization, vapor pressures and entropy of diborane between 13°K. and the boiling point (180.32°K.). J. T. Clarke, E. B. Rifkin and H. L. Johnston. bibliog Am Chem Soc J 75:781-5 F 20 '53

Condensed gas calorimetry; the heat capacity and vapor pressure of saturated liquid diborane above the boiling point. E. B. Rifkin, E. C. Kerr and H. L. Johnston. bibliog Am Chem Soc J 75:785-8 F 20 '53

Improved arc process for the preparation of diborane; purification of diborane. H. I. Schlesinger and others. Am Chem Soc J 75:191 Ja 5 '53

Kinetics of two exchange reactions involving diborane. P. C. Maybury and W. S. Koski. bibliog diags J Chem Phys 21:742-7 Ap '53

Mechanism of the hydrolysis of diborane in the vapor phase. H. G. Weiss and I. Shapiro. bibliog Am Chem Soc J 75:1221-4 Mr 5 '53

Molecular structure of B_4H_{10}. C. E. Nordman and W. N. Lipscomb. Am Chem Soc J 75: 4116-17 Ag 20 '53

Nature of the hydrogen bridge. R. T. Sanderson. bibliog diags J Chem Phys 21: 571-2 Mr '53

New developments in the chemistry of diborane and the borohydrides; general summary. H. I. Schlesinger and others. bibliog Am Chem Soc J 75:186-90 Ja 5 '53

Preparation of diborane from lithium hydride and boron trihalide ether complexes. J. R. Elliott, E. M. Boldebuck and G. F. Roedel. bibliog Am Chem Soc J 74:5047-52 O 20 '52

Preparation of other borohydrides by metathetical reactions utilizing the alkali metal borohydrides. H. I. Schlesinger, H. C. Brown and E. K. Hyde. bibliog diag Am Chem Soc J 75:209-13 Ja 5 '53

Reaction of diborane with the alkyl derivatives of some group Vb elements. F. Hewitt and A. K. Holliday. Chem Soc J p530-4 F '53

Reaction of hydrazine and symmetrical dimethylhydrazine with diborane. M. J. Steindler and H. I. Schlesinger. Am Chem Soc J 75:756 F 5 '53

BORON hydrides—*Continued*

Reaction of the boron halides with the alkali metal hydrides and with their addition compounds; a new synthesis of diborane. H. I. Schlesinger and others. bibliog diag Am Chem Soc J 75:195-9 Ja 5 '53

Reactions of diborane with alkali metal hydrides and their addition compounds; new syntheses of borohydrides; sodium and potassium borohydrides. H. I. Schlesinger and others. bibliog diags Am Chem Soc J 75:199-204 Ja 5 '53

Solubility of diborane- and boron-containing lithium salts. J. R. Elliott and others. Am Chem Soc J 74:5211-12 O 20 '52

Structure of tetraborane. M. E. Jones, K. Hedberg and V. Schomaker. diag Am Chem Soc J 75:4116 Ag 20 '53

Thermodynamic and kinetic constants for the diborane-borine equilibrium. S. H. Bauer, A. Shepp and R. E. McCoy. bibliog Am Chem Soc J 75:1003-4 F 20 '53

Vapor phase heat of chlorination of diborane. J. R. Lacher, R. E. Scruby and J. D. Park. bibliog Am Chem Soc J 74:5292-4 N 5 '52

Vibrational frequencies and the entropy of decaborane. W. E. Keller and H. L. Johnston. bibliog diags J Chem Phys 20:1749-51 N '52

BORON nitrides

T^2 dependence of the low temperature specific heat of boron nitride. A. S. Dworkin and others. J Chem Phys 21:954-5 My '53

BORON oxide

Addition of boron to steel by reduction from boron oxide. G. E. Speight. bibliog Iron & Steel Inst J 171:147-53 Je '52; Abstract. Metal Prog 63:134+ Ap '53; Discussion. Iron & Steel Inst J 173:275-9 Mr '53

BORON steel. See Steel—Boron content

BORON trichloride. See Boron chlorides

BORON trimethyl

Dissociation of the addition compounds of trimethylboron with branched-chain primary amines; the effects of chain-branching. H. C. Brown and G. K. Barbaras. bibliog diag Am Chem Soc J 75:6-9 Ja 5 '53

Dissociation of the addition compounds of trimethylboron with *n*-butyl- and neopentyldimethylamines; interaction of trimethylboron and boron trifluoride with highly hindered bases. H. C. Brown and R. B. Johannesen. bibliog diag Am Chem Soc J 75:16-20 Ja 5 '53

BORON triphenyl

Magnetic and spectroscopic studies on triphenyl-boron sodium. Ting Li Chu. bibliog Am Chem Soc J 75:1730-2 Ap 5 '53

BORT. See Diamonds, Industrial

BOSE-EINSTEIN statistics

Quantum corrections to classical nonlinear meson theory. D. R. Yennie. bibliog diags Phys R 88:527-36 N 1 '52

BOSON theory

Connection between fusion theory of bosons and nonlocal field theory. S. Watanabe. Phys R 91:771-2 Ag 1 '53

BOSTON

See also

Building—Boston
Housing—Boston
Wages—Boston

Architecture

Asset for Boston. il Bsns W p 129-30 F 21 '53

Galleries and museums

Museum changes its spots; it's an industrial designer; Boston's Institute of contemporary art. il Bsns W p78-80+ O 25 '52; Correction. J. S. Plaut. p 10+ N 15 '52

Harbor

Boston port development takes another step ahead. Eng N 150:53 Ja 15 '53

New deal in the port. Bsns W p 135 Jl 11 '53

Railroads

Syndicate buys rail yard to build center. il Eng N 150:45-6 Mr 5 '53

Rapid transit

MTA loses as DPU commissioners wrangle on law. Bus Transportation 32:62-3 S '53

Science park

Museum and planetarium built on old dam. il Eng N 150:31, cover Mr 12 '53

BOSTON Edison company

Public utility securities. O. Ely. Comm & Fin Chr 177:2324 My 28 '53

Stock offering underwritten. Comm & Fin Chr 178:294 Jl 27 '53

BOSTON symphony orchestra. See Orchestras

BOTANICAL research

Following a cold trail; to discover plant relationships, botanists work over old clues. E. C. Crocker. bibliog il Tech R 55:199-202+ F '53

BOTANY

See also

Fungi
Galls (botany)
Plant cells and tissues
Roots
Rusts (botany)

Arctic region

Cochlearia officinalis s.l. (scurvy grass) in northernmost Alaska. N. Polunin. bibliog Science 116:430-2 O 17 '52

Australia

Chemistry of western Australian plants; oleanolic acid acetate from eucalyptus calophylla bark. D. E. White and L. S. Zampatti. Chem Soc J p5040 D '52

Chemistry of western Australian plants; the occurrence of betulic, oleanolic, and ursolic acids. J. R. Anstee and others. Chem Soc J p4065-7 O '52

BOTANY, Economic

See also

Forest products
Grain
Rubber plants and planting
Textile fibers
Weeds

BOTT, George John, 1910-

Amiable Bott. por Fortune 47:81 F '53

BOTTLE caps and seals

Color-identity dropper stoppers of translucent polyethylene for Higgins ink. il Mod Packaging 26:92-4+ O '52

Hopper feeds for bottle caps. J. Waitkus and V. Waitkus. diags Mach 58:180-1 Je '52; 59:176-7 Ja; 184-5 F; 200-1 Mr; 192-4 Ap; 186-7 My '53

BOTTLE filling machines. See Bottling machines

BOTTLE handling

Case packer for bottles; Lilleshall-Webster case packer. il Engineering 174:236-7, pl 10 Ag 22 '52

Robot speeds and eases case, bottle handling; Duquesne brewing co. il Food Eng 25:67 S '53

BOTTLE washing machines

Internal surface damage to bottle. F. W. Preston. il Glass Ind 33:639-44 D '52

BOTTLED goods

Decals automatically applied. il Mod Packaging 26:101-3+ D '52

Prince Matchabelli perfumes; nominated for packaging's Hall of fame. il Mod Packaging 26:104-9+, cover D '52

See also

Beverages
Coca Cola
Wine

BOTTLES

Flask design portrays tempo of early nineteenth century; exhibition at the Corning museum of glass. il Glass Ind 34:426+ Ag '53

Internal surface damage to bottles. F. W. Preston. il Glass Ind 33:639-44 D '52

See also

Carboys
Thermos bottles
Whisky bottles

Testing

Behavior of glass bottles under impact. R. E. Mould. bibliog il diag Am Cer Soc J 35:230-5 S 1 '52

Observed direction of leader cracks from hinge failures of glass bottles. H. M. Dimmick. diags Am Cer Soc J 35:235-6 S 1 '52

BOTTLES, Plastic

Ever-ready squeeze; Noreen's teardrop poly shampoo bottle. il Mod Packaging 26:84-5+ Ag '53

BOTTLES, Plastic—*Continued*

Progress in squeeze-bottle filling. il Mod Packaging 27:114-19+ S '53

Two-way nasal treatment; Sharp & Dohme atomizer-dropper. il Mod Packaging 26:104-5 F '53

BOTTLING

New British cousin for Pepsi. il Bsns W p 112+ D 20 '52

See also

Breweries

BOTTLING machines

Multi-flavor filler for combination packaging; one rotary machine fills four wines simultaneously in Garrett plant. il diags Mod Packaging 26:122-3+ D '52

BOTTLING plants

Rinse 'er out and fill 'er up! Labatt's new bottling plant. il Can Chem Process 37:53-4 Jl '53

Suburban site for Coca-Cola bottling plant. il plan Arch Rec 113:132-3 Ja '53

What refrigeration do you need? beverage plant cooling requirements. T. Hicks. Food Eng 25:63+ F '53

Equipment

Blending and bottling plant for whisky; Distillers agency, limited. il diag Engineering 175:153-6 Ja 30 '53

Blending and bottling warehouse; Distillers agency, ltd. il Engineer 194:614-15 N 7 '52

Boosts output, deliveries, sales the pallet way; Pepsi-Cola bottling co. plan Food Eng 25:127 Ja '53; il Mill & Factory 52:117-18 Ap '53

Case packer for bottles; Lilleshall-Webster case packer. il Engineering 174:236-7, pl 10 Ag 22 '52

Important materials handling ideas; John Labatt, limited. il Factory Management 111:76-81 Ag '53

Kitten had to go; Grapette products co. W. E. Mankin. il Food Eng 25:60-1 S '53

New bottling plant incorporates six engineering advances; Stroh brewing co. F. W. McCarthy. il diag Food Eng 24:69-71+ D '52

Panorama of new beverage units; illustrations of equipment at Atlantic City exposition. Food Eng 25:88-9 Ja '53

Six simple auxiliaries smooth packaging line performance; Corn products refining co. I. C. Miller. il diags Food Eng 25:61-3 My '53

Triple-action operating efficiency; Labatt's new bottling plant. il Food Eng 25:74-8 Ag '53

BOTULINUM toxin

Motor nerve filament block produced by botulinum toxin. V. B. Brooks. Science 117:334-5 Mr 27 '53

BOULWARE, Lemuel Ricketts, 1895-

Carey vs. Boulware; G.E.'s bargaining bogs down. Fortune 46:92-3 O '52

BOUNDARY layer

Asymptotic solutions for the heat transfer at varying wall temperatures in a laminar boundary layer with Hartree's velocity profiles. H. Schuh. bibliog J Aeronautical Sci 20:146-7 F '53

Boundary-layer equations in hypersonic flow and their approximate solutions. L. Lees. bibliog J Aeronautical Sci 20:143-5 F '53

Boundary-layer stability and transition in subsonic and supersonic flow. C. Gazley, jr. bibliog(43 titles) J Aeronautical Sci 20:19-28 Ja '53

Calculation method for three-dimensional rotationally symmetrical laminar boundary layers with arbitrary free-stream velocity and arbitrary wall-temperature variation. R. M. Drake, jr. bibliog diag J Aeronautical Sci 20:309-16+ My '53

Calculation of the stability of the laminar boundary layer in a compressible fluid on a flat plate with heat transfer. E. R. Van Driest. bibliog J Aeronautical Sci 19:801-12+ D '52

Compressible laminar boundary layer on a heat-insulated body. N. Rott. J Aeronautical Sci 20:67-8 Ja '53

Electronic barrier layer phenomena in chemisorption and catalysis. P. B. Weisz. J Chem Phys 20:1483-4 S '52

Energy removal from a supersonic turbulent boundary layer. J. J. Martin. J Aeronautical Sci 20:140-1 F '53

Free-flight investigation of the possibility of high Reynolds number supersonic laminar boundary layers. J. Sternberg. bibliog il diags J Aeronautical Sci 19:721-33 N '52

Fundamentals of the boundary layer theory. M. Z. Krzywoblocki. Franklin Inst J 255:289-99 bibliog(p298-9) Ap '53

Graphical solution for turbulent boundary layer in compressible fluids. J. J. Martin. J Aeronautical Sci 20:147-8 F '53

Heat conduction of the boundary layer in liquid helium II. D. White and others. diag Phys R 89:593-4 F 1 '53

Heat transfer, recovery factors, and spin for laminar flows. A. N. Tifford and Sheng To Chu. bibliog J Aeronautical Sci 19:787-9 N '52

Life raiser; boundary layer control studied in Cessna 309. il diags Aviation W 58:22+ Ja 19 '53

Linear theory of boundary effects in open wind tunnels with finite jet lengths. S. Katzoff and others. bibliog il diags U S Nat Advisory Com for Aeronautics 1950:509-45 '51

Measurement of turbulent boundary-layer profiles and heat-transfer coefficient at *M*=7. P. P. Wegener and others. bibliog J Aeronautical Sci 20:221-2 Mr '53

Solution of the unsteady laminar boundary-layer equations. H. Tsuji. J Aeronautical Sci 20:295-6 Ap '53

Some effects of surface curvature on laminar boundary-layer flow. J. S. Murphy. bibliog diags J Aeronautical Sci 20:338-44 My '53

Some experiments on the effect of a single roughness element on boundary-layer transition. I. Tani and F. R. Hama. bibliog il J Aeronautical Sci 20:289-90 Ap '53

Stability of free laminar boundary layer between parallel streams. M. Lessen. bibliog diag U S Nat Advisory Com for Aeronautics 1950:571-9 '51

Temperature distribution along a semi-infinite sweat-cooled plate. N. Ness. diags J Aeronautical Sci 19:760-8 N '52

Theoretical pressure recovery through a normal shock in a duct with initial boundary layer. G. McLafferty. diags J Aeronautical Sci 20:169-74 Mr '53

Thermal characteristics of boundary layers. M. Bloom. bibliog J Aeronautical Sci 20:363-5 My '53

Turbulent boundary-layer characteristics at supersonic speeds. R. J. Monaghan. J Aeronautical Sci 20:142 F '53

BOUNDARY value problems

Application of Green's theorem to the solution of boundary-value problems in linearized supersonic wing theory. M. A. Heaslet and H. Lomax. bibliog diags U S Nat Advisory Com for Aeronautics 1950:257-70 '51

Conical potential solutions in linearized supersonic flow. G. Morikawa. bibliog diags J Aeronautical Sci 20:283-5 Ap '53

Solutions of some problems concerning long random coils. C. A. Hollingsworth. bibliog diags J Chem Phys 20:1580-90 O '52

BOUNTY (ship)

Captain Bligh and the breadfruit. il Sci Am 188:88-90+ Mr '53

BOURDON gages. See Pressure gages

BOURDON tubes. See Pressure gages

BOURKE, George Wesley, 1896-

Businessmen in the news. por Fortune 47:53 F '53

BOUVET, Rene

Man at the crossroads. R. E. Ellsworth. pors Mod Textiles Mag 34:38+ S '53

BOWEN, Ira Sprague, 1898-

I. S. Bowen, Frederic Ives medalist for 1952. por Opt Soc Am J 42:789-94 N '52

BOWLING alleys

Automatic pinboy for bowling alleys. F. K. Powell, jr. il diag Electronics 26:148-9 Je '53

BOWNE and company

Bowne & co., founded in 1775, is oldest Gotham printing plant. L. H. Allen. il Inland Ptr 129:53 S '52

BOX cars. See Freight cars

BOXES

See also

Candy boxes

Cigar boxes

BOXES—*Continued*

Manufacture

Man against machine; output climbs 300 per cent in assembly test on wood shipping containers. il Steel 131:280+ O 13 '52; Mill & Factory 52:157-8 Ap '53

BOXES, Paper. See Paper boxes

BOXING
Knows boxing from ring, ringside. Ed & Pub 85:64 N 1 '52
Occupational hazards of boxing; medical recommendations for control. F. R. Ferlaino. Ind Med 21:420-3 S '52

BOY scouts
Only the railroads had enough capacity for milk, water and boys. il Ry Age 135:84-9 S 7 '53
Railroads plan for huge scout jamboree. Ry Age News ed 135:13 Jl 6 '53

BOYCOTT
Battle act and boycott. Economist 165:309 N 1 '52

BOYK, Sol, 1914-
Business thrives on germs. por Bsns W p 186+ My 9 '53

BOYS
What is a boy? Sales Management 69:50+ O 15 '52

BOYS' life (periodical)
More engineers; Boy Scout magazine poll. Bsns W p74+ O 25 '52

BRACHIOPODA, Fossil
Life and death assemblages among fossils. A. J. Boucot. bibliog Am J Sci 251:25-40 Ja '53
Upper silurian brachiopods from southeastern Alaska. E. Kirk and T. W. Amsden. bibliog diags U S Geol S Professional Pa 233-C:53-66, pl 7-10; pa 55¢ Supt. of doc. '52

BRACKEN
Influence of bracken fern on establishment of spruce and fir seedlings. I. M. M. Place. Pulp & Pa of Can 54:169-70+ Ag '53

BRADBURY, Eva
Bradbury lumber co. Fortune 47:237 F '53

BRADFORD dyers' association, limited
Statement by the chairman. J. Ewing. Economist 167:60 Ap 4 '53

BRADSHAW, Thomas A.
Sketch. C. Axman. por East Underw 53:3-4 D 26 '52

BRAID
Braids and braiding. D. Brunnschweiler. bibliog(77 ref) diags Textile Inst J 44:P666-86 S '53

BRAIDING machines
Braids and braiding. D. Brunnschweiler. diags Textile Inst J 44:P673-81 S '53

BRAIN
Books; review of Design for a brain, by W. R. Ashby. W. S. McCulloch. Sci Am 188:96-8 My '53
Method for the preparation of a stable brain fraction containing acetylcholinesterase. H. Tauber. bibliog Am Chem Soc J 75:326-8 Ja 20 '53
See also
Electroencephalography

BRAIN waves. See Electroencephalography

BRAKE linings
Cerametallic brake linings for aircraft. Automobile Eng 43:157 Ap '53
Pressed-in friction surfaces for multiple disc brakes. il diags Machine Design 25:120 S '53

BRAKE shoes
New brake shoe foundry operating in California; American brake shoe co. il Foundry 81:132-3 Je '53

BRAKES
How to select and install braking equipment for your drawworks. A. Fredhold. World Oil 136:135-6+ Ja '53
See also
Air brakes
Railroads—Braking

BRAKES, Airplane
Automatic landing wheel braking. il diags Engineer 194:460-2 O 3 '52
Ceramic-base lining boosts brake loads. il Aviation W 58:57 Ja 26 '53
French develop new jet braking system. Aviation W 57:14-15 D 22 '52

Manufacture

Brake disks deburred; Goodyear aircraft corp. W. J. Hobday. il Automotive Ind 108:53+ My 1 '53

BRAKES, Automobile
Car brakes rate a break! report of round table on prospects for better passenger car brakes. S A E J 61:22-3 O '53
Design factors of highway brakes; abstract. P. J. Reese. S A E J 61:108-9 My '53
Earls Court exhibition; review of design trends; brakes. il Automobile Eng Extra no 42:488-90 N 27 '52
For cooler braking; Cop-Sil-Loy. Bsns W p52+ Jl 11 '53
Heavy-duty brake fluid seen essential in today's cars. G. S. Lamson. Nat Pet N 45:89 Ap 1 '53
Hydraulic clutch control to overcome problems of vibration, drumming and rattle. il Engineer 195:293 F 20 '53; Engineering 175:383 Mr 20 '53
Power steering and braking described. D. J. Schrum. S A E J 60:108+ N '52
Production of Girling brakes and dampers for motor vehicles. il Engineering 175:599 My 8 '53
Report on round table on passenger-car brake performance including power brakes; SAE summer meeting, Atlantic City, June 5. S A E J 61:73-7 Ja '53

Manufacture

Brake assembly; Automotive products co. il Automobile Eng 42:521-4 D '52
Center-drilling jig for brake cylinders. F. E. Riley. diags Tool Eng 30:46 F '53
Cleaning; 1½ cents a unit; Budd co. Red Lion foundry. il Steel 132:94+ F 16 '53

Testing

Braking distances of vehicles from high speed and tests of friction coefficients. O. K. Normann. il diags Pub Roads 27:159-69 Je '53
Why's and wherefore's of brake dynamometers mapped out for users of new SAE brake test code. il S A E J 61:100-1+ Mr '53

BRAKES, Electric
Alternating-current brakes; traffic cops of industry. G. Currie. il diag Westinghouse Eng 13:143 Jl '53
Improved rheostatic brake for trolley-buses; General electric co. diags Engineer 194:846-7 D 19 '52; Engineering 175:61 Ja 9 '53; Elec J 149:1764 D 5 '52; Automobile Eng 43:141 Ap '53
Solenoid-actuated drum brake design. il diag Machine Design 25:201 O '53

Standards

D-c mill motor brake standard. diags Iron & Steel Eng 29:131-4; Discussion. 134 D '52

BRAKES, Hydraulic
Air-pressure hydraulic braking. Automobile Eng 43:234 Je '53
Heavy-duty brake fluid seen essential in today's cars. G. S. Lamson. Nat Pet N 45:89 Ap 1 '53
Importance of SAE brake fluids. F. J. Markey. Automotive Ind 109:50-1+ Ag 15 '53
Need for high quality in brake fluids reiterated. S A E J 61:98-9 Mr '53

BRAKES, Magnetic
Smooth frictionless torque. il Machine Design 25:117 My '53

BRAKES, Motor bus
Brake controls stop skids. il Bus Transportation 32:41 Mr '53
Commercial vehicle show; review of current developments; brakes. il Automobile Eng 42:440-1 N '52
Exhaust brakes for Diesel engined vehicles. J. L. Koffman. diag Automobile Eng 43:218-20 My '53
Give air brakes a fair break with this step-by-step check; illustrated instructions. Bus Transportation 32:54-7 Je; 32-4 Jl '53
New Fawick brake has dual pressure system. il Bus Transportation 32:40 Mr '53

BRAKES, Motor truck
Commercial vehicle show; review of current developments; brakes. il Automobile Eng 42:440-1 N '52

BRAKES, Motor truck—*Continued*

Exhaust brakes for Diesel engined vehicles. J. L. Koffman. diag Automobile Eng 43:218-20 My '53

For cooler braking; Cop-Sil-Loy. Bsns W p52+ Jl 11 '53

Individual wheel brake system for trucks is step toward ending skids, jack-knifing. H. Ridder. Nat Pet N 45:43 Ja 21 '53

New three-shoe brake combines air and hydraulic actuation. il Automotive Ind 108:74+ Ja 15 '53

Oil transport adopts twin braking system. Safety Maint & Prod 106:33 S '53

BRAKES, Trolley bus

Improved rheostatic brake for trolley-buses; General electric co. diags Engineer 194:846-7 D 19 '52; Engineering 175:61 Ja 9 '53; Elec J 149:1764 D 5 '52; Automobile Eng 43:141 Ap '53

BRAKING, Dynamic

D-c dynamic braking of squirrel-cage induction motors; abstract. W. A. LaPierre and N. Metaxas. Elec Eng 72:785 S '53

Dynamic braking for low-grade lines. il diags Ry Loco & Cars 127:69-74 F '53

Dynamic braking on Diesel-electric locomotives. A. V. Johansson and H. R. Stiger. il diags Elec Eng 72:300-5 Ap '53; Abstract. Diesel Power 31:77 F '53

Locomotive utilizes dynamic braking. Machine Design 25:155 Ja '53

BRAMSTEDT, William F.

Constant questioning. por Fortune 47:140 My '53

BRAN

Quality of cereals and their industrial uses; the by-products of wheat and their nutritive values. J. G. Hay. bibliog Chem & Ind p 185-90 F 28 '53

BRANCH factories

Blessings of branch plants. Bsns W p 110 Ap 11 '53

BRANCH factories, Foreign

New factory in India manufactures drugs; Lederle laboratories (India), ltd. For Comm W 50:18 Jl 13 '53

BRANCH library. See Libraries—Branches

BRANCH management

How to inspire branch-office sales cooperation. W. J. Tobin. Ptr Ink 242:35-7 Mr 27 '53

BRANCH offices

U.S. firms open Canadian offices. il Eng N 150:56+ Ja 8 '53

BRANCH plants

See also

Branch factories

BRANCH stores. See Department stores—Branch stores

BRAND names. See Trade names

BRAND names foundation

Agencies cited by BNF for volunteer aid. il Ed & Pub 85:17 D 13 '52

Brand Names contests catch on. F. C. Sturtevant. il Nat Pet N 44:43-4 O 15 '52

BRANDS, Advertised. See Advertising, National

BRANIFF airways

Braniff asks big subsidy boost. Aviation W 58:93-4 Ap 6 '53

BRANTLEY, L. Reed, 1906-

Meeting chairmen. por(cover) Chem & Eng N 31:551 F 9 '53

BRASS

Brass ingot shipments, 1949, 1952; tabulation. Steel 132:174 Ja 5 '53

Brass scrap, bronze and brass ingots, prices, shipments, 1948-1952; tabulations. Iron Age 171:419 Ja 1 '53

Change of the elastic constants of β-brass with composition. H. Jones. J Ap Phys 23:697 Je '52

Definitions of alloys as used in the copper and brass mill products industry; engineering file facts. Materials & Methods 38:141 S '53

Elastic constants of beta-brass single crystals. R. A. Artman and D. O. Thompson. bibliog diags J Ap Phys 23:470-4 Ap '52

Electropolishing of brass; abstract. J. Daurat. Metal Finishing 50:72 D '52; 51:70 Jl '53

How to understand brass. S. Storchheim. il Am Mach 96:151-6 O 13 '52

Iron-silicon brass as substitute for tin bronzes and zinc alloys; abstract. V. V. Gusyev. Metal Prog 63:202+ My '53

Metal transfer and wear. I. Feng. il diags J Ap Phys 23:1011-19 S '52

Neutron diffraction studies of cold-worked brass. R. J. Weiss and others. bibliog J Ap Phys 23:1379-82 D '52

Radiation damage of beta-brass. R. R. Eggleston and F. E. Bowman. J Ap Phys 24:229-30 F '53

Relative diffusion rates of zinc and copper in alpha brass. R. W. Balluffi and B. H. Alexander. il diag J Metals 4:Trans 1315-16 D '52

Temperature dependence of Young's modulus and internal friction of single crystals of beta-brass. R. A. Artman. il J Ap Phys 23:475-82 Ap '52

Torsion texture of 70-30 brass and Armco iron. W. A. Backofen and B. B. Hundy. J Metals 5:Trans 61-2 Ja '53

Analysis

Tin assay shortcut speeds control. C. Goldberg. Iron Age 171:130-1 My 28 '53

Cleaning

Cleaners for copper and brass. il Consumers Res Bul 31:10-11 F '53

Corrosion

Corrosion of mild steel and brass in chlorinated water. F. Wormwell and T. J. Nurse. il J Ap Chem 2:685-92 D '52

Defects

New concept of heat-checking on brass pressure-casting dies. W. R. Brown. il Metal Prog 63:73-8 Je '53

Specifications

Standard commercial wrought copper and brasses, nonleaded and leaded; tabulation; data sheet. A. H. Allen, comp. Metal Prog 62:96B D '52

Standard commercial wrought tin and aluminum brasses, bronzes and nickel silvers; data sheet. A. H. Allen, comp. Metal Prog 63:96B F '53

BRASS founding

Brass and bronze; American foundrymen's society annual meeting, Chicago; abstracts of papers. Foundry 81:150+ Je '53

Brass and bronze castings. V. C. Reid and P. G. Maganus. il Foundry 81:136-9 My '53

Brass shop course; American foundrymen's society annual meeting, Chicago; abstracts of papers. Foundry 81:134+ Jl '53

Control of quality in the production of brass ingots and billets; abstract. M. Cook and C. L. M. Cowley. Metal Prog 64:300+ O '53

Conveyors make the difference in the production of brass castings; Chase brass & copper co. il plan diag Mill & Factory 52:90-2 Mr '53

Copper oxides, useful tools in casting copper-base alloys. L. G. Klinker. il Foundry 81:228+ S '53

Economic utilisation of copper-base alloys; report of Technical council sub-committee T.S.38 of the Institute of British foundrymen. Engineering 176:222-4 Ag 14 '53

Manual handling minimized in sixth-floor brass foundry. il plan diag Foundry 80:110-13 N '52

Modern continuous cast copper alloys. J. L. Kimberly. il diags Product Eng 24:178-81 Mr '53

New concept of heat-checking on brass pressure-casting dies. W. R. Brown. il Metal Prog 63:73-8 Je '53

Specification for copper-base alloy centrifugal castings; data sheet. Foundry 80:179 D '52

BRASS plating

Brass plating; abstract. O. Kraemer. Metal Finishing 51:101-2 Ja '53

Critical look at white brass plated coatings. R. B. Saltonstall. il Materials & Methods 37:97 F '53

BRASS work

History

History and particulars of the brass battery process; abstract. B. de Soyres. Engineer 194:427 S 26 '52

BRASS works

Employees

Making it easy to keep clean; Bridgeport brass co. il Nat Safety N 67:36-7 Ja '53

Equipment

Modern brass mill turns out quality products in quantity; Chase brass and copper co. A. H. Allen. il Metal Prog 62:110-12 N '52

Management

Handy aids for managements on pint-sized budgets; Eastern brass & copper co. il Mod Ind 25:54-6+ Je '53

BRASSIDIC acid

Anodic syntheses; unsaturated and hydroxy-acids; a direct stereochemical connection of oleic and elaidic with erucic and brassidic acids. D. G. Bounds, R. P. Linstead and B. C. L. Weedon. Chem Soc J p2393-400 Ag '53

Oxidation of monoethenoid fatty acids and esters; the preparation and catalytic oxidation of highly purified brassidic acid by gaseous oxygen. J. H. Skellon and C. G. Taylor. Chem Soc J p 1433-5 My '53

BRATTAIN, Walter Houser, 1902-

Presentation of the Stuart Ballantine medals. por Franklin Inst J 254:468-9 D '52

BRAVERY. See Courage

BRAZIL

See also

Aeronautics—Brazil
Chemical industries—Brazil
Electric apparatus industry—Brazil
Electricity supply—Brazil
Hydroelectric plants—Brazil
Iron mines and mining—Brazil
Newspapers—Brazil
Petroleum industry and trade—Brazil
Petroleum laws and regulations—Brazil

Commercial policy

Brazil establishes new procedure for filing license applications. For Comm W 50:9 Jl 13 '53

Brazilian Congress approves bill to create free exchange market. For Comm W 49:14 Ja 5 '53

Economic conditions

Economic conditions abroad (cont). For Comm W 48:5 D 1; 3+ D 29 '52; 49:3 F 2; 3 Mr 16; 4 My 4; 4 Je 15; 4 Je 22; 50:3 Jl 13 '53

Economic policy

Brazil and U.S. bury the hatchet. Bsns W p 124-5 Mr 7 '53

Economic relations

Great Britain

Brazil's arrears. Economist 167:682+ Je 6 '53

United States

Brazil and U.S. bury the hatchet. Bsns W p 124-5 Mr 7 '53

Export-import bank signs loan agreement with Brazil. For Comm W 49:5 My 11 '53

Plea for better relations with Brazil. L. C. Irvine. Weekly Underw 168:1610-11 Je 13 '53

United States extends credit line. For Comm W 49:3 Mr 9 '53

Industries and resources

German interests plan projects. For Comm W 49:5 Je 15 '53

BRAZING

Advanced information for the brazing operator. E. F. Davis. il diags Welding J 32:293-8 Ap '53

Back to work because of braze welding. R. L. Fuller. il Welding J 31:1057-8 N '52

Braze welding to the rescue. L. M. Smith. il Welding J 32:1000 O '53

Brazing departments, by states; tabulation. Iron Age 171:460 Ja 1 '53

Brazing methods for refrigeration units. A. L. Johnson. il Welding J 32:235-7 Mr '53

Brazing offers economy in making aluminum castings. W. G. Gude. il Foundry 80:124-5 O '52

Brazing vacuum-tight joints in high nickel alloys. R. A. Wallace and W. R. Vanderveer. il diags Materials & Methods 36:117-18 D '52

Butt-brazed carbide tips improve tool life. W. Jellig. il diags Iron Age 171:140-2 Je 25 '53

Dip-brazing speeds aluminum work. Aviation W 57:24 D 22 '52

Flame-fluxing brazes high-strength assemblies; McCulloch motors corp. J. Shinn. il Am Mach 96:133 N 24 '52

Flow of liquid metals on solid metal surfaces and its relation to soldering, brazing and hot-dip coating; abstract and discussion. G. L. J. Bailey and H. C. Watkins. Engineering 174:414 S 26 '52

Forum on technical progress; joining and assembling. il diags Steel 132:406-7+ Ja 5 '53

Hf brazes high-vacuum joints; Western Electric. H. W. Garbe. il diags Am Mach 97:131-5 Mr 16 '53

High-strength vacuum brazing of clad steels. R. C. Bertossa. il Welding J 31:sup441-7 O '52; Abstract. Metal Prog 63:166+ Ap '53

How to braze and solder zirconium. W. G. Schickner and others. il Steel 132:118-19 My 4 '53

How to fasten carbide inserts. diags Mill & Factory 53:83-5 S '53

How to repair a tubular handle. F. C. Geibig. il diag Welding J 32:49 Ja '53

How vapor flux brazing produces quality joints; manufacture of household refrigerators at the Erie works of General electric co. H. S. Card. il diags Materials & Methods 37:120-2 Je '53

Induction brazing can be used for copper and copper-alloy parts. E. M. Laughner. il diags Am Mach 96:138-40 N 24 '52

It's easy to braze titanium. H. L. Meredith. il Am Mach 97:120-1 Mr 30 '53

Joining aluminum to other metals. M. A. Miller. bibliog il Welding J 32:730-40 Ag '53; Same cond. Materials & Methods 38:96-9 S '53

Joining of aluminium and its alloys. W. V. Binstead. il Metallurgia 47:81-8 F '53

Joint design for brazing. W. J. Van Natten. diags Welding J 31:1023-8 N '52; Abstract. Iron Age 171:95-8 Ja 15 '53

Metal to nonmetallic brazing; abstract. C. S. Pearsall and P. K. Zingeser. Metal Prog 63:180+ Ap '53

New demands lead to new directions in engineering materials; welding and joining. T. C. Du Mond. Materials & Methods 37:95-6 Je '53

Photographic inspection spots defective brazing. M. A. Slairetam. il Materials & Methods 38:94-5 Ag '53

Pure silver forms strongest brazed joints in titanium. H. L. Meredith. il Iron Age 171:143-6 Mr 26 '53

Research findings on brazing and soldering titanium. H. L. Meredith. il diag Automotive Ind 109:34-7+ Ag 15 '53

Surface alloying in brazing and related techniques. R. Humphrey and R. D. Wasserman. il diags Welding J 31:1135-40 D '52; Abstract. Metal Prog 63:211-12 Ap '53

Thin phos-copper strips speed brazing; Westinghouse electric corp. R. E. Ballentine. il Am Mach 97:124-5 F 2 '53

Welded and brazed parts. H. R. Clauser. il diags Materials & Methods 36:123-38 N '52 (reprints 25¢)

Testing

Strength joints to steel with aluminum bronze filler metals. W. G. Groth and R. E. Maersch. il diags Welding J 31:1042-8 N '52

Vacuum tightness of welded and brazed aluminum containers. M. A. Miller and A. S. Russell. diags Welding J 32:116-18 F '53

BRAZING, Silver. See Silver solder

BREAD

Bakers aim innovations at new sales targets. il Food Eng 24:154+ D '52

Brown 'n' serve; oven speed-up boosts sales of rolls. Bsns W p58+ N 15 '52

Cures dough-dusting troubles. il diag Food Eng 24:75+ D '52

Dough as an industrial colloid. J. Cunningham. bibliog Chem & Ind p 163-6 F 21 '53

Flour aeration process may succeed nitrogen trichloride. Chem Age (Lond) 68:78 Ja 10 '53

Hearth baking goes modern; Henry S. Levy & son, inc. J. V. Ziemba. il Food Eng 25:90-2+ Ja '53

BREAD—*Continued*

Hot bread idea spreads; printed cellophane bread wrappers can go into a hot oven. il Mod Packaging 26:197 O '52

In-can baking perfected; Interstate bakeries corp. D. N. League. il Food Eng 25:86-7+ My '53

Pulling as a team; Thomas' coach-and-four provides unifying trademark in coordination and clean-up of line of baked goods. il Mod Packaging 26:136-7 S '52

Radical method of preparing doughs shortens bread making; John C. Baker Do-Maker process. il Food Eng 25:60+ Je '53

Role of glycerinated fats in baking; abstract and discussion. J. B. M. Coppock and M. A. Cookson. Chem & Ind p 12 Ja 3 '53

Study of mycological methylation with radioactive methyl donors or sources. F. Challenger and others. bibliog Chem & Ind p 128-9 F 7 '53

Standards

Atlas co. to petition court today for bread standards rehearing. Oil Paint & Drug Rep 163:3+ Ja 5 '53

Ban on softeners. Bsns W p34 Ja 3 '53

Bread ruling reversal plea filed by Atlas co. Oil Paint & Drug Rep 163:3+ F 23 '53

Bread softener withdrawal requested after court action. Oil Paint & Drug Rep 163: 3+ Ap 13 '53

FDA set to enforce bread softener ban. Oil Paint & Drug Rep 163:3+ My 18 '53

Research unit snubs bread softeners use. Oil Paint & Drug Rep 164:3+ Ag 3 '53

Testing

Soy-flour bread wins its place. C. W. Ofelt and others. bibliog il Food Eng 24:145+ D '52

BREAD, Frozen

Frozen bread may end stale returns but several hurdles hinder the path; Arnold bakers, inc. il Food Eng 25:199-200 My '53

Now it's frozen bread; a boon for the bakers. il Bsns W p44-6 Ap 11 '53

BREADFRUIT

Captain Bligh and the breadfruit. il Sci Am 188:88-90+ Mr '53

BREAK-even charts. See Cost accounting

BREAK-even point. See Cost accounting

BREAKDOWN, Electric. See Dielectrics; Electric discharges

BREAKFAST food. See Cereals, Prepared

BREAKFASTS

Why do you let Americans skip breakfast, and like it? Better breakfast week. L. B. Colby. il Sales Management 70:48+ Mr 1 '53

BREAKWATERS

Breakwater, Canada; unit prices. Eng N 150: 130 Ja 15 '53

Wave forces on breakwaters. R. Y. Hudson. bibliog diags Am Soc C E Proc 78 [no 113]: 1-22 Ja '52; Discussion. il 78 [no D-113]:1-11 N '52

BREAST

Sequence of emotional reactions in radical mastectomy patients. M. Bard. Pub Health Rep 67:1144-8 N '52

BRECCIA

Megabreccia formed by sliding in southern France. O. J. Koop. il map diag Am J Sci 250:822-8, pl 1-2 N '52

BREMSSTRAHLUNG. See Gamma rays; Radiation

BRENTON, Woodward Harold, 1899-

Banker-farmer views of W. H. Brenton; new A.B.A. president. A. Van Vlissingen. pors Burroughs Clearing House 37:38-40+ O '52

Meet President Brenton. pors Banking 45:36-40 O '52

BRESKIN, Charles

Publisher honored. por Mod Plastics 30:174 O '52

BRETTON WOODS agreement

Will Bretton Woods plan be revised? P. Einzig. Comm & Fin Chr 176:2135 D 4 '52

BREWER, Leo, 1919-

Baekeland award to Brewer for leadership in thermodynamics. por(cover) Chem & Eng N 31:1974 My 11 '53

BREWER, Roy Martin, 1909-

Limelight on Roy. por Fortune 47:76+ My '53

BREWERIES

Equipment

Gallows frame sets big, fragile tanks. il Constr Methods 35:106-8 Ap '53

pH control ups quality, boosts process yields; Acme brewing co. il diag Food Eng 25:66-7+ Mr '53

Now beams monitor fill-levels and lift barrier on packaging speeds; Pabst brewing co. G. Cram. il Food Eng 25:47+ Je '53

Pushbutton system cuts handling; Duquesne brewing co. A. V. Gemmill. il diag Food Eng 25:80-2+ My '53

Robot speeds and eases case, bottle handling; Duquesne brewing co. il Food Eng 25:67 S '53

Schlitz defeats dust. L. E. Slater. il diag Food Eng 25:61-3+ Ap '53

Slipforms raise Danish brewery silo. il Eng N 149:53 O 16 '52

Sound waves save ingredients in cooking operations at Schultheis brewery. G. W. Schroder. il Food Eng 25:48-50 F '53; Discussion. 25:183-4 Ap '53

Specially engineered cartoning systems speed brewers' half-dozens. il Food Eng 25:131-3 Jl '53

Safety measures

New team reduces accidents; Griesedieck brewery. il Nat Safety N 67:78+ Je '53 Food Eng 25:70 Jl '53; Safety Maint & Prod 106:56 O '53

Show-place is safe place; Theo. Hamm brewing co. J. J. Renner and O. D. Duggins. il Food Eng 25:74-6 Ja '53

Waste

Sources of b.o.d. in brewery wastes. F. Hale. bibliog Sewage & Ind Wastes 25: 1187-90 O '53

BREWING

Microgram H_2S analysis developed for brewing industry. Chem & Eng N 31:2189 My 25 '53

Progress in brewing science and technology. L. Wallerstein, L. T. Saletan and P. P. Gray. diag Ind & Eng Chem 44:2768-76 bibliog(210 ref, p2774-6) N '52

BREWING industries

Beer teams up with baseball; Anheuser-Busch purchases Cardinals. Bsns W p32 F 28 '53

See also

Miller brewing company

California

Beer goes west. N. Willatt. Barron's 33:9-10 Ap 20 '53

Great Britain

Tied beer and free. Economist 167:319-21 My 2 '53

BREWING research

Brewing industry research foundation. il Chem & Ind p 1053-4 O 25 '52

BRICK construction

Dealer's office is practical display; Georgia-Florida brick and tile co. il Brick & Clay Rec 122:51 Mr '53

How a contractor cuts brick-in-the-wall cost $21 per thousand; Stanley West's method for simplified handling. J. deNoyelles. il Brick & Clay Rec 123:70-3+ O '53

It looks like another boom year; construction picture for 1953. il Brick & Clay Rec 122:36-7 Ja '53

Reinforcement

Reinforced rowlock scores again. Brick & Clay Rec 121:61 D '52

BRICK handling

Brooks adapts loadlugger to carry brick by pallets. il Brick & Clay Rec 122: 54-5 Je '53

Fork simplifies brick and tile handling; Bickerstaff clay products co. il diag Brick & Clay Rec 123:42-3 O '53

How a contractor cuts brick-in-the-wall cost $21 per thousand; Stanley West's method for simplified handling. J. deNoyelles. il Brick & Clay Rec 123:70-3+ O '53

New techniques in face brick packaging. il Brick & Clay Rec 123:44-5 Jl '53

Packaging according to Hoiles; with cost data. F. S. Hoiles. il diags Brick & Clay Rec 123:60-2+ Ag '53

BRICK handling—*Continued*

Roller-bed unloader may answer one delivery problem; Arthur Rehberger & son, inc. il Brick & Clay Rec 123:60-1 S '53

Sets 7500 brick an hour; lift truck. il Brick & Clay Rec 122:59 Ap '53

BRICK houses

Brick is the poor man's building material. H. F. Goetz. il plan Brick & Clay Rec 121:41-3 D '52

Evaporative cooling of a residential roof; test results at the Acme ceramic housing project. R. A. Bacon and W. E. Long. il diags Heat & Ven 49:79-82 N '52

Here is a harmonious combination of adobe, glass and brick; house in Palos Verdes, Calif. il diags Am Bld 74:86-7 S '52

BRICK industry and trade

Heller report reviewed. D. Whitlock. Brick & Clay Rec 123:42-4 Ag; 48-50 S '53

It looks like another boom year; construction picture for 1953. il Brick & Clay Rec 122:36-7 Ja '53

Running inventory keeps stock investment low. Brick & Clay Rec 122:75 F '53

Six-point service system sells brick; Hoiss, Kuhn, Chuman co. il Brick & Clay Rec 121:52-3+ N '52

Southern brick and tile manufacturers association 11th annual meeting. Brick & Clay Rec 122:65+ Je '53

Western brick manufacturer tells how we sold SCR brick. Brick & Clay Rec 122:47+ Je '53

Advertising

Jack Neighbor's technique for introducing SCR brick. Brick & Clay Rec 122:46-7 Je '53

Statistics

What is the future of the brick industry. Brick & Clay Rec 122:48+ F '53

Canada

Preheat treatment of a western Canadian common brick clay. D. K. Hullock. plan diag Am Cer Soc Bul 31:470-1 N 15 '52

Europe

European brick and tile making. T. W. Garve. flow sheet il plan diags Am Cer Soc Bul 32:171-7 My 15 '53

Great Britain

Brick making in Britain today. L. Bor. Am Cer Soc Bul 32:327 S 15 '53

Pakistan

Brickmaking in ancient Pakistan. F. Mahurin. il Brick & Clay Rec 123:54+ Jl '53

BRICK walls. See Walls, Brick

BRICK works

Evans resumes face brick production. il Am Cer Soc Bul 32:285 Ag 15 '53

Employees

Back strains in brickmaking. F. S. Crawford and others. U S Bur Mines Information Circ 7655:1-14 '53

Mystery burns traced to bedding sand. L. W. Spolyar. Brick & Clay Rec 122:91 Ja '53

Equipment

Coal fired tunnel kiln heart of expanded plant; Globe brick co. il Brick & Clay Rec 123:64-6 Jl '53

Controlled feeder ups crushing 30 per cent. il Brick & Clay Rec 121:43 N '52

Curved bag walls give smooth heat flow; Buffalo brick corp. il diag Brick & Clay Rec 121:42 O '52

Electric aerial tramway sextuples production. J. W. Parris. il Elec World 139:126+ Mr 9 '53

Five miles of wire rope in constant use; Jova brick works. il Brick & Clay Rec 122:40-1+ Je '53

Fork simplifies brick and tile handling; Bickerstaff clay products co. il diag Brick & Clay Rec 123:42-3 O '53

Latest in materials and equipment. il Brick & Clay Rec 121:18-22 N '52

Maybe you don't need a tunnel kiln. J. Sparks. il Brick & Clay Rec 123:46-7 O '53

Mechanized plant beats production goal with plant-trained staff; Cleveland builders supply company's Warner plant. flow sheet il plan diag Brick & Clay Rec 122:40-3 F '53

Push-button plant. il Am Cer Soc Bul 32:328-9 S 15 '53

Rubber-steel combination prolongs equipment life. Brick & Clay Rec 121:42 O '52

Traxcavator does double duty; front-end loader mines and mixes clay. il Brick & Clay Rec 122:29-31 Ja '53

Use unique winch system for car movement. il Brick & Clay Rec 123:64 O '53

See also

Kilns

Management

Faults of management in industry. J. H. Isenhour. Am Cer Soc Bul 32:80 Mr 15 '53

Safety measures

Could anything here hurt me? hints on safety that may affect your insurance rates. Brick & Clay Rec 122:92-4 Mr '53

No costly toe injuries in years; A.P. Green fire brick co. L. B. Hawthorne, jr. il Brick & Clay Rec 122:87-8 Mr '53

BRICKLAYERS masons and plasterers international union of America

Annual meeting, Minneapolis. Eng N 149:31 N 6 '52

BRICKMAKING

Brickmaking in ancient Pakistan. F. Mahurin. il Brick & Clay Rec 123:54+ Jl '53

Brick making in Britain today. L. Bor. Am Cer Soc Bul 32:327 S 15 '53

Control of brickmaking costs through motion-time-analysis. A. B. Segur. Am Cer Soc Bul 32:47-8 F 15 '53

European brick and tile making. T. W. Garve. flow sheet il plan diags Am Cer Soc Bul 32:171-7 My 15 '53

Impulse system yields even heat distribution. Brick & Clay Rec 122:74 Je '53

Natural gas improves product and cost in the brick industry. C. G. Hobson. Am Gas J 179:27+ Ag '53

Slurry process for making soft-mud brick. C. R. Amberg. flow sheets Am Cer Soc Bul 32:183-5 My 15 '53

Solve four problems with these Yankee innovations; Yankee Hill brick co. il Brick & Clay Rec 123:37 Jl '53

Structural clay products glazing. R. R. Danielson and others. bibliog il diags Brick & Clay Rec 121:52-62 S; 70-1+ N '52

SCR brick problems solved; Robinson brick and tile co. il Brick & Clay Rec 122:55 Mr '53

Unique firing shrinkage test. L. E. Gates, jr. diags Am Cer Soc Bul 32:354-5 O 15 '53

See also

Fire brick—Manufacture
Silica brick—Manufacture

History

Brickmaking in colonial Salem. il Brick & Clay Rec 122:64-5+ Ap '53

BRICKS

SCR brick rapid success; abstract. il Brick & Clay Rec 121:32 D '52

See also

Brick construction
Fire brick
Masonry
Silica brick

Efflorescence

You can eliminate green efflorescence. A. J. Hammer. bibliog Brick & Clay Rec 123:37+ S '53

Testing

Relation beween bond and the surface physics of masonry units. J. C. Thornton. il diags Am Cer Soc J 36:105-20 Ap 1 '53

Relations among certain specification properties of building brick and effects of differences in raw materials and methods of forming. J. W. McBurney and others. bibliog Am Cer Soc J 35:309-18 D 1 '52

Transportation

Straddle truck cuts delivery costs. il Brick & Clay Rec 121:25 D '52

BRIDGE approaches

Building a 1,000,000 cu. yd. fill. il diag Roads & Sts 95:45-7 O '52

BRIDGE design

Auckland Harbour bridge project. map diag Engineering 174:673 N 21 '52

California tests aid bridge design. diags Eng N 149:42 O 23 '52

California's all-welded viaduct points way to improved design. L. C. Hollister. il map diags Civil Eng 22:764-9+ S '52

Delaware memorial bridge; design problems. C. H. Clarahan, jr. and E. K. Timby. Am Soc C E Proc 78[no 147]:1-9 Ag '52

Economic studies determine location and design of Richmond-San Rafael bridge. N. C. Raab and R. A. Tudor. maps diags Civil Eng 23:232-5+ Ap '53

Largest concrete spans of the Americas; how the three bridges were designed. J. Muller. il diags Civil Eng 23:161-5 Mr '53

Live loading for long-span highway bridges. R. J. Ivy and others. bibliog diags Am Soc C E Proc 79 [no 198]:1-14 Je '53

Planning the Pasco bridge across the Columbia river. G. B. Arthur. il Pub Works 84:81-2 Mr '53

Precasting fosters high stability in bridge built to be submerged; Orange River bridge in south west Africa. il diags Eng N 150:53+ Je 25 '53

Special design features of the Yorktown bridge. M. N. Quade. diags Am Soc C E Proc 79 [no 168]:1-15 Ja '53

Steel girders hung from concrete cantilevers. H. M. Hadley. il diags Civil Eng 22:1001-4 D '52

Studies of slab and beam highway bridges; full-scale tests of channel shear connectors and composite T-beams. I. M. Viest and others. il diags Ill U Eng Exp Sta Bul 405:1-155 bibliog(112 titles, p151-5) '52 (pa $1)

See also

Bridges—Load
Bridges, Arched
Bridges, Cantilever
Bridges, Suspension

BRIDGE engineering

Economic studies determine location and design of Richmond-San Rafael bridge. N. C. Raab and R. A. Tudor. maps diags Civil Eng 23:232-5+ Ap '53

International association for bridge and structural engineering 4th congress, Cambridge. Engineering 174:297-8, 427-8, 493-5 S 5, O 3, 17 '52

Kansas City gets bridge fast. il Eng N 150: 35-7 Ap 16 '53

One-mile-long bridge, with 1447-ft. suspension span, over Halifax harbor. P. L. Pratley. il Roads & Eng Constr 91:113-15+ Ag '53

Record high contracts let for Mackinac bridge project. il map diag Eng N 150: 25-6 Mr 12 '53

BRIDGE failures

Contractor acquitted in bridge collapse. Eng N 149:72 N 27 '52

BRIDGE painting

Bridge painting. A. W. Gray. Roads & Sts 96:119 Ap '53

Contract to remove old paint. A. W. Gray. Roads & Sts 96:61+ Jl '53

BRIDGES, Styles, 1898-

Portrait. Bsns W p28 N 8 '52

BRIDGES

Facts about bridges and bridge construction in the United States. D. B. Steinman. Mech Eng 74:1011-12 D '52

New Jersey turnpike, U.S.A. il diags Engineer 194:242-7 Ag 22 '52

Novel overpass structure; Morena Boulevard highway overpass. il diags Eng N 149:39 O 9 '52

Puget sound gets bridge controversy. Eng N 149:24 D 11 '52

Record high contracts let for Mackinac bridge project. il map diag Eng N 150:25-6 Mr 12 '53

Report ok's $82-million crossing of Puget sound west of Seattle. maps Eng N 149: 26 D 4 '52

Steel girders hung from concrete cantilevers. H. M. Hadley. il diags Civil Eng 22:1001-4 D '52

Techniques and trends; transportation; major projects. il Eng N 150:120-2+ F 19 '53

Traffic-actuated signals effective on one-way bridge. il Roads & Sts 95:102 D '52

Tunnel, viaducts join rail stations and transform central Brussels. G. N. Balbachevsky. il plan diags Eng N 149:40-2 O 9 '52

See also

East St Louis, Illinois—Bridges
Hudson River bridges
Philadelphia—Bridges
San Francisco Bay bridges

Architecture

Aesthetic steel bridges selected by engineer-architect jury; American institute of steel construction. il Roads & Eng Constr 90:117-18+ O '52; Civil Eng 22:972-3 N '52

Southern bridges win top honors; 25th annual Aesthetic bridge competition. il Manuf Rec 122:40-1 O '53

Cost

Bascule bridge, Chicago; unit prices. Eng N 149:87 O 16 '52

Highway and bridges, Massachusetts; unit prices. Eng N 150:98 Je 18 '53

Overpass, California; unit prices. Eng N 149: 100 D 11 '52

Overpass, Louisiana; unit prices. Eng N 149: 83 O 2 '52

Overpass, Rhode Island; unit prices. Eng N 150:59 F 12 '53

Parkway bridge, New Jersey; unit prices. Eng N 150:77 Ap 30 '53

San Francisco Bay toll bridge, California; unit prices. Eng N 150:130 Ja 15 '53

Erection

Bailey bridge used as falsework for erection of bridge in B.C. R. C. Harris. il Roads & Eng Constr 90:107+ O '52

Chesapeake Bay bridge. il Engineer 195:416-19 Mr 20 '53

Construction of the Delaware memorial bridge. H. R. Seely. Am Soc C E Proc 78 [no137]:1-13 Jl '52

Erecting a timber-truss highway bridge in British Columbia with Department of public works forces. R. A. Macdonald. il Roads & Eng Constr 91:87-90+ S '53

Erection of a railway bridge. il Engineer 195: 469 Mr 27 '53

Largest concrete spans of the Americas; how they were built. R. Shama. il diags Civil Eng 23:166-71 Mr '53

Finance

Investment billions ride the turnpikes. il Bsns W p 110+ My 30 '53

Floors

Bridge grid floors are skid-proofed in New Jersey. Roads & Sts 96:120 Ja '53

New life for old bridge by replacing antiquated floor system. J. N. Wallace. il Roads & Sts 96:68-9 Je '53

Foundations and piers

Air tools speed tight schedule; stone bridge piers get reinforced concrete support. il Constr Methods 34:57-9 O '52

Approximate method determines bridge pier loss. G. M. Allen, jr. diags Civil Eng 23: 177-8 Mr '53

Chesapeake Bay bridge. il diags Engineer 195: 379-81 Mr 13 '53

Columns in pipe simplify bridge piers. il Constr Methods 35:84-5+ F '53

Deep caissons stabilize weak bank. il diags Eng N 150:41+ Ja 22 '53

Pier 57 floating-box principle to be used for bridge foundations. Eng N 149:27 N 13 '52

Piles within cofferdam within cofferdam support bridge piers. il Constr Methods 34:50-1 N '52

Replacing disintegrated concrete in underwater bridge pier. I. L. Glassgold. il Roads & Eng Constr 91:91-3+ Jl '53

Scaffolding with built-in stairs, safety feature on Buffalo bridge job. il diag Roads & Sts 96:56-8 Jl '53

York River bridge, Virginia, U.S.A. il maps plan diags Engineering 175:737-9, pl 22 Je 12 '53

Lighting

Street lighting; lighting a bridge; lighting data sheet. H. S. Nonneman. il Illum Eng 48:34 Ja '53

BRIDGES—*Continued*

Load

Live loading for long-span highway bridges. R. J. Ivy and others. bibliog diags Am Soc C E Proc 79 [no 198]:1-14 Je '53

Nonelastic behavior of bridges under impulsive loads. S. J. Fraenkel and L. E. Grinter. diags Am Soc C E Proc 79 [no 185]:1-20 Ap '53

Maintenance and repair

Iron girdle holds concrete for bridge pier repair. il Constr Methods 35:58-60 O '53

New life for old bridge by replacing antiquated floor system. J. N. Wallace. il Roads & Sts 96:68-9 Je '53

Old piles jacketed at water line; Chowan River bridge in North Carolina. il Roads & Sts 95:50-2 N '52

Moving

Bridge moved to prevent flooding out. il Eng N 150:51 Ja 15 '53

Tall towers on barges pick up bridge for ride up river. il Eng N 150:24 Je 11 '53

Raising

This swing-span bridge converted to fixed span. il Ry Age 134:44-6 F 16 '53

Reconstruction

Bridge widened economically without traffic hindrance. il Roads & Sts 95:109 N '52

New floor + beam reinforcement = new bridge. il Pub Works 83:82 D '52

Quick way to replace an inadequate bridge; illustrations with text. Pub Works 84:101 My '53

Testing

California tests aid bridge design. diags Eng N 149:42 O 23 '52

Toll booths

Modern toll equipment for new bridge; Atlantic Beach bridge in Nassau county, N.Y. il Pub Works 84:73 My '53

Radiant heated booths; toll plaza of the Delaware River bridge, Camden, N.J. il Heat & Ven 49:126 N '52

Vibration

Aerodynamic stability of suspension bridges; progress report of the Advisory board on the investigation of suspension bridges. bibliog diags Am Soc C E Proc 78[no144A-144B]:1-63 Ag '52

Recommend Golden Gate bridge bracing. Eng N 150:22 Ja 22 '53

Tests of structural damping. il diags Pub Roads 27:203-33 O '53

Welding operations

Are we ready for all-welded railroad bridges? R. N. V. Brodie. il Civil Eng 22:387-9 Je '52; Discussion (Welded railroad bridges; why not?) 22:861-5 O '52

California's all-welded viaduct points way to improved design. L. C. Hollister. il map diags Civil Eng 22:764-9+ S '52

Corneille bridge in Rouen. J. Velitchkovitch and A. Schmid. il diags Welding J 32:sup 131-3 Mr '53

Design of welded steel bridges and buildings. F. L. Plummer. bibliog il Welding J 32:489-96 Je '53

Development of welded bridge construction. N. W. Morgan. il diags Welding J 32:923-7 O '53

French choose welding for heavy-traffic Seine bridge: Pont Corneille at Rouen. il diags Eng N 150:42+ Mr 12 '53

New bridge over the Rhine at Dusseldorf; abstract. diags Welding J 32:sup352 Jl '53

New welded railway bridge in Switzerland. M. Frei. il plan diags Welding J 31:1052-4 N '52

Sequence and continuity mark modern welding practice. R. W. Binder. il diags Civil Eng 22:770-5 S '52

Wrecking

Aerial cableway speeds pipe-bridge salvage. il Constr Methods 35:148+ O '53

Bridge floated to shore for dismantling. J. M. Scott. il diag Constr Methods 34:57-9 D '52

Jacks lower highway bridge 80 ft for dismantling on bank of river. il diags Eng N 150:44-5 Ja 22 '53

Lift-slab technique lowers bridge. il diags Constr Methods 35:112-14+ Ja '53

Oxygen lance piercing proves effective on Burlington bridge demolition. il Roads & Eng Constr 91:121-4 Ap '53

Trusses being lowered with threaded rods. J. Ward. il diags Roads & Sts 96:48-9+ Ja '53

Ohio

Ohio still has problem of old weak bridges. il Roads & Sts 96:87 S '53

Salvador

Cable-stiffened suspension bridge updated; San Marcos-Lempa bridge, El Salvador. B. Birdsall. il diags Eng N 150:32+ My 21 '53

Venezuela

Largest concrete spans of the Americas. E. Freyssinet and others. il diags Civil Eng 23:157-71 Mr '53

BRIDGES (instruments). See Electric instruments; Wien bridge; Wheatstone bridge

BRIDGES, Arched

Arch bridge sets western hemisphere record; Antas River bridge, Brazil. A. Froes, jr. il diag Eng N 150:55-6 Mr 5 '53

Largest concrete spans of the Americas: how the three bridges were designed. J. Muller. il diags Civil Eng 23:161-5 Mr '53

Prefabricated arch segments for restoring destroyed aqueduct spans in Germany. R. A. Papp. il map diag Roads & Eng Constr 91:128+ My '53

BRIDGES, Bascule

Bascule bridge planned for Chicago will avoid traffic bottleneck. il Eng N 150:42 Ja 1 '53

BRIDGES, Cantilever

East St Louis Veterans memorial bridge. A. L. R. Sanders. diags Am Soc C E Proc 78[no 150]:1-7 S '52

French choose welding for heavy-traffic Seine bridge: Pont Corneille at Rouen. il diags Eng N 150:42+ Mr 12 '53

Reinforced concrete cantilever span held by concrete pins and rockers; Pont Jacques Boulloche bridge at Bezon. il diag Eng N 150:59 Ap 9 '53

BRIDGES, Concrete

Arch bridge sets western hemisphere record; Antas River bridge, Brazil. A. Froes, jr. il diag Eng N 150:55-6 Mr 5 '53

Bridge built before waterway is dug; bridge built over dry land in Hawaii. il Eng N 150:56 Ja 15 '53

Bridge built of precast pumice concrete. il Eng N 150:26 Ap 9 '53

Builder finds prestressing can be taken in stride. il diags Eng N 149:35-7 O 16 '52

Cable trusses prestress bridge; Villeneuve-St Georges bridge near Paris. il diag Eng N 150:50+ Ap 30 '53

Columns in pipe simplify bridge piers. il Constr Methods 35:84-5+ F '53

Concrete slabs make good replacement. il Constr Methods 35:142-3 S '53

Continuous bridge girder prestressed in a single operation. F. Leonhardt. il plan diags Civil Eng 23:18-21 Ja '53

Continuous girder bridge rests on hinged piers. W. H. Wheeler. il diags Am Concrete Inst J 25:89-92 S '53

Continuous prestressed concrete beams. F. Leonhardt. il plan diags Am Concrete Inst J 24:617-34 Mr '53; Discussion. 25: 636¹-636³ pt 2 D '53

Factories for prestressing; big business in Pennsylvania. il Eng N 150:35-8 Ja 15 '53

Free-span prestressed concrete bridge. U. Finsterwalder. il Am Concrete Inst J 24: 225-32 N '52

Largest concrete spans of the Americas. E. Freyssinet and others. il diags Civil Eng 23:157-71 Mr '53

Low cost concrete bridge has simply supported steel span. H. M. Hadley. il diags Eng N 150:58 My 14 '53

Lower Tampa Bay bridge construction; offsite concreting cuts open-water hazards. il map diag Eng N 150:36-7+ F 26 '53

Maryland's prestressed bridge. diags Midwest Eng 5:10+ F '53; Same. Concrete 61:16+ Mr '53; Same. Roads & Sts 96:84-5 Mr '53; Same. Am Concrete Inst J 24:sup44-5 Ap '53; Same. Pub Works 84:62+ Jl '53

BRIDGES, Concrete—*Continued*

Ohio's first prestressed bridge. F. J. Cordova. il Am Concrete Inst J 24:155-7 O '52

Ohio's first prestressed concrete bridge. il diags Concrete 60:18+ N '52

Precast concrete bridges in Alberta; abstract. L. G. Grimble. Roads & Eng Constr 91:127-8 Ag '53

Precast concrete lends itself to economical bridge construction. E. L. Erickson. il diags Civil Eng 23:92-5 F '53; Same. Am Concrete Inst J 24:565-72 F '53; Discussion. W. A. Stancer. 24:957-8 Je '53

Precasting fosters high stability in bridge built to be submerged; Orange River bridge in south west Africa. il diags Eng N 150: 53+ Je 25 '53

Precasting pays off on long concrete trestle. H. W. Richardson. il map Constr Methods 35:54-60 Ja '53

Prefabricated arch segments for restoring destroyed aqueduct spans in Germany. R. A. Papp. il map diag Roads & Eng Constr 91: 128+ My '53

Prestressed bridge in British Columbia; abstract. A. L. van den Brandeler. Roads & Eng Constr 91:128+ Ag '53

Prestressed concrete bridge structure in Florida. Engineer 194:764 D 5 '52

Prestressed concrete railway bridge. il diags Engineer 194:805-6 D 12 '52

Prestressed concrete railway bridge of record span completed at Rotherham, England. D. H. Lee. il diags Civil Eng 23:26-9 Ja '53

Prestressed concrete wins place in Massachusetts bridge program. J. C. Rundlett. diags Am Concrete Inst J 24:469-83 Ja '53; Same cond. il Civil Eng 23:13-17+ Ja '53; Abstract. Rock Prod 55:199-200 O '52

Prestressed girder sets new record; span over the Samoggia in Italy. il Eng N 150: 57 Ja 29 '53

Prestressed small bridge in Florida. il Concrete 61:22 Mr '53

Pretensioned units for prestressed concrete bridge built on job. il diags Roads & Sts 95:52-5 O '52

Reinforced concrete box girders solve four problems. il Pub Works 83:99-100 D '52

Reinforced concrete cantilever span held by concrete pins and rockers; Pont Jacques Boulloche bridge at Bezon. il diag Eng N 150:59 Ap 9 '53

Reinforcement used at high stresses in concrete bridges abroad. A. Holmberg. il Eng N 150:57-8 My 7 '53

Simple prestressing methods on Tampa Bay bridge. H. W. Richardson. il Constr Methods 35:54-9 S '53

Small prestressed bridges of England. il Concrete 60:22-3+ D '52

Tests establish construction procedures for prestressed beams in Tampa Bay bridge. W. E. Dean. il diags Civil Eng 23:30-4 Ja '53; Same. Am Concrete Inst J 24:409-20 Ja '53

Venezuela rushes superhighway. il Constr Methods 34:76-7+ O '52

Testing

Testing a prestressed concrete bridge. Engineer 194:648 N 14 '52; Same. Engineering 174:737 D 5 '52

BRIDGES, Foot

Prestressed girder sets new record; span over the Samoggia in Italy. il Eng N 150: 57 Ja 29 '53

BRIDGES, Industrial

Contractor builds own hauling bridge. il Roads & Sts 95:100-1 O '52

BRIDGES, Iron and steel

Auckland Harbour bridge. diag Engineer 194: 583 O 31 '52

Bailey bridge used as falsework for erection of bridge in B.C. R. C. Harris. il Roads & Eng Constr 90:107+ O '52

Better bridges by-pass tougher traffic tangles. il Welding J 32:627-30 Jl '53

Big span; fabricated steel overpass span 136 ft long carried on trailer. il Iron Age 170: 168+ D 18 '52

Chesapeake Bay bridge. il map diags Engineer 195:377-81, 416-19 Mr 13-20 '53

New bridge over the Rhine at Dusseldorf; abstract. diags Welding J 32:sup352 Jl '53

York River bridge, Virginia, U.S.A. il maps plan diags Engineering 175:737-40, pl 22 Je 12 '53

BRIDGES, Lift

See also

Bridges, Bascule

BRIDGES, Military. See Military bridges

BRIDGES, Movable

See also

Bridges, Bascule

Bridges, Swing

BRIDGES, Pipe line. See Pipe lines—Bridge crossing

BRIDGES, Prefabricated

Bailey bridge used as falsework for erection of bridge in B.C. R. C. Harris. il Roads & Eng Constr 90:107+ O '52

Callender-Hamilton road bridge at Great Yarmouth. il Engineering 174:775 D 12 '52

Collapsed bridge over Spanish river replaced by triple-truss Bailey structure. E. H. Jones. il Roads & Eng Constr 91:87-8+ Ja '53

Precast concrete lends itself to economical bridge construction. E. L. Erickson. il diags Civil Eng 24:92-5 F '53; Same. Am Concrete Inst J 24:565-72 F '53; Discussion. W. A. Stancer 24:957-8 Je '53

Prefabricated arch segments for restoring destroyed aqueduct spans in Germany. R. A. Papp. il map diag Roads & Eng Constr 91: 128+ My '53

BRIDGES, Railroad

Are we ready for all-welded railroad bridges? R. N. V. Brodie. il Civil Eng 22:387-9 Je '52; Discussion (Welded railroad bridges; why not?) 22:861-5 O '52

Cranes replace steel bridge span. il Roads & Sts 96:65 Ap '53

Erection of a railway bridge. il Engineer 195:469 Mr 27 '53

New welded railway bridge in Switzerland. M. Frei. il plan diags Welding J 31:1052-4 N '52

Prestressed concrete railway bridge. il diags Engineer 194:805-6 D 12 '52

Prestressed concrete railway bridge of record span completed at Rotherham, England. D. H. Lee. il diags Civil Eng 23:26-9 Ja '53

This new swing span towed to site. il map Ry Age 135:55-7 Jl 27 '53

This swing-span bridge converted to fixed span. il Ry Age 134:44-6 F 16 '53

Maintenance and repair

Air tools speed tight schedule; stone bridge piers get reinforced concrete support. il Constr Methods 34:57-9 O '52

Clamp-on cofferdam repairs swing pier of B&O railroad bridge in tidewater. il Eng N 150:43 Je 11 '53

Repair of a cast-iron bridge girder. Engineering 174:613-14 N 7 '52

BRIDGES, Suspension

Aerodynamic stability of suspension bridges; progress report of the Advisory board on the investigation of suspension bridges. bibliog diags Am Soc C E Proc 78[no 144A-144B]:1-63 Ag '52

Bids asked for Delaware River bridge. il Eng N 150:23 Je 11 '53

Cable-stiffened suspension bridge updated; San Marcos-Lempa bridge, El Salvador. B. Birdsall. il diags Eng N 150:32+ My 21 '53

Construction of the Delaware memorial bridge. H. R. Seely. Am Soc C E Proc 78[no 137]:1-13 Jl '52

Delaware memorial bridge; design problems. C. H. Clarahan, jr. and E. K. Timby. Am Soc C E Proc 78[no 147]:1-9 Ag '52

Delaware memorial bridge, U.S.A. il map plan diags. Engineer 194:146-50, 178-81 Ag 1-8 '52

One-mile-long bridge, with 1447-ft. suspension span, over Halifax harbor. P. L. Pratley. il Roads & Eng Constr 91:113-15+ Ag '53

Quicker cable-strand erection method. B. Birdsall. il Eng N 150:43 Ja 8 '53

Recommend Golden Gate bridge bracing. Eng N 150:22 Ja 22 '53

Roebling completes all-cable highway suspension bridge. Blast F & Steel Pl 41:1231 O '53

Tests of structural damping. il diags Pub Roads 27:203-33 O '53

Trends in the design of large bridges. W. Schweisheimer. il Roads & Eng Constr 91:154+ Ag '53

BRIDGES, Suspension—*Continued*

Anchorages

How wellpoints aided anchorage excavation; suspension bridge over the Lempa river in El Salvador. B. J. Prugh. il plan diag Eng N 150:39-40 My 21 '53

BRIDGES, Swing

This new swing span towed to site. il map Ry Age 135:55-7 Jl 27 '53

York River bridge, Virginia, U.S.A. il maps plan diags Engineering 175:737-40, pl 22 Je 12 '53

BRIDGES, Wooden

Creosoted timber bridges for county highways. W. D. Keeney. il Pub Works 84:68-9+ Je '53

Erecting a timber-truss highway bridge in British Columbia with Department of public works forces. R. A. Macdonald. il Roads & Eng Constr 91:87-90+ S '53

Survey of timber highway bridges in the United States. R. Archibald. Civil Eng 22:755+ S '52

Wood truss bridge has clear deck. il Eng N 150:124 My 21 '53

BRIEF cases

Neolite brief bag. il Consumers Res Bul 30:18-19 D '52

BRIGHTNESS

Brightness difference; basic factor in suprathreshold seeing. S. K. Guth and others. il Illum Eng 48:233-7; Discussion. 237-9 My '53

Brightness discrimination data for the specification of quantity of illumination. H. R. Blackwell. Illum Eng 47:602-8; Discussion. 608-9 N '52

Design characteristics of a photo-electric brightness meter. K. Freund. il Illum Eng 48:524-6 O '53

Effect of a peripheral glare source upon the apparent brightness of an object. G. A. Fry and M. Alpern. diags Opt Soc Am J 43:189-95 Mr '53

Efficiency and appearance factors in luminous panels; abstract. M. E. Haskins, jr. Illum Eng 48:485-6 S '53

Explanation of the brightness and color of the sky, particularly the twilight sky. E. O. Hulburt. bibliog diags Opt Soc Am J 43:113-18 F '53

Meeting lighting quality requirements in school classrooms. J. J. Neidhart. diag Illum Eng 48:311-15 Je '53

New daylighting survey technique utilizing a photographic recorder and physical brightness meters. W. H. Billhartz and others. bibliog il diags Illum Eng 48:6-10; Discussion. 10-12 Ja '53

Pavement brightness measurements. D. M. Finch and R. B. Marxheimer. bibliog il diags Illum Eng 48:65-71; Discussion. 71-4 F '53

Visibility of school tasks. J. M. Ketch and C. J. Allen. il Illum Eng 48:299-305; Discussion. 305 Je '53

See also

Glare

Luminosity

BRILLIANT green

Polarographic reduction of crystal-violet, brilliant-green, malachite-green, and auramine. R. C. Kaye and H. I. Stonehill. Chem Soc J p3231-9 Ag '52

BRILLOUIN zones

Brillouin zone investigation of Mg alloys; Hall effect and conductivity. A. I. Schindler and E. I. Salkovitz. bibliog diags Phys R 91:1320-2 S 15 '53

Cyclotron resonances, magnetoresistance, and Brillouin zones in semiconductors. W. Shockley. diags Phys R 90:491 My 1 '53

Directional effects in the electric breakdown of ionic crystals. E. L. Offenbacher and H. B. Callen. bibliog diags Phys R 90:401-9 My 1 '53

BRINE

Faster brine making and filling; Vita food products, inc. J. V. Ziemba. il Food Eng 25:57+ S '53

How cities save money on water softening. il Pub Works 84:70 Je '53

Lixate brine; percolated salt solutions offer savings in labor, power, space. E. Weller. Mod Textiles Mag 34:56+ My '53

Production of sodium sulphate from natural brines at Monahans, Tex. flow sheets diag Min Eng 5:Trans711-15 Jl '53

Reaction between ferrous iron and dissolved oxygen in brine. D. C. Bond and G. G. Bernard. bibliog diag Ind & Eng Chem 44:2435-8 O '52

Salt well furnishes brine for softening; New Smyrna Beach, Fla. C. E. Wright. il Pub Works 83:63-4 D '52

BRISE soleil. See Sun breaks

BRISKIN, Sam

Revere Camera in stereo field. Bsns W p 104 My 23 '53

BRISTOL, England

Industries

Mechanical engineering around Bristol. A. B. Cooper. map Inst Mech Eng Proc (A) 166 no 3:278-82, pl 1-8; Discussion. 283-4 '52

Notices of works. Inst Mech Eng Proc (A) 166 no 3:286-94 '52

BRISTOL aeroplane company, limited

Statement by the chairman. W. G. V. Smith. Economist 167:561-3 My 23 '53

BRISTOL board. See Paper board

BRITALTA petroleums, ltd.

Gas reserves rising. Barron's 32:22 N 10 '52

BRITANNIC assurance company, limited

Statement by the chairman. J. A. Jefferson. Economist 167:54 Ap 4 '53

BRITISH association for the advancement of science

Annual meeting, Belfast, Sept. 3-10. Elec R (Lond) 151:545-7 S 12 '52

Annual meeting, 114th, Belfast; abstracts of papers. Electrician 149:697-8 S 5 '52

Annual meeting, 114th, Belfast, Sept. 3-10; with abstracts of papers. Engineer 194:357-9, 380-1 S 12-19 '52; Engineering 174:335, 369-71, 401-2, 445-6, 508-9 S 12-O 3, 17 '52

Endeavour prizes announced. Elec Eng 72:375-6 Ap '53

BRITISH association of chemists

B.A.C.'s new headquarters opened; Hinchley medal address by Dr Levinstein. Chem Age (Lond) 68:375-83 Mr 7 '53; Chem & Ind p211-12 Mr 7 '53

BRITISH cast iron research association

Research activities. il Metallurgia 46:193-4 O '52

BRITISH celanese, limited

Statement by the chairman. G. H. Whigham. Economist 165:482-3 N 15 '52

Statement by the chairman. G. H. Whigham. Economist 167:935-6 Je 27 '53

BRITISH chemical manufacturers, Association of. See Association of British chemical manufacturers

BRITISH COLUMBIA

See also

Electric lines—British Columbia

Forests and forestry—British Columbia

Hydroelectric plants—British Columbia

Mines and mineral resources—British Columbia

Roads—British Columbia

Industries and resources

Giant pulp and paper industry opening up in British Columbia. Chem & Eng N 30:5452 D 29 '52

BRITISH COLUMBIA power corporation

Public utility securities. O. Ely. Comm & Fin Chr 177:501 Ja 29 '53

BRITISH COLUMBIA university

Current research in wood fibres. R. W. Wellwood and J. W. Wilson. Pulp & Pa of Can 54:121-4 Je '53

BRITISH electrical and allied industries research association

Annual meeting and luncheon, London, April 10. Elec J 150:1298-300 Ap 17 '53; Elec R (Lond) 152:861-3 Ap 17 '53

BRITISH electrical and allied manufacturers' association

Annual report, 42d. Elec J 150:1312-13 Ap 17 '53; Elec R (Lond) 152:865-7 Ap 17 '53

BRITISH electrical development association

Annual meeting, 33d. Elec J 150:1788-92 My 22 '53; Elec R (Lond) 152:1161-3 My 22 '53

National industrial productivity conference, London, Oct. 29. Elec J 149:1414-20 N 7 '52; Elec R (Lond) 151:985-91 N 7 '52

Sales and service conference, Westminster. Elec R (Lond) 152:1133-6 Mr 15 '53

BRITISH electrical power convention. See Electric industries—Great Britain

BRITISH electricity authority

Constitution of the B.E.A.; announcement by Minister. Elec R (Lond) 151:287-8 Ag 8 '52

BRITISH European airways

BEA's economy drive. Economist 166:660+ Mr 7 '53

Viscount service; BEA starts turboprops on scheduled flights. Aviation W 58:76 My 4 '53

BRITISH HONDURAS

Economic conditions

Economic conditions abroad (cont). For Comm W 48:5-6 O 13 '52

BRITISH hydromechanics research association

British hydromechanics research association. Engineering 174:477-8 O 10 '52

BRITISH industrial plastics, limited

Statement by the chairman. K. M. Chance. Economist 166:913-14 Mr 28 '53

BRITISH industries fair

British banking on industries fair to increase trade with U.S. Sales Management 70:77-8 pt 2 Ja 1 '53

British industries fair. il Metallurgia 47:183-98+ Ap '53

British industries fair, Birmingham and London, April 27. il plans Elec J 150:1394-421, 1549-50 Ap 24-My 1 '53; Elec R (Lond) 152:898-939, 983-1000 Ap 24-My 1 '53

British industries fair, Birmingham and London, April 27-May 8. il diags Engineer 195:582-6, 618-21, 654-9 Ap 24-My 8 '53; Engineering 175:513-14, 545-8, pl 12-15, 577-80, pl 16-17, 630-1 Ap 24-My 15 '53

Textiles top attraction, synthetic fibers emphasized. Chem & Eng N 31:2104 My 18 '53

This year at the British industries fair. il Mod Ind 25:9-10+ Je '53

BRITISH institute of management

More money for BIM? Economist 165:196 O 18 '52

BRITISH iron and steel research association

Productivity in steelmaking; BISRA conference report. Chem Age (Lond) 67:609-10 N 1 '52

Research activities. Metallurgia 46:179-80 O '52

BRITISH labor party. See Labor party (Great Britain)

BRITISH museum

Lighting

British museum reading room; new lighting installation. il Elec R (Lond) 151:807-8 O 10 '52

BRITISH non-ferrous metals research association

Annual meeting, 33d, London, April 22. Engineering 175:568 My 1 '53

Metallurgical research. il Automobile Eng 43:258-62 Je '53

Non-ferrous metals research progress. il Metallurgia 47:203-5 Ap '53; Elec R (Lond) 152:806-8 Ap 10 '53

BRITISH overseas airways corporation

Annual report and accounts for the year ended March 31, 1952. Engineer 194:424 S 26 '52

BOAC says Comets now pay own way. R. Hotz. il plans Aviation W 57:83-5 N 3 '52

BRITISH scientific instrument research association

Open days, Nov. 5-6. il(p664) Engineering 174:659-60 N 21 '52

BRITISH shipbuilding research association

B.S.R.A. ship-structure research station at Glengarnock. il Engineering 174:531-3 O 24 '52

BRITISH steel castings research association

Steel castings research in the United Kingdom; British steel castings research association formed. Metallurgia 47:170 Ap '53; Iron & Steel Inst J 174:16 My '53

BRITISH steel founders' association

Research and development division. J. F. B. Jackson. il diags Metallurgia 46:231-6 N '52

BRITISH tin investment corporation

Statement by the chairman. E. V. Pearce. Economist 166:519 F 21 '53

BRITISH welding research association

Research activities. il Metallurgia 46:181-5 O '52

BRITISH WEST INDIES. See West Indies, British

BRITTLE coating test. See Strains and stresses—Brittle coating test

BRITTLENESS

See also

Steel—Brittleness

BROACHES

Colonial traveling broach racks. il Mach 59:235 Jl '53

Testing

Optical gaging; broach checking unit simplifies inspection of broach teeth. il Iron Age 171:166-7 Ap 23 '53; Steel 132:140+ My 18 '53; Automotive Ind 108:57 Je 15 '53; Mach 59:212-13 Je '53

BROACHING

Blind broaching method increases production. diag Tool Eng 29:68 N '52

Broaching arms on aircraft engine spiders. il Mach 59:215 Je '53

How to tap, mill and broach titanium. V. L. Coughlin. il diags Iron Age 171:186-8 Mr 5 '53

BROACHING machines

Acme hydraulic broaching machine. il Tool Eng 31:125 O '53

Automation in broaching. A. Lundell. il Mach 60:168-73 S '53

Broaching automotive castings at 200 feet per minute; Dodge Red Ram V-8 engine. J. J. Wetzel. il diags Mach 59:153-9 Ag '53

Colonial horizontal broaching machine. il Mach 59:206-7 Mr '53

Colonial horizontal broaching machine for jet-engine rings. il Am Mach 97:179 Je 22 '53; Mach 59:216-17 Je '53

Colonial vertical broaching machine. Tool Eng 31:74 Ag '53

Horizontal broach operates at 150 fpm and has 200 hp. il diag Am Mach 96:212+ O 13 '52; Automotive Ind 107:74 D 1 '52; Mach 59:215 D '52; Tool Eng 29:113 D '52

Horizontal high speed broach. il Tool Eng 30:117 My '53

Internal contours of aircraft engine parts broached. il Iron Age 171:150+ Mr 26 '53; Steel 132:112 Mr 30 '53; Mach 59:175 Ap '53

Lapointe high-speed broaching machine. il Mach 59:238-9 Jl '53

National broach & machine co. air-powered fixture broaches holes, keyways, and contours. il Am Mach 97:230 O 12 '53; Same. Mach 60:227-8 O '53

New broaching tools handle big diameters. il Aviation W 58:71+ My 18 '53

1953 American Machinist production preview. il Am Mach 97:170-1 Ja 19 '53

One broaching machine does four operations on single part. il Automotive Ind 109:100 Ag 1 '53

Rausch vertical broaching machine. il Engineering 175:800 Je 19 '53

Rausch vertical broaching machine. il(p371) Automobile Eng 43:370 S '53

What's ahead the next ten years in machining; broaching. Am Mach 96:E20-1 Mid-N '52

BROADCASTING stations, Radio. See Radio broadcasting stations

BROCCOLI

Farm-truck to freezer in 19 min.; Biscayne frozen foods. A. L. Stahl and C. J. John. il Food Eng 24:142-3+ N '52

BROKERS

Brokers' blues; low volume, high overhead keep profits lean. J. C. Perham. Barron's 32:11-12 N 10 '52

High costs hit Wall Street. Bsns W p60+ F 21 '53

Salesmen as parties to disciplinary proceedings. Comm & Fin Chr 177:1103+ Mr 12 '53

What should be done to stimulate the brokerage business. M. Moes. Comm & Fin Chr 176:1530 O 23 '52

Law

Cross fire! proposal requiring financial statements from dealer-brokers. Comm & Fin Chr 177:2740-1 Je 25 '53

BROKERS' loans

Customers' debit balances, money borrowed, and principal related items of stock exchange firms carrying margin accounts; June 1950-Nov. 1952. Fed Res Bul 39:38 Ja '53 [cont monthly]

BROMATES

Analysis of the spectrum of the Nd^{+++} ion in the bromate crystal. R. A. Satten. bibliog diags J Chem Phys 21:637-48 Ap '53

Electrometric study of the reaction between bromine and iodide ions in the absence and in the presence of acid; bromate and bromide ions in acid solution. H. T. S. Britton and H. G. Britton. Chem Soc J p3879-87 O '52

Heat and free energy of formation of bromate ion. H. C. Mel, W. L. Jolly and W. M. Latimer. bibliog Am Chem Soc J 75:3827-9 Ag 5 '53

BROMIDES

Electrometric study of the reaction between bromine and iodide ions in the absence and in the presence of acid; bromate and bromide ions in acid solution. H. T. S. Britton and H. G. Britton. Chem Soc J p3879-87 O '52

Halogen derivatives of phenyl styryl ketone; bromo- and chloro-derivatives. R. D. Abell and W. Siddall. Chem Soc J p2804-7 S '53

Mechanism of the reaction of α-haloketones with weakly basic nucleophilic reagents. R. G. Pearson and others. bibliog Am Chem Soc J 74:5130-2 O 20 '52

Pure quadrupole spectra; alkyl bromides and iodides. H. Zeldes and R. Livingston. J Chem Phys 21:1418-19 Ag '53

Rate law and mechanism for the reaction of cerium(IV) and bromide ion in aqueous sulfate media. E. L. King and M. L. Pandow. bibliog Am Chem Soc J 75:3063-8 Jl 5 '53

Reactivity of bridgehead bromides. W. V. Doering and others. bibliog Am Chem Soc J 75:1008 F 20 '53

Transformations of organic nitrogen base iodide and bromide salts to chlorides. A. P. Phillips and R. Baltzly. Am Chem Soc J 74:5231-2 O 20 '52

BROMINATION

Allylic bromination of unsaturated terpene hydrocarbons, and the synthesis of αβ-unsaturated alcohols. A. K. Macbeth, B. Milligan and J. S. Shannon. Chem Soc J p2574-6 S '53

Bromination, iodination and phenylation of thianaphthenes. R. Gaertner. Am Chem Soc J 74:4950-1 O 5 '52

Bromination of aceto-β-naphthalide. F. Bell. Chem Soc J p5046-7 D '52

Bromination of acridone. R. M. Acheson and M. J. T. Robinson. Chem Soc J p232-8 Ja '53

Bromination of hydrocarbons; photochemical and thermal bromination of toluene; bond dissociation energies. H. R. Anderson, jr. and others. bibliog diags J Chem Phys 21: 1258-67 Jl '53

Bromination of 2-methylnaphthalene. N. B. Chapman and J. F. A. Williams. Chem Soc J p5044-6 D '52

Bromination of neopentane. S. W. Benson and H. Graff. J Chem Phys 20:1182 Jl '52

Bromination product of acridone. S. Kruger. Chem Soc J p3648-9 S '52

cis-Addition in the bromination of a bicyclic olefin. J. A. Berson and R. Swidler. bibliog Am Chem Soc J 75:4366-7 S 5 '53

Electrophilic displacement reactions; rates of brominolysis of substituted benzeneboronic acids. H. G. Kuivila and A. R. Hendrickson. bibliog Am Chem Soc J 74:5068-70 O 20 '52

Isomerism in the Diels-Alder reaction; the bromination of Diels-Alder adducts. H. Kwart and L. Kaplan. bibliog diags Am Chem Soc J 75:3356-9 Jl 20 '53

Kinetics of iodine-catalyzed aromatic bromination; a new rate expression. T. Tsuruta, K. Sasaki and J. Furukawa. bibliog Am Chem Soc J 74:5995-8 D 5 '52

Mechanism of the bromination of ethyl malonate. R. P. Bell and M. Spiro. diag Chem Soc J p429-35 F '53

Photobromination of pentane. M. S. Kharasch and others. J Chem Phys 20:1659-60 O '52

Polar effects in N-bromosuccinimide brominations. E. J. Corey. bibliog Am Chem Soc J 75:2251-2 My 5 '53

Stereochemistry of 1,4-addition; the bromination of butadiene. K. Mislow. bibliog Am Chem Soc J 75:2512 My 20 '53

BROMINE

Addition and substitution with the bromine cation in aqueous solution. D. C. Abbott and C. L. Arcus. Chem Soc J p2934-5 Jl '52

Addition of bromine to (+)-1-phenylallyl alcohol and the oxidation of the (+)-dibromo-alcohol. C. L. Arcus and H. E. Strauss. Chem Soc J p2669-71 Jl '52

2 : 5 - Dihydroxy - 3 : 6 - dimethoxyacetophenone and its degradation by bromine. G. R. Ramage and C. V. Stead. Chem Soc J p 1393-5 My '53

Effect of bromine concentration on the products of the reactions of carbon tetrachloride with bromine activated by radiative neutron capture and by isomeric transition. J. F. Hornig and J. E. Willard. bibliog Am Chem Soc J 75:461-6 Ja 20 '53

Electrometric study of the reaction between bromine and iodide ions in the absence and in the presence of acid; bromate and bromide ions in acid solution. H. T. S. Britton and H. G. Britton. Chem Soc J p3879-87 O '52

Kinetics of reaction of bromine with *t*-amyl alcohol. L. J. Andrews and R. M. Keefer. bibliog Am Chem Soc J 75:3557-61 Jl 20 '53

Kinetics of the oxidation of iron(II) by bromine. P. R. Carter and N. Davidson. bibliog J Phys Chem 56:877-81 O '52

Magnetic susceptibility of bromine-graphite. R. Smoluchowski. bibliog diags Rs Mod Phys 25:178-80; Discussion. 180-1 Ja '53

Negative pion activation of bromine. T. T. Sugihara and W. F. Libby. Phys R 88: 587-8 N 1 '52

Nuclear quadrupole resonance of bromine in molecular solids. S. Kojima and others. J Chem Phys 21:1415-16 Ag '53

Participation of a neighboring carboxyl group in addition reactions; the mechanism of the reaction of bromine with γ,δ-unsaturated acids and esters. R. T. Arnold, M. D. Campos and K. L. Lindsay. bibliog Am Chem Soc J 75:1044-7 Mr 5 '53

Reaction between 2,6-di-*t*-butyl-*p*-cresol and bromine. G. M. Coppinger and T. W. Campbell. bibliog Am Chem Soc J 75:734-6 F 5 '53

Reaction of silver cyclobutanecarboxylate with bromine. E. R. Buchman and J. C. Conly. Am Chem Soc J 75:1990 Ap 20 '53

Reactions of *cis*- and *trans*-1,2-dibenzoylpropenes with hydrogen halides, bromine and phenylmagnesium bromide. P. S. Bailey and S. H. Pomerantz. bibliog Am Chem Soc J 75:281-4 Ja 20 '53

Reactions of trimethylene sulfide with chlorine and bromine. J. M. Stewart and C. H. Burnside. bibliog Am Chem Soc J 75:243-4 Ja 5 '53

Total cross sections of chlorine, sodium, titanium, and bromine for fast neutrons. H. R. Dvorak and R. N. Little, jr. bibliog diag Phys R 90:618-22 My 15 '53

Isotopes

Characteristics of Br^{87}, a delayed neutron activity. A. F. Stehney and N. Sugarman. bibliog diag Phys R 89:194-203 Ja 1 '53

Cross section for the reaction $Br^{81}(\gamma,\alpha)As^{77}$. J. G. V. Taylor and R. N. H. Haslam. Phys R 87:1138-9 S 15 '52

Effect of the isomeric transition in Br^{80} on its reactivity with the tetrachlorides of carbon, silicon, germanium, and tin. C. C. Coffin and W. D. Jamieson. J Chem Phys 20:1324-5 Ag '52

Evidence of partial failure of the Br^{80} isomeric transition to rupture carbon-bromine bonds. R. S. H. Chiang and J. E. Willard. bibliog Am Chem Soc J 74:6213-16 D 20 '52

Exchange of Br^{80} atoms with bromoölefins; induced rearrangement of the bromopropenes. R. R. Williams, jr. and others. bibliog Am Chem Soc J 74:5737-9 N 20 '52

Scintillation study of As^{77} and Br^{77}. M. E. Bunker and others. bibliog Phys R 91: 1021-2 Ag 15 '53

Theoretical view on hot atom chemistry. P. C. Capron and Y. Oshima. bibliog diags J Chem Phys 20:1403-10 S '52

BROMINE chloride

Raman frequency of bromine monochloride. H. Stammreich and R. Forneris. bibliog J Chem Phys 21:944-5 My '53

BROMINE compounds
Azeotropes of bromine; azeotropes of bromine with 1,2,2-trichloro-1,1-difluoroethane and 1,1-dichloro-2,2-difluoroethane. W. M. Spicer and H. D. R. Page. Am Chem Soc J 75:3603-4 Jl 20 '53
Bromomagnesium salts of dialkyl phosphites as intermediates in the synthesis of substituted hydroxymethyl phosphonic acid esters. O. Gawron and others. bibliog Am Chem Soc J 75:3591-2 Jl 20 '53
Configuration of steroid bromoketones. L. F. Fieser, R. Ettorre and X. A. Dominguez. bibliog Am Chem Soc J 75:1700-7 Ap 5 '53; Correction. 75:4837-8 O 5 '53
Dissociation energies of C-Br bonds in the bromo-naphthalenes, 9-bromo-phenanthrene, and 9-bromo-anthracene. M. Ladacki and M. Szwarc. J Chem Phys 20:1814-16 N '52
Some reactions of 1,2-diethoxyethylene and its bromo derivatives. S. M. McElvain and C. H. Stammer. bibliog Am Chem Soc J 75:2154-8 My 5 '53
Stereochemistry of α-haloketones; the three α-dibrominated cyclohexanones. E. J. Corey. bibliog Am Chem Soc J 75:3297-9 Jl 20 '53

BROMINE fluorides
Raman effect spectrum, structure, force constants, and thermodynamic properties of bromine pentafluoride. C. V. Stephenson and E. A. Jones. bibliog diag J Chem Phys 20:1830-4 D '52

BROMINE number
Proposed method of test for bromine number of petroleum distillates. diag Am Soc T M Proc 50:276-83 '50

BROMINOLYSIS. See Bromination

BROMOACETAMIDE
Infrared absorption spectra of some *N*-bromoacetamides. J. R. Lacher, G. G. Olson and J. D. Park. bibliog Am Chem Soc J 74:5578-80 N 20 '52

BROMOACETOPHENONE
Self-condensation of phenacyl bromide; the structure of the halogen diphenacyls. J. A. Berson. bibliog Am Chem Soc J 74:5175-7 O 20 '52

BROMOACETYL bromide
Rotational isomers of chloroacetyl chloride, bromoacetyl chloride, and bromoacetyl bromide. I. Nakagawa and others. bibliog J Chem Phys 20:1720-4 N '52

BROMOACETYL chloride
Rotational isomers of chloroacetyl chloride, bromoacetyl chloride, and bromoacetyl bromide. I. Nakagawa and others. bibliog J Chem Phys 20:1720-4 N '52

BROMOACRYLIC acid
Structure of the 2-pyridone and α-bromoacrylic acid adduct and its derivatives. R. Adams and I. J. Pachter. bibliog Am Chem Soc J 74:4906-9 O 5 '52

BROMOBENZENESULFONATE
Neighboring carbon and hydrogen; rearrangement as a sequel to neighboring functional group participation; solvolysis of 2-methyl-2-methoxy-1-propyl *p*-bromobenzenesulfonate. S. Winstein, C. R. Lindegren and L. L. Ingraham. bibliog Am Chem Soc J 75:155-8 Ja 5 '53

BROMOBUTYLACRYLIC acid
Olefinic acids; α-bromo-β-*tert.*-butyl- and α-bromo-ββ-diphenyl-acrylic acids. D. D. E. Newman and L. N. Owen. Chem Soc J p4722-7 D '52

BROMOCAPROIC acid
Cyclic intermediates in substitution reactions; the alkaline hydrolysis of ε-bromocaproic and ζ-bromoenanthic acids. H. W. Heine, E. Becker and J. F. Lane. bibliog Am Chem Soc J 75:4514-16 S 20 '53

BROMOCHLOROMETHANE
Substituted methanes; vibrational spectra, potential constants, and calculated thermodynamic properties of bromochloromethane. A. Weber and others. bibliog J Chem Phys 21:930-3 My '53

Physiological effect

Comparative inhalation toxicities of four halogenated hydrocarbons to rats and mice in the presence of gasoline fires. C. C. Comstock and F. W. Oberst. A M A Archives Ind Hygiene & Occup Med 7:157-67 F '53

BROMOCHLOROPROPENE

Physiological effect

Toxicology and safe handling of CBP-55 (technical 1-chloro-3-bromopropene-1). C. H. Hine and others. bibliog il A M A Archives Ind Hygiene & Occup Med 7:118-36 F '53

BROMOCINNOLINE
Cinnolines; the nature of the $C_{(3)}$-position; the synthesis of 3-methyl-, 3-chloro-, and 3-bromo-cinnoline; also, of cinnoline and the *Bz*-nitrocinnolines. E. J. Alford and K. Schofield. Chem Soc J p609-12 F '53

BROMOCYCLOHEXANE
Configurations of the 3-bromocyclohexanecarboxylic acids. S. Siegel and J. G. Morse. bibliog Am Chem Soc J 75:3857-9 Ag 5 '53

BROMOCYCLOHEXYLIDENEACETIC acid
Olefinic acids; α-bromo*cyclo*hexylideneacetic acid. D. D. E. Newman and L. N. Owen. Chem Soc J p4713-21 D '52

BROMODIMETHYLPROPANOL
Cleavage of 3-bromo-2,2-dimethyl-1-propanol by base. S. Searles and M. J. Gortatowski. bibliog Am Chem Soc J 75:3030-1 Je 20 '53

BROMODIPHENYLACRYLIC acid
Olefinic acids; α-bromo-β-*tert.*-butyl- and α-bromo-ββ-diphenyl-acrylic acids. D. D. E. Newman and L. N. Owen. Chem Soc J p4722-7 D '52

BROMOENANTHIC acid
Cyclic intermediates in substitution reactions; the alkaline hydrolysis of ε-bromocaproic and ζ-bromoenanthic acids. H. W. Heine, E. Becker and J. F. Lane. bibliog Am Chem Soc J 75:4514-16 S 20 '53

BROMOETHANOL
Stereospecificity in rearrangements; *erythro-* and *threo-*1-*p*-chlorophenyl-1,2-diphenyl-2-bromoethanol. D. Y. Curtin and E. K. Meislich. bibliog Am Chem Soc J 74:5905-8 D 5 '52

BROMOETHYL benzene
Stereochemistry of the formation and decomposition of dimethyl-α-phenethylsulfonium bromide. S. Siegel and A. F. Graefe. bibliog Am Chem Soc J 75:4521-5 S 20 '53

BROMOFORM
Molecular structure of bromoform. Q. Williams and others. J Chem Phys 20:1524-5 O '52

BROMOHEPTANE
Conversion of silver (+)-2-ethylhexanoate into (+)-3-bromoheptane. D. C. Abbott and C. L. Arcus. Chem Soc J p3195-7 Ag '52

BROMOHYDRINS
Debromination of inositol bromohydrins; synthesis of conduritol-*B*, *scyllo*quercitol, and D,L-*vibo*quercitol. G. E. McCasland and E. C. Horswill. bibliog Am Chem Soc J 75:4020-6 Ag 20 '53

BROMOISOCYTOSINE
Reactivity of 5-bromoisocytosine with some amines. A. P. Phillips. Am Chem Soc J 75:4092 Ag 20 '53

BROMOISOPROPENYLPHENOL
Condensation products of phenols and ketones; dimerides of 4-chloro- and 4-bromo-2-*iso*propenylphenol. W. Baker and others. Chem Soc J p3796-8 O '52

BROMOMALONIC acid
Intramolecular carbon isotope effects in the decarboxylation of malonic acid and bromomalonic acid. P. E. Yankwich and E. C. Stivers. bibliog diag J Chem Phys 21:61-6 Ja '53

BROMOMANDELIC acid
Determination of zirconium in steels using *p*-bromo- or *p*-chloromandelic acid. J. J. Klingenberg and R. A. Papucci. bibliog Anal Chem 24:1861-2 N '52

BROMOMETHANE
Electron impact studies in CH_4, CH_3Cl, CH_3Br and CH_3I. H. Branson and C. Smith. bibliog Am Chem Soc J 75:4133-8 S 5 '53

BROMONITROBENZOIC acid
Bromo-2-nitrobenzoic acids. J. L. E. Erickson, J. M. Dechary and T. R. Pullig. bibliog Am Chem Soc J 74:5621-3 N 20 '52

BROMONITROSTYRENE
Preparation of 4-bromo- and 4-iodo-ω-nitrostyrene. X. A. Dominguez, J. Slim S. and A. Elizondo. bibliog Am Chem Soc J 75:4581-2 S 20 '53

BROMOOCTYNE

Microwave spectrum of $C_8H_{13}Br$ and $C_8H_{13}Cl$. A. H. Nethercot, jr. and A. Javan. diag J Chem Phys 21:363-4 F '53

BROMOPHENYL methyl sulfide

Rearrangement amination of *o*-chloro- and *o*-bromophenyl methyl sulfides and *o*-bromophenyl methyl sulfone in liquid ammonia. H. Gilman and G. A. Martin. bibliog Am Chem Soc J 74:5317-19 N 5 '52

BROMOPROPENE

Exchange of Br^{80} atoms with bromoölefins; induced rearrangement of the bromopropenes. R. R. Williams, jr. and others. bibliog Am Chem Soc J 74:5737-9 N 20 '52

BROMOPROPIONIC acid

Condensation of kojic acid with crotonic acid and with β-bromopropionic acid. L. L. Woods. Am Chem Soc J 75:1510 Mr 20 '53

BROMOPYRIDINE

Some reactions of substituted 2-bromopyridines. A. H. Berrie, G. T. Newbold and F. S. Spring. Chem Soc J p2042-6 Je '52

BROMOSILANE

Preparation and characterization of some pure organobromosilanes. P. A. McCusker and E. L. Reilly. bibliog Am Chem Soc J 75:1583-5 Ap 5 '53

BROMOSTYRENE

Mechanisms of elimination reactions; the spontaneous decomposition of salts of β-halo acids; *trans*-cinnamic acid dibromide. S. J. Cristol and W. P. Norris. bibliog Am Chem Soc J 75:2645-6 Je 5 '53

Stereochemistry and mechanism of the transformation of cinnamic acid dibromide to β-bromostyrene. E. Grovenstein, jr. and D. E. Lee. bibliog Am Chem Soc J 75:2639-44 Je 5 '53

BROMOSUCCINIC acid

Reactions of hindered α-bromo- and hydroxysuccinic acids. W. R. Vaughan and K. M. Milton. bibliog Am Chem Soc J 74:5623-30 N 20 '52

BROMOSUCCINIMIDE

Action of N-bromosuccinimide on β-carotene. L. Zechmeister and L. Wallcave. bibliog Am Chem Soc J 75:4493-5 S 20 '53

Polar effects in N-bromosuccinimide brominations. E. J. Corey. bibliog Am Chem Soc J 75:2251-2 My 5 '53

Reaction of 1 : 4-diphenyl- and 1 : 1 : 4-triphenyl-butane with N-bromosuccinimide. S. Israelashvili and F. Bergmann. Chem Soc J p 1070-2 Ap '53

Reaction of saturated steroid 3-enol acetates with N-bromosuccinimide. M. Rubin and B. H. Armbrecht. bibliog Am Chem Soc J 75:3513-16 Jl 20 '53

Synthesis of 11-ketosteroids; oxidation of $\Delta^{7,9(11)}$-dienes with N-bromosuccinimide. L. F. Fieser, W. P. Schneider and W. Huang. bibliog Am Chem Soc J 75:124-7 Ja 5 '53

BROMOTRIFLUOROMETHANE

Infrared spectra of CF_3Br and CF_3I. S. R. Polo and M. K. Wilson. J Chem Phys 20:1183 Jl '52

Infrared spectral data and tentative assignments for CF_3Br and CF_3I. P. R. McGee and others. J Chem Phys 20:1044 Je '52

Raman and infrared spectra of CF_3Br and CF_3I. W. F. Edgell and C. E. May. bibliog J Chem Phys 20:1822-3 N '52

Substituted methanes; infrared spectral data, assignments, potential constants, and calculated thermodynamic properties for CF_3Br and CF_3I. P. R. McGee and others. J Chem Phys 21:242-6 F '53

Physiological effect

Comparative inhalation toxicities of four halogenated hydrocarbons to rats and mice in the presence of gasoline fires. C. C. Comstock and F. W. Oberst. A M A Archives Ind Hygiene & Occup Med 7:157-67 F '53

BRONZE

Brass scrap, bronze and brass ingots, prices, shipments, 1948-1952; tabulations. Iron Age 171:419 Ja 1 '53

Chase offers new alloy; Telnic bronze. Steel 131:135+ N 3 '52; Materials & Methods 36:146 D '52

Definitions of alloys as used in the copper and brass mill products industry; engineering file facts. Materials & Methods 38:141 S '53

Design and application of bronze slippers in universal couplings; abstract. J. R. Lottes. Steel 132:97 Je 29 '53

High copper nickel-phos alloy can be cold-worked. Iron Age 170:205 D 4 '52

Large bronze statue honors war dead. il Foundry 81:176 Ja '53

Tin and leaded-tin bronzes. H. J. Roast. il Foundry 81:94-7+ Jl '53

See also

Aluminum bronze

Bronze founding

Gun metal

Analysis

Tin assay shortcut speeds control. C. Goldberg. Iron Age 171:130-1 My 28 '53

Volumetric procedure for analysis of tin in copper-base alloys. R. Rapport. il Foundry 81:115 Ag '53

Specifications

Standard commercial wrought tin and aluminum brasses, bronzes and nickel silvers; data sheet. A. H. Allen, comp. Metal Prog 63:96B F '53

Standard specifications for bronze castings for bridges and turntables; data sheet. Foundry 81:155-6 Ja '53

Standard specifications for bronze castings in the rough for locomotive wearing parts; data sheet. Foundry 81:183-4 F '53

Testing

Asarco continuous-cast bearing bronzes. J. S. Smart, jr. and P. J. Kranz. il diags Mech Eng 75:287-90 Ap '53

BRONZE founding

Asarco continuous-cast bearing bronzes. J. S. Smart, jr. and P. J. Kranz. il diags Mech Eng 75:287-90 Ap '53

Brass and bronze; American foundrymen's society annual meeting, Chicago; abstracts of papers. Foundry 81:150+ Je '53

Brass and bronze castings. V. C. Reid and P. G. Maganus. il Foundry 81:136-9 My '53

Cast bronze, by H. J. Roast. Review, by H. M. St John. Metal Prog 63:111-12 My '53

Choosing the right copper-base alloy. H. J. Roast. il Foundry 81:114-15 O '53

Continuous casting. il diag Mill & Factory 53:97 S '53

Copper oxides, useful tools in casting copper-base alloys. L. G. Klinker. il Foundry 81:228+ S '53

Economic utilisation of copper-base alloys; report of Technical council sub-committee T.S. 38 of the Institute of British foundrymen. Engineering 176:222-4 Ag 14 '53

Huge cast bronze memorial to honor U.S. marine corps. P. Dwyer. il Foundry 81:104-7+ O '53

Melting of chill-cast tin bronzes. D. Hanson and W. T. Pell-Walpole. Metal Prog 64:180+ Jl '53

Modern continuous cast copper alloys. J. L. Kimberly. il diags Product Eng 24:178-81 Mr '53

Quality considerations for bronze castings. H. J. Roast. il Metal Prog 62:91-2 D '52; Discussion. 63:118+ Ap '53

Simplifies casting of aluminum bronze pins. F. R. Capps. il diag Foundry 81:208 O '53

Sonnets for the metallurgist; Benvenuto Cellini and casting of his Perseus. R. P. Lister. il Metal Prog 63:110-12 Ap '53

Specification for copper-base alloy centrifugal castings; data sheet. Foundry 80:179 D '52

Tin and leaded-tin bronzes. H. J. Roast. il Foundry 81:94-7+ Jl '53

BROOKLYN union gas company

Profit prospects brighten. Barron's 33:23-4 Jl 20 '53

Public utility securities. O. Ely. Comm & Fin Chr 177:1215 Mr 19 '53

BROPHY, Thomas D'Arcy, 1893-

Contemporary award for distinguished services to advertising. por Ptr Ink 242:31-2 Ja 9 '53

BROULAN reef mines, ltd.

New ore finds enhance Broulan Reef prospects. Barron's 32:17-18 O 20 '52

BROWN, Gordon Stanley, 1907-

George Westinghouse award, 1952. por J Eng Educ 43:50-1 S '52

BROWN, John and company, limited

Statement by the chairman. Lord Aberconway. Economist 165:65 O 4 '52

BROWN, Warren Wentworth, 1899-

W. Brown is new Monon chief. por Ry Age 134:246 Ja 12 '53

BROWN and Bigelow, inc.

Big advertising budgets aiding Brown & Bigelow. Barron's 33:21 My 4 '53

BROWN, Boveri company

Battle for a key U.S. market in Detroit. il Bsns W p 148+ Je 13 '53

Turbo tussle. Bsns W p 112+ Jl 18 '53

BROWN coal. See Lignite

BROWN shoe company

Anti-recession contract; St Louis local of AFL's teamsters' union. Bsns W p 130 Ja 31 '53

Brown Shoe treading path to higher sales, earnings. Barron's 33:23-4 Je 8 '53

BROWNELL, Emery A.

Portrait. Fortune 46:178 O '52

BROWNELL, Herbert, 1904-

Attorney general. por Nat Pet N 44:40 N 26 '52

Eisenhower's Cabinet; a gamble. por Bsns W p29-30 N 29 '52

Sketch. East Underw 54:5 Ja 2 '53

BROWNIAN movements

Brownian motion and the transmission of energy in the cochlea. H. L. de Vries. diags Acoustical Soc Am J 24:527-33 S '52

Brownian motion in the theory of irreversible processes. R. T. Cox. bibliog Rs Mod Phys 24:312-20 O '52

BROWNING

Amadori rearrangement under new conditions and its significance for nonenzymatic browning reactions. J. E. Hodge and C. E. Rist. bibliog Am Chem Soc J 75:316-22 Ja 20 '53

Chemical interactions of amino compounds and sugars; the repeating unit in browning polymers. M. L. Wolfrom and others. Am Chem Soc J 75:1013 F 20 '53

Reaction of acetoin and hydroxyacetaldehyde with cyclohexylamine. J. F. Carson. Am Chem Soc J 75:4337-8 S 5 '53

Reactions of carbohydrates with nitrogenous substances; factors affecting the darkening of N-D-glucosylaniline. L. Rosen, K. C. Johnson and W. Pigman. bibliog Am Chem Soc J 75:3460-4 Jl 20 '53

BROWNLEE, James F. 1891-

Portrait. Bsns W p28 F 21 '53

BRUCELLA

Better procedures for culture recognition. W. Braun and R. J. Goodlow. Pub Health Rep 68:109-10 Ja '53

Primary isolation of brucella from human blood clots. S. R. Damon and others. Pub Health Rep 67:883-7 S '52

BRUNAUER-EMMETT-TELLER equation

Low pressure validity of the BET equation. M. L. Corrin. bibliog Am Chem Soc J 75:4623 S 20 '53

BRUNSWICK pulp and paper company

Brunswick Pulp & Paper celebrates 15th anniversary. il Paper Ind 35:197-8 My '53

BRUSH

Brush chipper proves its worth in right-of-way maintenance. L. R. Dickinson. il Oil & Gas J 51:340 O 13 '52

Brush spraying cost halved by helicopter. L. M. Donahue. il Elec World 139:126 F 23 '53

First basal spray gives 90 per cent kill. L. A. Phillips. il Elec World 138:122+ N 3 '52

Kent county cuts brush, and then sprays chemicals. O. S. Hess. Roads & Sts 96:88-9 My '53

Operation killer; chemicals control brush and weeds. il Can Chem Process 37:52+ Ag '53

Southern Bell switches to chemical brush control. il Elec World 139:122-3 Mr 23 '53

What about roadside weed and brush control? H. A. Martin; R. M. Dawson. Roads & Eng Constr 91:203-4+ Mr '53

BRUSH electrical engineering company, limited

Statement by the chairman. R. W. Matthews. Economist 167:571 My 23 '53

BRUSHES (electric machinery)

Meaning of commutator film. L. D. Cook. il Iron & Steel Eng 30:74-9; Discussion. 79-83 Je '53

Powder metal; production costs cut in molding of generator brushes. Iron Age 170:192 D 11 '52

Wear of carbon brushes at high altitudes. R. F. Sims. diags Inst E E Proc 100 pt 1:183-8 Jl '53

BRUSHES, Industrial

Brushes; production tools for good surface finishes. R. O. Peterson. il Iron Age 171:134-7 Mr 19 '53

Brushing sharpens worn diamond wheels. il Steel 132:106 Mr 16 '53

Brushing unit. il Iron & Steel Eng 29:189-90+ O '52

Fullanchor wheelbrush. il Rubber Age 73:700 Ag '53

Industrial brushes; research finds new uses. il Steel 132:48 F 23 '53

Power brushing improves production in many ways; case studies. il Mill & Factory 52:114-15 Je '53

Power brushing versatility expands. il Steel 131:122 N 24 '52

BRUSHES, Paint. See Paint brushes

BRUSSELS

Railroads

Tunnel, viaducts join rail stations and transform central Brussels. G. N. Balbachevsky. il plan diags Eng N 149:40-2 O 9 '52

BRUUN, J. H.

Dr Bruun heads Hooker research. por Oil Paint & Drug Rep 162:4 D 8 '52

BRYAN, Joseph Jefferson, 1905-1951

Memorial. J. W. Harding. por Am Assn Pet Geologists Bul 36:1687-8 Ag '52

BRYSON, George D.

Young & Rubicam's Bryson shows British the U.S. way. por Ed & Pub 85:51 N 29 '52

BUBBLE caps. See Distillation apparatus

BUBBLE chambers

Bubble chamber tracks of penetrating cosmic-ray particles. D. A. Glaser. il Phys R 91:762-3 Ag 1 '53

BUBBLE plates. See Absorption apparatus

BUBBLE point

Isobaric heat capacities at bubble point; *cis*-2-butene, isopropylbenzene, and *n*-decane. W. G. Schlinger and B. H. Sage. bibliog Ind & Eng Chem 44:2454-6 O '52

BUBBLES

Cavitation. E. Crewdson. diag Engineer 195:122-3 Ja 23 '53

Critical micelle concentrations by a bubble pressure method. A. S. Brown and others. diag J Phys Chem 56:701-5 Je '52

Effect of a liquid phase velocity on the growth and collapse of gas bubbles. V. J. Berry. J Chem Phys 20:1045 Je '52

Experimental study of single bubble cavitation noise. M. Harrison. bibliog il diags Acoustical Soc Am J 24:776-82 N '52

Flexural response of a submerged solid to a pulsating gas bubble. G. Chertock. diags J Ap Phys 24:192-7 F '53

Mechanism of mass transfer on bubble plates; plate efficiencies. F. B. West, W. D. Gilbert and T. Shimizu. bibliog flow sheet il diags Ind & Eng Chem 44:2470-8 O '52

New method of producing the Allwörden reaction. E. H. Mercer and R. L. Golden. bibliog il diags Textile Res J 23:43-4 Ja '53; Discussion. A. Parisot and M. Leveau. 23:440-1 Je '53

Osmotic active substances of the Allwörden reaction. G. J. Schuringa and others. bibliog Textile Res J 23:645-6 S '53

Quantitative bubble pick-up methods. S. C. Sun and R. C. Troxell. Min Eng 5:Trans715 Jl '53

Studies on the motion of gas bubbles in liquids. F. N. Peebles and H. J. Garber. bibliog diag Chem Eng Prog 49:88-97 F '53

See also

Foam

BUCHMAN, Louis

Interview. por Min Eng 5:485 My '53

BUCKETS

New Zealanders design ten-ft. bucket to use on backhoe for ditchwork, and it's towed along by a tractor. il Eng N 150:209 F 19 '53; Same. Constr Methods 35:148 Mr '53

Scraper bucket delivers 82 tons an hour. il Brick & Clay Rec 122:46-7 F '53

BUCKLING of columns. See Columns

BUCKS county, Pennsylvania
See also
Banks and banking—Bucks county—Pennsylvania

BUDA company
Three by nine analysis of some unlisted stocks. H. J. King. Comm & Fin Chr 177:1208 Mr 19 '53

BUDGET

Canada

Canadian budget based on prospect for continuation of prosperity. For Comm W 49:6+ Mr 16 '53
Canadian finance minister offers investors budget. R. Redler. Barron's 33:8 Mr 2 '53

France

M. Pinay becalmed; with draft French budget for 1953. Economist 165:761-2 D 13 '52

Great Britain

Britain's budget. G. Schwartz. Barron's 33:3 Ap 20 '53
Budget analysed. Economist 167:169-75 Ap 18 '53
Budget shortfall. Economist 166:35-7 Ja 3 '53
Budgetary risks and incentives. Economist 167:200-2 Ap 25 '53
£400 million shortfall; out-turn of the budget for 1952-53. Economist 167:42 Ap 4 '53
Guns and butter in Britain. P. Einzig. Comm & Fin Chr 177:1010-11 Mr 5 '53
Payoff for extra effort. Bsns W p 164-5 Ap 25 '53
Retreat from socialism; budgets of Great Britain and the United States. Nat City Bank p52-6 My '53
Size of the budget. Economist 166:589-91 F 28 '53
Turn of the fiscal tide. Economist 167:129-31 Ap 18 '53

India

Plan and budget in India. Economist 166:811-12 Mr 21 '53

United States

Anti-spending bill is aired; Coudert's bill, HR 2. Bsns W p 152-4 Ap 25 '53
Appealing to the people. Bsns W p27-8 My 23 '53
Balanced budget; cash budget. Bsns W p 176 My 2 '53
Balanced budget, tax cut feasible this year! W. A. McDonnell. Comm & Fin Chr 177:1557 Ap 9 '53
Budget; a string of price tags. il Bsns W p 166-8+ My 23 '53
Budget and tax outlook. Nat City Bank p 138-42 D '52
Budget facts. R. R. Hughes. Banking 46:43+ Jl '53
Budget; how much can be cut? Iron Age 171:42-3 Ja 15 '53
Byrd versus Taber; two veteran budget-cutters slice at each other. J. C. W. Schaie. Barron's 33:3 F 23 '53
Caesar's wife; proposed budget for fiscal '54 is suspect. Barron's 32:1 N 17 '52
Congress gets Truman budget for fiscal '54. Ry Age 134:17-18 Ja 19 '53
Cuts; some now, more later. Bsns W p30-1 Jl 25 '53
Economic stability through federal budget. W. Lindow. Comm & Fin Chr 176:2124+ D 4 '52
Enough for a cut in taxes? Bsns W p25-6 My 9 '53
Explains budget deficit. G. M. Humphrey. Comm & Fin Chr 178:121 Jl 9 '53
Federal budget. Nat City Bank p 18-22 F '53; Excerpt. Comm & Fin Chr 177:812 F 19 '53
'54 construction budget hard to cut. Eng N 150:21-3 Ja 15 '53
Goal; $8-billion savings. Bsns W p25-6 F 28 '53
Hopes for balanced budget and income tax reduction by July. C. L. Allen. East Underw 54:41 Ap 10 '53; Same. Weekly Underw 168:924+ Ap 4 '53
Let's return to old-fashioned community self-reliance. W. A. McDonnell. Comm & Fin Chr 177:1321 Mr 26 '53
New federal construction projects offer best hopes for budget cuts. Eng N 150:28 Mr 19 '53
Performance budgeting in government. C. Seckler-Hudson. Advanced Management 18:5-9+ Mr '53
Putting hobbles on the boom. Bsns W p 29-30 Mr 21 '53
Retreat from socialism; budgets of Great Britain and the United States. Nat City Bank p52-6 My '53
Revised budget estimates. Nat City Bank p 102-4 S '52
Spending cuts will come hard. Bsns W p27-8 N 22 '52
Trimming the budget. Fortune 47:27-8 My '53
Truman's last budget. Comm & Fin Chr 177:203+ Ja 15 '53
What hit tax collections? Bsns W p25-6 Jl 11 '53
What will Eisenhower do with Truman's budget. J. T. Roberts. Mag of Wall St 91:516-18+ F 7 '53
Where Republicans are cracking down on U.S. spending. map Bsns W p32-3 Ap 25 '53
Who says the budget can't be cut? Fortune 47:89-90 Mr '53

BUDGET, Business
Basis of the flexible and the variable budget in an expanding economy. C. C. James. Advanced Management 17:2-8 S '52
Budgetary control gives today's accountant that forward look. J. P. Compton. Credit & Fin Management 54:16-17 S '52
Cash forecast and budget control tie credit man to top management. C. Rainess. Credit & Fin Management 54:23 D '52
Change your maintenance budget from a club to a useful tool. A. D. Buschmann. Factory Management 110:142-4 N '52
Eleven requirements for a good budgeting system, and five reasons why more companies don't use them. V. R. Draper. J Account 95:351-2 Mr '53
How Dow Jones controls budget. L. Stemp. il Am Bsns 22:40+ O '52
Human problems with budgets. C. Argyris. Harvard Bsns R 31:97-110 Ja '53
Industrial budget for small companies is actually an operations plan shown in dollars. J Account 95:227-9 F '53
Many techniques combine for good cost control. R. A. Powell. N A C A Bul 34:385-401 N '52
What good is a company budget? Bsns W p32-3 N 15 '52
Who'll buck a trend? G. Burck. Fortune 46:134-5+ O '52
See also
Advertising appropriations

BUDGET, Household
Family income, expenditures, and savings in ten cities. U S Bur Labor Statistics Bul 1065:1-110; pa 50c Supt. of doc. '52
Financial engineering. C. O. Brown. Ind & Eng Chem 45:sup25A-6A Ap; sup25A-6A My '53

BUDGET, Municipal
How a small city prepared a three-year capital outlay budget. B. H. Cruce. il Pub Works 84:87-9+ O '53

BUDGET finance plan (California)
Preferred stock sold. Comm & Fin Chr 177:522 F 2 '53

BUDWORMS, Spruce. See Spruce budworms

BUFFALO, New York

Streets

Thruway branch will ease traffic flow problems. C. R. Waters. il maps Eng N 150:41-3 Mr 19 '53

Water supply

Buffalo's water supply illustrates progressive engineering development. F. W. Crane. il Munic Util 91:29-30+ My '53

BUFFER solutions
Study of refractive index increments of weak acids and buffer mixtures. E. B. Dismukes and R. A. Alberty. bibliog il diag Am Chem Soc J 75:809-14 F 20 '53

BUFFING. See Polishing

BUILDERS' equipment
Choose your color and cut that tough material; abrasive wheel system. il Am Bld 74:210 N '52

BUILDERS' equipment—*Continued*

Products exhibit in print; photographs with text. Am Bld 75:104-7+ Ja '53

BUILDERS' risk insurance. See Insurance, Builders' risk

BUILDING

Ask the experts; questions and answers. Am Bld 75:96-7 Ja '53 [cont monthly]

Builders see summer rush. Bsns W p29 Ap 25 '53

Building three places at once. il Bsns W p 106-8+ Jl 25 '53

Curved roof on cables spans big arena; livestock judging pavilion at Raleigh, N.C. F. S. Merritt. il diags Eng N 150:31-4+ F 5 '53

Do it yourself, a new industry. R. W. Babson. Comm & Fin Chr 177:1012 Mr 5 '53

Factory services placed in central core; manufacturing plant of the International business machines corp. E. E. Seelye and C. M. Throop. il plan diags Eng N 150:37-8 F 12 '53

42-story building straddles railroad tracks on 250 concrete caissons 110 ft. in depth; Prudential building. J. P. Draney, jr. il diag Constr Methods 35:141-2+ Je '53

Home building holds fast pace; do-it-yourself market grows. J. M. Lange and others. Ind Marketing 38:40+ Mr '53

How would you do it? ideas for the man on the job. diags Published in monthly numbers of American builder

Industrial building awards fall off but still exceed last year's rate. Eng N 150:23 My 28 '53

Most house for the money; Levitt & sons. il plan Fortune 46:150-6+ O '52

NAHB's 4th 1952 trade secrets meeting, Chicago and Madison, Wis. House & Home 2:128-30 S '52

Plant construction schedule. W. V. King. Power 96:78-9 N '52

Preplan your fire protection. G. H. Tryon, 3d. il Constr Methods 34:101+ O '52

Second round of operation trade secrets gets under way. plans diags Am Bld 74:146-7 N '52

Special construction features of Rayonier's Jesup plant. C. E. Wright. il Paper Tr J 137:21-2 S 25 '53

Technical guide for builders and craftsmen. il Am Bld 75:64+ Ja '53 [cont monthly]

Techniques and trends; buildings and housing; with some major projects. il Eng N 150:87-8+ F 19 '53

There's construction ahead for tv. il map Eng N 149:21-4 D 11 '52

Tricks from the Paducah atom plant. il Constr Methods 35:82-4+ S '53

Tropical building design and construction symposium. J. L. Sarin. Science 117:582-3 My 29 '53

See also

Acoustics, Architectural
Air conditioning
Air raids and building
Architecture
Atomic bombs and building
Beams and girders
Brick construction
Building contracts
Building laws and regulations
Building materials
Building trades
Chimneys
Columns
Concrete construction
Concrete houses
Construction equipment
Earthquakes and building
Factories
Fireproof construction
Floors
Foundations
Framing (building)
Hangars
Heating
Home ownership
Hotels
Houses
Industrial buildings
Masonry
Piles and pile driving
Plumbing
Public works
Railroads—Buildings and structures
Roofs
School buildings
Sheet metal work, Architectural
Shipbuilding
Skylights
Steel construction
Steel houses
Strains and stresses
Strength of materials
Tile construction
Trusses
Underground construction
Ventilation
Walls
Windowless construction
Winter construction
Wood construction

Accidents

See Building accidents

Bibliography

Literature for the office. il Published in monthly numbers of Architectural record

Cost

Building costs stabilizing; final '52 figures for weighted indexes. Eng N 150:63-4 F 26 '53

Construction cost indexes, labor and materials for New York, Atlanta, St Louis and San Francisco; selected years, 1925-1951 and monthly, Aug.-Oct. 1952. Arch Rec 113:42 Ja '53 [cont monthly]

Construction costs up 7.3 per cent in 1952. Eng N 149:105 D 11 '52

Does code babel add $1,000 to small house building cost? editorial. House & Home 2:108-9 S '52

Expenditures for new construction, plant and equipment spending, housing starts; tabulations. Iron Age 171:447 Ja 1 '53

Low cost warehouse, Maryland; unit prices. il Eng N 150:99 Mr 19 '53

See also

Concrete construction—Cost
School buildings—Cost

Estimates

Progress estimates; how to compute normal and actual progress on construction contracts. H. W. Schleites. Roads & Sts 96:82-3+ Ap '53

Finance

Insurance companies urged to back commercial building. Eng N 149:104 D 18 '52

Stage set for another big year. Eng N 150:53-5+ F 19 '53

See also

Building loans
Federal national mortgage association
Housing finance
Mortgages

Heating aspects

Air infiltration through weatherstripped and non-weatherstripped windows. diags Am Bld 74:56+ N '52

Estimating the heat loss from slab floors and basements. M. Baker and others. Heating-Piping 24:95-7 N '52

Evaporative cooling of a residential roof; test results at the Acme ceramic housing project. R. A. Bacon and W. E. Long. il diags Heat & Ven 49:79-82 N '52

Heat supplied to I=B=R research home from the inside chimney. W. S. Harris and R. J. Martin. il plans diags Ill U Eng Exp Sta Bul 407:1-45 '53 (pa 50c); Excerpts. Heating-Piping 25:131-7 My '53

Thermal performance of frame walls. G. O. Handegord and N. B. Hutcheon. diags Heating-Piping 24:113-18 Mr '52; 25:117-22; Discussion. 122 Ag '53

Ultra-safe heat loss calculations increase costs and halt building. R. L. Stinard. plan Heat & Ven 49:83-4 D '52

Ventilating and heating publisher's home office. P. Moffet. il diag Heating-Piping 25:102-3 Mr '53

Rapid construction

Trends in buildings and grounds; fast construction. R. A. Dilley. il Factory Management 111:B 11-13 pt 2 My '53

Two erection practices speed refinery completion. A. McCone. il Pet Refiner 32:114-15 Ja '53

See also

Houses, Prefabricated

Repair and reconstruction

School building corner modification. il Constr Methods 35:89-90 F '53

See also

Houses, Remodeled

Safety aspects

How much can your floor hold? il Safety Maint & Prod 106:23-4+ Ag '53

New approach to safety of buildings. P. Weidlinger. diags Arch Rec 112:229-32 O '52

Safety measures

Industry told to clean house on safety. Eng N 149:30 O 30 '52

BUILDING—Safety measures—*Continued*

Missouri contractors fight accidents. R. M. Hoover. Roads & Sts 95:84-6 D '52

Report on a safe job; Contracting division of Dravo corp. H. A. Kamm. il Nat Safety N 66:20-1+ D '52

Two dramatic safety records; Capital airlines, North Atlantic constructors. Safety Maint & Prod 105:46-7 Ap '53; Excerpt. Constr Methods 35:150 Mr '53

Urge safety shoes on construction work. H. B. Wallace. Nat Safety N 67:72 Ja '53

Standards

Cheaper buildings; the contribution of modular co-ordination. M. H. Thomas. Engineering 174:768 D 12 '52

Demonstration houses show value of modular coordination. il plan Am Bld 74:135 N '52

Major stride toward building economy through the modular method. W. Demarest, jr. Am Cer Soc Bul 32:54 F 15 '53

Modular construction for the small homes builder (cont). G. S. Clark. il plans diags Am Bld 74:134-6 S; 158-61 O; 131-4 N; 118-23 D '52; 75:206-13 Ja; 122-4 F; 114-16+ Mr; 116-18+ My; 190-2 Je; 142-5 Jl; 180-2 Ag; 114-19 S '53 (to be cont)

Modular co-ordination in building; first steps taken towards formation of a modular society. Engineering 175:342 Mr 13 '53

New approach to cost reduction in the building industry; National standardization conference; abstracts of papers. Standardization 23:373-5 N '52

Statistics

Another record year. Eng N 150:21-2 Ja 1 '53

Construction and real estate; activities, contract awards, etc., Nov.-Dec. 1951-Jan.-Nov. 1952. Survey of Cur Bsns 33:S6-7 Ja '53 [cont monthly]

Construction, annual review, 1951. U S Bur Labor Statistics Bul 1122:1-67; pa 35c Supt. of doc. '53

Construction contracts awarded, by type of construction; monthly Jan. 1950-Nov. 1952. Fed Res Bul 39:55 Ja '53 [cont monthly]

Construction posts record high in '52. Eng N 149:122 N 6 '52

Construction valuation, new plant and equipment expenditures, new houses started, fabricated structural steel, industrial building cost index; tabulations and charts. Steel 132:202 Ja 5 '53

New construction, 1952. Survey of Cur Bsns 33:21-3 F '53

1952 construction highlights. Heat & Ven 50:140+ My '53

Stage set for another big year. Eng N 150:53-5+ F 19 '53

Study and teaching

Construction courses offer opportunities. J. W. Goff. Am Bld 74:271-4 O '52

Education for an integrated building industry. T. S. Rogers. il Arch Forum 97:141+ S '52

School for construction supervisors; University of Tennessee Extension school; list of subjects. Constr Methods 35:132+ F '53

Alaska

Alaska; land of construction opportunity. H. T. Perez. il map Constr Methods 34:60-5 D '52

Block-houses on the last frontier; defense installations in Alaska. G. W. Avery. il Concrete 60:28+ O '52

How the construction business goes in Alaska. R. H. Dodds. il map Eng N 149:32-4+ D 11 '52

Boston

Syndicate buys rail yard to build center. il Eng N 150:45-6 Mr 5 '53

Canada

American know-how moving across border. J. Montagnes. Barron's 32:17-18 D 22 '52

Awards in Canada hit second highest total; private housing twice '51 volume. Eng N 150:82 Ja 22 '53

Engineering highlights of Canada's defense construction program. R. G. Johnson. Roads & Eng Constr 91:126+ F '53

Industrial boom in Canada tapers off; commercial and housing awards climb. Eng N 150:80 Ap 30 '53

News from Canada. J. C. Smith. il Arch Rec 113:24+ Ja '53 [cont monthly]

Outlook for construction for the current year. P. G. Wilmut. Roads & Eng Constr 91:113+ F '53

Dallas, Texas

Push two skyscrapers for Dallas business. Eng N 150:28 Ja 22 '53

Flint, Michigan

Operation tornado! il Dom Eng 182:120-1+ O '53

France

Building Paris doesn't want; proposed headquarters for UNESCO. il plans diags Arch Rec 112:11-14 D '52

Great Britain

Bricks and mortar. Economist 166:649-51 Mr 7 '53

Construction in Britain reaches new high level, 1952. For Comm W 49:18 Mr 30 '53

India

Scientific principles and their application in tropical building and construction; symposium. Engineer 196:28 Jl 3 '53

Long Island, New York

Contractors and regional association work together as cooperation develops new construction. A. Smith. il map Eng N 150:62-3+ My 14 '53

New England

Construction requirements. W. C. Voss. Ind & Eng Chem 44:2544-8 N '52

Philadelphia

$50-million development planned. Eng N 149:48 N 6 '52

St Foy, Quebec

Road construction accompanies building boom in St Foy, Que. E. T. Nesbitt. il Roads & Eng Constr 90:111+ O '52

San Francisco

Multistory buildings designed to resist earthquakes. J. J. Gould. il plans Am Concrete Inst J 23:29-36 S '51; Discussion. 24:36^{1}-36^{8} pt 2 D '52

Southern states

Building for comfort in the South; symposium papers. Refrig Eng 61:375-8+ Ap '53

Construction throughout the South includes vast gas sales potentials. map Am Gas J 178:38-9+ My '53

Southern construction reaches all-time peak in 1952. il Manuf Rec 122:36-7 Ja '53

Texas

Industrial building booms in Gulf Coast region. il Eng N 150:136-8 Ja 15 '53

Tropics

Experts talk tropical building. F. S. Merritt. Eng N 149:57 N 27 '52

United States

AGC sees sharp competition in construction. Concrete 61:32 My '53

Building trends and the building materials industry. W. C. Voss. Comm & Fin Chr 177:2521 Je 11 '53

Congress sees high rate of building through 1960. Eng N 149:21 D 25 '52

Construction after the defense boom. Eng N 150:65-8+ F 19 '53

Construction; backlog and new forces presage expansion. W. C. Bober. il Trusts & Estates 92:255-8 Ap '53

Construction; $33 billion collossus. Steel 131:78-9 D 15 '52

Economy to expand under new national management; construction in the transition year 1953. T. S. Holden and C. Shute. Arch Rec 112:insert D '52

Engineering construction boom will continue into 1953. Ind Marketing 38:46+ My '53

Federal construction policies raked; more controversy ahead on revisions. Eng N 150:25-6 Ja 15 '53

Home building picture across the Nation; quarterly survey (cont). map Am Bld 74:22+ O '52; 75:18+ Ja; 16+ Ap; 6+ Jl; 6+ O '53

Industrial construction to feel new surge. Eng N 150:22-3 Ja 1 '53

BUILDING—United States—*Continued*
New construction policy takes shape in Washington. Eng N 149:19-20 N 27 '52
New rises in construction forecast. Eng N 149:21-3 O 9 '52
Outlook for 1953; 1,000,000 housing units. W. C. Bober. Am Bld 75:101-3 Ja '53
U.S. agencies see $32 billion building in '53. Eng N 149:21 D 4 '52
What construction means to America. W. Chevalier. Civil Eng 22:934-7 N '52
What happens to construction when defense spending stops. J. P. Yates. Civil Eng 23:304-5 My '53
What the election means to construction. Eng N 149:21-3 O 30 '52

BUILDING, Underground. See Underground construction

BUILDING accidents
What price accidents? Constr Methods 34:161 O '52
See also
Carpentry—Accidents

BUILDING and loan associations
By joining up with supermarkets, staging razzle-dazzle drives, S&Ls build up new business. il Bsns W p64+ Ja 24 '53
How banks can meet savings and loan competition. J. B. Mack, jr. Comm & Fin Chr 177:684 F 12 '53
Patterns in defalcations and fidelity losses in savings and loan associations. R. T. Wood. Weekly Underw 168:1175-6+ Ap 25 '53; Same. Nat Underw 57:11-13 Je 25 '53; Same cond. East Underw 54:48-9 Mr 27 '53
Take it easy. Bsns W p64+ Ja 31 '53
Urban mortgage lending and municipal bonds. M. Bodfish. Comm & Fin Chr 177:2526-7 Je 11 '53
See also
Federal savings and loan associations
United States savings and loan league

Great Britain

Building societies confer. Economist 167:619-20 My 30 '53
Building societies on the bit. Economist 166:747-9 Mr 14 '53
Halifax centenary. Economist 166:898 Mr 28 '53

BUILDING contracts
AGC protests new federal contract form. Roads & Sts 96:65 Jl '53
Building construction plans should provide separate category for refrigeration and air conditioning. Refrig Eng 60:1179+ N '52
Construction by contract method, an American tradition. H. E. Foreman. il Civil Eng 22:646-50+ S '52
Contractors prepare for fight over bid shopping legislation. Eng N 149:24-6 D 25 '52
Job organization and construction coordination. K. G. Taylor. Tappi 36:sup 115A-18A Ja '53
Legal decisions concerning construction (cont). Constr Methods 34:128+ N '52
Legal decisions; summaries of decisions relating to construction (cont). I. V. Werbin. Eng N 149:66+ O 23; 56-8 O 30; 83+ N 6; 68+ N 13; 78 D 4; 54 D 25 '52; 150:47 Ja 1; 67 Ja 8; 95 Ja 15; 64 Ja 22; 62-3 Ja 29; 92-3 F 5; 214 F 19; 80-1 Mr 12; 96+ Mr 26; 66+ Ap 2; 73 Ap 9; 90+ Ap 16; 95 My 14; 99-100 Je 4; 75 Je 18; 51:94+ Jl 16; 66 Jl 23; 70 Ag 13; 88+ Ag 20; 76 S 3; 302-3 O 8 '53
Massachusetts hammers out system for construction of public buildings. Eng N 149:24-5 O 30; 24-6 N 6 '52
Percolating water can cost you money. F. George. Am Bld 75:212+ F '53

BUILDING failures
See also
Concrete construction—Failures

BUILDING fittings
Products exhibit in print; photographs with text. Am Bld 75:104-7+ Ja '53
Use of steel in homes; tabulation. Iron Age 171:438 Ja 1 '53
See also
Sheet metal work, Architectural

BUILDING laws and regulations
Does code babel add $1,000 to small house building cost? editorial. House & Home 2:108-9 S '52
New provisions in building exits code. Nat Safety N 67:48 Ap '53
Over 560 communities have adopted code of National Board. East Underw 54:34 My 15 '53
When's industrial building exempt from building code? W. H. Hillyer. Heating-Piping 24:107-8 N '52
See also
City planning—Zone system
Mechanics' liens
Plumbing laws and regulations

BUILDING loans
Good outlook for credit; results of a national survey by the Credit policy commission; with comments divided according to Federal reserve districts. Banking 45:41-9 Ja '53
See also
Mortgages
Veterans—Loans

BUILDING lots. See Building sites

BUILDING materials
Building products limited expands despite fires and floods. J. S. Turner. il Pulp & Pa of Can 54:94-101 Je '53
Building trends and the building materials industry. W. C. Voss. Comm & Fin Chr 177:2521 Je 11 '53
Ceramics industry gets boost by new phase of building boom. Ind Marketing 37:36+ O '52
Everlasting concrete reported by Georgia Tech engineers; new substance called Tookite and Surco. Comm & Fin Chr 177:2648 Je 18 '53
Fabricated wrought iron brings new economies. il diags Am Bld 74:54+ D '52
House and lot; building material makers eye a lush fix-it market. J. V. Sherman. Barron's 33:11+ Ap 13 '53
How to evaluate economy of construction materials. P. E. Krystow. Chem Eng 60:204 Ja '53
New challenger for concrete; Zeprex. il Mod Ind 25:141 Ap '53
New ideas in plant construction. il Mod Ind 24:45-9 N '52
New membrane materials use no organic fibers. Eng N 150:120+ My 21 '53
New method of construction combines steel and Cemesto board. il plan diag Am Bld 75:132-3 F '53
Plastics; new materials not replacements. S. C. Jensen. il Eng N 150:103+ My 28 '53
Preliminary report; nonmetallic deposits accessible to the Alaska railroad as possible sources of raw materials for the construction industry. F. A. Rutledge and others. bibliog 42pls U S Bur Mines Rep of Invest 4932:1-129 '53
Prestressed ceramics as a structural material. R. D. Johnston and others. bibliog il diags Am Cer Soc J 36:121-6 Ap 1 '53
Products exhibit in print; photographs with text. Am Bld 75:104-7+ Ja '53
Report on translucent structural panels. il diags Am Bld 75:232-8 F '53
Soil-cement for house construction. R. Stone. il Civil Eng 22:1005-7 D '52
See also
Aluminum, Structural
Bricks
Clay products
Concrete
Concrete, Reinforced
Concrete blocks
Concrete tile
Flooring
Glass, Structural
Glass blocks
Gypsum products
Laths
Lumber
Mineral wool
Plywood
Roofing
Sheet metal work, Architectural
Steel, Structural
Strength of materials
Tiles
Wall board
Wood

Testing

Building links research and display; Certain-teed products corp. il Eng N 149:41 N 20 '52
General trends in the application of research in building materials; discussion. T. W. Parker and others. Chem & Ind p 1239-40 D 20 '52

BUILDING products, limited

Expands despite fires and floods. J. S. Turner. il Pulp & Pa of Can 54:94-101 Je '53

BUILDING research

Building research conference, April 17. Chem & Ind p 1239-42 D 20 '52

Research; an open trade secret; NAHB's 4th 1952 trade secrets meeting, Chicago and Madison, Wis. House & Home 2:128-9 S '52

Research station established at Norman Wells. Munic Util 91:46+ Mr '53

BUILDING sites

Lot-length house can offer both privacy and outdoor living on a narrow lot. il plans House & Home 2:96-8 S '52

Problem-lot house gets an architect's attention to solve a combination of site difficulties. il plan diag House & Home 2:102-3 S '52

See also

Hillside architecture

BUILDING stone

Water soluble salts in limestones and dolomites. J. E. Lamar and R. S. Shrode. bibliog il Econ Geol 48:97-112 Mr '53

See also

Marble

Testing

Exposure test wall for natural building stones. il Am Soc T M Proc 50:229-30 '50

BUILDING trades

Assisting build-your-owners can be profitable. il plan Am Bld 75:118-19 F '53

Big year in housing. Fortune 47:27, 30-2 Ap '53

Construction industry has big stake in new approach to antitrust cases. Eng N 150:22 Ap 9 '53

Do you know how to organize your business? Am Bld 75:116-17 F '53

ENR survey shows rate boost has done little for builders. Eng N 150:85 My 28 '53

Good for another year? Bsns W p25-6 Mr 14 '53

Gracious spacious living; complete in one package. il Bsns W p96-8 D 6 '52

Great rehousing market. Fortune 47:117-18 Ap '53

How to extend a beachhead in the home-building market; Pressteel recessed lighting fixtures. P. A. Jones and others. Sales Management 69:56+ O 1 '52

It doesn't have to crash. Bsns W p 122+ D 13 '52

Pushing houses. Bsns W p31 Ja 24 '53

Sometimes you sell more when you cut out the commercial; Producers Council selling of building materials. J. Shoenfeld. Sales Management 70:50+ Mr 15 '53

What do we know about construction markets? Am Concrete Inst J 24:sup22-3 My '53

See also

Crandell, Lou R.
Houses, Model
Housing projects
Johns-Manville corporation
National association of home builders
Plumbing trade

Accounting

Accounting system for small home builders increases contractor's financial control. R. L. Brummet and D. A. Thomas. J Account 94:570-5 N '52

Product group profit reporting for materials wholesaler. W. A. Lewis. N A C A Bul 34:783-90 F '53

Advertising

How to get a dozen uses out of one omnibus piece; simultaneous planning of all advertising; Homasote co. and Nova sales co. F. V. Wilson. il Ptr Ink 241:40-1 N 14 '52

How to stage a successful lumber yard promotion. il Am Bld 74:146-50 O '52

How's the do-it-yourself market doing? Sales Management 69:186+ N 10 '52

Jury picks home week contest winners. Am Bld 75:108+ Ja '53

Exhibitions

Home show draws 200,000 in Los Angeles. il Eng N 150:80-1 Je 25 '53

Finance

Contracting company profits. G. W. Grupp. Roads & Sts 95:60-1+ D '52

House and lot; building material makers eye a lush fix-it market. J. V. Sherman. Barron's 33:11+ Ap 13 '53

Strong credit bureau helps the building business in Detroit. Am Bld 74:143-5 O '52

Labor conditions

AGC contractors oppose wage hike. Eng N 150:26 Ja 1 '53

Construction incentives. Constr Methods 34:132 O '52

Construction labor on public housing in the South. A. L. Stucke and H. F. Haase. Mo Labor R 75:388-94 O '52

Contractor withdraws low bid; harrassed by controversy over use of union labor and Virginia right-to-work law. Eng N 150:28 Ja 8 '53

Contractors pay $7.8 million yearly to 27 New York City welfare funds. Eng N 149:27 N 27 '52

Defiant union head fined and ousted. Eng N 149:32 N 6 '52

How to improve contractor-labor relations. L. B. Kromer, jr. Constr Methods 35:79-80+ O '53 (to be cont)

Labor-management problems in the construction industry. L. C. Rogers. Civil Eng 22:633-6 S '52

Labor; reports of conditions in the building trades. Published in weekly numbers of Engineering news-record

Labor requirements for building air force housing. K. R. Murphy and E. M. Gordon. Mo Labor R 75:263-8 S '52

Labor secretary Martin P. Durkin gets construction industry backing. Eng N 149:29 D 11 '52

On-the-job contractor-labor relations (cont). L. B. Kromer, jr. Constr Methods 34:102+ N; 110-12+ D '52; 35:142+ Ja; 124+ F; 164+ Mr; 142+ Ap; 154-5 My; 174+ Je; 194+ Jl; 82+ Ag; 144+ S; 142+ O '53

Open-shop builders charge pay scale is unconstitutional. Eng N 149:31 O 23 '52

Regional Wage board continues crackdown on overpayments. Eng N 150:32 Ja 15 '53

Reports reveal upward wage trend of 10 to 15 cents an hour. Eng N 150:30 Je 4 '53

See construction aided by ban of jurisdictional-strike picketing. Eng N 150:24 Ja 22 '53

Stop-strike move called violation; NLRB decision labeled Austin company's firing of three guards to prevent a strike a T-H violation. Eng N 150:32 Ja 22 '53

Summary of 1952 developments in construction trades agreements. Roads & Eng Constr 91:76 F '53

Supreme court hears Ledbetter case. Eng N 149:31 N 20 '52

Union fights own members in court as Paducah labor troubles continue. Eng N 149:30 D 11 '52

Union wages and hours; building trades, July 1, 1952. A. Moros. U S Bur Labor Statistics Bul 1124:1-40; pa 25c Supt. of doc. '53

Violence may bring on probe of St Louis labor practices. Eng N 149:31 O 9 '52

Wage increase granted by arbitration for operating engineers employed by three Philadelphia contractors' groups. Eng N 149:30 N 13 '52

Wage rates in the building trades; tabulation. H. M. Stanton. Sheet Metal Worker 44:91 Ja '53

See also Building trades employers' association; Wage stabilization board—Construction industry stabilization commission

Securities

Building industry in a time of flux; with statistical data on leading building supply companies. H. F. Travis. Mag of Wall St 92:166-9+ My 2 '53

Statistics

Construction, annual review, 1951. U S Bur Labor Statistics Bul 1122:1-67; pa 35c Supt. of doc. '53

Canada

Summary of 1952 developments in construction trades agreements. Roads & Eng Constr 91:76 F '53

BUILDING trades—*Continued*

Great Britain

Building industry. Economist 166:889-90; 167: 40-1, 106-8 Mr 28-Ap 11 '53

Massachusetts

Massachusetts hammers out system for construction of public buildings. Eng N 149: 24-5 O 30; 24-6 N 6 '52

New Jersey

New Jersey HBA adopts statewide certification plan. Am Bld 75:228-9+ F '53

St Louis

AFL officials indicted in St Louis; indictments charging 12 construction leaders with extortion and racketeering. Eng N 150:28 Je 4 '53

BUILDING trades employers' association

Fifty years of peace. Fortune 47:84+ F '53

Unions call on the boss. il Bsns W p 110-14 F 7 '53

BUILDING-unit system. See Building—Standards

BUILDINGS

See also

Airport buildings
Architecture
Bank buildings
Building
College buildings
Commercial buildings
Concrete buildings
Earthquakes and building
Electric utilities—Buildings
Employees' buildings
Exhibition buildings
Factories
Gasoline service stations
Gymnasiums
High buildings
Hospitals
Hotels
Houses
Industrial buildings
Insurance company buildings
Library buildings
Military buildings
Mine building
Office buildings
Public buildings
Railroads—Buildings and structures
School buildings
Shopping centers
Society buildings
Steel buildings
Store buildings
Theaters
Warehouses
Water departments—Buildings
Young men's Christian association buildings

Demolition

See Wrecking

Exterior lighting

Built-in sidewalk lighting. il Illum Eng 47: 657 D '52

Dual lighting for facade sign and sidewalk; data sheet. R. H. MacVean and S. W. Brunn. il diags Illum Eng 48:373-4 Jl '53

Flood lighting protects schools. H. W. Rosenberger. il Elec World 139:161 Mr 23 '53

Installation at Markland Avenue branch, Union bank and trust company, Kokomo, Ind.; data sheet. il diag Illum Eng 48:277 My '53

Vibration

Vibration is a trouble-maker. B. Dopp. Heating-Piping 25:108-10 My '53

Wrecking

See Wrecking

BUILDINGS, Industrial. See Industrial buildings

BUILDINGS, Multiple use

New York may get new theaters in multipurpose buildings. il Eng N 150:50-2+ Ap 9 '53

Tower to provide office, living space; combination office and apartment building designed by Frank Lloyd Wright for the H. C. Price construction co. il plan Eng N 150:23 Je 4 '53

BUILDINGS, Portable

Money saving portable school building; with cost data. il plans Eng N 149:55-6 O 2 '52

Portable shelters permit winter reservoir construction. il Pub Works 84:88 Ag '53

BUILDINGS, Prefabricated

Arcon structures. il Engineering 175:543 Ap 24 '53

Factory produces prestressed buildings. il Eng N 150:31-2 Mr 19 '53

Giant jigsaw puzzle; District of Columbia courthouse. il Bsns W p 130+ D 6 '52

New job for prefabs; building offices in a hurry. il Bsns W p68-70 My 23 '53

Precast concrete offers new possibilities for design of shell structures. P. L. Nervi. il diags Am Concrete Inst J 24:537-48 F '53

Precast panels slid into slotted columns. il Concrete 61:22+ F '53

Prefab steel buildings turn civilian. Steel 132:55 Je 22 '53

Prefabricated steel piers cut construction costs. H. P. Maxton. il Civil Eng 23:306-7 My '53

Prefabricated structures speed building of Greenland air base. il Civil Eng 23:198 Mr '53

Using standardized buildings; prefabricated frames in Diesel shops. il diag Ry Age 134: 94-6 Mr 9 '53

BUILDINGS, Remodeled

Remodeled garage converted to modern sales room. il plans diags Am Bld 74:170-1 O '52

BUILT-in furniture. See Furniture, Built-in

BULDIR ISLAND

Geology of Buldir Island, Aleutian Islands, Alaska. R. R. Coats. bibliog maps U S Geol S Bul 989-A:1-26, pl 1-2; pa 25c Supt. of doc. '53

BULGANIN, Nikolaĭ Aleksandrovich, 1895-

Portrait. Fortune 47:96 My '53

BULGARIAN language

Bulgarian-English dictionary. R. Russev. 235p $4.50 Frederick Ungar publishing co, 105 E. 24th st, New York 10 '53

BULKHEADS

Design of flexible bulkheads. J. R. Ayers and R. C. Stokes. diags Am Soc C E Proc 79 [no 166]:1-11 Ja '53

Field study of a sheet-pile bulkhead. C. M. Duke. il diags Am Soc C E Proc 78 [no 155]: 1-26 O '52

BULKHEADS (naval architecture)

Bending strength of corrugated plate. J. B. Caldwell. il diags Engineering 174:609-12 N 7 '52

BULLDOZERS. See Excavating machinery

BULLET photography. See Photography of projectiles

BULLETIN boards

Big-city mill cultivates a small-town spirit. M. B. Andrews. Textile World 103:141 Jl '53

Here's a modern way to keep workers posted on safety. il Mill & Factory 52:86 My '53

Plant bulletin boards rival news broadcasts, win readers. R. Newcomb and M. Sammons. il Ind Marketing 38:102+ Ap '53

What do you want to swap, buy, sell? H. L. Spooner. il Mill & Factory 53:119 Ag '53

BULLETIN boards, Newspaper

Big fax board presents latest news, pictures. il Ed & Pub 85:54 O 4 '52

BULLETS. See Projectiles

BULLFIGHTS

Fight business on horns. il Bsns W p 130-1 F 14 '53

BULLION. See Precious metals

BUMPERS. See Automobiles—Bumpers

BUNSEN burner

Effect of Reynolds number in turbulent-flow range on flame speeds of Bunsen burner flames. L. M. Bollinger and D. T. Williams. bibliog il diag U S Nat Advisory Com for Aeronautics 1949:231-8 '51

BURDEN rate. See Overhead expense

BUREAU of accident and health underwriters

Bureau of accident underwriters establishes new committees. Weekly Underw 167:1523 D 6 '52

Seminar, New York, May 12-14. East Underw 54:44-5 My 15 '53

36 chairmen named for 1953 by A.&H. bureau. East Underw 53:32 D 5 '52

BUREAU of advertising. See American newspaper publishers association—Bureau of advertising

BUREAU of contract information

Annual meeting, New York, Dec. 15. East Underw 53:31+ D 19 '52; Nat Underw 56: 19 D 18 '52; Weekly Underw 167:1645+ D 20 '52

BURETS
Micro-gas burette. G. Glockler and H. Ven Horst. il R Sci Instr 23:563-4 O '52

BURGESS, Warren Randolph, 1889-
Portrait. Bsns W p29 Mr 21 '53
Scholar banker; Mr Burgess goes to Washington. por Barron's 32:1+ D 22 '52
Treasury's new team. por Bsns W p70+ D 20 '52

BURGLAR alarms
Bad news for burglars. B. Clark. Banking 45:54+ Je '53
Revolutionary new burglar alarm system, Sonic-Guard designed to reduce losses. E. R. Achilli. diag Weekly Underw 168:1556 Je 6 '53

BURGLARY and glass insurance association of New York
Annual meeting, New York, Dec. 10. East Underw 53:109 D 12 '52

BURGLARY insurance. See Insurance, Burglary

BURIAL insurance. See Insurance, Burial

BURK, Dean, 1904-
Dean Burk honored for one quantum reaction. por(cover) Chem & Eng N 31:998 Mr 9 '53
Honored for aid in verification of Einstein theory. por Chem & Eng N 31:1186 Mr 23 '53

BURLAP
Burlap market likely to remain strong. Barron's 32:27-8 O 20 '52
Indian mission in U.S. reports comeback in burlap market. For Comm W 48:17 O 27 '52

BURLINGAME, Mark V.
Nursemaid two thousand miles of pipeline. pors Bsns W p 142-4+ Jl 11 '53

BURLINGTON, North Carolina

Sewerage

Sewage treatment on pay-as-you-go basis. J. L. Morrison. il Pub Works 84:58-9 Jl '53

BURMA
Burma and the peace moves. F. Wittmer. Comm & Fin Chr 177:1535 Ap 9 '53

Economic conditions

Economic conditions abroad (cont). For Comm W 49:7+ Ap 20 '53

Foreign relations

Burma accuses Chinese Nationalists. map Economist 167:71-2 Ap 11 '53

BURMAH oil company, limited
Statement by the chairman. K. B. Harper. Economist 167:780-1 Je 13 '53

BURNERS
Acoustical oscillations of flames. A. A. Putnam. Science 117:sup3 Mr 20 '53
Flame radiation research; discussion on joint committee's work, London, Feb. 24. Chem Age (Lond) 68:383 Mr 7 '53
Solving dual-fuel problem; water-cooled burner handles up to 70 percent coke oven gas simultaneously with oil or tar. diags Chem Eng 59:248-9 O '52
Study of burner oscillations of the organ-pipe type. A. A. Putnam and W. R. Dennis. diags A S M E Trans 75:15-26; Discussion. 27-8 Ja '53
See also
Bunsen burner
Gas burners
Oil burners

BURNING. See Combustion

BURNISHING. See Polishing

BURNS, Arthur Frank, 1904-
Eisenhower decides CEA's size and chairman. Bsns W p28 Mr 7 '53
He's watching for trouble. pors Bsns W p43-8+ Jl 18 '53
Republicans need economists, too. por Fortune 47:116+ Ap '53

BURNS, William J., international detective agency, inc.
Burns detective agency doing effective loss prevention work. Weekly Underw 168:956 Ap 4 '53

BURNS and scalds
Greater resistance of the female to experimental burns following starvation. L. P. Munan and A. Einheber. bibliog Science 116:425-7 O 17 '52
Mystery burns traced to bedding sand. L. W. Spolyar. Brick & Clay Rec 122:91 Ja '53
Treatment of burns. G. K. Lewis. bibliog Ind Med 22:14-18 Ja '53
See also
Electricity, Injuries from

BURROUGHS adding machine company. See Burroughs corporation

BURROUGHS corporation (formerly Burroughs adding machine company)
Burroughs adding machine co. changes name. Comm & Fin Chr 177:2127 My 18 '53

BURRS
Burrs and chamfers entire tooth form. il Am Mach 97:138-9 Ag 31 '53

BURSITIS
Management of bursitis of the shoulder in industry. B. Behrend and P. S. Friedman. il Ind Med 21:583-4 D '52

BURT, Arthur H.
They're in the news. H. Woodward. por Sales Management 70:26 Ja 1 '53

BURTON, Edgar Gordon
Businessmen in the news. por Fortune 46:50 N '52

BURY felt manufacturing company, limited
Statement by the chairman. A. Buckley. Economist 167:701 Je 6 '53

BUSBARS
Aluminum bus duct speeds installation. il Elec West 110:102 Ap '53
Aluminum conductors in busway systems. J. St Andre. il Factory Management 111:110-12 F '53
Bus duct; modern electrical highway. W. F. Born and J. B. Wallace. il plan Westinghouse Eng 13:118-20 Jl '53
How to install high capacity aluminum buses. J. E. Housley. il Elec World 138:112-14 D 15 '52
Motor reactance for duty calculations of 600-v circuit breakers and buses. F. E. Reeves. Elec World 139:172 My 18 '53
Square copper bus; greater current carrying capacity, strength in square tube bus. il Iron Age 170:117 O 16 '52
Tinned Cu braid joins Al buses. il Elec World News ed 139:34 F 16 '53
What's best way to clean bus bars? diag Power 96:152+ D '52

Protection

Bus-bar barriers from clear acrylic sheets. il Mod Plastics 30:181 O '52
High voltage barriers for buss bar connectors. il Nat Safety N 66:62 D '52

BUSCOPAN
Buscopan in treatment of experimental poisoning by parathion, methyl parathion, and systox. W. B. Deichmann and R. Rakoczy. A M A Archives Ind Hygiene & Occup Med 7:152-6 F '53

BUSHINGS
Assembling leader pins and bushings in die sets. J. Sobkowiak. diags Mach 59:204-5 N '52
Bushed sheaves; illustrations with text. Power 96:132 D '52
Bushing insertion. H. G. Frommer. diag Tool Eng 31:42 Jl '53
Bushings from tubing have finer finish, cost less. il Iron Age 170:81 D 25 '52
Choose die bushings carefully; drawings with text; reference book sheet. J. R. Paquin. Am Mach 97:153, 155, 157 Jl 20 '53
Easily installed broach-fit bushings. il Product Eng 24:217 F '53
How to make emergency bushings. diags Pet Eng 24:D81 N '52
Sintered steel bushings extend life of roller chain. L. H. Whitney and R. Talmage. diags Iron Age 171:125-7 Je 25 '53
Thread insert locks bushing. il Product Eng 23:164-5 O '52

BUSHINGS, Insulating
400kv transformer bushing. P. G. Ashley. il diags Engineer 194:645-7 N 14 '52
Jet-cooled bushing developed for hydrogen-cooled generators. Elec Eng 72:852 S '53
New apparatus bushing with improved characteristics; abstract. R. N. Anderson and D. L. Johnston. il Elec Eng 71:1006 N '52
Porcelain bushings replaced with fiber at 66 per cent savings. E. H. Tyson. il Elec World 138:120 O 6 '52
275/300-kv re-entrant transformer bushing. il Engineering 174:488 O 10 '52

BUSHINGS, Insulating—*Continued*

Testing

Testing and specification of bushings in relation to service conditions. H. Barker and H. Davies. bibliog il diag Inst E E Proc 100 pt 2:427-38 Ag '53; Excerpt. Engineer 195:362 Mr 6 '53; Abstract. Elec R (Lond) 152:513 Mr 6 '53; Discussion. Inst E E Proc 100 pt 2:438-44 Ag '53; Elec R (Lond) 152:513-14 Mr 6 '53; Elec J 150:787-8 Mr 6 '53

BUSINESS

Answering opportunity's knock; business man's role in community relations, problems and plans of the Nation. C. Francis. Dun's R 61:1+ Ap '53

Big business and the consumer. J. S. Coleman. Comm & Fin Chr 177:1430-1 Ap 2 '53

Big business in a competitive society. A. D. H. Kaplan and A. E. Kahn. Fortune 47:1-14 sec 2 F '53

Big business, proud achievement of the American people; Lilienthal book and Brookings study show benefits. C. B. Larrabee. Ptr Ink 242:35-7 F 20 '53

Bill of rights for business. J. J. Babb. Mod Ind 25:67-8 My '53

Business executive's handbook. S. M. Brown and L. Doris, eds. 4th ed rev 1496p $7.50 Prentice-Hall, 70 Fifth av, New York 11 '53

Business quiz. L. Carson. il Dun's R 61:58-9+ Ja; 86-7+, 99 F; 86-7+ Mr '53

Challenge to business enterprise. R. L. Reierson. Comm & Fin Chr 177:2306+ My 28 '53

Congress, management, public must be sold industry census. S. E. Cohen. Ind Marketing 38:112+ Je '53

Eisenhower and business. R. W. Babson. Comm & Fin Chr 177:99 Ja 8 '53

Forearmed for '53. G. H. Clee. Dun's R 61:34-5, 88-92 F '53

Foresees reassessment of big business; Dr John Perry Miller in radio interview. Comm & Fin Chr 177:1228 Mr 19 '53

New peak for capital outlays? il Steel 132:45-6 Mr 30 '53

No depression before '56; sixth annual survey of business plans for new plants and equipment. Chem Eng 60:358-60+ My '53

Now, a fair break for business under our competitive system. S. Weeks. Comm & Fin Chr 177:2528-9 Je 11 '53

Outlook for business and investments. H. S. Cherry. Comm & Fin Chr 177:1849+ Ap 30 '53

See also

Accounting
Advertising
Applications for positions
Auditing
Banks and banking
Billing
Budget, Business
Business conditions and other headings beginning Business
Card system in business
Catalogs
Christmas business
Collecting of accounts
Commerce
Commercial correspondence
Competition
Corporations
Cost accounting
Credit
Department stores
Economics
Efficiency, Industrial
Employment management
Executives
Exhibitions
Export trade
Finance
Good will (in business)
Government aid to business
Government regulation of industry
House organs
Income
Income tax
Industry
Instalment plan
Insurance
Interest
Inventories
Jobbers
Mail order business
Manufactures
Market surveys
Marketing
Money
Office management
Organization in industry
Partnership
Price policies
Profit
Public relations
Purchasing
Real estate business
Retail trade
Sales letters
Salesmanship
Salesmen
Securities
Taxation
Telephone in business
Trade associations
Trade marks
Trust companies
Trusts, Industrial
Weather—Business aspects

Bibliography

Business books for the business man. Cleveland Pub Lib Business Information Bur Bul v 24, no 1:1-4 Ja '53 (10c)

Business bookshelf. Dun's R 61:69-71 Ja '53 [cont monthly]

Business handbooks. rev ed Cleveland Pub Lib Business Information Bur Bul v 23, no 4:13-16 O '52

Reading for perspective. M. E. Hunt, comp. (Business literature v. 25, no. 10) p63-4 Business library, Newark public lib, Newark, N.J. Je '53

What is ahead for business. M. P. McLean. (Business literature v. 25, no. 9) p61-2 Business library, Newark public lib, Newark, N.J. My '53

Classification

Classification schemes for business and financial libraries. J. Bogardus. Special Lib 43:409-12 D '52

Fiction

Author meets businessman; three novels. Fortune 46:111+ D '52

Foreign expansion

Why American firms have trouble getting toehold in Spain. H. Lund. il Am Bsns 23:38-40 Ag '53

Mortality

Business population; operating businesses and business turn-over, incorporations and commercial failures; Nov.-Dec. 1951-Jan.-Nov. 1952. Survey of Cur Bsns 33:S4 Ja '53 [cont monthly]

Political aspects

Appraisal of election results. E. P. Rubin. Comm & Fin Chr 176:1924+ N 20 '52

Business under the new political regime. H. Ford, 2d. Comm & Fin Chr 177:1232-3 Mr 19 '53

Election improves Washington attitude on oil. Nat Pet N 44:18-20 N 12 '52

Election results and the business outlook. E. V. Bell. Comm & Fin Chr 176:1918+ N 20 '52

Election results to have profound financial effects. R. S. Byfield. Manuf Rec 121:36 D '52

Election returns and your financial returns. E. T. McCormick. Comm & Fin Chr 176:1831+ N 13 '52

For business, getting ready means; shift of power to Republican hands. Bsns W p28-30 N 15 '52

Government is your business. R. A. McDonald. Paper Tr J 136:72-3 F 20 '53

It's Ike; what's ahead for business and finance. A. W. May. Comm & Fin Chr 176:1725 N 6 '52

Lest we forget! H. S. Bullis. Comm & Fin Chr 176:2029 N 27 '52

New administration; what it will do in finance and business. A. W. May. Comm & Fin Chr 176:1821+ N 13 '52

Outlook for aviation under Republicans. K. Johnsen. Aviation W 57:10-12 N 17 '52

Political weather for business is fair and warmer. S. Weeks. Comm & Fin Chr 177:1526 Ap 9 '53

Trust busters will not wither away under the G.O.P. J. C. Perham. Barron's 32:3 D 15 '52

We have survived other elections. H. Brayer. il Am Bsns 22:8-9+ O '52

What business wants from the next President. D. G. Mitchell. Comm & Fin Chr 176:1538-9 O 23 '52

What the election means to construction. Eng N 149:21-3 O 30 '52

Which groups will benefit from new administration. W. Gates. Mag of Wall St 91:282-3 D 13 '52

Will industry benefit from a change in administration? results of survey. Mill & Factory 51:71-2 O '52

Reports to government

Simplifying utility reports to federal agencies. W. B. Bourne, jr. Pub Util 52:141-5 Jl 30 '53

BUSINESS—*Continued*

Small business

Can small businesses get the capital they need? E. B. George. Dun's R 60:115-45 O '52
Help for the small businessman; small business clinic. J. J. Vogeley. J Retailing 28: 85-6 Summer '52
Making little ones out of big. Bsns W p 196+ F 21 '53
New management methods spur small industry growth. S. Fish. il Manuf Rec 122:34-5 Mr '53
Small business, America's bulwark. H. Barchoff. Dun's R 60:23-4+ D '52
Small business in action; government relations. Steel 131:57-8 N 17 '52
Small business in action; it's part in defense. Steel 131:59 N 17 '52
Small business needs a friend, and sales and credit management can help him in three ways. B. Y. Cooper. Credit & Fin Management 54:26-7 S '52
Small firms; have tougher problems. Iron Age 171:80-1 Mr 19 '53
Small firms; health still good; U.S. Chamber of commerce study. Iron Age 171:98-9 F 5 '53
Small firms; suggest special aid. Iron Age 170:119 D 11 '52
Small manufacturers' clinic. P. S. Shoemaker. Banking 45:102 O '52
Systems and procedures for the small business suffering from sudden expansion in volume. E. G. Scovil. J Account 94:702-7 D '52
Use of planning and control tools by small companies. R. U. Wellington. N A C A Bul 34:646-52 Ja '53
You must decide! plain talk for management of smaller businesses. L. Walters. il Nat Safety N 67:38-9+ Ap '53

Social aspects

Business leadership and a creative society. A. T. Collier. Harvard Bsns R 31:29-38 Ja '53
Road to serfdom blocked. A. P. Sloan, jr. Comm & Fin Chr 177:295+ Ja 22 '53

Terminology

Glossary of business paper publishing terms. pa $2 Associated business publications, 205 E. 42d st, New York 17 '52

BUSINESS advisers. See Business consultants

BUSINESS advisory council. See United States—Business advisory council

BUSINESS and defense services administration
Business unit set up by Commerce department. Oil Paint & Drug Rep 164:3+ O 5 '53

BUSINESS budget. See Budget, Business

BUSINESS combinations
New British cousin for Pepsi. il Bsns W p 112+ D 20 '52

BUSINESS conditions
After mobilization, what? C. L. Benner. Comm & Fin Chr 176:1817+ N 13 '52
Bankers expect continued high business level in the first half of new year. F. F. Florence. Comm & Fin Chr 177:27 Ja 1 '53
Banking outlook reappraised; prospective shift in the business and banking scene. R. I. Robinson. Burroughs Clearing House 37:29-31+ D '52
Boom's end near. M. Nadler. Comm & Fin Chr 177:1751 Ap 23 '53
Business and commodity outlook for 1953. A. C. Babson. Comm & Fin Chr 176:2113+ D 4 '52
Business and finance speaks after turn of the year; symposium. I. M. Ives and others. Comm & Fin Chr 177:281+, 466+ Ja 22, 29 '53
Business; fast pace through 1954. A. K. Rannells. Iron Age 171:38 Ja 8 '53
Business in 1953. M. Nadler. Comm & Fin Chr 177:577+ F 5 '53
Business is good, but competition will squeeze profits. R. A. Foulke. Comm & Fin Chr 177:586 F 5 '53
Business outlook and stock prices. J. I. Bogen. Comm & Fin Chr 177:2304-5 My 28 '53
Business outlook as we retreat from socialism. D. H. Bellemore. Comm & Fin Chr 177:2735+ Je 25 '53
Business outlook dubious in second-half of 1953. W. W. Townsend. Comm & Fin Chr 177:2522+ Je 11 '53
Business outlook for the second half. J. T. Roberts. Mag of Wall St 92:260-2+ My 30 '53
Business outlook; good through 1954. il Steel 132:39 Ja 12 '53
Business outlook requires both caution and confidence. M. R. Gainsbrugh. Comm & Fin Chr 177:2204 My 21 '53
Business prospects and the capital markets. R. L. Reierson. Comm & Fin Chr 176: 2489+ D 25 '52
Business prospects during next four years. G. MacKay. Comm & Fin Chr 176:2123 D 4 '52; Advanced Management 18:44-5 Ja '53
Business roundup. Iron Age 171:274-7 Ja 1 '53
Business roundup. Published in monthly numbers of Fortune
Business statistics; continuation of data published in 1951 statistical supplement. Survey of Cur Bsns 33:S 1-40 Ja '53 [cont monthly]
Capital spending by U.S. business should rise six per cent in 1953, survey shows. Eng N 150:86-7 Ap 2 '53
Chief factors in business outlook. N. H. Jacoby. Comm & Fin Chr 177:2417 Je 4 '53
Compass points of business; quarterly analysis. Dun's R 60:11-18 N '52; 61:11-17, 20-1 F; 15-22+ My '53
Cycles and imbalances affecting the 1953 outlook. C. E. Young. Comm & Fin Chr 177: 291+ Ja 22 '53
Decries exaggerated business optimism. J. Backman. Comm & Fin Chr 177:1341 Mr 26 '53
Economic picture for 1953. P. W. McCracken. Comm & Fin Chr 177:461+ Ja 29 '53
Eisenhower's team. L. Stafford. Banking 45: 51-6+ Ja '53
Forecast of 1953 business and securities markets. J. D. Weiss. Comm & Fin Chr 177:10 Ja 1 '53
Forecasts continued good business in 1953; United business service. Comm & Fin Chr 176:2232 D 11 '52
General business outlook. D. M. Keezer. Comm & Fin Chr 177:2316+ My 28 '53
Hard goods power the pickup. Bsns W p32 My 9 '53
High level of activity predicted for 1953; Industrial conference board's forum. Comm & Fin Chr 177:102-3 Ja 8 '53
High volume of consumer debt and other factors invite caution now. East Underw 54:26 Ja 9 '53
How good are business prospects for 1953; Mill & Factory survey. Mill & Factory 52: 69-72 Ja '53
Incomes stick at high level. Bsns W p78+ My 2 '53
Investor looks at 1953. S. B. Lurie. Comm & Fin Chr 177:470 Ja 29 '53
Is it past the top? Bsns W p27-8 Jl 4 '53
Is this the top of the boom? Bsns W p26-7 My 16 '53
Leading industry trends. Mech Eng 75:149-50 F '53
Local business. il Bsns W p 102-4 D 13; 58+ D 20 '52
Look ahead into 1953; opinions of executives of various industries. Sheet Metal Worker 44:76-83+ Ja '53
Markets after defense expansion; results of survey indicates that 1953 is likely to be another good year. C. Sawyer. Comm & Fin Chr 177:110-11 Ja 8 '53
Most industries see good year, second half is least certain; editors' forecast. Ind Marketing 38:130-5 Ja '53
National association of purchasing agents' business survey committee, monthly report (cont). Comm & Fin Chr 176:1739 N 6 '52
National summary of business conditions. Published in monthly numbers of Federal reserve bulletin
1953 business and stock market outlook. G. M. Loeb. Comm & Fin Chr 177:301 Ja 22 '53
1953 business outlook favorable. A. W. Zelomek. Comm & Fin Chr 176:1916 N 20 '52

BUSINESS conditions—*Continued*
1953 industrial outlook bright. S. E. Cohen. Ind Marketing 38:62+ Ja '53
1953; new forces go to work. il Bsns W p27-32 Ja 3 '53
1953; what industry leaders expect. Iron Age 171:225+ Ja 1 '53
No room for gloom. M. H. Baker. Dun's R 60:1, 21-2+ O '52
Nothing to get dithery about. Bsns W p25 Je 6 '53
Our era of uneasy prosperity. R. G. Gettell. Adv Agency 45:50 D '52
Outlook and condition of business. Banking 45:31-2+ Ja '53 [cont monthly]
Outlook for business. J. F. Barbour. Comm & Fin Chr 177:1101+ Mr 12 '53
Outlook for business. M. Nadler. Comm & Fin Chr 176:1822 N 13 '52
Outlook for 1953. L. D. Edie. Comm & Fin Chr 177:675+ F 12 '53
Outlook for 1953. R. Rodgers. Comm & Fin Chr 177:191+ Ja 15 '53
Outlook still good. Mod Ind 24:81 N '52
Predicts spectacular uptrend in business. M. Shields. Comm & Fin Chr 176:2034 N 27 '52
Prospects for prosperity. W. W. Townsend. Comm & Fin Chr 178:347+ Jl 30 '53
Realistic appraisal of the business outlook. H. Wingate. Mag of Wall St 91:332-4+ D 27 '52
Reasons for caution on near-term outlook. Comm & Fin Chr 177:123 Ja 8 '53
Sees good year ahead. T. A. Sick. East Underw 54:3 Ja 16 '53; Same. Weekly Underw 168:168 Ja 10 '53; Same cond. Nat Underw (Life ed) 57:13 Ja 2 '53
Stock market outlook for 1953. N. E. Crane. Comm & Fin Chr 176:2494-5+ D 25 '52
Stop worrying about recession! W. Williams. Steel 132:69 Ap 20 '53
Strength and weakness in business conditions. M. R. Gainsbrugh. Comm & Fin Chr 177:782 F 19 '53
Sustaining forces in business outlook. R. L. Reierson. Comm & Fin Chr 177:12-13 Ja 1 '53
Taking cutbacks in stride. Bsns W p43-4 Je 20 '53
Trend and perspective. il Mod Ind 25:73+ Ja '53 [cont monthly]
U.S. economy; a penetrating look reveals more strength than weakness. S. H. Slichter. Barron's 33:5+ Ja 26 '53
Views of purchasing agents on 1953 business. Comm & Fin Chr 177:19 Ja 1 '53
War business. R. W. Babson. Comm & Fin Chr 177:893 F 26 '53
Washington outlook for the years ahead. A. K. Rannells. Automotive Ind 108:46-7+ Ja 15 '53
What is the business outlook? 1953, the last half. Mod Ind 25:36-9 Je '53
What of the business outlook? J. A. Livingston. Comm & Fin Chr 176:1528 O 23 '52
What to expect in 1953. Factory Management 110:supW 1-6 D '52
What we see in business. B. H. McCormack. Comm & Fin Chr 177:683 F 12 '53
What will happen when defense spending levels off? L. F. Lee; R. C. Turner. Banking 45:18-20 D '52
Which industries and common stocks today? W. Maynard. Comm & Fin Chr 177:2625+ Je 18 '53
Which industries offer best prospects for 1953? G. W. Mathis. Mag of Wall St 91:386-9+, 456-9+ Ja 10-24 '53
Year ahead; bankers' commentaries on business and public affairs, from the 1952 annual reports. Banking 45:18+, 172 F; 34+ Mr '53
See also
Business depression
Business failures
Business forecasting
Inflation (finance)
Prosperity

BUSINESS conferences
Five-way tonic for good credit operation in give and take of industry group meetings. M. V. Ingraham. Credit & Fin Management 55:37 Ap '53
How to talk business, to win. E. Whitmore. il Am Bsns 22:12-13+ O '52
In favor of consultative management. B. N. Taylor. Personnel J 31:410-11 Ap '53
Television for business meetings. V. M. Ratner. Harvard Bsns R 31:64-70 My '53 (reprints $1)
See also
Chairmen

BUSINESS consolidations
Biggest shoemaker gets bigger. il Bsns W p 146-8 F 14 '53
Comeback for combines; mergers in Japan. Bsns W p 164-5 Mr 14 '53
Company mergers; how, why. Bsns W p29-30 Mr 7 '53
Economic necessity bringing new era of mergers? L. A. Lukens. Mag of Wall St 92:14-15+ Ap 4 '53
Edward J. Noble; his golden touch pans out again. Bsns W p82+ Mr 14 '53
Financing chemical expansion; expansion by acquisition. E. Hart. Chem & Eng N 31:2177-9 My 25 '53
Ford buys assets of Dearborn Motors. Bsns W p32 Je 6 '53
Industrial marriages; more firms rush into ties that bind. Steel 132:49 Je 22 '53
Merger; K-F, Willys take vows. Iron Age 171:109 Ap 2 '53
Merger of ABC and Paramount. J. D. C. Weldon. Mag of Wall St 91:644-5+ Mr 7 '53
Merger trend in the chemical industries. R. S. Aries and R. M. Cziner. Comm & Fin Chr 177:1309+ Mr 26 '53
New giant; American Broadcasting and Paramount Theaters. Bsns W p31-2 F 14 '53
Old company tries new fields; Cleveland Graphite. Bsns W p86+ D 20 '52
On the road to a ghost town? merger brings jobs nearer, in Park City, Utah. il Bsns W p80-2+ Je 27 '53
Rounding out; International shoe co. Bsns W p88 F 7 '53
Schenley eyes Dant as a boost to sales. Bsns W p30 F 21 '53
Signposts; two mergers; Harvester story; Federal story. Bsns W p33 N 1 '52
Testing the new merger law; decision in Pillsbury Mills case. Bsns W p29 My 9 '53
West Vaco and Hinde & Dauch to merge. map Paper Tr J 137:14-16 Ag 28 '53
Westinghouse Air Brake buys R. G. LeTourneau inc. Roads & Eng Constr 91:76 My '53
Why Kaiser bought Willys. Bsns W p32 Mr 28 '53
Why those mergers on Madison avenue? Bsns W p43-4 D 6 '52
See also
Airlines—Consolidation
Bank consolidations
Electric utilities—Consolidation
Insurance companies—Consolidation
Motor bus lines—Consolidation

BUSINESS consultants
What's your problem? P. Stryker. Fortune 47:106-7+ Mr '53

BUSINESS correspondence. See Commercial correspondence

BUSINESS cycles
Broken cycle. Bsns W p 100 Ja 3 '53
Business cycle has not been repealed. D. B. Woodward. Comm & Fin Chr 176:2036 N 27 '52
Business cycles. R. W. Babson. Comm & Fin Chr 177:676 F 12 '53
Cycles and imbalances affecting the 1953 outlook. C. E. Young. Comm & Fin Chr 177:291+ Ja 22 '53
Cycles in economics and nature. G. T. Altman. Science 115:51-3 Ja 18 '52; Discussion. G. R. Price. 117:335-6; Reply. 336-9 Mr 27 '53
Tools; builders seek end of cycles. R. M. Lorz. Iron Age 171:62 Je 11 '53

BUSINESS depression
British concern over U.S. outlook. P. Einzig. Comm & Fin Chr 177:1222 Mr 19 '53
Business after the defense boom. Fortune 46:112-17+ D '52
Business outlook, a depression coming. W. W. Townsend. Comm & Fin Chr 177:483 Ja 29 '53
Businessmen worrying mostly about the future. Bsns W p32-3 N 22 '52
How to recognize a recession. Fortune 47:95 Mr '53
How would a recession affect utilities? E. R. Abrams. Pub Util 52:135-40 Jl 30 '53

BUSINESS depression—*Continued*
If America slumps. Economist 166:917-28 Mr 28 '53
If business takes a slump. Bsns W p27-8 O 25 '52
Is prolonged depression inevitable? E. Hesz. Comm & Fin Chr 176:2030 N 27 '52
Is prosperity permanent? C. C. Brown. Comm & Fin Chr 176:1913+ N 20 '52
Is U.S. economy depression proof? M. Palyi. Comm & Fin Chr 177:2061+ My 14 '53
Major types of recession. A. M. Weimer. Comm & Fin Chr 177:2413 Je 4 '53
Measuring depression factors. W. I. King. Comm & Fin Chr 178:270 Jl 23 '53
Need farmers fear a depression? J. K. Galbraith. Comm & Fin Chr 177:1001+ Mr 5 '53
No grounds for assumption of a post-Korean economic slump. S. Weeks. Comm & Fin Chr 177:1851+ Ap 30 '53
Peace in Korea will not open door to depression. N. Strunk. Comm & Fin Chr 177:1647 Ap 16 '53
See also
Business failures

BUSINESS economists
See also
Hoadley, Walter Evans

BUSINESS education
Help for the small businessman; small business clinic. J. J. Vogeley. J Retailing 28:85-6 Summer '52
Should a business man be educated? Fortune 47:113-14 Ap '53
Talent without tears; a Radcliffe experiment expands. B. Lefferts. Barron's 33:7 Mr 9 '53
University of Georgia's executive development program. il Manuf Rec 122:44-5 Ag '53
See also
Harvard university—Graduate school of business administration
Junior achievement movement
Salesmanship—Study and teaching

Bibliography
Business education index, 1952. M. H. Freeman and L. C. Nanassy, eds. 78p Gregg pub. div, McGraw-Hill pub. co, 330 W. 42d st, New York 36 '53 (pa $2)

Great Britain
Education for management in Great Britain. M. E. Murphy. J Bsns 26:37-47 Ja '53

BUSINESS entertainment
Personal business; cost of entertaining customers at a night-club. Bsns W p 167-8 N 15 '52
Taxpayer's guide to business entertainment. J. K. Lasser. Fortune 47:92+ Mr '53

BUSINESS ethics
See also
Accounting ethics
Advertising ethics
Better business bureaus

BUSINESS failures
Business failures in November. Dun's R 61:49-50 Ja '53 [cont monthly]
Business failures, 1939-1952; tabulations. Steel 132:198 Ja 5 '53
Business population; operating businesses and business turn-over; incorporations and business turn-over; incorporations and commercial failures; Nov.-Dec. 1951-Jan.-Nov. 1952. Survey of Cur Bsns 33:S4 Ja '53 [cont monthly]
Why do businesses fail? quarterly analysis (cont). G. M. Jones. Dun's R 60:30 S; 30 D '52; 61:66-9 Mr; 56+ Je '53

BUSINESS forecasting
Best business and financial indicators; symposium. R. R. Dockson and others. Banking 45:41-50 O '52; Discussion. E. C. Zorn, jr. 45:51+ D '52
Business and credit outlook generally good; survey of bankers' opinions. maps Banking 46:29-38+ Jl '53
Business and money market outlook. H. H. Edmiston. Comm & Fin Chr 177:2075+ My 14 '53
Business outlook. A. Gaubis. Comm & Fin Chr 176:11+ sec 2 N 13 '52
Business outlook for next several years. S. H. Slichter. Comm & Fin Chr 177:1205+ Mr 19 '53
Business picture a year ahead. E. Solomon. Comm & Fin Chr 178:18 Jl 2 '53
Business prospect for 1953. F. O. Kiel. Comm & Fin Chr 176:2498-9 D 25 '52
Business prospects with decreased defense spending. M. J. Meehan. Comm & Fin Chr 177:775+ F 19 '53
Business pulse; analysis of 1953 business forecasts presented in this report. Automotive Ind 108:70+ Ja 15 '53
Business year to be good, despite increasing competition. H. H. Heimann. Comm & Fin Chr 178:15 Jl 2 '53
Changed America. il Bsns W p 101-4+ Je 6 '53
Clouded outlook for second-half year's business. E. G. Nourse. Comm & Fin Chr 177:1734+ Ap 23 '53
Construction boom by 1960. B. S. Chapple, jr. Credit & Fin Management 54:18-19 D '52
Forecasting business trends. Steel 132:47-54 Je 29 '53
High level business ahead; comments by executives; with table forecasting business indexes of mid-1953. Credit & Fin Management 55:8-11+ Ja '53
How 300 experts rate '53 prospects in 108 basic industries. Sales Management 70:69-71 Ja 1 '53
Industry's plans for capital spending; still on a big scale. Bsns W p 112-14+ Ap 4 '53
Inflation or deflation ahead now? A. W. May. Comm & Fin Chr 177:1313+ Mr 26 '53
Is it past the top? Bsns W p27-8 Jl 4 '53
Look for downward readjustment in 1954. C. J. Collins. Comm & Fin Chr 177:2188 My 21 '53
Mid-year economic outlook. J. D. Daane. Comm & Fin Chr 178:197+ Jl 16 '53
Modern industry looks ahead; forecast for 1953. Mod Ind 24:33-6 D '52
Must we have a recession? S. H. Slichter. Comm & Fin Chr 177:1959+ My 7 '53
1953 in U.S. and Britain. P. Einzig. Comm & Fin Chr 177:106 Ja 8 '53
1953; new forces go to work. il Bsns W p27-32 Ja 3 '53
1960 business. Bsns W p34 D 13 '52
No new business boom in '53. R. W. Babson. Comm & Fin Chr 177:1+ Ja 1 '53
No slump ahead! H. H. Curtice. Comm & Fin Chr 177:2309 My 28 '53
Outlook for business. M. Nadler. Am Gas Assn Proc 1952:184-6; Same cond. Am Gas Assn Mo 35:21-2+ F '53
Outlook for business; not too bearish, not too optimistic. J. K. Heyman. Comm & Fin Chr 177:1639 Ap 16 '53
Plans for tomorrow, future economic outlook. L. Levine. il Dun's R 60:25+ D '52
Sawyer report dates economic peak ahead to 1955. R. Y. Giles. Ptr Ink 242:22+ Ja 2 '53
Techniques in forecasting consumer durable goods sales. A. C. MacGowan. J Marketing 17:156-62 O '52
27 charts plot industry's course as management pinpoints its future. Mod Ind 26:36-40 Jl '53
What's ahead for business? G. V. Cox. Comm & Fin Chr 177:1635+ Ap 16 '53
What's ahead for '53? L. H. Allen. Inland Ptr 130:27-31 Ja '53
Which direction the business future? M. P. McNair. Comm & Fin Chr 177:189+ Ja 15 '53
Why forecasts go haywire. Bsns W p 140 Ja 10 '53
See also
Market research
Planning
Production and sales, Coordination of
Sales estimates

BUSINESS gifts. See Christmas gifts—Business gifts

BUSINESS histories
How to get your company story published. N. Kelne. il Ptr Ink 241:74-8 N 7 '52
Why it pays to tell your business history. H. O. Brayer. il Am Bsns 22:18-19+ D '52; 23:16-17+ Ja '53
See also
Du Pont de Nemours, E. I., and company
General motors corporation

BUSINESS histories—*Continued*

Bibliography

Selected business histories. Am Bsns 22:31-2 D '52

BUSINESS hours. See Banks and banking—Hours of business; Retail trade—Hours of business

BUSINESS in literature

Author meets businessman; three novels. Fortune 46:111+ D '52

BUSINESS information

Combing out facts for business; National industrial conference board. Bsns W p77-8+ My 23 '53

Commerce field offices offer easy way to market data. S. E. Cohen. il Ind Marketing 38:170+ O '53

Commercial intelligence service; chemical and chemical process industries. R. Soukup. Special Lib 43:389-95 D '52

BUSINESS insurance. See Insurance, Business

BUSINESS law. See Commercial law

BUSINESS letters. See Commercial correspondence

BUSINESS libraries

Classification schemes for business and financial libraries. J. Bogardus. Special Lib 43:409-12 D '52

See also

Advertising agencies—Libraries
Technical libraries
Bank libraries

BUSINESS machines. See Office appliances; Office equipment industry

BUSINESS management

Burden of proof; decision making. H. M. Williams. Dun's R 61:22+ Jl '53

Business economist on the prowl. il Bsns W p 134-8+ Ja 10 '53

Business finance handbook. L. Doris, ed. 919p $10 Prentice-Hall, 70 Fifth av, New York '53

Business leadership in a democracy. A. H. Williams. Mech Eng 75:284-6+ Ap '53

Central planning; place and purpose; lessons in management survey of New York city. C. Heyel. il Dun's R 61:33-5+ My '53

Eight signposts, one destination; program of management action and discipline necessary in meeting obstacles and opportunities. A. M. Sullivan. il Dun's R 61:31-2+ My '53

Expansion goes right on. Bsns W p27 Je 13 '53

Handy aids for managements on pint-sized budgets; Eastern brass & copper co. il Mod Ind 25:54-6+ Je '53

How a big company controls itself; Monsanto chemical co. il Bsns W p76-8, 80-2 D 6 '52

How to grow a president. R. J. Makarius. Dun's R 61:1+ Mr '53

How to plan, organize, and control marketing in your business; with chart. Gen Elec R 56:29-37 Jl '53

How to set up systems department. B. L. Smyth. Am Bsns 23:11+ Ap; 18-19 My; 26+ Je '53

Is there a doctor of business in the house? N. A. Coan. N A C A Bul 34:18-34 S '52

It's the same skill anywhere. Bsns W p74+ F 14 '53

Lessons from the hard sell. Bsns W p68 Jl 4 '53

Management by committee. H. Maurer. Fortune 47:145-7+ Ap '53

Management communication and the grapevine. K. Davis. Harvard Bsns R 31:43-9 S '53

Management policy. J. G. Glover. Advanced Management 18:24-7 Mr '53

New perspectives in managerial decision-making. E. Dale. J Bsns 26:1-8 Ja '53

New team adds life to old company; Waterman pen co. F. Dixon. Am Bsns 23:22-3 Jl '53

Nine ways to insure profits in a buyers' market. J. E. Jump. Adv Agency 46:86-7 Ap '53

Operations research for management. C. C. Herrmann and J. F. Magee. Harvard Bsns R 31:100-12 Jl '53

Outline of the skills of management. R. M. Besse. Edison Elec Inst Bul 21:331-6 S '53

Ronson's time of trouble. il Fortune 46:137-9+ D '52

Sales wins a bigger voice on biggest-company boards. L. M. Hughes. Sales Management 70:24-5+ Ja 15 '53

Story of Welch's grape juice. D. Wharton. il Adv Agency 46:56-9+ Mr '53

Strategy of the seller or, what businessmen won't tell. J. McDonald. Fortune 46:124-7+ D '52

Ten vitamin B's in business. J. W. Conrad. N A C A Bul 34:199-210 O '52

Ten ways to improve teamwork between departments. E. Whitmore. Am Bsns 23:12-13+ Ja '53

Trend of business; a challenge to management. W. P. Jones. Advanced Management 18:42-4 Ja '53

20 ways to break the back of rising costs in 1953. Am Bsns 23:16-17 F '53

Use of planning and control tools by small companies. R. U. Wellington. N A C A Bul 34:646-52 Ja '53

Waltham ticks again. T. D. Durrance. il Am Bsns 23:10-11+ O '53

We can carry through a transition by expanding civilian economy. H. R. Silverman. Comm & Fin Chr 176:1626-7 O 30 '52

What does breakeven mean? Bsns W p 158-60 D 13 '52

What will management be like 25 years from now; summary of book's conclusions. E. Dale. J Account 94:713-14 D '52

What's your problem? P. Stryker. Fortune 47:106-7+ Mr '53

See also

Accounting
Advertising
Auditing
Branch management
Budget, Business
Business consultants
Committees (in management)
Complaints
Corporations—Directors
Credit
Credit departments
Diversification in industry
Employment management
Executives
Factory management
Forms and blanks, Business
Ideas in business
Industrial management
Instalment plan
Inventories
Jobbers
Mail order business
Marketing
Office management
Organization in industry
Planning
Profit
Public relations
Purchasing
Tax evasion and avoidance
Trade marks

Expansion problems

All under one tent. il Bsns W p 152-4 Jl 18 '53

Financing chemical expansion. C. A. Gerstacker; E. Hart. Chem & Eng N 31:2175-9 My 25 '53

How much more plant expansion? Bsns W p 140-2 Mr 28 '53

Influence of government regulations on company expansions. C. E. Waring. Chem & Eng N 31:1964-6+ My 11 '53

Obstacles to business growth. K. Powlison. Harvard Bsns R 31:48-56 Mr '53

Pittsburgh Steel branches out for steady growing. il Bsns W p76-80+ Jl 25 '53

See also

Industrial expansion

Family business

Friends or relations? organizational aspects of the family managed business. J. M. Kennedy. Trusts & Estates 92:238-40 Ap '53

BUSINESS manuals

Ten big benefits you enjoy when you put your policies in writing; Aldens, Chicago mail order company. J. C. Staehle. Sales Management 70:24-5+ Ja 1 '53

BUSINESS men

Advent of a new administration. Bsns W p 164 Ja 17 '53

Answering opportunity's knock; business man's role in community relations, problems and plans of the Nation. C. Francis. Dun's R 61:1+ Ap '53

Eisenhower shapes a businessman's government. Bsns W p30-2 Ja 17 '53

Future of business-baiting. P. Viereck. Fortune 47:109-10+ F '53

New cast of characters for Philadelphia story. pors Bsns W p 100-2+ Ja 10 '53

Personal business. Bsns W p 163-4 D 6 '52

Problem; businessmen in government. Bsns W p27-8 Ja 24 '53

BUSINESS men—*Continued*
Should a businessman be educated? Fortune 47:113-14 Ap '53
Two kinds of businessmen; U.S. and Canadian breeds. Bsns W p 130 Je 20 '53
Where to young man? Z. C. Barnes. Ptr Ink 241:82 D 26 '52; Replies. 242:72+ F 20 '53
See also
Executives
Murchison, Clinton
Williams

BUSINESS men in fiction
Author meets businessman; three novels. Fortune 46:111+ D '52

BUSINESS men's assurance
B.M.A. reports greatest gains in 43-year history. Weekly Underw 168:282 Ja 24 '53

BUSINESS periodicals
See also
Banks and banking—Periodicals
Employees' magazines
Trade journals

BUSINESS research
See also
Advertising research
Market research
Market surveys

BUSINESS schools and colleges
Business schools and executive development. S. F. Teele. Advanced Management 18:25-8 Ja '53
See also
Harvard university—Graduate school of business administration

BUSINESS services administration
BSA, new agency to help business. A. K. Rannells. Iron Age 171:98 Je 18 '53
NPA assumes peacetime role as Business services administration. Am Mach 97:150 Ag 17 '53

BUSINESS statistics
Analysis of stock ownership. W. L. Crum. Harvard Bsns R 31:36-54 My '53
Annual sales totals, 1939-1952; inventories, new orders, foreign trade, business in operation, new business incorporations, discontinued businesses, freight carloadings; tabulations. Steel 132:197-8 Ja 5 '53
Business analyst; statistics of money and credit, trade, industry, commodities. Published in bi-weekly numbers of Magazine of Wall Street
Business indexes. Steel 132:193 Ja 5 '53
Business indexes, Federal reserve system compilation; tabulation. Iron Age 171:469 Ja 1 '53
Business indexes; industrial production, construction contracts, employment and payrolls etc.; index totals 1919-1951, monthly March 1951-December 1952. Fed Res Bul 39:47 Ja '53 [cont monthly]
Business inventories and sales; monthly tables, Dec. 1950-Sept. 1952. Survey of Cur Bsns 32:18-19 N '52
Business population in 1952; with table of number of firms in operation, and percent change, by major industry divisions, selected years, 1940-52. Survey of Cur Bsns 33:29-30 F '53
Business sales and inventories, consumer expenditures, classified; tabulations. Iron Age 171:448 Ja 1 '53
Business statistics; continuation of data published in 1951 statistical supplement. Survey of Cur Bsns 33:S 1-40 Ja '53 [cont monthly]
Business statistics going Ph.D. Bsns W p96+ My 30 '53
Compass points of business; quarterly analysis. Dun's R 60:11-18 N '52; 61:11-17, 20-1 F; 15-22+ My '53
Indications of current business activity; statistical tabulations covering production and other figures for the latest week or month available. Published in weekly Thursday numbers of Commercial and financial chronicle
Investment programs and sales expectations in 1953. L. Bridge and V. Natrella. Survey of Cur Bsns 33:7-11 Ap '53
National business volume; 1952 with gain (or loss) over year 1951; tabulations. map Manuf Rec 122:10 Mr '53
New series on retail store inventories; with tables of inventories by kind of business, 1948-52. Survey of Cur Bsns 32:14-16 N '52
Revision of business sales, orders, and inventories; with detailed tables; orders, 1946-51; manufacturers' sales and inventories, 1949-51; wholesale sales, selected periods, 1948-52; wholesale inventories, 1948-52. Survey of Cur Bsns 32:12-18 O '52
Southern business volume; 1952 with gain (or loss) over year 1951; tabulations. map Manuf Rec 122:11 Mr '53
S.L.A. lists new sources of statistical information. Bankers Mo 70:44+ F '53
Survival patterns of the postwar business population. B. C. Churchill. Survey of Cur Bsns 32:12-19 D '52
Trend of business; production, prices, trade, finance. il map Dun's R 61:39-40+ Ja '53 [cont monthly]
See also
Advertising—Statistics
Index numbers (economics)
Industrial statistics
Manufactures—Statistics
Market statistics
Prices—Statistics

BUSINESS trusts
Mutual ownership apartments; how they were financed by a Chicago group; Winchester-Hood project; with cost data. il Am Bld 74:87-9 Ag; 145-8 S '52

BUSINESS visitors. See Visitors

BUSINESS women
How to teach your wife business. Fortune 47:142 Ja '53
She built group of contractors into flourishing service business; Mrs Nell Allen. Ind Marketing 38:68 Ja '53
Talent without tears; a Radcliffe experiment expands. B. Lefferts. Barron's 33:7 Mr 9 '53
See also
Women as executives

BUSINESS year. See Fiscal year

BUTADIENE
Butadiene as an organic building block; abstract. O. V. Tracy. Oil Paint & Drug Rep 163:57-8 Je 8 '53
Copolymerization of anthracene with 1,3-butadiene. C. S. Marvel and W. S. Anderson. bibliog Am Chem Soc J 75:4600-1 S 20 '53
Copolymerization of butadiene and alpha-methylstyrene in emulsion at 12.8°. J. W. L. Fordham and H. L. Williams. bibliog J Phys Chem 57:346-9 Mr '53
Diene synthesis with unsymmetrical butadienes and β-nitrostyrenes. W. C. Wildman and others. bibliog Am Chem Soc J 75:1912-15 Ap 20 '53
Effect of associated salts on the polymerization of butadiene by organo-sodium reagents. A. A. Morton and others. bibliog Ind & Eng Chem 44:2876-82 D '52
Effect of comonomer on the microstructure of butadiene copolymers. F. C. Foster and J. L. Binder. bibliog Am Chem Soc J 75:2910-13 Je 20 '53
How Dow recovers butadiene. il diag Chem Eng 60:116 Mr '53
Kinetics of the association of maleic anhydride and butadiene. B. Eisler and A. Wassermann. Chem Soc J p 1943-4 Je '53
2-Neopentyl-1,3-butadiene dimer. A. T. Blomquist and J. C. Westfahl. bibliog Am Chem Soc J 75:2304-7 My 20 '53
Photochemical reactions in the gas phase systems; di-*t*-butyl peroxide, peroxide-butadiene and acetone-butadiene. D. H. Volman and W. M. Graven. bibliog Am Chem Soc J 75:3111-16 Jl 5 '53
Physical properties of sodium-catalyzed polymers. M. H. Reich, R. E. Schneider and W. K. Taft. bibliog Ind & Eng Chem 44:2914-22 D '52
Polymerization and copolymerization reactions with Alfin catalysts in relation to masterbatch preparation. R. A. Stewart and H. L. Williams. bibliog Ind & Eng Chem 45:173-82 Ja '53
Reaction of butadiene in the presence of acetylenepolymerizing catalysts; abstract. H. W. B. Reed. Chem & Ind p239 Mr 14 '53
Reaction of cyanogen and related nitriles with 1,3-dienes; propionitrile and butadiene. G. J. Janz and R. E. Myers. bibliog Am Chem Soc J 75:1910-12 Ap 20 '53

BUTADIENE—*Continued*

Resonance energies of benzene and butadiene. G. Glockler. bibliog J Chem Phys 21:1249-54 Jl '53

Stereochemistry of 1,4-addition; the bromination of butadiene. K. Mislow. bibliog Am Chem Soc J 75:2512 My 20 '53

Studies in spectroscopy; steric effects in some substituted butadienes and *cyclo*butanes. K. B. Alberman, R. N. Haszeldine and F. B. Kipping. diag Chem Soc J p3284-8 Ag '52

Thermal dimerization of butadiene, and the equilibrium between butadiene and vinylcyclohexene. N. E. Duncan and G. J. Janz. bibliog J Chem Phys 20:1644-5 O '52

Manufacture

Butadiene; Standard oil development co. flow diag Pet Refiner 31:258-9 S '52

Dehydrogenation; Houdry process corp. flow diag Pet Refiner 31:258-9 S '52

Neches butane products co. is expanding capacity. F. L. Resen. flow chart il Oil & Gas J 51:149-50 N 10 '52

BUTADIYNE

Normal coordinate treatment of diacetylene. S. M. Ferigle and A. Weber. bibliog diag J Chem Phys 21:722-5 Ap '53

Researches on acetylenic compounds; further studies on the synthesis of diacetylenic glycols. J. B. Armitage and others. Chem Soc J p 1998-2005 Je '52

Researches on acetylenic compounds; the influence of propargylic substituents on the ultra-violet absorption of diacetylenes. J. B. Armitage and M. C. Whiting. Chem Soc J p2005-10 Je '52

Researches on acetylenic compounds; the preparation of monosubstituted derivatives of diacetylenes. J. B. Armitage, E. R. H. Jones and M. C. Whiting. Chem Soc J p 1993-8 Je '52

Thermodynamic properties of diacetylene. S. M. Ferigle and A. Weber. J Chem Phys 20:1657 O '52

BUTANE

Aryl-2-halogenoalkylamines; the preparation of some derivatives of 1-aryl-3 : 4-dihalogenopyrrolidines and 1 : 4-bisarylamino-2 : 3-dihalogenobutanes. J. J. Roberts and W. C. J. Ross. Chem Soc J p4288-95 N '52

Butane vapor phase isomerization; Shell development co. flow diag Pet Refiner 31:168-9 S '52

Can the refiner use more light ends? D. P. Barnard and others. bibliog Pet Refiner 32:135-8 Je '53

Decomposition of *n*-butane in the presence of oxygen. W. G. Appleby and others. bibliog Am Chem Soc J 75:1809-14 Ap 20 '53

Effect of granule size in dehydrogenation of butane and in a hydrogen transfer reaction. R. W. Blue and others. bibliog diags Ind & Eng Chem 44:2710-16 N '52

Liquid phase isomerization; Shell development co. flow diag Pet Refiner 31:168-9 S '52

Neches butane products co. is expanding capacity. F. L. Resen. flow chart il Oil & Gas J 51:149-50 N 10 '52

Oxidative coupling of butanes to octanes. A. V. Grosse. Am Chem Soc J 75:1261 Mr 5 '53

Properties of *n*-butforane and its mixtures with *n*-butane. J. H. Simons and J. W. Mausteller. diag J Chem Phys 20:1516-19 O '52

Pyrolysis of propane and butanes at elevated pressure. H. J. Hepp and F. E. Frey. bibliog diag Ind & Eng Chem 45:410-15 F '53

Solubilities and structures in aqueous aliphatic hydrocarbon solutions. W. F. Claussen and M. F. Polglase. bibliog diag Am Chem Soc J 74:4817-19 O 5 '52

BUTANEDIOL. See Butylene glycol

BUTANEDIONE

Fluorescence of biacetyl vapor. H. J. Groh, jr. bibliog J Chem Phys 21:674-7 Ap '53

BUTANOL. See Butyl alcohol

BUTANONE

Dehydration of aqueous methyl ethyl ketone with 2-methyl furan. A. S. Smith, J. F. LaBonte. bibliog Ind & Eng Chem 44:2740-3 N '52

Industrial viewpoints on separation processes. K. H. Hachmuth. bibliog il diags Chem Eng Prog 48:617-26 D '52

Vapor-liquid equilibria for ethyl alcohol binary systems. L. R. Hellwig and M. Van Winkle. bibliog Ind & Eng Chem 45:624-9 Mr '53

Analysis

Dielectric method of determining solvent content of dewaxing mixes; methyl ethyl ketone and toluene. H. D. LeRosen, L. V. Wike and S. W. Denton. bibliog Anal Chem 24:1620-2 O '52

BUTENE

Derivatives of sulfenic acids; reactions of sulfenyl halides with the *cis*- and *trans*-2-butenes. N. Kharasch and A. J. Havlik. bibliog Am Chem Soc J 75:3734-7 Ag 5 '53

High molecular weight polymers from propylene and 1-butene. C. M. Fontana and others. bibliog diags Ind & Eng Chem 44:2955-62 D '52

Isobaric heat capacities at bubble point; *cis*-2-butene, isopropylbenzene, and *n*-decane. W. G. Schlinger and B. H. Sage. bibliog Ind & Eng Chem 44:2454-6 O '52

Sodium photosensitized isomerization of *cis*-butene-2. W. M. Smith. J Chem Phys 20:1808 N '52

Vapor phase heats of hydrobromination of the isomeric butenes. J. R. Lacher and others. Am Chem Soc J 74:5291-2 N 5 '52

BUTENOLIDE. See Butyrolactone

BUTFORANE. See Fluorocarbons

BUTLER, Richard Austin, 1902-

Trying hard money on Britain. por Bsns W p30-2 Mr 14 '53

BUTOXY group

Reactions of free radicals with aldehydes; the reactions of methyl and *t*-butoxy radicals with acetaldehyde and acrolein. D. H. Volman and R. K. Brinton. bibliog J Chem Phys 20:1764-8 N '52

BUTTER

Another commodity headache. Nat City Bank p44-5 Ap '53

Butter output falls; with world dairy production figures, 1938, 1949-51. Economist 165:417-18 N 8 '52

Can aggressive promotion save the butter industry? J. Shoenfeld. Sales Management 70:46+ F 15 '53

Margarine association head raps butter supports. S. F. Riepma. Oil Paint & Drug Rep 164:5+ Ag 24 '53

Meadow Gold butter; nominated to packaging's Hall of fame. il Mod Packaging 27:120-4+, cover O '53

Package that molds the product; formed vinyl plastic cup gives decorative shapes to butter or margarine. il Mod Packaging 26:90-3 My '53

Manufacture

Continuous buttermaking OK'd in Midwest trial; Rising sun creamery. il Food Eng 25:47+ F '53

Prices

Butter market softness expected to continue. Barron's 32:33+ D 15 '52

Butter melts. Bsns W p62+ Je 13 '53

BUTTERLEY company, limited

Statement by the chairman. E. F. Wright. Economist 167:848-9 Je 20 '53

BUTYL acetanilide

Analysis

Differential multicomponent spectrophotometry; spectrophotometric method for determination of benzyl benzoate and N-butyl acetanilide in clothing impregnant M-1960. M. Beroza. bibliog Anal Chem 25:112-15 Ja '53

BUTYL alcohol

Analgesics; esters of 4-dialkylamino-1,2-diphenyl-2-butanols. A. Pohland and H. R. Sullivan. bibliog Am Chem Soc J 75:4458-61 S 20 '53

Rapid method for the resolution of *s*-butyl alcohol. S. W. Kantor and C. R. Hauser. Am Chem Soc J 75:1744 Ap 5 '53

Study of the diffusion of *n*-butyl alcohol in water using the Gouy interference method. P. A. Lyons and C. L. Sandquist. bibliog Am Chem Soc J 75:3896-9 Ag 20 '53

BUTYL alcohol—*Continued*

System cobaltous chloride-water-*t*-butyl alcohol at 25°. L. I. Katzin and J. R. Ferraro. bibliog Am Chem Soc J 75:3825-7 Ag 5 '53

Vapor-liquid equilibria at 760 mm. pressure; 2-propanol-methanol, 2-propanol-ethyl alcohol, 2-propanol-propanol, and 2-propanol-2-butyl alcohol systems. L. H. Ballard and M. Van Winkle. bibliog Ind & Eng Chem 44:2450-3 O '52

Vapor-liquid equilibria for ethyl alcohol binary systems. L. R. Hellwig and M. Van Winkle. bibliog Ind & Eng Chem 45:624-9 Mr '53

BUTYL benzene

High pressure thermal reactions of propyl- and isopropylbenzene, *p*-cymene and *s*-butylbenzene; isomerization of alkyl groups. V. N. Ipatieff and others. Am Chem Soc J 75:3323-6 Jl 20 '53

BUTYL bromide

Dielectric dispersion in the microwave region of six tetrasubstituted methanes in the solid state. J. G. Powles and others. bibliog diags J Chem Phys 21:136-41 Ja '53

BUTYL chloride

Dielectric dispersion in the microwave region of six tetrasubstituted methanes in the solid state. J. G. Powles and others. bibliog diags J Chem Phys 21:136-41 Ja '53

Pyrolysis of poly-(*sec.*-butyl α-chloroacrylate). J. W. C. Crawford and D. Plant. Chem Soc J p4492-5 N '52

BUTYL fluoride

Electron diffraction and microwave investigation of tertiary butyl fluoride. F. Andersen and others. J Chem Phys 21:373 F '53

BUTYL hydroperoxide

Electric moments of some aliphatic peroxides, disulfides and diselenides. M. T. Rogers and T. W. Campbell. bibliog Am Chem Soc J 74:4742-3 O 5 '52

New technique for polarography of water-insoluble compounds. G. E. O. Proske. bibliog Anal Chem 24:1834-6 N '52

BUTYL hydroxyanisole

Antioxidants for food papers; butylated hydroxyanisole. R. W. Bentz. il Mod Packaging 27:141-3 S '53

BUTYL hydroxyethyl cellulose

Mixed ethylcellulose-butylhydroxyethylcellulose films. H. C. Haas, L. C. Farney and C. Valle, jr. bibliog Ind & Eng Chem 45:564-6 Mr '53

BUTYL hypochlorite

Reactions of *t*-butyl hypochlorite with vegetable oils and their derivatives; dechlorination of methyl alkoxychlorostearates with alkali. L. E. Gast and others. bibliog Am Chem Soc J 74:6280-1 D 20 '52

BUTYLLITHIUM

Reaction of isopropyllithium and *t*-butyllithium with simple olefins. P. D. Bartlett, S. Friedman and M. Stiles. bibliog Am Chem Soc J 75:1771-2 Ap 5 '53

BUTYL methyl ether

Alkylation of aromatic hydrocarbons by optically active secondary butyl methyl ether in the presence of boron trifluoride. R. L. Burwell, jr., L. M. Elkin and A. D. Shields. bibliog Am Chem Soc J 74:4570-2 S 20 '52

Effect of promoters on the alkylation of benzene by secondary butyl methyl ether in the presence of boron trifluoride. R. L. Burwell, jr., L. M. Elkin and A. D. Shields. bibliog Am Chem Soc J 74:4567-70 S 20 '52

BUTYL nitrate

Reaction of *n*-butyl nitrate with alkaline hydrosulfides. R. T. Merrow, S. J. Cristol and R. W. Van Dolah. bibliog Am Chem Soc J 75:4259-65 S 5 '53

BUTYL phthalate

Racemizing effect of the phenyl substituent of optically active hydrogen 2-phenyl-2-butyl phthalate in methanolytic reaction. H. H. Zeiss. bibliog Am Chem Soc J 75:3154-5 Jl 5 '53

BUTYL rubber. See Rubber, Artificial

BUTYL sulfite

Kinetics and mechanism of the reaction between thionyl chloride and dibutyl sulfite. P. D. Bartlett and H. F. Herbrandson. bibliog Am Chem Soc J 74:5971-4 D 5 '52

BUTYL toluene

Friedel-Crafts acetylation of *p-tert.*-butyltoluene. E. P. Taylor and G. E. Watts. Chem Soc J p5054 D '52

BUTYLATION

Acenaphthene series; the three isomeric *tert.*-butylacenaphthenes; migration of *tert.*-butyl groups and disproportionation; preparation and orientation of 1 : 3 : 6-tri-*tert.*-butylacenaphthene. E. Illingworth and A. T. Peters. Chem Soc J p2730-5 Jl '52

Butylation of guaiacol. R. H. Rosenwald. bibliog Am Chem Soc J 74:4602-5 S 20 '52

BUTYLENE glycol

Nickel-catalyzed hydrogenation of commercial aldol. C. K. Hancock and D. D. Henson. bibliog Ind & Eng Chem 45:629-32 Mr '53

BUTYNEDIOL

Synthesis and reactions of 3-butyne-1,2-diol. V. A. Engelhardt and J. E. Castle. bibliog Am Chem Soc J 75:1734 Ap 5 '53

BUTYROLACTONE

Aluminum chloride-catalyzed condensation of γ-butyrolactone with benzene. W. E. Truce and C. E. Olson. Am Chem Soc J 74:4721 S 20 '52

Arrhenius parameters for acid hydrolysis of γ-butyrolactone; search for a reaction with water. F. D. Coffin and F. A. Long. bibliog Am Chem Soc J 74:5767-8 N 20 '52

Further study of the course of ring-opening of unsymmetrical epoxides with nucleophilic reagents. G. D. Zuidema, P. L. Cook and G. Van Zyl. bibliog Am Chem Soc J 75:294-6 Ja 20 '53

Second form of γ-carboxymethylenebutanolide, the enol-lactone of β-ketoadipic acid. U. Eisner, J. A. Elvidge and R. P. Linstead. Chem Soc J p2439-40 Je '52

BUTYROSPERMOL

Chemistry of the triterpenes; the action of hydrogen chloride on butyrospermol. M. C. Dawson and others. Chem Soc J p586-9 F '53

BUYING. See Purchasing

BUYING habits

American shoppers want more and faster change in retailing. E. B. Weiss. il Ptr Ink 241:42-7 D 12 '52

Are outpost customers different? T. D. Ellsworth. J Retailing 29:57-66+ Summer '53

Big differences revealed in product sales by areas. Adv Agency 45:83+ O '52

Do you know or are you guessing? survey of 4,300 34th street, New York City, shoppers. T. D. Ellsworth and others. J Retailing 28:97-106+ Fall '52

Intimate data gathered on her shopping habits. T. S. Irvin. Ed & Pub 85:44 O 4 '52

Is your brand slipping? new ABP survey among dealers. Ptr Ink 241:51 O 17 '52

Let's face facts on consumer buying trends. D. Rennick. Oil Paint & Drug Rep 163:64-5 My 18 '53

More about shoppers and their desire to feel. E. B. Weiss. Ptr Ink 242:40 Ja 9 '53

New shopping habits are related to timing and technique of retailing. D. E. Shea. Ptr Ink 241:53-4 D 12 '52

Survey measures TBA buying habits. Nat Pet N 45:72 Mr 4 '53

Taking a candid look at your customer. il Mod Ind 25:50-2 My '53

See also

Women as purchasers

BUYING motives

Why price is tenth in buyer preferences. D. Markstein. Sales Management 70:110+ F 15 '53

BUYING power. See Consumption (economics)

BY-pass engine. See Airplane engines

C

C.I.G.R.E. See International conference on large high tension electric systems

C.I.O. See Congress of industrial organizations

CIPC. See Weeds—Control

C.I.T. financial corporation
Debentures sold. Comm & Fin Chr 177:2782 Je 29 '53
Five stocks best suited to resist downtrend; with comparative balance sheet items. Mag of Wall St 91:28 O 4 '52

CMC. See Carboxymethyl cellulose

CABINET (United States). See United States—Cabinet

CABINETS (furniture)
See also
Kitchen cabinets
Loud speaking apparatus—Cabinets
Television cabinets

CABINETS, File. See File cabinets

CABINS
How to build low cost cabins. il Am Bld 75:226-7 F '53

CABLE laying
These three gadgets ease cable-laying; illustrations with text. Constr Methods 35:63 Mr '53

CABLES
Curved roof on cables spans big arena; livestock judging pavilion at Raleigh, N. C. F. S. Merritt. il diags Eng N 150:31-4+ F 5 '53
Quicker cable-strand erection method. B. Birdsall. il Eng N 150:43 Ja 8 '53
See also
Electric cables
Telephone cables
Wire rope

Testing

Quick-action threaded clamps for proof-testing cables. il Mach 59:171 F '53

CABLES, Submarine. See Electric cables, Submarine; Telegraph, Submarine

CABLES, Telephone. See Telephone cables

CABLEWAYS
Aerial cableway speeds pipe-bridge salvage. il Constr Methods 35:148+ O '53
Aerial tramway centralizes plant of West African mine. A. R. Bunce. il plan Can Min J 74:62-3 Ja '53
Aerial tramway serves Kemano tunnels; Aluminum company of Canada's powerhouse construction. il Eng N 149:42-3 N 20 '52
Air tramway solves transport problem at Magnet Cove. C. F. Dwyer. il Eng & Min J 153:88-9 O '52; Same. Rock Prod 55:118-19 D '52
Concrete-placing cableway installation on Quebec power development. L. Zarifi. il diags Roads & Eng Constr 91:132-6+ Ap '53
Electric aerial tramway sextuples production. J. W. Parris. il Elec World 139:126+ Mr 9 '53
Little cableway places concrete. il Constr Methods 35:61 Ap '53

CABOOSE cars. See Cars, Caboose

CABOT, Godfrey L., inc.

Laboratories

New research laboratories; a Cabot milestone. il Am Cer Soc Bul 32:256 Jl 15 '53

CABOT, John Moors, 1901-
Portrait. Bsns W p 164 Ap 18 '53

CABOT, Maria Moors, medals
Five journalists get Maria Cabot medals. Ed & Pub 85:14 O 11 '52

CABOT, Thomas Dudley, 1897-
Awarded honorary LLD degree. por Paint Oil & Chem R 116:10B Je 18 '53

CABOT carbon of Canada, limited
Cabot comes to Canada; first carbon black plant. Can Chem Process 37:22 Jl '53

CACAO
Capital sought for Costa Rican cacao. For Comm W 49:10 Je 22 '53
French West African cacao trade changes. For Comm W 48:10 N 17 '52
Mexican cacao outlook good; trade rising. For Comm W 49:23 Ap 27 '53
Some biometric observations on cacao fruit. J. R. Kuppers. Science 117:354-5 Ap 3 '53

CACODYL
Thermochemistry of organo-arsenic compounds; cacodyl, As_2Me_4. C. T. Mortimer and H. A. Skinner. Chem Soc J p4331-4 N '52

CACTUS
Alkaloid studies; the isolation of pilocereine from the cactus lophocereus schottii. C. Djerassi, N. Frick and L. E. Geller. bibliog Am Chem Soc J 75:3632-5 Ag 5 '53
Terpenoids; the triterpenes of the cactus lemaireocereus thurberi. C. Djerassi, L. E. Geller and A. J. Lemin. bibliog Am Chem Soc J 75:2254-6 My 5 '53

CADILLAC motor car company
Can Cadillac keep the lead? L. M. Hughes. il Sales Management 69:24-7+ N 1 '52
50 years of Cadillac creations. il Automotive Ind 107:62-4 O 1 '52

CADMIUM
Cadmium finds new use. Can Min J 73:77-8 O '52
Cadmium, 1952. R. L. Mentch. Eng & Min J 154:94-5 F '53
Consecutive constants for the association of cadmium with imidazole. C. Tanford and M. L. Wagner. Am Chem Soc J 75:434-5 Ja 20 '53
Electrodeposition behavior of cadmium and of thallium at mercury cathodes. L. B. Rogers and C. Merritt, jr. diag Electrochem Soc J 100:131-5 Mr '53
Inorganic corrosion inhibitors in acid solution. C. V. King and others. bibliog Electrochem Soc J 99:423-6 O '52
Mechanism of growth of whiskers on cadmium. M. O. Peach. diags J Ap Phys 23:1401-3 D '52
Melting of cadmium scrap for anodes; abstract. L. Apelt. Metal Finishing 51:78 My '53
Metal-carbon composites for mechanical and electrical parts. E. P. Eaton, jr. il Product Eng 23:173-5 N '52
Production, prices, imports and exports of cadmium; tabulations. Iron Age 171:423 Ja 1 '53
Reaction of $Cd(^3P_1)$ with propane at low conversion. P. Agius and B. D. Darwent. bibliog J Chem Phys 20:1679-83 N '52
Some properties of superconductors below 1°K; Zr, Hf, Cd, and Ti. T. S. Smith and J. G. Daunt. bibliog Phys R 88:1172-6 D 1 '52
Total fast neutron cross sections of Co, Ga, Se, Cd, Te, Pt, Au, Hg, and Th. M. Walt and others. Phys R 89:1271-2 Mr 15 '53

Analysis

Colorimetric microdetermination of cadmium with dithizone; with improved separation of interfering metals. B. E. Saltzman. bibliog Anal Chem 25:493-6 Mr '53
Extension of sensitivity of polarographic analysis with rotating amalgam electrodes. W. D. Cooke. bibliog diag Anal Chem 25:215-18 F '53
2-(*o*-Hydroxyphenyl)benzoxazole as a volumetric reagent for cadmium. J. L. Walter and H. Freiser. Anal Chem 24:1985-6 D '52
Spot testing for rapid identification of tin cadmium and zinc of very thin coatings. F. Breh. Metal Prog 63:88-9 F '53

Isotopes

Effect of the electric quadrupole interaction on the gamma-gamma directional correlation in Cd^{111}. H. Albers-Schönberg and others. bibliog diag Phys R 90:322-3; 91:199-200, 1287-8 Ap 15, Jl 1, S 1 '53
Inelastic scattering of neutrons by Cd^{111}. A. E. Francis and others. bibliog diag Phys R 89:1232-6 Mr 15 '53
Neutron capture gamma-rays in cadmium, cobalt, and chlorine. W. A. Reardon and others. il diags Phys R 91:334-7 Jl 15 '53
Radiative capture of thermal neutrons by Cd^{113}. R. W. Pringle and others. diag Phys R 87:1016-17 S 15 '52

Prices

Nonferrous prices; tabulation. Steel 132:173 Ja 5 '53

CADMIUM alloys
Acoustic wave velocities, elastic constants, and Debye characteristic temperature for polycrystalline MgCd. C. S. Smith and W. E. Wallace. J Chem Phys 21:1120 Je '53

CADMIUM alloys—*Continued*

Diffusionless transformation in Au-Cd single crystals containing 47.5 atomic percent cadmium; characteristics of single-interface transformation. L. Chang. diags J Ap Phys 23:725-8 Jl '52

Magnesium-cadmium alloys; the cadmium-rich alloys; some lattice parameters and phase relationships between 25 and 300°; structure of the $MgCd_3$ superlattice; Schottky defects and the anomalous entropy. D. A. Edwards, W. E. Wallace and R. S. Craig. bibliog Am Chem Soc J 74:5256-61 N 5 '52

Silver-cadmium eutectoid. G. R. Speich and D. J. Mack. bibliog il J Metals 5:Trans 549-53 Ap '53

Thermodynamic properties of the liquid ternary system bismuth-cadmium-tin. S. Mellgren. bibliog Am Chem Soc J 74:5037-40 O 20 '52

CADMIUM chloride

High field conductance of an aqueous solution of cadmium chloride at 25°. F. E. Bailey, jr. and A. Patterson, jr. Am Chem Soc J 75:1471-2 Mr 20 '53

CADMIUM coating

Comparative protection afforded by cadmium and zinc coatings; abstract. G. Schikorr. Metal Finishing 50:70-1 D '52

CADMIUM dimethyl

Pyrolysis of cadmium dimethyl. C. A. Heller, jr. and H. A. Taylor. bibliog J Phys Chem 57:226-9 F '53

CADMIUM fluoride

Transmittance of crystalline cadmium fluoride. H. M. Haendler and others. Opt Soc Am J 43:215-16 Mr '53

CADMIUM iodide

Growth of cadmium iodide crystals; abstract. R. L. Fullman and D. L. Wood. J Metals 4:1041 O '52

X-ray studies of fused salt systems; cadmium iodide. R. E. Wood and H. L. Ritter. Am Chem Soc J 75:471-3 Ja 20 '53

CADMIUM niobate

Ferroelectricity in oxides of fluorite structure. W. R. Cook, jr. and H. Jaffe. Phys R 88:1426 D 15 '52

CADMIUM nitrate

Partial molal volumes of cadmium nitrate and water in concentrated aqueous solutions. W. W. Ewing and C. H. Herty, 3d. J Phys Chem 57:245-6 F '53

CADMIUM oxide

Physical adsorption on cadmium oxide. F. H. Healey, J. M. Fetsko and A. C. Zettlemoyer. bibliog J Phys Chem 57:186-8 F '53

CADMIUM poisoning

Chronic cadmium poisoning. E. W. Baader. il Ind Med 21:427-30 S '52

Chronic cadmium poisoning reported by European workers. H. H. Schrenk. Ind & Eng Chem 44:sup 107A-8A+ D '52

CADMIUM sulfide

Cadmium sulfide crystal acts as high-speed level checker. Elec Eng 72:377 Ap '53

Cadmium-sulfide crystal rectifiers; abstract. G. Strull. diag Electronics 25:189+ D '52

CdS detector checks propeller thickness. J. F. Howell. il diags Electronics 26:159-61 My '53

Luminescence and photoconductivity in cadmium sulfide at the absorption edge. C. C. Klick. bibliog Phys R 89:274-7 Ja 1 '53

Single synthetic cadmium sulfide crystals. S. J. Czyzak and others. J Ap Phys 23:932-3 Ag '52

Surface photoconductivity in cadmium sulfide crystals. R. H. Bube. diags J Chem Phys 21:1409-10 Ag '53

CAESIUM. See Cesium

CAFETERIAS, Employees'. See Lunchrooms and cafeterias, Employees'

CAISSONS

Caissons support riverfront power plant; Cincinnati gas and electric co.'s new Walter C. Beckjord station. C. E. Burtch. il Eng N 149:33-5 N 27 '52

Concrete caissons and long spans. E. G. Lambert and G. L. Coltrin. il diags Elec West 111:94-6 Ag '53

Deep caissons stabilize weak bank. il diags Eng N 150:41+ Ja 22 '53

Deep-water wharf on the Gambia river. il diags Engineering 175:1-5, pl 1 Ja 2 '53

Displacement caissons support big load; apartment house foundation in New York city. il Constr Methods 35:102-4 Je '53

Eastham oil dock. il plans diags Engineer 194:857-60 D 26 '52

42-story building straddles railroad tracks on 250 concrete caissons 110 ft in depth; Prudential building. J. P. Draney, jr. il diag Constr Methods 35:141-2+ Je '53

Open-caisson method used to erect Tokyo office building. A. C. Mason. il plan diags Civil Eng 22:944-7 N '52

CAKE

Old-fashioned look; Baker Boy packaging attained by color-printing techniques, high-speed wrapping machines. il Mod Packaging 26:114-15 N '52

Whipping emulsification cuts cake costs, raises quality. L. B. Crossland and H. K. Beasley. il Food Eng 25:77+ Je '53

CAKE, Frozen

Freezes to level off production; Wheatality baking corp. H. Tyor. il Food Eng 25:64-5 My '53

CAKE mixes

Oven-baking cartons; foil-lined display package becomes baking pan. il Mod Packaging 27:110-12 O '53

CALCINATION

Heat treatment of dolomite; the activity of dolime in relation to its temperature of preparation from dolomite. H. T. S. Britton and others. J Ap Chem 2:698-700 D '52

CALCITE

Chlorite-calcite pseudomorphs after orthoclase phenocrysts, Ray, Ariz. G. M. Schwartz. bibliog diag Econ Geol 47:665-72 S '52

Crystalline character of abraded surfaces; abstract. P. Gay and P. Hirsch. Metal Prog 63:138+ F '53

Effect of time and temperature of burning on the properties of quicklime prepared from calcite. J. A. Murray and others. bibliog il diags Am Soc T M Proc 50:1263-77; Discussion. 1278-82 '50

Phase equilibrium in the system calcite-aragonite. J. C. Jamieson. bibliog diag J Chem Phys 21:1385-90 Ag '53

Transmission of X-rays through calcite near the Bragg angle. G. L. Rogosa and G. Schwarz. bibliog diags Phys R 87:995-8 S 15 '52

CALCIUM

Adsorption of calcium and sodium on pyrite. A. M. Gaudin and W. D. Charles. bibliog Min Eng 5:Trans 195-200 F '53

Ammonia versus calcium in acid making, cooking, and screening. L. A. LaFond. Tappi 36:sup 131A-2A Ag '53

Effect of potassium chloride on the equilibrium between ethylenediaminetetraacetate and calcium ions. F. F. Carini and A. E. Martell. bibliog Am Chem Soc J 74:5745-8 N 20 '52

Hall coefficient of calcium. V. Frank and O. G. Jeppesen. Phys R 89:1153-4 Mr 1 '53

μ-Meson capture and nuclear shell structure. J. M. Kennedy. diags Phys R 87:953-8 S 15 '52

Reactive chemical instead of massive metal; finely divided calcium available. il Chem Eng 59:202-3 N '52

Separation of carrier-free scandium from a calcium target. J. E. Duval and M. H. Kurbatov. Am Chem Soc J 75:2246-8 My 5 '53

Thermochemistry of calcium and calcium iodide in ammonia at -33°. S. P. Wolsky, E. J. Zdanuk and L. V. Coulter. bibliog diag Am Chem Soc J 74:6196-9 D 20 '52

Use of radioactive isotopes in a study of evaporation from thermionic cathodes. W. F. Leverton and W. G. Shepherd. diag J Ap Phys 23:787-93 Jl '52

Analysis

Determination of calcium and strontium in a mixture. G. O. Assarsson and A. Balder. bibliog Anal Chem 24:1679 O '52

Determination of calcium, magnesium, and iron in limestone by titration with Versenate. Kuang Lu Cheng, T. Kurtz and R. H. Bray. bibliog Anal Chem 24:1640-1 O '52

Electrochromatographic separations of calcium and phosphate ions; factors influencing separations. T. R. Sato and others. bibliog il Anal Chem 25:438-46 Mr '53

CALCIUM—Analysis—*Continued*

Flame photometric determination of calcium, strontium, and barium in a mixture. O. N. Hinsvark, S. H. Wittwer and H. M. Sell. Anal Chem 25:320-2 F '53

Isotopes

Half-life of Ca^{45}. C. F. G. Delaney and J. H. J. Poole. Phys R 89:529-30 Ja 15 '53

Metabolism and removal of Ca^{45} in man. J. Bellin and D. Laszlo. bibliog Science 117: 331-4 Mr 27 '53

Neutron activation of Ca^{46}. L. G. Cook and K. D. Shafer. Phys R 90:1121 Je 15 '53

Photoneutron reaction in Ca^{40}. R. Braams and C. L. Smith. bibliog Phys R 90:995 Je 1 '53

Spin and magnetic moment of Ca^{43}. C. D. Jeffries. Phys R 90:1130 Je 15 '53

CALCIUM acetate

Determination of the carboxyl content of oxidized starches. M. F. Mattisson and K. A. Legendre. bibliog Anal Chem 24:1942-4 D '52

CALCIUM borate

Use of free energy data in the construction of phase diagrams. W. J. Knapp. bibliog Am Cer Soc J 36:43-7 F 1 '53

CALCIUM carbide

Calcium carbide injection is new tool in gray iron metallurgy. H. E. Henderson and P. M. Hulme. il diags Foundry 81:86-91+ Ap '53

CALCIUM carbonate

See also

Aragonite

Dolomite

CALCIUM caseinate

Calcium salts and the rennet coagulation of milk. G. T. Pyne. Chem & Ind p302-3 Mr 28 '53

CALCIUM chloride

Chemicals for a clear road. il Chem W 72: 62+ Ja 24 '53

Diffusion coefficients of calcium chloride and ammonium chloride in concentrated aqueous solutions at 25°. J. R. Hall, B. F. Wishaw and R. H. Stokes. bibliog diags Am Chem Soc J 75:1556-60 Ap 5 '53

Reaction between ferric sulfate and calcium chloride in the solid state. J. F. Hazel, W. M. McNabb and W. D. Cooke. bibliog Am Chem Soc J 75:1552-6 Ap 5 '53

Service behavior of calcium chloride treated gravel roads. E. M. Baylard. Pub Works 84:134 O '53

Surface roughness as related to hysteresis of contact angles; the systems paraffin-3-molar calcium chloride solution-air and paraffin-glycerol-air. F. E. Bartell and J. W. Shepard. diags J Phys Chem 57:455-8 Ap '53

Tracer-diffusion in liquids; self-diffusion of calcium ion and chloride ion in aqueous calcium chloride solutions. J. H. Wang. bibliog Am Chem Soc J 75:1769-70 Ap 5 '53

CALCIUM compounds

Dissociation constants of the alkaline-earth salts of some monocarboxylic acids. C. A. Colman-Porter and C. B. Monk. Chem Soc J p4363-8 N '52

CALCIUM cyanamide

Calcium cyanamide provides home base for large industry. il Can Chem Process 37:44+ Mr '53

Taproot of a chemical empire. Can Chem Process 37:18+ Mr '53

CALCIUM fluoride

Bleaching of CaF_2 crystals colored by X-rays. A. Smakula. Phys R 91:1570-1 S 15 '53

Comparison of the physical properties of barium fluoride and calcium fluoride. S. S. Ballard and others. Opt Soc Am J 42:684-5 S '52

Elastic wave propagation in solid media. R. A. Mapleton. bibliog diags J Ap Phys 23:1346-54 D '52

Fluoride model systems; the binary systems CaF_2-BeF_2, MgF_2-BeF_2, and LiF-MgF_2. W. E. Counts and others. bibliog Am Cer Soc J 36:12-17 Ja 1 '53

CALCIUM hyponitrite

Thermal decomposition of calcium hyponitrite tetrahydrate. T. M. Oza and V. T. Oza. Chem Soc J p909-13 Mr '53

CALCIUM in the body

Metabolism and removal of Ca^{45} in man. J. Bellin and D. Laszlo. bibliog Science 117: 331-4 Mr 27 '53

CALCIUM iodide

Thermochemistry of calcium and calcium iodide in ammonia at -33°. S. P. Wolsky, E. J. Zdanuk and L. V. Coulter. bibliog diag Am Chem Soc J 74:6196-7 D 20 '52

CALCIUM magnesium silicate

See also

Monticellite

CALCIUM metaphosphate

System sodium metaphosphate-calcium metaphosphate. G. W. Morey. Am Chem Soc J 74:5783-4 N 20 '52

CALCIUM nitrate

Stress-corrosion cracking of mild steels in nitrate solution. R. N. Parkins. bibliog 2pls diags Iron & Steel Inst J 172:149-62 O '52; Discussion. 174:140-2 Je '53

Thermal decomposition of calcium nitrite. T. M. Oza and V. T. Oza. diag Chem Soc J p907-9 Mr '53

CALCIUM oxide. See Lime

CALCIUM phosphates

Free energies of formation of tricalcium and tetracalcium phosphates. J. B. Bookey. bibliog diag Iron & Steel Inst J 172:61-6 S '52

New way to make dicalcium phosphate. diag Chem Eng 59:258-9 D '52

Preparation of carotene concentrates from dehydrated alfalfa meal. H. L. Mitchell, W. G. Schrenk and R. E. Silker. bibliog il Ind & Eng Chem 45:415-17 F '53

Tests for phosphate fertilisers; potentialities of dicalcium phosphate. Chem Age (Lond) 68:139-40 Ja 17 '53

See also

Apatite

CALCIUM silicates

Cellular calcium silicate products; preformed foamed concrete products. S. Dilnot. Rock Prod 55:110+ O '52

High temperature X-ray spectrograms of calcium silicates and cement clinkers. G. Tromel and H. Moller. bibliog il Rock Prod 55:72-5+ N '52

Hydrated calcium silicates; hydrothermal reactions; lime : silica ratios 2 : 1 and 3 : 1. L. Heller and H. F. W. Taylor. Chem Soc J p2535-41 Jl '52

Hydrated calcium silicates; the water content of calcium silicate hydrate (I). H. F. W. Taylor. Chem Soc J p 163-71 Ja '53

Use of free energy data in the construction of phase diagrams. W. J. Knapp. bibliog Am Cer Soc J 36:43-7 F 1 '53

See also

Wollastonite

CALCIUM sulfate

Analysis of calcium sulphate fillers; proposed revision of TAPPI official standard T 615 m-44. Tappi 36:sup 134A-5A Ap '53

See also

Gypsum

CALCULATING devices

Automatic computation of railway train schedules. F. Dubois. il plan Engineering 174:717-19 D 5 '52

Box-strength calculator. K. Q. Kellicutt and others. bibliog Mod Packaging 26:121-3+ Mr '53

Cam calculator. il Tool Eng 30:139 Je '53

Direct data cuts estimating time 66 per cent. P. Anjanos. il diags Am Mach 97:172-7 Mr 16 '53

Getting acquainted with the ARRL lightning calculator. D. H. Mix. il Q S T 37:44-5+ Ap '53

Give-away calculator can help your customer anywhere. V. W. Palen. il Ind Marketing 38:64 Ap '53

Handy calculator for X-ray spectrographic work. diags Eng & Min J 154:114+ O '53

How to figure machining time by the Direct Data method. P. Anjanos. diags Mill & Factory 52:121-3 My '53

Miniature universal calculating machine; Curta. il diags Engineering 175:102-6 Ja 23 '53

X-ray calculator for identifying elements; for X-ray spectrograph (fluorescence analysis) users in the paper field. V. W. Palen. diag Paper Ind 34:1354-5 F '53

See also

Slide rule

CALCULATING machines

Acoustic firing error indicator. M. C. Eliason and W. G. Hornbostel. il diags Electronics 25:98-101 O '52

Allison makes wide use of digital computer. J. T. Horner. il S A E J 60:24-6 D '52

Analog computer for rapid computation of potential-field data. S. Kaufman. il diags Instruments 26:120-4 Ja '53; Same. Electronics 26:174-7 Je '53

Analog computer for the roots of algebraic equations. L. Löfgren. diags Inst Radio Eng Proc 41:907-13 Jl '53

Analogue computer for use in the design of servo systems. E. E. Ward. diags Inst E E Proc 99 pt 2:521-32; Discussion. 549-52 D '52

Analog computer; how the various elements can be compounded to solve specific problems. D. H. Pickens. diags Product Eng 24:176-85 My '53

Analog computers boon to makers of modern regulating equipment. J. T. Carleton. Iron Age 171:148+ Ap 16 '53

Analog computers for coordinate transformation. N. L. Fritz. il diags R Sci Instr 23:667-71 D '52

Analogue computers for feedback control systems; abstract. R. A. Bruns. diags Elec Eng 72:211 Mr '53

Analogue multiplier tube. diags Tech R 55:307-8 Ap '53

Analog-to-digital converter simplifies data reduction; a new analog-to digital converter called the SADIC. il diag Product Eng 24:234-5 My '53

Analysers and computers; vacation school at Imperial college. Elec J 151:197-8, 272 Jl 17-24 '53; Same(pt 2). Elec R (Lond) 153:226-7 Jl 31 '53; Same. Engineer 196:184 Ag 7 '53

Analysis of control systems involving digital computers. W. K. Linvill and J. M. Salzer. diags Inst Radio Eng Proc 41:901-6 Jl '53

Analysis of magnetic shift register operation. E. A. Sands. diags Inst Radio Eng Proc 41:993-9 Ag '53

Analysis of rigid frames by an electronic digital computer. R. K. Livesley. diags Engineering 176:230-3, 277-8 Ag 21-28 '53

Application of power-line carrier by analogue computer studies. J. D. Moynihan. bibliog diags Elec Eng 72:58-62 Ja '53

Applications of large digital computers to calculations of microwave spectroscopy. B. L. Hicks and others. J Chem Phys 21:564 Mr '53

Arithmetic processes for digital computers. J. H. Felker. diags Electronics 26:150-5 Mr '53

Armour research foundation to get electric super-brain; card-programmed calculator. Midwest Eng 5:28 F '53

Automatic computers foster new engineering approach. Chem & Eng N 31:335 Ja 26 '53

Automatic computers go to work on design problems. il S A E J 60:17-20 D '52

Automatic computers save money and technical manpower. W. M. Harp. il Pet Refiner 32:159-61 Ap '53

Automatic cruise-control computer for long-range aircraft. J. R. Shull. diags Elec Eng 72:309-12 Ap '53

Automatic factory prelude; ERA 1103. Mill & Factory 52:286+ My '53

Automatic reduction of wind-tunnel data. V. S. Haneman and others. il plan diags Aeronautical Eng R 12:42-7 F '53

Beam switching tubes for computers and controls. S. Kuchinsky. il diags Tele-Tech 12:88-90+ S '53

Big brain to solve aviation problems; Oarac developed by General Electric's Electronics division. P. Klass. il Aviation W 58:61-2+ F 9 '53

Bioelectric integrator gages strain and effort. A. Ford. il diags Electronics 26:172-4 Ap '53

Business has chance to plan best use of electronic devices. R. B. Mitchell. Nat Underw 57:24+ Ap 16 '53

Calculator solves fluid flow problem. il Chem Eng 59:224 N '52

Characteristics of precision servo computer potentiometers. D. C. Duncan. diags Tele-Tech 11:52-4+ N '52

Coding by feedback methods. B. D. Smith. il diags Inst Radio Eng Proc 41:1053-8 Ag '53

Complex kinetic problems solved by high-speed digital computer. R. H. Perry. Chem & Eng N 31:246 Ja 19 '53

Computer assembly line. il Electronics 26:200, cover Jl '53

Computer erects its own vor, dme; airborne device provides course, distance data. P. Klass. il diags Aviation W 57:41+ D 15 '52

Computer progress; what it means in design, control. il Mod Ind 24:42-7 D '52

Computer simulates moving radar targets. W. B. Birtley. il diags Electronics 26:137-9 S '53

Computers; past, present, and future. W. H. MacWilliams, jr. bibliog Elec Eng 72:116-21 F '53

Computing machine developments in continental Europe. H. H. Aiken. Am Gas Assn Proc 1952:165-9

Computing machines in aircraft engineering. C. R. Strang. diags Elec Eng 72:43-8 Ja '53

Converters put data into useful form. il Aviation W 58:68+ My 18 '53

Coordinated systems necessary before railroads use giant brains; panel discussion. il Ry Age 134:74-5+ My 4 '53

Coupling analog for nonlinear systems with more than one degree of freedom. C. A. Ludeke and R. T. Evans. diags J Ap Phys 24:119-22 F '53

Curtiss-Wright Propeller division computes stresses and vibration. F. B. Stulen and J. A. DeVries. il diag S A E J 60:26-7 D '52

Damping of elastically supported element in a vacuum tube. S. Levy and others. il diag J Res Nat Bur Stand 50:71-4 F '53

Design features of the ERA 1101 computer. F. C. Mullaney. il diag Elec Eng 71:1015-18 N '52

Digital computer; ORDVAC. il R Sci Instr 23:774 D '52

Digital computer plays NIM. H. Koppel. il diag Electronics 25:155-7 N '52

Digital computer trend seen; airborne gunnery, bombing, and navigation computers. P. Klass. il Aviation W 57:27+ D 29 '52

Digital computers at Manchester university; abstracts. T. Kilburn and others. Elec J 150:1427 Ap 24 '53; Elec R (Lond) 152:957 Ap 24 '53; Discussion. Elec J 150:1427-8 Ap 24 '53

Digital data processing; key to technical progress. C. R. Wayne. il Gen Elec R 56:10-14 Jl '53

Digital to analog converter. M. Miller and others. il diags Electronics 25:127-9 O '52

Diode limiters simulate mechanical phenomena. C. D. Morrill and R. V. Baum. bibliog diags Electronics 25:122-6 N '52

D.c. amplifiers with low-pass feedback for electronic analogue computers. J. A. Colls. diags Wireless Eng 29:321-5 D '52

Election night; test for polls and robot brains. il Bsns W p30-2 N 1 '52

Electric analog for phase equilibria. R. F. Nielsen. diags Oil & Gas J 51:97 D 29 '52

Electrical analogies and electronic computers; surge and water hammer problems. H. M. Paynter. bibliog il diags Am Soc C E Proc 78[no 146]:1-28 Ag '52

Electrical computer for the solution of linear simultaneous equations. A. Many and others. diag R Sci Instr 24:112-16 F '53

Electronic age in computing; how new engineering robots are revolutionizing tedious and time-consuming computations in the oil industry. flow plan il diags Oil & Gas J 51:57-80 F 2 '53

Electronic brain controls lab tests; Timken-Detroit axle co. il diags Product Eng 24:195-6 Mr '53

Electronic brain reports for work; McIlroy pipeline-network analyzer. il Am Gas Assn Mo 25:18-19+ S '53

Electronic brain will turn election reporter. Ed & Pub 85:46 N 1 '52

Electronic calculator used for reservoir engineering and research. W. A. Bruce and R. N. Bonner. il diags Pet Eng 24:B66+ D '52

Electronic computer called the Maniac (mathematical analyzer, numerical integrator, and computer). Mech Eng 74:817-18 O '52

CALCULATING machines—*Continued*

Electronic computer; Commonwealth scientific and industrial research organization, Australia. M. Beard and T. Pearcey. il plan diags J Sci Instr 29:305-11 O '52

Electronic discrete variable computer; EDVAC. S. E. Gluck. bibliog diags Elec Eng 72:159-62 F '53

EDVAC drum memory phase system of magnetic recording. D. Eadie. diags Elec Eng 72:590-5 Jl '53

Electronics for insurer uses a practical reality. J. W. Braisie. Nat Underw 56:12 N 13 '52

Engineer and accountant work together on solving a technical problem. E. D. Cowles. diags Edison Elec Inst Bul 21:345-6 S '53

Engineering with digital computers. A. Keller. diags Tool Eng 31:125 Jl '53

Equation of state calculations by fast computing machines. N. Metropolis and others. diags J Chem Phys 21:1087-92 Je '53

Ferrites speed digital computers. D. R. Brown and E. Albers-Shoenberg. il diags Electronics 26:146-9 Ap '53

Ferro-electric materials as storage elements for digital computers and switching systems; abstract. J. R. Anderson. diags Electronics 26:204+ Jl '53

Five-channel analog correlator. M. J. Levin and J. F. Reintjes. bibliog il diags Tele-Tech 12:70-2+ Mr '53

Flying without wings; all-electronic flight simulator. diags Automotive Ind 108:43 Je 15 '53

Future use of digital computers. M. Rees. Machine Design 25:324+ O '53

Gas pipe networks analyzed by direct-reading electric analogue computor. M. S. McIlroy. bibliog il diags Am Gas Assn Proc 1952: 433-47; Same cond. Gas Age 110:31-5+ Jl 17 '52

Germanium photodiodes read computer tapes. L. Packer and W. J. Wray, jr. il diags Electronics 25:150-1 N '52

Giant brains could aid air defense. P. Klass. il Aviation W 58:67-8+ My 11 '53

High-speed number generator uses magnetic memory matrices. A. Wang. il diags Electronics 26:200+ My '53

How electric calculators solve water system distribution problems. G. W. Reid and L. B. Wolfenson. bibliog il diags Pub Works 84:78-9+ O '53

Industrial regulators; role of the Anacom. J. T. Carleton. il diags Westinghouse Eng 12:184-6 N '52; Same cond. Machine Design 24:173-4+ N '52

Interferometric analysis of airflow about projectiles in free flight. F. D. Bennett and others. bibliog il diags J Ap Phys 23:453-69 Ag '52

Intermittent-feed computer tape reader; five-phototube input system for digital computers reads teleprinter punched tape. B. G. Welby. il diags Electronics 26:115-17 F '53

IBM machine is applied to insurance in force file. Nat Underw (Life ed) 56:12 N 7 '52

Isolation circuits for analog computers. R. D. McCoy and F. R. Bradley. il diags Electronics 25:162-4 O '52

Laclede applies McIlroy network analyzer to design calculations for distribution system. E. F. Trunk. il map Am Gas J 179: 14-15+ S '53

Legal aspects of machine documentation. A. S. Davis, jr. bibliog Special Lib 44:5-10 Ja '53

Let punched-cards solve that problem. R. Habermann, jr. and F. J. Maginniss. il diag Gen Elec R 55:8-12 My '52; Same cond. Machine Design 24:302+ D '52

Life was too short; computors snap off solutions that took a lifetime, but they can't think creatively. A. E. Roach. Steel 131: 129 N 24 '52

Magnetic shaft-position digitizer uses phototubes to measure shaft rotation. A. J. Winter. diags Electronics 26:214+ Ag '53

Mathematicians needed to help brain; new electronic calculator. il Machine Design 25: 236 My '53

Mercury-delay-line storage system of the Ace pilot model electronic computer. E. A. Newman and others. il diags Inst E E Proc 100 pt 2:445-52 Ag '53

Miniature machine performs engineering calculations. il diags Product Eng 23:160-1 O '52

Missile computer ready for navy. il Electronics 25:6 S '52; diags Mech Eng 74:914-15 N '52

Modern flight simulator, electromechanical analogue computing equipment. W. W. Wood, jr. il diags Elec Eng 71:1124-9 D '52

NBS designs building block computer. il Product Eng 24:205 Mr '53

Neon lamp flip-flop and binary counter. H. A. Vuylsteke. diags Electronics 26:248+ Ap '53

New brains for oil; electronic punched-card computers. K. B. Barnes. il Oil & Gas J 51:138-40 D 22 '52

New electronic brain; new L3 GEDA. Franklin Inst J 254:443-4 N '52

New tempos in techniques; abstracts. T. O. Carlson. East Underw 53:29+ N 28 '52; Nat Underw 56:23+ N 27 '52

OARAC, new electronic computer, has one of largest memories yet used. il Elec Eng 72: 273-4 Mr '53; Abstract. Iron Age 198 Mr 5 '53

Perforated-tape reader for feeding input information into digital circuitry. S. Wald. il diag Tele-Tech 12:39+ Jl '53

Phase-bistable transistor circuit. H. Baker and others. diags Inst Radio Eng Proc 41: 1119-24 S '53

Power system analog and network computer; Detroit Edison co. il diags Power Eng 57: 68-70 F '53

Pratt & Whitney compares digital computer and analog. K. E. Fransson. S A E J 60:28 D '52

Production model of calculator, newest brain now installed; 701. Midwest Eng 5:11+ Ap '53; Same cond. il Elec Eng 72:464-6 My '53; Same cond. Mill & Factory 52: 298+ Je '53

Punched-card controlled aircraft navigation computer. E. H. Fritze. bibliog il diags Inst Radio Eng Proc 41:734-42 Je '53

Reservisor; memory drum-computer checks seat availability. C. Andrews. il diags Tele-Tech 11:57+ O '52

Re-thinking needed to make fullest use of electronic computers' potentials. R. B. Mitchell. Nat Underw (Life ed) 56:3-4 D 5 '52

Robot psychologist; electronic computer known as a psychological matrix rotator. il Mech Eng 75:406-7 My '53

Simple computer automatically plots correlation functions; Simcor. A. H. Schooley. bibliog il diags Tele-Tech 12:71-3+ My '53

Slide-in subassemblies simplify wiring and soldering of navy aircraft computer. W. F. Weber. il Electronics 25:292+ N '52

Solution of an hydraulic problem by analog computer. R. E. Glover and others. il diags Am Soc C E Proc 78 [no 134]:1-7 Je '52; Discussion. 79 [no D-134]:1-11 Je '53

Solution of differential equations on an electronic digital computer. C. F. Gradwell. diag Engineer 196:36-9 Jl 10 '53

Solution of transient stagewise operations on an analog computer. A. Acrivos and N. R. Amundson. il diags Ind & Eng Chem 45: 467-71 F '53

Solving automotive problems with automatic computers. A. W. Jacobson and others. il diags Automotive Ind 109:52-7+ S 1 '53

Structure-factor calculator. E. Stanley. diags J Sci Instr 29:334-5 O '52

Throwdown machine for telephone traffic studies. G. R. Frost and others. il diags Bell System Tech J 32:292-359 Mr '53

Touchdown; navy's TRODI calculator gives prompt correction data. il Iron Age 170: 212-13 N 6 '52

Transistor shift register and serial adder. J. R. Harris. diags Inst Radio Eng Proc 40:1597-602 N '52

Transistors in switching circuits. A. E. Anderson. il diags Inst Radio Eng Proc 40: 1541-58 N '52; Correction. 40:1732-3 D '52; Same. Bell System Tech J 31:1207-49 N '52

Transition probabilities in sharp and diffuse series of potassium. D. S. Villars. bibliog Opt Soc Am J 42:552-8 Ag '52

Typical block diagrams for a transistor digital computer. J. H. Felker. diags Elec Eng 71:1103-8 D '52

CALCULATING machines—*Continued*
Unitized pulse circuits speed computer design. H. Kenosian. il diag Electronics 25:156-7 O '52
UNIVAC on election night. A. F. Draper. il Elec Eng 72:291-3 Ap '53
Use of high-speed computing machines for oil-production problems. W. A. Bruce. bibliog diag Oil & Gas J 51:260-1+ N 17 '52
Uses and applications of the distribution system calculator. B. E. Hunt. bibliog il diags Am Gas Assn Proc 1952:516-30

See also
Adding machines
Counting machines and devices
Differential analyzers
Integrators
Monroe calculating machine company
Tabulating machines

Bibliography

Radio progress during 1952; electronic computers. il Inst Radio Eng Proc 41:473-6 Ap '53

Patents

Pertinent patents. diags Electronics 26:164+ Mr '53

Power supply

Linear-to-logarithmic voltage converter for use with analog computers. R. C. Howard and others. bibliog il diags Electronics 26:156-7 Jl '53
Precision power for computers. Aviation W 58:56 Ja 12 '53
Providing adequate power in computer drives. M. Felstein. bibliog il diags Machine Design 25:156-62 Ja '53
Regenerative amplifier for digital computer applications. J. H. Felker. bibliog il diags Inst Radio Eng Proc 40:1584-96 N '52
Source of computing voltage with continuously-variable output. R. W. Williams and G. M. Parker. diags J Sci Instr 29:322-4 O '52

Testing

Test pulse generator for digital computers. A. A. Gerlach. il diags Electronics 25:158-60 N '52

CALCULUS
See also
Laplace transformation

CALENDARS
Newest, oldest stand among 1953 calendars. il Ind Marketing 38:156-8 Ja '53

CALENDERS
All-purpose calender for circular-knit finishing. diag Textile World 102:176 N '52
Calendering line for rubber. il diag Westinghouse Eng 13:128-9 Jl '53
F-B three-roll tri-angular calender. il Rubber Age 72:526 Ja '53
Giant F-B Z calender. il Rubber Age 72:674-5 F '53
How to care for and maintain calenders and calender rolls today. A. Seaton. il diag Paper Tr J 137:14-16+ O 2 '53
Recent developments in rubber calenders. N. J. Elder. il diags India Rubber World 128:482-4 Jl '53
Regulation systems; key to higher supercalender production. W. R. Harris. il diags Paper Tr J 136:22-3 F 13 '53

CALIFORNIA
See also
Architecture, Domestic—California
Central Valley project, California
Earthquakes—California
Engineers—California
Irrigation—California
Mines and mineral resources—California
Petroleum industry and trade—California
Taxation—California
Water supply—California

Maps

Selected bibliography of southern California maps. E. L. Chapin, jr. 124p pa $3 Univ. of California press, Berkeley 4, Calif. '53

CALIFORNIA electric power company
Earnings are rising. Barron's 32:20-1 N 3 '52
Public utility securities. O. Ely. Comm & Fin Chr 177:712 F 12 '53
Stock offered. Comm & Fin Chr 177:1470-1 Ap 6 '53

CALIFORNIA institute of technology

Astrophysical observatory

Planets from Palomar. A. Beach. il diag Sci Am 188:17-21 F '53

CALIFORNIA water and telephone company
Stock offering. Comm & Fin Chr 177:522 F 2 '53

CALIFORNIUM

Isotopes

Spontaneous fission rate of Cf^{246}. E. K. Hulet and others. Phys R 89:878-9 F 15 '53

CALIPERS
Checking accuracy of twin-vernier calipers. J. E. Van Acker. diags Am Mach 97:148 Jl 20 '53

CALLAWAY mills company
Callaway helps LaGrange build a better school. M. B. Andrews. il Textile World 103:155+ Je '53

CALNAN, John J.
How does a million dollar a year contractor get that way? por Dom Eng 181:105+ F '53

CALORIMETERS and calorimetry
Annual calorimetry conference, 7th, Washington, Sept. 20, 1952. Science 117:71-2 Ja 23 '53
Calorimetric determination of the half-life of polonium. D. C. Ginnings and others. diag J Res Nat Bur Stand 50:75-9 F '53
Calorimetric evidence for the capillary condensation theory. I. Higuti and Y. Iwagami. bibliog diag J Phys Chem 56:921-7 O '52
Calorimetric heat exchange correction. H. D. Vasileff. J Ap Phys 23:979-83 S '52
Condensed gas calorimetry; heat capacity, heat of fusion, heat of vaporization, vapor pressures and entropy of diborane between 13°K. and the boiling point (180.32°K.). J. T. Clarke, E. B. Rifkin and H. L. Johnston. bibliog Am Chem Soc J 75:781-5 F 20 '53
Condensed gas calorimetry; the heat capacity and vapor pressure of saturated liquid diborane above the boiling point. E. B. Rifkin, E. C. Kerr and H. L. Johnston. bibliog Am Chem Soc J 75:785-8 F 20 '53
Condition for the creeping of a liquid past a mercury seal. R. S. Jessup. diags J Ap Phys 23:543-5 My '52
Determination of condensing unit capacity by a water calorimeter. A. P. Boehmer. bibliog diag Refrig Eng 61:284-5 Mr '53
Improved design of apparatus for measuring thermal conductivity of refractories and insulation at high temperatures. V. J. Duplin, jr. and E. S. Fitzsimmons. il diags Am Cer Soc J 35:226-9 S 1 '52
New twin micro-calorimeter, and the heat of transformation of α- into β-quinol. D. F. Evans and R. E. Richards. diags Chem Soc J p3932-6 O '52
Simple calorimeter for measurement of arc energy. M. W. Sims and A. M. Krakower. diags Automotive Ind 107:65+ O 1 '52

CALVERT CITY, Kentucky
Wooing and winning the plant town. il Mod Ind 25:50-3 Ap '53

Industries

Airco; its new plant breeds other new plants. il map Bsns W p 148-50+ Ap 18 '53
Calvert City finds its place on the chemical map. il Chem & Eng N 31:1739-41 Ap 27 '53

CALVIN, Melvin, 1911-
M. Calvin. por(cover) Chem & Eng N 30:5155 D 8 '52
Sunlight and life. Sci Am 188:37-8 F '53

CAMBRIDGE university, England
Early teaching of engineering. E. G. Sterland. Engineering 175:796-7, 826-7 Je 19-26 '53
Historical register of the University of Cambridge, supplement 1941-50. 570p 21s Cambridge univ. press, Bently House, 200 Euston road, London, N.W. 1 '52

Engineering school

Cambridge university Engineering department. il Engineer 194:682-4 N 21 '52; plan Engineering 174:669-72, pl 54 N 21 '52
Engineering department; report for the year 1951-52. Engineering 175:521-2 Ap 24 '53

CAMDEN, New Jersey

Railroads

Three-way benefits expected from station changes at Camden. il map plan Ry Age 134:47-9 F 16 '53

CAMERAS

Application of high speed flash tube to photographing the fundus of the eye in color. M. Jacobs and K. N. Ogle. il diags R Sci Instr 24:52-5 Ja '53

Camera recorder. il Aviation W 58:55-6 Ja 19 '53

Camera records position vs. time relationship. il diag Product Eng 24:231 Ap '53

Combined camera mechanisms speed picture taking; Karomat. il diags Product Eng 23:166-8 N '52

Data recording camera. il R Sci Instr 23:509 S '52

Electronic measurement of camera shutter speeds. A. V. Donnelly. diags Electronics 26:234+ Ag '53

High-speed camera. Mech Eng 75:228 Mr '53

High-speed rotating-mirror frame camera. B. Brixner. il diag Soc Motion Picture & Tv Eng J 59:503-11 D '52

Japanese cameras bid for the quality market. il Bsns W p 128-30 Mr 7 '53

Light-weight, versatile recording camera. il Product Eng 24:250 My '53

Mechanical drives in reducing camera. il diags Product Eng 24:168-71 My '53

New aid for foundation men; the borehole camera. il Eng N 150:39 Je 25 '53

New focus; camera makers draw bead on 3-D market. F. Henle. Barron's 33:9-10 My 11 '53

Photomicrography with the Polaroid-Land camera. E. R. Schwarz. il Mod Textiles Mag 34:35+ Ag '53

Research camera designed for study of self-luminous transient events. il diag Elec Eng 72:179 F '53; Same. R Sci Instr 24:185 F '53

Special camera expedites aircraft projects; Consolidated Vultee aircraft corp. C. L. Pogorel. il Automotive Ind 109:52-3 S 15 '53

Three-way camera records scope data. Aviation W 58:44 Ap 27 '53

See also

Lenses, Photographic

Moving picture cameras

Television cameras

Manufacture

Better methods cut retail price ten per cent; Argus camera, inc. il Factory Management 111:101 Ag '53

Every man his own inspector; every foreman his own boss at Graflex. E. J. Tangerman. il diags Am Mach 97:95-114 F 2 '53

Production improvements lessen cost; Argus cameras, inc. il Tool Eng 31:101-2 O '53

Rating

35 mm., Polaroid, and Stereo. il Consumers Res Bul 30:14-17 D '52

Twin-lens reflex cameras. il Consumers Res Bul 31:9-11 Mr '53

Small size

Tiny camera has fixed depth of field. il Product Eng 24:163 Ap '53

Standards

How to check camera shutters. V. E. Whitman. il Standardization 24:48-50 F '53

Testing

Collimator with variable focal length and tilted test plate for testing cameras. P. J. Lindberg. il diags Opt Soc Am J 42:748-51 O '52

Electronic instruments for production testing of camera shutters. R. W. Lavender. il diags Elec Eng 72:336-40 Ap '53

CAMERAS, Miniature. See Cameras—Small size

CAMERAS, Moving picture. See Moving picture cameras

CAMERAS, Television. See Television cameras

CAMERAS, X ray. See X ray cameras

CAMMELL Laird and company, limited

Statement by the chairman. J. C. Mather. Economist 167:694-5 Je 6 '53

CAMPHENAMINE

Structure of camphenamine. E. E. van Tamelen, W. F. Tousignant and P. E. Peckham. bibliog Am Chem Soc J 75:1297-302 Mr 20 '53

CAMPHENE

Mechanisms of racemization of camphene-8-C^{14}. J. D. Roberts and J. A. Yancey. bibliog Am Chem Soc J 75:3165-8 Jl 5 '53

Reactions of unsaturated compounds; the oxidation of camphene by chromic oxide. W. J. Hickinbottom and D. G. M. Wood. Chem Soc J p 1906-8 Je '53

CAMPHENILONE

Racemization in the camphene hydrochloride-isobornyl chloride rearrangement. W. R. Vaughn and R. Perry, jr. bibliog Am Chem Soc J 75:3168-72 Jl 5 '53

CAMPHOR

Dielectric relaxation in *d*-camphor. J. G. Powles. bibliog J Chem Phys 20:1648-9 O '52

CAMPS

Insurance requirements

Camps group views workmen's compensation, public liability, other cover problems. Nat Underw 56:28 N 13 '52

CAMPS, Military

See also

Water supply for armies

CAMPS, Tourist. See Tourist camps, hostels, etc.

CAMS

Analytical methods for deriving cam profiles. Z. Jania. diags Tool Eng 31:81-8 O '53

Cam action dies. il Iron Age 171:146-7 F 26 '53

Cam calculator. il Tool Eng 30:139 Je '53

Cam-controlled sewing machine sews complex stitches; Elna corp. of America, inc. il Machine Design 25:140 Mr '53

Cam curvature. A. R. Holowenko and A. S. Hall. diags Machine Design 25:170-7 Ag; 162-9 S '53 (to be cont)

Cam curves aren't tough. J. E. Hyler. il Steel 132:70-1 Ja 12 '53

Cam for jig clamping. R. Mery. diags Am Mach 96:145 D 8 '52

Cam operated fixture simplifies machining of spiral grooves. J. H. Pauli, jr. diags Am Mach 97:157 Jl 6 '53

Entire cam contour checked in 40 seconds; optical gaging. il Am Mach 97:140 Ag 31 '53

General considerations in cam design; abstract. A. Goloff. S A E J 61:112-13 F '53

Mechanical linearizer. A. S. Gutman. il Machine Design 25:175 My '53

Polydyne cam design. D. A. Stoddart. bibliog diags Machine Design 25:121-35 Ja; 146-54 F; 149-64 Mr '53

Side cams solve die-design problems; drawings with text. J. R. Paquin. Am Mach 97:89-91 Ag 31 '53

Simple cam made practical by increasing speed. L. Kasper. diags Mach 60:207-8 O '53

CAMS, Plastic

Plastic cams control automatic sewing machine. il diag Product Eng 24:140-3 Mr '53

CAN labels. See Labels

CAN lining. See Cans—Lining

CANADA

Canada, a dynamic neighbor. H. G. Hilton. Comm & Fin Chr 177:8+ sec 2 Je 25 '53

Canadian views United States-Canadian interrelations. S. Armour. Comm & Fin Chr 178:258+ Jl 23 '53

See also

Advertising—Canada

Banks and banking—Canada

Budget—Canada

Building—Canada

Chemical industries—Canada

Electric apparatus industry—Canada

Engineering—Canada

Forests and forestry—Canada

Gas, Natural—Canada

Gold mines and mining—Canada

Hydroelectric plants—Canada

Investments, Foreign (in Canada)

Labor and laboring classes—Canada

Mineral industries—Canada

Mines and mineral resources—Canada

Paper industry and trade—Canada

CANADA—See also—*Continued*

Paper mills—Canada
Petroleum—Canada
Petroleum industry and trade—Canada
Petroleum pipe lines—Canada
Population—Canada
Railroads—Canada
Roads—Canada
Steel industry and trade—Canada
Television broadcasting—Canada
Trust companies—Canada
Wood pulp—Canada

Bibliography

Books on Canada. K. Wales. Special Lib 44:147 Ap '53

Reference books on Canada; selected bibliography for a business library. R. M. Dow. Special Lib 44:150-1 Ap '53

Selected bibliography of Canadian geography with imprint, 1952. (Bibliog. ser. no. 10) 52 l Dept. of mines and technical surveys, Geographical branch, Ottawa, Canada '53

Biography

Canadian who's who, 1949-1951. v5 1159p $24 Trans-Canada press, 392 Bay st, Toronto 1 '52

Who's who in Canada, 1951-52; an illustrated biographical record of men and women of the time. B. M. Greene, ed. 40th ed 1536p Musson book co, 103-107 Vanderhoof av, Toronto 17; Macmillan co, 60 Fifth av, New York 11 '52 ($16)

Commerce

Canada puts more chips on good neighbor trade. Bsns W p 168-70 Ja 24 '52

Development of Canada's foreign trade. C. D. Howe. Roads & Eng Constr 90:124+ O '52

One-customer economy. Economist 166:541-2 F 21 '53

Purchasing agents favour more trade outside U.S. Can Chem Process 37:20-1 Mr '53

What we need is sustained world trade without monetary restrictions. M. W. Sharp. Pulp & Pa of Can 54:94-6 Jl '53

Defenses

Defense jeopardized by government's attitude toward roads. C. W. Gilchrist. Roads & Eng Constr 91:68 Jl '53

Engineering highlights of Canada's defense construction program. R. G. Johnson. Roads & Eng Constr 91:126+ F '53

Economic conditions

Canada appraises the peace prospects. C. M. Short. Banking 45:84 Je '53

Canada in 1952 and after. J. Muir. Comm & Fin Chr 177:197+ Ja 15 '53

Canada; lively sales, low margin. Bsns W p 146 Je 20 '53

Canada looks at problems of 1953. D. C. Abbott. Comm & Fin Chr 177:290+ Ja 22 '53

Canada not oversold in U.S.; report of Canadian committee of IBA. Comm & Fin Chr 176:2357+ D 18 '52

Canada's economic climate. J. D. Gibson. Trusts & Estates 92:445-7 Je '53

Canadian economic scene. W. T. G. Hackett. Comm & Fin Chr 177:792-3 F 19 '53

Canadian Finance Minister outlines country's position. S. J. Cook. Chem & Eng N 31:1111 Mr 16 '53

Canadian picture is still bright. H. S. Backus. Comm & Fin Chr 177:3+ sec 2 Je 25 '53

Changing economic climate of Canada. W. F. Lougheed. Comm & Fin Chr 176:1820+ N 13 '52

Developing dominions. Economist 166:612-14 Mr 7 '53

Economic conditions abroad (cont.) For Comm W 48:4 N 3; 3+ D 8 '52; 49:6+ Mr 16; 3+ Je 8 '53

Expanding economy. il map Economist 166:525-42 F 21 '53

Looking for 1953's best market? then train your sights on Canada. A. G. Mezerik. il map Sales Management 70:56-8+ Ja 15 '53

Prospects for 1953; survey of business conditions in Canada. H. H. Rogge. Roads & Eng Constr 91:56 Ja '53

Quebec; clue to Canada's future! C. S. Eaton. Comm & Fin Chr 176:2228 D 11 '52

Shooting for the biggest year yet. Bsns W p 162+ Ja 24 '53

Economic relations

United States

Your business and Canada; abstract. Management R 41:577-8 S '52

Foreign relations

Canada's diplomats. Economist 166:154-5 Ja 17 '53

United States

Canada and the Republicans. Economist 167:607-8 My 30 '53

Geological survey

Geological survey of Canada field program, 1953. Can Min J 74:73 Jl '53

Government publications

See Government publications—Canada

Industries and resources

Canada feels its strength. Economist 167:227-8, 310-11 Ap 25-My 2 '53

Canada, land of the future. A. A. Tousaw. East Underw 53:14 D 12 '52

Canada's development and its prospects. H. H. Wrong. Comm & Fin Chr 176:2347+ D 18 '52

Changing land; oil, mining spawn many enterprises in western Canada. J. Montagnes. Barron's 33:25 Mr 23 '53

Financing Canada's industrial expansion. J. R. Meggeson. Comm & Fin Chr 178:206+ Jl 16 '53

Record predicted for investment in Canada. For Comm W 49:3 Mr 30 '53

Three O's in Canada; oil, ore and optimism. I. U. Cobleigh. Comm & Fin Chr 176:1616 O 30 '52

Toronto; once a year, the world's marketplace; Canadian international trade fair. il Bsns W p 122-4+ Je 20 '53

National library

Canada's National library. Special Lib 44:151 Ap '53

Canada's National library. J. Lunn. Special Lib 44:23-5 Ja '53

Statistics

New metropolitan areas for Canada. Sales Management 69:173-4+ N 10 '52

Taxation

Lower taxes in Canada. Economist 166:559-60 F 28 '53

CANADA southern railroad

Good yields in guaranteed rails. R. Carleson. Mag of Wall St 92:112+ Ap 18 '53

CANADAIR, ltd.

Canadair may build Britannia for RCAF. Aviation W 58:27 Mr 23 '53

So they named it General Dynamics. il Fortune 47:134-7+ Ap '53

CANADAY, Ward Murphey, 1885-

Businessmen in the news. por Fortune 47:61 Ap '53

CANADIAN agricultural chemicals association

New association for agricultural chemicals. Can Chem Process 37:22 Jl '53

CANADIAN association of equipment distributors

Annual meeting, 10th, Montreal, April 13-14. Roads & Eng Constr 91:113-23+ My '53

A.E.D. and C.A.E.D. co-operation. S. J. Oechsle. Roads & Eng Constr 91:140 My '53

Canadian association of equipment distributors; list of members. Roads & Eng Constr 91:226 Je '53

CANADIAN broadcasting corporation

CBC proposes limit on U.S. programs. For Comm W 48:29 N 17 '52

Library

CBC radio and television library in Montreal. K. M. Greer. Special Lib 43:407-8 D '52

CANADIAN construction association

Annual meeting, 35th, Montreal. Eng N 150:26 Ja 29 '53

Annual meeting, 35th, Montreal, Jan. 18-21. Roads & Eng Constr 91:108-12+ F '53

Maritime regional meeting, Digby, Nova Scotia, Sept. 6-9. Roads & Eng Constr 90:109-10+ O '52

CANADIAN Fairbanks-Morse company, limited

Brief histories of some of our original 1903 advertisers or their successors. Pulp & Pa of Can 54:292 My '53

CANADIAN forestry association

Canadian forestry association teaches a large class. R. Black. Pulp & Pa of Can 54:207+ My '53

CANADIAN goods roads association

Annual meeting, 33d, Quebec, Oct. 20-23. Roads & Eng Constr 90:113-22+ N '52

Canadian counterpart of P.A.R. launched. Roads & Eng Constr 91:90+ Jl '53

Managing director's report. C. W. Gilchrist. Roads & Eng Constr 90:165-8 N '52

Report of the operating committee. L. H. Kain. Roads & Eng Constr 90:168+ N '52

Report on membership. K. D. MacDonald. Roads & Eng Constr 90:172+ N '52

Thirty years of road progress highlighted by revisit to Victoria; program. Roads & Eng Constr 91:134+ Ag '53

CANADIAN industries, limited

C-I-L set-up for dreaming. Can Chem Process 36:14+ N '52

Formed by fusion, finished by fission; life cycle for CIL? il map Chem W 72:18-20 Ja 17 '53

Is CIL to lose a parent? Can Chem Process 36:22-3 S '52

CANADIAN institute of mining and metallurgy

Annual meeting, 5th, Edmonton, April 13-16. Can Min J 74:86-7 My '53

CANADIAN institute on sewage and sanitation

Annual meeting, Montebello, Que. Nov. 3-5; with guided discussions. Munic Util 90:25-33+ N '52

Annual meeting, 19th, Montebello, Que. Nov. 3-5; with abstracts of papers. Water & Sewage Works 100:76-9 F '53

CANADIAN international trade fair. See Fairs

CANADIAN javelin foundries and machine works, ltd.

Extensive iron ore operations projected. Barron's 33:14-15 Jl 13 '53

CANADIAN life insurance officers association

Annual meeting, 60th, Montebello, Quebec. Weekly Underw 168:1397+ My 23 '53; East Underw 54:12+ My 22; 3-4+ My 29 '53; Nat Underw (Life ed) 57:1+ My 22 '53

CANADIAN liquid air company, ltd.

Half century of progress in industrial gas application. Roads & Eng Constr 91:80 Ja '53

CANADIAN Pacific railway

Annual report, 72d. Ry Age 134:115-18 Ap 6 '53; Same. Comm & Fin Chr 177:1440-2 Ap 2 '53

Canpacs miss the boom. Economist 166:755-6 Mr 14 '53

Statement by the president. W. A. Mather. Economist 167:398-400 My 9 '53

CANADIAN prospect, ltd.

Stock offering. Comm & Fin Chr 177:722 F 16 '53

CANADIAN pulp and paper association

Annual meeting, 40th, Montreal, Jan. 28-30. Pulp & Pa of Can (Convention no) 54:131+ [F] '53

Annual meeting, Montreal, Jan. 28-30. Paper Tr J 136:16 F 6 '53

Presidential parade. H. Crabtree and others. Pulp & Pa of Can 54:148-54 My '53

Industrial relations section

Annual meeting, 7th, Montreal, March 3-5. Pulp & Pa of Can 54:86-9 Mr '53

Fall meeting, St Adele, Que. Oct. 15-16; with abstracts of papers. Pulp & Pa of Can 53:96-9 N '52

Technical section

Annual meeting, Montreal, Jan. 27-30; tentative program. Paper Tr J 136:22+ Ja 16 '53

Annual meeting, 39th, Montreal. Pulp & Pa of Can (Convention no) 54:144-62+ [F] '53

Annual meeting, 39th, Montreal, Jan. 28-30; with abstracts of papers. Paper Ind 34:1484-8 Mr '53

Annual meeting, 39th, Montreal; with abstracts of papers. Paper Tr J 136:18+ F 6 '53

Forces of technical progress. J. S. Bates. il Pulp & Pa of Can 54:170-2 My '53

Summer meeting, Saranac Lake, June 4-6; with abstracts of papers. Paper Tr J 136:19-21 Je 12 '53

Summer meeting, Saranac Lake, N.Y. June 4-6. Pulp & Pa of Can 54:114-18 Je '53

Woodlands section

Annual meeting, 35th, Montreal, March 25-27. Paper Tr J 136:24 Ap 3 '53

Annual meeting, 35th, Montreal, March 25-27; with abstracts of papers. Pulp & Pa of Can 54:126-35 Ap '53; Paper Ind 35:230+ My '53

Chairman's annual report, 1952. J. B. Matthews. Pulp & Pa of Can 54:136-8 Ap '53

Chairman's interim report, 1952. Pulp & Pa of Can (Convention no) 54:270-1 [F] '53

Field meeting on silviculture, Manitoulin Island, Sept. 10-12. Pulp & Pa of Can 53:143+ O '52

Protecting the forests from all evils. W. A. E. Pepler. Pulp & Pa of Can 54:202-4 My '53

CANADIAN sanitation equipment association

Annual meeting, Montebello, Que. Munic Util 90:34+ N '52

CANADIAN stock exchange

McCormick dedicates opening of Canadian stock exchange. Comm & Fin Chr 177:1524+ Ap 9 '53

CANADIAN waterworks equipment association

Annual meeting, Buffalo, April 6-8. Munic Util 91:36+ Ap '53

CANAL lining

Trimmer and concrete liner finish Colorado canal; illustrations with text. Constr Methods 35:55 F '53

Use of canal linings in American irrigation schemes. il diags Engineer 195:199-202 F 6 '53

CANALS

Tests show canal loads lighter than assumed. diag Eng N 149:45 N 6 '52

Traffic jam hampers movement of oil on crowded Gulf Intracoastal canal. D. J. Warren. il map Nat Pet N 44:58-9 S 24 '52

See also

Irrigation canals

Suez canal

Canada

Canadian canal traffic reaches record level. For Comm W 49:23 My 18 '53

Czechoslovakia

Czechoslovakia plans to complete Oder-Danube canal construction. For Comm W 49:22 F 9 '53

Russia

Russia building huge canals for irrigation, inland waterways. Eng N 150:58-9 Je 18 '53

Texas

Navigation channel to Victoria, Tex. A. B. Davis, jr. maps diag Am Soc C E Proc 78 [no 154]:1-17 O '52

CANANDAIGUA, New York

Canandaigua, N.Y. Bsns W p 143 Je 27 '53

CANCELLATION of orders

See also

Contracts, Government—Termination

CANCER

Agent from *E. coli* causing hemorrhage and regression of an experimental mouse tumor; some nitrogenous components of the phospholipide moiety. M. Ikawa and others. bibliog diag Am Chem Soc J 75:3439-42 Jl 20 '53

Agent from *E. coli* causing hemorrhage and regression of an experimental mouse tumor; the component fatty acids of the phospholipide moiety. M. Ikawa and others. bibliog Am Chem Soc J 75:1035-8 Mr 5 '53

Analogs of the carcinogen 2-acetylaminofluorene; the isomeric 4-acetylaminofluorene. J. H. Weisburger, E. K. Weisburger and H. P. Morris. bibliog Am Chem Soc J 74:4540-3 S 20 '52

Analysis of dose-response in relation to mechanism of pulmonary tumor induction in mice. W. E. Heston and M. A. Schneiderman. Science 117:109-11 Ja 30 '53

Cancer control in the United States. R. F. Kaiser. il Pub Health Rep 67:877-82 S '52

Cancer control projects and research activities. Pub Health Rep 68:95-8 Ja '53

Cancer in children. Spectator (Endorsement no 1952-1953) 160:18-19 D '52; Nat Underw (Life ed) 56:5 D 5 '52

CANCER—*Continued*

Carcinogenic nitrogen compounds; benzacridines, benzocarbazoles, and related compounds bearing ethyl and propyl groups. N. P. Buu-Hoï and others. Chem Soc J p4867-9 D '52

Carcinogenic nitrogen compounds; fluorine-containing 1 : 2- and 3 : 4-benzacridines. N. P. Buu-Hoï and P. Jacquignon. Chem Soc J p4173-5 N '52

Carcinogenic nitrogen compounds; Friedel-Crafts reactions with *m*- and *p*-fluorotoluene. N. P. Buu-Hoï and N. D. Xuong. Chem Soc J p386-8 F '53

Carcinogenic nitrogen compounds; indeno(3′ : 2′-2 : 3)indoles, benzindeno(3′ : 2′-2 : 3)indoles, and related compounds. N. P. Buu-Hoï and N. D. Xuong. Chem Soc J p2225-8 Je '52

Chromate workers have high rate for cancer of respiratory system. Safety Maint & Prod 104:71-2 N '52

Cigarette smoke and the incidence of primary neoplasm of the lung in the albino mouse. J. M. Essenberg. il diag Science 116:561-2 N 21 '52

Cigarette smoking and cancer of the lung; abstract. E. A. Graham and others. Science 116:521-2 N 14 '52

Dean Burk honored for one quantum reaction. Chem & Eng N 31:998 Mr 9 '53

Did you give him cigarettes? smoking and lung cancer. Economist 165:883 D 27 '52

3′,7′-Dihydroxy-1,2,5,6-dibenzanthracene. L. S. Hornig. bibliog Am Chem Soc J 74:4572-7 S 20 '52

Industrial noise and cancer received most attention in 1952. H. H. Schrenk. Ind & Eng Chem 45:sup 109A-10A F '53

N-fluoroacetyl derivatives of carcinogenic amines. E. Sawicki and F. E. Ray. bibliog Am Chem Soc J 75:4346 S 5 '53

N-trifluoroacetyl derivatives of carcinogenic amines. E. Sawicki and F. E. Ray. Am Chem Soc J 75:2266-7 My 5 '53

New York state cancer control program. V. H. Handy and P. R. Gerhardt. Pub Health Rep 67:1225-32 D '52

Occupational factors in lung cancer. L. Breslow. bibliog Pub Health Rep 68:286-8 Mr '53

Occupational skin cancer in a group of tar workers. R. E. W. Fisher. A M A Archives Ind Hygiene & Occup Med 7:12-18 Ja '53; Abstract. Nat Safety N 67:60+ My '53

Potential carcinogens; Δ^6-steroids. D. L. Garmaise and C. W. Shoppee. Chem Soc J p245-9 Ja '53

Preparation and properties of some additional carcinogen-protein conjugates. R. M. Peck, G. L. Miller and H. J. Creech. bibliog Am Chem Soc J 75:2364-6 My 20 '53

Preparation of polycyclic aromatic hydrocarbons as potential carcinogens. G. Wolf. bibliog Am Chem Soc J 75:2673-8 Je 5 '53

Psychological impact of cancer surgery. A. Sutherland. Pub Health Rep 67:1139-43 N '52

Psychosocial aspects of cancer; aggregate community picture. E. Nicholson. Pub Health Rep 68:153-6 F '53

Psychosocial aspects of cancer; professional attitudes and terminal care. C. S. Cameron. Pub Health Rep 67:955-9 O '52

Respiratory cancer. Safety Maint & Prod 106:51-2 Ag '53

Seminar on cytological phenomena in ascites-sarcomas of rats. S. Makino. bibliog diags Franklin Inst J 255:257-63 Mr '53

Sequence of emotional reactions in radical mastectomy patients. M. Bard. Pub Health Rep 67:1144-8 N '52

Smoking a cause of cancer. Consumers Res Bul 32:24-5 Ag '53

Studies on carcinogenic hydrocarbons; dissociation constants and free energies of formation of complexes with 2,4,7-trinitrofluorenone. K. H. Takemura, M. D. Cameron and M. S. Newman. Am Chem Soc J 75:3280-2 Jl 5 '53

Studies on the toxicity and skin effects of compounds used in the rubber and plastics industries; carcinogenicity of carbon black extracts. E. von Haam and F. S. Mallette. il A M A Archives Ind Hygiene & Occup Med 6:237-42 S '52

Terminal cancer patients receive home care. Pub Health Rep 68:95 Ja '53

Thiophen derivatives of potential biological interest; the chemistry of 5-substituted thiophen-2-aldehydes. N. P. Buu-Hoï, N. Hoán and D. Lavit. Chem Soc J p4590-3 D '52

Typical patient and family attitudes. A. Thomas. Pub Health Rep 67:960-2 O '52

Ultraviolet spectra and carcinogenic activities of some fluorene and biphenyl derivatives. R. B. Sandin and others. bibliog Am Chem Soc J 74:5073-5 O 20 '52

Statistics

Morbidity and mortality experience among chromate workers; respiratory cancer and other causes. H. P. Brinton and others. Pub Health Rep 67:835-47 S '52

CANCER cytology, Southern society of. See Southern society of cancer cytology

CANCER research

Recent progress in cancer research. J. R. Heller. il Pub Health Rep 68:309-16 Mr '53

Reconsideration of the somatic mutation theory of cancer in the light of some recent developments. J. C. Fardon. bibliog Science 117:441-5 Ap 24 '53

Ultraviolet microscopy of the living cell's response to lethal X-radiation. P. O. Montgomery and S. Warren. bibliog il Science 117:589-91 My 29 '53

CANDY

Manufacture

Chemistry in candy manufacturing. W. H. Shearon, jr. il Chem & Eng N 30:4606-10 N 3 '52

Compound coatings find versatile uses in confections. A. E. Leighton. il Food Eng 24:102-4+ N '52

Diffusion problem whipped; foam-candy continuously produced. il diag Food Eng 25:56-7+ F '53

Improved candy-handling technique doubles output on fudge line; Just Born's. il Food Eng 25:87 Ja '53

Mars revolutionizes process. L. E. Slater. flow sheet(p 120-3) il Food Eng 25:57-60+ My '53

Six mixers do the work of 28; Cracker Jack co. W. R. Holtz. il diag Food Eng 24:109-11+ D '52

Streamlining gets Vernell's more output with less shifts. R. Bloomberg. il Food Eng 25:63-6 Je '53

Sweets at 250 lb. an hour; Just Born's Bethlehem, Pa. confectionery plant. J. V. Ziemba. il Food Eng 24:97+ N '52

Variety by flexibility; Schoenith, inc. E. D. White. il Food Eng 25:67+ F '53

CANDY boxes

New Laura Secord; Canadian candy firm's package modernization without loss of identity. il Mod Packaging 26:132 N '52

CANDY factories

Air conditioning

Dehumidification helps to process sticky sweets; Kroger company's candy manufacturing plant. R. G. Flohr. il diag Refrig Eng 61:292+ Mr '53

Employees

Earnings in selected industries, late 1951 and early 1952; candy and other confectionery products. L. E. Lewis. Mo Labor R 75:413-14 O '52

Equipment

Diffusion problem whipped; foam-candy continuously produced. il diag Food Eng 25:56-7+ F '53

Engineers keep price at five cents; Cracker Jack co. W. R. Holtz. il Food Eng 25:59-61 Ja '53

Foreign units accent NCA show; illustrations with text. Food Eng 25:70-1 Ag '53

Improved candy-handling technique doubles output on fudge line; Just Born's. il Food Eng 25:87 Ja '53

Mars revolutionizes process. L. E. Slater. flow sheet(p 120-3) il Food Eng 25:57-60+ My '53

New system for candies; Heide's carton filler. il diag Mod Packaging 26:108-9 Jl '53

CANDY factories—Equipment—*Continued*
Six mixers do the work of 28; Cracker Jack co. W. R. Holtz. il diag Food Eng 24:109-11+ D '52
Streamlining gets Vernell's more output with less shifts. R. Bloomberg. il Food Eng 25:63-6 Je '53
Sweets at 250 lb. an hour; Just Born's Bethlehem, Pa. confectionery plant. J. V. Ziemba. il Food Eng 24:97+ N '52
Variety by flexibility; Schoenith, inc. E. D. White. il Food Eng 25:67+ F '53

Quality control

Sharp uniformity control trims costly variation losses; Brock candy co. E. D. White. il Food Eng 25:80-1+ Mr '53

CANDY trade
Curtailed candy. Bsns W p52-3 Je 27 '53
Why Pangburn's hep with the hot-rod set. W. Lee. il Sales Management 70:52+ F 1 '53

Advertising

Salesmen's ad requests induce chain reaction; Hoffman Candy focused promotion on ten-cent bar, sell thru cash-and-carry jobbers. J. H. Collins. Sales Management 69:102-3 N 1 '52

CANNED fish
Duty not changed on canned tuna, bonito. For Comm W 48:31 D 8 '52
Pace-setting fish cannery; French sardine co. J. Joseph. flow sheet il Food Eng 25:81-4+ F '53
Salmon pack; Pacific canners face mounting cost squeeze. R. H. Syring. Barron's 33:17-18 Ap 6 '53

Advertising

New national advertiser in the making; Whitney & co.'s salmon. L. F. Thomann. il Ptr Ink 241:37 N 28 '52

CANNED food
Canners get their score at cutting bee. il Bsns W p33-4 Ja 31 '53
Flavor effects may set pesticide residue limits. Chem & Eng N 31:1000 Mr 9 '53
Frozen foods in cans. il Mod Packaging 26:85-90+ N '52
Natural resources from the sea and soil available to New England. L. C. Jenness. bibliog Ind & Eng Chem 44:2526-7 N '52
Tin in canned foods; reduced limits recommended. Chem Age (Lond) 68:175 Ja 24 '53

See also
Canned fish
Canned meat
Canneries
Canning and preserving

Testing

One-minute test for package O_2. C. C. Taylor and S. C. Danforth. il diags Food Eng 24:75+ N '52

CANNED meat
Armour meat products; nominated for packaging's Hall of fame. il Mod Packaging 26:112-17+, cover Je '53
Quality batches figured simply; equations and handy charts to gage amounts of water, carbohydrates, and seasoning to add to meats. A. Belanger. Food Eng 25:58-9 F '53

CANNED milk
Progress in canned fresh milk; International milk processors, inc. il Food Eng 24:90-2 N '52

CANNERIES

Equipment

Aseptic canning improves corn; Oconomowoc canning co. il Food Eng 25:74-5 F '53
Automatic unit fills beans into cans. il Food Eng 25:111 Jl '53
Controls optimize canning. L. E. Slater. il diags Food Eng 25:85-91+ F '53
Fast end-over-end retorting; new agitating sterilizer speeds heat penetration. il diag Food Eng 25:70-2 F '53
Integrate complex operation and make a better feed from peel; Minute maid corp. feed mill. W. H. Harte. flow sheet(p 118-21) il Food Eng 25:84-6+ Mr '53
Pace-setting fish cannery; French sardine co. J. Joseph. flow sheet il Food Eng 25:81-4+ F '53
Pimento canning gets a technological boost; Pomona products co. E. D. White. il Food Eng 25:64-6 S '53
Quality at a fast pace; Brandywine mushroom corp. J. V. Ziemba. flow sheet(p 120-3) il Food Eng 25:64-6+ Jl '53
Thermal engineering scores in new canning process; Sterilmatic process. C. R. Havighorst. flow sheet(102-5) il Food Eng 25:76-80+ F '53
These vapor separators cut concentrate losses 92 per cent; Minute maid corp. W. F. Mantey. il Food Eng 24:105+ N '52
They do things the easy way; Gerber's baby foods. I. C. Miller. il diag Food Eng 25:66-9+ Ag '53
Tomato-paste process improved by new idea. diag Food Eng 25:73+ F '53
Trends speed cannery pace; Mammoth Springs canning co. J. P. Kraemer. il Food Eng 24:98-101 N '52
What's new at annual show; illustrations with text. Food Eng 25:88-91 My '53
World's largest plant for freezing pineapple juice. H. D. Jefferson and R. H. Lloyd. flow diag il Refrig Eng 60:1167-71 N '52

Management

Why Green Giant grows. L. E. Slater. il Food Eng 25:66-8 My '53

Waste

Disposal of food processing wastes by spray irrigation. N. H. Sanborn. il Sewage & Ind Wastes 25:1034-43 S '53
Irrigation for cannery waste disposal. il Pub Works 84:90 Ja '53
Periodate oxidation of pea cannery wastes. R. B. Flay. bibliog Sewage & Ind Wastes 25:953-7 Ag '53

CANNING and preserving
Aseptic canning improves corn; Oconomowoc canning co. il Food Eng 25:74-5 F '53
Automation for tomorrow's process; aseptic canning process. flow sheet il Food Eng 25:102-5 O '53
Better color, better flavor in processed mushrooms by adding ascorbic acid. J. C. Bauernfeind and others. bibliog il Food Eng 24:89-92 D '52
In-can baking perfected; Interstate bakeries corp. D. N. League. il Food Eng 25:86-7+ My '53
Progress in canned fresh milk; International milk processors, inc. il Food Eng 24:90-2 N '52
Thermal engineering scores in new canning process; Sterilmatic process. C. R. Havighorst. flow sheet(p102-5) il Food Eng 25:76-80+ F '53
Tomato-paste process improved by new idea. diag Food Eng 25:73+ F '53

CANNON. See Guns (ordnance)

CANONICAL ensembles. See Statistical mechanics

CANS
Canning; dual-plate gains favor. J. B. Delaney. Iron Age 171:37 Ja 8 '53
Dripless, solderless can; new Lux liquid detergent. il Mod Packaging 26:88-9 Jl '53
Metal cans; shipments in terms of net tons of steel consumed, 1944-1952; tabulation. Steel 132:168 Ja 5 '53
Sterilizes can seams separately to cut hot-holding time. il diags Food Eng 25:67 Mr '53
X-ray level-checker OK's sealed cans. il Factory Management 111:87 Je '53

See also
American can company
Oil cans
Tin cans

Lining

Coming up on the inside. il Chem W 71:43-4 N 1 '52

CANS, Aluminum
Aluminum film cans automatically formed and finished. S. M. Tucker. il Materials & Methods 36:168+ D '52

CANS, Oil. See Oil cans

CANTHARIDIN
Stereospecific synthesis of cantharidin. G. Stork and others. bibliog Am Chem Soc J 75:384-92 Ja 20 '53

CANTILEVER bridges. See Bridges, Cantilever

CANTON ISLAND
See also
Fish trade—Canton Island

CANTOR, Georg, 1845-1918
Is there an infinity? H. Hahn. Sci Am 187:76-80+ N '52

CANVASSING. See Door-to-door selling

CANYONS, Submarine
Terraced canyons. W. H. Hobbs. map diag Science 117:461-3 Ap 24 '53
Turbidity currents and submarine slumps, and the 1929 Grand Banks earthquake. B. C. Heezen and M. Ewing. map Am J Sci 250:849-73 bibliog(p871-3) D '52

CAPACITANCE, Electric. See Electric capacitance

CAPACITANCE pressure gages. See Pressure gages

CAPACITORS. See Electric capacitors

CAPEHART, Homer Earl, 1897-
American system of government works; summary of address before American paper and pulp association annual meeting. por Paper Tr J 136:68 F 20 '53

CAPILLARIES
Adsorption in capillaries. C. Pierce and R. N. Smith. bibliog J Phys Chem 57:64-8 Ja '53
Method for testing capillary tubes; proposed ASRE standard. diag Refrig Eng 61:sup 1-4 Ag '53 (reprints 35c)
New approach to gas flow in capillary systems. R. M. Barrer. bibliog J Phys Chem 57:35-40 Ja '53
Practical method of selecting capillary tubes. J. R. Prosek. diags Refrig Eng 61:644-7 Je '53; Discussion. 61:875+ Ag '53
Properties of capillary-held liquids. P. C. Carman. bibliog diags J Phys Chem 57:56-64 Ja '53
Streaming potentials across glass capillaries for sinusoidal pressure. R. G. Packard. bibliog diags J Chem Phys 21:303-7 F '53

CAPILLARITY
Calorimetric evidence for the capillary condensation theory. I. Higuti and Y. Iwagami. bibliog diag J Phys Chem 56:921-7 O '52
Capillary condensation in contact zones between nonporous particles of a powder. I. Higuti and H. Utsugi. diag J Chem Phys 20:1180-1 Jl '52
Capillary rise of water in soils under field conditions. G. J. Bouyoucos. bibliog J Phys Chem 57:45-9 Ja '53
See also
Brownian movements

CAPITAL
Business prospects and the capital markets. R. L. Reierson. Comm & Fin Chr 176:2489+ D 25 '52
Can small businesses get the capital they need? E. B. George. Dun's R 60:115-45 O '52
Capital flotations in the United States in Dec. and for the twelve months of calendar year 1952. Comm & Fin Chr 177:1787+ Ap 27 '53; Correction. 177:2001 My 11 '53
Capital investment outlook. D. M. Keezer. Comm & Fin Chr 177:463+ Ja 29 '53
Capital markets active in first half of 1953. Comm & Fin Chr 178:118-19 Jl 9 '53
Capital outlays gain steadily. Steel 132:53 Je 15 '53
Changing concepts of capital exhaustion; review of Changing concepts of business income. Pub Util 50:562-6 O 23 '52
Corporate demands on the capital market. Fed Res Bul 39:323-9 Ap '53
Economics of savings, capital flow, and mortgages. M. Nadler. Comm & Fin Chr 177:1444-5 Ap 2 '53
Equity capital vs. loans. R. P. Soule. Burroughs Clearing House 37:11 Ja '53
High capital outlays seen in first quarter, 1953. Comm & Fin Chr 176:2506 D 25 '52
How are you fixed for working capital? Dom Eng 182:100-1+ S '53
Looking ahead at the capital markets. R. F. Murray. Comm & Fin Chr 177:2195+ My 21 '53
Lower-cost production for today's and tomorrow's needs; new philosophy on capital equipment. H. T. Hallowell, jr. Factory Management 111:52-5 My '53
NAM critical of capital investment data. G. G. Hagedorn. Comm & Fin Chr 177:1759 Ap 23 '53
New plant and equipment, '53-'56; survey by McGraw-Hill. Am Mach 97:194-5 Ap 13 '53
New security issues, noncorporate, corporate, new capital; yearly 1938-1951; monthly Oct.-Dec. 1951 and Jan.-Sept. 1952. Fed Res Bul 39:44 Ja '53 [cont monthly]
New trend gives small firms a chance; bold action getting venture capital for promising small business. W. V. Packard. map Iron Age 171:66-7 Ap 16 '53
1953 capital outlays seen at new peak. Comm & Fin Chr 177:1453 Ap 2 '53
SEC blocks capital flow with red tape. J. Dudley. Comm & Fin Chr 177:1424 Ap 2 '53
Services of capital. Nat City Bank p22-3 F '53
Some aspects of capital development. P. W. S. Andrews. Textile Inst J 44:P687-97 S '53
Trends in the cost of capital. R. P. Soule. Harvard Bsns R 31:33-47 Mr '53
Working capital problem underscored; report of Credit research foundation. Comm & Fin Chr 177:343 Ja 22 '53
Working capital trend. Burroughs Clearing House 37:6+ D '52
Your financial community. E. T. McCormick. Edison Elec Inst Bul 21:237-9 Jl '53
See also
Assets, Fixed
Corporations—Finance
Dividends
Industrial and commercial finance corporation, ltd.
Interest
Investments

CAPITAL administration company, limited
Capital Administration-Tri-Continental merger. P. A. Johnston. Barron's 33:37-8 Mr 16 '53
Proposed merger. Comm & Fin Chr 177:1150 Mr 16 '53

CAPITAL airlines
Capital to protest route restrictions. Aviation W 57:82 D 15 '52

CAPITAL gains tax. See Income tax—Capital gains tax

CAPITAL goods industries. See Equipment industries

CAPITAL punishment
Murder and the penalty of death. T. Sellin, ed. bibliog Ann Am Acad 284:1-166 N '52

CAPITAL spending. See Industrial expansion—Statistics

CAPITALISM
Forces eroding our free enterprise system. L. Ruthenburg. Comm & Fin Chr 178:253+ Jl 23 '53
Great mistake of Karl Marx. B. F. Fairless. Comm & Fin Chr 176:1531+ O 23 '52; Excerpts. Automotive Ind 108:37+ My 15 '53
Is industry selling itself out of free enterprise? A. S. King. Pub Util 50:566-8 O 23 '52
Labor's interest in free enterprise. D. W. Tracy. Edison Elec Inst Bul 21:235-6 Jl '53
Our inadequate knowledge of free enterprise. R. C. Ingalls. Comm & Fin Chr 177:594-5 F 5 '53
Soviet exploitation of capitalist devices proving futile. A. W. May. Comm & Fin Chr 177:889+ F 26 '53
Why have our living standards improved? R. S. Byfield. Manuf Rec 121:36 O '52
Youth should gear vision to opportunity, not security. H. L. Bache. Comm & Fin Chr 177:1113 Mr 12 '53

CAPPERS. See Closures (containers)

CAPROIC acid
Effect of steam activation on multilayer adsorption from solution by carbon. R. S. Hansen, R. D. Hansen and R. P. Craig. bibliog J Phys Chem 57:215-19 F '53

CAPSTANS
Taylor electric capstan. il Engineering 175:510 Ap 17 '53

CAPSULES
Capsule ideas; plastic dispensing containers for capsules. il Mod Packaging 26:120-1 O '52

CAQUOT, Albert, 1871-
Dr Caquot honored. Standardization 23:322-3 S '52

CAR cleaning
Carriage shed at Willesden. il Engineer 195:395-7 Mr 13 '53; Engineering 175:331-2, 336 Mr 13 '53

CAR cleaning—*Continued*

Cleaner, safer, faster! il Safety Maint & Prod 106:44-8 Jl '53

Movable car washer does good job. il Ry Age 134:34-5 Ja 19 '53; Ry Loco & Cars 127:61 F '53

Passenger car carpet cleaning. il Ry Mech & Elec Eng 126:64-5 D '52

CAR couplings

Couplers and draft gears; A.A.R. Mechanical division committee report. Ry Loco & Cars 127:60-2 Ag '53

CAR department officers' association

Annual meeting, Chicago, Sept. 15-17; with committee reports. Ry Mech & Elec Eng 126:94-103 N '52

Annual meeting, Chicago, Sept. 14-16. Ry Age 135:98-100 S 21 '53

CAR ferries. See Train ferries

CAR inspection

Frisco's radio-loudspeaker system allows faster car inspection. il Ry Age 134:47-8 F 23 '53

Report on train yard operations; Car department officers' association. Ry Mech & Elec Eng 126:96-7 N '52

CAR load. See Freight car service—Car load

CAR painting and finishing

Report of committee on painting; Car department officers' association. Ry Mech & Elec Eng 126:95-6 N '52

Santa Fe paints 35 freight cars a day at Emporia shops. il Ry Loco & Cars 127:66-9 O '53

CAR retarders

Automatic electronic retarder control. il Ry Age News ed 135:9 Ag 3 '53

Modern retarders and communications in Ernest Norris yard. il Ry Age 133:60-2 N 10 '52

Push-button retarders in new D&RGW yard. il plan Ry Age 135:68-72 O 19 '53

Retarder speed control. il Ry Age 133:31 O 20 '52

CAR shops

Indoor and outdoor pits for truck repairs; Louisville & Nashville. il Ry Mech & Elec Eng 126:72-6 O '52

Shops and procedures for heavy freight-car repairs. R. H. Herman. il Ry Loco & Cars 127:66-70 My '53

Equipment

Car roof patch puller. il diags Ry Loco & Cars 127:48 F '53

Carriage shed at Willesden. il Engineer 195: 395-7 Mr 13 '53; Engineering 175:331-2, 336 Mr 13 '53

Five air-operated gadgets used in car shops. il Ry Loco & Cars 127:99 S '53

Jobs that constitute light freight-car repairs. R. H. Herman. il Ry Loco & Cars 127: 85-9 Je '53

Santa Fe paints 35 freight cars a day at Emporia shops. il Ry Loco & Cars 127:66-9 O '53

Shop hints for car men. il Ry Loco & Cars 127:83 S '53

Table speeds up sorting of small parts; Louisville & Nashville heavy car repair shops. il diag Ry Loco & Cars 127:55-6 Ja '53

CAR springs

Air cells are the latest freight-car springs. il Ry Loco & Cars 127:90 S '53

Cars may soon float on air; pneumatic cushion spring. il Ry Age 135:109 Jl 13 '53

CAR trucks

Considerations on bogie design, with particular reference to electric railways. W. S. Graff-Baker. diags Inst Mech Eng Proc (A) 166 no 2:217-27, pl 1-4; Discussion. 227-36 '52; Engineer 193:58-9, 108 Ja 11-18 '52

CAR wheels

Car wheels; A.A.R. Mechanical division committee report. Ry Loco & Cars 127:72-4 Ag '53

Profile-cutting wheel lathe. J. H. Heron. il Ry Loco & Cars 127:100 S '53

Reconditioning wheel sets for London transport railways. il(p272) Engineering 175:269 F 27 '53

Texas & Pacific wheel shop at Marshall, Tex. il plan Ry Loco & Cars 127:58-65 Jl '53; Excerpts. Ry Age 134:52-3 Je 29 '53

Wheel shops; equipment and operation. R. H. Herman. il plan Ry Loco & Cars 127:93-8 S '53

Failure

Wheel checker gets results; detection of broken flanges on moving cars. il Ry Age News ed 134:18 Mr 2 '53; Same. Ry Loco & Cars 127:88 Ap '53

Manufacture

Carousel for car wheels. il Steel 132:168-9 Je 1 '53

Forge for continuous production of solid railway wheels and disc centres; Taylor brothers and co. il plan diags Engineering 174:713-16, pl 57, 752-4, pl 58 D 5-12 '52; Engineer 194:753-6 D 5 '52; Metallurgia 46: 275-80 D '52; Iron & Steel Eng 30:124+ F '53

How X-3 car wheels are made. il diag Ry Age 134:84-7 Ap 6 '53; Same. Ry Loco & Cars 127:61-5 My '53

Indexing tungsten carbide inserts cuts costs of machining wheels. il Iron Age 171:158-9 My 21 '53; Steel 132:165 Je 1 '53

CARACAS, Venezuela

Architecture

$300 million avenida Bolivar models new plan for 400-year-old Caracas. il Arch Rec 112: 12-13 S '52

CARBAZIC acid

Carbazic acid esters as carbonyl reagents. N. Rabjohn and H. D. Barnstorff. Am Chem Soc J 75:2259-61 My 5 '53

CARBAZOLE

Alleged carbazoacridines. R. M. Acheson and B. F. Sansom. Chem Soc J p 1900-1 Je '53

Catalytic synthesis of heterocycles; dehydrocyclization of anils to acridine and carbazole. C. Hansch, F. Gschwend and J. Barnesberger. bibliog Am Chem Soc J 74: 4554-5 S 20 '52

Formation of 1 : 2-7 : 8-diphthaloylcarbazole by dehydrogenation of 1 : 1′-dianthraquinonylamine. W. Bradley and C. R. Thitchener. Chem Soc J p 1085-92 Ap '53

Identification of isomers formed in the nitration of carbazole. D. B. Murphy and others. bibliog Am Chem Soc J 75:4289-91 S 5 '53

N-substituted 2-nitrocarbazoles. E. Sawicki. Am Chem Soc J 75:4106-7 Ag 20 '53

CARBETHOXYL group

σ-Constants of the carbethoxyl and hydroxyl groups. J. D. Roberts and W. T. Moreland, jr. Am Chem Soc J 75:2267-8 My 5 '53

CARBETHOXYLATION

Carbethoxylation products of *p*-aminoacetophenone and *p*-dimethylaminoacetophenone. H. S. Broadbent and C. Chu. Am Chem Soc J 75:226-7 Ja 5 '53

CARBIDE cutting tools. See Cutting tools, Carbide

CARBIDES

Behaviour of carbides in niobium stabilised austenitic stainless steel. T. V. Simpkinson. il Metallurgia 47:18-24 Ja '53

Carbides in chromium, molybdenum, and tungsten steels. K. Kuo. bibliog pl diags Iron & Steel Inst J 173:363-75 Ap '53

Changes in the techniques of manufacturing cemented carbide alloys. C. Ballhausen. Metal Prog 64:166+ Ag '53

Effect of grain size and density on mechanical properties of sintered carbides; abstract. W. G. Lidman and H. J. Hamjian. J Metals 4:1040-1 O '52

Hard carbides; their properties and application to the production of sintered hard metal. A. G. Gardner. il Metallurgia 47:163-70 Ap '53

How to make carbide cold-heading dies. A. E. Glen. il diags Am Mach 97:138-40 Ap 27 '53

Structure of carbides in alloy steels; carbide formation in high-speed steels. H. J. Goldschmidt. bibliog 2pls diag Iron & Steel Inst J 170:189-204 Mr '52; Discussion. 172:283-4 N '52

Studies of compounds for superconductivity. W. T. Ziegler and R. A. Young. bibliog Phys R 90:115-19 Ap 1 '53

Thermodynamics of metallurgical carbides and of carbon in iron. F. D. Richardson. Iron & Steel Inst J 175:33-51 bibliog(94 ref, p50-1) S '53

CARBIDES—*Continued*

Tool materials for punches and dies. L. F. Spencer. bibliog il Tool Eng 30:39-40 My '53

Tungsten-cobalt-carbon system. P. Rautala and J. T. Norton. bibliog il diags J Metals 4:Trans 1045-50 O '52; Discussion. 5:Trans 744-6 sec 2 My '53

See also

Boron carbide
Calcium carbide
Chromium carbide
Cutting tools, Carbide
Silicon carbide
Titanium carbide
Tungsten carbide
Zirconium carbide

CARBINOLS

Acetylene studies; dehydration of dialkylethynylcarbinols. E. D. Bergmann and Y. Sprinzak. bibliog J Ap Chem 3:97-8 Mr '53

Acetylene studies; preparation and reactions of the acetyldialkylcarbinols. E. D. Bergmann and D. F. Herman. bibliog J Ap Chem 3:42-8 Ja '53

Acetylene studies; the condensation of acetylene with aldehydes and ketones. E. D. Bergmann, M. Sulzbacher and D. F. Herman. bibliog J Ap Chem 3:39-42 Ja '53

Anionotropic systems; syntheses and rearrangements in the *cyclo*heptenyl series. E. A. Braude, W. F. Forbes and E. A. Evans. Chem Soc J p2202-7 Ag '53

Basicity of hydrocarbons; cryoscopy of conjugated hydrocarbon and carbinol solutes in sulphuric acid. V. Gold, B. W. V. Hawes and F. L. Tye. diag Chem Soc J p2167-72 Je '52

Condensation of 1-alkanols to dialkylcarbinols. E. E. Burgoyne and F. E. Condon. bibliog Am Chem Soc J 74:5592-5 N 20 '52

Condensations of aromatic aldehydes and aryl carbinols with aluminum chloride and aromatic systems. H. E. Ungnade, E. F. Kline and E. W. Crandall. bibliog Am Chem Soc J 75:3333-6 Jl 20 '53

Isotope effect in the oxidation of a secondary carbinol. W. A. Bonner and C. J. Collins. bibliog Am Chem Soc J 75:2308-11 My 20 '53

Kinetics of the formation of the carbinol of crystal violet. J. C. Turgeon and V. K. LaMer. bibliog Am Chem Soc J 74:5988-95 D 5 '52

Mechanism of the alkoxide-catalyzed carbinol-carbonyl equilibrium. W. V. Doering and T. C. Aschner. bibliog Am Chem Soc J 75:393-7 Ja 20 '53

Reaction between cyclobutylcarbinol and phosphorus tribromide. H. G. Kuivila and W. L. Masterton. bibliog Am Chem Soc J 74:4953-4 O 5 '52

Reactions of methylcyclopropylcarbinyl derivatives. R. G. Pearson and S. H. Langer. bibliog Am Chem Soc J 75:1065-8 Mr 5 '53

Resolution of *p*-ethylphenylmethylcarbinol; infrared spectra of enantiomorphs and racemates. E. L. Eliel and J. T. Kofron. bibliog Am Chem Soc J 75:4585-7 S 20 '53

Use of sodamide in preparation of 2- and 3-pyridylmethylcarbinols. A. J. Nunn and K. Schofield. Chem Soc J p716-17 F '53

CARBOHYDRASES

Mechanism of carbohydrase action. W. J. Whelan, J. M. Bailey and P. J. P. Roberts. diag Chem Soc J p 1293-304 Ap '53

CARBOHYDRATES

Carbohydrate derivatives of alkyl dithiocarbazinates. R. Hull. Chem Soc J p2959-62 Ag '52

Correlation of carbohydrate structure with papergram mobility. D. French and G. M. Wild. bibliog Am Chem Soc J 75:2612-16 Je 5 '53

Degradation of carbohydrates by alkali; α-alkoxy-ketones. J. Kenner and G. N. Richards. Chem Soc J p2240-4 Ag '53

Degradation of carbohydrates by alkali; lactose. W. M. Corbett and J. Kenner. Chem Soc J p2245-7 Ag '53

Destruction of carbohydrates in the kraft cook; abstract. J. Saarnio and C. Gustafsson. Paper Ind 35:582 Ag '53

Expanding the horizons of wood carbohydrates. E. J. Howard. bibliog Pulp & Pa of Can 54:116-20 Ap '53

Ionophoresis of some carbohydrate derivatives. A. B. Foster and M. Stacey. bibliog J Ap Chem 3:19-21 Ja '53

Lignin-carbohydrate bond in wood. E. E. Harris. bibliog(35 ref) Tappi 36:402-5 S '53

Production of formyl esters of carbohydrates by periodate oxidation. G. R. Barker and D. C. C. Smith. bibliog Chem & Ind p 1035 O 18 '52

Reactions of carbohydrates with nitrogenous substances; factors affecting the darkening of N-D-glucosylaniline. L. Rosen, K. C. Johnson and W. Pigman. bibliog Am Chem Soc J 75:3460-4 Jl 20 '53

Reactions of carbohydrates with nitrogenous substances; the tetraacetates of N-D-glucosylaniline. W. Pigman and K. C. Johnson. bibliog Am Chem Soc J 75:3464-6 Jl 20 '53

Reduction of alkaline 3 : 5-dinitrosalicylate by certain carbohydrates. D. J. Bell, D. J. Manners and A. Palmer. Chem Soc J p3760-3 O '52

Review of biochemistry. K. Rees. Chem Age (Lond) 68:79-81 Ja 10 '53

Synthesis of carbohydrates by use of acetylenic precursors; *erythro*-hexane-1 : 3 : 4 : 6-tetrol. R. A. Raphael and C. M. Roxburgh. Chem Soc J p3875-6 O '52

Tagged sugars yield first data on human carbohydrate absorption. Chem & Eng N 31:1395-6 Ap 6 '53

See also

Cellulose
Oligosaccharides
Polysaccharides
Sugar

Analysis

Chromatography of the carbohydrates and their derivatives; abstract. J. K. N. Jones. Chem & Ind p 171-2 F 21 '53

Improved method of preparing sulfonated 1-naphthol for carbohydrate tests. A. W. Devor. Anal Chem 24:1626 O '52

Use of anthrone reaction for determination of carbohydrates in the presence of serum protein. M. R. Shetlar. bibliog Anal Chem 24:1844-6 N '52

Nomenclature

Rules of carbohydrate nomenclature. Chem & Eng N 31:1776-83 Ap 27 '53

CARBOLINE. See Pyridindole

CARBOLOY. See Tungsten carbide

CARBOMYCIN

Aimed at the immune. Chem W 71:32+ O 25 '52

Magnamycin; abstract. R. L. Wagner and others. Chem & Eng N 31:876 Mr 2 '53

Magnamycin; mycarose, an unusual branched-chain desoxysugar from magnamycin. P. P. Regna and others. Am Chem Soc J 75:4625-6 S 20 '53

CARBON

Adsorption of ammonia on Fuller's earth and gas-adsorbent carbon. G. L. Bridger and R. D. Sinner. Ind & Eng Chem 45:581-2 Mr '53

Appearance potential of C^+ in the mass spectra of some substituted methanes and the heat of sublimation of carbon. H. Branson and C. Smith. bibliog J Chem Phys 20:1047 Je '52

Carbon in the engineering and metallurgical industries. V. S. Kingswood. bibliog flow sheet il diags Metallurgia 48:55-62, 133-8 Ag-S '53

Carbon-oxygen absorption band in the infrared spectra of alcohols. H. H. Zeiss and M. Tsutsui. bibliog Am Chem Soc J 75:897-900 F 20 '53

Dissociation energies of C-Br bonds in the bromo-naphthalenes, 9-bromo-phenanthrene, and 9-bromo-anthracene. M. Ladacki and M. Szwarc. J Chem Phys 20:1814-16 N '52

Double scattering of high-energy protons by hydrogen and carbon. C. L. Oxley and others. diag Phys R 91:419-20 Jl 15 '53

Effect of steam activation on multilayer adsorption from solution by carbon. R. S. Hansen, R. D. Hansen and R. P. Craig. bibliog J Phys Chem 57:215-19 F '53

Effects of carbon, oxygen and nitrogen on welds in titanium. D. C. Martin. il diags Welding J 32:sup 139-54 Mr '53

Elastic scattering of alpha-particles by carbon. R. W. Hill. bibliog Phys R 90:845-8 Je 1 '53

Electrolytic reduction of organic compounds at carbon cathodes. S. Swann, jr. and others. bibliog Electrochem Soc J 99:460-6 N '52; Discussion. 100:293-4 Je '53

CARBON—*Continued*

Evidence of partial failure of the Br^{80} isomeric transition to rupture carbon-bromine bonds. R. S. H. Chiang and J. E. Willard. bibliog Am Chem Soc J 74:6213-16 D 20 '52

Excitation function for charged π-meson production in hydrogen and carbon by 345- to 380-Mev protons. S. Passman and others. diag Phys R 88:1247-53 D 15 '52

Formed carbon and graphite in industry. L. C. Werking. bibliog il Am Cer Soc Bul 32:40-4; Discussion. J. J. Hazel. 44 F 15 '53

Heats of adsorption of nitrogen and argon on porous and on non-porous carbon adsorbents at —195°. R. A. Beebe, B. Millard and J. Cynarski. bibliog Am Chem Soc J 75:839-45 F 20 '53

High-temperature carbon-film resistors. diag Electronics 26:148+ Ja '53

Investigation of the heat of vaporization of carbon. W. A. Chupka and M. G. Inghram. bibliog J Chem Phys 21:371-2 F '53

Investigation of the surface reaction of oxygen with carbon on tungsten with the field emission microscope. R. Klein. bibliog il diag J Chem Phys 21:1177-80 Jl '53

Lifetimes of the μ^--mesons stopped in Li, Be, and C. W. E. Bell and E. P. Hincks. Phys R 88:1424-5 D 15 '52

Mechanism of substitution at a saturated carbon atom; effect of temperature on the competition between unimolecular solvolytic and non-solvolytic substitutions of di-*p*-tolylmethyl chloride; activation in the fast step of unimolecular non-solvolytic substitution. A. R. Hawdon, E. D. Hughes and C. K. Ingold. Chem Soc J p2499-503 Jl '52

Mechanism of substitution at a saturated carbon atom; kinetic effect of common-ion and of non-common-ion salts on the aqueous solvolysis of diphenylmethyl halides; a demonstration of the unimolecular mechanism of solvolysis. O. T. Benfey, E. D. Hughes and C. K. Ingold. Chem Soc J p2488-93 Jl '52

Mechanism of substitution at a saturated carbon atom; kinetic effects of hydroxide and alkoxide ions on the rate-controlling and product-forming stages of unimolecular solvolysis of *tert.*-butyl and diphenylmethyl halides. O. T. Benfey, E. D. Hughes and C. K. Ingold. Chem Soc J p2494-8 Jl '52

Molecular species evaporating from a carbon surface. W. A. Chupka and M. G. Inghram. bibliog J Chem Phys 21:1313 Jl '53

Neutron energy distribution from the proton bombardment of Li, Be, and C at 375 Mev. W. F. Goodell, jr. and others. bibliog diags Phys R 89:724-7 F 15 '53

Neutron energy distributions from Be, C, and Pb bombarded by 245-Mev protons. B. K. Nelson and others. bibliog diags Phys R 88:1-8 O 1 '52

Path of carbon in photosynthesis. M. Calvin. il diags Chem & Eng N 31:1622-5, 1735-8 Ap 20-27 '53

Physical analysis of Be and C disintegration induced by 330-Mev protons. W. H. Barkas and H. Tyren. diag Phys R 89:1-3 Ja 1 '53

Polarographic behavior of organic compounds; carbon-halogen bond fission in system acid-anion-ester; estimation of acid half-wave potentials. I. Rosenthal, C. Tang and P. J. Elving. bibliog Am Chem Soc J 74:6112-13 D 5 '52

Polarographic behavior of organic compounds: chloroacetic acids and their ethyl esters; *p*H-independence of carbon-halogen bond fission; wave splitting due to buffer interaction. P. J. Elving and C. Tang. bibliog Am Chem Soc J 74:6109-12 D 5 '52

Production of charged π-mesons in H, D, C, Cu, and Pb by 381-Mev protons. M. M. Block and others. bibliog diags Phys R 88:1239-47 D 15 '52

Reaction of carbon with steam at elevated temperatures. B. E. Hunt and others. diag Ind & Eng Chem 45:677-80 Mr '53

Resistor temperature coefficients of pyrolytic-deposited-carbon resistors and metal-film resistors. F. A. Paul. il Tele-Tech 12:52-3, 120 Ja '53

Restricted rotation about the aliphatic carbon-carbon bond. R. Adams, R. S. Voris and L. N. Whitehill. bibliog Am Chem Soc J 74:5588-92 N 20 '52

Solubility and diffusion coefficient of carbon in nickel; reaction rates of nickel-carbon alloys with barium oxide. J. J. Lander and others. bibliog J Ap Phys 23:1305-9 D '52

Solubility of carbon and oxygen in liquid bismuth. C. B. Griffith and M. W. Mallett. bibliog Am Chem Soc J 75:1832-4 Ap 20 '53

Solubility of carbon and oxygen in molybdenum. W. E. Few and G. K. Manning. bibliog il diags J Metals 4:Trans 271-4 Mr '52; Discussion. 5:Trans 746-7 sec 2 My '53

Test of the charge symmetry hypothesis; positive to negative pion production ratio obtained in bombarding carbon with alpha-particles and protons. H. W. Wilson and W. H. Barkas. diag Phys R 89:758-9 F 15 '53

Thermodynamics of metallurgical carbides and of carbon in iron. F. D. Richardson. Iron & Steel Inst J 175:33-51 bibliog(94 ref, p50-1) S '53

Titanium-carbon phase diagram. I. Cadoff and J. P. Nielsen. bibliog il diags J Metals 5:Trans 248-52 sec 2 F '53; Discussion. 5: Trans 1564-5 sec 2 N '53

Total cross sections of carbon and hydrogen for high energy neutrons. G. R. Mott and others. bibliog diag Phys R 88:9-14 O 1 '52

Total neutron cross sections of chlorine and carbon. R. M. Kiehn and others. bibliog Phys R 91:66-7 Jl 1 '53

Transition probabilities; dipole velocity computations for C_2 and N_2^+; the question of degree of hybridization. H. Shull. J Chem Phys 20:1095-102 Jl '52

Tungsten-cobalt-carbon system. P. Rautala and J. T. Norton. bibliog il diags J Metals 4:Trans 1045-50 O '52; Discussion. 5:Trans 744-6 sec 2 My '53

See also

Coal
Coke
Diamonds
Graphite
Petroleum coke

Analysis

Determination of combined carbon in graphitic iron. bibliog diags Iron & Steel Inst J 172:79-86 S '52

Recent developments in quantitative organic microanalysis. W. Kirsten. bibliog (62 ref) il diags Anal Chem 25:74-86 Ja '53

Use of magnesium oxide in determination of carbon and hydrogen in fluoro-organic compounds. W. H. Throckmorton and G. H. Hutton. bibliog Anal Chem 24:2003-4 D '52

Isotopes

Absolute determination of resonant energies for the radiative capture of protons by boron, carbon, fluorine, magnesium, and aluminum in the energy range below 500 kev. S. E. Hunt and W. M. Jones. diag Phys R 89:1283-7 Mr 15 '53

Addition of water to diphenylacetylene-1,2-C_1^{14}. J. G. Burr, jr. Am Chem Soc J 75:1990-1 Ap 20 '53

Analysis of the energy levels of the mirror nuclei, C^{13} and N^{13}. R. G. Thomas. bibliog Phys R 88:1109-25 D 1 '52

Assay and degradation of ^{14}C-labelled choline. H. R. V. Arnstein. Chem Soc J p4527-8 N '52

Biosynthesis of C^{14}-specifically labeled cotton cellulose. G. A. Greathouse. bibliog Science 117:553-4 My 22 '53

$C^{12}(p,pn)C^{11}$ cross section from threshold to 340 Mev. R. L. Aamodt and others. bibliog diags Phys R 88:739-44 N 15 '52

$C^{12}(p,p)C^{12}$ differential cross section. H. L. Jackson and others. bibliog diags Phys R 89:365-9 Ja 15 '53

C^{14} isotope effect in the decarboxylation of α-naphthyl- and phenylmalonic acids. A. Fry and M. Calvin. bibliog J Phys Chem 56:901-5 O '52

C^{14}-labeled colchicine derivatives. R. F. Raffauf, A. L. Farren and G. E. Ullyot. bibliog Am Chem Soc J 75:2576-8 Je 5 '53

C-14 tracer studies in the rearrangements of unsymmetrical α-diketones; ethyl α,β-diketobutyrate to methyltartronic acid. H. W. Davis, E. Grovenstein, jr. and O. K. Neville. bibliog Am Chem Soc J 75:3304-5 Jl 20 '53

CARBON—Isotopes—*Continued*

C^{14} tracer studies in the rearrangements of unsymmetrical α-diketones; *p*-methoxybenzylideneacetophenone oxide. E. C. Hendley and O. K. Neville. Am Chem Soc J 75:1995-6 Ap 20 '53

Carbon isotope effect in the acid hydrolysis of urea. J. A. Schmitt and F. Daniels. bibliog Am Chem Soc J 75:3564-6 Jl 20 '53

Carbon isotope effects in biological systems. D. L. Buchanan and others. bibliog Science 117:541-5 My 22 '53

Carbon-oxygen exchange in chemisorbed carbon monoxide. R. P. Eischens and A. N. Webb. J Chem Phys 20:1048-9 Je '52

Characterization and degradation of isotopic acetic and lactic acids. S. Roseman. bibliog Am Chem Soc J 75:3854-6 Ag 5 '53

Chicago radiocarbon dates. W. F. Libby. Science 116:673-81 D 19 '52

Claisen rearrangement of phenyl allyl ethers, labeled with carbon-14. J. P. Ryan and P. R. O'Connor. bibliog Am Chem Soc J 74:5866-9 D 5 '52

Comparison of the magnitudes of the isotope intermolecular effects in the decarboxylations of malonic-1-C^{14} acid and malonic-2-C^{14} acid at 154°. G. A. Ropp and V. F. Raaen. bibliog Am Chem Soc J 74:4992-4 O 20 '52

Constancy of cosmic-ray flux over the past 30,000 years. J. L. Kulp and H. L. Volchok. bibliog Phys R 90:713-14 My 15 '53

Conversion of L-lysine-6-C^{14} to pipecolic acid in the rat. M. Rothstein and L. L. Miller. Am Chem Soc J 75:4371-2 S 5 '53

Cortisone atomically labelled with carbon 14 for first time. Oil Paint & Drug Rep 164:65 Jl 13 '53

Cross sections for products of 90-Mev neutrons on carbon. D. A. Kellogg. bibliog Phys R 90:224-32 Ap 15 '53

Decomposition of methanol-C^{14} under the influence of its own radiation. W. J. Skraba and others. J Chem Phys 21:1296 Jl '53

Diffusion in the system $C^{14}O_2$-CO_2 to 1000 atmospheres pressure. K. D. Timmerhaus and H. G. Drickamer. bibliog diags J Chem Phys 20:981-4 Je '52

Distribution of acetic acid carbon in high fatty acids synthesized from acetic acid by the intact mouse. W. G. Dauben, E. Hoerger and J. W. Petersen. bibliog Am Chem Soc J 75:2347-51 My 20 '53

Effect of isotopic substitution on the collision properties of the carbon dioxide molecule. E. W. Becker and W. Beyrich. diag J Phys Chem 56:911-13 O '52

Effect of nuclear substituents on the C^{14} isotope effect in the saponification of carboxyl-labeled ethyl benzoates at 25°C. G. A. Ropp and V. F. Raaen. J Chem Phys 20:1823 N '52

Electronic emission spectrum of $C^{13}O^{16}$. K. E. McCulloh and G. Glockler. bibliog Phys R 89:145-7 Ja 1 '53

Energy dependence of the cross section for the reaction $C^{12}(\alpha,\alpha n)C^{11}$. M. Lindner and R. N. Osborne. Phys R 91:1501 S 15 '53

Energy levels in N^{14} and C^{14} from deuteron bombardment of C^{13}. R. E. Benenson. bibliog diags Phys R 90:420-8 My 1 '53

Energy levels of C^{12} from the $Be^{9}(\alpha,n)C^{12}$ reaction. L. E. Beghian and others. bibliog Phys R 90:1129 Je 15 '53

Experimental evidence for the Fermi interaction in the β decay of O^{14} and C^{10}. R. Sherr and J. B. Gerhart. bibliog Phys R 91:909-14 Ag 15 '53

Formation of radioactive cholesterol and fatty acids from C^{14}-labeled acetate by rat liver homogenates. N. L. R. Bucher. bibliog Am Chem Soc J 75:498 Ja 20 '53

Fractionation of the carbon isotopes in decarboxylation reactions; the mechanism of the pyrolysis of barium adipate. J. Bigeleisen, A. A. Bothner-By and L. Friedman. bibliog Am Chem Soc J 75:2908-10 Je 20 '53

Ground-state parity of N^{14}. D. A. Bromley. bibliog diags Phys R 88:565-70 N 1 '52

Hot atom recoils from $C^{12}(\gamma,n)C^{11}$. F. S. Rowland and W. F. Libby. bibliog J Chem Phys 21:1493-4 S '53

Incorporation of labeled carbon dioxide into pyruvate and α-ketoglutarate. M. Goldberg and D. R. Sanadi. Am Chem Soc J 74:4972-3 O 5 '52

Intermolecular carbon isotope effect in the decarboxylation of normal malonic acid in quinoline solution. P. E. Yankwich and R. L. Belford. bibliog Am Chem Soc J 75:4178-82 S 5 '53

Intramolecular carbon isotope effects in the decarboxylation of malonic acid and bromomalonic acid. P. E. Yankwich and E. C. Stivers. bibliog J Chem Phys 21:61-6 Ja '53

Isotope effect during ozonization. W. A. Bonner and C. J. Collins. bibliog Am Chem Soc J 75:3693-4 Ag 5 '53

Isotope effect in some reactions of carbon-14-labeled carbonatotetrammine cobaltic complex ion. D. R. Stranks and G. M. Harris. bibliog diag J Phys Chem 56:906-10 O '52

Isotope effect in the decomposition of oxalic acid. A. Fry and M. Calvin. bibliog diag J Phys Chem 56:897-901 O '52

Isotope effects in the exchange reaction between uncomplexed carbonate-bicarbonate ions and carbonate-*bis* ethylenediamine-cobalt (III) ion. P. E. Yankwich and J. E. McNamara. J Chem Phys 20:1325 Ag '52

Isotopic exchange rates as criteria of surface heterogeneity. R. P. Eischens. bibliog diag Am Chem Soc J 74:6167-71 D 20 '52

Lamont natural radiocarbon measurements. J. L. Kulp and others. bibliog Science 114:565-8; 116:409-14 N 30 '51, O 17 '52

Levels in N^{14} from the $C^{13}(p,\gamma)N^{14}$ reaction. D. Hicks and others. diag Phys R 90:163-4 Ap 1 '53

Mechanism of aquotization of carbonato complex ions. F. A. Posey and H. Taube. Am Chem Soc J 75:4099-101 Ag 20 '53

Mechanisms of racemization of camphene-8-C^{14}. J. D. Roberts and J. A. Yancey. bibliog Am Chem Soc J 75:3165-8 Jl 5 '53

Metabolic degradation in the mouse of 1,2,5,6-dibenzanthracene-9,10-C^{14}; some quinone metabolites retaining the intact ring system. C. Heidelberger, H. I. Hadler and G. Wolf. bibliog Am Chem Soc J 75:1303-8 Mr 20 '53

Metabolic fate of imidazoleacetic ($C^{14}OOH$) acid in the rat. L. P. Bouthillier and G. Léveillé. Am Chem Soc J 75:4075-7 Ag 20 '53

$(n,2n)$ Reactions in C^{12}, Cu^{63}, and Mo^{92}. J. E. Brolley, jr. and others. bibliog diag Phys R 88:618-21 N 1 '52

New synthesis of DL-lysine-6-C^{14} and DL-α-aminoadipic acid-6-C^{14}. M. Rothstein and C. J. Claus. bibliog Am Chem Soc J 75:2981-2 Je 20 '53

Nicotinic acid metabolism; the metabolism of radioactive nicotinic acid and nicotinamide in the rat. P. Lin and B. C. Johnson. bibliog diags Am Chem Soc J 75:2974-7 Je 20 '53

N^{14} level structure from the $C^{13}(p,n)N^{13}$ reaction. J. K. Bair and others. Phys R 90:575-6 My 15 '53

Origin of some of the carbon atoms of the side chain of C^{14}-ergosterol. D. J. Hanahan and S. J. Wakil. bibliog Am Chem Soc J 75:273-5 Ja 20 '53

Path of carbon in photosynthesis; kinetic relationships of the intermediates in steady state photosynthesis. A. A. Benson and others. bibliog Am Chem Soc J 74:4477-82 S 20 '52

Predicted isotopic enrichment effects in some isotopic exchange equilibria involving carbon-14. D. R. Stranks and G. M. Harris. bibliog Am Chem Soc J 75:2015-16 Ap 20 '53

Preparation of glycerol evenly labeled with C^{14}. S. Abraham. bibliog Am Chem Soc J 74:6098-9 D 5 '52

Racemization in the camphene hydrochloride-isobornyl chloride rearrangement. W. R. Vaughan and R. Perry, jr. bibliog Am Chem Soc J 75:3168-72 Jl 5 '53

Radiation decomposition of some C^{14}-labeled compounds. B. M. Tolbert and others. bibliog Am Chem Soc J 75:1867-8 Ap 20 '53

Radioactive monolayers; a new approach to surface research. D. E. Beischer. bibliog il diag J Phys Chem 57:134-8 F '53

CARBON—Isotopes—*Continued*

Reaction of ethylamine-1-C^{14} with nitrous acid. J. D. Roberts and J. A. Yancey. bibliog Am Chem Soc J 74:5943-5 D 5 '52

Reactions of allyl alcohol-1-C^{14}. R. F. Nystrom and J. C. Leak. Am Chem Soc J 75:3039 Je 20 '53

Rearrangement in the reaction of chlorobenzene-1-C^{14} with potassium amide. J. D. Roberts and others. bibliog Am Chem Soc J 75:3290-1 Jl 5 '53

Rearrangements in the reactions of 2-(4-substituted)-phenylethylamines-1-C^{14} with nitrous acid. J. D. Roberts and C. M. Regan. bibliog Am Chem Soc J 75:2069-72 My 5 '53

Relative rates of hydrolysis of urea containing C^{14}, C^{13} and C^{12}. J. A. Schmitt, A. L. Myerson and F. Daniels. bibliog J Phys Chem 56:917-20 O '52

Some molecular constants of $HC^{13}N$. R. E. Kagarise and others. J Chem Phys 20:1437-8 S '52

Studies in the mechanism of the Willgerodt reaction; direction of migration of the functional group in aliphatic ketones. E. Cerwonka, R. C. Anderson and E. V. Brown. bibliog Am Chem Soc J 75:28-30 Ja 5 '53

Studies in the Wagner rearrangement; the dehydration of 2-phenyl-1-acenaphthenol-1-C^{14}. W. A. Bonner and C. J. Collins. bibliog Am Chem Soc J 75:3831-4 Ag 5 '53

Studies of some carbon-14 isotope effects in organic chemistry. G. A. Ropp, V. F. Raaen and A. J. Weinberger. bibliog Am Chem Soc J 75:3694-7 Ag 5 '53

Study of the formation of iron percarbide. J. J. Mitchell. bibliog diags J Chem Phys 21:1153-9 Jl '53

Syntheses of benzene, toluene and benzoic acid labeled in the ring with isotopic carbon. M. Fields and others. bibliog Am Chem Soc J 74:5498-9 N 5 '52

Syntheses with isotopic tracer elements; $[^{14}C_1]$benzene. H. S. Turner and R. J. Warne. diags Chem Soc J p789-95 Mr '53

Synthesis of C^{14}-labeled squalene. W. G. Dauben and H. L. Bradlow. bibliog Am Chem Soc J 74:5204-6 O 20 '52

Synthesis of isonicotinic acid by halogen-metal exchange and its application to the preparation of isonicotinic-C^{14} acid hydrazide. A. Murray, 3d and W. H. Langham. bibliog Am Chem Soc J 74:6289-90 D 20 '52

Synthesis of L-ascorbic-1-C^{14} acid from D-sorbitol. L. L. Salomon, J. J. Burns and C. G. King. bibliog Am Chem Soc J 74:5161-2 O 20 '52

Synthesis of 2-methylaminofluorene-N-methyl-C^{141}. J. N. Little and F. E. Ray. Am Chem Soc J 74:4955-6 O 5 '52

Synthesis of progesterone labeled in position 4. G. I. Fujimoto and J. Prager. bibliog Am Chem Soc J 75:3259-61 Jl 5 '53

Synthesis of tertiary carbon^{14}-labeled DDT. D. R. Buhler, C. H. Wang and B. E. Christensen. Am Chem Soc J 75:4336 S 5 '53

Synthetic C^{14}-squalene; concerning its incorporation into cholesterol by liver. G. M. Tomkins and others. bibliog Am Chem Soc J 74:6145-6 D 5 '52

Temperature coefficient of the intermolecular carbon isotope effect in the decarboxylation of normal malonic acid. P. E. Yankwich, R. L. Belford and G. Fraenkel. bibliog Am Chem Soc J 75:832-5 F 20 '53

Thermal diffusion in isotopic mixtures in the critical region. F. E. Caskey and H. G. Drickamer. bibliog J Chem Phys 21:153-6 Ja '53

Toxic fluorine compounds containing the C-F link; preparation of carbon-labelled sodium fluoroacetate on a micro-scale. B. C. Saunders and T. S. Worthy. diags Chem Soc J p 1929-34 Je '53

Tracer study of the reaction of isocyanates with carboxylic acids. A. Fry. bibliog Am Chem Soc J 75:2686-8 Je 5 '53

Very long lifetime of C^{14} β-decay. A. M. L. Messiah. Phys R 88:151-2 O 1 '52

CARBON, Activated

Color in industrial wastes; effect of biological treatment and activated carbon. W. Rudolfs and W. D. Hanlon. Sewage & Ind Wastes 25:484-9 Ap '53

Exhaust nuisance abatement with activated carbon; Ace wire mills. W. B. Magee. il diag Sheet Metal Worker 44:83-4 F '53; Same. Heat & Ven 50:107 My '53; Abstract. Iron Age 170:170 D 18 '52

Exhaust nuisance stopped in wire mill; Ace wire mill. J. Bartol. il diag Power 97:120-1 Je '53

New reforming catalyst; abstract. R. A. Sanford and B. S. Friedman. Oil & Gas J 51:168-9 Mr 23 '53

Slurry feeding of activated carbon. J. R. Baylis. il diag Am Water Works Assn J 44:1161-8 D '52

CARBON, Decolorizing

Laboratory evaluation of granular carbons. W. R. Fetzer, E. K. Crosby and C. E. Engel. bibliog diags Anal Chem 24:1558-63 O '52

CARBON, Structural

Blast furnace; test carbon lining. J. B. Delaney. il Iron Age 171:77 F 12 '53

Carbon and graphite parts; properties, fabricating methods, corrosion resistance, uses; engineering file facts. Materials & Methods 38:137 S '53

Design and construction of a carbon lined blast furnace. J. M. Stapleton and W. S. Debenham. Blast F & Steel Pl 41:1048-52+ S '53; Same cond. Iron & Steel Eng 30:112-14 Ag '53

Progress report on carbon blast furnaces. T. J. Wilde and V. J. Nolan. Iron & Steel Eng 30:127-8 Ap '53; Same. Blast F & Steel Pl 41:505-7 My '53

Temperature distribution in carbon hearths. R. D. Westbrook. bibliog diags Iron & Steel Eng 30:141-4 Mr '53; Same. Blast F & Steel Pl 41:413-17+ Ap '53

CARBON arc. See Electric lamps, Arc

CARBON bisulfide. See Carbon disulfide

CARBON black

Carbon-black forecast. Oil & Gas J 51:69 Ja 12 '53

Carbon in the engineering and metallurgical industries; industrial carbons. V. S. Kingswood. Metallurgia 48:134-5 S '53

Carbon thermometer-heaters for use at low temperatures; effects of particle size and adsorption of hydrogen or helium. T. H. Geballe and others. bibliog R Sci Instr 23:489-92 S '52

Colloidal carbon, invaluable soot. C. W. Sweitzer. bibliog il J Chem Educ 29:493-502 O '52

Development of stepwise isotherms on carbon black surfaces. M. H. Polley, W. D. Schaeffer and W. R. Smith. bibliog J Phys Chem 57:469-71 Ap '53

Influence of carbon black on the oxidation of natural rubber. G. J. van Amerongen. bibliog Ind & Eng Chem 45:377-9 F '53

Processing oil-extended and carbon black GR-S masterbatches. H. L. Ericson and L. D. Carver. bibliog Ind & Eng Chem 45:792-5 Ap '53

Relationship between the modulus of reinforced rubber compounds and the physical properties of various carbon blacks. M. L. Studebaker. India Rubber World 127:215-19+ N '52

Role of heat in the carbon black reinforcement of rubber. C. W. Sweitzer; H. A. Braendle. bibliog il Rubber Age 72:55-63, 205-10 O-N '52; Excerpts. Can Chem Process 36:94+ N '52; 37:76-7 Ja '53

Rubber innovation; Copolymer corp. reveals new method of dispersing carbon black in cold rubber. F. L. Resen. il diag Oil & Gas J 51:160 Mr 23 '53

Soiling and soil retention in textile fibers; suspending power of surfactants. J. Compton and W. J. Hart. Ind & Eng Chem 45:597-602 Mr '53

Sorption of GR-S type of polymer on carbon black; sorption by commercial blacks. I. M. Kolthoff and R. G. Gutmacher. bibliog J Phys Chem 56:740-5 Je '52

Studies on the toxicity and skin effects of compounds used in the rubber and plastics industries; carcinogenicity of carbon black extracts. E. von Haam and F. S. Mallette. il A M A Archives Ind Hygiene & Occup Med 6:237-42 S '52

Study of soiling and soil retention in textile fibers; grease-carbon black soil-cotton fiber systems. J. Compton and W. J. Hart. Textile Res J 23:158-63 Mr '53

CARBON black—*Continued*

Study of soiling and soil retention in textile fibers; primary deposition of grease-free carbon black soil on various types of textile fibers. W. J. Hart and J. Compton. Textile Res J 23:164-8 Mr '53

Surface complexes on carbon blacks; high temperature evacuation studies. R. B. Anderson and P. H. Emmett. bibliog J Phys Chem 56:753-5 Je '52

Surface complexes on carbon blacks; the adsorption of NH_3, C_2H_2, C_4H_{10}, CH_3NH_2 and water vapor. R. B. Anderson and P. H. Emmett. bibliog J Phys Chem 56:756-61 Je '52

Weathering and crack resistance of black polyethylene for wire and cable. W. H. Haine and others. bibliog il diag Elec Eng 71:1113-17 D '52

Manufacture

Cabot Carbon opens first Canadian oil furnace black plant. il Rubber Age 73:678 Ag '53

Carbon black from western oil made in Canada; Sarnia plant of Cabot carbon of Canada, ltd. flow diag il Can Chem Process 37:32-3 Jl '53

New black process. diag Oil & Gas J 51:72-3 N 24 '52

Statistics

Carbon-black report. Oil & Gas J 52:62 Je 1 '53

CARBON compounds

Quantum conversion in photosynthesis. M. Calvin. diag Chem & Eng N 31:1735-8 Ap 27 '53

Relationships between analogous organic compounds of silicon and carbon. H. Gilman and G. E. Dunn. Chem R 52:77-115 bibliog(p 110-15) F '53

Unsymmetrical quaternary carbon compounds; the alkylation of ethyl 2-cyano-3-methyl-2-pentenoate with aliphatic Grignard reagents. F. S. Prout. bibliog Am Chem Soc J 74:5915-17 D 5 '52

See also
Fluorocarbons
Hydrocarbons

CARBON dioxide

Absorption line width in the infrared spectrum of atmospheric carbon dioxide. A. Adel. Phys R 90:1024-5 Je 15 '53

Additional measurements of heat conductivity of nitrogen, carbon dioxide, and mixtures. F. G. Keyes. bibliog A S M E Trans 74:1303-6 N '52

Adsorption of carbon dioxide by glass. J. B. Thompson, E. R. Washburn and L. A. Guildner. diag J Phys Chem 56:979-81 N '52

Corrected CO/CO_2 ratio for blast furnaces. S. T. Killian. J Metals 3:Trans 742-5 S '51; Discussion. 4:Trans 1168-72 N '52

Diffusion in the system $C^{14}O_2$-CO_2 to 1000 atmospheres pressure. K. D. Timmerhaus and H. G. Drickamer. bibliog diags J Chem Phys 20:981-4 Je '52

Direct semimicrodetermination of oxygen in organic substances; improved apparatus and procedure for use with carbon reduction-titrimetric carbon dioxide method. R. D. Hinkel and R. Raymond. bibliog diags Anal Chem 25:470-9 Mr '53

Effect of isotopic substitution on the collision properties of the carbon dioxide molecule. E. W. Becker and W. Beyrich. diag J Phys Chem 56:911-13 O '52

Emissivity for CO_2 at elevated pressures. R. J. Holm and others. J Ap Phys 23:1283 N '52

Ethylenediamine; carbonate-free alkali for carbon dioxide absorption. R. W. Swick, D. L. Buchanan and A. Nakao. Anal Chem 24:2000-1 D '52

Freezing point and vapor pressure data for solutions of carbon dioxide with some halogen substituted methanes. T. De Vries and W. N. Vanderkooi. Am Chem Soc J 75:2253-4 My 5 '53

Gas adsorption; absorption of carbon dioxide from air by sodium and potassium hydroxides. H. A. Blum, L. F. Stutzman and W. S. Dodds. bibliog flow sheets Ind & Eng Chem 44:2969-74 D '52

Incorporation of labeled carbon dioxide into pyruvate and α-ketoglutarate. M. Goldberg and D. R. Sanadi. Am Chem Soc J 74:4972-3 O 5 '52

Industrial gases raise average temperature 1.5°F. per century; abstract. G. N. Plass. Chem & Eng N 31:2092+ My 18 '53

Infrared emission and absorption of thermally excited carbon dioxide. R. H. Tourin. J Chem Phys 20:1651 O '52

Infrared emission spectra of OH, CO, and CO_2 from 3μ to 5.5μ. E. K. Plyler and J. J. Ball. J Chem Phys 20:1178-9 Jl '52

Infrared molecular emission excited in a glow discharge. R. M. Talley and others. diag Opt Soc Am J 42:982-3 D '52

Infrared spectra of H_2O and CO_2 at 500°C. J. H. Taylor and others. bibliog il diags J Chem Phys 20:1884-98 D '52

Integrated absorption for vibration-rotation bands of CO_2. D. Weber and others. J Chem Phys 20:1820 N '52

Intermolecular potentials for the systems CO_2-CO_2 and CO_2-N_2O. I. Amdur and others. bibliog J Chem Phys 20:1620-3 O '52

Mass spectrum of CO_2. A. S. Newton. J Chem Phys 20:1330-1 Ag '52

Mechanism of the carbon dioxide-carbon reaction. A. E. Reif. bibliog J Phys Chem 56:785-8 Je '52

Modified Poth carbon dioxide generator. C. E. Childs and V. A. Moore. bibliog diag Anal Chem 25:204 Ja '53

Near-infrared absorption by entire bands of carbon dioxide. J. N. Howard and R. M. Chapman. Opt Soc Am J 42:856 N '52

Nonfixation of carbon dioxide into organic acids in blood. M. A. Williams and others. Science 117:502-4 My 8 '53

Phase-equilibrium properties of system carbon dioxide-hydrogen sulfide. J. A. Bierlein and W. B. Kay. bibliog Ind & Eng Chem 45:618-24 Mr '53

Physical adsorption from mixtures of gases; ethane and carbon dioxide on chromic oxide gel at -78°. L. White, jr., C. H. Schneider and W. W. Robinson, jr. bibliog Am Chem Soc J 74:5796-8 N 20 '52

Removal of carbon dioxide from digester gas. J. E. Frook. diag Sewage & Ind Wastes 24:1473-7 D '52

Removal of hydrogen sulfide and carbon dioxide from synthesis gas using di- and tri-ethanolamine. H. W. Wainwright and others. bibliog 6pls U S Bur Mines Rep of Invest 4891:1-19 '52

Review of physico-chemical data on the state of supercritical fluids. F. G. Smith. diags Econ Geol 48:14-38 bibliog(108 titles, p34-8) Ja '53

Synergistic actions of carbon dioxide with DDT in the central nervous system. G. H. Pollock and R. I. H. Wang. bibliog Science 117:596-7 My 29 '53

Thermodynamic analysis of the Plank cycle; maximum efficiency in a carbon dioxide system. O. Almoslino. diags Refrig Eng 61:1090-5 O '53

Ultrasonic velocity, dispersion, and absorption in dry, CO_2-free air. C. Ener and others. Acoustical Soc Am J 24:474-7 S '52

Vibrational spectra of molecules and complex ions in crystals; carbon dioxide. W. E. Osberg and D. F. Hornig. bibliog J Chem Phys 20:1345-7 S '52

Viscosity, thermal conductivity and specific heat of carbon dioxide at elevated pressures and temperatures. I. Granet and P. Kass. bibliog Pet Refiner 31:137-8 N '52

Analysis

Apparatus for the determination of carbon dioxide in coal. I. Moulson and H. C. Wilkinson. il diag Chem & Ind p7-8 Ja 3 '53

Continuous photometric determination of carbon dioxide in gas streams. W. D. Maxon and M. J. Johnson. diags Anal Chem 24:1541-5 O '52

Manometric gas analysis apparatus. J. N. Pitts, jr., D. D. DeFord and G. W. Recktenwald. bibliog il diags Anal Chem 24:1566-8 O '52

Industrial applications

Cadillac teams CO_2 with silicon carbides to grind carbide tools better. T. N. Chambers and J. Kwolek. il Am Mach 97:172-5 F 16 '53

CARBON dioxide—Industrial applications—*Continued*

CO_2 cools carbide grinders. A. B. Albrecht. il Am Mach 96:97 D 8 '52

CO_2 cuts milling costs. Steel 132:125 My 25 '53

CO_2 flood recommended. K. B. Barnes. Oil & Gas J 51:64 N 3 '52

Carbon dioxide permits improved machining time; A. V. Roe Canada, limited. E. W. Bartle. il Mach 59:157-8 Ap '53

Gases are good cutting coolants. D. G. Pahlitzsch. diag Am Mach 97:196-7 F 16 '53

Line purged with CO_2. il Oil & Gas J 51:77 Ja 5 '53

New water-flood aid; use of carbon dioxide; abstract. P. D. Torrey. Oil & Gas J 51:73 N 24 '52

Porosity measured; new test measures metal casting leakage rates as low as 10^{-8}. Iron Age 170:224-5 N 6 '52

This improved CO_2 control cuts apple storage costs. F. Kedenburg, jr. il diag Food Eng 25:126-7 Mr '53

See also

Carbon dioxide, Solid

Fire extinguishers, Carbon dioxide

CARBON dioxide, Liquid

Manufacture

Kestnamine carbon dioxide plant; economical output from fuel oil process. il Chem Age (Lond) 68:275-6 F 14 '53; Abstract. Chem & Ind p83 Ja 24 '53

CARBON dioxide, Solid

Dry-ice source of purging gas. D. L. White. il diags Am Gas Assn Mo 35:30-3 S '53

Use of monoethanolamine in the production of dry ice; abstract. N. Tkachev. Refrig Eng 61:627 Je '53

CARBON dioxide fire extinguishers. See Fire extinguishers, Carbon dioxide

CARBON dioxide recorders

Automatic recording of carbon dioxide by conductometry; method for determination of rates of combustion. R. D. Goodwin. diags Anal Chem 25:263-5 F '53

CARBON disulfide

Action of elementary fluorine upon organic compounds; a new type of reactor and the mild fluorination of carbon disulfide. E. A. Tyczkowski and L. A. Bigelow. bibliog diags Am Chem Soc J 75:3523-6 Jl 20 '53

Effect of pressure on diffusion in CS_2 organic mixtures. R. C. Koeller and H. G. Drickamer. bibliog J Chem Phys 21:575-88 Ap '53

Effect of pressure on self-diffusion in carbon disulfide. R. C. Koeller and H. G. Drickamer. bibliog diags J Chem Phys 21:267-73 F '53

Fluorination of carbon disulfide and carbonyl sulfide. G. A. Silvey and G. H. Cady. Am Chem Soc J 74:5792-3 N 20 '52

Getting more CS_2 from sulphur. il Chem Eng 59:268 D '52

Ignition limits of 1-3 mixtures of carbon disulfide and oxygen. A. L. Myerson and F. R. Taylor. Am Chem Soc J 75:4348-50 S 5 '53

Light scattering study of a mixture of CCl_4 and CS_2. J. Powers and R. S. Stein. J Chem Phys 21:1611-12 S '53

Organometallic and organometalloidal fluorine compounds; the electrochemical fluorination of dimethyl sulphide and carbon disulphide. A. F. Clifford and others. diag Chem Soc J p2372-5 Ag '53

Reactions of ethylenimines with carbon disulfide. L. B. Clapp and J. W. Watjen. bibliog Am Chem Soc J 75:1490-2 Mr 20 '53

CARBON fluorides

Equilibria involving the $CF(g)$ and $CF_2(g)$ radicals at high temperatures. J. L. Margrave and K. Wieland. bibliog J Chem Phys 21:1552-4 S '53

Experimental evidence of restricted rotation in $CH_3—C\equiv C—CF_3$. B. Bak and others. bibliog J Chem Phys 21:1612-13 S '53

CARBON monoxide

Adsorption of hydrogen and carbon monoxide and their mixtures by cobalt Fischer-Tropsch catalysts. J. C. Ghosh, M. V. C. Sastri and K. A. Kini. bibliog diag Ind & Eng Chem 44:2463-70 O '52

Adsorption of hydrogen and carbon monoxide on iron surfaces. H. H. Podgurski and P. H. Emmett. bibliog J Phys Chem 57:159-64 F '53

Carbon-oxygen exchange in chemisorbed carbon monoxide. R. P. Eischens and A. N. Webb. J Chem Phys 20:1048-9 Je '52

Catalytic oxidation of carbon monoxide on nickel oxide. G. Parravano. bibliog Am Chem Soc J 75:1448-54 Mr 20 '53

Corrected CO/CO_2 ratio for blast furnaces. S. T. Killian. J Metals 3:Trans 742-5 S '51; Discussion. 4:Trans 1168-72 N '52

Drift velocity of ions in oxygen, nitrogen, and carbon monoxide. R. N. Varney. Phys R 89:708-11 F 15 '53

Effect of carbon monoxide on respiration in the sweet potato, ipomoea batatas Lan. G. C. Webster. bibliog Science 117:530-1 My 15 '53

Electronic emission spectrum of $C^{13}O^{16}$. K. E. McCulloh and G. Glockler. bibliog Phys R 89:145-7 Ja 1 '53

Emission of radiation from diatomic gases; emissivity calculations for CO and HCl for nonoverlapping rotational lines as a function of temperature and optical density. S. S. Penner. bibliog diag J Ap Phys 23:825-37 Ag '52

Flame propagation in carbon monoxide. G. McDonald. J Chem Phys 20:1497-8 S '52

Flame velocities in carbon monoxide-oxygen mixtures. T. W. Price and J. H. Potter. bibliog il diags A S M E Trans 75:91-6 Ja '53

Gaseous detonations; nonsteady waves in $CO-O_2$ mixtures. G. B. Kistiakowsky and others. bibliog il diags J Chem Phys 20:994-1000 Je '52

Hydrogen transfer reactions accompanying the cobalt-catalyzed addition of carbon monoxide to olefinic compounds. G. Natta, P. Pino and R. Ercoli. bibliog Am Chem Soc J 74:4496-8 S 20 '52

Hydrogen transfer reactions accompanying the cobalt catalyzed synthesis from acetylene, carbon monoxide and methanol. P. Pino and A. Miglierina. bibliog Am Chem Soc J 74:5551 N 5 '52

Infrared emission spectra of OH, CO, and CO_2 from 3μ to 5.5μ. E. K. Plyler and J. J. Ball. J Chem Phys 20:1178-9 Jl '52

Isotopic exchange rates as criteria of surface heterogeneity. R. P. Eischens. bibliog diag Am Chem Soc J 74:6167-71 D 20 '52

New product from benzene and blast furnace gas; carbon monoxide in blast furnace gas as a chemical reagent to convert benzene into benzaldehyde. J. L. Boyle. Blast F & Steel Pl 40:1443-7 D '52

Products from hydrocarbon synthesis. C. E. Morrell and others. flow sheet bibliog Ind & Eng Chem 44:2839-43 D '52

Products of the hydrogenation of carbon monoxide over an iron catalyst. A. W. Weitkamp and others. bibliog Ind & Eng Chem 45:343-67 F '53

Proposed method of test for disintegration of fireclay refractories in an atmosphere of carbon monoxide. Am Soc T M Proc 50:207-8 '50

Reaction of carbon monoxide with free radicals. G. B. Porter and S. W. Benson. Am Chem Soc J 75:2773-4 Je 5 '53

Study of the reactions of carbon monoxide with coke. A. E. Reif. bibliog diags J Phys Chem 56:778-84 Je '52

Suggested reaction mechanism for the copolymerization of ethylene and carbon monoxide. W. G. Barb. bibliog Am Chem Soc J 75:224-6 Ja 5 '53

Synthesis of alcohols by hydrogenation of carbon monoxide. R. B. Anderson, J. Feldman and H. H. Storch. bibliog Ind & Eng Chem 44:2418-24 O '52

Synthesis of methane by hydrogenation of carbon monoxide in a tubular reactor. M. M. Gilkeson, R. R. White and C. M. Sliepcevich. bibliog flow diag il diag Ind & Eng Chem 45:460-7 F '53

Use of ionization probability curves for the analysis of CO and N_2 mixtures. W. M. Hickam and R. E. Fox. J Chem Phys 20:1055 Je '52

CARBON monoxide—*Continued*

Analysis

Improved photometric determination of carbon monoxide by means of palladious chloride. E. W. Rice. A M A Archives Ind Hygiene & Occup Med 6:487-90 D '52

CARBON monoxide poisoning

Acute carbon monoxide poisoning; an analysis of one hundred five cases. J. W. Meigs and J. P. W. Hughes. A M A Archives Ind Hygiene & Occup Med 6:344-56 O '52

Carbon monoxide toxicity in submarine operations; report of a case. H. J. Alvis and C. W. Tanner. A M A Archives Ind Hygiene & Occup Med 6:404-6 N '52

Chronic carbon monoxide poisoning. Ind Med 21:459-60 S '52

Continuing investigations of carbon monoxide poisoning parallel new industrial exposures. H. H. Schrenk. bibliog Ind & Eng Chem 45:sup 119A-20A+ Ap '53

CARBON monoxide recorders

Automatic control of carbon monoxide; New York city's municipal omnibus garage and maintenance center. il Safety Maint & Prod 104:45-6 N '52; Same cond. Heat & Ven 49:99 D '52

CARBON oxysulfide. See Carbonyl sulfide

CARBON sulfide

CS radical. P. J. Dyne and D. A. Ramsay. bibliog diag J Chem Phys 20:1055-6 Je '52

CARBON tetrachloride

Action of carbon tetrachloride on silica gel. R. K. Taylor. Am Chem Soc J 75:2521-2 My 20 '53

Corrosion of aluminum by carbon tetrachloride. M. Stern and H. H. Uhlig. bibliog il diags Electrochem Soc J 99:381-8 O '52

Diffusion of iodine in carbon tetrachloride under pressure. E. W. Haycock and others. bibliog diag J Chem Phys 21:1601-4 S '53

Effect of bromine concentration on the products of the reactions of carbon tetrachloride with bromine activated by radiative neutron capture and by isomeric transition. J. F. Hornig and J. E. Willard. bibliog Am Chem Soc J 75:461-6 Ja 20 '53

Effect of oxide films on the reaction of aluminum with carbon tetrachloride. M. Stern and H. H. Uhlig. il Electrochem Soc J 99:389-92 O '52

Effect of pressure on diffusion in the system CCl_4-SnI_4. E. P. Doane and H. G. Drickamer. bibliog J Chem Phys 21:1359-61 Ag '53

Effect of the isomeric transition in Br^{80} on its reactivity with the tetrachlorides of carbon, silicon, germanium, and tin. C. C. Coffin and W. D. Jamieson. J Chem Phys 20:1324-5 Ag '52

Halogenation in the liquid phase by chlorine trifluoride; the reaction with benzene derivatives and with carbon tetrachloride. J. F. Ellis and W. K. R. Musgrave. Chem Soc J p 1063-7 Ap '53

Light scattering study of a mixture of CCl_4 and CS_2. J. Powers and R. S. Stein. J Chem Phys 21:1611-12 S '53

Liquid-liquid equilibrium data for the system carbon tetrachloride-acetone-water. R. H. Buchanan. Ind & Eng Chem 44:2449-50 O '52

Rayleigh's ratio (absolute turbidity levels) for benzene, carbon tetrachloride, and toluene. R. F. Stamm and P. A. Button. bibliog diags J Chem Phys 21:1304-5 Jl '53

Analysis

Determination of some chlorine-substituted methanes and ethanes; infrared and mass spectrometric determination. R. B. Bernstein, G. P. Semeluk and C. B. Arends. bibliog Anal Chem 25:139-42 Ja '53

Sensitive method for determination of vapor composition. K. M. Sancier. diags Anal Chem 24:1563-6 O '52

CARBON tetrachloride poisoning

Carbon tetrachloride mixtures in fire fighting. H. H. Fawcett. bibliog A M A Archives Ind Hygiene & Occup Med 6:435-40 N '52

Carbon tetrachloride poisoning; editorial in the Journal of the American medical association, Jan. 3, 1953. Consumers Res Bul 31:28 My '53

Comparative inhalation toxicities of four halogenated hydrocarbons to rats and mice in the presence of gasoline fires. C. C. Comstock and F. W. Oberst. A M A Archives Ind Hygiene & Occup Med 7:157-67 F '53

Toxicity of carbon tetrachloride and mercury hazards in laboratories. Ind & Eng Chem 44:sup 131A-3A O '52

Unrecognized hazards in electronics; dangers of carbon tet and selenium. T. R. Hughes. Radio & Tv N 49:96+ Ap '53

Vapor toxicity of carbon tetrachloride determined by experiments on laboratory animals. E. M. Adams and others. bibliog A M A Archives Ind Hygiene & Occup Med 6:50-66 Jl '52; Abstract. Nat Safety N 66:56+ N '52

CARBON tetrafluoride

Bond moments and derivatives in CF_4, SiF_4, and SF_6 from infrared intensities. P. N. Schatz and D. F. Hornig. bibliog diags J Chem Phys 21:1516-30 S '53

Molecular structure of carbon tetrafluoride. C. W. W. Hoffman and R. L. Livingston. bibliog J Chem Phys 21:565 Mr '53

Some partial molal volumes of gases in solution. R. H. Schumm and O. L. I. Brown. Am Chem Soc J 75:2520-1 My 20 '53

CARBONATED beverages. See Beverages

CARBONATES

Isotope effects in the exchange reaction between uncomplexed carbonate-bicarbonate ions and carbonate-*bis* ethylenediamine-cobalt (III) ion. P. E. Yankwich and J. E. McNamara. J Chem Phys 20:1325 Ag '52

Mechanism of aquotization of carbonato complex ions. F. A. Posey and H. Taube. Am Chem Soc J 75:4099-101 Ag 20 '53

CARBONIUM compounds

Bridgehead studies reveal stability of planar carbonium ion; abstract. W. E. Doering. Chem & Eng N 31:1294 Mr 30 '53

Energies of strained carbonium ions. J. L. Franklin and F. H. Field. bibliog J Chem Phys 21:550-1 Mr '53

Kinetic evidence for the triphenylcarbonium ion as a reaction intermediate and measurement of its relative reactivity with seven nucleophilic reagents. C. G. Swain, C. B. Scott and K. H. Lohmann. bibliog Am Chem Soc J 75:136-40 Ja 5 '53

CARBONYL chloride

Fluorescence obtained from formic acid, carbonyl chloride, and methylene iodide. P. J. Dyne and D. W. G. Style. pl Chem Soc J p2122-4 Je '52

CARBONYL compounds

Alicyclic compounds; the formation of *cyclo*propanes in the Kishner-Wolff reduction of αβ-unsaturated carbonyl compounds. S. G. Beech, J. H. Turnbull and W. Wilson. Chem Soc J p4686-90 D '52

Azidocarbonyl compounds; a new synthesis for certain substituted imidazoles from phenacyl azides. J. H. Boyer and D. Straw. bibliog Am Chem Soc J 74:4506-8 S 20 '52

Azidocarbonyl compounds; the preparation and pyrolysis of certain ortho-substituted phenacyl azides. J. H. Boyer and D. Straw. bibliog Am Chem Soc J 75:2683-4 Je 5 '53

Azidocarbonyl compounds; the pyrolysis of α-azidocarbonyl compounds. J. H. Boyer and D. Straw. bibliog Am Chem Soc J 75:1642-4 Ap 5 '53

Carbazic acid esters as carbonyl reagents. N. Rabjohn and H. D. Barnstorff. Am Chem Soc J 75:2259-61 My 5 '53

Carbonyl oxycelluloses. W. M. Corbet and others. bibliog Chem & Ind p 154 F 14 '53

Chemistry of metal carbonyls; preparation and properties of cobalt hydrocarbonyl. H. W. Sternberg and others. bibliog Am Chem Soc J 75:2717-20 Je 5 '53

Chemistry of metal carbonyls; the reaction between dicobalt octacarbonyl and dimethylamine. H. W. Sternberg and others. Am Chem Soc J 75:3148-52 Jl 5 '53

Enamine derivatives of steroidal carbonyl compounds. F. W. Heyl and M. E. Herr. bibliog Am Chem Soc J 75:1918-20 Ap 20 '53

Experiments on the synthesis of carbonyl compounds; a new general synthesis of ketones and β-keto-esters. R. E. Bowman and W. D. Fordham. Chem Soc J p3945-9 O '52

CARBONYL compounds—*Continued*

Extension of the Leuckart synthesis of tertiary amines, including its application to α,β-unsaturated carbonyl compounds. J. F. Bunnett, J. L. Marks and H. Moe. bibliog Am Chem Soc J 75:985-7 F 20 '53

Fermentation products of wheat germ; identification of methoxy- and 2 : 6-dimethoxy-*p*-benzoquinone; infra-red absorption of some quinones and 1 : 2-dicarbonyl compounds. D. J. Cosgrove and others. Chem Soc J p4821-3 D '52

Formation of 1,3,5-triazines by the reaction of α-cyanocarbonyl compounds with guanidine. P. B. Russell and others. bibliog Am Chem Soc J 74:5403-5 N 5 '52

Investigations on natural tannins; acidic condensation reactions between phenols and αβ-unsaturated carbonyl compounds. D. W. Clayton and others. Chem Soc J p581-6 F '53

Mechanism of the alkoxide-catalyzed carbinol-carbonyl equilibrium. W. V. Doering and T. C. Aschner. bibliog Am Chem Soc J 75:393-7 Ja 20 '53

New synthesis of arsonic acids; coupling of αβ-unsaturated carbonyl compounds with diazotised arsanilic acid and 4-amino-2-nitrophenylarsonic acid. W. Freund. Chem Soc J p3072-3 Ag '52

Perfluoroalkyl Grignard reagents; reaction of heptafluoropropylmagnesium iodide with carbonyl compounds, and the mechanism of reduction during Grignard reactions. R. N. Haszeldine. Chem Soc J p 1748-57 Je '53

Qualitative correlation of the spectra of some heterocyclic carbonyl compounds. J. A. Berson. bibliog Am Chem Soc J 75:3521-3 Jl 20 '53

Reduction of some enolizable β-dicarbonyl compounds to unsaturated alcohols by lithium aluminum hydride; β-diketones. A. S. Dreiding and J. A. Hartman. bibliog Am Chem Soc J 75:3723-6 Ag 5 '53

Reduction of some enolizable β-dicarbonyl compounds to unsaturated alcohols by lithium aluminum hydride; monocyclic β-keto-esters and α-hydroxymethylene ketones. A. S. Dreiding and J. A. Hartman. bibliog Am Chem Soc J 75:939-43 F 20 '53

Researches on acetylenic compounds; the synthesis of symmetrical conjugated tri-acetylenic compounds. J. B. Armitage and others. Chem Soc J p2010-14 Je '52

Steric requirements for three-ring carbonyl hyperconjugation. N. H. Cromwell and G. V. Hudson. bibliog Am Chem Soc J 75:872-4 F 20 '53

Structure of the products of condensation between primary β-hydroxyamines and aliphatic carbonyl compounds. E. D. Bergmann, E. Gil-Av and S. Pinchas. bibliog Am Chem Soc J 75:358-61 Ja 20 '53

Thio-oxindole, thioindoxyl, and certain carbonyl derivatives. R. H. Glauert and F. G. Mann. Chem Soc J p2127-35 Je '52

See also

Chromium hexacarbonyl

Analysis

Mercaptocarboxylic acids as reagents for the identification of carbonyl compounds. J. J. Ritter and M. J. Lover. bibliog Am Chem Soc J 74:5576-7 N 20 '52

Quantitative estimation of the carbonyl groups in saturated ketocholanic acids. E. L. Pratt. bibliog Anal Chem 25:175-7 Ja '53

CARBONYL fluoride

Electron diffraction investigation of the molecular structures of ketene, carbonyl fluoride and tetrafluoroethylene. T. T. Broun and R. L. Livingston. bibliog Am Chem Soc J 74:6084-91 D 5 '52

CARBONYL group

Fluorinated esters; the effect of neighboring fluorine atoms on the ester carbonyl frequency. G. Rappaport and others. bibliog Am Chem Soc J 75:2695-7 Je 5 '53

Free radical rearrangements in the decarbonylation of aldehydes. D. Y. Curtain and M. J. Hurwitz. bibliog Am Chem Soc J 74:5381-7 N 5 '52

Infrared spectroscopic study of the carbonyl stretching frequency in a group of *ortho* and *para* quinones. M. Josien and others. bibliog J Chem Phys 21:331-40 F '53

Mechanism of the reaction of α-haloketones with weakly basic nucleophilic reagents. R. G. Pearson and others. bibliog Am Chem Soc J 74:5130-2 O 20 '52

CARBONYL sulfide

Fluorination of carbon disulfide and carbonyl sulfide. G. A. Silvey and G. H. Cady. Am Chem Soc J 74:5792-3 N 20 '52

Six-millimeter spectra of OCS and N_2O. S. J. Tetenbaum. bibliog Phys R 88:772-4 N 15 '52

CARBORUNDUM company

Security I like best. T. R. Rankin. Comm & Fin Chr 176:2218+ D 11 '52

Simplifying industrial pricing. Bsns W p54+ Je 13 '53

Stock offered. Comm & Fin Chr 177:938 Mr 2 '53

Three by nine analysis of some unlisted stocks. H. J. King. Comm & Fin Chr 177:1208 Mr 19 '53

CARBOWAX

Water-soluble pastes for diamond powder. R. S. Young, D. A. Benfield and G. B. Dauncey. Ind & Eng Chem 45:402-4 F '53

CARBOXYL group

C^{14} isotope effect in the decarboxylation of α-naphthyl- and phenylmalonic acids. A. Fry and M. Calvin. bibliog J Phys Chem 56:901-5 O '52

Carboxylation of resorcinol and the separation of β- and γ-resorcylic acid by ion-exchange chromatography. D. K. Hale and others. diag Chem Soc J p3503-9 S '52

Cofactor requirements for the decarboxylation of succinate. H. R. Whiteley. bibliog Am Chem Soc J 75:1518-19 Mr 20 '53

Comparison of the magnitudes of the isotope intermolecular effects in the decarboxylations of malonic-1-C^{14} acid and malonic-2-C^{14} acid at 154°. G. A. Ropp and V. F. Raaen. bibliog Am Chem Soc J 74:4992-4 O 20 '52

Competitive action of isonicotinic acid hydrazide and pyridoxal in the amino acid decarboxylation of escherichia coli. M. Yoneda and N. Asano. bibliog Science 117:277-9 Mr 13 '53

Cyclization and decarboxylation of α-hydromuconic acids. H. E. Baumgarten. bibliog Am Chem Soc J 75:979-82 F 20 '53

Decarboxylation of α,β-unsaturated malonic acid derivatives via β,γ-unsaturated intermediates; the effect of α-substituents upon product composition and rate. E. J. Corey. bibliog Am Chem Soc J 75:1163-7 Mr 5 '53

Decarboxylation of α-substituted glycidic acids. N. K. Nelson and H. H. Morris. bibliog Am Chem Soc J 75:3337-9 Jl 20 '53

Determination of the carboxyl content of oxidized starches. M. F. Mattisson and K. A. Legendre. bibliog Anal Chem 24:1942-4 D '52

Determination of the terminal carboxyl residues of peptides and of proteins. V. H. Baptist and H. B. Bull. bibliog Am Chem Soc J 75:1727-9 Ap 5 '53

Effect of esterification of the carboxyl groups of collagen upon its combination with chromium compounds. K. H. Gustavson. bibliog Am Chem Soc J 74:4608-11 S 20 '52

Effect of methyl substitution on the decarboxylation of picolinic acids. N. H. Cantwell and E. V. Brown. bibliog Am Chem Soc J 74:5967-70 D 5 '52

Effect of solvents on the decarboxylation of picolinic acid. N. H. Cantwell and E. V. Brown. bibliog Am Chem Soc J 75:4466-8 S 20 '53

Existence of a 1,2-addition, 1,2-elimination mechanism for decarboxylation. E. J. Corey and G. Fraenkel. bibliog Am Chem Soc J 75:1168-72 Mr 5 '53

Intermolecular carbon isotope effect in the decarboxylation of normal malonic acid in quinoline solution. P. E. Yankwich and R. L. Belford. bibliog Am Chem Soc J 75:4178-82 S 5 '53

Intramolecular carbon isotope effects in the decarboxylation of malonic acid and bromomalonic acid. P. E. Yankwich and E. C. Stivers. bibliog diag J Chem Phys 21:61-6 Ja '53

CARBOXYL group—*Continued*
- Kinetics of the decarboxylation of 2,4,6-trihydroxybenzoic acid in perchloric acid solution. W. M. Schubert and J. D. Gardner. bibliog Am Chem Soc J 75:1401-5 Mr 20 '53
- Kinetics of the metal-ion catalysed decarboxylation of acetonedicarboxylic acid. J. E. Prue. Chem Soc J p2331-8 Je '52
- Mechanism of enzymatic oxidative decarboxylation of pyruvate. L. J. Reed and B. G. DeBusk. bibliog Am Chem Soc J 75:1261-2 Mr 5 '53
- Mechanism of the decarboxylation of α,β- and β,γ-unsaturated malonic acid derivatives and the course of decarboxylative condensation reactions in pyridine. E. J. Corey. bibliog Am Chem Soc J 74:5897-905 D 5 '52
- New reaction mechanism for the Marckwald asymmetric synthesis. J. Kenyon and W. A. Ross. Chem Soc J p2307-10 Je '52
- Origin of the carboxyl group of histidine in yeast. J. W. Davis and others. bibliog Am Chem Soc J 75:2252-3 My 5 '53
- Participation of a neighboring carboxyl group in addition reactions; the mechanism of the reaction of bromine with γ,δ-unsaturated acids and esters. R. T. Arnold, M. D. Campos and K. L. Lindsay. bibliog Am Chem Soc J 75:1044-7 Mr 5 '53
- Participation of a neighboring carboxyl group in addition reactions; the reaction of cyanogen iodide with γ,δ-unsaturated acids. R. T. Arnold and K. L. Lindsay. bibliog Am Chem Soc J 75:1048-9 Mr 5 '53
- Peptides; selective degradation from the carboxyl end; the use of carbodi-imides. H. G. Khorana. Chem Soc J p2081-8 Je '52
- Structure of α-oxalic acid and of the carboxyl group. E. G. Cox, M. W. Dougill and G. A. Jeffrey. diags Chem Soc J p4854-64 D '52
- Structure of the oxalate ion. G. A. Jeffrey and G. S. Parry. Chem Soc J p4864-7 D '52
- Temperature coefficient of the intermolecular carbon isotope effect in the decarboxylation of normal malonic acid. P. E. Yankwich, R. L. Belford and G. Fraenkel. bibliog Am Chem Soc J 75:832-5 F 20 '53

CARBOXYLASES
- Enzyme models; the kinetics of an artificial carboxylase catalysis. R. E. Schachat, E. I. Becker and A. D. McLaren. bibliog il diag J Phys Chem 56:722-6 Je '52
- Mechanism of action of oxalacetic carboxylase from liver. M. F. Utter and K. Kurahashi. bibliog Am Chem Soc J 75:758 F 5 '53

CARBOXYLIC acids
- Absorption of some organic bases by carboxylic acid ion-exchange resins; equilibrium studies. L. Saunders and R. S. Srivastava. Chem Soc J p2111-18 Je '52
- Acidity and basicity scale in the system ethanol-water; the evaluation of degenerate activity coefficients for single ions. B. Gutbezahl and E. Grunwald. bibliog Am Chem Soc J 75:565-74 F 5 '53
- Antispasmodics; basic esters and amides of some heterocyclic N-carboxylic acids. A. W. Weston, R. W. DeNet and R. J. Michaels, jr. Am Chem Soc J 75:4006-8 Ag 20 '53
- 2-Benzoyldithiocarbazinic acid and related compounds. E. Hoggarth. Chem Soc J p4811-17 D '52
- 3α-Carboxylic acids of 5-sistostene and stigmastane. E. N. Squire. Am Chem Soc J 75:493-4 Ja 20 '53
- Colloidal properties of highly fluorinated alkanoic acids. C. H. Arrington, jr. and G. D. Patterson. bibliog J Phys Chem 57:247-50 F '53
- Compounds of alkylamines with esters of azodicarboxylic acid. G. W. Kenner and R. J. Stedman. Chem Soc J p2089-94 Je '52
- Condensation product of pyrrolidonecarboxylic acid and formaldehyde. J. B. Stark and A. E. Goodban. Am Chem Soc J 74:4966-7 O 5 '52
- Configurations of the 3-bromocyclohexanecarboxylic acids. S. Siegel and J. G. Morse. bibliog Am Chem Soc J 75:3857-9 Ag 5 '53
- Degradation of veratramine to benzene-1,2,3,4-tetracarboxylic acid. O. Wintersteiner, M. Moore and N. Hosansky. bibliog Am Chem Soc J 75:2781-2 Je 5 '53
- Dielectric polarization and self-ionization in carboxylic acids. F. E. Harris and B. J. Alder. bibliog J Chem Phys 21:1306-7 Jl '53
- Dissociation constants of acids in salt solutions; carbocyclic carboxylic acids. M. Kilpatrick and J. G. Morse. Am Chem Soc J 75:1854-6 Ap 20 '53
- Dissociation constants of acids in salt solutions; monohydroxycyclohexanecarboxylic acids. M. Kilpatrick and J. G. Morse. bibliog diags Am Chem Soc J 75:1846-53 Ap 20 '53
- Dissociation constants of the alkaline-earth salts of some monocarboxylic acids. C. A. Colman-Porter and C. B. Monk. Chem Soc J p4363-8 N '52
- Electrical effects of substituent groups in saturated systems; reactivities of 4-substituted bicyclo[2.2.2]octane-1-carboxylic acids. J. D. Roberts and W. T. Moreland, jr. bibliog Am Chem Soc J 75:2167-73 My 5 '53
- Fluorinated esters; diesters of carboxylic acids with fluorine-containing alcohols and glycols. R. Filler and others. bibliog Am Chem Soc J 75:2693-5 Je 5 '53
- Fluorinated esters; esters of perfluoro monocarboxylic and dicarboxylic acids with 1,1-dihydroperfluoroalcohols and α,α,ω,ω-tetrahydroperfluoroglycols. M. Hauptschein and others. bibliog Am Chem Soc J 75:87-9 Ja 5 '53
- Formation of 1-phenylcyclohexanecarboxylic acid from α-halocyclohexyl phenyl ketones. C. L. Stevens and E. Farkas. bibliog Am Chem Soc J 74:5352-5 N 5 '52
- Hydrogen bond energies in carboxylic acids. M. M. Jones and others. bibliog J Chem Phys 20:1048 Je '52
- Hydrolysis of substituted ethyl *p*-biphenylcarboxylates. E. Berliner and Liang Huang Liu. bibliog Am Chem Soc J 75:2417-20 My 20 '53
- Ionization and dissociation of certain weakly acidic substances in pyridine. E. J. Corey. bibliog Am Chem Soc J 75:1172-4 Mr 5 '53
- Ionization of saturated *n*-aliphatic dicarboxylic acids in sulphuric acid. L. A. Wiles. Chem Soc J p996-7 Mr '53
- Mercaptocarboxylic acids as reagents for the identification of carbonyl compounds. J. J. Ritter and M. J. Lover. bibliog Am Chem Soc J 74:5576-7 N 20 '52
- Oxidation of carboxylic acids containing a tertiary carbon atom. J. Kenyon and M. C. R. Symons. Chem Soc J p2129-32 Jl '53
- Purpurogallin; further studies on the oxidation products of purpurogallin and purpurogallincarboxylic acid. W. D. Crow, R. D. Haworth and P. R. Jefferies. Chem Soc J p3705-13 O '52
- Pyridazinemonocarboxylic acids and derivatives. W. J. Leanza, H. J. Becker and E. F. Rogers. bibliog Am Chem Soc J 75:4086-7 Ag 20 '53
- Pyrolyses of the salts of the perfluoro carboxylic acids. J. D. LaZerte and others. bibliog Am Chem Soc J 75:4525-8 S 20 '53
- Reactions in carboxylic acid-thionyl chloride systems. W. Gerrard and A. M. Thrush. Chem Soc J p2117-20 Jl '53
- Reactions of aliphatic acid chlorides. N. O. V. Sonntag. Chem R 52:237-416 bibliog(p399-416) Ap '53
- Reactions of carboxylic acids in sulfuric acid. C. M. Welch and H. A. Smith. bibliog Am Chem Soc J 75:1412-15 Mr 20 '53
- Reactions of toluic acids with sulfur; stilbenedicarboxylic acids. W. G. Toland, jr., J. B. Wilkes and F. J. Brutschy. bibliog Am Chem Soc J 75:2263-4 My 5 '53
- Rearrangement of bromonorcedrenedicarboxylic acid. G. Stork and R. Breslow. bibliog Am Chem Soc J 75:3292 Jl 5 '53
- Relative configurations of the 2- and 3-hydroxycyclohexanecarboxylic acids and the related methylcyclohexanols; the stereochemistry of the catalytic hydrogenation of substituted cyclohexanones. S. Siegel. bibliog Am Chem Soc J 75:1317-20 Mr 20 '53
- Senecio alkaloids; the synthesis and resolution of 3 : 4-dihydroxy-2-methyl-pentane-3-carboxylic acids; viridifloric and trachelantic acids. L. J. Dry and F. L. Warren. Chem Soc J p3445-8 S '52

CARBOXYLIC acids—*Continued*

Solubility of the copper salts of aromatic carboxylic acids in benzene-ethanol mixtures. M. Crawford and F. H. C. Stewart. Chem Soc J p288-92 Ja '53

Some dicarboxylic acids and esters containing the phosphine oxide group. P. W. Morgan and B. C. Herr. bibliog Am Chem Soc J 74:4526-9 S 20 '52

Stability of metal chelates; nitrilotricarboxylic acids. S. Chaberek, jr. and A. E. Martell. bibliog Am Chem Soc J 75:2888-92 Je 20 '53

Stereochemistry of the 3-carboxycyclohexaneacetic acids. F. Ramirez and J. W. Sargent. bibliog Am Chem Soc J 74:5785-7 N 20 '52

Steroids and Walden inversion; the epimeric 6-hydroxy-2 : 3-*seco*cholestane-2 : 3-dicarboxylic acids. C. W. Shoppee and G. H. R. Summers. pl Chem Soc J p3374-81 S '52

Structure of Feist's methylcyclopropenedicarboxylic acid. M. G. Ettlinger. bibliog Am Chem Soc J 74:5805-6 N 20 '52

Studies on the thermal decomposition of silver salts of perfluorocarboxylic acids. A. D. Kirshenbaum, A. G. Streng and M. Hauptschein. bibliog diag Am Chem Soc J 75: 3141-5 Jl 5 '53

Synthesis of corticrocin. B. L. Shaw and M. C. Whiting. Chem & Ind p409-10 Ap 25 '53

Synthesis of higher aliphatic α,ω-dicarboxylic acids. A. Kreuchunas. bibliog Am Chem Soc J 75:3339-44 Jl 20 '53

Synthesis of oxazoles from ethyl acetoacetate; ring-fission of some oxazole-5-carboxylic acids. J. W. Cornforth and Mrs R. H. Cornforth. Chem Soc J p93-8 Ja '53

Synthesis of some 4-substituted bicyclo[2.2.2] octane-1-carboxylic acids. J. D. Roberts, W. T. Moreland, jr. and W. Frazer. bibliog Am Chem Soc J 75:637-40 F 5 '53

Synthesis of 2,3,4-trimethoxybenzosuberene- and 2,3,4-trimethoxybenzosuberancarboxylic acids and esters. J. Koo and J. L. Hartwell. bibliog Am Chem Soc J 75:1625-8 Ap 5 '53

Synthesis of 4,5,6-trimethoxyindene- and 4,5,6-trimethoxyindanecarboxylic acids and esters. J. Koo. bibliog Am Chem Soc J 75: 1889-91 Ap 20 '53

Synthetic experiments in the *cyclo*-heptatrienone series; 4-keto*cyclo*heptatrienecarboxylic acid. J. R. Bartels-Keith, A. W. Johnson and A. Langemann. Chem Soc J p4461-6 N '52

Tracer study of the reaction of isocyanates with carboxylic acids. A. Fry. bibliog Am Chem Soc J 75:2686-8 Je 5 '53

Water-soluble polycarboxylic acids by oxidation of coal. N. W. Franke and others. bibliog flow sheet il plan diag Ind & Eng Chem 44:2784-92 N '52

See also
Perfluorocarboxylic acids

Analysis

Microdetermination of carboxy groups in aromatic and aromatic-type heterocyclic acids. M. Beroza. diag Anal Chem 25:177-9 Ja '53

CARBOXYMETHYL cellulose

Carboxymethylcellulose, a staff-industry collaborative report. R. N. Hader, W. F. Waldeck and F. W. Smith. bibliog flow sheets il diags Ind & Eng Chem 44:2803-12 D '52

See also
Sodium carboxymethyl cellulose

CARBOXYMETHYLATION

Crease-resistant cloth from partially carboxymethylated cotton. G. C. Daul and others. bibliog Textile Res J 22:792-7 D '52

Studies on the partial carboxymethylation of cotton. G. C. Daul and others. bibliog Textile Res J 22:787-92 D '52

CARBOXYPEPTIDASES

C-terminal groups of trypsinogen, DFP-trypsin and carboxypeptidase. E. W. Davie and H. Neurath. bibliog Am Chem Soc J 74: 6305-6 D 20 '52

Some carboxypeptidase-substrate relationships. E. Ronwin. bibliog Am Chem Soc J 75:4026-30 Ag 20 '53

CARBOYS

Square for acids; box-shaped polyethylene carboy. il Mod Packaging 26:113 Ja '53

CARBURETERS

Method of carburetor adjustment; abstract. H. G. Bolton. S A E J 61:116+ Ap '53

Manufacture

Automatic machine assembles, inspects small parts; carburetor assembly lines at the Rochester products division plant of General motors corp. J. J. Obrzut. il Iron Age 171:236-8 My 7 '53

Mass production; but with an eye on versatility; machining zinc die castings for Chevrolet carburetor; Rochester products division, General motors corp. H. Chase. il Steel 131:110-12 D 15 '52

Multi-fixture table speeds soldered assemblies; dual carburetor floats at Rochester products division of General motors corp. il Iron Age 171:101 Ja 22 '53

CARBURIZING. See Case hardening

CARCINOGENIC substances. See Cancer

CARD system in business

Card index controls supplies at no extra personnel cost; Eastman cotton mills. M. D. Heaton. il Textile World 103:112-13 Ag '53

Card-recording timesaver. Steel 131:119 D 1 '52

Cards slash maintenance; Thermoid corp. T. J. Ellis. il Power 97:109-11 Je '53

Simple card index system pinpoints results and progress for large scale sample analysis. Chem & Eng N 31:1919 My 4 '53

See also
Punched card system

CARDIACS. See Heart—Diseases

CARDING

Processing synthetics on the woolen system. R. A. Smith. Textile World 102:80-3+ S '52; 103:141, 248 Ja '53

See also
Cotton carding
Nylon carding
Wool carding

CARDING machines

Can conversion at Avondale costs only $11.25 per card. T. B. Winston. il diag Textile World 103:97+ Mr '53

84-in. woolen cards pay off at New England mill. M. J. Koroskys. il Textile World 103:84 Ja '53

Let's take another look at metallic card clothing. J. H. Kennedy. il Textile World 103: 135+ F '53

See also
Cotton carding

CARDS, Merchandize. See Merchandize cards

CAREER publications, inc.

Selling job-hunters. Bsns W p 122 F 28 '53

CAREY, James Barron, 1911-

Carey vs. Boulware; G.E.'s bargaining bogs down. Fortune 46:92-3 O '52

CARFERRIES. See Train ferries

CARGO handling

Cargo-handling gear and deck machinery; Mariner ships. il diag Marine Eng 58:94-8 My '53

Mobile cargo crane. il Engineer 194:66 Jl 11 '52; Engineering 174:185 Ag 8 '52

See also
Freight handling
Stowage
Winches, Electric

CARIBBEAN region

Florida's rivals; Caribbean islands, South America plug for Southland's vacationers. N. Willatt. Barron's 32:9-10 N 3 '52

Industries and resources

Caribbean territories formulating industrial development program. A. J. Powers. For Comm W 49:13+ Ja 26 '53

CARLSBAD caverns

Aragonite rafts. D. M. Black. bibliog il Science 117:84-5 Ja 23 '53

Carlsbad caverns shot called for 2,400 bulbs. J. L. Collings. il Ed & Pub 85:57 N 22 '52

CARNAUBA wax

Detection of additives in vegetable waxes; the use of instrumental analysis. C. J. Marsel and others. Soap & San Chem 28: 127+ N '52

CARNEGIE institute of technology

Carnegie's printing department has good demand for graduates. Inland Ptr 130:43 Ja '53

Coal research laboratory

Coal research. C. H. Ruof. Science 116:sup3 O 31 '52

School of printing management

Carnegie Tech printing department expands to school status on July 1. il plan Inland Ptr 131:46-7 Je '53

CARNEGIE institution of Washington

Geophysical laboratory

List of systems investigated at geophysical laboratory. L. H. Adams. Am J Sci Bowen vol p 1-26 bibliog(156 titles, p 19-26) '52

CARNITINE

Improvements in the synthesis of DL-carnitine. H. E. Carter and P. K. Bhattacharyya. bibliog Am Chem Soc J 75:2503-4 My 20 '53

CARNOSINE

New synthesis of carnosine. H. Kroll and H. Hoberman. bibliog Am Chem Soc J 75: 2511-12 My 20 '53

Synthesis of carnosine and related peptides by the phthaloyl method. R. A. Turner. bibliog Am Chem Soc J 75:2388-90 My 20 '53

CARNOTITE

Carnotite; mining Colorado plateau; hundreds of small mines supply U.S. with uranium, vanadium. il Iron Age 170:110 N 6 '52

Geologic guides to prospecting for carnotite deposits on Colorado plateau. D. B. Weir. bibliog maps diag U S Geol S Bul 988-B: 15-27; pa 15¢ Supt. of doc. '52

Geology of the Uravan mineral belt; contributions to the geology of uranium, 1952. R. P. Fischer and L. S. Hilpert. maps U S Geol S Bul 988-A:1-13, pl 1-3[in pocket]; pa 35¢ Supt. of doc. '52

CAROLINA power and light company

Bonds offered. Comm & Fin Chr 176:1562 O 27 '52

CAROTENE

Action of N-bromosuccinimide on β-carotene. L. Zechmeister and L. Wallcave. bibliog Am Chem Soc J 75:4493-5 S 20 '53

Biosynthesis of carotene in phycomyes. F. Mackinney and others. Am Chem Soc J 75: 236-8 Ja 5 '53

Conversion of dehydro-β-carotene, via its boron trifluoride complex, into an isomer of cryptoxanthin. L. Wallcave and L. Zechmeister. bibliog Am Chem Soc J 75:4495-8 S 20 '53

Preparation of carotene concentrates from dehydrated alfalfa meal. H. L. Mitchell, W. G. Schrenk and R. E. Silker. bibliog il Ind & Eng Chem 45:415-17 F '53

CAROTENOIDS

Biogenesis of carotenoids; abstract. T. W. Goodwin. Chem & Ind p 152 F 14 '53

Reduction of phosphomolybdic acid by compounds possessing conjugated double bonds. S. Burstein. bibliog Anal Chem 25:422-4 Mr '53

Theory of absorption spectra of carotenoids according to Tomonaga-gas model of π-electrons. G. Araki and T. Murai. J Chem Phys 20:1661-2 O '52; Correction. 21:381 F '53

CARPAINE

Constitution of carpaine. T. R. Govindachari and N. S. Narasimhan. Chem Soc J p2635-7 S '53

Nitrogen-containing ring of carpaine. H. Rapoport and H. D. Baldridge, jr. bibliog Am Chem Soc J 74:5365-8 N 5 '52

CARPENTER, Aaron Everly, 1883-

Making new products out of old. pors Bsns W p43-4+, cover N 1 '52

CARPENTRY

See also
Rafters

Accidents

Injuries and accident causes in carpentry operations; detailed analysis of accidents experienced by carpenters during 1948 and 1949. F. S. McElroy and G. R. McCormack. U S Bur Labor Statistics Bul 1118:1-58; pa 35c Supt. of doc. '53; Excerpts. Constr Methods 35:175+ My '53

CARPET factories

Automatic system regulates pH, assures clean process water; James Lees & sons co. J. Tyler. flow diag il Textile World 103:122-3+ O '53

Employees

Occurrence of anthrax bacilli in the carpet-wool industry in the United States. R. S. Lloyd. bibliog A M A Archives Ind Hygiene & Occup Med 6:421-34 N '52

Recovery from anthrax meningitis. D. Kindler. bibliog il Ind Med 21:487-8 O '52

Equipment

Mohawk carpet mills controls quality by instrumentation. il diag Textile World 102: 106-7 D '52

Spectrophotometry is practical at Mohawk carpet mills; abstract. J. J. Hanlon. Textile World 102:141+ D '52

Quality control

How Bigelow-Sanford found 2,000 yd. of lost carpet. A. G. Klock and C. W. Carter. Textile World 103:129+ Je '53

CARPET industry

Sharp earnings comeback in sight for Firth Carpet. Barron's 33:27 Ja 19 '53

Under the rug; the dust of recession swept out, brighter is the profits hue; with table of carpet companies' first half earnings, 1951-52. F. Henle. Barron's 32:11 O 27 '52

Advertising

Retail plan book sparks '53 carpet fashion bazaar. R. B. McIntyre. Ed & Pub 85:20 N 1 '52

CARPET institute, inc.

Carpet institute celebrates 25 years. Comm & Fin Chr 176:1839 N 13 '52

Retail plan book sparks '53 carpet fashion bazaar. R. B. McIntyre. Ed & Pub 85:20 N 1 '52

CARPET sweepers

Rating

Carpet sweepers. il Consumers Res Bul 31: 5-9 My '53

CARPETS

Progress in making carpetings. G. Boyo. il Mod Textiles Mag 34:34-5 My '53

Scientific tests disprove certain claims about dry rot damage to carpeting. F. C. Johnson. Weekly Underw 168:1196 Ap 25 '53

Some types of Chinese carpet wools. Chang Soon Ying and others. bibliog il Textile Inst J 44:P171-82 Je '53

See also
Saran

Cleaning

On-location cleaners, including Glamorene. il Consumers Res Bul 30:24-6 O '52

Passenger car carpet cleaning. il Ry Mech & Elec Eng 126:64-5 D '52

Manufacture

Artloom converts to straight-line finishing. G. Moisson. il Textile World 103:152-3 S '53

Jute industries; manufacture of carpet and twine. il Elec R (Lond) 153:273-6 Ag 7 '53

CARR, Clark M.

Atomic airline from Albuquerque to Los Alamos. Fortune 46:231 N '52

CARRIER corporation

Five medium priced growth stocks; with comparative balance sheet items. Mag of Wall St 91:74 O 18 '52

New sales, earnings marks seen for Carrier this year. Barron's 33:23 Ja 26 '53

Security I like best. E. W. Snyder. Comm & Fin Chr 177:1954+ My 7 '53

CARRIER current control

Airplane pilots turn on lights. il Elec West 111:97 Ag '53

Application of line traps to power-line carrier systems; abstract. J. D. Moynihan. Elec Eng 72:319 Ap '53

Application of power-line carrier by analogue computer studies. J. D. Moynihan. bibliog diags Elec Eng 72:58-62 Ja '53

Application of power-line carrier-coupling equipment to typical field installations. F. B. Gunter. Elec Eng 72:163 F '53

CARRIER current control—*Continued*

C1 alarm and control system for microwave radio; abstract. H. M. Pruden. diag Electronics 26:246+ My '53

Centralized water heater control reduces system peaks. H. A. Schimelpfenig and L. Rietow. il Elec World 139:98-9 My 9 '53

Electronic line outage monitor. R. L. Brinton and C. E. Comstock. il diag Elec West 111:86-7 Jl '53

Factors affecting selection of power-line carrier. R. C. Cheek. bibliog il diags Westinghouse Eng 13:107-11, 121-5 My-Jl '53

Frequency-shift carrier-current equipment for telemetering and other control functions. R. W. Beckwith. bibliog diags Elec Eng 71:1026-31 N '52

How response speed is affected by the bandwidth of multiplex channels. J. S. Smith. bibliog diags Commun Eng 13:22-3+ My '53

Microwave protective relaying. H. W. Lensner. il diags Radio Com 12:26-7+ O; 24-5 D '52

New method of calculating carrier current attenuation; abstract. J. A. Becker. Elec Eng 71:1020 N '52

One circuit breaker less on line connecting Kearny plant with Bergen substation. I. D. Perry. il diags Elec World 138:100-1 N 3 '52

Phase comparison carrier relaying for three-terminal lines; abstract. H. W. Lensner. Elec Eng 72:698 Ag '53

Power-line carrier for relaying and joint usage. G. W. Hampe and B. W. Storer. diag Elec Eng 72:144 F '53

Selection of a relaying system. R. C. Cheek and J. L. Blackburn. diags Commun Eng 13:30-3+ Ja '53

This 33,750 kw hydro plant has no operators. H. E. Rhoades. il Elec World News ed 139: 28-30+ Ja 5 '53

CARRIER current telephone. See Telephone, Carrier current

CARRIERS

Go through picket lines; federal judge warns carriers in Montgomery Ward decision. Bsns W p 124-5 Jl 18 '53

See also

Air carriers
Air freight service
Airlines
Freight car service
Gas, Natural—Pipe lines
Highway transportation
Interstate commerce commission
Motor bus lines
Motor trucks—Laws and regulations
Petroleum pipe lines
Pipe lines
Railroads
Shipping
Steamboat lines

CARRY home containers. See Containers, Carry home

CARS

Dome cars highlight revival of equipment orders. il Ry Age 134:134-6 My 18 '53

What's ahead in equipment? il Ry Age 134: 129-31 My 18 '53

See also

Air brakes
Baggage and express cars
Car axles and other headings beginning Car
Car department officer's association
Cars, Electric railroad
Dining cars
Freight cars
Mine cars
Motor cars (railroad)
Postal cars
Railroads—Trains
Refrigerator cars
Sleeping cars
Street cars

Air conditioning

Air conditioning and refrigeration; A.A.R. Electrical section committee report. Ry Loco & Cars 127:76-7 Ag '53

Car air conditioning; report of A.A.R. Electrical section. Ry Mech & Elec Eng 126: 117-18 N '52

Comfort cooling on the Santa Fe. J. V. Dobbs. il Refrig Eng 61:1077-9 O '53

Quick check for car cooling and heating system. il diag Ry Loco & Cars 127:72-3 Jl '53

Bearings

Case for the solid journal bearing. J. G. Dick. il Ry Age 134:44-7 Ja 5 '53; Same cond. Ry Loco & Cars 127:62-4 F '53

Economic investigation of solid journal bearing operation in freight service on two large class I railways. R. M. Wright and others. bibliog diag Ill U Eng Exp Sta Bul 406:1-110 '53 (pa $1)

Hot-box research results in the iron-back journal bearing. J. J. Laudig. il Ry Age 134:65-9 Mr 23 '53; Same. Ry Loco & Cars 127:69-73 Ap '53

How hot boxes can stop trains automatically. il Ry Age 134:84-5 F 9 '53; Same. Ry Loco & Cars 127:59-60 F '53

How Santa Fe reduces hot boxes. il Ry Age 135:51-4+ Jl 27 '53

New journal stop developed on the Frisco. il Ry Loco & Cars 127:82 Jl '53

N&W demonstrates how hot boxes can be controlled. il Ry Age 134:103-8 Je 15 '53; Same. Ry Loco & Cars 127:45-52 Jl '53

This Southern Pacific lubrication instruction car is equipped with sample journal boxes. il Ry Age 133:59-60 O 27 '52

Where, and how often do hot boxes occur? M. A. Pinney. Ry Loco & Cars 127:53-7 My '53; Same cond. Ry Age 134:54-7 My 4 '53

Design

Budd's Siesta coach, new lure for passengers. il Ry Age 134:59-62 Je 1 '53

Dome cars; and how to use them. il Ry Age 134:132 Je 15 '53

Milwaukee gets first full-length dome-lounge cars. il plans diag Ry Age 133:68-74 D 8 '52; Same cond. Ry Loco & Cars 127:49-54 F '53

Milwaukee wholesales its ten Super Dome cars; ticket agents, passenger representatives and information clerks sample the new merchandise. il Ry Age 134:52-5 F 23 '53

New cars for the new Zephyrs; Chicago Burlington & Quincy. il plans Ry Age 134:77-84 F 9 '53; Same cond. Ry Loco & Cars 127:80-4 Ap '53

Double deck

Milwaukee gets first full-length dome-lounge cars. il plans diag Ry Age 133:68-74 D 8 '52; Same cond. Ry Loco & Cars 127:49-54 F '53

Electric equipment

Car electrical equipment; A.A.R. Electrical section committee report. Ry Loco & Cars 127:79-81 Ag '53

Car electrical equipment; report of A.A.R. Electrical section. Ry Mech & Elec Eng 126:115-16 N '52

Story of direct mechanical drive for caboose generators. W. S. H. Hamilton. il diags Ry Loco & Cars 127:95-100 Je '53

Equipment

Milwaukee gets first full-length dome-lounge cars. il plans diag Ry Age 133:68-74 D 8 '52; Same cond. Ry Loco & Cars 127:49-54 F '53

New cars for the new Zephyrs; Chicago, Burlington & Quincy. il plans Ry Age 134:77-84 F 9 '53; Same cond. Ry Loco & Cars 127:80-4 Ap '53

Interchange

Interchange and billing for car repairs; report of Car department officers' association. Ry Mech & Elec Eng 126:101-2 N '52

See also

Freight cars—Interchange

Lubrication

Car and locomotive lubrication; A.A.R. Mechanical division committee report. Ry Loco & Cars 127:74 Ag '53

Car lubrication; report of Car department officers' association. Ry Mech & Elec Eng 126:97-8 N '52

Reconstruction

Head-end units from old passenger cars; Great northern railway. il Ry Age 133:66-7 N 10 '52; Same. Ry Mech & Elec Eng 126: 66-7 D '52

Illinois Central passenger cars modernized at Burnside shops. il plan Ry Loco & Cars 127:66-8 Jl '53

Repair

Crusader checked for corrosion. il Ry Age News ed 134:17-18 Je 22 '53

CARS—Repair—*Continued*
Welding light-gage stainless steel; practice in the repair shops of Pullman co. il Ry Loco & Cars 127:71 Mr '53

Statistics

Domestic railroad passenger cars ordered, 1932-1952; tabulation. Iron Age 171:442 Ja 1 '53
666 passenger-train cars ordered in 1952. J. S. Gallagher, jr. and F. C. Miles. il Ry Age 134:184-7 Ja 12 '53

Testing

Technical center for product development; National malleable & steel castings co. il Ry Age 135:76-7 O 19 '53

CARS, Aluminum
Energy consumption tests with steel and light alloy trains. il Engineer 195:630-1 My 1 '53; Engineering 175:560, 566-7 My 1 '53
See also
Freight cars, Aluminum

CARS, Baggage and express. See Baggage and express cars

CARS, Ballast. See Ballast cars

CARS, Caboose
Caboose generator drives. E. K. Lofton and others. il Ry Loco & Cars 127:93-5 Mr '53
Great Northern builds 15 all-steel cabooses. il Ry Age News ed 135:13 O 12 '53
Making over railroaders' little red caboose. il Bsns W p68-71 My 16 '53
Story of direct mechanical drive for caboose generators. W. S. H. Hamilton. il diags Ry Loco & Cars 127:95-100 Je '53

History

Century-old caboose. R. E. McFee. il Comp Air Mag 58:72-6 Mr '53

CARS, Electric railroad
Considerations on bogie design, with particular reference to electric railways. W. S. Graff-Baker. diags Inst Mech Eng Proc (A) 166 no 2:217-27, pl 1-4; Discussion. 227-36 '52; Engineer 193:58-9, 108 Ja 11-18 '52
Laminated shoebeams for railway rolling stock. Engineer 194:300 Ag 29 '52
New lease of life; London Transport's railway rolling stock replacement. il Elec J 149:1592 N 21 '52
Trends in rapid-transit car design. S. H. Bingham. il diags Elec Eng 72:352-5 Ap '53
See also
Street cars

CARS, Freight. See Freight cars

CARS, Inspection
Rail track testing coach. il Engineer 194:809 D 12 '52; Engineering 174:766-7 D 12 '52
Vehicle for recording the condition of railway track. il diags Engineering 174:225-6 Ag 22 '52

CARS, Instruction
Model speeds signal rules instruction; Kansas City Southern. il Ry Age News ed 135:15 Ag 17 '53
This Southern Pacific lubrication instruction car is equipped with sample journal boxes. il Ry Age 133:59-60 O 27 '52
Train for safety; railroad instruction car. il Safety Maint & Prod 105:59-60 Ap '53

CARS, Postal. See Postal cars

CARS, Steel
Crusader checked for corrosion. il Ry Age News ed 134:17-18 Je 22 '53
Energy consumption tests with steel and light alloy trains. il Engineer 195:630-1 My 1 '53; Engineering 175:560, 566-7 My 1 '53
Structural applications of stainless steel. A. G. Dean. il diags Engineer 195:853-5, 882-4 Je 19-26 '53

CARTELS. See Trusts, Industrial—International trusts

CARTER, George W.
Sketch. por Nat Underw 57:13+ Ja 22 '53

CARTOONISTS
Barnstorming cartoonist Marsh takes to the road. E. Knoll. Ed & Pub 85:50 O 25 '52
NEA service's Walt Scott-triple-threat cartoonist. E. Knoll. Ed & Pub 85:50 N 29 '52
See also
Webster, Harold Tucker

CARTOONS
Utility industry in cartoons. A. B. Marvin. Pub Util 51:88-94 Ja 15 '53; Same. Edison Elec Inst Bul 21:45-8 F '53
See also
Moving pictures—Animated cartoons

CARTRIDGE, Power. See Power cartridge

CARTRIDGE cases

Manufacture

Continuous short-cycle anneal for spheroidization of cartridge-case steel. O. E. Cullen. il diags Metal Prog 64:79-82 Jl '53
Drawing; conveyers, integrated presses help boost shell output; Rheem mfg. co. il Iron Age 171:166 F 5 '53; Mach 59:164-6 Mr '53; Steel 132:122+ F 2 '53
Huge mechanical press speeds production of steel cartridge cases. H. G. Hron. il Mach 59:151-7 Ja '53
Mass-producing 105-millimeter cartridge cases. C. H. Wuerz. il Mach 59:168-72 Ag '53
Novel press increases production and facilitates feeding; designed by the Clearing machine corp. il Tool Eng 30:61-2 Mr '53

CARTY, Maurice Walter
Sketch. Mech Eng 75:262 Mr '53

CARVEOL
Carveol and carveol acetate. R. H. Reitsema. Am Chem Soc J 75:1996-7 Ap 20 '53
Carveol and related substances. A. Blumann and W. R. Wood. Chem Soc J p4420-2 N '52

CARVIN, Charles W.
Innocent on 7th avenue. G. Boyo. Mod Textiles Mag 33:36+ D '52

CARYOPHYLLENE
Nature of β-caryophyllene alcohol, clovene and clovenic acid. A. W. Lutz and E. B. Reid. bibliog Chem & Ind p278-9 Mr 21 '53
Sesquiterpenoids; tricyclic derivatives of caryophyllene. D. H. R. Barton, T. Bruun and A. S. Lindsey. Chem Soc J p2210-19 Je '52

CASE, J. I., company
Debentures offered. Comm & Fin Chr 177:722 F 16 '53
Twenty stocks acting best, poorest; with tables. J. S. Williams. Mag of Wall St 92:226 My 16 '53

CASE hardening
Carbon content determines boron steel behavior. A. S. Jameson. bibliog Steel 131:154-6 O 13 '52
Comparison of tests for hardenability of shallow-hardening steels. G. K. Manning. S A E J 61:30-6 Jl '53
Cost-cutting method of hardening small parts; Keller tool co. C. C. Dierdorf. il Mach 59:158-60 Ja '53
End quench test for determining the hardenability of carburized steels. F. X. Kayser and others. diags Iron Age 171:155-7 Mr 19 '53
Flame-hardened engine parts for high production. H. Chase. il Materials & Methods 37:90-2 Ap '53
Flame hardening; difficult surface hardness pattern easily attained. Iron Age 170:210 D 4 '52
Flame hardening; lathe ways to 30 ft long rapidly hardened, quenched in new setup. il Iron Age 170:217-18 N 6 '52; Tool Eng 29:47 D '52; Steel 131:86 D 29 '52
Flame hardening machines speed treatment of engine components. A. H. Allen. il Metal Prog 64:97-102 O '53
Flame hardening of large diameter thin-wall cylindrical shells. G. A. Weber. il diags Welding J 32:37-43 Ja '53
Heat treating gears to meet rigid requirements. R. Spagnola. il Materials & Methods 38:102-3 Ag '53
Induction heating helps produce better gears; Greenlee bros. & co. L. G. Miller. il Metal Prog 63:109-10+ Je '53
Natural gas; a switch for heat treating. il Steel 132:169-70 Je 1 '53
Retained austenite in carburized alloy steels. W. J. Jabsen. Metal Prog 62:118+ D '52
Salt bath carburizing. J. K. McIver. il Metal Prog 62:85-7 D '52
Salt bath case hardening with molybdenum and tungsten. il Materials & Methods 37:94-7 Mr '53

CASE hardening—*Continued*

Structures and properties of some carbonitrided cases. K. B. Valentine. il diags Metal Prog 63:97-103 Je '53

Surface hardening of steels and irons. J. L. Everhart. il Materials & Methods 38:137-52 O '53 (reprints 25c)

Tempering of cyanided links. V. Evans. Metal Prog 63:114 F '53

Thermal stabilization of austenite in carburizing steels. H. M. Otte and T. Ko. bibliog Iron & Steel Inst J 173:31-5 Ja '53; Discussion. 174:347-52 Ag '53

Electric hardening

Automatic induction hardening of transmission shifter forks. A. A. Lyness, jr. il Automotive Ind 108:90+ Ja 1 '53

Heat treatment; development of high frequency induction methods. il Elec R (Lond) 153:325-8 Ag 14 '53

High-frequency bar stock hardening machine. il Engineer 196:88 Jl 17 '53; Engineering 176:121 Jl 24 '53

Induction hardening boron steel gears. G. Van Camp. il Materials & Methods 36:121-2 N '52

Strength and wear resistance of induction hardened and of carburized spur gears; abstract. H. Glaubitz. Metal Prog 64:280+ O '53

Surface hardening of steels and irons; induction hardening. J. L. Everhart. Materials & Methods 38:147 O '53

Gas carburizing

Gas carburizing for crown wheels and pinions. il Automobile Eng 43:149-51 Ap '53

Versatile fixtures for high production gas carburizing. T. A. Frischman. il diags Materials & Methods 36:109-11 D '52

Nitriding process

Pressure nitriding for hardening internal or external surfaces. R. L. Chenault and G. E. Mohnkern. il diags Metal Prog 63:97-105 Ap '53

Surface hardening of steels and irons; nitriding. J. L. Everhart. il Materials & Methods 38:141-3 O '53

Titanium can be case hardened by nitriding. E. J. Silk. il Iron Age 170:166-70 N 13 '52

Testing

You can get better case depth measurements with radioactive isotopes. A. D. Kirshenbaum and H. C. Boynton. bibliog il diag Iron Age 171:138-40 My 14 '53

CASEIN

Casein paint. E. L. Barry. Can Chem Process 36:68+ N '52

Casein summary, 1952. H. Wilson. Paper Tr J 136:156-8 F 20 '53

Milk casein and peanut protein fibres. R. L. Wormell. flow sheet il Textile Inst J 44: P258-68; Discussion. P268-71 Jl '53

Analysis

Acid-base titration, viscosity and density of α-, β- and γ-casein. N. J. Hipp, M. L. Groves and T. L. McMeekin. bibliog Am Chem Soc J 74:4822-6 O 5 '52

Amino acid composition of γ-casein. W. G. Gordon, W. F. Semmett and M. Bender. bibliog Am Chem Soc J 75:1678-9 Ap 5 '53

Terminal amino groups of α- and β-caseins. E. F. Mellon, A. H. Korn and S. R. Hoover. bibliog Am Chem Soc J 75:1675-8 Ap 5 '53

CASH discount. See Discount, Cash

CASH registers

Samples on the spot; they save sales for National cash register co. il Sales Management 70:102 Mr 1 '53

CASHEW nuts

Indian production increasing; exports to the United States diminished. For Comm W 49:18 Mr 9 '53

CASS, Robert

Sketch. por S A E J 61:19 F '53

CASSITERITE

Some pipe deposits of eastern Australia. R. Blanchard. bibliog Econ Geol 47:822-3 D '52

CAST iron

ASTM annual meeting, Atlantic City, June 28-July 3; with abstracts of papers on castings. Foundry 81:159+ Ag '53

Cast iron radiation shipments, 1949-1952; tabulation. Iron Age 171:452 Ja 1 '53

Cast iron that bends; ductile iron. il Can Min J 73:90 N '52

Cast iron that bends; International Nickel's new ductile iron. il Diesel Power 30:60-1+ D '52

Cast iron with the properties of steel. il Ry Mech & Elec Eng 126:68-9 D '52; Same cond. Ry Age 133:60-1 O 20 '52

Cast meehanite rolls used for heavy-duty bending. M. R. Nelson. il Iron Age 171:135-7 My 28 '53

Castings; a material for ammunition. F. E. Shumann. il Foundry 81:88-93 Jl '53

Chemical and physical changes in magnesium-treated irons. M. Okamoto and R. Yoda. il Foundry 80:126-7 O '52

Ductile cast iron; where can it be used in process equipment? il Pet Processing 8: 234-5 F '53

Ductile iron, a new design material steps into your plant. il Power 97:122-3 F '53

Ductile iron applications expand. il Automotive Ind 108:42-3 Mr 1 '53

Ductile iron combines properties of cast iron, malleable iron, steel. il J Metals 4: 1143-5 N '52

Ductile iron for hammer castings; Chambersburg engineering co. Metal Prog 64:82-3 S '53

Ductile iron hits high gear. il Mod Ind 24: 105-6+ N '52

Ductile iron makes good; based on papers by H. L. Day and others. il S A E J 61:45-8 O '53

Ductile iron; new engineering material for water works construction. C. T. Haller. bibliog il Am Water Works Assn J 44:912-22 O '52

Ductile-iron uses. il Mech Eng 74:1012-14 D '52

Effect of chemistry and section size on the properties of ductile iron. D. J. Reese and others. S A E J 60:48-54 O '52; Abstract. Automotive Ind 106:124+ F 15 '52

Gray iron castings, shipments, 1945-1952; tabulation. Steel 132:165 Ja 5 '53

Gray iron founders warily optimistic. K. W. Bennett. Iron Age 171:38 Ja 22 '53

Heading die of ductile iron provides exceptional wear resistance. il Mill & Factory 53:131 Ag '53

Identification of certain iron-silicon carbides. W. S. Owen and B. G. Street. bibliog 2pls Iron & Steel Inst J 172:15-18 S '52; Discussion. W. I. Pumphrey. il 174:31-2 My '53

Inco demonstrates ductile iron. il Marine Eng 58:50-1 Ja '53

Internal porosity and inverse segregation in white cast iron. W. B. Sobers. bibliog il diags Foundry 81:128-31+ Je '53

Internal stresses in cast iron. C. O. Burgess. diags Product Eng 23:266+ O '52

Machinability studies; which gray irons for large volume production? E. A. Loria. il Iron Age 171:131-3 Ap 9 '53

Malleable founders' society market development conference, 4th, Chicago, April 9-10. Foundry 81:178+ Je '53

Malleable iron castings. J. H. Lansing. il Foundry 81:140-5 My '53

Malleable iron castings; shipments, 1936-1952; tabulation. Steel 132:166 Ja 5 '53

Malleable iron castings; types of malleable irons, engineering properties, design adaptability, processing characteristics, applications, directory of producers. H. R. Clauser. il diag Materials & Methods 37: 109-24 Mr '53 (reprints 25c)

Mechanism of second-stage malleablization. F. Brown. diags Foundry 81:108-9+ O '53

Metallurgical research in uranium, manganese and nodular cast irons. L. W. Goodwin, ed. bibliog il diags Colorado School of Mines (Golden) Quarterly 47 no 1:1-87 '52 (pa $1.50)

New cast iron increases glass mould life. N. Davis. il Cer Ind 60:133+ Ap '53

Nodular iron, plywood, hot dip coating make better fans. S. H. Fedan. il Materials & Methods 37:106-9 Je '53

Nodular iron tackles big jobs. T. E. Eagan. il Steel 132:102-4 Mr 16 '53

Pearlitic malleable castings. H. E. Steinhoff and L. Jenkins. il Foundry 81:84-7 Jl '53

CAST iron—*Continued*
Recent developments in cast iron metallurgy. A. B. Everest. il Metallurgia 46:293-7 D '52
Relative abrasiveness of the cast surfaces of various gray-iron castings on single-point tools of high-speed steel. J. Datsko and O. W. Boston. il A S M E Trans 75: 103-8 Ja '53; Abstract. Metal Prog 63:180+ My '53
Research on cast iron. Engineering 174:643 N 14 '52
Stress relief of gray iron. C. O. Burgess. bibliog il diags Foundry 81:112-14 Ag; 128-31+ S '53
Swarf injector for cupolas; abstract. A. R. Parkes. Metal Prog 62:180+ N '52
Time for drilling gray iron and malleable iron; reference book sheet. V. G. Hotchkiss. Am Mach 97:165, 167 Jl 6 '53
Wear properties of ductile cast iron. il Product Eng 24:125-7 F '53
What constituents affect machinability of gray irons? E. A. Loria and others. Am Mach 96:122-4 O 27 '52

Analysis
Influence of varying amounts of elements in steel and cast irons on spectral intensity. L. J. Canody and others. bibliog Opt Soc Am J 43:145-8 F '53

Copper content
Ductile iron; watch copper buildup. J. C. Neemes. Iron Age 171:162-4 F 5 '53

Graphitization
Determination of combined carbon in graphitic iron. bibliog diags Iron & Steel Inst J 172:79-86 S '52
Effect of oxidation rates on graphitization of cupola melted malleable. M. Tilley. il Foundry 80:108-9+ N '52
Graphite formation in ductile cast irons. V. A. Altekar and L. A. de Araujo. bibliog il Colorado School of Mines [Golden] Quarterly 48 no 1:1-67 Ja '53 (pa $1)
Nodular graphite. H. M. Weld and others. bibliog il diags J Metals 4:Trans 738-42 Jl '52; Discussion. 5:Trans 738-9 sec 2 My '53

Protection
Sodium benzoate and sodium nitrite as corrosion-inhibitors in ethylene glycol antifreeze solutions; laboratory investigations. F. Wormwell and A. D. Mercer. bibliog J Ap Chem 3:22-7 Ja '53

Specifications
Proposed tentative specifications for chilled and white iron castings; data sheet. diags Foundry 80:177-8 O '52
Specification for ductile iron. G. Sorkin. il diags Steel 132:86-7 Je 22 '53

Testing
Machinability of high-phosphorus irons improved by ladle additions. E. A. Loria. bibliog il Am Mach 97:92-5 Ag 31 '53
What the fluidity test reveals about gray cast iron. L. F. Porter and P. C. Rosenthal. il diags Foundry 81:94-9+ Ag '53

Welding
Arc welding of ferritic and austenitic nodular cast iron. J. Sohn and others. il diag Welding J 32:823-33 S '53
Joining of ductile iron by several arc welding methods. T. E. Kihlgren and H. C. Waugh. il Welding J 32:947-56 O '53
Redesign for producibility based on new welding technique; welding stainless steel parts to modified nodular cast iron; center main bearing support for Wright Sapphire turbo-jet engine. il diag Product Eng 23: 174-80 D '52
Weld cast iron pulley, prevent plant shutdown. il Constr Methods 34:122-3 D '52
Welding metallurgy of nodular cast iron. E. E. Hucke and H. Udin. il diags Welding J 32:sup378-85 Ag '53
Welding of malleable castings. T. J. Palmer. Metal Prog 63:162+ Je '53

CAST iron pipes. See Pipes, Cast iron

CAST stone. See Concrete stone

CASTEEL, Sanford Henry, 1898-1952
Sketch. F. Bradish. por Am Assn Pet Geologists Bul 36:2064-5 O '52

CASTERS
Manufacturers try to formulate standards while holding the line on prices. Steel 132: 78 My 11 '53

CASTING, Centrifugal
American standard specifications for cast iron pipe centrifugally cast in metal and sand lined molds, for water or other liquids. diags Am Water Works Assn J 45:189-230 F '53
Centrifugal casting; Ryke's technical trading co. il Foundry 81:272 S '53
Centrifugally cast jet engine rings; how to rough machine them. F. Meninger. il Steel 131:78-9 O 6 '52
Centrifugally cast steel tubing. T. E. Rybka. il diags Materials & Methods 37:104-7 F '53
Jet plane parts cast centrifugally; Centri-Die process. il Foundry 81:202+ S '53
Metal casting methods; centrifugal casting. J. B. McIntyre. bibliog il Metallurgia 47: 231-6 My '53
Method of centrifugally casting titanium. O. W. Simmons and others. il diag Metal Prog 63:72-4 Mr '53
New pressure pipe foundry serves West Coast area. il map Foundry 81:98-101 Ja '53
Specification for copper-base alloy centrifugal castings; data sheet. Foundry 80:179 D '52
Stainless jet parts centrifugally cast. il Iron Age 170:82 D 18 '52

CASTING, Precision. See Lost wax process

CASTING machines
Aluminum; continuous casting gaining. R. L. Hatschek. il diag Iron Age 171:77-8 Ap 23 '53
Automatic casting of steel grinding balls; National malleable and steel castings co. flow diag il Elec West 109:103 O '52
Continuous aluminium casting and rolling installation; Hunter Douglas corp., California. il Engineer 194:465-6 O 3 '52
Continuous casting machine will soon be in operation at Welland. Blast F & Steel Pl 40:1456+ D '52; Same cond. Materials & Methods 40:174+ D '52; Same cond. Mech Eng 75:153-4 F '53
Continuous casting of steel billets; Babcock & Wilcox tube co. Metal Prog 63:87+ Mr '53
Fraser continuous lead-casting machine. il Engineering 175:524 Ap 24 '53; Engineer 195:646 My 1 '53; Metallurgia 47:310 Je '53
Lewis die-forge-casting machine provides injection pressure of 1000 lb. il Am Mach 97: 148 Mr 30 '53
See also
Die casting machines

CASTINGS
Cast chuck jaws save toolroom time. M. Maloney. il Am Mach 97:167 S 14 '53
Cast metal gears. diags Am Mach 95:111 Ag 20 '51; Same. Product Eng Hdbk p D6-7 '53
Casting design for heavily loaded parts. E. T. Vincent. il diags Foundry 81:94-7+ Ja '53
Casting design improved by welding. A. L. Phillips. il Foundry 81:148+ F '53
Casting jam-up yields to mechanical handling. il Steel 132:134 Ap 13 '53
Castings play important part in developing air strength. W. T. Hefley. Foundry 81:190-1+ Mr '53
Continuous-cast shapes. il diag Machine Design 25:129-30 Je '53
Defense demands for Ni, Cr put squeeze on furnace castings. Iron Age 171:169 Je 18 '53
Designing an ideal sand casting. T. H. Trevithick. diags Product Eng 24:168-70 F '53
Designing magnesium castings and forgings. G. L. Moore. diags Product Eng 23:263-6+ D '52
Formulas useful in determining weights of castings; data sheet. diags Foundry 81: 149-50 Jl; 151-2 Ag; 265-6 S; 255-6 O; 203-4 N '53 (to be cont)
Forum on technical progress; casting. il Steel 132:264-6+ Ja 5 '53
How to buy aluminum castings. F. A. Lewis. il Aeronautical Eng R 12:34-40+ Ja '53; Same cond. Materials & Methods 37:95-100 Ja '53

CASTINGS—*Continued*

How to eliminate some machining on castings. H. L. Smith. diags Foundry 81:215+ Je '53

Internal stresses in castings; abstract. Metal Prog 63:222+ Ja '53

Large castings for huge forgings and extrusions. T. L. Fritzlen. diag Automotive Ind 108:45 Ja 15 '53

Longer life for truck center castings. il Welding J 32:237 Mr '53

Magnesium castings drilled, reamed, c'bored at high speed; special machine built by Snyder tool and engineering co. W. G. Patton. il Iron Age 170:162-4 D 4 '52

New demands lead to new directions in engineering materials; parts and forms. T. C. Du Mond. il Materials & Methods 37:94-5 Je '53

Nucleation of cast metals at the mould face; abstract and discussion. J. A. Reynolds and C. R. Tottle. Engineering 174:461-2 O 10 '52

Progress in castings. W. G. Gude. il Foundry 81:116-17 My '53

Role of castings in the agricultural industry. W. G. Gude. il Foundry 80:114-17+ N '52

Titanium and zirconium castings now practicable. W. E. Kuhn. il diag Materials & Methods 36:94-5 D '52

Use of castings in airframe design. A. H. Petersen. il diags Metal Prog 62:67-72 N '52

Uses of high-alloy castings involve more severe service; discussion. il Foundry 81:252 S '53

What's ahead in alloy castings. Materials & Methods 38:166+ Jl '53

What's ahead the next ten years in casting and molding. Am Mach 96:B-B7 Mid-N '52

Which metal form for jet engine blades? J. L. Everhart. il Materials & Methods 37: 92-6 F '53

See also

Die casting

Steel castings

Cleaning

Better parts flow trims foundry costs; Buick's new casting cleaning plant. H. Chase. il plan Iron Age 171:97-101 Ap 30 '53

Breakage down 50 per cent; installation of Rotoblast table at the Woodruff & Edwards foundry. Steel 132:185 My 25 '53

Casting cleaning costs blasted; Layne & Bowler, inc. il Iron Age 171:107 Ap 30 '53

Castings come clean in hurry; Jardine bronze foundries. Steel 132:111-12 Mr 2 '53

Cleaning cast steel armor; Cast armor division of American steel foundries. E. F. Ross. il Foundry 81:178+ Ag '53

Cleaning castings; airless blasting speeds cleaning of steel castings. il Iron Age 171: 116+ Ja 8 '53

Cleaning department is designed for flexibility; Ford Cleveland foundry. il plans Foundry 81:174-83 Mr '53

Cleaning; 1½ cents a unit; Budd co. Red Lion foundry. il Steel 132:94+ F 16 '53

Gisholt tries new setup for cleaning machine tool castings. il Iron Age 171:201-2 Mr 5 '53

Grinding + mechanization equals 2 × cleaning output; cleaning castings at the Truck engine works of International harvester co. W. M. Fitzsimmons. il Iron Age 171: 132-4 My 28 '53

Monorail conveyor system reduces blast-cleaning costs. W. I. Gladfelter. il plan diags Foundry 80:104-5+ D '52

Two-stage blast job; Electric steel castings co. il Steel 132:165 Ap 20 '53

Defects

Cracks and hot tears in steel castings. J. B. Caine. bibliog diags Foundry 81:120-7+ Je '53

Strain theory of hot tearing. W. S. Pellini. bibliog il diags Foundry 80:124-33+ N '52

Repair

Correct impregnation of castings prevents leakage, internal corrosion, and spotted or blistered finishes. W. N. Pratt. il Metal Prog 63:88-92 Ap '53

Impregnation; antidote for microporosity permits salvage of rejected castings; Polyplastex MC. il Iron Age 170:128 O 23 '52; Aviation W 57:37 N 24 '52; Materials & Methods 36:151 N '52; Steel 131:166 N 10 '52; Mech Eng 75:154 F '53

Porous castings sealed. Steel 132:134 Je 22 '53

Resin impregnation of metal castings fills pores completely. Chem & Eng N 31:1883-4 My 4 '53

Shaking out, cleaning and welding steel castings. J. H. Hall. il Foundry 81:194-5+ Mr '53

Vacuum impregnation makes porosity-free castings. J. H. Leary. il Materials & Methods 38:91-3 S '53

Specifications

Buying quality in light metal castings. Metallurgia 47:243-4 My '53

Standard specifications for leaded nickel-brass (leaded nickel-silver) and leaded nickel-bronze (leaded nickel-silver) sand castings; data sheet. Foundry 81:219-20 Mr '53

Testing

Casting porosity checked. Steel 131:111 N 10 '52; Iron Age 170:224-5 N 6 '52; Machine Design 24:253+ D '52

Clamping arrangement for sealing castings to be tested for leakage. R. S. Newton. diags Mach 59:199-200 N '52

Effect of degassing and the metal-mold reaction on soundness of castings; abstracts of papers by N. B. Rutherford and E. C. Mantle. Metal Prog 63:218+ Ja '53

Evaluating cast design. R. J. Franck. il diags Machine Design 25:104-8 Mr '53

How section size influences strength properties of sand castings. W. J. Reichenecker. diag Materials & Methods 38:80-1 Jl '53

Non-destructive testing reveals casting defects. J. M. Anspach. il diags Am Mach 97:117-24 Mr 2 '53

Resistance of cast Fe-Cr-Ni alloys to corrosion in oxidizing and reducing fluegas atmospheres. J. H. Jackson and others. bibliog flow chart il A S M E Trans 75: 1021-35 Ag '53

Ultrasonic testing of castings. T. A. Dickinson. il diag Foundry 81:221-2+ S '53

CASTOR beans

Mexican castor bean output seen increasing. Oil Paint & Drug Rep 163:68 F 23 '53

CASTOR oil

Dehydrated castor oil. R. L. Terrill. Paint Oil & Chem R 116:13-14+ F 12 '53

Dehydration of castor oil. H. C. Bryson. Paint Oil & Chem R 116:12+ Ja 29 '53

CASTRATION

Food intake and hepatic vitamin A in castrated mice. B. L. Truscott. bibliog Science 117:63-4 Ja 16 '53

CASUALTY actuarial society

Annual meeting, New York, Nov. 20-21. East Underw 53:28-30+ N 28 '52; Nat Underw 56: 23+ N 27 '52

CASUALTY insurance. See Insurance, Casualty

CASUALTY underwriters, National bureau of. See National bureau of casualty underwriters

CASUISTRY (term)

Casuistry in human relations. D. M. Munro. Personnel 29:369-71 Ja '53

CATALASE

Kinetics and thermodynamics of the steady state system of catalase with hydrogen peroxide. R. F. Beers, jr. and I. W. Sizer. bibliog J Phys Chem 57:290-3 Mr '53

CATALOGING

Corporate entries

Whodunnit; notes on the system adopted by the D.S.I.R., H.Q. library for the control of publications issued by corporate authors. R. M. Jacobs. J Doc 8:227-31 D '52

CATALOGS

How to plan and prepare your new industrial catalog. R. A. Falk. Ind Marketing 38:158-63 S; 102-3+ O '53 (to be cont)

Something new; Berg mixes catalog pages with reprints. il Ind Marketing 38:148 S '53

CATALOGS—*Continued*

Steel distributor solves catalog price problem. il Ind Marketing 37:106+ D '52

See also

United States—Defense, Department of—Standardization and cataloging program

Bibliography

Catalogues; equipment literature offered in the advertisements. Pet Refiner 32:169-70 Mr '53

CATALYSIS

Acid-base catalysis in non-aqueous solvents; the depolymerisation of paraldehyde in ethereal solutions of proton acids and Lewis acids. R. P. Bell and B. G. Skinner. Chem Soc J p2955-9 Ag '52

Catalysis in command of refining. A. L. Foster. il Pet Eng 24:C3-4 O '52

Copper catalysis for manganese oxidation. F. L. Futral and R. S. Ingols. Am Water Works Assn J 45:804-6 Ag '53

Effect of nearest neighbor substrate interactions on the rate of enzyme and catalytic reactions. T. L. Hill. Am Chem Soc J 74:4710-11 S 20 '52

Effect of structure on reactivity; catalysis in the ammonolysis and hydrolysis of methyl acetate. T. A. Koch, J. G. Miller and A. R. Day. Am Chem Soc J 75:953-5 F 20 '53

Electronic barrier layer phenomena in chemisorption and catalysis. P. B. Weisz. J Chem Phys 20:1483-4 S '52

Evidence of catalytic action in petroleum formation. B. T. Brooks. bibliog(59 ref) il Ind & Eng Chem 44:2570-7 N '52

Homogeneous catalytic hydrogenation; activation of molecular hydrogen by solutions of cuprous acetate. S. Weller and G. A. Mills. bibiog diags Am Chem Soc J 75:769-77 F 20 '53

Isomerization of saturated hydrocarbons; nature of the catalyst and mechanism of the reaction. F. G. Ciapetta. bibliog Ind & Eng Chem 45:162-5 Ja '53

Isotope effects during catalytic hydrogenations. W. A. Bonner and C. J. Collins. bibliog Am Chem Soc J 75:4516-18 S 20 '53

Kinetics of active centers in surface-catalyzed reactions. N. Thon and H. A. Taylor. bibliog Am Chem Soc J 75:2747-50 Je 5 '53

Kinetics of the reaction of potassium ferrocyanide and nitrosobenzene; the catalytic action of mercuric ions and ultra-violet light. S. Ašperger, I. Murati and O. Čupahin. Chem Soc J p 1041-6 Ap '53

Palladium catalysis; the hydrogenation of α-oximino ketones. Y. Chang and W. H. Hartung. bibliog Am Chem Soc J 75:89-91 Ja 5 '53

Specific effects in acid catalysis by ion exchange resins; hydrolysis of esters in 70 per cent aqueous acetone. S. A. Bernhard and L. P. Hammett. bibliog Am Chem Soc J 75:1798-800 Ap 20 '53

Studies in the detoxication of catalyst poisons; dimethylphenylphosphine. E. B. Maxted and G. T. Ball. Chem Soc J p 1509-11 My '53

Study of acid catalysis in ketone acylations. B. M. Perfetti and R. Levine. bibliog Am Chem Soc J 75:626-8 F 5 '53

Theory of catalysis of nucleation by surface patches. D. Turnbull. J Chem Phys 20:1327 Ag '52

See also

Catalysts

CATALYSTS

Activity of an iron oxide-chromium oxide water-gas shift catalyst; effect of added constituents. K. Atwood and M. R. Arnold. bibliog diag Ind & Eng Chem 45:424-6 F '53

Activity of solid catalysts. W. B. Argo and J. M. Smith. bibliog flow diag diag Ind & Eng Chem 45:298-302 F '53

Cat catches fume for McDougall-Butler. M. E. Schleicher. il Paint Oil & Chem R 116:13-14+ Mr 12 '53

Catalyst bin gage has accuracy, long life. il diags Pet Processing 7:1811+ D '52

Catalyst can end coffee plant odours and many other pollution problems. il diag Can Chem Process 37:48+ Ag '53

Catalyst curbs air pollution; Eppens, Smith co. il diag Food Eng 25:63+ Ag '53

Catalyst improves purity of ethylene produced by pyrolysis of ethane; patent. diags Pet Processing 8:735-6 My '53

Catalyst poisons, and what to do about them; panel discussion. Pet Refiner 32:125-7 F '53

Catalyst-pressure relationship in hydrogenolysis of coal. M. G. Pelipetz and others. Ind & Eng Chem 45:806-9 Ap '53

Catalytic activity of reduced nickel molybdate and reduced nickel chromate. J. Rooley, C. S. Rohrer and O. W. Brown. bibliog J Phys Chem 56:1082-4 D '52

Catalytic behavior of 2-amino-2-methyl-1-propanol vapor over alumina. D. M. Clarke, F. T. J. O'Leary and J. V. Karabinos. bibliog Am Chem Soc J 74:5587-8 N 20 '52

Catalytic cracking techniques in review. M. Sittig. flow diags diags Pet Refiner 31:263-316 bibliog(545 refs, p312-16) S '52

Catalytic determination of submicrogram quantities of silver. A. L. Underwood, A. M. Burrill and L. B. Rogers. bibliog Anal Chem 24:1597-601 O '52

Catalyzing air pollution problems. il diags Safety Maint & Prod 106:53-5 S '53

Chemicals in catalytic processes; abstract. L. A. Latour. Oil Paint & Drug Rep 164:61-3 S 21 '53

Clean out plugged catalyst with novel device. W. Rolf and D. W. Cassell. diag Pet Refiner 31:127 N '52

Control of physical structure of silica-alumina catalyst. K. D. Ashley and W. B. Innes. bibliog il Ind & Eng Chem 44:2857-63 D '52

Davison catalyzes Gulf coast; pictorial presentation. Chem & Eng N 31:1992-3 My 11 '53

Design factors in catalytic fume elimination. R. J. Ruff. il Heat & Ven 50:84-6 S '53

Diffusion in porous catalysts. C. Bokhoven and J. Hoogschagen. bibliog diag J Chem Phys 21:159-60 Ja '53

Diluent reduces catalyst deactivation in slurry polymerization of light olefins; patent. diag Pet Processing 8:573+ Ap '53

Don't let heat go up your flue; burning carbon monoxide in cracking unit flue gas; oxidation catalyst method. W. C. Uhl. flow diag il Pet Processing 7:1444-6 O '52

Dual-feed protector; new spray gun mixes paint, catalyst. Steel 131:120 O 20 '52

Dynamic structure of oxide cracking catalyst. A. G. Oblad, S. G. Hindin and G. A. Mills. bibliog Am Chem Soc J 75:4096-8 Ag 20 '53

Effect of granule size in dehydrogenation of butane and in a hydrogen transfer reaction. R. W. Blue and others. bibliog diags Ind & Eng Chem 44:2710-16 N '52

Effect of lithium hydroxide on the activity of cracking catalysts. P. Stright and J. D. Danforth. bibliog J Phys Chem 57:448-52 Ap '53

Greater heat recovery from catalytic flue gas; new catalytic oxidation unit. G. Weber. flow diag il diag Oil & Gas J 51:346-7+ O 13 '52

Houdriforming reactions; catalytic mechanism. G. A. Mills and others. bibliog Ind & Eng Chem 45:134-7 Ja '53

Houdriforming reactions; studies with sulfur compounds. H. Heinemann, H. Shalit and W. S. Briggs. bibliog Ind & Eng Chem 45:800-2 Ap '53

Improvement of catalysts and catalyst supports. C. H. Riesz and others. diag Am Gas Assn Proc 1952:657-63; Same. Pet Eng 24:C 17-18+ D '52

Isomerization of *n*-pentane in presence of molybdena-alumina catalysts at low hydrogen-hydrocarbon ratios. A. Clark and others. bibliog Ind & Eng Chem 45:803-6 Ap '53

Isomerization of saturated hydrocarbons in presence of hydrogenation-cracking catalysts. F. G. Ciapetta and J. B. Hunter. bibliog diag Ind & Eng Chem 45:147-65 Ja '53

Mechanism of the benzidine rearrangement; general acid catalysts. M. D. Cohen and G. S. Hammond. bibliog Am Chem Soc J 75:880-3 F 20 '53

CATALYSTS—*Continued*

Metal-catalysed reaction between acetylene and hydrogen: the reaction over rhodium and iridium. J. Sheridan and W. D. Reid. Chem Soc J p2962-6 Ag '52

New reforming catalyst; abstract. R. A. Sanford and B. S. Friedman. Oil & Gas J 51:168-9 Mr 23 '53

New use for radioactive tracers, measuring catalyst flow rates in cat crackers. D. E. Hull and R. R. Bowles. il diag Oil & Gas J 51:295-6+ Mr 23 '53

Nickel-catalyzed hydrogenation of commercial aldol. C. K. Hancock and D. D. Henson. bibliog Ind & Eng Chem 45:629-32 Mr '53

Palladium catalysis; change in the behavior of palladium-on-charcoal in hydrogenation reactions. W. H. Hartung and Y. Chang. Am Chem Soc J 74:5927-9 D 5 '52

Physical properties of sodium-catalyzed polymers. M. H. Reich, R. E. Schneider and W. K. Taft. bibliog Ind & Eng Chem 44:2914-22 D '52

Polymerization and copolymerization reactions with Alfin catalysts in relation to masterbatch preparation. R. A. Stewart and H. L. Williams. bibliog Ind & Eng Chem 45:173-82 Ja '53

Preparation and properties of a platinized charcoal catalyst with some observations on the behavior of inhibitors. R. Baltzly. bibliog Am Chem Soc J 74:4586-9 S 20 '52

Produce catalysts of superior activity by controlling depth of impregnation; patent. il Pet Processing 7:1657-8 N '52

Reactions catalyzed by anion exchange resins; cyanoethylation of alcohols. M. J. Astle and R. W. Etherington. bibliog Ind & Eng Chem 44:2871-2 D '52

Reactions catalyzed by anion exchange resins; Knoevenagel condensation; aldol condensation. M. J. Astle and J. A. Zaslowsky. Ind & Eng Chem 44:2867-71 D '52

Reactions of hydrocarbons over cracking catalysts. E. M. Gladrow, R. W. Krebs and C. N. Kimberlin, jr. bibliog diags Ind & Eng Chem 45:142-7 Ja '53

Relative catalytic activity of nickel produced by the reduction of nickel(II) bromide with liquid ammonia solutions of different alkali metals. G. W. Watt and P. I. Mayfield. bibliog Am Chem Soc J 75:1760-1 Ap 5 '53

Reversibility of the adsorption of catalyst poisons; the revival of poisoned catalysts by simple washing. E. B. Maxted and G. T. Ball. Chem Soc J p4284-8 N '52

Selenium as catalyst in *cis-trans*-isomerisation of unsaturated fatty acids. J. H. Skellon and J. W. Spence. Chem & Ind p302 Mr 28 '53

Solvent vapors burned in stacks; catalytic burning of vapors eliminated odors and furnished heat. Safety Maint & Prod 104:67 D '52

Studies of the Fischer-Tropsch synthesis; structural changes of a reduced iron catalyst on reoxidation and on formation of interstitial phases. W. K. Hall, W. H. Tarn and R. B. Anderson. bibliog J Phys Chem 56:688-91 Je '52

Successful applications of catalyst include oxidation of exhaust fumes from internal combustion engines. L. C. McCabe. diag Ind & Eng Chem 45:sup 115A-17A Ap '53

Synthetic fluid cracking catalysts. C. C. Brown and R. B. Wainright. Pet Eng (Ref annual) 25:C37-8+ Jl 15 '53; Same abr. Chem Eng 59:148-9+ N '52; Same cond. Oil & Gas J 51:133-7 D 1 '52

Testing powdered cracking catalysts. P. H. Johnson and C. P. Stark. bibliog flow diag il diags Ind & Eng Chem 45:849-55 Ap '53

Titanium tetrachloride as a catalyst in the Friedel-Crafts reaction; addition compounds. N. M. Cullinane, S. J. Chard and D. M. Leyshon. Chem Soc J p4106-8 N '52

See also

Aluminum bromide
Antioxidants
Catalysis
Enzymes
Growth promoting substances
Hormones
Nickel—Raney nickel

Testing

Simplified surface area apparatus and catalyst tester. D. E. Smith. il diags Pet Eng 24:C52+ N '52

CATALYSTS, Negative. See Inhibitors

CATAPHORESIS. See Electrophoresis

CATARACTS. See Eye—Diseases and defects

CATECHOL

Anodic polarography; catechol. C. M. Wheeler, jr. and R. P. Vigneault. Am Chem Soc J 74:5232-3 O 20 '52

ortho-Hydroxylation of phenols; derivatives of catechol. J. D. Loudon and J. A. Scott. Chem Soc J p265-8 Ja '53

Some nuclearly substituted catechols and their acid dissociation constants. D. H. Rosenblatt, J. Epstein and M. Levitch. bibliog Am Chem Soc J 75:3277-8 Jl 5 '53

Analysis

Separation of catechol from steam distillates and reaction mixtures. W. W. Zorbach and J. E. Weber. Am Chem Soc J 74:4718-19 S 20 '52

CATERPILLAR tractor company

Moves the earth in war or peace, boom or bust; with financial data. G. P. Edgar. Barron's 33:19+ My 18 '53

CATGUT

New line for surgery. I. W. Sizer. il diags Tech R 55:255-8 Mr '53

CATHODE followers

Advanced regenerative circuit. I. Gottlieb. il diags Radio & Tv N 49:48-9+ My '53

Cathode-follower as high-impedance input stage. D. A. Bell and H. O. Berktay. diags Wireless Eng 29:313-16 D '52

Cathode-follower design charts; reference sheet. N. O. Sokal. diags Electronics 26:192-4+ S '53

Cathode-follower operation. A. J. Shimmins. diags Wireless Eng 29:155-63 Je '52; Discussion. H. H. Adelaar. 30:49 F '53

Design of cathode followers. R. L. Whittle. diags Tele-Tech 12:52-3 Jl '53

Designing cathode followers for pulse type circuits. H. A. Favors. diags Tele-Tech 12:80-1 Ag '53

Improved variable power supply. W. Crevison. il diags Radio & Tv N 49:42+ Ap '53

Non-linearity in a voltmeter using cathode-follower and thermocouple. D. G. Tucker. diags J Sci Instr 30:11-13 Ja '53

Rc cathode-follower feedback circuits. S. C. Dunn. bibliog diags Wireless Eng 30:10-19 Ja '53

CATHODE ray oscillographs. See Oscillographs, Cathode ray

CATHODE ray tubes

Cathode-ray synchroscope and automatic synchronizer; abstract. M. A.-H. Ahmed. diags Elec Eng 72:808 S '53

Cathode-ray-tube beam intensifier. R. W. Rochelle. il diags Electronics 25:151-3 O '52

Cementing metal screens to cathode ray tubes. R. W. Holmes. il diag Materials & Methods 38:184+ S '53

Contrast in cathode ray tubes. J. H. Haines. il diags Tele-Tech 12:100-2+ Je '53

Du Mont dedicates new plant. il Elec World News ed 139:48 My 25 '53

Electron beam plotting in cathode-ray tubes. L. S. Allard and D. B. Clayson. diags J Sci Instr 29:377-8 N '52

Field plotting in deflection yoke design. E. Sieminski. bibliog il diags Electronics 25:122-6 O '52

GE shows internal magnetic focus tube. il Tele-Tech 12:130 My '53

High-efficiency 90° cathode-ray sweep system. C. E. Torsch. il diag Tele-Tech 12:108-10+ Je '53

Latest disc-cathode developments. diag Electronics 25:236+ N '52

Low-copper sweep yoke. C. E. Torsch. Electronics 25:250+ O '52

New high-speed cathode-ray tube. H. J. Peake and R. W. Rochelle. il diags Tele-Tech 12:58-61 Jl '53

Post deflection focusing chromatron, a single or multi-gun tri-color cathode-ray tube. R. Dressler. il diags Inst Radio Eng Proc 41:851-8 Jl '53

CATHODE ray tubes—*Continued*

Quality factor for radar cathode-ray tube presentations. A. F. Bischoff. bibliog Tele-Tech 12:88-90+ Mr '53

Self-focus picture tubes. E. M. Noll. il diags Radio & Tv N 48:122+ N '52

Streaming potential measurements and the adhesion of phosphors on cathode ray screens. J. F. Hazel and G. L. Schnable. bibliog diags Electrochem Soc J 100:65-71 F '53

Using cathode ray tubes for voltage wave form analysis. R. B. Immel. diags Product Eng 23:190-1 O '52

Using c-r tubes with internal pole pieces. C. V. Fogelberg and others. il diags Electronics 25:102-5 O '52

See also

Electron gun

Oscillographs, Cathode ray

Storage tubes

Testing

Crt tester-sparker. D. Gnessin and H. D. Suesholtz. il diag Radio & Tv N 49:104+ Mr '53

Transient analysis by time selection. R. Winfield. il diags Electronics 26:184-7 Ag '53

CATHODE rays

Cathode-ray sterilization preserves foods and drugs. il Electronics 26:200+ Ag '53

Effect of high-energy cathode rays on cellulose. J. F. Saeman, M. A. Millett and E. J. Lawton. bibliog il Ind & Eng Chem 44:2848-52 D '52

CATHODES

Calculation of the concentration of atomic hydrogen at a cathode. J. O. Bockris and R. Parsons. J Chem Phys 21:569 Mr '53

Calculation of the concentration of atomic hydrogen at a cathode. H. W. Salzberg and S. Schuldiner. J Chem Phys 20:1495 S '52

Cathode-interface effects in tv receiver design. F. M. Dukat and I. E. Levy. Electronics 26:169-71 Ap '53

Chemical reactions in barium oxide on tungsten emitters. R. C. Hughes and others. bibliog il diags J Ap Phys 23:635-41 Je '52

Decay and recovery of the pulsed emission of oxide-coated cathodes. R. M. Matheson and L. S. Nergaard. diags J Ap Phys 23:869-75 Ag '52

Diode characteristic of a hollow cathode. M. L. Babcock and others. diag Phys R 91:755 Ag 1 '53

Electrical properties of porous semiconductors. E. B. Hensley. diags J Ap Phys 23:1122-9 O '52

Electrolytic reduction of organic compounds at carbon cathodes. S. Swann, jr. and others. bibliog Electrochem Soc J 99:460-6 N '52; Discussion. 100:293-4 Je '53

Excess thermal noise due to current flow through (Ba Sr) oxide coating. K. Amakasu. diags J Ap Phys 23:1330-2 D '52

New dispenser type thermionic cathode. R. Levi. diags J Ap Phys 24:233 F '53

Nickel base indirectly heated oxide cathode. A. M. Bounds and P. N. Hambleton. bibliog diag Elec Eng 72:536-40 Je '53

Physical processes in the *L* cathode. D. L. Schaefer and J. E. White. bibliog il diags J Ap Phys 23:669-74 Je '52

Study of oxide-coated cathode by X-ray diffraction method. E. Yamaka. J Ap Phys 23:498-9, 937-40 Ap, S '52

Thermionic emission and electrical conductivity of oxide-coated cathodes. S. Narita. J Ap Phys 23:599 My '52

Use of radioactive isotopes in a study of evaporation from thermionic cathodes. W. F. Leverton and W. G. Shepherd. diag J Ap Phys 23:787-93 Jl '52

CATHODIC protection. See Metal protection—Cathodic protection; Pipe lines—Cathodic protection; Steel—Cathodic protection; Tanks, Steel—Cathodic protection

CATHODOLUMINESCENCE. See Luminescence

CATHOLIC trade unionists, Association of. See Association of Catholic trade unionists

CATHYLATION. See Carbethoxylation

CATIONS

Metallic-cation removal as an aid in volumetric sulfate determinations. W. G. Hunt, jr. Am Water Works Assn J 45:535-8 My '53

CATTLE

See also

Grazing

Diseases and pests

Bovine encephalomyelitis in western cattle; abstract. H. A. Wenner and others. Pub Health Rep 68:263-4 F '53

Experimental production of hyperkeratosis (X disease) of cattle with a chlorinated naphthalene. D. Sikes and M. E. Bridges. bibliog il Science 116:506-7 N 7 '52

CATTLE industry and trade

Livestock price skid effect on bank loans. T. L. Westra. Banking 45:66-7 Ap '53

You can't eat government controls or beef rollback orders! A. F. Schoeppel. Comm & Fin Chr 177:195+ Ja 15 '53

Finance

Bank loan policy in livestock crisis. Burroughs Clearing House 37:28-9 Ap '53

Cattle loans spark prosperity; pioneering by Alexandria, La., bank. J. W. Beasley. il Bankers Mo 69:7-8+ O '52

Mexico

Mexico announces cattle export quotas. For Comm W 49:10 F 9 '53

Uruguay

Cattle slaughter in Uruguay decreased. For Comm W 49:11 Ja 12 '53

CAUSALGIA

Causalgia. F. H. Mayfield. Ind Med 21:443-5 S '52

CAUSEWAYS

Canso causeway. il Can Min J 74:84-5 Ap '53

Long causeway rebuilt under traffic. il Constr Methods 35:119+ My '53

CAUSTIC soda. See Sodium hydroxide

CAVE CITY, Arkansas

Cave City; Arkansas makes its own revolution. il Bsns W p76-8+ My 30 '53

CAVES

Genetic relations of caves to peneplains and big springs in the Ozarks. J. H. Bretz. bibliog maps diag Am J Sci 251:1-24 Ja '53

CAVITATION

Cavitation effect in helium II. B. M. Cwilong and others. diag Phys R 88:138-9 O 1 '52

Chemical effects of ultrasonics. V. Griffing. bibliog J Chem Phys 20:939-42 Je '52

Experimental study of single bubble cavitation noise. M. Harrison. bibliog il diags Acoustical Soc Am J 24:776-82 N '52

See also

Hydraulic machinery—Cavitation

CAVITY resonators. See Radio resonators

CEDAR

Chemical nature of cedar barks. J. E. Smith and E. F. Kurth. bibliog Tappi 36:71-8 F '53

CEDRENE

Structure of cedrene. G. Stork and R. Breslow. bibliog Am Chem Soc J 75:3291 Jl 5 '53

CEILINGS

Air distribution studies for louvered or egg-crate ceiling, Detroit Edison co.'s new office building. R. V. Martelli and H. O. Scarlett. il plans diags Heating-Piping 24:77-82 N '52

Air flow through ceiling pans. A. H. Gipson. il diags Heat & Ven 50:79-81 Je '53

Branch banks bank on good lighting; illustrations with text. Illum Eng 48:240-1 My '53

Calculating sound-absorbing effect of acoustical baffles in lighting systems. E. H. Church. bibliog il diags Illum Eng 48:489-94 S '53

Coordination of lighting with architectural design; Lancaster (New York) branch of Manufacturers and traders trust co. of Buffalo. N. Jacobus. il Illum Eng 47:539 O '52

Distributing air from a luminous plastic ceiling. L. G. Seigel and W. L. Bryan. il diags Heating-Piping 25:107-9 S '53

CEILINGS—*Continued*

Duct access through beams; data sheet. W. A. Stahl. il diags Heating-Piping 24:103 N '52

Further studies of the thermal characteristics of plaster panels. L. F. Schutrum and C. M. Humphreys. il diag Heating-Piping 25:122-5 Je '53

Heat exchanges in a ceiling panel heated room. L. F. Schutrum and others. il plans Heating-Piping 24:123-32 D '52; Abstract. Heat & Ven 50:164+ Ap '53

How to hang acoustical ceiling board; illustrated instructions. Power 97:144 My '53

How warm a ceiling? F. A. Chrenko. Review, by C. Tasker. diag Heating-Piping 25:109-12+ Ap '53

Insulated drop ceiling supported by strap webbing. il Sheet Metal Worker 45:42 O '53

Jig-saw ceiling light for a store; John Walsh, ltd. il Elec J 151:655 Ag 28 '53

Modern control-room lighting with luminous ceilings. il diag Power 97:95-7 F '53

Natural ivy highlights daylight ceiling of dressing room. il plan diags Am Bld 74:105 N '52

New coordinated system for suspended acoustical ceiling. il diags Arch Rec 112:233+ O '52

Ontario transformer station; new type ceiling lighting in control room. il Elec J 150:1065-6 Mr 27 '53

Performance vs installation; luminous panel systems. B. S. Benson, jr. and E. H. Church. il Illum Eng 48:363-6 Jl '53

Simplified illumination calculations for large area perfectly diffused luminaires. R. D. Burnham. il Illum Eng 48:257-8 My '53

Six steps to a luminous ceiling. il Elec West 109:90-1 N '52

Suspended ceiling lighting. il Electrician 149:334 Ag 1 '52

Times versus luminous ceilings. D. E. Spencer and L. F. Martin. bibliog il Illum Eng 48:268-74; Discussion. 275-6 My '53

Tomorrow's lighting is here today; luminous ceilings. F. B. Graham. il Eng N 149:37-9 O 30 '52

CEILINGS, Aluminum

Aluminum panels for heating, cooling; Alcoa's Pittsburgh office. J. J. Mann. il Power 96:71-4 N '52

New type aluminum acoustical ceiling. il diags Sheet Metal Worker 44:84-5+ Ja '53

New way to heat and cool skyscrapers! Aluminum company of America's building in Pittsburgh. il Dom Eng 181:96-9+ F '53

CELANESE corporation of America

Sales and earnings decline. Comm & Fin Chr 177:1151 Mr 16 '53

CELERY

Fluorescence in ultraviolet light in the study of boron deficiency in celery. A. R. Spurr. bibliog il Science 116:421-3 O 17 '52

CELL division (biology)

Naked spindle; mitosis. Sci Am 187:32+ D '52

CELLINI, Benvenuto, 1500-1571

Sonnets for the metallurgist; Benvenuto Cellini and casting of his Perseus. R. P. Lister. il Metal Prog 63:110-12 Ap '53

CELLOBIOSE

Analysis

Isolation of crystalline D-glucose and cellobiose from an enzymatic hydrolyzate of cellulose. R. L. Whistler and C. L. Smart. bibliog Am Chem Soc J 75:1916-18 Ap 20 '53

CELLOPHANE

Alka Seltzer bundles; cellophane wraps. il Mod Packaging 26:120 F '53

Battle of the films. J. M. Cowan. Tappi 36:sup 118A-21A Ja '53

Cellophane bags call for new packaging techniques. E. D. White. il Textile World 103:88-9 Ap '53

Cellophane for dry edibles. J. A. Thompson. il diags Mod Packaging 26:151-5+ Je '53

Compartmented cookies; Kornreich Klein's cookie mailer. il Mod Packaging 26:94-5+ Ja '53

Hot bread idea spreads; printed cellophane bread wrappers can go into a hot oven. il Mod Packaging 26:197 O '52

New life for pretzels; cellophane overwraps and bags. il Mod Packaging 27:95 S '53

Pre-applied tear tapes. il Mod Packaging 26:130-2 Ap '53

Solution of a sealing problem; I. J. Grass noodle co., inc. il Mod Packaging 26:162-4 Ap '53

Manufacture

Staff-industry collaborative report. G. C. Inskeep and P. Van Horn. bibliog flow sheets il diag Ind & Eng Chem 44:2511-24 N '52; Same. Tappi 35:sup 10A+ D '52

CELLS

Alternative reaction patterns in autosynthetic systems. C. N. Hinshelwood. Chem Soc J p 1304-10 Ap '53

Aspects of cell life; behaviour of embryonic cells in tissue culture; abstract. A. Hughes. Chem & Ind p60 Ja 17 '53

Autosynthesis. C. Hinshelwood. Chem Soc J p 1947-56 Je '53

Cells with metachromatic cytoplasmic granules in the stroma of human chorionic villi. J. S. Latta and C. R. Beber. bibliog il Science 117:498-9 My 8 '53

Effect of nuclear counting procedures on determination of the desoxypentosenucleic acid content of rat liver cell nuclei. S. Albert and others. bibliog Science 117:551-3 My 22 '53

Embryologist and the protozoon. P. B. Weisz. il diags Sci Am 188:76-8+ Mr '53

Irradiation of parts of individual cells. R. E. Zirkle and W. Bloom. bibliog il diags Science 117:487-93 My 8 '53

Mass isolation of whole cells from rat liver. N. G. Anderson. bibliog il Science 117:627-8 Je 5 '53

Mast cells and susceptibility to experimental atherosclerosis. P. Constantinides. bibliog Science 117:505-6 My 8 '53

Nuclear envelope. N. G. Anderson. bibliog diags Science 117:517-21 My 15 '53

See also

Biology	Plant cells and tissues
Chromosomes	
Mitochondria	

CELLULAR glass. See Glass, Cellular

CELLULAR plastic materials. See Plastic materials, Cellular

CELLULOSE

Biosynthesis of C^{14}-specifically labeled cotton cellulose. G. A. Greathouse. bibliog Science 117:553-4 My 22 '53

Bonding of thin films. H. P. Meissner and J. Byrne. bibliog diag J Ap Phys 23:1170-3 O '52

Cellulose sheets as chromatographic supports. L. S. Cuendet, R. Montgomery and F. Smith. Am Chem Soc J 75:2764-5 Je 5 '53

Chemistry of the cellulosic wood fiber. L. E. Wise and M. A. Buchanan. bibliog il Paper Ind 34:1229-32 Ja '53

Cross and Bevan cellulose of posidonia australis. D. J. Bell. Chem Soc J p3649-50 S '52

Defibering of ground rubber scrap with cellulose-decomposing fungi. W. D. Stewart and others. India Rubber World 127:794-6+ Mr '53

Degradation of cellulose during mechanical processing; comparison of the evaluation by viscometric methods. J. C. Whitwell and R. F. Schwenker, jr. bibliog diags Textile Res J 23:175-85 Mr '53

Desorption of a direct cotton dye from cellulosic fibres. J. H. E. Jackson and H. A. Turner. bibliog Soc Dyers & Col J 68:345-52 S '52

Effect of daylight on the periodate oxidation of β-methyl glucoside, β-methyl cellobioside, and cellulose. F. S. H. Head. bibliog Textile Inst J Trans 44:T209-23 My '53

Effect of high-energy cathode rays on cellulose. J. F. Saeman, M. A. Millett and E. J. Lawton. bibliog il Ind & Eng Chem 44:2848-52 D '52

Effect of moisture on compressibility of natural high polymers. C. E. Weir. bibliog J Res Nat Bur Stand 49:135-9 S '52

Effect of the degree of polymerization on the serimetric properties of regenerated cellulose fibers. J. R. Coley. Textile Res J 23:34-6 Ja '53

Effect of Wiley mill cutting on solubility of cellulose fibers. A. F. Johnson and W. A. Mueller. Ind & Eng Chem 45:215-17 Ja '53

CELLULOSE—*Continued*

Effects of ultrasonic radiation on the viscosity of cellulose solutions. R. F. Schwenker, jr. and J. C. Whitwell. bibliog Textile Res J 23:436-7 Je '53

Electron-microscopy of degraded cellulose fibres. S. M. Mukherjee and others. bibliog il Textile Inst J Trans 43:T 196-201 Ap '52; Discussion. 43:T563-4 N '52

Expanding the horizons of wood carbohydrates. E. J. Howard. bibliog Pulp & Pa of Can 54:116-20 Ap '53

FAO helps develop world's cellulose resources. M. Leloup. Paper Tr J 135:24 D 26 '52

Freezing point lowering and solubility curves of cellulose fibers. J. M. Preston and M. V. Nimkar. bibliog Textile Res J 23:119-20 F '53

Fundamental improvements in regenerated cellulose fiber structure. N. Drisch and L. Soep. bibliog il Textile Res J 23:513-21 Ag '53

Further studies on cotton cellulose with reduced crystallinity. L. Segal and others. bibliog Textile Res J 23:428-35 Je '53

Infrared spectra of bacterial cellulose. H. G. Shirk and G. A. Greathouse. bibliog Anal Chem 24:1774-5 N '52

Magnetic anisotropy of cellulosic materials. L. Loeb and L. A. Welo. bibliog diags Textile Res J 23:251-7 Ap '53

Molecular dimensions of cellulose derivatives. P. Doty, N. S. Schneider and A. Holtzer. bibliog Am Chem Soc J 75:754 F 5 '53

New Rayonier Rayocord-X will produce better rayon. il Paper Tr J 137:25 O 2 '53

New Upson process for dimensional stabilization of cellulose materials. J. J. Upson. il Paper Tr J 137:14-16 Ag 7 '53

New use for cellulose bands. il Mod Packaging 26:77-82+ Ag '53

No-warp wood; Upson cellulose fiber process. il Chem W 72:56+ Ap 4 '53

Organic chemical work on the constitution of cellulose. Tappi 35:sup 129A N '52

Polymer-homologous series of oligosaccharides from cellulose. M. L. Wolfrom and J. C. Dacons. Am Chem Soc J 74:5331-3 N 5 '52

Present status of the chemistry of cellulose. E. Heuser. Tappi 35:481-9 bibliog(165 ref, p487-9) N '52

Products of fragmentation of textile fibres, as seen in the electron microscope; cellulose fibres. D. G. Drummond. bibliog il Textile Inst J Trans 44:T53-8 F '53

Reduction of chemically modified cellulose by sodium borohydride. A. Meller. Tappi 36:366-7 Ag '53

Some relations between intrinsic and specific viscosity in cellulose solutions at a controlled velocity gradient. V. W. Tripp, C. M. Conrad and T. Mares. bibliog J Phys Chem 56:693-6 Je '52

Studies on modified cellulose; characterization of the reactivity and supermolecular structure cellulose fibers. A. Meller. bibliog Tappi 36:264-8 Je '53; Correction. 36:480 O '53

Suitability of cellulose for the manufacture of its derivatives; abstract. K. Borgin. Paper Ind 34:1378 F '53

Treatment of cellulose prior to acetylation. C. J. Malm and others. bibliog Ind & Eng Chem 44:2904-9 D '52

Usefulness of tools for cellulose research examined. il Chem & Eng N 31:1287-9 Mr 30 '53

Vapor sorption of cellulose at high relative humidities. G. A. Richter, L. E. Herdle and W. E. Wahtera. bibliog diag Ind & Eng Chem 44:2883-93 D '52

Viscometric studies of cellulose in cotton in relation to mechanical processing. C. M. Conrad and R. A. Rusca. bibliog(42 ref) Textile Res J 23:168-74 Mr '53

Wetting characteristics of cellulose derivatives; interrelations of contact angles. B. R. Ray and F. E. Bartell. bibliog J Phys Chem 57:49-56 Ja '53

See also

Carboxymethylcellulose
Cotton
Ethyl cellulose
Hemicellulose
Hydroxyethyl cellulose
Lignin
Methyl cellulose
Nitrocellulose
Rayon
Viscose

Analysis

Alpha-cellulose from solvent extracted cotton linters. R. F. Burdynski and K. A. Kobe. bibliog diags Tappi 36:248-54 Je '53

Fractionation of cellulose. E. J. Pagé. bibliog Textile Res J 23:28-33 Ja '53

Recent studies on the morphology of cellulose fibers and their significance for fiber to resin bonding. B. G. Rånby. bibliog Tappi 36:sup8A+ Je '53

Bibliography

Chemical testing methods; part 1, viscosity of cellulose. C. J. West. (Bibliographic ser. no. 179) 85p pa $5 Institute of paper chemistry, Appleton, Wis. '52

CELLULOSE acetate

Anomalous diffusion of acetone into cellulose acetate. F. A. Long and others. bibliog J Chem Phys 21:1412-13 Ag '53

Cellulose acetate from raw material to haute couture. D. Finlayson. bibliog il Textile Inst J 44:P307-26; Discussion. P326-7 Ag '53

Fractionation of cellulose acetate. A. J. Rosenthal and B. B. White. bibliog diags Ind & Eng Chem 44:2693-6 N '52

Moisture regain of methylcellulose and cellulose acetate. G. C. Gibbons. bibliog Textile Inst J Trans 44:T201-8 My '53

New method for studying the solubility properties of cellulose acetates. K. Borgin. bibliog Tappi 36:284-8 Je '53

Relative rates of acetylation of the hydroxyl groups in cellulose acetate. C. J. Malm and others. bibliog Am Chem Soc J 75:80-4 Ja 5 '53

Studies on cellulose acetate; combination of sulfuric acid during the acetylation of cellulose and the mechanism of acetylation. T. Araki. bibliog Textile Res J 22:630-6 O '52

See also

Acetate fibers
Celanese corporation of America

Manufacture

Treatment of cellulose prior to acetylation. C. J. Malm and others. bibliog Ind & Eng Chem 44:2904-9 D '52

CELLULOSE acetate butyrate

Eastman Chemicals new cellulose polymer. il Paint Oil & Chem R 116:42B Mr 26 '53

Metallized butyrate reflectors. il Mod Plastics 30:110-12+ Mr '53

Why Bell & Howell uses butyrate. il Mod Plastics 30:75-7 Ja '53

CELLULOSE acetate phthalate

Analysis

Analysis of phthalic acid esters of cellulose and of polyvinyl alcohol. C. J. Malm, L. B. Genung and W. Kuchmy. bibliog Anal Chem 25:245-9 F '53

CELLULOSE esters

Analysis

Analysis of phthalic acid esters of cellulose and of polyvinyl alcohol. C. J. Malm, L. B. Genung and W. Kuchmy. bibliog Anal Chem 25:245-9 F '53

CELLULOSE ethers

Cellulose ethers and their applications; abstract and discussion. W. A. Caldwell. Chem & Ind p81-2 Ja 24 '53

CELLULOSE nitrate. See Nitrocellulose

CEMENT

American society for testing materials committees consider cement and concrete. Concrete 61:42-3+ Ap '53

ASTM 56th annual meeting, Atlantic City, June 28-July 3; with abstracts of papers on cement and concrete. Rock Prod 56:182+ Ag '53

Cementing in deep diamond drill holes. A. E. Ross. il diags Min Eng 4:Trans 1061-4 N '52

Chemical resistant cement reference sheet. R. B. Seymour and R. H. Steiner. Chem Eng Prog 49:158 Mr '53

International symposium on the chemistry of cement, 3d, London; with abstracts of papers. Rock Prod 56:161-2+ Ja '53

CEMENT—*Continued*

New developments in the use of bentonite in cements. B. E. Morgan and G. K. Dumbauld. bibliog Oil & Gas J 51:131-2+ Ap 20 '53

Pozzolan cements gaining favor in Mexico. F. Barona de la O. flow sheet il map Rock Prod 56:124-7+ Ag '53

Prospective chemistry of cement and concrete (cont). N. C. Rockwood. diags Rock Prod 55:90-2 N '52; 56:154-7 Ja; 110+ Mr; 101-3 Je; 174+ Ag '53 (to be cont)

See also

Cements
Concrete
Grouting
Petroleum—Well cementing and plugging

Analysis

Direct determination of aluminum oxide in portland cement; a chemical method. C. L. Ford. bibliog Anal Chem 24:1934-41 D '52

Hydration

Long-time study of cement performance in concrete; the heats of hydration of the cements. G. J. Verbeck and C. W. Foster. bibliog diag Am Soc T M Proc 50:1235-62 '50

Magnesium oxychloride cement

Heat generation in the setting of magnesium oxychloride cements. E. S. Newman and others. J Res Nat Bur Stand 49:377-83 D '52

Manufacture

Batching bulk cement for truck delivery; Penn-Dixie cement corp. B. Nordberg. il plans diags Rock Prod 56:110-23 Ag '53

Calcining cement slurry on continuous conveyor grate. B. M. Pearson. bibliog diags Rock Prod 55:102-4+ O '52

Cement rock beneficiation at the Universal atlas cement co., Northampton, Pa. L. J. Boucher. bibliog flow sheet il diag Min Eng 5:Trans 289-93 Mr '53; Abstract. Rock Prod 55:133-4 Ap '52

Control slurry viscosity with additive; Missouri portland cement co. J. Romig and B. Kester. il Rock Prod 56:64-7 My '53

Effect of phosphate on the constitution and hardening of portland cement. R. W. Nurse. bibliog il J Ap Chem 2:708-16 D '52

Features incorporated in the design of Lone Star's two new dry process cement plants. C. C. Van Zandt. il plan diags Min Eng 4: Trans 1244-50 D '52

Fine grinding in tube mills. B. M. Pearson. Rock Prod 55:106-8 D '52

Lehigh manufactures cement from coquina and staurolite residue. B. Nordberg. il plans diags Rock Prod 56:130-49+ Ag '53

More cement for Detroit market; Peerless cement corp. B. Nordberg. il diags Rock Prod 55:84-9 O '52

New portland cement process; patent. diag Chem Eng 66:384 My '53

New process for cement manufacture. J. C. Witt. Concrete 61:36-7 Ja '53; Same cond. Rock Prod 56:172+ Ja '53

Pay-off in good will; Witt process. Chem W 72:34 F 14 '53

Setting

Effect of current frequency on measurement of electrical resistance of cement pastes. J. Calleja. Am Concrete Inst J 24:329-32 D '52; Discussion. diags 25:332^1-332^4 pt 2 D '53

Heat generation in the setting of magnesium oxychloride cements. E. S. Newman and others. J Res Nat Bur Stand 49:377-83 D '52

Testing

Effect of current frequency on measurement of electrical resistance of cement pastes. J. Calleja. Am Concrete Inst J 24:329-32 D '52; Discussion. diags 25:332^1-332^4 pt 2 D '53

Why type II cement? F. H. Jackson. Am Soc T M Proc 50:1210-24; Discussion. il 1225-34 '50

Transportation

Huron adds to Great Lakes fleet; Portland cement co's self-unloading bulk cement ships. il Am Concrete Inst J 24:sup 15 My '53

Paul H. Townsend christened. il Marine Eng 58:92 Je '53

Pneumatic tanks for bulk cement. J. Grindrod. il Rock Prod 56:118 Mr '53

Pneumatic tanks transport Swedish cement. il Concrete 61:36 Mr '53

Self-unloading cement ship. B. Nordberg. il Rock Prod 56:96-9 Je '53

CEMENT, Effect of sulfates on

Sulfate resistant cement; primary requirement for sulfate resistant concrete pipe. D. G. Miller. Am Concrete Inst J 24:217-24 N '52; Discussion. il 25:224^1-224^{10} pt 2 D '53

CEMENT clinkers

Fine grinding in tube mills. B. M. Pearson. Rock Prod 55:106-8 D '52

High temperature X-ray spectrograms of calcium silicates and cement clinkers. G. Tromel and H. Moller. bibliog il Rock Prod 55:72-5+ N '52

Producing clinker at less than 700,000 B.t.u. per barrel; Skånska cement AB at Hellekis, Sweden. H. S. Tham and P. Sylvan. il plan diags Rock Prod 56:78-87+ S '53

Relation of ball load to clinker charge in grinding mills. R. A. Loveland. Rock Prod 55:96-9 O '52

Research on burning mechanism in rotary kiln. T. Yoshii. diags Rock Prod 56:106-8+ Mr '53

Vibrating conveyors for clinker; Dragon cement co. il Rock Prod 55:103 D '52

CEMENT handling

Bulk cement handling. il Engineer 196:247 Ag 21 '53; Engineering 176:109 Jl 24 '53; Metallurgia 48:139 S '53

Pneumatic cement handling. Comp Air Mag 58:54 F '53

Pumping system supplies cement to both ready-mixed concrete and block plants. W. B. Lenhart. il plan Rock Prod 56:189-91 Je '53

CEMENT industry and trade

Cement supply survey, 1952. Rock Prod 56: 152-3 Jl '53

NRMCA finds cement supply still critical. Concrete 61:20 Mr '53

Trends in the portland cement industry, 1952. B. S. Smith. il Min Cong J 39:49-51 F '53

Securities

Concrete investments; account of cement, its concrete uses, and the financial structure of some of the companies that make it. I. U. Cobleigh. Comm & Fin Chr 177:2064 My 14 '53

Statistics

Cement production, 1951. Rock Prod 56:57 My '53

Portland cement, Nov.-Dec. 1951-Jan.-Nov. 1952. Survey of Cur Bsns 33:S38 Ja '53 [cont monthly]

CEMENT kilns

Calcining cement slurry on continuous conveyor grate. B. M. Pearson. bibliog diags Rock Prod 55:102-4+ O '52

Producing clinker at less than 700,000 B.t.u. per barrel; Sånska cement AB at Hellekis, Sweden. H. S. Tham and P. Sylvan. il plan diags Rock Prod 56:78-87+ S '53

Research on burning mechanism in rotary kiln. T. Yoshii. diags Rock Prod 56:106-8+ Mr '53

Single-kiln cement plant with new ideas in design; Alpha portland cement co. B. Nordberg. il diags Rock Prod 56:157-61 Ag '53

CEMENT laboratories

Ideal cement co.'s new research center. il Rock Prod 56:103 Ag '53

Ideal Cement dedicates research center. il Concrete 61:24+ S '53

CEMENT lined pipe

Cement-mortar linings and coatings for steel pipe. R. C. Kennedy. Am Water Works Assn J 45:113-15 F '53

Mortar lining extends penstock life and restores original capacity. P. H. Yelton. il Elec World 139:106-8 F 9 '53

San Francisco water lines completed. il map Eng N 150:46+ Ja 8 '53

CEMENT lining

Acidproof cement lining halts corosion in vacuum flasher column. D. H. Stormont. il Oil & Gas J 51:255-7 Mr 23 '53

CEMENT plants
South Carolina cement firm completes expansion; Carolina giant cement co. il Manuf Rec 121:65 N '52

Electric equipment

Electric system of Lehigh's Bunnell, Fla. plant. A. Smith. il plan diags Rock Prod 56:90-9+ S '53

Equipment

Batching bulk cement for truck delivery; Penn-Dixie cement corp. B. Nordberg. il plans diags Rock Prod 56:110-23 Ag '53
Features incorporated in the design of Lone Star's two new dry process cement plants. C. C. Van Zandt. il plan diags Min Eng 4:Trans 1244-50 D '52
From open to closed-circuit grinding with liquid cyclones; Southwestern portland cement co. il diags Rock Prod 56:62-6 Jl '53
Lehigh manufactures cement from coquina and staurolite residue. B. Nordberg. il plans diags Rock Prod 56:130-49+ Ag '53
More cement for Detroit market; Peerless cement corp. B. Nordberg. il diags Rock Prod 55:84-9 O '52
Producing clinker at less than 700,000 B.t.u. per barrel; Skånska cement AB at Hellekis, Sweden. H. S. Tham and P. Sylvan. il plan diags Rock Prod 56:78-87+ S '53
Single-kiln cement plant with new ideas in design; Alpha portland cement co. B. Nordberg. il plans diags Rock Prod 56:150-61+ Ag '53
Vibrating conveyors for clinker; Dragon cement co. il Rock Prod 55:103 D '52
See also
Cement kilns

Layout

Single-kiln cement plant with new ideas in design; Alpha portland cement co. B. Nordberg. il plans diags Rock Prod 56:150-61+ Ag '53

Power

Well-planned power distribution meets tough situation; Lone star cement corp. il diag Factory Management 111:B216-21 pt 2 My '53

Safety measures

National safety council 40th annual congress. Cement and quarry section, Chicago, Oct. 20-24; with abstracts of papers. Rock Prod 55:109-11 D '52

CEMENT research
Chemical reactions in high-pressure steam curing of portland cement products; review of the literature. W. C. Hansen. bibliog Am Concrete Inst J 24:841-55 My '53
Japan cement engineering association 6th annual meeting, Tokyo, May 9-16; abstracts of papers. Rock Prod 55:122+ O '52
Long-time study of cement performance in concrete; the heats of hydration of the cements. G. J. Verbeck and C. W. Foster. bibliog diag Am Soc T M Proc 50:1235-62 '50
Ten-year report on the long-time study of cement performance in concrete. bibliog il Am Concrete Inst J 24:601-14 Mr '53; Discussion. 25:616^1-616^3 pt 2 D '53
See also
Cement laboratories

CEMENT sand molds. See Molds (for casting)—Cement sand molds

CEMENTS
Chemical engineering materials of construction. C. R. Payne. bibliog(94 ref) il Ind & Eng Chem 44:2292-5 O '52
Chemical resistant cement reference sheet; sulfur cement. R. H. Steiner and W. R. Pascoe. Chem Eng Prog 49:110 F '53
Furane cement. R. B. Seymour and R. H. Steiner. Chem Eng Prog 48:650 D '52
See also
Adhesives

CENSORSHIP

Bibliography

Selective bibliography of literary censorship in the United States. A. L. Fessler. Bulletin of Bibliography (F. W. Faxon co, Boston) 20:188-91 My '52

CENSORSHIP, Military
Censorship and security. H. B. Say. il U S Naval Inst Proc 79:134-41 F '53

CENSUS

Great Britain

Family anatomy; with charts illustrating findings on households and families; preliminary results of 1951 census. Economist 165: 518-20 N 22 '52

United States

Census or not? Bsns W p28 My 16 '53
Congress, management, public must be sold industry census. S. E. Cohen. Ind Marketing 38:112+ Je '53
How census trends affect banking; symposium. maps Banking 45:29-43 N '52
Scientific census. Eng N 150:68-9 My 7 '53

CENTENNIAL of engineering, 1952
Centennial of American engineering. il Engineering 174:345-6, 369, 444-5 S 12-19, O 3 '52; Engineer 194:381-2 S 19 '52
Centennial of engineering, Chicago Sept. 3-13. Arch Rec 112:11+ O '52
Centennial of engineering, Chicago, Sept. 3-13. Civil Eng 22:892-9 O '52
Engineering centennial depicts progress in various branches of the profession. Elec Eng 71:1038-40 N '52
One hundred years of civil engineering. Concrete 60:8-9 O '52
100 years of engineering; report of centennial, Chicago, Sept. 3-13. Mech Eng 74:867-76 N '52

CENTERING (machine work)
Accurate centering of projectiles insures precise turning. il diag Mach 59:195 Ap '53
Centering sleeve for cutting tool. H. Gifford. diags Am Mach 97:142 Ag 3 '53
Drill jig provides universal centering. T. Gray. il Am Mach 97:124 Mr 30 '53
Indicator for centering punch mark. J. Sobkowiak. diags Mach 59:199 F '53

CENTRAL AMERICA

Commerce

Central American trade slipping away from U.S. Bsns W p 162 O 25 '52

Politics and government

Breakdown in Central America. map Economist 166:31-2 Ja 3 '53

CENTRAL and South West corporation
Central & South West; its service area provides many operating advantages; with financial data, 1942-51. map Barron's 32:15-17 O 6 '52

CENTRAL CITY, Kentucky
Drive to unionize a whole town bogs down, leaves scars; UMW's District 50. il Bsns W p 146-8 N 1 '52

CENTRAL Hudson gas and electric corporation
Earnings. Comm & Fin Chr 177:622 F 9 '53
Public utility securities. O. Ely. Comm & Fin Chr 178:212 Jl 16 '53

CENTRAL Indiana railway
Ike Duffey, shipper turned railroader. W. H. Schmidt, jr. il Ry Age 133:88-92 D 1 '52

CENTRAL line sisal estates
Statement by the chairman. E. W. Bovill. Economist 166:676 Mr 7 '53

CENTRAL Louisiana electric company
Steady earnings uptrend in sight. Barron's 33: 20 Je 1 '53

CENTRAL Maine power company
Bonds offered. Comm & Fin Chr 177:1151 Mr 16 '53

CENTRAL mining and investment corporation, limited
Statement by the chairman. Lord Baillieu. Economist 167:788 Je 13 '53

CENTRAL of Georgia railway
McGinnis moves from Norfolk Southern to Central of Georgia. Ry Age 134:51 Ja 26 '53

CENTRAL paper company
S.D. Warren co. to buy Central Paper. il Paper Tr J 136:22 Mr 20 '53

CENTRAL power and light company
Bonds offered. Comm & Fin Chr 177:2127 My 18 '53

CENTRAL provinces manganese ore company, limited
Statement by the chairman. H. R. Holmes. Economist 167:783-4 Je 13 '53

CENTRAL stations. See Electric plants (central stations)

CENTRAL telephone company
Preferred stock offered. Comm & Fin Chr 178:146 Jl 13 '53

CENTRAL Valley project, California
CVP rates criticized as too low. Elec World News ed 139:18+ Mr 16 '53
Nevada use of CVP power attacked by legislature. Elec World 139:239 Ap 20 '53
Report on state CVP purchase. A. D. Edmonston. Elec West 111:136 Jl '53
SMUD signs for CVP power. Elec World 138:79 D 29 '52
Six pumps deliver 2,100,000 gallons per minute; Tracy pumping plant. C. J. Tullo. il Pub Works 83:62-3+ N '52
Tracy pumping plant of the Central Valley project, Calif. il diag Engineering 174:425-6, pl 32, 463-5, pl 38-9 O 3-10 '52

CENTRALIZED traffic control. See Railroads—Signals

CENTRIFUGAL casting. See Casting, Centrifugal

CENTRIFUGAL force
Application of centrifugal forces to gravitational classifiers. R. C. Emmett and D. A. Dahlstrom. bibliog il Min Eng 5:Trans 1015-21 O '53

CENTRIFUGAL pumps. See Pumps, Centrifugal

CENTRIFUGATION
Analysis of a concentration anomaly in the ultracentrifugation of mixtures. W. F. Harrington and H. K. Schachman. bibliog il Am Chem Soc J 75:3533-9 Jl 20 '53
Centrifugation in field-aligning capsules; preparative microcentrifugation. R. C. Backus and R. C. Williams. diags Science 117:221-3 F 27 '53

CENTRIFUGES
Acceleration testing centrifuge. H. A. Price. diag Machine Design 25:182 Ag '53
Boundary forming technique for the ultracentrifuge. C. Kegeles. il diags Am Chem Soc J 74:5532-4 N 5 '52
Centrifugal oil separator for commercial-vehicle engines. il diag Engineering 174:678 N 21 '52
Chemical engineering unit operations; centrifugation. J. O. Maloney. bibliog(63 ref) il Ind & Eng Chem 45:31-3 Ja '53
Closed loop controls human centrifuge. T. F. Peirce. il diags Electronics 25:132-4 O '52
Effect of ionic strength on the ultracentrifugal properties of human α-globulin. J. R. Cann. bibliog il Am Chem Soc J 75:4218-20 S 5 '53
Evaluation of adhesion of organic coatings by ultracentrifugal and other methods. A. M. Malloy and others. bibliog il diags Paint Oil & Chem R 116:14-19 Ag 27; 26-32+ S 10 '53
Human centrifuge test building; U.S. Naval air development center, Johnsville, Pa. il plan diag Arch Rec 112:184-5 S '52
Hydroextraction techniques for permeability measurement. M. M. Haruni and J. A. Storrow. bibliog il diags Ind & Eng Chem 44:2751-67 N '52
Industrial centrifuges. J. F. Jupp. il Can Chem Process 37:34+ S; 48+ O '53
Instrument frontier. il diags Fortune 46:146-9+ D '52
New sugar centrifugal separates continuously. il diag Food Eng 25:185 O '53
Pulsed light system for multiple-cell ultracentrifuge rotor. M. Wales and others. diags J Res Nat Bur Stand 50:69-70 F '53
Rotor temperature in the ultracentrifuge. C. W. Hiatt. diag R Sci Instr 24:182-3 F '53
Rotor temperature measurement and control in the ultracentrifuge. D. F. Waugh and D. A. Yphantis. diags R Sci Instr 23:609-14 N '52
Sedimentation in the ultracentrifuge. R. J. Goldberg. bibliog diags J Phys Chem 57:194-202 F '53
Separator spins water out of B-47 air; centrifugal unit, designed to keep cabins fog-free in fast descents. G. L. Christian. il diag Aviation W 57:67-8+ D 8 '52
Simple high-speed air spinner for centrifugal testing of small mechanical devices. C. F. Bild and P. F. Vial. il diag A S M E Trans 75:515-18; Discussion. 518-19 My '53
Swelling capacities of fibers in water; centrifuge studies. L. A. Welo and others. bibliog diags Textile Res J 22:261-73 Ap '52; Discussion. 23:64-5 Ja '53
Transient solute distributions from the basic equation of the ultracentrifuge. D. F. Waugh and D. A. Yphantis. bibliog J Phys Chem 57:312-18 Mr '53
Ultracentrifugal properties of human γ-globulins prepared by electrophoresis-convection. J. R. Cann. bibliog Am Chem Soc J 75:4213-17 S 5 '53
Ultracentrifuge double cell. J. W. Beams and H. M. Dixon, 3d. il R Sci Instr 24:228-9 Mr '53
Your centrifuges; how to know and clean them; illustrated instructions. S. Elonka. diag Power 97:112-13 Jl '53

Cleaning

Cleaning Sharples centrifuge bowls. il diags Diesel Power 31:44-5 Ja '53

CERAMIC art
Black Mountain seminar on pottery. il Cer Ind 59:103-4+ D '52
Future looks good for the alert craft potter; interview with Oliver Eldridge. il Cer Ind 60:116-17 Je '53
How to make your glazes (cont). F. C. Ball. Cer Ind 59:123+ O '52

See also
Pottery—Decoration

Exhibitions

Artware pottery gossip in southern California; 37th California gift show, July 26-30. il Cer Ind 61:92 S '53
Ceramic National, 17th, Syracuse. Cer Ind 59:52-3+ D '52
Gift show marked by good attendance, short-range buying in Chicago. il Cer Ind 61:93 O '53
Glass, pottery market good at Pittsburgh show. il Cer Ind 60:69 F '53

CERAMIC coating. See Enamel and enameling

CERAMIC engineers
Survey of professional income of membership for the year 1951. Am Cer Soc Bul 32:99 Mr 15 '53
Value of the engineer in the ceramic industry. Am Cer Soc Bul 31:406 O 15 '52
What industry wants of the young ceramic engineer. W. L. Kenagy. Am Cer Soc Bul 32:257-8 Jl 15 '53
What the young ceramic engineer expects of industry. W. Stetson. Am Cer Soc Bul 32:257 Jl 15 '53

CERAMIC engineers, Institute of. See Institute of ceramic engineers

CERAMIC industries
Ceramic data book with suppliers catalogs and buyers' directory of equipment and materials. 670p Industrial publications, 5 South Wabash av, Chicago 3 '52
Ceramics in the American economy. B. Deem and J. D. Sullivan. Am Cer Soc Bul 32:277-80 Ag 15 '53
Ceramics industry gets boost by new phase of building boom. Ind Marketing 37:36+ O '52
Diversification; key to industry. Cer Ind 61:49 S '53
Editors report; interviews with ceramic plant executives. Brick & Clay Rec 122:49 Je '53
How to mechanize. Cer Ind 61:46-7 Jl '53
Industry must boost man-hour production. Cer Ind 61:46-7 Ag '53
New Jersey ceramic association meeting. Cer Ind 60:170+ Ja '53
Thought waves in the industry; based on interviews with ceramic plant executives. Cer Ind 60:94-5+ Je '53
Ways and means for better production; illustrations with text. Cer Ind 60:96-7 Je '53
What the future holds for your business. Cer Ind 60:92-3 Je '53

See also
Brick industry and trade
Color in the ceramic industries
Enamel and enameling
Glass trade
Refractory materials

Directories

American ceramic society membership roster. Am Cer Soc Bul 31:411-16+ O 15 '52
American ceramic society membership roster. Am Cer Soc Bul 32:sup 1-75 O 15 '53

CERAMIC industries—*Continued*

Exhibitions

Ceramic displays steal California gift show. J. E. Tufft. Cer Ind 60:86 Mr '53
Scripps college 10th annual invitational spring ceramic show, Claremont, Calif. March 18-May 14. il Cer Ind 60:96 My '53

Statistics

Input-output; a new manufacturer's tool. Brick & Clay Rec 121:74+ O '52; Same. Cer Ind 59:92 N '52

Japan

Enameling industry of Japan. M. L. Simmons. il Am Cer Soc Bul 31:453-5 N 15 '52

West Indies

Caribbean ceramics; Cuba, Jamaica, Haiti, Dominican Republic, Puerto Rico. A. J. Gitter. il Am Cer Soc Bul 32:52-4 F 15 '53

CERAMIC industry (periodical)
CI completes thirty years of service. Cer Ind 60:90+ Je '53

CERAMIC laboratories
Armour's new laboratory for ceramic research. il Brick & Clay Rec 123:68 Ag '53; Same. Cer Ind 61:54 Ag '53
New laboratories of the British ceramic research association. A. E. Dodd. il Metallurgia 46:191-2 O '52

CERAMIC materials
Availability of ceramic raw materials. E. R. Killam. Am Cer Soc Bul 31:237-9 Jl 15 '52
Baked clay joins the jet age; coatings and cermets. Bsns W p41-2+ Jl 11 '53
Ball milling of pure ceramic bodies. H. Z. Schofield. il Am Cer Soc Bul 32:49-50; Discussion. O. J. Whittemore, jr. and E. Ryshkewitch. 50-1 F 15 '53
Ceramic product with special joints offers fast, easy installation of pipe lines. il Mill & Factory 52:148 Je '53
Chemical engineering materials of construction; ceramics. F. Singer. il Ind & Eng Chem 44:2296-308 bibliog(422 ref, p2305-8) O '52
Complete directory; with information on formulas, physical characteristics, properties and their use in enamel, glass and pottery. Cer Ind 60:61-4+ Ja '53; Correction. 60:73-4+ F '53
Design of ceramic-lined digesters. C. A. McDonald and others. diags Pulp & Pa of Can 54:174-88 My '53
Electromechanical properties at $BaTiO_3$ compositions showing substantial shifts in phase transition points. D. A. Berlincourt and F. Kulcsar. Acoustical Soc Am J 24:709-13 N '52
Historical background development on use of talc in ceramic bodies. W. W. Gaskins. bibliog(40 ref) Am Cer Soc Bul 31:392-5 O 15 '52
Metallising of glass, ceramic and plastic surfaces. R. J. Heritage and J. R. Balmer. bibliog il Metallurgia 47:171-4 Ap '53; Same. Metal Finishing 51:75-8+ Ag '53
Niobate and tantalate dielectrics. E. Wainer and C. Wentworth. bibliog Am Cer Soc J 35:207-14 Ag 1 '52
Review of ceramic material requirements for nuclear reactor use. J. F. White. bibliog diag Am Cer Soc Bul 32:301-5 S 15 '53
Review of methods for determining particle size distribution of ceramic raw materials. R. S. Lamar. bibliog Am Cer Soc Bul 31:283-8 Ag 15 '52
Stability of ceramic materials. J. F. Wygant and W. D. Kingery. Am Cer Soc Bul 31:251-5 Jl 15 '52
Study of eutectic glasses as fluxes in whiteware bodies. A. S. Watts and others. Am Cer Soc Bul 31:456-61 N 15 '52
Synthetic mica investigations; hot-pressed machinable ceramic dielectric. J. E. Comeforo and others. bibliog il Am Cer Soc J 36:286-94 S 1 '53
Synthetic mica investigations; role of fluorides in mica batch reactions. W. Eitel and others. bibliog Am Cer Soc J 36:341-8 O 1 '53

See also
Bricks
Cermets
Clay
Clay products
Feldspar
Refractory materials
Silica
Silicates

Analysis

Instrument for the control of soluble sulfates in ceramic raw materials. W. E. Brownell. il Am Cer Soc Bul 32:45-6 F 15 '53
New method uses atomic energy to detect impurities in raw materials; abstract. C. E. Larson. Cer Ind 59:131 O '52
Some applications of the fluorescent X-ray spectrometer in ceramics. R. F. Patrick. bibliog il Am Cer Soc J 35:189-93 Ag 1 '52

Electric properties

Ceramic and dielectric properties of the stannates. W. W. Coffeen. bibliog Am Cer Soc J 36:207-14 Jl 1 '53
Conductive ceramic for microwave applications; Caslode. Engineer 195:363 Mr 6 '53; Elec R (Lond) 152:464 F 27 '53
Dielectric bodies in the quaternary system $BaTiO_3$—$BaSnO_3$—$SrSnO_3$—$CaSnO_3$. W. W. Coffeen. bibliog Am Cer Soc J 36:215-21 Jl 1 '53
Low-loss electrical bodies from wollastonite. W. M. Jackson, 2d. Am Cer Soc Bul 32:306-8 S 15 '53
Properties of some high titania dielectric ceramics. E. G. Graf. Am Cer Soc Bul 31:279-82 Ag 15 '52

Joining to metal

Metallographic examination of ceramic-metal seals. A. G. Pincus. bibliog il diags Am Cer Soc J 36:152-8 My 1 '53

Testing

Compression strength of porous sintered alumina and zirconia; ninth communication to ceramography. E. Ryshkewitch. il Am Cer Soc J 36:65-8 F 1 '53
Modulus of rupture of cylindrical ceramic rods when tested on a short span. L. H. Milligan. Am Cer Soc J 36:159-60 My 1 '53
Prestressed ceramics as a structural material. R. D. Johnston and others. bibliog il diags Am Cer Soc J 36:121-6 Ap 1 '53
Sonic analysis for solid bodies. N. N. Ault and H. F. G. Ueltz. bibliog diag Am Cer Soc J 36:199-203 Je 1 '53
Stress-rupture and creep testing of brittle materials. W. A. Maxwell and P. F. Sikora. il Metal Prog 62:97-9 N '52
Temperature gradient method for determining firing range of ceramic bodies. R. L. Stone. il diags Am Cer Soc J 36:140-2 Ap 1 '53

CERAMIC research
Ceramic research at Oak Ridge national laboratory. il Am Cer Soc Bul 32:205-6 Je 15 '53
Control of brickmaking costs through motion-time-analysis. A. B. Segur. Am Cer Soc Bul 32:47-8 F 15 '53
$445,000 ceramics building for Clemson. il Brick & Clay Rec 122:89 Ja '53
High-temperature laboratory catenary kiln. G. Economos and F. E. Vinal. il diag Am Cer Soc J 36:204-6 Je 1 '53
High temperature research at Alfred on cermets. J. R. Tinklepaugh and others. Cer Ind 60:74-5 Mr '53
Investigate ceramics for nuclear reactors. Tool Eng 31:78 Ag '53
List of ceramic research projects in 1952. Am Cer Soc Bul 31:352-8 S 15 '52
Prestressing; tensioned ceramics show promise for building. il Iron Age 170:104 D 4 '52
Société francaise de céramique. il Am Cer Soc Bul 32:56-7 F 15 '53
Study of eutectic glasses as fluxes in whiteware bodies. A. S. Watts and others. Am Cer Soc Bul 31:456-61 N 15 '52
Vitrified china association reports progress and results of technical research work. Cer Ind 59:100 D '52

See also
Enamel and enameling

CERAMICS
Ceramic association of New York 19th annual meeting, Alfred, N.Y. Oct. 25; with abstracts of papers. Brick & Clay Rec 121:45+ D '52
CI two minute ideas for the craft ceramist. il Cer Ind 60:74 Ap '53 [cont monthly]

CERAMICS—*Continued*

Heat; how it is applied, contained and controlled in all the ceramic industries. il Cer Ind 61:53-7 S; 51-5+ O '53; Same. Brick & Clay Rec 123:41-5 S; 51-3+ O '53

Recent progress in ceramics. A. Dinsdale. bibliog il diag Chem & Ind p 1134-9 N 22 '52

Science in ceramics. A. E. R. Westman. il Can Chem Process 37:88+ S '53

Thermodynamics in ceramics. W. D. Kingery and J. F. Wygant. bibliog diags Am Cer Soc Bul 31:165-8, 213-17, 251-5, 294-7, 344-7, 386-8 My 15-O 15 '52

See also

Brickmaking
Cement
Clay
Clay products
Enamel and enameling
Fire brick
Frits
Glass
Glass manufacture
Glazes
Kilns
Porcelain
Pottery
Refractory materials
Tiles
Wollastonite

Bibliography

Applications of thermodynamics in ceramics; summary, bibliography, and sources of data. J. F. Wygant and W. D. Kingery. Am Cer Soc Bul 31:386-8 O 15 '52

Study and teaching

Ceramic education and its number one problem. W. W. Kriegel. Am Cer Soc Bul 31:401 O 15 '52

Ceramic engineering curricula, 1952. L. Mitchell. Am Cer Soc Bul 32:55 F 15 '53

Ceramics and ceramic engineering at the University of Illinois. il Am Cer Soc Bul 32:37-9 F 15 '53

Contribution to ceramic teaching. T. W. Garve. Am Cer Soc Bul 31:401+ O 15 '52

Trends and problems in graduate study. E. C. Henry. Am Cer Soc Bul 32:198 My 15 '53

See also

Rutgers university—School of ceramics

CEREAL factories

Equipment

Resourceful engineers make process sing; Gerber products co. il Food Eng 25:60-2+ F '53

CEREALS. See Grain

CEREALS, Prepared

Gains greater packaging efficiency by analyzing line performance; General mills, inc. W. P. Schommer. Food Eng 25:86-9 Ap '53

Advertising

How to see outer space for a box top; Ralston Purina's touring rocket ships. il Bsns W p30-1 O 25 '52

CEREBOS, limited

Statement by the chairman. W. A. Innes. Economist 167:628-9 My 30 '53

CERENKOV effect

Beta- and gamma-induced Čerenkov radiation in water. M. A. Greenfield and others. Opt Soc Am J 43:42-3 Ja '53

Energy loss and Čerenkov radiation of a relativistic ionizing particle. P. Budini. bibliog Phys R 89:1147-8 Mr 1 '53

Energy loss of a fast charged particle by Čerenkov radiation. R. M. Sternheimer. bibliog Phys R 89:1148 Mr 1 '53

ČERENKOV radiation. See Radiation

ČERENKOV radiation counter. See Counters (electrons, ions, etc.)

CEREVISTEROL

Constitution of cerevisterol. G. H. Alt and D. H. R. Barton. bibliog Chem & Ind p 1103 N 8 '52

CERIUM

Catalysis of the cerous-ceric electron exchange reaction by fluoride. H. C. Hornig and W. F. Libby. bibliog J Phys Chem 56:869-71 O '52

Cerium; uses, outlook, availability, price and suppliers, etc. il map Iron Age 170:288 O 9 '52

Concentration of bastnaesite and other cerium ores; with analytical methods. J. B. Zadra and others. U S Bur Mines Rep of Invest 4919:1-15 '52

Rare earths in stainless brought up to date. C. B. Post. Iron Age 171:148-9 Je 4 '53

Rate law and mechanism for the reaction of cerium(IV) and bromide ion in aqueous sulfate media. E. L. King and M. L. Pandow. bibliog Am Chem Soc J 75:3063-8 Jl 5 '53

Resistivity of lanthanum, cerium, praseodymium, and neodymium at low temperatures. N. R. James and others. bibliog Phys R 88:1092-8 D 1 '52

Isotopes

K-shell conversion coefficient of Ce^{141}. R. L. Heath. Phys R 87:1132-3 S 15 '52

Radiations of Ce^{143}. W. H. Burgus. bibliog diag Phys R 88:1129-32 D 1 '52

Short-lived cerium isotopes from uranium fission. A. A. Caretto, jr. and S. Katcoff. bibliog Phys R 89:1267-8 Mr 15 '53

CERIUM alloys

Testing

Magnesium-cerium cast alloys for elevated-temperature service. K. Grube and L. W. Eastwood. bibliog il diags Am Soc T M Proc 50:989-1010; Discussion. 1011-12 '50

Magnesium-cerium wrought alloys for elevated-temperature service. K. Grube and others. il diags Am Soc T M Proc 50:965-88 '50

CERIUM compounds

Interatomic electric quadrupole-quadrupole coupling in salts of cerium. R. Finkelstein and A. Mencher. bibliog J Chem Phys 21:472-9 Mr '53

CERIUM pyrophosphate

Solubility of cerium(IV) pyrophosphate. J. C. Brantley and J. R. Huizenga. Am Chem Soc J 74:6101 D 5 '52

CERIUM sulfate

Spectrophotometric study of the complex formed between cerous and sulfate ions. T. W. Newton and G. M. Arcand. bibliog Am Chem Soc J 75:2449-53 My 20 '53

Titration of uranium(IV) by electrolytically generated ceric ion. N. H. Furman, C. E. Bricker and R. V. Dilts. bibliog diag Anal Chem 25:482-6 Mr '53

CERMETS

Ceramic-base lining boosts brake loads. il Aviation W 58:57 Ja 26 '53

Cermets may help jets operate hotter. il Aviation W 58:36-8 F 23 '53

Impact strength of newer cermets. Materials & Methods 38:188+ S '53

Moly based metal ceramic designed for high temperature use. il Iron Age 170:114 O 16 '52

Oxidation products which contribute to the oxidation resistance of TiC-base cermets. H. M. Greenhouse. il Am Cer Soc J 35:271-4 O 1 '52

Reactions during sintering of a zirconium carbide-niobium cermet. W. G. Lidman and H. J. Hamjian. bibliog il Am Cer Soc J 35:236-40 S 1 '52

Silicon-based cermets may be useful in aircraft engines; abstract. B. C. Weber. Chem & Eng N 31:1976 My 11 '53

Testing

High temperature research at Alfred on cermets. J. R. Tinklepaugh and others. Cer Ind 60:74-5 Mr '53

Stress-rupture and creep testing of brittle materials. W. A. Maxwell and P. F. Sikora. il Metal Prog 62:97-9 N '52

CERTIFICATES of convenience and necessity

Accounting alternatives, and their consequences, in handling charges for depreciation under certificates of necessity. W. H. Harrison, jr. J Account 94:716-18 D '52

Emergency facilities; accounting for depreciation and taxes under certificates of necessity. J Account 95:48-50 Ja '53

CESIUM

Isotopes

Angular and direction-polarization correlation for Co^{60}, Cs^{134}, and Sb^{124}. R. M. Kloepper and others. bibliog il Phys R 88:695-8 N 15 '52

Measurement and interpretation of the *K* Auger intensities of Sn^{113}, Cs^{137}, and Au^{198}. C. D. Broyles and others. bibliog diag Phys R 89:715-24 F 15 '53

CESIUM—Isotopes—*Continued*

Nuclear levels in Cs^{131}. J. M. Cork and others. diag Phys R 91:76-7 Jl 1 '53

Nuclides Ba^{127}, Ba^{128}, and Cs^{128}. M. Lindner and R. N. Osborne. Phys R 88:1422-3 D 15 '52

Polarization correlations of gamma-rays of Cs^{134} and of annihilation radiation. B. L. Robinson and L. Madansky. bibliog il diags Phys R 88:1065-9 D 1 '52

Radiations of neutron-deficient barium and cesium nuclides. R. W. Fink and E. O. Wiig. bibliog Phys R 91:194 Jl 1 '53

Radioactive decay of Cs^{134}, Os^{185}, Os^{191}, and Os^{193}. J. M. Cork and others. bibliog diags Phys R 90:444-7 My 1 '53

Rb^{87} and Cs^{133} magnetic resonance shifts in the solid halides. H. S. Gutowsky and B. R. McGarvey. J Chem Phys 21:1423-4 Ag '53

CESIUM antimonide

Electron scattering and the photoemission from cesium antimonide. L. Apker and others. bibliog diags Opt Soc Am J 43:78-80 F '53

CESIUM chloride

Effect of solvent on the ultra-violet absorption spectra of aromatic hydrocarbons with special reference to the mechanism of salting-out; aqueous salt solutions. E. F. G. Herington and W. Kynaston. Chem Soc J p3143-9 Ag '52

Molecular constants of cesium chloride by the molecular beam electric resonance method. R. G. Luce and J. W. Trischka. bibliog diag J Chem Phys 21:105-9 Ja '53

Osmotic properties of aqueous sodium chloride-cesium chloride mixtures at 25°. R. A. Robinson. Am Chem Soc J 74:6035-6 D 5 '52

CESIUM fluoride

Complex fluorides; the structural chemistry of some complex fluorides of potassium, rubidium, cæsium, ammonium, and thallium. B. Cox and A. G. Sharpe. Chem Soc J p 1783-4 Je '53

CESIUM iodide

Infrared spectrometry with a cesium iodide prism. E. K. Plyler and N. Acquista. Opt Soc Am J 43:212 Mr '53

Scintillations produced by alpha particles in CsI. B. Hahn. Phys R 91:772-3 Ag 1 '53

CESIUM telluride

Photoemission from cesium and rubidium tellurides. E. Taft and L. Apker. Opt Soc Am J 43:81-3 F '53

CETANE number

Cetane number from aniline point. O. M. Duncan. diag Pet Eng 25:C37 F '53

CEVINE

Steroidal alkaloids; the functional groups of cevine. D. H. R. Barton and J. F. Eastham. Chem Soc J p424-8 F '53

CEYLON

See also

Electric apparatus industry—Ceylon

Commercial policy

Ceylon's deficit. Economist 167:765+ Je 13 '53

Economic conditions

Ceylon; an economic survey. map Economist 166:453-60 F 14 '53

CHAETOMIUM

Chemistry of fungi; metabolites of chaetomium indicum corda. D. H. Johnson, A. Robertson and W. B. Whalley. Chem Soc J p2429-34 Ag '53

CHAIN conveyors. See Conveying machinery—Chain conveyors

CHAIN gear

Care and maintenance of oil-field chains. Oil & Gas J 51:421 N 17 '52

Chain-driven intermittent rotary movement. L. Kasper. diags Mach 59:203-4 D '52

Chain drives. Steel 132:67 Ap 13 '53

Check chart for sick oil-field chains. Oil & Gas J 51:144 O 6 '52

Chuck jaws locked for turning with bicycle roller-chain. C. T. Bower. diags Am Mach 97:170 S 14 '53

Installation and maintenance of chain drives. R. T. Sweeney. il diags Diesel Power 30:68-70 O '52

Linear movement reduced by differential chain drive mechanism. L. Kasper. diags Mach 59:207-8 My '53

One man's opinion of one chain drive. Q. J. Kearney. Iron Age 171:154-5 Je 4 '53

Sintered steel bushings extend life of roller chain. L. H. Whitney and R. Talmage. diags Iron Age 171:125-7 Je 25 '53

Transmission chain. Steel 131:51 O 6 '52

Testing

Improving fatigue life; tests on roller chain link plates. M. K. Gerla. il diags Machine Design 25:171-3 Ja '53

CHAIN saws. See Saws, Chain

CHAIN stores

Concentration of retail volume; bugaboo or bonanza? W. E. Holden. Ptr Ink 241:70+ D 12 '52

Food chains, building supermarkets, see no trouble raising funds. Bsns W p 130-1 Jl 18 '53

Sears opens industrial store, dips toe in light tool market. B. Enos. il Ind Marketing 38:59 O '53

Selling to the British middle class; Marks & Spencer, ltd. il Bsns W p50-2+ Je 13 '53

They kept climbing, but in low gear. Bsns W p41-2 My 16 '53

See also

Five- and ten-cent stores

Food fair stores, inc.

Grant, W. T., company

Marketing—Chain store outlets

Sears, Roebuck and company

Woolworth, F. W., company

Advertising

Newspaper is basic says Kroger adman. W. J. Sanning. Ed & Pub 85:15+ D 20 '53

Management

Is Fedway in your sales future? L. M. Hughes. il Sales Management 70:34-6+ F 15 '53

Taxation

States drop tax on chains. Bsns W p68 My 30 '53

CHAINS

Basic suggestions for the care and filing of chains on power saws. N. T. Adair. Pulp & Pa of Can (Convention no) 54:279+ [F] '53

Big bite; cutter simplifies cutting chain by mill supply houses. il Iron Age 171:175 F 5 '53

Chains that won't let you down. J. Hogans. flow chart il Nat Safety N 67:32-5+ Ja '53

Load-bearing chain. il Nat Safety N 67:168 Mr '53

Lubricator for chains. il diag Engineering 174:518 O 17 '52

Motion of a link chain over a roller. A. E. R. de Jonge. diags A S M E Trans 75:747-58 Jl '53

Suggestions for safety in handling chains. il Iron & Steel Eng 30:129-30 My '53; Safety Maint & Prod 105:39 Je '53; Nat Safety N 68:66+ Jl '53

See also

Chain gear

Tire chains

CHAINS, Chemical

Anodic syntheses; chain extension of fatty acids by an isoprene unit. R. P. Linstead and others. Chem Soc J p3621-4 S '52

Effects of interactions in real polymer chains. F. Bueche. bibliog diag J Chem Phys 21:205-8 F '53

Excluded volume effect in polymer chains and the analogous random walk problem. R. J. Rubin. bibliog J Chem Phys 20:1940-5 D '52

Excluded volume of polymer chains. J. J. Hermans and others. bibliog J Chem Phys 20:1360-8 S '52

Flow birefringence in solutions of macromolecules. R. Cerf and H. A. Scheraga. bibliog diag Chem R 51:225-61 O '52

Influence of chain length on the symmetry of conjugated molecules. J. D. Dunitz and L. E. Orgel. diags J Chem Phys 20:1328 Ag '52

Kinetics of chain depolymerization. R. Simha and L. A. Wall. bibliog J Phys Chem 56:707-15 Je '52

π Helix, a hydrogen bonded configuration of the polypeptide chain. B. W. Low and R. B. Baybutt. bibliog Am Chem Soc J 74:5806-7 N 20 '52

CHAINS, Chemical—*Continued*

Properties of freshly formed surfaces; the influence of chain length and structure on the surface potentials of aqueous solutions of alcohols. C. C. Addison and D. Litherland. Chem Soc J p 1159-67 Ap '53

Sedimentation behavior of flexible chain molecules; polyisobutylene. L. Mandelkern and others. bibliog J Chem Phys 20:1392-7 S '52

Solutions of some problems concerning long random coils. C. A. Hollingsworth. bibliog diags J Chem Phys 20:1580-90 O '52

Statistical theory of networks of non-Gaussian flexible chains. Ming Chen Wang and E. Guth. bibliog J Chem Phys 20:1144-57 Jl '52

Volume effect in polymer chains. T. B. Grimley. J Chem Phys 21:185-6 Ja '53

CHAIRMEN

How to chair a conference. T. H. Nelson. Advanced Management 18:20-3 Ja '53

CHAIRS

Find the right chair for every employee. E. Whitmore. Am Bsns 23:25-6+ Ag '53

From five to fifteen cents a week! cost of good seating. E. Whitmore. il Am Bsns 23:34-6 Ag '53

Styles, materials, constructions. E. Whitmore. il Am Bsns 23:32-3 Ag '53

Why proper seating means more production and better morale. E. Whitmore. il Am Bsns 23:23-4 Ag '53

CHAIRS, Metal

Manufacture

Wire stitching; special stitch developed for fast assembly of seat frames. il Iron Age 170:101 O 30 '52

CHALCEDONY

See also

Jasper

CHALCONES

Infrared spectra of lignin and related compounds; characteristic carbonyl and hydroxyl frequencies of some flavanones, flavones, chalcones and acetophenones. H. L. Hergert and E. F. Kurth. bibliog Am Chem Soc J 75:1622-5 Ap 5 '53

Isolation of 2′ : 4 : 4′-trihydroxychalkone from yellow varieties of dahlia variabilis. E. C. Bate-Smith and T. Swain. Chem Soc J p2185-7 Jl '53

Probable enzymatic conversion of hydroxychalcone glycoside into hydroxybenzalcoumarone glycoside. M. Shimokoriyama and S. Hattori. bibliog Am Chem Soc J 75:2277 My 5 '53

CHALK

Chalk crushing and screening plant. il Engineer 195:115 Ja 16 '53; diags Engineering 175:94-5 Ja 16 '53; Elec R (Lond) 152:619-20 Mr 20 '53

CHALKBOARDS. See Blackboards

CHALKONES. See Chalcones

CHALLENGER expedition, 1872-1876. See Scientific expeditions

CHAMAZULENE

Structure of chamazulene. A. Meisels and A. Weizmann. bibliog Am Chem Soc J 75:3865-6 Ag 5 '53

CHAMBERS of commerce

Chamber of commerce secretary on the loose. il Bsns W p76-8+ Mr 7 '53

Get acquainted breakfast; Louisville. il Bsns W p 152+ Mr 14 '53

Health service

Trade organization fosters in-plant industrial health. C. E. Noyes. A M A Archives Ind Hygiene & Occup Med 6:472-4 D '52

CHAMFERING machines

Burrs and chamfers entire tooth form. il Am Mach 97:138-9 Ag 31 '53

CHANNELS

Analog circuit solves open channel problem. K. O. Vartia. Eng N 149:44-5 D 4 '52

Direct step method for computing water-surface profiles. A. A. Ezra. diag Am Soc C E Proc 79 [no 180]:1-10 Mr '53

Gradually varied flow in uniform channels on mild slopes. M. Lee and others. bibliog il plan diags Ill U Eng Exp Sta Bul 404:1-90 '52 (pa $1)

Laminar to turbulent flow in a wide open channel. W. M. Owen. il diags Am Soc C E Proc 79 [no 188]:1-8 Ap '53

Regime flow in a silt carrying channel. J. F. Cooke. Engineer 196:40 Jl 10 '53

River channel roughness. H. A. Einstein and N. L. Barbarossa. il diag Am Soc C E Proc 77[no 78]:1-12 Jl '51; Discussion. 78[no D-78]:1-14 Jl '52

CHAPELS

First all-faiths industrial chapel started by aircraft company; Solar aircraft co. P. Eastman. Am Bsns 23:32 F '53

Ludwig Mies van der Rohe designs a chapel; Illinois institute of technology. il Arch Rec 112:26 D '52

Navy buildings; chapels. il plan Arch Rec 112:196 S '52

CHAPELS, Mortuary. See Mortuary chapels

CHAPMAN, Oscar Littleton, 1896-

Chapman honored; National petroleum council praises the retiring Secretary of the interior. Oil & Gas J 51:77 D 15 '52

CHARCH, William Hale, 1898-

They do something about ideas! W. H. Church and his investigators. R. E. Ellsworth. pors Mod Textiles Mag 34:36+ Jl '53

CHARCOAL

Preparation and properties of a platinized charcoal catalyst with some observations on the behavior of inhibitors. R. Baltzly. bibliog Am Chem Soc J 74:4586-9 S 20 '52

CHARCOAL, Activated. See Carbon, Activated

CHARGE accounts (retail trade)

Bankers move in on charge credit. Bsns W p43 Ap 11 '53

Charge-it plan variations. il Burroughs Clearing House 37:13-15 Je '53

Group developments in shoppers' credit. il Burroughs Clearing House 37:38-41+ Ap '53

Retailers get rid of banking. J. M. Russakoff. J Retailing 28:107-10+ Fall '52

CHARITIES

See also

Corporations—Charities

Money raising campaigns

CHARITIES, Business. See Corporations—Charities

CHARLESTON, South Carolina

Harbor

Can Charleston keep it up? map Bsns W p84+ My 16 '53

Charleston, S.C. releases port traffic figures for '51. Manuf Rec 121:63 D '52

CHARLOTTE, North Carolina

See also

Chemical industries—Charlotte, North Carolina

CHARMIN paper mills, inc. (formerly Hoberg paper mills, inc.)

Hoberg changes name to Charmin paper mills, inc. Paper Tr J 137:9 Jl 31 '53; Paper Ind 35:646 S '53

CHARPY impact text. See Impact

CHARTER oil company, limited

Stock offered. Comm & Fin Chr 177:1047 Mr 9 '53

CHARTERED bank of India, Australia and China

Eastern banks raise dividends. Economist 166:759-60 Mr 14 '53

Statement by the chairman. V. A. Grantham. Economist 166:768-9 Mr 14 '53

CHARTERED buses. See Motor buses—Chartering

CHARTERHOUSE investment trust

Statement by the chairman. H. N. Hume. Economist 166:115 Ja 10 '53

CHARTREUSIN. See Antibiotic substances

CHARTS (calculating)

Automatic Smith chart plotter aids study of transmission lines and vhf circuits. K. S. Packard. il Tele-Tech 12:65-7+ Ap '53

Buckling design charts. W. A. Welch. diags Aero Digest 65:74+ N '52

Cathode-follower design charts; reference sheet. N. O. Sokal. diags Electronics 26:192-4+ S '53

Chart for direct concrete beam design. J. N. Robinson. Eng N 149:45 N 6 '52

Chart simplifies sheetpile design. R. E. Mann. Eng N 149:86 N 20 '52

Check your ratio delay; p charts improve methods for determining downtime. G. Nadler and D. H. Denholm. Iron Age 170:110-13 N 27 '52

CHARTS (calculating)—*Continued*

Compressibility factors; universal chart. Oil & Gas J 52:325 Je 22 '53

Constant-pressure combustion charts including effects of diluent addition. L. R. Turner and D. Bogart. bibliog U S Nat Advisory Com for Aeronautics 1949:315-39 '51

Cooling tower selection chart. A. M. Norris. Refrig Eng 61:980-3; Discussion. 983+ S '53

Current limiting reactance calculator aids switchboard design; engineering reference sheet. A. Conangla. Elec World 138:127 D 1 '52

Enthalpy of petroleum fractions; new charts and recent experimental data. C. R. Bauer and J. F. Middleton. bibliog Pet Refiner 32: 111-13 Ja '53

Multiband tuner design chart. G. J. Maki. Electronics 26:200 Ag '53

New-type code chart for the design of vessels under external pressure. E. O. Bergman. bibliog A S M E Trans 74:1217-22; Discussion. 1222-4 O '52

Parallel-resistor chart; reference sheet. M. Aron. Electronics 26:192, 194 Jl '53

Profile charts for microwave links. map diag Commun Eng 13:23-4+ Mr '53

Quality batches figured simply; equations and handy charts to gage amounts of water, carbohydrates, and seasoning to add to meats. A. Belanger. Food Eng 25:58-9 F '53

Quick capacity chart for horizontal tanks. Roads & Sts 95:109 N '52

Reactance chart calculations. C. W. Young. diags Tele-Tech 12:69-71+ Ag '53

Shortcuts for the pipe-line engineer; handy charts that save time and speed computations. Oil & Gas J 51:supp O 13 '52

Smith chart applications. J. Markin. diags Tele-Tech 12:85-7+ My '53

Spurious response chart. A. E. Eberhardt. Tele-Tech 11:49-50 D '52

Stiffness charts for gusseted members under axial load. J. E. Goldberg. bibliog diags Am Soc C E Proc 79 [no 179]:1-15 Mr '53

This handy chart tells right carton size in a jiffy. R. R. Haugh. diag Food Eng 25: 79+ Mr '53

Toroid design charts; reference sheet. R. E. Prouty. Electronics 26:193-4, 196 Ag '53

Torque chart; designed to figure torque and driving force where fractional horsepower is to be transmitted at very high speed. P. Swain. Power 96:95 N '52

Universal skin-effect chart for conducting materials. H. A. Wheeler. bibliog Electronics 25:152-4 N '52

Wavefront charts and raypath plotters. A. W. Musgrave. il diags Colorado School of Mines [Golden] Quarterly 47:1-60 [fold charts in pocket] bibliog(p59-60) O '52 (pa $1)

See also
Nomographs

CHARTS, Aeronautic. See Air navigation—Charts

CHASERS. See Thread cutting

CHATTEL mortgages

Automobile mortgage. F. C. Fiechter, jr. Burroughs Clearing House 37:72 Mr '53

CHAULMOOGRIC acid

X-ray and thermal examination of the glycerides; chaulmoogric and hydnocarpic acids and their mono-, di-, and tri-glycerides. A. Gupta and T. Malkin. Chem Soc J p2405-8 Je '52

CHAULMOOGRIC acid, Analogs of

Synthesis of potential antibacterial agents; a pyrimidine analogue of chaulmoogric acid. T. D. Heyes and J. C. Roberts. Chem Soc J p4935-7 D '52

CHAYEN process. See Oils and fats

CHECK writing machines

Mechanical sensor for automatic check signer. il diags Product Eng 23:162-3 O '52

CHECKS

Bank's check reconciling plan saves time for employers. il Am Bsns 23:24+ S '53

Coaxing bashful owners to cash dividend checks; companies devise novel methods. Credit & Fin Management 54:10-11+ S '52

Dividend checks produced faster with stenciling process. il Am Bsns 23:24 Ap '53

Standard check paying procedures; Illinois bankers association survey. Banking 45:94 S '52

Collection

Collection of checks by Federal reserve banks. Fed Res Bul 39:597-8 Je '53

Must that check go back? W. C. Streeter. Bankers Mo 69:14+ O '52

New system on wheels clears checks overnight. Bsns W p64+ Ap 11 '53; Banking 45: 120-1 My '53

Procedure for direct return of unpaid items. M. C. Miller. Banking 45:70-2 O '52

3 x 3 x 7,900,000,000; progress report from joint committee on check collection study. T. Fischer. il Banking 45:58-9 Ap '53

Endorsement

Challenged endorsement. Burroughs Clearing House 37:72+ Ja '53

Law

See also
Checks—Endorsement
Checks, Fraudulent

CHECKS, Forged. See Checks, Fraudulent

CHECKS, Fraudulent

John Smith forgeries; recent court decision. F. C. Fiechter, jr. Burroughs Clearing House 37:73 O '52

One of two innocent rule. F. C. Fiechter, jr. Burroughs Clearing House 37:71-2 Mr '53

Retailers worry about bad checks in Los Angeles. Bsns W p52 My 16 '53

CHEESE

Anti-mold wrapping; Milpure. Bsns W p72+ Jl 25 '53

Food in polyethylene collapsible tubes. il Mod Packaging 26:201 S '52

New cheese products, packages take spotlight. il Food Eng 24:154 N '52

New fungicide; sorbic acid. Food Eng 25: 127+ Ag '53

Manufacture

Antibiotic nisin and its use in the making and processing of cheese; abstract. N. J. Berridge. Chem & Ind p374 Ap 18 '53

New cheese plant streamlines Swiss process; Star Valley Swiss cheese co. F. Brog and C. R. Havighorst. il Food Eng 24:93-6+ D '52

New processing techniques speed cheese making. H. E. Walter and others. flow sheet Food Eng 25:125+ Ag '53

Optimum cheesemaking assured by air units; Lake to lake dairy cooperative. T. Torgerson. il Food Eng 25:129+ My '53

CHEESE factories

Equipment

Package engineering pays 207 per cent; Tillamook county creamery assn. C. R. Havighorst. il diags Food Eng 25:90-3 Ap '53

Speeds whey handling; Lake-to-lake dairy cooperative. flow diag il Food Eng 25:96+ Mr '53

CHELATION

Chelate ion exchange resins. H. P. Gregor and others. bibliog Ind & Eng Chem 44:2834-9 D '52

Chelate systems. T. H. Simpson, L. Garden and B. L. Shaw. diag Chem Soc J p4638-44, 5027-32 D '52

Chelating properties of 8-quinolinol Mannich bases. J. P. Phillips and Q. Fernando. bibliog Am Chem Soc J 75:3768-9 Ag 5 '53

Chemistry of thorium; some observations on the 8-quinolinol chelates of thorium. T. Moeller and M. V. Ramaniah. bibliog Am Chem Soc J 75:3946-9 Ag 20 '53

Inner complexes of uranium containing 1,3-dicarbonyl chelating groups. H. I. Schlesinger and others. bibliog Am Chem Soc J 75:2446-8 My 20 '53

Salt effects and chelation in the decomposition of diazomalonic acid. C. V. King and I. A. Lichtman. bibliog Am Chem Soc J 75:3949-53 Ag 20 '53

Sexadentate chelate compounds. F. P. Dwyer and others. bibliog Am Chem Soc J 75: 1526-8, 2443-6 Ap 5, My 20 '53

Stability constants for some metal chelates of pyridine-2-azo-*p*-dimethylaniline. I. M. Klotz and W.-C. Loh Ming. bibliog Am Chem Soc J 75:4159-62 S 5 '53

CHELATION—*Continued*

Stability of metal chelates. S. Chaberek, jr., A. E. Martell and R. C. Courtney. bibliog Am Chem Soc J 74:5052-60 O 20 '52

Stability of metal chelates; iminopropionic-acetic and aspartic acids. S. Chaberek, jr. and A. E. Martell. bibliog Am Chem Soc J 74:6021-5 D 5 '52

Stability of metal chelates N,N-dihydroxyethylglycine. S. Chaberek, jr., R. C. Courtney and A. E. Martell. bibliog Am Chem Soc J 75:2185-90 My 5 '53

Stability of metal chelates; N,N′-ethylenediaminediacetic acid and N,N′-ethylenediaminediacetic-N,N′-dipropionic acid. S. Chaberek, jr. and A. E. Martell. Am Chem Soc J 74:6228-31 D 20 '52

Stability of metal chelates; nitrilotricarboxylic acids. S. Chaberek, jr. and A. E. Martell. bibliog Am Chem Soc J 75:2888-92 Je 20 '53

Steric effects and the stability of complex compounds; the chelating tendencies of N-alkylethylenediamines, with copper(II) and nickel(II) ions. F. Basolo and R. K. Murmann. bibliog Am Chem Soc J 74:5243-6 N 5 '52

Structure and behavior of organic analytical reagents; stability of chelates of 8-hydroxyquinoline and analogous reagents. W. D. Johnston and H. Freiser. bibliog Am Chem Soc J 74:5239-42 N 5 '52

Studies on coördination compounds; a comparison of the chelating tendencies of β-diketones toward divalent metals. L. G. Van Uitert, W. C. Fernelius and B. E. Douglas. Am Chem Soc J 75:2736-8 Je 5 '53

Studies on coordination compounds; measurements of chelation in ethanol solution. L. G. Van Uitert, W. C. Fernelius and B. E. Douglas. bibliog Am Chem Soc J 75:3577-8 Jl 20 '53

Studies on coördination compounds; some factors concerning the effect of the terminal groups on the chelating abilities of β-diketones. L. G. Van Uitert and W. C. Fernelius. Am Chem Soc J 75:3862-4 Ag 5 '53

Studies on coördination compounds; the chelating tendencies of β-diketones with the chlorides of copper(II), nickel and barium in water-dioxane solutions. L. G. Van Uitert, W. C. Fernelius and B. E. Douglas. Am Chem Soc J 75:457-60 Ja 20 '53

Studies on coördination compounds; the effects of salt anion and of solvent upon the chelation of β-diketones. L. G. Van Uitert, W. C. Fernelius and B. E. Douglas. Am Chem Soc J 75:2739-41 Je 5 '53

Thermodynamics of chelation; bond energy effects in chelate ring formation. C. G. Spike and R. W. Parry. Am Chem Soc J 75:3770-2 Ag 5 '53

Thermodynamics of chelation; the statistical factor in chelate ring formation. C. G. Spike and R. W. Parry. bibliog Am Chem Soc J 75:2726-9 Je 5 '53

CHELTENHAM. See Type and type founding

CHEMICAL abstracts (periodical)

A.C.S. publications; committee report. Chem & Eng N 30:4512-13 O 27 '52

National sources of scientific journals. E. J. Crane. Chem & Eng N 31:864 Mr 2 '53

CHEMICAL apparatus

Dean and Stark apparatus. Chem Age (Lond) 67:874 D 27 '52

Recent developments in quantitative organic microanalysis. W. Kirsten. bibliog(62 ref) il diags Anal Chem 25:74-86 Ja '53

Set of apparatus for gram scale organic preparations. P. A. Claret. diags Chem & Ind p 1147-9 N 22 '52

Simple fraction collector. A. Renshaw. diags Chem & Ind p294-5 Mr 28 '53

See also

Ampuls
Autoclaves
Balances
Baths (chemical apparatus)
Centrifuges
Chemical engineering—Apparatus and supplies
Chemical plants—Equipment
Emulsifiers
Evaporators
Extraction apparatus
Filters and filtration (technical chemistry)
Gases—Apparatus
Microchemistry—Apparatus
Pipets
Stirrers
Sublimation apparatus
Vacuum pumps
Viscosimeters
Volumetric analysis—Apparatus

CHEMICAL-biological coordination center. See National research council—Chemical-biological coordination center

CHEMICAL bonds

Atomic radii; dependence of interatomic distance on bond energy. M. L. Huggins. bibliog Am Chem Soc J 75:4126-33 S 5 '53

Bond energies and bond distances of hydrocarbons. G. Glockler. bibliog J Chem Phys 21:1242-8 Jl '53

Bond energies and polarities. M. L. Huggins. bibliog Am Chem Soc J 75:4123-6 S 5 '53

Complex-ion formation; a general discussion of factors influencing the stability of metal ammines and complex ions. W. S. Fyfe. Chem Soc J p2018-23 Je '52

Conditions for the formation of hydrogen bonds. W. S. Fyfe. bibliog diag J Chem Phys 21:2-4 Ja '53

Electronegativities in inorganic chemistry. R. T. Sanderson. bibliog J Chem Educ 29:539-44 N '52

Evidence of partial failure of the Br^{80} isomeric transition to rupture carbon-bromine bonds. R. S. H. Chiang and J. E. Willard. bibliog Am Chem Soc J 74:6213-16 D 20 '52

Force constants in polyatomic molecules. W. J. O. Thomas. Chem Soc J p2383-9 Je '52

Hydrogen bond energies in carboxylic acids. M. M. Jones and others. bibliog J Chem Phys 20:1048 Je '52

Hydrogen bonding and the interactions of water molecules. E. S. Campbell. bibliog J Chem Phys 20:1411-20 S '52

Infrared spectroscopy and the character of chemical binding. R. Mecke. bibliog J Chem Phys 20:1935-9 D '52

Intermolecular force constants from thermal diffusion and other properties of gases. B. N. Srivastava and M. P. Madan. bibliog J Chem Phys 21:807-15 My '53

Intermolecular force constants of fluorine. D. White and others. bibliog diag J Chem Phys 21:1149-52 Jl '53

Lignin-carbohydrate bond in wood. E. E. Harris. bibliog(35 ref) Tappi 36:402-5 S '53

Nature of solids. G. H. Wannier. il diags Sci Am 187:39-48 D '52

Nature of the internal hydrogen bond; tautomerism of 1-arylazo-2-naphthols. A. Burawoy, A. G. Salem and A. R. Thompson. Chem Soc J p4793-8 D '52

Overlap integrals and the linkage in complex ions. W. S. Fyfe. bibliog J Chem Phys 20:1039-40 Je '52

O-H stretching frequencies in very short and possibly symmetrical hydrogen bonds. R. E. Rundle and M. Parasol. J Chem Phys 20:1487-8 S '52

Raman effect spectrum, structure, force constants, and thermodynamic properties of bromine pentafluoride. C. V. Stephenson and E. A. Jones. bibliog diag J Chem Phys 20:1830-4 D '52

Relative energies of polar and nonpolar valence bond functions and molecular orbital method. M. Wolfsberg. J Chem Phys 21:943-4 My '53

Semilocalized orbitals; relationship of n-center orbitals, two-center orbitals, and bond properties. C. R. Mueller. J Chem Phys 20:1600-4 O '52

Studies on bond type in certain cobalt complexes. B. West. Chem Soc J p3115-29 Ag '52

Studies on the coördinate bond; ferrous complexes of α-diimines. P. Krumholz. bibliog Am Chem Soc J 75:2163-6 My 5 '53

Theory of the variation of bond length with bond environment. R. P. Smith. bibliog Am Chem Soc J 75:2012-14 Ap 20 '53

See also

Double bonds
Valence

CHEMICAL chains. See Chains, Chemical

CHEMICAL development association, Commercial. See Commercial chemical development association

CHEMICAL education

ACS committee on professional training; progress report number 26. Chem & Eng N 31:1449-53 Ap 6 '53

ACS Division of chemical education national meeting, Los Angeles; abstracts of papers. Chem & Eng N 31:1396-7 Ap 6 '53

CHEMICAL education—*Continued*

ACS Indiana section meeting, Indianapolis, Dec. 6. Chem & Eng N 30:5366-7 D 22 '52

Education in chemistry; RIC and BAC discussion, London, Feb. 18. Chem Age (Lond) 68:339-40 F 28 '53

See also

Chemical engineering—Study and teaching
Chemistry—Study and teaching
Chemistry, Analytic—Study and teaching
Chemistry students

Industry cooperation

Does industry help train students for chemistry? P. K. Frolich. Chem & Eng N 31:1078-80 Mr 16 '53

CHEMICAL elements

Abundances of the elements. H. C. Urey. bibliog Phys R 88:248-52 O 15 '52

Critical properties of elements and compounds. K. A. Kobe and R. E. Lynn, jr. diags Chem R 52:117-236 bibliog(p228-36) F '53

Explanation of chemical variations within periodic major groups. R. T. Sanderson. bibliog Am Chem Soc J 74:4792-4 O 5 '52

Less familiar elements; symposium. Chem & Eng N 31:1406-7 Ap 6 '53

Need for accurate data on cosmic abundance of the elements cited. Chem & Eng N 30:4949-50 N 24 '52

Proton gun sorts elements. Steel 131:132 N 17 '52; Iron Age 170:179-80 D 4 '52

See also

Atoms
Isotopes
Periodic system
Transuranium elements
Valence

also names of elements, e.g. Carbon; Oxygen; Plutonium; Sulfur

Atomic no. 98

See Californium

CHEMICAL engineering

American institute of chemical engineers 45th annual meeting, Cleveland. Chem & Eng N 30:5360-2 D 22 '52

Applications of chemical engineering to pulp and paper technology. L. C. Jenness. Paper Tr J 135:271-2+ N 14 '52

Chemical engineering a new science. W. K. Lewis. Chem Eng Prog 49:23-5 Ja '53

Chemical engineering advances in Canada. Can Chem Process 37:32+ Je 1 '53

Chemical engineering and atomic energy; pilot plant problems. C. M. Nicholls and A. S. White. il plans diag Chem & Ind p51-5 Ja 17 '53

Flow of concentrated suspensions. P. S. Williams. J Ap Chem 3:120-8 Mr '53

High-pressure research in Chemical engineering department of Yale university. B. F. Dodge. bibliog il diags A S M E Trans 75:331-43 Ap '53

Industrial viewpoints on separation processes. K. H. Hachmuth. bibliog il diags Chem Eng Prog 48:523-7, 570-4, 617-26 O-D '52

Insulation engineered for the chemical process industries. il Can Chem Process 36:46+ O '52

Next time, use statistics. P. Ferencz and B. H. Lloyd. bibliog diag Chem Eng 60:219-22+ Ap; 207-10 My '53

Some chemical engineering activities in the U.S.A. F. J. Curtis and R. York. Chem & Ind p386-8 Ap 25 '53

Theory of prediction of nonstationary stochastic processes. R. C. Davis. J Ap Phys 23:1047-53 S '52; Discussion. G. W. Preston. 24:230-1 F '53

What's chemical engineering's outstanding achievement? Chem Eng 60:196-8 Ap '53

See also

Chemical plants
Chemistry, Technical
Cooling, Industrial
Countercurrent processes
Distillation
Distillation apparatus
Drying
Evaporation
Extraction processes
Feed water purification
Filters and filtration (technical chemistry)
Flotation process
Fluidization
Food factories
Hydrogenation
Metallurgy
Mixing
Petroleum refineries
Plastics engineering
Refrigeration and refrigerating machinery
Refuse disposal
Sedimentation
Sewage disposal
Sublimation
Water purification

Apparatus and supplies

15th biennial report on materials of construction; how protective coatings fight corrosion. K. Tator. il diags Chem Eng 59:143-90 D '52

Liquid O_2 unit travels by air. il diag Chem Eng 60:138-41 Ap '53

Metallurgical requirements of the chemical engineer. C. Hinton. Engineering 175:575-6 My 1 '53

New look at ceramic coatings. W. A. Barrows. il Chem Eng 59:270+ O '52

Rubber in chemical engineering; development leads to unexpected applications. il Chem Age (Lond) 68:205-7 Ja 31 '53

See also

Atomizers
Autoclaves
Centrifuges
Chemical industries—Exhibitions
Chemical plants—Equipment
Concentrators
Ejectors
Emulsifiers
Evaporators
Extraction apparatus
Feeders
Heat exchangers
Homogenizers
Mixers
Pressure vessels
Proportioning equipment
Pumps—Design
Vacuum apparatus

Bibliography

Annual thesis index. Chem Eng Prog 49:47-51 Ja '53

Costs

Why the emphasis today on costs? how to estimate and control them. bibliog diags Chem Eng 60:167-200 Ja '53

Estimates

Engineer's view of the dollar. S. Steele. Chem Eng 60:157-61 F '53

New correlation of engineering and other indirect project costs. J. P. O'Donnell. Chem Eng 60:188-90 Ja '53

New cost data bring economic pipe sizing up to date; pumps, piping, valves and insulation. R. M. Braca and J. Happel. Chem Eng 60:180-7 Ja '53

Where cost estimates go sour. C. Tyler. bibliog Chem Eng 60:198-200 Ja '53

Examinations

Use of propositions in examinations for the doctor's degree. L. Pauling. Science 116:667-9 D 12 '52

Study and teaching

Sponsorship of advanced study courses in chemical engineering. M. C. Throdahl and others. Chem Eng Prog 48:sup58+ Ag; sup58 S '52

Training of chemical engineers. D. M. Newitt. Engineer 194:389-90 S 19 '52; Same cond. Engineering 174:388 S 19 '52; Discussion. Engineer 194:380-1 S 19 '52

Undergraduate thesis in chemical engineering at M.I.T. A. S. Michaels. J Eng Educ 43:90-4 O '52

What are contemporary demands on the engineering curricula? G. G. Brown. J Eng Educ 43:307-11 Ja '53

Tables, calculations, etc.

Automatic computers foster new engineering approach. Chem & Eng N 31:335 Ja 26 '53

Empirical equations for three-variable data. H. Stern. Ind & Eng Chem 44:2442-4 O '52

Hydroextraction techniques for permeability measurement. M. M. Haruni and J. A. Storrow. bibliog il diags Ind & Eng Chem 44:2751-67 N '52

New grinding theory aids equipment selection. F. C. Bond. bibliog il Chem Eng 59:169-71 O '52

Saturation performance of ion-exchange and adsorption columns. N. K. Hiester and T. Vermeulen. bibliog Chem Eng Prog 48:505-16 O '52

Solution of transient stagewise operations on an analog computer. A. Acrivos and N. R. Amundson. il diags Ind & Eng Chem 45:467-71 F '53

CHEMICAL engineering—Tables, calculations, etc.—*Continued*

Transport of momentum, mass, and heat in turbulent jets. L. G. Alexander and others. il diags Ill U Eng Exp Sta Bul 413:1-88 bibliog(76 titles, p85-8) '53 (pa 75c)

See also

Cooling towers—Tables, calculations, etc.

Distillation—Tables, calculations, etc.

Heat transmission—Tables, calculations, etc.

Jacobians

CHEMICAL engineering, European federation of. See European federation of chemical engineering

CHEMICAL engineers

Are you in the right job? Chem Eng 59:290+ N '52

Chemical engineer in industry. E. H. T. Hoblyn. Chem Age (Lond) 67:385-8 S 20 '52; Same. Engineering 174:455-6 O 3 '52

Engineering manpower wants. il Chem Eng 60:185 Mr '53

English; chemical engineering tool. J. A. Field. bibliog Chem Eng Prog 48:482-5 O '52

Enrollments are up, not down. map Chem Eng 60:113-14+ F '53

How well does the chemical profession utilize technical manpower? Chem & Eng N 31:1178-80 Mr 23 '53

Manpower in chemical engineering. Chem Eng Prog 48:sup27+ S '52

Manpower resources in chemistry and chemical engineering. L. M. Sharp and T. R. Shapiro. U S Bur Labor Statistics Bul 1132:1-112; pa 50c Supt. of doc. '53

Opportunities for the technical man in Venezuela. A. R. Beardsley. Chem Eng 59:157-8 N '52

Opportunities in sales for chemical engineers. J. C. Leppart. Chem Eng Prog 48:437-9 S '52

Opportunity for chemical engineers in chemical marketing. W. H. Harding. Chem Eng Prog 48:481-2 O '52

Personal outlook for the engineer is good. Chem Eng 60:282+ Mr '53

Selling; its importance in the chemical industry. J. W. Kinsman. Chem Eng Prog 48:433-6 S '52

See also

Chemical education

Donald, J. R.

Salaries

Income of ACS members. Chem & Eng N 30:5430-6 D 29 '52

CHEMICAL engineers, American institute of. See American institute of chemical engineers

CHEMICAL equilibrium

Absorption of some organic bases by carboxylic acid ion-exchange resins; equilibrium studies. L. Saunders and R. S. Srivastava. Chem Soc J p2111-18 Je '52

Aluminum-oxygen equilibrium in liquid iron. N. A. Gokcen and J. Chipman. bibliog J Metals 5:Trans 173-8 F '53

Chemical reaction equilibria in the combustion of sodium-base pulping liquors. M. N. May. bibliog Tappi 35:511-17 N '52

Chemical reactions near equilibrium. W. R. Gilkerson and others. J Chem Phys 20:1182-3 Jl '52

Effect of enzyme concentration on the apparent equilibrium constant for an enzyme-catalyzed reaction. R. A. Alberty. bibliog Am Chem Soc J 75:1925-8 Ap 20 '53

Effect of potassium chloride on the equilibrium between ethylenediaminetetraacetate and calcium ions. F. F. Carini and A. E. Martell. bibliog Am Chem Soc J 74:5745-8 N 20 '52

Equilibria of several reactions of aromatic amines. G. N. Vriens and A. G. Hill. bibliog Ind & Eng Chem 44:2732-5 N '52

Equilibrium and the rate laws. C. A. Hollingsworth. J Chem Phys 20:1649-50 O '52

Equilibrium between protium, deuterium and tritium in the system; hydrogen-acetic acid; isotopic fractionation factors in a catalytic hydrogenation. M. L. Eidinoff and others. bibliog Am Chem Soc J 74:5280-4 N 5 '52

Equilibrium composition of combustion products of leaded octanes with air. E. B. Cook and others. bibliog U S Bur Mines Rep of Invest 4947:1-15 '53

Equilibrium in the exchange of deuterium between ammonia and hydrogen. M. Perlman and others. bibliog diag J Chem Phys 21:70-2 Ja '53

Equilibrium in the exchange of hydrogen between phosphine and water. R. E. Weston, jr. and J. Bigeleisen. bibliog J Chem Phys 20:1400-2 S '52

Equilibrium reaction $NiCl_2 + H_2 = Ni + 2HCl$; ferromagnetism and the third law of thermodynamics. R. H. Busey and W. F. Giauque. bibliog diag Am Chem Soc J 75:1791-4 Ap 20 '53

Fragments of chemistry; equilibria between metals and salts. C. A. Kraus. J Chem Educ 30:35-7 Ja '53

Rates of ionization of pseudo acids; relation between rates and equilibria. R. G. Pearson and R. L. Dillon. bibliog Am Chem Soc J 75:2439-43 My 20 '53

Relationship between Michaelis constants, maximum velocities and the equilibrium constant for an enzyme-catalyzed reaction. R. A. Alberty. bibliog Am Chem Soc J 70:1928-32 Ap 20 '53

Thermodynamic study of the equilibrium $2Cu(s)+H_2S(g)=Cu_2S(\gamma)+H_2(g)$. A. A. Brooks. bibliog diag Am Chem Soc J 75:2464-7 My 20 '53

Water softening and conditioning problems; solution by chemical equilibrium methods. D. H. Caldwell and W. B. Lawrence. bibliog Ind & Eng Chem 45:535-48 Mr '53

CHEMICAL industries

ACS Division of chemical marketing and economics national meeting, Los Angeles; abstracts of papers. Chem & Eng N 31:1398-9 Ap 6 '53

Annual review of developments in the chemical and chemical process industries. Chem & Eng N 31:16-51 Ja 5 '53

Chemical and related markets in 1952. Oil Paint & Drug Rep 163:3+ sec 2 Ja 26 '53

Chemical come-back; fourth quarter sales upsurge brightens 1953 prospects. J. V. Sherman. Barron's 33:9-10 Ja 5 '53

Chemical executives and educators join in mutual relations conference designed to acquaint teachers with the commercial and social economic roles of the chemical industry. Oil Paint & Drug Rep 163:7+ My 25 '53

Chemical expansion tax awards sufficient to meet 41 of 57 goals. Oil Paint & Drug Rep 163:3+ Ja 12 '53

Chemical export selling; past, present, future. il Chem W 72:16-23+ Ja 3 '53

Chemical growth seen four-fold since 1939 according to a Facts book published by the Manufacturing chemists' association. Oil Paint & Drug Rep 163:5+ My 25 '53

Chemical industry capacity will increase 40 to 50 per cent by 1955. Chem & Eng N 31:52-3 Ja 5 '53

Chemical industry's approach to procurement standards; ASA chemical industry correlating committee meeting; abstracts of papers. Standardization 23:382-3 N '52

Chemical market research. R. M. Lawrence; M. W. Leland; P. Frisselle. Chem Eng Prog 48:528-33 O '52

Chemical plants for spring. I. U. Cobleigh. Comm & Fin Chr 177:1315 Mr 26 '53

Commercial intelligence service; chemical and chemical process industries. R. Soukup. Special Lib 43:389-95 D '52

Consumer chemicals have increased the industry's economic stability. J. V. Sherman. Barron's 33:9+ Mr 23 '53

Expansion goals 99.7 per cent filled; with tabulated information on petrochemical projects undertaken by 81 companies; data showing certified dollar values and plant statuses. Pet Processing 7:1793-801 D '52

Facts, fears, and the future. K. H. Klipstein. Chem & Eng N 31:1854-6 My 4 '53

Fine chemicals industry; abstract. H. G. Dickenson. Chem & Ind p216 Mr 7 '53

Future trends in the chemical industry. F. J. Soday. bibliog(107 ref) Ind & Eng Chem 45:322-9 F '53

How's your sample program; symposium. Chem & Eng N 31:1514-19 Ap 13 '53

CHEMICAL industries—*Continued*

In 1953 management is thinking about; business, personal, technical outlook. Chem Eng 60:280+ Mr '53

In the lab, a bottle battle. il Chem W 72:69-70+ Mr 21 '53

Manufacturing chemists' association annual conference, 2d, New York. Chem W 71:12-13, 47 D 6 '52

Market survey of new products. G. D. Bieber. Chem Eng Prog 48:647-9 D '52

Merger trend in the chemical industries. R. S. Aries and R. M. Cziner. Comm & Fin Chr 177:1309+ Mr 26 '53

New plants are tapering off. Chem Eng 60:182-3 Mr '53

New profession of chemical salesmanship in the making. Chem & Eng N 30:5146-7 D 8 '52

News by commodities. Published in Foreign commerce weekly

Opportunity for chemical engineers in chemical marketing. W. H. Harding. Chem Eng Prog 48:481-2 O '52

Organization administration of chemical market research. R. B. Wittenberg. Chem Eng Prog 48:575-8 N '52

Plants and processes; Chemical Engineering report. il Chem Eng 60:175-206 F '53

Rapid progress predicted for titanium, coal-, petrochemicals. Chem & Eng N 30:5148-50+ D 8 '52

Salesmen's association of the American chemical industry clinic probes selling of chemicals. Oil Paint & Drug Rep 162:5+ N 3 '52

Selling and market research; an important aspect of the chemical industry. Chem Age (Lond) 67:867-9; 68:13-14 D 27 '52-Ja 3 '53

Selling; its importance in the chemical industry. J. W. Kinsman. Chem Eng Prog 48:433-6 S '52

Short report on the industry. S. D. Kirkpatrick. Chem Eng 60:294+ Ja '53

Supply catches up with demand. il diags Chem Eng 60:188-216 Mr '53

Symposium on fundamentals of chemical marketing. H. G. Johnson and others. Chem & Eng N 30:4822-6, 4938-41, 5030-3, 5143-5, 5244-7, 5354-6, 5437-41 N 17-D 29 '52

That new product; how and by whom a new development chemical product should be introduced. J. V. Miller. Soap & San Chem 29:126-7+ Ja '53

Weeks wants industry men as chemicals aids. Oil Paint & Drug Rep 163:3+ Ap 6 '53

What is a good project for a chemical company? S. T. Ellis; W. H. McLean. Chem & Eng N 31:2061-5 My 18 '53

You decide; competitors or partners. W. C. Caswell. Chem W 71:20-2+ N 1 '52

See also

Alcohol industry
Brewing industries
Chemical workers
Chemicals
Chemistry, Technical
Dye industry
Electrochemistry
Fermentation
Fertilizer industry
Fertilizers
Glass
Leather industry and trade
Metallurgy
Oil industries
Paint industry and trade
Paper
Paper chemicals
Paper industry and trade
Petroleum chemicals
Petroleum industry and trade
Plastic industries
Pottery
Rubber
Rubber industry and trade
Salt
Silicones
Soap
Soap industry and trade
Solvents
Sugar industry and trade
Tanning
Tanning materials
Textile industry

also

Allied chemical and dye corporation
Chemical market research association
Commercial chemical development association
Dow chemical company
Food machinery and chemical corporation
Manufacturing chemists' association
Mathieson chemical corporation
Monsanto chemical company
Synthetic organic chemical manufacturers association

Accounting

Accounting for factory overhead expenses in a multiple-use plant. L. W. Garner. Ind & Eng Chem 44:2829-32 D '52

Break-even charts for the chemical process industries. R. J. Roth. Chem & Eng N 30:5437-41 D 29 '52

Cost estimation in a multipurpose plant. W. S. Guthmann and P. R. Inman. Ind & Eng Chem 44:2832-3 D '52

Cost system for a chemical plant. F. M. Beall. flow chart N A C A Bul 34:263-75 O '52

How a big company controls itself; Monsanto chemical co. il Bsns W p76-8, 80-2 D 6 '52

New correlation of engineering and other indirect project costs. J. P. O'Donnell. Chem Eng 60:188-90 Ja '53

Advertising

Columbia campaign boosts buyer recognition of new name. il Ind Marketing 37:78+ O '52

Dictionaries

Stewart's scientific dictionary. J. R. Stewart and F. E. Spicer. 4th ed rev 788p $10.50 Stewart research laboratory, Forest Gate at Franconia, Alexandria, Va. '53

Directories

Chemical Week Buyers' guide issue. Chem W 71:1-774 pt 2 N 1 '52

New 1953 petrochemical directory; survey lists 143 firms in petrochemicals, with 271 plants operating, building or planned. il Pet Processing 8:713-22 My '53

New plants and facilities underway, 1952. il Chem Eng 60:176-93 F '53

Exhibitions

British industries fair displays British chemicals. il Can Chem Process 37:62 Ap '53

Netherlands chemical trade fair. il Chem Age (Lond) 67:693 N 22 '52

Finance

Chemical company earnings, calendar 1952. Chem W 72:15 Mr 21 '53

Chemical firms loans were lower last year. Oil Paint & Drug Rep 164:5 Jl 27 '53

Chemical industry ready for challenge of free markets; board of directors of Manufacturing chemists' assn.; annual report. Comm & Fin Chr 177:2644 Je 18 '53

DPA write-off roundup. Chem W 71:17-18+ N 22 '52

Favored industry; analysis of chemical companies reveals financial power. M. Pescatello. Barron's 33:13-14 Mr 23 '53

Financing chemical expansion. C. A. Gerstacker; E. Hart. Chem & Eng N 31:2175-9 My 25 '53

Financing the chemical industry; C&EN's annual review. C. P. Neidig. Chem & Eng N 31:19-22 Ja 5 '53; Excerpts. Comm & Fin Chr 177:100 Ja 8 '53

For CPI expansion; blend securities to cut costs, reduce risks. Chem W 71:20+ D 20 '52

1952 financing, pattern for the future? Chem W 72:16+ Ja 10 '53

Resources for the chemical industry in the United States; Mid Atlantic; financing new developments. R. G. Woodbridge, 3d. bibliog Ind & Eng Chem 45:517-20 Mr '53

Why Monsanto makes a profit. Chem Eng 60:316+ F '53

Year of profitless prosperity. Chem Eng 60:186-7 Mr '53

See also

Chemical industries—Securities
Chemical plants—Costs

History

Mobilization powers process, construction, manpower trends; I&EC editors report on 1952. il Ind & Eng Chem 45:sup 11A+ Ja '53

Regulation

Chemical export control procedures are changed. Oil Paint & Drug Rep 164:3+ S 21 '53

Influence of government regulations on company expansions. C. E. Waring. Chem & Eng N 31:1964-6+ My 11 '53

CHEMICAL industries—*Continued*

Securities

Are chemical stocks overpriced? D. Moody. Comm & Fin Chr 176:1922 N 20 '52

Chemicals; a study of individual company potentials; with comparative earnings and dividend records and statistics of leading companies. S. Devlin. Mag of Wall St 92:86-9+ Ap 18 '53

Chemicals, general and bucolic; progress of chemistry; investor interest. I. U. Cobleigh. Comm & Fin Chr 177:2630-1 Je 18 '53

Investment attitude toward growth companies. W. K. Beckers. Chem & Eng N 31:1961-3 My 11 '53

Investment view for chemical processing. Can Chem Process 37:14+ Ap '53

Outlook for chemical industry. J. F. Bohmfalk, jr. Comm & Fin Chr 176:1921 N 20 '52

See also
Union carbide and carbon corporation

Statistics

Chemical industry nearing halfway mark in expansion program. map Chem & Eng N 30:5042-4 D 1 '52

Chemical production industry shines as productivity paragon. Chem W 71:14+ D 27 '52

Chemicals and allied products; Nov.-Dec. 1951-Jan.-Nov. 1952. Survey of Cur Bsns 33:S24-6 Ja '53 [cont monthly]

Drugs and fine chemicals. Published in weekly numbers of Oil, paint and drug reporter

Heavy chemicals. Published in weekly numbers of Oil, paint and drug reporter

Principal United States imports, chemicals and related products; first six months, 1952. Chem W 71:62 O 25 '52

Record of a record breaker. Chem W 72:34-44+ F 28 '53

Regional markets for chemicals. R. H. Ewell. Chem Eng Prog 48:578-84 N '52

Resources for the chemical industry in the United States; Mid Atlantic; consumption of inorganic chemicals. W. J. Riley and C. M. Miller. il map Ind & Eng Chem 45:529-32 Mr '53

Resources for the chemical industry in the United States; Mid Atlantic; consumption of organic chemicals. V. H. Boden and H. D. Hughes. bibliog Ind & Eng Chem 45:532-4 Mr '53

Resources for the chemical industry in the United States; Mid Atlantic; production of chemicals. B. R. Putnam, jr. and R. F. Warren. bibliog maps Ind & Eng Chem 45:524-8 Mr '53

Survey shows major hike in chemical products revenues. Chem & Eng N 31:770+ F 23 '53

Synthetic organics production off in 1952. Oil Paint & Drug Rep 164:3+ S 7 '53

Trend to Southwest. Chem W 17:14-15 D 6 '52

Alabama

From McIntosh to Mobile: five new chemical plants. il map Chem W 72:22+ Mr 7 '53

Alberta

Petrochemical outlook. H. D. Ralph. il Oil & Gas J 51:67-8 D 8 '52

Argentina

Argentina, land of potential promise. il Chem W 72:44+ Ja 24 '53

Australia

Australian newsletter. Chem Age (Lond) 68:15-16 Ja 3 '53

Chemical research in Australia. T. F. West. il Chem Age (Lond) 68:165-6 Ja 24 '53

Development of chemistry in Australia. J. E. Cummins. Chem & Ind p204-10 Mr 7 '53

Brazil

Brazilian chemical imports; new policy endangers British exports. Chem Age (Lond) 68:132 Ja 17 '53

Brazil's expanding chemical industry. Chem Age (Lond) 68:374 Mr 7 '53

Chemical progress in Latin America. W. H. Shearon, jr. il maps Chem & Eng N 31:415-19 F 2 '53

Canada

Booming offspring of oil. map Can Chem Process 37:8+ My '53

Bridge over tariff wall. Chem W 71:19-20 N 8 '52

Canadian chemistry. S. J. Cook. Chem & Eng N 30:5174 D 8 '52

Canadian pentaerythritol goes to market; St Maurice chemicals, ltd. flow diag il Can Chem Process 37:70+ S '53

Canadian petrochemical industry may face marketing problems. For Comm W 49:11 Ap 6 '53

Chemical Canada, 1952 review. H. McLeod. Can Chem Process 37:10+ Je 1; 10+ Je 20; 8-10+ Jl '53

Dollar summary for chemical concerns. Can Chem Process 37:22+ My '53

Midyear review for '52. Can Chem Process 36:14-16 S '52

More chemical sales from Howe tour? Can Chem Process 37:21-3 Ja '53

New billion-dollar industry for Canada. il Bsns W p116+ Je 20 '53

Petrochemical boom in Canada. G. Weber. map Oil & Gas J 52:76-8 Je 15 '53

Prairie oil and chemicals. Economist 166:534+ F 21 '53

Reminiscences of a chemical engineer. J. R. Donald. Chem & Ind p284-8 Mr 28 '53

Survey of the chemical industry in Canada; abstract. V. G. Bartram. Pet Processing 8:155-6 F '53

See also
Chemical institute of Canada
Superior biochemicals of Canada

Charlotte, North Carolina

Reichhold chemicals, inc. open new Charlotte plant to serve growing needs of textile industry. H. H. Reichhold. il Manuf Rec 121:41 O '52

Cleveland

Cleveland, a center for chemical industry. G. W. Blum. il Chem Eng Prog 48:sup31-2+ N '52

Europe, Eastern

Satellite chemicals; infirm foundation? il Chem Ind W 72:16-17 Ap 4 '53

France

Shell-Saint-Gobain acetone works at Berre. Chem & Ind p 147 F 14 '53

Germany

Chemicals behind the curtain. il Chem Eng 59:252+ D '52

East German chemical industry; a survey of the Leipzig fair. J. Cardew. il Chem Age (Lond) 67:689-92 N 22 '52

German chemical industry held back by sales difficulties in '52. For Comm W 49:22 Ap 27 '53

Hanover technical fair; chemical and plastics exhibits. il Chem & Eng N 31:2102+ My 18 '53

Hopeful chemical outlook in Germany; petroleum processing capacity meets requirements. Chem Age (Lond) 68:49-50 Ja 10 '53

I.G. Farben reorganisation. Chem Age (Lond) 68:343-5 F 28 '53

West German chemical exports to Central and South America (in 1000 deutsche mark [=$238.06]). Chem W 72:16-18 Mr 14 '53

Great Britain

Alkali works report for 1952. Engineering 176:266 Ag 28 '53

Chemical industry outpaces all other industry in Britain; abstract. F. J. Curtis. Chem & Eng N 31:2186+ My 25 '53

Expansion of the British chemical industry; nearly half 1949 projects completed. Chem Age (Lond) 67:635 N 8 '52

Imperial chemical industries Wilton works. V. S. Swaminathan. il Pet Eng 24:C27+ O '52

Our changing chemical industries; an appraisement. H. Levinstein. Chem Age (Lond) 68:376-83 Mr 7 '53; Abstract. Chem & Ind p211-12 Mr 7 '53

Petrochemical picture in Great Britain. Can Chem Process 37:54+ Je 1 '53

CHEMICAL industries—Great Britain—*Cont.*

Some reflections on the British chemical industry. H. V. Potter. Chem & Ind p 1230-4 D 20 '52

U.K. and U.S. heavy chemical industries. Chem Age (Lond) 68:161-4 Ja 24 '53

See also
Imperial chemical industries

Gulf Coast region

Gulf Coast chemicals reach $2.5 billion. il Manuf Rec 122:30-2 Jl '53

India

India reports significant progress in peacetime-directed fields of nuclear science. Chem & Eng N 31:261-2 Ja 19 '53

Italy

Italy reports record exports of chemicals. For Comm W 48:21 N 24 '52

Japan

Japanese chemical comeback. il Ind & Eng Chem 44:sup 15A+ D '52

U.S. spurs Japanese chemical industry. il Chem W 72:16-18 F 28 '53

Kentucky

Calvert City finds its place on the chemical map. il Chem & Eng N 31:1739-41 Ap 27 '53

Latin America

Chemical progress in Latin America. W. H. Shearon, jr. il maps Chem & Eng N 31:414-19 F 2 '53

Mexico

Developing a basic chemical industry; Mexican progress since the war. Chem Age (Lond) 67:873-4 D 27 '52

New England

Resources for the chemical industry in the United States. J. B. Calkin and others. il maps Ind & Eng Chem 44:2525-55 N '52 (reprints 75c)

New Jersey

Resources for the chemical industry in the United States; Mid Atlantic; symposium. bibliog il maps Ind & Eng Chem 45:505-34 Mr '53 (reprints 75c)

New York (state)

Resources for the chemical industry in the United States; Mid Atlantic; symposium. bibliog il maps Ind & Eng Chem 45:505-34 Mr '53 (reprints 75c)

Norway

Norway increases use of local raw materials. Chem & Eng N 31:2105-6 My 18 '53

Norway widens range of chemical exports. Chem & Eng N 30:5379 D 22 '52

Ontario

Calcium cyanamide provides home base for large industry. il Can Chem Process 37:44+ Mr '53

Taproot of a chemical empire. Can Chem Process 37:18+ Mr '53

Pennsylvania

Resources for the chemical industry in the United States; Mid Atlantic; symposium. bibliog il maps Ind & Eng Chem 45:505-34 Mr '53 (reprints 75c)

Poland

Poland's progressive chemical industry; abstract. A. Metzner. Chem Age (Lond) 68:233-4 F 7 '53

Rumania

Rumania's chemical industry. J. Cardew. il Chem Age (Lond) 67:861-6 D 27 '52

Russia

Russia's five-year chemical plan, compared to Uncle Sam's four-year plan. Chem W 71:20-2 O 25 '52

South Africa

Oil from coal in South Africa. Engineer 195:123 Ja 23 '53

Southern states

Growth of chemical industry in South. S. Fish. Manuf Rec 122:56-7 Je '53

Southern industry; barefoot no longer. Chem W 72:22 Ja 10 '53

Southwestern states

Chemical expansion shifting to Southwest. Oil Paint & Drug Rep 162:5+ N 24 '52

Spain

Spanish chemical industry; progress towards self-sufficiency. Chem Age (Lond) 67:571-2 O 25 '52

Switzerland

Swiss chemical trade down; output lower. For Comm W 48:14 D 29 '53

Texas

Deep in the heart of Texas; Jim Lee keeps tabs on process industries of Southwest. il Chem Eng 59:141+ N '52

Natural gas industrializes south Texas. F. H. Dotterweich. il Oil & Gas J 52:294+ Je 22 '53

United States

British team reports productivity. Chem & Eng N 31:1012 Mr 9 '53

Census bureau trims its inorganics reports. Oil Paint & Drug Rep 164:5+ S 7 '53

Chemical industry council. Oil Paint & Drug Rep 163:3 Je 22 '53

Chemical industry in the U.S.A. Chem Age (Lond) 68:199-200 Ja 31 '53

Chemical industry urges trade pacts act extension for one year. Oil Paint & Drug Rep 163:3+ My 4 '53

Chemistry's role in better living. L. I. Doan. Comm & Fin Chr 177:2625+ Je 18 '53

Expanding imports threaten American chemical industry. Chem & Eng N 31:1410-13 Ap 6 '53

Imports at United States ports; list by ports of chemical products with amounts and consignors. Published in weekly numbers of Oil, paint and drug reporter

Mobilization powers process, construction, manpower trends; I&EC editors report on 1952. il Ind & Eng Chem 45:11A+ Ja '53

Open house on output; British industry-labor committee. map Chem W 72:13-14 Ja 24 '53

West Virginia

Debut of a new industry; West Virginia plant produces chemicals from raw coal through hydrogenation. Carbide and carbon chemicals co. flow chart il Manuf Rec 121:38-9+ D '52

Western states

Raw materials aren't enough. E. Schrier. il map Chem Eng 59:356+ O '52

Western chemical industry's development. G. L. Parkhurst. Elec Eng 72:434-9 My '53

Yugoslavia

Progress of Yugoslav chemical industry shows upswing in many fields, with copper sulfate production most prominent. Chem & Eng N 31:166-8 Ja 12 '53

CHEMICAL institute of Canada

Annual meeting, 36th, Windsor, June 4-6; abstracts of papers. Can Chem Process 37:50+ Je 20 '53; Oil Paint & Drug Rep 163:7+ Je 8 '53

Rubber chemistry division conference, Windsor, Ont. June 5; abstracts of papers. India Rubber World 128:218-19 My '53; Rubber Age 73:228-9, 378 My-Je '53

Analytical division

Annual conference, 5th, Quebec City, Feb. 23-24. Can Chem Process 37:89-90 Mr '53

CHEMICAL laboratories

Chemical research laboratory of the Department of scientific and industrial research. Engineering 174:415 S 26 '52

Development links laboratory to market; Naugatuck Chemicals. C. R. Howey. il Can Chem Process 36:64+ D '52

Extensions at Chemical research laboratory. Metallurgia 48:90 Ag '53

Industrial adhesive laboratory services 3-M clients. F. H. Jankowski. il Can Chem Process 37:68-9 Je 1 '53

CHEMICAL laboratories—*Continued*

Laboratory control of vegetable oil production. il Can Chem Process 37:73-4 Ja '53

Laboratory for the preparation of organic chemicals on a semiplant scale. R. J. Berner and L. J. Roll. il diags Ind & Eng Chem 44:2819-22 D '52

Labs that can be tailored; Wyandotte (Mich.) chemicals corp. il Bsns W p 126-7 Je 13 '53

NACL's new Niagara laboratory. il Can Chem Process 37:64 Jl '53

People who work in glass buildings; Lever Brothers research lab. il Chem & Eng N 30:4954-5 N 24 '52

Royal technical college, Glasgow; opening of the Heilbron laboratory. il Chem & Ind p 1194-5 D 6 '52

Three-column instruction form. H. H. Bliss. Chem & Eng N 31:991-3 Mr 9 '53

Wyandotte Chemicals opens combined research center. Oil Paint & Drug Rep 163:5+ Je 8 '53

Wyandotte Chemicals opens new research laboratories. il Rubber Age 73:381 Je '53

Wyandotte's dream labs. il Mod Ind 25:61-2+ Je '53

See also

Paint laboratories
Petroleum laboratories
Pharmaceutical laboratories
Rubber laboratories

Equipment

Apparatus for controlled atmosphere research. G. R. Thomas and N. N. Lichtin. il diags R Sci Instr 23:738-40 D '52

Wyandotte Chemicals opens new research laboratories building. il Metal Finishing 51:56-9 Jl '53

Layout

With work simplification, a lab goes mass production; International minerals & chemical corp. T. M. Ware. il Factory Management 111:96-8 Mr '53

Safety measures

Chemical laboratories. il Nat Safety N 66:124-5+ O; 32-3+ N '52

Laboratory safety program; Oklahoma Baptist university uses photographs. J. O. Purdue and C. J Halley, jr. J Chem Educ 29:553 N '52

Safety in the chemical laboratory and on the plant; protection of the individual. L. J. Burrage. Chem & Ind p92-4 Ja 31 '53

Safety in today's laboratories. H. M. Schwalb. il Can Chem Process 37:68+ Jl '53

CHEMICAL libraries

See also

American chemical society—Rubber division—Library

CHEMICAL literature

ACS Division of chemical literature national meeting, Los Angeles. Chem & Eng N 31:1290 Mr 30 '53

Chemical documentation. G. M. Dyson. Chem & Ind p 1081 N 1 '52

Costly chemical service has a cheaper offspring. Bsns W p44 Ap 4 '53

We talk to ourselves too much! D. H. Killeffer. Chem Eng Prog 49:155-7 Mr '53

See also

Chemical abstracts (periodical)
Chemistry—Periodicals

CHEMICAL market research association

Annual meeting, New York, June 4. Oil Paint & Drug Rep 163:5+ Je 8 '53

Meeting, Chicago, Dec. 11; with abstracts of papers. Oil Paint & Drug Rep 162:7+ D 22 '52

Meeting, Pocono Manor, Pa. Sept. 16-18. Oil Paint & Drug Rep 164:4+ S 21 '53

CHEMICAL patents

New patents. Published in monthly numbers of Soap and sanitary chemicals

Your checklist of patents. Chem Eng 60:376+ F '53

See also

Glass manufacture—Patents
Paper making—Patents
Petroleum refining—Patents

CHEMICAL plants

Accentuate the chemical; Pittsburgh Coke & Chemical units for plasticizers, insecticides and fine chemicals. il Chem Eng 59:238-9 N '52

B-A Shawinigan petrochemical plant. il Can Chem Process 37:26+ Jl '53

Britain's I.C.I. operates four petrochemical plants at Wilton. flow diag il Oil & Gas J 51:325-6 D 22 '52

Celanese dedicates Pampa plant. il Pet Refiner 32:133-4 Je '53

Commercial solvents corp., Sterlington, La. F. L. Resen. flow diag il Oil & Gas J 51:298+ S 29 '52

Deep extraction at Tuscola. D. J. Stark. bibliog diags Pet Refiner 32:139-42 Je '53

Designed to operate at 20° below zero; Shell oil co. of Canada's new petrochemical plant. G. S. Williamson. il Pet Processing 8:900-1 Je '53

Howards of Cornwall; specialized chemicals via new processes. il Can Chem Process 37:61 Je 1 '53

Imperial chemical industries Wilton works. V. S. Swaminathan. il Pet Eng 24:C27+ O '52

Instrumentation. R. H. Müller. Published in monthly numbers of Analytical chemistry

New $8,000,000 plant in Houston to make acrylate. F. L. Resen. il Oil & Gas J 51:92-3+ My 4 '53

New 1953 petrochemical directory; survey lists 143 firms in petrochemicals, with 271 plants operating, building or planned. il Pet Processing 8:713-22 My '53

New plants and facilities underway, 1952. il Chem Eng 60:176-93 F '53

Phillips synthesize pyridines; petrochemical plant opens new source of supply. J. M. Folz. flow diag il Pet Processing 7:1802-3 D '52

Progress at Wilton: olefins, ethylene oxide, terylene, formaldehyde. il Chem & Ind p 1030-1 O 18 '52

Resources for the chemical industry in the United States; Mid Atlantic; production of chemicals. B. R. Putnam, jr. and R. F. Warren. bibliog maps Ind & Eng Chem 45:524-8 Mr '53

Shell's petrochemical plant, a Canadian first. il Can Chem Process 37:34-5 My '53

Special construction features of Rayonier's Jesup plant. C. E. Wright. il Paper Tr J 137:21-2 S 25 '53

Texas Eastman co., Longview, Tex. G. Weber. il diag Oil & Gas J 51:118-19 N 24 '52

Water conservation in a chemical plant. J. Ludden, jr. and J. F. Vogler. Sewage & Ind Wastes 24:1377-81 N '52

See also

Canneries
Cement plants
Clay products plants
Corn products plants
Drug factories
Food factories
Glass factories
Paper mills
Petroleum refineries
Rubber, Artificial—Manufacture
Rubber factories
Soap factories

Accounting

See Chemical industries—Accounting

Control

Advantages and disadvantages of single-seated and double-seated control valves. R. H. Munch. il diag Ind & Eng Chem 45:sup87A-8A+ F '53

Analyzers keep product up to par. il Bsns W p56+ Mr 7 '53

Automatic control of chemical processes. A. J. Young. diags Instruments 26:100-1+ Ja '53

Automation; control by product. il Chem W 71:28+ D 27 '52

Continuous flow production. il diag Chem Age (Lond) 68:9-10 Ja 3 '53

How processes affect control. J. B. McMahon and R. A. Ackley. diags Chem Eng 59:191-5+ D '52

Monitoring of process variables. A. F. Sperry. il diag Pet Refiner 32:128-32 Mr '53

New continuous measurement system; process control by combined instruments. il Chem Age (Lond) 68:127 Ja 17 '53

One approach to automatic process control. diags Pet Processing 8:72-5 Ja '53

CHEMICAL plants—Control—*Continued*

Operation of a semi-continuous process using the kinegraphic control board. J. E. Read and J. Johnston, jr. il diags Instruments 25:1727-32 D '52

Process flow sheets and instrument control diagrams. W. L. Willoughby. flow sheets diags Instruments 25:1566-7+ N '52

Recent developments in process instrumentation. J. Procopi and S. D. Ross. il Chem Eng Prog 48:599-602 D '52

Trends in instrumentation during 1952. R. M. Munch. Ind & Eng Chem 45:sup93A-4A+ Ja '53

Valve panels control flow; Glidden co.'s Naval stores division. R. L. Hedberg. il Heating-Piping 24:93 D '52

Costs

Comparative cost study of ammonia plants using either natural gas or coal gasification as a source of synthesis gas. L. C. Skinner, H. R. Batchelder and S. Katell. map Ind & Eng Chem 44:2381-5 O '52

Heat exchanger costs today. F. L. Rubin. diags Chem Eng 60:201-6 My '53

How to control costs by kilowatts. D. E. Pierce. Chem Eng 60:195-7 Ja '53

How to estimate costs in a hurry. H. E. Wessel. bibliog Chem Eng 60:168-71+ Ja '53

More on estimation of vessel cost. Chem Eng 60:143-4 F '53

New correlation of engineering and other indirect project costs. J. P. O'Donnell. Chem Eng 60:188-90 Ja '53

Process equipment costs are becoming stabilized. Chem Eng 60:220-1 Mr '53

Simplify your cost estimates. L. Lynn and J. R. McKlveen. bibliog Chem Eng 60:193-5 Ap '53

Where cost estimates go sour. C. Tyler. bibliog Chem Eng 60:198-200 Ja '53

Design

Design is all-important in the development of satisfactory equipment, especially if unusual performance is required. C. O. Brown. il Ind & Eng Chem 44:sup85A-6A+ N '52

Design of commercial continuous-reactor systems from pilot-plant batch data. A. P. Weber. bibliog diags Chem Eng Prog 49: 26-32; Discussion. 32-4 Ja '53

Functional design for chemical plant. il diag Can Chem Process 37:50+ Ja '53

Influence of correct design in saving steel and other expensive materials. C. O. Brown. Ind & Eng Chem 44:sup71A-2A+ D '52

Problems of plant design for fluidized processes. S. A. Gregory. bibliog(60 ref) J Ap Chem 2(sup no 1):S 1-7 '52

What size foundation for your stills and towers? A. A. Brown. diags Chem Eng 59: 136-7 O '52

When vapors must be boiled out of a vessel. D. E. Pierce. diags Ind & Eng Chem 45:sup 81A-2A+ F '53

Electric equipment

Electrical installations in large chemical factories. D. B. Hogg. bibliog il diags Inst E E Proc 98 pt 2:125-37 Ap '51; Discussion. 98 pt 2:137-42; 100 pt 2:88-100 Ap '51, Ap '53

Electronic control of a constant-weight feeder. il diags Engineer 195:145 Ja 23 '53; Engineering 175:40 Ja 9 '53; Elec J 149:1999-2000 D 26 '52

How silicones are licking some tough electrical problems; Dow chemical co. W. Rupprecht and E. A. Crosby. il Factory Management 111:113-16 F '53

Motors and motor control; Chemical Engineering report. V. J. Kropf. il diags Chem Eng 58:123-36 Jl '51; Same abr. Product Eng Hdbk p H2-13 '53

New chemical works; electrolytic process for producing chlorine and caustic soda from brine; Murgatroyd's salt & chemical co. il Elec R (Lond) 151:423-9 Ag 29 '52

Employees

See Chemical workers

Equipment

Bursting disc design and application in the chemical industry. D. J. Breeze. il diag Engineer 195:129-30 Ja 23 '53

Canadian stainless for chemical industries. J. L. Cotsworth. il Can Chem Process 36:70+ S '52

Cathodic protection can save chemical process equipment. L. P. Sudrabin. il Chem Eng 60:196-200 My '53

Celanese corp., Bishop, Tex. F. L. Resen. flow diag il Oil & Gas J 51:120-1+ S 22 '52

Chemical engineering materials of construction; sixth annual review. bibliog il Ind & Eng Chem 44:2285-380 O '52 (reprints 75c)

Corrosion of stainless reduced by materials and process controls. D. R. Keck. Can Chem Process 37:40+ Ja '53

Custom engineered structures for chemical plant. il Can Chem Process 37:36+ Je 1 '53

Dry chemical feeder. il Can Chem Process 37:56 Ap '53

15th biennial report on materials of construction; how protective coatings fight corrosion. K. Tator. il diags Chem Eng 59: 143-90 D '52

FluoSolids reactor at Alcan's Arvida plant centrally instrumented. il diag Can Chem Process 37:42+ Je 1 '53

Fused quartz; applications in the CPI, physical and mechanical properties, and the chemical resistance. J. Gialanella. il Chem Eng 60:302+ Ap '53

Glass as a material of construction in chemical plant. B. H. Turpin. Chem Age (Lond) 67:559-60 O 25 '52

Handling liquid hydrogen sulfide. W. O. Bice, F. Prange and R. E. Weis. flow diag il Ind & Eng Chem 44:2497-500 O '52

High temperature service. R. M. Braca and R. Merims. il Chem Eng 60:165-71+ F '53

Instrument application engineer of a chemical plant often must use gadgeteering. W. B. Simon. diags Instruments 26:105-7+ Ja '53

Kodak redoubles silver nitrate output. flow sheet il diag Chem Eng 59:217-18+ O '52

Lucoflex solution to corrosion in chemical plants. il Can Chem Process 37:62+ F '53

Million dollar expansion for an expanding market; Metal hydrides, inc.'s plant. il Chem & Eng N 31:1108-9 Mr 16 '53

Multiple use of specialized facilities; Davison chemical corp. P. L. Veltman and A. W. Hemphill. il Ind & Eng Chem 44:2827-9 D '52

Neches butane products co. is expanding capacity. F. L. Resen. flow chart il Oil & Gas J 51:149-50 N 10 '52

New cost data bring economic pipe sizing up to date; pumps, piping, valves and insulation. R. M. Braca and J. Happel. Chem Eng 60:180-7 Ja '53

Nylon process equipment meets novel standards for C-I-L's Maitland plant. il Can Chem Process 37:60+ Ag '53

Our experience with corrosion. R. C. Thiede. Chem Eng 60:344+ Mr '53

Petrochemistry; how pipe lines serve burgeoning new industry. F. L. Resen. maps diag Oil & Gas J 51:195-7 O 13 '52

Petroleum refining and chemical plant; Foster Wheeler world-wide projects. il Chem Age (Lond) 68:311-15 F 21 '53

Plastics in anticorrosive applications. J. L. Huscher. il Chem & Eng N 31:860-3 Mr 2 '53

Plastics in chemical plant; recent German work. Chem Age (Lond) 67:633-4 N 8 '52

Radioisotopes in process instrumentation. J. Kohl. bibliog il diags Chem Eng Prog 48: 611-16 D '52

Switch to continuous processing slices operating costs; National carbide co. R. J. Niebanck. il diag Factory Management 111:90-3 O '53

Symposium on bursting discs. Chem & Ind p84 Ja 24 '53; Chem Age (Lond) 68:167-71 Ja 24 '53

Use of glass in chemical plant; abstract and discussion. J. C. Window. Chem & Ind p 1218-19 D 13 '52

See also

Autoclaves
Centrifuges
Chemical industries—Exhibitions
Chemical plants—Multiple use plants
Cooling towers
Distillation apparatus
Evaporators
Filters and filtration (technical chemistry)
Heat exchangers
Mixers
Piping
Pressure vessels
Pumps, Centrifugal

CHEMICALL plants—*Continued*

Experimental plants

Chemical engineering and atomic energy; pilot plant problems. C. M. Nicholls and A. S. White. il plans diag Chem & Ind p51-5 Ja 17 '53

Enriched and concentrated superphosphates. L. D. Yates and others. bibliog flow sheet il diag Ind & Eng Chem 45:681-90 Mr '53

Flexibility in pilot plant operations. H. B. H. Cooper and W. C. McIntire. flow diag il plans diags Ind & Eng Chem 44:2814-18 D '52

Process lab facilities grow. il Chem Eng 60:242 My '53

Fires and fire protection

Fire protection in a modern chemical plant; Celanese corporation of America. C. A. Williams. il Mill & Factory 53:108-10 Ag '53

Maintenance and repair

Operating problems in ammonia synthesis. A. V. Slack and others. Oil & Gas J 51:82-3 D 15 '52

Schedule your maintenance for minimum cost. R. L. Ahlness. Chem Eng 60:236-7 My '53

Management

Developing new programs for full utilization of technical skills. W. von Pechmann. Ind & Eng Chem 44:sup89A-90A+ D '52

How to keep from growing old? T. F. Washburn has a formula. il Paint Oil & Chem R 115:18+ N 20 '52

On the average; survey of representative plant managers. Chem W 72:44+ Mr 28 '53

Plant management. W. von Pechmann. Published in monthly numbers of Industrial and engineering chemistry

Production; easier on all sides. Chem W 71:35-6+ N 1 '52

Why all the fuss about executive development? Chem Eng 60:248+ F '53

Multiple use plants

Symposium on multiple-use plants. flow diag il plans diags Ind & Eng Chem 44:2813-33 D '52

Power

Chemical plant builds for continuity; Ciba states, ltd. P. Kronowitt. il diag Power 97:98-100+ S '53

Du Pont, how they lower power investment. Power Eng 57:78-9+ Ap '53

Electric power in industry. F. R. Benedict. Can Chem Process 36:54+ N '52

How to control costs by kilowatts. D. E. Pierce. Chem Eng 60:195-7 Ja '53

How to plan power distribution. W. B. Wilson. plan diags Chem Eng 60:199-203 Ap '53

Motors and motor control; Chemical Engineering report. V. J. Kropf. il diags Chem Eng 58:123-36 Jl '51; Same abr. Product Eng Hdbk p H2-13 '53

140 per cent return on small boiler modernization; E. I. Du Pont de Nemours & co. R. L. Steele. il diags Power Eng 57:96-8+ O '53

Should your plant produce power? W. B. Wilson. il diag Chem Eng 60:235-8 Mr '53

Wilton works power station. il plan diags Engineer 194:837-41 D 19 '52; Engineering 174:820-1, 824 D 26 '52; Elec J 149:1829-32 D 12 '52; Elec R (Lond) 151:1259-61 D 12 '52

Protection

Asphaltic coatings can reduce corrosion; mineral-armored mica-filled coating, waterproofing compositions, and floor coatings. K. N. Cundall. il Chem Eng 59:284+ N '52

Quality control

Close lab control for exacting specs; new petrochemical plant of the Shell oil co. H. Buxton. flow diag il Can Chem Process 37:98-9 My '53

Fundamentals of control testing. S. M. Swain. Am Cer Soc Bul 32:69 Mr 15 '53

Safety measures

Maintenance work is greatest hazard to chemical plant safety. il Chem & Eng N 30:4616+ N 3 '52

Remote control of piping processes aids plant safety: Du Pont co. il Heating-Piping 25:97 My '53

Safety engineer is in on everything. Chem Eng 59:336+ N '52

Safety in the chemical laboratory and on the plant; protection of the individual. L. J. Burrage. Chem & Ind p92-4 Ja 31 '53

Safety is your business. J. Guelich. il Chem Eng 60:211-13 My '53

Waste

Appraisal of a chemical waste problem by fish toxicity tests. L. A. Gillette and others. Sewage & Ind Wastes 24:1397-401 N '52

Approach to action on the industrial waste problem; program of Naugatuck Chemical. W. E. Williams. Water & Sewage Works 100:170-1 Ap '53

Cheaper to truck this waste slurry; Calco Chemical. H. J. Wells. il Chem Eng 59:135 O '52

Chemical industry can solve its own air pollution problems. Chem & Eng N 31:995-6 Mr 9 '53

Critical review of the literature of 1952 on sewage, waste treatment, and water pollution; chemical, pharmaceutical. bibliog Sewage & Ind Wastes 25:635-7 Je '53

Sulphuric triple play; Shell's alcohol plant helps make alumina and ammonium sulphate in Filtrol's new plant. il Chem Eng 59:226+ O '52

Surface and underground disposal of chemical wastes at Victoria, Texas. H. O. Henkel. Sewage & Ind Wastes 25:1044-9 S '53

CHEMICAL plants, Floating

Whale oil process afloat. il diag Can Chem Process 36:38-9 O '52

CHEMICAL reaction

Abstracts of papers published in Reaction kinetics and transfer processes, C.E.P. symposium series number four. Chem Eng Prog 49:22+ Ja '53

Chemical reactions in high-pressure steam curing of portland cement products; review of the literature. W. C. Hansen. Am Concrete Inst J 24:841-55 My '53

Effect of inert gases on unimolecular reactions, and possible cases of *cis*-addition. K. E. Howlett. bibliog Chem & Ind p 1175-6 N 29 '52

Encyclopedia of chemical reactions. C. A. Jacobson, comp. v5 787p $15 Reinhold pub. corp, 330 W. 42d st, New York 36 '53

Entropy changes accompanying association reactions in solution. E. L. King. bibliog J Chem Educ 30:71-7 F '53

Frequency factors of some bimolecular reactions. G. K. Rollefson. bibliog J Phys Chem 56:976-9 N '52

High-speed chemistry. L. P. Lessing. il diags Sci Am 188:29-35 My '53

Induction period in chain reactions. S. W. Benson. bibliog J Chem Phys 20:1605-12 O '52

Intermediate compounds formed when horseradish peroxidase reacts with potassium molybdicyanide and potassium chloriridate. P. George. bibliog Science 117:220-1 F 27 '53

International symposium on the reactivity of solids. Am Cer Soc Bul 31:269-73 Ag 15 '52

Mechanism of unimolecular reactions. L. S. Kassel. bibliog J Chem Phys 21:1093-7 Je '53

Mechanisms of elimination reactions; the spontaneous decomposition of salts of β-halo acids; *trans-m*-nitrocinnamic acid dibromide. S. J. Cristol and W. P. Norris. bibliog Am Chem Soc J 75:632-6 F 5 '53

Metabolic cage. S. R. Dickman. il Science 117:284-5 Mr 13 '53

New reaction mechanism for the Marckwald asymmetric synthesis. J. Kenyon and W. A. Ross. Chem Soc J p2307-10 Je '52

New technique for controlling the direction of elimination reactions. H. C. Brown and I. Moritani. Am Chem Soc J 75:4112-13 Ag 20 '53

CHEMICAL reaction—*Continued*

Parameters for the description of transition states. J. E. Leffler. Science 117:340-1 Mr 27 '53

Rate processes in chemical reactors. R. H. Wilhelm. diags Chem Eng Prog 49:150-4 Mr '53

Reaction of dinitrogen tetroxide with olefins; octadec-1-ene and buta-1 : 3-diene. C. R. Porter and B. Wood. Inst Pet J 38:877-81 O '52

Reactions catalyzed by anion exchange resins; cyanoethylation of alcohols. M. J. Astle and R. W. Etherington. bibliog Ind & Eng Chem 44:2871-2 D '52

Reactions catalyzed by anion exchange resins; Knoevenagel condensation; aldol condensation. M. J. Astle and J. A. Zaslowsky. Ind & Eng Chem 44:2867-71 D '52

Simple general notations for systems of simultaneous reactions. F. Halla. J Phys Chem 57:599-600 Je '53

Subsolidus reactions in oxide systems in the presence of water at high pressures. E. F. Osborn. bibliog diags Am Cer Soc J 36: 147-51 My 1 '53

Understanding the chemistry of petrochemical reactions. L. F. Hatch. Pet Refiner 32:143-5 My '53

See also

Addition compounds
Antigens and antibodies
Bromination
Catalysis
Catalysts
Chains, Chemical
Chemical equilibrium
Combustion
Condensation, Chemical
Dehydration
Dehydrogenation
Diels-Alder reaction
Electrolysis
Esterification
Feulgen reaction
Friedel-Crafts reaction
Gomberg reaction
Grignard reagents
Hydrogenation
Hydrolysis
Leuckart reaction
Mannich reaction
Methylation
Michael reaction
Molecular rearrangements
Nitration
Oxidation
Photochemistry
Polymerization
Precipitation
Prins reaction
Reduction, Chemical
Schmidt reaction
Steric hindrance
Substitution (chemistry)
Synthesis
Tishchenko reaction
Ullmann reaction
Willgerodt reaction
Wolff-Kishner reaction

Velocity

Chemical reactions near equilibrium. W. R. Gilkerson and others. J Chem Phys 20: 1182-3 Jl '52

Detailed formulation of kinetic processes from the point of view of the activated complex. S. W. Benson. bibliog J Chem Phys 20:1064-9 Jl '52

Detailed formulation of kinetic processes; the role of collision processes. S. W. Benson and A. E. Axworthy, jr. bibliog diags J Chem Phys 21:428-33 Mr '53

Effects of isotopic substitution on the rates of chemical reactions. J. Bigeleisen. bibliog J Phys Chem 56:823-8 O '52

Enrichment of isotopes by difference in rates for irreversible isotopic reactions. R. B. Bernstein. bibliog diag J Phys Chem 56: 893-6 O '52

Equilibrium and the rate laws. C. A. Hollingsworth. J Chem Phys 20:1649-50 O '52

High concentration limit of unimolecular reaction kinetics. H. S. Johnston. J Chem Phys 20:1103-7 Jl '52

Kinetics of active centers in surface-catalyzed reactions. N. Thon and H. A. Taylor. bibliog Am Chem Soc J 75:2747-50 Je 5 '53

Kinetics of the diazo coupling reaction. H. Zollinger. Chem R 51:347-61 bibliog(p360-1) O '52

Kinetics of the photochemical exchange between iodine and allyl iodide. D. J. Sibbett and R. M. Noyes. bibliog Am Chem Soc J 75:763-7 F 20 '53

Kinetics of the thermal exchange between iodine and allyl iodide. D. J. Sibbett and R. M. Noyes. Am Chem Soc J 75:761-3 F 20 '53

Nature of kinetic barriers in aqueous reactions; abstract. P. A. Shaffer. Science 116: 529 N 14 '52

Periodate-glycol reaction; a quantitative study of certain chemical equilibria and their effects upon the rate of reaction. J. E. Taylor. bibliog diags Am Chem Soc J 75:3912-16 Ag 20 '53

Quantitative correlation of relative rates; comparison of hydroxide ion with other nucleophilic reagents toward alkyl halides, esters, epoxides and acyl halides. C. G. Swain and C. B. Scott. bibliog Am Chem Soc J 75:141-7 Ja 5 '53

Quantum-mechanical calculation of the rates of some chemical reactions. E. Bauer and T. Wu. bibliog J Chem Phys 21:726-33 Ap '53; Discussion. S. Golden. 21:2071-2; Reply. 2072 N '53

Rate law and mechanism for the reaction of cerium(IV) and bromide ion in aqueous sulfate media. E. L. King and M. L. Pandow. bibliog Am Chem Soc J 75:3063-8 Jl 5 '53

Rate law for the reaction of selenious acid and iodide ion. J. A. Neptune and E. L. King. bibliog Am Chem Soc J 75:3069-72 Jl 5 '53

Rates of ionization of pseudo acids; relation between rates and equilibria. R. G. Pearson and R. L. Dillon. bibliog Am Chem Soc J 75:2439-43 My 20 '53

Reaction between ferrous iron and dissolved oxygen in brine. D. C. Bond and G. G. Bernard. bibliog diag Ind & Eng Chem 44: 2435-8 O '52

Reaction rates by distillation; the effect of changes in structure on the rate of the Baeyer condensation. E. F. Pratt and L. Q. Green. bibliog Am Chem Soc J 75:275-8 Ja 20 '53

Relationship between Michaelis constants, maximum velocities and the equilibrium constant for an enzyme-catalyzed reaction. R. A. Alberty. bibliog Am Chem Soc J 75:1928-32 Ap 20 '53

Significance of isotopic reactions in rate theory. H. Eyring and F. W. Cagle, jr. bibliog J Phys Chem 56:889-92 O '52

Some recent developments in reaction rate theory. H. Eyring and R. P. Smith. bibliog J Phys Chem 56:972-6 N '52

Symposium on kinetics of very fast reactions, Atlantic City, Sept. 1952. J Phys Chem 57:385-427 Ap '53

Temperature coefficient of heterogeneous reactions. A. C. Riddiford. bibliog J Phys Chem 56:745-8 Je '52

CHEMICAL reagents

Carbazic acid esters as carbonyl reagents. N. Rabjohn and H. D. Barnstorff. Am Chem Soc J 75:2259-61 My 5 '53

Conductance instrument for standardization of volumetric reagents. R. H. Müller and A. M. Vogel. diags Anal Chem 24:1590-2 O '52

In the lab, a bottle battle. il Chem W 72:69-70+ Mr 21 '53

Midlands society for analytical chemistry symposium on organic reagents. Chem Age (Lond) 67:831-5 D 20 '52

New reagent for the direct determination of water; solution of bromine and sulfur dioxide in chloroform; abstract. T. S. West. Chem Age (Lond) 67:561-2 O 25 '52

New reagent for the precipitation of sulphate; abstract. D. Gibbons. Chem Age (Lond) 67:562 O 25 '52

Polyphosphoric acid as a reagent in organic chemistry; conversion of aromatic acids and their derivatives to amines. H. R. Snyder, C. T. Elston and D. B. Kellom. Am Chem Soc J 75:2014-15 Ap 20 '53

Sensitivity of analytical reactions and the selectivity of some new organic reagents; abstract. J. Gillis. Chem Age (Lond) 67: 565-6 O 25 '52

Structure and behavior of organic analytical reagents; stability of chelates of 8-hydroxyquinoline and analogous reagents. W. D. Johnston and H. Freiser. bibliog Am Chem Soc J 74:5239-42 N 5 '52

Study of three suggested reagents for the detection of potassium; abstract. R. J. Winterton. Chem Age (Lond) 67:563 O 25 '52

See also

Anthrone
Fischer reagent
Grignard reagents
Phosphomolybdic acid

CHEMICAL reagents—*Continued*

Specifications

Recommended specifications for reagent chemicals. Anal Chem 25:365-80 F '53

CHEMICAL research

Chemical profession warms up to fuller use of statistics; American statistical association 112th annual meeting, Chicago. Chem & Eng N 31:148 Ja 12 '53

Chemical research in Australia. T. F. West. il Chem Age (Lond) 68:165-6 Ja 24 '53

Chemical researchers record the year's tally. Can Chem Process 36:90-2 O '52

Chemistry research in 1951; work of the CRL at Teddington. il Chem Age (Lond) 67:629-32+ N 8 '52

College and university research in chemistry. J. I. Mattill. J Chem Educ 29:556-9 N '52

Colonial research. Chem Age (Lond) 67:589-92 N 1 '52

Du Pont story; research. V. B. Guthrie. il map Pet Processing 8:92-4 Ja '53

Incidents during forty-three years of chemical research; abstract. H. H. Hodgson. Chem & Ind p236-7 Mr 14 '53

Increasing the efficiency and economy of experimentation. E. C. Harrington, jr. bibliog diags Tappi 36:sup 137A-40A My '53

London's international science centre; achievements of the Ciba foundation. Chem Age (Lond) 68:487 Mr 28 '53

New products through chemical research; American chemical society 123d national meeting, Los Angeles, March 15-19; abstracts of papers. Comm & Fin Chr 177:1328 Mr 26 '53

Radioactive cobalt laboratory for chemical research. R. A. Blomgren and others. il R Sci Instr 24:298-303 Ap '53

Report of the Chemical research laboratory. Engineer 194:578 O 31 '52

Research. C. H. Greenewalt. Chem & Ind p 1162-4 N 29 '52

Rifle or shotgun? coal hydrogenation products. Chem W 71:35-6 O 18 '52

Royal society of Spain for physics and chemistry golden jubilee meeting, Madrid, April 15-21. Chem & Eng N 31:1866 My 4 '53

See also

Chemical laboratories

Ciba foundation for the promotion of international cooperation in medical and chemical research

Electron microscope

Gas research

Metallurgical research

National chemical laboratory, Poona

National research council—Chemical-biological coordination center

Paper research

Petroleum research

Pharmaceutical research

Rubber, Artificial—Research

Rubber research

Textile research

CHEMICAL societies

See also

American chemical society

Armed forces chemical association

British association of chemists

CHEMICAL specialties manufacturers association

Annual meeting, 39th, New York, Dec. 7-9. Chem & Eng N 30:5369-70 D 22 '52; Chem W 71:57-8 D 20 '52; Oil Paint & Drug Rep 162:5+ D 15 '52; Soap & San Chem 29:113-19+ Ja '53

Annual meeting, 39th, New York, Dec. 7-9; program. Soap & San Chem 28:157-9 D '52

Midyear meeting, 39th, Chicago, May 18-19. Oil Paint & Drug Rep 163:4 My 25 '53

CHEMICAL stability

Analytical procedures based on complex formation. Z. G. Szabó and M. T. Beck. bibliog Anal Chem 25:103-8 Ja '53

Interferometer procedure applied to the study of the chemical durability of silicates, enamels, and metals. R. G. Pike and D. Hubbard. bibliog J Res Nat Bur Stand 50:87-93 F '53

Stability constants of the stannous bromide complexes from 0 to 45° from electromotive force measurements. C. E. Vanderzee. bibliog Am Chem Soc J 74:4806-8 O 5 '52

Stability of ceramic materials. J. F. Wygant and W. D. Kingery. Am Cer Soc Bul 31:251-4 Jl 15 '52

Stability of metallo-organic compounds. H. H. Jaffé and G. O. Doak. bibliog J Chem Phys 21:196-200 F '53

Zinc oxide in latex; influence of zinc oxide on colloidal stability. H. C. Jones and C. A. Klaman. bibliog Rubber Age 73:63-70 Ap '53

CHEMICAL symbols

History of the chemical sign language, tr. by R. E. Oesper. R. Winderlich. il J Chem Educ 30:58-62 F '53

CHEMICAL warfare

Chemical warfare. J. A. Tobey. il Tech R 55:259-61 Mr '53

See also

Gases, Asphyxiating and poisonous

CHEMICAL workers

Chemical labor gains. il Chem Eng 60:184 Mr '53

Many workers, more needed. Chem Eng 59:353-4 O '52

NLRB denial of craft severance in chemical plants asked by MCA. Oil Paint & Drug Rep 164:3+ O 12 '53

Plant-of-the-future training plan; Dow chemical co. il Factory Management 111:132-7 Ap '53

Practice unit aids operator training program at Monsanto Chemical plant. F. L. Resen. flow sheet il Oil & Gas J 51:144+ F 16 '53

Pros and cons of both financial and nonfinancial incentives. W. von Pechmann. Ind & Eng Chem 44:sup 109A-10A+ O; sup 109A-10A+ N '52

Resources for the chemical industry in the United States; Mid Atlantic; manpower. B. B. Watson. Ind & Eng Chem 45:510-12 Mr '53

Supervisory development, research approach; Monsanto chemical co. B. P. Hazeltine and R. L. Berra. Personnel 30:60-7 Jl '53

Three-column instruction form. H. H. Bliss. Chem & Eng N 31:991-3 Mr 9 '53

Wages in the industrial chemical industry. J. A. Wells. Mo Labor R 75:285-9 S '52

Welcome mat is out. Chem W 71:21-2 O 18 '52

CHEMICALS

Chemical supply gets easier, DPA declares in issue number nine of List of basic materials and alternates. Oil Paint & Drug Rep 162:3+ N 10 '52

Chemicals from Douglas-fir bark. E. F. Kurth. bibliog Tappi 36:sup 119A-22A Jl '53

Chemicals on location; Hollywood market. il Chem W 72:45-6+ Ap 4 '53

Chemicals supply eases further. Oil Paint & Drug Rep 162:3+ D 29 '52

Chemistry begins at home with household chemicals. M. S. Sage. Can Chem Process 37:28+ F '53

Chipping chemicals out of timber. Bsns W p 126+ Jl 4 '53

Coal chemicals output dropped off during '52. Oil Paint & Drug Rep 164:4 Ag 10 '53

Coal hydrogenation chemicals. H. B. McClure. Chem Age (Lond) 67:801-2 D 13 '52

Examples of incompatible chemicals; table. Nat Safety N 66:68+ N '52

Fats major chemical source for future use. D. Swern. Paint Oil & Chem R 116:44 S 10 '53

Introduction and distribution of chemicals. R. L. Bateman and J. A. Field. Chem & Eng N 30:5030-3 D 1 '52

OIT eases up export controls for chemicals. Oil Paint & Drug Rep 163:5+ Ja 5 '53

Products from hydrocarbon synthesis. C. E. Morrell and others. bibliog flow sheet Ind & Eng Chem 44:2839-43 D '52

Resources for the chemical industry in the United States; Mid Atlantic; consumption of inorganic chemicals. W. J. Riley and C. M. Miller. il map Ind & Eng Chem 45:529-32 Mr '53

Resources for the chemical industry in the United States; Mid Atlantic; consumption of organic chemicals. V. H. Boden and H. D. Hughes. bibliog Ind & Eng Chem 45:532-4 Mr '53

See also

Acids

Agricultural chemicals

Alcohols

Catalysts

Chemical industries

Chemical reagents

CHEMICALS—See also—*Continued*

Chemistry, Technical
Cleaning compositions
Drugs
Drying agents
Dyes and dyeing—Chemistry
Glyoxal
Hydrogen peroxide
Indicators and test papers
Insecticides
Ion exchangers
Oils and fats
Paint materials
Paper chemicals
Petroleum chemicals
Plasticizers
Propellants
Rubber chemicals
Sanitary chemicals
Solvents
Tanning materials
Tariff—United States—Chemicals
Textile chemicals
Wetting agents

Prices

Chemicals, oils and drugs price changes, Jan. 1, 1952 and Jan. 1, 1953 compared; table by commodity. Oil Paint & Drug Rep 163:9-10+ sec 2 Ja 26 '53

Chemicals, oils and drugs price record, selected years, 1939-1952; tables. Oil Paint & Drug Rep 163:7 sec 2 Ja 26 '53

Coal chemical makers granted ceiling boost. Oil Paint & Drug Rep 162:3+ N 24 '52

Current market quotations; chemicals and related materials. Published in weekly numbers of Oil, paint and drug reporter

OPS extends escalation use to all contract chemicals; general overriding Regulation 27. Oil Paint & Drug Rep 162:3 D 22 '52

Safety measures

Chemical hazards in glass and ceramics industries. J. A. Houghton. Glass Ind 34:369-71+ Jl '53

Danger is the same in any language. il Bsns W p66 Ja 17 '53

Safety practices and the chemistry stockroom. D. G. Nicholson. Can Chem Process 37:68-9 Je 20 '53

Thorough training can cut accidents involving chemicals. diags Iron Age 171:148 F 12 '53

Wear these against chemicals. T. W. Roy, jr. il Safety Maint & Prod 105:14-16+ My '53

Statistics

Heavy chemicals. Published in weekly numbers of Oil, paint and drug reporter

Inorganics, gases reported for '51. Oil Paint & Drug Rep 163:3+ Ja 5 '53

Transportation

Bulk conveyance of chemicals; railways produce standard wagon. il Chem Age (Lond) 68:461 Mr 21 '53

If you ship process products. S. P. Smith. Chem Eng 60:222-5 Mr '53

Polyethylene shippers gaining favor in chemical industry. il Mod Packaging 27:133-57 O '53

Regulations needed for shipment of hazardous chemicals. Chem & Eng N 31:767 F 23 '53

Resources for the chemical industry in the United States; Mid Atlantic; transportation. O. Swiedler. Ind & Eng Chem 45:520-4 Mr '53

Ship-bottom salesmen; Dow's chartered chemical tanker. il Chem W 71:49 N 8 '52

See also
Carboys
Railroads—Rates—Chemicals

CHEMISORPTION. See Adsorption

CHEMISTRY

Advancing front of chemistry. W. Wardlaw. Engineering 174:484, 517-18 O 10-17 '52

And how is your chemistry? C. Dyster. Chem & Eng N 31:1280-1 Mr 30 '53

Electrical measurements and chemistry. L. Hartshorn. diag Inst E E Proc 100 pt 2: 1-4 F '53; Abstracts. Elec J 149:1341-2 O 31 '52; Elec R (Lond) 151:944 O 31 '52

High-temperature chemistry is still in early infancy. L. Brewer. Chem & Eng N 31: 1972+ My 11 '53

Interrelated interests result in pressures in chemistry today. Chem & Eng N 30:5443 D 29 '52

See also
Acids
Atoms
Biological chemistry
Catalysis
Chemical reaction and other headings beginning Chemical
Chemicals
Chemists
Colloids
Combustion
Crystallization
Crystallography
Dyes and dyeing—Chemistry
Electrochemistry
Electrolysis
Electrolytes
Electrons
Evaporation
Explosives
Fermentation
Food—Chemistry
Gases
Geochemistry
Hydrolysis
Ions
Irreversible processes
Liquids
Metallurgy
Metals
Molecules
Oxidation
Periodic system
Photochemistry
Photographic chemistry
Poisons
Poisons, Industrial
Radioactive substances
Reduction, Chemical
Resonance (chemistry)
Rubber—Chemistry
Rubber, Artificial—Chemistry
Salt
Salts
Solids
Solution (chemistry)
Solvents
Spectrum
Stereochemistry
Synthesis
Textile chemicals
Textile chemistry
Thermochemistry
Waxes
Wood—Chemistry

Bibliography

Book reviews. Chem & Ind p222-35, 1008-24, 257-71 Mr 15, O 18 '52, Mr 21 '53

See also
Chemical abstracts (periodical)

Dictionaries

Do you know these words? B. H. Weil. il Pet Processing 8:553-4, 728, 1051, 1192, 1354, 1545 Ap-My, Jl-O '53 (to be cont)

Van Nostrand chemist's dictionary. J. M. Honig and others, eds. 761p $10 D. Van Nostrand co, 250 4th av, New York 3 '53

Experiments

Friedel-Crafts reaction in elementary organic laboratories. O. L. Wright and others. diag J Chem Educ 29:620-1 D '52

Suggestions for demonstrations. W. S. Lapp. il J Chem Educ 29:611 D '52

History

Naming of names; confusion of names in early history of chemistry. F. E. Wall. bibliog J Chem Educ 30:88-9 F '53

Nomenclature

A.C.S. committee on nomenclature, spelling, and pronunciation. Chem & Eng N 30:4513-26 O 27 '52

Words about words. Chem & Eng N 31:91 Ja 5 '53 [cont monthly]

See also
Chemical literature

Notation

Simple general notations for systems of simultaneous reactions. F. Halla. J Phys Chem 57:599-600 Je '53

Periodicals

Periodica chimica. M. Pflücke and A. Hawelek. 2d ed 411p Akademie-Verlag GmbH, Schiffbauerdamm 19, Berlin NW 7 '52

Study and teaching

Finding and founding future chemists. G. W. Thiessen. J Chem Educ 29:551-2 N '52

First fifty years are the hardest. A. Klock. J Chem Educ 30:40-4 Ja '53

New program to assist teaching chemistry in colleges and universities announced by DuPont. Paint Oil & Chem R 116:6 Ja 15 '53

Reorientation for training chemists as teachers. R. C. Anderson. J Chem Educ 29:562-5 N '52

See also
Chemistry, Analytic—Study and teaching
Chemistry, Inorganic—Study and teaching

Terminology

Too many chemistries? A. M. Patterson. Chem & Eng N 31:462 F 2 '53

CHEMISTRY—*Continued*

Textbooks

Reading difficulty of textbooks for high-school chemistry. G. G. Mallinson and others. bibliog J Chem Educ 29:629-31 D '52

CHEMISTRY, Analytic

ACS Division of analytical chemistry national meeting, Los Angeles; with abstracts of papers. Chem & Eng N 31:1392-5 Ap 6 '53

American chemical society 8th Southwest regional meeting, Little Rock, Ark. Dec. 4-6; abstracts of papers. Anal Chem 24:2015-18 D '52

Analytical methods for industrial wastes; symposium. bibliog diags Anal Chem 24:1872-95 D '52

Chemical institute of Canada Analytical division 5th annual conference, Quebec City, Feb. 23-24. Can Chem Process 37:89-90 Mr '53

Conference on analytical chemistry and applied spectroscopy, Pittsburgh, March 2-6; abstracts of papers. Anal Chem 25:516-30 Mr '53

Electro-optical instrument analyzes chemical streams with infrared. il diag Product Eng 24:174-5 My '53

Fifth annual review of analytical chemistry. bibliog Anal Chem 25:2-74 Ja '53 (reprints 75c)

Ingredients of unknown constitution; 5th annual summer symposium. bibliog il diags Anal Chem 24:1690-728 N '52

International analytical symposium, Birmingham, Sept. 11-12. Chem Age (Lond) 67:495-9, 561-6 O 11, 25 '52

Midlands society for analytical chemistry annual general meeting, 3d, Birmingham, Feb. 5. Chem Age (Lond) 68:449-53 Mr 21 '53

Midlands society for analytical chemistry symposium on organic reagents. Chem Age (Lond) 67:831-5 D 20 '52

Paul E. Wenger. R. E. Oesper. J Chem Educ 30:66-7 F '53

Pittsburgh conference on analytical chemistry, March 2-6; program. Anal Chem 25:358-61 F '53

Practice of analytical chemistry. S. E. Q. Ashley. bibliog Anal Chem 24:1690-2 N '52

Progress in analytical chemistry, 1952. A. J. Nutten. bibliog diag Chem Age (Lond) 68:97-102 Ja 10 '53

Push-button analysis. Chem W 71:40+ N 22 '52

Rôle of the analyst in the electroplating industry; abstract and discussion. K. E. Langford. Chem Age (Lond) 68:277-80 F 14 '53

Simple card index system pinpoints results and progress for large scale sample analysis. Chem & Eng N 31:1919 My 4 '53

Solid phase nucleation and analytical chemistry; abstract. R. A. Johnson. Chem Age (Lond) 67:496-7 O 11 '52

Symposium on analytical chemistry. Chem & Eng N 31:662-4 F 16 '53

Two new process analyzers use infrared. diags Pet Processing 8:602 Ap '53

See also

Assaying
Chromatographic analysis
Colorimetric analysis
Combustion analysis
Electrochemical analysis
Fluorometric analysis
Gas analysis
Gravimetric analysis
Indicators and test papers
Iodometry

Metallurgical analysis
Microanalysis
Mineralogical analysis
Oil analysis
Plants—Chemical analysis
Polarographic analysis
Precipitation
Spectrum analysis
Sugar analysis
Volumetric analysis

also subdivision Analysis under names of substances, e.g.

Acids
Air
Amino acids
Cellulose
Paper

Petroleum
Steel
Water
Wood
Wood pulp

Qualitative

Organic synthesis reactions effective for qualitative analysis; abstract. F. Feigl. Chem & Eng N 31:662 F 16 '53

Quantitative

Quantitative analysis of inorganic compounds by paper chromatography. F. H. Pollard and others. diag Chem Soc J p 1338-41 My '53

See also

Gravimetric analysis
Polarographic analysis
Volumetric analysis

Study and teaching

Instructional error in quantitative analysis. W. J. Blaedel and others. J Chem Educ 29:480 O '52

Some uses of radio service kits in teaching quantitative analysis. J. P. Phillips. J Chem Educ 30:70 F '53

Study and teaching

Motion picture demonstrations in analytical chemistry. R. A. Johnson. J Chem Educ 29:522-3 O '52

See also

Chromatographic analysis—Study and teaching

CHEMISTRY, Inorganic

Electronegativities in inorganic chemistry. R. T. Sanderson. bibliog J Chem Educ 29:539-44 N '52

Study and teaching

Course in inorganic preparations. K. H. Gayer and M. J. Elkind. bibliog J Chem Educ 30:90-3 F '53

CHEMISTRY, Legal

Incriminating stains. C. E. O'Hara and J. W. Osterburg. il Sci Am 188:58-60+ F '53; Discussion. W. F. Meggers. 188:2+; Reply. 4 Ap '53

CHEMISTRY, Medical and pharmaceutical

Medicinal chemistry; C&EN's annual review. R. O. Roblin, jr. Chem & Eng N 31:48-9 Ja 5 '53

Merck adds to New Jersey research facilities. il plan Chem & Eng N 31:2080+ My 18 '53

Nobel awards point to chemistry as key to medical advances. Chem & Eng N 31:155 Ja 12 '53

Review of analytical chemistry; clinical chemistry. R. M. Archibald. Anal Chem 25:2-7 bibliog(131 ref, p6-7) Ja '53

See also

Alkaloids
Aminobenzoic acid
Analgesics
Anesthetics
Anesthetics, Local
Antihistamines
Antispasmodics
Chemotherapy
Disinfection and disinfectants

Drugs
Histamine
Hormones
Immunity
Kellin
Pharmaceutical research
Vaccines
Vitamins

CHEMISTRY, Organic

Action of elementary fluorine upon organic compounds; a new type of reactor and the mild fluorination of carbon disulfide. E. A. Tyczkowski and L. A. Bigelow. bibliog diags Am Chem Soc J 75:3523-6 Jl 20 '53

Association between polysilicic acid and polar organic compounds. R. K. Iler. bibliog J Phys Chem 56:673-7 Je '52

Electro-organic chemical preparations. S. Swann, jr. bibliog Electrochem Soc J 99:219-26 Je '52; Same. Ill U Eng Exp Sta Reprint 50:1-19 '52 (pa 20c)

Studies of some carbon-14 isotope effects in organic chemistry. G. A. Ropp, V. F. Raaen and A. J. Weinberger. bibliog Am Chem Soc J 75:3694-7 Ag 5 '53

Studies of the localization theory of organic reactions; the effects of substituents. R. D. Brown. Chem Soc J p2229-33 Je '52

Year of organic chemistry. J. R. Majer. il Chem Age (Lond) 68:103-9 Ja 10 '53

See also

Acids, Fatty
Alcohols
Aldehydes
Alkaloids
Amines
Carbon

Carbon compounds
Cellulose
Condensation, Chemical
Cyclic compounds
Essential oils

CHEMISTRY, Organic—See also—*Continued*
Esterification
Esters
Ethers
Grignard reagents
Hydrocarbons
Ketones
Methyl group
Polymerization
Proteins
Stereochemistry
Sugars

CHEMISTRY, Physical and theoretical

Adsorption theory and practice are converging. L. Lapidus. bibliog diag Chem Eng 59:164-6 O '52

Colloid science; a chapter in chemistry. E. Rideal. Chem Soc J p2479-87 Jl '52

Colloid science vs. chemistry for rock products. N. C. Rockwood. bibliog Rock Prod 56:73+ Je '53

Recent history of the notion of a chemical species. J. J. Bulloff. bibliog J Chem Educ 30:78-9 F '53

Some current topics in physical chemistry; annual survey. H. Mackle. bibliog Chem Age (Lond) 68:87-96+ Ja 10 '53

See also
Absorption
Adsorption
Atoms
Azeotropes
Catalysis
Catalysts
Chemical bonds
Chemical equilibrium
Chemical reaction
Colloids
Compressibility
Condensation, Chemical
Conjugation (chemistry)
Coordination (chemistry)
Critical constants
Crystallization
Crystallography
Diffusion
Electrochemistry
Electrolysis
Electrolytes
Electrons
Emulsions
Entropy
Equation of state
Evaporation
Fluorescence
Freezing points
Gases
Ionization, Electrolytic
Ionization, Gaseous
Ions
Isotopes
Melting points
Mixtures
Molecular rearrangements
Molecular weights
Molecules
Osmotic pressure
Phase rule and equilibrium
Photochemistry
Polymers
Precipitation
Quantum theory
Resonance (chemistry)
Solids
Solubility
Solution (chemistry)
Stereochemistry
Stoichiometry
Surface tension
Thermodynamics
Valence
Vapor pressure
Wave mechanics

Experiments

Ion exchange experiment for physical chemistry. T. H. Roberts and others. bibliog J Chem Educ 29:545-8 N '52

CHEMISTRY, Technical

ACS Division of industrial and engineering chemistry; symposium on process kinetics. Chem & Eng N 31:246-8 Ja 19 '53

High-speed chemistry. L. P. Lessing. il diags Sci Am 188:29-35 My '53

New processes and technology, 1951-52. il Chem Eng 60:193-206 F '53

See also
Acid resisting materials
Alcohol
Alloys
Ammonia
Bleaching
Cellulose
Cement
Ceramics
Chemical engineering
Chemical industries
Chemical patents
Chemicals
Clay
Coal tar products
Corrosion and anticorrosives
Cosmetics
Cyanide process
Dehydration
Distillation
Drying
Dyes and dyeing—Chemistry
Emulsions
Essential oils
Extraction processes
Fertilizers
Filters and filtration (technical chemistry)
Fuel
Gas
Gas manufacture
Glass manufacture
Glue
Gums and resins
Ion exchangers
Metallurgy
Oils and fats
Ore treatment
Paint
Paper
Paper making
Petroleum—Chemistry
Petroleum distillation
Petroleum refining
Plastic materials
Pottery
Rayon
Refractory materials
Resinous products
Rubber
Rubber—Chemistry
Rubber, Artificial
Soap
Soap, Metallic
Soap manufacture
Solvents
Soybeans
Sugar
Sulfuric acid
Synthesis
Tanning
Tanning materials
Textile fibers, Synthetic
Varnish and varnishing
Vulcanization
Water purification
Wood—Chemistry
Wood preservation

CHEMISTRY students

Encouraging the students already in chemistry to stick with it. A. M. King. Chem & Eng N 31:514-15 F 9 '53

Preliminary returns on ACS survey show freshman class increases. Chem & Eng N 30:5164 D 8 '52

CHEMISTRY teachers

College chemistry teachers conference, Monmouth, Ill. Nov. 14-15; new association. Chem & Eng N 30:5056-7+ D 1 '52

Symposium on the preparation of college chemistry teachers. E. C. Fuller and others. J Chem Educ 29:560-72 N '52

CHEMISTS

Agricultural and food advisory board appointed; sketches and portraits. Chem & Eng N 30:5178-81 D 8 '52

ACS leaders receive honorary degrees at dedication of Pastore laboratory. il Chem & Eng N 31:2204-5 My 25 '53

Chemists in chains; employment contracts. il Chem W 72:23-4 Mr 21 '53

Controversial aspects of the manpower problem; editorial. W. J. Murphy. Chem & Eng N 30:4933+ N 24 '52

Encouraging the students already in chemistry to stick with it. A. M. King. Chem & Eng N 31:514-15 F 9 '53

How well does the chemical profession utilize technical manpower? Chem & Eng N 31:1178-80 Mr 23 '53

Improving the status of the chemist; work of the British association of chemists. Chem Age (Lond) 67:838-40 D 20 '52

Keep an eye on your bright young men, Mr Executive. Chem & Eng N 31:664-5 F 16 '53

Manpower resources in chemistry and chemical engineering. L. M. Sharp and T. R. Shapiro. U S Bur Labor Statistics Bul 1132:1-112; pa 50c Supt. of doc. '53

Occupational mobility of scientists; a study of chemists, biologists and physicists with Ph.D. degrees. T. R. Shapiro. U S Bur Labor Statistics Bul 1121:1-63; pa 35c Supt. of doc. '53

Organic chemist in industry. H. J. Barber. Chem & Ind p61-2 Ja 17 '53; Same. Chem Age (Lond) 68:143-4 Ja 17 '53

See also
American chemical society
Chemical education
Lamb, Arthur Becket
MacGregor, John R.

Public relations

ACS-AIC symposium on public relations for chemists. il Chem & Eng N 31:331-2 Ja 26 '53

Salaries

Chemists' salaries up for beginners in 1953. Oil Paint & Drug Rep 164:4+ Ag 3 '53

Income of ACS members. Chem & Eng N 30:5430-6 D 29 '52

Industrial vies with atomic research for top salaries. Chem & Eng N 31:1304-6 Mr 30 '53

CHEMISTS, American institute of. See American institute of chemists

CHEMISTS, Analytic

Prestige of analytical chemists has increased in recent years. G. L. Royer. Chem & Eng N 31:1414 Ap 6 '53

See also
Society of public analysts and other analytical chemists

CHEMOTHERAPY

Chemotherapy of experimental tuberculosis; the synthesis of acid hydrazides, their derivatives and related compounds. H. L. Yale and others. bibliog Am Chem Soc J 75:1933-42 Ap 20 '53

Chemotherapy of filariasis. J. S. Morley. Chem Soc J p4002-14 O '52

CHEMOTHERAPY—*Continued*
Chemotherapy of tuberculosis; some *N*-substituted nicotinamides and nicotinamidines. J. N. Baxter and J. Cymerman-Craig. Chem Soc J p 1490-3 My '53
Practical approach to chemotherapy; abstract. F. L. Rose. Chem & Ind p 167-8 F 21 '53
See also
Aminobenzoic acid
Pharmaceutical research

CHEMURGIC council, National farm. See National farm chemurgic council

CHEMURGY
See also
Sorbitol

CHENANGO and Unadilla telephone company
Stock offered. Comm & Fin Chr 177:938 Mr 2 '53

CHERRIES
Cherries in molded pulp; tray formed from plaster cast of an actual pack simplifies row-facing of fruit. il Mod Packaging 26:95 O '52

CHESAPEAKE and Ohio railway
Railroad securities. Comm & Fin Chr 177:1449; 178:275 Ap 2, Jl 23 '53
When employee-stockholders go to a meeting. il Bsns W p60-2 My 9 '53

CHICAGO
Central area of Chicago; a re-examination of the process of decentralization. L. Reeder. Land Econ 28:369-73 N '52
Parking; Chicago tackles its problem. P. Hirsch. il plan Pub Works 84:68-70 Ap '53
Pulling Chicago's south side out of its skid. il Bsns W p30-2 My 9 '53
Transportation in Chicago. V. E. Gunlock. Midwest Eng 5:3-4+ S '52
See also
Motor bus lines—Chicago
Wages—Chicago

Bridges

Bascule bridge planned for Chicago will avoid traffic bottleneck. il Eng N 150:42 Ja 1 '53

Galleries and museums

See also
Museum of science and industry, Chicago

Railroads

Parmelee completes a century. il Ry Age 134:132-3 My 18 '53

Rapid transit

What price local transit's future? R. Budd. Pub Util 50:415-23 S 25 '52

Sewerage

Siphons carry sewage under expressway. D. W. Johnson. il diag Pub Works 84:85-6 Ag '53

Streets

Chicago's heroic remedy for traffic. il map Bsns W p 100-4+ My 2 '53
Shoo-fly for Michigan boulevard; heavy-duty detour pavement. il plan Roads & Sts 96:124-5+ My '53
Tolls proposed for expressways. map Roads & Sts 96:53 S '53

Water supply

Chicago prepares site for navy pier filter plant. plan Water & Sewage Works 99:511 D '52
High-rate water filtration at Chicago. Pub Works 84:117-18 F '53
Water works developments in the Chicago area. L. R. Howson. Midwest Eng 5:7-8+ S '52

CHICAGO and eastern Illinois railroad
Railroad securities. Comm & Fin Chr 117:1014 Mr 5 '53

CHICAGO and north western railway
Feucht to succeed Williams as North Western's head. il Ry Age 133:42-3 D 29 '52
Pulling out of red. Barron's 32:19-20 O 13 '52
Railroad securities. Comm & Fin Chr 176:2241; 177:2225 D 11 '52; My 21 '53

CHICAGO and southern air lines, inc.
New giant hopes to invade East. map Bsns W p66+ Ap 18 '53
See also
Airlines—Consolidation

CHICAGO board of trade
With nothing to sell but attitude, he sells it via forums, films, radio; Tony Allison, director of public relations of the Chicago board of trade. Ind Marketing 37:132 N '52

CHICAGO corporation
Low-priced stocks headed for higher levels. J. S. Williams. Mag of Wall St 91:238 N 29 '52

CHICAGO daily news, inc.
Security I like best. H. Blumenthal. Comm & Fin Chr 177:1102+ Mr 12 '53

CHICAGO, Indianapolis and Louisville railway
Security I like best. H. Oetjen. Comm & Fin Chr 178:254 Jl 23 '53
Warren Brown is new Monon chief. Ry Age 134:246 Ja 12 '53

CHICAGO motor coach company
CMC's yardstick operation passes into hands of CTA. E. L. Klein. il Bus Transportation 31:56-9+ N '52

CHICAGO natural history museum
Chicago museum field work. H. B. Harte. Science 116:sup3 D 19 '52

CHICAGO, Rock Island and Pacific railway
Five stocks with record-breaking profits in 1952; with comparative balance sheet items. Mag of Wall St 91:241 N 29 '52
Railroad securities. Comm & Fin Chr 176:2041; 177:2658 N 27 '52, Je 18 '53

CHICAGO transit authority
What price local transit's future? R. Budd. Pub Util 50:415-23 S 25 '52

CHICAGO tribune
Phone girl thwarted Tribune sale to Lawson. Ed & Pub 85:56 N 22 '52

CHICHIBABIN synthesis
Abnormal chichibabin reactions; the condensation of phenylacetaldehyde and homoveratric aldehyde with ammonia. E. L. Eliel, R. T. McBride and S. Kaufmann. bibliog Am Chem Soc J 75:4291-6 S 5 '53

CHIEF JOSEPH dam. See Dams, Concrete

CHILD psychiatry
Special problems of infancy and childhood. F. H. Allen. Ann Am Acad 286:65-73 Mr '53

CHILD study
Study of child development. W. M. Krogman. Science 117:sup 3 Ap 10 '53

CHILD welfare
APHA conference report; handicapped children. Pub Health Rep 68:256-60 F '53
Feeding of mothers and children under emergency conditions. M. M. Heseltine. Pub Health Rep 67:872-5 S '52
State of the Nation's public health services; report on child health and welfare. M. M. Eliot. Pub Health Rep 68:183-7 F '53
See also
Day nurseries

CHILDREN
Histoplasmin and tuberculin sensitivity in Texas infants and children. G. B. Forbes and C. C. Chang. Pub Health Rep 68:320-2 Mr '53

Care and hygiene

Child health protection helps community morale; Well-baby station. M. B. Andrews. il Textile World 103:137+ Ag '53
Cooperative group action by parents of the handicapped. Pub Health Rep 68:127-9 Ja '53
Meeting the health needs of the child. H. C. Stuart. Pub Health Rep 67:1076-9 N '52

Day care

See Day nurseries

Diseases

Cancer in children. Spectator (Endorsement no 1952-1953) 160:18-19 D '52; Nat Underw (Life ed) 56:5 D 5 '52

Hospitals

Le Bonheur children's hospital, Memphis, Tenn. il plans diag Arch Rec 112:113-20 D '52

CHILDREN—*Continued*

Law

Minors or trusts as members of partnerships. L. B. Brown. Trusts & Estates 92:181-2 Mr '53

CHILDREN'S hospitals. See Children—Hospitals

CHILDREN'S literature

Children's books; science for younger readers. J. R. Newman. Sci Am 187:78-83 D '52

CHILE

See also

Agriculture—Chile
Copper mines and mining—Chile
Petroleum industry and trade—Chile

Economic conditions

Economic conditions abroad (cont). For Comm W 48:3 N 17 '52

Economic relations

No ally for Peron. Bsns W p 145 F 28 '53

Geology

Geology of the Chuquicamata orebody. V. D. Perry. il map diag Min Eng 4:1166-8 D '52

CHIMNEYS

Basic power plant figuring; how to figure size and mechanical design of natural-draft chimneys. W. H. Engelman. diags Power Eng 56:75-7 D '52

Case of the vibrating stack. D. J. Bergman. Midwest Eng 5:11-12 My '53

Chimney liners. D. L. Drake. Am Gas Assn Proc 1952:425-8

Design of chimneys for odor dispersion. F. L. Cate. Tappi 36:225-8 My '53

Field testing of stack-dust emission needs simplifying. il diags Power 97:76-7 Ag '53

Glass-lined stack. il Steel 132:136 Je 22 '53

Heat supplied to I-B-R research home from the inside chimney. W. S. Harris and R. J. Martin. il plans diags Ill U Eng Exp Sta Bul 407:1-45 '53 (pa 50c); Excerpts. Heating-Piping 25:131-7 My '53

How to figure chimney sway graphically. P. Rogers. diags Power Eng 57:92-3 Ap '53

How to keep from blowing your stack. Westinghouse Eng 13:78 Mr '53

How to pick most economical chimney size. J. G. Mingle. Power Eng 57:108+ Ap '53; Excerpt. Power 97:103 F '53

Is this stack the right size? il diags Power 97:135-6+ Je '53

Properly-sized chimneys aid smoke control. J. G. Mingle. Power Eng 57:82-3+ Mr '53

CHIMNEYS, Concrete

Standards

Proposed standard specification for the design and construction of reinforced concrete chimneys; reported by ACI committee 505. diags Am Concrete Inst J 24:353-400 Ja '53

CHIMNEYS, Steel

Chuquicamata sulphide plant; smelter stacks. C. W. Dunham. il diags Min Eng 4:1198-200 D '52

CHINA

China handbook, 1952-53. 632p $6.50 Pierce book co, 126 Liberty st, New York 6 '52

See also

Communism—China
Land tenure—China
Wool trade—China

Commerce

Chinese trade puzzle. Economist 165:826-7 D 20 '52

Crackdown on China trade? Bsns W p 128-30 My 30 '53

Japan bucks at trade barriers; businessmen lobby for more China trade. Bsns W p 112-13 N 29 '52

Pig bristle war. Bsns W p 105-6 F 7 '53

Plugging the leaks in China trade. Economist 166:789 Mr 21 '53

Traffic with Communist China. Economist 166:614-16 Mr 7 '53

Economic policy

Chinese down to earth. Economist 166:347 F 7 '53

Dilemmas for Peking. Economist 167:231-2 Ap 25 '53

Foreign relations

Crackdown on China trade? Bsns W p128-30 My 30 '53

Is China a great power? A. DeConde. il U S Naval Inst Proc 79:23-37 Ja '53

Plugging the leaks in China trade. Economist 166:789 Mr 21 '53

Truce through Chinese eyes. Economist 167:744-5 Je 13 '53

Russia

Far Eastern future. map Economist 165:870-2 D 27 '52

Politics and government

Chinese seat in Uno; political and legal aspects. Economist 167:449-50 My 16 '53

Formosa to the fore; red threat to southeast Asia. F. Morley. map Barron's 33:5-6 My 11 '53

Mao Tse-tung's road to power; review of Documentary history of Chinese communism, by C. Brandt, B. Schwartz and J. K. Fairbank. Economist 165:177-8 O 18 '52

Other side of the truce; must peace in Asia finally lose China to communism? J. Chamberlain. Barron's 33:5+ Ap 6 '53

Taiping rebellion

Frederick Townsend Ward, the mandarin from Salem. R. O. Patterson. il U S Naval Inst Proc 79:156-67 F '53

CHINAWARE. See Pottery; Tableware

CHINTZ

Chintz; polymerizable resins applied in thin layers, preferably by printing; patent. diags Am Dyestuff Rep 42:17 Ja 5 '53

CHIPPER knives. See Knives, Chipper

CHLADNI figures

Nodal pattern analysis. B. Grinstead. bibliog il diags Inst Mech Eng Proc (A) 166 no 3:309-21 '52; Discussion. 166 no 3:322-6 '52; 167 no 2:174-6 '53

CHLORAL

Chlorination of ethyl alcohol; studies by Rhode Island state college. Chem Age (Lond) 67:661-3 N 15 '52

CHLORAMINE

Chloramines as a source of iodine chloride; the preparation of iodo-phenols, -naphthols, and -aromatic ethers by means of a chloramine and an iodide. B. Jones and E. N. Richardson. Chem Soc J p713-15 F '53

Infrared spectra and structure of the chloramines and nitrogen trichloride. G. E. Moore and R. M. Badger. bibliog Am Chem Soc J 74:6076-80 D 5 '52

CHLORAMPHENICOL. See Chloromycetin, Analogs of

CHLORATES

Thermal decomposition of chlorate-chloride mixtures. A. V. Bosch and A. H. W. Aten, jr. Am Chem Soc J 75:3835-6 Ag 5 '53

CHLORDANE

Chlordane for household insecticides. Soap & San Chem 28:147+ N '52

Physiological effect

Chronic oral toxicity of chlordan to rats. L. Ingle. A M A Archives Ind Hygiene & Occup Med 6:357-67 O '52

Toxicological and pharmacological studies on chlordane. A. M. Ambrose and others. A M A Archives Ind Hygiene & Occup Med 7:197-210 Mr '53

CHLORELLA

High-temperature strain of chlorella. C. Sorokin and J. Myers. Science 117:330-1 Mr 27 '53

CHLORIDES

Allylic chlorides; the hydrochlorination products of 2,3-dimethyl-1,3-butadiene. L. F. Hatch and G. E. Journeay. bibliog Am Chem Soc J 75:3712-14 Ag 5 '53

Dealkalization, without acid; chloride anion exchanger. diags Power Eng 57:68+ Mr '53

Determination of electrokinetic charge and potential by the sedimentation method; silica in some aqueous chloride solutions. C. I. Dulin and G. A. H. Elton. Chem Soc J p 1168-72 Ap '53

Halogen derivatives of phenyl styryl ketone; bromo- and chloro-derivatives. R. D. Abell and W. Siddall. Chem Soc J p2804-7 S '53

CHLORIDES—*Continued*

Impact deposition of atmospheric sea salts on a test plate. A. H. Woodcock. bibliog il diags Am Soc T M Proc 50:1151-60; Discussion. 1161-6 '50

Magnetic properties of some anhydrous chlorides. N. Elliott. bibliog J Chem Phys 21:890-1 My '53

Mechanism of hydrolysis of acid chlorides; salt effects. B. L. Archer, R. F. Hudson and J. E. Wardill. diag Chem Soc J p888-93 Mr '53

Mechanism of hydrolysis of acid chlorides; the effect of *p*-substituents in 95 per cent aqueous acetone. D. A. Brown and R. F. Hudson. Chem Soc J p883-7 Mr '53

Nuclear quadrupole resonance in some metal chlorides and oxychlorides. H. G. Dehmelt. J Chem Phys 21:380 F '53

Preparation of *cyclo*pentenones from the products of interaction of acid chlorides and olefins. G. Baddeley, H. T. Taylor and W. Pickles. Chem Soc J p 124-6 Ja '53

Properties of the acidocobaltammines; the chlorotriammine series. R. G. Yalman and A. B. Lamb. bibliog Am Chem Soc J 75:1521-3 Ap 5 '53

Reactions of aliphatic acid chlorides. N. O. V. Sonntag. Chem R 52:237-416 bibliog(p399-416) Ap '53

Rearrangement of halotropones; chloride exchange in tribromotropolone. W. V. Doering and L. H. Knox. bibliog Am Chem Soc J 74:5683-7 N 20 '52

Relative reactivities of organic halides in displacement reactions; allylic chlorides. S. Oae and C. A. VanderWerf. bibliog Am Chem Soc J 75:2724-5 Je 5 '53

Steric strains as a factor in the solvolytic reactions of neopentyldimethyl and dineopentylmethylcarbinyl chlorides. H. C. Brown and H. L. Berneis. bibliog Am Chem Soc J 75:10-14 Ja 5 '53

Studies on 4-hydroxycoumarins; the reaction of 4-hydroxycoumarin with aromatic acid chlorides. H. R. Eisenhauer and K. P. Link. bibliog Am Chem Soc J 75:2046-9 My 5 '53

Thermal decomposition of chlorate-chloride mixtures. A. V. Bosch and A. H. W. Aten, jr. Am Chem Soc J 75:3835-6 Ag 5 '53

Transformations of organic nitrogen base iodide and bromide salts to chlorides. A. P. Phillips and R. Baltzly. Am Chem Soc J 74:5231-2 O 20 '52

Uncatalyzed reaction of olefins with acyl chlorides; reaction of 1 : 1-diphenylethylene. F Bergmann, S. Israelashvili and D. Gottlieb. Chem Soc J p2522-5 Jl '52

See also

Silver chloride

Analysis

Determination of small amounts of chlorides in titanium sponge. M. Codell and J. J. Mikula. bibliog Anal Chem 24:1972-3 D '52

CHLORINATED rubber. See Rubber—Chlorination

CHLORINATION

Analytical chemistry of niobium and tantalum; atmospheric chlorination of hydrolyzed oxide precipitates. C. F. Hiskey, L. Newman and R. H. Atkinson. diags Anal Chem 24:1988-91 D '52

Anhydrous chlorination of thioesters and related compounds. I. B. Douglass and C. E. Osborne. Am Chem Soc J 75:4582-3 S 20 '53

Chlorination of 1,1-difluoroethane and 1-chloro-1,1-difluoroethane. J. T. Barr, J. D. Gibson and R. H. Lafferty, jr. Am Chem Soc J 74:4945-6 O 5 '52

Chlorination of ethyl alcohol; studies by Rhode Island state college. Chem Age (Lond) 67:661-3 N 15 '52

Chlorination of fluorine-containing alcohols. E. T. McBee, O. R. Pierce and W. F. Marzluff. bibliog Am Chem Soc J 75:1609-10 Ap 5 '53

Dichlorination of *o*-xylene. C. Boyars. bibliog Am Chem Soc J 75:1989-90 Ap 20 '53

High temperature chlorination of various mono- and dichloropropenes. G. W. Hearne and others. Am Chem Soc J 75:1392-4 Mr 20 '53

Mechanism of the low temperature chlorination of isobutylene. W. Reeve, D. H. Chambers and C. S. Prickett. bibliog Am Chem Soc J 74:5369-71 N 5 '52

Nucleotides; *N*-chloroamides as reagents for the chlorination of diesters of phosphorous acid; a new synthesis of uridine-5′ pyrophosphate. G. W. Kenner, A. R. Todd and F. J. Weymouth. Chem Soc J p3675-81 O '52

ω-Chlorination of anisoles; abstract and discussion. H. E. Akerman and others. Chem & Ind p236 Mr 14 '53

Partial additive chlorination of the benzene ring; the isomers of benzene tetrachloride. H. D. Orloff and others. bibliog diags Am Chem Soc J 75:4243-9 S 5 '53

Photochlorination of methyl chloroformate in the gas phase. J. H. Brandy and D. J. Le Roy. J Chem Phys 21:1049-53 Je '53

Simultaneous vicinal dichlorination. E. Campaigne, W. Thompson and J. R. Leal. bibliog Am Chem Soc J 72:629-30; 75:230-1 Ja '50, Ja 5 '53

Vapor phase heat of chlorination of diborane. J. R. Lacher, R. E. Scruby and J. D. Park. bibliog Am Chem Soc J 74:5292-4 N 5 '52

See also

Rubber—Chlorination

Sewage disposal—Chlorination

Water pipes—Sterilization

Water purification—Chlorination

CHLORINE

Chlorine bleaching. E. R. Barker, jr. il Paper Tr J 135:253-4+ N 14 '52

Chlorine bleaching. J. C. Cousins. diags Paper Tr J 135:258+ N 14 '52

Chlorine distributor expands market; buys a tank car, sells by cylinders. il Chem W 71:46-8 N 22 '52

Chlorine pure quadrupole resonances. D. W. McCall and H. S. Gutowsky. J Chem Phys 21:1300 Jl '53

Chlorine shortage is over. il Chem Eng 60:192-3 Mr '53

Engineering approach to sales; case history of chlorine and caustic. M. E. Clark. maps Chem Eng Prog 48:643-6 D '52

Equilibria in aqueous systems containing Sr^{2+}, K^+, Na^+ and Cl^-. G. O. Assarsson. bibliog J Phys Chem 57:207-10 F '53

Explosions in chlorine absorption systems. E. A. Mason and others. bibliog diags Tappi 36:274-8 Je '53

Free energies and entropies of hydrogen, chlorine and hydrogen chloride from spectroscopic data. R. H. Sherman and W. F. Giauque. bibliog Am Chem Soc J 75:2007-8 Ap 20 '53

Fundamental principles of handling chlorine. V. W. Langworthy. il diags Water & Sewage Works 100:234-8, 318-22, 361-4 Je, Ag-S '53

New nuclides produced in chlorine spallation. M. Lindner. Phys R 91:642-4 Ag 1 '53

Presence of free chlorine in sodium chloride crystals containing color centers and color center precursors. M. Hacskaylo and others. bibliog J Chem Phys 21:1434-5 S '53

Reactions of trimethylene sulfide with chlorine and bromine. J. M. Stewart and C. H. Burnside. bibliog Am Chem Soc J 75:243-4 Ja 5 '53

Studies of *N*-halogeno-compounds; the reaction between ammonia and chlorine in aqueous solution, and the hydrolysis constants of chloroamines. R. E. Corbett, W. S. Metcalf and F. G. Soper. Chem Soc J p 1927-9 Je '53

Total cross sections of chlorine, sodium, titanium, and bromine for fast neutrons. H. R. Dvorak and R. N. Little, jr. bibliog diag Phys R 90:618-22 My 15 '53

Total neutron cross sections of chlorine and carbon. R. M. Kiehn and others. bibliog Phys R 91:66-7 Jl 1 '53

Total neutron cross sections of gold, chlorine, and phosphorus. S. C. Snowdon and W. D. Whitehead. bibliog Phys R 90:615-18 My 15 '53

Analysis

Combustion techniques for the determination of residues of highly chlorinated pesticides by total chlorine analysis. E. J. Agazzi, E. D. Peters and F. R. Brooks. bibliog diags Anal Chem 25:237-40 F '53

Determination of residual chlorine in metal finishing wastes. H. C. Marks and N. S. Chamberlin. bibliog Anal Chem 24:1885-7 D '52

CHLORINE—*Continued*

Isotopes

Chlorine isotope separation by thermal diffusion. A. Z. Kranz and W. W. Watson. bibliog diags Phys R 91:1469-72 S 15 '53

Correlation of Cl^{35} nuclear quadrupole coupling frequencies with Hammett's sigma. H. C. Meal. bibliog Am Chem Soc J 74:6121-2 D 5 '52

Energy levels in A^{38} from the $Cl(\alpha,p)$ reaction. A. Z. Kranz and W. W. Watson. bibliog Phys R 91:1472-3 S 15 '53

Investigation of the beta-spectra of Be^{10}, K^{40}, Tc^{99}, and Cl^{36}. L. Feldman and C. S. Wu. bibliog il diag Phys R 87:1091-6 S 15 '52

Microwave spectra, structure, dipole moment, and chlorine nuclear quadrupole coupling constants of methylene chloride. R. J. Myers and W. D. Gwinn. bibliog J Chem Phys 20:1420-7 S '52

Neutron capture gamma-rays in cadmium, cobalt, and chlorine. W. A. Reardon and others. il diags Phys R 91:334-7 Jl 15 '53

Nuclear quadrupole resonance in some metal chlorides and oxychlorides. H. G. Dehmelt. J Chem Phys 21:380 F '53

Pure quadrupole spectra of solid chloroacetic acids and substituted chloroacetic acids. H. C. Allen, jr. bibliog Am Chem Soc J 74:6074-6 D 5 '52

Short-lived radioisotopes P^{28} and Cl^{32}. N. W. Glass and others. Phys R 90:320 Ap 15 '53

Manufacture

Chlor-alkali industry, 1902-52. D. O. Hubbard. Electrochem Soc J 99:sup307C-9C N '52

How this alkali plant grew with Canada; Canadian industries limited at Windsor. il Can Chem Process 37:31+ Ja '53

Influence of impurities in the electrolyte in chlorine-caustic electrolysis by the mercury cell process; investigation of the influence of metallic impurities upon the decomposition rate of sodium amalgam. G. Angel and others. bibliog Electrochem Soc J 99:435-46; 100:39-44 N '52, Ja '53

More chlorine for U.S. goal of new plant; pictorial presentation. Chem & Eng N 31:258-9 Ja 19 '53

New chemical works; electrolytic process for producing chlorine and caustic soda from brine; Murgatroyd's salt & chemical co. il Elec R (Lond) 151:423-9 Ag 29 '52

New pattern for chlor-alkali. J. Gordon. Chem W 72:28-36+ Ap 4 '53

Trend to bigger cells; Hooker deposited-diaphragm cells. il diags Chem Eng 59:234+ N '52

Wanted; chlorine without caustic. J. Gordon. bibliog diags Chem Eng 60:187-93 My '53

Safety measures

Chlorine; hazards and precautions; data sheet. bibliog il Nat Safety N 68:36-7+ S '53

These check points build chlorine safety. H. J. Eichenhofer. il Power 97:112-13 Je '53

CHLORINE, Liquid

Bulk storage of liquid chlorine at San Francisco sewage plants. B. Benas. il diags Water & Sewage Works 100:381-5 O '53

Fundamental principles of handling chlorine. V. W. Langworthy. il diags Water & Sewage Works 100:234-8 Je '53

Recommended procedures in the use of chlorine at water and sewage plants. Am Water Works Assn J 45:1060-74 O '53; Same. Sewage & Ind Wastes 25:1235-49 O '53; Same cond. Water & Sewage Works 100:390-4 O '53 (to be cont)

Stationary storage of liquid chlorine. A. S. Woodward and L. L. Hedgepeth. Am Water Works Assn J 45:738-44 Jl '53; Same. Water & Sewage Works 100:310-13 Ag '53

CHLORINE compounds

Chloro-substituted unsaturated alkylmercapto thiazoles. J. J. D'Amico. Am Chem Soc J 75:681-2 F 5 '53

Dielectric constant of some chlorine derivatives of ethane in the liquid and the solid states. M. Yasumi and M. Shirai. J Chem Phys 20:1325-6 Ag '52

Direct method for the preparation of some α-chloro-carboxylic esters, and notes on other α-halogeno-carboxylic esters. A. D. Campbell and D. R. D. Shaw. Chem Soc J p5042-3 D '52

Organic fluorides; the synthesis of some aromatic fluoro- and chloro-compounds. L. V. Johnson and others. Chem Soc J p4710-13 D '52

Pure quadrupole spectra of solid chlorine compounds. R. Livingston. bibliog J Phys Chem 57:496-501 My '53

Synthesis and reactions of chlorinated 3-ketosteroids. J. J. Beereboom and others. bibliog Am Chem Soc J 75:3500-5 Jl 20 '53

CHLORINE dioxide. See Chlorine oxides

CHLORINE fluorides

Determination of the surface tension and viscosity of liquid chlorine trifluoride. A. A. Banks, A. Davies and A. J. Rudge. diags Chem Soc J p732-5 Mr '53

Halogenation in the liquid phase by chlorine trifluoride; the reaction with benzene derivatives and with carbon tetrachloride. J. F. Ellis and W. K. R. Musgrave. Chem Soc J p 1063-7 Ap '53

Microwave spectrum and structure of chlorine trifluoride. D. F. Smith. bibliog J Chem Phys 21:609-14 Ap '53

Structures of the interhalogen compounds; chlorine trifluoride at -120°C. R. D. Burbank and F. N. Bensey. bibliog diags J Chem Phys 21:602-8 Ap '53

Thermodynamic properties of chlorine trifluoride. A. Weber and S. M. Ferigle. J Chem Phys 20:1497 S '52

CHLORINE oxides

Bleaching with chlorine dioxide. W. D. Harrison. Tappi 36:sup 142A-5A My '53

Chlorine dioxide for odor control. E. R. Woodward. bibliog il diags Tappi 36:216-21 My '53

Chlorine dioxide for pulp bleaching. V. Woodside and K. S. MacLeod. bibliog il diag Paper Tr J 137:26-31 Ag 21 '53

Chlorine dioxide generation by reduction of sodium chlorate with sulphur dioxide. J. B. Heitman. bibliog flow diag il Tappi 36:419-23 S '53

Infrared spectrum of chlorine dioxide. A. H. Nielsen and P. J. H. Woltz. bibliog J Chem Phys 20:1878-83 D '52

Interaction of chlorine dioxide with flour; abstract. T. Moran and others. Food Eng 25:156-7 My '53

Manufacture and properties of chlorine dioxide. E. Kesting. il diags Tappi 36:166-71 Ap '53

Use of chlorine dioxide for bleaching in nonintegrated paper mills. H. R. Murdock. Tappi 36:sup 146A-7A F '53

Uses of chlorine dioxide and chlorites in pulp and paper. F. Casciani. bibliog(108 ref) Paper Tr J 136:21-5 Mr 6 '53

Vibration potential function of the ClO_2 molecule. J. Duchesne and A. H. Nielsen. bibliog diag J Chem Phys 20:1968-9 D '52

CHLORITE (mineral)

Chlorite-calcite pseudomorphs after orthoclase phenocrysts, Ray, Ariz. G. M. Schwartz. bibliog diag Econ Geol 47:665-72 S '52

CHLORITES

New developments in the chemistry of chlorites; abstract. Meybeck. Am Dyestuff Rep 41:890 D 22 '52

Uses of chlorine dioxide and chlorites in pulp and paper. F. Casciani. bibliog(108 ref) Paper Tr J 136:21-5 Mr 6 '53

CHLOROACETIC acid

Polarographic behavior of organic compounds; chloroacetic acids and their ethyl esters; *p*H-independence of carbon-halogen bond fission; wave splitting due to buffer interaction. P. J. Elving and C. Tang. bibliog Am Chem Soc J 74:6109-12 D 5 '52

Pure quadruple spectra of solid chloroacetic acids and substituted chloroacetic acids. H. C. Allen, jr. bibliog Am Chem Soc J 74:6074-6 D 5 '52

CHLOROACETONE. See Chloropropanone

CHLOROACETOPHENONE

Kinetics of the base-catalyzed condensation of benzaldehyde with phenacyl chloride. M. Ballester and P. D. Bartlett. bibliog Am Chem Soc J 75:2042-3 My 5 '53

CHLOROACETOVANILLONE

Syntheses of 5- and 6-chloroacetovanillone. J. E. Jayne. bibliog Am Chem Soc J 75:1742-3 Ap 5 '53

CHLOROACETYL chloride

Rotational isomers of chloroacetyl chloride, bromoacetyl chloride, and bromoacetyl bromide. I. Nakagawa and others. bibliog J Chem Phys 20:1720-4 N '52

CHLOROALKYL quinones

Quinones; chloroalkylation. R. H. Thomson. Chem Soc J p 1196-9 Ap '53

CHLOROANILINE

Studies in peroxidase action; the oxidation of *p*-chloroaniline; a reaction involving dechlorination. D. G. H. Daniels and B. C. Saunders. Chem Soc J p822-6 Mr '53

CHLOROBENZENE

Correlation of Cl^{35} nuclear quadrupole coupling frequencies with Hammett's sigma. H. C. Meal. bibliog Am Chem Soc J 74:6121-2 D 5 '52

Four ternary liquid systems involving monochlorobenzene; phase equilibria and tie line data. J. S. Peake and K. E. Thompson, jr. bibliog Ind & Eng Chem 44:2439-41 O '52

Homolytic aromatic substitution; ratio of isomerides formed in the phenylation of chlorobenzene; competitive experiments on the phenylation of *p*-dichlorobenzene and 1 : 3 : 5-trichlorobenzene; partial rate factors for chlorobenzene. D. R. Augood, D. H. Hey and G. H. Williams. Chem Soc J p44-50 Ja '53

Rearrangement in the reaction of chlorobenzene-1-C^{14} with potassium amide. J. D. Roberts and others. bibliog Am Chem Soc J 75:3290-1 Jl 5 '53

CHLOROBENZOIC acid

Hydrolysis of substituted *o*-chlorobenzoic acids; the mechanism of the reaction between *o*-halogenobenzoic acids and nucleophilic reagents. A. A. Goldberg. Chem Soc J p4368-73 N '52

Local anesthetics; aminoesters of chlorobenzoic and chlorocinnamic acids. E. R. Andrews, M. G. Van Campen and E. L. Schumann. bibliog Am Chem Soc J 75:4003-6 Ag 20 '53

CHLOROBENZOPHENONE

Polarography of *p*-chlorobenzophenone and xanthone. R. A. Day, jr. and R. E. Biggers. Am Chem Soc J 75:738-9 F 5 '53

CHLOROBROMOMETHANE. See Bromochloromethane.

CHLOROCINNAMIC acid

Local anesthetics; aminoesters of chlorobenzoic and chlorocinnamic acids. E. R. Andrews, M. G. Van Campen and E. L. Schumann. bibliog Am Chem Soc J 75:4003-6 Ag 20 '53

CHLOROCINNOLINE

Cinnolines; the nature of the $C_{(3)}$-position; the synthesis of 3-methyl-, 3-chloro-, and 3-bromo-cinnoline; also, of cinnoline and the *Bz*-nitrocinnolines. E. J. Alford and K. Schofield. Chem Soc J p609-12 F '53

CHLORO compounds. See Chlorine compounds

CHLOROCOPROSTANE

Steroids and Walden inversion; acetolysis of the coprostanyl halides. R. J. Bridgewater and C. W. Shoppee. Chem Soc J p 1709-15 Je '53

CHLOROCYCLOHEXANOL

Stereochemistry of the reactions of *cis*- and *trans*-2-chlorocyclohexanol with thionyl chloride. H. C. Stevens and O. Grummitt. bibliog Am Chem Soc J 74:4876-9 O 5 '52

CHLORODIBROMOMETHANE. See Dibromochloromethane

CHLORODIFLUOROETHANE

Chlorination of 1,1-difluoroethane and 1-chloro-1,1-difluoroethane. J. T. Barr, J. D. Gibson and R. H. Lafferty, jr. Am Chem Soc J 74:4945-6 O 5 '52

CHLORODIFLUOROETHYLENE

Infrared and Raman spectra of fluorinated ethylenes; 1,1-difluoro-2-chloroethylene. J. R. Nielsen and others. bibliog J Chem Phys 20:1090-4 Jl '52

CHLORODIFLUOROMETHANE

Viscosity of lubricating oil-Freon-22 mixtures. J. L. Little. diags Refrig Eng 60:1191-5 N '52; Discussion. 61:62+ Ja '53

CHLOROETHANE

Determination of some chlorine-substituted methanes and ethanes; infrared and mass spectrometric determination. R. B. Bernstein, G. P. Semeluk and C. B. Arends. bibliog Anal Chem 25:139-42 Ja '53

CHLOROETHYLAMINE

See also

Nitrogen mustards

CHLOROETHYLANILINE

Aryl-2-halogenoalkylamines; some carboxylic derivatives of *NN*-di-2-chloroethylaniline. J. L. Everett, J. J. Roberts and W. C. J. Ross. Chem Soc J p2386-92 Ag '53

CHLOROETHYLENE

See also

Trichloroethylene

CHLOROFLUOROMETHANES

Electron distribution in molecules; proton and fluorine magnetic resonance shifts in the halomethanes. L. H. Meyer and H. S. Gutowsky. bibliog il J Phys Chem 57:481-6 My '53

Heat conductivity of Freon; abstract. L. Cherneyeva. Refrig Eng 61:50 Ja '53

Microwave spectrum and structure of chlorofluoromethane. N. Muller. bibliog Am Chem Soc J 75:860-3 F 20 '53

Operating engineer looks at the common refrigerants. E. L. Forbes. Refrig Eng 60:1182-4+ N '52

CHLOROFORM

Absorption of 3.3-cm microwaves in chloroform and ethylene dichloride in the liquid state. S. C. Sirkar and D. K. Ghosh. J Chem Phys 21:1614-15 S '53

Chemical effects produced in chloroform by γ-rays. J. W. Schulte, J. F. Suttle and R. Wilhelm. bibliog Am Chem Soc J 75:2222-7 My 5 '53

Distribution of 8-quinolinol between water and chloroform as a function of *p*H. T. Moeller and F. L. Pundsack. Am Chem Soc J 75:2258-9 My 5 '53

Rotation vibration bands of some symmetric top molecules under high resolution. T. A. Wiggins and others. bibliog J Chem Phys 21:1368-73 Ag '53

Sensitivity of male dba mice to the toxicity of chloroform as a laboratory hazard. P. Shubik and A. C. Ritchie. Science 117:285 Mr 13 '53

Substituted methanes; infrared spectral data for deuterotrichloromethane. R. B. Bernstein and others. J Chem Phys 20:1979 D '52

Substitution in polymethylbenzenes; the course of the nitration of durene in sulfuric acid-chloroform mixtures. G. Illuminati and M. P. Illuminati. bibliog Am Chem Soc J 75:2159-61 My 5 '53

Analysis

Determination of some chlorine-substituted methanes and ethanes; infrared and mass spectrometric determination. R. B. Bernstein, G. P. Semeluk and C. B. Arends. bibliog Anal Chem 25:139-42 Ja '53

CHLOROHYDRINS

Kinetics of chlorohydrin formation; the reaction between hypochlorous acid and ethyl crotonate in the presence of sodium acetate-acetic acid buffers of constant pH. K. D. Reeve and G. C. Israel. Chem Soc J p2327-31 Je '52

Some derivatives of *cis*-1 : 2 : 3 : 6-tetrahydrophthalic anhydride. J. E. Gill and J. Munro. Chem Soc J p4630-2 D '52

CHLOROIODIDES

Study of chloroiodides of silicon, tin and germanium using the Raman spectra as proof of equilibria. M. L. Delwaulle, M. B. Buisset and M. Delhaye. bibliog Am Chem Soc J 74:5768-70 N 20 '52

CHLOROIODOPHENOXYACETIC acid

4-Chloro-2-iodophenoxyacetic acid labelled with ^{131}I. R. L. Jones. diag Chem Soc J p4080-2 O '52

CHLORO-IPC. See Weeds—Control

CHLOROISOPROPENYLPHENOL

Condensation products of phenols and ketones; dimerides of 4-chloro- and 4-bromo-2-*iso*propenylphenol. W. Baker and others. Chem Soc J p3796-8 O '52

CHLOROISOPROPYLPHENYLCARBAMATE

Effect of 3-chloro-isopropyl-N-phenyl carbamate on abscission of young fruits of peach. P. C. Marth and V. E. Prince. bibliog Science 117:497-8 My 8 '53

CHLOROMANDELIC acid

Determination of zirconium in steels using *p*-bromo- or *p*-chloromandelic acid. J. J. Klingenberg and R. A. Papucci. bibliog Anal Chem 24:1861-2 N '52

CHLOROMETHANE

Centrifugal distortion effects in methyl chloride. T. Chang and D. M. Dennison. bibliog J Chem Phys 21:1293 Jl '53

Crystal structure of methyl chloride at -125°. R. D. Burbank. bibliog diags Am Chem Soc J 75:1211-14 Mr 5 '53

Death after repeated exposures to refrigerant gases. J. Mendeloff. bibliog il AMA Archives Ind Hygiene & Occup Med 6:518-24 D '52

Determination of some chlorine-substituted methanes and ethanes; infrared and mass spectrometric determination. R. B. Bernstein, G. P. Semeluk and C. B. Arends. bibliog Anal Chem 25:139-42 Ja '53

Electron impact studies in CH_4, CH_3Cl, CH_3Br and CH_3I. H. Branson and C. Smith. bibliog Am Chem Soc J 75:4133-8 S 5 '53

Heat transfer film coefficients for refrigerants boiling inside tubes. M. Baker and others. bibliog flow diag diag Refrig Eng 61:986-91; Discussion. 991 S '53

Ionisation of tri-*p*-tolylmethyl chloride in nitroalkanes. A. Bentley and A. G. Evans. Chem Soc J p3468-73 S '52

Molecular orbital treatment of the ionization equilibria of triarylchloromethanes. A. Streitwieser, jr. bibliog Am Chem Soc J 74:5288-90 N 5 '52

Operating engineer looks at the common refrigerants. E. L. Forbes. Refrig Eng 60: 1182-4+ N '52

Pure quadrupole spectra; aliphatic chlorine compounds. R. Livingston. J Chem Phys 20: 1170-1 Jl '52

CHLOROMETHANE poisoning

Death after repeated exposures to refrigerant gases. J. Mendeloff. bibliog il A M A Archives Ind Hygiene & Occup Med 6:518-24 D '52

CHLOROMETHYL butane

Solvolysis rates of some deuterated tertiary amyl chlorides. V. J. Shiner, jr. bibliog Am Chem Soc J 75:2925-9 Je 20 '53

CHLOROMETHYL propane

Electron diffraction investigation of the molecular structures of 1,1,1-trichloroethane, 2,2-dichloropropane and 2-chloro-2-methylpropane. J. W. Coutts and R. L. Livingston. bibliog Am Chem Soc J 75: 1542-7 Ap 5 '53

CHLOROMETHYLATION

Chloromethylation of eugenol and the preparation of some new *iso*quinoline bases. G. R. Clemo and R. W. Temple. Chem Soc J p678-83 F '53

Chloromethylation of polystyrene. G. D. Jones. bibliog Ind & Eng Chem 44:2686-93 N '52

CHLOROMYCETIN

Chloromycetin (chloramphenicol) related compounds; some tertiary alcohols. M. C. Rebstock and A. C. Moore. bibliog Am Chem Soc J 75:1685-8 Ap 5 '53

Chloromycetin plant; Parke-Davis co. il Engineer 194:431-2 S 26 '52

Stereochemistry of the β-phenylserines; characterization of allophenylserine. K. N. F. Shaw and S. W. Fox. bibliog Am Chem Soc J 75:3417-21 Jl 20 '53

CHLOROMYCETIN, Analogs of

Potential antivirals; simple analogs of chlorophenicol (chloromycetin). A. P. Phillips. Am Chem Soc J 74:6125-7 D 5 '52

Potential antivirals; simple analogs of chloramphenicol (chloromycetin); assorted 2,5-dimethoxyphenethylamides. A. P. Philips. Am Chem Soc J 75:3621-2 Ag 5 '53

CHLORONAPHTHALENE

Experimental production of hyperkeratosis (X disease) of cattle with a chlorinated naphthalene. D. Sikes and M. E. Bridges. bibliog il Science 116:506-7 N 7 '52

CHLORONITROBENZENE

Comparative activation of nucleophilic substitution in 4-substituted-2-nitrochlorobenzenes. J. F. Bunnett and others. bibliog Am Chem Soc J 75:642-5 F 5 '53

CHLORONITROPROPANE

Dielectric dispersion in the microwave region of six tetrasubstituted methanes in the solid state. J. G. Powles and others. bibliog diags J Chem Phys 21:136-41 Ja '53

CHLOROÖCTYNE

Microwave spectrum of $C_8H_{13}Br$ and $C_8H_{13}Cl$. A. H. Nethercot, jr. and A. Javan. diag J Chem Phys 21:363-4 F '53

CHLOROPENTAFLUOROETHANE

Infrared and Raman spectra of fluorinated ethanes; the series CF_3CF_3, CF_3CFCl_2, CF_3CFCl_2, and CF_3CCl_3. J. R. Nielsen and others. bibliog J Chem Phys 21:383-93 Mr '53

CHLOROPHENOL

New infrared-investigations in the *cis-trans* isomerism of *ortho*-halogenphenols. G. Rossmy and others. bibliog J Chem Phys 21:1606-7 S '53

CHLOROPHENYL acetophenone

Epoxyethers; reaction of desyl chloride with base. C. L. Stevens, M. L. Weiner and R. C. Freeman. bibliog Am Chem Soc J 75: 3977-80 Ag 20 '53

CHLOROPHENYL methyl sulfide

Rearrangement amination of *o*-chloro-and *o*-bromophenyl methyl sulfides and *o*-bromophenyl methyl sulfone in liquid ammonia. H. Gilman and G. A. Martin. bibliog Am Chem Soc J 74:5317-19 N 5 '52

CHLOROPHOSPHONATES

Kinetic studies in the phosphinyl chloride and phosphorochloridate series. I. Dostrovsky. and M. Halmann. Chem Soc J p502-19 F '53

CHLOROPHOSPHOROUS acid

Use of diester chlorophosphites in peptide syntheses; mixed anhydrides. G. W. Anderson and R. W. Young. bibliog Am Chem Soc J 74:5307-9 N 5 '52

CHLOROPHTHALIC acid

Reduction of 3-chlorophthalic acid and of its three methyl esters. R. F. Bird and E. E. Turner. Chem Soc J p5050-1 D '52

CHLOROPHYL

Absolute quantum yields of the fluorescence of chlorophyll solutions. L. S. Forster and R. Livingston. bibliog diag J Chem Phys 20:1315-20 Ag '52

Absorption spectra of crystalline chlorophyll derivatives. E. E. Jacobs and A. S. Holt. J Chem Phys 20:1326 Ag '52

Absorption spectrum of bacteriochlorophyll. J. W. Weigl. bibliog Am Chem Soc J 75: 999-1000 F 20 '53

Amateur scientist. A. G. Ingalls. il diags Sci Am 188:102-6 F '53

Brand-new Smith; design for Smith brothers' new chlorophyll cough-drop package. il Mod Packaging 26:133 S '52

Chlorophyll and photosynthesis. S. Granick. bibliog il Chem & Eng N 31:748-51 F 23 '53

Chlorophyll debunked further; odours not removed. J. C. Brocklehurst. Chem Age (Lond) 68:415 Mr 14 '53; Discussion. 68:443-7; 69:505-6 Mr 21, S 5 '53

Chlorophyll photosensitized polymerization and free radical intermediates in photosynthesis. N. Uri. Am Chem Soc J 74:5808-9 N 20 '52

Chlorophyllins, effective for tropical use; abstract. F. H. Westcott. Chem & Eng N 31: 672 F 16 '53

Chlorophyll's therapy value seen promising. Oil Paint & Drug Rep 163:7+ F 9 '53

Claims made for chlorophyll products vigorously challenged. Chem & Eng N 30:5248-9 D 15 '52

Gathering up the green. il Chem W 71:69-73 N 22 '52

Green goods. Sci Am 188:38 F '53

Industry and chlorophyll. il Mod Ind 25:36-41 Mr '53

Infrared spectra of chlorophyll and related compounds. J. W. Weigl and R. Livingston. bibliog Am Chem Soc J 75:2173-6 My 5 '53

Investigations conducted to determine the deodorizing properties of chlorophyll preparations; abstract. L. C. Barail. Oil Paint & Drug Rep 164:57 Ag 24 '53

Part played by chlorophyll in plant transpiration studied by a new method; hygrophotography. J. Sivadjian. bibliog il Science 117:606-7 My 29 '53

CHLOROPHYL—*Continued*

Phototropy of chlorophyll in fluid solutions. R. Livingston and V. A. Ryan. il diag Am Chem Soc J 75:2176-81 My 5 '53

Preliminary experiments using Mg^{28} as a tracer with chlorophylls, plants, and their extracts. R. S. Becker and R. K. Sheline. diag J Chem Phys 21:946-7 My '53

Reversible bleaching of chlorophyll by metallic salts. W. F. Watson. Am Chem Soc J 75:2522-3 My 20 '53

CHLOROPROPANONE

Rotational isomerism in chloroacetone. S. Mizushima and others. bibliog J Chem Phys 21:815-18 My '53

CHLOROPROPENE

High temperature chlorination of various mono- and dichloropropenes. G. W. Hearne and others. Am Chem Soc J 75:1392-4 Mr 20 '53

CHLOROPROPIONIC acid

Stereochemistry of complex inorganic compounds; a partial resolution of racemic mixtures of organic acids by means of preferential coördination. A. D. Gott and J. C. Bailar, jr. Am Chem Soc J 74:4820-2 O 5 '52

CHLOROQUINE

New synthesis of chloroquine. W. S. Johnson and B. G. Buell. bibliog Am Chem Soc J 74:4513-16 S 20 '52

CHLOROSILANE

Acetylenic silicon derivatives. K. C. Frisch and R. B. Young. Am Chem Soc J 74:4853-6 O 5 '52

Dimethylaminochlorosilanes. R. Cass and G. E. Coates. Chem Soc J p2347-9 Je '52

Hydrolysis and separation of unsaturated chlorosilanes. K. C. Frisch, P. A. Goodwin and R. E. Scott. bibliog Am Chem Soc J 74:4584-5 S 20 '52

Microwave spectrum and structure of SiD$_3$Cl. B. Bak and others. J Chem Phys 21:753-4 Ap '53

Partial hydrolysis of chlorosilanes. R. West. bibliog Am Chem Soc J 75:1002-3 F 20 '53

Polarographic studies of some organochlorosilanes. E. A. Abrahamson, jr. and C. A. Reynolds. Anal Chem 24:1827-9 N '52

Raman spectra of ethoxychlorosilanes. H. Murata. J Chem Phys 20:1184 Jl '52

Reaction of diphenyldichlorosilane with ammonia and amines. E. Larsson and L. Bjellerup. bibliog Am Chem Soc J 75:995-7 F 20 '53

Silico-alkylation of sodio esters with trimethylchlorosilane to form silyl esters. C. R. Hance and C. R. Hauser. bibliog Am Chem Soc J 75:994-5 F 20 '53

CHLOROSTANNATES

Chlorostannates of dimethyl ketazine and certain hydrazones. W. Pugh and A. M. Stephen. Chem Soc J p354-5 Ja '53

CHLOROSTYRENE

Ionic polymerization; copolymerization of styrene, *p*-chlorostyrene and α-methylstyrene with meta and para substituted styrenes catalyzed by stannic chloride. C. G. Overberger and others. bibliog Am Chem Soc J 74:4848-53 O 5 '52

CHLOROSULFITES

Decomposition of secondary alkyl chlorosulfites; solvent effects and mechanisms. C. E. Boozer and E. S. Lewis. bibliog Am Chem Soc J 75:3182-6 Jl 5 '53

Isotope effects in the ionization of alkyl chlorosulfites. E. S. Lewis and C. E. Boozer. Am Chem Soc J 74:6306-7 D 20 '52

Studies in stereochemistry; ionic intermediates in the decomposition of certain alkyl chlorosulfites. D. J. Cram. bibliog Am Chem Soc J 75:332-8 Ja 20 '53

CHLOROSULFONATION

Chlorosulfonated polyethylene hailed as engineering material. R. T. Currin. il Chem & Eng N 31:1407-8 Ap 6 '53

CHLOROTRIFLUOROETHYLENE

Addition of free radicals to unsaturated systems; chlorotrifluoroethylene. R. N. Haszeldine and B. R. Steele. Chem Soc J p 1592-600 My '53

Fluorocarbons face fame and fortune; specific applications. Mod Plastics 30:175-8 D '52

Fluorothene wire insulation; with suggestions for extrusion techniques. B. H. Maddock and W. M. Land. diag Mod Plastics 30:126+ D '52; Abstract. Product Eng 24:298+ My '53

Heat of vaporization of chlorotrifluoroethylene (C$_2$F$_3$Cl). G. T. Furukawa, R. E. McCoskey and M. L. Reilly. bibliog Am Chem Soc J 75:4339-40 S 5 '53

Organic fluorides; the high-temperature dimerisation of chlorotrifluoroethylene. M. W. Buxton and others. Chem Soc J p3830-4 O '52

Plasticity grading of fluorothenes. F. D. Dexter. bibliog diag Mod Plastics 30:125-6+ Ap '53

Quenched fluorothene film. B. H. Maddock. diags Mod Plastics 30:116+ F '53

X-ray examination of polychlorotrifluoroethylene. H. S. Kaufman. Am Chem Soc J 75:1477-8 Mr 20 '53

CHOCOLATE

Heating cable keeps chocolate flowing. C. H. Swenson. Elec World 139:166 Mr 23 '53

Know-how in processing modern chocolate products; Walter Baker chocolate and cocoa division of General foods corp. il Food Eng 25:96-100 Jl '53

CHOKE coils. See Reactors

CHOLANIC acid

Analysis

Quantitative estimation of the carbonyl groups in saturated ketocholanic acids. E. L. Pratt. bibliog Anal Chem 25:175-7 Ja '53

CHOLECYSTOGRAPHIC agents. See Gall bladder

CHOLERETICS

Synthetic choleretics; phenol derivatives. R. R. Burtner and J. M. Brown. bibliog Am Chem Soc J 75:2334-40 My 20 '53

Synthetic choleretics; resorcinol derivatives. R. R. Burtner. bibliog Am Chem Soc J 75:2341-4 My 20 '53

CHOLESTADIENONE

Conjugate addition of ethyl malonate to 3,5-cholestadien-7-one. J. W. Ralls. bibliog Am Chem Soc J 75:2123-5 My 5 '53

CHOLESTANETRIOL

Cholesterol and companions; lathosterol, cholestanetriol and ketone 104 from a variety of sources. L. F. Fieser and B. K. Bhattacharyya. bibliog Am Chem Soc J 75:4418-23 S 20 '53

CHOLESTANOL

Cholesterol and companions; cholestanol, lathosterol and ketone 104. L. F. Fieser. bibliog Am Chem Soc J 75:4395-403 S 20 '53

Infrared spectra of some cholestanol derivatives. D. R. Johnson and others. bibliog Am Chem Soc J 75:52-5 Ja 5 '53

Reaction of α- and β-cholestanyl *p*-toluenesulfonates with methanol. H. R. Nace. bibliog Am Chem Soc J 74:5937-8 D 5 '52

Synthesis of 11-ketosteroids; 11-ketocholestanol. L. F. Fieser and J. E. Herz. bibliog Am Chem Soc J 75:121-4 Ja 5 '53

CHOLESTATRIENOL

Δ^{5,7}-Steroids; Δ^{3,5,7}-cholestatriene-3-ol acetate. S. Bernstein, M. Heller and J. H. Williams. Am Chem Soc J 75:1480-1 Mr 20 '53

CHOLESTENEDIOL

New cholestene diols; the simultaneous action of aluminium hydride and aluminium chloride on the enol acetate of cholest-4-en-3-one. B. R. Brown. Chem Soc J p2756-9 Jl '52

CHOLESTENOL

Cholesterol and companions; cholestanol, lathosterol and ketone 104. L. F. Fieser. bibliog Am Chem Soc J 75:4395-403 S 20 '53

Cholesterol and companions; lathosterol, cholestanetriol and ketone 104 from a variety of sources. L. F. Fieser and B. K. Bhattacharyya. bibliog Am Chem Soc J 75:4418-23 S 20 '53

Cholesterol and companions; oxidation of Δ^7-stenols with selenium dioxide. L. F. Fieser and G. Ourisson. bibliog Am Chem Soc J 75:4404-14 S 20 '53

Analysis

Cholesterol and companions; microdetermination of Δ^7-stenols. K. Nakanishi, B. K. Bhattacharyya and L. F. Fieser. diag Am Chem Soc J 75:4415-17 S 20 '53

CHOLESTENOLONE

Cholesterol and companions; partial dichromate oxidation to Δ^4-cholestene-6 β-ol-3-one. L. F. Fieser. bibliog Am Chem Soc J 75:4377-85 S 20 '53

CHOLESTENONE

New cholestene diols; the simultaneous action of aluminium hydride and aluminium chloride on the enol acetate of cholest-4-en-3-one. B. R. Brown. Chem Soc J p2756-9 Jl '52

CHOLESTEROL

Ascorbic acid deficiency and cholesterol synthesis. R. R. Becker and others. bibliog Am Chem Soc J 75:2020 Ap 20 '53

Cholesterol and companions. L. F. Fieser and others. bibliog il diag Am Chem Soc J 75:4377-423 S 20 '53

Cyclization of squalene in cholesterol synthesis. R. B. Woodward and K. Bloch. bibliog Am Chem Soc J 75:2023-4 Ap 20 '53

Effects of ferric chloride and bile on plasma cholesterol and atherosclerosis in the cholesterol-fed bird. M. D. Siperstein and others. Science 117:386-9 Ap 10 '53

Enzymatic degradation of the cholesterol side chain in cell-free preparations. C. B. Anfinsen and M. G. Horning. bibliog Am Chem Soc J 75:1511-12 Mr 20 '53

Experiments on the synthesis of substances related to the sterols; completion of the syntheses of androgenic hormones and of the cholesterol group of sterols. H. M. E. Cardwell and others. Chem Soc J p361-84 F '53

Formation of radioactive cholesterol and fatty acids from C^{14}-labeled acetate by rat liver homogenates. N. L. R. Bucher. bibliog Am Chem Soc J 75:498 Ja 20 '53

Further structural evidence for the reaction product of cholesterol-α-oxide and methylmagnesium iodide. R. B. Turner. bibliog Am Chem Soc J 74:5362-4 N 5 '52

Incorporation of acetate into cholesterol. W. G. Dauben and others. bibliog Am Chem Soc J 75:3038 Je 20 '53

Pyridinium sulphates derived from cholesterol and lanostadienol. M. J. Birchenough and H. Burton. Chem Soc J p2443-4 Je '52

Separation of the air-oxidation products of cholesterol by column partition chromatography. E. H. Mosbach, M. Nierenberg and F. E. Kendall. bibliog Am Chem Soc J 75:2358-60 My 20 '53

Stereochemical course of the addition of halogens to cholesterol. J. B. Ziegler and A. C. Shabica. bibliog Am Chem Soc J 74:4891-4 O 5 '52

Steroid series; further reactions of fucosterol and 24-ketocholesterol. D. H. Hey, J. Honeyman and W. P. Peal. Chem Soc J p4836-9 D '52

Synthetic C^{14}-squalene; concerning its incorporation into cholesterol by liver. G. M. Tomkins and others. bibliog Am Chem Soc J 74:6145-6 D 5 '52

Vitamin C regulates rate of cholesterol formation. Chem & Eng N 31:1756-7 Ap 27 '53

Analysis

Determination of cholesterol in microgram quantities of tissue. D. J. Cavanaugh and D. Glick. bibliog il diag Anal Chem 24:1839-41 N '52

CHOLESTERYL compounds

Preparation, reactions and kinetics of reactions of epicholesteryl *p*-toluenesulfonate. L. C. King and M. J. Bigelow. bibliog diags Am Chem Soc J 74:6238-41 D 20 '52

Reaction of cholesteryl *p*-toluenesulfonate and cholesteryl halides with pyridine type bases. L. C. King and B. M. Regan. bibliog Am Chem Soc J 74:5617-18 N 20 '52

Steroids; solvolysis of *epi*cholesteryl toluene-*p*-sulphonate and other steroid toluene-*p*-sulphonates. D. D. Evans and C. W. Shoppee. Chem Soc J p540-7 F '53

CHOLINE

Assay and degradation of ^{14}C-labelled choline. H. R. V. Arnstein. Chem Soc J p4527-8 N '52

Identification of murexine as β-[imidazolyl-(4)]-acryl-choline. V. Erspamer and O. Benati. bibliog Science 117:161-2 F 13 '53

Two complex salts of choline and copper chloride and their activity as catalysts of fat oxidation. P. L. White, D. M. Hegsted and J. Mayer. bibliog Am Chem Soc J 75:2352-4 My 20 '53

CHOLINESTERASE

Parathion exposure and cholinesterase response of Quebec apple growers. K. Kay and others. bibliog A M A Archives Ind Hygiene & Occup Med 6:252-62 S '52

Rapid micromethod for electrometric determination of red cell cholinesterase activity in whole blood. W. E. MacDonald, jr. and others. bibliog A M A Archives Ind Hygiene & Occup Med 6:271-5 S '52

Rapid screening test for the determination of the approximate cholinesterase activity of human blood. G. Limperos and K. E. Ranta. bibliog Science 117:453-5 Ap 24 '53

Substrate competition between procaine and succinylcholine diiodide for plasma cholinesterase. F. F. Foldes and others. bibliog il Science 117:383-6 Ap 10 '53

CHONDROITINSULFURIC acid

Uronic acid component of chondroitinsulfuric acid. M. L. Wolfrom and W. B. Neely. Am Chem Soc J 75:2778-9 Je 5 '53

CHOPPERS, Food. See Food choppers

CHRISTIAN science churches

Science church in contemporary form; First church of Christ, Scientist, New Haven, Conn. il plans diag Arch Rec 112:136-41 D '52

CHRISTIE, Lansdell K. 1903-

Three-way payoff in Liberia. H. Solow. por Fortune 47:130-3+ Ap '53

CHRISTMAS advertising

Daily, merchants unite to up Yule linage, sales. R. B. McIntyre. Ed & Pub 86:22 Ja 3 '53

CHRISTMAS business

Retailers have merriest Christmas. Bsns W p25-6 Ja 10 '53

Stores expect Santa Claus to treat 'em right, as usual. il Bsns W p28-30 N 22 '52

CHRISTMAS cards

Christmas spirit; it spills over with record sales for greeting card makers. N. Willatt. Barron's 32:11 N 24 '52

CHRISTMAS clubs

Plan for handling Christmas club accounts. V. C. Bartels. il Burroughs Clearing House 37:32-3+ N '52

Record Christmas club. Burroughs Clearing House 37:11 D '52

CHRISTMAS gifts

Advertising

Linage harvest seen in black dot ads. D. L. Lionel. Ed & Pub 85:28 N 29 '52

Business gifts

Playing the reluctant Santa Claus. Bsns W p45-6 N 8 '52

CHRISTMAS greetings to customers

Holiday patterns; printers' Christmas cards. il Inland Ptr 130:60-1 N '52

CHRISTMAS lighting

Christmas in California; illustrations with text. Illum Eng 47:610-11 N '52

Home for the holidays; Christmas lighting tricks; illustrations with text. Illum Eng 47:658-9 D '52

CHRISTMAS parties, Employees'

Russell Manufacturing says Merry Christmas to its town. M. B. Andrews. Textile World 102:170+ D '52

So you're going to throw a Christmas party. L. Bennet and J. Bennet. Mill & Factory 51:114-15 N '52

'Twas the afternoon before Christmas and. R. W. Sherman. Factory Management 110:114-15 D '52

CHRISTMAS tree decorations

Christmas canes made from cellulose acetate tube and solid rod. il Mod Plastics 30:196 N '52

Gift-ties plus; Burlington mills turns foil and paperboard on ribbon packages into re-use Christmas-tree decorations. il Mod Packaging 26:142-3 S '52

CHRISTMAS trees

Biggest Christmas tree grower. il Fortune 46:140-1+ D '52

CHRISTMAS trees—*Continued*

Case study in creative merchandising; garden furniture retailer sells Christmas trees. D. E. Faville. J Retailing 28:173-4+ Winter '52

CHROMANONES

Syntheses in the thiochromanone field. D. S. Tarbell, H. P. Hirschler and T. J. Hall. bibliog Am Chem Soc J 75:1985-7 Ap 20 '53

CHROMATES

Anticorrosive primers; pigments and vehicles applicable to magnesium. A. L. Alexander and others. bibliog il Ind & Eng Chem 44:2409-14 O '52

See also

Sodium chromate

Physiological effect

Chromate workers have high rate for cancer of respiratory system. Safety Maint & Prod 104:71-2 N '52

Morbidity and mortality experience among chromate workers; respiratory cancer and other causes. H. P. Brinton and others. Pub Health Rep 67:835-47 S '52

CHROMATOGRAPHIC analysis

Adsorption chromatography of flavonoid compounds. C. H. Ice and S. H. Wender. bibliog Anal Chem 24:1616-17 O '52

Amateur scientist. A. G. Ingalls. il diags Sci Am 188:102-6 F '53

Analysis of inorganic compounds by paper chromatography; the separation and detection of certain lanthanons. F. H. Pollard, J. F. W. McOmie and H. M. Stevens. Chem Soc J p4730-4 D '52

Application of ion exchange chromatography to the enzymatic resolution of amino acids. C. G. Baker and H. A. Sober. bibliog Am Chem Soc J 75:4058-60 Ag 20 '53

Application of partition paper chromatography to microbiology. H. Proom and A. J. Woiwood. bibliog il diags Chem & Ind p311-15 Ap 4 '53

Applications of the technique of paper chromatography to microbiology. W. G. C. Forsyth. bibliog Chem & Ind p315-16 Ap 4 '53

Cellulose sheets as chromatographic supports. L. S. Cuendet, R. Montgomery and F. Smith. Am Chem Soc J 75:2764-5 Je 5 '53

Characterisation of primary aliphatic amines by reaction with *o*-acetoacetylphenol and by paper chromatography. W. Baker, J. B. Harborne and W. D. Ollis. Chem Soc J p3215-17 Ag '52

Chelate systems. T. H. Simpson and L. Garden. diag Chem Soc J p4638-44 D '52

Chromatocoil; a space-saving device for paper chromatograms. V. Schwarz. diag Chem & Ind p 102 Ja 31 '53

Chromatographic separation of anomeric glycosides. I. Augestad and others. bibliog Chem & Ind p376-7 Ap 18 '53

Chromatographic separation of estrone, estradiol, and estriol. J. Bitman and J. F. Sykes. bibliog Science 117:356-8 Ap 3 '53

Chromatographic techniques for petroleum. H. Weil. bibliog Can Chem Process 37:92+ Mr; 72+ Je 1 '53

Chromatography in the purification of staphylococcal enterotoxin. M. S. Bergdoll and others. bibliog Science 116:633-4 D 5 '52

Chromatography of gases and vapours. D. H. James and C. S. G. Phillips. diags Chem Soc J p 1600-10 My '53

Chromatography of the carbohydrates and their derivatives; abstract. J. K. N. Jones. Chem & Ind p 171-2 F 21 '53

Chromatography of thiohydantoins on paper; determination of the C-terminal amino-acid of bovine plasma albumin. J. T. Edward and S. Nielsen. bibliog Chem & Ind p 197 F 28 '53

Chromatography past and present; abstract. T. I. Williams. Chem & Ind p 171 F 21 '53

Correlation of carbohydrate structure with papergram mobility. D. French and G. M. Wild. bibliog Am Chem Soc J 75:2612-16 Je 5 '53

Detection of deoxy-sugars, glycals, and methyl pentoses in paper partition chromatography. J. T. Edward and D. M. Waldron. Chem Soc J p3631-4 S '52

Differential migration of rubber by reversed-phase partition chromatography. T. F. Banigan, jr. bibliog il Science 117:249-50 Mr 6 '53

Direct measurement of the absorption spectra of some plant phenols on paper strip chromatograms. A. E. Bradfield and A. E. Flood. Chem Soc J p4740-4 D '52

Effect of moisture on the chromatographic properties of a synthetic hydrated magnesium silicate. M. L. Wolfrom and others. bibliog Anal Chem 24:1670-1 O '52

Electrochromatographic separations of calcium and phosphate ions; factors influencing separations. T. R. Sato and others. bibliog il Anal Chem 25:438-46 Mr '53

Electrochromatographic separations of rare earths. T. R. Sato and others. Am Chem Soc J 74:6154-5 D 5 '52

Expression for gradient elution. A. Cherkin, F. E. Martinez and M. S. Dunn. Am Chem Soc J 75:1244-5 Mr 5 '53

Identification of flavonoid compounds by filter paper chromatography; additional R*f* values and color tests. H. W. Casteel and S. H. Wender. bibliog Anal Chem 25:508-9 Mr '53

Identification of some organic acids by paper chromatography. A. R. Jones, E. J. Dowling and W. J. Skraba. bibliog Anal Chem 25:394-6 Mr '53

Inorganic chromatography on cellulose; determination of tantalum and niobium in low-grade phosphatic and siliceous ores. R. A. Mercer and A. F. Williams. Chem Soc J p3399-403 S '52

Inorganic chromatography on cellulose; the quantitative determination of tantalum and niobium in complex minerals, ores, and synthetic materials. A. F. Williams. Chem Soc J p3155-63 Ag '52

Inorganic chromatography on cellulose; the quantitative separation of rhodium, palladium, iridium and platinum; abstract. D. B. Rees-Evans and R. A. Wells. Chem & Ind p 171 F 21 '53

Ion exchange mechanism and isotherms from deep bed performance. C. N. Merriam, jr. and others. bibliog J Chem Phys 20:1842-6 D '52

Mathematics of adsorption in beds; the effect of longitudinal diffusion in ion exchange and chromatographic columns. L. Lapidus and N. R. Amundson. J Phys Chem 56:984-8 N '52

Nucleic acid derivatives; separation and quantitative analysis by ultraviolet spectrophotometry. A. Deutsch, R. Zuckerman and M. S. Dunn. bibliog Anal Chem 24:1769-73 N '52

Paper chromatographic separation and determination of some water-soluble vitamins. J. A. Brown and M. M. Marsh. bibliog Anal Chem 24:1952-6 D '52

Paper chromatography of bile acids. D. Kritchevsky and M. R. Kirk. Am Chem Soc J 74:4713 S 20 '52

Paper chromatography of corticosteroids. E. H. Sakal and E. J. Merrill. bibliog Science 117:451-2 Ap 24 '53

Paper chromatography of steroids. D. Kritchevsky and M. R. Kirk. bibliog Am Chem Soc J 74:4484-6 S 20 '52

Paper partition chromatography in taxonomic studies. A. A. Buzzati-Traverso and A. B. Rechnitzer. il Science 117:58-9 Ja 16 '53

Quantitative analysis of inorganic compounds by paper chromatography. F. H. Pollard and others. diag Chem Soc J p 1338-41 My '53

Quantitative determination of methylol phenols by paper chromatography. J. H. Freeman. bibliog Anal Chem 24:2001-2 D '52

Rapid method for paper chromatography of organic acids. F. W. Denison, jr. and E. F. Phares. bibliog diag Anal Chem 24:1628-9 O '52

Resolution of DL-tryptophan by paper chromatography. K. Closs and C. M. Haug. il Chem & Ind p 103 Ja 31 '53

Reversed phase paper chromatography of parathion and related phosphate esters. R. L. Metcalf and R. B. March. bibliog Science 117:527-8 My 15 '53

CHROMATOGRAPHIC analysis—*Continued*

Review of analytical chemistry; essential oils and related products, 1951 and 1952. E. Guenther and E. E. Langenau. Anal Chem 25:12-17 bibliog(153 ref, p 15-17) Ja '53

Scale for rapid determination of chromatographic R_f values. R. M. Nettleton, jr. and R. B. Mefferd, jr. bibliog diags Anal Chem 24:1687 O '52

Separation and detection of the pyrethrin-type insecticides and their derivatives by reversed phase paper chromatography. F. P. W. Winteringham. Science 116:452-3 O 24 '52

Separation and detection of zirconium and hafnium on paper strips. N. F. Kember and R. A. Wells. il Chem & Ind p 1129 N 15 '52

Separation of D vitamins from other sterols by paper chromatography and the quantitative determination of 7-dehydrocholesterol. R. B. Davis, J. M. McMahon and G. Kalnitsky. bibliog Am Chem Soc J 74:4483-4 S 20 '52

Separation of derivatives of α-keto acids by paper chromatography. D. J. D. Hockenhull and others. Chem & Ind p 127 F 7 '53

Separation of synnematin into components A and B by paper chromatography. B. H. Olson and others. il Science 117:76-8 Ja 23 '53

Some factors influencing the quantitative determination of amino acids separated by circular paper chromatography. K. V. Giri, A. N. Radhakrishnan and C. S. Vaidyanathan. Anal Chem 24:1677-8 O '52

Spectrophotometric attachment for use in paper chromatography. H. Campbell and J. A. Simpson. il Chem & Ind p342-3 Ap 11 '53

Spectrophotometric determination of small quantities of 2,4-dichlorophenoxyacetic acid and 2,4,5-trichlorophenoxyacetic acid using partition chromatography. N. Gordon. bibliog diag Anal Chem 24:1968-71 D '52

Two-dimensional chromatography of amino acids on buffered papers. A. L. Levy and D. Chung. bibliog il Anal Chem 25:396-9 Mr '53

Two-dimensional paper chromatography using one-dimensional apparatus; application to sugars of spent sulfite liquor. L. A. Boggs. bibliog diag Anal Chem 24:1673-5 O '52

Study and teaching

Introductory experiments in inorganic paper chromatography. J. G. Surak and others. J Chem Educ 29:144-5; 30:20-1 Mr '52, Ja '53

CHROME alum. See Alums

CHROMIC acid

Chromic acid oxidation of epicholesteryl acetate. E. J. Tarlton, M. Fieser and L. F. Fieser. bibliog Am Chem Soc J 75:4423-4 S 20 '53

Chromic acid recovery. Steel 132:109 Je 22 '53

Chromic acid recovery by ion exchange at Grumman Aircraft. D. T. Armstrong. Sewage & Ind Wastes 25:934-6 Ag '53

Polymerization of silicic acid; retarding effect of chromate ion. R. K. Iler. J Phys Chem 56:678-9 Je '52

Radiometric evaluation of the effectiveness of the chromic acid rinse treatment for phosphated work. S. L. Eisler and J. Doss. il Metal Finishing 50:54-8+ D '52

Rates of chromic acid oxidation of some cyclanols. H. G. Kuivila and W. J. Becker, 3d. bibliog Am Chem Soc J 74:5329-30 N 5 '52

CHROMIC chloride

Stearato chromic chloride as a sizing agent for paper; Quilon. R. J. Pavlin. Tappi 36: sup 107A-11A Jl '53

CHROMITE

Chromite, 1952. F. W. Libbey. il Min Cong J 39:125 F '53

Chromite, 1952. N. B. Melcher and H. V. Heidrich. Eng & Min J 154:99 F '53

Refractory properties of Pacific Northwest chromites. H. J. Kelly and others. 23pls U S Bur Mines Rep of Invest 4929:1-38 bibliog and patent list (192 titles, p28-38) '52

World production of chromite, 1943-1951; chromite imports for consumption, 1945-1952; chromite ore shipments, 1919-1952; tabulations. Iron Age 171:435 Ja 1 '53

CHROMIUM

Better coating for moly; chromium-frit combination cuts rapid oxidation in jet engine use. Steel 131:97 Ag 11 '52; Cer Ind 59:71 S '52; Iron Age 170:192 S 18 '52; Metal Finishing 50:61 O '52; Mech Eng 74:824 O '52; Glass Ind 34:144 Mr '53

Chromium recovery during submerged-arc welding. J. G. Kerr and D. A. Elmer. bibliog il Welding J 31:sup431-8 S '52; Discussion. F. G. Harkins. 32:sup 111-12 F '53

Effects of vanadium or chromium on the strain ageing of rimming steels. W. R. D. Jones and G. Coombes. bibliog il Iron & Steel Inst J 174:9-15 My '53

Forging of arc-melted chromium. H. L. Gilbert and others. bibliog il diags J Metals 5:Trans 63-5 Ja '53

Malleable chromium and its alloys. H. L. Gilbert and others. bibliog 17pls U S Bur Mines Rep of Invest 4905:1-22 '52

Melting point of chromium. Engineer 194: 169 Ag 1 '52

Preliminary study of the oxidation and vapor pressure of chromium. E. A. Gulbransen and K. F. Andrew. bibliog Electrochem Soc J 99:402-6 O '52

Properties of the Cr^{+++} ion in the paramagnetic alums at low temperatures. R. P. Hudson. bibliog Phys R 88:570-2 N 1 '52

Some magnetization studies of Cr^{+++}, Fe^{+++}, Gd^{+++}, and Cu^{++} at low temperatures and in strong magnetic fields. W. E. Henry. bibliog Rs Mod Phys 25:163-4 Ja '53

Spin paramagnetism of Cr^{+++}, Fe^{+++}, and Gd^{+++} at liquid helium temperatures and in strong magnetic fields. W. E. Henry. bibliog diag Phys R 88:559-62 N 1 '52

Study of molten borates with the Cr(VI)-Cr(III) indicator. F. Irmann. bibliog Am Chem Soc J 74:4767-70 O 5 '52

Substitute chromium sources reduce production costs of stainless steel. N. B. McFarlane. il J Metals 4:1284-5 D '52

Thermal and dilatometric investigation of the alloys of cobalt with chromium and molybdenum. A. G. Metcalfe. bibliog il diags J Metals 5:Trans 357-64 sec 2 F '53

Tristage crystallization process for utilizing western ferrophosphorus. L. H. Banning and others. flow sheet J Metals 5:Trans 423-30 Mr '53

Analysis

Determination of chromium by oxidation in the presence of silver nitrate. S. Lynn and D. M. Mason. bibliog Anal Chem 24:1855 N '52

Industrial chrome ore analysis; an industry standard sample of metallurgical chrome ore. W. H. Hartford. bibliog Anal Chem 25:290-6 F '53

Isotopes

Decay of Cr^{49}. B. Crasemann and H. T. Easterday. diag Phys R 90:1124-5 Je 15 '53

Disintegration of Cr^{51}. W. S. Lyon. Phys R 87:1126 S 15 '52

Energy levels in magnesium, vanadium, chromium, and manganese. H. J. Hausman and others. bibliog Phys R 88:1296-9 D 15 '52

Isotopic exchange reactions of chromium(III) complexes. W. R. King, jr. and C. S. Garner. bibliog Am Chem Soc J 74:5534-6 N 5 '52

Neutron capture γ-rays from titanium, chromium, iron, nickel, and zinc. B. B. Kinsey and G. A. Bartholomew. bibliog diags Phys R 89:375-85 Ja 15 '53

Nuclear magnetic moment of Cr^{53} and Sr^{87}. C. D. Jeffries and P. B. Sogo. Phys R 91: 1286 S 1 '53

Surface reactions of chromium in dilute $Cr^{51}O_4^{=}$ solutions. N. Hackerman and R. A. Powers. bibliog J Phys Chem 57:139-42 F '53

Metallography

Low temperature crystallography of chromium; abstract. E. F. Becht. Metal Prog 64:198 Jl '53

CHROMIUM alloys

Allotropy in the phase $ZrCr_2$. W. Rostoker. J Metals 5:Trans 304 sec 2 F '53

High temperature modification of $TiCr_2$. B. W. Levinger. J Metals 5:Trans 196 F '53

Malleable chromium and its alloys. H. L. Gilbert and others. bibliog 17pls U S Bur Mines Rep of Invest 4905:1-22 '52

Microconstituents in chromium-base chromium-iron-molybdenum alloys and their behavior with heat treatment. J. P. Hammond and others. bibliog il J Metals 4: Trans 1329-42 D '52

Subsurface porosity developed in sound metal during high-temperature corrosion. A. D. Brasunas. il Metal Prog 62:88-90 D '52

System zirconium-chromium. R. F. Domagala and others. bibliog il J Metals 5:Trans 279-83 sec 2 F '53

Tappet wear; adoption of cast chromium alloy tips. bibliog il Automobile Eng 42:405-8 O '52

Titanium-chromium phase diagram. F. B. Cuff and others. il J Metals 4:Trans 848-53 Ag '52; Discussion. 5:Trans 743-4 sec 2 My '53

Transformation kinetics and mechanical properties of titanium-aluminum-chromium alloys; abstract. H. D. Kessler and M. Hansen. Metal Prog 64:174+ O '53

See also

Chromium nickel steel

Chromium steel

Iron alloys—Chromium alloys

Testing

Chromium-base alloys. W. L. Havekotte and others. il diags Am Soc T M Proc 50:1101-26; Discussion. 1127-30 '50

CHROMIUM antimonide

Magnetic moment orientation and thermal expansion of antiferromagnetic CrSb. A. I. Snow. diag Rs Mod Phys 25:127 Ja '53

CHROMIUM carbide

Chromium carbide meets many industrial needs. J. D. Kennedy. il Materials & Methods 36:166+ Ag '52; Same. Steel 131:92-4 Ag 4 '52; Same cond. Mech Eng 74:820-1 O '52

Densification and kinetics of grain growth during the sintering of chromium carbide. H. J. Hamjian and W. G. Lidman. il J Metals 5:Trans 696-9 sec 2 My '53

Hard-facing alloys of the chromium carbide type. H. S. Avery and H. J. Chapin. bibliog il Welding J 31:917-30 O '52; Abstract. Metal Prog 63:136+ Mr '53

Heat capacity of chromium carbide (Cr_3C_2) from 13 to 300°K. W. DeSorbo. bibliog Am Chem Soc J 75:1825-7 Ap 20 '53

CHROMIUM compounds

Complex acids of cobalt and chromium; the green carbonatocobalt(III) anion. T. P. McCutcheon and W. J. Schuele. Am Chem Soc J 75:1845-6 Ap 20 '53

Complex ions of chromium; reactions between hexaquochromium(III) and oxalate ions. R. E. Hamm and R. E. Davis. bibliog Am Chem Soc J 75:3085-9 Jl 5 '53

Effect of esterification of the carboxyl groups of collagen upon its combination with chromium compounds. K. H. Gustavson. bibliog Am Chem Soc J 74:4608-11 S 20 '52

Isotopic exchange reactions of chromium(III) complexes. W. R. King, jr. and C. S. Garner. bibliog Am Chem Soc J 74:5534-6 N 5 '52

Spectrophotometric study of dichromate-chromic salt mixtures; application to the determination of glycerol in vinegar. D. T. Englis and L. A. Wollerman. Anal Chem 24:1983-5 D '52

X-ray *K* absorption edges of covalently bonded Cr, Mn, Fe, and Ni. G. Mitchell and W. W. Beeman. bibliog J Chem Phys 20:1298-301 Ag '52

CHROMIUM hexacarbonyl

Chromium hexacarbonyl. W. M. Cumming, J. A. Horn and P. D. Ritchie. bibliog J Ap Chem 2:624-32 N '52

CHROMIUM manganese steel

Chrome-manganese and 18-8 steels, how they resist corrosion; based on papers by C. B. Allen and others. il Ry Age 135:87-9 Ag 10 '53

CHROMIUM metallurgy

Domestic chrome and manganese ores can be upgraded and utilized. H. A. Doerner. Min Eng 5:385-6 Ap '53

Recent advances in the electrolytic extraction of manganese, chromium and cobalt. J. W. Cuthbertson. bibliog Chem & Ind p 1165-70 N 29 '52

CHROMIUM molybdenum steel

Arc welding of low chromium-molybdenum steel pipe. J. Bland. bibliog il Welding J 32:803-14 S '53

Carbide segregation in 1¼ Cr-½ Mo steel pipe welded joints. I. A. Rohrig and H. S. Blumberg. il Welding J 32:815-22 S '53

Chrome-moly steel tubing cuts Bourdon tube rejects. il Product Eng 24:139 Mr '53

Testing

Thermal shock and other comparison tests of austenitic and ferritic steels for main steam piping; a summary report. W. C. Stewart and W. G. Schreitz. bibliog il diags A S M E Trans 75:1051-67; Discussion. 1068-72 Ag '53

CHROMIUM nickel steel

Behaviour of carbides in niobium stabilized austenitic stainless steel. T. V. Simpkinson. il Metallurgia 47:18-24 Ja '53

Carbon solubility shown; test provides new information on annealing temperatures of austenitic stainless steel. Steel 131:153+ N 10 '52

Chrome-manganese and 18-8 steels, how they resist corrosion; based on papers by C. B. Allen and others. il Ry Age 135:87-9 Ag 10 '53

Corrosion of 18-8S by nitric acid as a function of temperature. M. G. Fontana. Ind & Eng Chem 44:sup 101A-2A+ N '52

Corrosion properties of stainless steels in oxidizing solutions; abstract. M. M. Kurtepov and G. V. Akimov. Metal Prog 64:124+ Jl '53

18-8 stainless steels. il Chem Eng 60:300+ My '53

Feasibility of using chromium and chromium-nickel steels. W. L. Nelson. Oil & Gas J 52:267 My 25 '53

Formation of nitrides from atmospheric exposure during creep rupture of 18 per cent Cr-8 per cent Ni steel. E. J. Dulis and G. V. Smith. il J Metals 4:Trans 1083-4 O '52

In 18-8 stainless wire use right draw speeds for better electrical properties. S. Storchheim. il Iron Age 171:135-8 Ap 9 '53

Influence of potassium dichromate on stainless steel in deaerated sulphuric acid. I. D. G. Berwick. Chem & Ind p408-9 Ap 25 '53

Magnetic transfer of 18-8 stainless recording wire; abstract. S. Storchheim. J Metals 4: 1039 O '52

Microstructural characteristics of acid corrosion in 18 per cent Cr, 8-14 per cent Ni, 3 per cent Mo steels. H. T. Shirley. bibliog 6pls Iron & Steel Inst J 174:242-9 Jl '53

Permanent magnetic properties in 18-8 obtained by cold working. S. Storchheim. Iron Age 171:140-2 F 12 '53

Problem of making nitrogen-alloyed chromium-nickel austenitic steels; abstract. V. I. Prosvirin and others. Metal Prog 63:170+ Je '53

Solubility of carbon in 18-percent-chromium-ten-percent-nickel austenite. S. J. Rosenberg and C. R. Irish. bibliog il J Res Nat Bur Stand 48:40-8 Ja '52; Abstract. Metal Prog 63:164+ Mr '53

Transgranular stress corrosion in chromium-nickel stainless steels. C. Edeleanu. bibliog 4pls Iron & Steel Inst J 173:140-6 F '53; Discussion. il 174:218; 175:390-2 Jl, D '53

Testing

Influence of carbon content on the acid resistance of titanium- and niobium-stabilized 18 Cr, 8-14 Ni steels. H. T. Shirley and J. E. Truman. 2pls Iron & Steel Inst J 172: 377-80 D '52

Thermal shock and other comparison tests of austenitic and ferritic steels for main steam piping; a summary report. W. C. Stewart and W. G. Schreitz. bibliog il diags A S M E Trans 75:1051-67; Discussion. 1068-72 Ag '53

CHROMIUM ores
Domestic chrome and manganese ores can be upgraded and utilized. H. A. Doerner. J Metals 5:39-40 Ja '53
See also
Chromite

CHROMIUM oxides
Activity of an iron oxide-chromium oxide water-gas shift catalyst; effect of added constituents. K. Atwood and M. R. Arnold. bibliog diag Ind & Eng Chem 45:424-6 F '53
Addition compounds of chromium(VI) oxide with heterocyclic nitrogen bases; reactions with the lutidines, vinylpyridines, 2,4,6-collidine and α-picoline. H. H. Sisler and others. bibliog Am Chem Soc J 75:446-8 Ja 20 '53
Antiferromagnetic structure in Cr_2O_3. B. N. Brockhouse. diag J Chem Phys 21:961-2 My '53
Reactions of unsaturated compounds; the oxidation of camphene by chromic oxide. W. J. Hickenbottom and D. G. M. Wood. Chem Soc J p 1906-8 Je '53
Simplified method for the determination of chromic oxide (Cr_2O_3) when used as an index substance. D. W. Bolin and others. bibliog Science 116:634-5 D 5 '52
Solid state reaction between magnesium and chromium oxides. G. Parravano. Am Chem Soc J 74:6123-5 D 5 '52
Use of free energy data in the construction of phase diagrams. W. J. Knapp. bibliog Am Cer Soc J 36:43-7 F 1 '53
See also
Chromite

CHROMIUM phosphates
Preparation and some properties of chromic phosphate. A. T. Ness, R. E. Smith and R. L. Evans. bibliog Am Chem Soc J 74:4685-8 S 20 '52

CHROMIUM plating
Advantages of hard chrome plating in the corrugator field. M. P. Boggio. Tappi 36: sup 170A-1A My '53
American electroplaters' society 40th annual meeting, Philadelphia; abstracts of papers. Steel 132:114+ Je 29 '53
Chrome plating unit. il Tool Eng 30:111 Je '53
Chromium plating in steel plants. J. B. Allen and J. D. Tulloch. il Iron & Steel Eng 30: 90-4; Discussion. 94-7 S '53
Chromium plating pays off for steel mills. J. B. Allen and J. D. Tullock. il Steel 131: 108+ N 24 '52
Effect of chromium plating of steel on the fatigue limit. G. M. Cabble, jr. bibliog Metal Finishing 51:106-8 Je; 60-3 Jl '53
Effect of chromium plating on the endurance limit of steels used in aircraft. H. L. Logan. bibliog il J Res Nat Bur Stand 43: 101-12 Ag '49; Same. Am Soc T M Proc 50:699-713; Discussion. 714-16 '50
Faults in chromium plating and their avoidance; abstract. Metal Finishing 50:70 D '52
Hard chrome plating unit; Chromasol; Refrigerator components, ltd. il Engineer 194: 268 Ag 22 '52
Lead-backed masking tape solves special plating problems; Pratt & Whitney aircraft division. W. J. Dyber. il Automotive Ind 108:82+ My 15 '53
Maintenance problem on ram of hydraulic shear solved. il Iron Age 171:159 Mr 26 '53
Plated hard chrome for i.c. engine cylinders; abstract. H. Wiegand and G. Schaeffeler. Metal Finishing 51:112 Je '53
Plating gun bores gives greater accuracy and longer life. C. E. McDowell. il Mach 60: 158-63 O '53
Regrind and break-in blasted from chrome-plated tools; illustrations with text. Am Mach 96:158-9 O 13 '52
Small plants can produce good work; Plating, inc. F. M. Burt. il Metal Finishing 51:64-5 Ag '53
Substitutes for nickel plate; atmospheric exposure tests. Chem Age (Lond) 67:772 D 6 '52

Waste

Chromium wastes, recovery or treatment; symposium. K. S. Watson and others. flow diag il Sewage & Ind Wastes 25:921-36 Ag '53
How toxic waters are made pure. il diag Can Chem Process 36:62-3 S '52
Treatment of chromium and other plating room waste waters. M. E. Hodges. il plan Metal Finishing 51:60-4 O '53

CHROMIUM poisoning
Study of chromium toxicity by several oxygen demand tests. R. S. Ingols and E. S. Kirkpatrick. bibliog Anal Chem 24:1881-4 D '52

CHROMIUM steel
Annealing type 414 stainless steel forgings. A. A. Scafati. il Materials & Methods 38: 78-9 Jl '53
Carbides in chromium, molybdenum, and tungsten steels. K. Kuo. bibliog pl diags Iron & Steel Inst J 173:363-75 Ap '53
Chrome stainless brightens. il Steel 132:70 Mr 16 '53
Corrosion cracking of martensitic stainless steel. A. E. Durkin. il Metal Prog 64:72-5 Jl '53
Feasibility of using chromium and chromium-nickel steels. W. L. Nelson. Oil & Gas J 52:267 My 25 '53
High-temperature transformations in ferritic stainless steels containing 17 to 25 per cent chromium; abstract. A. E. Nehrenberg and P. Lillys. Metal Prog 64:216+ O '53
How and where to use 430 stainless. R. A. Lincoln and T. A. Pruger. il Iron Age 171: 127-31 F 26; 178-81 Mr 5 '53
How to fabricate 17 percent chromium stainless steel. R. E. Paret. il Materials & Methods 36:100-4 N '52; Same abr. Mach 59:182-8 D '52
Identification of the precipitate accompanying 885°F embrittlement in chromium steels. R. M. Fisher and others. bibliog il J Metals 5:Trans 690-5 sec 2 My '53
Intergranular corrosion of ferritic stainless steels; abstract. R. A. Lula and others. Metal Prog 64:224+ O '53
Metallic oxidation in chromium steel melting. D. C. Hilty and others. J Metals 5: Trans 649-53 My '53
New creep resistant ferritic steels. D. D. Howat. bibliog Materials & Methods 38: 87-90 S '53
Properties of chromium stainless steels; tabulation. Product Eng Hdbk p B30 '53
17 per cent chromium stainless steel. il Machine Design 25:118-22 Je '53
Short cycle for hardening high-C, high Cr toolsteel. J. Y. Riedel. il diags Metal Prog 63:67-70 F '53
Stabilization of the austenite-martensite reaction in a high chromium steel. S. C. Das Gupta and B. S. Lement. bibliog il diags J Metals 5:Trans 530-6 Ap '53
Strip; cars eat up chrome stainless. R. D. Raddant. il Iron Age 171:93 F 5 '53
Sulfide resistance of chromium steels. W. L. Nelson. Oil & Gas J 51:101 Mr 2 '53
See also
Chromium nickel steel

CHROMIUM sulfate
System $Cr_2(SO_4)_3$-H_2SO_4-H_2O. D. Taylor. Chem Soc J p2502-3 Ag '53

CHROMIZING
Chromium diffusion for corrosion and abrasion resistance. F. M. Burt. il Metal Finishing 51:72-5+ Ap '53
Chromizing improves surface properties of steels; Chromalloy process. R. P. Seelig. il diag Materials & Methods 37:106-9 My '53

CHROMONE
Synthesis of 3-substituted chromones by rearrangement of o-acyloxyacetophenones. W. D. Ollis and D. Weight. Chem Soc J p3826-30 O '52

CHROMOPHORES
Actinomycin; studies on the chromophoric grouping. A. W. Johnson, A. R. Todd and L. C. Vining. Chem Soc J p2672-9 Jl '52

CHROMOSOMES
Chemistry of heredity. A. E. Mirsky. il Sci Am 188:47-57 F '53
Frequency of dicentric bridges in meiosis in the grasshopper gesonia punctifrons, produced by different dosages of X-rays. S. P. Ray-Chaudhuri and I. Sarkar. diags Science 116:479-82 O 31 '52

CHROMOSOMES—*Continued*
Mapping functions in tetrad and recombinant analysis. S. Spiegelman. bibliog Science 116:510-12 N 7 '52

CHROMYL fluoride
Pure chromyl fluoride. A. Engelbrecht and A. V. Grosse. bibliog Am Chem Soc J 74:5262-4 N 5 '52

CHRONIC diseases. See Diseases, Chronic

CHRYSENE
Polycyclic aromatic hydrocarbons as starting materials for the synthesis of dyestuffs. T. Holbro. J Ap Chem 3:1-9 Ja '53
Studies in the Wagner rearrangement; chrysene-5,6-C_1^{14}. C. J. Collins and others. bibliog Am Chem Soc J 75:397-402 Ja 20 '53

CHRYSLER corporation
Earnings, year ending Dec. 31. Comm & Fin Chr 177:831 F 23 '53
Five undervalued sound investments; with comparative balance sheet items. Mag of Wall St 91:349 D 27 '52
Investment audit. S. Devlin. Mag of Wall St 91:30-2+ O 4 '52
Security I like best. A. G. Erpf. Comm & Fin Chr 176:2490 D 25 '52
Ten potential market leaders for 1953; with comparative balance sheet items. Mag of Wall St 91:640 Mr 7 '53

CHRYSOSPLENIUM
Splash-cup dispersal mechanism in chrysosplenium and mitella. D. B. O. Savile. Science 117:250-1 Mr 6 '53

CHUCKING machines
Bullard vertical chucking grinding machines. il Mach 59:211-12 F '53; Tool Eng 30:115 Mr '53
Warner & Swasey model 2-AC chucks work to 10½-in. diameter. il Am Mach 97:176 My 25 '53

CHUCKS
Adapters simplify soft-jaw application. C. H. Winterburn. diags Am Mach 97:146 Ja 5 '53
Air chuck setup cuts machining time, improves quality. D. E. Harris. il Iron Age 170:107 O 23 '52
Cast chuck jaws save toolroom time. M. Maloney. il Am Mach 97:167 S 14 '53
Chuck jaws locked for turning with bicycle roller-chain. C. T. Bower. diags Am Mach 97:170 S 14 '53
Great grandpa did contour turning. A. V. Reed and N. Tweddle. il Am Mach 96:119-21 N 10 '52
Lathe chuck useful in holding non-cylindrical round work. W. M. Halliday. diags Mach 59:193-4 Mr '53

CHUCKS, Magnetic
Magnetic-chuck hazard reduced with shop-built safety circuit. R. M. Worthington and L. E. Mason. diags Am Mach 97:171 S 14 '53
Notched plates boost holding power of magnetic chucks. R. Double. il diag Am Mach 97:147 F 16 '53

CHUGAEV reaction
Chemical and kinetic studies on the Chugaev reaction. G. L. O'Connor and H. R. Nace. bibliog Am Chem Soc J 74:5454-9 N 5 '52
Further studies on the Chugaev reaction and related reactions. G. L. O'Connor and H. R. Nace. bibliog Am Chem Soc J 75:2118-23 My 5 '53

CHURCH and state
Church and state in Jugoslavia. map Economist 166:89-90 Ja 10 '53
Church and state in Poland. Economist 166:351-2 F 7 '53
Roman question. Economist 165:699-701 D 6 '52

CHURCH architecture
See also
Chapels
Christian science churches
Spires

CHURCH decoration and ornament
See also
Stained glass

CHURCH finance
Churches; spending billions to keep up with the times. il Bsns W p 100-2 Ap 11 '53
We welcome church loans; Bank of Asheville. L. W. Harrison. il Bankers Mo 70:7-8+ Je '53

CHURCHES
Award-winning Protestant church in North Little Rock, Ark. il plans Arch Rec 113:132-9 F '53
Churches; spending billions to keep up with the times. il Bsns W p 100-2 Ap 11 '53
High scaffolding supports heavy stone; Cathedral of the Sacred Heart in Newark, N.J. il Constr Methods 35:60-2 S '53
Is this church wall-less or roof-less? Cedar Hills Community church, Beaverton, Ore. il Am Bld 74:151 O '52
Lapped church roof of precast slabs. il Concrete 60:14 O '52

Air conditioning

Church air conditioning solves many problems. Heating-Piping 24:107 D '52

Heating and ventilation

Church warming. il Elec R (Lond) 152:1455-6 Je 26 '53
Warm air perimeter system heats basement-less church. il plan Heating-Piping 25:83 O '53

Lighting

Church lighting on a budget. E. A. Domoney. il Illum Eng 47:581-3 N '52
Daylight on a stained glass window; Beverly vista community church. R. E. Bevan. il Illum Eng 47:588 N '52

CHURCHILL, Winston Leonard Spencer, 1874-
Breach of the peace, if this were England. P. Webb. Ed & Pub 86:11 Ja 10 '53
Winston Churchill as First Lord of the admiralty, 1911-15. A. J. Marder. por U S Naval Inst Proc 79:18-27 Ja '53

CHUTES
Design of side walls in chutes and spillways. D. B. Gumensky. il diags Am Soc C E Proc 79 [no 175]:1-7 F '53
Ejection chutes for small wire parts. il Electronics 26:288+ S '53
Useful tricks for chutes and roller conveyors; drawings with text. S. Sinco. Mill & Factory 53:89-90 Ag '53

CHYMOTRYPSIN
α-Chymotrypsin catalyzed synthesis of the phenylhydrazides of certain acylated α-amino acids. W. H. Schuller and C. Niemann. bibliog Am Chem Soc J 74:4630-4 S 20 '52
Enzyme-inhibitor dissociation constants of α-chymotrypsin and several series of bifunctional competitive inhibitors. H. T. Huang and C. Niemann. bibliog Am Chem Soc J 74:5963-7 D 5 '52
Inhibition of the α-chymotrypsin-catalyzed hydrolysis of nicotinyl-L-tryptophanamide and of methyl hippurate by indole. H. T. Huang and C. Niemann. bibliog Am Chem Soc J 75:1395-401 Mr 20 '53
Kinetics of the α-chymotrypsin catalyzed hydrolysis of acetyl-L-tyrosinhydroxamide in aqueous solutions at 25° and *p*H 7.6. D. S. Hogness and C. Niemann. bibliog Am Chem Soc J 75:884-90 F 20 '53
Kinetics of the α-chymotrypsin catalyzed hydrolysis of methyl hippurate in aqueous solutions at 25° and *p*H 7.9. H. T. Huang and C. Niemann. bibliog Am Chem Soc J 74:4634-8 S 20 '52
Reaction of certain octamethylpyrophosphoramide derivatives with chymotrypsin. J. E. Casida, T. C. Allen and M. A. Stahmann. bibliog Am Chem Soc J 74:5548 N 5 '52
Redetermination of the kinetic constants for the system α-chymotrypsin-nicotinyl-L-tryptophanamide. H. T. Huang and C. Niemann. bibliog Am Chem Soc J 74:4713-14 S 20 '52
Solvent effects in the α-chymotrypsin-hydrocinnamic ester system. M. L. Barnard and K. J. Laidler. bibliog Am Chem Soc J 74:6099-101 D 5 '52
Thermodynamic study of some enzyme-inhibitor complexes of chymotrypsin. F. Vaslow and D. G. Doherty. bibliog Am Chem Soc J 75:928-31 F 20 '53

CIBA foundation for the promotion of international co-operation in medical and chemical research
Ciba foundation, London. G. Wolstenholme. Science 117:sup3 Mr 27 '53

CIBA foundation for the promotion of international co-operation in medical and chemical research—*Continued*

London's international science centre; achievements of the Ciba foundation. Chem Age (Lond) 68:487 Mr 28 '53

CIBA yellow

Constitution of ciba yellow 3G. R. S. Staunton and A. Topham. Chem Soc J p 1889-94 Je '53

CICUTOXIN

Chemistry of oenanthotoxin and cicutoxin; abstract. B. Lythgoe. Chem & Ind p242 Mr 14 '53

Oenanthotoxin and cicutoxin; isolation and structures. E. F. L. J. Anet and others. Chem Soc J p309-22 Ja '53

CIGAR boxes

Cigar box, new and improved. il Ptr Ink 241:50 D 19 '52

Pass the cigars by mail; clever mailer package and greeting card. il Mod Packaging 26:97 F '53

CIGAR industry and trade

Cigars go self-service; Bayuk cigars, inc. il Bsns W p52+ Ap 25 '53

CIGARET industry and trade

Cigarette makers see good times ahead. Bsns W p 138+ N 22 '52

Recent developments in cigarette industry. O. P. McComas. Comm & Fin Chr 177:1104 Mr 12 '53

Supplementing the senses. il Chem W 72:36+ Mr 28 '53

See also

Morris, Philip, and company

Reynolds tobacco company

Advertising

Ask for proof of cigarette and filter advertising! Consumers Res Bul 30:10 D '52

Best-read magazine advertisements. D. Starch. il Adv Agency 46:72-3 F '53

Best-read newspaper advertisements. D. Starch. il Adv Agency 45:168-9 O '52; 46:120-1 Mr '53

Chesterfield wins in court against FTC's ad charge. J. Shoenfeld. Sales Management 69:46+ D 15 '52

Chicago tribune study tells why people smoke. Ed & Pub 85:18 N 1 '52

Cigaret advertising near record level in dailies. Ed & Pub 85:17 N 22 '52

Cigarette competition gets hotter, companies plan new smoking appeals. C. Day. il Ptr Ink 242:29 Mr 6 '53

Does cigarette advertising need further self-regulation? C. B. Larrabee; R. Norr. Ptr Ink 241:52+ O 31 '52

FTC cracks down on Chesterfield ads. Bsns W p50+ N 8 '52

FTC will fight court ruling on Chesterfield cigarettes. Bsns W p80 D 13 '52

Marlboro schedules ads exclusively in papers. Ed & Pub 86:26 Ja 17 '53

Preferences in cigarettes and cigarette advertising. Ptr Ink 241:61 D 26 '52

Which are the most backward fields? cigaret, book, automobile and media advertising. Aesop Glim. Ptr Ink 241:63 D 19 '52

Finance

Spiraling smoke; cigarette outlook; with data on sales and earnings, 1952. J. V. Sherman. Barron's 33:13-14 My 18 '53

Statistics

Cigarette sales hit 433 billion. G. R. Dunhill. Adv Agency 46:56-7+ Ja '53

Cigarette sales increase 4.5 per cent over 1951. H. M. Wootten. il Ptr Ink 242:35-7+ Ja 9 '53

Cigarette sales; the kings shoot up. Bsns W p41-2+ D 27 '53

Taxation

Lost its starch; cigarette shipments between states. Bsns W p42 F 28 '53

Tax hopes rise. Bsns W p70-1 Ap 4 '53

CIGARET lighters

Mr Zippo. Fortune 46:220 O '52

Ronson's time of trouble. il Fortune 46:137-9+ D '52

Why didn't some one think of this before; Dryco leakproof capsule of lighter fluid. il Sales Management 70:64 F 1 '53

Advertising

How Ronson plans to test dailies in 30 key cities. R. B. McIntyre. Ed & Pub 85:18+ S 20 '52

Manufacture

Petrol lighter manufacture; electrical distribution system; Ronson products, ltd. il Elec R (Lond) 151:1153-6 N 28 '52

Precision makes possible drain cast whiteware for cigarette lighters; Evans case co. il Cer Ind 61:86-7 O '53

CIGARETS

King-size. il Consumers Res Bul 31:9 My '53

Preferences in cigarettes and cigarette advertising. Ptr Ink 241:61 D 26 '52

Why people smoke cigarettes is subject of new study. Adv Agency 45:94 D '52

Manufacture

Everything is handled mechanically; Louisville plant of Philip Morris; illustrations with text. Mill & Factory 51:94-5 O '52

Prices

Cigarette industry's price policies. E. T. Grether. J Bsns 25:264-6 O '52

CIGRE. See International conference on large high tension electric systems

CILIATA

Protozoal polysaccharides; structure of a polysaccharide produced by cycloposthium. G. Forsyth, E. L. Hirst and A. E. Oxford. Chem Soc J p2030-3 Jl '53

Protozoal polysaccharides; structure of the polysaccharide produced by the holotrich ciliates present in sheep's rumen. G. Forsyth and E. L. Hirst. Chem Soc J p2132-5 Jl '53

CINCHONINALDEHYDE

Condensations of cinchoninaldehyde; with phenylacetonitriles. A. P. Phillips. Am Chem Soc J 74:5230-1 O 20 '52

Condensations of cinchoninaldehyde; with the quaternary alkiodides of some heterocyclic active methyl compounds. A. P. Phillips. Am Chem Soc J 75:383-4 Ja 20 '53

CINCINNATI

Lighting

Cincinnati merchants throw a little light on the situation. il Elec World 139:117 My 4 '53

Rapid transit

Cincinnati transit story. G. W. Keith. Pub Util 52:86-94 Jl 16 '53

Sanitary affairs

Results of a five-year investigation of air pollution. J. Cholak and others. map A M A Archives Ind Hygiene & Occup Med 6:314-25 O '52

Sewerage

Cincinnati shows way in Ohio River clean-up. il map diag Eng N 150:40-1+ Je 25 '53

CINCINNATI enquirer

Enquirer sale to employes accomplished. Ed & Pub 85:12 O 4 '52

CINCINNATI gas and electric company

Public utility securities. O. Ely. Comm & Fin Chr 177:1450 Ap 2 '53

CINDER pots

Cinder pots designed for long service. il Blast F & Steel Pl 40:1454-5 D '52

Creating a thimble; cinder pot manufacturing requires specialized foundry operations. il Steel 131:90-1 O 20 '52

Longer life cast into modern slag ladle. il Foundry 80:108-11+ D '52

CINEMASCOPE

Fox's moves. Bsns W p27 F 7 '53

CINEMATOGRAPH cameras. See Moving picture cameras

CINERAMA, inc.

Cinerama; a Wall Street hit? Bsns W p 171-2 N 8 '52

Cinerama, the broad picture. il Fortune 47:92-3+ Ja '53

Debentures offered. Comm & Fin Chr 177:1151-2 Mr 16 '53

Speculation in color and depth. I. U. Cobleigh. Comm & Fin Chr 176:1519+ O 23 '52

CINEROLONE
Constituents of pyrethrum flowers; synthetic *dl-cis*-cinerolone and other cyclopentenolones. M. S. Schechter, N. Green and F. B. LaForge. bibliog Am Chem Soc J 74:4902-6 O 5 '52

CINNAMIC acid
Hydrolysis of some cyanocinnamic acids. H. Rapoport and others. bibliog Am Chem Soc J 75:1125-8 Mr 5 '53
Occurrence of cinnamic acid in sugar pine (pinus lambertiana Dougl.) A. B. Anderson. Am Chem Soc J 74:6099 D 5 '52
Polymerization of esters of cinnamic acid. C. S. Marvel and G. H. McCain. bibliog Am Chem Soc J 75:3272-3 Jl 5 '53

CINNAMIC acid dibromide. See Dibromocinnamic acid

CINNOLINE
Cinnolines and other heterocyclic types in relation to the chemotherapy of trypanosomiasis. J. McIntyre, J. C. E. Simpson and J. S. Morley. Chem Soc J p2606-22 Jl '52
Cinnolines and other heterocyclic types in relation to the chemotherapy of trypanosomiasis; general introduction; quaternary salts of amino-cinnolines, -quinazolines, and -quinolines. J. R. Keneford and others. Chem Soc J p2595-602 Jl '52
Cinnolines and other heterocyclic types in relation to the chemotherapy of trypanosomiasis; synthesis of 4 : 4′-diamino-6 : 6′-azoquinoline metho-salts. P. E. Macey and J. C. E. Simpson. Chem Soc J p2602-5 Jl '52
Cinnolines; 8-hydroxycinnoline and some of its derivatives. E. J. Alford and others. Chem Soc J p3009-17 Ag '52
Cinnolines; the nature of the $C_{(3)}$-position; some experiments with 3-substituted cinnolines. E. J. Alford and K. Schofield. Chem Soc J p 1811-17 Je '53
Cinnolines; the nature of the $C_{(3)}$-position; the Neber-Bossel synthesis of 3-hydroxycinnoline. E. J. Alford and K. Schofield. Chem Soc J p2102-8 Je '52
Cinnolines; the nature of the $C_{(3)}$-position; the synthesis of 3-methyl-, 3-chloro-, and 3-bromo-cinnoline; also, of cinnoline and the *Bz*-nitrocinnolines. E. J. Alford and K. Schofield. Chem Soc J p609-12 F '53
Electric moments of some derivatives of cinnoline, pyridine and quinoline. M. T. Rogers and T. W. Campbell. bibliog Am Chem Soc J 75:1209-10 Mr 5 '53

CIRCLES
Calculating a circle the easy way. Coal Age 58:110 Jl '53

CISLER, Walker Lee, 1897-
Portrait. Bsns W p 104 Mr 14 '53

CISSOID of Diocles
Exact computing linkage; mechanism which generates the ancient cissoid of Diocles. L. S. Packer. bibliog diags Machine Design 25:171-5 S '53

CITIES and towns
Impact on city property values resulting from decentralization. W. L. C. Wheaton. Comm & Fin Chr 176:2131 D 4 '52
Short-cut methods of forecasting city population. R. C. Schmitt and A. H. Crosetti. bibliog J Marketing 17:417-24 Ap '53
See also
City planning
Metropolitan districts
Municipal finance

Growth

Forecasting of population by census tracts in an urban area. R. P. Wolff. maps Land Econ 28:379-83 N '52
Urban growth and municipal finance; abstract. D. C. Corbett. Munic Util 91:44+ Mr '53
When big business comes to a country town. J. Garth. il Am Bsns 23:26-7+ Mr '53

Industries

Municipalities and industrial location. J. D. Garwood. Management R 41:572-6 S '52
Towns; how to get new industry. E. C. Kellogg. Iron Age 171:39 Ja 15 '53
See also
Industrial foundations

Size

Urban size; an assessment. R. M. Lillibridge bibliog Land Econ 28:341-52 N '52

Statistics

Municipal statistics. J. B. Whitbeck. Special Lib 43:396-400 D '52

Great Britain

Britain's new forest villages. H. L. Edlin. il Pulp & Pa of Can 54:158+ Je '53
New cities. Economist 166:470-2 F 21 '53

Ohio

Ohio slum clearance approved. il Eng N 150:55 Mr 12 '53

CITIES and towns, Company. See Company towns

CITIES service company
Five outstanding candidates for stock-splits; with comparative balance sheet items. Mag of Wall St 91:295 D 13 '52

CITRACONIC anhydride
Diene addition between *trans*-piperylene and citraconic anhydride. W. Huang, H. L. Holmes and L. F. Fieser. Am Chem Soc J 74:5920-1 D 5 '52

CITRATES
Presence of citrate in commercial crystallized bovine serum albumin. I. Feldman and J. R. Havill. bibliog Science 116:691-2 D 19 '52

CITRAZINIC acid
One step from citric; CZA. Chem W 72:26 Ja 31 '53; Excerpts. Chem Eng 60:263 Ap '53

CITRIC acid
Anisotropic dissolution and the orientation of the phosphorescent dye, trypaflavin, in the crystal of citric acid. D. Yamamoto. il diags J Chem Phys 20:1974-5 D '52
Citric acid ester plasticizers. F. J. Prescott and G. O. Cragwell. bibliog Mod Plastics 30:134+ O '52
Their waste-salvage process balances multi-product operation; Exchange lemon products co. H. H. Holton and C. R. Havighorst. flow sheet(p 162-5) il Food Eng 25:58-60+ Je '53

Manufacture

Effect of aeration on citric acid production in 50-gallon tanks. G. H. Buelow and M. J. Johnson. bibliog il diag Ind & Eng Chem 44:2945-6 D '52

CITRONELLA oil
Citronella oil output in Taiwan estimated at 1,200 tons for 1952; stocks small. For Comm W 49:24 My 4 '53

CITROVORUM factor. See Liver extracts

CITRUS fruit
Israel citrus output rises. For Comm W 49:12 Ja 26 '53
Squeeze on citrus growers. Bsns W p90 Ja 10 '53
Supply of citrus fruit expanded in West Europe. For Comm W 49:16 F 16 '53
Transient and steady-state heat transfer in irradiated citrus fruit. H. F. Poppendiek. bibliog diag A S M E Trans 75:421-5 Ap '53

By-products

Citrus wastes may yield new profit in by-products. Food Eng 25:232 F '53
Integrate complex operation and make a better feed from peel; Minute maid corp. feed mill. W. H. Harte. flow sheet(p 118-21) il Food Eng 25:84-6+ Mr '53
Pay-off in the peel. il Chem W 71:36+ D 20 '52
Their waste-salvage process balances multi-product operation; Exchange lemon products co. H. H. Holton and C. R. Havighorst. flow sheet(p 162-5) il Food Eng 25:58-60+ Je '53
See also
Limonene

Diseases and pests

Complex for results. il Chem W 71:29-31 N 1 '52

Transportation

Trend to fibre for produce. il Mod Packaging 27:140-1 O '53

CITRUS fruit industry

Advertising

How Thompson handles Florida citrus advertising for Florida citrus commission. S. Robin. il Adv Agency 45:59-61+ D '52

CITY investing company

Footlights and frontage; Mr Dowling makes both pay off for City Investing. B. Lefferts. Barron's 32:5+ O 20 '52

CITY manager plan. See Municipal government—City manager plan

CITY planning

APHA conference report; planning and team approaches to a better environment. Pub Health Rep 68:236-9 F '53

City planning techniques. R. H. Riley. Am Soc C E Proc 79 [no 194]:1-8 Je '53

Mesa air maps prove invaluable tools. D. Smith. il Pub Works 84:57+ Jl '53

New cities. Economist 166:470-2 F 21 '53

Our expanding cities demand good planning. L. V. Sheridan. plan Civil Eng 22:685-8 S '52

Philadelphia tears down its Chinese wall. il Bsns W p98-100+ F 14 '53

Pittsburgh's answer to the high cost of squalor. il map Bsns W p70-2+ Ap 11 '53

Planned community rises in Toronto. il Eng N 150:49-50 My 21 '53

Report on best ways to reduce effects of bomb or other attack. Pub Works 84:88+ My '53

St Louis slum-clearing planned. map Eng N 150:224-5 F 19 '53

Urban size; an assessment. R. M. Lillibridge. bibliog Land Econ 28:341-52 N '52

Zone system

Landmark zoning case; minimum living space restrictions; Lionshead Lake, inc. v. Township of Wayne. J. Beuscher. Land Econ 28: 384-5 N '52

CITY stores company

Sales, profits continue recent upswing. Barron's 33:15-16 Je 22 '53

CIVIC centers. See Municipal centers

CIVIL aeronautics administration

CAA airport aid fund is budget target. L. Moore. Aviation W 58:51 Mr 9 '53

CAA faces major overhaul under GOP. R. Hotz. Aviation W 58:13 Ap 20 '53

CAA ready to talk with ARB in early certification of the Comet 3. A. McSurely. Aviation W 58:32 Ap 13 '53

CAA reshuffles its development setup. Aviation W 57:15-16 D 8 '52

CAA seeks $45-million aid fund for buildup of navigation and traffic control aids on military, civil airports. Aviation W 58:78-80 F 9 '53

Reshuffles seven CAA regional offices into four. A. McSurely. map Aviation W 58:13-14 My 11 '53

Revolt hits CAA safety office. Aviation W 57: 64-5 D 22 '52

Top CAA, CAB jobs put before Congress. Aviation W 58:22+ Ap 6 '53

CIVIL aeronautics board

American airlines calls CAB rulings political. C. Roberts. Aviation W 58:52 Mr 9 '53

Board may delay nonsked action two years. L. Moore. Aviation W 58:85-6 Ap 13 '53

CAB asks for more enforcement power. Aviation W 58:26 Ap 6 '53

CAB declines to make insurance regulations. East Underw 54:42 Je 19 '53

CAB holds key to future airline profits. L. Moore. Aviation W 58:79-82 Ja 12 '53

CAB kills investigation of airline profits. L. Moore. Aviation W 58:96 My 25 '53

CAB policy. O. Ryan. Aviation W 58:81 Mr 30 '53

CAB refuses subsidy for Southwest 2-0-2s. Aviation W 58:81 Je 1 '53

CAB setup to remain intact. L. Moore. Aviation W 57:18 N 17 '52

CAB shuffles chairman's duties. Aviation W 57:16-17 N 24 '52

CAB to curb powers of its chairman. L. Moore. Aviation W 57:83-4 O 27 '52

Denny holds balance in CAB. Aviation W 58:92-3 Ap 27 '53

Gorham heads CAB Routes division. Aviation W 57:48 D 29 '52

Report says CAB is strangling nonskeds. Aviation W 58:64 Mr 16 '53

Shake-up in airline routes. Bsns W p 176+ My 23 '53

Top CAA, CAB jobs put before Congress. Aviation W 58:22+ Ap 6 '53

CIVIL defense. See Civilian defense

CIVIL engineering

Aluminum alloys in civil engineering practice. S. K. Ghaswala. il Light Metal Age 10:18-20+ Ap; 17+ Je; 21 Ag; 18+ O '52

ASCE meeting, San Francisco; with abstracts of papers. Eng N 150:23-4 Mr 12 '53

Century of progress in civil engineering. J. K. Finch. il Civil Eng 22:620-5 S '52

Civil engineer in the laboratory. A. J. S. Pippard. Engineering 175:703 My 29 '53

Civil engineering in 1952. il diags Engineer 195:13-15, pl 4, 42-4, pl 1, 82-6 Ja 2-16 '53

Civil engineering looks to the future. J. B. Wilbur. il Civil Eng 22:662-5 S '52

Construction economy is basic in reclamation design. L. N. McClellan. il Civil Eng 22:854-7 O '52

Sections select seven wonders of civil engineering. C. M. Bayer. Civil Eng 22:1043-4 D '52

Some foreign civil engineering schemes of 1952. il diags Engineer 195:164-6, 197-9 Ja 30-F 6 '53

Tabular summary of civil engineering contracts, 1952. Engineer 195:supp Ja 23 '53

See also

Airports
Airways
Aqueducts
Austin company
Blasting
Breakwaters
Bridges
Building
Cofferdams
Dams
Drainage
Drilling and boring (earth and rocks)
Earthwork
Filling
Flood control
Foundations
Highway engineering
Hydraulic engineering
Irrigation
Marine engineering
Mechanical engineering
Mining engineering
Moving of structures
Piers
Piles and pile driving
Pipe laying
Public works
Railroads—Construction
Reclamation of land
Regional planning
Rivers
Roads
Sanitary engineering
Sewerage
Soil mechanics
Steel construction
Strains and stresses
Strength of materials
Structural engineering
Surveying
Tunnels and tunneling
Underground construction
Water supply engineering

Study and teaching

What are contemporary demands on the engineering curricula? H. E. Wessman. J Eng Educ 43:298-302 Ja '53

Tables, calculations, etc.

Intersection of two lines computed by simple method. L. Clarke. diags Civil Eng 23:178-9 Mr '53

CIVIL engineers

Civil engineer grads far short of demand; Engineers' joint council survey. Eng N 150:26 F 26 '53

Civil engineers' income averages $7,100. Eng N 150:26 Ap 30 '53

Construction, a growing field for the civil engineer. D. W. Winkelman. Civil Eng 22: 626-7 S '52

Train design engineers in construction realities. G. B. Woodruff. il Civil Eng 22:858-60 O '52

See also

American society of civil engineers
Inter-American convention of civil engineers

CIVIL rights

Problem of experimentation on human beings; civil rights of military personnel regarding medical care and experimental procedures. W. H. Johnson. Science 117:212-15 F 27 '53

Rights of the Soviet citizen. Economist 167: 606-7 My 30 '53

Yearbook on human rights for 1950. 596p $6.50 Columbia univ. press, 2960 Broadway, New York 27 '52

CIVIL service
See also
Public officials

Great Britain

Great impartial. Economist 166:790-1 Mr 21 '53
Twilight of the temporaries. Economist 166: 560 F 28 '53

India

Independent India's civil service. Economist 165:314 N 1 '52

United States

Little Oscars and civil service. Fortune 47: 77-8 Ja '53
Opening up top U.S. jobs; Schedule A. Bsns W p27 Mr 14 '53

CIVILIAN defense
Civil defense called feasible and urgent; project East River calls for vast program of urban planning and structural protection. diag Arch Rec 113:16 F '53
Civil defense for water supplies. F. H. Kingsbury. il Pub Works 84:65-6+ Ap '53
Communications for civil defense. C. A. Armstrong. map diag Elec Eng 72:218-22 Mr '53
Food in civil defense. Tech R 55:198 F '53
Food supply and emergency feeding in civil defense. P. B. Murphy and others. Pub Health Rep 67:860-3 S '52
Minimum mobile for ten-meter civilian defense. R. G. Finkbeiner. il diags Radio & Tv N 50:52-3+ Jl '53
New tasks for civil defence? Economist 167: 13-14 Ap 4 '53
Nutritional problems and civil defense. J. Drummond. Pub Health Rep 67:857-9 S '52
Preparing for disaster control. A. D. O'Connor. Nat Safety N 67:34+ Mr '53
Radio amateur civil emergency service. il map diag Q S T 37:50-2+ Mr; 59-61+ Ap; 60-2+ My '53
Scientist in civil defence meeting, 1st, London, Oct 16. Chem Age (Lond) 67:639-40 N 8 '52
Sewage works in civil defense. A. S. Nesheim. il Pub Works 84:73-4+ Je '53
Utility rôle in civil defense. Pub Util 50:806-7 N 20 '52
See also
Air raids—Protective measures
Atomic bombs—Protective measures

CIVILIZATION
See also
Progress

CLAD metals. See Metals, Clad

CLAIM association, International. See International claim association

CLAIMS
See also
Damages
Insurance—Adjustment of claims
Manufacturers' liability
Railroads—Claims

CLAISEN rearrangement. See Molecular rearrangements

CLAM diggers
Clam digger's dermatitis; schistosome dermatitis from sea water; abstract. L. Orris and F. C. Combes. A M A Archives Ind Hygiene & Occup Med 7:69 Ja '53

CLAMPS
Cam for jig clamping. R. Mery. diags Am Mach 96:145 D 8 '52
Carbide punch clamp. W. V. Anderson. diag Tool Eng 30:42 Ja '53
Clamp for piston assembly. Steel 131:316+ O 13 '52
Clamping arrangement for sealing castings to be tested for leakage. R. S. Newton. diags Mach 59:199-200 N '52
Clamping devices for cylindrical members; reference book sheet. H. Murro. diags Am Mach 97:139, 141 Ag 17 '53
Finger clamp for gripping non-parallel surfaces. W. M. Halliday. diags Mach 59:203-4 My '53
Hydraulic clamping accelerates spar milling. il diags Mach 59:180-1 Ja '53
Improved finger clamps for the toolmaker. W. M. Halliday. diags Mach 60:210-11 O '53
Lever type clamps for jigs and fixtures. W. H. Litten. diags Mach 59:196-7 My '53
Methods of installing bell joint clamps. M. E. Malone. Am Gas Assn Proc 1952:475-7
Quick-acting miller clamp. C. T. Bower. diags Am Mach 97:132 Mr 2 '53
Quick-action threaded clamps for proof-testing cables. il Mach 59:171 F '53
Simple clamps speed tooling. N. Palmer. diags Am Mach 96:144 O 27 '52
Simplified clamping design; engineering data. S. Tilles. Tool Eng 29:67 N '52

CLARIFIERS
Simplified system for mechanical clarification solves corrosion, flow and explosion problems; Mennen co. il Mill & Factory 53:153 O '53

CLARK, Wallace
Wallace Clark international management center. L. M. Gilbreth. por Advanced Management 17:18-19 D '52

CLARK, Walton, medal
Presentation of the Walton Clark medal. Franklin Inst J 254:463-5 D '52

CLARK equipment company
Clark Equipment; betting on growth. Bsns W p82-3 Je 13 '53

CLARY multiplier corporation
Heavy demand for adding machines spurring sales. Barron's 33:27+ My 11 '53

CLASS distinction
Soviet society; from the dacha set down. il Fortune 47:125-9+ F '53

CLASSIFICATION
Bibliographic classification; extended by systematic auxiliary schedules for composite specification and notation. 4v $30; v 3, Classes L-Z. H. E. Bliss. $15 H. W. Wilson co, New York '53
Bibliographic classification; extended by systematic auxiliary schedules for composite specification and notation. 4v $30; v4, General index combining the indexes of v 1-3. H. E. Bliss. 426p $15 H. W. Wilson co, New York '53
Classification schemes for business and financial libraries. J. Bogardus. Special Lib 43: 409-12 D '52
Information theory and its application to taxonomy. D. K. C. MacDonald. J Ap Phys 23:529-31 My '52
Library of Congress, Class U, Military science. 3d ed 86p pa 75c Supt. of doc. '52
Scientist and the library cataloger. R. J. Poulin. Science 117:538-9; Discussion. R. S. Angell. 539 My 15 '53
Special classifications. Special Lib 44:31 Ja '53

CLASSIFICATION, Decimal
Dewey decimal classification and relative index. M. Dewey. 15th ed rev 872p $18.50 Forest press, Lake Placid club, Essex county, New York; for sale by H. W. Wilson co, New York '52
International U.D.C. developments in 1952. G. A. Lloyd. Aslib Proc 5:41-53 F '53

CLASSIFIED advertisements. See Advertisements, Classified

CLASSIFIED advertising managers, Association of newspaper. See Association of newspaper classified advertising managers

CLASSIFIED advertising managers, Southern. See Southern classified advertising managers

CLASSIFIERS
Application of centrifugal forces to gravitational classifiers. R. C. Emmett and D. A. Dahlstrom. bibliog il Min Eng 5:Trans 1015-21 O '53; Excerpt. Rock Prod 56:146+ Ap '53
Centriclone in specific metallurgical applications; abstract. P. G. McGuire. diag Rock Prod 56:178+ Ap '53
Classifier uses new theory. diags Chem Eng 60:384+ Mr '53
From open to closed-circuit grinding with liquid cyclones; Southwestern portland cement co. il diags Rock Prod 56:62-6 Jl '53
Holman vibratory classifier. il diags Engineering 176:189 Ag 7 '53
Magnetic reflux classifier. L. A. Roe. bibliog il diag Min Eng 5:Trans 312-15 Mr '53
New methods for the removal of solids and gases from liquid suspensions with particular reference to pulp stock conditioning. H. Freeman and J. D. Boadway. il diags Pulp & Pa of Can 54:102-7 Mr '53; Same. Tappi 36:236-40 My '53

CLASSIFIERS—*Continued*

Operating behavior of liquid-solid cyclones. E. B. Fitch and E. C. Johnson. bibliog diag Min Eng 5:Trans 304-8 Mr '53; Excerpts. Chem Eng 59:172-3+ Je '52

CLASSROOMS

Designing for natural ventilation in classrooms. il diags Heat & Ven 50:99-100 Ja '53

Developing the color treatment for schoolrooms. P. W. Seagers. Illum Eng 49:296-8 Je '53

Lighting for classrooms with nine-foot ceilings. J. F. Parsons. Illum Eng 48:318 Je '53; Discussion. 48:sup16A S '53

Meeting lighting quality requirements in school classrooms. J. J. Neidhart. diag Illum Eng 48:311-15 Je '53

CLATHRATE compounds. See Molecular compounds

CLAY, Lucius DuBignon, 1897-

It's the same skill anywhere. pors Bsns W p74+, cover F 14 '53

CLAY

Adsorption studies on clay minerals; a formulation of the thermodynamics of exchange adsorption. G. L. Gaines, jr. and H. C. Thomas. diag J Chem Phys 21:714-18 Ap '53

Blue ball clays offer high plasticity, wide firing range. Cer Ind 61:90 Ag '53

China clay in aqueous suspension; effect of anions on flow properties. T. W. Alton and O. J. Schierholtz. bibliog Pulp & Pa of Can 54:67-72 F '53

Clay minerals in sedimentary rocks and derived soils. F. B. Van Houten. map Am J Sci 251:61-82 bibliog(p80-2) Ja '53

Effect of additional pugging on clays and shales. A. P. Steele, jr. Am Cer Soc Bul 32:215-17 Je 15 '53

Effects of extrusion and some other processes on the microstructure of clay. J. H. Weymouth and W. O. Williamson. bibliog diags Am J Sci 251:89-108, pl 1-2 F '53

Electron microscopy of soil clays and related materials. E. B. Kinter and others. bibliog(24 titles) il diags Pub Roads 27:89-100 D '52

Large-scale preparation of clay slips. E. G. Heslop and H. M. Hughson. bibliog flow diag il Tappi 36:sup 152A-6A F '53

Lightweight aggregates from argillaceous raw materials. F. O. Anderegg. Rock Prod 55:122 D '52

Mechanism of cation and anion exchange capacity. M. A. Cook and others. bibliog J Phys Chem 57:1-6 Ja '53

Something to learn from clay research. N. C. Rockwood. Rock Prod 56:39+ Jl '53

Theory of cation exchange reactions with clay minerals. I. B. Cutler and M. A. Cook. bibliog Am Cer Soc J 36:165-70 My 1 '53

What causes molding green strength? C. A. Sanders. il Foundry 80:108-9+ O '52

See also

Bentonite
Ceramic materials
Fire clay
Montmorillonite
Pottery

Analysis

Determination of soluble sulfates in clay. L. G. Tubbs. Am Cer Soc Bul 32:181-2 My 15 '53

Differential thermal analyses as a means of predicting firing behavior of structural clay materials. J. O. Everhart and R. R. Van der Beck, jr. Am Cer Soc Bul 32:239-41 Jl 15 '53

Find scumming sulphates by quick method. L. G. Tubbs. il Brick & Clay Rec 122:59 F '53

Qualitative color test for rapid identification of the clay mineral groups. W. W. Hambleton and C. G. Dodd. bibliog Econ Geol 48:139-46 Mr '53

Quantitative analysis of clay minerals with the X-ray spectrometer. G. Talvenheimo and J. L. White. bibliog Anal Chem 24:1784-9 N '52

Testing

Measurement of dry strength of clay bodies. J. A. Pask. il Am Cer Soc J 36:313-18 S 1 '53

Use of native clays in high-grade pottery. G. B. Leach. il Cer Ind 60:86-8 My '53

Saskatchewan

Refractory products from Saskatchewan clays. il Can Chem Process 37:46+ Ja '53

Texas

Use of native clays in high-grade pottery. G. B. Leach. il Cer Ind 60:86-8 My '53

Utah

Ceramic properties of halloysite. B. F. Hampel and I. B. Cutler. bibliog il diag Am Cer Soc J 36:30-4 Ja 1 '53

CLAY drying

Cuts pipe drying by five days; steel grating floors. A. P. Potts and F. S. Trumbower. il Brick & Clay Rec 122:78 Ap '53

Fast drying of small sizes of sewer pipe. H. Dye and J. D. Feack. Am Cer Soc Bul 32:126-7 Ap 15 '53

Reduce drying time by preheating clay with steam. Brick & Clay Rec 122:66+ Ap '53

CLAY handling

Front-end loader ups production shaves clay handling costs. il Brick & Clay Rec 122:53 Ap '53

How to obtain a uniform product when using clays mined underground. L. P. Young. Brick & Clay Rec 123:63 S '53

Scraper bucket delivers 82 tons an hour. il Brick & Clay Rec 122:46-7 F '53

Traxcavator does double duty; front-end loader mines and mixes clay. il Brick & Clay Rec 122:29-31 Ja '53

CLAY industries

Modernize your design, mechanize your plant, merchandise your product. Brick & Clay Rec 123:30-1 Ag '53

What clay products manufacturers can do. Brick & Clay Rec 123:32 Jl '53

What faces you and your business. Brick & Clay Rec 122:42-3 Ap '53

Statistics

Clay products, Nov.-Dec. 1951-Jan.-Nov. 1952. Survey of Cur Bsns 33:S38 Ja '53 [cont monthly]

CLAY mines and mining

Winning of clay. il Brick & Clay Rec 121:44-5 O '52

CLAY products

Building material; glass balloons offer lightweight aggregate for plaster, concrete; made by blowing up grains of clay in a special furnace. Iron Age 170:114-15 O 2 '52

Clay bubbles form new clay aggregate; Kanamite. il Brick & Clay Rec 121:46-7 O '52

Concrete pumped through rubber hose now possible with new aggregate; Kanamite. J. Neff. il Roads & Eng Constr 90:116+ O '52

Effects of wetting agents on the physical properties of clay bodies. R. E. Pyle and P. R. Jones. Am Cer Soc Bul 31:233-6 Jl 15 '52

Foamclay products. M. Vukovich, jr. il Am Cer Soc Bul 32:85-6 Mr 15 '53

Influence on practice of the performance of burnt clay products in structures; discussion. N. Davey and others. Chem & Ind p 1240 D 20 '52

Jet aircraft offer new use for the Postonway road. il Brick & Clay Rec 121:50 O '52

Making bubbles from clay; Kanamite. il diags Chem Eng 59:247-8 D '52

See also

Sewer pipes, Vitrified clay
Spalling

Manufacture

Cellulated ceramics for the structural clay products industry; Foamclay. C. M. Nicholson and G. A. Bole. flow sheet il diags Am Cer Soc J 36:127-36 Ap 1 '53

Differential thermal analyses as a means of predicting firing behavior of structural clay materials. J. O. Everhart and R. R. Van der Beck, jr. Am Cer Soc Bul 32:239-41 Jl 15 '53

How to get maximum spraying results; application of glaze on clay products. il Brick & Clay Rec 121:60-1 O '52

See also

Kilns—Firing

CLAY products—*Continued*

Standards

Major stride toward building economy through the modular method. W. Demarest, jr. Am Cer Soc Bul 32:54 F 15 '53

Transportation

Dealer-contractor cooperate, mechanize material handling; Block coal & supply co. il Brick & Clay Rec 122:53-5+ My '53

Packaging and transporting clay products. il diag Brick & Clay Rec 122:55-6+ Ap '53

CLAY products, Decorative

Clay, featured theme of art exhibit; 1952 Los Angeles county fair. il Brick & Clay Rec 122:38-9 Ja '53

CLAY products plants

How to increase productivity. Brick & Clay Rec 122:71+ Je '53

See also

Brick works

Accidents

Stop foot accident losses. il Brick & Clay Rec 121:60-1 N '52

Electric equipment

Strain gages control pugmill water. diag Brick & Clay Rec 121:28 D '52

Employees

Put new foreman on your team. E. J. Martin. Brick & Clay Rec 121:64 D '52

See also

Brick works—Employees

Equipment

Clay products transport techniques; illustrations with text. Brick & Clay Rec 122:40 My; 123:46-7 Jl '53

Crushers and crushing. il Brick & Clay Rec 121:54-6 N '52

Cuts clay unloading time over 80 per cent; Hough Payloader. il Cer Ind 59:99 D '52

Denie's company starts bloated clay plant. il Concrete 61:3-5 Je '53

Depreciation of ceramic equipment. Cer Ind 59:49 D '52

Hanover technical fair. il Engineer 195:772-3 My 29 '53

Horizontal extrusion at Pine Hall. il Brick & Clay Rec 122:57 Je '53

How to mechanize. Brick & Clay Rec 122:42-3 My '53

Hydraulic dry pressing. L. A. Lassman. il Brick & Clay Rec 123:56 Jl '53

Hydraulic pressing helps specialty department pay higher profits. il diags Brick & Clay Rec 122:63 My '53

Latest in materials and equipment. il Brick & Clay Rec 121:18-22 N '52

Modern materials handling cuts costs; General Refractories new Los Angeles plant. il Brick & Clay Rec 121:53-5 D '52

Modernized production report; Tillotson refractories co. il Brick & Clay Rec 123:52-3 Jl '53

New developments in systems for measurement and control of humidity and temperature in ceramic driers. J. R. Green. il diags Am Cer Soc Bul 32:18-22 Ja 15 '53

Puerto Rico story; Puerto Rico clay products corporation. A. S. Keshen. il plan Brick & Clay Rec 122:42-5 Je '53

Rabble bin feed controlled automatically; Denver (Colo.) fire clay co. il Brick & Clay Rec 122:73 Ap '53

Screens and screening. il Brick & Clay Rec 122:52-3 Mr '53

Two-man crew operates aggregate plant; Light aggregate, inc. il Brick & Clay Rec 122:48-50 Mr '53

Unique rotary hearths in new plant; Cinder concrete products, inc. il plan Brick & Clay Rec 123:50-1 Ag '53

Visit to American container co. il Brick & Clay Rec 122:58-9 My '53

Your drum pelletizer still tops for pellet formation. Brick & Clay Rec 123:55 Jl '53

Fires and fire protection

When the fire bell rings. Brick & Clay Rec 121:76 O '52

Management

Safety, personnel training, kiln care lecture topics at 2d TRI factory operators committee meeting, Pittsburgh, March 30-31; abstracts of papers. Brick & Clay Rec 122:65-7 My '53

Safety measures

SCPI safety program to save $5 million. il Brick & Clay Rec 121:48 O '52

CLEANERS and dyers buildings

Air conditioning

Evaporative cooling for dry cleaning plant. R. Latimer. il Sheet Metal Worker 44:48+ My '53

CLEANING

Cleaning by sound. il Bsns W p70 Mr 21 '53

Fabric behavior in dry cleaning (cont). A. E. Johnson. il Mod Textiles Mag 33:63-4+ N '52; 34:41+ My '53

See also

Air filters—Cleaning
Castings—Cleaning
Coal cleaning
Cotton cleaning
Dairies—Cleaning
Degreasing
Factories—Cleaning
Glass cleaning
Laundry
Lighting fixtures—Cleaning
Metal cleaning
Monuments—Cleaning
Oil tanks—Cleaning
Soap
Steel—Cleaning
Taxicabs—Cleaning
Vacuum cleaning

CLEANING compositions

Action of detergents in sewage treatment; study by industry. W. R. Gowdy. il plan Sewage & Ind Wastes 25:255-60; Discussion. W. N. Wells. 260-1 Mr '53

Anionic syndets in Amsterdam sewage. P. N. Degens, jr. and others. Sewage & Ind Wastes 25:20-5 Ja '53

Carboxymethylcellulose; a staff-industry collaborative report. R. N. Hader, W. F. Waldeck and F. W. Smith. bibliog flow sheets il diags Ind & Eng Chem 44:2803-12 D '52

Chemical structure and action of synthetic detergents. W. R. Gowdy. il diags Sewage & Ind Wastes 25:15-19 Ja '53

Chemicals clean up on a multimillion-dollar market. il Bsns W p48-50+ Mr 7 '53

Clean your condensers chemically. J. H. Rusch. il diags Power Eng 57:76-8+ S '53

Cleaning stainless lines in place; Cornell university experimental milk plant. R. F. Holland and others. il Food Eng 25:75-8 My '53

Cold cleaner cuts costs; powder and a liquid, branded Houghto-Clean 440 and 439. D. C. Miner. il Steel 132:100-1 Mr 16 '53

Correction of tastes and odors resulting from detergents. J. G. Filicky and others. Munic Util 91:27-8+ Jl '53

Detergent compounds; their composition and behavior. L. Flett and L. F. Hoyt. Sewage & Ind Wastes 25:245-51; Discussion. W. Rudolfs. 252-4 Mr '53

Detergent situation in England; more about micro-strainers. J. Finch. il Water & Sewage Works 100:239-41 Je '53

Detergents effective in removing mold from fruit. R. D. Haynes and others. il diag Food Eng 25:87+ Mr '53

Detergents in, soaps out. il Chem W 71:62-3+ D 13 '52

Detergents, no more irritating than soap; abstract. A. Taylor. Chem Age (Lond) 68:349-50 F 28 '53

Detergents; tallow market? il Chem W 72:57-8 F 21 '53

Determination of surface active agents. G. R. Lewis and L. K. Herndon. bibliog Sewage & Ind Wastes 24:1456-66 D '52

Dripless, solderless can; new Lux liquid detergent. il Mod Packaging 26:88-9 Jl '53

Effect of a cationic detergent on the digestion of raw cornstarch *in vitro*. R. L. Gates and R. M. Sandstedt. bibliog Science 116:482-3 O 31 '52

Effect of detergents on sewage and water treatment; symposium. il Chem & Eng N 31:1072-9 Mr 16 '53

Effect of detergents on sewage microorganisms. R. Manganelli and E. S. Crosby. il Sewage & Ind Wastes 25:262-76 Mr '53

CLEANING compositions—*Continued*

Effects of synthetic detergent pollution on the operation of a public water supply softening plant; abstract. R. L. Culp and H. A. Stoltenberg. Water & Sewage Works 100:309 Ag '53

Ethylene oxide derivatives and their uses in the textile industry. G. Trinchieri. bibliog Am Dyestuff Rep 41:729-32+ N 10 '52

Evaluation of dishwashing detergents. J. C. Harris. bibliog il Soap & San Chem 28:45-7+ D '52; 29:42-3+ Ja '53

Everything is tidy. Fortune 46:191 O '52

Gluconic acid in cleansers; abstract. H. Beduneau. Soap & San Chem 29:71+ Ja '53

Look out for Lever; Lux liquid synthetic detergent. il Chem W 72:60+ Mr 28 '53

Metachromatic effects of anionic polysaccharides and detergents. A. Levine and M. Schubert. bibliog Am Chem Soc J 74:5702-6 N 20 '52

Metal cleaners. M. A. Lesser. bibliog il Soap & San Chem 28:42-5+ O; 46-9+ N '52

Metal complexing agents in soap and detergent products. H. W. Zussman. bibliog Soap & San Chem 28:79+ N '52

Microscopic study of molecular complex formation and soil removal. D. G. Stevenson. bibliog il diags Textile Inst J Trans 44: T 12-35 Ja '53

Modern detergency. F. C. Harwood. Textile Inst J 44:P 105-13 Mr '53

New phosphate for soap. F. H. Mackenzie. il Soap & San Chem 28:42-3 N '52

Operating experiences with detergents at Washington, D.C. R. E. Fuhrman and J. E. Rice. Sewage & Ind Wastes 25:277-80; Discussion. 280-3 Mr '53

Oronite chemical co. is pioneer and one of largest producers of raw synthetic detergents. D. H. Stormont. flow diag il Oil & Gas J 51:106-7+ F 9 '53

Physics and chemistry of detergent solutions; abstract and discussion. K. G. A. Pankhurst. Chem Age (Lond) 68:341-2 F 28 '53

Properties and uses of non-ionics. E. H. Wolfe and C. Marchant. Can Chem Process 37:46+ Jl '53

Selling through the pilot plant; Continental sulfonation plant. il Chem W 72:76-8 F 28 '53

Shift from soap to detergents. Chem Eng 60:198 Mr '53

Soap and synthetics. Economist 167:767 Je 13 '53

Soaps and syndets; C&EN's annual review. F. D. Snell. Chem & Eng N 31:38-40 Ja 5 '53

Steam detergent cleaning of industrial equipment cleans faster and saves labor. il Mill & Factory 53:139-40 Jl '53

Syndets in dentifrices. Soap & San Chem 28: 107+ O '52

Syndets in sewage can be measured. S. D. Faust. bibliog il Water & Sewage Works 100:242-3 Je '53

Synthetic detergents and sewage processing; abstracts. M. Elton and others. Sewage & Ind Wastes 24:1548-9 D '52

Synthetic detergents and sewage treatment; experimental trials at Wolverhampton. Chem Age (Lond) 67:657-9 N 15 '52

Synthetic detergents in commercial and domestic use; abstract and discussion. G. R. Perdue. Chem & Ind p 167 F 21 '53

Synthetic detergents up to date; with list of trade names. J. W. McCutcheon. Soap & San Chem 28:48-57 Jl; 52-63 Ag; 52-61 S; 50-61 O '52

Understand detergents you use for cleaning rollers. C. F. King. il Inland Ptr 130:50+ D '52

See also

Shampoos
Soap
Sodium carboxymethyl cellulose
Sodium dodecyl sulfate
Sodium phosphates
Trichloroethylene

Advertising

Best-read magazine advertisements. D. Starch. il Adv Agency 46:70-1 Ja '53

Hubbub in the washtub; detergent advertising eliminates need for bleaches. il Chem W 72:52 Ja 31 '53

In-pack premium; Soilax puts quality items right in or on packages. il Mod Packaging 26:110-11 D '52

Analysis

Determination of sulphate and sulphonate anion-active detergents in sewage. P. N. Degens, jr. and others. bibliog J Ap Chem 3:54-61 F '53

Physiological effect

Toxicity of soap and detergents. L. C. Barail. Soap & San Chem 28:48-51+ D '52

Rating

Household synthetic detergents. Consumers Res Bul 31:7 Mr '53

Oven cleaners. il Consumers Res Bul 31:25-6 My '53

Synthetic detergents. il Consumers Res Bul 32:10-11 Ag '53

Statistics

Soaps and cleaning preparations. Can Chem Process 37:28 Je 20 '53

Testing

Bacteria removal by hand dishwashing detergents. L. Flett and A. Guiteras. Soap & San Chem 28:48-50 O '52

Cleaning efficiency of detergents and washing methods in laundering wool. M. S. Furry and E. M. O'Brien. Am Dyestuff Rep 41:861-2 D 22 '52

Hot dirt gages detergents. il Chem W 71:65+ O 25 '52

Laundering of wool; effect of detergents and washing methods on fabric properties. M. S. Furry and E. M. O'Brien. bibliog Am Dyestuff Rep 41:763-9 N 24 '52

New soiling mixture for use in detergency evaluation. R. E. Wagg. Textile Inst J Trans 43:T515-16 S '52

CLEANLINESS

See also

Factories—Cleanliness

CLEARING of land

Brush chipper proves its worth in right-of-way maintenance. L. R. Dickinson. il Oil & Gas J 51:340 O 13 '52

Low cost land reclamation. R. H. Forbes. il Diesel Power 30:48-9 D '52

CLEMMENSEN reduction. See Reduction, Chemical

CLEOPATRA'S needle, London

Cleopatra's needle. S. G. Burgess and R. J. Schaffer. il Chem & Ind p 1026-9 O 18 '52

CLERICAL workers. See Office workers

CLEVELAND

Cleveland project gets boost. il Eng N 150: 48+ Je 4 '53

See also

Wages—Cleveland

Bridges

Cuyahoga projects pass halfway point with completion set for '57. plan Eng N 150:47 Ja 22 '53

Industries

Chemical Shore, product of a giant chain reaction in the Cleveland-northeast Ohio area. R. C. Hienton. il Electrochem Soc J 100:sup27C-35C F '53

Cleveland, a center for chemical industry. G. W. Blum. il Chem Eng Prog 48:sup31-2+ N '52

Sewerage

Design features of the Cleveland Southerly sludge heater installation. F. S. Palocsay. il Sewage & Ind Wastes 25:38-43 Ja '53

Streets

Facing up to Cleveland's traffic problems; abstract. Roads & Sts 96:91 S '53

Subway

Cleveland considering belt conveyor subway. il Arch Rec 113:36 Ja '53

CLEVELAND electric illuminating company

Five stocks with record-breaking profits in 1952; wih comparative balance sheet items. Mag of Wall St 91:241 N 29 '52

Ten potential market leaders for 1953; with comparative balance sheet items. Mag of Wall St 91:640 Mr 7 '53

CLEVELAND graphite bronze company

Old company tries new fields. Bsns W p86+ D 20 '52

CLEVITE corporation
Stock offering oversubscribed. Comm & Fin Chr 177:1678 Ap 20 '53

CLIFFORD, William Kingdon, 1845-1879
William Kingdon Clifford. J. R. Newman. pors Sci Am 188:78-82+ F '53

CLIMATE
Climatic factors measure air conditioning potentials. J. R. Hertzler and V. T. Kartorie. maps Heating-Piping 25:77-84 My; 93-7 Je; 102-6 Jl '53
Effect of climate and atmospheric pollution on corrosion. J. C. Hudson and J. F. Stanners. il J Ap Chem 3:86-96 F '53
Geographical and height distribution of the gradient of refractive index. B. R. Bean. maps Inst Radio Eng Proc 41:549-50 Ap '53
Heating and cooling in hot climates. W. R Woolrich. Refrig Eng 61:376-8+ Ap '53
See also
Housing and climate
Rain and rainfall

Physiological effect
Climate control through ionization. T. L. Martin, jr. bibliog diag Franklin Inst J 254: 267-80 O '52

CLIMATE and housing. See Housing and climate

CLIMATOLOGY, Medical
Clothing and climate from a physiological point of view. L. P. Herrington. bibliog il Am Dyestuff Rep 42:62-6+ F 2 '53
Controlling the environment for clinical research; facilities at the University of Illinois. M. K. Fahnestock and others. il plans diags Heating-Piping 25:123-7 Ja '53
Geography of disease. J. M. May. maps Sci Am 188:22-7 F '53; Discussion. M. Rosenblum. 188:4+; Reply. 6 Ap '53

CLINICAL laboratories. See Medical laboratories

CLINICAL thermometers. See Thermometers, Clinical

CLINICS
Easy maintenance was the requirement for this small clinic. il plan diag Am Bld 74: 106 S '52
Laboratories and clinic, Central institute for the deaf, St Louis. il plans diags Arch Rec 112:164-9 O '52

CLINKERS
See also
Cement clinkers

CLINTON machine company
Security I like best. R. De Pasquale. Comm & Fin Chr 177:1954 My 7 '53

CLIPPER ships
Clipper named for a singer; clipper ship Nightingale. C. C. Hanks. Marine Eng 58: 80 Mr '53
First extreme clipper, the Rainbow. C. C. Hanks. Marine Eng 58:78 F '53
Was the Ann McKim the first clipper? C. C. Hanks. Marine Eng 58:83 Ap '53

CLIPS, Hair curl. See Hair curl clips

CLITOCYBE
Identification of an antibiotic polyacetylene from clitocybe diatreta as a suberamic acid ene-diyne. M. Anchel. bibliog Am Chem Soc J 75:4621-2 S 20 '53

CLOCKS, Electric
Timekeeping smithies of Nottingham. il Comp Air Mag 58:77 Mr '53
Two synchronized clock circuits. D. Sachs. diag Electronics 26:244+ Ap '53
See also
Radio receiving apparatus—Clock combinations

Rating
Electric clocks. il Consumers Res Bul 31: 17-19 Mr '53

CLOOS, Hans, 1886-1951
Memorial. R. Balk. por(pl 4) Geol Soc Proc 1952:87-94 bibliog(p91-4) Je '53

CLOSED shop. See Open and closed shop

CLOSETS

Lighting
Closet lights. il Consumers Res Bul 31:20-1 Mr '53

CLOSURES (containers)
Commercial closures; production, 1948-1952; tin mill products consumed in producing closures, 1949-1952; aluminum consumed in producing closures, 1951-1952; tabulations. Steel 132:168-9 Ja 5 '53
New vacuum capper is versatile, sanitary, cuts losses. il Food Eng 25:159 S '53
Plug-lid tobacco tin; new top construction gives tighter force fit with easier opening. il Mod Packaging 26:109 S '52
See also
Bottle caps and seals

CLOTHES dryers
A.G.A. ad series to push sales of gas dryers. il Am Gas Assn Mo 35:32-3 Ja '53
Babies to theme automatic gas clothes dryer drive. Am Gas Assn Mo 35:36-7 Jl-Ag '53; Same. Gas Age 112:53-4 Ag 27 '53
Chicago launches four-part electric dryer campaign. Elec World News ed 138:41 N 10 '52
Clothes dryer plays How dry I am. il diag Machine Design 25:138 Je '53
Clothes dryer sales may exceed washer. Gas Age 112:30 S 24 '53

Manufacture
Change spider save part; illustrations with text. G. C. Farrington. Am Mach 96:147 O 13 '52

CLOTHING, Electrically heated
New applications for electric heat. R. F. Sambleson. il Gen Elec R 56:28-31 S '53

CLOTHING, Protective
Distribution of personal protective equipment. Nat Safety N 67:155-6 Mr '53
4500° F. won't ignite flameproofed clothing. il Safety Maint & Prod 106:93+ O '53
Heat-resisting suit cuts shut down time. il Nat Safety N 68:104 S '53
New trends in women's clothing. Safety Maint & Prod 105:50-1 Mr '53
Protection against radiant heat. A. M. Wallach. bibliog il Nat Safety N 67:30-1+ Je '53
Safety clothing. il Nat Safety N 67:126 Mr '53
Safety clothing for woodsworkers. G. Claus. il Pulp & Pa of Can 54:138+; Discussion. 142+ S '53

CLOTHING and dress
Men's formal dress is back, with a difference. il Bsns W p44-6+ D 20 '52
See also
Clothing, Protective
Fashion
Hats
Hosiery
Textile fabrics
Underwear
Women's apparel
Work clothes

Hygienic aspects
Clothing and climate from a physiological point of view. L. P. Herrington. bibliog il Am Dyestuff Rep 42:62-6+ F 2 '53
Comparison of physiological adjustments of clothed women and men to sudden changes in environment. T. Inouye and others. bibliog Heating-Piping 25:125-30 My '53
Fabric evaluations based on physiological measurements of comfort. J. H. Andreen and others. il Textile Res J 23:11-22 Ja '53
Physiological adjustments of clothed human beings to sudden change in environment; first hot moist and later comfortable conditions. F. K. Hick and others. il Heating-Piping 24:107-10 F '52; Abstract. Heat & Ven 50:85-6 Mr '53
Prediction of equilibrium thermal comfort from physical data on fabrics. H. B. Hardy, jr. and others. bibliog il Textile Res J 23: 1-10 Ja '53

Standards
No virtue goes with size. F. W. Nordsiek. il Tech R 55:27-30 N '52

CLOTHING trade
Figure beauty, foundation garment makers anticipate another record year. F. Henle. Barron's 33:11-12 Mr 2 '53
Sale I never forgot; he went formal. M. Rudofker. il Ptr Ink 242:64+ Ja 9 '53
See also
Fashion
Hats
Men's furnishing goods
Work clothes

CLOTHING trade—*Continued*

Advertising

How to team advertising with selling; Haspel bros. salesmen sell promotion package and product line together. N. Kelne. il Ptr Ink 241:40-1 N 21 '52

Men's wear council issues style supplement. Ed & Pub 86:26 Ja 24 '53

There's new business in the apparel industry. W. R. Mason. Adv Agency 46:67+ Ap '53

Why Les Pearl is happy to be a space writer. S. H. Margolis and M. Silverstein. Ptr Ink 241:41-2+ D 5 '52

Why new national advertiser plans all ads with retailer in mind. N. Kelne. il Ptr Ink 242:33-4 Mr 27 '53

Why newspapers rate high with Sagner's son. R. B. McIntyre. il Ed & Pub 86:20 Ja 17 '53

See also

Men's furnishing goods—Advertising

Great Britain

Selling to the British middle class; Marks & Spencer, ltd. il Bsns W p50-2+ Je 13 '53

CLOUD chambers

Amateur scientist. A. G. Ingalls. diag Sci Am 188:114-15 Ap '53

Application of the multiple scattering theory to cloud-chamber measurements. M. Annis and others. bibliog diags Phys R 89:1216-27 Mr 15 '53

Cloud-chamber observations of the heavy charged unstable particles in cosmic rays. H. S. Bridge and others. bibliog il Phys R 90:921-33 Je 1 '53

Cloud-chamber studies of the production of light positive particles near negative beta-ray emitters. G. Groetzinger and F. L. Ribe. bibliog diags Phys R 87:1003-11 S 15 '52

Cloud-chamber study of neutron production by sea-level cosmic rays with particular reference to μ-mesons stopped in lead. E. J. Althaus and R. D. Sard. bibliog il diags Phys R 91:373-84 Jl 15 '53

Cloud-chamber study of the scattering of fast neutrons in oxygen. J. P. Conner. bibliog Phys R 89:712-14 F 15 '53

Continuous cloud chamber. A. L. Kuehner. bibliog diag J Chem Educ 29:511-12 O '52

Continuously sensitive diffusion cloud chamber for operation at four atmospheres. M. Snowden and A. R. Bevan. bibliog il diag J Sci Instr 30:3-4 Ja '53

Control system for a balloon-borne cloud chamber. I. L. Kofsky. bibliog il diags R Sci Instr 24:227-8 Mr '53

Decay of a neutral *V* particle into two mesons. B. Dayton and D. Willard. il Phys R 91:348-50 Jl 15 '53

Diffusion cloud-chamber study of pion interactions in hydrogen and helium. E. C. Fowler and others. bibliog il diags Phys R 91:135-49 Jl 1 '53

Emulsion cloud-chamber observations on the interactions of high energy primary cosmic radiation. M. F. Kaplon and D. M. Ritson. bibliog diags Phys R 88:386-97 O 15 '52

Example of multiple meson production observed with a high pressure hydrogen-filled cloud chamber. O. Kusumoto and others. diags Phys R 90:998-9 Je 1 '53

Momentum determination from cloud-chamber photographs in axially symmetrical magnetic fields. A. M. Cormack. diag R Sci Instr 24:232 Mr '53

New cloud-chamber valve. B. Meyer and W. Stodiek. il R Sci Instr 24:76 Ja '53

Rear illuminated cloud chamber. R. R. Rau. bibliog il diags R Sci Instr 23:443-5 Ag '52

Search for penetrating showers from hydrogen at sea level using a cloud chamber. A. B. Weaver. bibliog il diags Phys R 90:86-94 Ap 1 '53

Specific probable ionization of electrons observed with a Wilson cloud chamber. R. H. Frost and C. E. Nielsen. bibliog diags Phys R 91:864-70 Ag 15 '53

Study of neutral *V* particles observed in a multiplate cloud chamber. H. S. Bridge and others. bibliog il Phys R 91:362-72 Jl 15 '53

Thermocouple temperatures in a diffusion cloud chamber. H. L. Morrison and G. J. Plain. bibliog R Sci Instr 23:607-9 N '52

CLOUD seeding. See Rain making

CLOUDS

Scattering of radio waves by meteorological particles. N. R. Labrum. bibliog diag J Ap Phys 23:1324-30 D '52

CLOVENE

Nature of β-caryophyllene alcohol, clovene and clovenic acid. A. W. Lutz and E. B. Reid. bibliog Chem & Ind p278-9 Mr 21 '53

CLOVENIC acid

Nature of β-caryophyllene alcohol, clovene and clovenic acid. A. W. Lutz and E. B. Reid. bibliog Chem & Ind p278-9 Mr 21 '53

CLOVER

Chemistry of subterranean clover; synthesis and reduction of *iso*flavones related to genistein and formononetin. R. B. Bradbury and D. E. White. Chem Soc J p871-6 Mr '53

CLOVES

Zanzibar cloves bring high world prices. For Comm W 49:15 Ja 5 '53

CLUBS

See also

4-H clubs

CLUTCHES

Automatic clutch aids dredging operation. il Can Min J 74:70 Ag '53

Clutch adjusts self. il Aviation W 58:60 Ja 26 '53

Consideration of off-on modulated reversing clutch servo system. T. R. Stuelpnagel and J. P. Dallas. bibliog diags Elec Eng 72:430-4 My '53

Morse adjustable clutches. il Tool Eng 31:117 O '53

New industrial drives; Twin disc clutch co. il Automotive Ind 108:90+ Je 1 '53; Coal Age 58:114+ Jl '53

Pros and cons of hydraulically actuated clutches. E. B. Falk. il Machine Design 25:183-4 Ag '53

See also

Automobiles—Clutches

Motor buses—Clutches

Motor trucks—Clutches

CLUTCHES, Magnetic

Fast-acting clutch developed by NBS. il Aviation W 58:53 Ja 5 '53

Magnetic clutch. Bsns W p70-1 Mr 14 '53

Magnetic clutch studies. Tech R 55:146 Ja '53

Moving-coil makes fast-acting clutch. Product Eng 23:199 D '52; Franklin Inst J 255:62-4 Ja '53; diags Electronics 26:216+ F '53

Sensitive magnetic powder clutch. il Product Eng 23:222 N '52

CLYDESDALE and North of Scotland bank, limited

Statement by the chairman. H. E. Yarrow. Economist 166:449 F 14 '53

COAGULATION

Mechanism of coagulation of lyophobic sols as revealed through investigations of silver halide sols in statu nascendi. B. Težak and others. bibliog J Phys Chem 57:301-7 Mr '53

See also

Sewage disposal—Coagulation

Water purification—Coagulation

COAGULATION of milk. See Milk

COAL

AIME-ASME 15th annual joint fuels conference, Philadelphia, Oct. 30-31. Coal Age 57:138+ D '52

Coal basic for Nation. R. E. Dennis. Coal Age 58:187-8 My '53

Don't overlook anthracite. A. W. Williams. il Mill & Factory 51:119-22 O '52

Early use of mineral coal in the chafery of the English forge. H. R. Schubert. Iron & Steel Inst J 172:313-14 N '52

Germanium and other elements in coal and the possibility of their recovery. A. J. W. Headlee. bibliog maps Min Eng 5:Trans 1011-14 O '53

Germanium found in coal seams. Manuf Rec 122:31 Ja '53

Possible significance of lactones as intermediates in oxidation of carbonaceous materials. J. Entel, C. H. Ruof and H. C. Howard. bibliog Am Chem Soc J 75:3038-9 Je 20 '53

COAL—*Continued*

They welcome silt in these reservoirs at Holtwood and Safe Harbor, Pa.; silt contains coal that can be reclaimed. il map diag Eng N 150:32+ Ap 23 '53

U.S. oil outlook; how coal fits in. E. Ayres. Coal Age 58:70-3 Ag '53

X-ray study of coal from Logan county, West Virginia, and a discussion of the structure of coal. R. S. Young and D. S. Robertson. bibliog il Econ Geol 47:609-33 S '52

See also

Boilers—Firing

Coal burning equipment and other headings beginning Coal

Lignite

Locomotives—Fuel

Analysis

Analyses of tipple and delivered samples of coal; fiscal year 1951. S. J. Aresco and C. P. Haller. bbliog U S Bur Mines Rep of Invest 4934:1-93 '53

Apparatus for the determination of carbon dioxide in coal. I. Moulson and H. C. Wilkinson. il diag Chem & Ind p7-8 Ja 3 '53

Elements in coal ash and their industrial significance. A. J. W. Headlee and R. G. Hunter. bibliog Ind & Eng Chem 45:548-51 Mr '53

Quantitative petrographic composition of three Alabama coals. R. Q. Shotts. bibliog Min Eng 5:Trans 522-6 My '53

Blending

Blending of western coals for production of metallurgical coke. J. D. Price. bibliog Min Eng 5:Trans 716-20 Jl '53; Correction. 5:Trans 997 O '53; Discussion. R. W. Campbell. 5:Trans 1127-8 N '53

Coal blending plant at a steel works; Shotton works of John Summers and sons, ltd. il Engineer 195:525-6 Ap 10 '53

Freezing

Coal freeze prevention for winter shipment. R. A. Jimenez and others. il Min Cong J 39:50-3 My '53

Geology

Coal deposits in the Deep River field, Chatham, Lee, and Moore counties, N.C. A. L. Toenges and others. bibliog 5 pls map fold maps U S Bur Mines Bul 515:1-41; pa 75¢ Supt. of doc. '52

Coalwood coal field, Powder River county, Montana. R. P. Bryson. bibliog maps diags U S Geol S Bul 973-B:23-106, pl 1-12; $3.25 Supt. of doc. '52

Geological research and its practical application. J. E. Richey. Engineering 174:702 N 28 '52

Geology and coal deposits in part of the Coos Bay coal field, Oregon. D. C. Duncan. bibliog maps diag U S Geol S Bul 982-B:53-73, pl 4-7[in pocket]; pa 60c Supt. of doc. '53

Liquefaction

See Coal liquefaction

Moisture content

Determination of moisture-holding capacity (bed moisture) of coal for classification by rank. W. A. Selvig and W. H. Ode. bibliog U S Bur Mines Rep of Invest 4968: 1-10 '53

Determination of moisture in low-rank coals. J. B. Goodman and others. 4pls bibliog(54 titles) U S Bur Mines Rep of Invest 4969: 1-20 '53

Prices

Eastern seaboard wholesale prices of number six fuel oil and bituminous coal (run of the mine) 1926 to 1951; tabulation. Nat Pet N 45:34 Ja 21 '53

Prices in the coal-steel community. Economist 166:860-1 Mr 28 '53

Single anthracite producer proposed to cut costs $5 a ton; abstract. G. O. Kidd. Coal Age 58:134 Ap '53

Swelling

Swelling pressures in the coke oven. diags Blast F & Steel Pl 40:1319-24 N '52

Testing

Char pilot plant erected at Pueblo. Blast F & Steel Pl 41:1107 S '53

Comparative performance of coals of different rank in a film-cooled gas-turbine combustor. T. E. Warren and others. diags A S M E Trans 75:35-40; Discussion. il 40-2 Ja '53

Transportation

Coal pipeline; Pittsburgh consolidated coal company's plan. Bsns W p48+ Ap 4 '53

Coal pipeline; plan of Hydro coal transportation company. Bsns W p50+ N 22 '52

Will railway movement of coal decline? L. K. Sillcox. il Ry Age 133:36-9 D 22 '52

Alabama

Quantitative petrographic composition of three Alabama coals. R. Q. Shotts. bibliog Min Eng 5:Trans 522-6 My '53

Asia

Coal and iron ore resources of Asia and the Far East. maps 155p pa $1.50 Columbia univ. press, 2960 Broadway, New York 27 '52

Colorado

Coal deposit, Coal creek district, Gunnison county, Colo.; reserves, coking properties, and petrographic and chemical characteristics. A. L. Toenges and others. il maps plan U S Bur Mines Bul 501:1-83; pa 50c Supt. of doc. '52

Far East

Coal and iron ore resources of Asia and the Far East. maps 155p pa $1.50 Columbia univ. press, 2960 Broadway, New York 27 '52

Kentucky

Preparation characteristics of coal from Floyd county, Ky. W. L. Crentz and J. W. Miller. 29pls U S Bur Mines Rep of Invest 4920:1-20 '52

Preparation characteristics of coal from Pike county, Ky. W. L. Crentz and J. W. Miller. 33pls U S Bur Mines Rep of Invest 4910:1-27 '52

Maryland

Castleman basin, Garrett county, Md.; coal beds in central part; reserves; petrographic and chemical characteristics of coals; stratigraphy of area. A. L. Toenges and others. 3pls [8 fold maps in box] U S Bur Mines Bul 507:1-22; pa $4.50 Supt. of doc. '52

Estimate of known recoverable reserves of coking coal in Allegany county, Md. J. J. Wallace and others. bibliog 10 pls U S Bur Mines Rep of Invest 4970:1-18 '53

Montana

Coalwood coal field, Powder River county, Montana. R. P. Bryson. bibliog maps diags U S Geol S Bul 973-B:23-106, pl 1-12; $3.25 Supt. of doc. '52

North Carolina

Coal deposits in the Deep River field, Chatham, Lee, and Moore counties, N.C. A. L. Toenges and others. bibliog 5 pls map fold maps U S Bur Mines Bul 515:1-41; pa 75¢ Supt. of doc. '52

Ohio

Meigs Creek number 9 coal bed in Ohio. W. H. Smith and others. Ohio State U [Columbus] Eng Exp Sta Bul 151:1-163 bibliog(p161-2) '52

Oregon

Geology and coal deposits in part of the Coos Bay Coal field, Oregon. D.C. Duncan. bibliog maps diag U S Geol S Bul 982-B:53-73, pl 4-7[in pocket]; pa 60c Supt. of doc '53

Pennsylvania

Preparation characteristics of coal from Jefferson county, Pa. W. L. Crentz and J. W. Miller. 31pls U S Bur Mines Rep of Invest 4941:1-21 '53

United States

Who found our coal? H. L. Spooner. il Coal Age 57:83 N '52

COAL—*Continued*

West Virginia

Estimate of known recoverable reserves of coking coal in McDowell county, W.Va. J. J. Wallace and others. bibliog 13pls U S Bur Mines Rep of Invest 4924:1-26 '52
Estimate of known recoverable reserves of coking coal in Wyoming county, W.Va. J. J. Wallace and others. bibliog 16pls U S Bur Mines Rep of Invest 4966:1-39 '53
X-ray study of coal from Logan county, West Virginia, and a discussion of the structure of coal. R. S. Young and D. S. Robertson. bibliog il Econ Geol 47:609-33 S '52

Wyoming

Early operations of the hydrogenation demonstration plant, using Rock Springs, Wyo. coal. bibliog 19pls U S Bur Mines Rep of Invest 4944:1-80 '53

COAL, Pulverized
Continuous pressure gasification of pulverised coal in suspension. C. G. Von Fredersdorff and E. J. Pyrcioch. diag Am Gas Assn Proc 1952:685-701
Fine coal drying. G. A. Vissac. bibliog diags Min Eng 5:Trans 1004-11 O '53
Fluidization in beds of coal and coke particles; some effects of size of particles and viscosity, density and velocity of gas. L. J. Jolley and J. E. Stantan. J Ap Chem 2(sup no 1):S62-8 '52
More data on heat transfer to fluidized solids. W. E. Schmid and others. bibliog Chem Eng 59:172-3 O '52
Progress report on operation of pressure-gasification pilot plant utilizing pulverized coal and oxygen. G. R. Strimbeck and others. bibliog 24pls U S Bur Mines Rep of Invest 4971:1-27 '53; Same. Am Gas Assn Proc 1952:778-817
Pulverized coal developments. Power Eng 57:95 Jl '53
Pulverized-coal gasification Ruhrgas processes. K. Traenckner. il diags A S M E Trans 75:1095-100; Discussion. 1100-1 Ag '53

Preparation

Combustion and fine grinding with the jet mill. G. M. Croft and L. D. Bechtel. il diags Iron & Steel Eng 29:61-5 O '52

Testing

Comparative performance of coals of different rank in a film-cooled gas-turbine combustor. T. E. Warren and others. diags A S M E Trans 75:35-40; Discussion. il 40-2 Ja '53

COAL ash

Analysis

Elements in coal ash and their industrial significance. A. J. W. Headlee and R. G. Hunter. bibliog Ind & Eng Chem 45:548-51 Mr '53

COAL bins
Rebuilt bunkers eliminate hot spots and explosions caused by dead coal with high sulphur content. J. D. Williamson. il Elec World 139:113 F 9 '53

COAL burning equipment
Automatic coal firing for heating equipment; BCR meeting. Heat & Ven 50:132+ Je '53
British coal utilisation research association; new research building for the study of domestic appliances. Engineering 176:20 Jl 3 '53
Coal-fired drier improves farm crops. il Manuf Rec 122:35 F '53
Progress continues on coal-burning gas turbine plant. J. I. Yellott and P. R. Broadley. il diag Power Eng 57:87-9 Je '53
Tests of the Anthratube. J. F. Barkley and others. 23pls U S Bur Mines Rep of Invest 4936:1-13 '53

COAL cleaning
Cleaning various coals in a drum-type dense-medium pilot plant. M. R. Geer and others. Min Eng 5:Trans 696-705 Jl '53; Discussion. 5:Trans 1125-6 N '53
Close fine coal cleaning circuit at Montcoal. H. A. Feazelle and P. R. Maxey. il diag Min Cong J 39:57-60 Mr '53
Efficient stripping and flexible cleaning; M. F. Fetterolf coal co. il plans diags Coal Age 58:82-6 Jl '53
Growing by improving services; Reidinger coal service plant. il Coal Age 58:100-2 Ag '53
See also
Coal preparation
Coal washing

COAL crushing
High-density Burundum speeds up coal crushing for laboratory analyses. W. W. Perkins. il Power 97:80-1 My '53

COAL cutters
German coal planer. Mech Eng 74:1021-2 D '52
Modified longwall mining with a German coal planer (plow) in the Pocahontas number four coal bed, Helen, W.Va. W. A. Haley and others. 10pls U S Bur Mines Rep of Invest 4922:1-13 '52; Same cond. Min Cong J 38:56-9+ O '52; Abstract. Coal Age 57:76-80 N '52

COAL distillation
Drying and carbonization of fine coal in the entrained and fluidized state. V. F. Parry and others. Heat & Ven 50:136+ Ag '53

COAL drying
Fine coal drying. G. A. Vissac. bibliog diags Min Eng 5:Trans 1004-11 O '53
How radial screens raise dewatering efficiency. E. Brock. il diags Coal Age 58:95-9 S '53
Reducing the moisture content and large moisture variations in Russellton washed coal. O. R. Lyons. diags Min Eng 5:Trans 614-19 Je '53

COAL dust
Gravimetric sampling of dust in coal mines. H. H. Watson and T. G. Morris. bibliog il diags Engineering 174:228-9 Ag 22 '52
How to build a dust-control program and how to keep it working. K. T. Miller. il Coal Age 58:104-6 F '53
Keep coal dust down. il Power Eng 57:80-2 Je '53

COAL gasification. See Gas manufacture

COAL handling
Chemical plant builds for continuity; Ciba states, ltd. P. Kronowitt. il diag Power 97:99-100 S '53
Coal by pipeline. Elec R (Lond) 151:1070 N 14 '52
Coal freeze prevention for winter shipment. R. A. Jimenez and others. il Min Cong J 39:50-3 My '53
Coal handling. W. G. Hudson. diags Power Eng 57:90-1 Ap '53
Coal handling plant at Nine Elms gas works. il Engineer 194:202-3 Ag 8 '52
Coal handling plant for Castle Donington. plan Elec J 150:1296-7 Ap 17 '53; Elec R (Lond) 152:817-18 Ap 10 '53
Costs for handling coal from cars to storage. W. G. Hudson. diags Power Eng 57:72-3+ O '53
Handling coal and ashes economically in smaller plants. D. M. Given and C. A. Marshall. il diags Mech Eng 75:125-9+ F '53; Same cond. Min Eng 5:685-7 Jl '53
How we licked sticking coal. M. E. Rule. diags Power Eng 57:73-5 Mr '53
Missouri Pacific builds coal transfer on Mississippi. il map plans diags Ry Age 134:94-6 Ap 20 '53
Power boost at Ecusta Paper. il Paper Ind 35:638 S '53
Slit bunker for brown coal. diags Engineer 195:402 Mr 13 '53
Treated coal solves silo problems for A. B. Dick co. F. M. Malmgren. il plan diag Power Eng 57:70-1 Jl '53
Water can carry your coal and ash. W. G. Hudson. diags Power Eng 57:92-3+ Jl '53

COAL hydrogenation. See Coal liquefaction

COAL lands
Meadowlark farming; stripped and reserve coal lands; illustrations with text. Coal Age 58:88-93 Ag '53
See also
Coal mines and mining

COAL liquefaction
ACS Division of gas and fuel chemistry spring meeting, Pittsburgh. Chem & Eng N 31:1860-2 My 4 '53

COAL liquefaction—*Continued*

Analytical acetylation; application to coal hydrogenation products. C. W. DeWalt, jr. and R. A. Glenn. bibliog Anal Chem 24: 1789-95 N '52

Catalyst-pressure relationship in hydrogenolysis of coal. M. G. Pelipetz and others. Ind & Eng Chem 45:806-9 Ap '53

Coal hydrogenation chemicals. Can Chem Process 37:40 Jl '53

Coal hydrogenation chemicals. H. B. McClure. Chem Age (Lond) 67:801-2 D 13 '52

Composition of gasoline from coal hydrogenation. J. Feldman and M. Orchin. bibliog Ind & Eng Chem 44:2952-6 D '52

Corrosion and erosion in the synthetic-fuels demonstration plant. G. D. Gardner and J. T. Donovan. il diag A S M E Trans 75:525-33 My '53

Early operations of the hydrogenation demonstration plant, using Rock Springs, Wyo. coal. E. A. Clarke and others. bibliog 19pls U S Bur Mines Rep of Invest 4944:1-80 '53

Liquid fuel from coal; progress report on hydrogenation demonstration plant. C. C. Chaffee and L. L. Hirst. bibliog il diags Ind & Eng Chem 45:822-38 Ap '53

Liquid-phase coal hydrogenation; the Japanese were using it in 1942. K. Shibata. diags Chem Eng 60:214-18 My '53

NPC says synthetic liquid fuels production is uneconomic. Chem & Eng N 31:1088+ Mr 16 '53

Oil from coal in South Africa. Engineer 195: 123 Ja 23 '53

Oils from coal. Engineer 196:278 Ag 28 '53

Synthetic liquid fuels; annual report of the Secretary of the interior for 1952; oil from coal. 40pls U S Bur Mines Rep of Invest 4942:1-85 bibliog(77 titles, p81-5) '53

Bibliography

Bibliography of pressure hydrogenation. J. L. Wiley and H. C. Anderson. 3 pts U S Bur Mines Bul 485:1-306 pa $1.25; 307-592 pa $1; 593-646 pa 25c Supt. of doc. '50-52

COAL loading machines

Goodman coal loader redesigned to eliminate complex transmission. il diags Machine Design 25:160-1 S '53

Rotating cable senses coal height in loader. il diags Machine Design 25:182 Ap '53

COAL miners

Carrot and club; John L. used some old baits. Fortune 46:80+ N '52

Coal; walk-out protests WSB cut. Iron Age 170:52-3 O 23 '52

Methods of training for mobile operations. J. E. Neason and W. H. Fleming. il Min Cong J 38:32-4+ D '52

My 66 years in deep mining; interview with R. T. Todhunter. Coal Age 58:138-40 My '53

6,211 miners speak on safety; safety department of District one, UMWA; results of questionnaire. C. Kaczinski and M. J. Kosik. Coal Age 57:81-3 N '52

Stabilizers' last stand? Fortune 46:109-10 D '52

Training supervisors, for what? B. B. Lucas, jr. Coal Age 58:102-3 F '53

Wage chronology; anthracite mining industry, 1930-51. D. T. Bond and A. A. Belman. Mo Labor R 75:528-34 N '52

See also

United mine workers of America

Great Britain

Game to the miners. Economist 166:475+ F 21 '53

Mining manpower. Economist 166:756+ Mr 14 '53

Wages policy in coal. Economist 166:93-5 Ja 10 '53

COAL mines and mining

AIME Central Appalachian section spring meeting, Somerset, Ky. June 12-13. Coal Age 58:142+ Jl '53

American mining congress, Coal division annual conference of committees, Pittsburgh, Nov. 20; with abstracts of papers. Min Cong J 38:64-7+ D '52

American mining congress Coal division annual meeting, Cleveland, May 11-14; with abstracts of papers. Coal Age 58:96-105+ Je '53; Min Cong J 39:54-9, 65-85 Je '53

Anthracite mechanical mining investigations; measurement of loads borne by underground-roadway supports. A. Allan, jr. and others. bibliog 18pls U S Bur Mines Rep of Invest 4946:1-12 '52

Arches for main haulage timbering; weak roof held by concrete block arches; Hillman coal & coke co. W. W. Dartnell. il diag Min Cong J 39:30-2+ My '53

Coal; annual review, 1952. D. R. Mitchell and others. il Min Eng 5:170-3 F '53

Coal mining institute 66th annual meeting, Pittsburgh, Dec. 11-12. Coal Age 58:150-1+ Ja '53

Half-century club; careers epitomizing contributions to coal-mining progress. Coal Age 58:100-3 Ja; 85 Ag '53

Illinois mining institute 60th annual meeting, Springfield, Oct. 24. Coal Age 57:134+ D '52

Indiana coal mining institute winter meeting, Terre Haute, Jan. 10; with abstracts of papers. Coal Age 58:138-9+ F '53

Kentucky mining institute 13th annual meeting, Lexington, Nov. 13-14. Coal Age 58:142-3+ Ja '53

Mining progress in 1952. il Coal Age 58:76-8 F '53

Modified roof bolts make convergence detectors. plan diag Coal Age 58:87 Jl '53

Mutiny among the coal operators. Bsns W p73 Ja 3 '53

Overlying roof bolted without removing bony; Lancashire no. 20 mine, Elmora, Pa. il Coal Age 58:158 My '53

Rock tunnels in coal mining. W. B. Fraser. il plans diag Can Min J 73:57-9 O '52

Rocky mountain coal mining institute 49th annual meeting, Glenwood Springs, Colo. June 29-July 1. Coal Age 58:136-7+ Ag '53

West Virginia coal mining institute spring meeting, Fairmont, June 5-6. Coal Age 58: 140+ Jl '53

W.Va. groups joint meeting, White Sulphur Springs, Nov. 14-15. Coal Age 57:140 D '52

See also

Coal miners

Accidents and explosions

Coal-mine accidents. Engineering 176:242 Ag 21 '53

Miners map safety drive. Bsns W p 180 F 21 '53

Study to determine factors causing pressure piling in testing explosion-proof enclosures. E. J. Gleim and J. F. Marcy. bibliog 9pls U S Bur Mines Rep of Invest 4904:1-9 '52

Cost

Cost cutting today. il Coal Age 58:71-83 Ja '53

Cutting cost in stripping. il Coal Age 58:72-81 S '53

Efficiency, machine made. il Coal Age 58:86-91 My '53

Electric equipment

American standard safety code for installing and using electrical equipment in and about coal mines (M2.1). diags U S Bur Mines Bul 514:1-28; pa 20c Supt. of doc. '52; Excerpts. il Min Cong J 39:62-4 Mr '53

Battery-charging simplified for coal-mine service. J. F. Hensler and E. F. Grothe. il diag Coal Age 57:79-83 D '52

Cable repairs and leak detection. C. E. Wissinger. il Min Cong J 38:56-7+ D '52

Conversion substation location and equipment. J. A. Dunn. il diags Min Cong J 38: 41-4 S; 60-3 O '52

Efficient big-shovel stripping; Midland electric coal corp. il Coal Age 57:84-8 N '52

Electrical inspector of mines report for 1950. Electrician 149:340 Ag 1 '52

Electricity applied to mining. B. L. Metcalf. bibliog il diags Inst E E Proc 100 pt 1: 59-71 Mr '53

Electricity in mines; principal inspector's report for 1950. Elec R (Lond) 151:295-6 Ag 8 '52

How to prevent sticking contacts and relays. R. S. Kercher and L. E. Markle. il Coal Age 58:112 Ag '53

How to use high-voltage dc for cable testing, fault location. R. A. Nelson. il diags Coal Age 58:108-13 My '53

COAL mines and mining—Electric equipment—*Continued*

Mine trolley locomotive installation; Sandhole colliery. il Engineer 196:239 Ag 21 '53; Engineering 176:279 Ag 28 '53; Elec R (Lond) 153:396 Ag 21 '53

Open-pit mining association Electrical division 9th annual meeting, Terre Haute, Ind. July 17. Coal Age 58:144+ Ag '53

Recommended electrical insulation. C. J. Photiadis. il Coal Age 58:117-18 Mr '53

Reversed polarity for mine circuits; Tennessee coal and iron division. H. B. Buckingham. il Min Cong J 39:18-21 S '53

Review of progress in distribution and control of underground electrical equipment; abstract. C. A. Ritchie and J. N. L. Woodley. Elec J 150:2211-12 Je 19 '53

Study to determine factors causing pressure piling in testing explosion-proof enclosures. E. J. Gleim and J. F. Marcy. bibliog 9pls U S Bur Mines Rep of Invest 4904:1-9 '52

Underground power; American mining congress Coal division annual conference of committees, Pittsburgh, Nov. 20; abstracts of papers. Min Cong J 38:71-2 D '52

Equipment

Better rock-disposal and better car-cleaning; Lehigh navigation coal co. il diags Coal Age 58:92-5 Je '53

Calverton colliery. il Engineer 194:463-4 O 3 '52; Engineering 174:447 O 3 '52

Capacity equipment skillfully used=24.7 tons per man; Tennessee coal co. J. H. Edwards. il Coal Age 58:88-92 Mr '53

Coal mine haulage. W. B. Jamison; J. D. Sutton. il plans diags Min Cong J 39:65-70 Ag '53

CF&I's Allen mine production goes into high gear. il Min Eng 5:757 Ag '53

Compressed air at low cost. il Coal Age 58:106+ Jl '53

Designed for future growth; West Kentucky coal co., Atkinson mine. il plan Coal Age 58:114-16 Ja '53

Dropbottom cars from autos serve Kanawha mines. J. H. Edwards. il plan Coal Age 59:88-91 Jl '53

Dual-fuel engines at Point of Ayr colliery. Engineering 176:136 Jl 31 '53

Enoco builds for the future. A. E. Flowers. il plan diag Coal Age 58:92-9 My '53

Equipment show sets new record; American mining congress Coal division, Cleveland. il diags Coal Age 58:106-16+ Je '53

Everybody gets ideas at Consol's Hendrix mine; illustrations with text. Coal Age 58:110-12 Ag '53

Gadgets solve preparation problems; illustrations with text. Coal Age 58:116-17 S '53

High capacity track haulage; Mathies coal co. D. H. Davis. il diags Min Cong J 39:29-32 Jl '53

How Compass Coal combines deep, strip and auger mining. A. E. Flowers. il map diags Coal Age 58:84-92 Ja '53

How to cut cost with modern equipment and modern materials. il Coal Age 58:66-77 Jl '53

Hydraulic drilling; Gay coal & coke co. il Coal Age 58:94-5 F '53

Keep 'em rolling on good tires; Shen-Penn production co. il Coal Age 58:76-82 Ap '53

Maximum extraction in first mining; Traux-Traer coal co. M. H. Shumate. il plan diag Min Cong J 39:34-7 Mr '53

Mechanical engineering features of Nantgarw colliery. T. G. Dash and J. Pettit. plans diags Inst Mech Eng Proc (A) 167 no 2:146-53, pl 1-2 '53

Mine air compressor maintenance. il Min Cong J 39:112-13+ Ap '53

Mining coal 275 years ago; mining equipment and tools displayed at King's College. il Coal Age 58:121 My '53

New slope taps 50 million tons; Panther coal co. il Coal Age 57:99-101 N '52

New TenMile mine stresses flexibility and smooth operation. il plan Coal Age 58:94-8 Ag '53

1953 coal show; what's what in equipment. Coal Age 58:124-30 My '53

Old problem, new approach; hand-hydraulic timber setter. W. E. Connor and A. G. Frank. il Coal Age 58:106-7 My '53

Quality preparation for contiguous-seam mining; Red jacket coal corp. flow sheet il plans Coal Age 58:86-93 F '53

Quick-made gadgets improve maintenance and safety around the mines. diags Coal Age 58:156 My '53

Rebuilding Sunnyside for greater production with higher efficiency. W. Hyatt and R. G. Heers. il plan diags Coal Age 58:114-21 My '53

Second wind for Sterling number one. H. Davis. il map Coal Age 58:80-4 Ag '53

Shuttle cars from autos. J. H. Edwards. il Coal Age 58:88-91 Ap '53

Switch to butterfly-type gates leads to efficient refuse ejection; Hudson coal co. il diags Coal Age 58:131-3 My '53

Underground coal transportation, 1952. N. G. Alford. il Min Cong J 39:114-15+ F '53

Underground haulage; abstracts of papers at American mining congress Coal division annual meeting. Min Cong J 39:71-2 Je '53

Underground stowing by power. il Engineering 175:373 Mr 20 '53

Watch your Diesel's diet. F. J. Shreck. il Coal Age 58:118 F '53

World's largest battery-operated haulage unit; Olga coal co. il Coal Age 58:114 Ag '53

See also

Coal cutters	Coal mining machinery
Coal loading machines	Mine cars

Fires and fire protection

Keeping safety up-to-date; preventing and fighting fires. W. H. Bennett. Coal Age 58:100-1 O '53

Gas generation

Underground gasification of coal in Belgium. Engineer 196:110 Jl 24 '53

See also

Gas manufacture—
Coal mine gasification

Bibliography

Selected bibliography of coal gasification. R. M. Busche and others. U S Bur Mines Rep of Invest 4926:1-28 '52

Haulage

See Mine haulage

History

First 160 years at Summit Hill. H. Davis. il Coal Age 58:90-4 S '53

Lighting

See Mine lighting

Longwall system

Modified longwall mining with a German coal planer (plow) in the Pocahontas number four coal bed, Helen, W.Va. W. A. Haley and others. 10pls U S Bur Mines Rep of Invest 4922:1-13 '52; Same cond. Min Cong J 38:56-9+ O '52; Abstract. Coal Age 57:76-80 N '52

Roof control in longwall. R. T. Todhunter, jr. il plan diags Coal Age 57:88-92 D '52

Management

All hail the customer! il Coal Age 58:104+ Ap '53

Cost cutting today. il Coal Age 58:70-83 Ja '53

Cutting cost in stripping. il Coal Age 58:72-81 S '53

Handling new management problems; raising mine efficiency; American mining congress Coal division; abstracts of papers. Coal Age 58:146+ Je '53

Striking off the boss. J. J. Rutledge. Explosives Eng 31:20-1 Ja '53

Methods

Anthracite mechanical-mining investigations; longhole retreat mining of a steeply pitching anthracite bed. A. Allan, jr. and R. S. Davies. 5pls U S Bur Mines Rep of Invest 4925:1-10 '52

Coal recovery; abstracts of papers at American mining congress Coal division annual meeting. Min Cong J 39:67-9 Je '53

COAL mines and mining—Methods—*Continued*

Continuous mining; American mining congress Coal division; abstracts of papers. Coal Age 58:97-9 Je '53

Dissertation on the mining of coal. D. Powell. Inst E E Proc 100 pt 1:82 Mr '53

Hampton mines story. J. H. Edwards. il maps diag Coal Age 58:82-9 S '53

Here's how to get production-line mining. P. McShane. diags Coal Age 57:90-8 N '52

High efficiency in 36-in. coal with machine loading on long faces; Ben Hur coal co. il plans Coal Age 58:84-8 Je '53

How Compass Coal combines deep, strip and auger mining. A. E. Flowers. il diags map Coal Age 58:84-92 Ja '53

How Lone Star Steel solves tough mining problems. il diags Coal Age 58:100-6 S '53

How longhole mining increases safety and efficiency. H. Davis. il plan Coal Age 58: 76-9 Mr '53

Maximum extraction in first mining; Traux-Traer coal co. M. H. Shumate. il plan diag Min Cong J 39:34-7 Mr '53

Mechanical coal mining progress, 1952. J. W. Woomer. il Min Cong J 39:47-8 F '53

Review and forecast of continuous mining. M. H. Forester. il Min Cong J 39:50-3+ Ap '53

Roof support for continuous mining. J. A. Younkins. plans diags Min Cong J 39:44-6 Jl '53

Uphill continuous mining. il plan Coal Age 57:94-5 D '52

See also

Coal mines and mining—Longwall system

Coal mines and mining—Stripping operations

Power

Power; abstracts of papers at American mining congress Coal division annual meeting. Min Cong J 39:72-3 Je '53

Power conversion with a 300-kw selenium rectifier; Crucible mine. il plan Coal Age 58:100-4 My '53

Stepping up haulage and power; American mining congress Coal division; abstracts of papers. Coal Age 58:99-101 Je '53

Trends in electric power use in coal mines. H. P. Musser, jr. il Min Cong J 38:53-5 N '52

Safety measures

Analysis of Public law 552; Federal coal mine safety act. M. J. Ankeny. il Min Cong J 39:41-5 S '53

Benefits of a safety campaign to a mine; Snow hill coal corp. A. G. Gossard. il Min Cong J 39:50-2 Mr '53

Bolting beats bad top. J. H. Edwards. il Coal Age 58:94-9 Ja '53

Bolts conquer mean top; Red parrot coal co. il Coal Age 58:89-91 Je '53

Coal and safety in 1952. il Coal Age 58:81-2 F '53

Economies through roof bolting in an Indiana coal mine. L. W. Kelly. 8pls U S Bur Mines Information Circ 7653:1-10 '52

European developments in firedamp control. D. W. Gillings. plans diags Min Cong J 39: 46-9+ S '53

Federal law to prevent major coal-mine disasters, 1952. Mo Labor R 75:505-7 N '52

Gassy mine. Bsns W p 170 Mr 21 '53

Gatehead protective canopy for coal mines; Gedling colliery. il Engineering 174:785 D 19 '52; Engineer 195:36 Ja 2 '53

Harman-Feds Creek foremen honored for safety records. Coal Age 58:144 Mr '53

Holmes awards cite safety achievements. Coal Age 58:176+ Je '53

How not to be it. il Coal Age 58:108+ O '53

Improving haulage safety. Coal Age 58:110+ Mr '53

Keeping safety up-to-date. W. H. Bennett. Coal Age 58:98-101 O '53

Making coal mining safer; American mining congress Coal division; abstracts of papers. Coal Age 58:105 Je '53

National safety congress Coal mining section meeting, Chicago, Oct. 20-23; with abstracts of papers. Coal Age 57:136-7+ D '52

Practical method for teaching mine workers and officials use of gas-detecting equipment. D. S. Kingery and F. D. Baker. 12pls U S Bur Mines Information Circ 7639:1-6 '52

Red Jacket honors 97 foremen for safety. Coal Age 58:140 Mr '53

6,211 miners speak on safety; safety department of District one, UMWA; results of questionnaire. C. Kaczinski and M. J. Kosik. Coal Age 57:81-3 N '52

Successful roof-bolting at Idamay. A. E. Flowers. il plan Coal Age 58:74-9 O '53

Technique for sounding roof. W. J. Egan. il Coal Age 58:104+ Ag '53

Telephone goes underground. il Safety Maint & Prod 105:23+ My '53

Tops in mine safety; how did they do it? Consolidation coal co. J. H. Edwards. il Coal Age 58:100-4 Jl '53

Underground storage of natural gas in coal-mining areas. H. P. Wheeler, jr. and W. E. Eckard. bibliog 4pls U S Bur Mines Information Circ 7654:1-11 '52; Same. Gas Age 111:28-31+ F 26 '53; Same. Pet Eng 25: D42-3+ Ap '53

Union Pacific's coal miners win top safety honors, fourth consecutive year. Explosives Eng 30:184-5+ N '52

Ventilating practices that minimize explosion hazards in bituminous-coal mines. M. J. Ankeny and others. 8pls U S Bur Mines Information Circ 7648:1-6 '52

Statistics

50 biggest mines in 1952; tabulation. J. R. Forsythe. Coal Age 58:105 My '53

Stripping operations

Aerial survey helps Clinchfield double production in Virginia. A. E. Flowers. il maps Min Cong J 38:30-2 N '52

Augering supplements stripping; Keeley construction co. A. F. Flowers. il Coal Age 58: 74-9 Ag '53

Carbide and chemical co. develop new mining rig. il Min Cong J 38:60-3 N '52

Continuous open-cast mining. il Engineer 195:403-4 Mr 13 '53

Cutting cost in stripping. il Coal Age 58:72-81 S '53

Digging 40 feet of rock to get two feet of coal. T. Slager. il Comp Air Mag 58:218-20 Ag '53

Efficient big-shovel stripping; Midland electric coal corp. il Coal Age 57:84-8 N '52

Efficient stripping and flexible cleaning; M. F. Fetterolf coal co. il plans diags Coal Age 58:82-6 Jl '53

Faster overburden drilling; Maumee's Sullivan no. 27 mine. A. E. Flowers. il diags Coal Age 58:80-5 Mr '53

High-capacity stripping; Power coal co. A. E. Flowers. flow diag il Coal Age 58:78-83 Je '53

Marriott-Reed coal co.; operations near Columbia, Mo. J. R. McCloskey. il Explosives Eng 30:180-3 N '52

Mining in thin seams. F. J. Foresman. il Min Cong J 38:42-3+ N '52

Moving a lake to work a strip mine; J. Robert Bazley, inc. H. Davis. il diag Coal Age 58:102-5 O '53

Open-pit mining association Electrical division 9th anual meeting, Terre Haute, Ind. July 17. Coal Age 58:144+ Ag '53

Strip mining; abstracts of papers at American mining congress Coal division annual meeting. Min Cong J 39:77-84 Je '53

Strip mining of coal, 1952. F. F. Kolbe. il Min Cong J 39:88-9 F '53

Stripping hilltop coal; Buckeye coal & limestone co. il diag Coal Age 58:134-7 My '53

Stripping low-sulphur coal; Evans coal co. il Coal Age 58:93-6 Ap '53

Successful contour stripping. il map Coal Age 57:84-7 D '52

Underground mining from the surface with the Carbide miner. il diags Coal Age 57:72-8 D '52

What's behind 1,522,154 yards in one month? Georgetown no. 12 strip mine. A. E. Flowers. il Coal Age 58:80-7 O '53

Waste

How to avoid stream pollution from acid mine drainage. il diag Coal Age 58:96-101 F '53

Preventing formation of acid waters in Pennsylvania strip coal mines. H. R. Murdock. Ind & Eng Chem 45:sup 101A-3A F '53

COAL mines and mining—Waste—*Continued*

Stream pollution by coal mine wastes. H. F. Hebley. bibliog (27 titles) Min Eng 5:Trans 404-12 Ap '53

Waste disposal

Switch to butterfly-type gates leads to efficient refuse ejection; Hudson coal co. il diags Coal Age 58:131-3 My '53

Alabama

Digging 40 feet of rock to get two feet of coal. T. Slager. il Comp Air Mag 58:218-20 Ag '53

Alberta

Timber setting machine at West Monarch colliery. T. Smith. il Can Min J 73:56-7 D '52

Arkansas

Washability study of upper Hartshorne bed at the Quality mine, Hackett, Ark. B. W. Gandrud and H. L. Riley. 20pls U S Bur Mines Rep of Invest 4964:1-17 '53

Belgium

New source of gas? coal mines yield marketable natural gas in Belgium. P. Reed. Oil & Gas J 52:81 My 11 '53

Colorado

CF&I's Allen mine production goes into high gear. il Min Eng 5:757 Ag '53

Europe

French consortium will control Ruhr coal mines. For Comm W 49:15 Je 15 '53

Germany

Aluminum mine props save labor, last longer, improve safety in German coal mines. M. Stern. il Min Eng 5:492-3 My '53

Great Britain

British coal prospects for 1953. E. Rose. Min Cong J 39:60-1 F '53

Calverton colliery. il Engineer 194:463-4 O 3 '52; Engineering 174:447 O 3 '52

Coal budgeting. Economist 167:764 Je 13 '53

Coal in 1952. R. Redmayne. Engineers 195:106-8 Ja 16 '53

Coal in the red. Economist 166:41 Ja 3 '53

Coal on the ground; opencast coal and National coal board. Economist 167:468 My 16 '53

Does nationalization work? Britain's experience in operating coal industry. W. W. Haynes. Harvard Bsns R 31:103-15 Mr '53

Improving coal production. E. H. Browne. Engineer 195:311-13 F 27 '53

Investment in coal; with table, 1947-52. Economist 165:55 O 4 '52

New policies in coal. Economist 166:585-9 F 28 '53

Pits in profile. Economist 166:510 F 21 '53

Illinois

Some factors affecting and suggested ways for improving coal mine ventilation, with particular reference to mines in Illinois, Indiana, and western Kentucky. C. A. Herbert. 4pls U S Bur Mines Information Circ 7656:1-15 '53

Indiana

Some factors affecting and suggested ways for improving coal mine ventilation, with particular reference to mines in Illinois, Indiana, and western Kentucky. C. A. Herbert. 4pls U S Bur Mines Information Circ 7656:1-15 '53

Kansas

Mining in thin seams. F. J. Foresman. il Min Cong J 38:42-3+ N '52

Kentucky

Clover splint mine in Harlan county, Kentucky. E. D. Trent. il Explosives Eng 31:53-6 Mr '53

Some factors affecting and suggested ways for improving coal mine ventilation, with particular reference to mines in Illinois, Indiana, and western Kentucky. C. A. Herbert. 4pls U S Bur Mines Information Circ 7656:1-15 '53

New South Wales

Water supply for Oakdale colliery. H. B. Fletcher. il Water & Sewage Works 100:71-3 F '53

Pennsylvania

First 160 years at Summit Hill. H. Davis. il Coal Age 58:90-4 S '53

Future of the Pennsylvania anthracite industry. A. Kaufman. Min Eng 5:286-8 Mr '53

Storage fight in Pennsylvania. Bsns W p 112+ Ap 18 '53

Surface-water seepage into anthracite mines in the Lackawanna basin, Northern field; anthracite region of Pennsylvania. S. H. Ash and others. bibliog il maps fold maps U S Bur Mines Bul 518:1-37; pa 75¢ Supt. of doc. '52

Rhodesia

New managers for Wankie. Economist 167:328-9 My 2 '53

United States

Annual report of research and technologic work on coal, fiscal year 1951. R. L. Brown and E. P. Carman. bibliog 27pls U S Bur Mines Information Circ 7647:1-81 '52

Granddaddy mines America. Coal Age 58:100-1 Mr '53

Thickness of bituminous-coal and lignite seams at all mines, and thickness of overburden at strip mines in the United States in 1950. W. H. Young and R. L. Anderson. 15 pls U S Bur Mines Information Circ 7642:1-18 '52

Virginia

Aerial survey helps Clinchfield double production in Virginia. A. E. Flowers. il maps Min Cong J 38:30-2 N '52

West Virginia

Hampton mines story. J. H. Edwards. il maps diag Coal Age 58:82-9 S '53

Modified longwall mining with a German coal planer (plow) in the Pocahontas number four coal bed, Helen, W.Va. W. A. Haley and others. 10pls U S Bur Mines Rep of Invest 4922:1-13 '52; Same cond. Min Cong J 38:56-9+ O '52

COAL mining institute of America

Annual meeting, 66th, Pittsburgh, Dec. 11-12. Coal Age 58:150-1+ Ja '53

COAL mining machinery

Anthracite mechanical-mining investigations; longhole retreat mining of a steeply pitching anthracite bed. A. Allan, jr. and R. S. Davies. 5pls U S Bur Mines Rep of Invest 4925:1-10 '52

Anthracite mechanical mining investigations; preliminary testing of Brieden pneumatic packing machine. C. A. Landsidle and others. 5pls U S Bur Mines Rep of Invest 4978:1-13 bibliog(33 titles, p 12-13) '53

Augering supplements stripping; Keeley construction co. A. F. Flowers. il Coal Age 58:74-9 Ag '53

Carbide and chemical co. develop new mining rig. il Min Cong J 38:60-3 N '52

Coal by remote control; Carbide and Carbon Chemicals new mining machine number three. il Min Eng 5:49 Ja '53

Continuous coal mining system developed to handle coal removal in outcrop seams. il Elec Eng 72:94-5 Ja '53; Same cond. Mech Eng 75:26-7 Ja '53

Continuous miner digs sewer tunnel through shale. il Constr Methods 35:54-6 O '53

Continuous mining; abstract. H. L. Thomas. Coal Age 58:144+ F '53

Continuous open-cast mining. il Engineer 195:403-4 Mr 13 '53

Continuous slope sinking. il Coal Age 58:81 Jl '53

Digging coal; no hands; Carbide & Carbon Chemicals continuous coal-mining machine. il Bsns W p70-2+ N 8 '52

Efficiency, machine made. il Coal Age 58:86-91 My '53

Engineering outlook; coal-mining, steam-raising and heavy electrical plant. Engineering 175:232-5 F 20 '53

High efficiency in 36-in coal with machine loading on long faces; Ben Hur coal co. il plans Coal Age 58:84-8 Je '53

COAL mining machinery—*Continued*

Mechanical coal mining progress, 1952. J. W. Woomer. il Min Cong J 39:47-8 F '53

Mechanical indicator shows ripper-head position. il diag Coal Age 57:93 D '52

Mechanical loading; American mining congress Coal division annual conference of committees, Pittsburgh, Nov. 20; abstracts of papers. Min Cong J 38:70-1 D '52

Mining by push-buttons; remote-controlled continuous coal miner. E. C. Kellogg. il Iron Age 170:111-12 N 6 '52

Motion of a link chain over a roller. A. E. R. de Jonge. diags A S M E Trans 75:747-58 Jl '53

Pillar-mining team; continuous miner and tracklaying shuttle car; Jamison coal & coke co. il Coal Age 58:98-9 Jl '53

Possibilities of the so-called continuous miner in coal production; abstract J. E. Robbins. Coal Age 58:146+ F '53

Remotely-steered coal-mining machine; patterns on cathode ray oscilloscope guide operator. J. Markus. il diags Electronics 26:148-51 Ag '53

Review and forecast of continuous mining. M. H. Forester. il Min Cong J 39:50-3+ Ap '53

Special crusher reduces picking load; Perry coal co. il Coal Age 58:93 Mr '53

Underground mining from the surface with the Carbide miner. il diags Coal Age 57:72-8 D '52

Uniformity of equipment controls. il diags Min Cong J 39:34-6 Ja '53

See also

Coal cutters

Conveyors

Aluminum shaking conveyor. H. Davis. il Coal Age 58:78-80 Jl '53

Coal mine haulage; mobile continuous conveyor. J. D. Sutton. il plans diags Min Cong J 39:67-70 Ag '53

Complete belt mine; Peabody coal co. J. Craggs. il Min Cong J 39:42-5 My '53

Conveyor mining; American mining congress Coal division annual conference of committees, Pittsburgh, Nov. 20; abstracts of papers. Min Cong J 38:65-7 D '52

Conveyor specifically developed for continuous mining. il Coal Age 58:114 Jl '53

Here's how to get production-line mining. P. McShane. diags Coal Age 57:90-8 N '52

How to get your money's worth out of your belt conveyors. C. W. Staacke. il Coal Age 58:83-7 Ap '53

New shuttle belt loader; Haywood coal co. il Coal Age 58:94-5 Mr '53

New slope taps 50 million tons; Panther coal co. il Coal Age 57:99-101 N '52

Second wind for Sterling number one. H. Davis. il map Coal Age 58:80-4 Ag '53

Two-way belt conveyor transportation. C. W. Thompson. il diags Min Eng 5:Trans 905-9 S '53

Exhibitions

Equipment show sets new record; American mining congress Coal division, Cleveland. il diags Coal Age 58:106-16+ Je '53

1953 coal show; what's what in equipment. Coal Age 58:124-30 My '53

Maintenance and repair

Machines plus ingenuity make resurfacing easier, better. il Coal Age 58:114 F '53

Preventive maintenance adds productive time at TCI. il Coal Age 57:102-4 N '52

Statistics

Equipment sales in 1952. W. H. Young and R. L. Anderson. Coal Age 58:83-5 F '53; Same. il Min Cong J 39:118-21 F '53

COAL pipeline. See Coal—Transportation

COAL planer. See Coal cutters

COAL preparation

Beaver Brook heavy-media plant. flow sheet il Coal Age 58:104-7 Ja '53

Coal for electrodes in the aluminum industry. R. J. Campbell, jr. and others. Coal Age 58:86-7 Ag '53

Coal preparation; abstracts of papers at American mining congress Coal division annual meeting. Min Cong J 39:74-7 Je '53

Coal preparation progress in 1952. A. C. Dorenfeld. il Min Cong J 39:109-10 F '53

Gadgets solve preparation problems; illustrations with text. Coal Age 58:116-17 S '53

Getting results in preparation; American mining congress Coal division; abstracts of papers. Coal Age 58:101-2 Je '53

Hampton mines story. J. H. Edwards. il maps diag Coal Age 58:82-9 S '53

Heated screens pay off. il Coal Age 58:98-9 Ap '53

How Itmann prepares original Pocahontas coal. J. H. Edwards. flow sheet il maps Coal Age 58:88-96 O '53

Mine operating factors that affect coal preparation. R. L. Llewellyn. il Min Cong J 39:41-3+ Je '53

Modern Black Star plant builds domestic markets. il Coal Age 58:102-5 Mr '53

Modernizing Cannelton; new central preparation plant. il maps diag Coal Age 58:108-13 Ja '53

New bituminous preparation facilities in 1952. tabulation. Coal Age 58:78-80 F '53

Preparation characteristics of coal from Floyd county, Ky. W. L. Crentz and J. W. Miller. 29pls U S Bur Mines Rep of Invest 4920:1-20 '52

Preparation characteristics of coal from Jefferson county, Pa. W. L. Crentz and J. W. Miller. 31pls U S Bur Mines Rep of Invest 4941:1-21 '53

Preparation characteristics of coal from Pike county, Ky. W. L. Crentz and J. W. Miller. 33pls U S Bur Mines Rep of Invest 4910:1-27 '52

Preparation of low-ash coal for production of electrodes. A. L. Wesner and A. C. Richardson. flow sheet diag Min Eng 4:Trans 1059-61 N '52

Quality preparation for contiguous-seam mining; Red jacket coal corp. flow sheet il plans Coal Age 58:86-93 F '53

Some fundamental principles applied to the design and operation of a fine anthracite plant at Coaldale colliery. W. T. Turrall and M. J. Cook. bibliog flow sheet il diag Min Eng 5:Trans 910-21 S '53

Surface preparation; American mining congress Coal division annual conference of committees, Pittsburgh, Nov. 20; abstracts of papers. Min Cong J 38:72-4 D '52

Theory, scale-up, and operating variables of the Peterson top feed reservoir. R. J. Piros and others. bibliog flow diag Min Eng 4:Trans 1236-43 D '52

Uniform high-Btu industrial fuel the goal in Williams preparation. flow diag il Coal Age 58:92-6 Jl '53

Williams preparation plant set for dedication. il Min Cong J 39:23-5 Jl '53

See also

Coal cleaning
Coal washing
Flotation process (coal)

COAL products

ACS Division of gas and fuel chemistry spring meeting, Pittsburgh. Chem & Eng N 31:1860-2 My 4 '53

Chemicals from coal. Can Chem Process 37:60+ Mr '53

Coal chemicals output dropped off during '52. Oil Paint & Drug Rep 164:4 Ag 10 '53

Debut of a new industry; West Virginia plant produces chemicals from raw coal through hydrogenation, Carbide and carbon chemicals co. flow chart il Manuf Rec 121:38-9+ D '52

Extracts from Paley commission report on coal and petroleum chemicals and products made therefrom. India Rubber World 126:777-81; 127:70-3+, 226-8+, 511-13 S-N '52, Ja '53

New non-fuel use for anthracite; AnthraAid. Heat & Ven 50:106 Jl '53

Resinous condensation products from humic acids and glycols or diamines. G. H. Thomson. bibliog J Ap Chem 2:603-8 O '52

Rifle or shotgun? coal hydrogenation products. Chem W 71:35-6 O 18 '52

Water-soluble polycarboxylic acids by oxidation of coal. N. W. Franke and others. bibliog flow sheet il plan diag Ind & Eng Chem 44:2784-92 N '52

See also

Coal tar products

COAL products—*Continued*

Analysis

Analytical acetylation; application to coal hydrogenation products. C. W. DeWalt, jr. and R. A. Glenn. bibliog Anal Chem 24:1789-95 N '52

COAL purchasing

How to buy coal for the small industrial plant. M. H. Charles. il Power Eng 57:70-2 Ag '53

Selling coal for power. C. H. Frick. il Coal Age 57:70-5 N '52

What is size consist worth? F. M. Reiter. Power Eng 56:63-5+ D '52

COAL research

Annual report of research and technologic work on coal, fiscal year 1951. R. L. Brown and E. P. Carman. bibliog 27pls U S Bur Mines Information Circ 7647:1-81 '52

Bituminous coal research, inc. meeting, Cincinnati. Chem & Eng N 31:1306-7 Mr 30 '53

British coal utilisation research association annual report for the year 1952. Engineering 176:88 Jl 17 '53

Coal research. C. H. Ruof. Science 116:sup3 O 31 '52

Coal research, 1952. J. W. Igoe and H. J. Rose. il Min Cong J 39:72-8 F '53

Coal research; sixteenth annual summary released by the U.S. Bureau of mines, Pittsburgh, Pa. Mech Eng 75:27-8 Ja '53

Fossil fuels will be utilized mainly as chemical raw materials; Pittsburgh award to Homer H. Lowry. Chem & Eng N 30:5442 D 29 '52

See also

Bituminous coal research, inc.

COAL sampling

Coal sampling; abstract and discussion. E. H. M. Badger. Elec R (Lond) 151:1231-2 D 5 '52

Improved probe seal reduces coal-sampling time. T. J. Harding. diag Elec World 139:96 Ja 12 '53

COAL-steel pool

At Coal-steel headquarters. Economist 165:308 N 1 '52

Britain and Luxemburg. Economist 167:718-20 Je 13 '53

Coal in 1952. R. Redmayne. Engineer 195:71-2 Ja 9 '53

Common coal and steel markets in Europe. Steel 132:56-7 Je 22 '53

Common market opens. Economist 166:407-8 F 14 '53

European steel output expands; with table. Economist 165:108 O 11 '52

Europe's biggest business at work. il Bsns W p 102-4 F 7 '53

First shocks from Luxemburg. Economist 166:8+ Ja 3 '53

French versus German steel. Economist 167:312 My 2 '53

M. Bidault's behaviour. Economist 166:714 Mr 14 '53

M. Monnet reports. map Economist 166:217-18, 287-8 Ja 24-31 '53

M. Monnet's sanctions. Economist 166:474-5 F 21 '53

Prices in the coal-steel community. Economist 166:860-1 Mr 28 '53

Schuman plan; an American steel executive measures its economic pitfalls. C. B. Randall. Barron's 32:5+ N 17 '52

Schuman plan; towards liberalism or monopoly? Nat City Bank p 116-19 O '52

Shadows over the Schuman plan. Bsns W p 142+ My 2 '53

Steel and the high authority. Economist 167:78 Ap 11 '53

Steel pool; how deep are cracks? Iron Age 171:46 Ja 22 '53

Steel prices in the community. Economist 167:674 Je 6 '53

Steel; snag in Schuman plan. Iron Age 170:69 N 20 '52

Two rounds for the high authority. Economist 167:430 My 16 '53

COAL storage

Coal-pile survey by aerial photos gives close check of stored amount; illustrations with text. Power 96:111 D '52

How Consolidated Edison packs and seals coal piles. il Power Eng 57:62-3 My '53

How Philadelphia Electric increased its coal storage. il Elec World 138:116 O 6 '52

New methods speed large coal stockpiling operations. R. A. Nussmeier. il Power 97:94-5+ Ja '53

Stockpile can be measured from air. il diag Eng & Min J 153:104-5 D '52

What can he do about this coal silo? Power Eng 57:102-3 Je '53

COAL supply

See also

Coal trade

Europe

Western Europe's coal. Economist 166:722-3 Mr 14 '53

Great Britain

Coal on the ground; opencast coal and National coal board. Economist 167:468 My 16 '53

Industrial and domestic coal; Consumer councils' annual reports and recommendations. Elec J 151:268 Jl 24 '53

United States

Coal reserves. H. J. Rose. Heat & Ven 50:138+ Ja '53

COAL tar

Coal-tar pavements containing rubber show promise for jet-plane runways. Eng N 150:42 Mr 5 '53

Some aspects of the chemistry of coal tars. M. Vahrman. bibliog diag J Ap Chem 2:532-46 S '52

Studies of coal tar bases; hydrogenation of 2-methylpyridine. J. I. Jones and A. S. Lindsey. Chem Soc J p3261-4 Ag '52

Analysis

Estimation of naphthalene in coal tar products by isotopic dilution analysis. W. S. McDonald and H. S. Turner. Chem & Ind p 1001-2 O 11 '52

2-Ethylpyridine as a constituent of coal-tar bases. A. B. Densham, D. J. Langston and A. J. Simpson. Chem Soc J p5044 D '52

COAL tar colors

See also

Aniline black

COAL tar pitch. See Pitch

COAL tar products

Coal chemicals enter new era. Chem Eng 60:195-6 Mr '53

Coaltar product import rules tightening is set. Oil Paint & Drug Rep 164:5 Jl 13 '53

See also

Acenaphthylene
Anthracene
Benzene
Coal distillation
Naphthalene
Tariff—United States—Coal tar products
Toluene
Xylene

Analysis

Separation and analysis of tar bases by countercurrent distribution. C. Golumbic. bibliog Anal Chem 24:1849-50 N '52

Prices

Average monthly quotations in 1952; tabulations. Steel 132:172 Ja 5 '53

Statistics

Coal chemicals. Published in weekly numbers of Oil, paint and drug reporter

Coaltar product import total dropped in 1952. Oil Paint & Drug Rep 164:4 Jl 6 '53

COAL trade

Anthracite conference, 11th, Bethlehem, Pa. May 7-8. Coal Age 58:170-5 Je '53

Anthracite in 1952. C. A. Garner. il Min Cong J 39:103-5 F '53

Anthracite retailers, producers join in fight for markets. H. O. Tompkins. Coal Age 58:135 S '53

Bituminous coal, 1952. C. J. Potter. il Min Cong J 39:58-60 F '53

Bituminous industry has new outlook. H. B. Brown, jr. il Trusts & Estates 91:704-7 O '52

Coal can cure its economic ills. J. B. Delaney. Iron Age 171:92 Ap 2 '53

Coal review and forecast. il Iron Age 171:279 Ja 1 '53

COAL trade—*Continued*

Coal stabilization. Coal Age 57:66-71 D '52

Don't count coal out. C. La Motte. il Nat Pet N 44:21-4 O 8 '52

Foreign oil; how it hurts America, how it can be curbed. map Coal Age 58:70-5 Mr '53

Fuel oil import flow seen peril to US coal. Oil Paint & Drug Rep 163:4+ F 23 '53

Lehigh Navigation unveils dealer's dream package. Coal Age 58:156 S '53

Now you can buy coal in a food store, too! D. J. Atchison. il Sales Management 70: 34+ Mr 15 '53

Other industrials; how coal has fared, what its opportunities are. il Coal Age 58:70-3 O '53

Selling coal for power. C. H. Frick. il Coal Age 57:70-5 N '52

Slack year in '52, better times in '53. Coal Age 58:71-5 F '53

That bright future isn't here yet. Bsns W p 180+ Ap 11 '53

Advertising

Coal firm uses dailies to tell management tale. J. W. Dragonetti. Ed & Pub 85:16 D 20 '52

Finance

Not so black. N. Willatt. Barron's 33:5 Je 15 '53

Statistics

Anthracite and bituminous; Nov.-Dec. 1951-Jan.-Nov. 1952. Survey of Cur Bsns 33:S34-5 Ja '53 [cont monthly]

Coal in 1952. R. Redmayne. Engineer 195: 71-3, 106-8 Ja 9-16 '53

U.S. coal production, consumption, exports; tabulations. Iron Age 171:432 Ja 1 '53

Europe

See also
Coal-steel pool

Great Britain

Accounting for coal. Economist 167:457-8 My 16 '53

Britain and Luxemburg. Economist 167:718-20 Je 13 '53

British coal prices show steady rise, lead industrial cost trend. For Comm W 49:17 Ap 20 '53

British coal stocks show decline; production and exports higher. For Comm W 49:14 Je 22 '53

Coal performance and plans. Economist 167: 115 Ap 11 '53

Deficit in '52 industry operations reported by British Coal board. For Comm W 50:18 Jl 13 '53

Delivered prices for coal; coal grades and transport costs. Economist 167:393 My 9 '53

Demand for warmth. Economist 166:663 Mr 7 '53

New policies in coal. Economist 166:585-9 F 28 '53

United Kingdom coal production still on upward trend. For Comm W 49:3 F 23 '53

COAL washing

Coal washer in use by Colorado fuel and iron corp. Blast F & Steel Pl 41:513 My '53

Washability study of upper Hartshorne bed at the Quality mine, Hackett, Ark. B. W. Gandrud and H. L. Riley. 20pls U S Bur Mines Rep of Invest 4964:1-17 '53

See also
Flotation process
(coal)

COAL waste

Convertol process of coal-slurry treatment. T. Fraser. 3pls U S Bur Mines Information Circ 7660:1-4 '53

COAST changes

Recent changes in sea level along the New England coast; new archaeological evidence. E. S. Barghoorn. bibliog Science 117:597-8 My 29 '53

COASTAL Caribbean oils, inc.

Security I like best. E. A. Grimm. Comm & Fin Chr 177:578+ F 5 '53

COASTAL plains

Critical analysis of cretaceous stratigraphy and paleobotany of Atlantic coastal plain. E. Dorf. bibliog Am Assn Pet Geologists Bul 36:2161-84 N '52

Sedimentary volumes in Gulf coastal plain of United States and Mexico. G. E. Murray and others. bibliog 8pls maps diags Geol Soc Bul 63:1157-228 D '52

Stratigraphy of coastal plain of New Jersey. M. E. Johnson and H. G. Richards. bibliog Am Assn Pet Geologists Bul 36:2150-60 N '52

COATED abrasives. See Abrasives

COATED paper. See Paper, Coated

COATINGS. See Finishing materials

COAXIAL cables. See Radio lines; Telephone cables—Coaxial cables

COBALAMIN. See Vitamins—Vitamin B_{12}

COBALT, Ontario

Cobalt celebrates. Comp Air Mag 58:197 Jl '53

Golden jubilee of a great silver camp. il Can Min J 74:47-52 Ag '53

COBALT

Adsorption of cobalt and barium ions by hydrous ferric oxide at equilibrium. J. E. Duval and M. H. Kurbatov. J Phys Chem 56:982-4 N '52

Adsorption of hydrogen and carbon monoxide and their mixtures by cobalt Fischer-Tropsch catalysts. J. C. Ghosh, M. V. C. Sastri and K. A. Kini. bibliog diag Ind & Eng Chem 44:2463-70 O '52

Cobalt enhancement of penicillin activity against salmonella pullorum. A. Pital and others. bibliog Science 117:459-60 Ap 24 '53

Cobalt, 1952. H. W. Davis. Eng & Min J 154:96-7 F '53

Cobalt production consumption and prices; tabulations. Iron Age 171:421 Ja 1 '53

Hydrogen peroxide formation by cobalt gamma-radiation. T. J. Sworski. bibliog J Chem Phys 21:375-6 F '53

Hydrogen transfer reactions accompanying the cobalt-catalyzed addition of carbon monoxide to olefinic compounds. G. Natta, P. Pino and R. Ercoli. bibliog Am Chem Soc J 74:4496-8 S 20 '52

Hydrogen transfer reactions accompanying the cobalt catalyzed synthesis from acetylene, carbon monoxide and methanol. P. Pino and A. Miglierina. bibliog Am Chem Soc J 74:5551 N 5 '52

Ion exchange experiment for physical chemistry. T. H. Roberts and others. bibliog J Chem Educ 29:545-8 N '52

Nature of the active substrate in Fischer-Tropsch synthesis over cobalt catalysts. M. V. C. Sastri and S. R. Srinivasan. bibliog Am Chem Soc J 75:2898-900 Je 20 '53

Nickel-cobalt. il map Eng & Min J 154:146-9 Jl '53

Phase transformation of cobalt as observed on single crystals. V. J. Kehrer and H. Leidheiser, jr. il J Chem Phys 21:570 Mr '53

Rate of adsorption of cobalt ions on hydrous ferric oxide. M. H. Kurbatov and G. B. Wood. J Phys Chem 56:698-701 Je '52

Reaction between periodate and cobaltous ions. R. E. Jentoft and R. J. Robinson. Am Chem Soc J 75:4083-4 Ag 20 '53

Study of some phenomena associated with the adherence of sheet iron ground coats. H. F. Patrick and others. bibliog il Am Cer Soc J 36:305-13 S 1 '53

Study of the X-irradiation protection afforded by cobalt. W. Parr and others. bibliog Science 117:155-6 F 13 '53

Total fast neutron cross sections of Co, Ga, Se, Cd, Te, Pt, Au, Hg, and Th. M. Walt and others. Phys R 89:1271-2 Mr 15 '53

Tungsten-cobalt-carbon system. P. Rautala and J. T. Norton. bibliog il diags J Metals 4:Trans 1045-50 O '52; Discussion. 5:Trans 744-6 sec 2 My '53

Analysis

Determination of traces of cobalt in soils; a field method. H. Almond. bibliog il Anal Chem 25:166-7 Ja '53

Isotopes

Angular and direction-polarization correlation for Co^{60}, Cs^{134}, and Sb^{124}. R. M. Kloepper and others. bibliog il Phys R 88:695-8 N 15 '52

Battelle installs cobalt 60 radiation source. R. Belcher. Materials & Methods 37:182+ F '53

COBALT—Isotopes—*Continued*

Beta-spectra of Co^{56}, Co^{57}, and Co^{58}. L. S. Cheng and others. bibliog Phys R 88:887-9 N 15 '52

Cobalt-60 irradiator; new tool for medical research. E. D. Trout and J. Vlach. il Gen Elec R 55:44-7 N '52

Convenient source of gamma radiation. D. F. Saunders, F. F. Morehead, jr. and F. Daniels. diag Am Chem Soc J 75:3096-8 Jl 5 '53

Gamma-gamma directional correlations in Co^{59}, Xe^{131}, and Hg^{198}. D. Schiff and F. R. Metzger. bibliog diag Phys R 90:849-52 Je 1 '53

Gamma radiation from cobalt-60 can promote chemical reactions; abstract. L. E. Brownell. Chem & Eng N 31:1310 Mr 30 '53

Half-life of Co^{60}. J. Kastner and G. N. Whyte. Phys R 91:332 Jl 15 '53

Hot atom chemistry; photonuclear preparation of cobalt-58, cobalt-58m. D. C. Hoffman and D. S. Martin, jr. bibliog J Phys Chem 56:1097-101 D '52

Irradiation of crystalline vitamin B_{12} with neutrons. P. Numerof and J. Kowald. diags Am Chem Soc J 75:4350-2 S 5 '53

Low temperature sterilization with radioactive cobalt-60. il Tech R 55:197-8 F '53

Neutron capture γ-rays from scandium, vanadium, manganese, cobalt, and copper. G. A. Bartholomew and B. B. Kinsey. bibliog diags Phys R 89:386-95 Ja 15 '53

Neutron capture gamma-rays in cadmium, cobalt, and chlorine. W. A. Reardon and others. il diags Phys R 91:334-7 Jl 15 '53

Neutron irradiation of crystalline vitamin B_{12}. D. T. Woodbury and C. Rosenblum. bibliog Am Chem Soc J 75:4364-5 S 5 '53

Precision measurement of Co^{60} gamma-radiation. G. Lindström and others. Phys R 89:1303-4 Mr 15 '53

Production of Fe^{59} by the $Co^{59}(n,p)$ reaction in the Brookhaven reactor. A. C. Wahl. J Chem Phys 21:182 Ja '53

Radioactive cobalt laboratory for chemical research. R. A. Blomgren and others. il R Sci Instr 24:298-303 Ap '53

Radioactive cobalt; tracer on carriers helps spot jams in pneumatic tubes. il Iron Age 171:156-7 Mr 26 '53

Studies on bond types in certain cobalt complexes. B. West. Chem Soc J p3115-29 Ag '52

Prices

Nonferrous prices; tabulation. Steel 132:173 Ja 5 '53

COBALT alloys

Hall effects of the cobalt nickel alloys and of Armco iron. S. Foner and E. M. Pugh. bibliog il diag Phys R 91:20-7 Jl 1 '53

Role of the binder phase in cemented tungsten carbide-cobalt alloys. J. Gurland and J. T. Norton. bibliog il diag J Metals 4:Trans 1051-6 O '52

Thermal and dilatometric investigation of the alloys of cobalt with chromium and molybdenum. A. G. Metcalfe. bibliog il diags J Metals 5:Trans 357-64 sec 2 F '53

Transformation in cobalt-nickel alloys. J. B. Hess and C. S. Barrett. bibliog J Metals 4: Trans 645-7 Je '52; Discussion. il 5:Trans 729-30 sec 2 My '53

Testing

Effect of various treatments on the fatigue strength of notched S-816 and Timken 16-25-6 alloys at elevated temperatures. W. E. Jones, jr. and G. B. Wilkes, jr. il diags Am Soc T M Proc 50:744-60; Discussion. 761-2 '50

COBALTAMMINES

Polarographic reduction of hexamminecobalt(III) ion; the effect of complexing agents. H. A. Laitinen and P. Kivalo. bibliog Am Chem Soc J 75:2198-202 My 5 '53

Polarographic reduction of hexamminecobalt(III) ion; the effect of non-complexing electrolytes. H. A. Laitinen, A. J. Frank and P. Kivalo. bibliog Am Chem Soc J 75: 2865-9 Je 20 '53

Properties of the acidocobaltammines; iodopentamminecobalt(III). R. G. Yalman. bibliog Am Chem Soc J 75:1842-5 Ap 20 '53

Properties of the acidocobaltammines; the chlorotriammine series. R. G. Yalman and A. B. Lamb. bibliog Am Chem Soc J 75: 1521-3 Ap 5 '53

COBALT chlorides

Heats of solution of the cobaltous chloride hydrates in water and certain organic solvents. L. I. Katzin and J. R. Ferraro. Am Chem Soc J 75:3821-4 Ag 5 '53

System cobaltous chloride-water-*t*-butyl alcohol at 25°. L. I. Katzin and J. R. Ferraro. bibliog Am Chem Soc J 75:3825-7 Ag 5 '53

trans-Dichlorobis-(N- or C-alkylethylenediamine)-cobalt(III) chlorides. F. Basolo. bibliog Am Chem Soc J 75:227-8 Ja 5 '53

COBALT compounds

Aquo and chloro complexes of cobalt(II) and nickel(II) in 2-octanol. W. D. Beaver and others. bibliog Am Chem Soc J 75:4556-60 S 20 '53

Chemistry of metal carbonyls; preparation and properties of cobalt hydrocarbonyl. H. W. Sternberg and others. bibliog Am Chem Soc J 75:2717-20 Je 5 '53

Complex acids of cobalt and chromium; the green carbonatocobalt(III) anion. T. P. McCutcheon and W. J. Schuele. Am Chem Soc J 75:1845-6 Ap 20 '53

Electrostatic effects in the combination of cobalt with amino acids. C. Tanford and W. S. Shore. bibliog Am Chem Soc J 75: 816-19 F 20 '53

Evidence for cobalt hydrocarbonyl as the hydroformylation catalyst. I. Wender, H. W. Sternberg and M. Orchin. Am Chem Soc J 75:3041-2 Je 20 '53

Inorganic complex compounds containing polydentate groups; complexes of cobalt(II) perchlorate with tetraethylenepentamine. H. B. Jonassen and F. W. Frey. bibliog il Am Chem Soc J 75:1524-6 Ap 5 '53

Mechanism, kinetics, and stereochemistry of octahedral substitutions; kinetics and molecularity of nucleophilic substitutions in the *cis*-dichlorobisethylenediaminecobalt(III) ion. D. D. Brown and C. K. Ingold. Chem Soc J p2680-96 S '53

Mechanism, kinetics, and stereochemistry of octahedral substitutions; steric course of some unimolecular substitutions in the *cis*-dichlorobisethylenediaminecobalt(III) ion. D. D. Brown and R. S. Nyholm. diags Chem Soc J p2696-701 S '53

Mechanism of substitution reactions in complex ions; kinetics of aquation of some cobalt(III) complex ions. R. G. Pearson, C. R. Boston and F. Basolo. bibliog Am Chem Soc J 75:3089-92 Jl 5 '53

Mechanism of substitution reactions in complex ions; stereochemical changes accompanying some reactions of cobalt(III) complexes. F. Basolo, B. D. Stone and R. G. Pearson. bibliog diags Am Chem Soc J 75:819-23 F 20 '53

New reagent for the precipitation of sulphate. R. Belcher and D. Gibbons. Chem Soc J p4216-18 N '52

Polarographic study of several *cis* and *trans* coördination compounds of cobalt. H. F. Holtzclaw, jr. and D. P. Sheetz. bibliog Am Chem Soc J 75:3053-8 Jl 5 '53

Preparation and some properties of potassium hydroxopentacyanocobaltate(III). L. C. Smith, J. Kleinberg and E. Griswold. bibliog Am Chem Soc J 75:449-51 Ja 20 '53

Preparation and some properties of the cobalticinium salts. G. Wilkinson. Am Chem Soc J 74:6148-9 D 5 '52

Reflection spectra of some solid cobalt(II) salts in the visible region. L. I. Katzin and E. Gebert. bibliog Am Chem Soc J 75:2830-2 Je 20 '53

Studies on bond type in certain cobalt complexes. B. West. Chem Soc J p3115-29 Ag '52

Studies on bond type in certain cobalt complexes; the polarographic reduction of some cobalt inner-complex compounds. J. R. Urwin and B. West. Chem Soc J p4727-9 D '52

Thermogravimetric curves for the decomposition of octa-ammino-μ-amino-μ-nitrodicobaltic sulphate and dichlorobisethylenediaminocobaltic hexachlorostibnate. D. Gibbons. Chem Soc J p 1641-2 My '53

COBALT compounds—*Continued*
Tracer studies in the aquation and hydrolysis of cobalt complexes. C. A. Bunton and D. R. Llewellyn. Chem Soc J p 1692-6 Je '53
X-ray investigation of $Co(NH_3)_6PbCl_6$ and $Co(NH_3)_6BiCl_6$. M. Atoji and T. Watanabe. J Chem Phys 20:1045-6 Je '52

COBALT ferrates
Magnetostriction of single crystals of cobalt and nickel ferrites. R. M. Bozorth and J. G. Walker. bibliog Phys R 88:1209 D 1 '52

COBALT metallurgy
Recent advances in the electrolytic extraction of manganese, chromium and cobalt. J. W. Cuthbertson. bibliog Chem & Ind p 1165-70 N 29 '52

COBALT nitrates
Heats of solution of the cobaltous nitrate hydrates in water and in certain organic solvents and binding energies of molecular ligands. L. I. Katzin and J. R. Ferraro. bibliog Am Chem Soc J 74:6040-7 D 5 '52

COBALT oxides
Elementary mechanisms of magnetization in mixed oxides of iron and cobalt. C. Guillaud. bibliog diags Rs Mod Phys 25:64-74 Ja '53
Evidence for domain structure in antiferromagnetic CoO from elasticity measurements. M. E. Fine. Phys R 87:1143 S 15 '52
Magnetomechanical effects in an antiferromagnet, CoO. M. E. Fine. bibliog Rs Mod Phys 25:158 Ja '53

COBALT silicides
Superconducting properties of cobalt disilicide. B. T. Matthias and J. K. Hulm. Phys R 89:439-41 Ja 15 '53

COCA COLA

Advertising

I like Coke. E. B. Weiss. Ptr Ink 241:36 N 28 '52

COCAINE
Stereochemistry of the tropane alkaloids; the configurations of the cocaines. G. Fodor and O. Kovács. Chem Soc J p724-7 Mr '53
Three-dimensional structure of cocaine. S. P. Findlay. bibliog Am Chem Soc J 75:4624-5 S 20 '53

COCHLEA. See Ear

COCHRAN, Jacqueline
Cochran sets sights on 700-mph. record. Aviation W 58:18 My 18 '53

COCKCROFT-WALTON voltage multiplying circuit. See Electric circuits

COCKPITS. See Airplanes—Cockpits

COCKROACHES
Cockroach repellency test; abstract. Soap & San Chem 28:99 S '52
Trickling filter roach invasion. G. T. Lohmeyer. il Sewage & Ind Wastes 25:1104-7 S '53

COCKS
Closed angle cock cause of Washington wreck. diag Ry Loco & Cars 127:85-6 Ap '53

COCKSHUTT farm equipment, limited
Security I like best. A. J. O'Donohoe. Comm & Fin Chr 177:2062 My 14 '53

COCOA
Heavy European demand squeezes cocoa supply. Barron's 33:27-8 Jl 20 '53
More cocoa round the corner; with table. Economist 165:196-7 O 18 '52
Price upsurge could continue. Barron's 32:35-6 D 8 '52

COCONUT milk
Coconut milk factor; the growth-promoting substances in coconut milk. E. M. Shantz and F. C. Steward. Am Chem Soc J 74:6133-5 D 5 '52

COCONUT oil
New copra and oil trade developed in Zanzibar. For Comm W 49:15 F 16 '53

CODECARBOXYLASE
Unambiguous synthesis of codecarboxylase. J. Baddiley and A. P. Mathias. Chem Soc J p2583-91 Jl '52

CODEINE
Conversion of codeinone to codeine. M. Gates. Am Chem Soc J 75:4340-1 S 5 '53

CODEINONE
Conversion of codeinone to codeine. M. Gates. Am Chem Soc J 75:4340-1 S 5 '53

COELACANTHS
Investigation of the coelacanth. J. L. B. Smith. Science 117:364 Ap 3 '53
Old fish. Sci Am 188:36-7 F '53

COENZYMES
Acetoacetyl coenzyme A as intermediate in the enzymatic breakdown and synthesis of acetoacetate. J. R. Stern, M. J. Coon and A. Del Campillo. bibliog Am Chem Soc J 75:1517-18 Mr 20 '53
Coenzyme A; pantetheine-2′ and -2′ : 4′ phosphates and a new method for the synthesis of cyclic phosphates. J. Baddiley and E. M. Thain. Chem Soc J p903-6 Mr '53
Coenzyme A; the identification of pantothenic acid -4′ and -2′ : 4′ phosphates from a hydrolysate. J. Baddiley and E. M. Thain. Chem Soc J p3783-9 O '52
Coenzyme A; the synthesis of pantetheine 4′-phosphate (acetobacter stimulatory factor), a degradation product of the coenzyme. J. Baddiley and E. M. Thain. Chem Soc J p 1610-15 My '53
Coenzyme function of thiamine pyrophosphate in pentose phosphate metabolism. B. L. Horecker and P. Z. Smyrniotis. bibliog Am Chem Soc J 75:1009-10 F 20 '53
Enzymatic mechanism of coenzyme A acetylation with adenosine triphosphate and acetate. M. E. Jones and others. bibliog Am Chem Soc J 75:3285-6 Jl 5 '53
Enzymatic reaction of crotonyl coenzyme A. J. R. Stern and A. del Campillo. bibliog Am Chem Soc J 75:2277-8 My 5 '53
N-pantothenylcysteine as a precursor for pantetheine and coenzyme A. G. M. Brown and E. E. Snell. Am Chem Soc J 75:2782-3 Je 5 '53
Participation of ATP and coenzyme A in the enzymatic decarboxylation of malonic acid. O. Hayaishi. bibliog Am Chem Soc J 75:4367 S 5 '53
Preparation of S-succinyl coenzyme A. E. J. Simon and D. Shemin. bibliog Am Chem Soc J 75:2520 My 20 '53
Studies on model compounds for coenzyme A; a kinetic study of aminolysis and hydrolysis of ethyl thioacetate and β-acetaminoethyl thioacetate in aqueous solution. P. J. Hawkins and D. S. Tarbell. bibliog Am Chem Soc J 75:2982-5 Je 20 '53
Thiamine pyrophosphate, a coenzyme of transketolase. E. Racker, G. de la Haba and I. G. Leder. Am Chem Soc J 75:1010-11 F 20 '53

COFFEE

Prices

With lid off, how high can they go? Bsns W p 148+ Mr 21 '53

COFFEE, Soluble
Bag-form quick coffee boasts brewed flavor; Jewel tea co. il Food Eng 25:75 Ap '53
Instants band together to keep up. il Bsns W p 142-4 Mr 21 '53
Story of the instants. il Bsns W p50+ F 28 '53

Advertising

How newspaper advertising sells soluble coffees. Adv Agency 45:84+ O '52

COFFEE extractors
Filtron coffee extractor. il Consumers Res Bul 30:17-18 O '52

COFFEE roasters
Catalyst curbs air pollution; Eppens, Smith co. il diag Food Eng 25:63+ Ag '53

COFFEE trade
Coffee growers cartel may be in the making. M. Bannell. Barron's 32:28 O 13 '52
Coffee market counters commodity price trend. Barron's 33:27-8 F 16 '53
Coffee price is stable. Barron's 32:27-8 O 6 '52
Flurry in coffee. Economist 166:305-6 Ja 31 '53
Price stabilizes near old OPS ceiling. Barron's 33:31-2 My 18 '53

Advertising

See also
Coffee, Soluble—Advertising

Brazil

Brazilian coffee supply is below normal level; exports heavy. For Comm W 48:8+ N 17 '52

COFFEE trade—*Continued*

Colombia

Rise in Colombian coffee prices leads to bright outlook for year. For Comm W 49:6 Ap 20 '53

Honduras

Honduran coffee crop harvested and shipped. For Comm W 49:9 Ja 12 '53

Latin America

Too many beans in one basket? Bsns W p96 Jl 4 '53

COFFERDAMS

Clamp-on cofferdam repairs swing pier of B&O railroad bridge in tidewater. il Eng N 150:43 Je 11 '53

Iron girdle holds concrete for bridge pier repair. il Constr Methods 35:58-60 O '53

Piles within cofferdam within cofferdam support bridge piers. il Constr Methods 34:50-1 N '52

Failure

Cofferdam breaks earlier than expected. Eng N 150:24 Ja 22 '53

COFFIN foundation

Coffin award entry invitations extended. Edison Elec Inst Bul 21:140 My '53

Electric energy, inc., wins Charles A. Coffin award. Edison Elec Inst Bul 21:234 Jl '53; Elec Eng 72:760 Ag '53

COHEN, George, sons and company, ltd.

Statement by the chairman. C. Cohen. Economist 165:63-4 O 4 '52

COHEN, Karl Paley

Businessmen in the news. por Fortune 46:47 D '52

COHEN, Sir Robert Waley, 1877-1952

Sketch. J. O. Oriel. Chem Soc J p 1651-2 My '53

COHUMULONE

Cohumulone, a new hop constituent. F. L. Rigby and J. L. Bethune. Am Chem Soc J 74:6118-19 D 5 '52

COILS, Pipe

Air cooling coil performance. D. D. Wile. bibliog diags Refrig Eng 61:727-32+ Jl '53; Discussion. 61:979+ S '53

Double-coil winding fixture. E. C. McMein. diag Mach 59:195-6 F '53

Finned coils made automatically; Carrie corp.; illustrations with text. D. W. Pennock. Am Mach 97:133-6 My 11 '53

Practical ways to get extended surface coils completely clean. il Power 96:134-5 D '52

Rules for proper steam blast coil installation. R. G. Lubinsky. il diags Tappi 36:279-83 Je '53

Should I repair or replace old steam heating coils? S. R. Lewis. diags Heating-Piping 25:122 Jl '53

Time-tested ways to clean coil insides. diags Power 97:120-1 Ap '53

COIN banks

Coin banks and savings programs. M. F. Tehan. Banking 45:152-4 S '52

COIN machines. See Vending machines

COINAGE

Legal counterfeiting. Bsns W p 100 Ja 3 '53

COINCIDENCE counting

Construction and calibration of a fast neutron scintillation spectrometer. G. L. Guernsey and others. bibliog il diags R Sci Instr 23:476-82 S '52

Detection of high energy particles with a fast coincidence system. K. Strauch. bibliog diags R Sci Instr 24:283-9 Ap '53

Lossless anticoincidence circuit. H. E. Kubitschek. diag R Sci Instr 23:567-8 O '52

6BN6 gated-beam tube as a fast coincidence circuit. J. Fischer and J. Marshall. diags R Sci Instr 23:417-20 Ag '52

COKE

Char pilot plant erected at Pueblo. Blast F & Steel Pl 41:1107 S '53

Effect of raw materials on cupola operation. B. P. Mulcahy. il Foundry 80:206+ O '52

Mechanism of the carbon dioxide-carbon reaction. A. E. Reif. bibliog J Phys Chem 56:785-8 Je '52

Study of the reactions of carbon monoxide with coke. A. E. Reif. bibliog diags J Phys Chem 56:778-84 Je '52

See also

Petroleum coke

Prices

Average monthly quotations in 1952; tabulations. Steel 132:172 Ja 5 '53

Beehive metallurgical coke, oven foundry coke; tabulations. Steel 132:170 Ja 5 '53

Steel plant, merchant and beehive oven production, blast furnace coke receipts, foundry, furnace coke prices; tabulations. Iron Age 171:433 Ja 1 '53

Size

Size distribution as a quality factor of blast-furnace coke. J. Taylor and J. D. Gilchrist. Engineering 174:805-7, 838-40 D 19-26 '52

Testing

Coke evaluation program in operation. B. P. Mulcahy. il Blast F & Steel Pl 41:408-12 Ap '53

Coke quality and carbon pickup. C. R. Austin. il Foundry 81:116-21+ O '53

Theoretical precision of screen-analysis results. J. B. Gayle. bibliog pl U S Bur Mines Rep of Invest 4933:1-9 '52

COKE handling

Coke handled at saving by conveyor unit. il Foundry 80:183+ O '52

COKE industry

Statistics

Coke and by-products in 1951. Iron & Steel Eng 29:116-22 N '52

Steel plant, merchant and beehive oven production, blast furnace coke receipts, foundry, furnace coke prices; tabulations. Iron Age 171:433 Ja 1 '53

Great Britain

Coke supplies for the steel industry. Engineer 194:187-8 Ag 8 '52

COKE manufacture

Blending of western coals for production of metallurgical coke. J. D. Price. bibliog Min Eng 5:Trans 716-20 Jl '53; Correction. 5: Trans 997 O '53; Discussion. R. W. Campbell. 5:Trans 1127-8 N '53

How does coal coke? F. W. Smith and R. L. Brown. bibliog(28 titles) Am Gas Assn Proc 1952:719-29

COKE oven gas

Ruhrgas process gasifies pulverized coal in cyclone. Chem Eng 60:124-5 F '53

COKE ovens

Development of new, experimental coke oven. J. B. Gayle and H. S. Auvil. 10pls U S Bur Mines Rep of Invest 4923:1-17 '52

Swelling pressures in the coke oven. diags Blast F & Steel Pl 40:1319-24 N '52

Underfiring of coke ovens with natural gas. W. E. Tate and M. Harrison. plan diags Am Gas Assn Proc 1952:678-84

Youngstown sheet and tube company increases service to the Midwest; coke ovens. C. Longenecker. il plan Blast F & Steel Pl 41:900-3 Ag '53

COKE plants

Equipment

Bethlehem Steel expands Bethlehem plant. il Iron & Steel Eng 30:198+ S '53; Blast F & Steel Pl 41:1194 O '53

Painting

Maintenance painting of steel and coke oven plants. S. C. Frye. il Iron & Steel Eng 30:83-9 S '53

Waste

Problems in the disposal of phenol waste in coke plants. G. E. Muns and C. V. Thompson. flow sheet diags Blast F & Steel Pl 41:761-9 Jl '53; Excerpts. Iron & Steel Eng 30:109-11 Ag '53

COKE plants, By-product

Annual coke capacity as of Jan. 1, 1953; tabulation. J Metals 5:507 Ap '53

Coke and by-products in 1951. Iron & Steel Eng 29:116-22 N '52

U.S. coke capacity, oven types listed by producing companies, plant locations; coke capacity by states. Iron Age 171:404-9 Ja 1 '53

COLBECK, Eric Winearls, 1899-
Sketch. por Iron & Steel Inst J 172:front O '52

COLBERT, Lester Lum, 1905-
Working methods of Chrysler's president. D. G. Baird. pors Am Bsns 23:14-15+ Je '53

COLCHICINE
C^{14}-labeled colchicine derivatives. R. F. Raffauf, A. L. Farren and G. E. Ullyot. bibliog Am Chem Soc J 75:2576-8 Je 5 '53
Colchicine and related compounds. G. A. Nicholls and D. S. Tarbell. bibliog Am Chem Soc J 75:1104-7 Mr 5 '53
Colchicine studies; synthesis and reactions of 2-arylcyclohept-2-enones. D. Ginsburg and R. Pappo. bibliog Am Chem Soc J 75:1094-7 Mr 5 '53
Constituents of U.S.P. colchicine; N-formyltrimethylcolchicinic acid methyl ether. R. F. Raffauf, A. L. Farren and G. E. Ullyot. bibliog Am Chem Soc J 75:3854 Ag 5 '53
Mannich bases and other compounds derived from benzsuberone. D. S. Tarbell, H. F. Wilson and E. Ott. bibliog Am Chem Soc J 74:6263-6 D 20 '52
Preliminary experiments on the synthesis of colchicine; a method for the synthesis of ring B. C. D. Gutsche and K. L. Seligman. bibliog Am Chem Soc J 75:2579-84 Je 5 '53
Syntheses in the colchicine field; the condensation of 2-isopropoxymethylenebenzsuberone and related compounds with biacetyl monoketal. E. Ott and D. S. Tarbell. bibliog Am Chem Soc J 74:6266-72 D 20 '52

COLD
See also
Cooling
Refrigeration and refrigerating machinery
Temperature, Low

Physiological effect

Pathological effects from work in cold environments. F. M. Troisi and others. Ind Med 22:11-13 Ja '53

COLD (disease)
Symptomatic treatment of the common cold. F. J. Weismiller. Ind Med 21:557-8 N '52

COLD rubber. See Rubber, Artificial—Manufacture

COLD storage
Refrigerated apples are better apples. E. P. Christopher and others. bibliog Refrig Eng 61:173-4 F '53
Year 'round on pecans by refrigerated storage. J. G. Woodroof and E. K. Heaton. il Food Eng 25:83-5+ My '53
See also
Refrigeration and refrigerating machinery

COLD storage warehouses
Glass insulates warehouse. il Heat & Ven 50:130 My '53
Intensification of cooling devices in refrigerated warehouses; abstract. I. Badylkes. Refrig Eng 60:1181+ N '52
New refrigerated warehouse at Dakar (West Africa); abstract. A. Andre. Refrig Eng 60:1290-1 D '52
New refrigerated warehouse at the Suez canal in Port Said; abstract. F. Mauro. plans Refrig Eng 60:1180 N '52
Reflective insulation; its performance in fruit storage warehouses. G. F. Sainsbury. bibliog il diags Refrig Eng 61:383-7 Ap '53
Roof insulating methods; fruit cold storage buildings. G. F. Sainsbury. Refrig Eng 61:286-91+ Mr '53
Safe storage r.h. and warmup; nomograph. R. R. Haugh. Food Eng 25:74 Ap '53

COLD treatment of aluminum. See Aluminum, Cold treatment of

COLD welding. See Welding—Cold welding

COLD working of metals. See Metals, Cold working of; Steel, Cold working of

COLE, Albert M.
HHFA nominee favors gradual change. por Eng N 150:60 Mr 5 '53

COLE, David Lawrence, 1902-
New mediation chief. por Fortune 46:84 N '52
New mediator is on trial. por Eng N 149:31-2 O 16 '52

COLE, W. Sterling, 1904-
Cole heads atomic committee. Elec World News ed 139:18 Ap 13 '53

COLEMAN, Harry Charles, 1893-
Thirty-five years in marine-electrical engineering. por Marine Eng 58:55 Jl '53; Same. Westinghouse Eng 13:124-5 Jl '53

COLEMAN, John Strider, 1897-
Portrait. Fortune 47:96 Mr '53

COLFOAM. See Plastic materials, Cellular

COLLAGEN
Adsorption of water vapor on acetyl derivatives of collagen and of silk fibroin. R. W. Green and K. P. Ang. bibliog Am Chem Soc J 75:2733-6 Je 5 '53
Effect of esterification of the carboxyl groups of collagen upon its combination with chromium compounds. K. H. Gustavson. bibliog Am Chem Soc J 74:4608-11 S 20 '52
Helical polypeptide chain configuration in collagen. C. Cohen and R. S. Bear. Am Chem Soc J 75:2783-4 Je 5 '53
New line for surgery. I. W. Sizer. il diags Tech R 55:255-8 Mr '53
Peptides isolated from a partial hydrolysate of steer hide collagen. T. D. Kroner, W. Tabroff and J. J. McGarr. bibliog Am Chem Soc J 75:4084-6 Ag 20 '53
Roles of the amino and hydroxyl groups of collagen in its reactions with formaldehyde, tannic acid and quinone. R. W. Green. bibliog Am Chem Soc J 75:2729-32 Je 5 '53

COLLECTING of accounts
Billing and accounting practices at Louisville. B. E. Payne. Am Water Works Assn J 44:1099-106 D '52
Collect your money but keep the customer too! collection letters. Dom Eng 181:86-7 Mr; 86-7+ Ap '53
Credit and collection experience; January 1-June 30, 1952. Am Gas Assn Mo 34:21-2 N '52
Credit and collection experience; July 1-December 31, 1952. Am Gas Assn Mo 35:15-16 Ap '53
Credit picture. Edison Elec Inst Bul 20:392 N '52
How to put warmth and friendliness into your letters; the collection letter. R. E. Smallwood. Sales Management 70:84-5+ F 15 '53
Invoice two to one vs. monthly statements. Credit & Fin Management 55:8-11+ Mr '53
See also
Billing
Credit

COLLECTIVE bargaining
Airlines pool bargaining. Bsns W p 172+ Ap 25 '53
Collective-bargaining in the field of job classification. J. D. Schneider. Personnel 30:49-53 Jl '53
Collective bargaining on company-owned house rents. N. C. Rockwood. Rock Prod 56:61 F '53
Collective bargaining plans' effect on group insurance explained. A. R. Willson. Weekly Underw 168:338-9+ Ja 31 '53
Collective bargaining; radio, television, and electronics industry. A. Bercowitz and others. U S Bur Labor Statistics Bul 1089: 1-32; pa 20c Supt. of doc. '52
Employer's duty to supply data for collective bargaining. J. E. Shanklin. bibliog Mo Labor R 75:381-7 O '52
Human relations in collective bargaining. K. M. Thompson. Harvard Bsns R 31:116-26 Mr '53
NLRB denial of craft severance in chemical plants asked by MCA. Oil Paint & Drug Rep 164:3+ O 12 '53
Negotiating with a local union committee. M. Berkowitz. Personnel 30:26-9 Jl '53
New association of bargaining groups activated for engineers. Eng N 150:31 Ja 15 '53
See also
Atomic energy labor relations panel
Employees' representation in management
National labor relations board
Trade agreements
Trade unions—Jurisdictional disputes

COLLECTIVE bargaining—*Continued*

Industry-wide bargaining

Approval of industry-wide bargaining under the Taft-Hartley law. J. A. Beirne. Pub Util 51:629-30 My 7 '53

Multi-employer bargaining. S. Garrett. Comm & Fin Chr 177:893+ F 26 '53

COLLECTOR rings. See Slip rings

COLLECTORS and collecting

Company collections. il Fortune 47:94-9 Ja '53

COLLEGE architecture

Fine arts center planned for Wayne university. il Arch Rec 112:22 N '52

Florida Southern college revisited for glimpse of the administration group in Wright's organic campus. il plans Arch Forum 97:120-7 S '52

Mexico's University City. il plans diag Arch Forum 97:99-119 S '52

Multi-purpose hall meets college needs; Alumnae hall, Cedar Crest college. il plans Arch Rec 112:166-7 N '52

See also

Dormitories

Theological seminaries

COLLEGE buildings

Air conditioning plays major design role; Business administration, agriculture and administrative offices building, Arizona state college. il plans Arch Rec 112:140-6 O '52

Cambridge university Engineering department. il Engineer 194:682-4 N 21 '52; plan Engineering 174:669-72, pl 54 N 21 '52

$445,000 ceramics building for Clemson. il Brick & Clay Rec 122:89 Ja '53

Prestressed concrete girders span college hall at Manhattanville college. C. Dobell. il Am Concrete Inst J 24:457-66 Ja '53

Recreation center with modern interiors; Student union building, Ohio state university. il plans Arch Rec 112:147-53 O '52

Sarah Lawrence builds new fine arts center. il plan diag Arch Rec 112:26+ S '52

Teamwork beats tight budget on complex school design; University of Buffalo Medical and dental school. J. N. De Serio. il plan diags Eng N 149:41-3 O 16 '52

See also

Dormitories

Engineering colleges

Stadiums

Heating and ventilation

Heating glass-walled building for the University of Cincinnati's College of applied arts. F. L. Bonem. il Heating-Piping 25:144-6 Ja '53

Heating modernization pays; new central boiler plant for heating Oberlin college. L. S. Ries. Heating-Piping 25:97 Ap '53

Heating plants modernized. E. J. Watts. il diag Heating-Piping 25:80-1 S '53

COLLEGE education

See also

Liberal education

COLLEGE graduates

College grads at premium. Steel 132:51 F 23 '53

Conducting an effective program of campus recruitment. L. A. Allen. Personnel 30:17-26 Jl '53

Graduates' employment. Economist 167:81 Ap 11 '53

Industry snaps up the grads. Bsns W p 116-19 My 2 '53

Industry wants Joe College. G. G. Carr. Iron Age 171:87 Je 4 '53

Is business doing a good job of college recruiting? J. B. Grant; W. Norris. il Am Bsns 22:14-15+ D '52

Placement head offers program for college recruiting. F. S. Endicott. Am Bsns 23:20+ Ja '53

Production control is the best place to train college grads; Aeroquip corp. M. Betley. Factory Management 111:296+ O '53

Recruitment and use of university graduates by industry. E. Ginzberg. Personnel 29:461-6 My '53

COLLEGE libraries

See also

Engineering colleges—Libraries

COLLEGE newspapers

College heads beseech students: be responsible. D. Bentel. Ed & Pub 85:32 O 11 '52

Deans tackle problem of college newspaper. D. Bentel. Ed & Pub 86:48 Ja 17 '53

Presidents explain student press curbs. D. Bentel. Ed & Pub 85:56 O 4 '52

Presidents tell policy for student papers. D. Bentel. Ed & Pub 85:48 S 27 '52

COLLEGE professors and instructors

Universities on the spot; congressional investigation cannot get at the real trouble. J. Chamberlain. Barron's 33:5+ Mr 30 '53

See also

Engineering colleges—Professors and instructors

Qualifications

Index of educational qualifications of a faculty. C. K. Hancock. Science 116:489-90 O 31 '52

Training

Paragon of college chemistry teachers. E. C. Fuller. J Chem Educ 29:560-2 N '52

COLLEGE students

Ohio college students build dormitory. il Concrete 60:11 D '52

Panel says life companies fail in effort to sell agent's career to college students. Nat Underw (Life ed) 57:10 F 13 '53

COLLEGES and universities

By their own petard; the universities' troubles are partly of their making. Barron's 32:1 D 1 '52; Discussion. C. F. Phillips. 32:9 D 22 '52

Freshman boom. Bsns W p104+ N 22 '52

Universities on the spot; congressional investigation cannot get at the real trouble. J. Chamberlain. Barron's 33:5+ Mr 30 '53

See also

Academic freedom

Cambridge university

Engineering colleges

Finance

Collective asking; 23 colleges band together in New England. Bsns W p84 D 6 '52

Colleges' difficulties. R. W. Babson. Comm & Fin Chr 176:2503 D 25 '52

Corporate profits and campus budgets. Fortune 46:108 D '52

Corporation support of higher education. J. A. Pollard. Harvard Bsns R 30:111-26 S '52

Land-poor Stanford opens its acres on 99-yr. leases. maps Bsns W p 134-6+ D 20 '52

See also

Colleges and universities—Investments

Council for financial aid to education

Gifts, legacies, etc.

Wanted, a Medici; colleges find corporations won't replace the rich man. J. Chamberlain. Barron's 33:5-6 Je 22 '53

Graduate work

Doctorate program for college teachers. L. L. Quill. J Chem Educ 29:570-2 N '52

Investments

College investments as of June 30, 1952; tabulation. Barron's 33:38 Mr 16 '53

Investing results by endowment funds. S. H. F. Goldstein. Comm & Fin Chr 177:2319 My 28 '53

Relations with business

Company personnel administration conferences for educators. N. Belfer. Personnel 29:437-40 Mr '53

Conferences; good idea going wrong. Bsns W p68 My 9 '53

Executive development program; Blue cross and Blue shield. R. J. Koch. Personnel J 31:333-5 F '53

Is business doing a good job of college recruiting? J. B. Grant; W. Norris. il Am Bsns 22:14-15+ D '52

Placement head offers program for college recruiting. F. S. Endicott. Am Bsns 23:20+ Ja '53

Putting your problems through college. il Mod Ind 26:52-5 Jl '53

COLLEGES and universities—Relations with business—*Continued*

Railroads and education. R. R. Young. Ry Age 134:89 Ap 6 '53

When utility vice presidents turn into professors; Pacific telephone & telegraph co. J. H. Collins. Pub Util 52:298-305 Ag 27 '53

Research

College and university research in chemistry. J. I. Mattill. J Chem Educ 29:556-9 N '52

Government research in colleges. Sci Am 188: 53-4 My '53

It's up to the colleges; business-college controversy. Bsns W p 106 Ja 10 '53

Military research in the universities. J. R. Killian, jr. J Eng Educ 43:13-17 S '52

Pulp and paper research at the University of Florida. W. J. Nolan. Paper Ind 35: 185-7 My '53

Survey of research facilities and projects, 1953; subjects dealing with treatment and disposal of sewage and industrial wastes, and water pollution. H. Heukelekian and W. H. Wisely. Sewage & Ind Wastes 25: 1077-91 S '53

University and government sponsored research. V. L. Parsegian. Chem & Eng N 30:4470-2 O 27 '52

Using university facilities for industrial research. H. K. Work. il Product Eng 23: 185-9 O '52

See also

Engineering colleges
—Research

Africa, Central

University of Salisbury? Economist 167:589 My 30 '53

COLLETS

Centering and side-clamping collet. M. Montag. diags Mach 59:196-7 F '53

COLLIDINE

Addition compounds of chromium(VI) oxide with heterocyclic nitrogen bases; reactions with the lutidines, vinylpyridines, 2,4,6-collidine and α-picoline. H. H. Sisler and others. bibliog Am Chem Soc J 75:446-8 Ja 20 '53

COLLIER'S (periodical)

Collier's goes biweekly in circulation battle. Bsns W p50 My 16 '53

COLLIMATORS

Collimator and how to use it. R. F. Mitchell. il diags Am Mach 96:161-4 N 10 '52

Collimator with variable focal length and tilted test plate for testing cameras. P. J. Lindberg. il diags Opt Soc Am J 42:748-51 O '52

COLLINS, William

Engineer-builder looks ahead into the age of atomic power. pors Eng N 150:156-8, cover Ap 16 '53

COLLINS radio company

Avionics maker hits profit peak. S. Altschul. Aviation W 57:75 N 17 '52

COLLISION phenomena

Angular distribution functions for high energy cosmic-ray particles. H. S. Green and others. bibliog Phys R 88:1277-83 D 15 '52

Angular distribution of scattering and reaction cross sections. J. M. Blatt and L. C. Biedenharn. bibliog Rs Mod Phys 24:258-72 O '52

Broadening of microwave absorption lines due to wall collisions. M. Danos and S. Geschwind. bibliog Phys R 91:1159-62 S 1 '53

Collision lengths of neutral, penetrating-shower-producing cosmic radiation in light and heavy water. D. Froman and others. bibliog diags Phys R 91:707-12 Ag 1 '53

Collisional excitation of F_2O. H. Aroeste. bibliog diags J Chem Phys 21:870-5 My '53

Detailed formulation of kinetic processes; the role of collision processes. S. W. Benson and A. E. Axworthy, jr. bibliog diags J Chem Phys 21:428-33 Mr '53

Diffusion of neutrons. G. Jaffé. bibliog Phys R 88:603-11 N 1 '52

Effect of collisions upon the Doppler width of spectral lines. R. H. Dicke. Phys R 89: 472-3 Ja 15 '53

Effect of isotopic substitution on the collision properties of the carbon dioxide molecule. E. W. Becker and W. Beyrich. diag J Phys Chem 56:911-13 O '52

Energy of nucleon-nucleon collisions. R. G. Glasser and M. Schein. bibliog diags Phys R 90:218-21 Ap 15 '53

Energy transfer by collisions in *cis*- and *trans*-dichloroethylene vapors. D. Sette and others. bibliog J Chem Phys 20:1899-902 D '52

Examples of multiple pion production in *n-p* collisions observed at the cosmotron. W. B. Fowler and others. bibliog il Phys R 91: 758-9 Ag 1 '53

Fermi's theory of nucleon collisions and the zero-point energy of pions. F. C. Auluck and D. S. Kothari. Phys R 90:1002-3 Je 1 '53

High energy charged particles from targets bombarded by 190-Mev deuterons. L. Schecter and others. diags Phys R 90:633-43 My 15 '53

Inelastic collision cross sections for 14-Mev neutrons. D. D. Phillips and others. bibliog Phys R 88:600-2 N 1 '52

Influence of binary collisions on molecular gas flow. J. W. Hiby and M. Pahl. bibliog Phys R 88:414 O 15 '52

Interactions of μ-mesons. W. D. Walker. bibliog il diags Phys R 90:234-8 Ap 15 '53

Interference between Coulomb and nuclear scattering in *p-p* collisions at 240 Mev. H. P. Noyes and H. G. Camnitz. Phys R 88:1206-7 D 1 '52

Measurement of electron exchange in gases at low pressure. E. E. Muschlitz, jr. and J. H. Simons. bibliog diags J Phys Chem 56:837-41 O '52

Microwave observation of the collision frequency of electrons in germanium. T. S. Benedict and W. Shockley. bibliog Phys R 89:1152-3 Mr 1 '53

Microwave observation of the collision frequency of holes in germanium. T. S. Benedict. Phys R 91:1565-6 S 15 '53

Multiple meson production by high energy nucleon-nucleon collisions. H. Fukuda. bibliog Phys R 89:842-7 F 15 '53

Neutral meson production in *n-p* collisions. R. H. Hildebrand. bibliog diag Phys R 89:1090-2 Mr 1 '53

Production of heavy mesons. L. S. Kothari. bibliog Phys R 90:1087-9 Je 15 '53

Production of high-energy electron pairs by negative pions in nuclear collisions. M. Schein and others. bibliog diags Phys R 91:973-80 Ag 15 '53

Radiative correction for the collision loss of heavy particles. V. Z. Jankus. bibliog Phys R 90:4-6 Ap 1 '53

Theoretical view on hot atom chemistry. P. C. Capron and Y. Oshima. bibliog diags J Chem Phys 20:1403-10 S '52

COLLISIONS at sea

Conflicting testimony marks collision inquiry. Weekly Underw 167:1640 D 20 '52

COLLOIDAL graphite. See Graphite

COLLOIDS

Apparatus for measurement of electrical properties of colloidal suspensions in oils. C. J. Penther and A. Bondi. J Phys Chem 57:540-1 My '53

Boundaries between some aqueous fatty sols and water. L. Saunders. Chem Soc J p 1310-13 Ap '53

Colloid science; a chapter in chemistry. E. Rideal. Chem Soc J p2479-87 Jl '52

Colloid science vs. chemistry for rock products. N. C. Rockwood. bibliog Rock Prod 56:73+ Je '53

Colloidal properties of highly fluorinated alkanoic acids. C. H. Arrington, jr. and G. D. Patterson. bibliog J Phys Chem 57:247-50 F '53

Colloidal science and some aspects of road construction; abstract. W. L. Peard. Chem & Ind p 1155 N 22 '52

Dough as an industrial colloid. J. Cunningham. bibliog Chem & Ind p 163-6 F 21 '53

Effect of exchangeable bases on the colloidal properties of bentonite. F. J. Williams, M. Neznayko and D. J. Weintritt. bibliog J Phys Chem 57:6-10 Ja '53

Factors governing hardness and transparency of alumina gels. B. P. Gyani. bibliog J Phys Chem 56:762-3 Je '52

COLLOIDS—*Continued*

Mechanism of coagulation of lyophobic sols as revealed through investigations of silver halide sols in statu nascendi. B. Težak and others. bibliog J Phys Chem 57:301-7 Mr '53

Peptization of UX_1 by various metallic ions; a possible mechanism. I. Adler and J. Steigman. diag J Phys Chem 57:443-8 Ap '53

Radiocolloids. G. K. Schweitzer and M. Jackson. bibliog(82 ref) J Chem Educ 29:513-22 O '52

Relationship of colloids to the surface tension of urine. R. A. Ravich. bibliog Science 117: 561-3 My 22 '53

Silica sols. K. C. Bryant and S. Baxter. Chem Soc J p3017-27 Ag '52

Some electrical properties of colloidal suspensions in oils. A. Bondi and C. J. Penther. bibliog il J Phys Chem 57:72-9 Ja '53

Studies in low concentration chemistry; the radiocolloidal properties of beryllium. G. K. Schweitzer and J. W. Nehls. bibliog Am Chem Soc J 75:4354-6 S 5 '53

Studies in low concentration chemistry; the radiocolloidal properties of silver-111. G. K. Schweitzer and J. W. Nehls. bibliog Am Chem Soc J 74:6186-9 D 20 '52

Studies in low concentration chemistry; the radiocolloidal properties of yttrium-90. G. K. Schweitzer, B. R. Stein and W. M. Jackson. bibliog Am Chem Soc J 75:793-5 F 20 '53

Swelling and aggregation of colloid particles during the sol-gel transition. P. K. Katti. bibliog J Chem Phys 20:1980-1 D '52

X-ray diffraction studies in the system Al_2O_3-SnO_2-TiO_2. W. O. Milligan and B. G. Holmes. bibliog J Phys Chem 57:11-14 Ja '53

See also

Adsorption
Aerosols
Brownian movements
Electric double layer
Electrophoresis
Emulsions
Gelation
Micelles
Polysaccharides
Silica gel
Soap

Study and teaching

Photomicrography as a tool for teaching colloid chemistry. E. A. Hauser and H. E. Bergna. bibliog il J Chem Educ 29:618-20 D '52

COLLYER insulated wire company

Outlook is favorable. Barron's 32:19-20 O 27 '52

COLOMBIA

See also

Petroleum industry and trade—Colombia
Petroleum laws and regulations—Colombia
Petroleum pipe lines—Colombia

Commercial policy

Colombia acts to curtail smuggling. For Comm W 49:8 F 16 '53

Colombia extends export certificate plan. For Comm W 49:9 F 9 '53

Colombia redefines remittable profits. For Comm W 49:10+ Mr 30 '53

Controls on international trade (cont). For Comm W 48:23 O 27; 10 D 15; 7 D 22 '52

Economic conditions

Economic conditions abroad (cont). For Comm W 49:5 Ja 19; 4+ F 23; 6 Ap 20; 7 My 11; 3 Je 15; 50:5 Jl 13 '53

Politics and government

Breaking Colombia's deadlock. Economist 167: 914 Je 27 '53

COLONIAL airlines

Colonial merger with Eastern air lines. Bsns W p92 Je 27 '53

COLONIES

Fumbling fingers; colonialism is a better bet than U.N. intervention. Barron's 32:1 O 27 '52

COLOR

Area balance in color harmony; an experimental study. G. W. Granger. bibliog diag Science 117:59-61 Ja 16 '53

Colour and constitution; aromatic hydrocarbons. M. J. S. Dewar. Chem Soc J p3532-44 S '52

Colour and constitution; polyphenyls, polyenes, and phenylpolyenes; and the significance of cross-conjugation. M. J. S. Dewar. Chem Soc J p3544-50 S '52

Color centers and trapped charge in KCl and KBr. D. Dutton and R. Maurer. bibliog diag Phys R 90:126-30 Ap 1 '53

Color centers in alkali halides at 5°K. W. H. Duerig and J. J. Markham. bibliog Phys R 88:1043-9 D 1 '52

Color in industrial wastes; color of suspended solids, and applications for waste color characteristics. W. Rudolfs and W. D. Hanlon. Sewage & Ind Wastes 24:1502-8 D '52

Color in industrial wastes; effect of biological treatment and activated carbon. W. Rudolfs and W. D. Hanlon. Sewage & Ind Wastes 25:484-9 Ap '53

Color in industrial wastes; effect of light on certain wastes. W. Rudolfs and W. D. Hanlon. Sewage & Ind Wastes 25:66-9 Ja '53

Colour of organic compounds. R. A. Jeffreys and E. B. Knott. Chem Soc J p4632-7, 4762-75 D '52

Color precursors in spruce- and western hemlockwoods and inner barks. W. Pigman and others. bibliog Tappi 36:4-12 Ja '53

Color reactions of lignin in solution compared to similar reactions in the solid state. J. C. Pew. Am Chem Soc J 74:5784-5 N 20 '52

Colored complexes with inorganic salts mounted on silica gel. H. A. Benesi. Am Chem Soc J 75:2250-1 My 5 '53

Correlation of color and constitution; 2,4-dinitrophenylhydrazones. G. D. Johnson. Am Chem Soc J 75:2720-3 Je 5 '53

Evaluation of color rendition by fluorescent lamps. A. C. Barr and others. bibliog Illum Eng 47:649-53; Discussion. 654-6 D '52

Explanation of the brightness and color of the sky, particularly the twilight sky. E. O. Hulburt. bibliog diags Opt Soc Am J 43:113-18 F '53

Light and colour. il Elec J 150:772-5 Mr 6 '53

Multiple reversible color changes initiated by irradiation at low temperature. Y. Hirshberg and E. Fischer. J Chem Phys 21:1619-20 S '53

Presence of free chlorine in sodium chloride crystals containing color centers and color center precursors. M. Hacskaylo and others. bibliog J Chem Phys 21:1434-5 S '53

Presence of free sodium in sodium chloride crystals containing color centers and color center precursors. M. Hacskaylo and D. Otterson. J Chem Phys 21:552-3 Mr '53

Reversible appearance and disappearance of coloured modifications of some compounds as a result of irradiation at low temperatures. Y. Hirshberg, E. H. Frei and E. Fischer. Chem Soc J p2184-5 Jl '53

Saturation in the X-ray coloration of corundum single crystals. R. A. Hunt and R. H. Schuler. Phys R 89:664 F 1 '53

Specification of color-rendering properties of fluorescent lamps. C. W. Jerome and D. B. Judd. bibliog Illum Eng 48:259-67 My '53

Taming the rainbow. J. E. Garnsey. il diags Gen Elec R 56:37-40 My '53

Three-dimensional color models constructed on the CIE and Munsell systems. F. W. Billmeyer, jr. and A. C. Webber. il Opt Soc Am J 43:69-70 F '53

U.S. color science speeds up. W. D. Wright. il Mod Textiles Mag 33:33-4+ D '52

World of color. il map diags Am Bld 74:120-6 S '52

See also

Automobiles—Color
Color printing
Color sense
Colorimeters and colorimetry
Colorimetric analysis
Dichroism
Dyes and dyeing
Glass, Colored
Light, Colored
Moving pictures, Colored
Package goods—Color
Paper—Color
Pigments
Steel—Color
Television—Color
Thermochromism

COLOR—*Continued*

Standards

Application of descriptive color system to china manufacture. W. G. Coulter. il diags Am Cer Soc Bul 31:340-2 S 15 '52
Colorimetric specifications of Munsell repaints. D. Nickerson and others. Opt Soc Am J 43:163-71 Mr '53

COLOR blindness
Characteristics of tritanopia. W. D. Wright. Opt Soc Am J 42:509-21 Ag '52

COLOR codes
Fool-proof machinery lubrication; North American aviation, inc. J. Joseph. il Mill & Factory 53:118-19 S '53
Let paint colors identify materials. L. G. Jones. diag Power Eng 57:92-3+ S '53

COLOR codes, Safety
Build plant safety with colors. L. J. Murphy. il Mill & Factory 51:81-5 N '52
Color, a new tool for industry. F. Birren. il Mill & Factory 53:119-20 O '53
Color code can cut accidents. F. Birren. il Ry Age News ed 135:18 Ag 31 '53
Colors label one-shot bus relays for system safety. F. W. Cornetet. il Elec World 138:134+ O 20 '52
Color's many uses. il Nat Safety N 67:24+ Mr '53
Lots of color makes plant safe; Star woolen co. R. Levi. Safety Maint & Prod 106:20 S '53
Shell adopts color scheme for rigs. Oil & Gas J 51:94 D 29 '52

COLOR fastness. See Dyes, Fastness of

COLOR filters. See Light filters

COLOR glazes. See Glazes

COLOR in advertising
Allegheny solves illustration problem with Flexichrome. il Ind Marketing 38:126 Ja '53
Art gallery merchandises CCS four-color campaign; Continental copper & steel industries. il Ind Marketing 38:150 Je '53
Chicago firm outlines ROP color standards. Ed & Pub 86:30 Ap 11 '53
Color ads will lift latch in Cobbs Country Store. R. B. McIntyre. il Ed & Pub 85:16 O 4 '52
Multiple products are promoted in color ads. Ed & Pub 86:20 Ja 24 '53
New era for color in 1953. M. Luckiesh. Ptr Ink 241:31-2 D 5 '52
Ten check points for color advertisers. M. J. Sutter. Ptr Ink 242:68+ Ja 16 '53
Tying ads and displays together. J. Harger. il Ptr Ink 242:45 F 6 '53

COLOR in house decoration
Color by command decision. F. Rahr. J Retailing 28:131-7 Fall '52

COLOR in industry
Benefits high with engineered plant colors. F. Birren. il Food Eng 25:45-6+ S '53
Build plant safety with colors. L. J. Murphy. il Mill & Factory 51:81-5 N '52
Color, a new tool for industry. F. Birren. il Mill & Factory 53:117-20 O '53
Colour and light in industry. R. F. Wilson. il Elec R (Lond) 151:652-4 S 26 '52
Color; paint plants scientifically. T. Metaxas. Iron Age 171:142-4 My 7 '53
Color's many uses. il Nat Safety N 67:24+ Mr '53
Dynamic painting in steel plants. J. K. Seyler. Iron & Steel Eng 30:71-3 Je '53
Painting for people and protection. H. Ketchem. il Safety Maint & Prod 105:20-2+ Je '53
Progress with color. H. Ketcham. il Nat Safety N 66:28-9+ N '52
Refinery doesn't have to look dingy; Phillips petroleum co. focal point painting. il Bsns W p50-1 Je 20 '53
Specification of color in finishes. C. R. Smedley. il Machine Design 25:187-92 O '53
Taming the rainbow. J. E. Garnsey. il diags Gen Elec R 56:37-40 My '53
See also
Color codes, Safety
Package goods—Color

COLOR in office management
Color can help to improve office efficiency; Ferro machine & foundry inc. il Foundry 81:144+ Ja '53
How color influences efficiency in an office. R. L. Oetting. il Am Bsns 22:20-1+ D '52

COLOR in package goods. See Package goods—Color

COLOR in plastic materials
Color styling varied with two-piece plastic base; liquefier and mixer. il Machine Design 25:137 My '53
Coloring of vinyl dry blend compound. R. L. Lynch. bibliog India Rubber World 128:65-8 Ap '53
Molded plastics plus precious metals; coloring added to television escutcheon by hot foiling and plating operations; illustrations with text. J. B. Loeffler. Mod Plastics 30:92-3 D '52

COLOR in school decoration
Developing the color treatment for schoolrooms. P. W. Seagers. Illum Eng 49:296-8 Je '53

COLOR in teaching
Teaching with color. W. C. Krathwohl. J Eng Educ 43:155-8 N '52

COLOR in the ceramic industry
Application of descriptive color system to china manufacture. W. G. Coulter. il diags Am Cer Soc Bul 31:340-2 S 15 '52
See also
Glazes

COLOR in the textile industry
See also
Dyes and dyeing

COLOR matching
Industrial tristimulus color matcher. G. P. Bentley. diags Electronics 24:102-3 Ag '51; Same cond. Product Eng Hdbk p I 32-3 '53

COLOR measurement
Color grading by electronics. N. W. Derosier and others. il diags Food Eng 25:52-3 S '53
Color measurement; abstracts. J. A. Van Den Akker. Paper Ind 34:1128+ D '52; Tappi 35: sup 112A-13A D '52
Colorimetry of glazes. P. F. O'Brien. diag Am Cer Soc J 35:254-9 O 1 '52
Photoelectric instruments for measurements of color. bibliog Tappi 36:sup 119A-23A; Discussion. J. A. Van den Akker. sup 123A-6A Ag '53
See also
Colorimeters and colorimetry

COLOR of flowers
Flavonoid glycosides of dahlia variabilis; general introduction; cyanidin, apigenin, and luteolin glycosides from the variety dandy. C. G. Nordström and T. Swain. Chem Soc J p2763-73 S '53

COLOR of packages. See Package goods—Color

COLOR photography
Allegheny solves illustration problem with Flexichrome. il Ind Marketing 38:126 Ja '53
Application of high speed flash tube to photographing the fundus of the eye in color. M. Jacobs and K. N. Ogle. il diags R Sci Instr 24:52-5 Ja '53
Colour photography. R. B. Collins and C. H. Giles. il 4pls diags Soc Dyers & Col J 68:421-57 bibliog(161 ref, p455-7) N '52
Photographing fluorescent lighting installations in color; abstract. W. Allphin. Illum Eng 48:487-8 S '53
Subtractive color reproduction; interimage effects. W. T. Hanson, jr. and C. A. Horton. bibliog Opt Soc Am J 42:663-9 S '52
See also
Moving pictures, Colored

Standards

Standard for color densitometry. J. P. Weiss. Standardization 24:112-13 Ap '53

COLOR printing
Chicago firm outlines ROP color standards. Ed & Pub 86:30 Ap 11 '53
Color coating. L. O. Carlisle. Tappi 36:sup 158A-60A My '53
Color coating container board. J. Gessner. Tappi 36:sup 160A-2A My '53
Coloring and pattern printing of corrugated liner stock. J. W. Viner. Tappi 36:sup 166A-7A My '53
Coloring machines for boxboard. H. C. Baker. Tappi 36:sup 162A-3A My '53
Corrugated liner, web printing, production problems. G. N. Holme. Tappi 36:sup 164A-6A My '53
Day-Glo color used in letterpress printing. il Inland Ptr 131:49 My '53

COLOR printing—*Continued*
Equipment for color coating; Waldron corp. L. M. Stempel. il diags Tappi 36:sup 156A-8A My '53
Flexographic (aniline) process growing rapidly. R. Dietz. il Inland Ptr 130:35-7 F '53
Four pointers toward better color reproduction. R. Pliskin. Adv Agency 45:84+ N '52
Graphic arts. A. P. Reynolds. 4pls il diags Paper Tr J 135:464-72 N 14 '52
Highspeed offset-letterpress color system developed in Australia. Ed & Pub 86:49-50 Ja 10 '53
Multicolor letterpress printing developments. D. J. Andella. il Paper Tr J 135:18-22+ O 31 '52
Photoelectric printing and engraving machines. J. Markus. il Electronics 26:143-4 My '53
Problems in coloring and decorating liner board. R. G. McCammon and L. K. Burnett. Tappi 36:sup 164A My '53
Ten check points for color advertisers. M. J. Sutter. Ptr Ink 242:68+ Ja 16 '53
Theory of masking for color correction; masks drawn from the subject. H. E. J. Neugebauer. bibliog Opt Soc Am J 42:740-7 O '52
Trend to fine-screen printing. il Mod Packaging 26:99-104 Je '53
See also
Silk screen printing

COLOR sense
Color and the intensity-time relation. R. O. Rouse. bibliog diags Opt Soc Am J 42:626-30 S '52
Determination of the tristimulus values of the spectrum for eight Egyptian observers and one British observer. I. G. H. Ishak. Opt Soc Am J 42:844-9 N '52
Effect of field size and chromatic surroundings on color discrimination. W. R. J. Brown. bibliog Opt Soc Am J 42:837-44 N '52
Experimental determination of some isochromaticity lines in color-deficient vision. R. M. Halsey and A. Chapanis. bibliog Opt Soc Am J 42:722-39 O '52
Influence on color perception of adaptation to illumination. R. W. Burnham and others. il diags Opt Soc Am J 42:597-605 S '52
Photopic luminosity curve for a group of fifteen Egyptian trichromats. I. G. H. Ishak. bibliog Opt Soc Am J 42:529-34 Ag '52
Photopic thresholds for red light in an unselected sample of color-deficient individuals. A. Chapanis and R. M. Halsey. bibliog Opt Soc Am J 43:62-3 Ja '53
Spectral chromaticity coordinates for one British and eight Egyptian trichromats. I. G. H. Ishak. bibliog Opt Soc Am J 42:534-9 Ag '52

Testing

Effect of illumination in testing color vision with pseudo-isochromatic plates. I. Schmidt. bibliog Opt Soc Am J 42:951-5 D '52

COLOR television. See Television—Color

COLOR temperature
Precision color temperature meter for tungsten illumination. G. H. Dawson and others. il diags Soc Motion Picture & Tv Eng N 59:309-12 O '52

COLORADO
See also
Geology—Colorado
Mines and mineral resources—Colorado
Petroleum—Colorado

COLORADO-BIG THOMPSON project
Big Tom project nearing completion. L. A. Luther. il map Comp Air Mag 57:339-43 D '52

COLORADO central power company
Stock offered. Comm & Fin Chr 177:1579 Ap 13 '53

COLORADO fuel and iron corporation
Colorado Fuel & Iron grows increasingly diversified. Barron's 33:23 My 11 '53
Colorado Fuel and Iron now has steel output of 2,425,000 tons annually. Blast F & Steel Pl 41:427 Ap '53
CF&I's growth brings diversity. il Steel 132:78+ Je 15 '53
Common stock offering oversubscribed. Comm & Fin Chr 177:43 Ja 5 '53
Registers with SEC. Comm & Fin Chr 176:2269 D 15 '52
Two-way stretch for steel co. Bsns W p 186+ Je 20 '53

COLORADO river
California counters Arizona's claims to water under Colorado River pact. Eng N 150:24 My 28 '53
Dam dedicated on the Colorado river; Davis Dam power and water control structure. map Eng N 149:28 D 11 '52
Expansion of the Colorado River aqueduct system. R. B. Diemer. map Am Water Works Assn J 45:397-404 Ap '53

Hoover Dam project

Final foundation treatment at Hoover dam. A. W. Simonds. il plan diags Am Soc C E Proc 77[no 109]:1-22 D '51; Discussion. 78[no D-109]:1-13 O '52

COLORED glass. See Glass, Colored

COLORED moving pictures. See Moving pictures, Colored

COLORIMETERS and colorimetry
Colorimetric analysis of RCA color television system. D. W. Epstein. diags RCA R 14:227-58 Je '53
Colorimetric specifications of Munsell repaints. D. Nickerson and others. Opt Soc Am J 43:163-71 Mr '53
Colorimetry in color television. F. J. Bingley. diags Inst Radio Eng Proc 41:838-51 Jl '53
Colorimetry of bronze paints. W. E. K. Middleton and A. G. Mungall. diag Opt Soc Am J 42:969-70 D '52
Critical concentrations of potassium *n*-alkanecarboxylates as determined by the change in color and spectrum of pinacyanole. S. H. Herzfeld. bibliog J Phys Chem 56:953-9 N '52
Effect of salt on the critical concentrations of potassium *n*-alkanecarboxylates as determined by the change in color of pinacyanole. S. H. Herzfeld. bibliog J Phys Chem 56:959-63 N '52
Industrial tristimulus color matcher. G. P. Bentley. diags Electronics 24:102-3 Ag '51; Same cond. Product Eng Hdbk p I 32-3 '53
Instrumentation studies; study of photoelectric instruments for the measurement of color; reflectance and transmittance. J. A. Van den Akker and others. bibliog il diags Tappi 35:sup 141A-58A N '52
New high sensitivity differential colorimeter. L. G. Glasser and D. J. Troy. il diags Opt Soc Am J 42:652-60 S '52
Spectral energy distribution of the International commission on illumination light sources A, B, and C. R. Davis and others. bibliog J Res Nat Bur Stand 50:31-7 Ja '53; Same abr. Opt Soc Am J 43:172-6 Mr '53
Two knob colorimeter is easy to operate. il Food Eng 25:169 S '53
U.S. color science speeds up. W. D. Wright. il Mod Textiles Mag 33:33-4+ D '52
Units and standards of measurement employed at the National physical laboratory; light; photometry, colorimetry, and radiometry. Opt Soc Am J 42:858-61 N '52 (reprints 15c)

COLORIMETRIC analysis
Analysis of gold and gold alloy solutions. E. A. Parker. bibliog Metal Finishing 51:56-60+ S '53
Colorimetric determination of cyanide and thiocyanate. J. M. Kruse and M. G. Mellon. bibliog Anal Chem 25:446-50 Mr '53
Colorimetric determination of cyanide, cyanate, and thiocyanate in sewage and plating wastes. J. M. Kruse and M. G. Mellon. bibliog Sewage & Ind Wastes 24:1254-9 O '52; Same. Metal Finishing 51:99-102 Je '53
Colorimetric determination of desoxycholic acid in ox bile. C. R. Szalkowski and W. J. Mader. bibliog Anal Chem 24:1602-4 O '52
Colorimetric determination of magnesium with Eriochrome black T. A. E. Harvey, jr., J. M. Komarmy and G. M. Wyatt. bibliog Anal Chem 25:498-500 Mr '53
Colorimetric determination of nitroparaffins. L. R. Jones and J. A. Riddick. bibliog diag Anal Chem 24:1533-6 O '52

COLORIMETRIC analysis—*Continued*

Colorimetric determination of pectic substances. E. A. McComb and R. M. McCready. bibliog Anal Chem 24:1630-2 O '52

Colorimetric determination of pentosans in highly refined pulp. A. S. O'Brien and T. L. Davis. bibliog Tappi 35:499-505 N '52

Colorimetric determination of phosphorus pentoxide in fertilizers using a standard calibration plot. G. L. Bridger, D. R. Boylan and J. W. Markey. bibliog Anal Chem 25:336-8 F '53

Colorimetric determination of ruthenium with *p*-nitrosodimethylaniline. J. E. Currah and others. bibliog Anal Chem 24:1980-2 D '52

Colorimetric determination of thiophen in pure benzoles by the alloxan and isatin reagents. K. H. V. French. J Ap Chem 2: 664-6 N '52

Colorimetric estimation of residual benzene hexachloride. W. F. Phillips. bibliog Anal Chem 24:1976-9 D '52

Colorimetric method for determination of desoxycholic acid in the presence of certain other bile acids. E. L. Pratt and H. B. Corbitt. Anal Chem 24:1665-7 O '52

Colorimetric microdetermination of cadmium with dithizone; with improved separation of interfering metals. B. E. Saltzman. bibliog Anal Chem 25:493-6 Mr '53

Continuous photometric determination of carbon dioxide in gas streams. W. D. Maxon and M. J. Johnson. diags Anal Chem 24: 1541-5 O '52

Determination of copper in wood pulps with tetraethylenepentamine. R. M. Kingsbury and C. L. Lake. bibliog Tappi 35:527-8 N '52

Determination of copper ion by a modified sodium diethyldithiocarbamate procedure; iron, zinc, and lead interference eliminated. C. A. Noll and L. D. Betz. Anal Chem 24: 1894-5 D '52

Determination of fluoride in water by the aluminum-hemotoxylin method. M. J. Price and O. J. Walker. bibliog Anal Chem 24: 1593-5 O '52

Determination of lindane in air. I. Hornstein and W. N. Sullivan. bibliog Anal Chem 25:496-8 Mr '53

Determination of microgram quantities of thorium in water: extension of colorimetric method. A. E. Taylor and R. T. Dillon. bibliog Anal Chem 24:1624-5 O '52

Determination of pyridine and pyridine-base compounds in river water and industrial wastes. R. C. Kroner, M. B. Ettinger and W. A. Moore. bibliog Anal Chem 24:1877-81 D '52

Determination of small amounts of chlorides in titanium sponge. M. Codell and J. J. Mikula. bibliog Anal Chem 24:1972-3 D '52

Determination of sulfur dioxide by color-changing gels. G. D. Patterson, jr. and M. G. Mellon. bibliog Anal Chem 24:1586-90 O '52

Determination of trace oxygen in gases. D. D. Williams, C. H. Blachly and R. R. Miller. bibliog diag Anal Chem 24:1819-21 N '52

Differentiation of carbohydrates by anthrone reaction rate and color intensity. L. H. Koehler. bibliog Anal Chem 24:1576-9 O '52

Effect of substituents on the protolytic constants of anilinium type protolytes. M. Kilpatrick and C. A. Arenberg. bibliog Am Chem Soc J 75:3812-21 Ag 5 '53

Flame photometric determination of calcium, strontium, and barium in a mixture. O. N. Hinsvark, S. H. Wittwer and H. M. Sell. Anal Chem 25:320-2 F '53

Improved colorimetric method for the quantitative estimation of thymine; abstract. E. D. Day and W. A. Mosher. Franklin Inst J 254:423 N '52

Improved photometric determination of carbon monoxide by means of palladious chloride. E. W. Rice. A M A Archives Ind Hygiene & Occup Med 6:487-90 D '52

Induced reaction method for determination of fluoride ion. J. L. Lambert. Anal Chem 25:271-4 F '53

Microdetermination of osmium. W. J. Allan and F. E. Beamish. bibliog diag Anal Chem 24:1608-12 O '52

New colorimetric reagent specific for copper; determination of copper in iron; 2,9-dimethyl-4,7-diphenyl-1,10-phenanthroline. G. F. Smith and D. H. Wilkins. bibliog Anal Chem 25:510-11 Mr '53

New spectrophotometric method aids determination of fluorides. Chem & Eng N 31: 874 Mr 2 '53

Photometric analysis error. W. A. E. McBryde. bibliog Anal Chem 24:1639-40 O '52

Photometric determination of aluminum in alkalies. O. A. Kenyon and H. A. Bewick. bibliog Anal Chem 24:1826-7 N '52

Photometric determination of microgram quantities of palladium with beta-furfuraldoxime. E. W. Rice. bibliog Anal Chem 24:1995-7 D '52

Photometric determination of silica in alkalies. O. A. Kenyon and H. A. Bewick. bibliog Anal Chem 25:145-8 Ja '53

Photometric determination of silicon in ferrous, ferromagnetic, nickel, and copper alloys; a molybdenum blue method. C. L. Luke. bibliog Anal Chem 25:148-51 Ja '53

Photometric determination of sulfide and reducible sulfur in alkalies. M. S. Budd and H. A. Bewick. bibliog diag Anal Chem 24:1536-40 O '52

Qualitative color test for rapid identification of the clay mineral groups. W. W. Hambleton and C. G. Dodd. bibliog Econ Geol 48: 139-46 Mr '53

Quantitative analysis of azo and other dyes and intermediates. F. M. Arshid and others. bibliog diag Soc Dyers & Col J 69:11-18 Ja '53

Quantitative determination of pentoses with anthrone. R. R. Bridges. bibliog Anal Chem 24:2004-5 D '52

Rapid method for moisture content estimation in plant products. H. F. Reichard. Chem Eng 60:172-3 F '53

Simplified method for the determination of chromic oxide (Cr_2O_3) when used as an index substance. D. W. Bolin and others. bibliog Science 116:634-5 D 5 '52

Simultaneous estimation of threonine and serine. B. A. Neidig and W. C. Hess. bibliog Anal Chem 24:1627-8 O '52

Spectrophotometric determination of iron as ferric sulfate complex; ultraviolet study. R. Bastian, R. Weberling and F. Palilla. bibliog Anal Chem 25:284-8 F '53

Spectrophotometric determination of thorium in monazite sands. C. V. Banks and C. H. Byrd. bibliog(51 ref) Anal Chem 25:416-19 Mr '53

Spectrophotometric determination of uranium by thiocyanate method in acetone medium. C. E. Crouthamel and C. E. Johnson. bibliog Anal Chem 24:1780-3 N '52

Spectrophotometric method for determination of the fluoride ion. H. E. Bumsted and J. C. Wells. bibliog Anal Chem 24:1595-7 O '52

Spectrophotometric method for the determination of hydrazine. G. W. Watt and J. D. Chrisp. bibliog Anal Chem 24:2006-8 D '52

Temperature effects in differential colorimetry; method of measurement. R. Bastian. bibliog diags Anal Chem 25:259-62 F '53

COLORIMETRY. See Colorimeters and colorimetry

COLORS

See also

Color

COLUMBIA broadcasting system

Television City. il Fortune 47:141-4 Ap '53

COLUMBIA gas system, inc.

Columbia Gas likely to receive substantial rate boosts in '53. Barron's 32:23 D 29 '52

Low-priced stocks headed for higher levels. J. S. Williams. Mag of Wall St 91:238 N 29 '52

Stock offered. Comm & Fin Chr 177:2127 My 18 '53

COLUMBIA river

Army engineers' 308 report. T. H. Lipscomb. map Elec West 110:73-5 Ja '53

Slackwater improvement of the Columbia river. O. E. Walsh. il map Am Soc C E Proc 79 [no 181]:1-16 Ap '53

Power utilization

Calendar of new generation, U.S. Columbia River power system; tabulation. Elec West 110:111 F '53

COLUMBIA river—Power utilization—*Cont.*
Columbia River project. J. Grindrod. il Electrician 149:833-6 S 19 '52
Columbia River project moves forward. il Eng N 150:27 My 28 '53
Development of the Columbia River basin. map Engineer 195:760-1 My 29 '53
Who will get Northwest's power in harness? Bsns W p92-4+ F 14 '53

COLUMBIA university Graphic arts center. See Graphic arts center (proposed)

COLUMBIAN carbon company
Comparative analysis. R. Colston. Mag of Wall St 92:173+ My 2 '53

COLUMBIUM. See Niobium

COLUMBUS, Ohio

Streets

Streets restored with emulsified asphalt. il Roads & Sts 95:82-3 O '52

COLUMBUS and southern Ohio electric company
Public utility securities. O. Ely. Comm & Fin Chr 176:2030 N 27 '52

COLUMNISTS
Columnist turns songster. J. Wagner. Ed & Pub 86:67 Ap 11 '53

COLUMNS
Column strength under combined bending and thrust. R. L. Ketter and others. bibliog il diags Welding J 31:sup607-22 D '52
Creep buckling of columns. C. Libove. bibliog diags J Aeronautical Sci 19:459-67 Jl '52; Discussion. G. Gerard. 19:714 O '52
Creep collapse viscoelastic columns with initial curvatures. H. H. Hilton. bibliog diag J Aeronautical Sci 19:844-6 D '52
Formula for tapered timber columns. E. I. Fiesenheiser. diags Eng N 150:90 Mr 26 '53
New lamp column. D. G. Sandeman. il diags Elec R (Lond) 152:83-4 Ja 9 '53
New metal lath helps fireproof columns. il Constr Methods 35:135 O '53

COLUMNS, Concrete
Analysis of beam-and-girder framing with known column settlements. P. M. Ferguson. diag Am Concrete Inst J 24:77-84 O '52
Concrete lighting columns. D. F. Orchard. Electrician 149:919-20 S 26 '52

Testing

Inelastic behavior in tests of eccentrically loaded short reinforced concrete columns. E. Hognestad. il diags Am Concrete Inst J 24:117-39 O '52; Discussion. 25:140^1-140^{14} pt 2 D '53

COLUMNS, Steel
Laboratory tests recommended to set up design procedure for steel column bases. M. A. Larson. Civil Eng 22:953 N '52
Monster column takes shape for press section; ingot weighing 275 tons. il Steel 132:109 Mr 16 '53
Torsional-flexural buckling of columns. H. L. Langhaar. bibliog Franklin Inst J 255:101-12 F '53

COLVILLES, limited
Statement by the chairman. J. Craig. Economist 166:448-9 F 14 '53

COMBINATION packages. See Package goods—Combination packages

COMBINES. See Harvesting machinery

COMBUSTION
Air-gas mixing systems and burner designs. A. D. Wilcox. Am Gas J 178:18-19 Ap '53
Automatic recording of carbon dioxide by conductometry; method for determination of rates of combustion. R. D. Goodwin. diags Anal Chem 25:263-5 F '53
Burning velocity measured. D. M. Simon and E. L. Wong. il J Chem Phys 21:936 My '53
Chemical reaction equilibria in the combustion of sodium-base pulping liquors. M. N. May. bibliog Tappi 35:511-17 N '52
Combustion characteristics of fuel gases. J. Grumer. bibliog Am Gas Assn Proc 1952:852-6
Combustion fundamentals of heavy duty gas engines. W. K. Newcomb. diags Diesel Power 30:54-9 N '52
Constant-pressure combustion charts including effects of diluent addition. L. R. Turner and D. Bogart. bibliog U S Nat Advisory Com for Aeronautics 1949:315-39 '51
Controlling combustion in dual-fuel engines. W. M. Kauffmann. il Diesel Power 31:96-8 Ap '53
Effect of water on the burning velocities of cyanogen-oxygen-argon mixtures. R. S. Brokaw and R. N. Pease. bibliog Am Chem Soc J 75:1454-7 Mr 20 '53
Energy basis for comparison of performance of combustion chambers. J. B. Nichols. diag A S M E Trans 75:29-33 Ja '53
Equilibrium composition of combustion products of leaded octanes with air. E. B. Cook and others. bibliog U S Bur Mines Rep of Invest 4947:1-15 '53
Find heating modernization prospects with combustion testing. il Dom Eng 182:94-6+ Jl '53
Fume disposal by catalytic combustion creates new market for gas use. R. J. Ruff. il Gas Age 111:33-6 Mr 26 '53
Gauge for indicating pressure transients in a combustion chamber. H. D. Warshaw. bibliog il diags R Sci Instr 23:493-6 S '52
Leonardo da Vinci's experiments on combustion. L. Reti. bibliog il J Chem Educ 29:590-6 D '52
Nonisotropic propagation of combustion waves. G. H. Markstein. bibliog diag J Chem Phys 20:1051-2 Je '52
Prediction of hydrocarbon burning velocities by the modified Semenov equation. P. L. Walker, jr. and C. C. Wright. Am Chem Soc J 75:750-1 F 5 '53
Principles of gas combustion. C. R. Bellamy. Am Gas J 177:23-6 O '52
Slot burner method for studying combustion wave instability. G. H. Markstein and L. M. Somers. bibliog il diag J Chem Phys 21:941 My '53
Some combustion developments in aeronautical turbines. il diag Engineer 194:383 S 19 '52
Steady-state burning of a semi-infinite solid or liquid. W. P. Reid. diag J Phys Chem 57:242-4 F '53
Study gas combustion corrosion. W. M. Myler, jr. Am Gas Assn Mo 34:17-18 N '52
Study of burner oscillations of the organ-pipe type. A. A. Putnam and W. R. Dennis. diags A S M E Trans 75:15-26; Discussion. 27-8 Ja '53
Thermodynamics of combustion gases; temperatures and composition of the combustion products of oxyacetylene flames. H. E. Edwards and others. U S Bur Mines Rep of Invest 4958:1-7 '53
Thermodynamics of combustion gases; temperatures of methane-air and propane-air flames at atmospheric pressure. R. W. Smith, jr. and others. bibliog U S Bur Mines Rep of Invest 4938:1-3 '53
Thermodynamics of combustion gases; temperatures of methane-air, propane-air, and ethylene-air flames. R. W. Smith, jr. and others. bibliog U S Bur Mines Rep of Invest 4983:1-21 '53

See also
Boilers—Firing
Bunsen burner
Detonation
Flame propagation
Flames
Flash points
Fuel
Gas burners
Internal combustion engines—Combustion research
Oxidation
Oxyacetylene flame
Spontaneous combustion

COMBUSTION, Heat of
Heat of combustion of neodymium. E. J. Huber, jr. and C. E. Holley, jr. Am Chem Soc J 74:5530-1 N 5 '52
Net heat of combustion of petroleum hydrocarbons. R. S. Fein, H. I. Wilson and J. Sherman. bibliog Ind & Eng Chem 45:610-14 Mr '53

COMBUSTION, Spontaneous. See Spontaneous combustion

COMBUSTION, Submerged
Heating pickle liquor by submerged combustion; Ozark-Mahoning co. W. I. Weisman. il Steel 131:114+ D 15 '52
Submerged combustion evaporation. W. I. Weisman. diag Tappi 36:383-4 Ag '53

COMBUSTION analysis
Analysis of synthesis gas; rapid and highly accurate method. G. L. Barthauer, A. Haggerty and R. J. Friedrich. bibliog diags Anal Chem 25:256-9 F '53

COMBUSTION analysis—*Continued*

Combustion techniques for the determination of residues of highly chlorinated pesticides by total chlorine analysis. E. J. Agazzi, E. D. Peters and F. R. Brooks. bibliog diags Anal Chem 25:237-40 F '53

Small portable combustion tube for Orsat type of gas analysis apparatus. M. L. Robinson. diags Am Gas J 178:14-15+ Mr '53; Same abr. Oil & Gas J 51:346+ Mr 23 '53

Stoichiometric combustion method for the determination of sulphur in slags. C. J. B. Fincham and F. D. Richardson. Iron & Steel Inst J 172:53-5 S '52

Use of magnesium oxide in determination of carbon and hydrogen in fluoro-organic compounds. W. H. Throckmorton and G. H. Hutton. bibliog Anal Chem 24:2003-4 D '52

COMBUSTION laboratories

Developing a combustion laboratory. J. H. Potter. bibliog diags J Eng Educ 43:107-14 O '52

COMBUSTION research

Relation of smoke point to molecular structure. R. A. Hunt, jr. bibliog Ind & Eng Chem 45:602-6 Mr '53

See also

Electric ignition

COM-CO. See Compost corporation of America

COMEY, Dennis J.

They put no limits on Philadelphia's dock priest. pors Bsns W p 158-61 Je 6 '53

COMICS (books, strips, etc.)

Comic books are serious aids to community education. M. B. Andrews. il Textile World 103:145+ My '53

Measuring editorial interest in children's comics. H. Henry. J Marketing 17:372-80 Ap '53

Tomorrow's engineers read the comics; General Electric's experiment. D. Van Avery. il Gen Elec R 56:20-2 S '53

Why's and how's of comic book advertising. G. Moses. Adv Agency 46:71-2 F '53

See also

Newspapers—Comic strip

COMITY of nations

Comity and the oil companies. Economist 165:556-7 N 22 '52

COMMERCE

Can crisis in international trade be remedied? M. Palyi. Comm & Fin Chr 177:773+ F 19 '53

Freer trade for a stronger free world. P. G. Hoffman. Comm & Fin Chr 178:20-1 Jl 2 '53

International trade conference, western style; Vienna parley. A. W. May. Comm & Fin Chr 177:2189 My 21 '53

Problems of trade equilibrium. Fed Res Bul 38:1089-97 O '52

Standards; can they be a curse? Iron Age 170:48 O 2 '52

Statistical techniques and international trade. W. E. Deming. J Marketing 17:428-33 Ap '53

Strange straws in the East-West trade winds. Fortune 46:111 O '52

Strong economics promote world trade. E. E. Schnellbacher. For Comm W 49:15-16 Ap 20 '53

What we need is sustained world trade without monetary restrictions. M. W. Sharp. Pulp & Pa of Can 54:94-6 Jl '53

World trade group pushes low tariffs, license agreements. Ind Marketing 38:54+ Mr '53

See also

Aeronautics, Commercial
Balance of payments
Banks and banking
Business
Commercial policy
Commercial statistics
Competition
Credit
Embargo
Exhibitions
Export trade
Foreign exchange
Free trade and protection
Imports
Insurance, Marine
Interstate commerce commission
Marketing
Merchandizing
Merchant marine
Money
Ports
Prices
Purchasing
Shipment of goods
Shipping
Stocks
Tariff
Transportation
Trusts, Industrial—International trusts

also subdivision Commerce under names of countries, e.g. Argentina—Commerce; France—Commerce; Great Britain—Commerce; United States—Commerce

Bibliography

United States Department of commerce publications. 795p $2.75 Supt. of doc., Washington '52

World trade, 1953. Cleveland Pub Lib Business Information Bur Bul v 24, no 3:9-12 My '53 (pa 10c)

World trade publications. Published irregularly in Foreign commerce weekly

COMMERCIAL buildings

Associated grocers co-op, Seattle, Wash. il plans Arch Rec 113:140-5 F '53

COMMERCIAL chemical development association

Annual meeting, New York, March 23. Oil Paint & Drug Rep 163:7+ Mr 30 '53; Chem W 72:20+ Ap 4 '53

Winter meeting, Cleveland, Jan. 22. Chem & Eng N 31:426+ F 2 '53; Oil Paint & Drug Rep 163:4+ Ja 26 '53

COMMERCIAL correspondence

Better bank public relations by mail. W. H. Butterfield. Banking 45:89 D '52; 62-3 F; 72+ Mr '53

Cordially yours; problems in executive letter writing. Mod Ind 24:63-4+ O '52

English; chemical engineering tool. J. A. Field. bibliog Chem Eng Prog 48:482-5 O '52

Find training in effective letter writing worthwhile; New York Life course. Nat Underw (Life ed) 56:20 O 24 '52

How to put warmth and friendliness into your letters. R. E. Smallwood. Sales Management 70:42-5 Ja 15; 84-5+ F 15; 98-101 Mr 15 '53

How to write poor letters. il Chem Eng 60:246+ Ja '53

Letters build bank business. J. B. Mack, jr. Banking 45:60-1 S '52

Letters that say we are glad to have you aboard. C. McPherson. Am Bsns 23:20-1+ Je '53

Mutual cites fat dividends from better letters program. E. M. Kelley. Sales Management 70:46-9+ Ja 1 '53

New letter policy makes friends faster. L. F. Thomann. Ptr Ink 242:43 F 13 '53

Photocopy substitutes for letter-writing, cuts costs. H. W. Smith. Ind Marketing 38:84 S '53

Write as you talk, and put a smile in those letters. C. McPherson. Am Bsns 23:22+ Ap '53

Your letters may cost more than you think. E. A. Buckley. Bankers Mo 69:30+ D '52

See also

Applications for positions
Collecting of accounts
Complaints
Letterheads
Mail order business
Sales letters

COMMERCIAL credit company

Credit puts America on wheels; review of Helping America buy what it wants; anniversary brochure. W. J. Brons. Bankers Mo 69:22+ N '52

Earnings, etc. Comm & Fin Chr 177:1047-8 Mr 9 '53

Five outstanding entrenched stocks; with comparative balance sheet items. Mag of Wall St 91:182 N 15 '52

Notes offered. Comm & Fin Chr 177:623, 1152 F 9, Mr 16 '53

Ten potential market leaders for 1953; with comparative balance sheet items. Mag of Wall St 91:641 Mr 7 '53

COMMERCIAL law

Legal rulings and opinions. Credit & Fin Management 55:27 Ja '53 [cont monthly]

Legislative and judicial developments in marketing. W. F. Brown, ed. Published in quarterly numbers of Journal of marketing

See also

Advertising—Laws and regulations
Banking law
Corporation law
Foreign exchange
Government regulation of industry
Income tax

COMMERCIAL law—See also—*Continued*
Insurance law
Mortgages
Patent laws and legislation
Prices—Regulation
Public utilities—Law
Sales
Trade marks—Law
Trusts, Industrial
Trusts and trustees
Warranty

COMMERCIAL paper
Commercial paper and bankers' acceptances outstanding, Dec. 1946-Nov. 1952. Fed Res Bul 39:34 Ja '53 [cont monthly]
New life for an ancient market. Bsns W p 168-71 N 8 '52
See also
Warehouse receipts

COMMERCIAL policy
Debtor nations, too, have responsibilities. A. W. May. Comm & Fin Chr 177:2737 Je 25 '53
Foreign control regulations applying to imports from the United States; tabular summary revised as of Sept. 5, 1952. For Comm W 48:9-11 O 13 '52
Free markets mean economic advance. D. C. Abbott. Comm & Fin Chr 177:11-12 sec 2 Je 25 '53
Is discrimination inevitable; currency convertibility and non-discriminatory trade. Economist 165:591-3 N 22 '52
Needed, more trade and less import restrictions. C. D. Howe. Comm & Fin Chr 176:2024-5+ N 27 '52
See also
Commercial treaties and agreements
Dumping (commercial policy)
also subdivision Commercial policy under names of countries, e.g. Brazil—Commercial policy; France—Commercial policy; United States—Commercial policy

COMMERCIAL products
25 fastest-growing products average production increase per year, 1940-1951 average; pictograph. Sales Management 70:65 F 15 '53

COMMERCIAL statistics
International trade in 1952. Survey of Cur Bsns 33:24-6 F '53
International trade statistics. R. G. D. Allen and J. E. Ely, eds. 448p $7.50 John Wiley & sons, inc, 440 4th av, New York 16 '53
Sterling area statistics; comment on quarterly supplement to Board of trade journal. Economist 167:549 My 23 '53
U.S. foreign trade, 1951-1952; total trade; trade by areas and countries; commodity, exports and imports. For Comm W 49:22-7 Mr 23 '53 [cont quarterly]
World trade, by countries; by quarters, 1951; first to third quarters, and months, July-December, 1952; annual, 1951 and 1952. For Comm W 49:19-22 Mr 23 '53 [cont quarterly]
Yearbook of food and agricultural statistics, 1952; pt 2, Trade. v6 290p $3.50 Food and agriculture organization of the United nations; for sale by Columbia univ. press, 2960 Broadway, New York 27 '53

COMMERCIAL treaties and agreements
Argentina modifies agreement with Japan. For Comm W 50:14 Jl 20 '53
Argentina signs agreement with Czechoslovakia. For Comm W 48:10 O 6; 7 D 29 '52
Australia, West Germany sign trade arrangement. For Comm W 48:17 D 1 '52
Belgium-Luxembourg signs agreement with France. For Comm W 50:9 Jl 27 '53
Brazil signs agreement with Argentina. For Comm W 49:11 Ap 27 '53
Brazil signs agreement with Finland. For Comm W 49:9 Je 29 '53
Brazil signs GATT Torquay protocol, Feb. 19. For Comm W 49:7 Mr 23 '53
Colombia; agreement signed with Spain. For Comm W 48:7-8 D 29 '52
Colombia extends agreement with Finland. For Comm W 50:17-18 Jl 6 '53
Colombia signs trade agreement with Sweden, effective Jan. 27. For Comm W 49:12 Mr 16 '53
Czechoslovakia, Iran sign agreements. For Comm W 48:13 N 24 '52
Denmark signs agreement with France. For Comm W 49:18 Je 8 '53
Denmark signs agreement with Poland. For Comm W 50:18 Jl 6 '53
Egypt initials agreement with Spain. For Comm W 50:9 Jl 27 '53
Egypt signs new agreements; Syria ratifies agreement with Jordan. For Comm W 49:11+ My 4 '53
El Salvador; agreements signed with Spain. For Comm W 49:8 Ja 5 '53
El Salvador signs agreements with France. For Comm W 50:9 Jl 27 '53
France signs agreement with Iran. For Comm W 50:9+ Jl 27 '53
France signs agreement with Pakistan. For Comm W 49:9+ Je 29 '53
General agreement on tariffs and trade; agenda for GATT; current meeting at Geneva. Economist 165:117-18 O 11 '52
GATT resolution; tolerance for prior contracts urged. For Comm W 48:10 D 8 '52
General agreement on tariffs and trade 7th session, Geneva, Oct. 2-Nov. 10. For Comm W 48:7 O 20; 12+ N 24 '52
India and Pakistan sign new trade pact. For Comm W 49:10 Ap 13 '53
India concludes pact with Egypt. For Comm W 50:22 Jl 27 '53
India signs agreement with Turkey. For Comm W 50:10+ Jl 13 '53
India signs agreements with Finland and Norway. For Comm W 48:20 N 17 '52
Israel signs agreements with Iceland. For Comm W 50:18-19 Jl 6 '53
Italy extends agreement with Spain. For Comm W 49:10-11 My 11 '53
Italy signs agreement with Germany. For Comm W 50:22 Jl 20 '53
Italy signs agreement with Norway. For Comm W 50:22 Jl 27 '53
Japan signs agreements with Brazil. For Comm W 48:11 O 6 '52
Liberia withdraws from GATT. For Comm W 49:9 Je 22 '53
Metal accords to stabilize world market. F. E. Wormser. Oil Paint & Drug Rep 164:3 S 28 '53
Netherlands signs agreement with Greece and with Israel. For Comm W 49:12+ Ap 20 '53
New Irish-British meat trade agreement relaxes restriction on outside exports. For Comm W 50:13 Jl 20 '53
Nicaragua withdraws from GATT; duties may rise on U.S. items. For Comm W 49:7 Ja 26 '53
Pakistan initials accord with Japan. For Comm W 49:19 Ap 27 '53
Perón wins again. Economist 166:39 Ja 3 '53
President's message to Congress on reciprocal trade agreements act. For Comm W 49:3+ Ap 20 '53
Simpler standards urged for export documentation at GATT session. For Comm W 48:16 D 1 '52
Sweden signs agreement with U.S.S.R. For Comm W 49:9 My 25 '53
Trade agreement between Colombia and France. For Comm W 48:12 D 8 '52
United Kingdom; agreement with Argentina. For Comm W 49:12 F 9 '53

COMMERCIAL union assurance company, limited
Statement by the chairman. J. Leslie. Economist 167:333 My 2 '53

COMMISSIONS, Federal. See United States—Executive departments

COMMITTEE for economic development
CED in new era of influence. Bsns W p 104+ Ja 24 '53

COMMITTEES (in management)
Can management by committee make marketing decisions? top men wary. L. C. McKesson and others. Ind Marketing 38:68-9+ My '53
He's in a meeting. W. H. Conant. Am Bsns 23:14-15+ Ap '53
Management by committee. H. Maurer. Fortune 47:145-7+ Ap '53
Who runs Bank of America; managing committee. E. V. Burke. Burroughs Clearing House 37:27-9+ Jl '53

COMMODITY credit corporation

Insurance problems

CCC calls on surety people for assistance. Nat Underw 56:28 O 16 '52

COMMON carriers. See Carriers

COMMON trust funds. See Trusts and trustees—Common trust funds

COMMONWEALTH conference, London, 1952

Commonwealth at turning point. Bsns W p 108+ N 29 '52

Commonwealth countries planning economic and trade expansion. For Comm W 49:4+ Ja 5 '53

Commonwealth decisions. Economist 165:837-42 D 20 '52

COMMONWEALTH development finance company, limited

New Commonwealth development company now under way in Britain. For Comm W 49:31 Ap 27 '53

COMMONWEALTH Edison company

Bonds offered. Comm & Fin Chr 178:147 Jl 13 '53

Preferred stock offered. Comm & Fin Chr 176:2062, 2160 D 1, 8 '52

Sound stocks with above-average yield; with comparative balance sheet items. Mag of Wall St 91:708 Mr 21 '53

COMMONWEALTH oil company

Registers with Commission. Comm & Fin Chr 176:2160 D 8 '52

COMMUNICABLE diseases. See Infectious diseases

COMMUNICATION

Communications for civil defense. C. A. Armstrong. map diag Elec Eng 72:218-22 Mr '53

Fateful process of Mr A talking to Mr B; wonders of speaking and listening. W. Johnson. diag Harvard Bsns R 31:49-56 Ja '53

Here you have communication. G. L. New. Chem Eng 59:280+ O '52

How employee opinion poll aids company communications; B. F. Goodrich co. F. C. Minaker. Am Bsns 23:26+ O '53

Human relations and communications are twins. R. D. Breth. Personnel J 31:259-61 D '52

Management communication and the grapevine. K. Davis. Harvard Bsns R 31:43-9 S '53

Measuring the effectiveness of industrial communications. H. B. Funk and R. C. Becker. Personnel 29:237-40 N '52

Outline of communication practice. J. D. Cooper. Personnel 29:422-30 Mr '53

Sweetening the meeting diet makes education more palatable. R. D. Breth. Sales Management 69:61-3 pt 2 O 1 '52

See also

Electric communication
Employment management—Information sharing
Moving pictures in industry
Ships—Communication
Speech
United nations—Headquarters—Communication facilities

COMMUNICATION, Electric. See Electric communication

COMMUNICATION, Factory. See Factory communication

COMMUNICATION, Military

New army teletypewriter relay station. il diag Electronics 26:198 My '53

Signals research and development establishment. Engineering 174:153-4, 189 Ag 1-8 '52

See also

Radio communication, Military
United States—Army—Signal corps

COMMUNICATION, Theory of

Bits, language efficiency, and information theory. R. L. Shuey. il diag Gen Elec R 56:15-19 S '53

Comparison of the informational capacities of amplitude- and phase-modulation communication systems. N. M. Blachman. diags Inst Radio Eng Proc 41:748-59 Je '53

Control tower language. F. C. Frick and W. H. Sumby. diag Acoustical Soc Am J 24:595-6 N '52

Correlation versus linear transforms. M. J. E. Golay. Inst Radio Eng Proc 41:268-71 F '53; Discussion. 41:1187 S '53

Five-channel analog correlator. M. J. Levin and J. F. Reintjes. bibliog il diags Tele-Tech 12:70-2+ Mr '53

Ideal coding versus redundancy. D. A. Bell. il Wireless Eng 30:73-4 Mr '53

Information theory. S. Kullback. bibliog J Ap Phys 24:106-7 Ja '53

Information theory and its application to taxonomy. D. K. C. MacDonald. J Ap Phys 23:529-31 My '52

Organization and entropy. J. Rothstein. J Ap Phys 23:1281-2 N '52

Radio progress during 1952; information theory and modulation systems. bibliog il Inst Radio Eng Proc 41:483-7 Ap '53

Some possibilities for the compression of television signals by recoding. E. C. Cherry and G. G. Gouriet. diags Inst E E Proc 100 pt 3:9-18 Ja '53

What practical benefits can communication engineers expect from modern communication theory? abstract and discussion. E. C. Cherry. Inst E E Proc 99 pt 3:404-5 N '52

COMMUNICATION and traffic

Transport and communications. Published in Foreign commerce weekly

See also

Airlines
Airways
Factory communication
Highway transportation
Motor vehicles
Pipe lines—Communication systems
Radio communication
Railroads
Rapid transit
Roads
Shipping
Street traffic
Telegraph
Telephone
Teletype
Television
Transportation
Waterways

Iraq

Radio station added to Iraq's communications. For Comm W 49:12 My 25 '53

Israel

Transport and communications; expansion of Israel's roads and utilities hampered by lack of funds, materials. For Comm W 48:12 O 27 '52

United States

Transportation and communications; Nov.-Dec. 1951-Jan.-Nov. 1952. Survey of Cur Bsns 33:S22-3 Ja '53 [cont monthly]

COMMUNICATIONS workers of America

Annual meeting, San Francisco. Pub Util 52:160-1 Jl 30 '53

CWA blasts labor law proposal that local utilities be exempted from provisions of the federal labor-management law. J. A. Beirne. Pub Util 51:703-4 My 21 '53

CWA sets up defense fund committee. Pub Util 51:37 Ja 1 '53

Pattern seen in CWA-Ohio Bell contract. Pub Util 51:703 My 21 '53

COMMUNISM

Confusion behind the curtain. Economist 166:121-3 Ja 17 '53

Eisenhower regime's policy for defeating communism. J. F. Dulles. Comm & Fin Chr 177:474+ Ja 29 '53

Farewell to arms? strategy that directs the party's work everywhere. Economist 164:729-30 S 27 '52

Pro-red blacklist threat to freedom? R. Erwin. Ed & Pub 86:36 F 21 '53

Rare opportunity; Stalin's death has offered a fleeting advantage to the West. F. Morley. Barron's 33:3 Mr 16 '53

Two masters; the UN assembly points up divided loyalties in its Secretariat; Communists among the Americans. F. Morley. Barron's 32:3 O 20 '52

See also

Trade unions—Communist problem
World peace congress, Vienna, 1952

Asia, Southeastern

Formosa to the fore; red threat to southeast Asia. F. Morley. map Barron's 33:5-6 My 11 '53

China

China 'cross the bay; its Communist conquest need not be final. J. Chamberlain. Barron's 33:3+ F 9 '53

Mao Tse-tung's road to power; review of Documentary history of Chinese communism, by C. Brandt, B. Schwartz and J. K. Fairbank. Economist 165:177-8 O 18 '52

Other side of the truce; must peace in Asia finally lose China to communism? J. Chamberlain. Barron's 33:5+ Ap 6 '53

Revolution in Chinese villages; land reform. Economist 165:762+ D 13 '52

Traffic with Communist China. Economist 166:614-16 Mr 7 '53

COMMUNISM—*Continued*

Czechoslovakia

Claws of the dove. Economist 165:661-2 D 6 '52
No concessions for the Czechs. Economist 167:888 Je 27 '53

France

Bonne nuit to Ce soir. Economist 166:561-2 F 28 '53

Germany

Communist Germany's strategy. Economist 167:584 My 30 '53
East Germans shatter red myth. Bsns W p 118+ Je 27 '53
Opportunity for Adenauer. Economist 167:884-5 Je 27 '53
Revolt in Stalin allee; east Berlin; what does the West say? Economist 167:801 Je 20 '53

Great Britain

Factory cell. Economist 166:479 F 21 '53

Poland

Church and state in Poland. Economist 166:351-2 F 7 '53

Russia

Boss of the Bolsheviks. Economist 166:641-2 Mr 7 '53
Security in the Soviet army. Economist 165:894-5 D 27 '52

United States

Universities on the spot; congressional investigation cannot get at the real trouble. J. Chamberlain. Barron's 33:5+ Mr 30 '53

Yugoslavia

Church and state in Jugoslavia. map Economist 166:89-90 Ja 10 '53

COMMUNIST party (China)
Mao reaches for the moon. Economist 166:12 Ja 3 '53
Mao's good bargain. Economist 167:15 Ap 4 '53

COMMUNIST party (Czechoslovakia)
Anxious days in Prague. Economist 167:803-4 Je 20 '53

COMMUNIST party (France)
Difficult days for French Communists. Economist 166:809-10 Mr 21 '53
Party cell to prison cell. Economist 167:12 Ap 4 '53

COMMUNIST party (India)
India's Communists take stock. Economist 166:89 Ja 10 '53

COMMUNIST party (Rumania)
Rumanian amnesty. Economist 167:748 Je 13 '53

COMMUNIST party (Russia)
Changes in the Kremlin. Economist 166:741-3 Mr 14 '53
Fate of the Soviet Jews. map Economist 166:218-19, 289-90 Ja 24-31 '53
From cell to Kremlin. Economist 165:31-2 O 4 '52
Malenkov reports to the party. Economist 165:103-4 O 11 '52
Medicine, treason and plot; doctors accused of murder by medical treatment. Economist 166:155 Ja 17 '53
Plot and counterplot; Moscow doctors' plot. Economist 167:497-8 My 23 '53
Rights of the Soviet citizen. Economist 167:606-7 My 30 '53
Ten day's council in the Kremlin. Economist 165:170+ O 18 '52
Waiting for the Moscow line. Economist 167:141 Ap 18 '53

COMMUNIST party (Ukraine)
New deal for the Ukrainians. map Economist 167:823-4 Je 20 '53

COMMUNIST party (Yugoslavia)
Party meeting in Zagreb. Economist 165:463-4 N 15 '52
Under President Tito. Economist 166:220 Ja 24 '53

COMMUNITY centers
Community building heated with perimeter systems. il plan Sheet Metal Worker 45:45-6+ O '53
See also
Health centers

COMMUNITY property
See also
Income tax—Joint returns

COMMUNITY relations. See Public relations

COMMUTATORS
Bench-type undercutter for commutators. il Engineering 175:544 Ap 24 '53
Dust-free commutator grinding. il Ry Mech & Elec Eng 126:89 O '52
Meaning of commutator film. L. D. Cook. il Iron & Steel Eng 30:74-9; Discussion. 79-83 Je '53
Molded commutator assemblies. il diags Machine Design 25:202 O '53
Removing coil ends from commutator risers. C. F. Steinbrink. il Ry Loco & Cars 127:70-1 Jl '53
RC memory commutator for signal-to-noise improvement. C. I. Beard and E. N. Skomal. il diags R Sci Instr 24:276-80 Ap '53
Turning fixture. F. E. Riley. diags Tool Eng 31:40-1 S '53
What causes these burn spots on bars? il Power 97:130-2 S '53
See also
Brushes (electric machinery)

Failure

Flashovers. W. A. Ernst. Ry Loco & Cars 127:87 Ja '53
Flashovers; causes and remedies. Ry Mech & Elec Eng 126:87-8 O '52; [cont as] Ry Loco & Cars 127:76-7 O '53; Discussion. J. K. Stotz. 127:107 N '53
Why d-c machines flash over. A. T. McClinton and J. P. O'Connor. il diags Power Eng 57:83-5 My '53; Abstract. Elec Eng 72:510 Je '53

COMMUTERS
See also
Railroads—Commuter service

COMPANY anniversaries. See Anniversaries, Company

COMPANY histories. See Business histories

COMPANY shows. See Employees' entertainment

COMPANY towns
Building a new city in the Canadian Northwest. Pub Works 84:134-5 My '53
Saxapahaw tradition; planning for village charm. M. B. Andrews. Textile World 102:188+ N '52
This is Talara; Peru's leading oil town. il World Oil 136:281-3 My '53

COMPARATORS
Comparator control holds production standards; Thew shovel co. il Steel 132:100 F 9 '53
Comparator measures coil spring tension. G. Lee. diags Am Mach 97:150 My 25 '53
Electromechanical comparator. diags Mech Eng 75:319-20 Ap '53
Gaging comparator has four ranges. il Product Eng 24:254 Ap '53
Height comparator employs standard micrometer head with special body. T. J. Bizzoco and C. A. Smith. il diag Mach 60:200 S '53
Resistance thermometers in the 50 metre comparator at the National physical laboratory. J. S. Clark and L. O. C. Johnson. diag Engineer 196:260-1 Ag 28 '53
Root comparator for turbine blades; British indicators, ltd. il Engineer 195:844 Je 12 '53; Engineering 176:158 Jl 31 '53

COMPASS
Compass-swinger mounts on belly. il Aviation W 57:71-2 N 3 '52
New compass developed for merchant ships. il Marine Eng 58:116+ Ap '53

COMPENSATION, Deferred. See Deferred compensation

COMPENSATORS, Optical
Examination and calibration of Soleil compensators. H. G. Jerrard. bibliog il diags J Sci Instr 30:65-70 Mr '53
Reducing aberrations in rotating-prism compensators for nonintermittent motion pictures. G. Schwesinger. bibliog diags Opt Soc Am J 42:923-30 D '52

COMPETITION

Big business in a competitive society. A. D. H. Kaplan and A. E. Kahn. Fortune 47:1-14 sec 2 F '53

Employment, prices, and monopolistic competition. H. Brems. diags R Econ & Stat 34:314-25 N '52

Foreign competition hurts. Steel 132:59 Je 29 '53

How to beat the imports; Elgin national watch co. il Cer Ind 59:78-9+ O; 56-8 N '52

Lower-cost production for today's and tomorrow's needs; dramatic increases in competitive capacity. C. W. Boyce. Factory Management 111:62-6 My '53

Non-price competition at the department-store level. P. Bliss. J Marketing 17:357-65 Ap '53

Perfection proves merit of if you can't lick 'em, join 'em; changing from oil to gas and electric ranges. L. Bushfield. il Sales Management 69:82+ N 1 '52

Revival of freight absorption in basic materials. S. Fish. Manuf Rec 122:32-3 S '53

Sales engineer and his problems; our attitude toward competition. B. Lester. Mach 59: 214-1F My '53

See also

Price fixing

Railroads—Competitive transportation

Restraint of trade

Trusts, Industrial

COMPETITION, International

Sale I never forgot; satisfied customer, but no re-order for French steel. P. Cortney. Ptr Ink 242:78 Ja 23 '53

COMPETITION, Unfair

Aluminum agreement cancellation requested. Oil Paint & Drug Rep 164:4+ Jl 27 '53

COMPETITIVE bidding. See Securities—Marketing

COMPLAINTS

There are only six basic reasons why people don't buy. W. E. Meuse. Ptr Ink 242:48+ Ja 23 '53

They can't brush off customer complaints; Christopher Dairy's policy. Sales Management 69:82 O 1 '52

COMPLEX salts. See Salts, Complex

COMPOSITAE

Acetylenic compounds from plants of the compositae family; abstract. N. A. Sörensen. bibliog Chem & Ind p240-1 Mr 14 '53

COMPOST corporation of America

Product they found in the Oakland garbage heap; Com-Co. R. Stovroff. il Sales Management 69:30-2+ O 15 '52

COMPOSTS. See Refuse as fertilizer

COMPOUND E. See Cortisone

COMPOUND F. See Hydroxycorticosterone

COMPOUND 1080. See Sodium fluoroacetate

COMPRESSED air

Air agitation snuffs fire like magic. il Nat Pet N 44:58-60 D 3 '52

Air blows snow from switches. il diags Ry Age News ed 134:18 Je 8 '53

Air cells are the latest freight-car springs. il Ry Loco & Cars 127:90 S '53

Air-cushion for heavy jigs. C. T. Bower. diag Am Mach 96:162 N 24 '52

Air displaces steam for forging hammers; Coulter steel co. il Elec West 109:106 O '52

Air-feed boosts screw-machine production. il Comp Air Mag 57:347 D '52

Air jacks push pipe through embankment; illustrations with text. Constr Methods 35: 78-9 Ja '53

Air keeps small plant in the running; Aero fastener corp. il Steel 132:68-9 Ja 26 '53

Air springs make all roads smooth. il diags Comp Air Mag 58:51 F '53

Blowing out service lines. S. H. Davis. il Water & Sewage Works 100:R79 My '53

Cadillac tank plant. S. Bell. il Comp Air Mag 58:9-11 Ja '53

Completely air-operated block hole drill. W. E. Johnson. il Rock Prod 56:91-3 Mr '53

Compressed air at low cost. il Coal Age 58: 106+ Jl '53

Compressed air at work; illustrations with text. Comp Air Mag 58:134-5 My '53

Compressed air finds wide foundry use. il Foundry 81:212+ S '53

Compressed air is used in various ways in Sunbury's modern hospital. C. H. Vivian. il Comp Air Mag 58:40-3 F '53

Compressed air keeps pond clear of ice in very cold weather. plan diag Pub Works 84: 86 Ap '53

Compressed air steps up production at Ryan aeronautical co. il Steel 131:76-7 O 27 '52

Compressed air troubles. C. T. Baker. diag Heating-Piping 24:98-9 D '52

Compressed air under the waves; Aqualung. R. J. Nemmers. il diag Comp Air Mag 58: 221-5 Ag '53

Difficult tunneling in England. Comp Air Mag 58:77 Mr '53

Drilling shot holes with air. H. A. Winter, jr. il Pet Eng 25:B76+ My '53

Effects of air agitation in sulfuric acid anodizing. R. C. Spooner. il diag Metal Finishing 51:78-81 Mr '53

Engineering compressed air systems. L. J. Murphy. plans diags Pet Refiner 31:139-43 D '52

Ford's ahead with new compressed-air system. E. C. Powers. il plan Power 96:118-19 N '52

Freeing tank cars of vapors. il Sheet Metal Worker 44:59-60 Ap '53; Same abr. Oil & Gas J 51:130 O 6 '52

Gases are good cutting coolants. D. G. Pahlitzsch. diag Am Mach 97:196-7 F 16 '53

Giving refinery fires the air; Socony's air agitation method. il Bsns W p68-9 N 29 '52

Guardian angels of the submarines; navy's rescue vessels stand ready to save sunken craft with compressed air. W. N. Johnson. il diag Comp Air Mag 58:17-19 Ja '53

High-pressure pneumatics; design considerations for maximum efficiency in energy storage. J. L. Dooley. il diag Machine Design 25:237-42 Ap '53

How can we dry air for instruments? il diags Power 96:132+ N '52; 97:134 Ja '53

How Douglas keeps its pressure up. C. M. Vigil. il Mill & Factory 52:108-12 Je '53

Improve your compressed air supply. R. A. Schaefer. diag Factory Management 110:96-9 N '52

In Texas they blow off home plate. il diags Comp Air Mag 58:251-2 S '53

Instrument for controlling compressed air supplies. il diag Engineer 195:605-6 Ap 24 '53

Keep air clean for your controls. diags Power Eng 57:84-5+ Je '53

Keeping your car on the road. R. J. Nemmers. il diags Comp Air Mag 58:266-71 O '53

Low friction properties of air-lubricated bearings. D. D. Fuller. il diags Machine Design 25:272-3+ Ap '53

Mist cooling. B. C. Brosheer. il diags Am Mach 97:137-52 S 14 '53

New air mover frees tank cars of vapors. il Oil & Gas J 51:130 O 6 '52

Pneumatic switch cleaner; Racor snow blower. J. C. Pierce. il diags Comp Air Mag 58: 280-1 O '53

Pressure suit for high fliers. il Comp Air Mag 58:115 Ap '53

Push-button sawmills. J. Mater. il Comp Air Mag 58:68-9 Mr '53

Shifting Nashville's freight yards; quarry-master rig drilling with rotary bits. E. S. Williams. il Comp Air Mag 58:48-9 F '53

Small aftercooler; homemade and effective. H. B. McDermid. diags Power Eng 57:87 Ja '53

Studebaker's first hundred years. C. H. Vivian. il Comp Air Mag 57:328-34 D '52

Taking the fog out of jet planes; compressed air helps Boeing engineers design equipment for removing moisture from cabins. J. Starr. il diag Comp Air Mag 57:314-15 N '52

Tank car time out cut 16 to one. il diag Ry Age 134:83 Mr 23 '53; Same. Ry Loco & Cars 127:90 Ap '53

Tire plant in the country; McCreary tire & rubber co. J. C. Pierce. il Comp Air Mag 58:94-9 Ap '53

Viscosity, thermal conductivity and specific heat of dry air at elevated pressures and temperatures. I. Granet and P. Kass. bibliog Pet Refiner 31:113-14 O '52

COMPRESSED air—*Continued*

What about compressed air? removing well cuttings from a rotary drilled borehole. L. K. Shallenberger. il diag World Oil 136:155-6+ Ap '53

See also

Air compressors
Air receivers
Pneumatic conveying
Pneumatic machinery
Pneumatic tools

Moisture content

Aftercooling is important. R. A. Schaefer. diag Power Eng 57:106 Ag '53

COMPRESSED air circuit breakers. See Electric circuit breakers—Oilless

COMPRESSED air lines

Air lines; flexible metal hose absorbs vibration, cuts maintenance. il diag Iron Age 170:214-15 N 6 '52

Compressed air plant's success depends on distribution piping. diag Heating-Piping 25:120-1 Mr '53

Hymatic filter and reducing valve for compressed-air lines. il diag Engineering 175:477 Ap 10 '53

Paris underground. G. J. Constantini. il Comp Air Mag 57:307-9 N '52

Pneumatic tubes shift radioactive capsules in pseudo atomic-ray bombarder. il Comp Air Mag 58:252-3 S '53

Tight compressed air lines save power dollars. il Power Eng 56:77 O '52; Mach 59:209 N '52; Rubber Age 72:210 N '52; Constr Methods 35:182 Jl '53

Trouble-shooting on compressed air systems. diag Mill & Factory 52:127-9 Ja '53

COMPRESSED gas association

Annual meeting, New York, Jan. 25-27. Chem & Eng N 31:556 F 9 '53; Oil Paint & Drug Rep 163:5 F 2 '53

COMPRESSED gases. See Gases, Compressed

COMPRESSIBILITY

Blockage corrections for three-dimensional-flow closed-throat wind tunnels, with consideration of the effect of compressibility. J. G. Herriot. bibliog diags U S Nat Advisory Com for Aeronautics 1950:771-83 '51

Compressibility factors; universal chart. Oil & Gas J 52:325 Je 22 '53

Compressibility of and an equation of state for gaseous neopentane. J. A. Beattie and others. J Chem Phys 20:1619-20 O '52

Compressibility of and an equation of state for gaseous normal pentane. J. A. Beattie, S. W. Levine and D. R. Douslin. bibliog Am Chem Soc J 74:4778-9 O 5 '52

Compressibility of gaseous krypton; the virial coefficients and potential parameters of krypton. J. A. Beattie and others. bibliog J Chem Phys 20:1615-18 O '52

Compressibility of krypton; an equation of state for krypton and the weight of a liter of krypton. J. A. Beattie and others. J Chem Phys 20:1613-15 O '52

Compressibility of vitreous silica. H. T. Smyth and others. Am Cer Soc J 36:238-40 Jl 1 '53

Effect of moisture on compressibility of natural high polymers. C. F. Weir. bibliog J Res Nat Bur Stand 49:135-9 S '52

PVT relations of nitrogen and ethylene mixtures at high pressure. W. P. Hagenbach and E. W. Comings. bibliog il diags Ind & Eng Chem 45:606-9 Mr '53

COMPRESSORS

Centrifugal compressor. C. F. Koenig. 3d. diags Oil & Gas J 51:81 Ja 5; 117 Ja 12; 129 Ja 19; 395 Ja 26; 93 F 2 '53

Centrifugal refrigerating compressors without stuffing box and without gear; abstract. F. Chistiakoff and A. Plotnikoff. Refrig Eng 60:1290 D '52

Choosing overload ratings for hermetic compressor applications. J. Sheets. il Refrig Eng 61:620-1 Je '53

Clark's turbocharged two-cycle angle compressor. il diags Diesel Power 31:36-7 S '53

Clearanceometer for determining blade-tip clearances of axial-flow compressors. A. W. Brunot and R. O. Fulton. il diag A S M E Trans 75:1-5; Discussion. 5-6 Ja '53

Compressor design variations. A. A. McCormack. diags Refrig Eng 61:622-4+ Je '53; Discussion. 61:873-4 Ag '53

Elimination of wall effects in axial-flow compressor stages. J. M. Stephenson. diags Roy Aeronautical Soc J 57:241-3 Ap '53

Forty years with compressor valves. C. R. Neeson. il diags Refrig Eng 60:1292-5 D '52

Hymatic small diaphragm compressor. il Engineer 195:593 Ap 24 '53

Liquid ring compressor; some thermodynamic characteristics. H. E. Adams. diag Tappi 36:193-9 My '53

Rotary compressor with inbuilt compression. il diags Engineer 195:170-1 Ja 30 '53

Two-dimensional compressible flow in centrifugal compressors with straight blades. J. D. Stanitz and G. O. Ellis. diags U S Nat Advisory Com for Aeronautics 1950:141-63 '51

See also

Air compressors
Gas compressors

Maintenance and repair

Cut compressor ills with the right upkeep. il Power 97:144-5 O '53

Low temperature knocks out compressor. R. A. Line. il Power 96:114-15 N '52

Now let's pack your refrigerating compressor; illustrated instructions. S. Elonka. Power 97:122-3 Je '53

COMPTON effect

Double Compton effect. P. E. Cavanagh. Phys R 87:1131 S 15 '52

Multiple Compton scattering of low energy gamma-radiation. R. C. O'Rourke. bibliog Phys R 89:999-1003 Mr 1 '53

Systematic calculations of gamma-ray penetration. H. Goldstein and others. bibliog Phys R 89:1150 Mr 1 '53

Total Compton and pair production cross section at 19.5 Mev. A. I. Berman. bibliog diags Phys R 90:210-17 Ap 15 '53

COMPUTATION, Approximate. See Approximate computation

COMPUTERS. See Calculating machines

CONCENTRATORS

Chuquicamata sulphide plant; concentrator design. E. F. Raffo. flow sheet il plan diag Min Eng 4:1181-6 D '52

Chuquicamata sulphide plant; concentrator operation. D. S. Sanders and E. W. Witcomb. il Min Eng 4:1187-8 D '52

Dry concentrator offers high recoveries; Dry-ore-concentrator, inc. il Eng & Min J 153:115 N '52

See also

Evaporators

Lining

Special linings successful with abrasive sands at Trail Ridge plant. il Eng & Min J 154:102-4 Ja '53

CONCESSIONS

See also

Petroleum—Concessions

CONCRETE

Absorption by concrete of X-rays and gamma-rays. B. E. Foster. bibliog Am Concrete Inst J 25:45-63 S '53

American society for testing materials committee meetings on concrete, Detroit, March 2-6. Rock Prod 56:154+ Ap '53

American society for testing materials committees consider cement and concrete. Concrete 61:42-3+ Ap '53

ASTM 56th annual meeting, Atlantic City, June 28-July 3; with abstracts of papers on cement and concrete. Rock Prod 56:182+ Ag '53

Annual better concrete conference, 4th, Ames, Iowa, March 19-20. Rock Prod 56:160+ My '53

Concrete envelope prevents cable migration. B. M. Carothers. il Elec World 139:174 My 18 '53

Experience with fly-ash blends in a test pavement built in 1938. W. T. McClenahan. il Eng N 150:32-4 Mr 12 '53

Extent to which concrete quality control is being applied and the results thereof; discussion. R. Ward and others. Chem & Ind p 1242 D 20 '52

Fly ash, its effects when used in plastic concrete and concrete products. Rock Prod 56:186-8 F '53

CONCRETE—*Continued*

High-density concrete. Rock Prod 55:181 D '52

Highway department tests fly-ash in pavement mixes. W. L. Chilcote. il Eng N 149: 40-1 O 23 '52; Abstract. Elec World 139:62 Ja 12 '53

Introduction to the vacuum concrete processes; abstract. I. Leviant. Engineering 175:266 F 27 '53

Panel discussion of concrete problems; abstracts of A.C.I. annual meeting papers. Am Concrete Inst J 24:sup30-3 Ap '53

Prospective chemistry of cement and concrete (cont). N. C. Rockwood. diags Rock Prod 55:90-2 N '52; 56:154-7 Ja; 110+ Mr; 101-3 Je; 174+ Ag '53 (to be cont)

Quality concrete school at Georgia Tech, Feb. 2-4. Rock Prod 56:166-7+ Mr '53

Some recent developments in concrete technology. D. A. Stewart. il diags Engineering 174:313-15, 354-6 S 5-12 '52

Use of lightweight concretes; discussion. T. Whitaker and others. Chem & Ind p 1240-1 D 20 '52

See also

Bridges, Concrete
Cement
Concrete, Reinforced
Concrete construction
Concrete lining
Pavements, Concrete
Roads, Concrete
Sakrete

Aggregate

Alkali reactivity of natural aggregates in western United States. W. Y. Holland and R. H. Cook. bibliog il maps Min Eng 5: Trans 991-7 O '53; Abstract. Rock Prod 56: 140 Ap '53

Basalt rock makes pelletized aggregates. il Concrete 61:3-5+ Ap '53

Blending aggregates for concrete units; Shelby concrete products. W. B. Lenhart. il diags Rock Prod 55:195+ O '52

Building material; glass balloons offer lightweight aggregate for plaster, concrete; made by blowing up grains of clay in a special furnace. Iron Age 170:114-15 O 2 '52

California's concrete aggregate resources. B. Tremper and E. D. Drew. maps Rock Prod 56:147-9+ Ja '53

Clay bubbles form new clay aggregate; Kanamite. il Brick & Clay Rec 121:46-7 O '52

Concrete and concrete aggregates specifications. Rock Prod 56:170 My '53

Concrete pumped through rubber hose now possible with new aggregate; Kanamite. J. Neff. il Roads & Eng Constr 90:116+ O '52

Cooling of aggregate for Vaitarna dam. Engineer 195:281 F 20 '53

Crushed limestone aggregates for concrete. K. Mather. bibliog il diags Min Eng 5: Trans 1022-8 O '53; Abstract. Rock Prod 56:140 Ap '53

Denie's company starts bloated clay plant. il Concrete 61:3-5 Je '53

Expanded blast furnace slag for use as light weight concrete aggregate. R. W. Miller. bibliog il Blast F & Steel Pl 41:635-8+ Je '53

Extensive revisions made in concrete aggregate specifications. Concrete 61:7-8 Ja '53

Fire tests on expanded slag block walls. il Concrete 60:3-7 N '52

From sand and gravel to lightweight aggregate; Kentucky light aggregates, inc. W. B. Lenhart. flow sheet il Rock Prod 56: 70-4 S '53

Good concrete depends on good aggregate. R. F. Blanks. il diags Civil Eng 22:651-5+ S '52; Same. Roads & Eng Constr 91:142+ Ap '53

Heating aggregates in bins. W. J. Shore. diags Rock Prod 55:193-4+ O '52

High-quality aggregate from rejected material; Owatonna aggregates corp. W. B. Lenhart. flow sheets il Rock Prod 56:56-61 Jl '53

Laboratory tests of aggregates treated by the heavy media process; abstract. D. L. Bloem. Rock Prod 56:109 Ap '53

Lightweight aggregates; expanded shale. J. W. Shaver. il map Concrete 61:3-6+ O '53

Lightweight aggregates from argillaceous raw materials. F. O. Anderegg. Rock Prod 55:122 D '52

Lightweight concrete for lower construction costs. J. A. Murlin. il diags Am Concrete Inst J 23:37-44 S '51; Discussion. 24:44^1-44^4 pt 2 D '52

Method of petrographic examination of aggregates for concrete. K. Mather and B. Mather. il Am Soc T M Proc 50:1288-312 bibliog(p 1308-12); Discussion. 1312-13 '50

New lightweight aggregate; Kanamite. Rock Prod 55:120 N '52

Pelletizer mixer can control size and quality of pellets. il Brick & Clay Rec 123:49 Ag '53

Plant improves gravel dredged from river bed; Dravo corporation. il diag Constr Methods 35:71+ S '53

Production of commercial blast furnace slag. F. Hubbard. bibliog Am Concrete Inst J 24:713-19 Ap '53

Prospective chemistry of cement and concrete; structural chemistry of aggregates in and out of concrete. N. C. Rockwood. Rock Prod 55:90-2 N '52

Prospective chemistry of cement and concrete; structural chemistry of some of the minerals in concrete aggregates. N. C. Rockwood. diags Rock Prod 56:154-7 Ja '53

Ready-mixed concrete business; selecting and handling aggregates. J. A. Nicholson. il Rock Prod 56:163-5 Mr; 226-9+ Ap '53

Short talks on lightweight slag concrete. H. E. de Weerdt. Concrete 61:16+ Jl; 12+ Ag '53

Specifications for aggregates and ready mixed concrete; abstract. J. R. Gilbert. Rock Prod 56:105-7 Ap '53

Sydney foamed slag as a lightweight aggregate; abstract. M. R. Foran and others. Roads & Eng Constr 91:145-6+ Ag '53

Your drum pelletizer still tops for pellet formation. Brick & Clay Rec 123:55 Jl '53

Air entrainment

Air-entrained concrete; abstract. L. E. Andrews. Roads & Sts 96:65-6 F '53

Alcohol method of test for measuring air entrained in green concrete. Concrete 60: 20-1 D '52

ASTM evaluates additions and admixtures. Concrete 60:28+ D '52

Concrete; air entrainment vs. vibration. N. C. Rockwood. Rock Prod 56:53 S '53

Effect of admixtures on air content and strength of portland cement concrete. J. C. Dalton. Concrete 61:9-10+ Ja '53

Effect of vibration on air content of mass concrete. W. O. Crawley. il Am Concrete Inst J 24:909-20 Je '53; Discussion. 25: 920^1-920^2 pt 2 D '53

Exploratory tests to develop a method for determining the air content of hardened concrete. A. Klein and others. diag Am Soc T M Proc 50:1283-7 '50

Investigation of methods to determine air content of mass concrete. T. B. Kennedy. diag Concrete 60:18+ D '52

Linear traverse and point-count methods of measuring entrained air in concrete. il Concrete 60:16+ D '52

Producer views the ready-mixed concrete business; air-entrained concrete. J. A. Nicholson. il Rock Prod 56:154-6 My; 192-4+ Je '53

Virtues of air-entrained concrete. N. C. Rockwood. Rock Prod 56:47+ My '53

Bibliography

Current reviews of significant contributions in foreign and domestic publications. Published in monthly numbers of Journal of the American concrete institute

Cinder concrete

Cinder concrete manufacturers summer meeting, Atlantic City, Aug. 11-13; with abstracts of papers. Rock Prod 55:139+ N '52

Cracks

U.S. Corps of engineers' regulations for the use of concrete masonry; prevention of wall cracking. D. L. Chaney. Concrete 61: 8-10 F '53

Curing

Accepted methods of curing cement-concrete pavements. il Roads & Eng Constr 91:100-1+ Ja '53

CONCRETE—Curing—*Continued*

Automatic continuous curing kiln; Builders co. cures block. L. D. Minsk. il plan diag Rock Prod 56:213-15+ Ap '53

Block plant accelerates curing with Duo boilers; Southeastern construction, inc. il Concrete 61:38-9 F '53

Curing pipe with supersaturated steam. il Concrete 61:3-5+ Ag '53

Curing system for quality block; Quillian's concrete co. L. Roberts. il Rock Prod 56: 151-3 My '53

Cutting cost of high pressure curing. W. J. Shore. diags Rock Prod 56:204+ Je '53

Effect of delay in applying concrete curing membrane. B. Tremper. Roads & Sts 96: 86-8 Mr '53

Effect of time of application of sealing compound on the quality of concrete. G. E. Burnett and M. R. Spindler. il Am Concrete Inst J 24:193-200 N '52; Discussion. 25:200^{1}-200^{6} pt 2 D '53

Forum on curing concrete products. plan Rock Prod 55:189+ D '52

Gas-fired steam boiler replaces coal in curing concrete block. il Concrete 61:34 S '53

High-pressure steam curing. Concrete 61:8+ Jl; 16+ Ag '53

High-pressure steam used for 44 years; Crume brick co. il Concrete 61:18+ S '53

Physical properties of high-pressure steam-cured concrete block. il Am Concrete Inst J 24:745-56 Ap '53

Small capacity plant uses autoclave steam curing; Arkhola sand & gravel co. W. B. Lenhart. il Rock Prod 55:196-7 O '52

Steam curing effect on concrete strength. V. B. Pickett. il Concrete 60:8-10 D '52; Discussion. H. W. Easterly. 61:12+ Jl '53

Cutting

Concrete cutter gets lift on wall demolition job. il Constr Methods 35:118 Ag '53

Concrete saw. il Blast F & Steel Pl 41:544 My '53

Motorized rotary drill saves 95 per cent time in drilling concrete. il Elec World 139:176+ My 18 '53

Thermic boring through reinforced concrete. Roads & Sts 96:88 S '53

Water cooled diamond drill cuts concrete. il Heat & Ven 50:130 My '53

Whoever heard of sawing vertically up a concrete wall; illustrations with text. Constr Methods 35:62-3 My '53

Durability

Strength and durability of concrete containing Chicago fly ash. G. W. Washa and N. H. Withey. Am Concrete Inst J 24:701-12 Ap '53

Why type II cement? F. H. Jackson. Am Soc T M Proc 50:1210-24; Discussion. il 1225-34 '50

Failure

Failure of concrete under combined tensile and compressive stresses. G. M. Smith. il Am Concrete Inst J 25:137-40 O '53

See also
Concrete—Cracks

Finishing

Coating concrete blocks in advance; Kem-Krete. il Bsns W p54 Ja 10 '53

Kem-Krete; Sherwin-Williams' new color-glaze block coating. E. G. Hurst. il Concrete 61:42+ Ja '53

Rainbow on the wall; an organic glazed coating for concrete building blocks. il Chem W 72:47-8 Ja 10 '53

Freezing

Correlation between laboratory accelerated freezing and thawing and weathering at Treat Island, Maine. T. B. Kennedy and K. Mather. il Am Concrete Inst J 25:141-72 O '53

Early freezing of non-air-entraining concrete. D. C. McNeese. bibliog Am Concrete Inst J 24:293-300 D '52

Mixing

See Concrete mixing

Moisture content

U.S. Corps of engineers' regulations for the use of concrete masonry; prevention of wall cracking. D. L. Chaney. Concrete 61:8-10 F '53

Prestressing

Beam made of lightweight concrete tested. il Concrete 61:26+ Mr '53

Behavior of composite T-beams with prestressed and unprestressed reinforcement. S. Revesz. il diags Am Concrete Inst J 24: 585-92 F '53; Correction. 24:sup7 Mr '53

Builder finds prestressing can be taken in stride. il diags Eng N 149:35-7 O 16 '52

Cable trusses prestress bridge; Villeneuve-St Georges bridge near Paris. il diag Eng N 150:50+ Ap 30 '53

Canadian engineers review progress in prestressed concrete construction. il Eng N 150:25-6 Je 4 '53

Continuous bridge girder prestressed in a single operation. F. Leonhardt. il plan diags Civil Eng 23:18-21 Ja '53

Continuous prestressed concrete beams. F. Leonhardt. il plan diags Am Concrete Inst J 24:617-34 Mr '53; Discussion. 25:636^{1}-636^{3} pt 2 D '53

Cost analysis of prestressed structures. C. Stainer. Concrete 61:6-7 F '53

Design and construction of a fully vibration-controlled forging hammer foundation. A. M. Klein and J. H. A. Crockett. il diags Am Concrete Inst J 24:421-44 Ja '53; Same cond. Civil Eng 23:6-12 Ja '53

Designer-contractor firms advance prestressed concrete abroad. L. Coff. il Eng N 149:56+ D 11 '52

Designing for continuity in prestressed concrete structures. A. L. Parme and G. H. Paris. diags Am Concrete Inst J 23:45-64 S '51; Discussion. 24:64^{1}-64^{16} pt 2 D '52

Determining cable profiles for prestressed concrete beams. E. Geer. diags Am Concrete Inst J 24:301-4 D '52

Economical design of prestressed concrete beams. D. P. Billington. diags Am Concrete Inst J 25:73-87 S '53

Engineering-base building for British European airways. il plan Engineering 174:521-4 O 24 '52

Equivalent rectangle in prestressed concrete design. J. J. Peebles. diags Am Soc C E Proc 79 [no 187]:1-11 Ap '53

Factories for prestressing; big business in Pennsylvania. il Eng N 150:35-8 Ja 15 '53

Factory produces prestressed buildings. il Eng N 150:31-2 Mr 19 '53

Fire resistance of prestressed concrete. Engineer 195:404 Mr 13 '53; Engineering 175:311 Mr 6 '53

Fire resistance of prestressed concrete. J. Feld and others. Am Concrete Inst J 24: 153-5 O '52

Forge support proves tough. il diag Eng N 149:46-7 D 11 '52

Free-span prestressed concrete bridge. U. Finsterwalder. il Am Concrete Inst J 24:225-32 N '52

Garage roof of prestressed block beams. A. M. Lount and L. Schenker. il diag Concrete 61:32+ F '53

How to lower prestressing costs. P. W. Abeles. il diags Eng N 149:32-4 O 30 '52

Large prestressed concrete bridge units made with lightweight aggregates; Carter-Waters corp. T. Brown. il Rock Prod 56:152-3 S '53

Lift-slab prestressed for two new buildings. diags Eng N 150:39 Ap 16 '53

Long prestressed girder in Belgium carries 6,700 kips. G. Magnel. il Civil Eng 23:111 F '53

Looking to the future in prestressed concrete construction. J. F. Jelley. Am Concrete Inst J 24:485-8 Ja '53

Low-cost warehouse with prestressed girders. il diags Eng N 150:41-3 Je 11 '53

Lower Tampa Bay bridge construction; off-site concreting cuts open-water hazards. il map diag Eng N 150:36-7+ F 26 '53

Maryland's prestressed bridge. diags Midwest Eng 5:10+ F '53; Same. Concrete 61: 16+ Mr '53; Same. Roads & Sts 96:84-5 Mr '53; Same. Am Concrete Inst J 24:sup44-5 Ap '53; Same. Pub Works 84:62+ Jl '53

New fatigue machine tests prestressed concrete. il Eng N 149:76 O 9 '52

CONCRETE—Prestressing—*Continued*

New prestressed concrete ideas discussed at Western conference. Eng N 149:76 D 4 '52
New system for prestressing beams devised. il Civil Eng 22:907 O '52
Novel hammer foundation. R. Hammond. il diags Engineer 195:573-5 Ap 17 '53
Objection to alternate designs voiced at prestressed concrete conference. Eng N 150:26 My 7 '53
Ohio's first prestressed bridge. F. J. Cordova. il Am Concrete Inst J 24:155-7 O '52
Ohio's first prestressed concrete bridge. il diags Concrete 60:18+ N '52
Plastic tubing for prestressing cables. il Eng N 150:180 F 19 '53
Precast prestressed concrete units for a sea wall. diags Engineer 195:364-5 Mr 6 '53
Pressure pipe project in Pakistan. F. L. Fitzpatrick. il Rock Prod 56:145-7 My '53
Prestressed beams using concrete blocks developed by the H.E.P.C. il diag Roads & Eng Constr 90:112-13+ O '52
Prestressed bridge in British Columbia; abstract. A. L. van den Brandeler. Roads & Eng Constr 91:128+ Ag '53
Prestressed concrete bridge structure in Florida. Engineer 194:764 D 5 '52
Prestressed concrete full-scale beam test planned at Lehigh. il diags Roads & Sts 96:86 Ap '53
Prestressed concrete girders span college hall at Manhattanville college. C. Dobell. il Am Concrete Inst J 24:457-66 Ja '53; Same. Concrete 61:3-6+ My '53
Prestressed concrete grandstand at baseball stadium, Sherbrooke, Que.; abstract. G. M. Demarque. Roads & Eng Constr 91:128 Ag '53
Prestressed concrete hangars at London airport. il diags Engineer 194:579-81 O 31 '52
Prestressed concrete makes rapid progress in the United States. M. J. Holley, jr. il Civil Eng 23:1-5 Ja '53; Am Concrete Inst J 24:401-8 Ja '53; Abstract. Rock Prod 55:198-9 O '52
Prestressed-concrete pipe failure is attributed to wire corrosion. Eng N 150:24 My 7 '53
Prestressed concrete railway bridge. il diags Engineer 194:805-6 D 12 '52
Prestressed concrete railway bridge of record span completed at Rotherham, England. D. H. Lee. il diags Civil Eng 23:26-9 Ja '53
Prestressed concrete station roof. Engineer 195:307 F 27 '53; diags Engineering 175:508 Ap 17 '53
Prestressed concrete wins place in Massachusetts bridge program. J. C. Rundlett. diags Am Concrete Inst J 24:469-83 Ja '53; Same cond. il Civil Eng 23:13-17+ Ja '53
Prestressed girder sets new record; span over the Samoggia in Italy. il Eng N 150:57 Ja 29 '53
Prestressed girders eliminate columns to free parking garage entrance area. il plan diags Arch Rec 112:179-80 D '52
Prestressed girders support garage floor. il plan diags Eng N 149:38-9 N 13 '52
Prestressed machine-made block assemblies. il Concrete 61:6-8+ Ag '53
Prestressed railway ties in Germany. il diags Concrete 61:6-7 Jl '53
Prestressed roof beams span 150 ft in hangar at London airport. il Eng N 149:61-2 N 13 '52
Prestressed small bridge in Florida. il Concrete 61:22 Mr '53
Prestressed spirally reinforced columns. G. M. Nordby. il diag Concrete 60:5-6 O '52
Prestressing and thin-shell design draw largest technical attendance; Structural division of the American society of civil engineers. Concrete 60:9-10 O '52
Prestressing gains ground. P. F. Blair, jr. Eng N 149:12+ N 27 '52
Prestressing of concrete for road paving studied by British research board. il diags Roads & Eng Constr 91:93-5+ S '53
Prestressing warrants study to simplify construction methods. M. M. Upson. il diags Civil Eng 23:22-5 Ja '53; Same cond. Am Concrete Inst J 24:489-96 Ja '53
Prestressing; will bars boost use? G. G. Carr. il diag Iron Age 170:40 O 16 '52
Pretensioned units for prestressed concrete bridge built on job. il diags Roads & Sts 95:52-5 O '52
Properties of concrete for prestressing. H. J. Gish. Rock Prod 55:133+ N '52
Proposed definitions and notations for prestressed concrete. Am Concrete Inst J 24:85-8 O '52; Discussion. 25:88^1-88^{10} pt 2 D '53
Rubber-tipped vibrators used on prestressed job. il diag Roads & Sts 96:104 F '53
Simple prestressing methods on Tampa Bay bridge. H. W. Richardson. il Constr Methods 35:54-9 S '53
Small prestressed bridges of England. il Concrete 60:22-3+ D '52
Statically indeterminate prestressed concrete building. diags Engineer 196:86-7 Jl 17 '53
Tacoma plant features factory prestressing. il Concrete 61:3-6 S '53
Test post-tensioned highway slabs. il Eng N 150:59-61 Ap 23 '53
Testing a prestressed concrete bridge. Engineer 194:648 N 14 '52; Same. Engineering 174:737 D 5 '52
Tests establish construction procedures for prestressed beams in Tampa Bay bridge. W. E. Dean. il diags Civil Eng 23:30-4 Ja '53; Same. Am Concrete Inst J 24:409-20 Ja '53
Tests of pre-cast prestressed concrete floor beams. il diag Engineering 174:154-5 Ag 1 '52
University of Colorado research into prestressed concrete problems. Concrete 60:6-7 O '52
What do we need to know about prestressed concrete? N. M. Newmark. Am Concrete Inst J 24:445-56 Ja '53; Same cond. Civil Eng 23:35-9 Ja '53
World's heaviest prestressed building girders; garage building. T. Y. Lin. il plan diags Civil Eng 22:927-31 N '52

Protection

Protective coatings and slime growths. H. Heukelekian and E. S. Crosby. il Sewage & Ind Wastes 25:869-74 Ag '53

Setting

Concrete setting must be controlled. diags Power Eng 57:96 Je '53

Specifications

Concrete and concrete aggregates specifications. Rock Prod 56:170 My '53
Recent changes in Corps of engineers concrete construction specifications. G. L. Otterson and W. L. Burgess. Am Concrete Inst J 24:721-7 Ap '53

Strength

Effect of admixtures on air content and strength of portland cement concrete. J. C. Dalton. Concrete 61:9-10+ Ja '53
Effect of straining rate on the compressive strength and elastic properties of concrete. D. Watstein. il diags Am Concrete Inst J 24:729-44 Ap '53
Effects of capping materials on apparent strength of concrete specimens. F. M. Masters, jr. and A. C. Loewer, jr. bibliog il Concrete 60:30+ N '52
Impact resistance of concrete. il Concrete 61:22+ My '53
Properties of concrete for prestressing. H. J. Gish. Rock Prod 55:133+ N '52
Shape factor and compressive strength of lightweight concretes. F. O. Anderegg. bibliog Am Concrete Inst J 24:333-4 D '52
Some problems in flexural testing. F. A. Blakey. bibliog diags Engineer 196:98-100 Jl 24 '53
Steam curing effect on concrete strength. V. B. Pickett. il Concrete 60:8-10 D '52; Discussion. H. W. Easterly. 61:12+ Jl '53
Strength and durability of concrete containing Chicago fly ash. G. W. Washa and N. H. Withey. Am Concrete Inst J 24:701-12 Ap '53
Ultimate strength and cracking resistance of lightly reinforced beams. S. D. Lash. bibliog diag Am Concrete Inst J 24:573-82 F '53; Discussion 25:584^1-584^2 pt 2 D '53

Testing

ASTM evaluates additions and admixtures. Concrete 60:28+ D '52

CONCRETE—Testing—*Continued*

Correlation between laboratory accelerated freezing and thawing and weathering at Treat Island, Maine. T. B. Kennedy and K. Mather. il Am Concrete Inst J 25:141-72 O '53

Development of a device for the direct measurement of compressive stress. R. W. Carlson and D. Pirtz. il diags Am Concrete Inst J 24:201-15 N '52; Discussion. 25:216^{1}-216^{16} pt 2 D '53

Early freezing of non-air-entraining concrete. D. C. McNeese. bibliog Am Concrete Inst J 24:293-300 D '52

Effect of delay in applying concrete curing membrane. B. Tremper. Roads & Sts 96:86-8 Mr '53

Effect of straining rate on the compressive strength and elastic properties of concrete. D. Watstein. il diags Am Concrete Inst J 24:729-44 Ap '53

Effect of vibration on bond strength of concrete. W. J. Larnach. Roads & Eng Constr 91:86 F '53

Effects of capping materials on apparent strength of concrete specimens. F. M. Masters, jr. and A. C. Loewer, jr. bibliog il Concrete 60:30+ N '52

Exploratory tests to develop a method for determining the air content of hardened concrete. A. Klein and others. diag Am Soc T M Proc 50:1283-7 '50

Laboratory tests on vibration of concrete. S. G. Bergstrom. bibliog il diag Am Concrete Inst J 24:893-908 Je '53

Method for preparing SR-4 strain gages for embedment in concrete. E. C. Thoma and R. E. Schneebeli. diags Am Concrete Inst J 24:305-16 D '52

Pulse techniques applied to dynamic testing. J. R. Leslie. bibliog il diags Am Soc T M Proc 50:1314-23; Discussion. 1324-6 '50

Supersonics test concrete structures. J. R. Leslie. il diag Elec World 139:79 My 4 '53

Testing of concrete mixers. R. H. H. Kirkham. bibliog diags Engineer 195:232-5, 286-8, 321-3, 341-3 F 13-Mr 6 '53

Vibration

Airfield pavement vibrated full-depth; U.S. air force base just outside Lincoln, Neb. il Eng N 150:39 Je 18 '53

Application of vibration to concrete pavement construction. A. G. Timms. bibliog il Am Concrete Inst J 24:933-42 Je '53

Compacting concrete by vibration. H. S. Meissner. diags Am Concrete Inst J 24:885-92 Je '53

Concrete; air entrainment vs. vibration. N. C. Rockwood. Rock Prod 56:53 S '53

Density measurement of concrete slabs using gamma radiation. E. E. Smith and A. C. Whiffin. bibliog il diag Engineer 194:278-81 Ag 29 '52

Effect of vibration on air content of mass concrete. W. O. Crawley. il Am Concrete Inst J 24:909-20 Je '53; Discussion. 25:920^{1}-920^{2} pt 2 D '53

Effect of vibration on bond strength of concrete. W. J. Larnach. Roads & Eng Constr 91:86 F '53

Is high-speed vibrating effective? il Constr Methods 35:149 My '53

Laboratory tests on vibration of concrete. S. G. Bergstrom. bibliog il diag Am Concrete Inst J 24:893-908 Je '53

New vibration techniques on western project. il Roads & Sts 95:126 N '52

Symposium on vibration of concrete; abstracts of A.C.I. annual meeting papers. Am Concrete Inst J 24:sup 14-16+ Ap '53

Vibration of mass concrete. L. H. Tuthill. il Am Concrete Inst J 24:921-31 Je '53

Vibration practices in pipe, precast, and block manufacture. G. W. Washa. il Am Concrete Inst J 24:945-52 Je '53

Vibration practices in structural work. J. H. Banker. il Am Concrete Inst J 24:953-6 Je '53

CONCRETE, Effect of alkalies on

Alkali reactivity of natural aggregates in western United States. W. Y. Holland and R. H. Cook. bibliog il maps Min Eng 5: Trans 991-7 O '53; Abstract. Rock Prod 56:140 Ap '53

CONCRETE, Effect of sulfates on

Sulfate resistant cement; primary requirement for sulfate resistant concrete pipe. D. G. Miller. bibliog Am Concrete Inst J 24: 217-24 N '52; Discussion. il 25:224^{1}-224^{10} pt 2 D '53

CONCRETE, Ready-mixed. See Concrete mixing—Ready-mixed concrete

CONCRETE, Refractory

Castable refractory use growing. J. D. McCullough. Midwest Eng 5:26 N '52; Same cond. Steel 131:134 N 10 '52

Refractory concrete for tunnel kiln car tops. N. M. Thompson. il Am Cer Soc Bul 32: 1-4 Ja 15 '53

CONCRETE, Reinforced

Bar spacing table for cross-sectional drawings. M. Benoit. diags Am Concrete Inst J 25:93-4 S '53

Behavior of composite T-beams with prestressed and unprestressed reinforcement. S. Revesz. il diags Am Concrete Inst J 24:585-92 F '53; Correction. 24:sup7 Mr '53

Bundled reinforcement. H. M. Hadley. diags Am Concrete Inst J 24:157-9 O '52

Determining the position of reinforcement in concrete; Covermeters. il Engineering 175: 640 My 15 '53

Fire resistance of reinforced concrete floors. J. P. Thompson. plan diags Am Concrete Inst J 24:677-80 Mr '53

Hyperbolic cooling towers of reinforced concrete. G. L. Blanchard and P. Rogers. diag Am Concrete Inst J 24:sup28-9 Je '53

Inelastic deformation of reinforced concrete in relation to ultimate strength. H. J. Cowan. bibliog diags Engineering 174:276-8 Ag 29 '52

Jap pillbox resists American air tools. il Comp Air Mag 58:257 S '53

Old steel tops new concrete frame. il Constr Methods 35:80-1+ Ap '53

Reinforced concrete thin shell structures. C. S. Whitney. il diags Am Concrete Inst J 24:521-36 F '53

Reinforcement used at high stresses in concrete bridges abroad. A. Holmberg. il Eng N 150:57-8 My 7 '53

Skew shell utilized in unusual roof. F. Candela. il plans diags Am Concrete Inst J 24: 657-64 Mr '53

They didn't start at bottom and work up on this job; 70-ft. deep looping pit. il diag Constr Methods 35:170-1 Je '53

U-block for beams in hurricane areas. il Concrete 61:8+ My '53

Ultimate strength and cracking resistance of lightly reinforced beams. S. D. Lash. bibliog diag Am Concrete Inst J 24:573-82 F '53; Discussion. 25:584^{1}-584^{2} pt 2 D '53

Yield-line theory for the ultimate flexural strength of reinforced concrete slabs. E. Hognestad. diags Am Concrete Inst J 24: 637-56 bibliog(30 titles, p654-6) Mr '53

See also

Concrete construction

Steel, Reinforcing

Standards

Proposed manual of standard practice for detailing reinforced concrete highway structures. plans diags Am Concrete Inst J 24: 857-60 My '53

Proposed standard specification for the design and construction of reinforced concrete chimneys; reported by ACI committee 505. diags Am Concrete Inst J 24:353-400 Ja '53

Testing

Diagonal tension in T-beams without stirrups. P. M. Ferguson and J. N. Thompson. il diags Am Concrete Inst J 24:665-75 Mr '53; Discussion. 25:676^{1}-676^{3} pt 2 D '53

Effect of compressive reinforcement on the plastic flow of reinforced concrete beams. G. W. Washa and P. G. Fluck. il diags Am Concrete Inst J 24:89-108 O '52; Discussion. 25:108^{1}-108^{8} pt 2 D '53

Effect of sustained overload on the strength and plastic flow of reinforced concrete beams. G. W. Washa and P. G. Fluck. il Am Concrete Inst J 25:65-72 S '53

CONCRETE, Reinforced—Testing—*Continued*

Inelastic behavior in tests of eccentrically loaded short reinforced concrete columns. E. Hognestad. il diags Am Concrete Inst J 24:117-39 O '52; Discussion. 25:140^1-140^{14} pt 2 D '53

Instrumentation and strain measurement in welded wire fabric reinforced concrete slabs. E. W. Carlton and J. H. Senne. il plan diag Am Concrete Inst J 24:141-52 O '52

Prestressed spirally reinforced columns. G. M. Nordby. il diag Concrete 60:5-6 O '52

Spacing of spliced bars in tension pull-out specimens. S. J. Chamberlin. il Am Concrete Inst J 24:261-74 D '52

CONCRETE arches. See Arches, Concrete

CONCRETE bins. See Bins, Concrete

CONCRETE blocks

Billboards made of concrete masonry units. P. V. Taylor. il Concrete 61:26 S '53

Block maker shows wares in new building; Ryan builders supplies, ltd. il Concrete 61:30+ O '53

Cinder concrete manufacturers summer meeting, Atlantic City, Aug. 11-13; with abstracts of papers. Rock Prod 55:139+ N '52

Coating concrete blocks in advance; Kem-Krete. il Bsns W p54 Ja 10 '53

Concrete block industry in Japan. G. Kimura. il Concrete 61:12+ Mr '53

Concrete blocks, set on springs, cushion air-operated drop stamps. il Automotive Ind 108:92+ Ja 1 '53

Fire tests on expanded slag block walls. il Concrete 60:3-7 N '52

Kem-Krete; Sherwin-Williams' new color-glaze block coating. E. G. Hurst. il Concrete 61:42+ Ja '53

Mechanical unloader handles block cubes. il Concrete 61:18 Je '53

Prestressed machine-made block assemblies. il Concrete 61:6-8+ Ag '53

Rainbow on the wall; an organic glazed coating for concrete building blocks. il Chem W 72:47-8 Ja 10 '53

Simplified block handling saves manpower; Holroyd co. il Brick & Clay Rec 123:48 Ag '53

Tetrapod; science develops a jetty block. il Eng N 150:32+ Ja 8 '53

Texas concrete masonry association annual meeting, Corpus Christi, May 1-2. Concrete 61:30+ Je '53; Rock Prod 56:206+ Je '53

Wall panels of assembled soffit block. il Concrete 61:10+ O '53

Wisconsin concrete products association products and methods forum. Rock Prod 56:175-7+ F '53

Manufacture

Arizona contractor makes block, ready-mix. il Concrete 61:3-5+ F '53

Atlanta Aggregate's new plant at Marietta. il Concrete 61:20+ Jl '53

Automatic continuous curing kiln; Builders co. cures block. L. D. Minsk. il plan diag Rock Prod 56:213-15+ Ap '53

Bergen machine and tool co. announces Tri-Matic block machine. il Concrete 61:42 Mr '53

Block plant accelerates curing and Duo boilers; Southeastern construction, inc. il Concrete 61:38-9 F '53

Canadian firm doubles output with new block machine; Einarson and French co. il Concrete 61:34+ F '53

Continuous kiln features block production. flow sheet il Concrete 61:25-6+ Ja '53

Curing system for quality block; Quillian's concrete co. L. Roberts. il Rock Prod 56:151-3 My '53

Designing plants; a better concrete; Ytong. E. Ahlstedt. Chem Eng 59:340+ N '52

Gas-fired steam boiler replaces coal in curing concrete block. il Concrete 61:34 S '53

High-pressure steam used for 44 years; Crume brick co. il Concrete 61:18+ S '53

Market forty million block annually; Builders supply corp. W. B. Lenhart. il Rock Prod 56:136-8+ Jl '53

Rebuilt block plant; John A. Mercier brick co. H. C. Persons. il Rock Prod 56:149-50 S '53

Small capacity plant uses autoclave steam curing; Arkhola sand & gravel co. W. B. Lenhart. il Rock Prod 55:196-7 O '52

Solutions to some block-making problems; questions and answers. Concrete 61:12+ My '53

Vibration practices in pipe, precast, and block manufacture. G. W. Washa. il Am Concrete Inst J 24:945-52 Je '53

Marble facing

Producing block with smooth marble aggregate faces in various colors. il diags Rock Prod 56:148-50 My '53

Testing

High-pressure steam curing. Concrete 61:8+ Jl; 16+ Ag '53

Physical properties of high-pressure steam-cured concrete block. il Am Concrete Inst J 24:745-56 Ap '53

CONCRETE brick

Wisconsin concrete products association products and methods forum. Rock Prod 56:175-7+ F '53

CONCRETE bridges. See Bridges, Concrete

CONCRETE buildings

Factory produces prestressed buildings. il Eng N 150:31-2 Mr 19 '53

Reinforced-concrete workshop. il Engineering 176:93 Jl 17 '53

Three concrete structures in Denmark. il plan diags Arch Rec 112:202-4 N '52

Waterproofing concrete block buildings. Pub Works 83:112 D '52

See also

Concrete construction

Concrete houses

CONCRETE coating

Concrete coat for outdoor tanks. il Factory Management 111:121 O '53

CONCRETE construction

Airport terminal building bids sought. il Eng N 150:52 Ja 29 '53

Barracks erected with vacuum lift. il Constr Methods 35:65-6+ Je '53

Block-houses on the last frontier; defense installations in Alaska. G. W. Avery. il Concrete 60:28+ O '52

Bolt boxes for concrete construction. Engineer 194:268 Ag 22 '52; Engineering 174:266 Ag 29 '52

Careful planning a necessity in building with precast concrete. B. H. Prock. il Am Concrete Inst J 24:833-40 My '53

Concrete for radiation shielding. E. J. Callan. bibliog(29 titles) diags Am Concrete Inst J 25:17-44 S '53

Concrete requirements for Niagara Power development total 1,750,000 cu. yd. il Roads & Eng Constr 91:89-91+ Ja '53

Continuous pour raises silo fast. J. W. MacDonald. il Constr Methods 35:64+ Ja '53

Design and construction of a fully vibration-controlled forgings hammer foundation. A. M. Klein and J. H. A. Crockett. il diags Am Concrete Inst J 24:421-44 Ja '53; Same cond. Civil Eng 23:6-12 Ja '53

Engineering-base building for British European airways. il plan Engineering 174:521-4 O 24 '52

Europe leads in product development. G. E. Olson. il Rock Prod 56:231-4+ Ja '53

Fabrication and erection of precast enclosure framing for one-story barracks. F. J. Twaits and M. M. Denn. il Am Concrete Inst J 24:825-32 My '53

Factory production and field installation of thin ribbed precast panels. C. D. Wailes, jr. il Am Concrete Inst J 24:797-808 My '53

Four-step construction of warehouses; Prock construction co. T. Brown. il Constr Methods 35:55-61 Ag '53

Improved methods for fireproofing structures. C. J. Kuhasz. il diags Pet Processing 7:1616-19 N '52

Improved techniques lower cost of concrete construction. J. R. Hardin. il Civil Eng 22:948-52 N '52

Indians make longhouse of concrete masonry. il Concrete 61:26 Je '53

Lift-slab prestressed for two new buildings. diags Eng N 150:39 Ap 16 '53

Look at CBS' $12-million tv studio in Los Angeles. il plans Eng N 149:34-6 N 20 '52

CONCRETE construction—*Continued*

New bleach plant poured for Hollingsworth & Whitney. il Paper Ind 35:39 Ap '53

New ideas in plant construction. il Mod Ind 24:45-9 N '52

New twist in wall construction pays off. il Constr Methods 35:59-60 Ap '53

1953 construction may hit $44 billion following record $42.3 billion in 1952. Concrete 61:14+ Mr '53

Ohio college students build dormitory. il Concrete 60:11 D '52

Precast cable terminal pedestals cut costs. S. J. Ward. il Elec World 139:148+ Ap 20 '53

Precast concrete sandwich panels as used in B.C. mill construction; Columbia cellulose co. C. H. Klotz. il Paper Ind 35:47-8 Ap '53

Precast panels slid into slotted columns. il Concrete 61:22+ F '53

Precast warehouses go up fast, and cheaply. H. T. Perez. il Constr Methods 35:104-5+ S '53

Prestressed beams using concrete blocks developed by the H.E.P.C. il diag Roads & Eng Constr 90:112-13+ O '52

Prestressed concrete girders span college hall at Manhattanville college. C. Dobell. il Am Concrete Inst J 24:457-66 Ja '53; Same. Concrete 61:3-6+ My '53

Prestressed concrete hangars at London airport. il diags Engineer 194:579-81 O 31 '52

Prestressed concrete makes rapid progress in the United States. M. J. Holley, jr. il Civil Eng 23:1-5 Ja '53; Am Concrete Inst J 24:401-8 Ja '53

Prestressed girders eliminate columns to free parking garage entrance area. il plan diags Arch Rec 112:179-80 D '52

Refinements in thin-shell concreting. il Constr Methods 34:52-6 D '52

Reinforced concrete factory near Harwich; Standard yeast co. il diag Engineer 194: 647-8 N 14 '52; Engineering 175:220-1 F 13 '53

Scientists shake building in seismic test; rigid-frame building for Reader's digest in Tokyo. il plan diag Eng N 149:36-7 D 25 '52

Structural support for plant loads. A. G. Hult. il diags Power 97:80-3+ Ja '53

Thin-shell precast concrete; economical framing system. A. Amirikian. Am Concrete Inst J 24:775-9 My '53

Thin-shell rib panels site fabricated in plastic molds. M. R. Montgomery and T. G. Atkinson. il diags Am Concrete Inst J 24: 781-94 My '53

This contractor runs construction costs down by building ramps and purchasing buggies. R. H. Lewis. il Constr Methods 35:93+ Je '53

This portable cover speeds concrete work; protection in rainy or hot weather. il plan Am Bld 75:83-5 F '53

Tilt-up construction cuts cost on airline warehouse. il Am Concrete Inst J 24:sup40 Ap '53

Tilt-up forms pare building costs. il Eng N 149:72 N 13 '52

Tilt-up lift-slab job speeded by fork-lift truck. il Eng N 150:44 My 14 '53

Tilt-up walls have own columns, beams; St Louis produce market. il diags Arch Rec 113:169-72 Ja '53

U.S. Corps of engineers' regulations for the use of concrete masonry; prevention of wall cracking. D. L. Chaney. Concrete 61:8-10 F '53

U.S. tests concrete panel to pare barrack costs. Eng N 149:41 O 30 '52

Unusual cantilevers, trusses built for concrete hangar for the British overseas airways corp. il Eng N 150:68+ My 28 '53

Vermiculite concrete for roofs and wall panels. L. A. Castell. il Rock Prod 56: 196-7 Je '53

Vibration practices in structural work. J. H. Banker. il Am Concrete Inst J 24:953-6 Je '53

Warehouse tilted up for $5 per sq ft. il Eng N 149:37 O 16 '52

See also

Arches, Concrete
Bridges, Concrete
Concrete, Reinforced
Concrete blocks
Concrete houses
Concrete lining
Concrete mixing
Concrete piling
Concrete placing
Concrete slabs
Dams, Concrete
Floors, Concrete
Footings, Concrete
Reservoirs, Concrete
Swimming pools, Concrete
Walls, Concrete
Water pipes, Concrete
Wharves, Concrete

Bibliography

Current reviews of significant contributions in foreign and domestic publications. Published in monthly numbers of Journal of the American concrete institute

Cost

Cost analysis of prestressed structures. C. Stainer. Concrete 61:6-7 F '53

Cost of blast design. J. J. Gould. Am Concrete Inst J 24:sup25-6 Je '53

Lightweight concrete for lower construction costs. J. A. Murlin. il diags Am Concrete Inst J 23:37-44 S '51; Discussion. 24:44^1-44^4 pt 2 D '52

Design

Analysis of beam-and-girder framing with known column settlements. P. M. Ferguson. Am Concrete Inst J 24:77-84 O '52

Bracing walls for multistory buildings. N. B. Green. diags Am Concrete Inst J 24:233-48 N '52

Chart for direct concrete beam design. J. N. Robinson. Eng N 149:45 N 6 '52

Comprehensive numerical method for the analysis of earthquake resistant structures. C. S. Whitney and others. bibliog diag Am Concrete Inst J 23:5-28 S '51; Discussion. 24:28^1-28^3 pt 2 D '52

Construction plant for shell structures should be carefully coordinated. A. Tedesko. il diags Civil Eng 23:96-101 F '53; Same. Am Concrete Inst J 24:505-20 F '53

Design of concrete structures, A.C.I. sessions. Rock Prod 56:154+ Ap '53

Design of prismatic shells. H. Craemer. diags Am Concrete Inst J 24:549-63 F '53; Correction. 24:sup7 Mr '53; Discussion. 25:564^1-564^3 pt 2 D '53

Designing for continuity in prestressed concrete structures. A. L. Parme and G. H. Paris. diags Am Concrete Inst J 23:45-64 S '51; Discussion. 24:64^1-64^{16} pt 2 D '52

Equivalent rectangle in prestressed concrete design. J. J. Peebles. diags Am Soc C E Proc 79 [no 187]:1-11 Ap '53

Inelastic behavior in tests of eccentrically loaded short reinforced concrete columns. E. Hognestad. il diags Am Concrete Inst J 24:117-39 O '52; Discussion. 25:140^1-140^{14} pt 2 D '53

Limit analysis of voussoir (segmental) and concrete arches. A. Kooharian. diags Am Concrete Inst J 24:317-28 D '52; Discussion. 25:328^1-328^4 pt 2 D '53

Long prestressed girder in Belgium carries 6,700 kips. G. Magnel. il Civil Eng 23:111 F '53

Multistory buildings designed to resist earthquakes. J. J. Gould. il plans Am Concrete Inst J 23:29-36 S '51; Discussion. 24:36^1-36^2 pt 2 D '52

Nebraska holds home design competition. Concrete 61:44 Jl '53

Precast concrete offers new possibilities for design of shell structures. P. L. Nervi. il diags Am Concrete Inst J 24:537-48 F '53; Same cond. Civil Eng 23:85-8 F '53

Prestressing and thin-shell design draw largest technical attendance; Structural division of the American society of civil engineers. Concrete 60:9-10 O '52

Prestressing warrants study to simplify construction methods. M. M. Upson. il diags Civil Eng 23:22-5 Ja '53; Same cond. Am Concrete Inst J 24:489-96 Ja '53

Shell design adaptable to many uses. C. S. Whitney. il diags Civil Eng 23:89-91 F '53; Same. tables Am Concrete Inst J 24:521-36 F '53

CONCRETE construction—Design—*Continued*
Stability of thin-shelled structures. G. C. Ernst. bibliog il diags Am Concrete Inst J 24:277-91 D '52; Discussion. 25:292^1-292^5 pt 2 D '53
Statically indeterminate prestressed concrete building. diags Engineer 196:86-7 Jl 17 '53
Stirrup design in beams. J. Moyse. Am Concrete Inst J 24:958-9 Je '53
Stresses in frame of Grand Coulee pumping plant reduced by construction procedure. E. J. Sollid. diags Civil Eng 23:318-19 My '53
Ultimate strength design; abstracts of A.C.I. annual meeting papers. Am Concrete Inst J 24:sup 18-19 Ap '53
What do we need to know about prestressed concrete? N. M. Newmark. Am Concrete Inst J 24:445-56 Ja '53; Same cond. Civil Eng 23:35-9 Ja '53
World's heaviest prestressed building girders; garage building. T. Y. Lin. il plan diags Civil Eng 22:927-31 N '52

Failures

Failure of warehouse trusses probed. il Eng N 150:25 My 28 '53
Florida board probes waffle slab collapses; Seelye report upholds Youtz-Slick method. diag Arch Forum 97:45 S '52
Why waffle slab failed. E. E. Seelye. diags Eng N 149:10+ O 23 '52

Fire resistance

Blown-on concrete fireproofs walls. il Safety Maint & Prod 105:65 My '53
Fire resistance of prestressed concrete. Engineer 195:404 Mr 13 '53; Engineering 175: 311 Mr 6 '53
Fire resistance of prestressed concrete. J. Feld and others. Am Concrete Inst J 24: 153-5 O '52
Fire resistance of reinforced concrete floors. J. P. Thompson. plan diags Am Concrete Inst J 24:677-80 Mr '53
Fire tests on expanded slag block walls. il Concrete 60:3-7 N '52

Forms

Collapsible inner form simplifies pipe-casting in trenches. il diags Constr Methods 34:74-5 N '52
Concrete forms that adjust to the job; Rubora. il Am Bld 74:231 O '52; Arch Forum 97:210 S '52
Concrete waffle formed with plastic pans. il diag Eng N 149:39-40 O 2 '52
Electric-powered wrench speeds this job; illustrations with text. Constr Methods 35: 132 Ag '53
Hydraulic jacks expand the versatility of slip-form concreting. il diag Constr Methods 35:64-6+ My '53
Metal forms used for casting concrete steps. il Am Bld 75:204+ F '53
Simple forms make the job go; construction of an army Signal corps depot. il diag Constr Methods 35:56-60 F '53

Pipe embedding

Follow good piping practices when installing snow melting coils. G. D. Lain. diags Heating-Piping 25:111-12 My '53
Heat flow analysis in panel heating or cooling sections; floor slab on earth with uniformly spaced pipes or tubes at the slab-earth interface. H. B. Nottage and others diags Heating-Piping 25:115-18 My '53
Protecting snow melting piping against corrosion. Heating-Piping 25:103 Je '53
Snow melting piping keeps garage ramps in use. il Heating-Piping 25:99 O '53

Rapid construction

Anderson finds the quick way up in grain elevators; Anderson truck terminal, Maumee, Ohio. il Bsns W p52-4+ Jl 4 '53
Beams prestressed for fast erection of mezzanine; plant of The Glenn L. Martin co. F. W. Wilcox. il diags Eng N 150:32+ Je 18 '53
Flat-plate office building goes up fast. il plan diag Eng N 150:36-8 Ja 8 '53
From start to finish, 30 days, 176 working hours. il Constr Methods 35:159-60 S '53
Water tops 600-ft dam built in 52 days. F. L. Flood, jr. il Constr Methods 35:70-1+ Ja '53

Safety measures

Scaffolding goes underground! il Safety Maint & Prod 106:27-8 Ag '53
Scaffolding with built-in stairs, safety feature on Buffalo bridge job. il diag Roads & Sts 96:56-8 Jl '53

Standards

Proposed revision of minimum standard requirements for precast concrete floor units (ACI 711-46). il diags Am Concrete Inst J 24:169-84 N '52
Recent changes in Corps of engineers concrete construction specifications. G. L. Otterson and W. L. Burgess. Am Concrete Inst J 24:721-7 Ap '53
T-beam design and the 1951 ACI building code. B. A. Wasil. diags Am Concrete Inst J 24:185-91 N '52; Discussion. 25:192^1-192^4 pt 2 D '53
See also
Floors, Concrete—
Standards

Tables, calculations, etc.

Nomographic chart for uniformly distributed load. L. S. Muller. Am Concrete Inst J 24: 862-4 My '53; Correction. 25:sup 10 O '53

CONCRETE construction, Subaqueous
Concrete caissons and long spans. E. G. Lambert and G. L. Coltrin. il diags Elec West 111:94-6 Ag '53
Deep-water piers are precast concrete. il Eng N 150:30-1, cover Mr 5 '53
Heavy precast members make sturdy tower foundations. L. L. Wise. il Constr Methods 35:60-2 Mr '53
Lock number five, Monongahela river, refaced by grout-intrusion method. J. S. Minnotte. il map plan diags Civil Eng 22:872-5 O '52
Replacing disintegrated concrete in underwater bridge pier. I. L. Glassgold. il Roads & Eng Constr 91:91-3+ Jl '53
Transmission-line piers built under water without cofferdams. B. C. Gerwick, jr. il diags Civil Eng 23:221-5 Ap '53
See also
Piers, Concrete
Wharves, Concrete

CONCRETE construction, Underground
See also
Concrete construction in mines

CONCRETE construction in mines
Arches for main haulage timbering; weak roof held by concrete block arches; Hillman coal & coke co. W. W. Dartnell. il diag Min Cong J 39:30-2+ My '53
Mechanical handling aids building of new underground hoist room; New Park mining co. J. B. Huttl. il diags Eng & Min J 153:100-2 N '52
Testing of roof-bolting systems installed in concrete beams. R. G. Wuerker. bibliog(42 titles) il diags Min Eng 5:Trans 606-14 Je '53

CONCRETE construction in winter
Big top speeds job during winter months in frigid Alaska; extension to power plant of Ladd air force base. il Constr Methods 35: 80-1+ My '53
Develop electric heating for cold-weather pours. Eng N 150:56+ Mr 5 '53
Here is job practice for cold weather concreting; sketches and instructions by Austin co. Constr Methods 34:60-1 O '52
Portable shelters permit winter reservoir construction. il Pub Works 84:88 Ag '53

CONCRETE curbs. See Curbs, Concrete

CONCRETE dams. See Dams, Concrete

CONCRETE finishing. See Concrete—Finishing

CONCRETE floors. See Floors, Concrete

CONCRETE footings. See Footings, Concrete

CONCRETE houses
Detroit store holds concrete home exhibit. il Concrete 60:24 N '52
Housing project has gunited walls. J. B. Jessup. il Eng N 149:43-4 N 6 '52
Low-cost concrete housing. K. P. Billner. il plan Concrete 61:30-2 Mr '53

CONCRETE houses—*Continued*

Low-cost mass production of concrete houses. T. Brown. il Rock Prod 56:257-8 Ag '53

Nebraska concrete masonry homes competition winners announced. il Am Concrete Inst J 25:sup 13 O '53; Concrete 61:40, 42 O '53; Rock Prod 56:193+ O '53

Precast panels form house wall veneer. il diag Concrete 61:20 F '53

Precast units; backbone of Unity housing; Unity farm. T. Brown. il Concrete 60:8-10 N '52

CONCRETE industry

NRMCA reviews three per cent transportation tax. Concrete 61:28-9 O '53

National ready mixed concrete association 23d annual meeting, San Francisco, Feb. 23-26; with abstracts of papers. Rock Prod 56:216-21+ Ap '53

Ready-mixed concrete business; planning for profits. J. A. Nicholson. il Rock Prod 55:189-92 O; 136-8+ N; 183-5+ D '52; 56: 235-7 Ja; 181-5 F; 163-5 Mr '53

See also

Concrete products industry

Directories

Ready-mix concrete suppliers, Canada. Roads & Eng Constr 91:192 Je '53

Taxation

Truck weight distance tax. E. J. Nunan. Rock Prod 56:148+ Ap '53

California

Ready mix in the San Francisco Bay region. W. B. Lenhart. il Rock Prod 56:238-41 Ja '53

Japan

Concrete block industry in Japan. G. Kimura. il Concrete 61:12+ Mr '53

CONCRETE laboratories

Basalt rock co. opens research laboratory for concrete products. il Rock Prod 55:134-5 N '52

CONCRETE lining

Big equipment speeds construction of Boqueron tunnels. E. D. Phinney. Civil Eng 23:156+ Mr '53

Elevator shaft lined with Blocrete. il Eng N 150:78 F 26 '53

Lining pumped for B&O tunnel number one. il diag Constr Methods 34:64+ N '52

Trimmer and concrete liner finish Colorado canal; illustrations with text. Constr Methods 35:55 F '53

CONCRETE mixers

Four-axled truck boosts payloads. il Eng N 150:98 Ap 30 '53

Testing

Mixing efficiency of truck mixers. Concrete 60:14-15 D '52

Testing of concrete mixers. R. H. H. Kirkham. bibliog diags Engineer 195:232-5, 286-8, 321-3, 341-3 F 13-Mr 6 '53

CONCRETE mixing

Calculations of the concrete mix. E. M. Brickett. Concrete 61:20+ Je '53

Checking the water-cement ratio of concrete; Ratiometer. il Engineering 175:608 My 8 '53

Concrete mix design. G. B. Sowers. Am Concrete Inst J 24:959-60 Je '53

Concrete mixing and placing. T. B. Appel, jr. il Constr Methods 35:94-5+ O '53 (to be cont)

Concrete requirements for Niagara Power development total 1,750,000 cu. yd. il Roads & Eng Constr 91:89-91+ Ja '53

Effect of admixtures on air content and strength of portland cement concrete. J. C. Dalton. Concrete 61:9-10+ Ja '53

Good concrete depends on good aggregate. R. F. Blanks. il diags Civil Eng 22:651-5+ S '52; Same. Roads & Eng Constr 91:142+ Ap '53

New instrument tests concrete mix; water-cement ratio found electrically. il Eng N 150:51+ Je 11 '53

Proposed recommended practice for selecting proportions for concrete. Am Concrete Inst J 25:105-20 O '53

See also

Concrete—Aggregate

Ready-mixed concrete

Arizona contractor makes block, ready-mix. il Concrete 61:3-5+ F '53

Building material firm adds ready mix; Eide and Swanson bros. co. il Concrete 60:3-5 D '52

Federal communications commission asked to remove bar on ready mix radio. Concrete 61:32+ Mr '53

Ohio association holds ready mix school, Toledo, Jan. 21-23; abstracts of papers. Concrete 61:24+ Ap '53

Ohio ready mixed concrete association annual meeting, Cincinnati, June 23-24. Rock Prod 56:234+ Ag '53

Practical pointers on the use of ready-mixed concrete. il Roads & Eng Constr 91:96-8+ S '53

Ready mix concrete invades California desert; navy's Elk Hills reservation. il Concrete 61:40 F '53

Ready mix in the San Francisco Bay region. W. B. Lenhart. il Rock Prod 56:238-41 Ja '53

Ready mix now a $500 million industry. V. P. Ahearn. Concrete 61:16 My '53

Ready mix truck drivers are salesmen; Dayton builders concrete co. il Concrete 61:10+ Ap '53

Ready-mixed concrete business; planning for profits. J. A. Nicholson. il Rock Prod 55: 189-92 O; 136-8+ N; 183-5+ D '52; 56:235-7 Ja; 181-5 F; 163-5 Mr; 226-9+ Ap; 154-6 My; 192-4+ Je; 139-41 Jl; 264-6+ Ag; 154-6+ S '53

Rebuild plant for both transit and premixed concrete; Twin City ready mix concrete co. L. A. Castell. il Rock Prod 56: 133-4+ Jl '53

Small ready-mix concrete plants. H. K. Church. il Rock Prod 56:159-62 S '53

Specifications for aggregates and ready mixed concrete; abstract. J. R. Gilbert. Rock Prod 56:105-7 Ap '53

Two-way radio in Columbus ready mix plant. H. L. Pinkerton. il Concrete 61:12+ S '53

See also

National ready mixed concrete association

CONCRETE pavements. See Pavements, Concrete

CONCRETE piers. See Piers, Concrete

CONCRETE piling

Columns in pipe simplify bridge piers. il Constr Methods 35:84-5+ F '53

Deep-water wharf on the Gambia river. il diags Engineering 175:1-5, pl 1 Ja 2 '53

Method devised for making grout-soil mixed-in-place piles. il Roads & Eng Constr 90:89+ D '52

Novel rigging swings pile plumb. il diags Constr Methods 34:52-6 N '52

Old piles jacketed at water line; Chowan River bridge in North Carolina. il Roads & Sts 95:50-2 N '52

Piles placed in drilled holes are used to hold new wharf on steep slope. il diag Eng N 150:48 My 14 '53

CONCRETE pipe association, American. See American concrete pipe association

CONCRETE pipes. See Pipes, Concrete

CONCRETE placing

Air-placed concrete eliminates mortar. il Constr Methods 35:54 Ag '53

Air-placed concrete speeds large sewer construction. il Pub Works 84:66 Mr '53

Concrete mixing and placing. T. B. Appel, jr. il Constr Methods 35:94-5+ O '53 (to be cont)

Concrete placed off trestle at Folsom. il Constr Methods 35:50-5 Mr '53

Concrete-placing cableway installation on Quebec power development. L. Zarifi. il diags Roads & Eng Constr 91:132-6+ Ap '53

Construction plant for shell structures should be carefully coordinated. A. Tedesko. il diags Civil Eng 23:96-101 F '53; Same. Am Concrete Inst J 24:505-20 F '53

Dragline handles cableway bucket in novel hook-up. il Roads & Sts 96:66 Ap '53

Little cableway places concrete. il Constr Methods 35:61 Ap '53

CONCRETE placing—*Continued*
They didn't start at bottom and work up on this job; 70-ft. deep looping pit. il diag Constr Methods 35:170-1 Je '53
See also
Concrete construction, Subaqueous
Concrete lining

CONCRETE plants
Rebuild plant for both transit and premixed concrete; Twin City ready mix concrete co. L. A. Castell. il Rock Prod 56:133-4+ Jl '53
Small ready-mix concrete plants. H. K. Church. il Rock Prod 56:159-62 S '53
See also
Concrete construction
Concrete mixing—Ready-mixed concrete
Concrete placing
Concrete products plants

Accounting

Cost accounting for a ready mix plant. J. W. Murphy. il Concrete 61:6-8+ Je '53; Abstract. Rock Prod 56:115+ Ap '53

Employees

Use of arbitration in the resolution of labor disputes; abstract. H. G. Jahncke. Rock Prod 56:218-19 Ap '53

Equipment

Atlanta Aggregate's new plant at Marietta. il Concrete 61:20+ Jl '53
Batch loader pivots over stockpiles. il Constr Methods 35:134+ Ja '53
Batching plant with stock bin and scale bin; Cimco twin bin concrete batcher. il Roads & Eng Constr 90:88 O '52
Building material firm adds ready mix; Eide and Swanson bros. co. il Concrete 60:3-5 D '52
Efficient water heating system for ready mix concrete plant. il Concrete 61:34 O '53
Site batch plant supplies two pavers. J. Grindrod. il Constr Methods 35:64-6+ Ap '53

Management

Ready-mixed concrete business; planning for profits. J. A. Nicholson. il Rock Prod 55:189-92 O; 136-8+ N; 183-5+ D '52; 56:235-7 Ja; 181-5 F; 163-5 Mr; 226-9+ Ap; 154-6 My; 192-4+ Je; 139-41 Jl; 264-6+ Ag; 154-6+ S '53

Radio communication

Federal communications commission asked to remove bar on ready mix radio. Concrete 61:32+ Mr '53
Industrial radio. F. B. Hagan. Rock Prod 56:221+ Ap '53
Two-way radio in Columbus ready mix plant. H. L. Pinkerton. il Concrete 61:12+ S '53; Abstract. Rock Prod 56:234+ Ag '53

Safety measures

Safety in the ready mixed concrete plant. il Concrete 61:3-5 Jl '53
Wright ready mix puts accent on safety. il Concrete 61:14+ O '53

CONCRETE products
Cellular calcium silicate products; preformed foamed concrete products. S. Dilnot. Rock Prod 55:110+ O '52
Europe leads in product development. G. E. Olson. il Rock Prod 56:231-4+ Ja '53
Fly ash, its effects when used in plastic concrete and concrete products. Rock Prod 56:186-8 F '53
See also
Concrete blocks
Concrete piling
Concrete slabs
Concrete tile
Pipes, Concrete
Sewer pipes, Concrete

CONCRETE products association, National. See National concrete products association

CONCRETE products company of America
Factories for prestressing; big business in Pennsylvania. il Eng N 150:35-8 Ja 15 '53

CONCRETE products industry
Breaking into a tough market; Adams concrete products co. il Rock Prod 55:187+ D '52
Concrete block, ready mix, silo staves; Watertown, (S.D.) cement product co. il Concrete 60:6-7 D '52
Concrete products association of Washington fall meeting, Yakima, Sept. 12-13. Concrete 60:28-9+ N '52
Concrete products manufacturers association of South Dakota annual convention, Pierre, April 27-28. Concrete 61:32+ Je '53
Concrete units make another gain, 1952. Brick & Clay Rec 122:25 F '53
Products output booms in North Central states. R. Foss. il Rock Prod 55:182 D '52
Southeastern products makers organize. Concrete 61:38-40+ Ja '53
Wisconsin concrete products association annual meeting, 33d, Milwaukee, Jan. 14-15. Concrete 61:12+ F '53; Rock Prod 56:175-7+ F '53

Advertising

Block promotion plan is all-inclusive; Black-Brollier, inc. il Concrete 60:20-3 O '52

Europe

Europe leads in product development. G. E. Olson. il Rock Prod 56:231-4+ Ja '53
John L. Strandberg tours Europe to observe concrete masonry practices. T. Brown. il Rock Prod 56:178-9 F '53

CONCRETE products plants
California block manufacturers inspect Arizona plant. Rock Prod 56:268+ Ag '53
Developing a big business in a small town; Salina concrete products, inc. T. Brown. il Rock Prod 55:177-9+ D '52
Diversity characterizes Knoxville plant; Southern cast stone co. il Concrete 61:7-10 S '53
Expand market with new products; Atlas building products co. W. B. Lenhart. il Rock Prod 56:260-3 Ag '53
Marietta nears large-scale expansion of precast concrete panel facilities. Concrete 61:34 Ja '53
Tacoma plant features factory prestressing. il Concrete 61:3-6 S '53

Equipment

Blending aggregates for concrete units; Shelby concrete products. W. B. Lenhart. il diags Rock Prod 55:195+ O '52
Concrete fills new roles; Livesay window co. il Comp Air Mag 58:50 F '53
Continuous kiln features block production. flow sheet il Concrete 61:25-6+ Ja '53
Curing system for quality block; Quillian's concrete co. L. Roberts. il Rock Prod 56:151-3 My '53
High-pressure steam used for 44 years; Crume brick co. il Concrete 61:18+ S '53
Market forty million block annually. Builders supply corp. W. B. Lenhart. il Rock Prod 56:136-8+ Jl '53
Rebuilt block plant; John A. Mercier brick co. H. C. Persons. il Rock Prod 56:149-50 S '53
Small capacity plant uses autoclave steam curing; Arkhola sand & gravel co. W. B. Lenhart. il Rock Prod 55:196-7 O '52
Story of Cuban Pete and Havana Hank; Fleming manufacturing co. R. B. Stockton. il Concrete 61:32+ Ag '53
They produce concrete block untouched by hand; Bickerstaff concrete products co. il Brick & Clay Rec 123:53-4 S '53

CONCRETE research
Colloid science vs. chemistry for rock products. N. C. Rockwood. bibliog Rock Prod 56:73+ Je '53
Effect of admixtures on air content and strength of portland cement concrete. J. C. Dalton. Concrete 61:9-10+ Ja '53
Keys to concrete research. N. C. Rockwood. Rock Prod 56:93+ Ag '53
Long-time study of cement performance in concrete; the heats of hydration of the cements. G. J. Verbeck and C. W. Foster. bibliog diag Am Soc T M Proc 50:1235-62 '50
NCMA sponsors research project at Iowa state college. Concrete 61:47 O '53
Research projects previewed; abstracts of A.C.I. annual meeting papers. Am Concrete Inst J 24:sup27+ Ap '53
Research studies in the concrete field. J. W. Shaver. il Concrete 60:3-5 O; 16 N '52
Ten-year report on the long-time study of cement performance in concrete. bibliog il Am Concrete Inst J 24:601-14 Mr '53; Discussion. 25:616^1-616^3 pt 2 D '53

CONCRETE research—*Continued*
University of Colorado research into prestressed concrete problems. Concrete 60:6-7 O '52
See also
Concrete laboratories

CONCRETE reservoirs. See Reservoirs, Concrete

CONCRETE roads. See Roads, Concrete

CONCRETE roofs. See Roofs, Concrete

CONCRETE slabs
Bison long-span hollow roof slabs. il Engineering 175:605 My 8 '53
Careful planning a necessity in building with precast concrete. B. H. Prock. il Am Concrete Inst J 24:833-40 My '53
Concrete slabs are piled neatly and seven-high by outsize straddle truck in casting yard. il Constr Methods 35:123+ Mr '53; Same. Concrete 61:46+ Ap '53
Concrete slabs make good replacement. il Constr Methods 35:142-3 S '53
Fabrication and erection of precast enclosure framing for one-story barracks. F. J. Twaits and M. M. Denn. il Am Concrete Inst J 24:825-32 My '53
Factory production and field installation of thin ribbed precast panels. C. D. Wailes, jr. il Am Concrete Inst J 24:797-808 My '53
Four million square feet of thin-shell rib panels for roof framing. C. C. Zollman. il diags Am Concrete Inst J 24:809-23 My '53
Lapped church roof of precast slabs. il Concrete 60:14 O '52
Los Angeles lift-slab is heaviest yet. il Eng N 149:44 N 20 '52
Make floor slabs by centrifugal method; Permacrete products corp. W. B. Lenhart. il diag Rock Prod 56:151 S '53
Navy uses vacuum lift for precast panels. il Concrete 61:18+ Mr '53
Precast concrete panels cast in plastic molds; abstracts of A.C.I. annual meeting papers. Am Concrete Inst J 24:sup24-6 Ap '53
Pre-cast concrete slabs reduce building cost. S. J. Ward. il Elec World 139:110 Ap 6 '53
Precast panels slid into slotted columns. il Concrete 61:22+ F '53
Vermiculite concrete for roofs and wall panels. L. A. Castell. il Rock Prod 56:196-7 Je '53
Yield-line theory for the ultimate flexural strength of reinforced concrete slabs. E. Hognestad. diags Am Concrete Inst J 24:637-56 bibliog(30 titles, p654-6) Mr '53

Testing

Density measurement of concrete slabs using gamma radiation. E. E. Smith and A. C. Whiffin. bibliog il diag Engineer 194:278-81 Ag 29 '52
Instrumentation and strain measurement in welded wire fabric reinforced concrete slabs. E. W. Carlton and J. H. Senne. il plan diag Am Concrete Inst J 24:141-52 O '52

CONCRETE steps. See Steps, Concrete

CONCRETE stone
Specification for cast stone. Am Concrete Inst J 24:sup 18-19 My '53

CONCRETE swimming pools. See Swimming pools, Concrete

CONCRETE tile
Building faced with tiled concrete panels. L. Lindin. il diags Concrete 60:24-6+ O '52
See also
Drain tile

CONCRETE walls. See Walls, Concrete

CONCRETE water pipes. See Water pipes, Concrete

CONCRETE wharves. See Wharves, Concrete

COND-AL. See Aluminum alloys

CONDEMNATION of land. See Eminent domain

CONDENSATION
Capillary condensation in contact zones between nonporous particles of a powder. I. Higuti and H. Utsugi. diag J Chem Phys 20:1180-1 Jl '52
Condensation of nitrogen in a hypersonic nozzle. W. W. Willmarth and H. T. Nagamatsu. bibliog il J Ap Phys 23:1089-95 O '52
Heat transfer in condensation; effect of heat capacity of condensate. L. A. Bromley. bibliog Ind & Eng Chem 44:2966-9 D '52
Heat transfer in condensation; effect of temperature variation around a horizontal condenser tube. L. A. Bromley, R. S. Brodkey and N. Fishman. diag Ind & Eng Chem 44:2962-6 D '52
Investigation into the condensation of steam. H. Hampson and N. Özisik. bibliog il diags Inst Mech Eng Proc (B) 1B no 7:282-93; Discussion. 293-4 '52
Statistical mechanical theory of irreversible condensation. H. Reiss. bibliog diag J Chem Phys 20:1216-27 Ag '52; Correction. 21:1312 Jl '53
Theory of catalysis of nucleation by surface patches. D. Turnbull. J Chem Phys 20:1327 Ag '52
Theory of fusion and condensation. A. J. F. Siegert. bibliog Phys R 90:97-101 Ap 1 '53
See also
Atmospheric nucleation
Condensers (steam)

CONDENSATION, Chemical
Acetylene studies; the condensation of acetylene with aldehydes and ketones. E. D. Bergmann, M. Sulzbacher and D. F. Herman. bibliog J Ap Chem 3:39-42 Ja '53
Condensations by sodium; the effect of sodium reagents on indicators. A. A. Morton and F. H. Bolton. bibliog Am Chem Soc J 75:1146-8 Mr 5 '53
Preparation of a cyclopentenone by the Stobbe condensation. D. L. Turner. bibliog Am Chem Soc J 75:1257-8 Mr 5 '53
Reactions catalyzed by anion exchange resins; Knoevenagel condensation; aldol condensation. M. J. Astle and J. A. Zaslowsky. Ind & Eng Chem 44:2867-71 D '52
Sodium dispersions in acetoacetic ester condensation. O. D. Frampton and J. F. Nobis. bibliog diags Ind & Eng Chem 45:404-10 F '53
Sodium hydride as a condensing agent with acylaminomalonates in the synthesis of amino acids. J. Shapira, R. Shapira and K. Dittmer. bibliog Am Chem Soc J 75:3655-7 Ag 5 '53
Stobbe condensation with dimethyl homophthalate. H. J. E. Loewenthal and R. Pappo. Chem Soc J p4799-804 D '52
See also
Michael reaction

CONDENSERS
Design of cooler condensers for vapor-gas mixtures. G. H. Bras. bibliog Chem Eng 60:223-6 Ap; 238-40 My '53
Forming and assembling condenser coils and fins. R. Wagner. il diag Mach 59:192-4 Ag '53

CONDENSERS (electricity). See Electric capacitors

CONDENSERS (steam)
Finding condenser air leaks by easy method. P. H. Renfore. Power 97:149 O '53
How to check your condenser losses. F. B. Pyle. Power 97:78-81 Ag '53
How we cured condenser tube corrosion. H. Weldingh. il diag Power 97:78-9 Ja '53
Know your condenser tube joints. A. Levine. il diags Power Eng 56:66-7, 107-8+ D '52

Cleaning

Clean your condensers chemically. J. H. Rusch. il diags Power Eng 57:76-8+ S '53

CONDUCT of life
Two philosophies. F. A. Magoun and R. C. Nyman. il Tech R 55:147-50+ Ja '53

CONDUCTIVITY, Electric. See Electric conductivity

CONDUITS
See also
Electric conduits
Water conduits

CONE family
Versatile Cones. Fortune 47:162 Ja '53

CONE mills corporation
Cone Mills; Old King Denim. il Fortune 47:86-91+ Ja '53

CONELRAD. See Radio broadcasting stations—War measures

CONES

Cone rolling made easy. il Steel 132:122 My 25 '53

Lateral area of right cones and pyramids; reference book sheet. S. H. Heller, jr. diags Product Eng 24:205 Ja '53

Nomograph for the volume of cones and pyramids; reference book sheet. S. R. Heller, jr. diags Product Eng 23:207 N '52

CONESSINE

Constitution of conessine. R. D. Haworth and others. Chem Soc J p 1102-29 Ap '53

CONFECTIONARY

Know-how in processing modern chocolate products; Walter Baker chocolate and cocoa division of General foods corp. il Food Eng 25:96-100 Jl '53

CONFERENCE of local airlines

Nyrop heads local service association. Aviation W 58:21-2 Mr 30 '53

CONFERENCE rooms

Architects' offices; conference rooms; design details, materials, equipment. il plans diags Arch Rec 113:147-53+ Ja '53

CONFERENCES

Conferences; good idea going wrong. Bsns W p68 My 9 '53

Recording facilities for conferences. G. E. Beggs, jr. il diag Electronics 26:186-7 S '53

See also

Employees' conferences

CONFIDENTIAL communications. See Privileged communications

CONGO, Belgian

Colonial big five. H. Solow. il Fortune 46: 113-15+ N '52

Congo, Indonesia, Venezuela loom as new world markets; with maps. Ind Marketing 38:47-50 Mr '53

Congo is in business. H. Solow. il map Fortune 46:106-12+ N '52

Commerce

Imports into Belgian Congo rise sharply. For Comm W 50:9 Jl 20 '53

CONGRESS. See United States—Congress

CONGRESS of industrial organizations

AFL, CIO sign no-raid agreement. Bsns W p 162-3 Je 13 '53

Balance wheel. Bsns W p 147 F 28 '53

Big labor eyes the future. il Bsns W p 128-9 Ja 31 '53

CIO closes ranks. Bsns W p 173-4 Mr 28 '53

CIO will go slow. Bsns W p 152 D 6 '52

Double trouble. Bsns W p 152-3 My 23 '53

Labor's problems; law, leaders; Murray's death a blow to CIO. Bsns W p 154-7+ N 15 '52

No one-man show in CIO. Bsns W p 142+ D 13 '52

Unionism on a plateau. Fortune 46:78+ N '52

Unity; talks but no real urge. Bsns W p 154+ Ap 11 '53

Voice of labor; CIO and the Eisenhower administration. Barron's 33:1 Je 8 '53

Why Reuther? Fortune 47:66+ Ja '53

CONIFERS

See also

Douglas fir

Pine

Spruce

CONJUGATION (chemistry)

Basicity of hydrocarbons; a theoretical treatment of conjugated hydrocarbons. V. Gold and F. L. Tye. Chem Soc J p2184-8 Je '52

Conjugation in sulphones. E. S. Waight. Chem Soc J p2440-2 Je '52

Discoveries among conjugated macrocyclic compounds. R. P. Linstead. bibliog diags Chem Soc J p2873-84 S '53

Hyperconjugation. C. A. Coulson and V. A. Crawford. Chem Soc J p2052-65 Jl '53

Hyperconjugation; an elementary approach. R. C. Ferreira. bibliog J Chem Educ 29: 564-5 N '52

Hyperconjugation in $C_6H_7^+$ and other hydrocarbon ions. L. W. Pickett and others. bibliog diag J Chem Phys 21:1400-1 Ag '53

Influence of conjugation on the ionization of aromatic amines. N. S. Hush. Chem Soc J p684-91 F '53

Properties of the π electron distribution in conjugated system. H. H. Greenwood. J Chem Phys 20:1333 Ag '52

Relationship between hyperconjugation and intramolecular configuration; the ethyl alcoholysis of some derivatives of diphenylmethyl chloride. G. Baddeley and M. Gordon. Chem Soc J p2190-3 Je '52

Steric requirements for three-ring carbonyl hyperconjugation. N. H. Cromwell and G. V. Hudson. bibliog Am Chem Soc J 75:872-4 F 20 '53

CONJUNCTIVITIS

Field treatment of trachoma in North Vietnam. E. Braff and W. Winkiestein. il maps Pub Health Rep 67:1233-6 D '52

CONKLING, Richard A. 1885-1952

Sketch. A. S. Clinkscales. por Am Assn Pet Geologists Bul 36:2066-8 O '52

CONKLING cavern, New Mexico

Fluorine content of associated human and extinct animal bones from the Conkling cavern. T. D. Stewart. bibliog Science 116: 457-8 O 24 '52

CONNECTICUT

See also

Public works—Connecticut

CONNECTING rods

Manufacture

Connecting rod and piston automation; Ford Cleveland engine plant. J. Geschelin. il Automotive Ind 108:64-7+ Ap 1 '53

CONNELLY, John Francis

Businessmen in the news. por Fortune 47: 64 Ap '53

CONSERVATION of resources

Conservation and the public works engineer. E. A. Pratt. il Pub Works 83:57-8+ N '52

Conservation plans on the grid; conference to be held in Washington next March. Bsns W p34 N 15 '52

Conservation yearbook, 1952; a directory and guide to facts, figures and people in American conservation. E. Kauffman, ed. 288p pa $5 Conservation yearbook, 1740 K st, N.W, Washington 6 '52

Program to conserve and develop Nation's energy and raw materials resources developed by NSRB. R. G. Gibbs. Chem & Eng N 31:126 Ja 12 '53

Reference material relating to the military and commercial fields. H. Coonley. Special Lib 44:11-14 Ja '53

See also

Gas, Natural—Conservation

Metals—Conservation

Mines and mineral resources

Petroleum—Conservation

Reclamation of land

Soil conservation

Water conservation

also Mid-century conference on resources for the future

CONSERVATIVE party (Great Britain)

Socialism in conservative Britain. P. Einzig. Comm & Fin Chr 178:117 Jl 9 '53

Tories tighten their grip. Bsns W p 160+ N 8 '52

CONSISTOMETERS

Method for determining pressure and consistency of aerosol coatings. R. W. Morrow and F. S. Palmer. diags Soap & San Chem 28:139-40+ S '52

CONSOLIDATED Edison company of New York

Analysts get inside story of rate increases from Con Ed. il Elec World News ed 138: 46-7 D 22 '52

Bonds offered. Comm & Fin Chr 177:831 F 23 '53

Integration of combined utility operations. G. R. Hadden. il Pub Util 51:596-602 My 7 '53

Public utility securities. O. Ely. Comm & Fin Chr 176:2509 D 25 '52

CONSOLIDATED engineering corporation

New vacuum equipment division to spur Consolidated Engineering. Barron's 33:25+ Ja 12 '53

Tightrope management builds profits in physics lab. il Bsns W p 170-2 N 15 '52

CONSOLIDATED freightways, inc.

Stock sold. Comm & Fin Chr 176:1470 O 20 '52

CONSOLIDATED gas electric light and power company of Baltimore
Bonds offered. Comm & Fin Chr 177:2567 Je 15 '53
Debentures offered to stockholders. Comm & Fin Chr 176:2160-1 D 8 '52

CONSOLIDATED grocers corporation
Net making sharp recovery. Barron's 32: 15+ O 20 '52

CONSOLIDATED natural gas company
Debentures sold. Comm & Fin Chr 177:2351 Je 1 '53
Rate rises may offset high costs. Barron's 33:25-6 Ap 13 '53

CONSOLIDATED Vultee aircraft corporation
Consolidated Vultee's 1952 net income larger. Barron's 33:21 F 9 '53
Convair control gets shuffled again. Bsns W p94-6+ My 2 '53
Convair, where flight makes might. I. U. Cobleigh. Comm & Fin Chr 177:1111 Mr 12 '53
Getting a new angle on aircraft production. il Bsns W p48-50 Ap 18 '53
Odlum relinquishing control. Aviation W 58: 13 Ap 6 '53

CONSOLIDATIONS, Business. See Business consolidations

CONSOWELD, inc.
Consolidated Water Power & Paper and Canadian company form new Wisconsin firm. Paper Ind 35:649-50 S '53

CONSPIRACY
Defendants in Duane Jones case will ask dismissal of verdict for lack of evidence. B. Tolk. Ptr Ink 241:35 N 7 '52
Did they conspire to destroy the Duane Jones agency? verbatim testimony. B. Tolk and R. Webster. Ptr Ink 241:32-32D, 33+ O 24; 36-7+ O 31 '52
Jury gets Duane Jones case. B. Tolk. Ptr Ink 241:34-34B, 35 O 31 '52
Justice Cohalan upholds $300,000 verdict favoring agency head Duane Jones. B. Tolk. Ptr Ink 241:39 N 21 '52

CONSTRUCTION battalions. See United States—Navy—Construction battalions

CONSTRUCTION equipment
Buyer's guide; international directory of construction equipment. Roads & Eng Constr 91:384+ Je '53
Construction equipment for a modern water department. H. Graeser and J. D. Henry. il Pub Works 84:64-7 My '53
Customs tariff; rates levied on importation of construction equipment and materials. Roads & Eng Constr 91:374+ Je '53
Earthmoving and excavating equipment; shipments tabulated. Steel 132:182 Ja 5 '53
East German regime manufactures construction equipment, too. il Constr Methods 35: 58 Ap '53
Electric drives for earthmoving and construction machinery; abstract. D. K. Heiple. diag S A E J 61:83 Jl '53
High-strength steel helps you. A. F. Stuebing. il Constr Methods 35:186+ Jl '53
Imports (including parts) during past three years; Canada. Roads & Eng Constr 91:96 Je '53
Mechanization has revolutionized construction work. F. Donaldson. il Civil Eng 22: 637-45 S '52
Side-cutting Euclid loader speeds Palisades Dam fill. L. I. Wise. il Constr Methods 35:50-3 O '53
Speeding dollar turnover in the equipment business. S. D. Maddock. Roads & Eng Constr 91:128+ F '53; Abstract. Eng N 150: 60-1 F 12 '53
This contractor runs construction costs down by building ramps and purchasing buggies. R. H. Lewis. il Constr Methods 35:93+ Je '53
Tignes dam in French Alps constructed with American equipment. P. A. Montagné. il map plan diags Civil Eng 22:923-6 N '52
Trade names. Roads & Eng Constr 91:310+ Je '53
Tricks from the Paducah atom plant. il Constr Methods 35:82-4+ S '53
See also
Cranes, derricks, etc.
Excavating machinery
Hoisting machinery
Motor trucks in construction work
Roads—Construction equipment
Tractors

Advertising
Heavy construction advertisers show up as screamers. il Ind Marketing 38:121+ O '53

Exhibitions
Public works and municipal services congress and exhibition, Olympia, Nov. 3-8. il Engineer 194:582-3, 625-6 O 31-N 7 '52; Engineering 174:568, 573-4, 595-7, 600, 626-8, 632 O 31-N 14 '52
Public works exhibition, London; electric equipment. il Elec R (Lond) 151:1071-3 N 14 '52
Roadbuilding and construction show at 6th Canadian international trade fair, Toronto, June 1-12. il Roads & Eng Constr 91:119-21 Ag '53

Maintenance and repair
Analyzed oil samples from construction equipment cut maintenance costs. il Constr Methods 35:156-8+ Jl '53
Better tire care increases profits. il Constr Methods 34:112-13+ O '52
Examples of welding heat treated parts. il Roads & Sts 96:50 Ja '53
How M-K keeps $200,000,000 worth of equipment moving. il Roads & Sts 96:78-80 S '53
How to trouble-shoot your hydraulic systems. il diags Constr Methods 35:170-1+ Jl '53
Inventory of manufacturers' manuals on the operation, maintenance and repair of construction equipment. il Constr Methods 35: 65-96 Jl '53
Maintenance in pictures. Constr Methods 35: 79-82 Jl '53
Make it and save money! maintenance formula employed by the Serafini construction co. il Constr Methods 35:98-9+ Jl '53
On-the-job service unit. il plan Constr Methods 35:154 O '53
Parts, an answer to keep equipment running; Euclid road machinery co. and Caterpillar tractor co. il Constr Methods 35:122-4 Jl '53
Power impact tool cuts repair cost on heavy equipment. il Roads & Sts 96:87 Ap '53
Rough on the guy in the middle. Constr Methods 35:152-4 Jl '53
Simple forms cut maintenance paper work. G. M. Perry. Constr Methods 35:118-21 Jl '53
Steel walking crank of 30-cu. yd. shovel reclaimed. J. X. Merkt. il Welding J 32: 864-5 S '53
This army way is the right way; instruction in maintenance, operation and application of heavy engineer equipment, motor vehicles, etc. il Constr Methods 35:148-9 Jl '53
This is old stuff, but worth reviewing; winter weather maintenance. Constr Methods 35: 140+ F '53
What makes a distributor tick? Rish equipment co.; illustrations with text. Constr Methods 35:166-7 Jl '53

Prices
Equipment makers caught in price squeeze. Eng N 149:100 O 23 '52

Renting
Rental-purchase agreements generate tax and accounting problems. M. F. Macdonald. Roads & Eng Constr 91:126+ My '53

Transportation
Airborne construction equipment; abstract. R. G. Alexander. S A E J 60:54 N '52
Trek through Indian jungles; how trained and organized personnel took a fleet of 22-ton earth wagons to Hirakud Dam site. il map Roads & Sts 96:88-9+ F '53

CONSTRUCTION industry manufacturers association
Export managers' division meeting, Chicago. Eng N 150:153-4 My 14 '53

CONSTRUCTION industry stabilization commission. See Wage stabilization board—Construction industry stabilization commission

CONSTRUCTORS, limited
Statement by the chairman. R. S. Dyball. Economist 167:775 Je 13 '53

CONSULTANTS, Business. See Business consultants

CONSULTING engineers
Establishing the objectives and defining responsibilities are important preliminaries to getting what you want from consulting development groups. A. W. Richards. il Product Eng 24:143-7 My '53

CONSUMER contests. See Advertising—Prize contests

CONSUMER credit. See Instalment plan

CONSUMER finance companies. See Finance companies

CONSUMER panels
Baltimore news-post starts consumer panel. Ed & Pub 86:30 Ja 24 '53
Consumer panel operation. R. Ferber. J Marketing 17:246-59 Ja '53

CONSUMERS
Financing business investment in 1952; consumer debts. Survey of Cur Bsns 33:28-9 F '53
How buying habits change. Bsns W p 111-12+ N 22 '52
Lower-cost production for today's and tomorrow's needs; huge consumer demand. A. H. Johnson. Factory Management 111:58-61 My '53
Postwar use of consumer funds. Fed Res Bul 38:967-73 S '52
Some like it hot, some like it cold. Bsns W p64 O 25 '52
Survey of consumer expenditures in 1950; interpretation and use of the results. Mo Labor R 75:425-8 O '52
What pulls motorists to a favorite service station? Bsns W p62+ Mr 21 '53
Why consumers feel bullish; Federal Reserve survey. Bsns W p59 Je 27 '53
Why customers change brands. N. H. Comish. Dun's R 61:29+ Mr '53
See also
Buying habits
Consumer panels

CONSUMERS' contests. See Advertising—Prize contests

CONSUMERS power company
Bonds offered. Comm & Fin Chr 178:239-40 Jl 20 '53
Consumers Power; strikes a balance between rural and industrial customers. P. Sutor. Barron's 33:11-13 Je 1 '53
Rapidly growing gas business important to Consumers Power. Barron's 33:19-20 F 23 '53
Stock offered. Comm & Fin Chr 177:234-5 Ja 19 '53

CONSUMPTION (economics)
Appraisal of consumer market. E. L. Butz. Comm & Fin Chr 177:1429 Ap 2 '53
Consumer spending; its quality responds to changing incomes. L. Licht. Barron's 32:13 D 1 '52
How buying habits change. Bsns W p 111-12+ N 22 '52
Increasing distribution efficiency by better organized research. C. W. Smith. bibliog J Marketing 17:233-45 Ja '53
Postwar use of consumer funds. Fed Res Bul 38:967-73 S '52
Private consumption rises in western Germany. For Comm W 49:10 Ap 20 '53
See also
Buying habits
Consumers
Market research
Prices
Purchasing

Statistics

Back in the market, consumers are buying; sales pickup has manufacturers rolling again; with graphs. Bsns W p32-3 O 25 '52
Expenditures in 1952; personal income, consumption expenditures, and saving. Fed Res Bul 38:1189-92 N '52
Measuring the new norm in consumer buying power today. H. Price. Mag of Wall St 92:72-5+ Ap 18 '53
1952 survey of consumer finances. Fed Res Bul 38:739-55, 861-76, 974-1001 Jl-S '52
1953 survey of consumer finances. Fed Res Bul 39:588-96, 697-703, 816-21, 940-7 Je-S '53
Personal consumption expenditures; Nov.-Dec. 1951-Jan.-Nov. 1952. Survey of Cur Bsns 33:S8 Ja '53 [cont monthly]
Personal consumption expenditures, seasonally adjusted at annual rates, by year and quarter, 1949-51. Survey of Cur Bsns 32:20 N '52
Personal income and spending in the United States, 1939-51; charts and graphs. Economist 165:540 N 22 '52
Regional trade barometers; aids to sales planning; with data on consumer spending and retail sales. M. C. Booss and G. Loesch. map Dun's R 61:30-6 Ap '53
Selected preliminary findings of the 1953 survey of consumer finances. Fed Res Bul 39:217-18 Mr '53
Solved; mystery of the $400 deficit. J. Shoenfeld. il Sales Management 69:46+ N 1 '52
Survey of consumer expenditures in 1950: spending patterns in 91 cities and relation of expenditures to disposable income. M. C. Ruark and A. Hurwitz. Mo Labor R 75:125-33 Ag '52; Correction. 75:262 S '52

CONTACT angle
Alteration of surface properties of gold and silver as indicated by contact angle measurements. F. E. Bartell and J. T. Smith. bibliog diags J Phys Chem 57:165-72 F '53
Contact angles and boundary energies of a low energy solid. F. M. Fowkes and W. M. Sawyer. bibliog J Chem Phys 20:1650 O '52
Surface roughness as related to hysteresis of contact angles; the system paraffin-water-air. F. E. Bartell and J. W. Shepard. bibliog diags J Phys Chem 57:211-15 F '53
Surface roughness as related to hysteresis of contact angles; the systems paraffin-ethylene glycol-air, paraffin-methyl cellosolve-air and paraffin-methanol-air. J. W. Shepard and F. E. Bartell. J Phys Chem 57:458-63 Ap '53
Surface roughness as related to hysteresis of contact angles; the systems paraffin-3-molar calcium chloride solution-air and paraffin-glycerol-air. F. E. Bartell and J. W. Shepard. diags J Phys Chem 57:455-8 Ap '53
Thermodynamic derivation of Wenzel's modification of Young's equation of contact angles; together with a theory of hysteresis. R. J. Good. bibliog diag Am Chem Soc J 74:5041-2 O 20 '52
Wetting characteristics of cellulose derivatives; interrelations of contact angles. B. R. Ray and F. E. Bartell. bibliog J Phys Chem 57:49-56 Ja '53

CONTACT potential. See Potential, Electric

CONTACTORS, Electric. See Electric contactors

CONTACTS, Electric. See Electric contacts

CONTAINER corporation of America
Five attractive stocks for capital gains; with comparative balance sheet items. Mag of Wall St 91:470 Ja 24 '53
Spurt in business activity benefits Container corp. Barron's 33:17 F 16 '53

CONTAINER industry
Container future seen good over long term. Oil Paint & Drug Rep 163:5 Ja 12 '53
See also
American can company

Statistics

Containers and closures; statistics tabulated. Steel 132:168-9 Ja 5 '53

CONTAINER system (freight handling)
Containers for l.c.l. traffic. il Ry Age News ed 135:22 Jl 20 '53

CONTAINERS
Canned parachutes. il Mod Packaging 26:120-1+ Jl '53
Stress and deflections in axially loaded cylindrical containers. D. P. Timo. il Machine Design 24:169-72 N '52
See also
Bags
Bottles
Cans
Closures (containers)
Container industry
Food containers
Glass containers
Hoppers
Labels
Milk containers
Oil cans
Package design
Package goods
Paper bags
Paper boxes
Paper containers
Pressure vessels
Tanks
Tin cans

CONTAINERS—*Continued*

Re-use

Beef pie in a can that's the baking pan. il Mod Packaging 27:112 O '53
Gift-ties plus; Burlington mills turns foil and paperboard on ribbon packages into re-use Christmas-tree decorations. il Mod Packaging 26:142-3 S '52
Ovenbaking cartons; foil-lined display package becomes baking pan. il Mod Packaging 27:110-12 O '53
Package with a long life; cake mix packed in baking tin. il Ptr Ink 241:30 D 26 '52
Tell-tale De Moist; spring scale in hanger weighs moisture pick-up. il Mod Packaging 26:116-17 N '52

Testing

Evaluation of bearing packages. W. E. Ellis and others. bibliog il Mod Packaging 26:127-32+ My '53

CONTAINERS (for shipping)
Acids in a box. il Mod Plastics 30:151 Ja '53
Better industrial packaging. il Mod Packaging 27:105-9+ O '53
Chemical packaging. D. K. Ballman. Chem Eng 60:309-10 Ja '53
Diamond rolls its own; drum shop cut inventories and storage expenses. il Chem Eng 59:224-5 O '52
Economical use of fibreboard; study of master shipping containers for pre-packaged tomatoes. B. C. Robertson and W. A. Aronow. il diags Mod Packaging 26:141-3 N '52
Gaylord container for rubber. diag Rubber Age 72:239 N '52
Giant package pays off; returnable corrugated bins; Fisher flouring mills co. H. A. Herzog. il Food Eng 25:57-60 Jl '53
Glue-lap acceptance gains; corrugated container. il Mod Packaging 27:128-9+ O '53
Heavy loads in corrugated. il Mod Packaging 27:125 O '53
Hot lead carried safely; specially designed insulated containers, Heppenstall co. il Nat Safety N 67:56-7 My '53
Industrial award winners; selection of best shipping packages. il Mod Packaging 26:118-19+ N '52
New paperboard-veneer container produced by Weyerhaeuser. il Paper Tr J 136:26 My 8 '53
New status of the film liner. il Mod Packaging 27:144-7+ O '53
Pictorial printing on corrugated. il Mod Packaging 26:98-100+ Ag '53
Polyethylene shippers gaining favor in chemical industry. il Mod Packaging 27:133-5 O '53
Pre-engineered shipping package; Calnevar co. il Mod Packaging 26:107-9+ Ag '53
Rigid barriers for the military. G. S. Mustin. bibliog il Mod Packaging 27:163-7+ O '53
Salvaging shipping costs by drum reconditioning. il Can Chem Process 37:50+ F '53
Square, light shipper ups their loads and minimizes handling labor; Queen City poultry co. G. Iannelli. il Food Eng 25:95+ Mr '53
Tear-tape shipper; General Mills' quick-opening shipping case for Betty Crocker pie crust mix. il Mod Packaging 26:83-5 Mr '53
Today's trend in bulk packaging. B. J. Shea. Can Chem Process 37:54 Ja '53
Trend to fibre for produce. il Mod Packaging 27:138-41+ O '53
What a new shipping crate has done for Koven; unit heater boilers. A. R. Hanson. il Sales Management 70:40 Mr 15 '53
Wirebound containers slash packaging costs. il Mill & Factory 53:121 O '53

See also
Carboys
Containers, Steel
Packing for shipment

Testing

Pre-shipment testing; National safe transit program. il Mod Packaging 27:118-19 O '53

CONTAINERS, Aluminum
Giant tube for oil. il Mod Packaging 27:124-5 S '53

Manufacture

Vacuum tightness of welded and brazed aluminum containers. M. A. Miller and A. S. Russell. diags Welding J 32:116-18 F '53

CONTAINERS, Carry home
Circular carrier; new construction principle for take-home pack provides for counter stacking; Boonton molding company's new plastic tumblers. il Mod Packaging 26:110-11 Je '53

CONTAINERS, Dispensing
Aerosol safety plug for Sprey, an aerosol plastic coating. il Mod Packaging 26:110-11 Mr '53
Boom in aerosols. il Mod Packaging 26:91-7+ D '52
Bug bomb aerosol; nominated for packaging's Hall of fame. il Mod Packaging 26:94-9, cover My '53
Bug bombs for everything; push-button, aerosol dispensers more than doubled sales in 1952. Bsns W p 142 Jl 25 '53
Capsule ideas; plastic dispensing containers for capsules. il Mod Packaging 26:120-1 O '52
Ever-ready squeeze; Noreen's teardrop poly shampoo bottle. il Mod Packaging 26:84-5+ Ag '53
Extruding can; Caulk 'n Gun introduces new principle in pressure dispensers. il diag Mod Packaging 26:121 Ap '53
First glass aerosol; Larvex mothproofing spray. il diags Mod Packaging 26:90-3+ Ja '53
Food in polyethylene collapsible tubes; cheese spreads. il Mod Packaging 26:201 S '52; Mod Plastics 30:178 O '52
Pinching bag; polyethylene-film tube holds stack as cups are withdrawn one at a time. il Mod Packaging 27:96-8 S '53
Pressure packaging. R. J. Nemmers. il Comp Air Mag 58:160-4 Je '53
Progress in squeeze-bottle filling. il Mod Packaging 27:114-19+ S '53
℞ for convenience; troubles with a saturating resin for casts are solved with a bag-in-a-can. il diags Mod Packaging 26:90-1+ Jl '53
Stopette spray deodorant; nominated for packaging's Hall of fame. il Mod Packaging 26:136-41+, cover Ap '53
Styrene dispenser. il Mod Plastics 30:172 F '53

CONTAINERS, Glass. See Glass containers

CONTAINERS, Paper. See Paper containers

CONTAINERS, Plastic
Bagging a new market; fruit-juice film container. il Chem W 72:58-9 Mr 28 '53
Capsule ideas; plastic dispensing containers for capsules. il Mod Packaging 26:120-1 O '52
Double-wall poly jars; Aziza eye cosmetics, inc. il Mod Packaging 26:105 Je '53
Freezer jar molded of polystyrene. il Mod Plastics 30:195 N '52
Good taste in plastics; John Wagner & sons use molded canister with sift or pour top for new seasoning. il Mod Packaging 26:114-15 S '52
Ice cream in plastics; Golden state co. il Mod Packaging 26:89 F '53
Nozzle containers. il Mod Plastics 30:170 Ap '53
Package that molds the product; formed vinyl plastic cup gives decorative shapes to butter or margarine. il Mod Packaging 26:90-3 My '53
Square for acids; box-shaped polyethylene carboy. il Mod Packaging 26:113 Ja '53

See also
Bottles, Plastic

CONTAINERS, Returnable
Giant package pays off; returnable corrugated bins; Fisher flouring mills co. H. A. Herzog. il Food Eng 25:57-60 Jl '53

CONTAINERS, Steel
Containers and closures; statistics tabulated. Steel 132:168-9 Ja 5 '53
Domestics go export in a steel wrapper. il Chem W 72:80-1+ Ap 4 '53
Drums come clean and rust-inhibited. il Steel 132:84 Mr 23 '53
Filled to the brim; more steel will go into containers. il Steel 132:48-9 Ja 26 '53

CONTAINERS, Steel—*Continued*

New resin linings give better container protection. D. E. Hartman. il Iron Age 171:129-32 Je 11 '53

Steel containers may be adapted to many services. T. W. Rodes. Ind & Eng Chem 44: sup 115A-16A+ D '52

Steel drum producers fix prices, FTC claims. Oil Paint & Drug Rep 163:3+ F 2 '53

Steel used in a container; tabulation. Iron Age 171:438 Ja 1 '53

Used steel drums. Steel 132:48 My 18 '53

Maintenance and repair

Salvaging shipping costs by drum reconditioning. il Can Chem Process 37:50+ F '53

Manufacture

Rheem steel drums coated and lithographed before forming. G. C. Close. il Mach 59: 182-5 Ap '53

Steel drum manufacture; St Vincent works of Rheem-Lysaght, ltd. il Elec R (Lond) 152:451-5 F 27 '53

USS process means chemically clean, protectively coated drums; zinc phosphate applied after forming and fabricating operations. il Chem & Eng N 30:5393 D 22 '52

CONTEMPLATION of death (law). See Gifts (law)

CONTEMPT of court

Georgia court voids contempt conviction. Ed & Pub 86:12 Ja 24 '53

CONTESTS. See Advertising—Prize contests; Employees' contests; Prize contests

CONTINENTAL auto club, inc.

Auto club head in Michigan takes exception to story. R. J. Stanslow. Nat Underw 57:16 F 19 '53

Continental auto club held to be operating as insurer. Nat Underw 57:9 F 5 '53; Weekly Underw 168:472 F 14 '53

CONTINENTAL can company

Can, can; review of the two major units in the metal container industry. I. U. Cobleigh. Comm & Fin Chr 178:348 Jl 30 '53

Five stocks with unique growth prospects; with comparative balance sheet items. Mag of Wall St 92:451 Jl 11 '53

It's the same skill anywhere. Bsns W p74+ F 14 '53

Twenty stocks acting best, poorest; with tables. J. S. Williams. Mag of Wall St 92: 226-7 My 16 '53

CONTINENTAL electric equipment company

New competition for G.E. Fortune 47:241 Ap '53

CONTINENTAL insurance company

Continental and Fidelity-Phenix joining ranks of century old insurance companies. C. Axman. East Underw 54:19-20 Ja 16 '53

CONTINENTAL shelf

Continental shelf could be a major source for U.S. oil. maps World Oil 136:64-5 Ap '53

Continental shelf sediments of southern California. K. O. Emery. bibliog Geol Soc Bul 63:1105-7, pl 1 N '52

Geologic and engineering aspects of continental shelves. J. C. Miller. map diags Oil & Gas J 51:78-80+ Mr 2 '53

Geomorphic evolution of continental terrace (continental shelf and slope). R. S. Dietz. bibliog il map diags Am Assn Pet Geologists Bul 36:1802-19 S '52

Look for oil on shelf areas. P. C. Ingalls. diag Oil & Gas J 51:393 Mr 23 '53

CONTINENTS

Principles of regional geology of continents; Europe, Asia, North America, by A. N. Mazarovich. Review, by C. C. Nikiforoff. Am J Sci 251:156-8 F '53

CONTINGENCY tables

Tables for use in fourfold contingency tests. D. Mainland and I. M. Murray. Science 116:591-4 N 28 '52

CONTRACT bonds. See Insurance, Surety and fidelity—Contract bonds

CONTRACT information, Bureau of. See Bureau of contract information

CONTRACTORS

Construction data file. E. T. Nettleton. Roads & Sts 96:138-40 Mr '53

Contracting company profits. G. W. Grupp. Roads & Sts 95:60-1+ D '52

Contractor and sub-contractor; liability for workmen's injuries. W. Ball. Engineer 196: 274 Ag 28 '53

Contractor rating plan proposed. Eng N 150:60 Mr 26 '53

Develop cooperation between engineers and contractors. R. E. DeSimone. Civil Eng 22: 850-3 O '52

Licensing scandal spreads in Miami. Eng N 149:25 O 16 '52

Missouri contractors fight accidents. R. M. Hoover. Roads & Sts 95:84-6 D '52

More about why contractors go broke. G. E. Deatherage. Roads & Sts 95:54-6 N '52

No obligation to provide detour. A. W. Gray. Roads & Sts 96:92 F '53

Revision of equipment depreciation rates studied by Treasury experts. Eng N 150:26 Mr 19 '53

Rift widens over bid shopping. Eng N 149:21 O 16 '52

Suretyship, a stabilizing factor in construction industry. E. R. Higgins. il Civil Eng 22:656-8+ S '52

See also

Austin company
Building contracts
Construction equipment
Crandell, Lou R.
Electric contractors
Engineering contracts
Gas, Natural—Pipe lines—Contractors
Insurance, Surety and fidelity—Contract bonds
Petroleum pipe lines—Contractors
Road contractors

Accounting

Can completed contract basis be used for all jobs extending into two taxable years? J. S. H. Weiner. J Account 94:708-12 D '52

Mechanized accounting aids major drilling contractor. J. A. Kornfeld. il diag Oil & Gas J 51:76-7 F 2 '53

Advertising

How to make news with an eight-page insert. il Ptr Ink 241:35 D 5 '52

Insurance requirements

Employers of contractors should keep check on all insurance policies. R. V. Spell. Weekly Underw 168:1488 My 30 '53

Canada

Contractors for engineered construction; directory. Roads & Eng Constr 91:228+ Je '53

CONTRACTORS' equipment floater insurance. See Insurance, Contractors' equipment floater

CONTRACTORS' liability insurance. See Insurance, Contractors' liability

CONTRACTS

Bridge painting. A. W. Gray. Roads & Sts 96:119 Ap '53

Contract to remove old paint. A. W. Gray. Roads & Sts 96:61+ Jl '53

Contracts and sales. C. F. Mayson. Elec R (Lond) 151:297-9, 348-50, 405-7 Ag 8-22 '52

Court decisions indicate possibilities in gas company contract wrangles. L. T. Parker. Am Gas J 177:16+ D '52

How higher courts have ruled. L. T. Parker. Heat & Ven 50:92-4 Ag '53

Law establishes written contract provisions as superior. L. T. Parker. Am Gas J 177:21-2 N '52

Legal aspect; repudiation of a contract. Elec J 151:195-6 Jl 17 '53

Six pointed legal Q's and A's of food processors. L. T. Parker. Food Eng 25:65-6+ F '53

When is a valid contract not valid? Dom Eng 181:68 F '53

See also

Building contracts
Engineering contracts
Labor contracts
Mortgages
Petroleum—Well drilling—Contracts
Roads—Contracts
Sales

CONTRACTS, Government

Air force cancels Kaiser's C-119 and C-123 contracts as result of Senate investigation. Am Mach 97:176 Jl 6 '53

Alaskan lump-sum program successful. il Eng N 149:28 N 20 '52

CONTRACTS, Government—*Continued*

Bid shopping nearer? advocates gain as Senate-House committees end hearings. Eng N 150:23-4 Ap 23 '53

Builder wins first round in claim case; American construction co. awarded $59,000 in a suit against the government. Eng N 149:88 O 16 '52

Buy American backfires. Bsns W p34 Ap 25 '53

Buy American laws have foreign companies dizzy. Bsns W p 149 My 23 '53

Case of a government subcontractor with a weak financial structure. J Account 94:470 O '52

Components department aids project engineers. S. Kramer and S. Gurian. il Electronics 26:141-3 Ag '53

Construction firm on H-bomb project sued over joint venture agreement. Eng N 150:22 Ap 16 '53

Defense contract awards; list of prime contracts for various types of automotive military equipment, including tanks, motorized gun carriages, trucks, warplanes, automotive components and spare parts, automotive maintenance equipment, etc. (cont). Automotive Ind 107:166+ O 15; 160+ N 15; 130+ D 15 '52; 108:102+ Ja 15; 576+ Mr 15; 152+ Ap 15; 200+ My 15; 100+ Je 15; 109:148+ Jl 15; 116+ Ag 15; 162+ S 15; 112+ O 15 '53

Defense research; the Bureau of standards is caught in the middle of the contract-award fracas. Steel 132:81 My 11 '53

Engineering contract policy altered. Eng N 150:21 Ja 22 '53

Federal awards delayed for review. Eng N 150:21-2 F 12 '53

How to file applications for navy work. il map Arch Rec 112:172-6 S '52

Industrial leaders disagree on foreign bidding for government contracts. Ind Marketing 38:118-19+ Ag '53

Kaiser deposed. Bsns W p33-4 Jl 4 '53

New weapons, new leaders; top companies doing defense business. Bsns W p30-1 Ja 24 '53

Revised federal contract forms fail to solve disputes-clause question. Eng N 150:25 Je 11 '53

Signal corps procurement changed. Tele-Tech 11:47 O '52

Small business in action; it's part in defense. Steel 131:59 N 17 '52

Small manufacturers' and defense business. M. H. Pryor. Advanced Management 17:20-1 D '52

Uncle Sam, the buyer; is this customer always right? R. M. Love. Steel 132:54-5 F 16 '53

What to consider when bidding a government contract; packaging requirements; abstract. R. C. Butler. Mod Packaging 26:125 O '52

Who'll get the contracts of Defense department? Bsns W p27 My 2 '53

See also

Purchasing, Government

Accounting

Accounting information needed by regional renegotiation boards in processing cases. R. M. Girard. J Account 94:692-6 D '52

Advance payments and progress payments on contracts. J Account 95:222-3 F '53

Current defense contract termination rules compared to World war II procedures. F. E. Hall. J Account 95:440-8 Ap '53

Defense department policy in use of accelerated amortization as a cost in contracts. H. W. Bordner. J Account 95:179-89 F '53

How to prepare price adjustment claims on government contracts. P. M. Trueger. J Account 94:442-7 O '52

Internal procedures to prepare for renegotiation. F. W. Boydstun. N A C A Bul 34:729-37 F '53

Living with defense contracts. J. M. Arnfield. N A C A Bul 34:653-60 Ja '53

See also

Emergency facilities —Accounting

Insurance aspects

Munitions board suggests surety bond omission. Nat Underw 56:28 N 6 '52

Products liability included; Defense department accedes to request of aircraft manufacturers to accept cost as reimbursable expense. East Underw 54:34 Ja 9 '53

Renegotiation

How to handle tax renegotiation. Paper Tr J 136:35 F 13 '53

Internal procedures to prepare for renegotiation. F. W. Boydstun. N A C A Bul 34:729-37 F '53

Public interest v. award for efficiency tug-o'-war in problems of renegotiation. C. B. Everberg. Credit & Fin Management 55:18-19+ Je '53

What renegotiation means to you. R. D. Stevens. Mill & Factory 53:127-8 Jl '53

Subcontracting

Case of a government subcontractor with a weak financial structure. J Account 94:470 O '52

Lockheed's subcontracting program. il diags Automotive Ind 107:90 O 1 '52

Rights of the contractors and subcontractors of war goods. C. B. Everberg. Credit & Fin Management 54:20-2 S '52

To correct public's impression of bigness in business. N. Keine. il Ptr Ink 242:40-2 F 13 '53

Termination

Current defense contract termination rules compared to World war II procedures. F. E. Hall. J Account 95:440-8 Ap '53

Hazards hide in new contract terminations. Steel 132:70 Mr 9 '53

How to protect yourself for defense contract termination. K. G. Smith. Automotive Ind 109:64-5+ Ag 1 '53

CONTRACTS, Letting of

Contractor can profit, city can save by incentive contract on tunnel job. Eng N 150:23-4 Je 11 '53

Contractor rating plan proposed. Eng N 150:60 Mr 26 '53

Contractors prepare for fight over bid shopping legislation. Eng N 149:24-6 D 25 '52

Massachusetts hammers out system for construction of public buildings. Eng N 149:24-5 O 30; 24-6 N 6 '52

Relief from errors in contract bids. A. W. Gray. Roads & Sts 95:64-5+ N '52

Rift widens over bid shopping. Eng N 149:21 O 16 '52

Suit to open Ohio turnpike bidding to asphalt interests nears climax. Eng N 149:24 N 27 '52

CONTRACTS, Municipal

Battle for a key U.S. market in Detroit. il Bsns W p 148+ Je 13 '53

City cancels contract, troubles not over; Columbus, Ohio street widening contract. Eng N 150:60 Mr 26 '53

Relief from errors in contract bids. A. W. Gray. Roads & Sts 95:64-5+ N '52

Turbo tussle. Bsns W p 112+ Jl 18 '53

CONTRACTUAL liability insurance. See Insurance, Contractual liability

CONTROL, Electric. See Electric control

CONTROL boards

Operation of a semi-continuous process using the kinegraphic control board. J. E. Read and J. Johnston, jr. il diags Instruments 25:1727-32 D '52

Schedule board at Lockheed saves 180 machine-hours a month. il Factory Management 111:139 F '53

CONTROL equipment

Advanced control system features Trans-Northern pipe line. P. Reed. il map diag Oil & Gas J 51:226+ D 22 '52

Analog computers boon to makers of modern regulating equipment. J. T. Carleton. Iron Age 171:148+ Ap 16 '53

Analysis of control systems involving digital computers. W. K. Linvill and J. M. Salzer. diags Inst Radio Eng Proc 41:901-6 Jl '53

Application of automatic control to the coal feed of steelworks gas producers. S. A. Burke and G. A. Sparham. il diag Iron & Steel Inst J 172:257-64 N '52

Automatic control. diags Food Eng 25:98-100+ O '53

Automatic control characteristics of thermal neutron reactors. J. H. Bowen. diags Inst E E Proc 100 pt 1:102-9; Discussion. 116-20 My '53

CONTROL equipment—*Continued*

Automatic control for regenerative soaking pits. G. L. Isaacs. il diags Iron & Steel Eng 30:75-8; Discussion. 78-82 F '53

Automatic control of chemical processes. A. J. Young. diags Instruments 26:100-1+ Ja '53

Automatic control of fuel-air ratio in metallurgical furnaces. L. Walter. diags Metallurgia 47:307-9 Je '53

Automatic control of gas producers. diag Engineer 195:841 Je 12 '53; Engineering 175: 751 Je 12 '53; Metallurgia 47:287 Je '53

Automatic control of open-hearth furnaces. il Engineer 195:456-8 Mr 27 '53

Automatic controls. H. F. Dever. il Mech Eng 75:323-4 Ap '53

Automatic controls; abstract. F. M. H. Taylor. Elec J 150:46 Ja 2 '53

Automatic controls eliminate guesswork. H. Miedendorp. il Mod Textiles Mag 34:72+ F '53

Automatic controls for surface finishing jet engine parts. R. J. Thomas. il diags Automotive Ind 109:48-50 S 1 '53

Automatic process control by light measurement. il Product Eng 23:218 N '52

Automatic TEL blending of gasoline for delivery into products pipe line. H. R. Hoyt. il diag Oil & Gas J 51:241+ O 13 '52

Automation; control by product. il Chem W 71:28+ D 27 '52

Automation cuts costs, improves quality, and speeds production. C. F. Prutton. Chem & Eng N 31:1634+ Ap 20 '53

Automation for tomorrow's process; aseptic canning process. flowsheet il Food Eng 25:102-5 O '53

Automation; road to the robot plant. D. A. Wallace. Bsns W p55 N 22 '52

Control devices are keys; abstract. H. F. Dever. Steel 132:129 F 9 '53

Control devices; still a long way to go. il Bsns W p60+ N 29 '52

Controls for pipe-line engines. C. B. Lester. il diags Oil & Gas J 51:212+ O 13 '52

Controls optimize canning. L. E. Slater. il diags Food Eng 25:85-91+ F '53

Effluent rate control for rapid sand filters; from the Venturi tube to automatic control and master supervision devices. C. G. Richardson. il diags Water & Sewage Works 100:133-41 Ap '53

Electro-mechanical counters as control devices. R. J. Visin. il diags Product Eng 24: 148-53 My '53

Even control panels are standardized now. Bsns W p80 N 8 '52

Feedback, heart of automatic process control. P. Lindholm. diags Factory Management 111:106-9 O '53

Feedback system engineering; expanding professional field. G. S. Brown. Elec Eng 71: 1067-71 D '52; Same cond. Machine Design 25:386+ Ap '53

Fiber ducts save time in wiring machine panels. R. T. Johnstone. il Am Mach 96: 105 D 8 '52

Forum on technical progress; drives and controls. il Steel 132:336-8+ Ja 5 '53

Frequency-response analysis for industrial automatic-control systems. D. W. St Clair and others. bibliog diags A S M E Trans 74:1133-47; Discussion. 1147-50 O '52

Future plant robotization in the paper mill; use of instruments. L. Walter. il Paper Ind 35:558-60 Ag '53

Gas transmission control problems. J. Procopi and W. W. Drake. flow diag il diags Pet Eng 25:D3-6+ Mr '53

Good instrumentation program pays off; City of Pasadena light and power department. C. O'Connor. il Power Eng 57:72-3 F '53

Grace bleachery gets results from control instruments. D. B. Daubert. il Textile World 103:141+ My '53

Heating, ventilating and air conditioning controls; Instrument society of America's Chicago section symposium; abstracts of papers. Heating-Piping 25:113-15 Mr; 104-7 Ap '53

High-speed routing equipment is remote controlled; North American aviation, inc. il Mach 59:197-9 D '52

How to use valves in solving today's control problems. C. S. Beard. il diags Paper Tr J 137:14-18+ O 9 '53

Instrumentation handbook; new developments in automatic control. J. F. Draffen. diags Pet Refiner 31:121-5 D '52

Instrumentation in the pulp and paper industry. D. B. Scrivens. flow sheet il diags Instruments 25:1420-4+ O '52

Instrumentation simplifies annealing; Atlas steels, ltd. H. C. McKinnon. il diag Steel 132:128+ My 25 '53

Instrumentation used in other industries which might be applied to paper manufacturing. J. R. Green. il diags Tappi 36:sup 141A-7A S '53

Instruments in the new Riegel mill. C. E. Roth and others. il Tappi 36:sup 144A-6A F '53

Measurement and control instruments. il diags Paper Tr J 137:131-47 S 18 '53

Mohawk carpet mills controls quality by instrumentation. il diag Textile World 102: 106-7 D '52

Monitoring of process variables. A. F. Sperry. il diag Pet Refiner 32:128-32 Mr '53

New developments in remote control of pumping stations. M. Hyde. il diags Oil & Gas J 51:202-3+ O 13 '52

New equipment lowers pumping costs at Trenton's sewage treatment plant. E. C. Condict. il diags Water & Sewage Works 100:154-8 Ap '53

Optimum three-mode controller settings for automatic start-up. D. W. Pessen. diags A S M E Trans 75:843-9 Jl '53

Packaged system monitors nuclear reactors. Machine Design 25:188+ S '53

Process characteristics which affect automatic control. J. B. McMahon and R. A. Ackley. diags A S M E Trans 74:1321-6 N '52

Progress in automatic control. L. Walter. diags Paper Ind 35:334-6 Je '53

Remote control of piping processes aids plant safety; Du Pont co. il Heating-Piping 25: 97 My '53

Semi-automatic power-operated drilling machinery. M. E. True. il diag Pet Eng 24: B42+ O '52

Sizing control valves. G. F. Brockett and C. F. King. diag Oil & Gas J 52:331 Je 22 '53

Some practical applications of measurement and control instruments in a paper mill. R. W. Peters and B. W. Huston. il diags Tappi 36:sup 127A-33A S '53

Structural analysis of control rods. F. M. Hoblit. diags Product Eng 23:173-6 O '52

Teleflex mechanical remote control system. diags Engineer 195:531 Ap 10 '53

Theoretical consideration of retarded control. G. H. Cohen and G. A. Coon. bibliog diags A S M E Trans 75:827-34 Jl '53

Trends in instrumentation during 1952. R. M. Munch. Ind & Eng Chem 45:sup93A-4A+ Ja '53

Unattended booster pump station boosts flow 12,000 bbl. per day for Aramco. R. J. Park and V. M. Liss. map plans Oil & Gas J 51:207-8+ O 13 '52

Uniformity of equipment controls. il diags Min Cong J 39:34-6 Ja '53

What automatic controls can the mill operator use? J. E. Lawver. bibliog il diags Min Eng 5:982-4 O '53

What the papermaker and converter would like to see measured and controlled. W. H. Aiken. Tappi 36:sup 133A-6A S '53

What you need to know about electronic controls. N. Weissman. il Factory Management 111:118-27 S '53

See also

Airplanes—Control
Brakes
Carrier current control
Electric control
Electrohydraulic control
Electropneumatic control
Governors (machinery)
Graphic panels
Liquid level control
Machine tools—Control
Machinery, Automatic
Milling machines—Control
Petroleum refineries—Control equipment
Pneumatic control
Pressure regulators
Servomechanisms
Vacuum tubes—Control uses

Maintenance and repair

Slip ring controller problem remedied. J. Foster. Power Eng 56:81 D '52

CONTROL equipment—*Continued*

Manufacture

Cost-cutting dies; Minneapolis-Honeywell regulator co. P. S. Tobias. il diags Mach 59:155-62 My '53

Terminology

Control your control language! review of Automatic control terminology. diags Power Eng 57:83 Je '53

Testing

Operating range of electronic flame failure devices. Engineer 196:174 Ag 7 '53; Engineering 176:171 Ag 7 '53

CONTROLLED circulation audit

Media man's point of view; CCA's paid and nonpaid audit. D. B. Arnold. Adv Agency 46:146-7 Ap '53

NBP urges standardized audit to include both paid and unpaid circulation. D. Bruner. Ptr Ink 241:29+ N 28 '52

CONTROLLERS

Controller's job is to help management gain broad knowledge of company operations. J. L. Burns. J Account 94:617-18 N '52

CONVAIR. See Consolidated Vultee aircraft corporation

CONVENTIONS

Slum clearance may bring conventions to New York. il plan diag Arch Rec 113:20 Ja '53

They tell you they love your meetings; but are you sure they mean it? R. C. Edlund. Sales Management 70:28+ pt 2 Ja 1 '53

See also

Sales conventions

CONVERSATION

Atmosphere for conversation. D. A. Laird and D. Ericson. Banking 45:54-5 Mr '53

Practice your conversation. D. A. Laird. Banking 45:80 D '52

CONVERTAPLANES. See Airplanes—Design—Convertaplanes

CONVERTIBLE bonds. See Bonds, Convertible

CONVEYING machinery

Appliance assembly; novel device up-ends refrigerators on assembly line. Iron Age 171:242+ My 7 '53

Automatic conveyors bridge handling gap; General electric co. il Factory Management 111:90-2 S '53

Autorouting conveyor cuts costs in six-floor plant; Stewart-Warner corp.; illustrations with text. D. C. Peterson. Am Mach 97:148-51 Jl 6 '53

Better handling, better fruit; United fruit co.'s mechanical banana-unloading terminal. J. V. Ziemba. il Food Eng 25:90-1 Ag '53

Case-handling hurdles cleared by automation; Arden farms co. J. Shinn. il plan Food Eng 25:67-70+ Jl '53

Chemical engineering unit operations; materials handling. R. L. Speaker. bibliog(55 ref) il Ind & Eng Chem 45:88-92 Ja '53

Clever conveyorizing avoids handling headaches; Western electric co. P. T. Mathy. il diag Am Mach 97:140-3 My 11 '53

Conveyor that unstacks six floors; Stewart-Warner corp. D. C. Peterson. il diags Factory Management 111:84-6 Je '53

Conveyorized lines speed delivery of 105-mm shell. G. E. Avery. il Am Mach 97:169-73 Ap 13 '53

Conveyors boost machine tool production; Brown & Sharpe mfg. co. il Steel 131:94-5 N 3 '52

Conveyers carry cold-extruded rockets to high production level; Pontiac division, General motors corp. W. G. Patton. il diag Iron Age 171:225-31 My 7 '53

Conveyors make the difference in the production of brass castings; Chase brass & copper co. il plan diag Mill & Factory 52:90-2 Mr '53

Dispatching conveyor speeds small-lot handling; Sheffield corp. L. Eickman and E. Adkins. il plan diags Am Mach 97:146-8 My 11 '53

Double-quicked packages keep pace with fast process; Kraft foods co. il Food Eng 25:62+ Je '53

Extensive conveyor lines facilitate powerglide operations. J. Geschelin. il Automotive Ind 108:34-7 My 15 '53

Fluidized-solids conveyor. Can Chem Process 36:64 S '52

From motion-plus, output-minus to motion-minus, output-plus; Virnelson's bakery. I. C. Miller. il plan diag Food Eng 25:64-6 Ja '53

Full conveyorization eliminates manual chip handling; Stewart-Warner corp. D. C. Peterson. il diags Am Mach 96:162-5 O 13 '52

Handling materials in process. R. T. Kimmel. il plans Tool Eng 30:67-78 Mr '53

How to handle chips and trimmings; conveyorized handling. il diags Am Mach 97:157-66 My 11 '53

Hydraulic handling; coil handling equipment conveyor at U.S. Steel's sheet and tin mill. il Steel 132:127 Je 29 '53

Labeling-cartoning teamwork; Wyeth, inc. il Mod Packaging 26:108-9 Je '53

Let gravity do your handling. J. E. Hyler. il diags Mill & Factory 51:97-102 N; 88-91 D '52

Making easy work of box, bin and skid handling. J. E. Hyler. il Mill & Factory 52:129-32 Je '53

Manual handling minimized in sixth-floor brass foundry. il plan diag Foundry 80:110-13 N '52

Merry-go-round conveyor speeds assembly; Stewart-Warner corp. D. C. Peterson. il plan Factory Management 111:100-1 Ja '53

Mile-long body conveyor system; Studebaker corp. il Automotive Ind 108:40-2 My 15 '53

Multiple log conveyor system in operation at H&W mobile plant. il Paper Ind 35:533-4 Ag '53

New bunching conveyor improves automatic painting. H. Marks. il Factory Management 110:118-19 O '52

Overhead conveyers boost production 400 per cent, cut handling 50 per cent; Landers, Frary & Clark. L. F. Spencer. il diags Iron Age 171:212-16 My 7 '53

Push-button barrel handling; Richmond refinery of Standard oil co. of California. D. H. Stormont. il Oil & Gas J 51:52-3 Ja 5 '53

Raised system telescopes part production; Ryan aeronautical co. il Steel 132:118 Je 8 '53

Reduces costs, boosts production by conveyorizing; Barrows porcelain enamel co. il Cer Ind 60:121-2 Ap '53

Roller tracks; movement of in-plant materials by elevator simplified. Iron Age 170:212 D 4 '52

Ryan's intermixed conveyors move job lots; illustrations with text. Am Mach 97:198-9 My 11 '53

Scrap disposal by automation; Fisher body plant. J. Geschelin. il Automotive Ind 109:38-40 Ag 15 '53

Screw mechanism groups cabinets for better finishes. il diag Iron Age 171:208-9 My 7 '53

Selection of conveyors for handling hot bulk materials. J. W. Snavely. flow diag il diags Min Eng 5:Trans 512-17 My '53

Steam heated conveyor tunnel solves winter problem. il Mill & Factory 51:134 N '52

They glide through the air with the greatest of ease; handling in new Scarborough, Ont. plant of Frigidaire Products. il Can Chem Process 37:58 Ja '53

Traffic problems in shopping centers; the parcel pick-up service. K. C. Welch. il plans diags Arch Rec 112:226-8 O '52

Transfer cars keep assembly moving; Reliance electric & engineering co. E. L. Brainard. il plan Am Mach 96:132-4 N 10 '52

Trucks with built-in roller conveyers. il Automotive Ind 109:59+ O 15 '53

Two tons of mail handled daily with conveyor system; John Hancock mutual life insurance co. W. Norris. il diag Am Bsns 23:20-1+ Jl '53

Up receiving-room efficiency. C. V. Hall. il Food Eng 25:66-8+ Ap '53

Useful tricks for chutes and roller conveyors; drawings with text. S. Sinço. Mill & Factory 53:89-90 Ag '53

Using conveyors to make money. il Mod Ind 25:136-8 Je '53

Vibrating conveyors for clinker; Dragon cement co. il Rock Prod 55:103 D '52

CONVEYING machinery—*Continued*

What's ahead the next ten years in plant services; conveyors. Am Mach 96:J 15-17 Mid-N '52

See also

Cableways
Coal mining machinery—Conveyors
Cranes, derricks, etc.
Feeders
Hoisting machinery
Loading and unloading
Mechanical handling
Monorail conveyors
Pneumatic conveying

Belt conveyors

Belt conveyers, arteries of new ore dock. W. H. Raff. il Iron Age 170:133-6 D 18 '52

Belt conveyors cut handling costs; Pacific coast aggregates, inc. il plan Rock Prod 56:130-2+ Ja '53

Belt conveyors double capacity of ore-handling pier at Baltimore. il Eng N 149:26 O 30 '52

Belt conveyors handle sewage sludge. il Pub Works 84:75+ Je '53

Belt weighs continuously. Steel 131:112 D 8 '52

Better parts flow trims foundry costs; Buick's new casting cleaning plant. H. Chase. il plan Iron Age 171:97-101 Ap 30 '53

Blast furnace charged with belt conveyors at the Société John Cockerill works in Seraing. L. Halbrecq. il plans diags Blast F & Steel Pl 41:743-50 Jl '53

Canton company expands ore handling facilities at Baltimore. il Manuf Rec 121:69 N '52

Cleveland-Cliffs conveyor system uses twisted belt. D. K. Campbell and others. il Min Eng 5:676-8 Jl '53

Conveyor boosts press operations; North American aviation, inc. L. Boarts and E. Searcy. il Steel 132:100-1 F 2 '53

Conveyor for handling 250 tons of scrap per day; Grand Rapids Fisher body plant. C. H. Wick. il Mach 59:190-3 My '53

Conveyor network moves press scrap. H. C. Tuttle. il Steel 131:100-1 D 8 '52

Drives for descending belt conveyors. R. U. Jackson. il diags Min Cong J 39:45-9 Ja '53; Excerpt. Eng & Min J 154:106-7 Ja '53

Handy aids in belt conveying; drawings with text. S. Marlowe. Mill & Factory 52:116-19 Mr '53

Hopper, conveyor and silo replace yard gang; unloading carloads of foundry sand. E. H. Taylor. il plan diag Iron Age 170:105-6 O 23 '52

Kicker for rolling paper rolls off conveyor. diags Pulp & Pa of Can 53:122-3 O '52

Roller coaster conveyor. il Can Chem Process 37:64 Ja '53

Scrap goes by subway; General Motors' Fisher body division. il Mill & Factory 52:133 Je '53

Six-foot conveyor speeds chip handling at Crown Zellerbach mill. il Paper Ind 35:202+ My '53

Small changes lick these conveyor problems. J. Campbell. il diags Power 97:146-7 O '53

Space shrinker expands production in close quarters; Ryan aeronautical co. il Mill & Factory 52:85 Je '53

Stamping scrap belt is 1100 ft long. Automotive Ind 108:72 Ap 1 '53

Sulfur via the belt line. D. P. Thornton, jr. il Pet Processing 8:389-91 Mr '53

Union Pacific mechanizes mail handling. il plan diag Ry Age 134:109-13 Je 15 '53

Wire belt conveyors. J. F. Reid. il diags Food Eng 25:90-2+ Jl; 72-3+ Ag '53

See also

Belting, Conveyor
Coal mining machinery—Conveyors
Conveying machinery (long distance)

Chain conveyors

Order filling time cut 50 per cent at Supplee-Biddle-Steltz co. L. Albertson. il Elec World 139:135 Mr 9 '53

Vertical-chain conveyor in multi-story plant solves inter-floor handling problems. il diag Mill & Factory 53:151 O '53

Control

Controlling inertia; how linkages and irregular gearing achieve improved performance in shaker conveyors. W. W. Sloane. il diag Machine Design 25:154-8 Jl '53

With industrial tv one operator controls four conveyors. il Factory Management 111:113 Ap '53

Freight conveyors

See Conveying machinery (long distance)

Safety measures

Conveyor safety. T. MacNew. Automotive Ind 107:73 N 1 '52

Rolling safely. J. R. Clemens. il Nat Safety N 66:114-15 O '52

Safety tips for conveyors; reference book sheet. Am Mach 97:139 Mr 2 '53

Screw conveyors

Easy way to estimate screw conveyor power needs. Mill & Factory 51:132 O '52

Porcelain enamel on screw conveyer eliminates caking of gypsum. il Iron Age 170:202 D 4 '52

Screw, ribbon and paddle conveyors. E. L. Cady. il Mill & Factory 52:106-8 Mr '53

Stainless, hollow screw conveyor has many uses. il Food Eng 24:121 N '52

CONVEYING machinery (long distance)

Cleveland belt conveyor plan may solve river jam. il plan Min Eng 5:257 Mr '53

Conveyor belt squabble in Ohio. Bsns W p26 F 14 '53

Ohio conveyor belt comes to life again. Bsns W p26 D 20 '52

Rubber conveyor beltroad to transport iron ore and limestone to Cuyahoga valley. il map Mech Eng 75:232-3 Mr '53

CONVEYING machinery, Portable

Boom conveyer; unit on wheels crosses railroad track to link buildings. il diag Iron Age 171:248 My 7 '53

Coke handled at saving by conveyor unit. il Foundry 80:183+ O '52

Conveyors that fold and move. il Mod Ind 24:150+ O '52

CONVEYING machinery for passengers. See Subways—Belt conveyors (passenger)

CONVEYOR belting. See Belting, Conveyor

CONVULSIONS

Synergistic actions of carbon dioxide with DDT in the central nervous system. G. H. Pollock and R. I. H. Wang. bibliog Science 117:596-7 My 29 '53

COOK, Donald Clarence, 1909-

SEC head resigns. por Comm & Fin Chr 177:900 F 26 '53

COOK, G. Yates

Urban rebuilder; Cook heads NAHB's redevelopment drive. Eng N 150:59 Ap 2 '52

COOK, Warren Ayer, 1900-

Wins award in industrial hygiene. Nat Safety N 67:59 Ja '53

COOKERY

See also

Electric cooking
Frying
Gas cooking

COOKIES

Compartmented cookies; Kornreich Klein's cookie mailer. il Mod Packaging 26:94-5+ Ja '53

Makes macaroons continuously; Schoenith, inc. E. D. White. il Food Eng 24:97+ D '52

New one added to old five zooms output a third; Burry biscuit corp. G. W. Burry and E. Wood. il diag Food Eng 25:48-50+ Je '53

COOKING ware

See also

Aluminum ware

COOL flame. See Flames

COOLANTS. See Lubrication and lubricants (cutting and grinding)

COOLING

Absorption cooling. H. R. Nielsen. il diags Sheet Metal Worker 44:sup 13-16 Jl '53

Advanced design featured in the Lincoln electric co.'s new plant. il Heating-Piping 24:90-4 N '52

Air conditioning a necessity; White House. C. Stempf and H. A. Caldwell. il Heating-Piping 25:88-9 F '53

COOLING—*Continued*

Air conditioning tv stations. F. F. Stevenson. il Heating-Piping 25:98-102 My '53
Air conditioning the outdoors; historic New Orleans restaurant cools its open-air patio. T. Richards. il Heating-Piping 25:89 S '53
Artificial lighting and its relation to air conditioning. W. Sturrock. bibliog diags Heat & Ven 50:101-12 Ja '53
Calculating cooling requirements. diag Dom Eng 182:107+ Jl '53
Central system for small-unit apartment house. A. I. McFarlan. il plan Refrig Eng 61:499-501+ My '53
Comfort cooling keeps absentees at one per cent at Auto Specialties' windowless plant. P. A. Messer. il Factory Management 111: 90-1 F '53
Comfort cooling on the Santa Fe. J. V. Dobbs. il Refrig Eng 61:1077-9 O '53
Cooling a hotel basement laundry. R. Latimer. il Sheet Metal Worker 44:129+ Ja '53
Cooling a small residence with a two-horsepower mechanical condensing unit. H. T. Gilkey and others. bibliog il plans Heating-Piping 25:109-19 F '53; Correction. 25: 146 Ap '53; Abstract. Heat & Ven 50:166 Ap '53
Does this house hold the key to the future of wet cooling? W. S. Harris. il Dom Eng 182:161+ S '53
Effect of the rate of cooling on the allotropic transformation temperatures of uranium. P. Duwez. bibliog J Ap Phys 24:152-6 F '53
Evaporative cooling for comfort. R. S. Farr. il Refrig Eng 61:527-30+ My '53
Evaporative cooling for dry cleaning plant. R. Latimer. il Sheet Metal Worker 44: 48+ My '53
Evaporative cooling of a residential roof; test results at the Acme ceramic housing project. R. A. Bacon and W. E. Long. il diags Heat & Ven 49:79-82 N '52
Evaporative cooling saves the day. W. E. Kahlert. il diags Refrig Eng 61:1072-5+ O '53
Fundamentals of cooling. R. Follansbee. diags Sheet Metal Worker 44:sup 10-13 Jl '53
Heat flow analysis in panel heating or cooling sections; floor slab on earth with uniformly spaced pipes or tubes at the slab-earth interface. H. B. Nottage and others. diags Heating-Piping 25:115-18 My '53
Heat relief in industry. B. R. Small. il Iron & Steel Eng 29:71-8 Ap '52; Same. Heating-Piping 24:114-17 O '52; Discussion. Iron & Steel Eng 29:78-83 Ap '52; Heating-Piping 25:90-3 F '53
Heating and cooling a residence with a three-hp air source heat pump. W. F. Stoecker and R. R. Herrick. il plan Refrig Eng 60:1172-6 N '52; Discussion. 61:102-3 Ja '53
Heating and cooling in hot climates. W. R. Woolrich. Refrig Eng 61:376-8+ Ap '53
How they keep cool in the desert states; evaporative coolers. il Bsns W p 158-60 Ja 24 '53
Ice storage air conditioning. J. A. Wilkerson. diag Heating-Piping 25:90-2 Je '53; Discussion. 25:70 O '53
Making cool profits. H. M. Carnahan. Sheet Metal Worker 44:60-1 Mr '53
Methods of cooling and types of equipment; panel discussion. il diags Sheet Metal Worker 44:sup9-32 Jl '53
Miscellaneous heating and cooling media; reference data. D. G. Lewis. Heat & Ven 50:162a-162b Mr '53
Modern trends in air distribution. R. D. Tutt. il diags Refrig Eng 61:509-13+ My '53
NWAHACA's manual II. J. Kice. Sheet Metal Worker 44:sup7 Ag '53
New car air cooling recommendation OK'ed. S A E J 61:93+ My '53
New design data for heating and cooling; compiled from practical research by the American society of heating and ventilating engineers and other groups, and presented at annual meeting, Chicago. Dom Eng 181: 102+ Ap; 94-5+ My '53
Perimeter air delivery for cooling. R. Follansbee. Sheet Metal Worker 44:sup9-10 Ag '53
Peripheral system for luxury class cooling. J. Anselmo. il plans diags Refrig Eng 61: 501-3+ My '53
Procedure and forms for estimating cooling in residences. il plan Sheet Metal Worker 44:70-1+ Jl '53
Progress in wet cooling. W. S. Harris. Sheet Metal Worker 44:sup8 Ag '53
Thermoelectric cooling; based on papers by N. Forsberg and others. Refrig Eng 61: 878-9 Ag '53
Tie attic fans to summer cooling business. A. Stout. il Sheet Metal Worker 44:49-50 My '53

See also

Air conditioning
Cold storage
Cooling towers
Factories—Air conditioning
Heat pump
Refrigeration and refrigerating machinery

Tables, calculations, etc.

Accurate sizing boosts room cooler sales. map Sheet Metal Worker 44:71+ Ag '53
Air cooling coil performance. D. D. Wile. bibliog diags Refrig Eng 61:727-32+ Jl '53; Discussion. 61:979+ S '53
Short cut for residential cooling load calculation. W. A. Grant. diag Refrig Eng 61: 519-21+ My '53
Use of cooling degree day as index of air conditioning energy consumption. S. L. Pappas and F. R. O'Brien. Refrig Eng 61: 867-9+ Ag '53

COOLING, Industrial

Aftercooling is important. R. A. Schaefer. diag Power Eng 57:106 Ag '53
Cooling of aggregate for Vaitarna dam. Engineer 195:281 F 20 '53
Cooling of rimming steel ingots in a casting pit. R. T. Fowler and L. H. W. Savage. diags Iron & Steel Inst J 171: 277-88 Jl '52; Discussion. 173:259-63 Mr '53
Cooling system speeds rubber forming. il Heat & Ven 50:132 My '53
Economics of reducing crude-oil vaporization losses; cooling the oil prior to sending it to storage. I. A. El-dib and R. L. Huntington. diag Oil & Gas J 51:90-2+ Mr 9 '53
Economics of the air-cooled heat exchanger. J. C. Chase and H. E. Degler. flow diag il map Pet Eng 25:C42-4+ Ja '53
Ingot heat conservation; cooling of eight-ton ingots between teeming and stripping. L. H. W. Savage and R. T. Fowler. bibliog diags Iron & Steel Inst J 173:119-28 F '53
Lead clad copper solves an anodizing problem. il Metal Finishing 50:65-6+ D '52
Water cooling for resistance soldering tool. il Electronics 26:230+ F '53

See also

Cold storage
Cooling towers
Electric generators, Alternating current—Cooling
Quenching
Steel, Quenching of
Testing laboratories—Cold rooms
Vacuum tubes—Cooling

COOLING equipment

Air cooled condensers seen predominating. S. F. Shawhan. Sheet Metal Worker 44: sup23-4 Jl '53
Automobile air conditioning; papers with discussion. il diags Refrig Eng 61:31-44 Ja '53
Biggest cooling machines for giant shopping center. C. Wampler. il Heating-Piping 25: 112 Mr '53
Efficiency of partially by-passed cooling surfaces; abstract. H. Glasser. Refrig Eng 61: 522-3 My '53
Electric dew point meter cooled by the Vortex tube. F. C. Hooper and I. S. Juhasz. bibliog il diags Refrig Eng 60:1196-7 N '52
Hamilton Standard cold-air unit for aircraft cabins. il diag Engineering 176:255 Ag 21 '53
Methods of cooling and types of equipment; panel discussion. il diags Sheet Metal Worker 44:sup9-32 Jl '53
Residential cooling equipment. il diag Sheet Metal Worker 44:51-2 My; 48-9 Je; 75 Jl '53
Room coolers. il Mod Plastics 30:95-9+ Ap '53
Small aftercooler; homemade and effective. H. B. McDermid. diags Power Eng 57:87 Ja '53

COOLING equipment—*Continued*

Stratos units cool hot Sabre cabins. il Aviation W 57:59 O 20 '52

Trouble on cooling job. P. C. Goetz. Heating-Piping 25:177 Ja '53

Unusual cooling system. il plan Sheet Metal Worker 44:50+ D '52

Will air-cooled condensers replace cooling towers? Sheet Metal Worker 44:sup27-9 Jl '53

See also
Cooling towers

Maintenance and repair

Servicing the cooling plant for summer use; reference data. K. E. Sontag. Heat & Ven 50:172a-172b Je '53

COOLING of fruits and vegetables

Evaporative cooling of fruits and vegetables. D. H. Dewey. bibliog il Refrig Eng 60:1281-3+ D '52

Quick cooling cuts fresh vegetable losses; vegetable packing plant of Chase & co. C. E. Wright. il Food Eng 25:94-5 Ja '53

Refrigeration of prepackaged fresh fruits and vegetables. H. A. Schomer. Refrig Eng 61:742-4+ Jl '53

COOLING of roofs. See Roofs—Water cooling

COOLING of water

Application and control of shell and tube water cooling equipment. A. B. Newton. il diags Refrig Eng 61:394-9+ Ap '53

Refrigeration systems for cooling drinking water. J. Askin. il diags Heat & Ven 50:81-6 F '53

Water chiller ups production of electroplating tanks. H. L. Hoglund. il Heating-Piping 25:108-9 Mr '53

See also
Cooling towers

COOLING towers

Acid dispersal system; La Gloria uses natural gas as lifting medium. il diags Oil & Gas J 51:129-30 F 9 '53

Controlling deterioration of cooling tower lumber. D. R. Baker. Pet Eng 24:D67-8+ N '52

Cooling tower performance. D. R. Baker and L. T. Mart. il Chem Eng 59:196-9 D '52

Design, maintenance, operation of Cit-Con's cooling tower. B. H. Mylius. il Oil & Gas J 52:298+ Je 22 '53

Deterioration of Redwood cooling towers. R. V. Comeaux. Power 97:246+ O '53

Elimination of carryover; abstract. H. Chilton. Chem Age (Lond) 67:699-700 N 22 '52

How can we cut tower windage loss? T. Hicks. diags Power 97:131-2 Ja '53

Hyperbolic cooling towers of reinforced concrete. G. L. Blanchard and P. Rogers. diag Am Concrete Inst J 24:sup28-9 Je '53

Keep down cooling tower costs. E. H. Krieg and W. L. Chadwick. il diag Power Eng 57:72-3 S '53

One sure way to prove out your cooling tower repairs. T. W. Reynolds. diags Power 97:124-5 My '53

Performance of a forced-draft cooling tower. B. H. Spurlock, jr. bibliog diags Heating-Piping 25:115-21 Je '53

Use of cooling towers with unitary equipment. H. A. Blair. il diag Heat & Ven 50:77-81 My '53

Design

Analyze cooling tower performance by this method. E. R. Baker and L. T. Mart. Pet Refiner 31:97-103 O '52

How to calculate cooling tower control variables. M. R. Beychok. flow diag diag Pet Processing 7:1452-6 O '52

Specifications

Make cooling-tower specs accurate for best output, long life. R. Baker. il diag Power 96:82-5 N '52

Tables, calculations, etc.

Cooling tower selection chart. A. M. Norris. Refrig Eng 61:980-3; Discussion. 983+ S '53

Performance of natural-draught water-cooling towers. H. Chilton. bibliog plan diags Inst E E Proc 99 pt 2:440-52 O '52; Abstracts. Engineering 173:315-16 Mr 7 '52; Engineer 193:319 F 29 '52; Elec R (Lond) 150:511 Mr 7 '52; Discussion. Inst E E Proc 99 pt 2:452-6 O '52; Elec R (Lond) 150:511-12 Mr 7 '52

Prediction of cooling tower performance. W. W. Smith. bibliog Heating-Piping 25:109-12 O '53

COOLING water

Automatic conditioning of cooling tower water. J. W. Segraves. il diag Water & Sewage Works 100:406-9 O '53

Bearings, glands need clean water too; station cooling-water services clog up from iron and solids. P. Snyder. il Power 97:86-7 Jl '53

Better pump, cheaper bromination. F. Breese. diag Pet Processing 7:1785 D '52

Corrosion control in cooling water systems. W. A. Tanzola. il Pet Eng 25:C57-60 Ap '53

Determination of heavy metals and silica in chromate-treated cooling waters. S. Sussman and I. L. Portnoy. bibliog Anal Chem 24:1644-6 O '52

Dow conquers sea water corrosion. D. P. Thornton, jr. il Pet Processing 7:1640-3 N '52

How to estimate air compressor cooling water; nomograph. Mill & Factory 51:80 D '52

Pipe line that led to the court house. C. T. Baker. diags Heating-Piping 25:102-4 F '53

Problems of a giant cooling system; Arnold engineering development center. il Eng N 150:32+ Ap 30 '53

Recirculating-water systems need expert treatment supervision. S. T. Powell. il diags Power 97:86-9+ S '53

Trouble on cooling job. P. C. Goetz. Heating-Piping 25:177 Ja '53

What corrosion inhibitors should and should not do; treatment of Diesel-engine cooling water. J. F. Wilkes. il Ry Loco & Cars 127:77-83 S '53

Why did the Diesel stop? L. B. Villarta. il diags Power 97:118-19 Jl '53

See also
Cooling towers

Testing

Test cooling water for corrosion by these methods. M. C. Forbes. bibliog il diags Pet Refiner 32:130-3 Ap '53

COOPER, Merian C. 1893-
Portrait. Fortune 47:93 Ja '53

COOPER-Bessemer corporation

Generating more power from less fuel. il Bsns W p 101-2+ Ap 25 '53

Good business into 1953 seen. Barron's 32:17-18 O 27 '52

COOPERATION

See also
Advertising, Cooperative
Agriculture, Cooperative
Banks and banking, Cooperative
Building and loan associations
Cooperative associations
Insurance, Mutual
International cooperation
Medical service—Group and prepayment plans
Profit sharing
Trade unions—Cooperation with management

Japan

How Japanese accounting systems for coöperatives have been revised under the allied occupation. J. C. Essene. J Account 95:336-44 Mr '53

COOPERATIVE associations

Developments in consumers' cooperatives in 1951. F. E. Parker. U S Bur Labor Statistics Bul 1073:1-29; pa 20c Supt. of doc. '52; Excerpts. Mo Labor R 74:279-83 Mr '52

Indiana co-op faces court fight. Pub Util 51:39 Ja 1 '53

Toward a balance. Chem W 71:23-4 N 29 '52

Accounting

How Japanese accounting systems for coöperatives have been revised under the allied occupation. J. C. Essene. J Account 95:336-44 Mr '53

COOPERATIVE banking. See Banks and banking, Cooperative

COOPERATIVE education. See Engineering education—Cooperative plan; Industrial education—Cooperative plan

CO-OPERATIVE insurance society, limited
Statement by the chairman. A. Davies. Economist 167:189 Ap 18 '53

CO-OPERATIVE permanent building society
Statement by the chairman. H. L. Score. Economist 166:675 Mr 7 '53

COORDINATE setting machine. See Measuring instruments, Optical

COORDINATION (chemistry)
Application of molecular-orbital theory to some binuclear co-ordination compounds. J. D. Dunitz and L. E. Orgel. diags Chem Soc J p2594-6 S '53
Dimethylberyllium; co-ordination compounds. G. E. Coates and N. D. Huck. Chem Soc J p4501-11 N '52
Electrochemistry of boron trifluoride co-ordination compounds. N. N. Greenwood and R. L. Martin. Chem Soc J p751-64 Mr '53
Olefin co-ordination compounds; compounds with two double bonds attached to one platinum atom. J. Chatt and R. G. Wilkins. diags Chem Soc J p2622-6 Jl '52
Possible isomers for coördination compounds with terdentate ligands and ligands of higher function. W. C. Fernelius and B. E. Bryant. Am Chem Soc J 75:1735-6 Ap 5 '53
Stereochemistry and reaction mechanisms of hexacovalent inorganic complexes. F. Basolo. diags Chem R 52:459-527 bibliog(p521-7) Je '53
Studies in co-ordination chemistry; a ditertiary arsine nickel carbonyl and some halogen derivatives. R. S. Nyholm. Chem Soc J p2906-10 Jl '52
Studies in co-ordination chemistry; magnetic moments and bond types of transition-metal complexes. F. H. Burstall and R. S. Nyholm. Chem Soc J p3570-9 S '52
Studies in co-ordination chemistry; the magneto-chemistry of simple and complex fluorides of transition metals. R. S. Nyholm and A. G. Sharpe. Chem Soc J p3579-87 S '52
Studies on coördination compounds; a comparison of the chelating tendencies of β-diketones toward divalent metals. L. G. Van Uitert, W. C. Fernelius and B. E. Douglas. Am Chem Soc J 75:2736-8 Je 5 '53
Studies on coördination compounds; a method for determining thermodynamic equilibrium constants in mixed solvents. L. G. Van Uitert and C. G. Haas. bibliog Am Chem Soc J 75:451-5 Ja 20 '53
Studies on coordination compounds; measurements of chelation in ethanol solution. L. G. Van Uitert, W. C. Fernelius and B. E. Douglas. bibliog Am Chem Soc J 75:3577-8 Jl 20 '53
Studies on coördination compounds; some factors concerning the effect of the terminal groups on the chelating abilities of β-diketones. L. G. Van Uitert and W. C. Fernelius. Am Chem Soc J 75:3862-4 Ag 5 '53
Studies on coördination compounds; the chelating tendencies of β-diketones with the chlorides of copper(II), nickel and barium in water-dioxane solutions. L. G. Van Uitert, W. C. Fernelius and B. E. Douglas. Am Chem Soc J 75:457-60 Ja 20 '53
Studies on coördination compounds; the dissociation constants of β-diketones in water-dioxane solutions. L. G. Van Uitert and others. bibliog Am Chem Soc J 75:455-7 Ja 20 '53
Studies on coördination compounds; the effects of salt anion and of solvent upon the chelation of β-diketones. L. G. Van Uitert, W. C. Fernelius and B. E. Douglas. Am Chem Soc J 75:2739-41 Je 5 '53

COPELAND, Morris Albert, 1895-
How money flows through an economic system; moneyflow system. Bsns W p 144-6 Ja 10 '53

COPELAND refrigeration corporation
Offering oversubscribed. Comm & Fin Chr 177:2128 My 18 '53

COPENHAGEN

Sewerage

Sewage treatment of Scandinavia. E. L. Knoedler. Water & Sewage Works 100:125 Mr '53

COPOLYMERIZATION. See Polymerization

COPOLYMERS. See Polymers

COPPER
Aluminum for copper; greater corrosion risks? H. A. Liebhafsky and E. W. Balis. il diags Gen Elec R 56:12-16, 61 Mr '53
Anodic behaviour of copper in neutral and alkaline chloride solutions. H. Lal and H. R. Thirsk. Chem Soc J p 2638-44 S '53
Cathode polarization potential during the electrodeposition of copper; effect of the cathode base upon the cathode polarization potential and the crystal structure of the deposit. L. L. Shreir and J. W. Smith. bibliog il Electrochem Soc J 99:450-6 N '52
Cold work studies on copper at low temperatures. R. R. Eggleston. bibliog J Ap Phys 23:1400-1 D '52
Combined pairs of vacancies in copper. J. H. Bartlett and G. J. Dienes. bibliog Phys R 89:848-50 F 15 '53
Continuous cast copper on tonnage basis. il Steel 132:155-6 Ap 20 '53
Copper and copper alloys; survey of technical progress during 1952. E. Voce. Metallurgia 47:9-17 bibliog(205 titles, p 15-17) Ja '53
Copper-catalyzed decomposition of diazoketones. P. Yates. bibliog Am Chem Soc J 74:5376-81 N 5 '52
Copper in type 347 weld metal. R. P. Wentworth. il Welding J 32:347-51 Jl '53
Copper recovery. Mech Eng 75:325-6 Ap '53
Corrosion resistance to H_2SO_4 under non-oxidizing conditions. M. G. Fontana. Ind & Eng Chem 45:sup93A-5A Ap '53
Creep of copper under deuteron bombardment. W. F. Witzig. bibliog diag J Ap Phys 23:1263-6 N '52
Deformation of copper single crystals at 300° K and 78° K. T. H. Blewitt. bibliog il diag Phys R 91:1115-21 S 1 '53
Elastic scattering of 6.5-Mev protons from copper. L. M. Goldman. bibliog diags Phys R 89:349-52 Ja 15 '53
Electrochemical measurements in pyridine; the system Cu-Cu^+-Cu^{++}. A. K. Gupta. diag Chem Soc J p3473-9 S '52
Electron diffraction studies on the oxidation of pure copper and pure zinc between 200° and 500°C. E. A. Gulbransen and W. R. McMillan. bibliog il Electrochem Soc J 99:393-401 O '52
Electron-induced showers in copper. A. Kantz and R. Hofstadter. bibliog il diag Phys R 89:607-17 F 1 '53
Electron microscopic and other studies on a copper-cystine complex. H. Kahler, B. J. Lloyd, jr. and M. Eden. bibliog il J Phys Chem 56:768-70 Je '52
Evaporation of copper from germanium. G. Finn. Phys R 91:754-5 Ag 1 '53
Extra-resistivity owing to vacancies in copper. P. Jongenburger. bibliog Phys R 90:710-11 My 15 '53
Grain boundary diffusion of zinc in copper. R. Flanagan and R. Smoluchowski. J Ap Phys 23:785-7 Jl '52
Helium film transport over copper below 1°K. L. Lesensky and H. A. Boorse. diag Phys R 87:1135-6 S 15 '52
Isothermal annealing effects in irradiated copper. A. W. Overhauser. bibliog diag Phys R 90:393-400 My 1 '53
Large angle scattering of negative pions in aluminum, copper, and lead. H. H. Heckman and L. E. Bailey. bibliog diags Phys R 91:1237-42 S 1 '53
Magnetoresistance of Mg, Cu, Sb, and Al at liquid helium temperatures. G. B. Yntema. bibliog Phys R 91:1388-94 S 15 '53
Measurement of the internal energy in copper introduced by cold work. B. Welber. bibliog diags J Ap Phys 23:876-81 Ag '52
Metal-carbon composites for mechanical and electrical parts. E. P. Eaton, jr. il Product Eng 23:173-5 N '52
New copper facility casts larger ingots. Materials & Methods 38:208+ S '53
Pickling and bright dipping of copper and copper-rich alloys. E. E. Halls. Metal Finishing 51:68-73 My '53

COPPER—*Continued*

Production of charged π-mesons in H, D, C, Cu, and Pb by 381-Mev protons. M. M. Block and others. bibliog diags Phys R 88:1239-47 D 15 '52

Radiation damage and recovery in Cu, Ag, Au, Ni, and Ta. J. W. Marx and others. bibliog diags Phys R 88:106-12 O 1 '52

Reflectivity of copper electrodeposits. W. H. Gauvin and C. A. Winkler. bibliog Electrochem Soc J 99:447-9 N '52

Relative diffusion rates of zinc and copper in alpha brass. R. W. Balluffi and B. H. Alexander. il diag J Metals 4:Trans 1315-16 D '52

Relative effect of traces of hydrogen sulfide and sulphur dioxide on the corrosion of copper. J. Byrne and others. Blast F & Steel Pl 41:780-1 Jl '53

Retention by wood of copper and zinc from aqueous solutions of their salts. B. A. Ripley-Duggan. bibliog J Ap Chem 2:593-600 O '52

Salvage copper scrap without making smoke; Los Angeles Department of water and power incinerator. Elec World 138:134+ O 6 '52

Some acoustical properties of lead and other substances at liquid nitrogen temperature. P. J. Ernst and P. Zayon. Acoustical Soc Am J 25:152-3 Ja '53

Some magnetization studies of Cr^{+++}, Fe^{+++}, Gd^{+++}, and Cu^{++} at low temperatures and in strong magnetic fields. W. E. Henry. bibliog Rs Mod Phys 25:163-4 Ja '53

Spallation of Cu with high energy neutrons. L. Marquez. bibliog Phys R 88:225-7 O 15 '52

Specifications for copper and copper alloy welding rods; tabulation; data sheet. Metal Prog 64:96B O '53

Studies on some metal electrodes; the temperature coefficients of the copper and antimony electrodes in solutions initially free from their ions; the mode of oxidation of these metals. A. R. Tourky and E. M. Khairy. Chem Soc J p2626-33 Jl '52

Study of the annealing kinetics in cold worked copper. D. Bowen and others. J Ap Phys 23:630-4 Je '52

Thermodynamic study of liquid metallic solutions; approximate thermodynamic data from the phase diagram for the systems copper-bismuth, copper-lead and copper-thallium. O. J. Kleppa. Am Chem Soc J 74:6047-51 D 5 '52

Vapor pressure of copper. H. N. Hersh. bibliog diag Am Chem Soc J 75:1529-31 Ap 5 '53

Vapor pressures of inorganic substances; titanium between 1587 and 1764°K., and copper between 1143 and 1292°K. J. W. Edwards, H. L. Johnston and W. E. Ditmars. bibliog Am Chem Soc J 75:2467-70 My 20 '53

Wave functions and energy levels for Cu^{+} as found by the Slater approximation to the Hartree-Fock equations. G. W. Pratt, jr. bibliog Phys R 88:1217-24 D 15 '52

See also
Copper alloys

Analysis

Alizarin blue as a selective reagent for traces of copper; abstract. F. Feigl. Chem Age (Lond) 67:563-4 O 25 '52

Determination of copper in iron and steel. Iron & Steel Inst J 174:335-8 Ag '53

Determination of copper in wood pulps with tetraethylenepentamine. R. M. Kingsbury and C. L. Lake. bibliog Tappi 35:527-8 N '52

Determination of copper ion by a modified sodium diethyldithiocarbamate procedure; iron, zinc, and lead interference eliminated. C. A. Noll and L. D. Betz. Anal Chem 24:1894-5 D '52

Determination of milligram and submilligram quantities of copper by the iodate titration of cuprous thiocyanate. K. Tantranon and B. B. Cunningham. bibliog Anal Chem 25:194-5 Ja '53

Determination of trace metals in crudes and other petroleum oils; analysis for iron, nickel, vanadium, and copper. O. I. Milner and others. bibliog diags Anal Chem 24:1728-32 N '52

Iodometric determination of copper. L. Meites. Anal Chem 24:1618-20 O '52

Modified short iodide method for the determination of copper in ores and concentrator products to allow recovery of the reagents. R. G. W. Willcocks. J Ap Chem 2:608-12 O '52

New colorimetric reagent specific for copper; determination of copper in iron; 2,9-dimethyl-4,7-diphenyl-1,10-phenanthroline. G. F. Smith and D. H. Wilkins. bibliog Anal Chem 25:510-11 Mr '53

Review of analytical chemistry; nonferrous metallurgy. M. L. Moss. bibliog Anal Chem 25:38 Ja '53

Spectrophotometric titrations with ethylenediaminetetraacetic acid; determination of iron, copper, and nickel. P. B. Sweetser and C. E. Bricker. bibliog diags Anal Chem 25:253-5 F '53

Brittleness

Embrittlement of low-phosphorus phosphorus deoxidised coppers. B. T. Houlden and W. A. Baker. bibliog il diag Metallurgia 47:223-9 My '53

Cleaning

Cleaners for copper and brass. il Consumers Res Bul 31:10-11 F '53

Isotopes

Excitation functions for proton-induced reactions with copper. J. W. Meadows. Phys R 91:885-9 Ag 15 '53

Inverse Oppenheimer-Phillips process in the $Cu^{65}(He^{3}, \alpha)$ reaction. D. N. Kundu and M. L. Pool. Phys R 91:417 Jl 15 '53

Neutron capture γ-rays from scandium, vanadium, manganese, cobalt, and copper. G. A. Bartholomew and B. B. Kinsey. bibliog diags Phys R 89:386-95 Ja 15 '53

$(n,2n)$ Reactions in C^{12}, Cu^{63}, and Mo^{92}. J. E. Brolley, jr. and others. bibliog diag Phys R 88:618-21 N 1 '52

Radioactivity of Cu^{67}. H. T. Easterday. Phys R 91:653-4 Ag 1 '53

$Zn^{64}(d,\alpha n)Cu^{61}$ reaction. C. S. Cook and F. T. Porter. bibliog Phys R 90:429 My 1 '53

Metallography

Electron microscope study of the effect of cold work on the subgrain structure of copper. L. Delisle. bibliog il diags J Metals 5:Trans 660-6 My '53

Influence of prior strain history on the tensile properties and structures of high-purity copper. W. D. Jenkins and T. G. Digges. bibliog il J Res Nat Bur Stand 49:167-86 S '52

Recrystallization of a cold-rolled copper single crystal. Y. C. Liu and W. R. Hibbard, jr. bibliog il diags J Metals 5:Trans 672-9 My '53; Discussion. 5:Trans 1568-9 sec 2 N '53

Structure of crystallography of second order twins in copper. M. Sharp and C. G. Dunn. il J Metals 4:Trans 1344 D '52

Prices

Copper stockpile buying halted, allocations ended. Elec World 139:212 Ap 20 '53

Nonferrous prices; tabulation. Steel 132:173 Ja 5 '53

Specifications

Standard commercial wrought copper and brasses, nonleaded and leaded; tabulation; data sheet. A. H. Allen, comp. Metal Prog 62:96B D '52

Testing

Copper tensile properties. Mech Eng 75:326 Ap '53

Influence of prior strain history on the tensile properties and structures of high-purity copper. W. D. Jenkins and T. G. Digges. bibliog il J Res Nat Bur Stand 49:167-86 S '52

NBS studies tensile properties as related to previous strain. Iron Age 171:155-6 F 12 '53

Transportation

Antofagasta copper yards and shipping. A. J. Chellew and R. Condit. Min Eng 4:1214 D '52

COPPER—*Continued*

Welding

Argon-arc welding of copper; abstract. J. H. Cole. Metal Prog 63:206-8 Ap '53

Joining of copper by use of Heliwelding. H. A. Huff, jr. il Welding J 32:625-6 Jl '53

Welding aluminum and copper without heat. A. Stout. il Sheet Metal Worker 44:27-8 D '52

COPPER, Lead clad

Lead clad copper solves an anodizing problem. il Metal Finishing 50:65-6+ D '52

COPPER, Molten

Effect of dissolved sulphur on the surface tension of liquid copper. C. F. Baes, jr. and H. H. Kellogg. bibliog diags J Metals 5: Trans 643-8 My '53

COPPER, Powdered

Average copper powder price, shipments; tabulation. Iron Age 171:454 Ja 1 '53

COPPER acetate

Anomalous magnetic resonance absorption of copper acetate at 40 kMc/sec. H. Abe and J. Shimada. diag Phys R 90:316 Ap 15 '53

Anomalous paramagnetism of copper acetate. B. Bleaney. Rs Mod Phys 25:161-2 Ja '53

Conversion of ortho-parahydrogen by cuprous acetate in quinoline. W. K. Wilmarth and M. K. Barsh. bibliog Am Chem Soc J 75: 2237-42 My 5 '53

Homogeneous catalytic hydrogenation; activation of molecular hydrogen by solutions of cuprous acetate. S. Weller and G. A. Mills. bibliog diags Am Chem Soc J 75:769-77 F 20 '53

Paramagnetic resonance in copper acetate at 47 000 mc/sec. T. Okamura and others. Phys R 89:525 Ja 15 '53

COPPER alloys

Alpha solid-solution area of the Cu-Mn-Sn system. C. W. Funk and J. A. Rowland. bibliog il J Metals 5:Trans 723-5 sec 2 My '53

Beryllium copper spot welded without change in properties. D. I. Brown. il diag Iron Age 171:142-4 Mr 12 '53

Casting process introduced for economy in production of broader range of alloys; Asarco. il diag Tool Eng 31:98-9 Ag '53

Continuous-cast shapes. il diag Machine Design 25:129-30 Je '53

Continuous casting; wider range of bar, tube shapes available, market grows. il Iron Age 171:169-70 Ap 2 '53

Copper and copper alloys; survey of technical progress during 1952. E. Voce. Metallurgia 47:9-17 bibliog(205 titles, p 15-17) Ja '53

Copper-zinc constitution diagram, redetermined in the vicinity of the beta phase by means of quantitative metallography. L. H. Beck and C. S. Smith. bibliog il J Metals 4:Trans 1079-83 O '52

Corrosion resistance to H_2SO_4 under non-oxidizing conditions. M. G. Fontana. Ind & Eng Chem 45:sup93A-5A Ap '53

Definitions of alloys as used in the copper and brass mill products industry; engineering file facts. Materials & Methods 38:141 S '53

Effect of mould material and alloying elements on metal/mould reaction in copper-base alloys; abstract and discussion. N. B. Rutherford. Engineering 174:462 O 10 '52

Elastic constants of Cu-4 percent Si. C. S. Smith and J. W. Burns. bibliog J Ap Phys 24:15-18 Ja '53

Ferromagnetic alloys in the system copper-manganese-indium. R. R. Grinstead and D. M. Yost. bibliog il diags Am Chem Soc J 75:1803-9 Ap 20 '53

Hall effect of copper-nickel alloys. A. I. Schindler and E. M. Pugh. bibliog diags Phys R 89:295-8 Ja 1 '53

Heat conduction in alloys at low temperatures. I. Estermann and J. E. Zimmerman. bibliog diags J Ap Phys 23:578-88 My '52

High-copper alloy has improved properties. Materials & Methods 36:150 N '52

How to work tellurium copper; reference book sheet. H. Ashley. il Am Mach 97:199 O 12 '53

Inert arc welding of 90-10 cupro-nickel. L. H. Hawthorne. il Welding J 32:31-5; Discussion. 36 Ja '53

Isothermal ordering of Cu_3Au at 200°C. E. K. Halteman and others. Phys R 88:1205 D 1 '52

Kinetics of the disorder-order transformation in Cu_3Au. N. W. Lord. bibliog diags J Chem Phys 21:692-9 Ap '53

New copper alloy has high stress-corrosion resistance. C. H. Hannon. il Iron Age 170: 131-3 N 20 '52

Novoston alloy for ships' propellers. Engineering 175:326 Mr 13 '53

Pickling and bright dipping of copper and copper-rich alloys. E. E. Halls. Metal Finishing 51:68-73 My '53

Residual resistance in dilute copper alloys. D. K. C. MacDonald and W. B. Pearson. Phys R 88:149 O 1 '52

Resistivity of Cu_3Au during neutron irradiation. H. L. Glick and others. Phys R 87:1074 S 15 '52

Reversal of the strain-induced martensitic transformation in the copper-zinc system. J. E. Reynolds, jr. and M. B. Bever. il J Metals 4:Trans 1065-6 O '52

Specifications for copper and copper alloy welding rods; tabulation; data sheet. Metal Prog 64:96B O '53

System zirconium-copper. C. E. Lundin and others. bibliog il diags J Metals 5:Trans 273-8 sec 2 F '53

Theoretical analysis of the diffusion processes determining the oxidation rate of alloys. C. Wagner. bibliog(47 ref) Electrochem Soc J 99:369-80 O '52

Typical Brinell hardness numbers of some nonferrous alloys; data sheet. Foundry 81: 203-4 My; 175-6 Je '53

Volumetric procedure for analysis of tin in copper-base alloys. R. Rapport. il Foundry 81:115 Ag '53

What's ahead the next ten years in materials and components. Am Mach 96:A6 Mid-N '52

See also

Aluminum bronze
Brass
Bronze
Monel metal
Nickel silver

Analysis

Photometric determination of silicon in ferrous, ferromagnetic, nickel, and copper alloys; a molybdenum blue method. C. L. Luke. bibliog Anal Chem 25:148-51 Ja '53

Testing

Forming characteristics of beryllium copper strip. J. T. Richards and E. M. Smith. bibliog Am Soc T M Proc 50:1085-100 '50

COPPER Brite. See Polishing materials

COPPER bromide

Low temperature heat capacities of inorganic solids; heat capacity and thermodynamic properties of cuprous bromide from 16 to 300° K. J. Hu and H. L. Johnston. bibliog Am Chem Soc J 74:4771-2 O 5 '52

COPPER chloride

Antiferromagnetic $CuCl_2\cdot 2H_2O$ crystals. C. J. Gorter. bibliog diag Rs Mod Phys 25:332-7 Ja '53

Studies on coördination compounds; the chelating tendencies of β-diketones with the chlorides of copper (II), nickel and barium in water-dioxane solutions. L. G. Van Uitert, W. C. Fernelius and B. E. Douglas. Am Chem Soc J 75:457-60 Ja 20 '53

Two complex salts of choline and copper chloride and their activity as catalysts of fat oxidation. P. L. White, D. M. Hegsted and J. Mayer. bibliog Am Chem Soc J 75:2352-4 My 20 '53

COPPER clad aluminum. See Aluminum, Copper-clad

COPPER clad steel. See Steel, Copper clad

COPPER compounds

Copper-based fungicides announced for test. Paper Tr J 135:34 N 7 '52

Determination of molecular weights of dextrans by means of alkaline copper reagents. H. S. Isbell and others. bibliog J Res Nat Bur Stand 50:81-6 F '53

Magnetic susceptibilities of hydrogenated pyridine and quinoline solutions of cupric and nickelous acetate and salicylaldehyde. W. K. Wilmarth, M. K. Barsh and S. S. Dharmatti. Am Chem Soc J 74:5035-7 O 20 '52

COPPER compounds—*Continued*

Reaction of sodium cyanide on cupric ammonia. R. K. McAlpine. bibliog Anal Chem 25:331-4 F '53

Solubility of the copper salts of aromatic carboxylic acids in benzene-ethanol mixtures. M. Crawford and F. H. C. Stewart. Chem Soc J p288-92 Ja '53

Spectrophotometric investigation of the copper(II) ion-triethanolamine complex. J. M. Bolling and J. L. Hall. bibliog Am Chem Soc J 75:3953-5 Ag 20 '53

Steric effects and the stability of complex compounds; the chelating tendencies of N-alkylethylenediamines, with copper(II) and nickel(II) ions. F. Basolo and R. K. Murmann. bibliog Am Chem Soc J 74:5243-6 N 5 '52

Studies of metallated dye complexes; copper (II) complexes with 2-carboxyphenyl-azo-β-naphthol and 2-carboxyphenyl-azo-β-naphthylamine. H. B. Jonassen and J. S. Wilson. bibliog Am Chem Soc J 75:4201-4 S 5 '53

COPPER cyanide

Reaction of sodium cyanide on cupric ammonia. R. K. McAlpine. bibliog Anal Chem 25:331-4 F '53

COPPER glycinate

Diffusion coefficient of cupric glycinate. R. B. Dean and H. Soonpää. bibliog Am Chem Soc J 74:6108-9 D 5 '52

COPPER hydroxide

Catalysis by $Cu(OH)_2$; inhibition by magnesium hydroxide; abstract. J. D'Ans and J. Mattner. Chem Age (Lond) 67:805 D 13 '52

COPPER in the body

Deficiency of ceruloplasmin in patients with hepatolenticular degeneration (Wilson's disease). I. H. Scheinberg and D. Gitlin. bibliog Science 116:484-5 O 31 '52

COPPER industry and trade

Chopping controls to size. Bsns W p28-9 F 21 '53

Copper, 1952. I. K. Hearn. il Min Cong J 39:85-7 F '53

Copper world allocations set for first quarter, 1953. Oil Paint & Drug Rep 162:3 D 22 '52

No stopper from copper as shortage ends. S. W. Baker. il Steel 132:67-8 Ap 20 '53

Refined copper open-ended for export; copper scrap, alloy ingot quotas set. For Comm W 49:5 Ap 27 '53

So there's plenty of copper. Bsns W p 123-4 Ap 25 '53

See also

Kennecott copper corporation

Finance

Copper futures market opens today in New York. Barron's 33:27-8 Je 1 '53

Sitting pretty despite today's price ceilings. W. F. Boericke. Barron's 32:11 D 8 '52

Securities

Will end of price controls boost copper share earnings. F. L. Walters. Mag of Wall St 92:32-3+ Ap 4 '53

Statistics

Copper, 1952. H. H. Wanders. Eng & Min J 154:77-9 F '53

Copper production, consumption, imports and exports, scrap copper recovery and prices; tabulations. Iron Age 171:418 Ja 1 '53

Copper production, shipments and stocks; imports, exports, copper and brass mill fabricator statistics; copper consumption in U.S.; tabulations. Steel 132:174 Ja 5 '53

World production of copper from ores; by countries, 1943-1951; tabulation. Iron Age 171:417 Ja 1 '53

Great Britain

Plans for a copper market. Economist 167:244+ Ap 25 '53

U.K. frees copper for trade; reduces price. For Comm W 49:10 My 25 '53

COPPER iodomercurata

Solid phases in the system Ag_2HgI_4-Cu_2HgI_4. L. Suchow and P. H. Keck. bibliog Am Chem Soc J 75:518-22 F 5 '53

COPPER laurate

Magnetic properties and structure of copper laurate. A. Gilmour and R. C. Pink. Chem Soc J p2198-201 Ag '53

COPPER mandelate

Acidimetric titrations of salts of weak acids; equilibria in the copper(II)- mandelate system. L. Meites. bibliog Am Chem Soc J 75:2859-62 Je 20 '53

COPPER metallurgy

ASARCO rehabilitates copper refinery. G. H. Weis and others. il plans diags J Metals 5:616-23 My '53

Arc-furnace equipment and its operation at the Kennecott Utah refinery. H. A. Shaw and H. G. G. Whitton. il plan diag J Metals 5:Trans 197-203 F '53

Chuquicamata, story of Chilean copper. flow sheets il plans diags J Metals 5:19-33 Ja '53

Control of quality in melting and casting copper and high-conductivity copper-base alloys; abstract. J. Sykes. Metal Prog 64:124+ S '53

Electrical and metallurgical improvements at Kennecott's Utah copper division mills. R. J. Corfield and A. G. Johnson. il diag Min Eng 5:274-6 Mr '53

Flash smelting improves Harjavalta's metallurgy. F. Benitez. il diags Eng & Min J 154:76-80 O '53

General design sulphide ore plant; Chuquicamata. W. Jurden and others. flow sheets il plans diags Min Eng 4:1174-212 D '52

How new leach-float plant handles Greater Butte's ore. J. B. Huttl. flow sheets il Eng & Min J 154:90-3 Je '53

Milling methods at Hayden. J. L. Stevens. il Min Cong J 38:46-8 O '52

New acid-leaching section raises Cyprus copper recovery by ten per cent. A. W. Schlechten and J. L. Bruce. il maps Eng & Min J 153:88-91 D '52

New ore treatment process. Can Chem Process 36:58+ S '52

Operations at new Cornelia copper smelter of Phelps Dodge corp. J. W. Byrkit. flow sheet il plan diags J Metals 5:Trans 633-42 My '53

Oxide plant, Chuquicamata. E. V. Herring and J. C. Allen. Min Eng 4:1212-14 D '52

Preliminary tests of Nevada oxidized copper ores. A. L. Engel. U S Bur Mines Rep of Invest 4952:1-6 '53

Remarkable case of the Copperhill ball mill. Eng & Min J 154:86-9 Je '53; Discussion. diags 154:80-3+ S '53

Sponge iron at Anaconda. F. F. Frick. diag Min Eng 5:Trans 83-4 Ja '53; Same cond. J Metals 5:395 Mr '53

White Pine copper. R. H. Ramsey. flow sheets il map plans diags Eng & Min J 154:80-6 Ja '53

COPPER mines and mining

New growth for the red metal; with tabulation, new projects operating, in construction or planned. il plan maps Eng & Min J 154:110-19 Jl '53

Unit copper production costs increase in foreign mines. W. F. Boericke. Eng & Min J 154:99 O '53

Alaska

Investigation of the copper bullion claims, Rua Cove, Knight island, Alaska. F. A. Rutledge. 9pls U S Bur Mines Rep of Invest 4986:1-6 '53

Arizona

Carryall scraper plays major role in open pit mining at Inspiration. H. H. Mellus. il Min Eng 5:978-9 O '53

City to grow in Arizona desert. Eng N 149:25 D 11 '52

Mining copper at Bagdad, Ariz. O. Hondrum. il Explosives Eng 30:143-5+ S '52

New ideas for Bagdad Copper. E. R. Dickie and others. il Eng & Min J 154:88-93 Mr '53

Use of a caved block as an ore pass and its application to open-pit mining; Inspiration consolidated copper co. H. C. Weed. il diags Min Eng 5:Trans 886-9 S '53

Chile

Chuquicamata copper. D. M. Dunbar and others. flow sheets il plans maps diags Min Eng 4:1164-214 D '52

Chuquicamata, story of Chilean copper. flow sheets il plans diags J Metals 5:19-33 Ja '53

Israel

King Solomon's mines; illustrations with text. Iron Age 171:57 Ja 29 '53

COPPER mines and mining—*Continued*

Michigan

White Pine copper. R. H. Ramsey. flow sheets il map plans diags Eng & Min J 154:72-87 Ja '53

Montana

Greater Butte mine output nears 10,000-ton mark. J. B. Huttl. il diags Eng & Min J 154:77-81 Ap '53

Nevada

Mac Arthur copper deposit, Lyon county, Nev. E. J. Matson. 10pls U S Bur Mines Rep of Invest 4906:1-47 '52

Rhodesia

Copper boom ending? Economist 166:441 F 14 '53

Still profitable copper. Economist 167:544+ My 23 '53

Through the ring fence. Economist 166:755 Mr 14 '53

Southwestern states

Truck haulage and maintenance in the Southwest. H. C. Weed and C. A. Lindberg. il Min Cong J 39:29-31 Mr '53

Tennessee

Blast hole drilling at the Tennessee copper co.; tungsten carbide insert bits. E. Flournoy. il diags Min Cong J 39:78-80+ Ap '53

Vermont

New life for Vermont's 160-year old copper mine. G. P. Lutjen and J. H. Kearney. il diag Eng & Min J 154:72-5 O '53

COPPER ores

Geochemical prospecting for copper at Ray, Ariz. O. M. Clarke, jr. map diags Econ Geol 48:39-45 Ja '53

Geology of the Chuquicamata orebody. V. D. Perry. il map diag Min Eng 4:1166-8 D '52

Uranium-copper deposits, Rum Jungle, Australia. C. J. Sullivan and R. S. Matheson. il maps diags Econ Geol 47:751-8 N '52

COPPER oxides

Aids in vulcanization of lignin-natural rubber coprecipitates; lead, copper, and bismuth oxides. T. R. Griffith and D. W. MacGregor. bibliog Ind & Eng Chem 45:380-6 F '53

Copper oxides, useful tools in casting copper-base alloys. L. G. Klinker. il Foundry 81:228+ S '53

Flow of oxide layer during oxidation of copper. W. J. Moore. J Chem Phys 21:1117 Je '53

Low temperature heat capacities of inorganic solids; heat capacity of cupric oxide from 15 to 300°K. J. Hu and H. L. Johnston. bibliog Am Chem Soc J 75:2471-3 My 20 '53

COPPER phthalocyanine

Unit cell constants of α-copper phthalocyanine. M. T. Robinson and G. E. Klein. Am Chem Soc J 74:6294-5 D 20 '52

COPPER plating

Bright copper plating; abstract. D. Trivich. il Steel 131:83 D 1 '52

Cathode polarization potential during electrodeposition of copper. L. L. Shreir and J. W. Smith. bibliog il Electrochem Soc J 98:193-202; 99:64-70, 450-6 My '51, F, N '52

How one firm beat the nickel shortage; Daystrom furniture. il diag Metal Finishing 51:78-81 O '53

Speedy plating of small diameter steel tubing. il Iron Age 170:174-5 N 6 '52

COPPER pyrophosphates

Spectrophotometric investigation of the complexes formed between copper and pyrophosphate ions in aqueous solution. J. I. Watters and A. Aaron. bibliog Am Chem Soc J 75:611-16 F 5 '53

COPPER sulfate

Anomalous paramagnetism of copper sulfate pentahydrate. W. E. Henry. Phys R 87:1133 S 15 '52

British sulphate of copper association 28th annual general meeting, London, Oct. 22. Chem Age (Lond) 67:608 N 1 '52

Copper catalysis for manganese oxidation. F. L. Futral and R. S. Ingols. Am Water Works Assn J 45:804-6 Ag '53

High field conductance of copper sulfate relative to potassium chloride at 25°. D. Berg and A. Patterson, jr. Am Chem Soc J 74:4704-5 S 20 '52

More copper sulfate approved for export. For Comm W 49:9 Je 8 '53

Principles of copper dyeing of polyacrylonitrile fibers; the controlled redox-potential method. R. H. Blaker. il diags Am Dyestuff Rep 42:76-80 F 2 '53; Same cond. Mod Textiles Mag 33:56+ N '52

Reservoir treatment by improved methods. R. L. Derby and F. W. Townsend. il diags Water & Sewage Works 100:211-16 Je '53

COPPER thiocyanate

Determination of milligram and submilligram quantities of copper by the iodate titration of cuprous thiocyanate. K. Tantranon and B. B. Cunningham. bibliog Anal Chem 25:194-5 Ja '53

COPPER tubes. See Tubes, Copper

COPPERWELD steel company

Preferred stock offered. Comm & Fin Chr 176:2269 D 15 '52

COPPERWORK

Flanged parts made by splitting flat stock. M. Huisman. il Am Mach 97:120-1 F 2 '53

Induction brazing can be used for copper and copper-alloy parts. E. M. Laughner. il diags Am Mach 96:138-40 N 24 '52

Production welding large copper vessels. il Welding J 32:52 Ja '53

Thin phos-copper strips speed brazing; Westinghouse electric corp. R. E. Ballentine. il Am Mach 97:124-6 F 2 '53

COPRA

Copra price boom seen as short-lived. Barron's 32:27-8 N 3 '52

Indonesia's copra output low; prices stabilized. For Comm W 48:20 O 13 '52

New copra and oil trade developed in Zanzibar. For Comm W 49:15 F 16 '53

COPROPORPHYRINS

Coproporphyrinuria; study of its usefulness in evaluating lead exposure. S. S. Pinto and others. bibliog A M A Archives Ind Hygiene & Occup Med 6:496-507 D '52

COPYING processes

Duplicating your office records. il Mod Ind 26:117-18 Jl '53

Duplicator reproduces with heat; Thermo-Fax duplicator. il diags Product Eng 23:162-4 N '52

How to cut duplicating costs. H. Herslow. Am Bsns 23:28+ Ap '53

Operation and control of an office duplicating department; abstract. G. J. Hart. Management R 41:730-1 N '52

Vacuum-pressure system handles large reproductions. il diags Machine Design 25:139 Ja '53

See also

Duplicating machines
Photographic records
Photomechanical processes
Photostat
Xerography

COPYING processes (machine work). See Machine work—Copying processes

COPYRIGHT

Expediency and copyright. Economist 165:216-18 O 25 '52

CORAL reefs and islands

Facies relationships of organic reefs. P. E. Cloud, jr. diags Am Assn Pet Geologists Bul 36:2125-49 bibliog(p2147-9) N '52

CORALS, Fossil

Pleistocene corals at Lake Worth, Florida. C. W. Cooke. Science 117:440 Ap 17 '53

CORBETT, J. Ralph

NuTone rings the bell. Fortune 46:170 D '52

CORCORAN, Thomas Gardiner, 1900-

Businessmen in the news. por Fortune 47:37 Ja '53

CORD fabric. See Tire fabrics

CORDAGE fibers

Mechanics of elastic performance of textile materials; factors affecting the translation of certain mechanical properties of cordage fibers into cordage yarns. M. M. Platt and others. bibliog diags Textile Res J 22:641-67 O '52; Discussion. 22:827-9 D '52

CORDINER, Ralph Jarron, 1900-

Portrait. Fortune 46:116 D '52

CORDON, Guy, 1890-

Cordon of Oregon, key man in federal public works policy. por Eng N 150:76+ Je 4 '53

CORDS, Cotton. See Cotton cords

CORDS, Rayon. See Rayon cords

CORDUROY

Cutting is the key to successful corduroy finishing; Vanetta corduroy corp. G. M. Moisson. il diag Textile World 103:146-9 S '53

How Avondale mills quills, slashes, and weaves corduroy. R. B. Pressley. il Textile World 103:115-17+ My '53

CORE blowers. See Foundry machinery

CORE ovens

Carl-Mayer core oven. il Foundry 81:277 O '53

COREOPSIS

Anthochlor pigments of cosmos sulphureus, coreopsis lanceolata and C. saxicola. M. Shimokoriyama and S. Hattori. bibliog Am Chem Soc J 75:1900-4 Ap 20 '53

CORES

Coremaking at Ford's modern, new Cleveland foundry. il plans Foundry 81:146-57 Mr '53

Coremaking speeded by use of heated corebox. W. M. Peterson. il Foundry 81:106-7+ Jl '53

Cores are blown at ends through 90-degree elbow; core blowing machine. L. D. Pridmore. il Foundry 80:186 O '52

Drying of core wash speeded by infrared heating unit; Atlas foundry co. il Foundry 81:248 Je '53

Loose hinge on book corebox facilitates core removal. L. D. Pridmore. il diags Foundry 80:216 N '52

Making plain cylindrical cores without a corebox. F. J. McCulloch. il Foundry 81:152 O '53

New coreroom handles jobbing work efficiently; Midwest foundry co. J. E. Wolf. il Foundry 81:118-19+ Je '53

Patterns; their relation to castings production. T. H. Trevithick. diags Foundry 81:195-6+ F '53

Plaster cores formed in plastic corebox. G. C. Close. il Foundry 81:132+ F '53

Shell moulds and cores. il Engineer 194:845 D 19 '52

Versatile core boxes. il Materials & Methods 36:234+ O '52; Same. Mech Eng 74:913 N '52

Who uses strainer cores and how many? Foundry 81:305-6 My '53

See also

Molds (for casting)

CORIOLIS acceleration. See Acceleration

CORIOLUS sanguineus

Chemistry of mould metabolites; isolation and characterisation of a red pigment from coriolus sanguineus (Fr). G. W. K. Cavill and others Chem Soc J p525-9 F '53

CORLUMINE

Synthesis and resolution of (+)-corlumine. W. M. Whaley and M. Meadow. Chem Soc J p 1067-70 Ap '53

CORN

Aseptic canning improves corn; Oconomowoc canning co. il Food Eng 25:74-5 F '53

Corn market seen near end of slump. Barron's 33:33+ Ja 26 '53

Hog price rise and CCC bolster corn market. Barron's 33:35-6 My 11 '53

Thermal engineering scores in new canning process; Sterilmatic process. C. R. Havighorst. flow sheet(p102-5) il Food Eng 25:76-80+ F '53

Cleaning

High voltage removes filth; electrostatic separator perfected by Quaker Oats. E. D. Andrews. flow diag il diag Food Eng 24:53-4+ Jl '52; Discussion. 24:114+ D '52

Prices

Problem of high feed prices vs. cheaper meat prices. L. N. Burch. Banking 46:64-5 Jl '53

CORN cribs. See Granaries

CORN exchange bank trust company

Five outstanding entrenched stocks; with comparative balance sheet items. Mag of Wall St 91:183 N 15 '52

How the Corn grew. Burroughs Clearing House 37:8 F '53

CORN flakes

Untouched by human hands; processing corn flakes. il Can Chem Process 36:64+ N '52

CORN products

See also

Cornstarch
Inositol
Sorbitol

CORN products plants

Industrial water use; corn products industry. W. J. Lauterbach. Am Water Works Assn J 44:1033-5 N '52

Plastic-model plant, midget equipment make process revisions come alive; American Maize-products co. il Food Eng 25:93+ Ja '53

Polarographic analysis using flowing samples; continuous automatic measurement of sulfur dioxide in corn steep liquor. L. D. Wilson and R. J. Smith. diags Anal Chem 25:334-6 F '53

Equipment

High voltage removes filth; electrostatic separator perfected by Quaker Oats. E. D. Andrews. flow diag il diag Food Eng 24:53-4+ Jl '52; Discussion. 24:114+ D '52

Revolutionary graphic panel simplifies process control; Corn products refining co. L. E. Slater. il diags Food Eng 24:84-6+ N '52

CORN products refining company

Five timely selections in risk free stocks; with comparative balance sheet items. Mag of Wall St 92:279 My 30 '53

Twenty stocks acting best, poorest; with tables. J. S. Williams. Mag of Wall St 92:227 My 16 '53

CORN sirup

Corn sweeteners help processors in many ways. R. F. Cohee, jr. il Food Eng 25:74-6+ Je '53

Corn syrup wins place as pickle sweetener. F. W. Fabian and H. Pivnick. Food Eng 25:97-8+ Mr '53

Laboratory evaluation of granular carbons. W. R. Fetzer, E. K. Crosby and C. E. Engel. bibliog diags Anal Chem 24:1558-63 O '52

Quality fruits with corn syrup. E. H. Wiegand. il Food Eng 25:131+ My '53

Six simple auxiliaries smooth packaging line performance; Corn products refining co. I. C. Miller. il diags Food Eng 25:61-3 My '53

CORN starch. See Cornstarch

CORN steep liquor. See Cornstarch

CORN sugar. See Glucose

CORNELL university

Flight lab learns to tame stalls; Cornell aeronautical laboratory's Flight research department. S. H. Reiniger. Aviation W 57:29+ D 22 '52

Guggenheim aviation safety center

Cornell center sets up targets. A. McSurely. Aviation W 58:25-6 Ap 27 '53

CORNET

See also

Trumpet

CORNING glass works

Five stocks with unique growth prospects; with comparative balance sheet items. Mag of Wall St 92:452 Jl 11 '53

Stock offering oversubscribed. Comm & Fin Chr 176:1672 N 3 '52

CORNSTARCH

Determination of lactic acid in heavy corn steep liquor. R. J. Smith. bibliog Anal Chem 25:505-7 Mr '53

Effect of a cationic detergent on the digestion of raw cornstarch *in vitro*. R. L. Gates and R. M. Sandstedt. bibliog Science 116:482-3 O 31 '52

Evidence of multiple branching in waxy maize starch. S. Peat, W. J. Whelan and G. J. Thomas. Chem Soc J p4546-8 N '52

CORONA. See Sun—Corona

CORONA (electricity)

Bipolar logarithmic corona-current amplifier. S. Chapman and L. Bogdan. bibliog il diags Electronics 26:136-7 Ja '53

Corona resistors. T. A. Ledward. il diag Electrician 149:981-2 O 3 '52

Current increase at constant amplification factor in steady corona with coaxial cylindrical geometry. L. B. Loeb. Phys R 90:144-5 Ap 1 '53

CORONA (electricity)—*Continued*

Estimate of the energies of the positive ions in a negative point-to-plane corona. G. L. Weissler and M. Schindler. bibliog diags J Ap Phys 23:844-6 Ag '52

Mechanism of the ring discharge in negative point-to-plane corona. A. Greenwood. bibliog il diags J Ap Phys 23:1316-19 D '52

Physical concepts of corona in capacitors; abstract. J. R. Nye. diags Elec Eng 72:631 Jl '53

Proportional counters in corona region. L. Colli and others. il R Sci Instr 23:621-3 N '52

Pulse-free discharges in negative point-to-plane corona. A. Greenwood. il diag Phys R 88:91-2 O 1 '52

CORONAGRAPH

Smart tooling solves tough elliptical boring job; Westinghouse electric corp. S. D. Phillips. il diags Am Mach 96:140-1 D 8 '52

CORONATIONS

British spur sales with coronation theme. il Food Eng 25:144 My '53

Coronation broadcasts. Engineer 195:805+ Je 5 '53

Coronation; businessmen put it to work. il Bsns W p64-6+ Ap 4 '53

Coronation china in Great Britain. K. B. Czarnecki. il Am Cer Soc Bul 32:286-7 Ag 15 '53

Coronation floodlighting and illuminated displays. il Elec J 150:710 F 27 '53

Coronation lighting equipment. il Electrician 149:998-9 O 3 '52; [cont as] Elec J 149:1266-8, 1750-2; 150:110-14 O 24, D 5 '52, Ja 9 '53; Elec R (Lond) 152:131-44 Ja 16 '53

Coronation showroom displays. il Elec R (Lond) 152:421 F 20 '53

Designs for coronation displays. il diags Elec J 150:206-8 Ja 16 '53

Economic consequences of the coronation. A. W. May. Comm & Fin Chr 177:2513 Je 11 '53

Electricity and the coronation celebrations. P. Dunsheath. il Elec R (Lond) 152:119-20 Ja 16 '53

Heating engineer's view of the coronation. il Heating-Piping 25:84-5 Je '53

King-size headaches in coronation, jewels. D. Willens. Ed & Pub 85:59 N 22 '52

Lighting the way. B. H. Leeson. Elec R (Lond) 152:115-16 Ja 16 '53

Sound and television broadcasts at the coronation. Engineering 175:724 Je 5 '53

Tv covers coronation. A. V. J. Martin. il map Tele-Tech 12:136-7 Je '53

Tv fights for its crowning glory. Bsns W p32 My 30 '53

When U.S. television covered coronation. il map Bsns W p28-31 Je 6 '53

CORONENE

Eight- and higher-membered ring compounds; improved synthesis of coronene. W. Baker, J. F. W. McOmie and W. K. Warburton. Chem Soc J p2991-3 Ag '52

CORPORATE entries. See Cataloging—Corporate entries

CORPORATION law

New York law prohibiting engineering practice by corporations under attack. Eng N 150:21-2 Mr 12 '53

Shifting from corporate to unincorporated business form. J Account 94:473-4 O '52

See also

Public utilities—Law

CORPORATIONS

New weapons, new leaders; top companies doing defense business. Bsns W p30-1 Ja 24 '53

Transformations of American corporations since the 20's; with table of corporate growth in employees and stockholders of 25 leading corporations, 1901 and 1951. M. Smith. Mag of Wall St 91:279-81+ D 13 '52

See also

Banks and banking
Building and loan associations
Controllers
Corporation law
Electric utilities
Gas companies
Insurance companies
Investment trusts
Oil companies
Public utilities
Railroads
Standard oil company (New Jersey)
Stockholders
Stocks
Trust companies
Trusts, Industrial

Accounting

Balance sheet treatment of note payable in common stock of debtor corporation. J Account 94:606-7 N '52

More accurate method of accounting for fixed assets; abstract. A. B. Hossack. J Account 94:484-6 O '52

Relationship between depreciation allowance and maintenance of capital during inflation. J. E. Kane. J Account 94:697-701 D '52

Stock dividends and split-ups; accounting treatment by stockholders and corporation. J Account 95:44-7 Ja '53; Discussion. R. V. Hunter. 95:543-4+ My '53

Systems and procedures for the small business suffering from sudden expansion in volume. E. G. Scovil. J Account 94:702-7 D '52

See also

Accounting departments
Financial statements
Fiscal year

Charities

Boost for school donations. Bsns W p67 Je 6 '53

Corhart adopts federated charity plan. Glass Ind 33:680-1 D '52

Corporate profits and campus budgets. Fortune 46:108 D '52

Corporation support of higher education. J. A. Pollard. Harvard Bsns R 30:111-26 S '52

Flexible five per cent. B. Ruml. il Dun's R 60:1, 21-2+ S '52

Practical standards for corporate giving; abstract. G. J. Eger. Management R 42:48-9 Ja '53

Some pointers on corporate giving. Management R 41:754-5 N '52

Wanted, a Medici; colleges find corporations won't replace the rich man. J. Chamberlain. Barron's 33:5-6 Je 22 '53

What's giving; Cleveland survey. Bsns W p 115 Mr 7 '53

Close corporations

Some tax factors influencing the operation of the closely-held corporation. J. A. Phillips. J Account 95:166-75 F '53

Directors

Directors; should they be useful or ornamental? W. H. Conant. Am Bsns 23:8-9+ F '53

Putting directors on a salary. Bsns W p 136+ Mr 28 '53

Sales wins a bigger voice on biggest-company boards. L. M. Hughes. Sales Management 70:24-5+ Ja 15 '53

Selling your ideas to the board of directors. C. McPherson. Am Bsns 22:18-19+ N '52; Abstract. Management R 42:3-4 Ja '53

What it takes to be a good director. il Bsns W p90+ Ja 17 '53

Who is the average board member? American institute of management's survey. Steel 132:60 Mr 2 '53

Directors, Junior

Second-team directors score for Tileston & Hollingsworth. Paper Tr J 137:18 Ag 28 '53

Finance

All things considered, 1952 profits are not as bad as they might have been. Bsns W p29-30 N 1 '52

Bigger scores for 1953? Bsns W p 131 My 16 '53

Capital spending continues to climb. Bsns W p34 Mr 28 '53

Closer look at earnings. Bsns W p 134 Mr 21 '53

Companies that will and will not benefit from repeal of EPT. H. Wingate. Mag of Wall St 92:207-9+ My 16 '53

Constructive risk lending to growing enterprises. E. L. Worstall. Comm & Fin Chr 178:19 Jl 2 '53

Corporate demands on the capital market. Fed Res Bul 39:323-9 Ap '53

Corporate earnings in 1952; with table; net income of leading corporations for the years 1951 and 1952. Nat City Bank p41-4 Ap '53

Corporate profit dips to $10.7 billion in 1952. Steel 132:50 My 18 '53

CORPORATIONS—Finance—*Continued*

Debt warning raised; American institute of management report. Burroughs Clearing House 37:3-5 Jl '53

Do you stack up as a growth company? Chem W 71:24+ D 20 '52

Expansion goes right on. Bsns W p27 Je 13 '53

Factors in coming business financing. R. L. Reierson. Comm & Fin Chr 177:1530-1 Ap 9 '53

Financial and stockholder relations; problems of the average corporation. H. S. Hettinger. Management R 42:41-6 Ja '53

Financing business investment in 1952. Survey of Cur Bsns 33:27-9 F '53

First-quarter profits; mixed. Bsns W p58 Ap 11 '53

First reports are full of cheer; first quarter earnings. Bsns W p28-9 My 2 '53

Giants report. Economist 167:459-60 My 16 '53

High capital outlays seen in first quarter, 1953. Comm & Fin Chr 176:2506 D 25 '52

High cost of corporate equity capital. R. P. Soule. Comm & Fin Chr 176:2241 D 11 '52

High taxes depleting corporate working capital; report of IBA industrial securities committee. Comm & Fin Chr 176:2349+ D 18 '52

How high can corporate debt go? Bsns W p58+ Je 20 '53

How much more plant expansion? Bsns W p 140-2 Mr 28 '53

How much more squeeze on profits? Bsns W p 110+ F 14 '53

In '52; high sales but fading profit. Bsns W p28-9 F 7 '53

Liquidity; it's quality that counts. Bsns W p 114 Jl 4 '53

Million-dollar-a-day businesses; with list of 100 largest U.S. corporations and total sales or revenues, for 1952. Nat City Bank p81-3 Jl '53

NAM critical of capital investment data. G. G. Hagedorn. Comm & Fin Chr 177:1759 Ap 23 '53

Pattern of profits. Economist 167:239-41 Ap 25 '53

Payout keeps climbing. Bsns W p92+ Ja 3 '53

Portrait of the week. Chem W 71:19-20 N 29 '52

Profit margins in a buyers' market. T. D. Sears. Comm & Fin Chr 178:345+ Jl 30 '53

Radical changes in corporate liquidity. J. Sattler. Mag of Wall St 92:434-5+ Jl 11 '53

Recent money market developments. Survey of Cur Bsns 33:3-5 Jl '53

Recent trends in corporation financing. S. R. Miller. Comm & Fin Chr 176:1915+ N 20 '52

Significant turn in new financing. L. A. Lukens. Mag of Wall St 91:696-7+ Mr 21 '53

Stocks in a doubtful position; with table of 13 stocks with lower earnings. H. F. Travis. Mag of Wall St 92:338-9 Je 13 '53

Turn in profits; a long decline ended in the third quarter. R. M. Bleiberg. Barron's 32: 5 O 27 '52

U.S. plant investment gains 40 per cent in three years; with table by industries. C. R. Walker. Manuf Rec 121:37+ D '52

Upturn in corporate profits; graph. Fortune 46:25 D '52

Working capital need causing corporate borrowing. Comm & Fin Chr 176:2247 D 11 '52

Your financial community. E. T. McCormick. Edison Elec Inst Bul 21:237-9 Jl '53

See also

Amortization
Bonds
Capital
Dividends
Railroads—Finance
Stocks

Statistics

Basic changes in profit margins; trend since 1950; with tables. W. Gates. Mag of Wall St 91:693-5+ Mr 21 '53

Character and grouping of new corporate issues in the United States for the month of Dec. for five years; table. Comm & Fin Chr 177:2004 My 11 '53

Character and grouping of new corporate issues in the United States for the twelve months ended Dec. 31 for five years; table. Comm & Fin Chr 177:2005 My 11 '53

Corporate earnings in 1952; with table, net income of leading corporations, 1951 and 1952. Nat City Bank p30-2, 41-4 Mr-Ap '53; Excerpt(table). Trusts & Estates 92:265 Ap '53

Domestic business investment in 1952. Survey of Cur Bsns 33:18-19 F '53

Employment costs of important companies compared; relation between wages, sales and profits. Mag of Wall St 92:315 Je 13 '53

First quarter corporate earnings. Nat City Bank p51-2 My '53

Five attractive stocks for capital gains; with comparative balance sheet items. Mag of Wall St 91:469-71 Ja 24 '53

Five medium priced growth stocks; with comparative balance sheet items. Mag of Wall St 91:73-5 O 18 '52

Five outstanding entrenched stocks; with comparative balance sheet items. Mag of Wall St 91:181-3 N 15 '52

Five stocks best suited to resist downtrend; with comparative balance sheet items. Mag of Wall St 91:27-9 O 4 '52

Five stocks with better-than-average prospects; with comparative balance sheet items. Mag of Wall St 91:125-7 N 1 '52

Five stocks with record-breaking profits in 1952; with comparative balance sheet items. Mag of Wall St 91:240-2 N 29 '52

Five undervalued sound investments; with comparative balance sheet items. Mag of Wall St 91:349-51 D 27 '52

Industrial expansion and working capital; with tables. Nat City Bank p 142-3 D '52

Low-priced stocks headed for higher levels. J. S. Williams. Mag of Wall St 91:237-9+ N 29 '52

1952 billion dollar club; tables. Bsns W p 129 My 2 '53

Profits off the boil; analysis of third quarter figures. Economist 165:317-19 N 1 '52

Sales, profits, and dividends of large corporations; annual 1946-1951; quarterly 1951-1952. Fed Res Bul 39:45 Ja '53 [cont monthly]

Seven companies likely to increase dividends in 1953; with comparative balance sheet items. Mag of Wall St 91:398-401 Ja 10 '53

Third quarter corporate earnings; with tables. Nat City Bank p 123-4 N '52

Wartime and postwar credit demands of large corporations; with tables of composite sources and uses of funds statement, 1939-52, 300 large corporations in selected industries. P. S. Anderson. Fed Res Bul 39: 704-18 Jl '53

What first quarter earnings reveal; with table of quarterly comparison of sales and earnings. W. Gates. Mag of Wall St 92:158-9+, 215-17+ My 2-16 '53

What 1952 balance sheets reveal; with data on recent balance sheet changes of selected companies. J. C. Clifford. Mag of Wall St 92:78-9+ Ap 18 '53

What third quarter earning reports reveal; with quarterly comparison of sales and earnings of selected companies, 1951-52. W. Gates. Mag of Wall St 91:114-15+, 176-7+ N 1-15 '52

Which companies to maintain or increase earnings in 1953. J. C. Clifford. Mag of Wall St 91:396-7+ Ja 10 '53

Which stocks have done best, which poorest? with table of companies showing divergent earning trends in 18 groups. J. C. Clifford. Mag of Wall St 91:79-81+ O 18 '52

Year-end corporate statements and first quarter outlook. W. Gates. Mag of Wall St 91:522-3+, 582-3+ F 7-21 '53

Foreign subsidiaries

Licensing and mental attitude push Lindberg sales abroad. C. H. Stevenson. Ind Marketing 38:62+ Mr '53

Netherlands takes lead in attracting U.S. industry. Ind Marketing 38:97+ Mr '53

Representation of foreign firms by Yugoslav state agencies regulated. For Comm W 50: 10 Jl 13 '53

Presidents

How one company president budgets his time; J. W. Alsdorf, president of Cory corp. W. Norris. il Am Bsns 23:16-17+ My '53

CORPORATIONS—Presidents—*Continued*
How one president relaxes; W. Paul Jones of Servel, inc. W. Norris. Am Bsns 23:14-15+ S '53
How to grow a president. R. J. Makarius. Dun's R 61:1+ Mr '53
Working methods of Chrysler's president. D. G. Baird. il Am Bsns 23:14-15+ Je '53

Public relations

See Public relations

Reports and yearbooks

Annual reports can do a lot of selling. J. Kirk. Spectator 161:43 Mr '53
Company presidents praise, condemn new, extensive annual reports. Ind Marketing 37:52+ N '52
Filmosound equipment for annual report; Ohio Edison co. Elec World 138:93 D 1 '52
Gas report leads among all utilities; Financial World magazine's annual survey of financial reports. il Am Gas Assn Mo 34:5+ N '52
How good are paper-dollar company reports? F. Pick. Comm & Fin Chr 176:1729 N 6 '52
How to analyze an annual report. il Mod Ind 25:41-4 My '53

See also
Banks and banking —Reports
Insurance companies —Reports

Advertising

Extra benefits for you in your annual report. Sales Management 70.76 F 1 '53

Size

Big business in a competitive society. A. D. H. Kaplan and A. E. Kahn. Fortune 47:1-14 sec 2 F '53
Big business is important but not controlling element. R. G. Gibbs. Chem & Eng N 31:1266 Mr 30 '53
Big business, proud achievement of the American people; Lilienthal book and Brookings study show benefits. C. B. Larrabee. Ptr Ink 242:35-7 F 20 '53
Case for big business. Bsns W p75-6 F 21 '53
Is bigness bad? Brookings says not really. Bsns W p30-1 F 7 '53
Making little ones out of big. Bsns W p 196+ F 21 '53
Measurement of industrial concentration. M. A. Adelman. bibliog R Econ & Stat 33:269-96 N '51; Discussion. 34:156-78, 343-67 My, N '52

Taxation

Capital wanted; Mills law increases in first-half tax payments are hurting. Steel 131:72 N 10 '52
Corporations prove valuable source for state taxes. Steel 132:79 My 11 '53
Deferring income is smart management now. Bsns W p 178+ N 15 '52
March is near; so's that frustrating trip to tax wringer with all its unequal loads. A. J. Giese. Credit & Fin Management 55:18-19 F '53
Power to destroy. B. F. Fairless. Comm & Fin Chr 176:1736+ N 6 '52
Profit-sharing plans and trusts offer corporation way to cut down tax bill. V. R. Wolder. Credit & Fin Management 55:30-1 Mr '53
Some tax factors influencing the operation of the closely-held corporation. J. A. Phillips. J Account 95:166-75 F '53
Subsidiaries that slash your taxes; Western hemisphere trade corporations. Bsns W p66-7 D 27 '52
Survivorship problems; acquisition of deceased or retiring partner's interest. C. W. Tye. Rough Notes 96:56+ My '53
Tax-free split? Du Pont management is cool toward proposal for using spinoff. Bsns W p60+ Ap 11 '53
Tax holiday; Puerto Rico. Bsns W p64 Jl 11 '53
U.S. Supreme court denies ordinary-loss deduction to post-liquidation transferee. S. A. Gutkin and D. Beck. J Account 95:314-19 Mr '53
Your financial community. E. T. McCormick. Edison Elec Inst Bul 21:237-9 Jl '53

See also
Excess profits tax
Insurance companies —Taxation
Railroads—Taxation

CORPULENCE
Chronic conditions and obesity. Safety Maint & Prod 105:51 Je '53
Decreased activity and energy balance in the hereditary obesity-diabetes syndrome of mice. J. Mayer. bibliog Science 117:504-5 My 8 '53
Group weight control. Safety Maint & Prod 104:70 D '52
Insurance ads pave the way for dietary and health foods. il Bsns W p46+ D 6 '52
Lean horse; long race. Tech R 55:195 F '53
Scientific, group, and community approaches to obesity. Pub Health Rep 68:124-6 Ja '53

CORRELATION (geology)
Are Petaluma horse teeth reliable in correlation? R. A. Stirton. bibliog il diags Am Assn Pet Geologists Bul 36:2011-25 O '52
Correlation of the cretaceous formations of the western interior of the United States. W. A. Cobban and J. B. Reeside, jr. 2pls maps Geol Soc Bul 63:1011-43 bibliog(372 titles, p 1034-43) O '52
Correlation of the Jurassic formations of North America, exclusive of Canada. R. W. Imlay. maps Geol Soc Bul 63:953-92 bibliog(p986-92) S '52
Revision of stratigraphic units in Great Basin. map Am Assn Pet Geologists Bul 37:143-51 bibliog(p 150-1) Ja '53
Thermoluminescence and surface correlation of limestones. D. F. Saunders. bibliog diags Am Assn Pet Geologists Bul 37:114-24 Ja '53

CORRELATION (statistics)
Analysis and correlation of test data. I. W. Burr. Metal Prog 64:112-18+ O '53
Application of multiple correlation methods in the pulp mill. F. L. Riley. Tappi 36:sup 192A-5A My '53
Detection of weak signals by correlation methods. P. Rudnick. diags J Ap Phys 24:128-31 F '53
Five-channel analog correlator. M. J. Levin and J. F. Reintjes. bibliog il diags Tele-Tech 12:70-2+ Mr '53
Measurements of detector output spectra by correlation methods. L. Weinberg and L. G. Kraft. bibliog diags Inst Radio Eng Proc 41:1157-66 S '53
Rimming steel production rate studied by multiple correlation. W. W. Black and C. R. Taylor. J Metals 5:401-3 Mr '53
Simple computer automatically plots correlation functions; Simcor. A. H. Schooley. bibliog il diags Tele-Tech 12:71-3+ My '53

See also
Contingency tables

CORRELATION meter
Photoelectric correlation meter. M. J. Tucker. bibliog il diags J Sci Instr 29:326-30 O '52

CORRESPONDENCE schools and courses
A.I.B. in uniform. Banking 45:61+ My '53
Classroom at home; correspondence schools serve individual and corporation. N. Willatt. Barron's 33:7-8+ Mr 23 '53
Correspondence colleges. Economist 165:4-6, 74-5 O 4-11 '52
Sears uncovers hidden talents with home-study courses. M. French. il Am Bsns 22:16-17+ O '52
Short courses and correspondence courses for water plant operators. H. K. Gidley. bibliog Am Water Works Assn J 45:67-71 Ja '53

CORRESPONDENT banks. See Banks and banking—Correspondent banks

CORROSION and anti-corrosives
Anti-corrosion devices worthless unless operated on proven scientific principle. Heat & Ven 50:140 O '53
Attention on corrosion; three-day forum sponsored by the International nickel co., Wrightsville Beach, N.C. Oil & Gas J 52:215-16 My 18 '53
Basic factors in electrolytic corrosion. E. F. Wolf. il map plan diags Iron & Steel Eng 30:102-5; Discussion. 105-6 Ja '53

CORROSION and anti-corrosives—*Continued*

Battle against corrosion. R. H. Wilcox. il diag Mill & Factory 51:85-7 Ag; 97-100 S; 115-18 O; 105-8 N '52

Battle against decay. il diags Fortune 47:148-51+ F '53

Behaviour of metallic contacts at low voltages in adverse environments. A. Fairweather. diags Inst E E Proc 100 pt 1:174-82 Jl '53

Causes and prevention of kraft digester corrosion. E. W. Hopper. il Tappi 36:345-52 Ag '53

Caustic cracking in steam boilers; intercrystalline corrosion of mild steels. R. N. Parkins. bibliog Chem & Ind p 180-4 F 28 '53

Chemical behavior as influenced by surface condition; abstract. U. R. Evans. Metal Prog 63:134+ F '53

Combating corrosion in oil and gas wells; compiled from papers, reports and discussions at National association of corrosion engineers annual meeting, Chicago. Oil & Gas J 51:106-9+ Ap 13 '53

Conundrums in corrosion. O. P. Watts. Electrochem Soc J 99:sup278C-9C O '52

Corrosion, an engineering problem. M. E. Parker. Pet Eng 25:D3-4 F '53

Corrosion and erosion in the synthetic-fuels demonstration plant. G. D. Gardner and J. T. Donovan. il diag A S M E Trans 75:525-33 My '53

Corrosion aspects of Bunker C combustion in gas turbines. B. O. Buckland and C. M. Gardiner. Power 97:148+ S '53

Corrosion control in cooling water systems. W. A. Tanzola. il Pet Eng 25:C57-60 Ap '53

Corrosion factors in design and lubrication. F. L. LaQue. il diags Product Eng 23:142-7 O '52

Corrosion in closed circulating water systems. S. Sussman and J. B. Fullman. il diag Heat & Ven 50:77-82 O '53

Corrosion in engineering. S. F. Dorey. 10pls diag Inst Pet J 38:885-907; Discussion. 907-18 N '52

Corrosion in the pulp and paper industry. F. A. Guba. Tappi 36:sup 134A-7A My '53

Corrosion of alloys; abstracts of Institute of metals papers. Engineering 175:534 Ap 24 '53

Corrosion of automobile bodies. F. L. LaQue. S A E J 61:78-80 Jl '53

Corrosion of materials by liquid low melting alloys; engineering file facts. Materials & Methods 37:131 Mr '53

Corrosion of steel under phosphate coatings and protective finishes; Iron and steel institute and British iron and steel research association joint meeting. Engineer 194:652-3 N 14 '52; Engineering 174:646-7 N 14 '52

Corrosion problems in steam-jet vacuum equipment. D. H. Jackson. il diags Chem Eng Prog 49:102-4 F '53

Corrosion properties of stainless steels in oxidizing solutions; abstract. M. M. Kurtepov and G. V. Akimov. Metal Prog 64:124+ Jl '53

Crusader checked for corrosion. il Ry Age News ed 134:17-18 Je 22 '53

Digester corrosion studies; abstract. C. B. Christiansen. Tappi 35:sup 108A-9A D '52

Don't let corrosion eat up your profits. D. H. Carpenter. il World Oil 136:172-4 F '53

Dow conquers sea water corrosion. D. P. Thornton, jr. il Pet Processing 7:1640-3 N '52

Drastic cuts in corrosion costs in sour crude field. F. H. Clements and J. P. Barrett. bibliog il map World Oil 135:264+ O '52

Effect of climate and atmospheric pollution on corrosion; abstract and discussion. J. C. Hudson and J. F. Stanners. Chem & Ind p 168 F 21 '53

Effective corrosion control common goal of many industries. Chem & Eng N 31:1307-8 Mr 30 '53

Eight methods or means for combatting corrosion. M. G. Fontana. Ind & Eng Chem 44:sup83A-4A+ D '52

Electrochemical behaviour of metals and corrosion; abstract and discussion. M. Pourbaix. Chem & Ind p215-16 Mr 7 '53

Fighting corrosion; National association of corrosion engineers 9th annual conference, Chicago; abstracts of papers. Materials & Methods 37:194+ My '53; Metal Prog 63:112-14 My '53; Iron Age 171:171-2+ Ap 2 '53

Filiform corrosion and related phenomena; abstract and discussion. C. F. Sharman and others. Chem & Ind p 1126-7 N 15 '52

Fretting corrosion. Engineer 195:172 Ja 30 '53

Fretting corrosion brings new research in lubrication; abstract. R. S. Barnett. Pet Processing 7:1372 O '52

Fretting corrosion; what it is, its cause and possible preventives. A. H. Allen. il Metal Prog 62:71-6 D '52

Fuel injection nozzles; investigation into causes of corrosion. W. P. Mansfield. il Automobile Eng 43:215-17 My '53; Same cond. Engineering 175:564-6 My 1 '53; Discussion. Automobile Eng 43:331 Ag '53

Galvanic corrosion; engineering file facts. Materials & Methods 37:119 Ja '53

Galvanic corrosion of dissimilar metals. W. D. Mogerman. il Sheet Metal Worker 44:41-3+ N '52

Here's a new method of inhibiting corrosive wells. J. R. Marshall. diags Oil & Gas J 51:105 D 8 '52

Here's how to overcome radiator tank corrosion. il Bus Transportation 32:35 Mr '53

High-temperature corrosion rates of several metals with hydrogen sulfide and sulfur dioxide. M. Farber and D. M. Ehrenberg. bibliog flow diag il diag Electrochem Soc J 99:427-34 O '52

High-vacuum concentration; its realm in the chemical industry. E. J. Kelly. flow diag il diag Chem Eng Prog 48:589-93 D '52

How corrosion costs cut in sour wells. J. A. Caldwell. World Oil 135:200+ N '52

How inhibitors prevent corrosion in oil wells. T. M. Newell. il Oil & Gas J 51:145 F 9; 175 F 16; 207 F 23; 103 Mr 2 '53

How to mitigate corrosion in a glycol-dehydration plant. N. K. Senatoroff. flow diag il diag Oil & Gas J 51:154+ Ap 27 '53

How we cured condenser tube corrosion. H. Weldingh. il diag Power 97:78-9 Ja '53

How you can fight corrosion. A. G. Gray. il diag Steel 132:102-6+ Ap 6 '53

Influence of corrosion on the cracking of pressure vessels. H. R. Copson. bibliog(101 titles) il Welding J 32:sup75-91 F '53

Intergranular corrosion of ferritic stainless steels; abstract. R. A. Lula and others. Metal Prog 64:224+ O '53

Investigation of fretting corrosion; abstract. K. H. R. Wright. Engineer 195:323; Discussion. 323-5 F 27 '53

Is corrosion eating your dollars? S. Maggiacomo. il Can Chem Process 37:74+ S '53

Joint industry conference discusses corrosion preventives. Materials & Methods 37:11+ F '53

Kraft mill corrosion; abstract. C. B. Christiansen. Paper Tr J 136:19-20 Je 12 '53

Measurement of the corrosion rate of a metal from its polarizing characteristics. W. J. Schwerdtfeger and O. N. McDorman. Electrochem Soc J 99:407-13 O '52

Mechanical aspects of corrosion inhibitor injection. D. J. Elliott. il diags World Oil 135:190-2+ N '52

Metallic corrosion influenced by ultrasonic waves. S. Yamaguchi. il J Ap Phys 23:1057-8 S '52

New insulating union for corrosion control. K. B. Shearon. il World Oil 135:269 N '52

Oil well corrosion control. E. N. Frisius. Pet Eng 25:B50+ Ap '53

Our experience with corrosion. R. C. Thiede. Chem Eng 60:344+ Mr '53

Plastic plates solve sewage plant corrosion problem; Dallas, Texas treatment plant. C. V. Ing, jr. il Water & Sewage Works 100:40-1 Ja '53

Practical corrosion control. Chem Eng 60:332+ Ap '53

Preventing corrosion of air conditioning equipment. P. O. Blackmore. il diags Refrig Eng 61:733-7+ Jl '53

Protecting hot-water tanks against corrosion. Consumers Res Bul 31:29-30 My '53

CORROSION and anti-corrosives—*Continued*

Pumping well service costs cut by corrosion control. B. W. Bradley. bibliog World Oil 135:214+ D '52

Railroad corrosion conference, 4th, Wrightsville Beach, N.C. May 19-21. Ry Loco & Cars 127:55-7 Jl '53

Recovery operation corrosion problems. H. O. Teeple. bibliog Tappi 36:sup 127A-8A Jl '53

Role of corrosion in engine wear. J. C. Geniesse and H. R. Jackson. bibliog Pet Processing 7:1620-2 N '52

Sodium benzoate and sodium nitrate as corrosion-inhibitors in ethylene glycol antifreeze solutions. F. Wormwell, A. D. Mercer and H. C. K. Ison. bibliog il J Ap Chem 3:22-7, 133-44 Ja, Mr '53

Some answers to oil field scale and corrosion. E. N. Frisius. il World Oil 136:191-2+ Je '53

South Louisiana operators wage fight on four types of corrosion. J. T. Martin. Oil & Gas J 52:308-14+ Je 22 '53

Stress-corrosion cracking of commercially pure titanium. G. C. Kiefer and W. W. Harple. il Metal Prog 63:74-6 F '53

Structure and corrosion. G. V. Akimov. Metal Prog 63:230+ Ja '53

Study gas combustion corrosion. W. M. Myler, jr. Am Gas Assn Mo 34:17-18 N '52

Sweet-well corrosion. H. E. Greenwell. Oil & Gas J 51:63-4 Mr 30 '53

Symposium on control of internal corrosion of tankers; abstracts and discussion. W. B. Jupp and others. Marine Eng 58:64-7 F '53

Technical advances point to control of digester corrosion. Chem & Eng N 30:4481-2 O 27 '52

Titanium and other alloys in corrosive environments; abstract. W. L. Williams. Automotive Ind 108:88+ F 15 '53

Treating condensate cuts maintenance cost. G. A. Mierendorf. il diag Power 96:116-17 N '52

Uneven corrosion in alkaline pulping digesters; a major cause and possible cures; abstract. F. W. Flynn and others. Paper Tr J 136:104 F 20 '53

Vapourize your rust problems. Can Chem Process 37:78+ S '53

Volatile corrosion inhibitor insures rust-free die sets. D. Myers. il Mach 59:195-7 Ag '53

Water corrosion of structural materials. C. R. Breden and others. Metal Prog 64:194+ Ag '53

What corrosion costs Canada. Can Chem Process 37:10 S '53

What corrosion inhibitors should and should not do; treatment of Diesel-engine cooling water. J. F. Wilkes. il Ry Loco & Cars 127:77-83 S '53

Why gas plants should be surveyed to determine corrosion damage. E. W. Wallace. Gas Age 112:47-9+ Ag 13 '53; Same abr. Oil & Gas J 52:201-2+ My 25 '53

See also

Acid resisting materials
Aluminum—Corrosion
Aluminum—Protection
Boilers—Corrosion
Corrosion research
Corrosion resisting materials
Gas, Natural—Distillate wells—Corrosion problem
Metal protection
Paint, Protective
Passivity
Petroleum refineries—Corrosion
Pipe coating
Pipe lines—Corrosion
Pipe lines—Protection
Steam pipes—Corrosion
Steel—Protection
Water pipes—Corrosion
Water purification—Corrosion control

Bibliography

Corrosion. (Bibliog. no. 32) 35p Tulsa pub. lib, Technical dept, Tulsa 3, Okla. '51

History

Corrosion of metals; historical treatment. U. R. Evans. bibliog Chem & Ind p986-93 O 11 '52

Developments in corrosion during the past fifty years, a brief review. H. H. Uhlig. Electrochem Soc J 99:sup275C-6C O '52

Study and teaching

Corrosion; movie is recommended as a teaching aid. M. G. Fontana. Ind & Eng Chem 45:sup99A-100A+ Ja '53

Testing

Accelerated corrosion test of stainless steel samples in an effort to establish galvanic attack. J. T. Waber and S. F. Waber. Metal Prog 63:204+ Ja '53

Accelerated corrosion tests of steels; abstract. Metal Prog 62:186+ N '52

Analysis of variability in accelerated corrosion testing cabinets; abstract. V. V. Kendall. Iron & Steel Eng 30:107-8 Ag '53

Certain aspects of the galvanic corrosion behavior of titanium. D. Schlain. bibliog 16pls U S Bur Mines Rep of Invest 4965:1-22 '53

Chrome-manganese and 18-8 steels, how they resist corrosion; based on papers by C. B. Allen and others. il Ry Age 135:87-9 Ag 10 '53

Corrosion cracking of martensitic stainless steel. A. E. Durkin. il Metal Prog 64:72-5 Jl '53

Corrosion detection by rotogeneration; d-c corrosion currents used to generate a-c potentials. il diag Electronics 26:146+ Ja '53

Corrosion of mercury-boiler tubes during combustion of a heavy residual oil. A. M. Hall and others. bibliog flow chart il diags A S M E Trans 75:1037-49 Ag '53

Corrosion of mild steel and brass in chlorinated water. F. Wormwell and T. J. Nurse. il J Ap Chem 2:685-92 D '52

Corrosion of steel under phosphate coatings and protective finishes; report of conference; with abstracts of papers and discussion. Metallurgia 46:305-7 D '52

Corrosion of structural spot welds. B. Karnisky and others. bibliog il diags Welding J 31:903-16 O '52; Excerpts. Metal Prog 63:174+ Je '53

Corrosion of titanium and other alloys studied. W. L. Williams. Iron Age 71:179-80 Ap 2 '53

Corrosion surface survey; system permits testing without injury to pipe coating. A. F. Schmierer. diags Oil & Gas J 51:281+ O 13 '52

Digester corrosion measurement. N. Shoumatoff. Tappi 35:494-9 N '52

Effect of packaging on corrosion of zinc plated equipment; abstract. K. G. Compton and others. Metal Prog 62:194 N '52

Impact deposition of atmospheric sea salts on a test plate. A. H. Woodcock. bibliog il diags Am Soc T M Proc 50:1151-60; Discussion. 1161-6 '50

In corrosion testing get the facts; International nickel co. conference on heat and corrosion resistant alloys, Wrightsville Beach, N.C. May 12-14. Steel 132:128+ Je 15 '53

Intergranular corrosion of high-purity aluminum. M. J. Lavigne. il Metal Prog 64:84-6 S '53

Microstructural characteristics of acid corrosion in 18 per cent Cr, 8-14 per cent Ni, 3 per cent Mo steels. H. T. Shirley. bibliog 6pls Iron & Steel Inst J 174:242-9 Jl '53

Radiometric evaluation of the effectiveness of the chromic acid rinse treatment for phosphated work. S. L. Eisler and J. Doss. il Metal Finishing 50:54-8+ D '52

Relative effect of traces of hydrogen sulfide and sulphur dioxide on the corrosion of copper. J. Byrne and others. Blast F & Steel Pl 41:780-1 Jl '53

Report of committee B-6 on die-cast metals and alloys. Am Soc T M Proc 50:167-72 '50

Report of subcommittee XIV on inspection of black and galvanized sheets. Am Soc T M Proc 50:104-9 '50

Resistance of cast Fe-Cr-Ni alloys to corrosion in oxidizing and reducing flue-gas atmospheres. J. H. Jackson and others. bibliog flow chart il A S M E Trans 75:1021-35 Ag '53

Second report of the methods of testing (corrosion) sub-committee. il 4pls diag Iron & Steel Inst J 171:255-72 Jl '52; Discussion. 173:181-3 F '53

CORROSION and anti-corrosives—Testing—*Continued*

Spot-checking corrosion; immersed ultrasonic inspection. D. H. Stormont. il Oil & Gas J 51:75 Mr 16 '53

Spray testing with natural and synthetic sea water; corrosion characteristics in the testing of metals. T. P. May and A. L. Alexander. bibliog Am Soc T M Proc 50:1131-41; Discussion. 1142-3 '50

Stress-corrosion cracking of mild steels in nitrate solution. R. N. Parkins. bibliog 2pls diags Iron & Steel Inst J 172:149-62 O '52; Discussion. 174:140-2, 317 Je, Ag '53

Substitutes for nickel plate; atmospheric exposure tests. Chem Age (Lond) 67:772 D 6 '52

Subsurface porosity developed in sound metal during high-temperature corrosion. A. D. Brasunas. il Metal Prog 62:88-90 D '52

Surface-potential surveying of bare underground pipe lines. T. L. Canfield. diag Oil & Gas J 51:330+ O 13 '52

Test cooling water for corrosion by these methods. M. C. Forbes. bibliog il diags Pet Refiner 32:130-3 Ap '53

Tin-nickel alloy and nickel/chromium coatings; some comparative corrosion tests; abstract and discussion. S. C. Britton and R. M. Angles. Chem & Ind p 1152-3 N 22 '52

Transgranular stress corrosion in chromium-nickel stainless steels. C. Edeleanu. bibliog 4pls Iron & Steel Inst J 173:140-6 F '53; Discussion. il 174:218; 175:390-2 Jl, D '53

Use interferometer for sensitive corrosion measurements. il Cer Ind 61:62 Jl '53

Utility of Strauss test. L. H. Satz. Metal Prog 63:136+ Ja '53

Underground corrosion

Bacterial attack on buried piping regarded as serious cause of rapid corrosion. C. G. Deuber. il Am Gas J 178:31+ F; 23+ Mr '53

Bacteriological control. Oil & Gas J 52:113 Je 29 '53

Corrosion of galvanized steel in soils. I. A. Denison and M. Romanoff. bibliog il J Res Nat Bur Stand 49:299-314 N '52

Corrosion of low-alloy irons and steels in soils. I. A. Denison and M. Romanoff. bibliog il J Res Nat Bur Stand 49:315-24 N '52

Economics of corrosion control. A. W. Peabody. Am Gas Assn Proc 1952:284-9; Same cond. Am Gas J 177:27+ N '52

Fighting underground corrosion at the new Fairless works; how piping and other services are protected. W. E. Coleman and H. G. Frostick. diag Heating-Piping 25:85-7 Ap '53

Galvanic corrosion. diags Oil & Gas J 51:89 Ja 5; 121 Ja 12; 131 Ja 19; 407 Ja 26; 52:115 Je 1 '53

How low-alloy irons and steels resist corrosion in various soils. il Gas Age 112:47+ S 10 '53

Microbiological corrosion of buried steel pipe; abstract. F. E. Kulman. Am Water Works Assn J 45:sup62+ Ap '53

Pipe line corrosion and cathodic protection. M. E. Parker. diags World Oil 136:210-12 F '53

Protection of underground cable sheaths. T. W. Alexander, jr. diags Iron & Steel Eng 30:97-100; Discussion. 100-2 Ap '53

Role of tannates and phosphates in the preservation of ancient buried iron objects. T. W. Farrer, L. Biek and F. Wormwell. il J Ap Chem 3:80-4 F '53

Soil corrosion rate measured electrically. W. J. Schwerdtfeger and O. N. McDorman. il Am Gas J 178:16-17 Mr '53; Same. Oil & Gas J 51:101 F 2 '53; Same. Pet Eng 25: D20+ Ap '53; Same cond. Heat & Ven 50:115 F '53; Same cond. Product Eng 24: 203 F '53

Stray-current corrosion. diag Oil & Gas J 52: 151 Je 15 '53

Study made of underground corrosion of galvanized steel. I. A. Denison and M. Romanoff. Heat & Ven 50:113 Mr '53; Same. il Heating-Piping 25:106-7 Mr '53; Same. Diesel Power 31:85-6 Mr '53; Same. Gas Age 111:43+ Mr 21 '53; Same. Am Gas J 178:17 Mr '53; Same. Iron Age 171:152-3 F 12 '53; Same. Blast F & Steel Pl 41:sup74+ Ap '53; Same abr. Oil & Gas J 51:289 Ap 27 '53

CORROSION engineers, National association of. See National association of corrosion engineers

CORROSION research

Black iron or equivalent. W. M. Myler, jr. Am Gas Assn Proc 1952:849-51

Cause of the chemical resistance of stainless steel. I. D. G. Berwick and U. R. Evans. bibliog il diags J Ap Chem 2:576-90 O '52

Corrosion; how Inco fights it. il Iron Age 171:73 My 21 '53

Corrosion investigation during 1951. Chem Age (Lond) 67:599-601 N 1 '52

Corrosion of iron and steel by aqueous suspensions of sulphur. T. W. Farrer and F. Wormwell. bibliog Chem & Ind p 106-7 Ja 31 '53

Corrosion of mild steel and brass in chlorinated water. F. Wormwell and T. J. Nurse. il J Ap Chem 2:685-92 D '52

Corrosion; rotogenerated signal shown on oscilloscope in study method. J. B. McAndrew. plan Iron Age 170:172 N 13 '52

Effect of climate and atmospheric pollution on corrosion. J. C. Hudson and J. F. Stanners. il J Ap Chem 3:86-96 F '53; Abstract and discussion. Chem & Ind p 168 F 21 '53

Effect of corrosion and growth on the life of positive grids in the lead-acid cell. J. J. Lander. Electrochem Soc J 99:467-73 N '52

El Paso Natural's research project; how corrosion of gas-treating plants is being studied. J. W. Cronenberg. il Oil & Gas J 51:267-8 Ap 27 '53

Influence of ferrous iron on bacterial corrosion. M. E. Adams and T. W. Farrer. bibliog J Ap Chem 3:117-20 Mr '53

Polarographic study of the influence of temperature on the rate of oxygen consumption by iron, lead, and zinc. P. Delahay and others. bibliog Electrochem Soc J 99:414-16 O '52

Some recent progress in corrosion research; abstract and discussion. W. H. J. Vernon. Chem & Ind p318-19 Ap 4 '53

Studies in the corrosion of metals occasioned by aqueous solutions of some surface-active agents. T. K. Ross and H. Holness. bibliog il J Ap Chem 2:520-31 S '52

Use interferometer for sensitive corrosion measurements. il Cer Ind 61:62 Jl '53; Same, without il. Iron Age 171:156-7 My 21 '53; Excerpt. Machine Design 25:196+ Ag '53; Abstract. Chem & Eng N 31:2096+ My 18 '53

CORROSION resisting materials

Alloy F is corrosion-resistant, stronger than austenitic steels. Chem & Eng N 31:1232 Mr 23 '53

Chemical engineering materials of construction; sixth annual review. bibliog il Ind & Eng Chem 44:2285-380 O '52 (reprints 75c)

Chromium carbide meets many industrial needs. J. D. Kennedy. il Materials & Methods 36:166+ Ag '52; Same. Steel 131:92-4 Ag 4 '52; Same cond. Mech Eng 74:820-1 O '52

Coatings cut corrosion costs. L. G. Jones. il Power Eng 57:87-9 Jl; 74-5 Ag '53

Corrosion-resistant alloy; Hastelloy F. il Machine Design 25:151-2 My '53; Materials & Methods 37:92-3 My '53

Corrosion-resistant alloys; XA54S and XC56S. Mech Eng 75:154-5 F '53

Hastelloy alloy F; a new corrosion-resistant alloy for lined digesters. M. A. Scheil. il Tappi 36:241-7 Je '53

High impact styrene copolymers. R. B. Seymour and R. H. Steiner. il Chem Eng 60: 254+ Ja '53

Lead and lead alloys. K. H. Roll. bibliog il Chem Eng 60:264+ F '53

Metallurgical requirements of the chemical engineer. C. Hinton. Engineering 175:575-6 My 1 '53

CORROSION resisting materials—*Continued*

New alloy tried in pulp digester resists corrosion; Hastelloy F. il Iron Age 171:148-50 Mr 26 '53

New aluminum-magnesium metals highly corrosion resistant. Iron Age 170:196-7 D 4 '52

New copper alloy has high stress-corrosion resistance. C. H. Hannon. il Iron Age 170: 131-3 N 20 '52

New demands lead to new directions in engineering materials; materials for corrosion resistance. T. C. Du Mond. il Materials & Methods 37:75-6 Je '53

Plastics in anticorrosive applications. J. L. Huscher. il Chem & Eng N 31:860-3 Mr 2 '53

Polyethylene; the corrosion resistance. J. L. Huscher. il Chem Eng 59:260+ O '52

Reinforced polyester plastics. R. B. Seymour and R. H. Steiner. il Chem Eng 59:278+ D '52

Resin-petroleum coke material beats corrosion; Chemplas. il Can Chem Process 36:80 N '52

Titanium may be your solution to critical corrosion problems. Pet Processing 8:155 F '53

Unplasticized polyvinyl chloride. J. L. Huscher. il Chem Eng 59:264+ N '52

Utilization of titanium and other alloys in corrosive environments. W. L. Williams. Machine Design 25:298+ Je '53

See also

Acid resisting materials
Chemical plants—Equipment
Chromium nickel steel
Chromium steel
Corrosion and anticorrosives
Monel metal
Paint, Protective
Steel, Corrosion resisting
Steel, Stainless

Testing

Uniform test procedures evaluate corrosion resistance of titanium. G. C. Kiefer. Iron Age 170:170-3 D 4 '52

CORRUGATED paper board. See Paper board, Corrugated

CORSET trade

Figure beauty; foundation garment makers anticipate another record year. F. Henle. Barron's 33:11-12 Mr 2 '53

$1,000,000 hoist in sales when Gossard digs in at point-of-purchase. W. Baudette. il Sales Management 70:42-5 Mr 15 '53

CORTICOSTEROIDS

Corticosteroid intermediates; a new route to 11-oxygenated steroids. G. D. Laubach and others. bibliog Am Chem Soc J 75:1514-15 Mr 20 '53

Paper chromatography of corticosteroids. E. H. Sakal and E. J. Merrill. bibliog Science 117:451-2 Ap 24 '53

CORTICOSTERONE

Microbiological transformations of steroids; preparation of 11-epi-corticosterone and of 6β-hydroxy-11-desoxycorticosterone. S. H. Eppstein and others. bibliog Am Chem Soc J 75:408-12 Ja 20 '53

Preparation of the 3-ethylenedioxy derivatives of 11-ketoprogesterone, dehydrocorticosterone acetate and cortisone acetate. J. M. Constantin, A. C. Haven, jr. and L. H. Sarett. bibliog Am Chem Soc J 75:1716-18 Ap 5 '53

See also

Cortisone
Hydroxycorticosterone

CORTICOTROPIN. See ACTH

CORTICROCIN

Synthesis of corticrocin. B. L. Shaw and M. C. Whiting. Chem & Ind p409-10 Ap 25 '53

CORTISONE

Britain produces cortisone. Chem Age (Lond) 67:694 N 22 '52

Cortisone atomically labelled with carbon 14 for first time. Oil Paint & Drug Rep 164: 65 Jl 13 '53

Cortisone reported made from common materials. Oil Paint & Drug Rep 164:5 Ag 24 '53

Determination of purity of steroids; solubility analysis. W. Tarpley and M. Yudis. bibliog diags Anal Chem 25:121-7 Ja '53

Effect of environmental temperature on cortisone toxicity for mice. G. H. Scherr. Science 116:685 D 19 '52

Enzymatic reduction of compound E-21-aldehyde of compound E. J. J. Schneider. Am Chem Soc J 75:2024 Ap 20 '53

Heterotransplantation of human tumors into cortisone-treated rats. C. Hoch-Ligeti and Y. T. Hsü. bibliog il Science 117:360-1 Ap 3 '53

Microbiological transformations of steroids; the 11-epimer of compound F and other new oxygenated derivatives of Reichstein's compound S; a new route to cortisone. D. H. Peterson and others. bibliog Am Chem Soc J 75:412-15 Ja 20 '53

New routes to cortisone; abstract. E. R. H. Jones. Chem & Ind p81 Ja 24 '53

Preparation of the 3-ethylenedioxy derivatives of 11-ketoprogesterone, dehydrocorticosterone acetate and cortisone acetate. J. M. Constantin, A. C. Haven, jr. and L. H. Sarett. bibliog Am Chem Soc J 75:1716-18 Ap 5 '53

Stereospecific total synthesis of cortisone. L. H. Sarett and others. Am Chem Soc J 74:4974-6 O 5 '52

Steroid compounds resulting from incubation of cortisone with surviving liver slices; abstract. A. B. Eisenstein. Science 116:520-1 N 14 '52

Steroids: a ten step conversion of progesterone to cortisone; the differential reduction of pregnane-3, 20-diones with sodium borohydride. O. Mancera and others. bibliog Am Chem Soc J 75:1286-90 Mr 20 '53

Steroids derived from bile acids; introduction of the 4,5-double bond of cortisone. W. F. McGuckin and E. C. Kendall. bibliog Am Chem Soc J 74:5811-13 D 5 '52

Steroids; 22 : 23-dibromoergosta-7 : 9(11)-dien-3β-yl acetate (ergosteryl-D acetate 22 : 23-dibromide). R. C. Anderson, R. Stevenson and F. S. Spring. Chem Soc J p2901-6 Jl '52

Steroids; 11-oxygenated steroids from ergosteryl-D acetate. R. Budziarek and others. Chem Soc J p2892-900 Jl '52

Steroids; synthesis of allopregnane-3,11,20-trione-17α,21-diol (dihydroallocortisone) from allopregnan-3β-ol-11,20-dione. J. Pataki, G. Rosenkranz and C. Djerassi. bibliog Am Chem Soc J 74:5615-16 N 20 '52

Synthesis of *dl*-cortisone acetate. L. B. Barkley and others. bibliog Am Chem Soc J 75:4110-11 Ag 20 '53

CORTISONE, Analogs of

Simple analogues of cortisone; some monocyclic compounds. J. D. Billimoria. Chem Soc J p2626-31 S '53

CORTLANDT complex. See Geology—New York (state)

CORUNDUM

Corundum deposits of Montana. S. E. Clabaugh. il maps diags U S Geol S Bul 983: 1-100, pl 1-6[in pocket] bibliog(p96-8) '52

Etiology of corundum smelter's lung; bauxite worker's lung, Shaver's disease. H. Gärtner. A M A Archives Ind Hygiene & Occup Med 6:339-43 O '52

Saturation in the X-ray coloration of corundum single crystals. R. A. Hunt and R. H. Schuler. Phys R 89:664 F 1 '53

CORYNE diphtheriae. See Diphtheria

COSMETIC chemists, Society of. See Society of cosmetic chemists

COSMETICS

Delaney measures face possible thirty-day committee bottleneck. Oil Paint & Drug Rep 163:3+ F 9 '53

Double-wall poly jars; Aziza eye cosmetics, inc. il Mod Packaging 26:105 Je '53

Little cosmetic package. il Mod Packaging 26:106-7 N '52

New dimensions for cosmetics. il Mod Packaging 27:132-4 S '53

Precision labeling; Sofskin hand cream. il Mod Packaging 26:92-5 Mr '53

Shades of Wedgwood; Dorothy Gray. il Mod Packaging 26:106-7 Je '53

Society of cosmetic chemists meeting, New York; abstracts of papers. Chem & Eng N 31:2183+ My 25 '53

COSMETICS—*Continued*

Society of cosmetic chemists meeting, New York, Dec. 11. Chem & Eng N 30:5367 D 22 '52

See also
Hair preparations

Advertising

It's the ad that sells cosmetics. il Bsns W p62-4+ D 13 '52

COSMIC physics

See also
Auroras

COSMIC rays

Angular distribution functions for high energy cosmic-ray particles. H. S. Green and others. bibliog Phys R 88:1277-83 D 15 '52

Anisotropic distribution of secondaries in extreme energy cosmic-ray stars. F. C. Roesler and C. B. A. McCusker. bibliog Phys R 91:690-4 Ag 1 '53

Bubble chamber tracks of penetrating cosmic-ray particles. D. A. Glaser. il Phys R 91:762-3 Ag 1 '53

Close pair effect in cosmic-ray stars. K. E. Davis and others. bibliog diags Phys R 88:368-72 O 15 '52

Cloud-chamber observations of the heavy charged unstable particles in cosmic rays. H. S. Bridge and others. bibliog il Phys R 90:921-33 Je 1 '53

Cloud-chamber study of neutron production by sea-level cosmic rays with particular reference to μ-mesons stopped in lead. E. J. Althaus and R. D. Sard. bibliog il diags Phys R 91:373-84 Jl 15 '53

Constancy of cosmic-ray flux over the past 30,000 years. J. L. Kulp and H. L. Volchok. bibliog Phys R 90:713-14 My 15 '53

Cosmic-ray albedo. S. B. Treiman. bibliog Phys R 91:957-9 Ag 15 '53

Coulomb and nuclear interactions of cosmic-ray mesons and protons in lead. W. L. Whittemore and R. P. Shutt. bibliog Phys R 88:1312-21 D 15 '52

Energy loss of cosmic-ray mu-mesons in sodium iodide crystals. A. Hudson and R. Hofstadter. bibliog il diag Phys R 88:589-96 N 1 '52

Interference of amplitudes in cascade processes. O. Halpern and B. A. Lippmann. Phys R 87:1128 S 15 '52

Meteorites as cosmic-ray meters. S. F. Singer. Phys R 90:168 Ap 1 '53

Origin of cosmic rays. J. W. Dungey. bibliog Phys R 91:766 Ag 1 '53

Particle localization by means of a scintillation detector. L. C. L. Yuan and H. L. Poss. il diag R Sci Instr 23:553-4 O '52

Production cross section and frequency of neutral mesons in cosmic rays. G. Salvini and Y. B. Kim. bibliog il diags Phys R 88:40-50 O 1 '52

Rocket determination of the ionization spectrum of charged cosmic rays at λ=41°N. G. J. Perlow and others. bibliog diags Phys R 88:321-5 O 15 '52

Search for *T*-tracks in photographic plates. P. H. Barrett and others. Phys R 89:656 F 1 '53

Statistical study of the distribution of stars in nuclear emulsions. F. B. Brown, jr. and A. V. Masket. Phys R 88:1204-5 D 1 '52

Team probes radiation barrier. il Aviation W 57:28+ D 1 '52

See also
Mesons

Components

Absorption mean free path of the high-energy nucleonic component of cosmic radiation. M. F. Kaplon and others. bibliog Phys R 91:1573 S 15 '53

Electronic component at low altitudes produced by π-meson decay. E. D. Palmatier. bibliog diags Phys R 88:761-72 N 15 '52

Intensity of the soft and hard component of the cosmic radiation as a function of altitude at geomagnetic latitudes of 28°N, 41°N, and 55°N. M. L. Vidale. bibliog diags Phys R 88:266-72 O 15 '52

Ionization chamber measurements of the absorption on the *N*-component of cosmic rays in lead. H. S. Bridge and R. H. Rediker. bibliog diags Phys R 88:206-24 O 15 '52

Mean free path of the high energy *N* component of cosmic radiation. R. R. Brown. bibliog diags Phys R 87:999-1002 S 15 '52

Negative primaries as part of cosmic radiation. B. Bhowmik. Phys R 89:327-8 Ja 1 '53

Properties of the low energy nucleonic component at large atmospheric depths. J. A. Simpson and W. C. Fagot. bibliog diags Phys R 90:1068-72 Je 15 '53

Ratio of neutral to charged particles in the nuclear interacting component of cosmic rays. K. Greisen and W. D. Walker. bibliog diags Phys R 90:915-20 Je 1 '53

Spread of the soft component of the cosmic radiation. H. S. Green and H. Messel. bibliog Phys R 88:331-8 O 15 '52

Intensity

Cosmic radiation intensity-time variations and their origin; energy dependence of 27-day variations. W. H. Fonger. bibliog Phys R 91:351-61 Jl 15 '53

Cosmic radiation intensity-time variations and their origin; neutron intensity variation method and meteorological factors. J. A. Simpson and others. bibliog diags Phys R 90:934-50 Je 1 '53

Diurnal variations in the intensity of cosmic rays underground. N. Sherman. Phys R 89:25-6 Ja 1 '53

Effect of equatorial ring current on cosmic-ray intensity. S. B. Treiman. bibliog diag Phys R 89:130-3 Ja 1 '53

Effects of the atmosphere on the penetrating cosmic radiation. R. L. Chasson. bibliog Phys R 89:1255-6 Mr 15 '53

World-wide effects of continuous emission of cosmic rays from the sun. V. Sarabhai and R. P. Kane. Phys R 90:204-6 Ap 15 '53

Latitude effect

Cosmic radiation intensity-time variations and their origin; energy dependence of 27-day variations. W. H. Fonger. bibliog Phys R 91:351-61 Jl 15 '53

Cosmic-ray neutron production in elements as a function of latitude and altitude. J. A. Simpson and R. B. Uretz. bibliog diags Phys R 90:44-50 Ap 1 '53

Effects at Godhavn and lower latitudes of changes in energy and composition of solar cosmic rays. V. Sarabhai and R. P. Kane. Phys R 91:688-9 Ag 1 '53

Fluctuations and latitude effect of cosmic rays at high altitudes and latitudes. H. V. Neher and others. bibliog map diag Phys R 90:655-74 My 15 '53

High altitude measurements of the intensity of cosmic radiation at magnetic latitudes of 3°N and 19°N. A. S. Rayo and others. Phys R 91:764-5 Ag 1 '53

Intensity of the soft and hard component of the cosmic radiation as a function of altitude at geomagnetic latitudes of 28°N, 41°N, and 55°N. M. L. Vidale. bibliog diags Phys R 88:266-72 O 15 '52

Range distribution of sea-level mesons at low geomagnetic latitudes. L. del Rosario and J. Dávila-Aponte. bibliog diags Phys R 88:998-1002 D 1 '52

Measurement

Energy spectra of cosmic-ray photons and electrons from plastic scintillation counter measurements. C. N. Chou. bibliog diags Phys R 90:473-6 My 1 '53

Improved Čerenkov detector for cosmic rays. J. Winckler and K. Anderson. R Sci Instr 23:765-6 D '52

See also
Cosmic rays—Intensity
Hodoscope

Showers

Absorption mean free path of large hard showers in air. H. K. Ticho. bibliog diags Phys R 88:236-41 O 15 '52

Bursts in material of low atomic number. F. E. Driggers. il diags Phys R 87:1080-90 S 15 '52

Collision lengths of neutral, penetrating-shower-producing cosmic radiation in light and heavy water. D. Froman and others. bibliog diags Phys R 91:707-12 Ag 1 '53

COSMIC rays—Showers—*Continued*

Density distribution within two meters of large air shower axes. R. E. Heineman and W. E. Hazen. diag Phys R 90:496-7 My 1 '53

Emulsion cloud-chamber observations on the interactions of high energy primary cosmic radiation. M. F. Kaplon and D. M. Ritson. bibliog diags Phys R 88:386-97 O 15 '52

Experimental investigation of the nucleon cascade in water. C. B. A. McCusker and others. diag Phys R 89:1172-7 Mr 15 '53

Further results from the study of sea-level penetrating showers. W. Y. Chang and others. bibliog il Phys R 89:408-11 Ja 15 '53

Plural theories for the shower component in high energy nuclear disintegrations. H. Messel and R. B. Potts. bibliog Phys R 88:488-92 N 1 '52

Search for penetrating showers from hydrogen at sea level using a cloud chamber. A. B. Weaver. bibliog il diags Phys R 90:86-94 Ap 1 '53

Secondaries of penetrating showers. C. C. Damm. bibliog diags Phys R 89:826-31 F 15 '53

Unstable particles from penetrating showers. W. D. Walker and N. M. Duller. bibliog Phys R 90:320 Ap 15 '53

Underground studies

Diurnal variations in the intensity of cosmic rays underground. N. Sherman. Phys R 89:25-6 Ja 1 '53

Interpretation of cosmic-ray measurements far underground. P. H. Barrett and others. bibliog diags Rs Mod Phys 24:133-78 Jl '52

COSMOGONY

Abundances of the elements. H. C. Urey. bibliog Phys R 88:248-52 O 15 '52

Arbitrary concentrations of matter and the Schwarzschild singularity. A. Raychaudhuri. bibliog Phys R 89:417-21 Ja 15 '53

COSMOLOGY

Unusual and seductive universe of the late cosmologist E. A. Milne. J. Bronowski. Sci Am 187:87-9 N '52

COSMOS sulphureus

Anthochlor pigments of cosmos sulphureus, coreopsis lanceolata and C. saxicola. M. Shimokoriyama and S. Hattori. bibliog Am Chem Soc J 75:1900-4 Ap 20 '53

COSMOTRON. See Proton accelerator

COST

Cost factors in price-making. H. C. Greer. Harvard Bsns R 30:33-45 Jl; 127-36 S '52

See also

Chemical engineering—Costs
Cost accounting
Cost of living
Factory costs
Labor cost
Power cost
Railroads—Costs
Sales costs

COST accounting

Accounting treatment of fixed costs in product; costing, the direct cost plan; discussion. I. W. Keller. N A C A Bul 34:157-71 sec 3 S '52

Beneficial costing for milk products. R. W. Cherry. N A C A Bul 34:50-7 S '52

Break-even charts for the chemical process industries. R. J. Roth. Chem & Eng N 30:5437-41 D 29 '52

Cost accounting for a ready mix plant. J. W. Murphy. il Concrete 61:6-8+ Je '53

Cost accounting for drilling contractors. F. H. Rousey. World Oil 135:153— N '52

Cost accounting in a research organization. A. L. Spurr. N A C A Bul 34:344-8 N '52

Cost control; building net revenue. W. V. Weir. Am Water Works Assn J 45:116-20 F '53; Same. Water & Sewage Works 100:65-7 F '53

Cost controls for the road ahead. S. Z. Bronner. N A C A Bul 34:607-15 Ja '53

Cost estimation in a multipurpose plant. W. S. Guthmann and P. R. Inman. Ind & Eng Chem 44:2832-3 D '52

Half-century of cost accounting progress. J. H. Jackson. bibliog N A C A Bul 34:3-17 S '52

How fixed-variable cost control helps produce profits. C. L. Wallace. Factory Management 111:126-9 Je '53

How to control shop costs. A. E. Grover. Am Mach 97:147-62 Mr 16 '53

How to estimate costs in a hurry. H. E. Wessel. bibliog Chem Eng 60:168-71+ Ja '53

Introduction to statistical cost control. L. W. Smith, jr. N A C A Bul 34:509-15 D '52

Meeting competition with good cost methods. A. E. Grover. Foundry 80:102-3+ D '52; 81:108-11+ Ja '53

Profit analysis for the magnet wire industry. G. L. Faulkner. N A C A Bul 34:35-47 S '52

Saves twenty times its cost; cost-control program, General Aniline. Chem W 71:59 N 8 '52

Ten years' progress in management; cost accounting. J. A. Willard and W. P. Fiske. A S M E Trans 75:700-1 My '53

To show a profit, you must figure knitting costs. J. H. Blore. Textile World 103:108-9+ F '53

What does breakeven mean? Bsns W p 158-60 D 13 '52

When does management think in terms of marginal (or of complete) costs? P. L. Noble. N A C A Bul 34:764-5 F '53

Will direct costing theory stand inspection? G. W. Frank. N A C A Bul 34:490-9 D '52

See also

Bank accounting
Budget, Business
Depreciation
Estimates
Overhead expense
Time keeping

also subdivision Accounting under special subjects, e.g.

Contracts, Government
Factories
Industrial research
Inventories
Labor cost
Payrolls
Sales costs

Standard costs

Bringing delivery route costs under standards. W. D. Holdsworth. N A C A Bul 34:254-62 O '52

Calculation of variances. N A C A Bul 34:82-90 S '52

Standard costs in a hosiery mill. C. R. Pincsak. N A C A Bul 34:76-81 S '52

Terminology

When making cost estimates, watch your language. R. D. Beattie and J. E. Vivian. Chem Eng 60:172-5 Ja '53

COST of living

Cost of living at new high. Nat City Bank p98-9 S '52

C of L; down. Bsns W p 157 Ap 11 '53

Downturn in living costs? graphs. Fortune 47:24 Mr '53

Escalators shift gears; readjustment of wages to the new cost-of-living index. Steel 132:42 Ja 12 '53

Living costs in cities. Economist 167:13 Ap 4 '53

Menace of the index number standard. P. Einzig. Comm & Fin Chr 177:208 Ja 15 '53

New cost-of-living index creates problems. H. Unterberger. Inland Ptr 131:42-3 Ap '53

New index shakes escalator. Bsns W p74+ D 27 '52

Old C-of-L index gets a new lease. Bsns W p 108-9 F 7 '53

Revised consumers' price index. Mill & Factory 52:103-4 F '53

Wages; what will index revision do? A. K. Rannells. Iron Age 170:19 D 25 '52

See also

Rent
Standard of living

Statistics

Consumer price index; a layman's guide. M. S. Bedell. bibliog U S Bur Labor Statistics Bul 1140:1-34; pa 20c Supt. of doc. '53

Consumers' price index in large cities, 1914-1952; tabulation. Iron Age 171:483 Ja 1 '53

Consumers' price index, 1946-1952; tabulation. Steel 132:193 Ja 5 '53

Consumers' price index, 1949-1952; chart and tabulations. Automotive Ind 108:329 Mr 15 '53

Consumers' price indexes, 1943-1951; monthly Nov. 1951-Nov. 1952. Fed Res Bul 39:85 Ja '53 [cont monthly]

Consumers' prices, 1929-1951; monthly Nov. 1951-Nov. 1952. Fed Res Bul 39:60 Ja '53 [cont monthly]

COST of living—Statistics—*Continued*

Purchasing power of the dollar, Nov.-Dec. 1951-Jan.-Nov. 1952. Survey of Cur Bsns 33:S6 Ja '53 [cont monthly]

Russia

Existing in Moscow. Economist 166:13-14 Ja 3 '53

Spain

Cost-of-living trends in Spain analyzed. For Comm W 49:5 My 11 '53

COST of living adjustments. See Wage payment plans—Cost of living adjustments

COSTA RICA

See also

Insurance—Costa Rica

Investments, Foreign (in Costa Rica)

Economic conditions

Economic conditions abroad (cont). For Comm W 48:6 O 6; 9 N 24 '52; 49:5 My 18 '53

COSTS. See Cost

COSTUME jewelry. See Jewelry trade

COTTELL, John

New competition for G.E.; Continental electric equipment co. Fortune 47:241 Ap '53

COTTON

Biosynthesis of C^{14}-specifically labeled cotton cellulose. G. A. Greathouse. bibliog Science 117:553-4 My 22 '53

Cotton defoliation and fiber maturity. M. A. Grimes. Textile Res J 22:637-40 O '52

Degradation of cotton and wood pulp with acids and sulfite waste liquor; abstract. N. Hartler and O. Samuelson. Paper Ind 34:1498+ Mr '53

Effect of applied sugars, light intensity, and temperature upon the chemical defoliation of cotton. H. C. Lane and W. C. Hall. bibliog Science 116:427-8 O 17 '52

Hopi Acala; what it is and how it performs. B. Johnson and T. Kerr. il Textile World 103:89-100 My '53

How cotton meets the threat of synthetics. G. Buck. Mod Textiles Mag 34:76+ O '53

Raw cotton; variation within bales and within shipments. J. W. van Dalfsen and J. Alberts. Textile Res J 23:121-2 F '53

Studies on the partial carboxymethylation of cotton. G. C. Daul and others. bibliog Textile Res J 22:787-92 D '52

What you can expect from 1952 cotton. J. M. Cook. il Textile World 103:101-3 Ja '53

What's happening to cotton? P. M. Thomas. Textile World 103:85-92 Ja '53

See also

Bleaching—Cotton

Cellulose

Cotton carding and other headings beginning Cotton

Cottonseed oil

Dyes and dyeing—Cotton

Analysis

Analysis of cotton-glass asbestos yarn. C. L. Hilton. bibliog Textile Res J 23:401-4 Je '53

Cotton's minor constituents; their role in utilization; abstract. C. L. Hoffspauir. Am Dyestuff Rep 41:749 N 10 '52

Morphology and chemical composition of certain components of cotton fiber cell wall. V. W. Tripp and M. L. Rollins. bibliog il diag Anal Chem 24:1721-8 N '52

Diseases and pests

Cavitomic cotton may be draining your profits. L. T. Hall. bibliog Textile World 103:133+ O '53

Newer organic insecticides pose no health problem; Cotton insect control conference, Memphis, Dec. 10-12. Chem & Eng N 30:5363-4 D 22 '52

Tight-lock of cotton, associated fungi and pH values in South Carolina in 1952. C. H. Arndt. bibliog Textile Res J 23:533-5 Ag '53

Grading

How to improve winding of yarn-grading boards. E. F. Wallace. il Textile World 103:111 Mr '53

Lighting a cotton classing room; data sheet. il diags Illum Eng 48:527-8 O '53

Moisture content

Nonfreezing water and nonfreezing benzene capacities of cottons and modified cottons. F. C. Magne and E. L. Skau. bibliog(36 ref) Textile Res J 22:748-56 N '52

Storage

How storage and high gin-drying temperatures affect new-crop cotton; abstract. J. Compton. Textile World 103:97+ Ap '53

Testing

Chemical and physical properties of aminized cotton. W. A. Reeves and others. bibliog Textile Res J 23:527-32 Ag '53

Nonfreezing water and nonfreezing benzene capacities of cottons and modified cottons. F. C. Magne and E. L. Skau. bibliog(36 ref) Textile Res J 22:748-56 N '52

Single-fiber load-elongation tester for cotton. R. S. Orr and J. N. Grant. bibliog il diags Textile Res J 23:505-9 Jl '53

COTTON Belt railway. See St Louis southwestern railway

COTTON carding

Can conversion at Avondale costs only $11.25 per card. T. B. Winston. il diag Textile World 103:97+ Mr '53

Danville yarn mill is sold on continuous stripping. T. B. Winston. il Textile World 103:167+ S '53

Here is a card-room waste-control program. D. E. Baylis. il Textile World 103:124-7+ O '53

Let's take another look at metallic card clothing. J. H. Kennedy. il Textile World 103:135+ F '53

Method of preparing bulk cottons for nep counting. P. L. Orcutt and H. Wakeham. bibliog Textile Res J 23:614-16 S '53

STA discusses 12 topics from carding through weaving. Textile World 103:143+ Je '53

Survey analyzes mill experiences with speeded-up carding; abstract. W. A. Newell. Textile World 103:137+ My '53

Timely carding topics tackled at Georgia TOE. Textile World 103:135-7+ Je '53

Tips for carders and spinners on how to increase efficiency. J. E. Allen. Textile World 103:160-1+ S '53

COTTON cleaning

Cleaning by air minimizes fiber damage; abstract. A. L. Vandergriff. Textile World 103:133+ My '53

Electrostatic processing methods are still in the exploratory stage; abstract. H. M. Brown. Textile World 103:133 My '53

New Shirley opener removes 66 per cent trash at two per cent lint loss; abstract. G. Dakin. diag Textile World 103:128-9+ My '53

Soiling and soil retention in textile fibers; suspending power of surfactants. J. Compton and W. J. Hart. Ind & Eng Chem 45:597-602 Mr '53

COTTON combing

Effect of lap preparation on waste extraction at the cotton comber. W. E. Morton and R. Nield. diags Textile Inst J Trans 44:T317-34 Jl '53

COTTON cords

Alkarylsulfonates as conditioners in wet-twisting cotton tire cord. J. C. Ambelang and others. bibliog Ind & Eng Chem 45:204-10 Ja '53

COTTON drying

How storage and high gin-drying temperatures affect new-crop cotton; abstract. J. Compton. Textile World 103:97+ Ap '53

COTTON exchanges

Memphis; clearinghouse for cotton. il Bsns W p 114-16+ N 15 '52

COTTON fabrics

Art by the yard. B. Bradshaw. J Retailing 29:83-4+ Summer '53

Avondale's nonwoven fabrics are made by a continuous process; Plastavon. T. B. Winston. il Textile World 103:102-3+ Jl '53

Cotton looks at its customers; with tables. Trusts & Estates 91:638-9+ S '52

Helping an oldtimer make a comeback. Bsns W p54-6+ O 25 '52

COTTON fabrics—*Continued*

Reflectance as a measure of the soil content of cotton fabric. I. Reich, F. D. Snell and L. Osipow. Ind & Eng Chem 45:137-41 Ja '53

See also
Cotton weaving
Duck (textile)

Creasing

Crease-resistant cloth from partially carboxymethylated cotton. G. C. Daul and others. bibliog Textile Res J 22:792-7 D '52

Defects

Causes of seaming damage and pinholing in cotton and rayon fabrics. C. M. Dorkin and N. H. Chamberlain. bibliog il diags Textile Inst J Trans 43:T203-33, T536-44 My, O '52

Moisture absorption

Swelling capacities of fibers in water. L. A. Welo and others. bibliog diags Textile Res J 22:254-73 Ap '52; Discussion. 23:64-5 Ja '53

Protection

Shading costs. il Ind & Eng Chem 45:sup 13A+ Ap '53

Shrinkage

Shrinkage of cotton fabrics; behavior of certain cotton fabrics in laundering. H. T. Stevens and others. Mod Textiles Mag 34:78+ Ag '53

See also
Sanforizing

Testing

Crease-resistant cloth from partially carboxymethylated cotton. G. C. Daul and others. bibliog Textile Res J 22:792-7 D '52
Development of a sewability test for cotton fabrics. E. B. Frederick. il Textile Res J 22:687-92 O '52
Tactual and instrumental ranking of softeners on starched and unstarched cottons. C. R. Stock and A. Hvizdak. bibliog il Textile Res J 23:186-96 Mr '53

COTTON fibers

Cut loss of spinnable cotton with fiber analyses of waste. il Textile World 103:133+ Jl '53
Doughnut cotton fibers may cause poor spinning; abstract. T. L. W. Bailey, jr. il Textile World 103:96 Ap '53
Equation estimates yarn strength from cotton-fiber properties. E. H. Helliwell. Textile World 103:103 O '53
Fibre arrangement in cotton slivers and laps. W. E. Morton and K. C. Yen. Textile Inst J Trans 43:T463-72 S '52
Fiber ratings revised in 1952. Textile World 103:159 Jl '53
Morphology and chemical composition of certain components of cotton fiber cell wall. V. W. Tripp and M. L. Rollins. bibliog il diag Anal Chem 24:1721-8 N '52
Products of fragmentation of textile fibres, as seen in the electron microscope; cellulose fibres. D. G. Drummond. bibliog il Textile Inst J Trans 44:T53-8 F '53
Soiling and soil retention in textile fibers; suspending power of surfactants. J. Compton and W. J. Hart. Ind & Eng Chem 45:597-602 Mr '53
SRRL mechanizes the Fibrograph; illustrations with text. Textile World 103:107 F '53
Study of soiling and soil retention in textile fibers; grease-carbon black soil-cotton fiber systems. J. Compton and W. J. Hart. Textile Res J 23:158-63 Mr '53
T-7 holds promise for cotton textiles. il Manuf Rec 122:29 S '53
Textile World's cotton-fiber table; 1953 revision. P. M. Thomas and T. B. Winston, comps. il Textile World 103:93-100 Ja '53 (reprints 25c)
Thermodynamics of stretching cellulosic fibers. H. Wakeham and W. F. Gerrow, jr. bibliog Textile Res J 23:593-4 Ag '53

Measurement

Stelometer measures fiber strength and elongation; abstract. K. L. Hertel. il Textile World 103:97+ Ap '53

Testing

Application of high compression stresses to textile fibers. W. F. Busse. bibliog il Textile Res J 23:77-84 F '53
Causticaire; new method for finding cotton maturity and fineness. Textile World 103:128-9 Mr '53
Cotton defoliation and fiber maturity. M. A. Grimes. Textile Res J 22:637-40 O '52
Effects of mechanical processing of cotton on the physical properties of fibers. J. N. Grant and others. bibliog Textile Res J 22:682-7 O '52
Mechanical properties of cotton fibers. J. A. Lasater and others. bibliog diags Textile Res J 23:237-42, 481-8, 629-39 Ap, Jl, S '53
Pilot-plant tests show zero gauge length best; abstract. G. W. Pfieffenberger. Textile World 103:101 Ap '53
Short gauge lengths can unfairly rate fiber strengths; abstract. H. M. Brown. il Textile World 103:100 Ap '53
Swelling capacities of fibers in water. L. A. Welo and others. bibliog diags Textile Res J 22:254-73 Ap '52; Discussion. 23:64-5 Ja '53

COTTON finishing

Improvement of luster of cotton; decrystallizing and mercerizing; influence on luster. L. Fourt and P. Streicher. bibliog Textile Res J 23:23-8 Ja '53
Look at your cotton-finishing formulas. C. N. Rabold. Textile World 103:99+ Je '53
Textile wet processing; cotton textiles. W. W. Evans. bibliog Am Dyestuff Rep 41:658-61 O 13 '52

See also
Cotton sizing
Mercerizing
Sanforizing

COTTON futures. See Cotton exchanges

COTTON growing

Mississippi

Attitudes relating to mechanization and farm labor changes in the Yazoo-Mississippi delta. H. A. Pedersen. Land Econ 28:353-61 N '52

COTTON insurance. See Insurance, Cotton

COTTON linters

Alpha-cellulose from solvent extracted cotton linters. R. F. Burdynski and K. A. Kobe. bibliog diags Tappi 36:248-54 Je '53
Effect of bleaching treatments on the physical properties of cotton linters pulp. E. F. Thode and others. Paper Tr J 137:16-18 Jl 3 '53
Effect of high-energy cathode rays on cellulose. J. F. Saeman, M. A. Millett and E. J. Lawton. bibliog il Ind & Eng Chem 44:2848-52 D '52
Fiber we know as cotton linters. A. Mosby. Paper Tr J 135:32+ D 12 '52; 136:31-5 Ja 2 '53
Treatment of cellulose prior to acetylation. C. J. Malm and others. bibliog Ind & Eng Chem 44:2904-9 D '52

COTTON machinery

Consider the fundamentals in opening and picking equipment; abstract. P. M. Strang. Textile World 103:131+ My '53
Experimental study of pirn-winding. R. Conrad and G. J. Siddall. Textile Inst J 44:P215-22 Je '53
How we make uniform picker laps. L. C. Sheehan. Textile World 103:118-20+ Mr '53
Machinery changes help make better cotton rugs. R. B. Pressley. il Textile World 103:114-15 Ja '53
Modern machinery and smart layout keep costs low at new Riegel yarn mill; illustrations and plan with text. W. C. Westbrook. Textile World 103:114-16 O '53
New British machines said to improve opening and blending; abstract. W. A. Hunter. il Textile World 103:131+ My '53
New opener and new picker section coming from Saco-Lowell; abstract. R. M. Jones and R. S. Curley. Textile World 103:129+ My '53
New Shirley opener removes 66 per cent trash at two per cent lint loss; abstract. G. Dakin. diag Textile World 103:128-9+ My '53
SRRL opener giving good results; new cleaner being developed; abstract. R. A. Rusca. Textile World 103:135 My '53

COTTON machinery—*Continued*

Use this report to check your opening and picking. E. H. Helliwell. il Textile World 103:143+ F '53

See also

Cotton combing

COTTON manufacture

Degradation of cellulose during mechanical processing; comparison of the evaluation by viscometric methods. J. C. Whitwell and R. F. Schwenker, jr. bibliog diags Textile Res J 23:175-85 Mr '53

Use this report to check your opening and picking. E. H. Helliwell. il Textile World 103:143+ F '53

See also

Cotton carding
Cotton combing
Cotton mills
Cotton sizing
Cotton waste
Cotton yarn

COTTON mills

After a 65-yr. delay, Springs builds a general office; illustrations with text. R. B. Pressley. Textile World 102:127-9 D '52

Cone Mills; Old King Denim. il Fortune 47:86-91+ Ja '53

Farm program pays off in better community relations; Avondale mills. M. B. Andrews. il Textile World 103:143+ Mr '53

Planned for quick and easy expansion; White horse mill. il Factory Management 111: B 16-19 pt 2 My '53

Air conditioning

At Beaumont mfg. co. refrigerated-air system improves carding and spinning. E. D. White. il Textile World 103:126-7+ My '53

Electric equipment

This is the way to protect against lightning; Avondale mills. J. W. Ward. il diag Textile World 103:98-9+ Jl '53

Employees

Child health protection helps community morale; Well-baby station. M. B. Andrews. il Textile World 103:137+ Ag '53

Community seminars get ideas across in mill towns; Freedom forums of Alabama mills, inc. M. B. Andrews. il Textile World 103: 145+ F '53

Loomfixer training; Henderson cotton mills. R. B. Pressley. il Textile World 103:100-1 Je '53

Suggestion system that works; Shuford mills. N. L. Brown. il Textile World 103:87-9+ Jl '53

Equipment

Fork trucks and tractors reduce handling time at Cone mills; illustrations with text. Textile World 103:139 Ja '53

Good planning gives high steam-plant efficiency; Anniston mfg. co. E. D. White. il Textile World 103:122-3 Ja '53

How Exposition cotton mills brought 222 looms up to date. E. A. Satterfield. il Textile World 103:118-19 F '53

New starch-handling system saves $61 in starch every 24 hrs.; Avondale mills. R. B. Pressley. il diag Textile World 103:138-41 S '53

These materials-handling ideas pay off at American thread co. T. L. Griffith. il Textile World 103:114 Ag '53

This new weave room does everything but run itself; Clinchfield mfg. co. R. B. Pressley. il Textile World 103:138-41 Je '53

White Horse mill, the South's newest cotton mill; illustrations with text. J. H. Kennedy. plan Textile World 103:112-17 F '53

Layout

Modern machinery and smart layout keep costs low at new Riegel yarn mill; illustrations and plan with text. W. C. Westbrook. Textile World 103:114-16 O '53

Maintenance and repair

Brookside has direct-line organization. N. Garlington. il plan Textile World 103:133-4+ Je '53

Maintenance is important business at Huntsville mfg. co. R. B. Pressley. il plan Textile World 103:119-21+ O '53

Organized maintenance at Henderson cotton mills. R. B. Pressley. il Textile World 103:121+ My '53

Management

Card index controls supplies at no extra personnel cost; Eastman cotton mills. M. D. Heaton. il Textile World 103:112-13 Ag '53

He hated cotton; James C. Self and his Greenwood Mills. Manuf Rec 122:38-9+ Mr '53

Quality control

This live-wire quality program improved Lane's denims. R. B. Pressley. Textile World 103:102-3+ Mr '53

Wamsutta follows through on its quality control. E. S. Rudnick. il Textile World 103: 104-5+ Ap '53

Waste

Modern caustic-recovery system reduces cost, lowers inventory; American thread co. H. Eastman. il Textile World 103:150-1+ S '53

Oxidation of cotton kier wastes; with cost data. N. L. Nemerow. bibliog Sewage & Ind Wastes 25:1060-4 S '53

Reducing pollution by cotton finishing wastes. Pub Works 84:125 S '53

Simple plan reduced waste at Sycamore spinning plant. T. B. Winston. il Textile World 103:114-15 Jl '53

See also

Cotton waste

COTTON openers. See Cotton machinery

COTTON picking machines

Mr little ol' Rust. il Fortune 46:150-2+ D '52

COTTON research

Aminization of cotton. W. A. Reeves and J. D. Guthrie. bibliog Textile Res J 23:522-7 Ag '53

Annual cotton research clinic, 4th, Savannah; abstracts of papers. Textile World 103:96-101+ Ap; 128-9+ My '53

Effect of a wetting agent on the hydrolysis of highly methylated cotton cellulose. R. E. Reeves and B. J. Barrett. Textile Res J 23:510-12 Jl '53

Ethylenimine-treated cotton. G. L. Drake, jr. and others. bibliog Textile Res J 23:639-41 S '53

Further studies on cotton cellulose with reduced crystallinity. L. Segal and others. bibliog Textile Res J 23:428-35 Je '53

Mechanical properties of cotton fibers. J. A. Lasater and others. bibliog diags Textile Res J 23:237-42, 481-8, 629-39 Ap, Jl, S '53

New muscles for Old King Cotton; cyanoethylation. il Mod Textiles Mag 34:37+ S '53

Nonfreezing water and nonfreezing benzene capacities of cottons and modified cottons. F. C. Magne and E. L. Skau. bibliog(36 ref) Textile Res J 22:748-56 N '52

Viscometric studies of cellulose in cotton in relation to mechanical processing. C. M. Conrad and R. A. Rusca. bibliog(42 ref) Textile Res J 23:168-74 Mr '53

COTTON rugs. See Rugs, Cotton

COTTON sizing

New slasher equipment shows definite improvements. il Textile World 103:116-17+ Jl '53

Textile operating executives of Georgia fall meeting; summary of discussion. Textile World 103:108-9+ Ja '53

COTTON spinning

Cut loss of spinnable cotton with fiber analyses of waste. il Textile World 103:133+ Jl '53

Flow chart can simplify your spinning organizations. E. H. Helliwell. Textile World 103:133 Ag '53

Georgia TOE surveys 16 spinning subjects. Textile World 103:104-7 Jl '53

How to handle roving. N. H. Pomfret. diags Textile World 103:124+ Ag '53

Simple plan reduced waste at Sycamore spinning plant. T. B. Winston. il Textile World 103:114-15 Jl '53

Timely carding topics tackled at Georgia TOE. Textile World 103:135-7+ Je '53

Tips for carders and spinners on how to increase efficiency. J. E. Allen. Textile World 103:160-1+ S '53

Uniformity improvement centers on drawing; Coats & Clark, inc. J. Duerst. diags Textile World 103:115+ Ag '53

COTTON spinning—*Continued*

Tables, calculations, etc.

New formula for roving twist includes fineness factor; abstract. J. R. Corley. Textile World 103:99 Ap '53

COTTON thread

Modern caustic-recovery system reduces cost, lowers inventory; American thread co. H. Eastman. il Textile World 103:150-1+ S '53

COTTON trade

Bale of trouble; cotton glut points up some farm program follies. W. Mintz. Barron's 32:15-16 D 15 '52

Buxton and after; conference of leaders of world's cotton textile trade. Economist 165: 43-4 O 4 '52

Cone Mills; Old King Denim. il Fortune 47: 86-91+ Ja '53

Cotton looks at its customers; with tables. Trusts & Estates 91:638-9+ S '52

Credit of $40 million arranged for Japan. For Comm W 49:27 My 18 '53

Helping an oldtimer make a comeback. Bsns W p 54-6+ O 25 '52

International cotton textile industry conference, Buxton, England. Textile World 102: 168 D '52

Japan, Spain granted credit to buy cotton. For Comm W 49:4 Ap 27 '53

See also

Cotton exchanges

Brazil

Brazil auctions its cotton. Economist 166:306-7 Ja 31 '53

Egypt

Neguib's cotton market. Economist 167:49 Ap 4 '53

Great Britain

Bulk buying in the cotton slump. Economist 167:926-7 Je 27 '53

Cotton imports as before. Economist 167:842 Je 20 '53

Lancashire's fill of advice. Economist 166:37-9 Ja 3 '53

Umbrella for spinners. Economist 166:655-6 Mr 7 '53

U.K. cotton commission offers new contracts. For Comm W 49:15 Ja 19 '53

COTTON waste

Cut loss of spinnable cotton with fiber analyses of waste. il Textile World 103: 133+ Jl '53

Effect of lap preparation on waste extraction at the cotton comber. W. E. Morton and R. Nield. diags Textile Inst J Trans 44:317-34 Jl '53

Here is a card-room waste-control program. D. E. Baylis. il Textile World 103:124-7+ O '53

COTTON weaving

Alabama mill men check up on weaving. il Textile World 103:116-17, 184+ Ag '53

STA discusses 12 topics from carding through weaving. Textile World 103:143+ Je '53

This new weave room does everything but run itself; Clinchfield mfg. co. R. B. Pressley. il Textile World 103:138-41 Je '53

Versatile designing and weaving spark mill's multifiber program; Mooresville mills. R. B. Pressley. il Textile World 103:92-3+ Jl '53

COTTON workers

See also

Cotton mills—Employees

COTTON yarn

Cotton basically altered by new chemical treatment; cyanoethylation. Textile World 103:96+ O '53

Improvement of luster of cotton; decrystallizing and mercerizing; influence on luster. L. Fourt and P. Streicher. bibliog Textile Res J 23:23-8 Ja '53

Irregularities in cotton and rayon-staple slivers caused by roller slip at the drawframe. G. Dakin and others. Textile Inst J Trans 43:T545-62 N '52

You can minimize your yarn variation. E. H. Helliwell. Textile World 103:145+ Je '53

Strength

How cotton-fiber properties affect yarn strength; abstract. H. Wakeham. Textile World 103:98 Ap '53

Tables, calculations, etc.

Equation estimates yarn strength from cotton-fiber properties. E. H. Helliwell. Textile World 103:103 O '53

Use of constants speeds doffer-cost calculations. N. H. Pomfret. Textile World 103: 131+ F '53

COTTONSEED

Cottonseed cake put on market by Egypt. Oil Paint & Drug Rep 163:4 Ja 12 '53

Cottonseed price supports set at 75 percent of parity. Oil Paint & Drug Rep 163:78 Je 29 '53

Cottonseed processing study results reported by USDA. Oil Paint & Drug Rep 163:74 Je 22 '53

Cottonseed products buying program terms are fixed. Oil Paint & Drug Rep 164:5+ Jl 13 '53

Filtration-extraction of cottonseed. E. L. D'Aquin and others. bibliog flow diags il diag Ind & Eng Chem 45:247-54 Ja '53

COTTONSEED oil

Better solvent extraction. diag Chem Eng 60:124+ My '53

Commodity credit corporation firms cottonseed and soybean oil markets. Barron's 33: 27-8 Mr 2 '53

Direct solvent process aids small operators; packaged plants for cotton-seed. il Food Eng 25:89 Ag '53

Lukenwald designs packaged solvent extraction plant. Chem Eng 60:147-8 Ap '53

New process offers boon to small oilseed crushers; Lukenweld process. Chem Eng 59:236 O '52

COUDERT, Frederic René, 1898-

Anti-spending bill is aired. pors Bsns W p 152-4 Ap 25 '53

COUGH drops

Brand-new Smith; design for Smith brothers' new chlorophyll cough-drop package. il Mod Packaging 26:133 S '52

COULOMB friction. See Friction

COULOMB wave function. See Wave mechanics

COULOMETRIC titrations. See Volumetric analysis

COUMARANONE. See Benzofuranone

COUMARONE-indene resins. See Resinous products

COUNCIL for financial aid to education

College financing aided. Product Eng 24:216 Ap '53

COUNCIL of economic advisers. See United States—Council of economic advisers

COUNCIL of engineering societies secretaries

Annual meeting, 16th, Chicago, Sept. 12-13. Midwest Eng 5:28 N '52

COUNCIL of Europe

Cold spring in Strasbourg; draft treaty for a European political community (EPC) considered. Economist 167:448-9 My 16 '53

Strasbourg in search of raw materials. Economist 165:104+ O 11 '52

Uncertainty at Strasbourg. Economist 165:30 O 4 '52

COUNCIL of national library associations

Meeting, New York, Nov. 29, 1952. Special Lib 44:110 Mr '53

COUNSELORS, Employees'. See Employees' counselors

COUNTER display. See Display of merchandize

COUNTERCURRENT apparatus

Countercurrent distribution of methyl esters of higher fat acids. J. A. Cannon, K. T. Zilch and H. J. Dutton. bibliog Anal Chem 24:1530-2 O '52

Simple robot drive for Craig countercurrent distribution apparatus. F. C. Hickey. diags Anal Chem 24:1993-5 D '52

COUNTERCURRENT processes

Countercurrent distribution of sheep adrenocorticotropic protein preparations. G. P. Hess, F. H. Carpenter and Choh Hao Li. bibliog Am Chem Soc J 74:4956-7 O 5 '52

Electron exchange polymers; countercurrent applications. H. G. Cassidy, M. Ezrin and I. H. Updegraff. il Am Chem Soc J 75:1615-17 Ap 5 '53

Hydraulic characteristics of packed towers operating under counter-current flow conditions. H. E. Rose and P. H. Young. bibliog il diags Inst Mech Eng Proc (B) 1B no 4:114-26; Discussion. 127-8 '52

COUNTERCURRENT processes—*Continued*
Pituitary hormones; the purification of corticotropin-B by countercurrent distribution. F. A. Kuehl, jr. and others. bibliog Am Chem Soc J 75:1955-9 Ap 20 '53
Quantity separation of rare earths by liquid-liquid extraction; the first kilogram of gadolinium oxide. B. Weaver, F. A. Kappelmann and A. C. Topp. bibliog Am Chem Soc J 75:3943-5 Ag 20 '53
Tower utilizes kinetic energy. C. A. Pfeiffenberger. il diags Chem Eng 60:242-3 Ap '53

COUNTERFEITS and counterfeiting
Gold coin counterfeiting in Italy. P. Einzig. Comm & Fin Chr 177:694 F 12 '53
See also
Insurance, Liquor law liability—Counterfeit policies

COUNTERS (electrons, ions, etc.)
Amateur scientist. A. G. Ingalls. diags Sci Am 188:104-6 Mr '53
Atomic instruments for oil exploration. J. Mitchel. Safety Maint & Prod 104:34 N '52
Combination peaks; an energy addition effect in scintillation counters. P. S. Jastram and others. R Sci Instr 23:648-9 N '52
Correction for finite angular resolution in directional correlation measurements. J. S. Lawson, jr. and H. Frauenfelder. diags Phys R 91:649-52 Ag 1 '53
Design of liquid scintillation cells. R. L. Garwin. diags R Sci Instr 23:755-7 D '52
Detectability of low-level radioactivity in water. A. S. Goldin and others. bibliog Am Water Works Assn J 45:73-80 Ja '53
Discharge mechanism in argon counters. L. Colli and U. Facchini. bibliog il diag Phys R 88:987-98 D 1 '52
Energy spectra of cosmic-ray photons and electrons from plastic scintillation counter measurements. C. N. Chou. bibliog diags Phys R 90:473-6 My 1 '53
Factors influencing the life of self-quenching counters. S. S. Friedland and H. S. Katzenstein. bibliog il R Sci Instr 24:109-12 F '53
Fast neutron counting with hydrogenous liquid phosphors. G. R. Keepin and R. H. Loveberg. R Sci Instr 23:483-4 S '52
Fast neutron scintillation spectrometer. R. F. Mozley and F. C. Shoemaker. diag R Sci Instr 23:569 O '52
High sensitivity fission counter. W. Baer and R. T. Bayard. diag R Sci Instr 24:138-40 F '53
Improved Čerenkov detector for cosmic rays. J. Winckler and K. Anderson. R Sci Instr 23:765-6 D '52
Ion-scattering analyzer. W. C. Estler. Science 116:sup3 N 28 '52
Large liquid scintillation detectors. C. L. Cowan, jr. and others. Phys R 90:493-4 My 1 '53
Liquid scintillation counting of tritium-labeled water and organic compounds. F. N. Hayes and R. G. Gould. bibliog Science 117:480-2 My 1 '53
Method of increasing the effective resolution of scintillation counters. K. G. Standing and R. W. Peelle. R Sci Instr 24:193-5 Mr '53
Neutron detection system for use with pulsed accelerators. J. Halpern and others. diags R Sci Instr 23:678-80 D '52
Neutron-proton scattering using organic crystal scintillation detectors. M. E. Remley and others. bibliog diags Phys R 89:1194-8 Mr 15 '53
Optical cement for scintillation use. R. L. Shipp. R Sci Instr 23:773 D '52
Packaging of NaI(Tl) crystals for scintillation spectrometry. R. K. Swank and J. S. Moenich. diag R Sci Instr 23:502-3 S '52
Particle localization by means of a scintillation detector. L. C. L. Yuan and H. L. Poss. il diag R Sci Instr 23:553-4 O '52
Proportional counters in corona region. L. Colli and others. il R Sci Instr 23:621-3 N '52
Proportional fission neutron counters. R. C. Rohr and others. il diag R Sci Instr 23:595-8 N '52
Proton-proton scattering from 1.8 Mev to 4.2 Mev. H. R. Worthington and others. bibliog diags Phys R 90:899-911 Je 1 '53
Scintillation response from NaI(Tl) crystals under bombardment with positive ions of energies 60-600 kev. S. K. Allison and H. Casson. bibliog diags Phys R 90:880-5 Je 1 '53
Scintillators and energy transfer processes. C. Reid. diag Phys R 88:422-3 O 15 '52
Versatile laboratory scintillation counter. R. K. Swank and J. S. Moenich. diag R Sci Instr 23:503-4 S '52
See also
Bubble chambers
Coincidence counting
Geiger-Müller counters

Power supply

Application of transistors to high-voltage low-current supplies. G. W. Bryan, jr. il diags Inst Radio Eng Proc 40:1521-3 N '52
Extra high tension filter box for BF$_3$ proportional counters. J. Sharpe. diags J Sci Instr 29:409-10 D '52

COUNTING machines and devices
Coil turns counter. il Electronics 26:284+ My '53
Counter test circuits. R. Weissman. diags Electronics 25:230+ O '52
Counting strain gauge. J. B. Lambie. il diags Engineering 174:168-70 Ag 8 '52
Direct reading, plug-in counters. il Product Eng 23:220 N '52
Electro-mechanical counters as control devices. R. J. Visin. il diags Product Eng 24:148-53 My '53
Electronic tablet counter; Warner-Chilcott laboratories. il Mod Packaging 26:154-7+ Ap '53
Gated decade counter requires no feedback. E. L. Kemp. il diags Electronics 26:145-7 F '53
Gated lamp decade counters. R. L. Rod. diag Electronics 25:170+ O '52
High-speed counter uses ternary notation. R. Weissman. il diags Electronics 25:118-21 O '52
How many? il Mill & Factory 53:122-5 S '53
Optical position encoder and digit register. H. G. Follingstad and others. bibliog il diags Inst Radio Eng Proc 40:1573-83 N '52
Preset counter for time and quantity measurements. T. H. Thomason. il diags Tele-Tech 12:82-3+ Ag '53
Ten-stage cold-cathode stepping tube. D. S. Peck. il diags Elec Eng 71:1136-9 D '52
Transistor reversible binary counter. R. L. Trent. bibliog il diags Inst Radio Eng Proc 40:1562-72 N '52

COUNTRY banks. See Banks and banking—Country banks

COUNTRY correspondents. See Newspapers—Country correspondents

COUNTRY houses
Country house on Long Island. il plans Arch Rec 112:145-9 S '52

COUNTY engineers

Directories

County engineers in Ontario. Roads & Eng Constr 91:196 Je '53

COUNTY fairs. See Fairs

COUNTY taxation. See Taxation, County

COUPLINGS
Aligning couplings and other handy indicator checks; drawings with text. S. Elonka. Power 97:112-13 Ap '53
Electromagnetic couplings and gearbox on M. V. Surrey. il Engineer 194:314-15 S 5 '52; Engineering 174:299-301 S 5 '52; Electrician 149:773-4 S 12 '52
How to select fluid couplings. diags Product Eng Hdbk p E 12-17 '53
How to size flexible couplings. Mill & Factory 51:138 O '52
Improved riding control for locomotive bogies. diag Engineering 176:285 Ag 28 '53
Lubricating flexible couplings. A. F. Brewer. il diags Diesel Power 31:56-61 Ag '53
Torflex small shaft couplings. diag Engineer 195:531 Ap 10 '53
Torsional vibration notes with solutions for an untuned viscous damper and flexible coupling with nonlinear elasticity. F. P. Porter. diags A S M E Trans 75:241-62; Discussion. 262-8 F '53

COUPLINGS—*Continued*

Treat couplings right, don't abuse them. E. J. Clement. il diags Mill & Factory 53: 103-7 O '53

See also

Car couplings

COUPONS

Couponing and sampling. K. Groesbeck. Adv Agency 45:81 N '52

Low-cost couponing; new attachment on unit-packaging machine. il Mod Packaging 27:113 O '53

COURAGE

Construction heroes; winners of Carnegie hero medal. H. F. Unger. il Constr Methods 35: 98+ Ja '53

COURT, Contempt of. See Contempt of court

COURT houses

Giant jigsaw puzzle; District of Columbia courthouse. il Bsns W p 130+ D 6 '52

COURTS

See also

Justice, Administration of

COURTS, Motor. See Tourist camps, hostels, etc.

COVENTRY, England

Sewerage

Partial treatment by diffused air and sewage filtration studies are new ideas in an old city. J. Finch. il Water & Sewage Works 100:416-18 O '53

COVERED bridges. See Bridges, Wooden

COVERS (printing)

Cover contest winning designs announced. il Inland Ptr 130:30-2 Mr '53

COWIE, Wilbur

Low-cost fur from a lab. por Bsns W p 134-6 Ap 4 '53

COWPOX. See Vaccinia

CRABS

He made a million at old game; Lowell Wakefield goes fishing for Alaska king crab. R. M. Harmer. il Am Bsns 22:22+ N '52

CRACKER Jack. See Popcorn

CRACKING of concrete. See Concrete—Cracks

CRACKING processes. See Distillation; Petroleum distillation

CRANDELL, Lou R.

Construction has adventure for George A. Fuller co. pors Eng N 149:49-52, cover O 30 '52

CRANE cabs

Crane controls for iron and steel works; suggested criteria for the design of crane cabs. L. N. Bramley. bibliog 2pls diags Iron & Steel Inst J 173:59-68 Ja '53

Air conditioning

Foundry crane operators get clean air. il Heating-Piping 25:106 Jl '53

CRANE company

More jet metal. Bsns W p 128 Ap 11 '53

12 promising specialties. P. Dobbs. Mag of Wall St 92:95+ Ap 18 '53

CRANE wheels

Crane wheel tread contours. J. J. Stolz. diags Iron & Steel Eng 29:101-4; Discussion. 104-6 O '52

Design of wheels for electric overhead travelling cranes. H. B. Lloyd. diags Engineer 195:429-30 Mr 20 '53

CRANES, derricks, etc.

Anglo-Canadian shore and sea cranes increase efficiency in wood handling. il Paper Ind 35:206 My '53

Anti-swing crane increases safety and accuracy. diags Power Eng 57:81 Mr '53

Belt conveyers, arteries of new ore dock. W. H. Raff. il Iron Age 170:133-6 D 18 '52

Biggest over-the-road truck crane. H. W. Richardson. il Constr Methods 34:93+ D '52

British-built tower crane. il Roads & Eng Constr 90:96 N '52

Crane supported by spherical roller bearing. il diag Machine Design 25:246 My '53

Crane transfer job salvages ladle lining pit. il Steel 132:139 My 18 '53

Cranes replace steel bridge span. il Roads & Sts 96:65 Ap '53

Develop 70,000 psi injection press, anti-swing crane at Argonne lab. il Am Mach 97:203 F 16 '53

Diesel increases locomotive crane efficiency. il Diesel Power 31:52 Ag '53

Diesel-powered gantry meets special power need. il Steel 131:115 N 3 '52

Diesel powered rail crane. il Diesel Power 30:63 O '52

Dredging with mobile crane. W. B. Lenhart. il Rock Prod 56:112-14 Je '53

Dropball cuts blasting costs at Tahawus. P. W. Allen. il Min Eng 5:379-81 Ap '53

Gallows frame sets big, fragile tanks. il Constr Methods 35:106-8 Ap '53

Handling materials in process. R. T. Kimmel. il plans Tool Eng 30:67-78 Mr '53

How poles are set quicker with a hinged derrick. il Elec West 110:79 Mr '53

How to place parts accurately by crane. H. B. McDermid. diag Power 97:128 Ja '53

Large crane makes big utility jobs easy. il Elec West 110:79 Ja '53

Less than one man hour required to change hoe to crane. il Pub Works 84:102-3 My '53

Lorry-mounted 20-ton crane. il Engineering 174:519 O 17 '52

Low-boy trailer crane will job lift 45 tons. il Constr Methods 35:126+ Je '53

Mobile cargo crane. il Engineer 194:66 Jl 11 '52; Engineering 174:185 Ag 8 '52

Mountain-to-the-sea tower raising. il Constr Methods 35:88-90 Ap '53

New nonferrous foundry lets cranes lighten the load; Seagrave corp. il Foundry 81:176 F '53

New 30-ton Lorain moto-crane. il Roads & Eng Constr 91:60 F '53

New twist in wall construction pays off. il Constr Methods 35:59-60 Ap '53

150-ton crane converted to Diesel. il Ry Age News ed 134:31 Je 22 '53

Permanent shaft acts as temporary pedestal; refinery expansion job for Standard oil co. of Texas. il Constr Methods 35:136-7+ Ap '53

Schield puts bantams on crawlers. H. W. Richardson. il Constr Methods 35:87+ Ag '53

Steelworks ladle cranes; Shotton steel works of John Summers and sons. il Engineer 195:505-6 Ap 3 '53; Engineering 175:417-19, pl 8-9 Ap 3 '53

Thew adds to its line of Lorain cranes. il Eng N 150:104 Ja 22 '53; Same cond. Constr Methods 35:111 F '53

Tower crane. il Engineer 194:665 N 14 '52

Truck-mounted crane speeds many jobs and cuts labor; Los Angeles Department of water and power system. C. M. Allen. il Elec World 139:90+ Ja 12 '53

Wild-Fawcett tower crane for building construction. il Engineering 175:653 My 22 '53

Work sampling; fast way to get facts on handling. W. P. Smith. diags Factory Management 111:70-1 My '53

See also

Crane wheels

Advertising

Trade character gives new industrial product a symbolic personality; Harnischfeger power crane and shovel. H. E. Green. il Ptr Ink 242:37-8 Ja 23 '53

Control

Crane controls for iron and steel works. L. N. Bramley. bibliog 6pls diags Iron & Steel Inst J 173:53-68 Ja '53

Cranes; no swing, no sway; servomechanism control. Steel 132:119 My 4 '53

Modern crane control for steel plants. W. R. Wickerham and G. E. Mathias. il diags Iron & Steel Eng 29:100-11; Discussion. 111-15 N '52

Electric equipment

Code interpretations and conductor selection for cranes and hoists. L. Price. Iron & Steel Eng 29:130-6 N '52

Electric cranes. diags Elec R (Lond) 151: 1217-18 D 5 '52

Trolley system; copper conductor bus replaces steel in crane systems. Iron Age 170:190 D 11 '52

Walker brothers mobile Diesel-electric crane. il Engineer 196:268-9 Ag 28 '53

CRANES, derricks, etc.—*Continued*

Lubrication

Crane lubrication made safe, sure, with centralized system. J. A. Gordon. il Power 97:79 Jl '53

Manufacture

Case study; Michigan crane & conveyor co. small and relatively new, has had a spectacular growth. Steel 131:67 N 17 '52

Mobile crane works in Sunderland. il Engineer 196:148-50 Jl 31 '53

Safety measures

Antiswing crane with anticreep variable-speed hoisting. R. C. Goertz. il diags Elec Eng 72:635-7 Jl '53

Crane accidents can be prevented. il Power Eng 57:82-4 O '53

Ground your cranes! A. A. Wolf. Roads & Sts 96:92 Mr '53

Hoists and portable cranes. il Nat Safety N 67:172 Mr '53

New safety hook block will reduce crane accidents. diag Iron & Steel Eng 30:116-18 Jl '53

Protect crane trolleys and save a life. il Elec West 109:107 O '52

What price an industrial accident? hazard of exposed crane trolley wires. il Elec West 109:108 O '52

CRANKCASES

Explosions

Crankcase explosions. R. O. Montenero. il diags Ry Loco & Cars 127:58-62 Ja '53

Explosions in enclosed crankcases of reciprocating engines; their cause, effect, and possible remedy. J. Lamb. diags Inst Mech Eng Proc (A) 166 no 3:327-35 '52; Same. il Engineering 173:632-3, 661-2, 695-8 My 16-30 '52; Discussion. Inst Mech Eng Proc (A) 166 no 3:335-49, pl 1-4 '52; Engineer 193:597-8 My 2 '52

How to forestall Diesel crankcase explosions? L. W. Fitzpatrick and others. Power Eng 56:78-9 D '52

CRANKPINS

Save your scored Diesel crankpin. H. Welch. diags Power 96:110-11 N '52

CRANKSHAFTS

Avoid crankshaft failures. il diag Diesel Power 31:80-2 Jl '53

Crankshaft and bearing failures; report of Locomotive maintenance officers' association. Ry Mech & Elec Eng 126:78-80 N '52

Crankshaft balancing; Daimler-Benz. il Automobile Eng 42:532 D '52

Crankshaft rotating device. il diags Ry Loco & Cars 127:62 Ja '53

Passenger-car noise; engine harshness. L. M. Ball. il diags S A E J 60:61-3 O '52

Repair sprung crankshaft in place and save dollars; illustrations with text. S. Elonka. Power 97:110-11 Ja '53

Manufacture

Automated forging line boosts output, cuts costs; Dodge division. W. G. Patton. il plan Iron Age 170:93-6 O 2 '52

Automation assures precision assemblies. C. F. Hautau. il diags Tool Eng 31:37-42 Ag '53

Continuous press forging applied to crankshafts. J. Geschelin. il diag Automotive Ind 107:58-9+ O 1 '52

Continuous press forging system uses novel furnaces. A. H. Allen. il Metal Prog 63:90-3 F '53

Crankshaft forging; Chrysler corp. il Automobile Eng 43:386-8 S '53

Crankshaft production; Ambrose Shardlow & co. ltd. il Automobile Eng 43:23-32 Ja '53

Making a production line automatic; Crankshaft press shop of Chrysler corp. il diag Mod Ind 25:46-7 F '53

Precision production balancing. G. C. Lawrie. il Tool Eng 30:48-52 Ap '53; Same abr. Machine Design 25:330+ Je '53

Production rate of turning crankshafts increased seven times; Continental motors corp. il Automotive Ind 109:51+ S 1 '53

Testing

Ultrasonic testing of a large engine crankshaft; abstract. W. A. Black. Iron & Steel Eng 30:108-9 Ag '53

Ultrasonic testing of a large engine crankshaft at Republic steel corp. W. A. Black. il diags Blast F & Steel Pl 41:1065-6+ S '53

CRATES

Engineering a wirebound crate for mine fairings. H. A. Wolsdorf. il Mod Packaging 27:168-9+ O '53

CRAZING of plastics. See Plastic materials—Crazing

CREAMERIES

Equipment

Continuous buttermaking OK'd in Midwest trial; Rising sun creamery. il Food Eng 25:47+ F '53

CREASING of textiles

Creaseproofing; glucose ureides plus formaldehyde; patent. Am Dyestuff Rep 41:769 N 24 '52

Effect of conditioning on crease recovery angle; abstracts. Am Dyestuff Rep 41:653 O 13 '52; Textile World 102:145 D '52

Properties of textile materials; rigidity, stiffness, and crease-resistance of fibres. R. Meredith. diags Textile Inst J 43:P785-92 O '52

See also

Cotton fabrics—
Creasing

CREATIVE ability

Deliberate creativeness in science and engineering. M. Nelles. Chem & Eng N 31:1520-3 Ap 13 '53

Solve design problems with a creative approach. L. W. Guth. Gen Elec R 56:55-8 Jl '53; Same cond. Machine Design 25:348+ O '53

CREDIT

American living standards and consumer finance. P. L. Selby. Comm & Fin Chr 177:1963 My 7 '53

Backing away from tight money. Bsns W p34 Je 27 '53

Business and credit outlook generally good; survey of bankers' opinions. maps Banking 46:29-38+ Jl '53

Coasting days over, time to pedal; younger bank officers and need of care in loan policies. H. H. Heimann. Credit & Fin Management 55:20-1 Ap '53

Consumer credit aids business stability. R. Rodgers. Comm & Fin Chr 176:2033 N 27 '52

Consumer credit can safely expand by $18 billions. A. H. Johnson. Comm & Fin Chr 177:1536+ Ap 9 '53

Consumer credit; danger or opportunity? Burroughs Clearing House 37:6-7 My '53

Consumer debt; too little or too much? B. A. Wapensky. Comm & Fin Chr 178:12 Jl 2 '53

Credit and monetary review for 1952. Fed Res Bul 39:91-7 F '53

Credit and the problem of a sound exchange medium. W. E. Spahr. Comm & Fin Chr 177:1860+ Ap 30 '53

Credit bulge; consumer finance companies wonder how high is high. V. F. Morris. Barron's 33:13-14 My 4 '53

Credit; loan demand at hot pace. R. M. Stroupe. Iron Age 171:96 Je 4 '53

Credit men say no, but. Bsns W p 138+ Ap 25 '53

Credit policy. Nat City Bank p38-41 Ap '53; Same abr. Comm & Fin Chr 177:1556 Ap 9 '53

Credit supply and demand. Nat City Bank p 124-7 N '52

Credit will cushion readjustment, but it must have courageous and sound policy. H. H. Heimann. Credit & Fin Management 55:16-17+ Jl '53

Debtor and the creditor. Nat City Bank p76-9 Jl '53

Economy has many props. E. L. Hall. Spectator 161:101-2 My '53

High volume of consumer debt and other factors invite caution now. East Underw 54:26 Ja 9 '53

Influence of credit and monetary measures on economic stability. Fed Res Bul 39:219-34 Mr '53

CREDIT—*Continued*

Institutional acceptance of consumer credit. W. J. Cheyney. Comm & Fin Chr 177: 1742+ Ap 23 '53

Is trained personnel lagging in race against expansion of credit business? B. F. Reinking. Credit & Fin Management 55:22-3 F '53

More borrowing by consumers is reflected in Reserve board's new estimates. Bsns W p32 My 2 '53

Most fruitful years for America; the next ten! Credit & Fin Management 54:16-18 N '52

Outstanding consumer credit. W. J. Cheyney. Comm & Fin Chr 177:2227 My 21 '53

Progress report on credit inflation; with data on nonfederal debt for selected years, 1916-1951. M. Palyi. Comm & Fin Chr 176:1721+ N 6 '52

Recent credit and monetary developments, first half of 1953. Fed Res Bul 39:689-96 Jl '53

Sale I never forgot; he went formal. M. Rudofker. il Ptr Ink 242:64+ Ja 9 '53

Telling the teachers about instalment credit; Philadelphia educators symposium on consumer credit. F. Parker. Burroughs Clearing House 37:36-7+ Je '53

To market! on credit. P. M. Millians. Comm & Fin Chr 177:682+ F 12 '53

Too much credit. Barron's 33:1 Ja 12 '53

Urges caution in expanding consumer debt: Guaranty trust co. of New York. Comm & Fin Chr 177:13 Ja 1 '53

Wartime and postwar credit demands of large corporations; with tables of composite sources and uses of funds statement, 1939-52, 300 large corporations in selected industries. P. S. Anderson. Fed Res Bul 39:704-18 Jl '53

What leeway in installment credit? J. C. Cresswill. Mag of Wall St 91:571-3 F 21 '53

Working capital problem underscored; report of Credit research foundation. Comm & Fin Chr 177:343 Ja 22 '53

Yesterday, today, and tomorrow. O. W. Adams. Comm & Fin Chr 177:461+ Ja 29 '53

See also

Accounts receivable
Agricultural credit
American bankers association—Credit policy commission
Banks and banking
Billing
Charge accounts (retail trade)
Collecting of accounts
Credit, Bank
Credit cards
Debt
Discount, Cash
Federal reserve board—Credit policy
Finance companies
Instalment plan
Insurance—Credit aspects
Loans
Salesmen and credit
Warehouse receipts

Law

See also

Instalment plan—Regulation

Regulation

Attitude of Reserve board on standby controls. Comm & Fin Chr 177:1560 Ap 9 '53

Credit control in France. Economist 165: 506+ N 15 '52

Credit control is a continuing responsibility of bank management. J. M. Dodge. Bankers Mo 69:2 S '52

Real estate credit; suspension of Regulation X. Fed Res Bul 38:1004 S '52

Statistics

Consumer credit, Nov.-Dec. 1951-Jan.-Nov. 1952. Survey of Cur Bsns 33:S 16 Ja '53 [cont monthly]

Consumer credit statistics; total consumer credit, by major parts; consumer instalment loans, 1939-1951 and monthly, Oct. 1951-Nov. 1952. Fed Res Bul 39:64 Ja '53 [cont monthly]

Consumer instalment sale credit; consumer instalment credits of commercial and industrial banks, by type of credit and of industrial loan companies, by type of credit; furniture store statistics and ratio of collections to accounts receivable; tables for selected periods. Fed Res Bul 39:65-6 Ja '53 [cont monthly]

Indebtedness of individuals; consumer credit; residential mortgage debt. L. F. McHugh. Survey of Cur Bsns 33:12-18 Ap '53

Recent credit expansion. Fed Res Bul 38: 1269-75 D '52

Revision of consumer credit statistics; with tables of revised monthly estimates, Dec. 1939-Feb. 1953. Fed Res Bul 39:336-54 Ap '53

Study and teaching

Cementing the road to opportunity; educational forum of the Cleveland association of credit men. Credit & Fin Management 54:39-40 S '52

Great Britain

Twelve months of credit expansion. Economist 167:855-6+ Je 20 '53

CREDIT, Agricultural. See Agricultural credit

CREDIT, Bank

Appraising bank credit; national credit conference of the American bankers association. Burroughs Clearing House 37:33-5+ F '53

Bank credit outlook. W. T. Taylor. Comm & Fin Chr 177:579+ F 5 '53

Banker says some audit reports are still not good enough; detrimental to borrower and CPA. A. L. Nash. J Account 94:560-4 N '52

Credit and monetary review for 1952. Fed Res Bul 39:91-7 F '53

Credit control by British banks. P. Einzig. Banking 45:60-1 Ja '53

Credit control is a continuing responsibility of bank management. J. M. Dodge. Bankers Mo 69:2 S '52

Financing the trucking industry; manuals pertaining to the financing of fleet operators. H. V. Odle. il Burroughs Clearing House 37:34-6+ Ja '53

Good outlook for credit; results of a national survey by the Credit policy commission; with comments divided according to Federal reserve districts. Banking 45:41-9 Ja '53

How a business finance company works with banks; Walter E. Heller & co., Chicago. W. E. Heller. il Burroughs Clearing House 37:38-40+ Je '53

Importance of business audits. J. L. Carey. Banking 45:114+ Mr '53

News for instalment credit men. Banking 45: 91-2 Ja '53 [cont monthly]

News for mortgage credit men. Banking 45: 94+ Ja '53 [cont monthly]

Operation clean-up. W. Hasler. il Bankers Mo 70:5-6+ My '53

Traps in bank instalment credit. Credit & Fin Management 54:20-1 D '52

See also

Agricultural credit
Federal reserve board—Credit policy
Loans, Bank

Great Britain

Credit expansion continues. Economist 165: 712 D 6 '52

CREDIT, Foreign

Banking policies in foreign trade credit. A. M. Strong. Comm & Fin Chr 178:264+ Jl 23 '53

CREDIT and insurance. See Insurance—Credit aspects

CREDIT and salesmen. See Salesmen and credit

CREDIT bureaus

Strong credit bureau helps the building business in Detroit. Am Bld 74:143-5 O '52

CREDIT cards

Imprinter speeds credit card sales. il Nat Pet N 45:31 Ja 21 '53

Motorists credit checks gaining in popularity. Nat Pet N 45:72 F 4 '53

Now, a national credit card. Fortune 46: 180 O '52

Oil credit men taking careful look at Universal cards; most neutral. F. C. Sturtevant. Nat Pet N 44:21-2 O 22 '52

Travel on the cuff; Go Europe n' sign, inc. Bsns W p 146 My 2 '53

Universal credit cards; what oil marketers think of them. F. C. Sturtevant. il Nat Pet N 44:29-33 N 19 '52

CREDIT clubs. See Credit cards

CREDIT departments

How figure costs of credit department? J. A. Walker. Credit & Fin Management 55:14-15+ Jl '53

Top executive or just a sitting statistic? development of the credit department as a force for sales and profits. W. R. Dunn. Credit & Fin Management 54:27 N '52

See also

Salesmen and credit

Records

Which? open invoice or ledger sheets; symposium. E. L. Porter and others. Credit & Fin Management 55:8-11+ Je '53

You can't pick a winner without a good program; forms and procedures vital to credit. L. H. Juengling. Credit & Fin Management 55:8-9+ Ap '53

Service

Customer relations; credit department changes name; wholesale drug company, Yahr-Lange, inc. Credit & Fin Management 55:19+ Mr '53

CREDIT education

Bootstraps and standards; education a stepping stone to recognition of credit operation as a profession. J. G. Purvis. Credit & Fin Management 54:22-3 N '52

CREDIT insurance. See Insurance, Credit; Insurance, Export credit

CREDIT managers

Bootstraps and standards; education a stepping stone to recognition of credit operation as a profession. J. G. Purvis. Credit & Fin Management 54:22-3 N '52

Buyer, seller, collector; credit man must be all of them. J. H. Wendt. Credit & Fin Management 55:20-1 F '53

Cash forecast and budget control tie credit man to top management. C. Rainess. Credit & Fin Management 54:23 D '52

Credit executive should be the doctor keeping fingers on the business pulse. L. W. Stolte. Credit & Fin Management 55:24-5 Je '53

Five-way tonic for good credit operation in give and take of industry group meetings. M. V. Ingraham. Credit & Fin Management 55:37 Ap '53

Invoice two to one vs. monthly statements. Credit & Fin Management 55:8-11+ Mr '53

Key factors in managing credit. P. M. Millians. Credit & Fin Management 55:14-15 Ap '53

Manager reneges on responsibility unless he performs at least one public service. W. G. Caples. Credit & Fin Management 55:24-5 F '53

Ostrich creditmen don't pay off in sales. Credit & Fin Management 55:20 Mr '53

Playing loosely with insurance means losing customer's business, or yours. R. B. Gallagher. Credit & Fin Management 55:18-19 Ap '53

Problem for the book and how it was solved. Credit & Fin Management 55:12-13 Ja '53 [cont monthly]

Three braces to lift management; help customers, fight credit abuses, work with your salesmen. E. O. Kallman. Credit & Fin Management 55:16 Ja '53

CREDIT records. See Credit departments—Records

CREEP of materials

Accuracy of extrapolated creep-test relations for plexiglas subjected to various stresses. J. Marin and Y. Pao. bibliog A S M E Trans 74:1231-40 O '52

Creep of neoprene in shear under static conditions; ten years. W. N. Keen. diags A S M E Trans 75:891-3 Jl '53; Same. India Rubber World 128:351-3 Je '53

Creep testing in compression for simple creep assessment. A. H. Sully. il diags Product Eng 24:150-3 Ap '53

Effect of temperature on the creep and recovery of a melamine-glass fabric laminate. W. J. Worley and W. N. Findley. bibliog diags Am Soc T M Proc 50:1399-413 '50

Stress-rupture and creep testing of brittle materials. W. A. Maxwell and P. F. Sikora. il Metal Prog 62:97-9 N '52

CREEP of metals

Combined tension-torsion creep-time relations for aluminum alloy 2S-O. J. Marin and others. bibliog il diag Am Soc T M Proc 50:1054-70; Discussion. 1071-2 '50

Correlations between the creep behavior and the resulting structures in alpha solid solutions. O. D. Sherby and J. E. Dorn. bibliog il J Metals 5:Trans 324-30 sec 2 F '53

Creep and plastic deformation; abstracts of Institute of metals papers. Engineering 175: 534-5 Ap 24 '53

Creep collapse viscoelastic columns with initial curvatures. H. H. Hilton. bibliog diag J Aeronautical Sci 19:844-6 D '52

Creep of copper under deuteron bombardment. W. F. Witzig. bibliog diag J Ap Phys 23:1263-6 N '52

Creep of the grain boundary in high purity aluminum. H. C. Chang and N. J. Grant. bibliog il diag J Metals 4:Trans 619-25 Je '52; Discussion. 5:Trans 732-3 sec 2 My '53

Creep of zinc single crystals. L. Slifkin and W. Kauzmann. bibliog diag J Ap Phys 23:746-53 Jl '52

Creep of zinc single crystals. D. O. Thompson. J Ap Phys 23:1277-8 N '52

Creep properties of commercially pure titanium. W. R. Kiessel and M. J. Sinnott. bibliog diags J Metals 5:Trans 331-8 sec 2 F '53

Creep properties of steels for power plants. A. E. Johnson and N. E. Frost. Engineering 175:25-8, 58-60, 249-50 Ja 2-9, F 20 '53; Discussion. J. H. M. Draper and G. Gosling. 175:755 Je 12 '53; Reply. 175:820 Je 26 '53

Creep properties of titanium. D. R. Luster and others. Materials & Methods 37:100-3 Je '53

Creep resisting ferritic steels for gas turbines; abstract. H. W. Kirby. Metal Prog 64:134+ Jl '53

Creep strength of stainless steels. W. L. Nelson. Oil & Gas J 51:195 Mr 30; 291 Ap 27 '53

Creep testing; three-year high temperature creep data on nickel alloys. il Iron Age 171: 158 F 26 '53; Steel 132:112+ Mr 2 '53; Mech Eng 75:320-1 Ap '53

Creep tests on Nimonic alloys. Engineering 174:415 S 26 '52

Creep tests on Nimonic alloys under varying stress and temperature. D. C. Herbert and D. J. Armstrong. diag Engineering 175: 605-6 My 8 '53

Effect of some solid solution alloying elements on the creep parameter of nickel; abstract. T. H. Hazlett and E. R. Parker. Metal Prog 64:298+ O '53

Equipment for compression-creep tests at high temperatures. A. E. Johnson and N. E. Frost. diags Engineering 176:28-9 Jl 3 '53

Factors influencing the creep resistance of wrought carbon steels. C. H. M. Jenkins and H. J. Tapsell. bibliog 5pls Iron & Steel Inst J 171:359-71 Ag '52; Abstract. Metal Prog 64:130+ Jl '53

Fatigue and creep testing of aircraft-engine materials. il diag Engineering 175:353-4 Mr 20 '53

Flow of metals. E. N. D. Andrade. bibliog diags Iron & Steel Inst J 171:217-28 Jl '52; Same abr. Engineer 193:658-9, 692-3 My 16-23 '52; Same cond. Engineering 173:601-2 My 9 '52; Abstract. Metal Prog 63:178-81 Ap '53

Fundamental effects of aging on creep properties of solution-treated low-carbon N-155 alloy. D. N. Frey and others. bibliog il diag U S Nat Advisory Com for Aeronautics 1950:939-68 '51

Grain boundary sliding and migration and intercrystalline failure under creep conditions. H. C. Chang and N. J. Grant. bibliog il diags J Metals 5:Trans 305-12 sec 2 F '53; Discussion. 5:Trans 1579-81 sec 2 N '53

Influence of prior strain history on the tensile properties and structures of high-purity copper. W. D. Jenkins and T. G. Digges. bibliog il J Res Nat Bur Stand 49:167-86 S '52

CREEP of metals—*Continued*

Limiting creep and stress rupture values for various ferrous and nonferrous materials in sheet form; tabulation; engineering file facts. Materials & Methods 36:139, 141, 143 D '52

Metallographic observations of the deformation of high-purity magnesium in creep at 500°F. A. R. Chaudhuri and others. bibliog il J Metals 5:Trans 712-16 sec 2 My '53

Nature of the creep curve. T. H. Hazlett and E. R. Parker. bibliog il J Metals 5:Trans 318-23 sec 2 F '53; Discussion. 5:Trans 1577-9 sec 2 N '53

Recovery and creep in an alloy steel; abstract. H. A. Lequear and J. D. Lubahn. Metal Prog 63:132 F '53

Simple devices for approximating constant stress during tensile creep tests. R. L. Fullman and others. bibliog diags J Metals 5:Trans 657-9 My '53

Stress-rupture characteristics of unalloyed titanium plotted. F. B. Cuff, jr. and N. J. Grant. il Iron Age 170:134-9 N 20 '52

Subgrain formation during creep in high purity aluminum. I. S. Servi and others. bibliog il J Metals 4:Trans 965-71 S '52; Discussion. 5:Trans 730-2 sec 2 My '53

CREOLE petroleum corporation

Creole report. Oil & Gas J 51:88 Ap 13 '53

Now it's Venezuela oil under fire. Nat Pet N 44:25 O 8 '52

CRESAP, Mark Winfield, 1910-

Portrait. Fortune 46:121 D '52

CRESOL

Cresylic acids in petroleum naphthas; assay recovery and characterization. S. G. Gallo, C. S. Carlson and F. A. Biribauer. bibliog Ind & Eng Chem 44:2610-15 N '52

Retardation of benzaldehyde autoxidation; a comparative study of the actions of *p*-cresol, *m*-2-xylenol, and their oxidation products. W. A. Waters and C. Wickham-Jones. Chem Soc J p2420-7 Je '52

Separation of *m*- and *p*-cresols from their mixtures. S. A. Savitt and D. F. Othmer. bibliog(39 ref) flow sheet Ind & Eng Chem 44:2428-31 O '52

Structure and configuration of dihydroxydiphenylmethanes derived from butylated *m*-cresols as evidenced by infrared absorption. J. C. Ambeland and J. L. Binder. bibliog Am Chem Soc J 75:947-50 F 20 '53

Synthesis of cresol; sulfonation of toluene; caustic fusion of toluenesulfonic acid. S. V. Englund, R. S. Aries and D. F. Othmer. bibliog Ind & Eng Chem 45:189-97 Ja '53

Manufacture

Cresylic acid; pictured flow sheet. Chem Eng 59:212-15 N '52

Getting set for competition; cost-cutting improvements in synthetic para-cresol process. diag Chem Eng 60:127 Ja '53

CRESYLIC acid. See Cresol

CRIME and criminals

See also

Capital punishment
Embezzlement
Fraud
Newspapers—Crime investigation
Police
Theft

Great Britain

Birch and cosh; Bill to reintroduce whipping as a judicial punishment. Economist 166:477 F 21 '53

CRIMEA conference, 1945

Secrets of Yalta and Potsdam. Economist 166:581-2 F 28 '53

CRIMINAL law

See also

Capital punishment
Justice, Administration of

CRIMPING of textiles

Crimping of wool fibers. M. Horio and T. Kondo. bibliog il diag Textile Res J 23:373-86; Discussion. E. H. Mercer. 387 Je '53

Skin effect in crimped rayon. W. A. Sisson and F. F. Morehead. il diag Textile Res J 23:152-7 Mr '53

Theory and morphology of crimped rayon staple. M. Horio and T. Kondo. il diags Textile Res J 23:137-51 Mr '53

CRINOLINE

Mechanical requirements of stiff cloths for crinolines and similar heavy fabric structures. G. W. H. Stevens. Textile Inst J Trans 44:T347-57 Jl '53

CRISTOBALITE

Study of the structure of quartz, cristobalite, and vitreous silica by reflection in infrared. I. Šimon and H. O. McMahon. bibliog diags J Chem Phys 21:23-30 Ja '53

CRITICAL constants

Critical phenomena of saturated solutions in binary systems. C. A. van Gunst, F. E. C. Scheffer and G. A. M. Diepen. bibliog J Phys Chem 57:578-81 Je '53

Critical phenomena of saturated solutions in ternary systems. C. A. van Gunst, F. E. C. Scheffer and G. A. M. Diepen. bibliog J Phys Chem 57:581-3 Je '53

Critical properties of elements and compounds. K. A. Kobe and R. E. Lynn, jr. diags Chem R 52:117-236 bibliog(p228-36) F '53

Critical temperature of solids. B. J. Alder and G. Jura. J Chem Phys 20:1491-2 S '52

Possibility of a theoretical calculation of the critical temperature. J. van Dranen. J Chem Phys 20:1175 Jl '52

Relation between critical temperature and pressure of normal paraffins. Y. P. Varshni. J Chem Phys 21:1400 Ag '53

Review of physico-chemical data on the state of supercritical fluids. F. G. Smith. diags Econ Geol 48:14-38 bibliog(108 titles, p34-8) Ja '53

Vapor pressures and critical constants of pure ozone. A. C. Jenkins and C. M. Birdsall. bibliog flow sheet diags J Chem Phys 20:1158-61 Jl '52

CRITICAL materials. See Strategic materials

CRITICAL phenomena

Application of the cell method to the statistical thermodynamics of solutions; critical solution phenomena. A. Bellemans. bibliog J Chem Phys 21:369-70 F '53

CRITICAL point

Critical point and the disturbed rotation of molecules in the liquid state. J. van Dranen. bibliog J Chem Phys 21:1404-5 Ag '53

Movable critical points of a nonlinear wave equation. T. Tietz. Phys R 90:495 My 1 '53

Second-order transitions and critical phenomena. R. L. Scott. bibliog J Chem Phys 21:209-11 F '53

Some additional remarks on a hypothesis concerning the critical state. J. van Dranen. bibliog J Chem Phys 21:567-8 Mr '53

Thermodynamical study of the water-triethylamine system near its lower critical point. A. Bellemans. bibliog J Chem Phys 21:368-9 F '53

Total energy of substances at the critical point. J. van Dranen. bibliog J Chem Phys 21:1404 Ag '53

CRITICAL solution temperature

See also

Aniline point

CRITICAL temperatures. See Critical constants

CRITTALL manufacturing company, limited

Statement by the chairman at 28th annual general meeting. Lord Braintree. Economist 165:794 D 13 '52

CROMPTON Parkinson, limited

Statement by the chairman at 39th annual general meeting. A. Parkinson. Economist 165:793 D 13 '52

CROMWELL, Christine

Businessmen in the news. por Fortune 46:50 N '52

CRONING process. See Foundry practice—Shell molding

CROP insurance. See Insurance, Agricultural

CROP insurance corporation, Federal. See Federal crop insurance corporation

CROPS

Crop prospects near record. Nat City Bank p 110-12 O '52

Financing truck crops. R. J. Castille. Banking 45:61+ Mr '53

CROPS—*Continued*

1953 crop outlook. R. W. Babson. Comm & Fin Chr 177:2741 Je 25 '53

See also

Corn

Cotton

Drying (crops)

Grain

Rice

Soybeans

Wheat

CROSS, Hardy, 1885-

Hardy Cross of Yale retires. por Eng N 150: 63-4 My 28 '53

CROSS company

Heavy demand for Transfer-matics. Barron's 33:21-2 Ap 20 '53

CROSS ties. See Railroad ties

CROSSARMS. See Electric lines—Crossarms

CROTONIC acid

Condensation of kojic acid with crotonic acid and with β-bromopropionic acid. L. L. Woods. Am Chem Soc J 75:1510 Mr 20 '53

Kinetics of chlorohydrin formation; the reaction between hypochlorous acid and ethyl crotonate in the presence of sodium acetate-acetic acid buffers of constant pH. K. D. Reeve and G. C. Israel. Chem Soc J p2327-31 Je '52

Kinetics of the Raney nickel catalyzed hydrogenation of crotonic acid. F. L. Morritz, E. Lieber and R. B. Bernstein. bibliog diags Am Chem Soc J 75:3116-21 Jl 5 '53

CROTYLTHIOSALICYLIC acid

Action of heat on S-crotylthiosalicylic acid and related compounds. J. C. Petropoulos, M. A. McCall and D. S. Tarbell. bibliog Am Chem Soc J 75:1130-4 Mr 5 '53

CROWLEY, John P.

J. P. Crowley trounced electric competition and won AGA-Servel promotion award. por Am Gas J 177:46 N '52

CROWN galls. See Galls (botany)

CRUCIBLES

Device gives one man complete control of crucible handling. A. C. Osborn. il Foundry 81:200 Ap '53

New study shows domestic graphite satisfactory for crucibles. Materials & Methods 36: 208+ D '52; Mech Eng 74:1014 D '52; Iron Age 170:208-9 N 6 '52; Steel 131:148+ N 10 '52

CRUISERS. See Warships

CRUSHED stone. See Stone, Crushed

CRUSHING

Chemical engineering unit operations; size reduction. L. T. Work. bibliog(109 ref) il Ind & Eng Chem 45:95-8 Ja '53

Crushing practice and theory (cont). B. McGrew. il diags Rock Prod 55:79-81 N; 91-3 D '52; 56:105, 117+ Mr; 96+ My; 128+ Je '53

Fundamental aspects of grinding. E. L. Piret. bibliog Chem Eng Prog 49:56-63 F '53

Tennessee Copper explores use of rock grinding media. F. M. Lewis. il Min Eng 5:491 My '53

Unusual techniques in grinding. J. H. Foote. il Chem Eng Prog 49:68-72 F '53

Work indexes tabulated. F. C. Bond. Min Eng 5:Trans 315-16 Mr '53

See also

Ball mills

CRUSHING machinery

Big portable rock-crushing plant produces over 200 tons per hour. J. M. Connolly. flow sheet il Eng N 149:136+ N 6 '52; Same. Constr Methods 34:102-4+ D '52

Cedarapids plant designed for military requirements. il Roads & Eng Constr 90:78-9 O '52

Chalk crushing and screening plant. il Engineer 195:115 Ja 16 '53; diags Engineering 175:94-5 Ja 16 '53; Elec R (Lond) 152:619-20 Mr 20 '53

Chuquicamata sulphide plant; crushing section. A. P. Svenningsen. plan diags Min Eng 4:1178-81 D '52

Controlled feeder ups crushing 30 per cent. il Brick & Clay Rec 121:43 N '52

Crushers and crushing. il Brick & Clay Rec 121:54-6 N '52

Crushing practice and theory (cont). B. McGrew. il diags Rock Prod 55:79-81 N; 91-3 D '52; 56:105, 117+ Mr; 96+ My; 128+ Je '53

Design development of crushing cavities. H. M. Zoerb. diags Min Eng 5:Trans 603-5 Je '53

Dry rolling bearings for heavy-duty toggle mechanisms. A. J. Roubal. il diags Machine Design 25:131-3 Je '53

Experimental stone-crushing plant; Underwood quarry. F. G. Taylor. flow diag il Engineering 176:281-3 Ag 28 '53

Moving large crushing plant; New York trap rock corp. il Rock Prod 56:71 My '53

Neat portable plant prepares granular base for Utah road. J. B. Parsons. il Constr Methods 34:82-4+ N '52

New grinding theory aids equipment selection. F. C. Bond. bibliog il Chem Eng 59: 169-71 O '52

Small plant has high capacity; Valley Forge stone co. W. B. Lenhart. il Rock Prod 55: 104-5 D '52

Smelter slag processed for ballast; Utah sand and gravel co. W. B. Lenhart. flow sheet il Rock Prod 56:70-3 F '53

Special crusher reduces picking load; Perry coal co. il Coal Age 58:93 Mr '53

Supersonic rock crusher. il Eng & Min J 154: 109 Mr; 112 Je '53

Types of grinding mills and when to use them. H. W. Erickson. il Chem Eng Prog 49:63-8 F '53

See also

Ball mills

Pulverizers

Tube mills

Wood grinders

Maintenance and repair

Quick repair of crusher crack; Metalock casting repair service. C. A. Gustafson. il Rock Prod 55:89+ N '52

CRUSTACEA

See also

Daphnia

CRUSTACEA, Fossil

See also

Trilobites

CRYOGENIC laboratories

Government erects $3,500,000 low temperature laboratory; NBS-AEC cryogenic engineering laboratory. flow diag il Refrig Eng 61:1082-4+ O '53

CRYOLITE

Electrical conductivity of molten cryolite and potassium, sodium, and lithium chlorides. J. D. Edwards and others. bibliog il diag Electrochem Soc J 99:527-35 D '52; Discussion. 100:294-5 Je '53

CRYOSCOPY. See Freezing points

CRYOSTATS

Cryostat for reaching 50 K without using liquid hydrogen; abstract. E. Justi. Refrig Eng 61:403+ Ap '53

Instrument frontier. il diags Fortune 46:146-9+ D '52

Windowed cryostat vessels for use in low temperature research. H. L. Johnston. diags R Sci Instr 23:569-70 O '52

CRYPTOSTEGIA grandiflora

Paper from flosses of cryptostegia grandiflora; abstract. N. K. S. Iyengar. Paper Ind 34: 1267 Ja '53

CRYPTOXANTHIN

Conversion of dehydro-β-carotene, via its boron trifluoride complex, into an isomer of cryptoxanthin. L. Wallcave and L. Zechmeister. bibliog Am Chem Soc J 75:4495-8 S 20 '53

CRYSTAL diode

Diole modulators. B. Goodman. diags Q S T 37:39-42 Ap '53

Germanium diode as video detector. W. B. Whalley and others. diags Inst Radio Eng Proc 41:638-44 My '53

Silicon *p-n* junction alloy diodes. G. L. Pearson and B. Sawyer. bibliog il Inst Radio Eng Proc 40:1348-51 N '52

Some transients in the pulse response of point-contact germanium diodes. M. C. Waltz. il diags Inst Radio Eng Proc 40: 1483-7 N '52

Tester for germanium diodes. N. Dewolf and N. E. Schick. il diags Electronics 25:150+ D '52

CRYSTAL oscillators. See Oscillators, Crystal

CRYSTAL receivers. See Radio receiving apparatus

CRYSTAL spectrometer. See Spectrometers

CRYSTAL triode. See Transistors

CRYSTAL violet

Kinetics of the formation of the carbinol of crystal violet. J. C. Turgeon and V. K. LaMer. bibliog Am Chem Soc J 74:5988-95 D 5 '52

Polarographic reduction of crystal-violet, brilliant-green, malachite-green, and auramine. R. C. Kaye and H. I. Stonehill. Chem Soc J p3231-9 Ag '52

CRYSTALLINITY of cellulose. See Cellulose

CRYSTALLIZATION

Chemical engineering unit operations. C. S. Grove, jr. il Ind & Eng Chem 45:34-8 bibliog(111 ref, p37-8) Ja '53

Crystallization of silicon from a floating liquid zone. P. H. Keck and M. J. E. Golay. il Phys R 89:1297 Mr 15 '53

Crystallization, structure and infrared spectra of saturated L-α-lecithins. E. Baer. bibliog Am Chem Soc J 75:621-3 F 5 '53

Growth of zinc sulfide single crystals. W. W. Piper. diag J Chem Phys 20:1343 Ag '52

Investigation of crystal growth by thermal etching and oriented overgrowth. A. Smakula and M. W. Klein. bibliog il J Chem Phys 21:100-4 Ja '53

Macroscopic spirals and the dislocation theory of crystal growth. N. Cabrera. bibliog J Chem Phys 21:1111-12 Je '53

Mechanism of growth of whiskers on cadmium. M. O. Peach. diag J Ap Phys 23:1401-3 D '52

Methanol-insoluble material in sorgo and beet juices. W. A. Harris and others. bibliog Ind & Eng Chem 44:2414-17 O '52

Model for epitaxy-in metal-rock salt pairs. O. G. Engel. J Chem Phys 20:1174 Jl '52

Oxygen-free single crystals of lead telluride, selenide, and sulfide. W. D. Lawson. diag J Ap Phys 23:495-6 Ap '52

Pegmatitic differentiates of basic sheets. F. Walker. Am J Sci 251:41-60, pl 1 bibliog(p59-60) Ja '53

Preparation of pure sodium hydroxide solution for use in electrode kinetics. E. C. Potter. bibliog diags Chem & Ind p 1149-50 N 22 '52

p—n Junctions produced by growth rate variation. R. N. Hall. Phys R 88:139 O 1 '52

Recrystallization data applied to control of the mechanical properties of molybdenum; abstract. J. H. Bechtold. Metal Prog 64:205-6 O '53

Recrystallization kinetics of low carbon steel. S. F. Reiter. bibliog il J Metals 4:Trans 972-9 S '52; Discussion. 5:Trans 739 sec 2 My '53

Recrystallization of a cold-rolled copper single crystal. Y. C. Liu and W. R. Hibbard, jr. bibliog il diags J Metals 5:Trans 672-9 My '53; Discussion. 5:Trans 1568-9 sec 2 N '53

Recrystallization welding. J. M. Parks. bibliog(29 titles) il diags Welding J 32:sup209-22 My '53

Separation of *m*- and *p*-cresols from their mixtures. S. A. Savitt and D. F. Othmer. bibliog(39 ref) flow sheet Ind & Eng Chem 44:2428-31 O '52

Statistical theory of crystallite length. R. Simha. J Chem Phys 20:1654 O '52; Reply. M. Dole. 21:173-4 Ja '53

Study of the oxide-coated cathodes by X-ray diffraction method. E. Yamaka. il diag J Ap Phys 23:937-40 S '52

Tentative theory of metallic whisker growth. J. D. Eshelby. bibliog diag Phys R 91:755-6 Ag 1 '53

Time-temperature relationship for recrystallization and grain growth; abstract. F. R. Larson and J. Salms. Metal Prog 64:167-8 O '53

Tristage crystallization process for utilizing western ferrophosphorus. L. H. Banning and others. flow sheet J Metals 5:Trans 423-30 Mr '53

CRYSTALLIZERS

Ammonium sulphate crystallizer. diag Chem Eng 60:338+ Ja '53

Separate your solid solutions! diag Chem Eng 60:368 F '53

CRYSTALLOGRAPHY

Alums; a study of the alums by measurement of their aqueous dissociation pressures. J. R. I. Hepburn and R. F. Phillips. Chem Soc J p2569-78 Jl '52

Alums; a theory of hydrate dissociation and aqueous dissociation pressure, with particular reference to the alums. R. F. Phillips. Chem Soc J p2578-83 Jl '52

Angle between the *a*-axis and the trace of the rhombic section on the (010)-pinacoid in the plagioclases. G. Tunell. diag Am J Sci Bowen vol p547-51 '52

Antiparallel dipole arrangement in tungsten trioxide. R. Ueda and J. Kobayashi. diags Phys R 91:1565 S 15 '53

Complicated domain patterns on iron-silicon single crystals. C. F. Ying and others. il J Ap Phys 23:1339-45 D '52

Crystal structure and lattice energy of orthorhombic hexachloroethane. Y. Sasada and M. Atoji. bibliog diags J Chem Phys 21:145-52 Ja '53

Crystal structure of cyanuric acid. E. H. Wiebenga. Am Chem Soc J 74:6156-7 D 5 '52

Crystal structure of $KVO_3 \cdot H_2$. C. L. Christ and others. diags J Chem Phys 21:1114 Je '53

Crystal structure of lanthanum nitride. R. A. Young and W. T. Ziegler. bibliog Am Chem Soc J 74:5251-3 N 5 '52

Crystal structure of tetrachlorophosphonium dichloroiodide. W. F. Zelezny and N. C. Baenziger. Am Chem Soc J 74:6151-2 D 5 '52

Crystal structures of americium compounds. D. H. Templeton and C. H. Dauben. bibliog Am Chem Soc J 75:4560-2 S 20 '53

Crystal structures of $ThSe_2$ and Th_7Se_{12}. R. W. M. D'Eye. Chem Soc J p 1670-2 Je '53

Crystal structures of YF_3 and related compounds. A. Zalkin and D. H. Templeton. bibliog diags Am Chem Soc J 75:2453-8 My 20 '53

Crystalline field in chrome alum. W. H. Kleiner. bibliog diag J Chem Phys 20:1784-91 N '52

Crystallography of nickel kieselguhr. R. B. Roof, jr. J Chem Phys 20:1181-2 Jl '52

Crystals and the future of physics. P. Le Corbeiller. diags Sci Am 188:50-2+ Ja '53

Disorder in crystalline 2,2-dinitropropane at room temperature. S. C. Abrahams. bibliog diags J Chem Phys 21:1218-19 Jl '53

Effects of crystal fields on the properties of transition-metal ions. L. E. Orgel. Chem Soc J p4756-61 D '52

Electrical conductivity of some alkaline earth titanates. E. K. Weise and I. A. Lesk. bibliog J Chem Phys 21:801-6 My '53

Evidence for collapse of lattice vacancy aggregates to form dislocation rings. R. W. Hoffman and others. J Ap Phys 24:231-2 F '53

Grain boundary diffusion of zinc in copper. R. Flanagan and R. Smoluchowski. J Ap Phys 23:785-7 Jl '52

Identification of polymorphic forms of crystals by infrared spectroscopy. D. N. Kendall. bibliog diags Anal Chem 25:382-9 Mr '53

Infrared spectra of three solid phases of methyl ammonium chloride. R. D. Waldron. J Chem Phys 21:734-41 Ap '53

Lattice constants and dielectric properties of barium titanate, barium stannate, strontium titanate bodies. R. H. Dungan and others. bibliog Am Cer Soc J 35:318-21 D 1 '52

Lattice sums; the validity of Evjen's method. I. D. C. Gurney. Phys R 90:317-18 Ap 15 '53

Nature of solids. G. H. Wannier. il diags Sci Am 187:39-48 D '52

Neutron diffraction determination of the crystal structure of amonium bromide in four phases. H. A. Levy and S. W. Peterson. bibliog diags Am Chem Soc J 75:1536-42 Ap 5 '53

New approximation method for order-disorder problems. L. D. Fosdick and H. M. James. bibliog diags Phys R 91:1131-41 S 1 '53

New method of studying lattice defects in solids by Debye absorption; case of semiconductors. M. Freymann and R. Freymann. bibliog J Chem Phys 20:1970-1 D '52

Relation of crystal habit to the polymorphic behavior of long-chain paraffin hydrocarbons. B. J. Fontana. bibliog il J Phys Chem 57:222-6 F '53

CRYSTALLOGRAPHY—*Continued*

Relationship between metallic radii in body-centered cubic and close-packed structures. J. Thewlis. bibliog Am Chem Soc J 75:2279-80 My 5 '53
Screw dislocations in thin rods. J. D. Eshelby. diags J Ap Phys 24:176-9 F '53
Single-crystal measurements on paracelsian. J. V. Smith. bibliog Am J Sci Bowen vol p513-15 '52
Some aspects of neutron single crystal analysis. R. Pepinsky. bibliog Science 117:1-3 Ja 2 '53
Structure of crystallography of second order twins in copper. M. Sharp and C. G. Dunn. il J Metals 4:Trans 1344 D '52
Structures of the interhalogen compounds; chlorine trifluoride at -120°C. R. D. Burbank and F. N. Bensey. bibliog diags J Chem Phys 21:602-8 Ap '53
Theory of cooperative phenomena; detailed discussions of the cluster variation method. M. Kurata and others. bibliog diags J Chem Phys 21:434-48 Mr '53
Thermal and electrical properties and crystal structure of tungsten oxide at high temperatures. S. Sawada. Phys R 91:1010-11 Ag 15 '53
Triterpenoids; the crystal structure of lanostenyl iodoacetate. J. Fridrichsons and A. M. Mathieson. diags Chem Soc J p2159-67 Jl '53
Vibrations of a simple cubic lattice. H. B. Rosenstock and G. F. Newell. diags J Chem Phys 21:1607-8 S '53
Why metals are weak. J. C. Fisher. il diags Gen Elec R 56:15-17 Jl '53

See also
Feldspar
Polymorphism
Solutions, Solid

X ray studies

Aligning single crystals for X-ray diffraction. L. S. Birks and A. B. Wing. bibliog il R Sci Instr 23:442-3 Ag '52
Crystal and molecular structure of octamethylnaphthalene; a non-planar naphthalene derivative. D. M. Donaldson and J. M. Robertson. diags Chem Soc J p 17-24 Ja '53
Crystal structure and superconductivity of lanthanum. W. T. Ziegler, R. A. Young and A. L. Floyd, jr. bibliog Am Chem Soc J 75:1215-21 Mr 5 '53
Crystal structure of methyl chloride at -125°. R. D. Burbank. bibliog diags Am Chem Soc J 75:1211-14 Mr 5 '53
Crystallographic examination of the structure of lumisterol. D. C. Hodgkin and D. Sayre. diags Chem Soc J p4561-6 D '52
Cut-off phenomena of protein crystallography. A. D. Booth. bibliog J Chem Phys 20:1907-10 D '52
Effect of internal strains on linear expansion, X-ray lattice constant, and density of crystals. P. H. Miller, jr. and B. R. Russell. bibliog diag J Ap Phys 23:1163-9 O '52
Effects of lattice imperfections on X-ray line broadening. M. S. Paterson. bibliog J Ap Phys 23:499-500 Ap '52
Extra Laue reflections of tetraphenylethylene crystal. M. N. Dutt. il J Chem Phys 21:1609-10 S '53
Hydrothermal chemistry of silicates; reactions of analcite and leucite. R. M. Barrer, L. Hinds and E. A. White. Chem Soc J p 1466-75, pl 1-7 My '53
Mechanism of plastic flow in titanium; determination of slip and twinning elements. F. D. Rosi and others. bibliog il diags J Metals 5:Trans 257-65 sec 2 F '53
Reference data for orienting quartz plates by X-ray diffraction. C. Barclay and L. T. Sogn. diags U S Nat Bur Stand Circ 543: 1-7; pa 15c Supt. of doc. '53
Separation of cold-work distortion and particle size broadening in X-ray patterns. B. E. Warren and B. L. Averbach. J Ap Phys 23:497 Ap '52
Separation of stacking fault broadening in cold-worked metals. B. E. Warren and B. L. Averbach. J Ap Phys 23:1059 S '52
Structure of N,N'-diglycyl-L-cystine dihydrate. H. L. Yakel, jr. and E. W. Hughes. Am Chem Soc J 74:6302-3 D 20 '52
Structure of the oxalate ion. G. A. Jeffrey and G. S. Parry. Chem Soc J p4864-7 D '52
Transmission of X-rays through calcite near the Bragg angle. G. L. Rogosa and G. Schwarz. bibliog diags Phys R 87:995-8 S 15 '52
X-ray absorption corrections for single crystals. H. T. Evans, jr. diags J Ap Phys 23: 663-8 Je '52
X-ray absorption in a crystal set at the Bragg angle. H. N. Campbell. bibliog il J Ap Phys 22:1139-42 S '51; Discussion. G. N. Ramachandran. 23:500 Ap '52
X-ray and electron-microscope examination of potassium cobaltinitrite precipitates; abstract. J. W. Robinson. Chem Age (Lond) 67:495-6 O 11 '52
X-ray diffraction by face-centered cubic crystals with deformation faults. M. S. Paterson. bibliog diags J Ap Phys 23:805-11 Ag '52
X-ray examination of polychlorotrifluoroethylene. H. S. Kaufman. Am Chem Soc J 75:1477-8 Mr 20 '53
X-ray investigation of Co(NH$_3$)$_6$PbCl$_6$ and Co(NH$_3$)$_6$BiCl$_6$. M. Atoji and T. Watanabe. J Chem Phys 20:1045-6 Je '52
X-ray studies of crystalline and amorphous order in high polymers. S. Krimm. bibliog J Phys Chem 57:22-5 Ja '53
X-ray studies of fused salt systems; cadmium iodide. R. E. Wood and H. L. Ritter. Am Chem Soc J 75:471-3 Ja 20 '53
X-ray studies of rare earth oxide systems; the oxide systems Ce^{IV}-Sm^{III}, Ce^{IV}-Gd^{III}, Ce^{IV}-Y^{III}, Pr^{IV}-Y^{III} and Pr^{III}-Y^{III}. J. D. McCullough and J. D. Britton. Am Chem Soc J 74:5225-7 O 20 '52

CRYSTALS

Absolute optical absorption from diffuse reflectance. P. D. Johnson. diag Opt Soc Am J 42:978-81 D '52
Absorption of light by trapped electrons. R. C. O'Rourke. bibliog Phys R 91:265-70 Jl 15 '53
Acousto-electric effect. R. H. Parmenter. bibliog diags Phys R 89:990-8 Mr 1 '53
Aid for making stereographic plots when working with cubic crystals. C. Goldberg. diags J Metals 4:Trans 1160-1 N '52
Anelasticity of zinc. S. Takahashi. il J Ap Phys 23:866-8 Ag '52; Discussion. J. W. Marx. 23:1406-7 D '52
Applications of thermodynamics in ceramics; crystal chemistry, physical processes and surface effects. J. F. Wygant and W. D. Kingery. diags Am Cer Soc Bul 31:294-7 Ag 15 '52
Approximate formulas for many-center integrals in the theory of molecules and crystals. P. Löwdin. bibliog J Chem Phys 21:374-5 F '53
Band structures of one-dimensional crystals with square-well potentials. G. Allen. bibliog diag Phys R 91:531-3 Ag 1 '53
Bend plane phenomena in the deformation of zinc monocrystals. J. J. Gilman and T. A. Read. bibliog il diags J Metals 5:Trans 49-55 Ja '53
Clausius-Mosotti equation for anisotropic crystals. H. J. Neugebauer. Phys R 88:1210 D 1 '52
Clues to stronger metals; work with laboratory-grown perfect crystals at GE. J. H. Hollomon. Steel 132:104+ My 18 '53
Cold-rolling and annealing textures of molybdenum single crystals. N. K. Chen and R. Maddin. bibliog il diags J Metals 5: Trans 300-4 sec 2 F '53
Combined pairs of vacancies in copper. J. H. Bartlett and G. J. Dienes. bibliog Phys R 89:848-50 F 15 '53
Computation of mean Debye temperature of cubic crystals from elastic constants. S. L. Quimby and P. M. Sutton. Phys R 91:1122-7 S 1 '53
Correlation of polarized light extinctions with crystal orientation in 70 nickel-30 copper alloy. H. C. Vacher. bibliog il J Res Nat Bur Stand 49:149-53 S '52
Crack formation on sodium chloride single crystal surfaces. R. A. Lad. il J Ap Phys 23:800-1 Jl '52
Creep of zinc single crystals. L. Slifkin and W. Kauzmann. bibliog diag J Ap Phys 23: 746-53 Jl '52
Creep of zinc single crystals. E. H. Weinberg; D. O. Thompson. J Ap Phys 23:1277-8 N '52

CRYSTALS—*Continued*

Crystal field theory in the rare earths. R. J. Elliott. bibliog Rs Mod Phys 25:167-9 Ja '53

Crystal structure of titanium alloys reviewed. diag Iron Age 170:204-5 D 4 '52

Crystalline character of abraded surfaces; abstract. P. Gay and P. Hirsch. Metal Prog 63:138+ F '53

Deformation of copper single crystals at 300°K and 78°K. T. H. Blewitt. bibliog il diag Phys R 91:1115-21 S 1 '53

Deformation of ferrite single crystals. F. L. Vogel, jr. and R. M. Brick. bibliog il diags J Metals 5:Trans 700-6 sec 2 My '53

Deuterium effect on hydrogen bond distances in crystals. R. E. Rundle. J Chem Phys 21: 937-8 My '53

Diffusion of antimony in silver single crystals. L. Slifkin and others. bibliog J Ap Phys 23:1405 D '52

Diffusionless transformation in Au-Cd single crystals containing 47.5 atomic percent cadmium; characteristics of single-interface transformation. L. Chang. diags J Ap Phys 23:725-8 Jl '52

Dipolar broadening of magnetic resonance lines in magnetically diluted crystals. C. Kittel and E. Abrahams. Phys R 90:238-9 Ap 15 '53

Directional effects in the electric breakdown of ionic crystals. E. L. Offenbacher and H. B. Callen. bibliog diags Phys R 90:401-9 My 1 '53

Directional variation of frequency in the infrared spectrum of crystals. L. Couture-Mathieu and others. bibliog diag J Chem Phys 20:1492-3 S '52

Dislocations in lineage boundaries in germanium. F. L. Vogel and others. il Phys R 90:489-90 My 1 '53

Dynamic formation of slip bands in aluminum. N. K. Chen and R. B. Pond. bibliog il diags J Metals 4:Trans 1085-92 O '52; Discussion. 5:Trans 733-5 sec 2 My '53

Effect of internal strains on linear expansion, X-ray lattice constant, and density of crystals. P. H. Miller, jr. and B. R. Russell. bibliog diag J Ap Phys 23:1163-9 O '52

Effects of *F* centers on the internal friction of rocksalt single crystals. D. R. Frankl and T. A. Read. Phys R 89:663-4 F 1 '53

Elastic constants of beta-brass single crystals. R. A. Artman and D. O. Thompson. bibliog diags J Ap Phys 23:470-4 Ap '52

Elastic wave propagation in solid media. R. A. Mapleton. bibliog diags J Ap Phys 23: 1346-54 D '52

Electric field and energy in dipole lattices. E. F. Bertaut. Phys R 91:415 Jl 15 '53

Electrical conductivity of single crystals of graphite. A. K. Dutta. bibliog Phys R 90: 187-92 Ap 15 '53

Electrochemistry of ionic crystals. C. Wagner. Electrochem Soc J 99:sup346C-54C bibliog(119 ref, sup352C-4C) D '52

Electron diffraction from small crystals. C. R. Berry. bibliog Phys R 88:596-9 N 1 '52

Electronic states in crystals under large overall perturbations. P. Feuer. bibliog diag Phys R 88:92-100 O 1 '52

Electronic structure of the diamond crystal. F. Herman. bibliog Phys R 88:1210-11 D 1 '52; Reply. G. G. Hall. 90:317 Ap 15 '53

Electronic structure of the germanium crystal. F. Herman and J. Callaway. Phys R 89:518-19 Ja 15 '53

Energy band structure in silicon crystal. E. Yamaka and T. Sugita. Phys R 90:992 Je 1 '53

Energy distribution of slow neutrons scattered from solids. B. N. Brockhouse and D. G. Hurst. bibliog diags Phys R 88:542-7 N 1 '52

Energy loss of cosmic-ray mu-mesons in sodium iodide crystals. A. Hudson and R. Hofstadter. bibliog il diag Phys R 88:489-96 N 1 '52

F bands in some mixed crystals of the alkali halides. R. J. Gnaedinger, jr. bibliog J Chem Phys 21:323-30 F '53

F-center wave functions and electronic *g*-values in KCl crystals. A. H. Kahn and C. Kittel. bibliog Phys R 89:315 Ja 1 '53

Flow and fracture of single crystals of high-purity ferrites; abstract. R. P. Steijn and R. M. Brick. Metal Prog 64:264+ O '53

Formation of deformation bands in Al-3 per cent Mg monocrystals during cold rolling. J. Herenguel and others. bibliog il diags J Metals 5:Trans 559-64 Ap '53

Fracture of alpha iron. C. F. Tipper and E. O. Hall. bibliog 2pls diags Iron & Steel Inst J 175:9-15 S '53

Franck-Condon principle and its application to crystals. M. Lax. bibliog J Chem Phys 20:1752-60 N '52

Generation of *F* centers at low temperature. F. Seitz. bibliog Phys R 89:1299 Mr 15 '53

Growing of single crystals of magnetite. J. Smiltens. bibliog J Chem Phys 20:990-4 Je '52

Growth and analysis of barium oxide crystals containing a stoichiometric excess of barium. G. G. Libowitz. diag Am Chem Soc J 75:1501-2 Mr 20 '53

Growth spirals originating from screw dislocations on electrolytically produced titanium crystals; abstract. M. A. Steinberg. J Metals 4:1041-2 O '52

Hall effect in zinc crystals at low temperatures. J. K. Logan and J. A. Marcus. bibliog diags Phys R 88:1234-8 D 15 '52

Hall effect modulators and gyrators employing magnetic field independent orientations in germanium. W. P. Mason and others. il diags J Ap Phys 24:166-75 F '53

How crystal structure affects metal forming. S. Storchheim. diags Am Mach 97: 139-47 S 28 '53

Infrared spectra of oriented rhombic sulfur crystals with polarized radiation. G. M. Barrow. bibliog diags J Chem Phys 21:219-22 F '53

Intensities of nuclear magnetic resonances in cubic crystals. G. D. Watkins and R. V. Pound. Phys R 89:658 F 1 '53

Interaction of methylene deformation frequencies in paraffin crystals. R. S. Stein and G. B. B. M. Sutherland. J Chem Phys 21:370-1 F '53

Interpretation of *e/m* values for electrons in crystals. W. Shockley. Phys R 88:953 N 15 '52

Ion-exchange in crystals of analcite and leucite. R. M. Barrer and L. Hinds. pl Chem Soc J p 1879-88 Je '53

Ionic mobility at grain boundaries. P. E. Goddard and F. Urbach. il J Chem Phys 20:1975 D '52

Kinetics of thermal reorientations in cold rolled zirconium. R. K. McGeary and B. Lustman. bibliog il diags J Metals 5:Trans 284-91 sec 2 F '53; Discussion. 5:Trans 1573-7 sec 2 N '53

Kinking in zinc single-crystal tension specimens. J. Washburn and E. R. Parker. bibliog il diags J Metals 4:Trans 1076-8 O '52; Discussion. 5:Trans 737-8 sec 2 My '53

Lattice vibrations in graphite. R. W. Gurney. Phys R 88:465-6 N 1 '52

Localized functions in molecules and crystals. G. F. Koster. bibliog diags Phys R 89:67-77 Ja 1 '53

Magnetically induced ultrasonic velocity changes in polycrystalline nickel. S. J. Johnson and T. F. Rogers. bibliog diags J Ap Phys 23:574-7 My '52

Measurement of magnetostriction in single crystals. R. M. Bozorth and R. W. Hamming. bibliog Phys R 89:865-9 F 15 '53

Mobility of slow electrons in polar crystals. F. E. Low and D. Pines. Phys R 91:193-4 Jl 1 '53

Motion of slow electrons in a polar crystal. T. D. Lee and others. bibliog Phys R 90: 297-302 Ap 15 '53

Motion of slow electrons in polar crystals. T. Lee and D. Pines. bibliog Phys R 88:960-1 N 15 '52

NBS uses polarized light to study grain orientation in alloys. Iron Age 171:196-7 Mr 5 '53; Franklin Inst J 255:335-7 Ap '53; Steel 132:115-16 My 4 '53

Neutron monochromator crystals, Fe_3O_4 and Ge. A. W. McReynolds. Phys R 88:958-9 N 15 '52

Nuclear electric quadrupole spectra in solids. R. Bersohn. bibliog J Chem Phys 20:1505-9 O '52

CRYSTALS—*Continued*

Occurrence of singularities in the elastic frequency distribution of a crystal. L. Van Hove. Phys R 89:1189-93 Mr 15 '53

Oxygen-free single crystals of lead telluride, selenide, and sulfide. W. D. Lawson. diag J Ap Phys 23:495-6 Ap '52

Paramagnetic resonance absorption in additively colored crystals of alkali halides. C. A. Hutchison, jr. and G. A. Noble. bibliog Phys R 87:1125-6 S 15 '52

Perturbations on exciton states in molecular crystals. H. Winston. J Chem Phys 21:170-1 Ja '53

Phase transformation of cobalt as observed on single crystals. V. J. Kehrer and H. Leidheiser, jr. il J Chem Phys 21:570 Mr '53

Photocurrent, space-charge buildup, and field emission in alkali halide crystals. A. von Hippel and others. bibliog diags Phys R 91:568-79 Ag 1 '53

Polarization of acoustic waves in cubic crystals. A. E. Fein and C. S. Smith. J Ap Phys 23:1212-13 N '52

Preferential etch for use in optical determination of germanium crystal orientation. R. H. Wynne and C. Goldberg. il J Metals 5:Trans 436 Mr '53

Preferred orientations in iodide titanium. C. J. McHargue and J. P. Hammond. bibliog diags J Metals 5:Trans 57-61 Ja '53; Discussion. 5:Trans 1563 sec 2 N '53

Preparation in sheet form of large single crystals of silicon-iron of predetermined orientation for magnetic purposes. R. G. Martindale and D. A. Langford. bibliog il diags Inst E E Proc 100 pt 2:417-26 Ag '53

Preparation of germanium single crystals. L. Roth and W. E. Taylor. bibliog il diag Inst Radio Eng Proc 40:1338-41 N '52; Correction. 41:218 F '53

Presence of free chlorine in sodium chloride crystals containing color centers and color center precursors. M. Hacskaylo and others. bibliog J Chem Phys 21:1434-5 S '53

Properties of a tetragonal antiferroelectric crystal. W. P. Mason. Phys R 88:480-4 N 1 '52

Pure quadrupole spectra of molecular crystals. H. C. Allen, jr. diags J Phys Chem 57:501-4 My '53

Quantitative determination of preferred orientation; abstract. J. H. Bach and J. B. Burnham, jr. J Metals 4:1043 O '52

Quantum theory of the polarizability of an idealized crystal. D. L. Dexter and W. R. Heller. bibliog Phys R 91:273-8 Jl 15 '53

Recrystallization of a cold-rolled copper single crystal. Y. C. Liu and W. R. Hibbard, jr. bibliog il diags J Metals 5:Trans 672-9 My '53; Discussion. 5:Trans 1568-9 sec 2 N '53

Reflection and diffraction from ice crystals in the sky. C. F. Squire. il Opt Soc Am J 42:782 O '52

Self-diffusion in pure polycrystalline silver. L. Slifkin and others. bibliog J Ap Phys 23:1032-4 S '52

Shot noise in germanium filaments. R. H. Mattson and A. van der Ziel. J Ap Phys 24:222 F '53

Single synthetic cadmium sulfide crystals. S. J. Czyzak and others. J Ap Phys 23:932-3 Ag '52

Small angle scattering of X-rays from cold-worked solids. D. L. Dexter. bibliog Phys R 90:1007-12 Je 15 '53

Soft mold technique for growing single crystals of aluminum. T. S. Noggle. il diag R Sci Instr 24:184-5 F '53

Solute distribution in germanium crystals. W. P. Slichter and E. D. Kolb. Phys R 90:987-8 Je 1 '53

Some predicted effects of temperature gradients on diffusion in crystals. W. Shockley. diags Phys R 91:1563-4 S 15 '53

Sound-on-film recording using electrooptic crystal techniques. R. Dressler and A. A. Chesnes. bibliog il diags Soc Motion Picture & Tv Eng J 60:205-16 Mr '53

Space-charge layer and distribution of lattice defects at the surface of ionic crystals. K. Lehovec. bibliog J Chem Phys 21:1123-8 Jl '53

Spectral location of the absorption due to color centers in alkaline earth halide crystals. H. F. Ivey. bibliog Phys R 89:322 Ja 1 '53

Speculation on the formation of *F*-centers during irradiation. J. J. Markham. bibliog diag Phys R 88:500-9 N 1 '52

Strain aging of iron single crystals. A. N. Holden and F. W. Kunz. J Ap Phys 23:799 Jl '52

Strong hydrogen bonds in crystals. R. C. Lord and R. E. Merrifield. J Chem Phys 21:166-7 Ja '53

Structure of deformation bands. E. W. Hart. diags Phys R 89:521-2 Ja 15 '53

Structure of graphite oxide. R. J. Beckett and R. C. Croft. bibliog il J Phys Chem 56:929-35 N '52

Study metal behaviour with large metal crystals. R. Maddin and N. K. Chen. il Iron Age 170:108-11 O 23 '52

Surface effects in the slip and twinning of metal monocrystals. J. J. Gilman and T. A. Read. bibliog il diags J Metals 4:Trans 875-83 Ag '52; Discussion. 5:Trans 735-6 sec 2 My '53

Temperature dependence of Young's modulus and internal friction of single crystals of beta-brass. R. A. Artman. il J Ap Phys 23:475-82 Ap '52

Theory of slip-band formation. J. C. Fisher and others. bibliog diags Phys R 87:958-61 S 15 '52

Theory of spin waves in ferromagnetic media. C. Herring and C. Kittel. Phys R 81:869-80 Mr 1 '51; Correction. 88:1435 D 15 '52

Theory of successive rotational transitions in crystals. T. J. Krieger and H. M. James. bibliog J Chem Phys 21:176-7 Ja '53

Theory of the deviation from close packing in hexagonal metal crystals. J. B. Goodenough. bibliog diags Phys R 89:282-94 Ja 1 '53

Thermal expansion of nonmetallic crystals. J. B. Austin. il diags Am Cer Soc J 35:243-53 O 1 '52

Thermally induced acceptors in single crystal germanium. R. A. Logan. Phys R 91:757-8 Ag 1 '53

Thermodynamic functions for surfaces of crystals. S. H. Bauer. bibliog Am Chem Soc J 75:1004-5; Reply. 1006-7 F 20 '53

Twinning in single crystals of titanium; abstract. T. S. Liu and M. A. Steinberg. J Metals 4:1043 O '52

Ultrasonic attenuation in magnetic single crystals. S. Levy and R. Truell. diag Rs Mod Phys 25:140-5 Ja '53

Vapour pressure and lattice energy of hydrogen-bonded crystals; α- and β-anhydrous oxalic acid and tetragonal pentaerythritol. R. S. Bradley and S. Cotson. Chem Soc J p 1684-8 Je '53

Vapour pressure and lattice energy of hydrogen-bonded crystals; oxamide, oxamic acid, and rubeanic acid. R. S. Bradley and T. G. Cleasby. diags Chem Soc J p 1681-4 Je '53

Vapour pressure and lattice energy of hydrogen-bonded crystals; 2-thenoic, 2-furoic, and pyrrole-2-carboxylic acids. R. S. Bradley and A. D. Care. diag Chem Soc J p 1688-90 Je '53

Vibrational spectra of molecules and complex ions in crystals; carbon dioxide. W. E. Osberg and D. F. Hornig. bibliog J Chem Phys 20:1345-7 S '52

See also

Crystallization
Crystallography
Diamonds
Ferroelectric effect
Phenocrysts

CRYSTALS, Piezoelectric

Design procedure for crystal lattice filters. W. C. Vergara. il diags Tele-Tech 12:86-7 S '53

Hydrothermal synthesis of quartz crystals. A. C. Walker. bibliog il diags Am Cer Soc J 36:250-6 Ag 1 '53

Loading of quartz oscillator plates. L. T. Sogn and P. A. Simpson. diags J Res Nat Bur Stand 49:325-30 N '52

Multichannel crystal control of vhf and uhf oscillators. A. Hahnel. il diags Inst Radio Eng Proc 41:79-81 Ja '53

Piezo-electric element measures surface roughness. Product Eng 23:201 O '52

CRYSTALS, Piezoelectric—*Continued*

Properties of synthetic quartz crystals and their growing technique. D. R. Hale. diag Electronics 26:238+ Ap '53

Rapid method for evaluating the activity of piezoelectric barium titanate; abstract. H. I. Oshry and J. Minkowski. diag Electronics 26:230+ Jl '53

Reference data for orienting quartz plates by X-ray diffraction. C. Barclay and L. T. Sogn. diags U S Nat Bur Stand Circ 543: 1-7; pa 15c Supt. of doc. '53

Review of methods for measuring the constants of piezoelectric vibrators. E. A. Gerber. bibliog diags Inst Radio Eng Proc 41:1103-12 S '53

Self-generating accelerometers. G. K. Guttwein and A. I. Dranetz. bibliog il diags Electronics 24:120-3 O '51; Same cond. Product Eng Hdbk p I 26-8 '53

Some aspects of mixer crystal performance. P. D. Strum. bibliog diag Inst Radio Eng Proc 41:875-89 Jl '53

Theoretical sensitivity of a transversely loaded, circular bimorph transducer. E. G. Thurston. diags Acoustical Soc Am J 24: 656-9 N '52

See also

Barium titanate

Oscillators, Crystal

Radio frequency—Crystal control

Testing

Crystal impedance meters replace test sets. A. C. Prichard and M. Bernstein. il diags Electronics 26:176-80 My '53

CUBA

Havana episode; first official call on first president of Cuba. F. L. Oliver. il U S Naval Inst Proc 78:1099-101 O '52

See also

Nickel mines and mining—Cuba

Taxation—Cuba

Textile industry—Cuba

Commerce

United States-Cuban trade may be expected to remain at high levels. O. G. Zorn. For Comm W 48:17 N 17 '52

Commercial policy

Cuba changes import document procedure. For Comm W 49:7 My 18 '53

Cuban customs code newly revised. For Comm W 48:7 D 22 '52

Economic conditions

Economic conditions abroad (cont). For Comm W 48:5+ O 6; 6 N 24; 8 D 8; 3+ D 22 '52; 49:3+ Mr 2; 5+ Mr 9; 4 Mr 23; 6+ My 11; 4+ Je 1; 50:3+ Jl 27 '53

Prosperity of Cuba. Engineering 174:634 N 14 '52

CULBERSON, Olin

Portrait. Bsns W p 104 F 21 '53

CULTURE mediums

Penicillin from chemically defined media. P. Hosler and M. J. Johnson. bibliog diag Ind & Eng Chem 45:871-4 Ap '53

Penicillin production by pigment-free molds. R. F. Anderson and others. bibliog diag Ind & Eng Chem 45:768-73 Ap '53

See also

Bacteriology—Culture mediums

Tissues—Culture mediums

CULVERTS

Culvert under high fill is research laboratory. il diags Eng N 149:38+ N 20 '52

Heavy corrugated culverts take creek under high fill. il Constr Methods 35:92-3+ F '53

CUMENE

Acid-catalyzed decomposition of cumene hydroperoxide. F. H. Seubold, jr. and W. E. Vaughan. bibliog Am Chem Soc J 75:3790-2 Ag 5 '53

High pressure thermal reactions of propyl- and isopropylbenzene, *p*-cymene and *s*-butylbenzene; isomerization of alkyl groups. V. N. Ipatieff and others. Am Chem Soc J 75:3323-6 Jl 20 '53

Isobaric heat capacities at bubble point; *cis*-2-butene, isopropylbenzene, and *n*-decane. W. G. Schlinger and B. H. Sage. bibliog Ind & Eng Chem 44:2454-6 O '52

Keeping up with cumene. Chem W 71:34 D 13 '52

Phenol and acetone via cumene oxidation. il Can Chem Process 37:50+ My '53

CUMENE hydroperoxide

Mechanisms of reduction of cumene hydroperoxide; nucleophilic displacement of hydroxyl ion by iodide ion. H. Boardman and G. E. Hulse. Am Chem Soc J 75:4272-3 S 5 '53

Mechanisms of reduction of cumene hydroperoxide; reduction by electron transfer with ferrocyanide ion. H. Boardman. bibliog Am Chem Soc J 75:4268-71 S 5 '53

CUMYL phenyl ether

Cumyl phenyl ether. A. M. Spivey. Chem Soc J p 1647-8 My '53

CUNARD steam-ship company, limited

Statement by the chairman. F. A. Bates. Economist 167:332 My 2 '53

CUNEIFORM inscriptions

Oldest laws; code of Ur-Nammu. S. N. Kramer. il Sci Am 188:26-8 Ja '53

CUNNINGHAM, Morrison B.

Cunningham to be president of AWWA. por (cover) Eng N 150:62 My 7 '53

CUPOLA furnaces

Annual Chesapeake educational program considers aspects of cupola operation. Foundry 81:188 Ja '53

Cupola combines hot blast and gas cleaning. il Foundry 81:315 My '53

Drops cupola bottom once a week; Zoller casting co. E. Bremer. diags Foundry 81: 124-5+ S '53

Effect of raw materials on cupola operation (cont). B. P. Mulcahy. il Foundry 80:206+ O; 236+ N '52; 81:158+ Ja '53

Hot metal receivers; continuous supply of iron for casting. il diags Metallurgia 47: 309-10 Je '53

How to bott the cupola tap hole. P. Dwyer. diag Foundry 81:163+ Jl '53

Pressure drop in blast furnace and in cupola. S. Ergun. bibliog diag Ind & Eng Chem 45:477-85 F '53

Air supply

Automatic air-weight control increases cupola efficiency. P. Glass. il diag Foundry 80:275-6 N '52

Charging

Coke quality and carbon pickup. C. R. Austin. il Foundry 81:116-21+ O '53

Mechanized handling of bulk materials pays off in two years. H. L. Humes. il diag Factory Management 111:90-1 Ja '53

Swarf injector for cupolas; abstract. A. R. Parkes. Metal Prog 62:180+ N '52

CUPS, Paper. See Paper cups

CURARE

Curarization by rectal suppository. J. Delay and J. E. Thuillier. il Science 117:57 Ja 16 '53

CURARE, Substitutes for

Hexahydroindolo[2,3-a]quinolizine. W. A. Reckhow and D. S. Tarbell. bibliog Am Chem Soc J 74:4960-2 O 5 '52

Some bis-substituted succinamides as curare substitutes. A. P. Phillips. Am Chem Soc J 75:2774 Je 5 '53

CURBS

City adds low-cost curb, gutter. il Eng N 150:57-8 Ap 16 '53

Curb curves at street corners. plan Pub Works 84:66-7 Je '53

CURBS, Concrete

Low cost rolled curbs, feature of Detroit area paving. il diag Roads & Sts 96:58-60 Ap '53

CURCUMIN

Compounds of curcumin and boric acid. G. S. Spicer, J. D. H. Strickland and L. J. Bellamy. Chem Soc J p4644-56 D '52

CURLERS. See Hair curl clips

CURRANTS

Isolation and identification of quercetin and isoquercitrin from black currants (ribes nigrum). B. L. Williams, C. H. Ice and S. H. Wender. Am Chem Soc J 74:4566-7 S 20 '52

CURRENCY. See Money

CURTICE, Harlow Herbert, 1893-

Businessmen in the news. por Fortune 47:37 Ja '53

General Motors' new boss. pors Bsns W p92-4+, cover Mr 21 '53

New president for GM. por Bsns W p34 N 29 '52

CURTIUS reaction
Structure of native poly-D-glutamic acid; synthesis of α-poly-L-glutamic acid hydrazide and the Curtius degradation thereof. J. Kovács, V. Bruckner and K. Kovács. Chem Soc J p 145-7 Ja '53

CURVE plotting
Application of carpet and lattice plotting. R. Tatham. Roy Aeronautical Soc J 57:107-10 F '53
Axial tension and bending interaction curves for members loaded inelastically. D. O. Brush and O. M. Sidebottom. il diags A S M E Trans 75:63-71; Discussion. 71-2 Ja '53
Calculation of the variance-length curve from the length distribution of fibres. H. Breny. bibliog Textile Inst J 44:P 1-14 Ja '53
Conductance curves speed triode r-c amplifier design. K. A. Pullen. Tele-Tech 12:80-1+ My '53
Delay curves for calls served at random. J. Riordan. bibliog Bell System Tech J 32:100-19 Ja '53
Digital to analog converter. M. Miller and others. il diags Electronics 25:127-9 O '52
Graphical differentiation. J. M. Ramrath. diag Product Eng Hdbk p F20-1 '53

CURVES in engineering
Horizontally curved box beams. C. E. Cutts. bibliog il diags Am Soc C E Proc 78 [no 128]:1-18 My '52; Discussion. 79 [no D-128]: 1-10 Mr '53
See also
Railroads—Curves and turnouts
Roads—Curves

CUSTOMER relations
All hail the customer! il Coal Age 58:104+ Ap '53
Customer school trains carbide specialists. il Steel 131:108-9 D 15 '52
New approach; Mr Employe meet Mr Customer. R. Newcomb and M. Sammons. il Ind Marketing 38:65+ F '53
New ideas in Sheaffer Pen office improve customer service. il Am Bsns 22:18-19+ O '52
Pacific Intermountain Express invites customers and competitors to its annual sales meeting. Sales Management 70:82-4 Mr 1 '53
Post-sale demonstrations pay off in good will and leads for G-E. il Sales Management 69: 28-30 N 20 '52
Producer views the ready-mixed concrete business; customer relations. J. A. Nicholson. Rock Prod 56:139-41 Jl '53
When customer relations suffer from inside employe neglect Bausch & Lomb make service people part of sales team. R. Marks. il Sales Management 69:74+ D 1 '52
See also
Advertising, Institutional
Banks and banking—Customer relations
Complaints
Electric utilities—Customer relations
Gas companies—Customer relations
Instruction in use of product
Service in industry

CUSTOMERS
How many of your customers moved away last year? il Am Bsns 23:16-17+ Ap '53

CUSTOMS service
Customs measure passes Congress freed of two controversial sections. Oil Paint & Drug Rep 164:3+ Ag 3 '53
Customs simplification measure passes House. Oil Paint & Drug Rep 164:5+ Jl 20 '53
Statement filed by Assistant Secretary Anderson in support of customs simplification bill. For Comm W 49:12-13+ Je 1 '53

CUTHRELL, Hugh H. d 1953
Sketch. por Gas Age 112:39-40 S 24 '53

CUTLER, Robert, 1895-
Businessmen in the news. por Fortune 47:55 Mr '53
Key man in security setup. por Bsns W p31-2 Jl 25 '53

CUTTING
See also
Electric cutting
Gear cutting
Metal cutting
Milling
Oxyacetylene cutting
Pipe cutting
Plastic materials—Cutting
Steel cutting
Thread cutting

CUTTING lubricants. See Lubrication and lubricants (cutting and grinding)

CUTTING machines
High-speed cutting machine for tough metals. il Engineer 194:393 S 19 '52
Ring-cutting machine; Richard Klinger, limited. il Engineering 174:776 D 12 '52
Rotary knife hose cutter. il Machine Design 24:183 D '52
See also
Cutting tools
Gear cutting machines
Machine tools
Metal cutting
Milling cutters
Oxyacetylene cutting
Paper cutting machines
Reamers
Rubber cutting
Screw machines
Shears (machines)
Slitting machines

CUTTING of metals. See Metal cutting

CUTTING off machines
Ballinger cutoff machine has eccentric wheel operation. il Am Mach 97:222 My 11 '53
Circular cut-off tool. il Automotive Ind 107: 76 D 1 '52; Tool Eng 29:107 D '52
Cutoff press. Tool Eng 30:96 F '53
1953 American Machinist production preview. il Am Mach 97:190-2 Ja 19 '53
What's ahead the next ten years in machining; cutting off. Am Mach 96:E23 Mid-N '52
See also
Saws, Metal working

CUTTING oils. See Lubrication and lubricants (cutting and grinding)

CUTTING tools
Complex cuts easy for ultrasonic tool; Raytheon manufacturing co. il Factory Management 111:140-1 Ag '53
Cutters team up on workpiece. il diag Steel 132:121 Je 8 '53
Cutting feeds and speeds for standard tools; tabulation; reference sheets. Tool Eng 30: 79-81 Mr '53
DoAll shows 'em with visual catalog. il Sales Management 69:33 N 20 '52
Grinding and cutting tools; abstract. A. Karabinus. Tool Eng 31:129-30 S '53
Hard chrome plating unit; Chromasol; Refrigerator components, ltd. il Engineer 194: 268 Ag 22 '52
Increasing tool life and performance; Buick motor division. H. H. Miller. il Tool Eng 29:37-46 N '52
Limitations of investment cast tool alloys. D. Von Ludwig. il Tool Eng 30:51-5 Je '53
Metal-cutting temperatures and tool wear. A. O. Schmidt. bibliog il diags Tool Eng 29:33-5 Jl; 51-4 Ag '52; Excerpts. Metal Prog 64:186+ Jl '53
Practical approach to optimum machining; chip-tool temperature affects the cutting speed. A. B. Albrecht. il diag Am Mach 97:130-3 Je 22 '53
Regrind and break-in blasted from chrome-plated tools; illustrations with text. Am Mach 96:158-9 O 13 '52
Relative abrasiveness of the cast surfaces of various gray-iron castings on single-point tools of high-speed steel. J. Datsko and O. W. Boston. il A S M E Trans 75:103-8 Ja '53; Abstract. Metal Prog 63:180+ My '53
Tooling and low cost production. E. A. Cyrol. Tool Eng 30:52-5 F '53
What is your tool-grinding cost? E. L. Dangle and J. J. Demchak. il Am Mach 97:132-3 S 14 '53
See also
Forming tools
Hobs
Metal cutting
Milling cutters
Tool steel

Manufacture

Tool finishing costs reduced by wet blasting. E. F. Anderson. il Tool Eng 30:53-4 Ja '53

Standards

Standardize your standard tooling. H. D. Rhodenbaugh. diags Am Mach 97:126-7 My 25 '53

Testing

Dull tools sap aluminum alloy strength. Steel 132:133 Ap 13 '53

CUTTING tools—Testing—*Continued*

Radioactive cutting tools for rapid tool-life testing. M. E. Merchant and others. il A S M E Trans 75:549-59 My '53; Excerpts. Iron Age 170:154-5 S 4 '52; Automotive Ind 108:48-50+ Ja 15 '53; Mill & Factory 52:121-2 F '53

Swedish tests prove out radioactive tool experiments. diags Am Mach 97:194 Mr 16 '53

CUTTING tools, Carbide

Butt-brazed carbide tips improve tool life. W. Jellig. il diags Iron Age 171:140-2 Je 25 '53

Carbide boring tool for deep holes. A. Clarke. diags Am Mach 96:171 N 10 '52

Carbide cutters; made and maintained at home; Solar aircraft co. M. S. Schlegel. il Steel 132:82-3 F 23 '53

Carbide steps up drilling job. il diags Steel 132:93-4 Mr 2 '53

Carbide tool finishing machine; R. J. H. tool and equipment co. il Engineer 196:248 Ag 21 '53

Carbide tool life increased by adding steel ball. W. L. Kennicott. diags Am Mach 97:156 Jl 6 '53

Carbide tooling pays dividends in machining valve castings. T. Cunningham. il Mach 59:173-9 Ag '53

Carbide tools challenge efficiency of automatic screw machines. C. R. Morgan. il Iron Age 170:97-9 O 2 '52

Carbide with a twist. il Steel 132:92 Je 29 '53

Carbides increase production of wood products; Rockwell manufacturing co. R. C. DuBrucq. il diags Tool Eng 31:59-62 Jl '53

Carbides machine tough oil-country equipment. il Mach 60:196 O '53

Carbides; solving tough cutting bug. il Iron Age 171:66-7 F 19 '53

Centrifugally cast jet engine rings; how to rough machine them. F. Meninger. il Steel 131:78-9 O 6 '52

Change a bit, save a lot. il diag Am Mach 97:136 Je 22 '53

Contouring takes on the heavyweights. P. H. Gribbin. il Steel 132:84-5 Mr 30 '53

Curtiss-Wright boosts output with machinability data. R. LeGrand. il diags Am Mach 96:141-8 N 24 '52

Customer school trains carbide specialists. il Steel 131:108-9 D 15 '52

Directory of tool steels and carbides. Iron Age 171:109-10+ Ja 8 '53

How to fasten carbide inserts. diags Mill & Factory 53:83-5 S '53

How to machine stainless steel with carbides. J. J. Robert. il diags Am Mach 96:109-12 O 27 '52

How water soluble oils affect carbide milling cutter life. J. R. Roubik. il Iron Age 170:112-15 O 23 '52

Indexing tungsten carbide inserts cuts costs of machining wheels. il Iron Age 171:158-9 My 21 '53; Steel 132:165 Je 1 '53

Ingenious holder increases life of carbide tools. G. H. DeGroat. il diags Am Mach 97:108-9 Mr 2 '53

Inserts mean versatility. Steel 132:113 My 18 '53

Is coolant for carbides really necessary? L. J. St Clair. Am Mach 97:129 Jl 20 '53

Long life promotes carbide blanking dies. N. W. Oberg. il Steel 132:100-2 My 4 '53

Machining; better finish, longer tool life attained with carbide inserts. il diag Iron Age 171:206-7 Mr 5 '53; Steel 132:112 Mr 9 '53

Mechanically mounted cutting elements of cemented carbide. W. L. Kennicott. il diags Mech Eng 75:387-92 My '53

Mercury and magnetism identify mixed carbide blanks. C. Edgar. Am Mach 97:187 S 14 '53

Power required by carbide-tipped face-milling cutters. W. W. Gilbert and others. il diags A S M E Trans 75:1087-92; Discussion. 1092-3 Ag '53

Practical carbide tool maintenance. J. W. Ripple. il diags Am Mach 97:126-8 Jl 20 '53

Report on panel on grinding and cutting tools. S A E J 61:69-71 O '53

Right wheel cuts diamond consumption; chipbreaker grinding in carbide cutter tips. J. W. Ripple. il diags Steel 132:72-3 F 16 '53

Some factors affecting wear on cemented carbide tools. E. M. Trent. bibliog diags Inst Mech Eng Proc (A) 166 no 1:64-70, pl 1-4 '52; Same abr. Engineer 192:599-600 N 9 '52; Abstracts. Tool Eng 28:96 Ja '52; Metal Prog 61:186+ My '52; Discussion. Inst Mech Eng Proc (A) 166 no 1:70-4 '52; Metal Prog 63:116+ Mr '53

Thirty-foot holes drilled in two hours. il Steel 131:105 N 3 '52

Tool steel directory, tool steels, die steels and carbides; including charts showing chemical and physical properties, and forging and heat treating temperatures for most tool steel on the United States and Canadian markets. Iron Age 171:306-12+ Ja 1 '53

Trepanning; impressive reduction in machining time reported with carbides. il Iron Age 170:130+ O 23 '52

Wear of carbide tools. A. J. Pekelharing and R. A. Schuermann. bibliog diags Tool Eng 31:51-7 O '53

What's ahead the next ten years in tools and tooling; cutting tools. Am Mach 96:C 1-4 Mid-N '52

Manufacture

Preforming complex carbide shapes lowers costs. F. J. Lennon, jr. il Iron Age 171:153-5 F 5 '53

Sharpening

Abrasive belts grind carbide. G. H. DeGroat. il Am Mach 96:102-4 D 8 '52

Belt sharpens carbide tools. il Iron Age 170:25 D 25 '52; Mill & Factory 52:137-8 Mr '53; Tool Eng 30:82 Mr '53; Mech Eng 75:152-3 F '53

Cadillac teams CO_2 with silicon carbides to grind carbide tools better. T N. Chambers and J. Kwolek. il Am Mach 97:172-5 F 16 '53

Carbide tools ground without a diamond wheel. E. Sperisen. diags Am Mach 97:195 Mr 16 '53

CO_2 cools carbide grinders. A. B. Albrecht. il Am Mach 96:97 D 8 '52

Economic factors must govern wheel selection for grinding carbides. F. J. Lennon, jr. il diag Am Mach 97:165-70 F 16 '53

Electrolytic grinding of carbides fully tested. N. W. Thibault and B. H. Anderson. il Iron Age 170:162-5 N 13 '52

Electrolytically-assisted diamond wheel grinding of cemented carbide; abstract. N. W. Thibault and B. H. Anderson. Metal Prog 63:198+ My '53

Grinding carbide tools with electrolytic assistance. N. W. Thibault and B. H. Anderson. il Metal Prog 64:161-4+ Ag '53

How sharp are carbide tools finished with silicon carbides? J. C. Redmond. il Am Mach 97:120 Ag 3 '53

How to convert carbide tool grinders to electrolytic grinding; illustrated instructions. Am Mach 96:157-8 N 10 '52

How to grind carbides six times as fast with less than one per cent diamond wheel wear. J. A. Mueller. il diag Am Mach 97:122-5 S 28 '53

How to sharpen carbide tipped masonry drills. diags Power Eng 57:91 Ag '53

Sharpener lengthens carbide tool life; Fenlind micro-finisher. il Aviation W 58:31 Ja 19 '53; Steel 132:90+ Ja 19 '53

Standards

Standards ease selection and use of carbide tool materials. H. H. Miller. il diag Metal Prog 63:75-81 Ap '53

Testing

Cutting forces and temperatures when milling with carbide cutters. H. Optiz and J. Kob. bibliog il Tool Eng 30:35-41 Ja '53

CUYAHOGA river

Cuyahoga projects pass halfway point with completion set for '57. plan Eng N 150:47 Ja 22 '53

CYANAMIDE

Cyanamides; sulphonyl derivatives related to dicyandiamide and melamine. F. Kurzer and J. R. Powell. Chem Soc J p2531-7 S '53

CYANANTHRENE

Synthesis of cyananthrene. W. Bradley and F. K. Sutcliffe. Chem Soc J p2118-22 Je '52

CYANATES

Analysis

Colorimetric determination of cyanide, cyanate, and thiocyanate in sewage and plating wastes. J. M. Kruse and M. G. Mellon. bibliog Sewage & Ind Wastes 24:1254-9 O '52; Same. Metal Finishing 51:99-102 Je '53

CYANIDE process

Mechanism of cyanidation. J. R. Lambert. bibliog Can Min J 74:57-64 Ap '53

CYANIDES

Action of acyl cyanides on 2- and 1 : 2-substituted indoles. A. K. Kiang and F. G. Mann. Chem Soc J p594-602 F '53

Cyanide waste disposal survey. P. R. Carlson. Sewage & Ind Wastes 24:1541-3 D '52

Electron transfer processes and the oxidation-reduction reactions of hexacyanoferrate (III) ion in aqueous solution. A. W. Adamson. bibliog J Phys Chem 56:858-62 O '52

Recovery of cyanide from cyanide plating rinse baths; abstract. C. F. Paulson. Steel 132:177+ My 25 '53

Reduction of acyl cyanides with lithium aluminum hydride. A. Burger and E. D. Hornbaker. bibliog Am Chem Soc J 74:5514 N 5 '52

Reduction of plating waste losses by reclaim tanks; Delco-Remy division, General motors corp. C. F. Hauri. il diags Sewage & Ind Wastes 25:586-90 My '53

Some reactions of 3-dimethylamino-1 : 1-diphenylbutyl cyanide. J. Cymerman and W. S. Gilbert. Chem Soc J p3529-31 S '52

See also

Isocyanides

Analysis

Colorimetric determination of cyanide and thiocyanate. J. M. Kruse and M. G. Mellon. bibliog Anal Chem 25:446-50 Mr '53

Colorimetric determination of cyanide, cyanate, and thiocyanate in sewage and plating wastes. J. M. Kruse and M. G. Mellon. bibliog Sewage & Ind Wastes 24:1254-9 O '52; Same. Metal Finishing 51:99-102 Je '53

CYANINES

Adsorption of sensitizing dyes in photographic emulsions. W. West, B. H. Carroll and D. H. Whitcomb. bibliog J Phys Chem 56:1054-67 D '52

Colour of organic compounds; a comparison of isomeric dyes from 3-alkyl-2-thiothiazolid-4- and -5-ones. R. A. Jeffreys and E. B. Knott. Chem Soc J p4632-7 D '52

Colour of organic compounds; complex cyanines and *mero*cyanines. E. B. Knott and R. A. Jeffreys. Chem Soc J p4762-75 D '52

*mero*Cyanines derived from thio-oxindole; *mero*cyanines having a dimethin chain attached to the 3-thionaphthen nucleus. R. H. Glauert and F. G. Mann. Chem Soc J p2135-44 Je '52

*mero*Cyanines derived from thio-oxindole; *mero*cyanines having a tetramethin, hexamethin or diazadimethin chain attached to the 3-thionaphthen nucleus. R. H. Glauert and F. G. Mann. Chem Soc J p5012-16 D '52

Oxazole cyanine and *mero*cyanine dyes, and intermediates. R. A. Jeffreys. Chem Soc J p4823-32 D '52

Significance of basicity and acidity of nuclei in cyanine type condensations. L. G. S. Brooker and others. bibliog Am Chem Soc J 75:4335-6 S 5 '53

Solvent effects in merocyanine spectra. N. S. Bayliss and E. G. McRae. Am Chem Soc J 74:5803-4 N 20 '52

Some trinuclear cyanine dyes; attempted synthesis of dyes isomeric with those of the neocyanine type. F. M. Hamer. Chem Soc J p3197-211 Ag '52

See also

Phthalocyanines

CYANOACETIC acid

Stereochemistry of arylidenecyanoacetic acids and arylarylideneacetonitriles. W. Baker and C. S. Howes. Chem Soc J p 119-24 Ja '53

CYANOACETYLENE

Infrared and Raman spectra of dicyanoacetylene. F. A. Miller and R. B. Hannan, jr. bibliog diag J Chem Phys 21:110-14 Ja '53

CYANOETHYLANILINE

Cyclization of N-β-cyanoethylanilines. W. S. Johnson and W. DeAcetis. bibliog Am Chem Soc J 75:2766-8 Je 5 '53

CYANOETHYLATION

Cotton basically altered by new chemical treatment. Textile World 103:96+ O '53

Cyanoethylation of α-amino acids; N-2-carbalkoxyethyl derivatives. L. L. McKinney and others. Am Chem Soc J 74:5183-5 O 20 '52

Cyanoethylation of aryl phosphines. F. G. Mann and I. T. Millar. Chem Soc J p4453-7 N '52

Cyanoethylation of isophorone. H. A. Bruson and T. W. Riener. Am Chem Soc J 75:3585-6 Jl 20 '53

Decyanoethylation of polyvinyl β-cyanoethyl ether. J. F. Wright and L. M. Minsk. bibliog Am Chem Soc J 75:98-101 Ja 5 '53

Monocyanoethylation of certain ketones. H. E. Baumgarten and R. L. Eifert. bibliog Am Chem Soc J 75:3015-16 Je 20 '53

New muscles for Old King Cotton; cyanoethylation. il Mod Textiles Mag 34:37+ S '53

Preparation of bis-2-cyanoethyl derivatives of aromatic primary amines, and their conversion into 1 : 6-diketojulolidines. J. T. Braunholtz and F. G. Mann. Chem Soc J p 1817-24 Je '53

Preparation of δ-ketoacids and δ-ketonitriles from monocyanethylated β-ketoesters. C. W. Yoho and R. Levine. bibliog Am Chem Soc J 74:5597-9 N 20 '52

Reactions catalyzed by anion exchange resins; cyanoethylation of alcohols. M. J. Astle and R. W. Etherington. bibliog Ind & Eng Chem 44:2871-2 D '52

T-7 holds promise for cotton textiles. il Manuf Rec 122:29 S '53

CYANOGEN

Direct cyanogenation of benzene. G. J. Janz. bibliog Am Chem Soc J 74:4529-31 S 20 '52

Effect of water on the burning velocities of cyanogen-oxygen-argon mixtures. R. S. Brokaw and R. N. Pease. bibliog Am Chem Soc J 75:1454-7 Mr 20 '53

Reaction of cyanogen and related nitriles with 1,3-dienes; propionitrile and butadiene. G. J. Janz and R. E. Myers. bibliog Am Chem Soc J 75:1910-12 Ap 20 '53

Temperature of the cyanogen-oxygen flame. J. B. Conway, R. H. Wilson, jr. and A. V. Grosse. bibliog Am Chem Soc J 75:499 Ja 20 '53

CYANOGEN iodide

Participation of a neighboring carboxyl group in addition reactions; the reaction of cyanogen iodide with γ,δ-unsaturated acids. R. T. Arnold and K. L. Lindsay. bibliog Am Chem Soc J 75:1048-9 Mr 15 '53

CYANOHYDRINS

Carbonyl reactions; the kinetics of cyanohydrin formation in aqueous solution. W. J. Svirbely and J. F. Roth. bibliog Am Chem Soc J 75:3106-11 Jl 5 '53

Estimation of fructose by the cyanohydrin reaction. R. D. Coombs, 3d, A. R. Reid and C. B. Purves. Anal Chem 25:511-12 Mr '53

CYANOMETHYLATION

Cyanomethylation of indole with diethylaminoacetonitrile. E. L. Eliel and N. J. Murphy. bibliog Am Chem Soc J 75:3589-90 Jl 20 '53

CYANOPROPYL group

Properties and reactions of free alkyl radicals in solution; a study of the reactions of the 2-cyano-2-propyl radical with quinones. F. J. Lopez Aparicio and W. A. Waters. Chem Soc J p4666-74 D '52

CYANURIC acid

Crystal structure of cyanuric acid. E. H. Wiebenga. Am Chem Soc J 74:6156-7 D 5 '52

CYBERNETICS

Cybernetics for industry and military applications. G. Post. bibliog diags Tele-Tech 12:64-5+ Ag '53

Design for a brain. W. R. Ashby. 259p $6 John Wiley & sons, 440 4th av, New York '52; Reviews. Sci Am 188:96-8 My '53; Electronics 26:368-74 Je '53

CYCLANOLS. See Cycloalkanols

CYCLANONES. See Cycloalkanones

CYCLIC compounds

Alicyclic compounds; the formation of *cyclo*propanes in the Kishner-Wolff reduction of αβ-unsaturated carbonyl compounds. S. G. Beech, J. H. Turnbull and W. Wilson. Chem Soc J p4686-90 D '52

Conjugated macrocycles; a new type of cross-conjugated macrocycle, related to the azaporphins. J. A. Elvidge and R. P. Linstead. Chem Soc J p5008-12 D '52

Conjugated macrocycles; tetra*cyclo*hexenotetrazaporphin. G. E. Ficken and R. P. Linstead. Chem Soc J p4846-54 D '52

Conjugated macrocycles; tetrazaporphin and its metallic derivatives. R. P. Linstead and M. Whalley. Chem Soc J p4839-46 D '52

Conversion of *trans* to *cis* fusions of rings II and III in the morphine series. M. Gates and R. Helg. bibliog Am Chem Soc J 75:379-81 Ja 20 '53

Course of cyclisation in the formation of alicyclic rings; a paradoxical case of Dieckmann cyclisation. R. N. Chakravarti. Chem Soc J p 1315-16 Ap '53

Cyclic derivatives of α,α-disubstituted phenylacetonitriles. N. Sperber and R. Fricano. bibliog Am Chem Soc J 75:2986-8 Je 20 '53

Cyclic polyolefins; valence tautomerism of 1,3,5-cycloöctatriene and bicyclo[4.2.0]octa-2,4-diene. A. C. Cope and others. bibliog Am Chem Soc J 74:4867-71 O 5 '52

Cyclisation, ring-fission, and acyl-migration reactions in the thiazoline field. J. C. Crawhall and D. F. Elliott. Chem Soc J p3094-102 Ag '52

Cyclizations of benzylsuccinic acids. E. C. Horning and G. N. Walker. bibliog Am Chem Soc J 74:5147-51 O 20 '52

Discoveries among conjugated macrocyclic compounds. R. P. Linstead. bibliog diags Chem Soc J p2873-84 S '53

Eight- and higher-membered ring compounds; di-, tri-, and tetra-thiosalicylides. W. Baker, A. S. El-Nawawy and W. D. Ollis. Chem Soc J p3163-7 Ag '52

Eight- and higher-membered ring compounds; improved synthesis of coronene. W. Baker, J. F. W. McOmie and W. K. Warburton. Chem Soc J p2991-3 Ag '52

Energy relationships of fused ring systems. W. S. Johnson. diags Am Chem Soc J 75:1498-500 Mr 20 '53

Explanation of the preferential formation of certain rings in acetals of the polyhydric alcohols. S. A. Barker, E. J. Bourne and D. H. Whiffen. Chem Soc J p3865-70 O '52

Fused carbon rings; dibenzopentalene. C. T. Blood and R. P. Linstead. Chem Soc J p2263-8 Je '52

Fused carbon rings; experiments directed towards the synthesis of simple pentalenes. C. T. Blood and R. P. Linstead. Chem Soc J p2255-62 Je '52

Heterocycles containing *p*-phenylene units; amines. R. C. Fuson and H. O. House. bibliog Am Chem Soc J 75:1327-9 Mr 20 '53

Heterocycles containing *p*-phenylene units; ethers. R. C. Fuson and H. O. House. bibliog Am Chem Soc J 75:1325-7 Mr 20 '53

Internuclear cyclisation; the cyclisation of derivatives of diphenylmethane, benzophenone, and *N*-methyldiphenylamine. D. H. Hey and R. D. Mulley. Chem Soc J p2276-87 Je '52

Internuclear cyclisation; the synthesis of some methyl-, halogeno-, and carbomethoxy-*N*-methylphenanthridones. R. A. Heacock and D. H. Hey. Chem Soc J p4059-64 O '52

Macro rings; polynuclear paracyclophanes. H. Steinberg and D. J. Cram. bibliog Am Chem Soc J 74:5388-91 N 5 '52

Molecular rotation of polycyclic compounds; general principles and the correlation of the triterpenoids with the steroids. W. Klyne. Chem Soc J p2916-32 Jl '52

New syntheses of heterocyclic compounds; diethylaminoethyl 1 : 3-dimethyl-2-aza-9-fluorylideneacetate. B. N. Feitelson and V. Petrow. Chem Soc J p3358-61 S '52

Perfluorinated cyclic ethers. A. L. Henne and S. B. Richter. bibliog Am Chem Soc J 74:5420-2 N 5 '52

Reductive cyclization; a method for the synthesis of tricyclic compounds possessing a bridgehead nitrogen. N. J. Leonard and W. J. Middleton. bibliog Am Chem Soc J 74:5114-18 O 20 '52

Ring size vs. basicity; abstract. M. Tamres. Chem & Eng N 31:1294-5 Mr 30 '53

Seven-membered ring compounds; benzosuberoneglyoxylates. W. J. Horton, C. E. Hummel and H. W. Johnson. bibliog Am Chem Soc J 75:944-6 F 20 '53

Small-ring compounds; molecular orbital calculations of properties of some small-ring hydrocarbons and free radicals. J. D. Roberts, A. Streitwieser, jr. and C. M. Regan. bibliog Am Chem Soc J 74:4579-82 S 20 '52

Studies on the chemistry of heterocyclics investigations on the mechanism of reactions of 2-thienyl halides with sodium amide and sodium acetylide in liquid ammonia. A. Vaitiekunas and F. F. Nord. bibliog Am Chem Soc J 75:1764-8 Ap 5 '53

Syntheses of macrocyclic compounds. E. D. Bergmann and Z. Pelchowicz. bibliog Am Chem Soc J 75:4281-6 S 5 '53

Synthetical and stereochemical investigations of reduced cyclic bases; the synthetic *cis*- and *trans*-octahydroindoles and the anomalous exhaustive methylation products of the *trans*-base. F. E. King and others. Chem Soc J p250-5 Ja '53

Thermal cyclization of *o*-aroyloxyacetoarones; further syntheses in the flavone series (diflavones and flavonols). H. M. Lynch, T. M. O'Toole and T. S. Wheeler. Chem Soc J p2063-7 Je '52

CYCLITOLS

Chemistry of extractives from hardwoods; the cyclitols and steroids of opepe (sarocephalus diderrichii). F. E. King and L. Jurd. Chem Soc J p 1192-5 Ap '53

Analysis

Cyclitols present in sugar pine (pinus lambertiana Dougl.) C. E. Ballou and A. B. Anderson. bibliog Am Chem Soc J 75:648-50 F 5 '53

CYCLOALKANES. See Cycloparaffins

CYCLOALKANOLS

Rates of chromic acid oxidation of some cyclanols. H. G. Kuivila and W. J. Becker, 3d. bibliog Am Chem Soc J 74:5329-30 N 5 '52

CYCLOALKANONES

Stereochemistry of α-haloketones; the molecular configurations of some monocyclic α-halocyclanones. E. J. Corey. bibliog Am Chem Soc J 75:2301-4 My 20 '53

CYCLOALKENES. See Cycloolefins

CYCLOANDROSTANOLONE

Origin of 3,5-cycloandrostan-6β-ol-17-one (i-androsten-6β-ol-17-one) in urinary extracts. S. Teich and others. bibliog Am Chem Soc J 75:2523-5 My 20 '53

CYCLOARTENOL

Structure of *cyclo*artenol. H. R. Bentley and others. bibliog Chem & Ind p217-18 Mr 7 '53

CYCLOBUTANE

Isomerization of saturated hydrocarbons; the isomerization of alkylcyclopropanes and alkylcyclobutanes in the presence of aluminum halide catalysts. H. Pines, W. D. Huntsman and V. N. Ipatieff. bibliog Am Chem Soc J 75:2315-17 My 20 '53

Molecular structure of cyclobutane. J. D. Dunitz and V. Schomaker. bibliog J Chem Phys 20:1703-7 N '52

Studies in spectroscopy; steric effects in some substituted butadienes and *cyclo*butanes. K. B. Alberman, R. N. Haszeldine and F. B. Kipping. diag Chem Soc J p3284-8 Ag '52

Synthesis of cyclobutene-d_6 and cyclobutane-d_8. R. C. Lord. bibliog J Chem Phys 21:378 F '53

CYCLOBUTANEDIONE

Cyclobutanediones and the lower alkylketene dimers. E. B. Reid and S. J. Groszos. bibliog diag Am Chem Soc J 75:1655-60 Ap 5 '53

CYCLOBUTENE

Synthesis of cyclobutene-d_6 and cyclobutane d_8. R. C. Lord. bibliog J Chem Phys 21:378-9 F '53

CYCLODECANEDIONE
Self-condensation of *cyclo*decane-1 : 2-dione. R. A. Raphael and A. I. Scott. diags Chem Soc J p4566-9 D '52

CYCLODEHYDRATION. See Dehydration

CYCLOHEPTANE
Isomerization of saturated hydrocarbons; catalytic isomerization of cycloheptane. H. Pines, F. J. Pavlik and V. N. Ipatieff. bibliog Am Chem Soc J 74:5544-5 N 5 '52

CYCLOHEPTANEDIOL
Alicyclic glycols; derivatives of *cyclo*heptane-1 : 2-diol. L. N. Owen and G. S. Saharia. Chem Soc J p2582-8 S '53

CYCLOHEPTANOL
Composition of cycloheptanol produced by the Demianov rearrangement. P. A. S. Smith and D. R. Baer. Am Chem Soc J 74:6135-7 D 5 '52

CYCLOHEPTATRIENE
Heterocyclic derivatives of 1 : 2-5 : 6-dibenzocyclohepta-1 : 3 : 5-triene; 2 : 3-6 : 7-dibenz-1-oxa-4-azacyclohepta-2 : 4 : 6-trienes. C. I. Broderick and others. Chem Soc J p 1079-85 Ap '53

CYCLOHEPTATRIENOLONE
β,γ-Benzotropolone and related compounds. G. A. Nicholls and D. S. Tarbell. bibliog Am Chem Soc J 74:4935-40 O 5 '52

CYCLOHEPTATRIENONE
Reactions of halotropones and related compounds. W. V. Doering and C. F. Hiskey. bibliog Am Chem Soc J 74:5688-93 N 20 '52
Rearrangement of halotropones; chloride exchange in tribromotropolone. W. V. Doering and L. H. Knox. bibliog Am Chem Soc J 74:5683-7 N 20 '52
Synthetic experiments in the *cyclo*heptatrienone series; 4-keto*cyclo*heptatrienecarboxylic acid. J. R. Bartels-Keith, A. W. Johnson and A. Langemann. Chem Soc J p4461-6 N '52
Tropolones; halogeno*cyclo*heptatrienones. B. J. Abadir and others. Chem Soc J p2350-3 Je '52

CYCLOHEPTENONE
Colchicine studies; synthesis and reactions of 2-arylcyclohept-2-enones. D. Ginsburg and R. Pappo. bibliog Am Chem Soc J 75:1094-7 Mr 5 '53

CYCLOHEXANE
Dipole moments and structures of *cis*- and *trans*-1,2-dichlorocyclohexane. A. Tulinskie, A. Di Giacomo and C. P. Smyth. bibliog diag Am Chem Soc J 75:3552-4 Jl 20 '53
Epimeric alcohols of the *cyclo*hexane series; (±)-*cis*-3-methyl*cyclo*hexylmethanol and (±)-*cis*-3-methyl*cyclo*hexanecarboxylic acid. L. H. Darling, A. K. Macbeth and J. A. Mills. Chem Soc J p 1364-8 My '53
Molecular structures of trans-1,4-dihalogenocyclohexanes. K. Kozima and T. Yoshino. bibliog Am Chem Soc J 75:166-71 Ja 5 '53
Optical dispersion of perdeuterobenzene and perdeuterocyclohexane. R. T. Davis, jr. and R. W. Schiessler. bibliog Am Chem Soc J 75:2763-4 Je 5 '53
Reaction of *cis*-1,4-epoxycyclohexane with hydrochloric acid and with hydrobromic acid. E. L. Bennett and C. Niemann. bibliog Am Chem Soc J 74:5076-8 O 20 '52
Stereochemistry of *cyclo*hexane derivatives. D. H. R. Barton. bibliog diags Chem Soc J p 1027-40 Mr '53
Stereochemistry of the 3-carboxycyclohexaneacetic acids. F. Ramirez and J. W. Sargent. bibliog Am Chem Soc J 74:5785-7 N 20 '52

Analysis

Determination of benzene, cyclohexane, and methylcyclopentane by mass spectrometer. S. Meyerson. bibliog diag Anal Chem 25: 338-41 F '53

CYCLOHEXANECARBOXYLIC acid
Dissociation constants of acids in salt solutions; cyclohexanecarboxylic acid. M. Kilpatrick, R. D. Eanes and J. G. Morse. Am Chem Soc J 75:588-9 F 5 '53

CYCLOHEXANEDIOL
Study of the system *cis*- and *trans*-cyclohexanediol-1,2. W. J. Svirbely and S. Goldhagen. J Phys Chem 57:597-9 Je '53

CYCLOHEXANEDIONE
2-Acetyl*cyclo*hexane-1 : 3-dione. H. Smith. Chem Soc J p803-10 Mr '53
Alicyclic compounds; the preparation of *cyclo*hexane-1 : 3-diones and their enol ethers. E. G. Meek, J. H. Turnbull and W. Wilson. Chem Soc J p811-15 Mr '53
Reactions of the monoethylene ketal of 1,3-cyclohexanedione. M. W. Cronyn and G. H. Riesser. bibliog Am Chem Soc J 75: 1247-8 Mr 5 '53

CYCLOHEXANETHIOL
Identification of cyclohexanethiol in virgin naphtha. R. C. Arnold, P. J. Launer and A. P. Lien. bibliog Anal Chem 24:1741-4 N '52

CYCLOHEXANOL
Amino acids; *dl*-β-aminoadipic acid; preparation and oxidation of 2-, 3- and 4-acetamidocyclohexanols. J. H. Billman and J. A. Buehler. Am Chem Soc J 75:1345-6 Mr 20 '53
Determination of the configuration of 4-cyclohexylcyclohexanols. W. G. Dauben, V. M. Alhadeff and M. Tanabe. bibliog Am Chem Soc J 75:4580 S 20 '53
Refractive indices of some cyclohexanol solutions. C. M. Wheeler, jr. and F. S. Jones. bibliog Anal Chem 24:1991-2 D '52
Syntheses and relative dehydration rates of some methyl-substituted 1-phenylcyclohexanols. R. B. Carlin and H. P. Landerl. bibliog Am Chem Soc J 75:3969-75 Ag 20 '53
Synthesis of phenanthrenes; a mechanism for the cyclization of β-arylethylcyclohexanols. R. A. Barnes. bibliog Am Chem Soc J 75: 3004-8 Je 20 '53

CYCLOHEXANONE
Condensation of 2-hydroxy- and 2-acetoxycyclohexanone with 1-diethylamino-3-pentanone. J. Szmuszkovicz and H. Born. bibliog Am Chem Soc J 75:3350-2 Jl 20 '53
Relative configurations of the 2- and 3-hydroxycyclohexanecarboxylic acids and the related methylcyclohexanols; the stereochemistry of the catalytic hydrogenation of substituted cyclohexanones. S. Siegel. bibliog Am Chem Soc J 75:1317-20 Mr 20 '53
Stereochemistry of α-haloketones; the three α-dibrominated cyclohexanones. E. J. Corey. bibliog Am Chem Soc J 75:3297-9 Jl 20 '53

CYCLOHEXENE
Anomalies in the vapor phase ozonolysis of cyclohexene. R. H. Eastman and R. M. Silverstein. bibliog Am Chem Soc J 75: 1493-4 Mr 20 '53
Reaction of cyclohexene with phosphorus pentasulfide. P. Fay and H. P. Lankelma. bibliog Am Chem Soc J 74:4933-5 O 5 '52
Vanadium oxide hydrogenation catalyst; the action of vanadium oxide catalyst on cyclohexene. V. I. Komarewsky and T. A. Erikson. Am Chem Soc J 75:4082-3 Ag 20 '53

CYCLOHEXENONE
3-Methyl-5-anisyl-4-carbethoxy-2-cyclohexene-1-one. W. T. Smith, jr. and D. S. P. Eftax. bibliog Am Chem Soc J 75:4356-7 S 5 '53
Synthesis of *cyclo*hexenones. H. Born, R. Pappo and J. Szmuszkovicz. Chem Soc J p 1779-82 Je '53
Synthesis of substituted cyclohexenones. F. C. Novello, M. E. Christy and J. M. Sprague. bibliog Am Chem Soc J 75:1330-4 Mr 20 '53

CYCLOHEXENYL hydroperoxide
Thermal decomposition of *cyclo*hexenyl hydroperoxide in hydrocarbon solvents. L. Bateman and H. Hughes. Chem Soc J p4594-601 D '52

CYCLOHEXYLAMINE
Reaction of acetoin and hydroxyacetaldehyde with cyclohexylamine. J. F. Carson. Am Chem Soc J 75:4337-8 S 5 '53
Reaction of diacetyl and cyclohexylamine. J. F. Carson. bibliog Am Chem Soc J 75: 4300-2 S 5 '53
Reaction of ring-substituted *cyclo*hexylamines with nitrous acid; an interpretation based on conformational analysis. J. A. Mills. Chem Soc J p260-4 Ja '53

CYCLOHEXYLENEFLUORENE
Dehydration of 2-9′-fluorenyl*cyclo*hexanol. J. W. Cook and L. Hunter. Chem Soc J p3168-71 Ag '52

CYCLONE classifiers. See Classifiers

CYCLONE separators. See Separators

CYCLOÖCTANE
Cyclic polyolefins; cycloöctanediols; molecular rearrangement of cycloöctene oxide on solvolysis. A. C. Cope, S. W. Fenton and C. F. Spencer. bibliog Am Chem Soc J 74:5884-8 D 5 '52

CYCLOÖCTATETRAENE
Cyclic polyolefins; cycloöctatetraene derivatives from copolymerization and side chain modification. A. C. Cope and R. M. Pike. bibliog Am Chem Soc J 75:3220-3 Jl 5 '53
Cyclic polyolefins; functionally substituted cycloöctatetraenes from acetylenic alcohols. A. C. Cope and D. F. Rugen. bibliog Am Chem Soc J 75:3215-19 Jl 5 '53
*Cyclo*Octatetraene derivatives; condensation of *cyclo*octatetraene with phenol. W. O. Jones. Chem Soc J p2500-1 Ag '53
*cyclo*Octatetraene derivatives; dimers of *cyclo*octatetraene. W. O. Jones. diags Chem Soc J p2036-40 Jl '53
Eight-membered carbocycles; reduction of cycloöctatetraene. L. E. Craig, R. M. Elofson and I. J. Ressa. bibliog Am Chem Soc J 75:480-3 Ja 20 '53
Reaction of hydrogen bromide with cycloöctatetraene. C. G. Overberger, M. A. Klotz and H. Mark. bibliog Am Chem Soc J 75:3186-8 Jl 5 '53

CYCLOOCTATRIENE
Cyclic polyolefins; valence tautomerism of 1,3,5-cycloöctatriene and bicyclo[4.2.0]octa-2,4-diene. A. C. Cope and others. bibliog Am Chem Soc J 74:4867-71 O 5 '52

CYCLOÖCTENE
Cyclic polyolefins; *cis-* and *trans-*cycloöctene from N,N-dimethylcycloöctylamine. A. C. Cope, R. A. Pike and C. F. Spencer. bibliog Am Chem Soc J 75:3212-15 Jl 5 '53

CYCLOÖCTYNE
Many-membered carbon rings; cyclöoctyne. A. T. Blomquist and Liang Huang Liu. bibliog Am Chem Soc J 75:2153-4 My 5 '53

CYCLOOLEFINS
Synthesis and oxidation of polymethylene bis-cycloalkenes. A. Kreuchunas. bibliog Am Chem Soc J 75:4278-9 S 5 '53

CYCLOPARAFFINS
Carbon-carbon bond dissociation energies in the cycloalkanes. F. H. Seubold, jr. bibliog diag J Chem Phys 21:1616-17 S '53
High molecular weight polymethylene. S. W. Kantor and R. C. Osthoff. bibliog Am Chem Soc J 75:931-2 F 20 '53
Isomerization of saturated hydrocarbons; cycloalkanes. F. G. Ciapetta. Ind & Eng Chem 45:159-62 Ja '53
Melting transition of polymethylene. L. Mandelkern and others. bibliog Am Chem Soc J 75:4093-4 Ag 20 '53
Preparation of nitro compounds from oximes; the improved synthesis of nitrocycloalkanes. D. C. Iffland and G. X. Criner. bibliog Am Chem Soc J 75:4047-8 Ag 20 '53
Synthesis and oxidation of polymethylene bis-cycloalkenes. A. Kreuchunas. bibliog Am Chem Soc J 75:4278-9 S 5 '53
Ultraviolet absorption spectra of dibenzylidene-1,2-cycloalkanediones. N. J. Leonard and G. C. Robinson. bibliog Am Chem Soc J 75:2714-17 Je 5 '53

CYCLOPENTADIENE
Bis-cyclopentadienyl derivatives of some transition elements. G. Wilkinson and others. Am Chem Soc J 75:1011-12 F 20 '53
Vibrational spectra and structure of ferrocene and ruthenocene. E. R. Lippincott and R. D. Nelson. bibliog J Chem Phys 21:1307-8 Jl '53
X-ray examination of iron biscyclopentadienyl. P. F. Eiland and R. Pepinsky. Am Chem Soc J 74:4971 O 5 '52

CYCLOPENTADIENONE
Dimerized cyclopentadienones from esters of allethrolone. F. B. LaForge, N. Green and M. S. Schechter. bibliog Am Chem Soc J 74:5392-4 N 5 '52

CYCLOPENTANE
Low-temperature thermal data for some C_7H_{14} alkylcyclopentanes. M. E. Gross, G. D. Oliver and H. M. Huffman. bibliog Am Chem Soc J 75:_801-4 Je 20 '53
Role of neighboring groups in replacement reactions; some conversions of cyclopentane and indan derivatives. S. Winstein and R. M. Roberts. bibliog Am Chem Soc J 75:2297-300 My 20 '53

CYCLOPENTANEDIOL
Alicyclic glycols; *cyclo*pentane-1 : 3-diol, anionotropic rearrangement in some reactions of 3 : 5-dibromo*cyclo*pentene. L. N. Owen and P. N. Smith. Chem Soc J p4035-47 O '52
Alicyclic glycols; derivatives of *cyclo*-pentane-1 : 2-diol. L. N. Owen and P. N. Smith. Chem Soc J p4026-35 O '52

CYCLOPENTANONAPHTHALENE
Synthesis of hydroaromatic compounds containing angular methyl groups; 1,2-cyclopentanonaphthalene series. M. S. Newman, G. Eglinton and H. M. Grotta. bibliog Am Chem Soc J 75:349-52 Ja 20 '53

CYCLOPENTENOLONE
Constituents of pyrethrum flowers; synthetic *dl-cis*-cinerolone and other cyclopentenolones. M. S. Schechter, N. Green and F. B. LaForge. bibliog Am Chem Soc J 74:4902-6 O 5 '52

CYCLOPENTENONE
Preparation of a cyclopentenone by the Stobbe condensation. D. L. Turner. bibliog Am Chem Soc J 75:1257-8 Mr 5 '53
Preparation of *cyclo*pentenones from the products of interaction of acid chlorides and olefins. G. Baddeley, H. T. Taylor and W. Pickles. Chem Soc J p 124-6 Ja '53

CYCLOPENTENOPHENANTHRENE
New derivatives of 1 : 2-*cyclo*pentenophenanthrene. G. M. Badger, W. Carruthers and J. W. Cook. Chem Soc J p4996-5000 D '52

CYCLOPOSTHIUM. See Ciliata

CYCLOPROPANE
Absorption spectrum of cyclopropane in the vacuum ultraviolet; note on the absorption spectrum of methyl cyclopropane. P. Wagner and A. B. F. Duncan. bibliog J Chem Phys 21:516-19 Mr '53
Alicyclic compounds; the formation of *cyclo*propanes in the Kishner-Wolff reduction of αβ-unsaturated carbonyl compounds. S. G. Beech, J. H. Turnbull and W. Wilson. Chem Soc J p4686-90 D '52
Anomalous susceptibilities of three-membered ring compounds. J. R. Lacher and others. bibliog J Chem Phys 20:1047-8 Je '52
*cyclo*Propanes; a new route to some *bicyclo* [3 : 1 : 0]hexene derivatives. R. W. Kierstead, R. P. Linstead and B. C. L. Weedon. Chem Soc J p 1803-7 Je '53
*cyclo*Propanes; the addition of ethyl sodiomalonate to ethyl *cyclo*propane-1 : 1-dicarboxylate and its 2-vinyl derivative. R. W. Kierstead, R. P. Linstead and B. C. L. Weedon. Chem Soc J p3616-21 S '52
*cyclo*Propanes; the condensation of 1 : 4-dibromobut-2-ene with ethyl cyano- and aceto-acetate. R. W. Kierstead, R. P. Linstead and B. C. L. Weedon. Chem Soc J p 1799-803 Je '53
*cyclo*Propanes; the malonate condensation with 1 : 4-dibromobut-2-ene; a convenient new route to vinyl*cyclo*propane derivatives. R. W. Kierstead, R. P. Linstead and B. C. L. Weedon. Chem Soc J p3610-16 S '52
Dissociation of cyclopropane under electron impact. F. H. Field. bibliog J Chem Phys 20:1734-9 N '52
Isomerization of saturated hydrocarbons; the isomerization of alkylcyclopropanes and alkylcyclobutanes in the presence of aluminum halide catalysts. H. Pines, W. D. Huntsman and V. N. Ipatieff. bibliog Am Chem Soc J 75:2315-17 My 20 '53
Nitration of cyclopropane in the vapor phase: nitrocyclopropane. H. B. Hass and H. Shechter. bibliog Am Chem Soc J 75:1382-4 Mr 20 '53

CYCLOPROPANETRIAMINE
Synthesis of 1,2,3-cyclopropanetriamine. H. A. Hoffman and A. Burger. bibliog Am Chem Soc J 74:5485-7 N 5 '52

CYCLOPROPENE

Molecular structure of cyclopropene, C_3C_4. J. D. Dunitz and others. bibliog J Chem Phys 20:1708-9 N '52

CYCLOPROPYL chloride

Reaction of cyclopropyl chloride with lithium; isolation of dicyclopropyl. V. A. Slabey. Am Chem Soc J 74:4928-30 O 5 '52

CYCLOPROPYL methyl butane

Synthesis and purification of 2-cyclopropyl-3-methyl-1-butene and 2-cyclopropyl-3-methyl-butane. V. A. Slabey. Am Chem Soc J 74:4963-4 O 5 '52

CYCLOTRON

Cyclotron resonances, magnetoresistance, and Brillouin zones in semiconductors. W. Shockley. diags Phys R 90:491 My 1 '53

Effect of cyclotron bombardment on self-diffusion in silver. R. D. Johnson and A. B. Martin. bibliog diags J Ap Phys 23:1245-54 N '52

Electric fields within cyclotron dees. R. L. Murray and L. T. Ratner. diags J Ap Phys 24:67-9 Ja '53

Heavy artillery at the Oak Ridge national laboratory. Sci Am 188:55-6 My '53

Nuclear reactions with 21-Mev He^3 in a cyclotron. D. N. Kundu and others. bibliog Phys R 89:1200-2 Mr 15 '53

Occurrence of lymphocytes with bilobed nuclei in cyclotron personnel. M. Ingram and others. bibliog Science 116:706-8 D 26 '52

Radial oscillations in the cyclotron. P. V. C. Hough. bibliog diags R Sci Instr 24:42-8 Ja '53

Servomechanism for the elimination of time lag. R. L. Garwin. diags R Sci Instr 23:681-3 D '52

Synchrocyclotron for 450-Mev protons. H. L. Anderson and others. bibliog il diags R Sci Instr 23:707-28 D '52

Synchrocyclotron production and properties of magnesium 28. J. W. Jones and T. P. Kohman. Phys R 90:495-6 My 1 '53

University of Pittsburgh scattering project. R. S. Bender and others. plan diags R Sci Instr 23:542-7 O '52

X-ray measurement of the cyclotron rf dee voltage. F. H. Harlow. R Sci Instr 23:501 S '52

CYCLOVERSION process. See Gasoline—Manufacture

CYLINDERS

Critical buckling shear stresses in thin cylinders; reference book sheet. J. J. Eden. diags Product Eng 24:225, 227 Ap '53

Critical stress of ring-stiffened cylinders in torsion. M. Stein and others. bibliog diags U S Nat Advisory Com for Aeronautics 1950:693-9 '51

Current flow in cylinders. W. R. Smythe. bibliog diags J Ap Phys 24:70-3 Ja '53

Deformation and fracturing of thick-walled steel cylinders under explosive attack. J. Pearson and J. S. Rinehart. bibliog il diag J Ap Phys 23:434-41 Ap '52

Designing cylinders and struts for maximum strength. B. Saelman. il diags Machine Design 25:133-8 Ag '53

Estimating the weight of joints in cylindrical vessels; reference book sheet. V. Tatarinov. diags Product Eng 23:213, 215 D '52

Flexural vibrations of thin cylinders. R. N. Arnold and G. B. Warburton. diags Inst Mech Eng Proc (A) 167 no 1:62-74; Discussion. 74-80 '53

Forced convection heat transfer from horizontal cylinders in a rarefied gas. F. M. Sauer and R. M. Drake, jr. bibliog J Aeronautical Sci 20:175-80+ Mr '53

Influence of residual stress on behavior of thick-wall closed-end cylinders. J. H. Faupel and A. R. Furbeck. bibliog il diags A S M E Trans 75:345-54 Ap '53

Local heat-transfer coefficients on the surface of an elliptical cylinder in a high-speed air stream. R. A. Seban and R. M. Drake. bibliog il A S M E Trans 75:235-9; Discussion. 239-40 F '53

Method for off-center drilling of cylindrical parts. A. E. Rylander. diags Mach 59:205 My '53

Stress and deflections in axially loaded cylindrical containers. D. P. Timo. il Machine Design 24:169-72 N '52

Stress distribution and strength condition of two rolling cylinders pressed together. E. I. Radzimovsky. diags Ill U Eng Exp Sta Bul 408:1-40 '53 (pa 50c)

CYLINDERS (engines, etc.)

Engine cylinder pressure measurements. J. D. McCullough. il diags S A E J 61:72-7 Jl '53

Plated hard chrome for i.c. engine cylinders; abstract. H. Wiegand and G. Schaeffeler. Metal Finishing 51:112 Je '53

Lining

Cylinder liner design. il diags Automobile Eng 43:373-8, 427-39 S-O '53

GM 71 cylinder liner and piston fits. il diags Diesel Power 31:66-7 Mr '53

How Southern reconditions Diesel cylinder liners. il Ry Mech & Elec Eng 126:70-1 O '52

Manufacture

Cylinder blocks machined on transfer unit. il Automotive Ind 107:74 N 1 '52

Testing

Full-scale fatigue testing of compressor cylinders. T. O. Kuivinen. il diags A S M E Trans 75:467-72 Ap '53; Same. Pet Eng (Ref annual) 25:D5-8+ Jl 15 '53

Wear

Cylinder liner design; wear and its causes. il diags Automobile Eng 43:373-8 S '53

Cylinder wear; how to measure it, how to reduce it. J. F. Kunc, jr. and others. il S A E J 60:44-50 D '52

Mechanism of wear. W. E. Jominy. diags S A E J 61:23-5 Ag '53

Role of corrosion in engine wear. J. C. Geniesse and H. R. Jackson. bibliog Pet Processing 7:1620-2 N '52

CYMENE

High pressure thermal reactions of propyl- and isopropylbenzene, *p*-cymene and *s*-butylbenzene; isomerization of alkyl groups. V. N. Ipatieff and others. Am Chem Soc J 75:3323-6 Jl 20 '53

CYSTEINE

Addition reactions of quinones; the reaction of cysteine and thiourea and its derivatives with some quinones. H. Burton and S. B. David. Chem Soc J p2193-6 Je '52

Effect of ultraviolet radiation on sulfhydryl and disulfide containing amino acids. K. Schocken. bibliog Science 116:544-6 N 14 '52

Preparation of peptides containing cysteine. L. C. King and F. H. Suydam. bibliog Am Chem Soc J 74:5499-501 N 5 '52

Raney nickel desulphurisation of *S*-benzyl-*N*-phthaloyl-L-cysteine. D. Fleš and K. Balenović. Chem Soc J p2447 Je '52

Stress relaxation of fibrous materials; kinetics of the reduction of wool keratin by cysteine. E. T. Kubu and D. J. Montgomery. bibliog Textile Res J 22:778-82 D '52

CYSTINE

Effect of ultraviolet radiation on sulfhydryl and disulfide containing amino acids. K. Schocken. bibliog Science 116:544-6 N 14 '52

Electron microscopic and other studies on a copper-cystine complex. H. Kahler, B. L. Lloyd, jr. and M. Eden. bibliog il J Phys Chem 56:768-70 Je '52

New synthesis of cystine and lanthionine. R. O. Atkinson, F. Poppelsdorf and G. Williams. Chem Soc J p580-1 F '53

Structure of N,N′-diglycyl-L-cystine dihydrate. H. L. Yakel, jr. and E. W. Hughes. Am Chem Soc J 74:6302-3 D 20 '52

CYTIDINE

Investigation of polymorphism and isomerism in cytidine phosphates. R. J. C. Harris and others. Chem Soc J p489-94 F '53

CYTIDINE phosphates

Nucleotides; the action of ribonuclease on the 2′ : 3′-phosphates of uridine and cytidine. D. M. Brown, C. A. Dekker and A. R. Todd. Chem Soc J p2715-21 Jl '52

Nucleotides; the preparation of cyclic 2′ : 3′-phosphates of adenosine, cytidine, and uridine. D. M. Brown, D. I. Magrath and A. R. Todd. Chem Soc J p2708-14 Jl '52

CYTIDYLIC acid
Identification of cytidylic acids *a* and *b*. L. F. Cavalieri. bibliog Am Chem Soc J 74:5804 N 20 '52

Analysis

Identification of cytidylic acids *a* and *b* by spectrophotometric methods. J. J. Fox, L. F. Cavalieri and N. Chang. bibliog Am Chem Soc J 75:4315-17 S 5 '53

CYTOLOGY. See Cells

CYTOSINE
Cytosine deaminase of yeast. J. Kream and E. Chargaff. bibliog Am Chem Soc J 74:5157-60 O 20 '52
Pyrimidines; the synthesis of 5-amino-4-hydroxypyrimidine, a new isomer of cytosine. M. P. V. Boarland and J. F. W. McOmie. Chem Soc J p4942-5 D '52

CZECHOSLOVAKIA
See also
Munitions industry—Czechoslovakia
Trade unions—Czechoslovakia

Economic conditions

Soviets tighten Czech leash. Bsns W p 154+ Je 13 '53

Politics and government

New bosses. Economist 167:14 Ap 4 '53
What next? Economist 166:810-11 Mr 21 '53

D

D-PROCESS. See Foundry practice

DDT
D.D.T. spells death to the budworm. il Can Chem Process 37:60-1 Je 20 '53
Greater DDT exports possible; production capacity high. For Comm W 48:31 N 17 '52
Hold and fit theories hold for DDT structure-activity; abstract. F. A. Gunther and others. Chem & Eng N 31:1283-4 Mr 30 '53
Household insecticides, their role in public health. J. M. Andrews. bibliog Soap & San Chem 28:135-8+ S '52
Insects v. insecticides. R. L. Metcalf. il Sci Am 187:21-5 O '52
Microanatomical study of DDT-moribund anopheles quadrimaculatus Say. J. C. Jones. bibliog Science 117:452-3 Ap 24 '53
Synergistic actions of carbon dioxide with DDT in the central nervous system. G. H. Pollock and R. I. H. Wang. bibliog Science 117:596-7 My 29 '53
Synthesis of tertiary carbon^{14}-labeled DDT. D. R. Buhler, C. H. Wang and B. E. Christensen. Am Chem Soc J 75:4336 S 5 '53
Urge DDT export decontrol. Soap & San Chem 28:137 N '52

Physiological effect

Structure and toxicity of DDT insecticides. E. F. Rogers and others. bibliog Am Chem Soc J 75:2991-9 Je 20 '53

DDT, Analogs of
Insecticidal activity and chemical constitution; a new synthetic route to methyl analogues of DDT. E. J. Skerrett and D. Woodcock. Chem Soc J p2804-6 Jl '52
Some ester analogs of DDT. W. T. Smith, jr. and J. W. Ryan. bibliog Am Chem Soc J 75:749-50 F 5 '53

DACRON
Dacron sizing formulations. Mod Textiles Mag 34:72 O '53
Development of terylene. J. R. Whinfield. Textile Res J 23:289-93 My '53
Modern Textiles handbook; Dacron. L. Mauer and H. Wechsler. il diag Mod Textiles Mag 34:82-3+ Mr '53
Preliminary study of the sizing of staple Orlon and Dacron. W. C. Wylie, jr. Am Dyestuff Rep 42:11-13 Ja 5 '53
Printing acrylic and polyester fibers. Am Dyestuff Rep 42:99-107 F 16 '53
Progress in polyesters. G. Boyo. il Mod Textiles Mag 34:48 S '53
Progress report on terylene. il Chem Age (Lond) 67:533-5 O 18 '52
Terephthalic acid for the terylene process. P. W. Sherwood. Can Chem Process 37:56+ Je 20 '53
Terylene, new British fibre for Canada. il Can Chem Process 37:60 Ap '53
Terylene polyester film to be released. Chem Age (Lond) 68:8 Ja 3 '53
Yarn characteristics simplify mill problems. D. M. Thornton. Mod Textiles Mag 34:34-5+ Jl '53; Same. Textile World 103:128-9+ Jl '53

Dyeing

See Dyes and dyeing—Dacron

DAHLIAS
Flavonoid glycosides of dahlia variabilis; general introduction; cyanidin, apigenin, and luteolin glycosides from the variety dandy. C. G. Nordström and T. Swain. Chem Soc J p2764-73 S '53
Isolation of 2' : 4 : 4'-trihydroxychalkone from yellow varieties of dahlia variabilis. E. C. Bate-Smith and T. Swain. Chem Soc J p2185-7 Jl '53

DAILY compass (newspaper)
Liberal newspaper. Fortune 46:107 D '52

DAILY mirror newspapers, limited
Statement by the chairman. C. H. King. Economist 167:697-8 Je 6 '53

DAIRIES

Air conditioning

Optimum cheesemaking assured by air units; Lake to lake dairy cooperative. T. Torgerson. il Food Eng 25:129+ My '53

Cleaning

New cleaners at dairy show. Soap & San Chem 28:59+ N '52
Sprays put zip in cleaning. R. Fiske and K. C. Tucker. il Food Eng 25:52-3+ Je '53

Electric equipment

Electricity in the dairy industry; abstract. R. H. Cotton. Inst E E Proc 100 pt 1:80 Mr '53
Large dairy farm; National coal board's East Moor dairy farm. il Elec R (Lond) 152:877-8 Ap 17 '53
Modern dairy. il Elec R (Lond) 152:294-6 F 6 '53

Equipment

Case-handling hurdles cleared by automation; Arden farms co. J. Shinn. il plan Food Eng 25:67-70+ Jl '53
Dairymen view latest equipment at Dairy industry exposition; illustrations with text. Food Eng 24:80-3 N '52
Look inside your local dairy for remodeling business; trend to permanent welded lines. il Dom Eng 181:120-1+ Ja '53
Up receiving-room efficiency. C. V. Hall. il Food Eng 25:66-8+ Ap '53

DAIRY buildings. See Dairies

DAIRY farms
Farm program pays off in better community relations; Avondale mills. M. B. Andrews. il Textile World 103:143+ Mr '53

DAIRY products
APHA conference report; standard methods for examination of dairy products. Pub Health Rep 68:243-4 F '53
Dairy products improved by ion exchange. O. F. Garrett. diag Food Eng 25:61+ Jl '53
Hearings set on dairy and related products. For Comm W 49:3 Ap 20 '53
Import quotas imposed on certain dairy products, relaxed on others. For Comm W 49:23 Ja 5 '53
President orders revised import controls on dairy, other products. For Comm W 49:24 Je 15 '53
See also
Butter
Casein
Cheese
Milk

Advertising

Brown's cow cuts local tv costs. il Sales Management 69:91 N 20 '52

DAIRY waste
Biochemical oxidation of dairy wastes. N. Porges and others. bibliog Sewage & Ind Wastes 24:874-81, 1144-9; 25:201-6 Jl, S '52, F '53; Discussion. 25:207-9 F '53

DAIRY waste—*Continued*
Disposal of food processing wastes by spray irrigation. N. H. Sanborn. il Sewage & Ind Wastes 25:1034-43 S '53
Interpretation of the b.o.d. test in terms of endogenous respiration of bacteria. S. R. Hoover and others. bibliog Sewage & Ind Wastes 25:1163-73 O '53
Milk waste treatment by activated sludge. P. M. Thayer. flow diag il plans Water & Sewage Works 100:34-7 Ja '53
Recent developments in design of small milk waste disposal plants. J. P. Horton and H. A. Trebler. flow sheet diag Sewage & Ind Wastes 25:941-9 Ag '53
Reduction of milk waste in dairy plants. V. Schwarzkopf. Sewage & Ind Wastes 24:1489-94 D '52
Treatment and disposal of milk wastes. S. I. Zack. Sewage & Ind Wastes 25:177-87 F '53
Treatment of milk waste. N. D. Woolings. flow diag plans diags Munic Util 90:25-8+ D '52

Analysis

Determination of lactose in dairy wastes. E. Hindin. bibliog Sewage & Ind Wastes 25:188-90 F '53

DAIRYING
North American dairying; abstract and discussion. A. W. Marsden. Chem & Ind p 1098-9 N 8 '52
They can't brush off customer complaints; Christopher Dairy's policy. Sales Management 69:82 O 1 '52
War of the ices; dairymen take aim at ice-cream-like vegetable fat desserts. Bsns W p50-2 Ja 31 '53
See also
Milk plants

DAITCH crystal dairies, inc.
Security I like best. I. Henner. Comm & Fin Chr 177:2626 Je 18 '53

DAKIN, Henry Drysdale, 1880-1952
Sketch. H. T. Clarke. Chem Soc J p3319-24 Ag '52

DAKIN reaction
Anomalous result of an attempted Dakin reaction. D. H. Rosenblatt and R. W. Rosenthal. bibliog Am Chem Soc J 75:4607-8 S 20 '53

DALLAS
Dallas' industrial district grows on former flood lands. il Eng N 149:47-8+ O 23 '52
Dallas turns out for New York Met. il Bsns W p30-2 My 16 '53

Sewerage

Plastic plates solve sewage plant corrosion problem. C. V. Ing, jr. il Water & Sewage Works 100:40-1 Ja '53

Water supply

Critical water shortage threatens Texas city. Eng N 149:51+ N 6 '52
Dallas looks to new water sources as present supply is termed critical. map Eng N 150:46+ Mr 5 '53
Dallas takes more steps to alleviate water lack. Eng N 149:51 D 4 '52
High and dry. Bsns W p 158 N 22 '52

DAMAGES
Compensation for personal injuries. C. F. Mayson. Engineering 175:660-1 My 22 '53
See also
Employers' liability
Negligence
Personal injuries

DAMPERS
That incinerator! il Power Eng 57:81 Jl '53

DAMPING of vibration. See **Vibration**

DAMPNESS in buildings
You simply must supply air for combustion. S. R. Lewis. Heating-Piping 25:106 My '53

DAMS
Aggregate production for Canadian dams; Kenney dam on Nechako river. il Rock Prod 55:120-1 D '52
Big equipment moves in on Palisades dam, Reclamation bureau's biggest earth fill. il Constr Methods 35:96-7+ Mr '53
Big Tom project nearing completion. L. A. Luther. il map Comp Air Mag 57:339-43 D '52
Building an earthfill dam in the tropics; Presidente Aleman dam. il maps Eng N 149:34-5 O 9 '52
Ceremonies at Garrison, Detroit dams underline new administration policy. il Eng N 150:26-7 Je 18 '53
Compaction of a rock fill dam. Engineer 195:455 Mr 27 '53
Conemaugh dam will restrain floods. il Eng N 149:28 O 30 '52
Construction of compacted earth-fill dam in New Brunswick. J. V. Daniliauskas and D. F. Coates. il plan diags Roads & Eng Constr 91:122-5+ Ag '53
Construction starts on Cherry Valley dam; newest unit in Hetch Hetchy system. M. L. Dickinson. map plan diag Civil Eng 23:308-10 My '53
Dam construction races to reduce future Missouri River flood threats. il Eng N 149:27-8 N 6 '52
Dam dedicated on the Colorado river; Davis Dam power and water control structure. map Eng N 149:28 D 11 '52
Dam harnesses the Roanoke. il Eng N 149:28 O 9 '52
Dam modifications checked by hydraulic models. E. S. Harrison and C. E. Kindsvater. il maps plan diags Am Soc C E Proc 79 [no 184]:1-17 Ap '53
Dams and the rock products industries. W. B. Lenhart. il Rock Prod 55:98-102+ D '52
Dams in Greece. map Eng N 150:90+ My 14 '53
Destruction of our cultural heritage. M. E. Tong, jr. Science 116:488 O 31 '52
Divert stream over dam under construction; Blakely Mountain dam. J. R. Stephens. il diags Constr Methods 35:92+ S '53
Double dam-dedication in Oklahoma. il Eng N 150:27 Je 18 '53
Dozer blocks old road for new dam as shovel, trucks, scraper supply fill; Lexington dam. il Constr Methods 35:119-20 Mr '53
Effect of rock content and placement density on consolidation and related pore pressure in embankment construction. H. J. Gibbs. il diags Am Soc T M Proc 50:1343-60; Discussion. 1361-3 '50
Flood-control plan at Bagnell dam meets opposition from FPC. Eng N 150:27 F 5 '53
Garrison Dam event has minor crisis. il Eng N 150:27 Ap 23 '53
Garrison Dam project, North Dakota. Engineer 194:200 Ag 8 '52
Garrison Dam scheme; big Ferranti contract for plant. diags Electrician 149:397-8 Ag 8 '52
Ground broken for two major dams; Table Rock dam, Tuttle Creek dam. Eng N 149:25 O 16 '52
Here's one way to build a rock-fill dam. H. T. Perez. il map diag Constr Methods 35:52-8 Je '53
Isabella dam in California's Kern valley. P. Sturtevant and G. Sturtevant. il Explosives Eng 30:186-9+ N '52
Joint plan for Priest rapids. Elec World News ed 139:8 F 16 '53
Kenny rock-fill dam. il Constr Methods 34:50-4 O '52
Kern River storage dam completed. il Eng N 150:39 My 28 '53
Local materials in high Andes prove suitable for rolled-fill dam. A. E. Cummings and R. B. Peck. il map diags Civil Eng 23:293-6 My '53
Lower Bhavani dam, Madras. R. D. Rajan. il map diags Engineering 174:777-80 D 19 '53
Missouri Basin groups oppose halting Oahe and Tuttle Creek dam projects. Eng N 150:23 Ap 30 '53
Missouri river corralled at Garrison dam. il maps Constr Methods 35:149+ Je '53
Oahe is target for flanking attack. il Eng N 150:27 Ja 8 '53
Pneumatic rollers cut costs and time on earthfill dams. G. E. Bertram. il diag Eng N 150:30-2 Ap 2 '53
Relief well systems for dams and levees. W. J. Turnbull and C. I. Mansur. il diags Am Soc C E Proc 79 [no 192]:1-20 My '53
Renaissance in rockfill dams. L. L. Wise. il diags Eng N 150:35-8 Ja 22 '53

DAMS—*Continued*

Side-cutting Euclid loader speeds Palisades Dam fill. L. I. Wise. il Constr Methods 35:50-3 O '53

Sluicing pumps wash fines out of fill, create impervious core in earthfill dam. il Constr Methods 35:62-4 Ag '53

TVA dam construction is bustling. il Eng N 150:24 Ja 1 '53

Three dams instead of five; Idaho power co. files revision of plan for Hell's Canyon site. map Elec World News ed 138:8 D 8 '52

Tungabhadra irrigation and power scheme. R. D. Rajan. il map diags Engineering 175: 161-3 F 6 '53

Water company defends Perkiomen dam site. Eng N 150:52-3 Ja 22 '53

See also

Dikes (engineering)
Hydroelectric plants
Reservoirs

Cost

Big Carson dam, California; unit prices. Eng N 150:92 Je 11 '53

Earth-fill dam, South Dakota; unit prices. Eng N 150:56 Ja 1 '53

Design

Analysis of arch dams of variable thickness. W. A. Perkins. diags Am Soc C E Proc 78 [no 129]:1-29 My '52; Discussion. 79 [no D-129]:1-17 My '53

Construction economy is basic in reclamation design. L. N. McClellan. il Civil Eng 22:854-7 O '52

Design of side walls in chutes and spillways. D. B. Gumensky. il diags Am Soc C E Proc 79 [no 75]:1-7 F '53

Progress in earth-dam design and construction in the United States. T. A. Middlebrooks. bibliog(58 titles) il diags Civil Eng 22:702-10 S '52; Same cond. Roads & Eng Constr 91:156+ Mr '53

Failure

Harrogate dam failure. D. G. Davies. Engineer 194:795-6 D 12 '52

Hydraulic resistance effect upon the dam-break functions. R. F. Dressler. bibliog diag J Res Nat Bur Stand 49:217-25 S '52

Foundations

Final foundation treatment at Hoover dam. A. W. Simonds. il plan diags Am Soc C E Proc 77[no 109]:1-22 D '51; Discussion. 78[no D-109]:1-13 O '52

Gunite blanket improves foundation grouting for earth dams. J. B. Hays. il diag Civil Eng 23:246-7 Ap '53

Ice pressure

Ice pressure against dams; experimental investigations by the Bureau of reclamation. G. E. Monfore. il diags Am Soc C E Proc 78 [no 162]:1-13 D '52

Ice pressure against dams; some investigations in Canada. A. D. Hogg. il diag Am Soc C E Proc 78 [no 161]:1-4 D '52

Ice pressure against dams; studies of the effects of temperature variations. B. Löfquist. il diags Am Soc C E Proc 78 [no 160]:1-12 D '52

DAMS, Concrete

Birmingham waterworks; the Claerwen dam. il plan diags Engineering 174:530-1, 559-61, pl 48 O 24-31 '52

Chief Joseph arises; two joint ventures push final phases of U.S. engineers dam on Columbia. il Eng N 150:40-1+ Je 18 '53

Concrete placed off trestle at Folsom. il Constr Methods 35:50-5 Mr '53

Cooling of aggregate for Vaitarna dam. Engineer 195:281 F 20 '53

Final foundation treatment at Hoover dam. A. W. Simonds. il plan diags Am Soc C E Proc 77[no 109]:1-22 D '51; Discussion. 78[no D-109]:1-13 O '52

Gravity dam design. B. F. Jakobsen. diags Am Concrete Inst J 25:94-5 S '53

Hungry Horse dam. Comp Air Mag 57:318 N '52; Eng N 149:24 O 2 '52

Opening of the Claerwen dam. il Engineer 194:591 O 31 '52

Philpott dam construction completed. il Eng N 150:27 Mr 5 '53

Processing aggregates for Folsom dam. W. B. Lenhart. flow sheet il diag Rock Prod 56:72-7+ Mr '53

Supersonics test concrete structures. J. R. Leslie. il diag Elec World 139:79 My 4 '53

Third-stage diversion at Canyon Ferry dam. il Eng N 149:42-3 O 30 '52

Tignes dam in French Alps constructed with American equipment. P. A. Montagné. il map plan diags Civil Eng 22:923-6 N '52

Water power in the Italian Alps. il plan diags Engineer 195:482-5 Ap 3 '53

Water tops 600-ft dam built in 52 days. F. L. Flood, jr. il Constr Methods 35:70-1+ Ja '53

Repair

Grouting stops Arizona dam leakage. il Eng N 150:27 Ap 30 '53

Repairing concrete structures; rebuilding of powerhouse dam of the Iowa-Illinois gas & electric co. H. N. Joselyn. il diags Power Eng 57:90-1 Jl '53

Testing

Development of stresses in Shasta dam. J. M. Raphael. bibliog il plan diags Am Soc C E Proc 78 [no 117]:1-21 F '52; Discussion. 79 [no D-117]:1-12 Ja '53

DANCING

Saturday night at the Palais. Economist 166:401-2 F 14 '53

D'ANGELO, Horace

Pulling tractors out of a hole. Bsns W p76+ Ja 17 '53

DANIELS, Farrington, 1889-

ACS president for 1953. por(cover) Chem & Eng N 31:54 Ja 5 '53

DANIELS, Josephus, 1862-1948

Josephus Daniels and the naval oil reserves. J. L. Bates. por U S Naval Inst Proc 79: 170-9 F '53

DANSE, L. A.

Sketch. A. H. Allen. por Metal Prog 62:86-8 N '52

DAPHNANDRA

Alkaloids of daphnandra species; an examination of the alkaloidal content of D. micrantha and of D. tenuipes; isolation of some minor daphnandra alkaloids. I. R. C. Bick, W. I. Taylor and A. R. Todd. Chem Soc J p695-700 F '53

Alkaloids of daphnandra species; observations on repanduline. I. R. C. Bick and others. Chem Soc J p692-5 F '53

DAPHNIA

Toxicity of combinations of certain inorganic compounds to daphnia magna Straus. L. Freeman. and I. Fowler. bibliog Sewage & Ind Wastes 25:1191-5 O '53

DARAPRIM

New malaria drug. Oil Paint & Drug Rep 163:38 Mr 9 '53

DARDI, Virgil David

Businessmen in the news. por Fortune 47:49 My '53

DARK adaptation. See Eye—Accommodation and refraction

DARLING, Maus Vedder

Surplus commercial candor. Fortune 46:215 D '52

DARWIN, Charles Robert, 1809-1882

Darwin's finches. D. Lack. Sci Am 188:66-8+ Ap '53

DATA storage and recording. See Records, Preservation of

DATES (fruit)

Iranian dried date output is higher. For Comm W 48:14 D 29 '52

Iraq date crop normal; exports drop seven percent. For Comm W 49:14 Mr 2 '53

Iraqi date production stable; market outlook good. For Comm W 48:14 D 29 '52

DAVENPORT, James Franklin

Davenport may be last head of Depa. por Elec World News ed 138:7 D 8 '52

DAVID, Donald Kirk, 1896-

Portrait. Dun's R 60:126 O '52

DAVIDSON, William Lee

AEC bids business join the feast; Office of industrial development. por Bsns W p 140+ D 20 '52

DAVIES, Ralph Kenneth, 1897-

Businessmen in the news. por Fortune 47:49 My '53

da VINCI, Leonardo. See Leonardo da Vinci

DAVIS, Clyde Brion, 1894-
Author meets businessman. por Fortune 46:111+ D '52

DAVIS, W. E. 1878-
Half-century club; careers epitomizing contributions to coal-mining progress. por (p 101) Coal Age 58:102-3 Ja '53

DAVISON chemical corporation
Common stock offered. Comm & Fin Chr 176:2161 D 8 '52

DAWSON, Francis Murray, 1889-
Sketch. por(p961) Civil Eng 22:962 N '52

DAY, William L. 1907-
Businessmen in the news. por Fortune 46:50 N '52

DAY nurseries
Economics of baby-minding. Economist 167:12-13 Ap 4 '53

DAY nurseries, Factory
Absenteeism reduced when industry takes up baby sitting; J. H. Swisher & son. il Mill & Factory 52:103 Je '53

DAYLIGHT
Attainment of quality daylighting in school classrooms. R. A. Boyd. bibliog il Illum Eng 48:15-20; Discussion. 20-2 Ja '53
Controlling and redirecting daylight by means of louvers. H. S. Bull. il Illum Eng 48:25-30; Discussion. 30-2 Ja '53
Daylighting performance of a pre-tested school design. C. L. Crouch. diags Illum Eng 48:343-5 Je '53
Daylighting with a new kind of functional skylight; abstract. R. A. Boyd and J. L. Reid. diags Illum Eng 48:472-3 S '53
Daylighting with plastic domes; abstract. B. F. Greene. il plan Illum Eng 48:473-4 S '53
Dual light source in machine shop. G. P. Leyes. il Illum Eng 48:23-4 Ja '53
Effect of daylight on the periodate oxidation of β-methyl glucoside, β-methyl cellobioside, and cellulose. F. S. H. Head. bibliog Textile Inst J Trans 44:T209-23 My '53
Filtered daylight; glass blocks' gift to building. il Bsns W p 152-4+ Mr 7 '53
Importance of ground reflection in daylighting. J. W. Griffith and others. Illum Eng 48:35-6; Discussion. 37-8 Ja '53
Lumen method of daylighting design. R. L. Biesele, jr. and others. bibliog diag Illum Eng 48:39-45 Ja '53; Abstract. Eng N 150:41-2 Ja 29 '53; Discussion. Illum Eng 48:45-8, 91 Ja-F '53
New daylighting survey technique utilizing a photographic recorder and physical brightness meters. W. H. Billhartz and others. bibliog il diags Illum Eng 48:6-10; Discussion. 10-12 Ja '53
See also
Skylights

DAYLIGHT, Artificial
Daylight on a stained glass window; Beverly vista community church. R. E. Bevan. il Illum Eng 47:588 N '52

DAYTON power and light company
Reports higher earnings. Comm & Fin Chr 177:939 Mr 2 '53

DEAF
Laboratories and clinics, Central institute for the deaf, St Louis. il plans diags Arch Rec 112:164-9 O '52

DEAFNESS
Field study of occupational deafness; abstract. C. M. Johnston. Nat Safety N 67:56 Ap '53
Perception of speech sounds by deafened persons. H. Fletcher. Acoustical Soc Am J 24:490-7 S '52
Tentative estimate of a hearing damage risk criterion for steady-state noise. H. C. Hardy. Acoustical Soc Am J 24:756-61 N '52
Unsolved problems relating to hearing loss in industry. G. D. Hoople. Acoustical Soc Am J 24:765-6 N '52
See also
Ear—Injuries
Hearing

DEALER helps
Are these ten sales ideas rusty from disuse? R. B. Cox. Sales Management 69:140-1 O 15 '52
Curious dealers seek Dearborn's four one-thousand-dollar ideas. C. N. Hinds. Sales Management 69:40-2 O 1 '52
Department openings are springboard for series of new in-store promotions. L. F. Thomann. il Ptr Ink 242:42-3 F 27 '53
Distributor shows retailers how to become better merchants; Bass merchandising and equipment fair. E. J. Dever, jr. il Ptr Ink 241:68-70 N 7 '52
Does it pay manufacturers to train retail salespeople? R. E. Taylor. Sales Management 69:94+ O 15 '52
Esso moves to help its distributors operate facilities more efficiently. Nat Pet N 45:23 Ap 29 '53
15-point check list for dealer helps. H. P. Abrahams. Mod Ind 25:68 Ja '53
How a small company lives, and grows, in the hazardous garment industry; Tabak sports wear. J. H. Collins. il Sales Management 70:94+ Mr 1 '53
Project; manufacturer goes all-out to help dealers sell remodeling; Minneapolis-Honeywell regulator company. il Dom Eng 182:79+ Ag '53
Refrigerators and pancakes, dishwashers and pearls. il Sales Management 70:64 Mr 15 '53
Timken arms dealers with a manpower kit; manuals on locating, selecting, paying, supervising sales recruits. A. F. Mahan, jr. Sales Management 69:97-8 O 1 '52
25 big stores join Pleetway in sleep clinic promotions. il Sales Management 70:88-9 Ja 15 '53
United Wallpaper makes it easier for the lady to buy. il Sales Management 70:92+ F 15 '53
See also
Advertising—Dealer helps
Advertising, Point-of-sale
Models, Miniature

DEALER relations
Awards to veteran dealers testify to company's dependence on all dealers. il Ptr Ink 242:62 Ja 9 '53
Dealer forums help increase sales 25 per cent; Radio Merchandise Sales. N. Keine. il Ptr Ink 242:78+ F 20 '53
Dealer training; selling the "Jet 99" vacuum cleaner. il Mod Ind 24:54-5 N '52
Dealer's angle. J. W. Ferry. Am Gas Assn Mo 35:10-11+ My '53
Helping dealers modernize; Chevrolet motor division. D. G. Baird. il Am Bsns 23:20-1+ Ap '53
Hotpoint's president talks to 10,000 dealers; four-minute recording; player carried by distributor salesmen. il Sales Management 70:102 Mr 15 '53
Perfection proves merit of if you can't lick 'em, join 'em; changing from oil to gas and electric ranges. L. Bushfield. il Sales Management 69:82+ N 1 '52
Teaching liquor retailers how to sell; Hiram Walker's merchandising festival. il Bsns W p54-6+ N 29 '52
When dealers ask what is net to me? Hunter Douglas salesmen sales portfolio. Sales Management 69:87 N 1 '52
See also
Electric utilities—Dealer relations
Gas companies—Dealer relations
Exclusive agencies

DEALERS' contests. See Sales contests, Dealers'

DEALKYLATION. See Alkyl group

DEAMINASES
Cytosine deaminase of yeast. J. Kream and E. Chargaff. bibliog Am Chem Soc J 74:5157-60 O 20 '52

DEAMINATION
Convenient deamination of β-dialkylamino ketones. E. M. Schultz and J. B. Bicking. bibliog Am Chem Soc J 75:1128-9 Mr 5 '53

DEAMINOCOLCHINIC acid
Synthesis of deaminocolchinic acid anhydride. J. Koo. bibliog Am Chem Soc J 75:720-3 F 5 '53

DEAN, Hugh, 1888-
Portrait. Fortune 47:94 Mr '53

DEARBORN, Michigan

Streets

Experiences with asphalt emulsion. H. A. Hoxie. il Roads & Sts 96:131+ My '53

DEARBORN motors corporation
Ford buys assets. Bsns W p32 Je 6 '53

DEATH, Causes of. See Mortality

DEATH penalty. See Capital punishment

DEATH rate. See Mortality—Statistics

DEATH tax. See Inheritance tax

DE BEERS consolidated mines, limited
Statement by the chairman. E. Oppenheimer. Economist 167:782-3 Je 13 '53

DEBROMINATION
Debromination of inositol bromohydrins; synthesis of conduritol-*B*, *scyllo*quercitol, and D,L-*vibo*quercitol. G. E. McCasland and E. C. Horswill. bibliog Am Chem Soc J 75:4020-6 Ag 20 '53
Stereochemistry of the debromination of vicinal dibromides by metals. W. H. Schubert and others. bibliog Am Chem Soc J 74:4590-2 S 20 '52

DEBT
Buying-on-time boom. Burroughs Clearing House 37:3 Mr '53
Consumer debt; too little or too much? B. A. Wapensky. Comm & Fin Chr 178:12 Jl 2 '53
Danger ahead! despite increase in savings by lower income groups an inverted pyramid exists in growth of private debt. W. W. Townsend. Comm & Fin Chr 177:786 F 19 '53
Debt changes in 1951; with tables, 1945-51. A. E. Turner. Survey of Cur Bsns 32:10-15 S '52
Debt warning raised; American institute of management report. Burroughs Clearing House 37:3-5 Jl '53
Debtor and the creditor. Nat City Bank p76-9 Jl '53
Debts get bigger but so does muscle to carry them. Bsns W p 166-8+ D 6 '52
High volume of consumer debt and other factors invite caution now. East Underw 54:26 Ja 9 '53
How high can corporate debt go? Bsns W p58+ Je 20 '53
Indebtedness of individuals; consumer credit; residential mortgage debt. L. F. McHugh. Survey of Cur Bsns 33:12-18 Ap '53
Institute cautions against corporate debt. Pub Util 51:859-60 Je 18 '53
1952 survey of consumer finances; income, selected investments, and short-term debt of consumers; with technical note and supplementary tables. Fed Res Bul 38:974-1001 S '52
Private debt not at dangerous level. M. Nadler. Comm & Fin Chr 177:1341 Mr 26 '53; Same. Burroughs Clearing House 37:10-11 Ap '53
Progress report on credit inflation; with data on nonfederal debt for selected years, 1916-1951. M. Palyi. Comm & Fin Chr 176:1721+ N 6 '52
Public and private debt totals $640 billion, Institute of life insurance estimates. Comm & Fin Chr 177:2764 Je 25 '53
Public and private debt vs. savings; Institute of life insurance report; with table of liquid assets and debts, 1939-51. Comm & Fin Chr 176:1646 O 30 '52
See also
Credit

DEBTOR and creditor
Hazard of the false affidavit. C. B. Everberg. Credit & Fin Management 55:15 Ja '53
See also
Limitation of actions
Suretyship and guaranty

DEBTS, Public
Public and private debt vs. savings; Institute of life insurance report; with table of liquid assets and debts, 1939-51. Comm & Fin Chr 176:1646 O 30 '52
See also
Bonds, Government
Municipal finance

Brazil

Brazil's arrears. Economist 167:682+ Je 6 '53

Ecuador

Ecuador offers to settle. Economist 167:686 Je 6 '53

Germany

German bonds; debt settlement plan keys investment attraction. L. Tanzer. Barron's 33:11 Ja 5 '53
Last stage for German debts. Economist 166:664 Mr 7 '53
West Germany agrees on debt settlements. For Comm W 49:6 Mr 30 '53

Great Britain

Seasonal credit contraction. Economist 166:654-5 Mr 7 '53

Japan

Japan settles its debts. Economist 165:48 O 4 '52

United States

Debt changes in 1951; with tables, 1945-51. A. E. Turner. Survey of Cur Bsns 32:10-15 S '52
Debtor and the creditor. Nat City Bank p76-9 Jl '53
Debts get bigger but so does muscle to carry them. Bsns W p 166-8+ D 6 '52
Demonetizing the federal debt. W. E. Spahr. Comm & Fin Chr 177:1955+ My 7 '53
Federal debt; Humphrey's big headache. Bsns W p98-100 N 29 '52
56 economists fear further debt monetization in absence of redeemable dollar; members of Economists' national committee on monetary policy. Comm & Fin Chr 178:363 Jl 30 '53
National debt; Twentieth century fund report. Bsns W p 110-11 Ja 17 '53
Protecting the dollar. Nat City Bank p 135-8 D '52
Repair job needed on our government debt. T. L. Godey. Mag of Wall St 91:335-7 D 27 '52
Sound dollar and debt management. P. Bush. Comm & Fin Chr 178:101+ Jl 9 '53
Spreading the debt. J. Donoghue. Burroughs Clearing House 37:41-2 Mr '53
Treasury refunding prospects. Comm & Fin Chr 177:1224 Mr 19 '53
United States government debt, volume and kind of securities, 1940-1951; monthly 1952. Fed Res Bul 39:42 Ja '53 [cont monthly]
We must accept the national debt as a permanent fixture; role of banks. W. Patman. Comm & Fin Chr 176:1527+ O 23 '52
See also
Bonds, Government
—United States

DEBURRING. See Metal finishing

DEBYE-HÜCKEL theory
Solution of the Debye-Hückel equations for a polarized electrode. B. Breyer and F. Gutmann. bibliog J Chem Phys 21:1323-6 Ag '53

DECABORANE. See Boron hydrides

DECADIENOIC acid
Isomerisation of deca-2 : 4-dienoic acid in presence of alkali at 180°. A. Crossley and T. P. Hilditch. Chem Soc J p4613-15 D '52

DECAHYDRONAPHTHALENE. See Decalin

DECAHYDRONAPHTHOL
Infrared spectra of the isomeric 2-decalols and their acetates; the effects of stereochemical configuration. W. G. Dauben, E. Hoerger and N. K. Freeman. bibliog Am Chem Soc J 74:5206-8 O 20 '52

DECALCOMANIA
Decals automatically applied. il Mod Packaging 26:101-3+ D '52

DECALIN
Heat capacity of *cis*- and *trans*-decahydronaphthalene and the possible existence of a λ-region for the *cis* form at 50.1-50.5°. W. F. Seyer. bibliog Am Chem Soc J 75:616-21 F 5 '53
Refractive indices and molecular dispersion of *cis*- and *trans*-decahydronaphthalene. S. Mizuhara and W. F. Seyer. Am Chem Soc J 75:3274-5 Jl 5 '53

DECALIN hydroperoxide
Decomposition of decalin hydroperoxide; a kinetic study. C. F. H. Tipper. Chem Soc J p 1675-80 Je '53

DECALOL. See Decahydronaphthol

DECANE
cis- and *trans*-propenylbenzene and their azeotropes with *n*-decane. R. Y. Mixer and others. Am Chem Soc J 75:4094-6 Ag 20 '53
Isobaric heat capacities at bubble point; *cis*-2-butene, isopropylbenzene, and *n*-decane. W. G. Schlinger and B. H. Sage. bibliog Ind & Eng Chem 44:2454-6 O '52

DECAPENTAENE
1,3,5,7,9-Decapentaene and 1,3,5,7,9,11,13-tetradecaheptaene. A. D. Mebane. bibliog Am Chem Soc J 74:5227-9 O 20 '52

DECARBONYLATION. See Carbonyl group

DECARBOXYLATION. See Carboxyl group

DECAY of wood. See Wood—Decay

DECCA navigation system
Examination of some site and transmission path errors of the Decca navigator system when used over land. L. G. Reynolds. bibliog diags Inst E E Proc 100 pt 3:29-35 Ja '53
Navigation system extension. il map Engineer 194:262-3 Ag 22 '52

DECCA record company
Statement by the chairman. C. F. Entwistle. Economist 166:911 Mr 28 '53

DECCA records, inc.
Stock offering underwritten. Comm & Fin Chr 177:2567 Je 15 '53

DECEDENTS' estates. See Estates, Decedents'

DECELOSTAT, Aircraft
Automatic landing wheel braking. il Engineer 194:461-2 O 3 '52

DECENTRALIZATION of industry. See Industry—Decentralization

DECIMAL system
Decimal dimensioning saves time and reduces errors. G. E. Rowbotham. diags Tool Eng 30:63-4 Je '53
Dollars and sense in stock transactions; stock exchanges might streamline their operations by adopting decimal system for transactions. H. J. King. Comm & Fin Chr 177:1111 Mr 12 '53

DECISION making in business. See Business management

DECOLORIZATION
Percolation decolorization of a lubricating oil fraction by Fuller's earth. W. T. Granquist and H. J. Streich. bibliog Ind & Eng Chem 44:2898-903 D '52
TCP process offers these advantages. L. P. Evans and others. flow diag diags Pet Refiner 32:117-22 My '53; Same cond. Oil & Gas J 52:116-18+ Je 8 '53
See also
Carbon, Decolorizing
Glass—Decolorization

DECOMPOSITION
Acylarylnitrosamines; the rearrangement, decomposition, and deacylation of acylarylnitrosamines. D. H. Hey, J. Stuart-Webb and G. H. Williams. Chem Soc J p4657-65 D '52
Copper-catalyzed decomposition of diazoketones. P. Yates. bibliog Am Chem Soc J 74:5376-81 N 5 '52
Decomposition of arylthiolsulphonic acids; identification of thiolsulphonic and sulphonic acids as benzylthiuronium derivatives. F. Kurzer and J. R. Powell. Chem Soc J p3728-34 O '52
Decomposition of methanol-C^{14} under the influence of its own radiation. W. J. Skraba and others. J Chem Phys 21:1296 Jl '53
Decomposition of nitrate crystals by ionizing radiations. G. Hennig and others. bibliog J Chem Phys 21:664-8 Ap '53
Decomposition of nitrogen pentoxide in the presence of nitric oxide; effect of foreign gases. H. S. Johnston. bibliog Am Chem Soc J 75:1567-70 Ap 5 '53
Decomposition of nitrosyl disulfonate ion; the relation to the mechanisms of diazotization and deamination. J. C. M. Li and D. M. Ritter. bibliog Am Chem Soc J 75:3024-5 Je 20 '53
Decomposition of organic acids in the presence of lead tetraacetate. W. A. Mosher and C. L. Kehr. bibliog Am Chem Soc J 75:3172-6 Jl 5 '53
Decomposition of secondary alkyl chlorosulfites; solvent effects and mechanisms. C. E. Boozer and E. S. Lewis. bibliog Am Chem Soc J 75:3182-6 Jl 5 '53
Decomposition of sulphuric acid in town's gas flames. R. F. Littlejohn and G. Whittingham. diags Chem Soc J p3304-8 Ag '52
Decomposition of toluene-*p*-sulphonylhydrazones by alkali. W. R. Bamford and T. S. Stevens. Chem Soc J p4735-40 D '52
Effect of inert gases on unimolecular reactions, and possible cases of *cis*-addition. K. E. Howlett. bibliog Chem & Ind p 1175-6 N 29 '52
Effect of structure of diacyl peroxides on their radical-induced decomposition in vinyl monomers. W. Cooper. Chem Soc J p2408-15 Je '52
Effect of structure of the alkyl group on the rates of decomposition of alkyl substituted benzenediazonium salts. E. S. Lewis and E. B. Miller. bibliog Am Chem Soc J 75:429-32 Ja 20 '53
Effect of water on the decomposition of benzoyl peroxide. C. F. H. Tipper. Chem Soc J p2966-71 Ag '52
Fast electron and X-ray decomposition of the alkyl halides. R. H. Schuler and W. H. Hamill. bibliog diag Am Chem Soc J 74:6171-4 D 20 '52
Induced decomposition of acetaldehyde by radicals. R. K. Brinton and D. H. Volman. bibliog J Chem Phys 20:1053-4 Je '52
Kinetic salt effects on the decomposition of diacetone alcohol in solutions of tetraalkylammonium hydroxides. E. S. Halberstadt and J. E. Prue. Chem Soc J p2234-6 Je '52
Kinetics and mechanism of the acid-catalyzed decomposition of diazoacetone. C. E. McCauley and C. V. King. bibliog Am Chem Soc J 74:6221-5 D 20 '52
Kinetics of decomposition of nitric oxide. F. Kaufman and J. R. Kelso. bibliog J Chem Phys 21:751; Discussion. H. Wise and M. F. Frech. 752 Ap '53
Kinetics of decomposition of nitric oxide at elevated temperatures; the effect of reaction products and the mechanism of decomposition. H. Wise and M. F. Frech. bibliog J Chem Phys 20:1724-7 N '52
Kinetics of the decompositions of ethyl, isopropyl and *n*-propyl bromides. A. T. Blades and G. W. Murphy. bibliog Am Chem Soc J 74:6219-21 D 20 '52
Kinetics of the thermal decomposition of nitric acid vapor; mechanism. H. S. Johnston, L. Foering and R. J. Thompson. bibliog diags J Phys Chem 57:390-5 Ap '53
Mechanisms of elimination reactions; the spontaneous decomposition of salts of β-halo acids; *trans-m*-nitrocinnamic acid dibromide. S. J. Cristol and W. P. Norris. bibliog Am Chem Soc J 75:632-6 F 5 '53
Mechanisms of the thermal decompositions of 1 : 4-dichlorobutane and 1 : 1 : 2-trichloroethane. R. J. Williams. Chem Soc J p 113-16 Ja '53
2-Mercaptobenzothiazole derivatives; the thermal decomposition and isomerisation of 2-alkyl- and 2-alkenyl-thiobenzothiazoles and 3-alkyl- and 3-alkenyl-2-thiobenzothiazolines. C. G. Moore and E. S. Waight. diag Chem Soc J p4237-51 N '52
Photochemical decomposition of hydrogen peroxide; quantum yields, tracer and fractionation effects. J. P. Hunt and H. Taube. bibliog Am Chem Soc J 74:5999-6002 D 5 '52
Photochemical decomposition of methylamine. J. S. Watson and B. D. Darwent. J Chem Phys 20:1041-2 Je '52
Photothermal decomposition of mixed silver and mercurous oxalates. L. Suchow and S. L. Hersh. bibliog J Phys Chem 57:437-9 Ap '53
Quantitative studies of the reactivities of mixed carboxylic anhydrides; the hydrolysis and decomposition of acetic formic anhydride. V. Gold and E. G. Jefferson. Chem Soc J p 1416-18 My '53
Quinoxaline *N*-oxides; photochemical decomposition of quinoxaline mono- and di-*N*-oxides. J. K. Landquist. Chem Soc J p2830-3 S '53
Radiation decomposition of organic molecules. J. B. Birks. bibliog J Chem Phys 20:1655-6 O '52
Radiation decomposition of some C^{14}-labeled compounds. B. M. Tolbert and others. bibliog Am Chem Soc J 75:1867-8 Ap 20 '53
Some decompositions of triphenylphenylazomethane in presence of quinones. A. J. Betterton and W. A. Waters. Chem Soc J p329-31 Ja '53
Some theoretical considerations of ether decompositions. B. G. Gowenlock. bibliog J Chem Phys 21:941-2 My '53
Studies in stereochemistry; ionic intermediates in the decomposition of certain alkyl chlorosulfites. D. J. Cram. bibliog Am Chem Soc J 75:332-8 Ja 20 '53

DECOMPOSITION—*Continued*

Studies on unimolecular chlorohydrocarbon decompositions. K. E. Howlett. Chem Soc J p3695-701, 4487-91 O-N '52; p945-7 Mr '53

Thermal and photochemical decomposition of H_2O_2 vapor in the presence of foreign gases. F. S. Stone and H. S. Taylor. bibliog diag J Chem Phys 20:1339-41 Ag '52

Thermal decomposition of *cyclo*hexenyl hydroperoxide in hydrocarbon solvents. L. Bateman and H. Hughes. Chem Soc J p4594-601 D '52

Thermal decomposition of ethyl chlorocarbonate. L. E. Roberts and others. Am Chem Soc J 74:5787-8 N 20 '52

Thermal decomposition of guanidine perchlorate; reaction products and mechanism. A. Glasner and A. Makovky. Chem Soc J p 182-4 Ja '53

Thermal decomposition of $MeCl_4\cdot 2C_6H_5COOR$ type compounds. F. W. Chapman and others. bibliog Am Chem Soc J 74:5277-9 N 5 '52

Thermal decomposition of potassium perchlorate. L. L. Bircumshaw and T. R. Phillips. diag Chem Soc J p703-7 F '53

Thermogravimetric curves for the decomposition of octa-ammino-μ-amino-μ-nitrodicobaltic sulphate and dichlorobisethylenediaminocobaltic hexachlorostibnate. D. Gibbons. Chem Soc J p 1641-2 My '53

Unimolecular decompositions of some alkyl bromides. J. H. S. Green and others. bibliog J Chem Phys 21:178 Ja '53

See also

Double decomposition

DECORATION and ornament

See also

Clay products, Decorative
Decalcomania
Glassware—Decoration
Pottery—Decoration
Textile design

DECORATIVE lighting. See Lighting, Decorative

DECOYS (hunting)

Decoys by businessmen. il Fortune 46:126-30 N '52

DECREPITATION

Sources of error in the decrepitation method of study of liquid inclusions. T. E. Stephenson. bibliog diag Econ Geol 47:743-50 N '52

DECYANOETHYLATION. See Cyanoethylation

DECYL alcohol

Properties of freshly formed surfaces; experiments on decyl alcohol. C. C. Addison and D. Litherland. diag Chem Soc J p 1143-55 Ap '53

DEFALCATION. See Embezzlement

DEFAULTED bonds. See Bonds—Default; Bonds, Government—Default

DEFENSE, Department of. See United States—Defense, Department of

DEFENSE electric power administration

Davenport may be last head of Depa. Elec World News ed 138:7-8 D 8 '52

Depa studies defense production goals to predict peak load. C. R. Beardsley. Elec World 138:88-9 N 3 '52

Depa to close up. Elec World 139:134 My 18 '53

How to load transformers by Depa regulation. L. M. Limpus. Elec World 138:90-1 N 3 '52

DEFENSE materials procurement agency

Asbestos buying plans are completed by US. Oil Paint & Drug Rep 163:7 Ja 5 '53

DEFENSE materials system. See National production authority—Defense materials system

DEFENSE military personnel records center. See United States—Armed services—Defense military personnel records center

DEFENSE minerals exploration administration

Small mines; with map and table of defense minerals exploration administration projects. il plan Eng & Min J 154:150-2 Jl '53

DEFENSE mobilization, Office of. See United States—Defense mobilization, Office of

DEFENSE transport administration

Congress extends life of DTA. Bus Transportation 32:86 Ag '53

Material controls for the transit business. J. K. Knudson. Pub Util 50:411-14 S 25 '52

Review of railway operations in 1952; work of the Defense transport administration. J. H. Parmelee. Ry Age 134:160-1 Ja 12 '53

DEFENSE transportation association, National. See National defense transportation association

DEFERRED compensation

Deferred compensation benefits. S. J. Foosaner. Life Ins Courant 58:24-7 Ap '53

Deferred compensation plan for executives and key employees. M. K. Collié. Am Gas Assn Proc 1952:173-8

Deferred pay; how and why. Bsns W p 103-4 My 30 '53

Profit-sharing plans with deferred compensation. V. R. Wolder. Comm & Fin Chr 176:2503 D 25 '52

Treasury gunning for deferred compensation plans. Nat Underw (Life ed) 56:1+ O 24 '52

DEFERRED payment. See Instalment plan

DEFERRED payment merchandize insurance. See Insurance, Deferred payment merchandize

DEFLATION (finance)

Deflation may be in offing. D. H. Bellemore. Comm & Fin Chr 176:1925+ N 20 '52

Stock market and real estate boom or disastrous deflation ahead? R. E. Wenzlick. Comm & Fin Chr 177:1218-19+ Mr 19 '53

DEFLECTION of beams. See Beams and girders

DEFOLIATION

Effect of applied sugars, light intensity, and temperature upon the chemical defoliation of cotton. H. C. Lane and W. C. Hall. bibliog Science 116:427-8 O 17 '52

DE FOREST, Lee, 1873-

Radio; coalescence of science and arts; speech given at presentation of portrait of Lee de Forest to IRE. I. S. Coggeshall. por Inst Radio Eng Proc 40:1156-7 O '52

DEFORMATION (mechanics)

Bend plane phenomena in the deformation of zinc monocrystals. J. J. Gilman and T. A. Read. bibliog il diags J Metals 5:Trans 49-55 Ja '53

Changes in the electrical, thermal, and thermoelectrical properties of monovalent metals by lattice distortions. A. W. Sáenz. bibliog Phys R 91:1142-51 S 1 '53

Creep and plastic deformation; abstracts of Institute of metals papers. Engineering 175:534-5 Ap 24 '53

Deformation by transformation makes alloys tougher. E. S. Machlin. il diags Iron Age 171:106-9 Ja 22 '53

Deformation of austenite in relation to the hardness characteristics of steel. G. R. Bish and H. O'Neill. bibliog pl diags Iron & Steel Inst J 173:398-405 Ap '53; Discussion. 174:347-52 Ag '53

Deformation of ferrite single crystals. F. L. Vogel, jr. and R. M. Brick. bibliog il diags J Metals 5:Trans 700-6 sec 2 My '53

Deformation twinning in Charpy V-notch specimens of ingot iron. G. W. Geil and N. L. Carwile. bibliog il Welding J 32:sup273-82 Je '53

Deformation work absorbed by the workpiece during metal cutting. E. G. Thomsen and others. bibliog il diags A S M E Trans 75:591-8; Discussion. 598-603 My '53

Deformations and stresses in symmetrically loaded circular plates of varying thickness. D. C. Boston. diags Roy Aeronautical Soc J 57:449-54 Jl '53

Effect of slightly elevated-temperature treatment upon microscopic and submicroscopic residual stresses induced by small inelastic strains in metals. H. T. Corten and T. M. Elsesser. bibliog A S M E Trans 74:1297-302 N '52

Effect of tensile strain at low temperatures on deformation twinning in ingot iron. G. W. Geil and N. L. Carwile. bibliog il J Metals 5:Trans 213-17 sec 2 F '53

Energy stored in a metal during plastic deformation. L. M. Clarebrough and others. bibliog Engineer 195:316-17 F 27 '53

Equation of motion of a dislocation. J. D. Eshelby. bibliog Phys R 90:248-55 Ap 15 '53

Experimental technique used to measure transient waves through solids. W. A. Allen and C. L. McCrary. bibliog il diags R Sci Instr 24:165-71 F '53

Inelastic deformation of reinforced concrete in relation to ultimate strength. H. J. Cowan. bibliog diags Engineering 174:276-8 Ag 29 '52

DEFORMATION (mechanics)—*Continued*

Influence of aging on the Bauschinger effect in inelastically strained beams. T. M. Elsesser and others. bibliog diags A S M E Trans 74:1291-6 N '52

Machine for measuring load and deformation of rubber under cyclical compression. D. M. Davies. il diags Engineering 176:196-8 Ag 14 '53

Mechanism of work-hardening of metals. N. F. Mott. bibliog diags Inst Mech Eng Proc (A) 166 no 4:413-18 '52; Same abr. Engineer 194:694-7 N 21 '52

Metallographic observations of the deformation of high-purity magnesium in creep at 500°F. A. R. Chaudhuri and others. bibliog il J Metals 5:Trans 712-16 sec 2 My '53

Plastic deformation of germanium and silicon. C. J. Gallagher. il Phys R 88:721-2 N 15 '52

Transformation of deformed austenite into martensite; abstract. G. V. Kurdyumov and others. Metal Prog 62:146+ S '52; Discussion. M. Cohen. 63:114+ Ap '53

X-ray line broadening of plastically deformed marble. D. Rosenthal and M. Kaufman. bibliog J Ap Phys 23:600-1 My '52

See also

Creep of materials
Creep of metals
Elasticity
Plasticity
Strains and stresses
Torsion

DEFORMATION of rocks. See Rocks

DEFORMITIES

Excessive intake of vitamin A as a cause of congenital anomalies in the rat. S. Q. Cohlan. bibliog il Science 117:535-6 My 15 '53

DE GOLYER, Everette Lee, 1886-

Businessmen in the news. por Fortune 46:48 N '52

DEGRADATION

Action of phenylhydrazine on the periodate degradation products of β-D-glucopyranosyl sulfones. E. Blanchfield and T. Dillon. bibliog Am Chem Soc J 75:647-8 F 5 '53

Applications of the Hunsdiecker silver salt degradation; the preparation of dibromides and tribromides. J. C. Conly. Am Chem Soc J 75:1148-50 Mr 5 '53

Controlled thermal depolymerization of dextran. I. A. Wolff and others. bibliog diag Ind & Eng Chem 45:755-9 Ap '53

Degradation of aureomycin; aureomycin and anhydroaureomycin. C. W. Waller and others. Am Chem Soc J 74:4981-2 O 5 '52

Degradation of aureomycin; aureomycinic acid. B. L. Hutchings and others. Am Chem Soc J 74:4980 O 5 '52

Degradation of aureomycin; desdimethylaminoaureomycinic acid. C. W. Waller and others. Am Chem Soc J 74:4979-80 O 5 '52

Degradation of aureomycin; 3,4-dihydroxy-2,5-dioxocyclopentane-1-carboxamide. C. W. Waller and others. Am Chem Soc J 74:4978-9 O 5 '52

Degradation of aureomycin; isoaureomycin and aureomycin. C. W. Waller and others. Am Chem Soc J 74:4981 O 5 '52

Degradation of carbohydrates by alkali; α-alkoxy-ketines. J. Kenner and G. N. Richards. Chem Soc J p2240-4 Ag '53

Degradation of carbohydrates by alkali; lactose. W. M. Corbett and J. Kenner. Chem Soc J p2245-7 Ag '53

Degradation of D-glucose, D-fructose and invert sugar in carbonate-buffered water solutions. L. J. Heidt and C. M. Colman. Am Chem Soc J 74:4711-13 S 20 '52

Degradation of quaternary ammonium salts; attempts to prepare presumed intermediates having co-ordinately linked carbon. W. R. Bamford, T. S. Stevens and J. W. Wright. Chem Soc J p4334-8 N '52

New stepwise degradation of peptides. R. W. Holley and A. D. Holley. bibliog Am Chem Soc J 74:5445-8 N 5 '52

Steroids derived from bile acids; Barbier-Wieland degradation in the 11-keto series. R. B. Turner and others. bibliog Am Chem Soc J 74:5814-18 D 5 '52

Steroids derived from bile acids; degradation of 3α,9α-epoxy-11-ketonorcholanic acid to 3α,9α-epoxy-11-ketoetiocholanic acid. V. R. Mattox and others. Am Chem Soc J 74:5818-19 D 5 '52

Syntheses of degradation products of aureomycin. S. Kushner and others. bibliog Am Chem Soc J 75:1097-100, 1732-3, 3261-4 Mr 5, Ap 5, Jl 5 '53

DEGREASING

Chemical degreasing techniques; abstract. O. Vogel. Metal Finishing 50:85 N '52

Chlorinated solvent degreasers; recommended practices for safe operation. G. M. Hama. bibliog il Nat Safety N 68:128-9+ O '53

Detrex ultrasonic degreaser employs ceramic transducer. il Am Mach 97:144 Mr 30 '53; Aviation W 58:82 Ap 27 '53; Factory Management 111:150-1 Je '53

New degreasing evaluation test; the atomizer test. H. B. Linford and E. B. Saubestre. bibliog diag Metal Finishing 51:74-8 S '53

Simultaneous pickling and degreasing with the electro-alkaline bath; Derostan process; abstract. T. Skutta. Metal Finishing 51:78-9 My '53

Ultrasonic degreaser. il Metal Finishing 51:88 F '53

DEGREE days. See Heating—Tables, calculations, etc.

DEGREES, Academic

Use of propositions in examinations for the doctor's degree. L. Pauling. Science 116:667-9 D 12 '52

DE HAAS-VAN ALPHEN effect. See Magnetic susceptibility

DEHALOGENATION

Dehalogenation reaction; dechlorination of the copolymers vinyl acetate/*trans*-dichloroethylene and vinyl acetate/trichloroethylene. T. Alfrey, jr., H. C. Haas and C. W. Lewis. Am Chem Soc J 74:4856-8 O 5 '52

DE HAVILLAND, Sir Geoffrey, 1882-

1952 Guggenheim medalist. por Aeronautical Eng R 11:18 O '52

DE HAVILLAND aircraft company

PanAm reopens Comet contract; certification deadline will probably be extended. N. McKitterick. Aviation W 58:22+ Ap 13 '53

DEHUMIDIFIERS

Comfort air conditioning system emphasizes dehumidification; Toledo scale co. W. A. Fink. il Heat & Ven 49:108-10 N '52

Dehumidification helps to process sticky sweets; Kroger company's candy manufacturing plant. R. G. Flohr. il diag Refrig Eng 61:292+ Mr '53

Dehumidified pipe galleries; Chicago's south district filtration plant. W. W. DeBerard. flow diag il plan diag Heating-Piping 25:73-8 F '53

Dehumidifier in today's home. C. F. Alsing. il diag Refrig Eng 61:157-9+ F '53

Dehumidifier system protects cargoes from moisture. Marine Eng 58:77 S '53

Drier for the clothes closet. il Consumers Res Bul 31:24-5 Ap '53

Storage room for laminated acrylic; dehumidifier supplies ultra-dry air. F. M. Johnson. flow diag il Mod Plastics 30:111+ D '52

Tell-tale De Moist; spring scale in hanger weighs moisture pick-up. il Mod Packaging 26:116-17 N '52

DEHYDRATION

Acetylene studies; dehydration of dialkylethynylcarbinols. E. D. Bergmann and Y. Sprinzak. bibliog J Ap Chem 3:97-8 Mr '53

Aromatic cyclodehydration; 3-hydroxy-9-(*p*-hydroxyphenyl)-10-ethylphenanthrene, an estrogen analog. C. K. Bradsher and W. J. Jackson, jr. Am Chem Soc J 74:4880-3 O 5 '52

Dehydration and racemisation of *N*-acyl-L-aspartic acids by acetic anhydride. C. C. Barker. Chem Soc J p453-6 F '53

Dehydration of aqueous methyl ethyl ketone with 2-methyl furan. A. S. Smith, J. F. LaBonte. bibliog Ind & Eng Chem 44:2740-3 N '52

Dehydration of castor oil. H. C. Bryson. Paint Oil & Chem R 116:12+ Ja 29 '53

Dehydration of ethyl alcohol over alumina. H. Feilchenfeld. bibliog Ind & Eng Chem 45:855-7 Ap '53

Dehydration of 2-9′-fluorenyl*cyclo*hexanol. J. W. Cook and L. Hunter. Chem Soc J p3168-71 Ag '52

DEHYDRATION—*Continued*

Dehydration of 4-hydroxy-2,2,4,5,5-pentamethyltetrahydrofuran (acetylene studies). M. Sulzbacher and E. D. Bergmann. bibliog Am Chem Soc J 75:3859 Ag 5 '53

Design and choice of equipment for gas dehydration. J. M. Campbell. bibliog flow sheets Chem Eng Prog 48:440-8 S '52

Design and operation of dehydrators for volatile hydrocarbons. L. Boyd. flow plan Oil & Gas J 51:106-7 D 8 '52

Polyphosphoric acid as a dehydrating agent; identification of the hydrocarbons from mesitylene and aliphatic acids. H. R. Snyder and R. W. Roeske. bibliog Am Chem Soc J 74:5820-2 D 5 '52

Syntheses and relative dehydration rates of some methyl-substituted 1-phenylcyclohexanols. R. B. Carlin and H. P. Landerl. bibliog Am Chem Soc J 75:3969-75 Ag 20 '53

See also

Gas, Natural—Dehydration

DEHYDRATORS. See Drying apparatus

DEHYDROABIETIC acid

Oxidation of methyl dehydroabietate by molecular oxygen. P. F. Ritchie, T. F. Sanderson and L. F. McBurney. bibliog Am Chem Soc J 75:2610-12 Je 5 '53

DEHYDROACETIC acid

Structure of dehydroacetic acid. J. A. Berson. bibliog Am Chem Soc J 74:5172-5 O 20 '52

DEHYDROASCORBIC acid

Polarographic reduction wave of dehydroascorbic acid. S. Ono, M. Takagi and T. Wasa. bibliog il Am Chem Soc J 75:4369-70 S 5 '53

DEHYDROCHLORINATION

Mechanisms of elimination reactions; deuterium exchange in base-promoted dehydrochlorination of β-benzene hexachloride. S. J. Cristol and D. D. Fix. bibliog Am Chem Soc J 75:2647-8 Je 5 '53

DEHYDROCHOLESTEROL

Analysis

Separation of D vitamins from other sterols by paper chromatography and the quantitative determination of 7-dehydrocholesterol. R. B. Davis, J. M. McMahon and G. Kalnitsky. bibliog Am Chem Soc J 74:4483-4 S 20 '52

DEHYDROERGOSTEROL

Studies in the steroid group; reduction of dehydroergosterol epidioxide. P. Bladon and others. Chem Soc J p4883-90 D '52

DEHYDROERGOSTERYL acetate

Rearrangement of dehydroergosteryl acetate to a *s*-octahydroanthracene derivative. W. R. Nes and E. Mosettig. Am Chem Soc J 75:2787 Je 5 '53

DEHYDROGENASES

Butyryl CoA-dehydrogenase, a cupro-flavoprotein. H. R. Mahler. Am Chem Soc J 75:3288-9 Jl 5 '53

DPN specific glycerol dehydrogenase from aerobacter aerogenes. R. M. Burton and N. O. Kaplan. bibliog Am Chem Soc J 75:1005-6 F 20 '53

Formation of a labile pigment in rabbit ova during histochemical demonstration of succinic dehydrogenase. A. G. Foraker and others. bibliog il Science 117:449-51 Ap 24 '53

Glyceraldehyde phosphate dehydrogenase of green plants. D. I. Arnon. bibliog Science 116:635-7 D 5 '52

Interrelation of succinic acid dehydrogenase with apodehydrase and codehydrase. E. Waldschmeidt-Leitz and H. Sprinz. Science 116:488-9 O 31 '52

DEHYDROGENATION

Attempted dehydrogenation 3,4-disubstituted thiolanes. A. I. Kosak and R. L. Holbrook. bibliog Science 117:231 F 27 '53

Catalytic dehydrogenation; Universal oil products co. flow diag Pet Refiner 31:176-7 S '52

Dehydrogenation and structure proof of 1-methylestrone. A. S. Dreiding and W. J. Pummer. bibliog Am Chem Soc J 75:3162-5 Jl 5 '53

Dehydrogenation; Houdry process corp. flow diag Pet Refiner 31:258-9 S '52

Effect of granule size in dehydrogenation of butane and in a hydrogen transfer reaction. R. W. Blue and others. bibliog diags Ind & Eng Chem 44:2710-16 N '52

Use of iodine and potassium acetate in the dehydrogenation of tetrahydro*iso*quinoline; the synthesis of 7-nitro*iso*quinoline. M. D. Potter and E. P. Taylor. Chem Soc J p 1320-1 Ap '53

DEHYDROHALOGENATION

Mechanisms of elimination reactions; the alkaline dehydrohalogenation of chloro- and bromo-maleate and fumarate. S. J. Cristol and A. Begoon. Am Chem Soc J 74:5025-9 O 20 '52

Preparation and dehydrohalogenation of 4-halo-3-ketosteroids. R. P. Holysz. bibliog Am Chem Soc J 75:4432-7 S 20 '53

DEHYDROISOANDROSTERONE

Direct introduction of oxygen into the steroid nucleus; studies on the chromic anhydride oxidation of dehydroisoandrosterone acetate dibromide. A. F. St André and others. bibliog Am Chem Soc J 74:5506-11 N 5 '52

DE-INKING of paper. See Waste paper

DELAWARE, Lackawanna and western railroad

Tenders. Comm & Fin Chr 177:1472 Ap 6 '53

DELAWARE memorial bridge. See Bridges, Suspension

DELAWARE river

Delaware; deeper channel urged. W. V. Packard. diag Iron Age 171:59 F 19 '53

New York city's quest for more water from Delaware river nears satisfaction. map Eng N 150:27 Je 25 '53

DELAWARE River basin, Interstate commission on the. See Interstate commission on the Delaware River basin

DELAY devices

High-impedance artificial delay lines. W. S. Carley and E. F. Seymour. bibliog il diags Electronics 26:188-92+ Ap '53

Highly stable variable time-delay system. Y. P. Yu. bibliog il diags Inst Radio Eng Proc 41:228-35 F '53

Magnetostrictive sonic delay line. H. Epstein and O. Stram. R Sci Instr 24:231-2 Mr '53

Mercury-delay-line storage system of the ace pilot model electronic computer. E. A. Newman and others. il diags Inst E E Proc 100 pt 2:445-52 Ag '53

Microwave measurements on metallic delay media. S. B. Cohn. diags Inst Radio Eng Proc 41:1177-83 S '53

Ultrasonic delay lines. D. L. Arenberg. Electronics 26:210+ Jl '53

DELIGNIFICATION. See Lignin

DELIVERY of goods

Procedure for measuring employee productivity. M. Kriesberg. Advanced Management 17:6-8 Ag '52

See also

Drivers as salesmen
Milk delivery
Oil delivery

Cost

Bringing delivery route costs under standards. W. D. Holdsworth. N A C A Bul 34:254-62 O '52

Delivery to dealers

See also

Jobbers, Wagon

DELTA air lines

New giant hopes to invade East. map Bsns W p66+ Ap 18 '53

See also

Airlines—Consolidation

DELTA function. See Dirac function

DELTA modulation. See Radio modulation

DEMAGNETIZATION

Adiabatic demagnetization of chromium methylamine alum. D. de Klerk and R. P. Hudson. bibliog Phys R 91:278-81 Jl 15 '53

Cyclic adiabatic demagnetization. S. C. Collins and F. J. Zimmerman. diag Phys R 90:991-2 Je 1 '53

Demagnetizer. M. Mandl. il diags Radio & Tv N 49:42-3 Ja '53

DEMAND and supply. See Supply and demand

DEMAND factor

Control of demand and power factor on electric arc furnaces. H. G. Heath. Iron & Steel Eng 29:78-81; Discussion. 81-3 O '52

DEMAND meters

Testing

Load holder aids demand meter testing. il diag Elec World 139:102 My 4 '53

DEMEROL

Synthesis of two seven-membered ring homologs of demerol. F. F. Blicke and E. Tsao. bibliog Am Chem Soc J 75:3999-4002 Ag 20 '53

DEMMLER, Ralph H.

New face; chairman-to-be, Securities and exchange commission. J. C. Perham. Barron's 33:7 Ap 20 '53

DEMOCRACY

Adventure in democracy; Workshop for world understanding in Pittsfield, Mass. H. R. Sass. Gen Elec R 56:30-1 My '53

DEMOCRATIC digest (periodical)

Readers can vote. Bsns W p68+ Jl 11 '53

DEMOCRATIC party

Democrats and labor. C. Van Devander. Barron's 33:7-8 Ja 12 '53

Eying the Republican record. Bsns W p29-30 Je 20 '53

DEMOGRAPHY

Social security financing and demography. Int Labour R 66:461-76 N-D '52

DEMOLITION of buildings. See Wrecking

DEMONSTRATION houses. See Houses, Model

DEMONSTRATIONS. See Department stores—Manufacturers' demonstrations; Salesmanship—Demonstrations

DENATURATION of proteins. See Proteins—Denaturation

DENATURED alcohol. See Alcohol, Denatured

DENEBRINK, Gerald Compton, 1900-

Portrait. Sales Management 69:28 O 15 '52

DENMARK

See also

Architecture—Denmark

Taxation—Denmark

Commerce

Danish exports to United States increase; meat products lead. For Comm W 48:3+ N 10 '52

Economic conditions

Economic conditions abroad (cont). For Comm W 48:4 N 17; 5 D 15 '52

Politics and government

Danish dilemmas. Economist 167:746 Je 13 '53

New mood in Denmark. Economist 165:733-4 D 13 '52

DENNY, Harmar Denny, 1886-

Denny holds balance in CAB. por Aviation W 58:92-3 Ap 27 '53

DENSITOMETERS

Isophotal contour densitometer. F. E. Fowler and others. diag Opt Soc Am J 43:63 Ja '53

DENSITOMETRY

Standard for color densitometry. J. P. Weiss. Standardization 24:112-13 Ap '53

DENSITY. See Specific gravity

DENTAL amalgams

Phase changes in silver-tin amalgams. J. C. Moffett and others. il J Ap Phys 23:1188-9 O '52

DENTAL colleges

Finance

Financial resources of dental schools. G. D. Timmons. map Pub Health Rep 67:989-96 O '52

DENTAL hygiene

APHA conference report; studies and programs in dental public health. Pub Health Rep 68:251-3 F '53

DENTAL instruments and apparatus

Electronics aids the dentist. D. Becker. il diags Electronics 25:148+ D '52

DENTAL metallurgy

See also

Dental amalgams

DENTAL schools. See Dental colleges

DENTAL service

Dental service provisions under workmen's compensation laws. Safety Maint & Prod 105:56 Mr '53

DENTAL service, Industrial

Compensation laws in relation to dental and jaw injuries. L. S. Morvay. Ind Med 21:473-6 O '52

Dental aspects of industrial absenteeism. J. M. Dunning. bibliog Ind Med 21:431-2 S '52

DENTAL surveys

Effect of fluoridated public water supplies on dental caries prevalence. F. A. Arnold, jr. and others. bibliog Pub Health Rep 68:141-8 F '53

DENTIFRICES

Ammoniated dentifrices and hamster caries; further studies on the effects of ingestion. D. F. Mitchell and others. bibliog Science 116:537-8 N 14 '52

If they try it, will they buy it? il Sales Management 69:106+ D 1 '52

Syndets in dentifrices. Soap & San Chem 28:107+ O '52

Advertising

Best-read magazine advertisements. D. Starch. il Adv Agency 45:74-5 D '52

DENTISTRY

See also

Dental service

DENTISTS' offices

Lighting

Design for a dentists' waiting room. P. Grayson. il plan Illum Eng 48:231-2 My '53

Lighting a dental office; data sheet. W. C. Kuhnke. il plan Illum Eng 48:187-8 Ap '53

DENVER

Commercial center planned for Denver to have 20-story main building. il Eng N 149:48 D 18 '52

See also

Wages—Denver

DENVER and Rio Grande western railroad

Earnings advance likely. Barron's 33:23+ F 9 '53

Five stocks with better-than-average prospects; with comparative balance sheet items. Mag of Wall St 91:126 N 1 '52

Railroad securities. Comm & Fin Chr 177:915; 178:128 F 26, Jl 9 '53

DEODORIZATION

Chasing outdoor odors; Lorain slag co. Steel 132:60-1 Mr 2 '53

Masking air-borne malodors; utilization of aromatic chemicals in industrial odor abatement. B. K. Tremaine. Tappi 36:sup 143A-6A Ag '53

Textile odors and deodorants; 1952 intersectional contest. diag Am Dyestuff Rep 42:67-9 F 2 '53

DEODORIZERS

Chlorophyll debunked further; odours not removed. J. C. Brocklehurst. Chem Age (Lond) 68:415 Mr 14 '53; Discussion. 68:443-7; 69:505-6 Mr 21, S 5 '53

Continuous oil deodorizer uses concurrent flow; patent. diag Chem Eng 60:376-7 Ap '53

Flexible way to remove odors. il diag Chem Eng 60:120+ Mr '53

Investigations conducted to determine the deodorizing properties of chlorophyll preparations; abstract. L. C. Barail. Oil Paint & Drug Rep 164:57 Ag 24 '53

Odors and fragrances. R. Pantaleoni. bibliog il Chem & Eng N 31:1730-4 Ap 27 '53

Stopette spray deodorant; nominated for packaging's Hall of fame. il Mod Packaging 26:136-41+, cover Ap '53

Testing

Several judges working blind could test deodorants effectively. Chem & Eng N 30:5367 D 22 '52

DEPARTMENT stores

Are outpost customers different? T. D. Ellsworth. J Retailing 29:57-66+ Summer '53

Big store performance in 1952 called drab. M. P. McNair. Bsns W p64 My 30 '53

Department stores are in for a change. E. Arens. Ptr Ink 242:115+ Mr 20 '53

Department stores worry. Bsns W p43-4+ Ja 24 '53

From 126 fast-growing markets, here's how Fedway picked eight. L. M. Hughes. Sales Management 70:75-6+ Mr 1 '53

DEPARTMENT stores—*Continued*

How economic necessity is changing merchandising. V. Savage. Mag of Wall St 92:155-7+ My 2 '53

Non-price competition at the department-store level. P. Bliss. J Marketing 17:357-65 Ap '53

Sale at Filene's; how to price suits at $11 and still turn a profit. il Bsns W p 142-4+ Mr 14 '53

Shopping after dark. D. A. Saunders. il Fortune 46:120-3+ N '52

What department store management should know about supermarkets. V. Lebow. J Retailing 29:17-20+ Spring '53

See also

Charge accounts (retail trade)

Marketing—Department store outlets

Accounting

Department store expense control. M. P. McNair and E. G. May. Harvard Bsns R 31:113-27 My '53

Advertising

M. E. Blatt company takes to the air. S. I. Abelow. J Retailing 28:155-8+ Winter '52

Macy's 64-page Times ad called largest ever run. il Ed & Pub 85:24 N 29 '52

See also

Retail trade—Advertising

Air conditioning

See Store buildings—Air conditioning

Branch stores

Are branch stores overexpanding? T. D. Ellsworth and S. J. Zimmerman. J Retailing 28:159-66+ Winter '52

Gimbels joins the trek to the suburbs. Bsns W p 101 Jl 11 '53

Shopping goes suburban. Economist 165:752-3 D 13 '52

Electric equipment

Capacitors pay off within first year zooming power factor from 72 to 95 per cent; Halle brothers Shaker Square store. E. W. Dougherty. il diag Power 97:84-5 Jl '53

Employees

Executive trainees earn while they learn. E. D. Fraser. J Retailing 29:71-8+ Summer '53

How to make store training work. P. E. Smith. J Retailing 29:31-4+ Spring '53

Selling problems of department store salespeople. E. P. Shapiro. J Marketing 17:284-9 Ja '53

Lighting

Jig-saw ceiling light for a store; John Walsh, ltd. il Elec J 151:655 Ag 28 '53

Power and light aid Sears to sell. il Elec West 111:98-100 Ag '53

Location

See Retail trade—Store location

Management

Fellow retailers give Texas store a working over. il Bsns W p48-50 Ap 25 '53

Is Fedway in your sales future? L. M. Hughes. il Sales Management 70:34-6+ F 15 '53

Manufacturers' demonstrations

Thousands of housewives jam sewing clinics; cooperative promotion; how to make draperies and slip covers. il Sales Management 69:56+ O 15 '52

25 big stores join Pleetway in sleep clinic promotions. il Sales Management 70:88-9 Ja 15 '53

Package handling

Cellophane bags help Bamberger cut losses. Bsns W p56+ My 2 '53

Securities

Department store securities as investments. B. E. Puckett. Comm & Fin Chr 177:681+ F 12 '53

Statistics

Department stores account for $1 in every $9 spent at retail. E. J. Dever, jr. Ptr Ink 242:52-3 Ja 2 '53

Indexes of sales and stocks by Federal reserve districts, 1946-1951, monthly Nov. 1951-1952; Sales and stocks by major departments, 1951-1952; Sales, stocks, orders and receipts 1943-1951 averages; monthly Nov. 1951-Nov. 1952; Weekly index of sales, July 1951-January 1953. Fed Res Bul 39:57-9 Ja '53 [cont monthly]

Revised series on department store sales, stocks, and orders; with table giving monthly figures Jan. 1939-Aug. 1952. Fed Res Bul 38:1098-102 O '52

Sales by Federal reserve districts and by cities in terms of percentage change from corresponding period of preceding year. Fed Res Bul 39:60 Ja '53 [cont monthly]

DEPHOSPHORYLATION

Acyl migration during dephosphorylation and a suggested mechanism. T. H. Bevan and others. Chem Soc J p 127-9 Ja '53

DEPLETION

Depletion committee recommends test case. Brick & Clay Rec 122:83 Ja '53

Percentage depletion for the sand and gravel industry; abstract. J. T. Sapienza. Rock Prod 56:113-14 Ap '53

DEPOLYMERIZATION

Acid-base catalysis in non-aqueous solvents; the depolymerisation of paraldehyde in ethereal solutions of proton acids and Lewis acids. R. P. Bell and B. G. Skinner. Chem Soc J p2955-9 Ag '52

Controlled thermal depolymerization of dextran. I. A. Wolff and others. bibliog diag Ind & Eng Chem 45:755-9 Ap '53

Effect of high-energy cathode rays on cellulose. J. F. Saeman, M. A. Millett and E. J. Lawton. bibliog il Ind & Eng Chem 44:2848-52 D '52

Kinetics of chain depolymerization. R. Simha and L. A. Wall. bibliog J Phys Chem 56:707-15 Je '52

Vapor phase depolymerization of trioxane. A. W. Schnizer, G. J. Fisher and A. F. MacLean. diag Am Chem Soc J 75:4347-8 S 5 '53

DEPRECIATION

Accounting alternatives, and their consequences, in handling charges for depreciation under certificates of necessity. W. H. Harrison, jr. J Account 94:716-18 D '52

American industry is being taxed into obsolescence. T. Berna. il Mill & Factory 53:77-82 O '53

Aspect of depreciation policy; and year-end recordation of sale and purchase. J Account 94:748-9 D '52

Depreciation and inflation; impact of inflation on the law governing depreciation accounting. G. J. Eder. bibliog Pub Util 50:617-25 O 23 '52

Depreciation and the depreciating dollar. F. F. Tannery. N A C A Bul 34:211-19 O '52

Depreciation rates for air conditioning and heating; data sheet. Heating-Piping 25:106 F '53

Easing depreciation rules. Bsns W p28 Mr 21 '53

Emergency facilities; accounting for depreciation and taxes under certificates of necessity. J Account 95:48-50 Ja '53

Estimating utility plant life. P. H. Jeynes. Elec Wor'd 138:73+ D 29 '52

Let's keep to historical cost basis for depreciation. R. M. Chan. N A C A Bul 34:319-26 N '52

National association of railroad and utilities commissioners report on depreciation; with charts and revenues and net income trends. Pub Util 51:42-5 Ja 1 '53

Needed reform for utility tax depreciation. F. W. Brooks. Pub Util 52:407-15 S 24 '53

No stampede for faster tax writeoffs. Bsns W p30-1 Mr 28 '53

Original cost depreciation versus replacement cost. E. A. Steinberger. Pub Util 51:671-8 My 21 '53

Producers' equipment; growth, replacement, and stock. R. Nassimbene and D. G. Wooden. Survey of Cur Bsns 33:12-16+ Je '53

Public utility depreciation. C. W. Smith. Pub Util 50:625-31 O 23 '52

Rapid depreciation charge-offs; do they aid or hinder earnings? J. C. Clifford. Mag of Wall St 91:14-15, 44-5 O 4 '52

DEPRECIATION—*Continued*

Relationship between depreciation allowance and maintenance of capital during inflation. J. E. Kane. J Account 94:697-701 D '52

Responsibility of utility management with respect to depreciation. C. H. Ross. Pub Util 50:602-17 O 23 '52

Revision of equipment depreciation rates studied by Treasury experts. Eng N 150:26 Mr 19 '53

Subtle socialization by accounting. R. A. Gilbert. Pub Util 51:837-42 Je 18 '53

Urge revised tax depreciation policies to spur machine replacement. Ind Marketing 38:65+ Jl '53

Valuation and depreciation related to income tax. M. R. Scharff. Am Soc C E Proc 77[no 69]:1-7 My '51; Discussion. 78[no D-69]:1-3 D '52

Writeoff pace. Bsns W p90+ Ap 4 '53

See also

Depletion

DEPSIDONE

Depsidones; hydroxy and methoxy analogs. D. S. Noyce and J. W. Weldon. bibliog Am Chem Soc J 74:5144-6 O 20 '52

DEPTH sounding. See Sounding

DERBY, Roland E.

AATCC's Olney medal going to R. Derby. Oil Paint & Drug Rep 164:7 Ag 3 '53

DERMATITIS. See Skin—Diseases

DERRICKS. See Cranes, derricks, etc.

DERRICKS, Oil well

Changing oilfield scene. W. T. Rintoul. il Pet Eng 25:B55-6+ Ap '53

Contractor packages big rig for ease in moving, rigging up. R. F. Carlson. il Oil & Gas J 51:122-3 Ap 20 '53

Diesel-electric rig; Standard of California. il diags Pet Eng 24:B74+ O '52

Do you know your rotary rigs? diag Oil & Gas J 51:167 S 29 '52

Drilling rigs differ, but they seek one thing in common. il Oil & Gas J 51:201 S 29 '52

Has your drilling rig got a groove in? wire rope costs in drilling can be reduced by installing a special system. J. Menneer. il Pet Eng 24:B97-8 O '52

Heated shelter will protect derrick man. il World Oil 136:180 Ap '53

Humble's new push button rig cuts cost, saves time. R. F. Carlson. il Oil & Gas J 51:48-9+ D 29 '52

New deep well servicing rig for California. R. Sneddon. il Pet Eng 25:B14+ Ap '53

New rig can be drilling again eight hours after move starts. R. F. Carlson. il Oil & Gas J 51:108-10 S 22 '52

New trailer-mounted rig saves valuable rig-up time. R. E. Fuller. il World Oil 136:120-2 Mr '53

New trailer-mounted workover rig. F. L. Rosen. il Oil & Gas J 51:116-18+ Mr 16 '53

Portable roof sections travel with drilling rig. il Oil & Gas J 51:141 Mr 16 '53

Rig ownership. World Oil 136:145 F 15 '53

Rig skidded in 15 minutes. J. A. Kornfeld. il map Oil & Gas J 51:116-17+ F 16 '53

Rig with 100 hints. D. Madole. il diag World Oil 136:147-9+ My '53

Semi-automatic power-operated drilling machinery. M. E. True. il diag Pet Eng 24:B42+ O '52

Shell's 11,000-ft. jackknife rig features increased efficiency without loss of safety. R. F. Carlson. il Oil & Gas J 51:80-2 Ja 19 '53

Shop-made rig speeds operations. A. R. Frank. il World Oil 136:131 Ja '53

Stay-at-home rig on outskirts of Los Angeles. D. H. Stormont. il Oil & Gas J 51:107 O 27 '52

Steel roof for drilling rig made of four sections. il Oil & Gas J 52:98 Je 1 '53

Three-piece rig for servicing deep wells or drilling straight through. R. F. Carlson. il diags Oil & Gas J 52:121+ Je 8 '53

DESALTING of sea water. See Sea water—Desalting

DESCARTES, René, 1596-1650

Role of Descartes in the rise of physiology; abstract. T. S. Hall. Science 116:522 N 14 '52

DESERTIONS, Military. See United States—Army—Desertions

DESERTS

Saudi Arabia; transportation in oil operations. E. J. Zinszer. il Pet Eng 24:A60+ N '52

DESICCANTS. See Drying agents

DESIGN

Casting design improved by welding. A. L. Phillips. il Foundry 81:148+ F '53

Corrosion factors in design and lubrication. F. L. LaQue. il diags Product Eng 23:142-7 O '52

Design tips for changing to die casting. H. K. Barton. diags Product Eng 24:174-8 Ap '53

Design trends; round table discussion. J. W. Dunlap and others. il Advanced Management 18:69-80 Ja '53

Designing an ideal sand casting. T. H. Trevithick. diags Product Eng 24:168-70 F '53

Designing around inert-gas metal arc welded stainless, nickel and stainless clads, copper, copper base alloys, aluminum. J. H. Berryman. il diag Product Eng 24:171-3 Ap '53

Designing electroformed parts. W. H. Metzger, jr. and V. A. Lamb. il diags Machine Design 25:124-31 S '53

Designing for spotwelding. Machine Design 25:157-9 F '53

Designing with engineering materials. R. L. Stedfeld and others. il Machine Design 25:137-92 O '53

Factors of safety in tolerance specifications. N. G. Meagley. Product Eng 24:155-9 Mr '53

Fine points in a product development program. G. Kendall. il Product Eng 24:129-35 Ja '53

How to develop cast products. R. J. Franck. il Foundry 80:120-3+ O '52

Martex towel started it all; cooperative promotion of towels, cotton rugs, blankets and shower curtains. il Sales Management 70:108 Mr 1 '53

Materials and design. il Mod Ind 25:89-90+ Ja '53 [cont monthly]

Mechanics of industrial design. il Product Eng 24:121-8 Ja '53

Museum changes its spots; it's an industrial designer; Boston's Institute of contemporary art. il Bsns W p78-80+ O 25 '52; Correction. J. S. Plaut. p 10+ N 15 '52

Predicting casting costs with accurate design yardsticks. P. Tripoli. il diags Machine Design 25:139-54 Je '53

Product Engineering annual handbook of product design for 1953. Published by McGraw-Hill pub. co., 330 W. 42d st, New York 36

Pure design research transforms abstract sculpture into new forms for architecture and furniture; work of Harry Bertoia. il Arch Forum 97:142-7 S '52

Recommended practices for designing porcelain enamel products; drawings with text. P. F. Metz. Product Eng 23:176-7 N '52

Solve design problems with a creative approach. L. W. Guth. Gen Elec R 56:55-8 Jl '53; Same cond. Machine Design 25:348+ O '53

Styling with plastics. C. W. Sundberg and M. Ferar. il Machine Design 25:155-6 Je '53

Successful product design. I. F. Kinnard. bibliog il diags Machine Design 25:108-14 Je '53

Unitized designs are replacing built-up assemblies. C. F. Marschner. il diags Product Eng 24:199-201 My '53

What makes a successful design engineer? G. H. Logan. Product Eng 24:279-80+ Ap '53

When a mere upstart challenges big-name competition; Rose Marie Reid's swimsuits. B. L. Kamberg. il Sales Management 69:128-32 O 15 '52

See also

Airplanes—Design
Architecture, Domestic—Designs and plans
Automobiles—Design
Bridge design
Concrete construction—Design
Fashion
Gearing—Design
Machinery—Design
Naval architecture—Designs and plans
Package design
Steel construction—Design
Structural engineering—Design
Textile design

DESIGN—*Continued*

Study and teaching

Design without clients; appraisal of industrial-art schools. L. Lionni. il Fortune 47: 132-7 My '53

When college and industry team up on a design school; Pratt institute. il Bsns W p 94-6+ N 8 '52

DESIGN, Decorative
See also
Textile design

DESIGN departments
Coordinating design at the executive level; General electric co. A. N. BecVar. Advanced Management 18:77-80 Ja '53

DESIGNERS
Product research and development. R. Spilman. Advanced Management 18:73-5 Ja '53

DE SIMONE, Ralph
Black Horse sees new fields to conquer. pors Eng N 149:43-4+ O 2 '52

DESK and derrick clubs. See Women in the petroleum industry

DESKS
Desk units save 625 square feet of floor space at United air lines. il Am Bsns 22:14-15+ N '52

How to conceal telephone wires, keep desks neat. A. R. Hutchinson. il Standardization 23:407 D '52

How to construct a desk in the kitchen. il Am Bld 74:200 D '52

Man without a desk. il Bsns W p 182-4+ Mr 14 '53

New desk units save floor space, cut noise, and add privacy. il Am Bsns 23:30+ Mr '53

Manufacture

Welded desks cut school expansion costs. il Welding J 32:744-5 Ag '53

DESORPTION
Application of the cathode-ray oscilloscope to polarographic phenomena; adsorption-desorption relationships exhibited by alcohols at aqueous saline solution-mercury interfaces. J. W. Loveland and P. J. Elving. bibliog il diag J Phys Chem 56:935-48 N '52

Desorption of a direct cotton dye from cellulosic fibres. J. H. E. Jackson and H. A. Turner. bibliog Soc Dyers & Col J 68:345-52 S '52

DESOXYBENZOIN
Non-existence of the third isomer of *p*-nitrobenzaldesoxybenzoin. W. B. Black and R. E. Lutz. Am Chem Soc J 75:4578-9 S 20 '53

DESOXYCHOLIC acid

Analysis

Colorimetric determination of desoxycholic acid in ox bile. C. R. Szalkowski and W. J. Mader. bibliog Anal Chem 24:1602-4 O '52

Colorimetric method for determination of desoxycholic acid in the presence of certain other bile acids. E. L. Pratt and H. B. Corbitt. Anal Chem 24:1665-7 O '52

DESOXYCORTICOSTERONE, Analogs of
Experiments on the synthesis of potential cortical hormone substitutes. F. J. Dyer, D. A. A. Kidd and J. Walker. Chem Soc J p4778-83 D '52

DESOXYGLUCOSE
2-Desoxy-D-glucose as an inhibitor in the aerobic glucose metabolism of yeast. G. E. Woodward. Franklin Inst J 254:553-5 D '52

Lack of effect of 2-desoxy-D-glucose on rat liver adenosinetriphosphatase and pyrophosphatase. M. H. Ross and J. G. Archer. Franklin Inst J 255:161-2 F '53

DESOXYHYDROXY corticosterone
Microbiological transformations of steroids; preparation of 11-epi-corticosterone and of 6β-hydroxy-11-desoxycorticosterone. S. H. Eppstein and others. bibliog Am Chem Soc J 75:408-12 Ja 20 '53

DESOXYMANNOHEPTOSE
7-Deoxy-L-manno-L-*gala*-heptose and some of its derivatives. E. L. Jackson and C. S. Hudson. Am Chem Soc J 75:3000-2 Je 20 '53

DESOXYPENTOSE nucleic acid
Effect of nuclear counting procedures on determination of the desoxypentosenucleic acid content of rat liver cell nuclei. S. Albert and others. bibliog Science 117:551-3 My 22 '53

Electrophoresis-convection applied to substances forming soluble complexes. S. J. Singer, S. N. Timasheff and J. G. Kirkwood. bibliog Am Chem Soc J 74:5985-8 D 5 '52

Molecular weight and shape of desoxypentose nucleic acid. P. Doty and B. H. Bunce. bibliog Am Chem Soc J 74:5029-34 O 20 '52

Analysis

Deoxypentosenucleic acids; the properties and composition of the deoxypentosenucleic acids from certain animal, plant, and bacterial sources. S. G. Laland, W. G. Overend and M. Webb. Chem Soc J p3224-31 Ag '52

DESOXYPYRIDOXINE
Chemistry of vitamin B_6; derivatives of 5-desoxypyridoxine. D. Heyl, S. A. Harris and K. Folkers. bibliog Am Chem Soc J 75: 653-5 F 5 '53

Chemistry of vitamin B_6; homologs of 4-desoxypyridoxine. D. Heyl and others. Am Chem Soc J 75:4080-1 Ag 20 '53

DESOXYRIBONUCLEASE
Studies on the structure of nucleic acids; the kinetics of desoxyribonuclease action. L. F. Cavalieri and B. Hatch. bibliog Am Chem Soc J 75:1110-15 Mr 5 '53

DESOXYRIBONUCLEIC acid
Action of denaturing agents on deoxyribonucleic acid. B. E. Conway and J. A. V. Butler. diags Chem Soc J p3075-82 Ag '52

Action of ionizing radiations and of radiomimetic substances on deoxyribonucleic acid; physicochemical measurements of the action of bischloroethylmethylamine. J. A. V. Butler, L. Gilbert and D. W. F. James. Chem Soc J p3268-73 Ag '52

Chemistry of heredity. A. E. Mirsky. il Sci Am 188:47-57 F '53

Nucleotides; a method suitable for the large-scale preparation of deoxyribonucleosides from deoxyribonucleic acids. W. Andersen, C. A. Dekker and A. R. Todd. Chem Soc J p2721-4 Jl '52

Simplified preparation of high-polymer desoxyribonucleic acid. M. H. Bernstein. Science 117:228-9 F 27 '53

Analysis

Composition of mammalian desoxyribonucleic acids. E. Chargaff and R. Lipshitz. bibliog Am Chem Soc J 75:3658-61 Ag 5 '53

DESOXYRIBONUCLEOSIDES
Nucleotides; a method suitable for the large-scale preparation of deoxyribonucleosides from deoxyribonucleic acids. W. Andersen, C. A. Dekker and A. R. Todd. Chem Soc J p2721-4 Jl '52

DESOXYRIBOSE
Synthesis of 4-deoxy-L-ribose from D-lyxose. P. W. Kent and P. F. V. Ward. Chem Soc J p416-18 F '53

DESOXYXYLITOL
1-Desoxy-D-xylitol and some of its derivatives. E. Zissis and N. K. Richtmyer. bibliog Am Chem Soc J 75:129-31 Ja 5 '53

DE STIJL movement. See Architecture, Modernistic

DESYL chloride. See Chlorophenyl acetophenone

DETECTORS
Automatic system for fire protection guards this generator installation; Charles Pfizer & co., inc. il diags Power 97:96-7 My '53

Detectors end flame hazards; soybean extraction plant, Swift & co. il plan Food Eng 25:96-7 Ja '53

EAL super Connies use Fenwal fire units. il diag Aviation W 57:76+ O 27 '52

Find fires promptly; fire detection and alarm equipment. P. C. Hensler. il diag Safety Maint & Prod 104:18-20+ N '52

Fire-detection cable. il Bsns W p54+ Je 20 '53

Heat detector ends belt fires. diags Safety Maint & Prod 106:59-60 Jl '53; Excerpt. Refrig Eng 61:651 Je '53

DETECTORS—*Continued*
How a temperature-indication error was found and remedied. J. H. Pennell. diag Elec World 139:116+ Mr 9 '53
Stops fires before they start; electronic hot-spot detector. F. De Vaux. il Food Eng 25:77+ S '53
See also
Leak detectors

DETECTORS, Metal. See Metals—Detection

DETENTION homes, Juvenile. See Juvenile detention homes

DETERGENTS. See Cleaning compositions

DETERMINANTS (mathematics)
Determinants. E. H. Sibley. diags Elec R (Lond) 152:621-4, 699-704 Mr 20-27 '53

DETONATION
Detonation of pentaerythritol tetranitrate. M. P. Murgai. bibliog J Chem Phys 21:1403-4 Ag '53
Experimental efforts to find radioactivity induced by the firing of shaped charges. G. J. Plain and others. J Chem Phys 20:1049 Je '52
Experimental investigation of spinning detonation. R. E. Duff and H. T. Knight. bibliog il J Chem Phys 20:1493-5 S '52
Gaseous detonations. G. B. Kistiakowsky and others. bibliog il J Chem Phys 20:876-87, 994-1000 My-Je '52
Mechanical theory of spinning detonation. J. A. Fay. bibliog il J Chem Phys 20:942-50 Je '52
Possible explanation of the radioactivity induced by the detonation of shaped charges. L. Grunberg and K. H. R. Wright. il J Chem Phys 21:763 Ap '53
Some examples of weak detonations. S. G. Reed, jr. J Chem Phys 20:1823-4 N '52

DETONATORS
Posters warn against blasting caps. Nat Safety N 68:66+ Ag '53

DETONATORS, Electric
Blasting no-cut-hole raise rounds using millisecond delays. P. L. Russell and W. G. Agnew. 8pls U S Bur Mines Rep of Invest 4962:1-9 '53; Same cond. Min Cong J 39:18-22 Jl '53

DETOURS. See Roads—Detours

DETROIT
$180-million expressway program passes the one-third mark. il Eng N 149:44 O 30 '52

Industries

Detroit auto makers; tempo shapes a type. il Bsns W p56+ Ap 25 '53

Streets

Low cost rolled curbs, feature of Detroit area paving. il diag Roads & Sts 96:58-60 Ap '53

DETROIT Edison company
Bonds offered. Comm & Fin Chr 177:1900 My 4 '53

DETROIT steel corporation
Detroit Steel likely to benefit from major expansion program. Barron's 33:27+ Ja 19 '53

DETROIT, Toledo and Ironton railroad
David E. Smucker heads the Detroit, Toledo & Ironton. Ry Age 134:52 Ja 5 '53

DEUTERIUM
Charge-exchange scattering of 34-Mev π-mesons in hydrogen and deuterium. A. Roberts and J. Tinlot. bibliog diags Phys R 90:951-9 Je 1 '53
Cross section and angular distribution of the $D(d, p)T$ reaction. W. A. Wenzel and W. Whaling. bibliog Phys R 88:1149-54 D 1 '52
Cross section for the reaction $D(d,p)H^3$. C. F. Cook and J. R. Smith. bibliog diag Phys R 89:785-6 F 15 '53
Deuterium and hydrogen electrode characteristics of lithia-silica glasses. D. Hubbard and G. W. Cleek. bibliog J Res Nat Bur Stand 49:267-72 O '52
Deuterium effect on hydrogen bond distances in crystals. R. E. Rundle. J Chem Phys 21:937-8 My '53
Difference in viscosity of *ortho-* and *para-*deuterium at low temperatures. E. W. Becker and others. Phys R 91:414 Jl 15 '53
Elastic scattering of 9.7-Mev protons by deuterium and by hydrogen. J. C. Allred and others. bibliog Phys R 88:433-8 N 1 '52
Elastic scattering of pions in deuterium. K. A. Brueckner. bibliog Phys R 90:715-16 My 15 '53
Equilibrium in the exchange of deuterium between ammonia and hydrogen. M. Perlman and others. bibliog diag J Chem Phys 21:70-2 Ja '53
Exchange reaction between deuterium and ammonia on the surface of metal powders. J. R. Gutmann. bibliog diag J Phys Chem 57:309-12 Mr '53
Exchange reactions of methane and monodeuteromethane with atomic deuterium. D. W. Coillet and G. M. Harris. bibliog Am Chem Soc J 75:1486-7 Mr 20 '53
Faraday effect in deuterium and certain other gases. L. R. Ingersoll and W. L. James. Opt Soc Am J 42:985 D '52
Hyperfine structure of hydrogen and deuterium. A. G. Prodell and P. Kusch. bibliog diags Phys R 88:184-90 O 15 '52
Isotope effects in the ionization of alkyl chlorosulfites. E. S. Lewis and C. E. Boozer. Am Chem Soc J 74:6306-7 D 20 '52
Lamb shift for hydrogen and deuterium. E. E. Salpeter. bibliog Phys R 89:92-7 Ja 1 '53
Mechanism of the Meerwein-Ponndorf-Verley reaction; a deuterium tracer study. E. D. Williams, K. A. Krieger and A. R. Day. bibliog Am Chem Soc J 75:2404-7 My 20 '53
Mechanisms of elimination reactions; deuterium exchange in base-promoted dehydrochlorination of β-benzene hexachloride. S. J. Cristol and D. D. Fix. bibliog Am Chem Soc J 75:2647-8 Je 5 '53
Molecular kinetics and mechanism of methane-deuterium exchange reactions on nickel. M. C. Markham, M. C. Wall and K. J. Laidler. bibliog J Phys Chem 57:321-3 Mr '53
Natural concentration of deuterium in honey. T. C. Helvey. bibliog Science 117:276-7 Mr 13 '53
Nuclear radiofrequency spectra of D_2 and H_2 in intermediate and strong magnetic fields. N. J. Harrick and others. bibliog Phys R 90:260-6 Ap 15 '53
Ortho-para conversion of deuterium in molecular electric fields. Y. L. Sandler. bibliog J Chem Phys 20:1050 Je '52
Photoproduction of mesons in deuterium. M. Lax and H. Feshbach. bibliog Phys R 88:509-15 N 1 '52
Photoproduction of π^0 mesons in hydrogen and deuterium. N. C. Francis. bibliog Phys R 89:766-74 F 15 '53
π^+ to π^- ratio from proton bombardment of deuterium. M. A. Ruderman. Phys R 88:1427 D 15 '52
Polymerization of allyl compounds; the polymerization of allyl-1-d_2 acetate and the mechanism of its chain termination. P. D. Bartlett and F. A. Tate. bibliog diag Am Chem Soc J 75:91-5 Ja 5 '53
Production of charged photomesons from deuterium and hydrogen. R. W. White and others. bibliog diags Phys R 88:836-50 N 15 '52
Production of charged π-mesons in H, D, C, Cu, and Pb by 381-Mev protons. M. M. Block and others. bibliog diags Phys R 88:1239-47 D 15 '52
Production of photomesons in deuterium. J. Keck and R. Littauer. diag Phys R 88:139-40 O 1 '52
Production of π^0 mesons in hydrogen and deuterium by high energy γ-rays. G. Cocconi and A. Silverman. bibliog diag Phys R 88:1230-3 D 15 '52
Rate of deuterium exchange between ethanol and water; a reinvestigation. J. Hine and C. H. Thomas. bibliog Am Chem Soc J 75:739-40 F 5 '53
Ratio of positive to negative π-meson production from deuterium. J. Carothers and C. G. André. diag Phys R 88:1426-7 D 15 '52
Reaction of alkanes with hydrogen and deuterium; racemization and exchange. R. L. Burwell, jr. and W. S. Briggs. bibliog Am Chem Soc J 74:5096-102 O 20 '52
Self-diffusion and structure of liquid water; measurement of the self-diffusion of liquid water with H^2, H^3 and O^{18} as tracers. Jui Hsin Wang, C. V. Robinson and I. S. Edelman. Am Chem Soc J 75:466-70 Ja 20 '53

DEUTERIUM—*Continued*

Studies in the mechanism of the Willgerodt reaction; nature of the labile intermediate. E. Cerwonka, R. C. Anderson and E. V. Brown. bibliog Am Chem Soc J 75:30-3 Ja 5 '53

DEUTERIUM chloride

Solvolysis rates of some deuterated tertiary amyl chlorides. V. J. Shiner, jr. bibliog Am Chem Soc J 75:2925-9 Je 20 '53

DEUTERIUM compounds

Absorption spectra of SH and SD produced by flash photolysis of H_2S. and D_2S. D. A. Ramsay. bibliog il diags J Chem Phys 20:1920-7 D '52

Calculated approximate values of the free energy function for the OD molecule. G. McDonald. Am Chem Soc J 74:5539-40 N 5 '52

Characterization of methyl and methylene groups in steroids by infrared spectrometry; methyl and methylene bending frequencies in steroids labeled with deuterium. R. N. Jones, A. R. H. Cole and B. Nolin. bibliog Am Chem Soc J 74:5662-8 N 20 '52

Disproportionation in deuterated ammonia. J. Bigeleisen. J Chem Phys 20:1495-6 S '52

Evidence for α- and β-elimination from deutero alkyl halides with potassium amide. D. G. Hill and others. bibliog Am Chem Soc J 74:5599-602 N 20 '52

Infrared spectrum of CF_3D. S. R. Polo and M. K. Wilson. bibliog J Chem Phys 21:1129-31 Jl '53

Infra-red spectrum of nitric and of deuteronitric acid vapour; completion of identification of the fundamental frequencies, entropy of nitric acid; barrier resisting rotation of the hydroxyl group. H. Cohn, C. K. Ingold and H. G. Poole. diag Chem Soc J p4272-82 N '52

Infrared studies of mixed crystals; naphthalene-d_8 in naphthalene. W. B. Person and G. C. Pimentel. bibliog J Chem Phys 20:1913-15 D '52

Microwave absorption spectrum of ND_3. R. G. Nuckolls and others. bibliog Phys R 89:1101 Mr 1 '53

Microwave spectrum and structure of SiD_3Cl. B. Bak and others. J Chem Phys 21:753-4 Ap '53

Microwave spectrum and structure of SiD_3F. B. Bak and others. J Chem Phys 21:752-3 Ap '53

Nature of the gradual transition in NH_4Cl and ND_4Cl. C. C. Stephenson and others. J Chem Phys 20:1046-7 Je '52

Neutron diffraction study of the NaCl-type modification of ND_4Br and ND_4I. H. A. Levy and S. W. Peterson. J Chem Phys 21:366 F '53

Nitration of monodeuterobenzene. W. M. Lauer and W. E. Noland. bibliog Am Chem Soc J 75:3689-92 Ag 5 '53

Optical dispersion of perdeuterobenzene and perdeuterocyclohexane. R. T. Davis, jr. and R. W. Schiessler. bibliog Am Chem Soc J 75:2763-4 Je 5 '53

Piezoelectric, dielectric, and elastic properties of $ND_4D_2PO_4$ (deuterated ADP). W. P. Mason and B. T. Matthias. bibliog diag Phys R 88:477-9 N 1 '52

Potential function of ethylene. B. L. Crawford, jr. and others. bibliog diags J Chem Phys 21:678-86 Ap '53

Preparation of deuteroporphyrin IX dimethyl ester. T. C. Chu and E. J. Chu. bibliog Am Chem Soc J 74:6276-7 D 20 '52

Preparation of free hydroxylamine and deutero-hydroxylamine. R. E. Nightingale and E. L. Wagner. Am Chem Soc J 75:4092-3 Ag 20 '53

Properties of a tetragonal antiferroelectric crystal. W. P. Mason. Phys R 88:480-4 N 1 '52

Quadrupole coupling of the deuteron in DCCCl and DCN. R. L. White. Phys R 91:1014 Ag 15 '53

Reaction of methyl radicals with isobutyryl and α-deuteroisobutyryl chlorides. C. C. Price and H. Morita. bibliog Am Chem Soc J 75:3686-8 Ag 5 '53

Rotation-vibration spectra of allene and allene-d_4. R. C. Lord and P. Venkateswarlu. bibliog J Chem Phys 20:1237-47 Ag '52

Rotation-vibration spectra of diatomic and simple polyatomic molecules with long absorbing paths; the spectra of the HCN and DCN molecules from 2.5μ to 0.5μ. A. E. Douglas and D. Sharma. bibliog diag J Chem Phys 21:448-58 Mr '53

Rotation-vibration spectra of diatomic and simple polyatomic molecules with long absorbing paths; the spectrum of tri-deuteromethane in the photographic infrared. L. F. H. Bovey. bibliog il J Chem Phys 21:830-6 My '53

Rotational intensity distributions of OH and OD in an electrodeless discharge through water vapor. H. P. Broida and W. R. Kane. bibliog Phys R 89:1053-9 Mr 1 '53

Rotational isomerism and the vibrational spectrum of *sym*-dideuterodibromoethane. H. J. Bernstein and others. bibliog diags J Chem Phys 20:1227-31 Ag '52

Structure of the methyl halides. S. L. Miller and others. bibliog J Chem Phys 20:1112-14 Jl '52

Substituted methanes; infrared spectral data for deuterotrichloromethane. R. B. Bernstein and others. J Chem Phys 20:1979 D '52

Substituted methanes; Raman and infrared spectra, assignments, potential constants, and calculated thermodynamic properties for $CHClBr_2$ and $CDClBr_2$. D. A. Pontarelli and others. bibliog J Chem Phys 20:1949-54 D '52

Substitution and elimination rate studies on some deutero-isopropyl bromides. V. J. Shiner, jr. bibliog Am Chem Soc J 74:5285-8 N 5 '52

Thermal *trans-cis* isomerization of dideuteroethylene. B. S. Rabinovitch and others. bibliog J Chem Phys 20:1807-8 N '52

Transition temperatures in some dihydrogen and dideutero phosphates and arsenates and their solid solutions. C. C. Stephenson and others. J Chem Phys 21:1110 Je '53

Vapor pressures of the deuteromethanes. G. T. Armstrong and others. bibliog J Chem Phys 21:1297-8 Jl '53

Vibrational frequencies of phosphine-*d* and phosphine-d_2. R. E. Weston, jr. and M. H. Sirvetz. bibliog J Chem Phys 20:1820-1 N '52

Vibrational spectra of pyridine and pyridine-d_5. L. Corrsin and others. bibliog J Chem Phys 21:1170-6 Jl '53

DEUTERIUM oxide. See Water—Heavy water

DEUTERIZATION. See Hydrogenation

DEUTERONS

Angular correlations of the radiations from deuteron stripping reactions. L. C. Biedenharn and others. bibliog Phys R 88:517-19 N 1 '52

Angular distribution of alpha-particles from the reaction of deuterons with tritons. T. F. Stratton and G. D. Freier. Phys R 88:261-3 O 15 '52

Angular distribution of deuterons from $Be^9(p,d)Be^8$. B. L. Cohen and others. Phys R 90:323-4 Ap 15 '53

Angular distribution of neutrons of the *d-d* reaction. P. Baker, jr. and A. Waltner. Phys R 88:1213-14 D 1 '52

Creep of copper under deuteron bombardment. W. F. Witzig. bibliog diag J Ap Phys 23:1263-6 N '52

Deuteron bombardment of Be^9 and classification of levels of B^{10}. F. Ajzenberg. bibliog Phys R 88:298-304 O 15 '52

Deuteron photodisintegration at high energies. W. S. Gilbert and J. W. Rosengren. bibliog diag Phys R 88:901-5 N 15 '52

Differential and total neutron scattering cross sections of the deuteron in the energy range 0.1 to 1.0 Mev. P. R. Tunnicliffe. bibliog Phys R 89:1247-51 Mr 15 '53

Differential cross-section measurements for the scattering of protons by deuterons. R. J. S. Brown and others. bibliog diags Phys R 88:253-6 O 15 '52

Elastic pion-deuteron scattering. E. Arase and others. Phys R 90:160-1 Ap 1 '53

Elastic scattering of π-mesons by deuterons. T. A. Green. Phys R 90:161-2 Ap 1 '53

Elastic scattering of protons and neutrons by deuterons. R. S. Christian and J. L. Gammel. bibliog Phys R 91:100-21 Jl 1 '53

DEUTERONS—*Continued*

Energy levels in N^{14} and C^{14} from deuteron bombardment of C^{13}. R. E. Benenson. bibliog diags Phys R 90:420-8 My 1 '53

Energy loss of hydrogen, helium, nitrogen, and neon ions in gases. P. K. Weyl. bibliog diags Phys R 91:289-96 Jl 15 '53

High energy charged particles from targets bombarded by 190-Mev deuterons. L. Schecter and others. diags Phys R 90:633-43 My 15 '53

Interaction of 14-Mev neutrons with protons and deuterons. J. C. Allred and others. bibliog diags Phys R 91:90-9 Jl 1 '53

Limit on repulsive core from 100-Mev deuteron photoeffect. N. Austern. Phys R 88:1207-8 D 1 '52

Magnetic analysis of the deuteron-beryllium reactions. R. W. Gelinas and S. S. Hanna. bibliog diags Phys R 89:483-8 Ja 15 '53

Momentum space wave functions; the deuteron ground state. E. E. Salpeter and J. S. Goldstein. bibliog Phys R 90:983-6 Je 1 '53

Neutrons from the disintegration of phosphorus by deuterons. S. C. Snowdon. bibliog Phys R 87:1022-5 S 15 '52

Photodisintegration of the deuteron. L. Hulthén and B. C. H. Nagel. bibliog Phys R 90:62-9 Ap 1 '53

Photodisintegration of the deuteron at 20 Mev. J. Halpern and E. V. Weinstock. bibliog diag Phys R 91:934-9 Ag 15 '53

Photomesons from the deuteron. J. A. Thie. Phys R 88:420-1 O 15 '52

Polarizability of the deuteron. N. F. Ramsey and others. bibliog Phys R 91:1162-4 S 1 '53

Proton and deuteron transfer over hydrogen bridges as cause of conductivity effects. A. Gierer and K. Wirtz. bibliog J Phys Chem 56:914-17 O '52

Quadrupole coupling of the deuteron in DCCCl and DCN. R. L. White. Phys R 91:1014 Ag 15 '53

Radiation damage and recovery in Cu, Ag, Au, Ni, and Ta. J. W. Marx and others. bibliog diags Phys R 88:106-12 O 1 '52

Range-energy relations for alpha-particles and deuterons in the Kodak NTB emulsion. O. Gailar and others. bibliog diags R Sci Instr 24:126-8 F '53

Scattering of neutrons by deuterons. R. K. Adair and others. bibliog Phys R 89:1165-70 Mr 15 '53

Validity of Born approximation in stripping. N. Austern. Phys R 89:318-19 Ja 1 '53

Scattering

d-d Elastic scattering at 10.5 Mev. L. Rosen and J. C. Allred. bibliog Phys R 88:431-2 N 1 '52

Elastic scattering of deuterons by tritons. W. R. Stratton and others. bibliog Phys R 88:257-61 O 15 '52

Elastic scattering of 10-Mev deuterons by H^3 and He^3. J. C. Allred and others. bibliog diags Phys R 88:425-30 N 1 '52

Electric scattering of deuterons. U. E. Kruse and others. Phys R 89:655-6 F 1 '53

Electric scattering of the polarizable deuteron. B. J. Malenka and others. bibliog Phys R 91:1165-7 S 1 '53

Proton-deuteron scattering at 5.1 Mev and deuteron-proton scattering at 10.2 Mev. K. B. Mather. bibliog Phys R 88:1408-11 D 15 '52

DEVALUATION of money. See Money—Devaluation

DEVELOPERS, Photographic. See Photography—Developing and developers

DEVELOPMENT agencies, State. See State planning boards

DEVELOPMENT credit corporations. See State planning boards

DEVINY, John J.

Deviny, public printer since 1948, retires from civil service post. L. H. Allen. por Inland Ptr 130:37 Mr '53

DEVITRIFICATION. See Glass—Devitrification

DEW points

Electric dew point meter cooled by the Vortex tube. F. C. Hooper and I. S. Juhasz. bibliog il diags Refrig Eng 60:1196-7 N '52

DEWAXING. See Waxes

DEXTRAN

Blood plasma substitute; pictured flow sheet. Chem Eng 59:240-3 D '52

Controlled thermal depolymerization of dextran. I. A. Wolff and others. bibliog diag Ind & Eng Chem 45:755-9 Ap '53

Determination of molecular weights of dextrans by means of alkaline copper reagents. H. S. Isbell and others. bibliog J Res Nat Bur Stand 50:81-6 F '53

Dextran; staff-industry collaborative report. G. H. Bixler and others. bibliog flow sheet il plans diags Ind & Eng Chem 45:692-705 Ap '53

Dextran triacetates. A. Jeanes and C. A. Wilham. bibliog Am Chem Soc J 74:5339-41 N 5 '52

Evidence of new linkages in dextrans. R. Lohmar. Am Chem Soc J 74:4974 O 5 '52

Factors affecting molecular weight of enzymatically synthesized dextran. H. M. Tsuchiya, N. N. Hellman and H. J. Koepsell. bibliog Am Chem Soc J 75:757-8 F 5 '53

Infra-red absorption spectra of dextran and other polyglucosans. S. A. Barker and others. bibliog Chem & Ind p 196-7 F 28 '53

Structure of a novel dextran synthesized by a betacoccus arabinosaceous. S. A. Barker and others. bibliog Chem & Ind p 1156 N 22 '52

Thermal degradation of dextran. M. Stacey and F. G. Pautard. bibliog Chem & Ind p 1058-9 O 25 '52

DEXTRINS

Mechanism of carbohydrase action; the preparation and properties of maltodextrin substrates. W. J. Whelan, J. M. Bailey and P. J. P. Roberts. diag Chem Soc J p 1293-8 Ap '53

Viscometer for dextrin pastes. W. R. Fetzer, E. K. Crosby and R. E. Fullick. diags Anal Chem 24:1671-2 O '52

DEXTROSE. See Glucose

DIABETES

Decreased activity and energy balance in the hereditary obesity-diabetes syndrome of mice. J. Mayer. bibliog Science 117:504-5 My 8 '53

Incorporation of C_{14} amino acids into peptides by normal and diabetic rat tissues; abstract. M. E. Krahl. Science 116:524 N 14 '52

Many served economically in North Carolina clinics. W. B. Hunter. Pub Health Rep 68:83-4 Ja '53

Protection against alloxan diabetes by mannose and fructose. G. Bhattacharya. bibliog Science 117:230-1 F 27 '53

DIACETONE alcohol. See Hydroxymethyl pentanone

DIACETYL

Reaction of diacetyl and cyclohexylamine. J. F. Carson. bibliog Am Chem Soc J 75:4300-2 S 5 '53

DIACETYLENE. See Butadiyne

DIAGNOSIS

Predictive diagnosis. G. J. Kidera. Aeronautical Eng R 12:31+ Mr '53

See also

Ultrasonic waves—Medical use

DIAGNOSIS, Radioscopic

Electrical technology in medicine; International congress of radiology 7th meeting, Copenhagen. Elec R (Lond) 153:448-9 Ag 28 '53

Research produced Urokon; abstract. V. H. Wallingford. Oil Paint & Drug Rep 164:5+ Ag 24 '53

X-ray diagnostics; cholecystographic agents. D. Papa and others. bibliog Am Chem Soc J 75:1107-10 Mr 5 '53

DIAGRAMS, Electric wiring. See Electric wiring—Diagrams

DIAL, Morse Grant, 1895-

Dial of Union Carbide & Carbon. por Fortune 46:136-7 N '52

DIAL telephone. See Telephone, Automatic

DIALS, Instrument

Psychology and the instrument panel. A. Chapanis. il diags Sci Am 188:74-6+ Ap '53

DIAMAGNETISM
Diamagnetism of an enclosed electron gas. H. A. Nye. Phys R 89:1305-6 Mr 15 '53
Low temperature diamagnetism of electrons in a cylinder. W. Band. diag Phys R 91:249-55 Jl 15 '53
Number theory and the magnetic properties of an electron gas. M. F. M. Osborne. bibliog diags Phys R 88:438-51 N 1 '52
DIAMINES. See Amines
DIAMINOBIPHENYL. See Benzidine
DIAMINOBUTYRIC acid
New synthesis of αγ-diaminobutyric acid. R. O. Atkinson and F. Poppelsdorf. Chem Soc J p2448 Je '52
DIAMINODIBENZOFURAN
Absorption spectra and basicity of 2,3-diaminodibenzofuran. E. Sawicki and F. E. Ray. Am Chem Soc J 75:2519-20 My 20 '53
DIAMINOPYRIMIDINE
Purines; the synthesis of certain purines and the cyclization of several substituted 4,5-diaminopyrimidines. R. K. Robins and others. bibliog Am Chem Soc J 75:263-6 Ja 20 '53
DIAMINOXANTHONE
Synthesis of diaminoxanthones. A. A. Goldberg and H. A. Walker. Chem Soc J p 1348-57 My '53
DIAMOND alkali company
Sharp earnings recovery likely. Barron's 33:19-20 Mr 9 '53
DIAMOND cutters
Labour conditions in the diamond-cutting industry. R. Viala. Int Labour R 66:354-78 O '52
DIAMOND match company
Billions of matches; but the bright economic light comes from other sources. H. Murphy. Barron's 32:11-12 N 3 '52
DIAMOND mines and mining
Recovery of diamonds by modern mechanical methods. J. Bone. flow sheets diags Inst Mech Eng Proc (A) 166 no 3:367-75 '52
DIAMOND powder
Water-soluble pastes for diamond powder. R. S. Young, D. A. Benfield and G. B. Dauncey. Ind & Eng Chem 45:402-4 F '53
DIAMONDS
Carbon in the engineering and metallurgical industries. V. S. Kingswood. bibliog il diags Metallurgia 48:55-62 Ag '53
Electronic structure of the diamond crystal. F. Herman. bibliog Phys R 88:1210-11 D 1 '52; Reply. G. G. Hall. 90:317 Ap 15 '53
Interferometric examination of polished diamond surfaces. E. M. Wilks. il Opt Soc Am J 43:84-7 F '53
Reversible bleaching of a band in the absorption spectrum of diamond. P. Pringsheim. bibliog Phys R 91:551-4 Ag 1 '53
South Africa extends diamond controls. For Comm W 48:16 D 1 '52
Specific heat of diamond at low temperatures. W. DeSorbo. bibliog J Chem Phys 21:876-80 My '53
DIAMONDS, Artificial
Synthetic diamonds; British patent. Chem Age (Lond) 67:638 N 8 '52; Chem & Eng N 30:464+ N 3 '52
DIAMONDS, Industrial
Are diamonds your plant's big problem? il Mod Ind 24:133-4 N '52
Conservation of industrial diamonds. Mach 59:167 Ja '53
Diamond drilling bits may lower costs in drilling hard formations. J. Sanna. il Oil & Gas J 51:127 D 15 '52
Diamond drilling in prospecting. J. D. Cumming. il diags Can Min J 73:52-5 D '52
Diamond-lapping and polishing compound; Hyprez. il Engineering 175:416 Ap 3 '53
Diamond pin locators. E. J. LaBroad. diags Tool Eng 29:45-6 D '52; Same. Am Mach 96:108 D 8 '52
Diamond savers and substitutes. il Mill & Factory 53:128-31 O '53
Diamond tools; rustproof holders resist corrosion, retain size. il Iron Age 171:135 F 19 '53
Diamond wheel shortage looms large. E. C. Beaudet. Iron Age 171:99 F 12 '53
Diamond wheels; a new method for bonding diamonds in the wheels. Bsns W p72+ My 16 '53
Economic factors must govern wheel selection for grinding carbides. F. J. Lennon, jr. il diag Am Mach 97:165-70 F 16 '53
Look at your diamond wheel dressers. G. Daskel, jr. il Am Mach 96:142-3 O 27 '52
Orientation of cube diamonds in drill bits. E. P. Pfleider. il Min Eng 5:Trans 998-1003 O '53
Oriented diamond bits cut drilling costs. A. E. Ross and A. E. Long. il Min Cong J 39:71-3 Ag '53
Practical carbide tool maintenance. J. W. Ripple. il diags Am Mach 97:126-8 Jl 20 '53
Recovery of diamonds by modern mechanical methods. J. Bone. flow sheets diags Inst Mech Eng Proc (A) 166 no 3:367-75 '52
Research on the cutting action of the diamond drill bit. E. P. Pfleider and R. L. Blake. bibliog il diags Min Eng 5:Trans 187-95 F '53
Right wheel cuts diamond consumption; chip-breaker grinding in carbide cutter tips. J. W. Ripple. il diags Steel 132:72-3 F 16 '53
Simple method saves diamonds at Carboloy. il Iron Age 171:83 My 21 '53
Standards up to date for diamond core drill fittings. H. A. Kurtze. diag Eng & Min J 153:112 D '52
Synthetic diamond process reported in English patent. Chem & Eng N 30:4647 N 3 '52; Chem Age (Lond) 67:638 N 8 '52
Why and how; we must conserve diamond bort! A. Ashburn. Am Mach 96:151-3 N 10 '52
DIANTHRONYLIDENE. See Bianthronylidene
DIAPHRAGMS
Diaphragm error and testing rate in the paper bursting test. F. T. Carson and V. Worthington. bibliog diags Tappi 35:539-44 D '52
Paper diaphragm starts siphon for corrosive liquids. R. Volterra. diags Chem Eng 60:210 Ap '53
Rubber division library bibliography; diaphragms. 5 l Rubber division lib, Univ. of Akron, Akron 4, Ohio '52
DIATOMACEOUS earth
Crystallography of nickel kieselguhr. R. B. Roof, jr. J Chem Phys 20:1181-2 Jl '52
Diatomaceous earth; non-metal of a thousand uses. C. V. O. Hughes, jr. il Min Eng 5:277-81 Mr '53
Diatomaceous earth; staff industry collaborative report. W. Q. Hull and others. bibliog flow sheet il diags Ind & Eng Chem 45:256-69 F '53
Diatomite for filtration. diag Can Chem Process 37:76+ My '53
Glaze investigations; effect of various silicas in typical glazes. R. Russell, jr. and R. R. Rowlands. bibliog Am Cer Soc J 36:1-8 Ja 1 '53
Information on the handling of diatomaceous earth. Rubber Age 73:369 Je '53
Pneumoconiosis due to diatomaceous earth; clinical and X-ray aspects. R. H. Smart and W. M. Anderson. bibliog il Ind Med 21:509-18 N '52; Abstract. Nat Safety N 67:64+ F '53
DIATOMITE. See Diatomaceous earth
DIATOMS
Amateur scientist. A. G. Ingalls. il Sci Am 188:80-4 Ja '53
DIAZAPHENANTHRENE
New syntheses of heterocyclic compounds; 2 : 10-diazaphenanthrenes by application of the Stieglitz rearrangement. S. S. Berg and V. Petrow. Chem Soc J p3713-16 O '52
DIAZAPYRENE
Some derivatives of 1 : 6-diazapyrene and 4 : 5-6 : 7-dibenzo-1 : 3-diazacyclohepta-2 : 4 : 6-triene. A. E. S. Fairfull and others. Chem Soc J p4700-9 D '52
DIAZOACETIC acid
Formation of phenoxyacetic acids from alkoxybenzenes and diazoacetic ester. A. W. Johnson, A. Langemann and J. Murray. Chem Soc J p2136-40 Jl '53
DIAZOACETONE
Kinetics and mechanism of the acid-catalyzed decomposition of diazoacetone. C. E. McCauley and C. V. King. bibliog Am Chem Soc J 74:6221-5 D 20 '52

DIAZOAMINOBENZENE

Action of light on diazoaminobenzene dissolved in ethanol. H. C. Freeman and R. J. W. Le Fèvre. Chem Soc J p2932-4 Jl '52

DIAZO compounds

Copper-catalyzed decomposition of diazoketones. P. Yates. bibliog Am Chem Soc J 74:5376-81 N 5 '52

Decomposition of aliphatic diazo-compounds by trimethyl borate; the preparation of branched-chain paraffins of high molecular weight. G. D. Buckley and N. H. Ray. Chem Soc J p3701-4 O '52

Heats of combustion of diazoaminobenzene, benzotriazole and 2-triazoethanol. T. F. Fagley, E. Klein and J. F. Albrecht, jr. bibliog Am Chem Soc J 75:3104-6 Jl 5 '53

Kinetics of the diazo coupling reaction. H. Zollinger. Chem R 51:347-61 bibliog(p360-1) O '52

New reaction of aliphatic diazo-compounds. W. R. Bamford and T. S. Stevens. Chem Soc J p4675-8 D '52

Possible occurrence of geometrical isomerism among the diazosulphones. H. C. Freeman and others. Chem Soc J p3381-4 S '52

Sensitometry of the positive diazotype process. C. E. Herrick, jr. bibliog Opt Soc Am J 42:904-10 D '52

Some 10-substituted 1 : 3-dimethyl-2 : 9-diazaphenanthrene 9-oxides. S. B. Hansen and V. Petrow. Chem Soc J p350-1 Ja '53

Study of diazo-compounds by use of nitrogen isotopes; the reduction of mixed diazonium salts of anthranilic acid and aniline. P. F. Holt and B. I. Hopson-Hill. Chem Soc J p4251-4 N '52

Analysis

Ultraviolet spectrophotometric determination of nitrites with 4-aminobenzenesulfonic acid. J. M. Pappenhagen and M. G. Mellon. bibliog Anal Chem 25:341-3 F '53

DIAZOCYCLOPENTADIENE

Diazocyclopentadiene; abstract. W. E. Doering. Chem & Eng N 31:1295 Mr 30 '53

DIAZOFLUORENE

Formation of a spiro compound by the action of diazofluorene on acenaphthylene. A. Schönberg, A. Mustafa and N. Latif. Am Chem Soc J 75:2267 My 5 '53

DIAZOMETHANE

High molecular weight polymethylene. S. W. Kantor and R. C. Osthoff. bibliog Am Chem Soc J 75:931-2 F 20 '53

Photochemical reactions of diazomethane with polyhalomethanes and α-haloesters. W. H. Urry and J. R. Eiszner. bibliog Am Chem Soc J 74:5822-6 D 5 '52

Syntheses of methylamine-C^{14} and diazomethane-C^{14}. A. R. Jones and W. J. Skraba. bibliog Science 117:252-3 Mr 6 '53

DIAZONIUM compounds

Coupling of aconitic acid and itaconic acid with certain diazonium chlorides. K. B. L. Mathur, M. Krishnamurti and U. K. Pandit. bibliog Am Chem Soc J 75:3240-1 Jl 5 '53

Diazonium fluoborates as initiators of vinyl polymerization. C. S. Marvel and others. Am Chem Soc J 75:3846-8 Ag 5 '53

Malonyl-α-aminopyridine; hydrolysis of its diazonium coupling products and related compounds. H. R. Snyder and M. M. Robison. Am Chem Soc J 74:5945-9 D 5 '52

Polarographic examination of diazotized amines; additional coulometric data. E. R. Atkinson, C. E. Garland and A. F. Butler. Am Chem Soc J 75:983-4 F 20 '53

Polymerization of vinyl monomers in aqueous solution by diazonium salts. W. Cooper. Chem & Ind p407-8 Ap 25 '53

Reaction of diazonium salts with alcohols. N. Kornblum and A. E. Kelley. bibliog Science 117:379-80 Ap 10 '53

Reaction of diazonium salts with amines. S. Kruger. Chem Soc J p700-2 F '53

Reaction of diazonium salts with furylacrylic acid. W. Freund. Chem Soc J p3068-71 Ag '52

Replacement of the primary aromatic amino group by hydrogen using diazonium fluoborates. A. Roe and J. R. Graham. bibliog Am Chem Soc J 74:6297-8 D 20 '52

Study of diazo-compounds by use of nitrogen isotopes; the reduction of mixed diazonium salts of anthranilic acid and aniline. P. F. Holt and B. I. Hopson-Hill. Chem Soc J p4251-4 N '52

DIAZOTIZATION

Incidents during forty-three years of chemical research; abstract. H. H. Hodgson. Chem & Ind p236-7 Mr 14 '53

DIBENZALACETONE

Structure of a photodimer of dibenzalacetone. G. W. Recktenwald, J. N. Pitts, jr. and R. L. Letsinger. bibliog Am Chem Soc J 75:3028-9 Je 20 '53

DIBENZANTHRACENE

3′,7′-Dihydroxy-1,2,5,6-dibenzanthracene. L. S. Hornig. bibliog Am Chem Soc J 74:4572-7 S 20 '52

Metabolic degradation in the mouse of 1,2,5,6-dibenzanthracene-9,10-C^{14}; some quinone metabolites retaining the intact ring system. C. Heidelberger, H. I. Hadler and G. Wolf. bibliog Am Chem Soc J 75:1303-8 Mr 20 '53

DIBENZOFLUORANTHENE

Aromatic hydrocarbons; 2 : 3-6 : 7-dibenzofluoranthene. E. Clar and D. G. Stewart. Chem Soc J p4783-5 D '52

Syntheses of benzo[*mno*]fluoranthene and dibenzo[*k*, *mno*]fluoranthene. N. Campbell and D. H. Reid. Chem Soc J p3281-4 Ag '52

DIBENZOFLUORENE

Synthesis of 1,2,5,6-dibenzfluorene. J. Szmuszkovicz and E. D. Bergmann. bibliog Am Chem Soc J 75:353-4 Ja 20 '53

DIBENZOFURAN

Dibenzofuran-2-sulfonic and 3-nitro-8-sulfonic acids as reagents for amines and amino acids. R. Wendland, J. Rode and R. Meintzer. bibliog Am Chem Soc J 75:3606-8 Jl 20 '53

DIBENZONAPHTHACENE

Molecular-orbital calculations for Clar's hydrocarbon 1 : 13 : 12-6 : 16 : 7-dibenzonaphthacene (zethrene). C. A. Coulson and C. M. Moser. Chem Soc J p 1341-7 My '53

DIBENZOPENTALENE

Fused carbon rings; dibenzopentalene. C. T. Blood and R. P. Linstead. Chem Soc J p2263-8 Je '52

DIBENZOSPARTEINE

Synthesis of dibenzo[*c,k*]sparteine. G. R. Clemo and B. Nath. Chem Soc J p2196-8 Je '52

DIBENZOTHIOPHENE

Reaction of *n*-butyllithium with dibenzothiophene-5-dioxide and with diphenyl sulfone. H. Gilman and D. L. Esmay. Am Chem Soc J 75:278-81 Ja 20 '53

Some brominated dibenzothiophene derivatives. H. Gilman and R. K. Ingham. Am Chem Soc J 75:3843-5 Ag 5 '53

Some nitrogen derivatives of dibenzothiophene. E. Sawicki and H. S. Greene. Am Chem Soc J 75:1752-3 Ap 5 '53

DIBENZOYLPROPENE

Reactions of *cis*- and *trans*-1,2-dibenzoylpropenes with hydrogen halides, bromine and phenylmagnesium bromide. P. S. Bailey and S. H. Pomerantz. bibliog Am Chem Soc J 75:281-4 Ja 20 '53

DIBENZYL chloroethylamine

Sympathetic blocking β-haloalkylamines. E. Nyman and others. bibliog Science 116:600-1 N 28 '52

DIBENZYL phthalate

Crystallographic data. J. Krc, jr. and W. Rila. il diags Anal Chem 25:514-15 Mr '53

DIBENZYL sulfide

Crystallographic data. J. Krc, jr. and J. French. il diags Anal Chem 25:198-9 Ja '53

DIBORANE. See Boron hydrides

DIBROMOBUTENE

*cyclo*Propanes; the condensation of 1 :4-dibromobut-2-ene with ethyl cyano- and aceto-acetate. R. W. Kierstead, R. P. Linstead and B. C. L. Weedon. Chem Soc J p 1799-803 Je '53

*cyclo*Propanes; the malonate condensation with 1 : 4-dibromobut-2-ene; a convenient new route to vinyl*cyclo*propane derivatives. R. W. Kierstead, R. P. Linstead and B. C. L. Weedon. Chem Soc J p3610-16 S '52

DIBROMOCHLOROMETHANE

Substituted methanes; Raman and infrared spectra, assignments, potential constants, and calculated thermodynamic properties for $CHClBr_2$ and $CDClBr_2$. D. A. Pontarelli and others. bibliog J Chem Phys 20:1949-54 D '52

DIBROMOCINNAMIC acid

Mechanisms of elimination reactions; the spontaneous decomposition of salts of β-halo acids; *trans*-cinnamic acid dibromide. S. J. Cristol and W. P. Norris. bibliog Am Chem Soc J 75:2645-6 Je 5 '53

Stereochemistry and mechanism of the transformation of cinnamic acid dibromide to β-bromostyrene. E. Grovenstein, jr. and D. E. Lee. bibliog Am Chem Soc J 75:2639-44 Je 5 '53

DIBROMOCYCLOPENTENE

Alicyclic glycols; *cyclo*pentane-1 : 3-diol, anionotropic rearrangement in some reactions of 3 : 5-dibromo*cyclo*pentene. L. N. Owen and P. N. Smith. Chem Soc J p4035-47 O '52

DIBROMODIFLUOROMETHANE

Substituted methanes; infrared spectral data and assignments for dibromodifluoromethane. C. E. Decker and others. J Chem Phys 21:189-90 Ja '53

DIBROMODIMETHYL hydantoin

New brominating and oxidizing agent. Chem W 72:44+ Mr 21 '53

DIBROMOETHANE. See Ethlyene bromide

DIBUTYL benzene

Reaction of methyl iodide with *o*-phenylenediamine; homomorphs of *o*-di-*t*-butylbenzene. H. C. Brown and K. L. Nelson. bibliog il Am Chem Soc J 75:24-8 Ja 5 '53

DIBUTYL cresol

Reaction between 2,6-di-*t*-butyl-*p*-cresol and bromine. G. M. Coppinger and T. W. Campbell. bibliog Am Chem Soc J 75:734-6 F 5 '53

DIBUTYL diselenide

Electric moments of some aliphatic peroxides, disulfides and diselenides. M. T. Rogers and T. W. Campbell. bibliog Am Chem Soc J 74:4742-3 O 5 '52

DIBUTYL disulfide

Electric moments of some aliphatic peroxides, disulfides and diselenides. M. T. Rogers and T. W. Campbell. bibliog Am Chem Soc J 74:4742-3 O 5 '52

DIBUTYLMETHYL phenol

2,6-Di-*tert*-butyl-4-methylphenol as a gasoline antioxidant. M. C. K. Jones, A. R. Jones and B. R. Strickland. bibliog Ind & Eng Chem 44:2721-5 N '52

DIBUTYL peroxide

Electric moments of some aliphatic peroxides, disulfides and diselenides. M. T. Rogers and T. W. Campbell. bibliog Am Chem Soc J 74:4742-3 O 5 '52

Photochemical reactions in the gas phase systems; di-*t*-butyl peroxide, peroxide-butadiene and acetone-butadiene. D. H. Volman and W. M. Graven. bibliog Am Chem Soc J 75:3111-16 Jl 5 '53

DIBUTYL phosphonate

Di-*t*-butyl phosphonate. R. W. Young. bibliog Am Chem Soc J 75:4620 S 20 '53

DIBUTYL pyridine

2,6-Di-butylpyridine; an unusual pyridine base. H. C. Brown and B. Kanner. Am Chem Soc J 75:3865 Ag 5 '53

DIBUTYL sulfite. See Butyl sulfite

DICARBOXYLIC acids. See Carboxylic acids

DICHLOROBENZENE

Electronic spectra of *o*-dichlorobenzene in the solid state. S. C. Sirkar and H. N. Swamy. bibliog J Chem Phys 20:1177 Jl '52

Homolytic aromatic substitution; ratio of isomerides formed in the phenylation of chlorobenzene; competitive experiments on the phenylation of *p*-dichlorobenzene and 1 : 3 : 5-trichlorobenzene; partial rate factors for chlorobenzene. D. R. Augood, D. H. Hey and G. H. Williams. Chem Soc J p44-50 Ja '53

Rectification at reduced pressures. H. Bliss, A. M. Eshaya and N. W. Frisch. bibliog diags Chem Eng Prog 48:627-32 D '52

DICHLOROBENZYL sulfide

Mechanism of the oxidation of *p,p'*-dichlorobenzyl sulfide by peroxybenzoic and *para* substituted peroxybenzoic acids. C. G. Overberger and R. W. Cummins. bibliog Am Chem Soc J 75:4250-4 S 5 '53

DICHLOROBUTANE

Mechanisms of the thermal decompositions of 1 : 4-dichlorobutane and 1 : 1 : 2-trichloroethane. R. J. Williams. Chem Soc J p 113-16 Ja '53

DICHLOROBUTYNE

Internal rotation in dichlorobutine. Y. Morino and others. J Chem Phys 20:1976-7 D '52

DICHLORODIFLUOROMETHANE

Death after repeated exposures to refrigerant gases. J. Mendeloff. bibliog il A M A Archives Ind Hygiene & Occup Med 6:518-24 D '52

Effect of temperature on azeotropy in 1,1-difluoroethane and dichlorodifluoromethane. W. A. Pennington. bibliog Ind & Eng Chem 44:2397-401 O '52

Heat transfer film coefficients for refrigerants boiling inside tubes. M. Baker and others. bibliog flow diag diag Refrig Eng 61:986-91; Discussion. 991 S '53

Making the most of superheat in ammonia and Freon-12 systems. L. Buehler. diags Refrig Eng 61:617-19+ Je '53

Metastable flow of Freon-12. P. F. Pasqua. bibliog flow diag il diag Refrig Eng 61:1084A-1088; Discussion. 1088+ O '53

Refrigeration chemical helps electronic nose find leaks. Du Pont Freon-12 fluorinated hydrocarbon. Elec Eng 72:471 My '53; Excerpt. Iron Age 171:207-8 Mr 5 '53

Suction gas superheaters for Freon-12 systems. diags Heat & Ven 50:82-4 Mr; 127-8 Ap '53

Thermodynamic properties of gaseous difluorodichloromethane (Freon-12). J. F. Masi. bibliog diag Am Chem Soc J 74:4738-41 O 5 '52; Correction. 75:2276-7 My 5 '53

Physiological effect

Comparative inhalation toxicities of four halogenated hydrocarbons to rats and mice in the presence of gasoline fires. C. C. Comstock and F. W. Oberst. A M A Archives Ind Hygiene & Occup Med 7:157-67 F '53

DICHLOROETHANE. See Ethylene chloride

DICHLOROETHYLENE

Absorption of 3.3-cm microwaves in chloroform and ethylene dichloride in the liquid state. S. C. Sirkar and D. K. Ghosh. J Chem Phys 21:1614-15 S '53

Dehalogenation reaction; dechlorination of the copolymers vinyl acetate/*trans*dichloroethylene and vinyl acetate/trichloroethylene. T. Alfrey, jr., H. C. Haas and C. W. Lewis. Am Chem Soc J 74:4856-8 O 5 '52

Energy transfer by collisions in *cis*- and *trans*-dichloroethylene vapors. D. Sette and others. bibliog J Chem Phys 20:1899-902 D '52

Liquid-phase reactions at high pressures; the polymerisation of 1 : 2-dichloroethylene. K. E. Weale. Chem Soc J p2223-4 Je '52

Sound dispersion in *cis*- and *trans*-dichloroethylene vapors. M. Boudart. J Chem Phys 21:955-6 My '53

See also

Saran

DICHLOROFLUORESCEIN

Improved protective colloid for use with dichlorofluorescein adsorption indicator. R. B. Dean and others. Anal Chem 24:1638-9 O '52

DICHLOROFUMARIC acid

Dichlorofumaric acid. N. R. Eldred and D. M. Young. Am Chem Soc J 75:4338-9 S 5 '53

DICHLOROHEXAFLUOROCYCLOBUTANE

Infrared absorption spectra of *cis*- and *trans*-1,2-dichlorohexafluorocyclobutane. J. R. Lacher and others. bibliog J Chem Phys 20:1014-15 Je '52

DICHLOROMETHANE. See Methylene chloride

DICHLORONAPHTHOQUINONE

Condensation of 2 : 3-dichloro-1 : 4-naphthaquinone with α-naphthols. N. P. Buu-Hoï and P. Demerseman. Chem Soc J p4699-700 D '52

DICHLOROPHENOXYACETIC acid

Herbicides. P. Frisselle and D. Stillman, jr. il Chem & Eng N 31:1175-7 Mr 23 '53

Toxicity of 2,4-dichlorophenoxyacetic acid and 2,4,5-trichlorophenoxyacetic acid; a report on their acute and chronic toxicity in dogs. V. A. Drill and T. Hiratzka. A M A Archives Ind Hygiene & Occup Med 7:61-7 Ja '53

Analysis

Spectrophotometric determination of small quantities of 2,4-dichlorophenoxyacetic acid and 2,4,5-trichlorophenoxyacetic acid using partition chromatography. N. Gordon. bibliog diag Anal Chem 24:1968-71 D '52

DICHLOROPHENYL methyl butane

Insecticidal activity and chemical constitution; synthesis of 2 : 2-di-*p*-chlorophenyl-3-methylbutane. E. J. Skerrett and D. Woodcock. Chem Soc J p2806-10 Jl '52

DICHLOROPHENYLPROPANONE

Insecticidal activity and chemical constitution; synthesis of some di-*p*-chlorophenylalkanes. E. J. Skerrett and D. Woodcock. Chem Soc J p3308-12 Ag '52

DICHLOROPROPANE. See Propylene chloride

DICHLOROPROPENE

Kinetics and mechanism of nucleophilic displacements in allylic systems; reaction of 3 : 3-dichloroprop-1-ene with the ethoxide ion. P. B. D. de la Mare and C. A. Vernon. Chem Soc J p3325-31 S '52

Kinetics and mechanisms of nucleophilic displacements in allylic systems; the reactions between 3 : 3-dichloroprop-1-ene and the thiophenoxide ion. P. B. D. de la Mare and C. A. Vernon. Chem Soc J p3331-4 S '52

DICHLOROTRIMETHYL phenylindan

Electrical and physical properties of IN-420; a new chlorinated liquid dielectric. A. J. Warner. bibliog diag Elec Com 30:118-23 Je '53; Abstract. Elec Eng 72:68 Ja '53

DICHROISM

Direct evidence for the $n \rightarrow \pi$ electronic transition of the nitroso-absorption. K. Nakamoto and K. Suzuki. J Chem Phys 20:1971-2 D '52

Interpretation of infrared dichroism in fibrous protein structures. R. D. B. Fraser. bibliog diags J Chem Phys 21:1511-15 S '53

DICHROMATES

Inorganic corrosion inhibitors in acid solution. C. V. King and others. bibliog Electrochem Soc J 99:423-6 O '52

Spectrophotometric study of dichromate-chromic salt mixtures; application to the determination of glycerol in vinegar. D. T. Englis and L. A. Wollerman. Anal Chem 24:1983-5 D '52

Analysis

Spectrophotometric method for following dichromate oxidations. M. J. Cardone and J. Compton. bibliog Anal Chem 24:1903-8 D '52

DICKEY, Charles Denston

Portrait. Bsns W p34 Ja 24 '53

DICROTALIC acid

Dicrotaline; the structure and synthesis of dicrotalic acid. R. Adams and B. L. Van Duuren. bibliog Am Chem Soc J 75:2377-9 My 20 '53

DICROTALINE

Dicrotaline; the structure and synthesis of dicrotalic acid. R. Adams and B. L. Van Duuren. bibliog Am Chem Soc J 75:2377-9 My 20 '53

DICTAPHONE corporation

Security I like best. W. H. Holly. Comm & Fin Chr 177:2626 Je 18 '53

DICTATING machines

Audograph saves time, money for industry. Weekly Underw 168:764 Mr 14 '53

Compact Voicewriter designed for portability. il diags Product Eng 23:158-61 N '52; Machine Design 24:180-1 D '52

Manufacture

Zinc-protected talkers. il Steel 132:103-4 Je 22 '53

DICTATION

John Hancock hitches its inter-office phones to central dictation recorders. R. B. Mitchell. Nat Underw (Life ed) 57:2+ Ja 9 '53

DICUMAROL

Effect of salicylic acid on the hypoprothrombinemia induced by dicumarol in the dog and the rat. J. B. Field. bibliog Science 117: 499-501 My 8 '53

DICYANDIAMIDE

Sulphonyl-compounds derived from dicyandiamide and melamine. F. Kurzer and J. R. Powell. Chem & Ind p 195-6 F 28 '53

DICYCLOHEXYLAMMONIUM nitrate

Vapourize your rust problems. Can Chem Process 37:78+ S '53

DICYCLOPROPANE

Reaction of cyclopropyl chloride with lithium; isolation of dicyclopropyl. V. A. Slabey. Am Chem Soc J 74:4928-30 O 5 '52

DIE casting

Aluminum die casting. il Light Metal Age 11: 15 F '53

Aluminum die castings up. Steel 131:81 N 24 '52

Design tips for changing to die casting. H. K. Barton. diags Product Eng 24:174-8 Ap '53

Diecasting; growing like a beanstalk. R. L. Hatschek. Iron Age 171:71-2 Mr 19 '53

Die casting works extension; Non-ferrous die casting co. Engineer 196:27 Jl 3 '53

Die castings, copper and copper-base, aluminum and aluminum-base, zinc and zinc-base, lead and lead-base shipments, 1949-1952; tabulations. Steel 132:165 Ja 5 '53

Die castings; light metal limits; abstract. M. R. Caldwell and C. Pack. Materials & Methods 37:204+ My '53

Electric furnaces merit greater promotion; Price-Pfister brass mfg. co. L. B. Reed. il Elec West 109:97 O '52

Expansion of die-castings in the cavity; abstract. L. C. Barton. diags Product Eng 24:283-4 Ap '53

Fused die castings for car window frames and ventilating panes. H. Chase. il Materials & Methods 38:119 O '53

Good design can cut die casting costs. W. M. Halliday. diags Iron Age 169:138-41 Je 5 '52; Same cond. Product Eng 23:258+ N '52

High aluminum zinc-base die-casting alloys. O. A. Carson. Can Min J 74:70-3 Jl '53

How to design dies for trimming diecastings. H. K. Barton and L. C. Barton. diags Mach 50:173-9 Mr '53

How to increase your diecasting output. L. F. Spencer. bibliog il Iron Age 171:93-8 Ja 8 '53

Increasing use of die castings for automotive components. T. Mac New. il Automotive Ind 109:38-41+ O 15 '53

Integral die-cast handle simplifies drill design; Thor power tool co. il diag Machine Design 25:133 Jl '53

Metal casting methods; die casting and investment casting. J. B. McIntyre. bibliog il Metallurgia 48:123-9 S '53

New concept of heat-checking on brass pressure-casting dies. W. R. Brown. il Metal Prog 63:73-8 Je '53

Re-organisation of die-casting foundry; Non-ferrous die casting co. il Engineering 176: 186-7 Ag 7 '53

Trouble-shooting die casting problems. W. M. Halliday. il Foundry 81:86-91+ F; 196-7+ Mr '53

What alloy should be used to die cast decorative automobile parts; zinc, aluminum or magnesium? M. R. Caldwell and C. Pack. S A E J 61:78-9 Ag '53

What's ahead the next ten years in casting and molding. Am Mach 96:B4 Mid-N '52

DIE casting machines

Die caster features two-stage injection. il Steel 132:96 F 23 '53; Mach 59:212 Ap '53; Machine Design 25:138 My '53

Die casting machine uses high pressures. il Foundry 81:223 Ap '53

1953 American Machinist production preview. il Am Mach 97:226 Ja 19 '53

Retriever unloads diecaster automatically. R. E. Fromson. il diag Am Mach 96:100-1 D 22 '52

DIELECTRIC constants

Analysis of the pressure dependence of the dielectric constant of polar liquids. I. S. Jacobs and A. W. Lawson. bibliog J Chem Phys 20:1161-4 Jl '52

Calculation of the static dielectric constant of ice. J. G. Powles. diags J Chem Phys 20:1302-9 Ag '52

DIELECTRIC constants—*Continued*

Computation of dielectric constants. R. M. Redheffer and others. diags J Ap Phys 23:505-8 My '52; Correction. 23:1413 D '52

Constants in the equation for atmospheric refractive index at radio frequencies. E. K. Smith, jr. and S. Weintraub. bibliog Inst Radio Eng Proc 41:1035-7 Ag '53

Cyclic meso-ionic compounds; further studies on the stereochemistry of the sydnones, with a description of a heterodyne capacitance meter for dielectric-constant measurements in the range 2-3. R. A. W. Hill and L. E. Sutton. diags Chem Soc J p 1482-90 My '53

Determination of complex dielectric constants of absorptive liquids by microwave interferometry. F. H. Branin, jr. bibliog diag J Ap Phys 23:990-7 S '52

Dielectric and ultrasonic relaxation in glycerol. T. A. Litovitz and D. Sette. bibliog J Chem Phys 21:17-22 Ja '53

Dielectric constant and dissipation factor of soda-potassia-silica glasses at frequencies of one to 300 kilocycles at room temperatures. G. F. Stockdale. diags Ill U Eng Exp Sta Bul 411:1-27 '53 (pa 30c)

Dielectric constant for the dioxane-water system from 20 to 35°. F. E. Critchfield, J. A. Gibson, jr. and J. L. Hall. bibliog Am Chem Soc J 75:1991-2 Ap 20 '53

Dielectric constant of dry air. J. V. Hughes and H. L. Armstrong. bibliog il diag J Ap Phys 23:501-4 My '52

Dielectric constant of some chlorine derivatives of ethane in the liquid and the solid states. M. Yasumi and M. Shirai. J Chem Phys 20:1325-6 Ag '52

Dielectric constant of trifluoroacetic acid. W. Dannhauser and R. H. Cole. bibliog Am Chem Soc J 74:6105 D 5 '52

Dielectric constant theory for polar liquids. W. F. Brown, jr. bibliog diag J Chem Phys 21:1327-32 Ag '53

Dielectric constants of solutions of charged particles. G. K. Fraenkel. J Chem Phys 20:1931-3 D '52

Dielectric constants of water-ethyl acetate mixtures. A. P. Altshuller. J Chem Phys 21:562 My '53

Dielectric dispersion in sulphuric acid. J. C. D. Brand, J. C. James and A. Rutherford. Chem Soc J p2447-56 Ag '53

Dielectric method of determining solvent content of dewaxing mixes; methyl ethyl ketone and toluene. H. D. LeRosen, L. V. Wike and S. W. Denton. bibliog Anal Chem 24:1620-2 O '52

Dielectric properties of certain petroleum oils. R. Irving and C. N. Thompson. bibliog Chem & Ind p975-80 O 4 '52

Dielectric properties of compressed fluoromethane. H. G. David and others. bibliog J Chem Phys 20:969-72 Je '52

Dielectric properties of dispersed liquids; the theory of the dielectric constant. H. C. Thacher, jr. bibliog J Phys Chem 56:795-7 Je '52

Dielectric properties of ice and snow at 3.2 centimeters. W. A. Cumming. bibliog il diags J Ap Phys 23:768-73 Jl '52

Dielectric properties of ice and solid D_2O. R. P. Auty and R. H. Cole. bibliog diags J Chem Phys 20:1309-14 Ag '52

Dielectric properties of supercooled liquids. G. N. Roberts. bibliog Am Chem Soc J 75:2264-6 My 5 '53

Dielectric properties of water in solutions. G. H. Haggis and others. bibliog diags J Chem Phys 20:1452-65 S '52

Green's correction of Yvon's dielectric constant formula. W. F. Brown, jr. J Chem Phys 21:1121 Je '53

High frequency dispersion in *n*-propanol. R. H. Cole and D. W. Davidson. J Chem Phys 20:1389-91 S '52

Instrument for dielectric measurements in the frequency range 100-300 mc/s. D. L. Hollway and G. J. A. Cassidy. bibliog il diags Inst E E Proc 99 pt 3:364-72 N '52

Ion association of 2-1 salts in methanol. F. M. Sacks and R. M. Fuoss. bibliog Electrochem Soc J 99:483-7 D '52

Lattice constants and dielectric properties of barium titanate, barium stannate, strontium titanate bodies. R. H. Dungan and others. bibliog Am Cer Soc J 35:318-21 D 1 '52

Microwave absorption and molecular structure in liquids; measurement in organic halides at 10-cm wavelength. F. H. Branin, jr. and C. P. Smyth. bibliog diag J Chem Phys 20:1121-8 Jl '52

Molar polarizations of isomeric propyl and butyl mercaptans. S. Mathias. bibliog J Phys Chem 57:344-6 Mr '53

Phase transitions in antiferroelectric $PbHfO_3$. G. Shirane and R. Pepinsky. bibliog Phys R 91:812-15 Ag 15 '53

Piezoelectric, dielectric, and elastic properties of $ND_4D_2PO_4$ (deuterated ADP). W. P. Mason and B. T. Matthias. bibliog diag Phys R 88:477-9 N 1 '52

Reaction field and dielectric constant of polar liquids. D. G. Frood and A. J. Dekker. bibliog diag J Chem Phys 20:1030-3 Je '52

Studies in hydrogen-bond formation; detection of the interaction of phenols with amido- and azo-groups, etc., by dielectric-constant measurement. C. H. Giles, T. J. Rose and D. G. M. Vallance. diag Chem Soc J p3799-805 O '52

Table of dielectric constants and electric dipole moments of substances in the gaseous state. A. A. Maryott and F. Buckley. U S Nat Bur Stand Circ 537:1-29; pa 20c Supt. of doc. '53

DIELECTRIC heating. See Electric heating, Industrial—High frequency heating

DIELECTRIC losses

Dielectric dispersion in materials having a distribution of relaxation times. J. R. Macdonald. bibliog J Chem Phys 20:1107-11 Jl '52

Dielectric dispersion in the microwave region of six tetrasubstituted methanes in the solid state. J. G. Powles and others. bibliog diags J Chem Phys 21:136-41 Ja '53

Dielectric dispersion of water vapor adsorbed on silica gel. K. Kamiyoshi and T. Odake. bibliog J Chem Phys 21:1295-6 Jl '53

Dielectric losses of sodium chloride crystals. Y. Haven. J Chem Phys 21:171-2 Ja '53

Dielectric relaxation and the internal field. J. G. Powles. bibliog J Chem Phys 21:633-7 Ap '53

Dielectric relaxation in *d*-camphor. J. G. Powles. bibliog J Chem Phys 20:1648-9 O '52

Instrument for dielectric measurements in the frequency range 100-300 mc/s. D. L. Hollway and G. J. A. Cassidy. bibliog il diags Inst E E Proc 99 pt 3:364-72 N '52

Mathematical theory of laminated transmission lines. S. P. Morgan, jr. diags Bell System Tech J 31:883-949, 1121-206 S-N '52

New model for the Debye dispersion equations. J. R. MacDonald. bibliog Phys R 91:412 Jl 15 '53

Simple calculation of dielectric loss from dielectric dispersion for polar polymers. P. Ehrlich. bibliog J Res Nat Bur Stand 50:19-20 Ja '53

DIELECTRIC polarization. See Polarization, Dielectric

DIELECTRICS

Ceramic and dielectric properties of the stannates. W. W. Coffeen. bibliog Am Cer Soc J 36:207-14 Jl 1 '53

Composite-dielectric coaxial line. J. A. Kostriza. bibliog diag Elec Com 30:155-63 Je '53

Construction of a liquid dielectrics test cell. S. Baxter and H. A. Vodden. diag J Sci Instr 29:379-80 N '52

Dielectric bodies in the quaternary system $BaTiO_3$—$BaSnO_3$—$SrSnO_3$—$CaSnO_3$. W. W. Coffeen. bibliog Am Cer Soc J 36:215-21 Jl 1 '53

Dielectric breakdown of sulphur hexafluoride in nonuniform fields; abstract. C. N. Works and T. W. Dakin. Elec Eng 72:624 Jl '53

Dielectric image line. D. D. King. diag J Ap Phys 23:699-700 Je '52

Directional effects in the electric breakdown of ionic crystals. E. L. Offenbacher and H. B. Callen. bibliog diags Phys R 90:401-9 My 1 '53

DIELECTRICS—*Continued*

Electrical and physical properties of IN-420; a new chlorinated liquid dielectric. A. J. Warner. bibliog diag Elec Com 30:118-23 Je '53; Abstract. Elec Eng 72:68 Ja '53

Electrical properties of sea water. J. A. Saxton and J. A. Lane. bibliog Wireless Eng 29:269-75 O '52

Electrical properties of the inorganic papers. T. D. Callinan. bibliog Elec Eng 72:441-3 My '53

Electrocapillarity in dielectrics and in poorly conducting systems. G. J. Kahan and C. L. Gravel. bibliog diag J Phys Chem 57:239-42 F '53

Electromechanical properties of $BaTiO_3$ compositions showing substantial shifts in phase transition points. D. A. Berlincourt and F. Kulcsar. Acoustical Soc Am J 24:709-13 N '52

Ferroelectric amplifier. H. Urkowitz. diags Franklin Inst J 254:517-30 D '52

Fluoride models for oxide systems of dielectric interest; the systems $KF\text{-}MgF_2$ and $AgF\text{-}ZnF_2$. R. C. DeVries and R. Roy. bibliog Am Chem Soc J 75:2479-84 My 20 '53

Foamed polyethylene dielectric. il Electronics 26:206+ Ag '53

Further developments in low-loss steatite bodies using Yellowstone talc. R. S. Lamar. bibliog Am Cer Soc Bul 32:12-15 Ja 15 '53

Impulse strength characteristics of liquid-impregnated pressboard; abstract. T. W. Dakin and C. N. Works. Elec Eng 72:156 F '53

Investigation of the arc-quenching behavior of sulphur hexafluoride; abstract. H. J. Lingal and others. Elec Eng 72:335 Ap '53

Liquid dielectric r-f coaxial cables. R. M. Soria and others. bibliog diags Tele-Tech 11:38-41+ D '52

Niobate and tantalate dielectrics. E. Wainer and C. Wentworth. bibliog Am Cer Soc J 35:207-14 Ag 1 '52

Properties of artificial dielectrics comprising arrays of conducting elements. M. M. Z. Kharadly and W. Jackson. bibliog diags Inst E E Proc 100 pt 3:199-212 Jl '53

Properties of fluorochemical N-43 (heptacosafluorotributylamine) liquid dielectric and heat transfer fluid; engineering reference sheet. Elec World 138:126 D 15 '52

Properties of fluorochemical 0-75; fluorinated cyclic ether; liquid dielectric and heat transfer fluid; engineering reference sheet. Elec World 138:96 D 29 '52

Properties of some high titania dielectric ceramics. E. G. Graf. Am Cer Soc Bul 31:279-82 Ag 15 '52

Quasi-degenerated modes in high-ε dielectric cavities. H. M. Schlicke. bibliog il diags J Ap Phys 24:187-91 F '53

Radioactive charging through a dielectric medium. E. G. Linder and P. Rappaport. diag Phys R 91:202 Jl 1 '53

Random noise in dielectrics. H. Bauss and R. F. Boyer. J Ap Phys 23:802-3 Jl '52

Reaction field of a noncentral dipole. B. K. P. Scaife. diag J Chem Phys 21:945-6 My '53

Results of a questionnaire covering current practices in electrical tests on dielectrics in the field, AIEE subcommittee report. Elec Eng 71:1132-5 D '52

Some fluorinated liquid dielectrics; abstract. N. M. Bashara. Elec Eng 72:424 My '53

Synthetic mica investigations; hot-pressed machinable ceramic dielectric. J. E. Comeforo and others. bibliog il Am Cer Soc J 36:286-94 S 1 '53

Testing of the irregularity of blended yarns and rovings using apparatus of the dielectric capacity type. H. Locher. diags Textile Inst J 44:P698-700 S '53; Discussion. 44:P811-12 D '53

Use of dielectric lenses in reflection measurements. J. R. Mentzer. il diags Inst Radio Eng Proc 41:252-6 F '53

Variable length re-entrant cavity for dielectric measurements from 100 to 400 mc. J. H. Beardsley. il diag R Sci Instr 24:180-1 F '53

Variation at constant density of the dielectric breakdown of paper with air resistance; abstract. P. Cloke and K. K. Khandelwal. Elec Eng 72:157 F '53

Variational methods for periodic lattices and artificial dielectrics. C. Flammer. Phys R 89:1298 Mr 15 '53

Wollastonite bodies as low-loss dielectrics. N. H. Snyder and J. H. Koenig. Am Cer Soc Bul 31:246-7 Jl 15 '52

See also

Electrets

Insulating materials

Mica

Polarization, Dielectric

Power factor, Dielectric

DIELS-ALDER reaction

α,β-Unsaturated sulfonyl compounds in the Diels-Alder reaction. H. R. Snyder and D. P. Hallada. bibliog Am Chem Soc J 74:5595-7 N 20 '52

Bicyclic dihydropyrans by the Diels-Alder reaction. W. S. Emerson, G. H. Birum and R. I. Longley, jr. bibliog Am Chem Soc J 75:1312-13 Mr 20 '53

1,2-Bis-(arylsulfonyl)-ethenes in the Diels-Alder reaction. W. E. Truce and R. J. McManimie. bibliog Am Chem Soc J 75:1672-3 Ap 5 '53

Diels-Alder reaction; abstract. R. Adams. Chem & Eng N 31:1866 My 4 '53

Isomerism in the Diels-Alder reaction; the bromination of Diels-Alder adducts. H. Kwart and L. Kaplan. bibliog diags Am Chem Soc J 75:3356-9 Jl 20 '53

Stereochemical factors in the kinetics of Diels-Alder associations. B. Eisler and A. Wassermann. Chem Soc J p979-82 Mr '53

DIENES. See Olefins

DIENONE phenol rearrangement. See Molecular rearrangements

DIES

Adjustable die for channelling. T. H. Hsu. diags Am Mach 97:180 Je 8 '53

Assembling leader pins and bushings in die sets. J. Sobkowiak. diags Mach 59:204-5 N '52

Choose die bushings carefully; drawings with text; reference book sheet. J. R. Paquin. Am Mach 97:153, 155, 157 Jl 20 '53

Combination die pierces, shears, bends. F. Strasser. diags Am Mach 97:126 Mr 30 '53

Constant specific pressures for blank-holders in drawing dies. F. Strasser. diags Mach 59:200-1 Ja '53

Cost-cutting dies; Minneapolis-Honeywell regulator co. P. S. Tobias. il diags Mach 59:155-62 My '53

Design of dies for auto bodies; drawings with text. C. R. Cory. S A E J 61:38-40 Mr '53

Die elevator soothes storage headache. il Steel 131:124 D 15 '52

Die storage; system developed by Pittsburgh forgings co. il Iron Age 171:194-5 Mr 5 '53; Steel 132:116+ Mr 2 '53

Diemakers kinks (cont). F. Strasser. diags Am Mach 96:127 O 13; 103 D 22 '52; 97:126 F 2; 103 Mr 30; 150 Ap 13; 137 Ap 27; 124 Jl 6 '53

Dies fog-oiled from stripper tubes. A. E. Chambers. il diag Am Mach 97:186-7 O 12 '53

Economically designed die for high production of small clips. R. Isetts. diags Mach 59:209 Je '53

Flame beats sugar for lengthening die life. J. A. Goodbar. il Am Mach 97:122-3 F 2 '53

Follow these 22 steps in die setting; illustrated instructions. F. Strasser. Am Mach 96:128-9 O 13 '52

Further thoughts on shaving dies. O. Loeffler. diags Am Mach 97:144-5 Jl 20 '53

Good design can cut die casting costs. W. M. Halliday. diags Iron Age 169:138-41 Je 5 '52; Same cond. Product Eng 23:258+ N '52

Heading die of ductile iron provides exceptional wear resistance. il Mill & Factory 53:131 Ag '53

How to apply strippers, pressure pads, knockouts to compound and draw dies; drawings with text. P. Balsells. Am Mach 97:125-7 Je 22 '53

How to avoid the problems of die maintenance. A. Peterson. diags Mill & Factory 53:104 Ag '53

How to design dies for trimming die-castings. H. K. Barton and L. C. Barton. diags Mach 59:173-9 Mr '53

How to determine exact blank diameters. J. Dahl. diags Tool Eng 31:47-8 Ag '53

DIES—*Continued*

How to increase the life of cutting dies. F. Strasser. diags Iron Age 171:144-6 My 14 '53

How to make carbide cold-heading dies. A. E. Glen. il diags Am Mach 97:138-40 Ap 27 '53

Increasing production from tools, dies. E. E. Griffiths. il Tool Eng 30:37-45 Ap '53

Integral die remover. W. V. Anderson. diags Tool Eng 31:40 S '53

Jumbo dies compression-form tubing. il Steel 132:120+ My 25 '53

Long life promotes carbide blanking dies. N. W. Oberg. il Steel 132:100-2 My 4 '53

Low cost blanking dies for light gage aircraft parts. G. V. Rutkoskie. il Automotive Ind 107:66-8 O 1 '52

Metal stampers discuss advances in presses, safety, die life. il Am Mach 97:197 Ap 13 '53

Multi-purpose dies. F. Strasser. diags Tool Eng 29:47 N '52

New lubricant improves die life and finish. W. E. Curtiss. il Iron Age 170:94-5 O 30 '52

No-scrap hinge die. T. H. Hsu. diags Am Mach 96:124 D 22 '52

Piercing die for heavy stock. F. Strasser. diags Am Mach 96:120 D 22 '52

Pressure-pad cutoff die clips wire square. H. Dahl. diags Am Mach 97:140 Ag 3 '53

Progressive die has two tap heads; baseplates for Type 500 telephone set manufactured at Western electric co. G. W. Piper. il diags Am Mach 97:126-7 Mr 2 '53

Punching, swaging, and blanking in a progressive die. F. Strasser. diags Mach 59:207-8 Ag '53

Semi-automatic stop for blanking dies. F. Strasser. diags Mach 59:206 My '53

Side cams solve die-design problems; drawings with text. J. R. Paquin. Am Mach 97:89-91 Ag 31 '53

Spotting-in propeller tooling with special die set. il Mach 59:180-1 Ap '53

Standard pilot nuts for dies; reference book sheet. J. R. Paquin. diags Am Mach 97:147 Ag 3 '53

Standard punch and die clearances; reference book sheet. J. R. Paquin. diags Am Mach 97:151 Ag 3 '53

Station stops for progressive dies reduce waste. F. Strasser. diags Tool Eng 31:64-7 Ag '53

Stock pushers for dies; reference book sheet. P. Balsells. diags Am Mach 97:283 Ja 19 '53

Stops for dies; reference book sheet. P. Balsells. diags Am Mach 96:149, 151, 153 D 8 '52

Talks on draw dies. S. R. Cope. diags Am Mach 97:110-13 Ag 3; 106-9 Ag 17; 96-9 Ag 31; 164-6 S 14; 126-9 S 28; 120-3 O 26 '53

Tool materials for punches and dies. L. F. Spencer. bibliog il diags Tool Eng 30:35-40 My '53

Trouble shooting die maker. H. Morgan. Am Mach 96:144 D 8 '52

Unique steel selection method reduces die costs. il Mach 60:188-91 O '53

Unusual die produces metal-and-felt washers. plan diags Mach 59:208-10 Ja '53

Upset beading die cuts job time 98 per cent; Northrop aircraft, inc. E. A. DeVoss. il diags Am Mach 96:160-1 O 13 '52

Volatile corrosion inhibitor insures rust-free die sets. D. Myers. il Mach 59:195-7 Ag '53

Welding tools and dies. H. S. Card. il Tool Eng 30:58-62 Je '53

What are significant features of shaving dies? P. H. Prikos. plans diags Am Mach 97:144-6 F 16 '53

Zone-heated dies deep-draw thin magnesium; Emerson electric mfg. co. il Am Mach 97:129-31 Ap 27 '53

Manufacture

Grinding fixture aids die manufacture; B. Jahn manufacturing co. R. LeGrand. il diags Am Mach 96:134-5 N 24 '52

Low-cost methods speed die construction; Allied products corp. W. C. Miller. il Am Mach 96:93-6 D 8 '52

Scale removal by wet blasting cuts tool polishing costs. il Iron Age 171:144 Je 25 '53

Tables, calculations, etc.

Common problem in gage and die design. R. L. Wakelee. diags Mach 60:209-10 O '53

Testing

Die inspection tool; Profiloscope. il Engineer 195:735 My 22 '53; Engineering 175:621 My 15 '53; Metallurgia 48:101-2 Ag '53

DIES, Plastic

Cast phenolic dies for sheet forming. il Mod Plastics 30:97-9 O '52

Low-cost methods speed die construction; Allied products corp. W. C. Miller. il Am Mach 96:93-6 D 8 '52

Plastics; auto die use growing. R. D. Raddant. Iron Age 170:79 D 18 '52

Short runs at low cost with plastic tooling. il Iron Age 171:115-18 F 19 '53

Thermosetting plastic replaces steel in auto die. il Product Eng 23:202 O '52

Try out; test run costs cut through use of plastic dies on big press. il Iron Age 170:188 D 11 '52

DIESEL-electric locomotives. See Locomotives, Diesel-electric

DIESEL engine stations. See Electric plants (central stations)—Diesel engine stations

DIESEL engines

Development of the Diesel engine; new equipment helps meet increased industrial demand. Chem Age (Lond) 68:274 F 14 '53

Diesel boosts station's capacity; Gulf refining company's State line station. Pet Eng 25:D42 F '53

Diesel engine prospects. P. B. B. Andrews. Diesel Power 31:32-5 Ja '53

Diesel increases locomotive crane efficiency. il Diesel Power 31:52 Ag '53

Diesel powered rail crane. il Diesel Power 30:63 O '52

Diesel Q and A. J. Baker. il Power 97:116-17 My; 114-15 S '53

Diesel usage in the army; abstract. C. Bullard. Elec J 150:976 Mr 20 '53

Diesels at U.S. Steel's Fairless works. il Diesel Power 31:44-5 F '53

Diesels power tanker loading station. M. D. Pugh. il Diesel Power 30:50-1 N '52

Dual fuel engines for pumping water cut power costs at San Antonio. J. A. Scanlan. il Water & Sewage Works 100:279-81 Jl '53; Same cond. Pub Works 84:65 F '53

Ductile iron, a new design material steps into your plant. il Power 97:122-3 F '53

Fairbanks, Morse small heavy-duty opposed-piston engine. il Ry Loco & Cars 127:106+ Je '53

F-M's small opposed-piston engine. il Diesel Power 31:50-2 My '53

Flexible hoses in Diesel engine installation. il diags Diesel Power 31:73-7 O '53

Free-piston Diesels. il diag Elec J 149:1573-4 N 21 '52

Free-piston engine development; present status and design aspects. A. L. London and A. K. Oppenheim. bibliog il diags A S M E Trans 74:1349-60; Discussion. 1360-1 N '52

Leyland 150-b.h.p. industrial Diesel engine. il Engineering 175:141 Ja 30 '53

Mobile emergency power. il Diesel Power 30:56-7 D '52

More pipeline power for greater throughput; new pumping unit on Gulf's Tulsa-Lima pipeline. il Diesel Power 31:38-40 F '53

National Supply's Lister Diesels. il Diesel Power 31:79 Ja '53; Pulp & Pa of Can 54:139+ Mr '53

New type hangar Diesel-powered for atomic-age getaway. il Diesel Power 31:51 Je '53

Nordberg's Supairthermal V. il diags Diesel Power 31:60-2 Je '53

150-ton crane converted to Diesel. il Ry Age News ed 134:31 Je 22 '53

1.25 kw Diesel generating plant; Dale electric (Yorkshire), ltd. il Engineer 196:185-6 Ag 7 '53; Engineering 176:213 Ag 14 '53

Research engineer looks at metallurgy. C. G. A. Rosen. il diags Metal Prog 63:93-6+ Ap '53

Reserve power for telephone exchanges. il Diesel Power 31:58 S '53

Russell Newbery single-cylinder Diesel engine. il Engineer 196:79 Jl 17 '53; Engineering 176:95 Jl 17 '53

DIESEL engines—*Continued*

10,890 hp for pipe line expansion; dual-fuel engines. il Diesel Power 30:55 D '52

V-type Diesel engines cover range from 2400 to 4260 hp. il Power 97:158 Jl '53

Watts keep Diesels warm. Steel 132:124+ Mr 9 '53

Where are small engines going? il Diesel Power 31:100-1 Ap '53

See also

Electric plants (central stations)—Diesel engine stations

Power plants—Diesel engine plants

Air supply

Air filter adhesive developed in laboratory and field tests; Diesel-engine filtration study. A. W. Hardy and others. il Ry Loco & Cars 127:65-71 Mr '53

Air-Maze oil-bath filter adapted to Diesels. il Ry Age 134:35-6 Je 29 '53

Cleaning the air is a three-way job; report on round table on Diesel engine air cleaners. S A E J 61:43-6 F '53

Conditioned combustion air jacks Diesel output. W. R. Crooks and E. L. Miller. il diags Power 97:100-2+ F '53

Operating problems of the dual-fuel engine. G. Steven. il diags Power Eng 57:62-3 Mr '53

Watch your Diesel's diet. F. J. Shreck. il Coal Age 58:118 F '53

Bearings

Aluminum-on-steel bearings. J. B. Mohler. il Diesel Power 31:38-41 S '53

Getting the most from your bearings. R. J. Schager. il diags Diesel Power 30:58-61 O '52

Visually analyzing bearing troubles. E. Crankshaw and W. Weinkamer. il Diesel Power 31:58-63 O '53

Cleaning

Cleaning, a part of maintenance. il Diesel Power 31:48-9 O '53

Cold weather operation

Plan winterization, now. il diags Diesel Power 31:50-3 S '53

Recent developments in sub-zero engine-starting. F. A. Traino. il Automotive Ind 109:52-3+ Ag 15 '53

Starting cold Diesels. D. E. Kilty and others. il S A E J 61:36-40 F '53

Control

Automatic-control equipment for Diesel engines; Mirrlees, Bickerton and Day, limited. Engineering 176:235 Ag 21 '53; Elec J 151: 277-8 Jl 24 '53

Diesel-electrics; how to keep 'em rolling; Diesel engine governor. B. L. Judy and others. il diags Ry Loco & Cars 127:98-104 Mr '53

Diesel-electrics; how to keep 'em rolling; engine control. B. L. Judy and A. V. Johansson. il diags Ry Loco & Cars 127: 101-6 Ap '53

Diesel-engine governors. E. J. Kates. il diags Power 97:71-3+ Mr; 87-9 Ap; 98-100 My; 82-3+ Je; 85-7+ Ag '53

Governor for Diesel engines. il Roads & Eng Constr 90:80 O '52

Hydraulic governor for Diesel engines. il diag Product Eng 24:208-9 Ja '53

Cooling

Conditioned combustion air jacks Diesel output. W. R. Crooks and E. L. Miller. il diags Power 97:100-2+ F '53

Contemporary European air cooled Diesel engine practice. W. H. Worthington. il diags S A E J 61:74-6 S '53; Correction. 61:48 D '53

What corrosion inhibitors should and should not do; treatment of Diesel-engine cooling water. J. F. Wilkes. il Ry Loco & Cars 127:77-83 S '53

Cost of operation

Tarboro cuts costs. R. M. Weatherly. il Diesel Power 31:28-30 My '53

Design

Sixteen-cylinder vertical radial Diesel engine. E. R. Brater. diags Engineer 194:330-1 S 5 '52

Directories

Diesel engine directory; manufacturers of engines and plant accessories. Diesel Power 31:47-73 Ja; 53-74 Jl '53

Exhaust

Diesel engine exhaust. A. L. Wachal. bibliog il diags Automobile Eng 43:303-5 Jl '53

Don't forget your Diesel exhaust lines. C. M. Jones. il diags Power 97:110-11 Ag '53

Explosions

Crankcase explosions. R. O. Montenero. il diags Ry Locomotives & Cars 127:58-62 Ja '53

How to forestall Diesel crankcase explosions? L. W. Fitzpatrick and others. Power Eng 56:78-9 D '52

Failure

Avoid crankshaft failures. il diag Diesel Power 31:80-2 Jl '53

Why did the Diesel stop? L. B. Villarta. il diags Power 97:118-19 Jl '53

Fuel

Cheaper power costs by the use of bunker fuels and natural gas in the internal combustion engine; abstract. J. A. Brynelsen. S A E J 61:68 O '53

Comparison of liquefied petroleum gas, gasoline, and Diesel fuel in city-bus operation. F. C. Burk and others. Pet Refiner 32:119-21 Je '53

Controlling combustion in dual-fuel engines. W. M. Kauffmann. il Diesel Power 31:96-8 Ap '53

Dual-fuel engines at Point of Ayr colliery. Engineering 176:136 Jl 31 '53

Effects of additives on the Diesel combustion process; abstract. W. Chow and others. S A E J 61:21-2; Discussion. 22 Jl '53

How residual fuels are treated for use in Diesel engines. F. P. Downing and others. diags Marine Eng 58:59-63 Ap '53

National annual Diesel-fuel survey, 1952. O. C. Blade. pl U S Bur Mines Rep of Invest 4935:1-22 '52; Excerpts. Oil & Gas J 51: 154+ F 16 '53

New designs of large two-stroke marine Diesel engines. W. Kilchenmann. Engineering 175:571-2 My 1 '53

Proposed method of test for hydrocarbon type analysis of Diesel fuels by silica gel adsorption. diag Am Soc T M Proc 50:271-5 '50

Tarboro cuts power costs by using heavy fuel oil. R. M. Weatherly. il Pub Works 84:79+ Ag '53

Two years with bunker C fuel. R. J. Dodd. il diags Diesel Power 31:56-60+ Ap; 46-9 Ag '53

Use of heavy fuels for medium-sized marine and stationary Diesel engines. J. R. P. Smith. Inst Mech Eng Proc (A) 166 no 3: 295-301, pl 1-2; Discussion. 301-8 '52

Use of heavy fuels in Diesel engines of high and medium power; technical meeting, Milan. Engineer 195:671-3 My 8 '53

Watch your Diesel's diet. F. J. Shreck. il Coal Age 58:118 F '53

What is fuel for Diesel locomotives? L. E. Talbot. Ry Loco & Cars 127:82-4 Mr '53

See also

Cetane number

Locomotives, Diesel
—Fuel

Fuel feeding

Applying fuel injection equipment to Diesel engines. F. DeLuca and P. G. Burman. Diesel Power 31:54-9 F '53

Calibrating fuel injection systems. il Diesel Power 30:64-7 O '52

Checking the I-H fuel injection system. il diags Diesel Power 31:68-72 O '53

Clean spray tips properly! il Diesel Power 31:65 Ag '53

Diesel digestion; abstract. G. B. Fox. Engineer 194:545 O 24 '52

Give zing to Diesel-fuel pumps. C. M. Jones. il diags Power 97:118-19 Ap '53

DIESEL engines—Fuel feeding—*Continued*

High pressure fuel pipes; failures on C.I. engines and their prevention. il diags Automobile Eng 43:235-7 Je '53; Engineer 195: 628-30 My 1 '53; Engineering 175:585-7 My 8 '53

Maintaining fuel injection nozzles. il Diesel Power 31:50-7 O '53

Measuring rate of fuel injection in an operating engine; abstracts. R. J. Wehrman and others. Automotive Ind 108:85 F 15 '53; S A E J 61:23 S '53

Operating problems of the dual-fuel engine. G. Steven. il diags Power Eng 56:74-5 Ag '52; 57:62-3 Mr '53

Roosa-Master; fuel injection pump with ideas. il Diesel Power 30:36-9+ N '52

Simms SPE-6A injection pump for six cylinder Diesel engines. il diags Automobile Eng 43:158-62 Ap '53

Simplifying fuel injection; abstracts. V. Roosa. diag Automotive Ind 108:80+ F 15 '53; S A E J 61:36-8; Discussion. 39-40 Je '53

Heaters

Engine heaters have definite advantages. il diag Diesel Power 31:54-7 S '53

Recent developments in sub-zero engine-starting. F. A. Traino. il Automotive Ind 109:52-3+ Ag 15 '53

Ignition

NBS studies autoignition. Diesel Power 31: 80-1 Ag '53

Lubrication

Factors affecting Diesel lubricant performance; abstracts. H. C. Morris. Automotive Ind 106:120 F 15 '52; S A E J 61:39 Ja '53

Heavy duty lubricating oils; abstract. J. W. Vollentine. S A E J 61:112 F '53

How's your mechanical lubricator? il Diesel Power 30:78-9+ O '52

Let service choose Diesel lubricants. C. G. A. Rosen. S A E J 60:38-43 D '52

Lubricating large engines. B. Corrigan. il Diesel Power 30:50-4 D '52

Should Diesel crankcase oils be mixed? W. K. Simpson. Ry Loco & Cars 127:124+ Mr '53

Spectrograph as a maintenance tool. il Diesel Power 31:42-8 My '53

Spectrographic oil analysis for Diesel locomotive maintenance. Pet Processing 8:156 F '53

Maintenance and repair

Calibrating fuel injection systems. il Diesel Power 30:64-7 O '52

Care cuts maintenance costs; Al Ives's interview with John Borgogno. Diesel Power 31:58-9 Mr '53

Flying down Diesel troubles. F. Carter. Power 97:140-1 O '53

GM series 71 engine tune-up. il diag Diesel Power 31:40-7 O '53

How Southern reconditions Diesel cylinder liners. il Ry Mech & Elec Eng 126:70-1 O '52

How to check for eight Diesel faults; illustrated instructions. Power 97:136 Ag '53

How to keep your Diesels running smoothly. L. J. Murphy. il diag Mill & Factory 53: 80-3 Ag '53

Log pyrometer readings and end Diesel mysteries. C. M. Jones. il diags Power 97:118-19 Je '53

Maintaining fuel injection nozzles. il Diesel Power 31:50-7 O '53

Manufacturers excise taxes hit rebuilding; questions prepared by the Automotive engine rebuilders association. Diesel Power 30:56-7 O '52

Repair sprung crankshaft in place and save dollars; illustrations with text. S. Elonka. Power 97:110-11 Ja '53

Research instruments aid engine maintenance; based on papers by J. L. Broughten and others. il diags S A E J 61:44-52 Jl '53

Save your scored Diesel crankpin. H. Welch. diags Power 96:110-11 N '52

Special tools for speedier repair. il diags Diesel Power 30:52-5 O '52

Tooling a shop for Diesels. il Diesel Power 30:71-3 O '52

What do you know! Diesel Power 30:67+ O '52

Why is Diesel piston worn? il Power 97: 134-5 Je '53

Manufacture

Automatic arc welding aids assembly of Diesel engine parts. H. Chase. il diags Mach 60:153-7 O '53

Extensions to a Diesel engine works; Eastfield works of F. Perkins, ltd. il Engineer 196:22-4 Jl 3 '53; Engineering 176:12-13, 16 Jl 3 '53

Modernisation of Diesel engine works; Henry Meadows, ltd. il Engineer 194:426-7 S 26 '52

Modernised oil engine works; Hazel Grove works of Mirrlees, Bickerton and Day, ltd. il Engineer 195:216-18 F 6 '53; plan diags Engineering 175:171-3, 176, pl 3 F 6 '53; Elec J 150:433-5 F 6 '53

Packard produces lightweight Diesel engines. C. H. Wick. il Mach 59:155-61 D '52

Packard's precision job-lot tooling makes high-speed Diesels for the navy. B. C. Brosheer. il diags Am Mach 96:149-53 N 24 '52

Semi-automatic machine processes variety of oil pans. il Automotive Ind 109:64 S 15 '53

Noise

Measurement and interpretation of machinery noise with special reference to oil engines. C. H. Bradbury. diags Inst Mech Eng Proc (B) 1B no 1:1-8, pl 1-4 '52; Same abr. il Engineer 192:773-5 D 14 '51; Discussion. Inst Mech Eng Proc (B) 1B no 1:8-18 '52

Specifications

Diesel engine specifications, 1953. Diesel Power 31:73-89 Ap '53

Diesel engines for use in Diesel-electric locomotives; tabulations. Automotive Ind 108: 273 Mr 15 '53

Starting

Air starters for commercial vehicles. T. MacNew. il diag Automotive Ind 109:48-9+ Ag 15 '53

Air-starting cuts cost of electrical maintenance on Mesabi operator's off-highway trucks. il Eng & Min J 153:118 S '52; Same. Constr Methods 35:128+ Ja '53

Cold room study of starting fluids. H. D. Young. il diags Pet Eng 25:C10+ F '53

Diesel-electrics; how to keep 'em rolling; engine control. B. L. Judy and A. V. Johansson. il diags Ry Loco & Cars 127: 101-6 Ap '53

Matching batteries and starting equipment for Diesel engine cranking. E. A. Hoxie. il Diesel Power 31:52-7+ Mr '53

Rectifier for engine starting. il Engineering 175:460 Ap 10 '53

Starting cold Diesels. D. E. Kilty and others. il S A E J 61:36-40 F '53

See also
Diesel engines—
Heaters

Statistics

1951 engine production by hp ratings; tabulations. Automotive Ind 108:285 Mr 15 '53

Superchargers

De Laval turbosupercharger. Mill & Factory 53:292+ O '53

DeLaval's high-pressure turbocharger. il Diesel Power 31:44-7 Je '53

New supercharger increases Diesel efficiency. R. Birmann. il Marine Eng 58:65-8 O '53

New Waukesha Diesels equipped with turbo-superchargers. il Automotive Ind 108:43 F 15 '53; Automobile Eng 43:95 Mr '53

Supercharged Diesel performance versus intake and exhaust conditions; abstract. L. Johnson. S A E J 61:26-7 Je '53

Survey of the combustion chamber envelope; abstract. C. G. A. Rosen. S A E J 61:72 F '53

Turbocharger maintenance. C. F. Harms. il diag Diesel Power 30:46-9 O '52

Waukesha turbocharges. il diag Diesel Power 31:40-3+ Ja '53

DIESEL engines—*Continued*

Temperature

Small thermostat for lube and water temperature control. il diags Diesel Power 31:78-9 Jl '53

Testing

Checking the I-H injection system. il diags Diesel Power 31:68-72 O '53
Type test of Leyland 9.8-litre Diesel engine. Engineering 175:352 Mr 13 '53

Valves

Screw-in valve inserts can be practical; interview with B. D. Foley. il diags Diesel Power 31:53-5 My '53

Vibration

Torsional vibration in Diesel engines; some observations and practical aspects; abstract. C. H. Bradbury. Engineer 194:776 D 5 '52

DIESEL engines, Aircraft

Nomad compounded Diesel engine. il Engineer 195:422-4 Mr 20 '53; Engineering 175:388-9 Mr 27 '53
Novel Diesel burns wide range of fuels. diag Automotive Ind 109:41+ Ag 15 '53
Procedures used in the development of the B & R air force Diesel engine; abstract. E. W. Spannhake. S A E J 61:25-6 Ag '53

DIESEL engines, Automotive

Air starters for commercial vehicles. T. MacNew. il diag Automotive Ind 109:48-9+ Ag 15 '53
BARC. il Diesel Power 31:38-9 My '53
Bison freight line repowers. il Diesel Power 31:94-5 Ap '53
British transport show discloses increasing use of Diesel engines. W. F. Bradley. il Automotive Ind 107:50-3+ N 1 '52
Buda's compact 165-hp Diesel. il Automotive Ind 108:54 F 15 '53; Diesel Power 31:65 Mr '53
Case introduces Diesel tractor. il Diesel Power 31:53 Ag '53
Commercial vehicle show; review of current developments; Diesel engines. il diags Automobile Eng 42:417-22 N '52
Dart's Aardvark; Diesel-powered truck for use in underground mining operations. il Diesel Power 31:47 S '53
Dart's new 60-ton dumper. il Diesel Power 31:49 My '53
Development of a 16 cylinder, vertical, radial Diesel engine; abstract. E. R. Brater. il S A E J 60:24-5 N '52
Diesel engine for earth moving equipment. il Engineer 194:875-6 D 26 '52
Diesel-engined industrial tractor. il Engineering 174:160 Ag 1 '52
Diesel fork lifts for safety and economy. L. C. Daniels. il Diesel Power 31:60-1 F '53; Abstract. S A E J 61:127 My '53
Diesel power in the Delta country; silt levee constructed to hold fresh water for mining operations. il Diesel Power 31:39 Ja '53
Diesel-powered equipment underground. J. H. East, jr. il Min Cong J 39:22-5 Ja '53
Diesel-powered towmotors. il Diesel Power 31:63-5 Je '53
Diesels in the Palouse. R. H. Forbes. il Diesel Power 31:48-50 Je '53
Exhaust brakes for Diesel engined vehicles. J. L. Koffman. diag Automobile Eng 43:218-20 My '53
Experiences during twenty years of oil-engine development. C. B. Dicksee. il diags Inst Mech Eng Proc (Auto div pt 1):1-8 '51-52; Same. Engineering 172:490-1, 541-3 O 19-26 '51
Future developments in commercial vehicle engines. C. G. A. Rosen. il diags Automotive Ind 107:38-42+ O 15 '52; Excerpts. S A E J 61:33-8 Ja '53
General Motors model 51 Diesel engine. J. Dickson and R. D. Wellington. il diags S A E J 61:48-54; Discussion. 54-5 Je '53
How four-cycle and two-cycle Diesels work. J. W. Brown. diags Constr Methods 35:107+ Mr '53
Increased power for Baldwin-Lima-Hamilton locomotives. il Diesel Power 30:46-9 N '52
Italian lightweight Diesel engine power truck. il diag Product Eng 24:164-5 Ap '53
Lansing Bagnal heavy industrial Diesel-engined tractor. il Engineering 176:160 Jl 31 '53
Long-distance Diesel 'buses on the European continent. J. A. Steenman. Inst Mech Eng Proc (Auto div pt 1):23-7; Discussion. il diags 27-33 '51-52
Low cost land reclamation. R. H. Forbes. il Diesel Power 30:48-9 D '52
Mack brings out new Diesel engine. il diag Automotive Ind 109:98+ Jl 1 '53; Diesel Power 31:50-1 Ag '53
Minneapolis-Moline's Model U Diesel. il Diesel Power 31:49 F '53
New small Diesel engine powers Fiat truck and bus. W. F. Bradley. il diag Automotive Ind 108:64+ Mr 1 '53
Perkins Diesel engine of 108 b.h.p. for commercial vehicles; R 6. il Engineering 175:461 Ap 10 '53
Perkins P3 (TA) engine. il diags Automobile Eng 43:193-9 My '53
Rubber-tired freight train; Tournatrain. il Diesel Power 31:45 Ag '53
Sheppard builds them strong, but makes them simple. R. H. Lewis. il diag Constr Methods 35:110+ O '53
SAE national Diesel engine meeting. S A E J 60:70-4 D '52
Southwestern Greyhound stresses, PM. W. J. Granberg. il Diesel Power 31:40-3 Mr '53
Tests show Diesel buses cost less to operate than LP-gas or gasoline. Nat Pet N 45:56-7 My 27 '53
Three truck loads in one. R. H. Forbes. il Diesel Power 31:61 Ap '53
Uniflow vs. loop-scavenging; abstract. P. H. Schweitzer and C. G. A. Rosen. Automotive Ind 109:60-1 Jl 1 '53
Use of Diesel equipment in a zinc-lead mine. V. C. Allen. Min Cong J 39:26+ Ja '53
Use of Diesels almost universal for German farm tractors. O. V. Drtina. il diags Automotive Ind 109:66-8 Ag 1 '53
Winter checkpoints for Diesel haulage equipment. E. D. Prieto. Min Cong J 38:122-3 O '52

See also
Locomotives, Diesel
Locomotives, Diesel-electric
Motor cars (railroad)—Diesel-electric

Manufacture

Diesel engine production; Frank Perkins, limited. il plan Automobile Eng 43:332-44 Ag '53

Specifications

1953 automotive Diesel engines; tabulations. Automotive Ind 108:286-91 Mr 15 '53

DIESEL engines, Marine

Aluminum Diesel body castings; Packard motor car co. il Materials & Methods 37:90 Ja '53
Bolinders small marine Diesel engine. il Engineering 175:268 F 27 '53
British Diesels. il diag Automotive Ind 108:46-8 Je 15 '53
Detroit Diesel's 51 Series engine. il Diesel Power 31:46 Ja '53
Engines for ships. Economist 167:831-2 Je 20 '53
Götaverken lightweight supercharged marine Diesel engine. il Engineering 176:251 Ag 21 '53
How residual fuels are treated for use in Diesel engines. F. P. Downing and others. diags Marine Eng 58:59-63 Ap '53
Lightweight Diesel engines for the U.S. navy. il diag Engineer 196:89-90 Jl 17 '53
Light, weight Packard Diesel. il diag Diesel Power 30:36-8 S '52; Mech Eng 74:910-11 N '52; Marine Eng 58:77-80 Ap '53
Marine Diesel engines use aluminum extensively. il Machine Design 24:236 S '52; Light Metal Age 10:12 O '52; diags Product Eng 23:144-5 D '52
Marine Diesel has triangular cylinder arrangement. il diags Machine Design 25:212-14 O '53
New designs of large two-stroke marine Diesel engines. W. Kilchenmann. Engineering 175:571-2 My 1 '53
New two-stroke loop scavenged Diesel. il Automotive Ind 108:94+ Ja 1 '53
Nordberg's multifuel V-type Diesel. il Marine Eng 58:77-8 Je '53

DIESEL engines, Marine—*Continued*

Opposed-piston engine built by Fairbanks-Morse. il Marine Eng 58:87-8 O '53

Packard produces lightweight Diesel engines. C. H. Wick. il Mach 59:155-61 D '52

Packard's precision job-lot tooling makes high-speed Diesels for the navy. B. C. Brosheer. il diags Am Mach 96:149-53 N 24 '52

2500 b.h.p. Deltic Diesel engine. il diag Engineer 195:596-7 Ap 24 '53; Engineering 175:555-7 My 1 '53

See also

Motor ships

DIESEL fuels. See Diesel engines—Fuel

DIESEL locomotives. See Locomotives, Diesel

DIESTERS. See Esters

DIET

Caloric intake in relation to physique in children. P. S. Peckos. bibliog Science 117:631-3 Je 5 '53

See also

Nutrition

DIET in disease

Special feeding problems in an emergency. R. E. Butler. bibliog Pub Health Rep 67:867-71 S '52

DIETHOXYETHYLENE

Some reactions of 1,2-diethoxyethylene and its bromo derivatives. S. M. McElvain and C. H. Stammer. bibliog Am Chem Soc J 75:2154-8 My 5 '53

DIETHYLAMINOPROPYLPHENOTHIAZINE

Resolution of Parsidol. J. D. Genzer and others. bibliog Am Chem Soc J 75:2506-7 My 20 '53

DIETHYLBENZENE

Rectification at reduced pressures. H. Bliss, A. M. Eshaya, and N. W. Frisch. bibliog diags Chem Eng Prog 48:627-32 D '52

DIETHYL diselenide

Electric moments of some aliphatic peroxides, disulfides and diselenides. M. T. Rogers and T. W. Campbell. bibliog Am Chem Soc J 74:4742-3 O 5 '52

DIETHYL ketone. See Pentanone

DIETHYL paranitrophenyl thiophosphate. See Parathion

DIETHYL peroxide. See Ethyl peroxide

DIETHYLENE glycol

Operating glycol-amine gas treating plants. M. Atcheson and A. A. Cohn. bibliog flow diag il World Oil 135:297-300 O '52

DIETICIANS

Outlook for women as food-service managers and supervisors. A. W. Mitchell. il U S Women's Bur Bul 234-2:1-54 bibliog(p52-4); pa 20c Supt. of doc. '52

DIFFERENTIAL analyzers

L3 GEDA (linear Goodyear electronic differential analyzer). il R Sci Instr 23:651-2 N '52

Stabilized time-division multiplier for differential analyzers. C. D. Morrill and R. V. Baum. diags Electronics 25:139-41 D '52

DIFFERENTIAL equations

Coupling analog for nonlinear systems with more than one degree of freedom. C. A. Ludeke and R. T. Evans. diags J Ap Phys 24:119-22 F '53

Forced oscillations with nonlinear restoring force. C. Hayashi. diags J Ap Phys 24:198-207 F '53

Mathematical analysis of parallel-connected magnetic amplifiers with resistive loads. L. A. Pipes. J Ap Phys 23:625-9 Je '52

Solution of differential equations on an electronic digital computer. C. F. Gradwell. diag Engineer 196:36-9 Jl 10 '53

Solution of nonlinear differential equations by the reversion method. G. I. Cohn and B. Saltzberg. diag J Ap Phys 24:180-6 F '53

See also

Differential analyzers
Laplace transformation
Poisson-Boltzmann equation

DIFFRACTION

Annual Pittsburgh diffraction conference, 10th, Nov. 6-7; program. Anal Chem 24:1683 O '52

Determination of surface geometry and structure by microscopy and diffraction. C. F. Tufts. bibliog il diags Anal Chem 24:1700-4 N '52

Diffraction field of a circular aperture. G. A. Woonton. J Ap Phys 23:1405-6 D '52

Diffraction in time. M. Moshinsky. diags Phys R 88:625-31 N 1 '52

Diffraction of strong shock waves. W. Griffith and D. E. Brickl. bibliog diags Phys R 89:451-3 Ja 15 '53

Diffraction patterns in circular apertures less than one wavelength in diameter. H. L. Robinson. J Ap Phys 24:35-8 Ja '53

Formation of the diffraction image with electrons in the Gabor diffraction microscope. M. E. Haine and T. Mulvey. bibliog il diags Opt Soc Am J 42:763-73 O '52

New method of solving diffraction problems. H. E. J. Neugebauer. J Ap Phys 23:1406 D '52

Xn and *Yn* functions of Hopkins, occurring in the theory of diffraction. E. Wolf. Opt Soc Am J 43:218 Mr '53

DIFFRACTION gratings

Amateur scientist. A. G. Ingalls. diags Sci Am 187:88-90 D '52

Double-passing a plane grating. D. H. Rane and T. A. Wiggins. bibliog diag Opt Soc Am J 42:983-4 D '52

Interferometer action of a parallel pair of wire gratings. J. P. Casey, jr. and E. A. Lewis. Opt Soc Am J 42:971-7 D '52

Preservation of groove-form in replicas of diffraction gratings. G. D. Dew. il J Sci Instr 29:277-9 S '52

Short history of spectroscopy; the theory of the diffraction grating. T. W. Chalmers. diags Engineer 196:258-60 Ag 28 '53

Successive diffractions by a concave grating. F. A. Jenkins and L. W. Alvarez. bibliog il diag Opt Soc Am J 42:699-705 O '52

Theory of grating anomalies. V. Twersky. Opt Soc Am J 42:855-6 N '52

DIFFRACTION of X-rays. See X rays—Diffraction

DIFFUSION

Analytical method of calculating variable diffusion coefficients. L. D. Hall. bibliog J Chem Phys 21:87-9 Ja '53

Anelastic measurements of atomic mobility in substitutional solid solutions. A. S. Nowick. bibliog Phys R 88:925-34 N 15 '52

Anomalous diffusion of acetone into cellulose acetate. F. A. Long and others. bibliog J Chem Phys 21:1412-13 Ag '53

Calculation of diffusion coefficients from sorption data. Jenn Lin Hwang. bibliog J Chem Phys 20:1320-3 Ag '52

Chlorine isotope separation by thermal diffusion. A. Z. Kranz and W. W. Watson. bibliog diags Phys R 91:1469-72 S 15 '53

Complete solution of the one-velocity diffusion problem at intermediate and large distances. L. Tonks. J Ap Phys 23:1085-8 O '52

Concentration dependence of diffusion coefficients in metallic solid solution. D. E. Thomas and C. E. Birchenall. bibliog J Metals 4:Trans 867-73 Ag '52; Discussion. 5:Trans 726-8 sec 2 My '53

Correlating diffusion coefficients in liquids. D. F. Othmer and M. S. Thakar. bibliog Ind & Eng Chem 45:589-93 Mr '53

Determination of diffusion coefficients from rates of evaporation. D. D. Kimpton and F. T. Wall. bibliog diag J Phys Chem 56:715-17 Je '52

Development of porosity during diffusion in substitutional solid solutions. R. W. Balluffi and B. H. Alexander. il J Ap Phys 23:1237-44 N '52

Differential diffusion coefficient of strontium chloride in dilute aqueous solution at 25°. H. S. Harned and F. M. Polestra. bibliog Am Chem Soc J 75:4168-9 S 5 '53

Diffusion and penetration mechanism of liquids into wood. A. J. Stamm. bibliog(34 titles) Pulp & Pa of Can 54:54-63 F '53

Diffusion and solubility of nitrogen in beta zirconium. M. W. Mallett and others. bibliog Electrochem Soc J 100:103-6 Mr '53

Diffusion coefficient of cupric glycinate. R. B. Dean and H. Soonpää. bibliog Am Chem Soc J 74:6108-9 D 5 '52

Diffusion coefficients of calcium chloride and ammonium chloride in concentrated aqueous solutions at 25°. J. R. Hall, B. F. Wishaw and R. H. Stokes. bibliog diags Am Chem Soc J 75:1556-60 Ap 5 '53

DIFFUSION—*Continued*

Diffusion coefficients of certain metals in mercury. W. C. Cooper and N. H. Furman. bibliog Am Chem Soc J 74:6183-6 D 20 '52

Diffusion currents in the semiconductor Hall effect. H. Landauer and J. Swanson. bibliog diag Phys R 91:555-60 Ag 1 '53

Diffusion, de-excitation, and ionization cross sections for metastable atoms. M. A. Biondi. bibliog diag Phys R 88:660-5 N 1 '52

Diffusion in binary systems. S. Prager. bibliog J Chem Phys 21:1344-7 Ag '53

Diffusion in liquid sulfur. R. L. Saxton and H. G. Drickamer. diag J Chem Phys 21:1362-3 Ag '53

Diffusion in metals. A. D. Le Claire. Iron & Steel Inst J 174:229-36 Jl '53

Diffusion in porous catalysts. C. Bokhoven and J. Hoogschagen. bibliog diag J Chem Phys 21:159-60 Ja '53

Diffusion in supersaturated solutions; glucose solutions. J. K. Gladden and M. Dole. bibliog Am Chem Soc J 75:3900-4 Ag 20 '53

Diffusion in the system $C^{14}O_2$-CO_2 to 1000 atmospheres pressure. K. D. Timmerhaus and H. G. Drickamer. bibliog diags J Chem Phys 20:981-4 Je '52

Diffusion in the system CH_4-TCH_3 to 300 atmospheres pressure. Q. R. Jeffries and H. G. Drickamer. J Chem Phys 21:1358 Ag '53

Diffusion of acetone into polyvinyl acetate above and below the second-order transition. R. J. Kokes and others. bibliog J Chem Phys 20:1711-16 N '52

Diffusion of α-alanine in water at 25°. F. J. Gutter and G. Kegeles. bibliog il Am Chem Soc J 75:3893-6 Ag 20 '53

Diffusion of antimony in silver single crystals. L. Slifkin and others. bibliog J Ap Phys 23:1405 D '52

Diffusion of barium in barium oxide. R. W. Redington. bibliog diag Phys R 87:1066-73 S 15 '52

Diffusion of dissolved materials through wood. E. A. Behr, D. R. Briggs and F. H. Kaufert. bibliog J Phys Chem 57:476-80 Ap '53

Diffusion of hydrocarbon vapors into polyisobutylene. S. Prager. E. Bagley and F. A. Long. bibliog Am Chem Soc J 75:1255-6 Mr 5 '53

Diffusion of iodine in carbon tetrachloride under pressure. E. W. Haycock and others. bibliog diag J Chem Phys 21:1601-4 S '53

Diffusion of lithium into germanium and silicon. C. S. Fuller and J. A. Ditzenberger. bibliog Phys R 91:193 Jl 1 '53

Diffusion phenomena in solvent deresination of guayule rubber. T. F. Banigan, jr. bibliog Ind & Eng Chem 45:577-81 Mr '53

Diffusion with a sharp moving boundary. H. Fujita. bibliog J Chem Phys 21:700-5 Ap '53

Dimensional changes normal to the direction of diffusion. R. W. Balluffi and B. H. Alexander. bibliog il diags J Ap Phys 23:953-6 S '52

Drickamer's modification of the theory of the thermal diffusion column. K. Hirota and Y. Kobayashi. bibliog diags J Chem Phys 21:246-9 F '53

Effect of cyclotron bombardment on self-diffusion in silver. R. D. Johnson and A. B. Martin. bibliog diags J Ap Phys 23:1245-54 N '52

Effect of impurities on the self-diffusion of silver. R. E. Hoffman and D. Turnbull. J Ap Phys 23:1409-10 D '52

Effect of pressure on diffusion in aqueous and alcoholic salt solutions. R. B. Cuddeback and H. G. Drickamer. J Chem Phys 21:597-601 Ap '53

Effect of pressure on diffusion in CS_2 organic mixtures. R. C. Koeller and H. G. Drickamer. bibliog J Chem Phys 21:575-88 Ap '53

Effect of pressure on diffusion in liquid sulfur. D. R. Cova and H. G. Drickamer. diag J Chem Phys 21:1364-5 Ag '53

Effect of pressure on diffusion in the system CCl_4-SnI_4. E. P. Doane and H. G. Drickamer. bibliog J Chem Phys 21:1359-61 Ag '53

Effect of pressure on diffusion in water and in sulfate solutions. R. B. Cuddeback and others. bibliog J Chem Phys 21:589-97 Ap '53

Effect of pressure on self-diffusion in carbon disulfide. R. C. Koeller and H. G. Drickamer. bibliog diags J Chem Phys 21:267-73 F '53

Effect of X-ray irradiation on the self-diffusion coefficient of Na in NaCl. D. Mapother. Phys R 89:1231-2 Mr 15 '53

Electrophoretic contributions to the diffusion of electrolytes. R. H. Stokes. Am Chem Soc J 75:2533-4 My 20 '53

Electrophoretic corrections to the diffusion coefficient of an electrolyte solution. R. H. Stokes. bibliog Am Chem Soc J 75:4563-6 S 20 '53

Entropies of activation in metallic diffusion. G. J. Dienes. bibliog Phys R 89:185-8 Ja 1 '53

Estimation of heterogeneity from diffusion measurements. P. A. Charlwood. bibliog J Phys Chem 57:125-8 Ja '53

Exact pattern of a concentration-dependent diffusion in a semi-infinite medium. H. Fujita. bibliog Textile Res J 22:757-60, 823-7 N-D '52

Experimental verification of the relationship between diffusion constant and mobility of electrons and holes. Phys R 88:1368-9 D 15 '52

General theory for the Gouy diffusion method. L. J. Gosting and L. Onsager. bibliog diags Am Chem Soc J 74:6066-74 D 5 '52

Grain boundary diffusion of zinc in copper. R. Flanagan and R. Smoluchowski. J Ap Phys 23:785-7 Jl '52

Impurity diffusion and space charge layers in fused-impurity *p-n* junctions. J. S. Saby and W. C. Dunlap, jr. bibliog diags Phys R 90:630-2 My 15 '53

Interdiffusion of polyvinyl acetate with a series of solvents. A. T. Hutcheon and others. bibliog J Chem Phys 20:1232-6 Ag '52

Intermolecular force constants from thermal diffusion and other properties of gases. B. N. Srivastava and M. P. Madan. bibliog J Chem Phys 21:807-15 My '53

Intermolecular potentials for the systems CO_2-CO_2 and CO_2-N_2O. I. Adur and others. bibliog J Chem Phys 20:1620-3 O '52

Kirkendall effect in alloy systems. H. N. Hersh. J Ap Phys 23:1055-6 S '52

Material transfer in turbulent gas streams; concentric flow. W. G. Schlinger and B. H. Sage. bibliog il diags Ind & Eng Chem 45:657-61 Mr '53

Mathematics of adsorption in beds; effect of intraparticle diffusion in flow systems in fixed beds. P. R. Kasten, L. Lapidus and N. R. Amundson. J Phys Chem 56:683-8 Je '52

Mathematics of adsorption in beds; the effect of longitudinal diffusion in ion exchange and chromatographic columns. L. Lapidus and N. R. Amundson. J Phys Chem 56:984-8 N '52

Measurement of ordinary diffusion coefficients of polymers. F. T. Wall and C. W. Childers. bibliog Am Chem Soc J 75:3550-2 Jl 20 '53

Measurement of self-diffusion in solid polymers. F. Bueche and others. bibliog J Chem Phys 20:1956-8 D '52

Mechanism for self-diffusion in graphite. G. J. Dienes. bibliog diags J Ap Phys 23:1194-200 N '52

Method of determining the concentration dependence of the diffusion coefficient. H. Fujita and A. Kishimoto. bibliog Textile Res J 22:94-5; 23:59-63 F '52, Ja '53

Mixing and distribution of liquids in high-velocity air streams. J. P. Longwell and M. A. Weiss. bibliog il diags Ind & Eng Chem 45:667-77 Mr '53

Multi-stage sweep diffusion; patent. diag Chem Eng 60:379 My '53

New method of measuring diffusion coefficients. K. J. Mysels and D. Stigter. bibliog diags J Phys Chem 57:104-6 Ja '53

Non-additivity of polarographic diffusion currents with mixtures of certain reducible species. S. L. Miller and E. F. Orlemann. Am Chem Soc J 75:2001-3 Ap 20 '53

DIFFUSION *Continued*

Polygonization during diffusion; copper-nickel couples. R. W. Balluffi. il J Ap Phys 23:1407-8 D '52

Self-diffusion and structure of liquid water; measurement of the self-diffusion of liquid water with H^2, H^3 and O^{18} as tracers. Jui Hsin Wang, C. V. Robinson and I. S. Edelman. Am Chem Soc J 75:466-70 Ja 20 '53

Self-diffusion in pure polycrystalline silver. L. Slifkin and others. bibliog J Ap Phys 23:1032-4 S '52

Self-diffusion in solid sodium. N. H. Nachtrieb and others. bibliog diag J Chem Phys 20:1185-94 Ag '52

Self-diffusion in the alkali metals. D. K. C. MacDonald. J Chem Phys 21:177-8 Ja '53

Self-diffusion of liquid mercury. R. E. Hoffman. bibliog diag J Chem Phys 20:1567-70 O '52

Solid diffusion of radioactive sodium in perthite. M. L. Jensen. bibliog diag Am J Sci 250:808-21 N '52

Solubility and diffusion coefficient of carbon in nickel; reaction rates of nickel-carbon alloys with barium oxide. J. J. Lander and others. bibliog J Ap Phys 23:1305-9 D '52

Some predicted effects of temperature gradients on diffusion in crystals. W. Shockley. diags Phys R 91:1563-4 S 15 '53

Studies of self-diffusion in graphite using C-14 tracer. M. H. Feldman and others. bibliog diag J Ap Phys 23:1200-6 N '52

Study of the diffusion of *n*-butyl alcohol in water using the Gouy interference method. P. A. Lyons and C. L. Sandquist. bibliog Am Chem Soc J 75:3896-9 Ag 20 '53

Theoretical analysis of the diffusion processes determining the oxidation rate of alloys. C. Wagner. bibliog(47 ref) Electrochem Soc J 99:369-80 O '52

Theory of electrolysis at constant current with partial or total control by diffusion; application to the study of complex ions. P. Delahay and T. Berzins. bibliog diag Am Chem Soc J 75:2486-93 My 20 '53

Thermal diffusion in binary systems. S. Prager and H. Eyring. bibliog J Chem Phys 21:1347-50 Ag '53

Thermal diffusion in isotopic mixtures in the critical region. F. E. Caskey and H. G. Drickamer. bibliog J Chem Phys 21:153-6 Ja '53

Thermal neutron diffusion length in a heterogeneous pile. G. N. Plass. J Ap Phys 23:621-4 Je '52

Tracer-diffusion in liquids; self-diffusion isoelectric glycine in aqueous glycine solutions. J. H. Wang. Am Chem Soc J 75:2777-8 Je 5 '53

Tracer-diffusion in liquids; self-diffusion of calcium ion and chloride ion in aqueous calcium chloride solutions. J. H. Wang. bibliog Am Chem Soc J 75:1769-70 Ap 5 '53

Tracer diffusion in the ground in radioactive leak location. A. Gemant. bibliog J Ap Phys 24:93-5 Ja '53

Turbulent diffusion and erosion. R. W. Davies. diag J Ap Phys 23:941-8 S '52

Variational principles for irreversible processes. P. Rosen. J Chem Phys 21:1220-1 Jl '53

Viscosity, self-diffusion, and allied effects in solid polymers. F. Bueche. bibliog diags J Chem Phys 20:1959-64 D '52

DIFFUSION cloud chambers. See Cloud chambers

DIFLUOROBENZENE

Vibrational spectra of fluorinated aromatics. E. E. Ferguson and others. bibliog J Chem Phys 21:1457-63, 1470-4 S '53

DIFLUORODICHLOROMETHANE. See Dichlorodifluoromethane

DIFLUOROETHANE

Chlorination of 1,1-difluoroethane and 1-chloro-1,1-difluoroethane. J. T. Barr, J. D. Gibson and R. H. Lafferty, jr. Am Chem Soc J 74:4945-6 O 5 '52

Effect of temperature on azeotropy in 1,1-difluoroethane and dichlorodifluoromethane. W. A. Pennington. bibliog Ind & Eng Chem 44:2397-401 O '52

DIFLUOROMETHANE

Reinvestigation of the structure of difluoromethane by electron diffraction. W. C. Hamilton and K. Hedberg. Am Chem Soc J 74:5529-30 N 5 '52

DIGESTERS (paper making)

Causes and prevention of kraft digester corrosion. E. W. Hopper. il Tappi 36:345-52 Ag '53

Design of ceramic-lined digesters. C. A. McDonald and others. diags Pulp & Pa of Can 54:174-88 My '53

Digester corrosion measurement. N. Shoumatoff. Tappi 35:494-9 N '52

Digester corrosion studies; abstract. C. B. Christiansen. Tappi 35:sup 108A-9A D '52

Experiences with field-applied Inconel digester linings. S. J. Baisch. il diags Tappi 36:221-5 My '53

Hastelloy alloy F; a new corrosion-resistant alloy for lined digesters. M. A. Scheil. il Tappi 36:241-7 Je '53

New alloy tried in pulp digester resists corrosion; Hastelloy F. il Iron Age 171:148-50 Mr 26 '53

Stainless steel in the Swedish pulp industry; circulating systems for sulphite digesters, and evaporators for black liquor in sulphate mills. E. G. Lindh. bibliog il diags Pulp & Pa of Can (Convention no) 54:239-46+ [F] '53

Sulphite digester inspection. Tappi 35:sup 132A-4A D '52

Uneven corrosion in alkaline pulping digesters; a major cause and possible cures; abstract. F. W. Flynn and others. Paper Tr J 136:104 F 20 '53

Cleaning

Sulphite digester heater tube cleaning survey, 1952. W. R. Barber, jr. and J. M. Wilcox. Tappi 36:sup48A+ Jl '53

Failures

Factors influencing premature failure of ceramic digester linings in sulfite pulp mills. H. J. Kelly and others. il diags Am Cer Soc J 36:18-26 Ja 1 '53

DIGESTION

Effect of a cationic detergent on the digestion of raw cornstarch *in vitro*. R. L. Gates and R. M. Sandstedt. bibliog Science 116:482-3 O 31 '52

Surface activity of naturally occurring emulsifiers. G. F. Dasher. bibliog Science 116:660-3 D 12 '52

DIGITAL computers. See Calculating machines

DIGITONIDES

Infrared absorption of some steroid digitonides. R. B. Turner. Am Chem Soc J 75:4362-3 S 5 '53

DIGLYCERIDES. See Glycerides

DIHYDRONAPHTHALENE

1,4-Dimethoxy-5-methyl-6-tetralone and 1,4-dimethoxy-5,5-dimethyl-6-tetralone. T. R. Lewis, W. B. Dickinson and S. Archer. bibliog Am Chem Soc J 74:5321-4 N 5 '52

DIHYDRONAPHTHOIC acid

Components of podophyllin; absorption spectra and reaction with iodine of the dihydro-β-naphthoic acids. A. W. Schrecker, G. Y. Greenberg and J. L. Hartwell. bibliog Am Chem Soc J 74:5669-71 N 20 '52

DIHYDRONIQUIDINE

Synthesis of dihydroniquidine. H. S. Mosher and others. bibliog Am Chem Soc J 74:4627-9 S 20 '52

DIHYDROPHENANTHRENE

Polynuclear aromatic hydrocarbons; a new synthesis of picene. D. D. Phillips. bibliog Am Chem Soc J 75:3223-6 Jl 5 '53

DIHYDROPYRAN

Bicyclic dihydropyrans by the Diels-Alder reaction. W. S. Emerson, G. H. Birum and R. I. Longley, jr. bibliog Am Chem Soc J 75:1312-13 Mr 20 '53

DIHYDROPYRIDAZINEDIONE

Crown gall suppression by anti-auxin. P. E. Waggoner and A. E. Dimond. Science 117:13 Ja 2 '53

DIHYDROQUINOLINE

1,2-Dihydroquinoline. W. S. Johnson and B. G. Buell. bibliog Am Chem Soc J 74:4517-20 S 20 '52

DIHYDROROTENONE

Analysis

Infrared analysis of rotenone-dihydrorotenone mixtures. H. L. Cupples. Anal Chem 24:1657 O '52

DIHYDROSPHINGOSINE

Sphingolipid field; an improved synthesis of racemic 2-amino-octadecane-1 : 3-diols, and an X-ray examination of its derivatives. M. J. Egerton, G. I. Gregory and T. Malkin. pl Chem Soc J p2272-4 Je '52

DIHYDROSTREPTOMYCIN. See Streptomycin

DIHYDROTESTOSTERONE

Improved method of preparing testosterone, dihydrotestosterone and some of their esters. A. Ercoli and P. de Ruggieri. bibliog Am Chem Soc J 75:650-3 F 5 '53

DIHYDROXYBENZOIC acid. See Resorcylic acid

DIHYDROXYCOUMARANONE

C-methylation of 4 : 6-dihydroxycoumaran-3-one. T. P. C. Mulholland and G. Ward. Chem Soc J p 1642-3 My '53

DIHYDROXYDIPHENYLMETHANE

Structure and configuration of dihydroxydiphenylmethanes derived from butylated *m*-cresols as evidenced by infrared absorption. J. C. Ambelang and J. L. Binder. bibliog Am Chem Soc J 75:947-50 F 20 '53

DIHYDROXYETHYLGLYCINE

Stability of metal chelates; N-N-dihydroxyethylglycine. S. Chaberek, jr., R. C. Courtney and A. E. Martell. bibliog Am Chem Soc J 75:2185-90 My 5 '53

DIHYDROXYINDOLE

Melanin and its precursors; further syntheses of 5 : 6-dihydroxyindole and its derivatives. J. Harley-Mason. Chem Soc J p200-3 Ja '53

DIHYDROXYPHENYLACETIC acid

3,4-Dihydroxyphenylacetic acid; a metabolite of quercetin. C. W. Murray and others. Am Chem Soc J 75:3289 Jl 5 '53

DIHYDROXYPHENYLALANINE

Destruction of epinephrine by the DOPA-oxidase system of ocular tissue. W. J. Angenent and G. B. Koelle. bibliog Science 116:543-4 N 14 '52

Melanin and its precursors; synthesis of 5- and 7-hydroxyindole from dihydroxyphenylalanines. R. I. T. Cromartie and J. Harley-Mason. Chem Soc J p2525-7 Jl '52

New synthesis of 2 : 5-dihydroxyphenyl-DL-alanine adapted to isotopic scale. A. T. Shulgin and E. M. Gal. Chem Soc J p 1316-18 Ap '53

DIHYDROXYPHENYLETHYLAMINE

2-3′ : 5′-Dihydroxyphenylethylamine and 3 : 5-dihydroxyphenylalanine. A. S. Bailey and others. Chem Soc J p4534-5 N '52

DIHYDROXYPROGESTERONE

11-Oxygenated steroids; the synthesis of Δ_4-pregnen-11α,17α-diol-3,20-dione (11α,17α-dihydroxyprogesterone) and Δ_4-pregnen-11α,17α,21-triol-3,20-dione 11-acetate (11-epi-compound F 11-acetate). E. P. Oliveto and others. bibliog Am Chem Soc J 75:3651-3 Ag 5 '53

Steroids; synthesis of Δ^4-pregnene-11 α,21-diol-3,20-dione diacetate, the 11-epimer of corticosterone acetate. F. Sondheimer and others. bibliog Am Chem Soc J 75:2601-3 Je 5 '53

DIHYDROXYPTERIDINE

Pteridine studies; 4 : 6- and 4 : 7-dihydroxypteridine. A. Albert and D. J. Brown. Chem Soc J p74-9 Ja '53

DIHYDROXYQUINALDINE

Syntheses of the 5,8-dihydroxyquinaldine series. A. Burger and G. T. Fitchett. bibliog Am Chem Soc J 75:1359-62 Mr 20 '53

DIHYDROXYTHIONAPHTHENE

Synthesis of 5 : 6-dihydroxythionaphthen. D. G. Bew and G. R. Clemo. Chem Soc J p 1314-15 Ap '53

DIKES (engineering)

Bank stabilization by revetments and dikes. R. H. Haas and H. E. Weller. il diag Am Soc C E Proc 78[no 148]:1-12 S '52

Dike and drainage structures, Minnesota; unit prices. Eng N 150:76 Ja 29 '53

Dike rebuilding in Netherlands poses great engineering problems. map Eng N 150:48 F 26 '53

Thruway problems in Montezuma swamp. W. Robinson. il map diag Roads & Sts 95:44-7+ D '52

DIKES (geology)

Pleistocene clastic dikes in weathered granite-gneiss, Rhode Island. J. H. Birman. bibliog maps diags Am J Sci 250:721-34, pl 1 O '52

DIKETONES. See Ketones

DILATOMETERS

Assessment of weldability by rapid dilatation tests. C. L. M. Cottrell. bibliog il diag Iron & Steel Inst J 174:17-24 My '53

Design and construction of a self-calibrating dilatometer for high-temperature use. A. Lieberman and W. B. Crandall. diags Am Cer Soc J 35:304-8 N 1 '52

DIMENSIONAL analysis

Learning how to use dimensional analysis. I. H. Silberberg and J. J. McKetta, jr. bibliog diags Pet Refiner 32:179-83 Ap; 147-50 My; 101-3 Je; 129-33 Jl '53

DIMERIZATION. See Polymerization

DIMETHYLAMINE

Chemistry of metal carbonyls; the reaction between dicobalt octacarbonyl and dimethylamine. H. W. Sternberg and others. Am Chem Soc J 75:3148-52 Jl 5 '53

Constitution of conessine; the position of the double bond and dimethylamino-group. R. D. Haworth, J. McKenna and G. H. Whitfield. Chem Soc J p 1102-9 Ap '53

DIMETHYL aminoacetophenone

Carbethoxylation products of *p*-aminoacetophenone and *p*-dimethylaminoacetophenone. H. S. Broadbent and C. Chu. Am Chem Soc J 75:226-7 Ja 5 '53

DIMETHYL aminoazobenzene

Solubilization of 4-dimethylaminoazobenzene (butter yellow) in serum. C. Wunderly. bibliog il Science 117:248-9 Mr 6 '53

DIMETHYL aminobenzaldehyde

Spectrophotometric method for the determination of hydrazine. G. W. Watt and J. D. Chrisp. bibliog Anal Chem 24:2006-8 D '52

DIMETHYL aniline

Stability constants for some metal chelates of pyridine-2-azo-*p*-dimethylaniline. I. M. Klotz and W.-C. Loh Ming. bibliog Am Chem Soc J 75:4159-62 S 5 '53

System acetic acid-water-dimethylaniline; liquid phase behavior and analysis. L. Garwin and P. O. Haddad. bibliog Anal Chem 25:435-7 Mr '53

DIMETHYL arabinose

Preparation of 2 : 3-anhydromethyl-D-lyxoside from 2-toluene-*p*-sulphonyl methyl-D-xylofuranoside, and synthesis of 2-methyl D-xylose, 3-methyl D-aribinose, and 3 : 5-dimethyl D-arabinose. E. E. Percival and R. Zobrist. Chem Soc J p 564-6 F '53

DIMETHYL azafluorylidene

New syntheses of heterocyclic compounds; diethylaminoethyl 1 : 3-dimethyl-2-aza-9-fluorylideneacetate. B. N. Feitelson and V. Petrow. Chem Soc J p3358-61 S '52

DIMETHYL benzene. See Xylene

DIMETHYL benzotriazole

5,6-Dimethylbenzotriazole and its acyl derivatives. F. R. Benson, L. W. Hartzel and W. L. Savell. bibliog Am Chem Soc J 74:4917-20 O 5 '52

DIMETHYL benzyl hydroperoxide. See Xylyl hydroperoxide

DIMETHYL beryllium. See Beryllium dimethyl

DIMETHYL butadiene. See Isoprene

DIMETHYL butadiyne

Raman and infrared spectral data and assignments for dimethyldiacetylene. S. M. Ferigle and others. bibliog J Chem Phys 20:1928-31 D '52

DIMETHYL butylbenzene

Homomorphs of 2,6-dimethyl-*t*-butylbenzene. H. C. Brown and M. Grayson. bibliog diag Am Chem Soc J 75:20-4 Ja 5 '53

DIMETHYL cadmium. See Cadmium dimethyl

DIMETHYL catechol

3 : 4-, 3 : 5-, and 3 : 6-dimethylcatechol. W. Baker and others. Chem Soc J p 1615-19 My '53

DIMETHYL coumalic acid

Alkyl esters of isodehydroacetic acid. R. H. Wiley, N. R. Smith and J. A. Bauer. Am Chem Soc J 75:244-5 Ja 5 '53

2-Pyrones; new derivatives of isodehydroacetic acid. R. H. Wiley and others. bibliog Am Chem Soc J 75:3715-17 Ag 5 '53

DIMETHYL cyclohexane
Alicyclic glycols; a chemical proof of the configurations of the 1 : 2-, 1 : 3-, and 1 : 4-dimethyl*cyclo*hexanes, and of the 2-, 3-, and 4-methyl*cyclo*hexylmethanols. G. A. Haggis and L. N. Owen. Chem Soc J p408-12 F '53
Sulfuric acid isomerization of methylalkanes, dimethylalkanes and dimethylcyclohexanes. A. K. Roebuck and B. L. Evering. bibliog Am Chem Soc J 75:1631-5 Ap 5 '53

DIMETHYL cyclopentane
Configurations of the isomeric forms of 1 : 3-dimethyl*cyclo*pentane. S. F. Birch and R. A. Dean. Chem Soc J p2477-81 Ag '53

DIMETHYL diacetylene. See Dimethyl butadiyne

DIMETHYL diaminobenzene, Analogs of
Some aggregate analogs of *p*-aminobenzoic acid and dimethyldiaminobenzene possessing unusual biological properties. D. W. Woolley. bibliog Am Chem Soc J 74:5450-3 N 5 '52

DIMETHYL diphenylphenanthroline
New colorimetric reagent specific for copper; determination of copper in iron; 2,9-dimethyl-4,7-diphenyl-1,10-phenanthroline. G. F. Smith and D. H. Wilkins. bibliog Anal Chem 25:510-11 Mr '53

DIMETHYL docosa diynedioate
Stepwise hydrogenation of dimethyl docosa-10 : 12-diynedioate. J. P. Riley. Chem Soc J p2193-8 Ag '53

DIMETHYL formamide
Use of dimethylformamide as a formylation reagent. E. Campaigne and W. L. Archer. bibliog Am Chem Soc J 75:989-91 F 20 '53
Use of dimethylformamide in the Ullmann reaction. N. Kornblum and D. L. Kendall. Am Chem Soc J 74:5782 N 20 '52

DIMETHYL hexynol
Formic acid rearrangement of 3,4-dimethyl-1-hexyn-3-ol. T. Takeshima. bibliog Am Chem Soc J 75:3309-12 Jl 20 '53

DIMETHYL homophthalate
Stobbe condensation with dimethyl homophthalate. H. J. E. Loewenthal and R. Pappo. Chem Soc J p4799-804 D '52

DIMETHYL hydantoin
Stabilizing cellulosic fabrics; dimethylhydantoin-formaldehyde condensates; patent. Am Dyestuff Rep 42:50 Ja 19 '53

DIMETHYL hydrazine
Reaction of hydrazine and symmetrical dimethylhydrazine with diborane. M. J. Steindler and H. I. Schlesinger. Am Chem Soc J 75:756 F 5 '53

DIMETHYL indole
Condensation of 1 : 3-dimethylindole with hexane-2 : 5-dione and heptane-2 : 6-dione. R. Robinson and J. E. Saxton. Chem Soc J p2596-600 S '53

DIMETHYL isophthalate
Dimethyl isophthalate now produced at low cost. Chem Eng 60:264 Ap '53
Use of dimethyl isophthalate. F. Oswald. Paint Oil & Chem R 116:78 O 8 '53

DIMETHYL malonyl chloride
Interaction of dimethylmalonyl chloride with malonic ester; a new synthesis of filicinic acid. E. B. Reid and T. E. Gompf. bibliog Am Chem Soc J 75:1661-3 Ap 5 '53

DIMETHYL naphthidine
Substituted benzidines and related compounds as reagents in analytical chemistry; the oxidation potentials of naphthidine, 3 : 3′-dimethylnaphthidine, and their sulphonic acids. R. Belcher, A. J. Nutten and W. I. Stephen. Chem Soc J p3857-61 O '52

DIMETHYL phenanthrene
New synthesis of 4,5-dimethylphenanthrene. E. D. Bergmann and Z. Pelchowicz. Am Chem Soc J 75:2663-5 Je 5 '53

DIMETHYL phenylhexanol
Studies in stereochemistry; molecular rearrangements in the 3,4-dimethyl-4-phenyl-3-hexanol system. D. J. Cram and J. D. Knight. bibliog Am Chem Soc J 74:5839-46 D 5 '52
Studies in stereochemistry; the preparation and complete resolution of the 3,4-dimethyl-4-phenyl-3-hexanol system. D. J. Cram and J. D. Knight. bibliog Am Chem Soc J 74:5835-8 D 5 '52

DIMETHYL phenylphosphine
Studies in the detoxication of catalyst poisons; dimethylphenylphosphine. E. B. Maxted and G. T. Ball. Chem Soc J p1509-11 My '53

DIMETHYL phenyltriazole
Preparation of 3 : 5-dimethyl-1-phenyl-1 : 2 : 4-triazole. A. A. Komzak and J. B. Polya. bibliog J Ap Chem 2:666-8 N '52

DIMETHYL pyrimidine
Pyrimidines; experiments on the synthesis of pyrimidine and 4 : 6-dimethylpyrimidine. M. P. V. Boarland, J. F. W. McOmie and R. N. Timms. Chem Soc J p4691-5 D '52

DIMETHYL quinoline
Synthesis and nitration of 2,6- and 2,7-dimethylquinoline and of 2,5,8-trimethylquinoline. D. M. Bowen, R. W. Belfit, jr. and R. A. Walser. bibliog Am Chem Soc J 75:4307-11 S 5 '53

DIMETHYL sulfide. See Methyl sulfide

DIMETHYLTRIACETYLENE
Infrared spectrum of dimethyltriacetylene. A. Weber and others. bibliog J Chem Phys 21:1613 S '53

DIMETHYL xylose
Synthesis of 3 : 4- and 3 : 5-dimethyl xylose. E. E. Percival and R. Zobrist. Chem Soc J p4306-10 N '52
Synthesis of 3 : 4-dimethyl D-xylose and 4-methyl D-xylose. L. Hough and J. K. N. Jones. Chem Soc J p4349-51 N '52

DIMETHYLENE ketene
Dimethyleneketene; an attempted synthesis. H. M. Walborsky. bibliog Am Chem Soc J 74:4962-3 O 5 '52

DINING cars
New Haven diner has open kitchen. il Ry Age News ed 135:14 S 14 '53
Norfolk & Western dining car refrigeration. il plan Ry Loco & Cars 127:76-9 My '53
Place for plastic dishes. il Ry Age 134:84-5 Ap 20 '53

DINING rooms

Lighting

Flexible lighting system for a country-club dining room. il Illum Eng 48:134 Mr '53

DINITROBENZENE
Interaction of dinitrobenzene derivatives with bovine serum albumin. M. E. Carsten and H. N. Eisen. bibliog Am Chem Soc J 75:4451-6 S 20 '53

DINITROBENZENESULFINIC acid
Attempted preparation of 2 : 4-dinitrobenzenesulphinic acid. H. Bradbury and F. J. Smith. Chem Soc J p2943 Jl '52

DINITROGEN oxides. See Nitrogen oxides

DINITROGEN tetroxide. See Nitrogen oxides

DINITROPHENOL
Crystallographic data. W. C. McCrone and J. Krc, jr. il diags Anal Chem 24:1863-4 N '52
Study of the quantitative dinitrophenylation of amino acids and peptides. W. A. Schroeder and J. LeGette. bibliog Am Chem Soc J 75:4612-15 S 20 '53

DINITROPHENYLHYDRAZONE
Correlation of color and constitution; 2,4-dinitrophenylhydrazones. G. D. Johnson. Am Chem Soc J 75:2720-3 Je 5 '53
Formation, separation, and identification of the 2,4-dinitrophenylhydrazones. L. I. Braddock and others. bibliog Anal Chem 25:301-6 F '53

DINITROPROPANE
Dielectric dispersion in the microwave region of six tetrasubstituted methanes in the solid state. J. G. Powles and others. bibliog diags J Chem Phys 21:136-41 Ja '53
Disorder in crystalline 2,2-dinitropropane at room temperature. S. C. Abrahams. bibliog diags J Chem Phys 21:1218-19 Jl '53

DINITRORESORCINOL
4,6-Dinitroresorcinol. W. C. McCrone and I. Corvin. il diag Anal Chem 24:2008-9 D '52

DINITROSALICYLIC acid
Reduction of alkaline 3 : 5-dinitrosalicylate by certain carbohydrates. D. J. Bell, D. J. Manners and A. Palmer. Chem Soc J p3760-3 O '52

DINNERWARE. See Tableware

DIODES. See Crystal diode; Vacuum tubes

DIOLS. See Glycols

DIOPSIDE

Leucite, potash nepheline, and clinopyroxene from volcanic lavas from southwestern Uganda and adjoining Belgian Congo. T. G. Sahama. Am J Sci Bowen vol p457-70 bibliog(p469-70) '52

System diopside—forsterite—anorthite. E. F. Osborn and D. B. Tait. bibliog diags Am J Sci Bowen vol p413-33 '52

DIOSCOREA

Alkaloid of dioscorea hispida, Dennstedt; Hofmann degradation. A. R. Pinder. Chem Soc J p 1825-8 Je '53

Alkaloid of dioscorea hispida, Dennstedt; the lactone ring. A. R. Pinder. Chem Soc J p2236-40 Je '52

DIOSPHENOL

Dipole moment and infra-red spectrum of diosphenol. R. J. W. Le Fèvre, F. Maramba and R. L. Werner. Chem Soc J p2496-8 Ag '53

DIOXANE

Antimony(III) fluoride-dioxane addition compound. H. M. Haendler, R. H. Glazier and D. W. Breck. bibliog Am Chem Soc J 75:3845-6 Ag 5 '53

Dielectric constant for the dioxane-water system from 20 to 35°. F. E. Critchfield, J. A. Gibson, jr. and J. L. Hall. bibliog Am Chem Soc J 75:1991-2 Ap 20 '53

Molecular polarisation and molecular interaction; the apparent dipole moments of mesidine, aminodurene, and methylmesidine in benzene and dioxan solutions. J. W. Smith. Chem Soc J p 109-13 Ja '53

Olefin-aldehyde condensation; the Prins reaction. E. Arundale and L. A. Mikeska. Chem R 51:505-55 bibliog(p550-5) D '52

Ortho esters, imidic esters and amidines; the acid-catalyzed hydrolysis of N,N′-diphenylformamidine in aqueous dioxane solutions. R. H. DeWolfe and R. M. Roberts. bibliog Am Chem Soc J 75:2942-7 Je 20 '53

Structure of styrene oxide dimers; ultraviolet spectra of 2,5-diphenyl-1,4-dioxanes and related compounds. M. J. Kland-English, R. K. Summerbell and I. M. Klotz. bibliog Am Chem Soc J 75:3709-12 Ag 5 '53

System water-dioxane-hydrogen chloride. R. A. Robinson. Am Chem Soc J 74:6125 D 5 '52

DIOXIN

Heterocyclic syntheses with malonyl chloride; 2 : 2-disubstituted 6′-amino-2′ : 4-diketopyrano(3′ : 4′-5 : 6)-1 : 3-dioxins and simpler derivatives of 4-keto-1 : 3-dioxin. S. J. Davis and J. A. Elvidge. Chem Soc J p2251-7 Ag '53

DIP and strike, Determination of

Use of apparent dip in measuring thickness. W. F. Tanner. diags Am Assn Pet Geologists Bul 37:566-7 Mr '53

DIPALMITOYL lecithin

Isolation of dipalmitoleyl-L-α-glycerylphosphorylcholine from yeast; a new route to (dipalmitoyl)-L-α-lecithin. D. J. Hanahan and M. E. Jayko. bibliog Am Chem Soc J 74:5070-3 O 20 '52

DIPHENIC acid

2,2′-Diphenic acid from phenanthrene. W. F. O'Connor and E. J. Moriconi. bibliog flow sheet il Ind & Eng Chem 45:277-81 F '53

DIPHENOXYPROPANE

Diaryloxyalkane derivatives; some miscellaneous diphenoxypropanes. F. H. McMillan. Am Chem Soc J 74:5229-30 O 20 '52

DIPHENYL

Existence of a hidden transition in biphenyl. A. Wenzel. bibliog J Chem Phys 21:403-8 Mr '53

Relation between configuration and conjugation in diphenyl derivatives; the dipole moments of the monohalogeno- and mononitro-diphenyls. A. C. Littlejohn and J. W. Smith. Chem Soc J p2456-63 Ag '53

Solubilities of naphthalene and biphenyl in aqueous solutions of electrolytes. M. A. Paul. bibliog Am Chem Soc J 74:5274-7 N 5 '52

Solubility of *p*-terphenyl in *o*- and *m*-terphenyls and in biphenyl. R. J. Good and others. bibliog Am Chem Soc J 75:436-42 Ja 20 '53

Vapour pressure and lattice energy of some aromatic ring compounds. R. S. Bradley and T. G. Cleasby. Chem Soc J p 1690-2 Je '53

See also
Dowtherm

Analysis

Infrared determination of biphenyl in treated fiberboard cartons. L. R. Knodel and E. J. Elvin. Anal Chem 24:1824-6 N '52

DIPHENYLACETONITRILE

Mannich reaction of diphenylacetonitrile; products and derivatives. H. E. Zaugg, B. W. Horrom and M. R. Vernsten. bibliog Am Chem Soc J 75:288-91 Ja 20 '53

DIPHENYLACETYLENE

Addition of water to diphenylacetylene-1,2-C_1^{14}. J. G. Burr, jr. Am Chem Soc J 75:1990-1 Ap 20 '53

Reaction of dinitrogen tetroxide with tolane. K. N. Campbell, J. Shavel, jr. and B. K. Campbell. bibliog Am Chem Soc J 75:2400-3 My 20 '53

DIPHENYLAMIDINOPHENOXYMETHANE

Synthesis of di-(*p*-*N*-phenylamidinophenoxy) methane. F. C. Cooper and M. W. Partridge. Chem Soc J p5036-7 D '52

DIPHENYLAMINE

Equilibria of several reactions of aromatic amines. G. N. Vriens and A. G. Hill. bibliog Ind & Eng Chem 44:2732-5 N '52

Study of the diphenylamine test for aliphatic nitrocompounds. K. Grebber and J. V. Karabinos. bibliog diag J Res Nat Bur Stand 49:163-6 S '52

Synthesis of thyroxine and related substances; diphenylamines. R. C. Cookson. Chem Soc J p643-54 F '53

DIPHENYLANTHRACENE

Influence of temperature on the spectrum of 9 : 10-diphenylanthracene. J. C. D. Brand and J. R. Davidson. Chem Soc J p352-4 Ja '53

Studies of the localization theory of organic reactions; the effects of substituents. R. D. Brown. Chem Soc J p2229-33 Je '52

DIPHENYL butane

Reaction of 1 : 4-diphenyl- and 1 : 1 : 4-triphenyl-butane with *N*-bromosuccinimide. S. Israelashvili and F. Bergmann. Chem Soc J p 1070-2 Ap '53

DIPHENYL compounds

Ultraviolet spectra and carcinogenic activities of some fluorene and biphenyl derivatives. R. B. Sandin and others. bibliog Am Chem Soc J 74:5073-5 O 20 '52

DIPHENYLCYCLOHEXANONE

Derivatives of 2,2-diphenylcyclohexanone; some anomalous absorption spectra. W. B. Bennet and A. Burger. bibliog Am Chem Soc J 75:84-7 Ja 5 '53

DIPHENYLCYCLOÖCTATETRAENE

Cyclic polyolefins; 1,2-diphenylcycloöctatetraene. A. C. Cope and D. S. Smith. bibliog Am Chem Soc J 74:5136-9 O 20 '52

DIPHENYLCYCLOPENTANONE

Synthesis of 2,2-diphenylcyclopentanone and some of its derivatives. N. R. Easton and S. J. Nelson. Am Chem Soc J 75:640-1 F 5 '53

DIPHENYLDIAZOMETHANE

Pyrolysis of the addition product of diphenyldiazomethane and 1,4-naphthoquinone. A. R. Bader and M. G. Ettlinger. bibliog Am Chem Soc J 75:730-4 F 5 '53

DIPHENYL ether. See Phenyl ether

DIPHENYLETHYLENE

Reaction of *trans*-stilbene oxide and 1,1-diphenylethylene oxide with 2-naphthol. C. O. Guss, R. Rosenthal and R. F. Brown. bibliog Am Chem Soc J 75:2393-5 My 20 '53

Uncatalyzed condensation of 1,1-diphenylethylene with chlorinated acetyl chlorides. F. Bergmann and J. Klein. Am Chem Soc J 75:4333-4 S 5 '53

Uncatalyzed reaction of olefins with acyl chlorides; reaction of 1 : 1-diphenylethylene. F. Bergmann, S. Israelashvili and D. Gottlieb. Chem Soc J p2522-5 Jl '52

DIPHENYLINE. See Diphenylamine

DIPHENYLMETHANE

Internuclear cyclisation; the cyclisation of derivatives of diphenylmethane, benzophenone, and *N*-methyldiphenylamine. D. H. Hey and R. D. Mulley. Chem Soc J p2276-87 Je '52

DIPHENYLMETHANOL. See Benzohydrol

DIPHENYLMETHYL
Acylation and allied reactions catalysed by strong acids; the ease of formation and reactions of the diphenylmethyl and some triarylmethyl cations. H. Burton and G. W. H. Cheeseman. Chem Soc J p832-7 Mr '53

DIPHENYLMETHYLENEANTHRONE
Thermochromism of diphenylmethyleneanthrone. R. J. W. Le Fèvre and I. Youhotsky. Chem Soc J p 1318-19 Ap '53

DIPHENYLPROPANEDIAMINE
2,2-Diphenyl-1,3-propanediamines and N-substituted derivatives. H. E. Zaugg and B. W. Horrom. bibliog Am Chem Soc J 75:292-4 Ja 20 '53

DIPHENYLPROPANOL
Studies in stereochemistry; the 1,2-diphenyl-1-propanol system. F. A. A. Elhafez and D. J. Cram. bibliog Am Chem Soc J 74: 5846-51 D 5 '52

DIPHENYLPROPYL group
Studies in stereochemistry; the course of the solvolytic-substitution reactions in the 1,2-diphenyl-1-propyl system. F. A. A. Elhafez and D. J. Cram. bibliog Am Chem Soc J 75:339-46 Ja 20 '53

DIPHENYL sulfone. See Phenyl sulfone

DIPHENYLTHIOCARBAZONE. See Dithizone

DIPHENYLTRIAZOLE
Synthesis of 1,3-diphenyl-1,2,4-triazole. M. R. Atkinson and J. B. Polya. bibliog Am Chem Soc J 75:1471 Mr 20 '53

DIPHOSPHOPYRIDINE
Luminescence in cell-free extracts of luminous bacteria and its activation by DPN. B. L. Strehler. bibliog Am Chem Soc J 75:1264 Mr 5 '53

DIPHTHERIA
Diphtheria toxin. A. M. Pappenheimer, jr. il Sci Am 187:32-6 O '52
Relation of bacteriophage to the change of corynebacterium diphtheriae from avirulence to virulence. N. B. Groman. bibliog Science 117:297-9 Mr 20 '53
Virulence induced in avirulent bacilli; Corynebacterium diphtheriae. Pub Health Rep 68: 108-9 Ja '53

Statistics

Diphtheria in the United States. Pub Health Rep 68:67 Ja '53

DIPOLE moment. See Electric moment

DIPOLES. See Molecules

DIPROPYLENE glycol
Synthesis and identification of dipropylene glycol isomers. A. R. Sexton and E. C. Britton. bibliog Am Chem Soc J 75:4357-8 S 5 '53

DIPYRIDYL. See Bipyridine

DIQUINOLYL. See Biquinoline

DIRAC, Paul Adrian Maurice, 1902-
Interpretation and generalization of Dirac's theory of the electron. W. Wessel and S. J. Czyzak. bibliog Phys R 91:986-94 Ag 15 '53

DIRAC function
Dirac delta-function and the summation of Fourier series. M. R. Spiegel. J Ap Phys 23:906-9 Ag '52

DIRECT current motors. See Electric motors, Direct current

DIRECT mail advertising. See Advertising, Mail

DIRECTION finding apparatus
Lear's new automatic direction finder. Aviation W 57:79+ O 27 '52
Static doesn't bother new adf. S. H. Reiniger. il diag Aviation W 58:66+ My 4 '53
See also
Range finders

DIRECTORIES
See also
Trade directories
also subdivision Directories under special subjects, e.g.
Air conditioning industries
Chemical industries
Employment management associations
Heating industry
Importing
Manufacturers
Manufacturers' agents
Radio apparatus industry
Television apparatus industry
Television stations
Trade associations

DIRECTORS. See Bank directors; Corporations—Directors; Insurance companies—Directors

DIRECTORS, Junior. See Corporations—Directors, Junior

DISABILITY evaluation. See Personal injuries

DISABILITY insurance. See Insurance, Disability

DISABLED
See also
Handicapped

Rehabilitation

He might have been a cripple. H. W. Park. Nat Safety N 68:110-11+ O '53
Heart disease and industrial medicine; the placement, protection and rehabilitation of persons suffering from heart disease. E. M. Kline and others. Ind Med 22:76-9 F '53
How Ontario rehabilitates its industrially injured. D. D. McRae. Paper Tr J 136:16-17 Mr 13 '53; Same. Pulp & Pa of Can 54: 202+ Jl '53
Rehabilitation in the hospital. H. A. Rusk. il Pub Health Rep 68:281-5 Mr '53
Rehabilitation plan for disabled endorsed. East Underw 54:41 Mr 20 '53
Rehabilitation program for the incapacitated. K. E. Pohlmann. Pub Health Rep 68:84-5 Ja '53
See also
Occupational therapy

DISACCHARIDES
Acetobrominolysis of di- and polysaccharide acetates. A. Jeanes, C. A. Wilham and G. E. Hilbert. bibliog Am Chem Soc J 75: 3667-73 Ag 5 '53
Ionophoresis of some disaccharides. A. B. Foster. Chem Soc J p982-6 Mr '53
Studies on inulin; the preparation and properties of inulobiose. J. H. Pazur and A. L. Gordon. bibliog diag Am Chem Soc J 75:3458-60 Jl 20 '53

DISALLE, Michael Vincent, 1908-
Controls on borrowed time. por Bsns W p27-8 D 13 '52

DISASTERS
Disaster relief plans; U.S. Public health service is assuming an active role. Eng N 150:34 Je 4 '53
Insect and rodent control in epidemics and disasters. J. S. Wiley and P. A. Stephens. il Pub Health Rep 68:334-7 Mr '53
Lessons from disasters. L. B. Olson. Nat Safety N 67:20-1+ Je '53
Norton story; how company met disaster, and the lessons it learned. il Cer Ind 61:74+ Ag '53
Preparing for disaster control. A. D. O'Connor. Nat Safety N 67:34+ Mr '53
Pre-planning vital to meet disasters. L. A. Vincent. East Underw 54:1+ F 27 '53

DISCHARGED soldiers. See Veterans

DISCHARGES of electricity. See Electric discharges

DISCHE reaction
Chemistry of gram staining and of the Feulgen and Dische reactions for nuclear material; abstract. M. Stacey. Chem & Ind p 124 F 7 '53

DISCOUNT

Rates

Discount rate increase. Nat City Bank p 14-17 F '53
Money rates in foreign countries; discount rates of central banks. Fed Res Bul 39:81 Ja '53 [cont monthly]

DISCOUNT, Cash
Are retail stores inviting regulation? handling anticipatory discounts. T. D. Ellsworth. J Retailing 28:111-22+ Fall '52
Cash discounts; still a sore spot. Bsns W p 123 Ap 18 '53

DISCOUNT, Trade
Amoco, tire firms press quantity discount appeal. Nat Pet N 45:84 F 4 '53
Court decision postponed in tire discount case. Nat Pet N 44:35 N 19 '52

DISCOUNT, Trade—*Continued*
Court dismisses tire suits against FTC. Nat Pet N 44:19 D 3 '52
Court holds fate of FTC bid to kill opposition to tire carload discount. Nat Pet N 44:13-14 O 22 '52
Court trial of FTC tire discount rule approved. India Rubber World 128:653 Ag '53
Pattern for substantiating quantity discounts. R. A. Kosloske. N A C A Bul 34:479-89 D '52

DISCOUNT companies
Discount house. F. W. Gilchrist. J Marketing 17:267-72 Ja '53; Discussion. S. C. Hollander. 18:57-9 Jl '53

DISCOVERY of North America. See North America—Discovery and exploration

DISCRIMINATION in employment
Employer guilty. Bsns W p 134 Ja 31 '53
Is Ontario's Fair employment practices act unfair? N. A. Macdougall. Can Chem Process 36:17-18 O '52
To stop job bias, amend Taft-Hartley. Bsns W p 177 My 9 '53

Bibliography

Selected annotated references on fair employment practices legislation. R. J. Nelson. 6p Industrial relations center, Univ. of Minnesota, Minneapolis '52

DISCUSSION
Across the table; simple device for improving conference discussion. R. A. Rogers. Personnel 29:510-11 My '53
See also
Forum, Open

DISEASES
Genetotrophic disease. R. B. Mefferd, jr. and J. B. Loefer. Science 117:sup3 My 1 '53
See also
Anthrax
Arthritis
Asthma
Bursitis
Diabetes
Eye—Diseases and defects
Heart—Diseases
Infectious diseases
Influenza
Lungs—Diseases
Medical geography
Miners—Diseases and hygiene
Mortality
Public health
Rheumatism
Sickness
Skin—Diseases
Teeth—Diseases and defects
Toxoplasmosis
Tuberculosis
Urethritis
Vascular system—Diseases

Statistics

See also
Cancer—Statistics

DISEASES, Chronic
Chronic conditions and obesity. Safety Maint & Prod 105:51 Je '53

DISEASES, Feigned. See Malingering

DISEASES, Industrial
Multiphasic screening; occupational diseases; Medical society of the state of New York Section on industrial medicine and surgery annual convention, New York, May 14-15. Ind Med 21:447-8 S '52
State compensatory provisions for occupational diseases. G. G. Morgis and S. J. Davenport. bibliog U S Bur Mines Information Circ 7650:1-125 '52
Trauma and peripheral vascular disease. M. M. Fisher. bibliog Ind Med 21:538-42 N '52
See also
Anthrax
Beryllium poisoning
Deafness
Heart—Diseases
Hygiene, Industrial
Lead poisoning
Lungs—Dust diseases
Miners—Diseases and hygiene
Poisons, Industrial
Sickness
Silicosis
Skin—Diseases
Workmen's compensation

DISEASES, Infectious. See Infectious diseases

DISH towels. See Towels

DISHONESTY insurance. See Insurance, Surety and fidelity

DISHWASHING
Bacteria removal by hand dishwashing detergents. L. Flett and A. Guiteras. Soap & San Chem 28:48-50 O '52
Evaluation of dishwashing detergents. J. C. Harris. bibliog il Soap & San Chem 28:45-7+ D '52; 29:42-3+ Ja '53

DISHWASHING machines
Engineering the electric dishwasher. G. H. Wotring. il diags Gen Elec R 56:51-4 Jl '53
New approach to consumer-appeal in Universal's dishwasher-in range. il Am Gas J 178:43-4 Ja '53
Sanitary standards for dishwashing machines. Nat Safety N 68:78 S '53

Merchandizing

Sales promotion clinic for water connected appliances; dishwashers. T. F. Elrod. Dom Eng 181:101+ Mr '53

Rating

Faucet dishwashers. il Consumers Res Bul 31:16-17 Ja '53
Three new dishwashing machines. il Consumers Res Bul 31:21-4 Je '53

DISINFECTION and disinfectants
Actamer makes its debut. Can Chem Process 37:68-9 F '53
Bacteria removal by hand dishwashing detergents. L. Flett and A. Guiteras. Soap & San Chem 28:48-50 O '52
Battle of the bacteriostats Actamer and Lorothiodol. il Chem W 72:52+ Mr 14 '53
Business thrives on germs. il Bsns W p 186+ My 9 '53
Germ-deadening paper toweling developed by armed forces. Paper Ind 35:648+ S '53
Influence of formamide on the bactericidal action of selected chemical compounds. E. A. Cooper and A. E. Goddard. bibliog J Ap Chem 3:129-32 Mr '53
Iodine as a bactericide. C. W. Chambers and others. bibliog Soap & San Chem 28:149-51+ O '52
Microbiological control studies; evaluation of a new biocide; 3,5-dimethyltetrahydro-1,3,5, 2H-thiadiazine-2-thione. R. J. Herschler. bibliog Tappi 36:sup 163A-6A S '53
New antibacterial agents; 2-acylamino-1-(4-hydrocarbonylsulfonylphenyl)-1,3-propanediols and related compounds. R. A. Cutler, R. J. Stenger and C. M. Suter. bibliog Am Chem Soc J 74:5475-81 N 5 '52
New antibacterial agents; an alternate synthesis of DL-*threo*-2-dichloroacetamido-1-(4-methylsulfonylphenyl)-1,3-propanediol. C. M. Suter, S. Schalit and R. A. Cutler. bibliog Am Chem Soc J 75:4330-3 S 5 '53
New bacteriostat for soap; Actamer 2,2′-thiobis (4,6-dichlorophenol). R. S. Shumard and others. bibliog il Soap & San Chem 29:34-7+ Ja '53
Quaternary ammonium compounds with bactericidal properties. H. Sturm and others. Ind & Eng Chem 45:186-8 Ja '53
Synthesis of potential antibacterial agents; a pyrimidine analogue of chaulmoogric acid. T. D. Heyes and J. C. Roberts. Chem Soc J p4935-7 D '52
See also
Air purification
Amebicides
Antibiotic substances
Chloramine
Chlorination
Formaldehyde
Insecticides
Resorcinol
Sanitary chemicals
Soap, Antiseptic
Sterilization
Sulfonamides
Triethylene glycol
Water pipes—Sterilization
Water purification

DISINTEGRATION of atoms. See Atoms—Disintegration

DISKS
Bursting disc design and application in the chemical industry. D. J. Breeze. il diag Engineer 195:129-30 Ja 23 '53
Symposium on bursting discs. Chem & Ind p84 Ja 24 '53; Chem Age (Lond) 68:167-71 Ja 24 '53

DISKS, Rotating
Characteristics of a spinning-disk liquid sprayer. W. H. Boshoff. bibliog il Inst Mech Eng Proc (A) 166 no 4:443-6; Discussion. 447-9 '52
Direct method of design and stress analysis of rotating disks with temperature gradient. S. S. Manson. bibliog diags U S Nat Advisory Com for Aeronautics 1950:103-16 '51
Partially plastic rotating discs. M. Zaid. bibliog diag J Aeronautical Sci 19:697-704 O '52
Stresses in rotating parts. R. L. Lake and A. J. Durelli. il Machine Design 25:128-31 Jl '53

DISMISSAL wage. See Wages—Dismissal wage

DISNEY, Walt, productions
He'll double as a top-notch salesman. il Bsns W p43-4 Mr 21 '53

DISODIUM methylphosphonate
Heat of formation of disodium methylphosphonate. R. Thompson. Chem Soc J p3292-5 Ag '52

DISODIUM nitrophenyl phosphate
Preparation of the phosphatase reagent disodium *p*-nitrophenyl phosphate. R. Aschaffenburg. Science 117:611 My 29 '53

DISPENSING apparatus
Air-operated tape dispenser delivers metered lengths. il Machine Design 25:136 Jl '53
Martin-Senour's new paint dispensing machine. il Paint Oil & Chem R 116:8 Jl 16 '53

DISPENSING containers. See Containers, Dispensing

DISPERSION
Resin dispersion; Polyco 426. Chem Eng 60:270+ Ap '53
See also
Colloids

DISPERSION, Dielectric. See Dielectric losses

DISPERSION of rays
Millimeter wavelength dispersion of water vapor. G. Birnbaum. bibliog diag J Chem Phys 21:57-61 Ja '53

DISPLACED persons. See Refugees

DISPLAY of merchandize
Cereals on display in styrene shelves. il Mod Plastics 30:119 N '52
Circular carrier; new construction principle for take-home pack provides for counter stacking; Boonton molding company's new plastic tumblers. il Mod Packaging 26:110-11 Je '53
Dealer survey leads to new package and new display program; automobile battery cables. K. R. MacLean. il Ptr Ink 241:38+ N 28 '52
Display re-designed for cleaner presentation of sales message; Fisher Pen. il Ptr Ink 241:46 D 26 '52
Faster tempo calls for quick-action promotions in stores. C. K. Bagg. il Ptr Ink 241:84+ D 12 '52
Free-motion display; mobile aerial sculpture becomes powerful point-of-sale merchandiser. il Mod Packaging 26:108-9 N '52
Hardware; today's merchandising demands eye-catching packaging. il Mod Packaging 26:99-105+ S '52
How to increase use of display material; General Foods' answer. P. Lillard. il Ptr Ink 241:36-8 O 24 '52
New packages help Magna break bottleneck at the retail counter; family dress identifies this line of power tool accessories. R. L. Chambers. il Sales Management 69:76+ N 10 '52
New title for salesmen is display engineer. E. B. Weiss. Ptr Ink 241:29-30 D 26 '52
Pequot puts the feel back into the sheets; swatch board. E. M. Kelley. il Sales Management 70:64 Ja 15 '53
Self-tiered cartons; economical, easily set up double-decker merchandiser for industrial tape. il Mod Packaging 26:96-7 O '52
Snap-fold display box; Acushnet golf balls. il Mod Packaging 26:118-19+ F '53
TBA display tips. V. H. Jones. il Nat Pet N 44:69-71 O 1 '52
When the little dealer says, what about me? dried fruits displayed with fresh fruits and vegetables. L. B. Williams. il Sales Management 69:82+ N 20 '52
Why manufacturers of nonfood lines have a rack problem in super markets. J. Lorin. il Ptr Ink 241:52-4 O 17 '52

DISPROPORTIONATION
Disproportionation equilibria and rates in perchloric and hydrochloric acid solutions of plutonium; influence of α-particles. R. E. Connick and W. H. McVey. bibliog Am Chem Soc J 75:474-9 Ja 20 '53
Disproportionation in deuterated ammonia. J. Bigeleisen. J Chem Phys 20:1495-6 S '52
Disproportionation of alkylbenzenes; mechanism of alkyl-group transfer. D. A. McCaulay and A. P. Lien. bibliog Am Chem Soc J 75:2411-13 My 20 '53
Disproportionation of alkylbenzenes; product distribution and rate studies. A. P. Lien and D. A. McCaulay. bibliog Am Chem Soc J 75:2407-10 My 20 '53
Disproportionation of manganate ion; manganese dioxide as heterogeneous catalyst. F. R. Duke. bibliog J Phys Chem 56:882-4 O '52
Equilibria and reaction rates in the disproportionation of Pu(IV). S. W. Rabideau. bibliog Am Chem Soc J 75:798-801 F 20 '53
Measurement of disproportionation rates at the dropping mercury electrode. E. F. Orlemann and D. M. H. Kern. bibliog Am Chem Soc J 75:3058-63 Jl 5 '53
Vapor pressure of germanic iodide; the entropies of germanic halides; the disproportionation of germanous iodide. W. L. Jolly and W. M. Latimer. bibliog Am Chem Soc J 74:5754-7 N 20 '52

DISSERTATIONS, Academic
Undergraduate thesis in chemical engineering at M.I.T. A. S. Michaels. J Eng Educ 43:90-4 O '52

Bibliography

Annual thesis index. Chem Eng Prog 49:47-51 Ja '53
Doctoral dissertations accepted by American universities, 1951-1952. A. H. Trotier and M. Harmon, eds. 269p $5 H. W. Wilson co, New York '52
Theses in the social sciences; an international analytical catalogue of unpublished doctorate theses, 1940-1950. 236p United nations educational, scientific and cultural organization; pa $1.25 Columbia univ. press, 2960 Broadway, New York 27 '52

DISSOCIATION
Acid dissociation constants of aromatic phosphonic acids; meta and para substituted compounds. H. H. Jaffé, L. D. Freedman and G. O. Doak. bibliog Am Chem Soc J 75:2209-11 My 5 '53
Alums; a study of the alums by measurement of their aqueous dissociation pressures. J. R. I. Hepburn and R. F. Phillips. Chem Soc J p2569-78 Jl '52
Alums; a theory of hydrate dissociation and aqueous dissociation pressure, with particular reference to the alums. R. F. Phillips. Chem Soc J p2578-83 Jl '52
Carbon-carbon bond dissociation energies in the cycloalkanes. F. H. Seubold, jr. bibliog diag J Chem Phys 21:1616-17 S '53
Differential potentiometric method of measuring acid and base dissociation constants. S. Kilpi. bibliog Am Chem Soc J 74:5296-8 N 5 '52
Dissociation constants of acids in salt solutions. M. Kilpatrick, R. D. Eanes and J. G. Morse. bibliog Am Chem Soc J 75:584-9 F 5 '53
Dissociation constants of acids in salt solutions; carbocyclic carboxylic acids. M. Kilpatrick and J. G. Morse. Am Chem Soc J 75:1854-6 Ap 20 '53
Dissociation constants of acids in salt solutions; monohydroxycyclohexanecarboxylic acids. M. Kilpatrick and J. G. Morse. bibliog diags Am Chem Soc J 75:1846-53 Ap 20 '53
Dissociation constants of peptides; a survey of the effect of optical configuration. E. Ellenbogen. bibliog Am Chem Soc J 74:5198-201 O 20 '52
Dissociation constants of substituted ethylenediamines. F. Basolo, R. K. Murmann and Yun Ti Chen. bibliog Am Chem Soc J 75:1478-80 Mr 20 '53
Dissociation constants of the alkaline-earth salts of some monocarboxylic acids. C. A. Colman-Porter and C. B. Monk. Chem Soc J p4363-8 N '52
Dissociation energies of C-Br bonds in the bromo-naphthalenes, 9-bromo-phenanthrene, and 9-bromo-anthracene. M. Ladacki and M. Szwarc. J Chem Phys 20:1814-16 N '52
Dissociation energy of fluorine. P. W. Gilles and J. L. Margrave. J Chem Phys 21:381-2 F '53
Dissociation energy of the C-I bond in methyl iodide from electron impact measurements. C. A. McDowell and B. G. Cox. J Chem Phys 20:1496-7 S '52

DISSOCIATION—*Continued*

Dissociation of certain benzohydryl ethers. Ti Li Loo. bibliog Am Chem Soc J 74:4717-18 S 20 '52

Dissociation of cyclopropane under electron impact. F. H. Field. bibliog J Chem Phys 20:1734-9 N '52

Dissociation of ethyl bromide and iodide by neutron capture. S. Wexler and T. H. Davies. bibliog diag J Chem Phys 20:1688-94 N '52

Dissociation of H_2 and N_2 on tungsten filaments. M. Farber and A. J. Darnell. bibliog J Chem Phys 21:172-3 Ja '53

Dissociation of 3,3′,5,5′-tetranitro-4,4′-dihydroxydiphenyl in methanol. H. Hart and W. J. Detroit. Am Chem Soc J 74:5214-15 O 20 '52

Dissociation of the addition compounds of trimethylboron with branched-chain primary amines; the effects of chain-branching. H. C. Brown and G. K. Barbaras. bibliog diag Am Chem Soc J 75:6-9 Ja 5 '53

Dissociation of the addition compounds of trimethylboron with *n*-butyl- and neopentyldimethylamines; interaction of trimethylboron and boron trifluoride with highly hindered bases. H. C. Brown and R. B. Johannesen. bibliog diag Am Chem Soc J 75:16-20 Ja 5 '53

Effect of solvent on equilibrium and rate constants; the measurement and correlation of acid dissociation constants of anilinium and ammonium salts in the system ethanol-water. B. Gutbezahl and E. Grunwald. bibliog Am Chem Soc J 75:559-65 F 5 '53

Enzyme-inhibitor dissociation constants of α-chymotrypsin and several series of bifunctional competitive inhibitors. H. T. Huang and C. Niemann. bibliog Am Chem Soc J 74:5963-7 D 5 '52

Heat of formation of phenyl radical and the related bond dissociation energies. M. Szwarc and D. Williams. J Chem Phys 20:1171-2 Jl '52

Investigation of the thermal dissociation, reassociation, and synthesis of zircon. C. E. Curtis and H. G. Sowman. bibliog Am Cer Soc J 36:190-8 Je 1 '53

Metal-hydrogen systems; the uranium-hydrogen system. T. R. P. Gibb, jr., J. J. McSharry and H. W. Kruschwitz, jr. bibliog Am Chem Soc J 74:6203-7 D 20 '52

Preparation and determination of apparent dissociation constants of some alkylphosphonic and dialkylphosphinic acids. P. C. Crofts and G. M. Kosolapoff. bibliog Am Chem Soc J 75:3379-83 Jl 20 '53

Relationship between dissociation energies and interaction constants in the potential function, for polyatomic molecules. P. Torkington. J Chem Phys 20:1174-5 Jl '52

Self-consistent calculation of the dissociation of oxygen in the upper atmosphere; three-body recombinations. H. E. Moses and T. Wu. Phys R 91:1408-9 S 15 '53

Shock waves in chemical kinetics; the rate of dissociation of N_2O_4. T. Carrington and N. Davidson. bibliog il diags J Phys Chem 57:418-27 Ap '53

Studies on coördination compounds; the dissociation constants of β-diketones in water-dioxane solutions. L. G. Van Uitert and others. bibliog Am Chem Soc J 75:455-7 Ja 20 '53

Thermodynamics of dissociating solvents. K. W. Dunning and W. J. Dunning. Chem Soc J p2993-7 Ag '52

See also
Radicals (chemistry)

DISSOCIATION, Heat of

Magnetic susceptibility of liquid nitric oxide and the heat of dissociation of $(NO)_2$. A. L. Smith and H. L. Johnston. bibliog Am Chem Soc J 74:4696-8 S 20 '52

DISTANCES

Measurement

Instrument has wide measuring range. il Product Eng 24:218 Ja '53

DISTILLATE wells. See Gas, Natural—Distillate wells

DISTILLATION

Chemical engineering unit operations; high temperature distillation. T. J. Walsh. il Ind & Eng Chem 45:39-43 bibliog(140 ref, p42-3) Ja '53

Chemical engineering unit operations; high vacuum distillation. K. Hickman. bibliog (78 ref) il Ind & Eng Chem 45:44-6 Ja '53

Critical factors in fluoride distillation technique. S. Megregian and I. Solet. bibliog diags Am Water Works Assn J 45:1110-16 O '53

Distilling fatty acid; four suggestions. R. H. Potts. Chem Eng 59:344+ D '52

Effect of column holdup and reflux ratio in binary batch distillation. A. Rose, R. C. Johnson and T. J. Williams. bibliog Chem Eng Prog 48:549-56 N '52

Extractive distillation of close-boiling alcohols; patent. diag Chem Eng 60:384-5 Ap '53

Industrial viewpoints on separation processes. K. H. Hachmuth. bibliog il diags Chem Eng Prog 48:523-7, 570-4, 617-26 O-D '52

Laboratory fractionation. E. F. G. Herington. bibliog il diags Chem & Ind p26-30 Ja 10 '53

Moisture in paper by toluene distillation; TAPPI tentative standard T 484 m-53. diag Tappi 36:sup 137A-9A Ap '53

Reaction rates by distillation; the effect of changes in structure on the rate of the Baeyer condensation. E. F. Pratt and L. Q. Green. bibliog Am Chem Soc J 75:275-8 Ja 20 '53

Relationship between all common vaporization or distillation curves. W. L. Nelson. Oil & Gas J 51:149-50 Mr 16 '53

Separation of germanium tetrachloride from arsenic trichloride by fractional distillation. H. J. Cluley and R. C. Chirnside. Chem Soc J p2275-6 Je '52

Separation of isotopes by fractional distillation; determination of parameters from production data; value of the unit process separation factor for the $H_2{}^{16}O$-$H_2{}^{18}O$ system. I. Dostrovsky and others. diag Chem Soc J p3517-24 S '52

Separation of isotopes by fractional distillation; fractionating columns for the enrichment of the heavy isotopes of oxygen in water. I. Dostrovsky, D. R. Llewellyn and B. H. Vromen. diags Chem Soc J p3509-17 S '52

Separation of 1- and 2-methylnaphthalenes by azeotropic distillation. J. Feldman and M. Orchin. bibliog Ind & Eng Chem 44:2909-14 D '52

See also
Coal distillation
Oil shales—Distillation
Petroleum distillation
Rectification
Tar distillation

Tables, calculations, etc.

Evaporation from liquids in high vacuum. K. C. D. Hickman and D. J. Trevoy. bibliog il diags Chem Eng Prog 49:105-9 F '53

Industrial viewpoints on separation processes. K. H. Hachmuth. bibliog il diags Chem Eng Prog 48:617-26 D '52

Theory of unsteady-state distillation; batch-distillation calculations. A. Rose and R. C. Johnson. bibliog diag Chem Eng Prog 49:15-21 Ja '53

DISTILLATION apparatus

Apparatus for distillation and stirring. N. S. Radin. diag Anal Chem 24:1686-7 O '52

Automatic constant-volume fraction collector. J. E. Varner and W. A. Bulen. bibliog diag J Chem Educ 29:625-6 D '52

Bubble-plate efficiencies in ethanol-water fractionation. G. D. Shilling and others. bibliog flow diag diags Chem Eng Prog 49:128-34 Mr '53

Chemical engineering unit operations; high temperature distillation. T. J. Walsh. il Ind & Eng Chem 45:39-43 bibliog(140 ref, p42-3) Ja '53

Force balance pressure transmitters used to detect column flooding. G. W. Swinney. diags Oil & Gas J 51:108-10 O 27 '52; Same. Pet Processing 7:1469-71 O '52

Here's the story about the new turbogrid distillation trays. il diags Pet Refiner 31:105-8 N '52

DISTILLATION apparatus—*Continued*

How to rig bubble caps for easier replacement. R. P. Loewen. diag Chem Eng 60:172 F '53

Improved Dean and Stark moisture determination apparatus. A. W. Billitzer. diag Anal Chem 25:533-4 Mr '53

Improved method for the determination of vapour-liquid equilibrium data. S. A. J. Ablewhite and others. bibliog diag Chem & Ind p 1146-7 N 22 '52

Laboratory continuous distillation column; for concentration of aqueous solutions of volatile flavors. K. P. Dimick and M. J. Simone. bibliog diag Ind & Eng Chem 44:2487-90 O '52

Magnetic drive for spinning-band column. N. G. Foster and L. E. Green, jr. il diags Anal Chem 24:1869 N '52

Mechanism of mass transfer on bubble plates; plate efficiencies. F. B. West, W. D. Gilbert and T. Shimizu. bibliog flow sheet il diags Ind & Eng Chem 44:2470-8 O '52

Modern bubble-tray construction. H. C. Glitsch and R. W. Fowler. diag Oil & Gas J 51:135 Ja 19; 397 Ja 26 '53

Modified Vigreux column. A. C. F. Mason. diag Anal Chem 25:533 Mr '53

Packing support for glass columns. P. Pantages and J. Feldman. diags Ind & Eng Chem 44:2783 N '52

Performance of perforated-plate distillation columns. D. S. Arnold, C. A. Plank, and E. M. Schoenborn. bibliog il diags Chem Eng Prog 48:633-42 D '52

Trio of towers. Chem W 72:63-4 Ap 4 '53

Design

Applied distillation. K. E. Coulter. bibliog flow sheet diags Pet Refiner 31:145-50 O; 137-8 D '52

Effect of one of the quantities making up total pressure may be overlooked in designing stills and columns. D. E. Pierce. diags Ind & Eng Chem 45:sup 81A-2A+ Ap '53

Froth and foam, the bases for tower sizing. F. A. Zenz. bibliog diags Pet Refiner 32:150-4 Ja '53

Inside story of a Houdriflow cat-cracker. diag Pet Eng 25:C42 Ap '53

New approach to tray design. A. C. Eld. diags Pet Refiner 32:157-61 My '53

New bubble tray design. diags Pet Processing 7:1447 O '52

Nomographic calculation for three-component distillation. W. Schotte and W. A. Selke. bibliog Ind & Eng Chem 45:472-6 F '53

Novel still design pays off; Wurster & Sanger unit gets more and better refined fatty acids. il diag Chem Eng 59:228+ N '52

Spiral flow for better distillation. il diags Pet Processing 8:556-9 Ap '53

To help you design fractionators. R. R. White. bibliog diags Pet Processing 8:357-62, 539-43, 704-9, 892-6 Mr-Je '53

Testing

Evaluation of vacuum rectification columns; monomethylnaphthalenes as a binary test mixture. J. Feldman and others. bibliog Ind & Eng Chem 45:214-15 Ja '53

How surface tension affects flooding in packed columns. W. M. Newton and others. bibliog diag Pet Refiner 31:141-3 O '52

DISTILLERIES

Employees

Wages in liquor distilleries in April 1952. J. A. Wells. Mo Labor R 75:515-17 N '52

Equipment

Blending and bottling warehouse; Distillers agency, ltd. il Engineer 194:614-15 N 7 '52; Engineering 175:153-6 Ja 30 '53

New flow meters save steam and improve cost accounting at Hiram Walker distillery. W. I. Bingaman and R. E. Johnson. flow chart il diag Heating-Piping 25:140-2 Ja '53

Some aspects of instrumentation in the distilling industry. I. Lefkowitz. diags Tappi 36:sup 147A-50A S '53

Fires and fire protection

Distillery plant fire protection; Hiram Walker program. il Safety Maint & Prod 105:51-2 Ja '53

Lighting

Technique for explosion-proof lighting; Fritzsche brothers. J. M. Adams. il Illum Eng 48:506-8 O '53

Waste

Grain distillery feeds and wastes. C. S. Boruff and R. K. Blaine. bibliog(27 ref) flow diag Sewage & Ind Wastes 25:1179-86 O '53

Waste material now valuable by-product; feed recovery at Hiram Walkers. il Can Chem Process 37:28+ My '53

DISTILLING industries

Cheering up the liquor distributor. il Bsns W p50-2+ My 2 '53

See also

Whisky

Securities

Contrasts in the beverages; with statistical data on leading soft drink companies and distillers. Mag of Wall St 92:510-11+ Jl 25 '53

Whiskey; its shares need stimulants. Bsns W p 100-2 Ap 4 '53

DISTRIBUTION (economics)

Ten years' progress in management; marketing and distribution. N. Hall. A S M E Trans 75:683-5 My '53

See also

Chain stores
Department stores
Jobbers
Marketing
Retail trade

DISTRIBUTION, Electric. See Electric distribution

DISTRIBUTION function

Molecular distribution functions in a one-dimensional fluid. Z. W. Salsburg and others. bibliog J Chem Phys 21:1098-107 Je '53

Radial distribution functions and the equation of state of fluids composed of molecules interacting according to the Lennard-Jones potential. J. G. Kirkwood and others. bibliog J Chem Phys 20:929-38 Je '52

Radial distribution functions and the equation of state of monatomic fluids. R. W. Zwanzig and others. bibliog J Chem Phys 21:1268-71 Jl '53

Random walk theory of one-dimensional gases. C. W. Harris and others. J Chem Phys 21:1617-18 S '53

DISTRIBUTION of gas. See Gas distribution

DISTRICT bank, limited

Statement by the chairman. T. D. Barlow. Economist 166:254-6 Ja 24 '53

DISTRICT 50. See United mine workers of America—District 50

DISTRICT heating association, National. See National district heating association

DISTRICT of Columbia

$319-million public works recommended for capital. Eng N 149:54+ O 23 '52

DISULFUR decafluoride. See Sulfur fluoride

DISULFURIC acid. See Pyrosulfuric acid

DITCH cleaning machines

New Zealand ditch cleaning machine employs novel principle. il Eng N 150:106 Ap 2 '53

DITCHES

Precise sloping ditch replaces weed-choked and silted roadside. il diags Constr Methods 35:92-3 Mr '53

DITCHING machinery. See Trenching machinery

DITHIACYCLOPENTENETHIONE

Isomeric dithia*cyclo*pentenethiones. F. Challenger and others. Chem Soc J p292-304 Ja '53

DITHIADIENE

Oxidation products of 2,5-diphenyl-1,4-dithiadiene. H. H. Szmant and J. Dixon. Am Chem Soc J 75:4354 S 5 '53

DITHIENYLHEXANE

Hormonal antimetabolites; derivatives of *meso*-2,2′-dithienylhexane. J. Sicé and M. Mednick. bibliog Am Chem Soc J 75:1628-31 Ap 5 '53

DITHIOCARBAMATES

Chloro-substituted alkenyl dithiocarbamates. M. W. Harman and J. J. D'Amico. bibliog Am Chem Soc J 75:4081-2 Ag 20 '53

DITHIOCARBAMIC acid
Associating effect of the hydrogen atom; the S-H-N bond; esters of thion- and dithiocarbamic acids. A. A. Burrows and L. Hunter. Chem Soc J p4118-22 N '52

DITHIOCARBAMYLHYDRAZINE
Reaction between *NN'*-dithiocarbamylhydrazine and hydrazine. E. Hoggarth. Chem Soc J p4817-20 D '52

DITHIOCARBAZINATES
Carbohydrate derivatives of alkyl dithiocarbazinates. R. Hull. Chem Soc J p2959-62 Ag '52

DITHIONATES
Formation of dithionate and sulfate in the oxidation of sulfur dioxide by manganese dioxide and air. A. E. Back and others. bibliog pl U S Bur Mines Rep of Invest 4931:1-14 '52

DITHIOÖXAMIDE
Vapour pressure and lattice energy of hydrogen-bonded crystals; oxamide, oxamic acid, and rubeanic acid. R. S. Bradley and T. G. Cleasby. diags Chem Soc J p 1681-4 Je '53

DITHIZONE
Absorption characteristics of the dithizone mixed color system. R. G. Milkey. Anal Chem 24:1675-6 O '52
Colorimetric microdetermination of cadmium with dithizone; with improved separation of interfering metals. B. E. Saltzman. bibliog Anal Chem 25:493-6 Mr '53
Diphenylthiocarbazone; Australians are using it to find ore. il Eng & Min J 154:134 O '53

DITOLYLMETHYL chloride
Mechanism of substitution at a saturated carbon atom; effect of temperature on the competition between unimolecular solvolytic and non-solvolytic substitutions of di-*p*-tolylmethyl chloride; activation in the fast step of unimolecular non-solvolytic substitution. A. R. Hawdon, E. D. Hughes and C. K. Ingold. Chem Soc J p2499-503 Jl '52

DIURESIS
Effect of renin on diuresis in rats. H. Croxatto and others. bibliog Science 116:507-10 N 7 '52

DIURETICS
Mercurial diuretics; ionization of organic mercurials. R. L. Rowland. bibliog Am Chem Soc J 74:5482-4 N 5 '52
Studies on the antidiuretic action of morphine. N. J. Giarman and others. bibliog Science 117:225-6 F 27 '53

DIVERSIFICATION in industry
Broadening the focus at Magic Chef. il Bsns W p 170-1 Ap 11 '53
Colorado Fuel & Iron grows increasingly diversified. Barron's 33:23 My 11 '53
Diversification; key to industry. Cer Ind 61:49 S '53
Diversify; only company which produces cement, aggregates, ready mix, and concrete products; New York coal sales co. B. Nordberg. il map plan diag Rock Prod 56:74-86+ F '53
Diversify your industrial line to protect sales volume, profit; Rockwell mfg. co. W. F. Rockwell, jr. Ind Marketing 38:133-6 Je '53
From analysis to action; how Ferro enamel corporation did its planning. C. D. Clawson. Dun's R 60:26-7+ D '52
Industry; put eggs in many baskets; Pressed steel car co. E. C. Kellogg. Iron Age 171:47 Ap 30 '53
Non-automotive products important to King-Seeley. Barron's 33:21 Mr 9 '53
Old dogs can learn new tricks. Bsns W p84+ Je 13 '53
Owens-Illinois Glass; entry into new fields bolsters its growth rate. C. A. Clark, jr. Barron's 33:15+ F 23 '53
Pet Milk's product line growing more diversified. Barron's 33:25 My 18 '53
Trend toward diversification slackens, management warns of pitfalls. L. A. Petersen and others. Ind Marketing 38:96+ S '53
See also
Products, Diversified

DIVIDEND checks. See Checks

DIVIDENDS
Bank dividends under pressure. Economist 166:505-6 F 21 '53
Carrier dividends reach new high. S. Altschul. Aviation W 58:46 Ja 26 '53
Dividend pay-out; today. W. F. Stanley. Pub Util 52:571-8 O 22 '53
Dividends announced. Published in weekly Monday numbers of Commercial and financial chronicle
Important dividend changes in twenty major groups; with table of dividend trends. H. Wingate. Mag of Wall St 91:290-1+ D 13 '52
New dividend trends shaping up. W. Gates. Mag of Wall St 91:11-13 O 4 '52
Payout keeps climbing. Bsns W p92+ Ja 3 '53
Profits and dividends (quarterly), Nov.-Dec. 1951-Jan.-Nov. 1952. Survey of Cur Bsns 33:S 18 Ja '53 [cont monthly]
Recent dividend developments. Survey of Cur Bsns 33:4-6+ Ap '53
Seven companies likely to increase dividends in 1953; with comparative balance sheet items. Mag of Wall St 91:398-401 Ja 10 '53
Stock dividends and split-ups; accounting treatment by stockholders and corporation. J Account 95:44-7 Ja '53; Discussion. R. V. Hunter. 95:543-4+ My '53
Stock market at a glance; price changes, earnings and dividends. Published in weekly numbers of Barron's
Study of dividend changes. W. Gates. Mag of Wall St 92:266-7+ My 30 '53

Law

Allocating stock dividends; need for retrospective law to avoid income and principal problems. D. Ives. Trusts & Estates 91:851-6 N '52

Taxation

Can the double tax on dividends be eliminated? A. F. Tegen. Pub Util 52:375-6 S 10 '53
Crushing incentive for equity investment. E. T. McCormick. Comm & Fin Chr 178:270 Jl 23 '53
Double taxation of dividends, a triple penalty on the investor. G. K. Funston. Comm & Fin Chr 178:271 Jl 23 '53; Discussion. R. Spitz. 178:357 Jl 30 '53

DIVIDING (machine work)
See also
Ruling machines

DIVIDING machines
Dividing head ordered; optical head gives three-second accuracy. Steel 131:309 O 13 '52

DIVING, Submarine
Compressed air under the waves; Aqualung. R. J. Nemmers. il diag Comp Air Mag 58:221-5 Ag '53

DIVINYLBENZENE
Application of volume characteristics of sulfonated polystyrene resins as a tool in analytical chemistry; determination of pH and dissociation constants of acids. C. Calmon. bibliog Anal Chem 25:490-2 Mr '53

DIVORCE
Legal aid and divorce. Economist 167:894 Je 27 '53

DIVVER, Margaret
Names Margaret Divver advertising woman of year. por East Underw 54:8 Je 19 '53

DIXANTHYLENE
Thermochromism of dixanthylenes. A. Schönberg, A. Mustafa and M. E. El-Din Sobhy. bibliog Am Chem Soc J 75:3377-8 Jl 20 '53

DIXIE cup company
New product opening up market in beer; financial report. Barron's 33:19-20 F 2 '53
Pouring profits from paper cups. I. U. Cobleigh. Comm & Fin Chr 177:1632 Ap 16 '53

DOBECKMUN company
End of cellophane glut likely to aid Dobeckmun. Barron's 33:23-4 Ja 12 '53

DOCK labor. See Longshoremen

DOCKS
Dock that climbs. il Mill & Factory 52:144 Je '53
Eastham oil dock. il plans diags Engineer 194:825-8, 857-60 D 19-26 '52
Savannah dedicates new state docks. il Manuf Rec 121:40-1 O '52
$6 million Georgia docks opened. il Eng N 149:47-9 N 13 '52
See also
Ore docks

DR PEPPER company
Dr Pepper going places. il Bsns W p 174-6+ My 16 '53

DOCTORS. See Physicians

DOCTORS' degrees. See Degrees, Academic

DOCUMENTARY evidence. See Evidence, Documentary

DOCUMENTATION
Chemical-biological coordination center; an experiment in documentation. R. L. Beard and K. F. Heumann. Science 116:553-4 N 21 '52; Discussion. 117:611-12 My 29 '53
If I had my way with publishers. B. A. Evans. Aslib Proc 5:16-20; Discussion. 20-6 F '53
International organization of scientific documentation based on legislation. G. W. Sinclair. Science 117:233-4 F 27 '53

Bibliography

Signposts; some selections from the 1952 special library literature. J. Bird and E. M. R. Ditmas. Aslib Proc 5:27-39 bibliog(p33-9) F '53

Mechanical aids

Legal aspects of machine documentation. A S. Davis, jr. bibliog Special Lib 44:5-10 Ja '53
SLA Science-technology Metals section regional meeting, Philadelphia, Oct. 20. Special Lib 44:30-1 Ja '53

Standards

Standards in documentation. G. A. Lloyd. Aslib Proc 5:54-60 F '53

DODECYL alcohol
Kinetics of hydrochlorination of lauryl alcohol. H. A. Kingsley, jr. and H. Bliss. diags Ind & Eng Chem 44:2479-87 O '52

DODECYLBENZENE
Selling through the pilot plant; Continental sulfonation plant. il Chem W 72:76-8 F 28 '53

DODGE, Joseph Morrell, 1890-
Banker in the Budget bureau. D. Norton-Taylor. pors Fortune 47:134-6+ Mr '53

DODGE, Richard Elwood, 1868-1952
Memorial. S. S. Visher. bibliog por (pl 5) Geol Soc Proc 1952:95-6 Je '53

DOEHLER-JARVIS corporation
Merger; decide which way to jump? Iron Age 171:100-1 F 5 '53
National Lead arranges Doehler-Jarvis merger. Bsns W p68 D 20 '52

DOERING, William, 1917-
ACS Pure Chemistry award goes to W. Doering. por(cover) Chem & Eng N 31:1296 Mr 30 '53

DOG food
How a co-op wins customers with dog food prize. Sales Management 70:110-11 Ja 15 '53

DOGS
Pup; $10 down, $5 weekly; Amerbrit kennels. il Bsns W p42-4 Je 6 '53

Diseases

Infectious canine hepatitis; symposium. J. A. Baker and others. Pub Health Rep 67:980-2 O '52

See also
Rabies

DOLLS, Plastic
All-vinyl doll. il Mod Plastics 30:198 N '52

DOLOMITE
Acid action rate equalized in limestone and dolomite. P. L. Menaul. il World Oil 135:200+ D '52
Application of centrifugal forces to gravitational classifiers. R. C. Emmett and D. A. Dahlstrom. bibliog il Min Eng 5:Trans 1015-21 O '53; Excerpt. Rock Prod 56:146+ Ap '53
Heat treatment of dolomite. H. T. S. Britton and others. bibliog J Ap Chem 2:693-703 D '52
Heavy media separation removes friable granite from dolomite; Kaiser aluminum and chemical corp. W. B. Lenhart. flow sheet il Rock Prod 56:89-93+ F '53
Heavy media separation upgrades dolomite. il diag Chem Eng 60:114-16 My '53
Nichols Herreshoff furnace for the calcination of dolomitic fines; abstract. G. E. Connolly. il Rock Prod 55:86-7 N '52
Water soluble salts in limestones and dolomites. J. E. Lamar and R. S. Shrode. bibliog il Econ Geol 48:97-112 Mr '53

DOMES
Economies in dome construction; two simple radial designs in US compared with complicated spherical design in Britain. il diags Arch Forum 97:156-7+ S '52

DOMES, Aluminum
Dome built on rotating jig. il diags Eng N 150:31-2 My 28 '53
Spinning an aluminum spiderweb; Ford rotunda. H. W. Richardson. il diags Constr Methods 35:60-4 Je '53

DOMES, Plastic
Daylighting with plastic domes; abstract. B. F. Greene. il plan Illum Eng 48:473-4 S '53
Heavens on earth; hemispherical dome molded of resin impregnated fibrous glass. il Mod Plastics 30:166 D '52

DOMESTIC appliances
Appliances; boom production continues. K. W. Bennett. Iron Age 171:63-4 My 28 '53
Home appliances; overproduction in some lines looms ahead. N. Willatt. Barron's 33:9-10 Mr 9 '53
New worlds for Bendix. Bsns W p52+ D 6 '52

See also
Dishwashing machines
Electric apparatus and appliances, Domestic
Freezers, Domestic
Gas appliances, Domestic
Vacuum cleaners
Washing machines

Advertising

ACB tally of appliance ads shows linage trend. Ed & Pub 86:30 F 21 '53

Manufacture

Combined welding and forming lower appliance costs. J. Maloney. il Steel 131:104+ N 24 '52

Merchandizing

Appliance promotion needs big needle, public confidence. Cer Ind 61:59+ S '53
Appliances head for a showdown. Bsns W p66-8 Jl 18 '53
Are these ten sales ideas rusty from disuse? R. B. Cox. Sales Management 69:140-1 O 15 '52
Business looks good! J. F. McBride. Dom Eng 182:231-2+ Jl '53
From analysis to action; how Ferro enamel corporation did its planning. C. D. Clawson. Dun's R 60:26-7+ D '52
How a weekly budget plan boosts sales; Henderson vulcanizing co. C. Boyd, jr. il Nat Pet N 45:80-2 Ap 1 '53
Refrigerators and pancakes, dishwashers and pearls. il Sales Management 70:64 Mr 15 '53
Sales promotion clinic for water connected appliances. J. M. Wicht; T. F. Elrod. Dom Eng 181:101+ Mr '53
Sell comes back in appliance sales. Steel 131:38-9 D 22 '52
You sell freedom when you sell major appliances! G. T. Mortland. J Retailing 29:37-42+ Spring '53

Prices

Price cuts sweep appliances. Bsns W p62 Je 13 '53

Statistics

Appliances; heating equipment, cooking stoves, electric and gas appliances, washers, refrigerators, vacuum cleaners, etc.; tabulations. Steel 132:186-9 Ja 5 '53
Estimated unit sales of gas appliances; estimated sales of competitive appliances; appliances in use on Dec. 31 of each year, 1947-1952; tabulations. E. R. Martin, comp. Gas Age 112:44-5 Jl 16 '53
Household appliances; sales and retail value; refrigerator index of sales; tabulations. Iron Age 171:444 Ja 1 '53

DOMESTIC architecture. See Architecture, Domestic

DOMESTIC finance
Family income, expenditures, and savings in ten cities. U S Bur Labor Statistics Bul 1065:1-110; pa 50c Supt. of doc. '52
Survey of consumer expenditures in 1950; interpretation and use of the results. Mo Labor R 75:425-8 O '52

DOMESTIC finance—*Continued*

Survey of consumer expenditures in 1950; spending patterns in 91 cities and relation of expenditures to disposable income. M. C. Ruark and A. Hurwitz. Mo Labor R 75:125-33 Ag '52; Correction. 75:262 S '52

See also

Budget, Household

DOMESTIC service. See Servants

DOMESTIC workers. See Servants

DOMINICAN REPUBLIC

Economic conditions

Economic conditions abroad. For Comm W 48:3+ D 15 '52; 49:6 Je 8 '53

Industries and resources

Making newsprint from a sugar byproduct. Bsns W p 139 D 13 '52

DOMINION stores, limited

New sales, profit peaks seen. Barron's 33:31 Je 29 '53

DON MILLS, Ontario

Sewerage

Sewage-treatment plant for pre-planned $200,000,000 community. J. S. L. King. il Munic Util 91:19-20+ My '53

DONALD, James Richardson, 1890-

Reminiscences of a chemical engineer. J. R. Donald. Chem & Ind p284-8 Mr 28 '53

DONKIN, Sydney Bryan, 1871-1952

Sketch. por Engineer 194:691-2 N 21 '52; Engineering 174:668 N 21 '52

DONNELLY, James A. 1868-1952

Sketch. Heating-Piping 25:217-18 Ja '53

DONOVAN, Hedley

Fortune's wheel. por Fortune 47:80 Ap '53

DOOR knobs

Ceramic touch for doors; porcelain door accessories, known as Décor knobs. il Am Cer Soc Bul 32:254 Jl 15 '53

Décor for doorknobs; Yale & Towne creates box with gift appeal for decorator porcelain knobs. il Mod Packaging 26:86-7 Ag '53

Opportunity knocked on their door; Yale & Towne manufacturing co. il Cer Ind 61:65 Ag '53

DOOR-to-door selling

Boy meets girl; boy sells girl kitchenware. il Bsns W p92-4+ Ja 10 '53

Commission payments for door-to-door selling. Sales Management 69:43 N 1 '52

Off the editor's chest; doorbell-ringing salesmen. Consumers Res Bul 30:2+ D '52

One way to sell an air conditioner. il Bsns W p 156+ My 9 '53

Soliciting house-to-house clients. Adv Agency 45:86-7+ O '52

DOORS

Window and door details; detail plate. K. R. O'Neal. il diags Am Bld 75:154-5 F '53

See also

Airplanes—Doors

Garage doors

Manufacture

Translucent door; resin-impregnated wood covered with sheets of translucent reinforced plastic glass. il Mod Plastics 30:162 D '52

DOORS, Folding

These folding doors make two rooms of one. il plan Am Bld 74:88 S '52

DOORS, Garage. See Garage doors

DOORS, Mechanically operated

Automatic door control saves time-labor for Indianapolis shop. il diag Bus Transportation 31:40-1 D '52

DOORS, Rubber

Industrial rubber door. il Engineer 195:743-4 My 22 '53

DOORWAYS

Counter-acting cold air at large doorways. N. Feder. diags Heating-Piping 25:112-13 My '53

DOPA. See Dihydroxyphenylalanine

DOPPLER effect

Effect of collisions upon the Doppler width of spectral lines. R. H. Dicke. Phys R 89:472-3 Ja 15 '53

Microwave vehicle approach alarm operates on Doppler reflection principle. W. C. White. il diag Tele-Tech 11:48+ D '52

Moving target indicator in pulse radar systems and the Doppler myth. J. F. Bachman. il diags Tele-Tech 12:86-8+ Ap '53; Discussion. M. Pleasure. 12:76+; Reply. 152-3 Je '53

Quantitative studies of apparent rotational temperatures of OH in emission and absorption (spectral lines with Doppler contour) S. S. Penner. bibliog J Chem Phys 21:31-41 Ja '53

DORMISON. See Methyl parafynol

DORMITORIES

Ohio college students build dormitory. il Concrete 60:11 D '52

Heating and ventilation

What type of heating for new dormitory? S. R. Lewis. Heating-Piping 25:116 S '53

Lighting

Dormitory lighting design for visual comfort and efficiency. E. W. Commery and R. C. Putnam. il diags Illum Eng 48:61-4 F '53

DORMITORIES, Military

See also

Barracks

DOUBLE bonds

Determination of double-bond character in cyclic systems; the 9,10-bond of phenanthrene. I. M. Hunsberger, R. Ketcham and H. S. Gutowsky. bibliog Am Chem Soc J 74:4839-45 O 5 '52

Effect of 3*p* atomic orbital on energy of the double bond. J. S. Dooling. J Chem Phys 21:859-62 My '53

Open-chain acylals, formals and ethers containing terminal double bonds. C. D. Hurd and others. Am Chem Soc J 74:5128-30 O 20 '52

Position of the double bond in pseudosantonin. W. G. Dauben and P. D. Hance. bibliog Am Chem Soc J 75:3352-6 Jl 30 '53

Reduction of phosphomolybdic acid by compounds possessing conjugated double bonds. S. Burstein. bibliog Anal Chem 25:422-4 Mr '53

Steroids derived from bile acids; introduction of the 4,5-double bond of cortisone. W. F. McGuckin and E. C. Kendall. bibliog Am Chem Soc J 74:5811-13 D 5 '52

DOUBLE deck cars. See Cars—Double deck

DOUBLE decomposition

Metathetical reactions of silver salts in solution; the synthesis of acyl trifluoroacetates. A. F. Ferris and W. D. Emmons. bibliog Am Chem Soc J 75:232-3 Ja 5 '53

DOUBLE refraction. See Refraction, Double

DOUBLE taxation. See Taxation, Double

DOUCETT, George H.

Tribute paid to Ontario's Minister of highways. pors Roads & Eng Constr 91:70+ Ja '53

DOUGH

Dough as an industrial colloid. J. Cunningham. bibliog Chem & Ind p 163-6 F 21 '53

Radical method of preparing doughs shortens bread makings; John C. Baker Do-Maker process. il Food Eng 25:60+ Je '53

DOUGH mixers

Morton machine co. dough treatment machine. il Elec R (Lond) 152:216 Ja 23 '53

DOUGHERTY, Richard Erwin, 1880-

ASCE past president gets Columbia alumni honor. Eng N 149:73 D 18 '52

DOUGHNUTS

Science in doughnuts. H. M. Schwalb. il Can Chem Process 37:70 Ag '53

DOUGLAS aircraft company

Douglas Aircraft backlog tops $2 billion. R. Hotz. il Aviation W 58:13-14 Mr 9 '53

Douglas Aircraft may earn $12 per share this year. Barron's 33:29 Mr 23 '53

DOUGLAS fir

Chemical composition of the bast fibers of Douglas-fir bark. H. J. Kiefer and E. F. Kurth. bibliog il Tappi 36:14-19 Ja '53

Chemicals from Douglas-fir bark. E. F. Kurth. bibliog Tappi 36:sup 119A-22A Jl '53

Interrelationships of temperature, pressure and pressing time in the production of hardboard from Douglas-fir fiber. H. Wilcox. Tappi 36:89-94 F '53

Longer life for boxed-heart Douglas fir ties. il Ry Age 134:44-5 F 2 '53

DOUGLAS fir—*Continued*
Method for the estimation of decay in Douglas-fir wood chips. W. L. Pearl. bibliog Tappi 36:133-6 Mr '53
Physicochemical study of a water-soluble polysaccharide from Douglas-fir (pseudotsuga taxifolia). J. O. Thompson and others. bibliog il Tappi 36:319-24 Jl '53
Products from the destructive distillation of Douglas-fir lignin. T. L. Fletcher and E. E. Harris. bibliog flow diag Tappi 35:536-9 D '52

DOUTY, Daniel Ellis
Made to measure. G. Boyo. pors Mod Textiles Mag 34:35+, cover Ja '53

DOW chemical company
Five companies paying dividends in stock and cash; with comparative balance sheet items. Mag of Wall St 92:222 My 16 '53
Stock offered. Comm & Fin Chr 176:1767 N 10 '52

DOW-CORNING corporation
Dow Corning celebrates its tenth anniversary. Automotive Ind 108:34+ Je 1 '53
Pushes plans for greater silicone production. Iron Age 171:138 Je 11 '53

DOWEX 50. See Resinous products—Ion exchanging

DOWLING, Robert Whittle, 1895-
Footlights and frontage; Mr Dowling makes both pay off for City Investing. B. Lefferts. por Barron's 32:5+ O 20 '52

DOWTHERM
Design and operation of a large heat transfer installation. N. Brearley. diags Inst Mech Eng Proc (A) 166 no 3:350-8; Discussion. 359-60 '52

DOYLE, Gerald S.
News sells in Newfoundland. Fortune 47:198 Ap '53

DRAFFEN, Luther
Saga of Marshall county, a new chemical empire. por(p 1741) Chem & Eng N 31:1729 Ap 27 '53

DRAFT
Calibrated draft regulators. E. A. Field. Heat & Ven 49:110 N '52
Draft control for heating boilers; abstract. D. H. Cook. Heating-Piping 25:115 Mr '53
Draft controls. diags Dom Eng 182:101+ Jl '53
Properly-sized chimneys aid smoke control. J. G. Mingle. Power Eng 57:82-3+ Mr '53

DRAFT gages
Draft gage; Hays Vertiscale. il Blast F & Steel Pl 41:121 Ja '53

DRAFT gears
Couplers and draft gears; A.A.R. Mechanical division committee report. Ry Loco & Cars 127:60-2 Ag '53

DRAFTING room practice
Bar spacing table for cross-sectional drawings. M. Benoit. diags Am Concrete Inst J 25:93-4 S '53
Constants for layout of ellipses; reference book sheet. D. E. Sweet. diag Am Mach 97:179 S 14 '53
Decimal dimensioning saves time and reduces errors. G. E. Rowbotham. diags Tool Eng 30:63-4 Je '53
Dimensions and tolerances for mass production. E. Buckingham. diags Mach 59:163-9 My; 172-9 Je; 180-5 Ag; 60:176-85 S; 197-203 O '53
Drafting; simpler drawings save time; policy of the General electric co. Iron Age 171:80-1 F 12 '53
Graphic illustrations supersede blueprints in production lines. L. W. Mitchell. il diags Mach 59:189-90 F '53
Ideas for shop drafting-room. diags Mach 59:202 Ja '53
Pictorial drawings prepared from conventional views. il diags Tool Eng 31:76-8 O '53
Simplified drafting practice. W. L. Healy and C. H. Bayer. il diags Machine Design 25:110-16 My '53
Streamlined drafting. il Mech Eng 75:324-5 Ap '53
Templates of detail profiles promote drafting efficiency. M. Harper and M. G. Casady. il Product Eng 23:178-80 N '52
Tool drawings to meet shop needs. E. M. Hofmann. diags Tool Eng 30:47-51 F '53
See also
Engineering drawing

DRAFTING rooms
Architects' offices; drafting rooms; design details, materials, equipment. il Arch Rec 113:154-5+ Ja '53

Lighting

Lighting a drafting room. il plan diag Illum Eng 47:647-8 D '52

DRAFTSMEN
Men on the boards. E. A. Kehoe. Machine Design 25:272+ S '53

Training

Schoolboys get co-op training; Fansteel metallurgical corp. J. Meade. il Factory Management 111:100-1 Je '53
Steps in training sheet metal draftsmen. W. J. Hornung. il diags Sheet Metal Worker 44:62+ Ap; 75-6+ My; 60+ Je; 95-7 Jl; 92+ Ag; 85-6 S; 45:54-5 O '53 (to be cont)

DRAGLINE trucks. See Trucks, Dragline

DRAGLINES. See Excavating machinery

DRAGON'S blood
Pigments of dragon's blood resin; the oxidation of some anhydro-7-hydroxybenzopyranols. P. Broadbent, A. Robertson and W. B. Whalley. Chem Soc J p4957-9 D '52

DRAIN tile
Lays 300 to 400 feet of tile per hour. il Constr Methods 35:56 My '53
Special drainage along Ohio turnpike to protect farm tiling. H. N. Luebcke. il plan diags Roads & Sts 96:73-6+ Jl '53

DRAINAGE
See also
Drain tile
Mine drainage
Roads—Drainage
Sewerage
Wellpoint system

Florida

Drill barge rides Everglades muck. H. W. Richardson. il Constr Methods 35:52-6 My '53

Great Britain

Tidal sluice gates for sea-walls and land drainage. E. C. Bowden-Smith. il diags Engineer 195:240-2 F 13 '53

DRAINAGE (physical geography)
Glaciation and drainage changes in the Fish Lake plateau, Utah. C. T. Hardy and S. Muessig. bibliog maps Geol Soc Bul 63:1109-16, pl 1-3 N '52
Hypsometric (area-altitude) analysis of erosional topography. A. N. Strahler. bibliog maps diags Geol Soc Bul 63:1117-41, pl 1 N '52

DRAINAGE, House
Standards bureau evolves answer to plumbing stack design problem. Eng N 149:48 O 30 '52
See also
Plumbing

DRAKE America corporation
Trade that goes two ways. Bsns W p 153 N 15 '52

DRAMA

Bibliography

Play index, 1949-1952. D. H. West and D. M. Peake, comps. 239p $5 H. W. Wilson co. New York '53

DRAMATIZATION in training
Role-playing as a practical training technique. W. G. O'Donnell. Personnel 29:275-89 N '52

DRAWING
See also
Engineering drawing
Perspective

DRAWING frames
Irregularities in cotton and rayon-staple slivers caused by roller slip at the drawframe. G. Dakin and others. Textile Inst J Trans 43:T545-62 N '52

DRAWING instruments
Kuhlmann perspective draughting machine. il diag Engineering 176:202-3 Ag 14 '53
Mavitta drafting machine. il Engineering 176:30 Jl 3 '53

DREDGES
Automatic clutch aids dredging operation. il Can Min J 74:70 Ag '53
Big dredge bulls its way down the Big Muddy. il Constr Methods 35:136-7 Je '53

DREDGES—*Continued*

Bucket ladder dredges pay off. C. M. Romanowitz and H. A. Sawin. il Civil Eng 22:746-8 S '52

Dredge, Hydro-Quebec is largest of its type. il Marine Eng 58:87 S '53

Handy dredge pays off handsomely. il Eng N 150:27 Mr 19 '53

Mobile dredge cuts soft rock. il Eng N 150:102 Je 25 '53

Performance of hydraulic dredges. O. P. Erickson. Civil Eng 23:250+ Ap '53

Seagoing civils see hopper dredge at work; illustrations with text. Eng N 150:48-9, cover Mr 26 '53

Specially designed dredge handles tough boulder clay. il Constr Methods 35:110+ Ap '53

Tailings dredge on Great Bear lake. H. R. Rice. il Can Min J 74:59-61 Jl '53

DREDGING

Dredging for gravel and gold; Cooley gravel co. W. B. Lenhart. flow sheet il Rock Prod 56:94-8 Mr '53

Dredging with mobile crane. W. B. Lenhart. il Rock Prod 56:112-14 Je '53

If you need to dredge a reservoir. il Pub Works 83:86 D '52

Modern hydraulic dredging, a product of experience. C. H. Giroux. il Civil Eng 22:740-5 S '52

See also

Dredges

DRESS patterns

Pins and needles; dress pattern makers cashing in on home-sewing upsurge. C. W. White. Barron's 33:11 Jl 27 '53

DRESSES

Hooped foundations

Scientific aspects of the design of a full skirt. G. W. H. Stevens. Textile Inst J 44:P247-57 Jl '53

DRESSING rooms

Natural ivy highlights daylight ceiling of dressing room. il plan diags Am Bld 74:105 N '52

DRESSING tables

How to build in a dressing table. il plan diags Am Bld 74:136 N '52

DRIED apples. See Apples, Dried

DRIED fruit. See Fruit, Dried

DRIED milk. See Milk, Dried

DRIFT

Drift dispersion in west-central New York. C. D. Holmes. bibliog maps Geol Soc Bul 63:993-1010 O '52

DRILLING and boring (earth and rocks)

Blast hole drilling at the Tennessee copper co.; tungsten carbide insert bits. E. Flournoy. il diags Min Cong J 39:78-80+ Ap '53

Blast hole rotary drilling in open-pit mining; abstract. G. R. Putnam. Min Cong J 38:96-7 O '52

Cementing in deep diamond drill holes. A. E. Ross. il diags Min Eng 4:Trans 1061-4 N '52

Diamond drilling for zinc ore at Andover-Sulphur Hill iron mines, Sussex county, N.J. G. L. Neumann. 2pls U S Bur Mines Rep of Invest 4911:1-13 '52

Diamond drilling in prospecting. J. D. Cumming. il diags Can Min J 73:52-5 D '52

Drill barge rides Everglades muck. H. W. Richardson. il Constr Methods 35:52-6 My '53

Drilling a deep hole in rock. il Engineering 174:265 Ag 29 '52

Drilling progress at Homestake. C. N. Kravig. il Min Cong J 39:38-41+ Ag '53

Faster overburden drilling; Maumee's Sullivan no. 27 mine. A. E. Flowers. il diags Coal Age 58:80-5 Mr '53

Jet piercing blast holes in granite; Consolidated quarries corp. J. R. Thoenen and G. D. Germain. il Rock Prod 56:132-5 Ap '53

Lever-held unit drills hard roof. il Coal Age 58:157 My '53

Miniature current meter fits inside of diamond drill hole to measure flow in limestone cavities. G. F. Sowers. il Civil Eng 23:176 Mr '53

Rock breaking; American mining congress, Western division; abstracts of papers. Min Cong J 38:118-21 O '52

Safe blast hole drilling. il Min Eng 5:780-1 Ag '53

Shifting Nashville's freight yards; quarry-master rig drilling with rotary bits. E. S. Williams. il Comp Air Mag 58:48-9 F '53

Soil boring machine. il Engineer 194:847 D 19 '52; Engineering 174:805 D 19 '52

See also

Gas, Natural—Well drilling
Mining methods
Petroleum—Well drilling
Rock drills
Shaft sinking
Tunnels and tunneling
Wells

DRILLING and boring (metal working, etc.)

Automaticity can increase your drilling production. R. H. Cowan. il diags Mach 59:184-7 Mr '53

Carbide boring tool for deep holes. A. Clarke. diags Am Mach 96:171 N 10 '52

Center-drilling jig for brake cylinders. F. E. Riley. diags Tool Eng 30:46 F '53

Deep-hole drilling. G. A. Wilson, jr. il diags Machine Design 25:178-81 Ag '53

Designing jigs for multiple-spindle drilling. F. G. Zagar. il diags Mach 59:179-83 N '52

Estimating drilling hp and speed; chart; reference book sheet. T. Hicks. Am Mach 97:137 Mr 2 '53

Estimating drilling time for deep holes; chart; reference book sheet. T. Hicks. Am Mach 97:187 Mr 16 '53

How much material is removed in turning and boring? L. J. Murphy. Mill & Factory 53:126 S '53

How to set up a heavy angleplate. T. Gray. diags Am Mach 96:169 O 13 '52

Jig bores two holes at once. H. Dahl. diags Am Mach 96:142 D 8 '52

Lathe doubles as boring mill. L. Cranston. il Am Mach 96:156 N 24 '52

Method for off-center drilling of cylindrical parts. A. E. Rylander. diags Mach 59:205 My '53

Modified dial indicator gives direct boresize. A. Clarke. diags Am Mach 97:130 Mr 2 '53

Precision boring; charts and tables; reference sheet. Tool Eng 30:95-8 Ap '53

Smart tooling solves tough elliptical boring job; Westinghouse electric corp. S. D. Phillips. il diags Am Mach 96:140-1 D 8 '52

Solving production boring problems. R. S. Hahn. il diags Tool Eng 30:85-8 Ap '53

Tape saves time; drilling operation speeded by solving chip problem. il Iron Age 170:103 O 30 '52

Thirty-foot holes drilled in two hours. il Steel 131:105 N 3 '52

Time-cutting method speeds up drilling. il Tool Eng 30:101-2 Ja '53

Time for drilling gray iron and malleable iron; reference book sheet. V. G. Hotchkiss. Am Mach 97:165, 167 Jl 6 '53

Time for drilling mild steel; reference book sheet. V. G. Hotchkiss. Am Mach 97:149 Ag 3 '53

Useful drilling information; tabulations; data sheet. Mach 59:253 Ap; 257 My '53

Versatility in a jig. F. E. Riley. plan diags Steel 131:74-5 D 29 '52

What's ahead the next ten years in machining; turning and boring. Am Mach 96:E7-10 Mid-N '52

See also

Broaching
Drilling and boring machinery

DRILLING and boring machinery

Adjustable taper boring attachment. W. M Halliday. diags Mach 59:225-6 Jl '53

Angular drill jig. F. E. Riley. diags Tool Eng 31:47-8 O '53

Automatic attachments; drill makes chips fly. F. M. Butrick, jr. diags Steel 131:80-1 D 1 '52

Automatic boring machine for jet engine components. il Automotive Ind 108:90 F 1 '53

Boring fixture saves time, money. il Iron Age 170:103 D 11 '52

Carbide steps up drilling job. il diags Steel 132:93-4 Mr 2 '53

Cross special machine for drilling and reaming tank housings. il Mach 59:215-16 Ja '53

Design of an air-powered hydraulic drilling unit. C. Johnson and P. Butzin. flow diag il Mach 59:202-6 Ag '53

DRILLING and boring machinery—*Continued*

Drill press extrusion cuts costs of thin-wall parts; Uniskan extrusion method. W. N. Parker. il diags Iron Age 171:171-5 Mr 5 '53

Drill units give a new push to job-lot machining; illustrations with text. P. Jones. Am Mach 97:126-8 Jl 6 '53

Drilling and tapping machine for jet engines. il Automotive Ind 107:79 D 1 '52

Drilling, boring and facing machine. il Engineer 195:842 Je 12 '53; Engineering 175:726 Je 5 '53

Drilling machine classification. R. T. Kimmel. il Tool Eng 29:69-76 N '52

Ekstrom, Carlson radial-arm drill available in double-spindle model. il Am Mach 97:208 Ap 13 '53

Electronic prevention of drill breakage. il Engineering 175:278-9 F 27 '53

Five-way drilling machine for jet-engine housings. il Am Mach 96:216 N 10 '52

Fixture multiplies drill's capacity; Ryan aeronautical co. il Steel 132:117 Je 1 '53

German horizontal boring mill has 29½-, 35-, 43-in. vertical capacity. il Am Mach 97:164 Ag 17 '53

High-frequency reciprocating drill. E. A. Neppiras. bibliog diags J Sci Instr 30:72-4 Mr '53

Horizontal drilling machine for boilers. il Engineer 194:234 Ag 15 '52

Indexable inserts sharpen boring performance. il Steel 132:165 Je 1 '53

Jig borer has two separate measuring units. il Automotive Ind 108:77 My 1 '53

Kearns optimetric horizontal boring machine for tool room. il Am Mach 97:190 Je 22 '53

Kerry pillar drilling machine. il Engineer 196:284 Ag 28 '53

Kitchen and Wade drilling machine for armature yokes. il Engineering 176:190 Ag 7 '53

Kitchen and Wade fixed height drilling, boring and facing machine. il Engineer 196:111 Jl 24 '53

Kitchen and Wade large duplex drilling, boring and screwing machine. il Engineer 195:646 My 1 '53; Engineering 175:668 My 22 '53

Lindner jig borer with autopositioner. il Mach 60:224-5 O '53

Machine tool simplification, especially as applied to horizontal boring machines. C. A. Sparkes. diags Inst Mech Eng Proc (A) 166 no 4:450-8, pl 1-10; Discussion. 458-65 '52; Engineer 194:620-1 N 7 '52

Magnesium castings drilled, reamed, c'bored at high speed; special machine built by Snyder tool and engineering co. W. G. Patton. il Iron Age 170:162-4 D 4 '52

Mesta horizontal boring and milling machine has capacity of 50,000 tons. il Blast F & Steel Pl 41:412 Ap '53

Millholland automatic boring unit. il Automotive Ind 107:62 D 15 '52; Same. Tool Eng 30:104 Ja '53; Same. Mach 59:227 D '52

Morey machine for boring and internal profiling engine parts. il Am Mach 97:222 Je 8 '53

Motch & Merryweather vertical turning and boring machine for jet-engine parts. il Mach 59:230 Jl '53

New drilling device reduces labor 83 per cent. il Mill & Factory 53:129 Jl '53

Niles side head boring mill. il Aero Digest 66:72+ Ja '53

1953 American Machinist production preview. il Am Mach 97:155-7, 160-6 Ja 19 '53

OMI jig borer. il Tool Eng 30:148 Ap '53

Otto Muller SR23 high-speed radial drill. il Engineering 175:252-3 F 20 '53

Polygonal machining on a drilling machine. il diags Engineering 175:698 My 29 '53

Pratt & Whitney adds 2E size to electrolimit jig borer line. il Am Mach 97:145-6 Mr 30 '53; Mach 59:214 Ap '53; Tool Eng 30:146 Ap '53

Production fixture increases drill press output. D. E. Harris. il Iron Age 171:130 Ap 16 '53

Production-model drillpress has from one to four heads. il Am Mach 97:207 Ap 13 '53

Redesign and aluminum combine to save work; Northrop Aircraft's Hawthorne plant. il Tool Eng 31:102 Jl '53

Remote column lock for radial drill. I. Epstein. diag Am Mach 96:168 O 13 '52

Semi-automatic machine processes variety of oil pans. il Automotive Ind 109:64 S 15 '53

Special way type Bore-Matic for boring jet part. il Mach 59:212 Mr '53

Students build machine to drill holes, insert dowels. il Iron Age 171:134 Ap 9 '53

Taper-boring tool guided by internal taper shaft. A. Wetsch. diag Am Mach 97:148 Je 22 '52

Tool life in precision boring; abstract. R. S. Hahn. diags Automotive Ind 108:86+ Ap 15 '53

Transfer machine; compound drilling at high production rates possible. il Iron Age 171:167-8 Ap 23 '53

Underarm support aids milling and boring of large work. D. M. Laflin. il Mach 59:156-60 N '52

Unique drilling duplicator developed by Northrop tool engineers. L. Donner. il diags Mach 59:214-17 Jl '53

Universal tool performs intricate boring operations; Stokvis, Edera and co. J. Stokvis and E. Edera. il diags Tool Eng 31:44-7 Jl '53

Variable-speed drillpress operates in two ranges. il diag Machine Design 25:140 F '53

What's ahead the next ten years in machining; drilling and reaming. Am Mach 96:E 11-12 Mid-N '52

See also

Boring bars

DRILLING muds. See Petroleum—Mud fluids

DRILLS. See Drilling and boring machinery

DRILLS, Oil well

Care and treatment of cable tool bits. F. J. Spang. il Pet Eng 24:B64-6+ N '52

Diamond drilling bits may lower costs in drilling hard formations. J. Sanna. il Oil & Gas J 51:127 D 15 '52

Drill pipe rejects show good service life. H. G. Texter. il Pet Eng 24:B78+ D '52

How to care for tool joints. F. C. Gignoux. diags World Oil 135:175+ D '52

Improved rock bit lowers drilling cost in hard, abrasive formations. L. L. Payne. il Oil & Gas J 51:226+ S 29 '52; Same. Pet Eng 24:B70+ O '52; Same. World Oil 135:202+ O '52

New bit speeds drilling in hard and brittle formations. E. G. Boice. il Oil & Gas J 51:240+ S 29 '52; Same. Pet Eng 24:B 100+ O '52; Same. World Oil 135:190-1 O '52

New drilling equipment. C. H. Alcorn. il diag World Oil 136:152+ F 15 '53

New techniques improve drill collar performance. S. C. Moore. il diags World Oil 135:220+ O '52

When you drill an oil well every bit counts; illustrations with text. E. J. Tangerman. Am Mach 97:137-46 My 25 '53

Testing

Methods for improvement of drill-collar joints evaluated by full size fatigue tests. L. E. Trishman. il diags Pet Eng 25:B98+ F '53

DRINKING water systems

Drinking water. diags Nat Safety N 67:60-2 Mr '53

Refrigeration systems for cooling drinking water. J. Askin. il diags Heat & Ven 50:81-6 F '53

DRIVE-in and curb services

Drive-in banking. J. Montagnes. il Burroughs Clearing House 37:63-4 N '52

Drive-in facility is feature of small neighborhood bank in Osceola, Ind. il plan diag Am Bld 74:154-5 S '52

Drive-in ticket office opens. Am Bsns 22:44 D '52

Drive-ins in action. il Burroughs Clearing House 37:22-4 D '52

Unit drive-in; Hudson trust co., Jersey City. il Burroughs Clearing House 37:12+ F '53

DRIVERS as salesmen

Truckers promote agstone sales; Maymead lime co. L. D. Minsk. il Rock Prod 56:78 My '53

DROPPING mercury electrode. See Polarography

DROPS

Characteristics of a spinning-disk liquid sprayer. W. H. Boshoff. bibliog il Inst Mech Eng Proc (A) 166 no 4:443-6; Discussion. 447-9 '52

Growth of small water droplets in steam nozzles. D. J. Ryley. bibliog Engineer 195: 686-8 My 15 '53

Mechanics of drops. R. R. Hughes and E. R. Gilliland. bibliog diag Chem Eng Prog 48:497-504 O '52

Mixing and distribution of liquids in high-velocity air streams. J. P. Longwell and M. A. Weiss. bibliog il diags Ind & Eng Chem 45:667-77 Mr '53

Photographic analysis of sprays. J. L. York and H. E. Stubbs. bibliog il diags A S M E Trans 74:1157-61; Discussion. 1161-2 O '52

Scattering of light from small drops. R. L. Lander and C. E. Nielsen. bibliog diag R Sci Instr 24:20-2 Ja '53

Statistics of liquid spray and dust electrification by the Hopper and Laby method. E. E. Dodd. bibliog il J Ap Phys 24:73-80 Ja '53

Surface tension at elevated temperatures; furnace and method for use of the sessile drop method; surface tension of silicon, iron and nickel. W. D. Kingery and M. Humenik, jr. bibliog diags J Phys Chem 57:359-63 Mr '53

Vibrations of evaporating liquid drops. N. J. Holter and W. R. Glasscock. il diag Acoustical Soc Am J 24:682-6 N '52

DROSOPHILA

Influence of amino acids upon incidence of tumors in tu^{50j} stock of D. melanogaster. S. Mittler. bibliog Science 116:657-9 D 12 '52

Quantitative study of folic acid requirements and reversal of aminopterin inhibition in drosophila. T. Hinton. Science 116:708-10 D 26 '52

DROUGHTS

Drought burns out corn roots as U.S. gives $8-million in aid to Texas. il Bsns W p34 Jl 4 '53

Drought conditions in Oklahoma; abstract. M. B. Cunningham. Water & Sewage Works 100:306-7 Ag '53

Drought, tough but no dust bowl. maps Bsns W p27-8 Jl 25 '53

DRUCKER, Peter F.

New view of unions. Bsns W p 139-40 Ap 4 '53

DRUG factories

Chloromycetin plant; Parke-Davis co. il Engineer 194:431-2 S 26 '52

Modern methods of drug production; Crookes new laboratories. Chem Age (Lond) 68: 337-8 F 28 '53

Multiple-use plant for synthetic medicinal chemicals; Merck & co. E. J. Nolan. il diags Ind & Eng Chem 44:2823-6 D '52

Plant goes horizontal; White laboratories packaging problems encountered in move from multi-story to one-story plant. il Mod Packaging 26:125-7 S '52

Quality control for drug making; Sterling drug mfg., ltd. il Can Chem Process 37:95-6 My '53

Air conditioning

Humidity control necessary for production of antibiotic drugs; Schenley laboratories, inc. il diag Refrig Eng 61:180+ F '53

Electric equipment

Pfizer's three-pronged approach to electrical maintenance. il Power 97:107-13 F '53

Inspection

Factory inspection bill endorsed by House group over three dissents. Oil Paint & Drug Rep 164:3+ Jl 13 '53

Factory inspection bill, H.R. 5740 passed by the House. Oil Paint & Drug Rep 164:3+ Jl 20 '53

FDA details steps taken to use its new plant inspection powers. Oil Paint & Drug Rep 164:3+ Ag 31 '53

Plant inspection backed by trade; lawmakers want checks on power. Oil Paint & Drug Rep 163:3+ My 25 '53

Plant inspection legislation clears Congress despite last-minute snarl. Oil Paint & Drug Rep 164:3+ Ag 10 '53

Management

Product development takes teamwork; Parke, Davis & co. il diag Mod Ind 25:59-60+ Ap '53

DRUG manufacturers association, American. See American drug manufacturers association

DRUG packages

Labeling-cartoning teamwork; Wyeth, inc. il Mod Packaging 26:108-9 Je '53

Lydia Pinkham makes bid for younger generation. il Mod Packaging 26:130 O '52

DRUG research. See Pharmaceutical research

DRUG stores

Druggists sell radios by using right medium. Ed & Pub 85:18 O 4 '52

Patterson-Bradford Rexall drug store, Jackson, Miss. il plans Arch Rec 112:170-2 O '52

Self-service reaches the drugstore. Bsns W p43-4 Mr 7 '53

Why manufacturers and agencies must watch self-service drugstores. J. S. Trieb. il Ptr Ink 241:38-40 N 7 '52

DRUG trade

American pharmaceutical manufacturers' association meeting, New York, Dec. 8-10. Chem & Eng N 30:5368-9 D 22 '52

Drug industry prospects. R. G. Woodbridge, 3d. Comm & Fin Chr 177:1854-5 Ap 30 '53

Drug sales on the rise again. Chem Eng 60: 380 Mr '53

Drugs and pharmaceuticals. il Chem Eng 60: 208 Mr '53

Market attitudes; research report from the medical field. T. Caplow. Harvard Bsns R 30:105-12 N '52

New in the distribution scheme; the ethical drug jobber. E. Gidlow. il Sales Management 69:82-3+ D 1 '52

Probing overseas markets by A. C. Nielsen co. Bsns W p 120-1 Ja 31 '53

Serving two masters; Promotion clinic sponsored by Pharmaceutical advertising club. Chem W 72:40+ Mr 7 '53

Students stage summer sales blitz; Charles Pfizer & co. contacts doctors and hospitals with medical students. C. Judson. Ptr Ink 241:78+ O 17 '52

Why super markets use rack jobbers. M. M. Zimmerman. il Sales Management 69:108+ O 15 '52

See also

American drug manufacturers association

American pharmaceutical manufacturers' association

Medicines, Proprietary

Advertising

Bureau cold barometer proves accurate in test; predicting prevalence of colds. Ed & Pub 86:28 F 7 '53

Bureau extends tests of health barometer. Ed & Pub 85:28 O 4 '52

Epidemic index plan is tested for drug ads. Ed & Pub 85:9 S 20 '52

Kid contest pays off again for Bauer & Black. il Sales Management 70:118 F 15 '53

See also

Advertising—Physicians, Appeal to

Veterinary medicine—Advertising

Finance

Drug parade; price cuts slow down industry's sales growth. J. V. Sherman. Barron's 33:9+ Je 15 '53

Regulation

Antibiotics' half a law. il Chem W 72:38+ Ja 31 '53

FDA drug export ban power seen in making. Oil Paint & Drug Rep 163:3+ Mr 9 '53

Legislative section activities; ADMA. L. D. Harrop. Oil Paint & Drug Rep 163:56-62 Ap 20 '53

Securities

Changed outlook for the drug companies; with comparative earnings and dividend record of leading companies. P. Dobbs. Mag of Wall St 91:122-4+ N 1 '52

Drugs; what prospects for a turn? with statistical data on leading companies. H. F. Travis. Mag of Wall St 92:274-7 My 30 '53

DRUG trade—*Continued*

Statistics

- Botanical drugs, spices, gums. Published in weekly numbers of Oil, paint and drug reporter
- Drugs and fine chemicals. Published in weekly numbers of Oil, paint and drug reporter
- Medicinals production, sales dropped in 1952. Oil Paint & Drug Rep 163:7 Je 29 '53

Canada

- Basic producer of pharmaceuticals; Fine chemicals of Canada. il Can Chem Process 37:32 F '53
- Broad look at pharmaceuticals. il Can Chem Process 37:18+ F '53
- Danish research contributes to Canadian pharmaceutical industry. il Can Chem Process 37:46+ F '53
- Medicinals and pharmaceuticals industry; tabulations. Can Chem Process 37:32 Je 20 '53
- Pharmaceuticals expansion includes new products and facilities at the British Drug Houses. il Can Chem Process 37:32+ Mr '53

Great Britain

- Doctor's dilemma; Minister of health's complaints of the cost of proprietary medicines. Economist 167:540 My 23 '53

India

- New factory in India manufactures drugs; Lederle laboratories (India), ltd. For Comm W 50:18 Jl 13 '53
- Pharmaceuticals in India. Chem W 72:53 F 14 '53

DRUG trade conference, National. See National drug trade conference

DRUGS

- Botanicals new crop stocks reported low. Oil Paint & Drug Rep 162:4+ N 10 '52
- Desiccants for drugs. il Mod Packaging 26:86-8+ F '53
- Drugs and pharmaceuticals. il Chem Eng 60:208 Mr '53
- Electron beams sterilize food and drugs. E. A. Burrill and A. J. Gale. il diags Electronics 25:98-101 N '52
- Movement toward sound drug therapy. Pub Health Rep 68:46 Ja '53
- New drug developments. D. S. Gilmore. Oil Paint & Drug Rep 163:55-6 Ap 20 '53
- Objective approach to drug therapy. J. S. Mordell and C. K. Himmelsbach. Pub Health Rep 68:47-53 Ja '53
- Physicians desk reference to pharmaceutical specialties and biologicals, 1953. 7th ed 616p Medical economics, Rutherford, New Jersey '53 ($5)
- Public health service drug list curbs government hospital stocks. Oil Paint & Drug Rep 163:3+ My 4 '53
- Safer drug labeling; Sharp & Dohme. il Mod Packaging 26:107 Mr '53

See also

Analgesics
Anesthetics
Anesthetics, Local
Antihistamines
Antispasmodics
Chemistry, Medical and pharmaceutical
Chemotherapy
Medicines, Proprietary
Penicillin
Pharmaceutical laboratories
Pharmaceutical research
Pharmacology
Poisons
Sulfonamides

Analysis

- Nonaqueous titrations open pharmaceutical analysis field; abstract. C. W. Pifer. Chem & Eng N 31:672 F 16 '53

Laws and legislation

See also

Drug factories—Inspection

Prices

- Botanical drugs, spices, gums; 1952 market trends. Oil Paint & Drug Rep 163:46-8 sec 2 Ja 26 '53
- Chemicals, oils and drugs price changes, Jan. 1, 1952 and Jan. 1, 1953 compared; table by commodity. Oil Paint & Drug Rep 163:9-10+ sec 2 Ja 26 '53
- Chemicals, oils and drugs price record, selected years, 1939-1952; tables. Oil Paint & Drug Rep 163:7 sec 2 Ja 26 '53

Terminology

- Drug trade concerned over WHO name work. Oil Paint & Drug Rep 162:5 O 27 '52
- WHO drug names draw joint protest to State dept. from ADMA and APMA. Oil Paint & Drug Rep 163:3+ Mr 30 '53
- WHO drug nomenclature procedure now undergoing complete overhaul. Oil Paint & Drug Rep 163:3+ Je 8 '53
- WHO subcommittee picks names for world non-proprietary drugs; list. Oil Paint & Drug Rep 162:7+ O 27; 5+ D 22; 4+ D 29 '52; 163:56 Mr 2; 57 My 25 '53

DRUMMOND, Sir Jack Cecil, 1891-1952

- Sketch. G. F. Marrian. Chem Soc J p357-60 Ja '53

DRUNKENNESS

- Urges bill to enforce tests for intoxication; would curb drunken drivers. East Underw 54:41 Mr 6 '53

DRY cleaning. See Cleaning; Cleaning industry

DRY cleaning plants. See Cleaners and dyers buildings

DRY docks

- Barge-mounted pumps drain large drydock. il Constr Methods 35:110 Ag '53
- Barry commercial dry dock. il plan diags Engineering 174:641-3, pl 50 N 14 '52
- Dry dock on the North East coast. il diags Engineer 194:494-5, 526-7 O 10-17 '52; Engineering 174:525-8, 536 O 24 '52
- Engineering developments in the port of Dublin. il plans diags Engineering 174:814-17 D 26 '52
- Large dry docks. E. L. Champness. diag Engineering 175:636-9 My 15 '53; Discussion. 175:552-3 My 1 '53; Engineer 195:535-6 Ap 10 '53

DRY docks, Floating

- Erecting a 500-ton floating dock on Lake Nyasa. il Engineering 176:200-1 Ag 14 '53
- Salvage of Singapore floating dock. il Engineering 174:728 D 5 '52

DRY ice. See Carbon dioxide, Solid

DRYDEN paper company

- Stock control acquired by Anglo-Canadian. il Pulp & Pa of Can 54:184+ S '53

DRYING

- Chemical engineering unit operations. W. R. Marshall, jr. il Ind & Eng Chem 45:47-54 bibliog(232 ref, p52-4) Ja '53
- New process developed for industrial drying. Machine Design 24:236+ N '52

See also

Clay drying
Drying apparatus
Electric heating, Industrial—High frequency heating
Gas, Natural—Dehydration
Infrared rays—Industrial heating
Lumber drying
Paint—Drying
Paper drying
Textile drying

DRYING (crops)

- Coal-fired drier improves farm crops. il Manuf Rec 122:35 F '53
- Design of hay drying systems. V. H. Baker and U. F. Earp. il diags Heat & Ven 50:77-81 Mr; 100-2 Ap '53
- Electricity helps alfalfa keep its vitamin A. il Elec World News ed 139:43 Ja 5 '53
- Electricity in farm crop-drying. C. A. C. Brown and P. G. Finn-Kelcey. Inst E E Proc 100 pt 2:115-24; Discussion. 125-9 Ap '53; Elec J 149:1679-80 N 28 '52; Elec R (Lond) 151:1157-8 N 28 '52
- Fire protection in malt drying. Safety Maint & Prod 106:72 S '53
- Grain drying. E. C. Claydon. il Elec R (Lond) 152:350-2 F 13 '53
- Grain drying; large all-electric installation at Fakenham. il Elec R (Lond) 151:1026-8 N 7 '52
- Recent developments in grain drying; abstract and discussion. H. T. Horsman. Elec R (Lond) 152:429-30 F 20 '53

DRYING agents

- Dehydration of natural gas and light hydrocarbon liquids. J. M. Campbell and others. bibliog flow sheet il diags Pet Refiner 31:106-12 O '52
- Desiccants for drugs. il Mod Packaging 26:86-8+ F '53

DRYING agents—*Continued*
Effect of driers on alkyd resin finishes; abstract. Paint Oil & Chem R 116:43 My 21 '53
Function of driers; abstract. K. Meier and K. Ohm. Paint Oil & Chem R 116:56 My 7 '53
How to lengthen life of solid desiccants. B. F. Koepke and V. M. Stowe. Oil & Gas J 51:107-8 Ja 12 '53
Trends in dehydrated packaging; use of desiccants in military and non-military packages. R. H. Herrmann. il Mod Packaging 26:200-4 Ap '53

DRYING apparatus
Conduction dryer saves fines; Monotube dryer. il Chem Eng 59:178 O '52
Enameled pipe dried in rotary drier. il Cer Ind 60:57 Mr '53
How vacuum dryers were converted for three-way operation. F. Gibadlo. diag Chem Eng 60:235 My '53
Integrate complex operation and make a better feed from peel; Minute maid corp. feed mill. W. H. Harte. flow sheet(p 118-21) il Food Eng 25:84-6+ Mr '53
Mechanical air drying of hands following preoperative scrubbing. P. E. Walker. Pub Health Rep 68:317-19 Mr '53
New compact dryer has many uses. diag Food Eng 24:115 N '52
New developments in systems for measurement and control of humidity and temperature in ceramic driers. J. S. Green. il diags Am Cer Soc Bul 32:18-22 Ja 15 '53
Special drives, twin dryer hook-up features of this asphalt plant; Tampa sand and materials co. il Roads & Sts 96:105 S '53
Type of equipment to use for drying sludge and granular material. Heat & Ven 50:118-19 Jl '53

Textiles

Hunter Machine's new Vapojet cloth dryer. il Mod Textiles Mag 34:47 My '53; Textile World 103:108 Je '53
New era dries more for less with a steam-circulating system. diag Textile World 103:107 Ja '53
Slasher dryer dries warps with superheated steam. il Textile World 103:150 O '53

DRYING oils
Commentary on drying oils. L. A. Jordan. Chem & Ind p 1208-12 D 13 '52; Abstract. Paint Oil & Chem R 116:56 My 7 '53
Drying oil in the seeds of mercurialis perennis (dog's mercury). T. P. Hilditch. Chem & Ind p981 O 4 '52
Improved drying oils; abstract. R. L. Terrill. Paint Oil & Chem R 116:36-7 F 26 '53
Microdetermination of iodine values; abstract. C. Whalley and M. Ellison. Paint Oil & Chem R 116:19 F 12 '53
Synthetic fatty acid triglycerides and natural drying oils; film studies. P. S. Hess and G. A. O'Hare. Ind & Eng Chem 44:2424-8 O '52
See also
Tall oil

DRYSALTERS club of New England
Drysalters club of New England. G. O. Linberg. Am Dyestuff Rep 41:665 O 13 '52

DUBLIN, Louis I. 1882-
Dr Dublin affiliates with Life Institute. East Underw 54:4 Ja 23 '53
Retiring. C. Axman. por East Underw 53:5+ D 12 '52

DUBLIN

Harbor

Engineering developments in the port of Dublin. il plans diags Engineering 174:1-3, 814-17 Jl 4, D 26 '52

DUBRIDGE, Lee Alvin, 1901-
Lee Alvin DuBridge. por(cover) Chem & Eng N 31:1388 Ap 6 '53

DUCK (textile)
Standardize your methods to make better ducks; Georgia duck & cordage mill. E. E. Olsen. il Textile World 103:130-1+ S '53

DUCKS, Decoy. See Decoys (hunting)

DUCTILE iron. See Cast iron

DUFFEY, Ike W.
I. Duffey, shipper turned railroader. W. H. Schmidt, jr. por Ry Age 133:88-92 D 1 '52

DUFFY, Ben
Big Ben. P. de Guzman. por Ptr Ink 241:110 N 28 '52

DUKES, Arthur J.
Half-century club; careers epitomizing contributions to coal-mining progress. por Coal Age 58:85 Ag '53

DULLES, John Foster, 1888-
Eisenhower's Cabinet; a gamble. por Bsns W p27-8 N 29 '52
Portrait. Bsns W p29 Je 27 '53

DUMAINE, Frederic Christopher, 1902-
Businessmen in the news. por Fortune 47:55 Mr '53

DUMONT-airplane and marine instruments, inc.
Report for the first quarter of 1953. Comm & Fin Chr 177:2568 Je 15 '53

DU MONT laboratories, inc.
Du Mont dedicates new plant. il Elec World News ed 139:48 My 25 '53

DUMPING (commercial policy)
Dumping of foreign nitrogen here is charged by sellers; abstract. C. S. Edwards. Chem & Eng N 31:2182 My 25 '53
Foreign oil; how it hurts America, how it can be curbed. map Coal Age 58:70-5 Mr '53
Potash import policy rebuke is seen due. Oil Paint & Drug Rep 163:3+ Je 15 '53
Potash makers seek government aid to halt influx of red material. Oil Paint & Drug Rep 163:3+ Ap 27 '53
Potash probers attack State dept. for allowing Communist imports. Oil Paint & Drug Rep 164:3+ Ag 17 '53

DUMPING appliances
Dart's new 60-ton dumper. il Diesel Power 31:49 My '53
Darts sparks new ideas in world's largest end-dump truck. il Constr Methods 35:111+ My '53
Fraser and Chalmers wagon tippler. diag Engineer 195:385-6 Mr 13 '53; Engineering 175:409 Mr 27 '53
Improved skip-dumping plate design. diags Eng & Min J 154:126+ Ag '53
Three-cubic-yard dumper. il Engineer 194:847 D 19 '52; Engineering 174:835 D 26 '52

DUNLOP rubber company, limited
Statement by the chairman. Lord Baillieu. Economist 167:852 Je 20 '53

DUNTON, A. Davidson, 1912-
Annual SLA convention banquet. por Special Lib 44:154 Ap '53

DUO-SOL process. See Lubricating oils—Manufacture

DUPLICATING machines
How many copies? new duplicator eliminates work error. F. L. Gibson. il Trusts & Estates 91:954 D '52

DUPLICATING processes. See Copying processes

DU PONT, Alfred I., estate
Terrible-tempered Mr Ball. F. Lincoln. il Fortune 46:142-6+ N '52

DU PONT, Francis V. 1894-
Du Pont takes over as Public roads commissioner. Roads & Sts 96:57-8 My '53
MacDonald retires as Commissioner of public roads; F. V. du Pont takes over. Eng N 150:52+ Ap 2 '53

DU PONT, Henry Belin, 1898-
Businessmen in the news. por Fortune 46:58 O '52

DU PONT, Irénée
Portrait. Bsns W p84 Mr 21 '53

DU PONT de Nemours, E. I., and company
Anti-trust suit against DuPont enterprise opens. Paint Oil & Chem R 115:37 N 20 '52
Anti-trust suit against DuPont gets under way in federal court. Rubber Age 72:366-7 D '52
Blessings of branch plants. Bsns W p 110 Ap 11 '53
Commercial intelligence service; chemical and chemical process industries. R. Soukup. Special Lib 43:389-95 D '52
Du Pont and GM as the family saw them. Bsns W p77-8+ Mr 21 '53
Du Pont called largest single concentration of economic power. Chem & Eng N 30:5060-1 D 1 '52
Du Pont story; research. V. B. Guthrie. il map Pet Processing 8:92-4 Ja '53
Government rests its case in DuPont anti-trust suit. Rubber Age 72:649 F '53
Milestone for chemicals? coal partial combustion. diag Bsns W p 138+ Je 13 '53

DU PONT de Nemours, E. I., and company—*Continued*
Site of Du Pont co.'s first mill to be made a park. Paint Oil & Chem R 116:26 Ja 29 '53
Sky's the limit. Bsns W p 130+ Jl 4 '53
Tax-free split? Du Pont management is cool toward proposal for using spinoff. Bsns W p60+ Ap 11 '53
U.S. court decree restricts DuPont and ICI relationship. Rubber Age 72:80 O '52

DUQUESNE light company
Common stock passing into hands of public. Barron's 32:19-20 D 22 '52
Common stock sold. Comm & Fin Chr 176:1963 N 24 '52
Operations feature low coal and power transmission costs. E. Etherington. Barron's 33:23-5 Je 29 '53
Stock offering completed. Comm & Fin Chr 176:2062 D 1 '52

DURABLE goods
Durables are the key to prosperity. Fortune 46:114-15 D '52
1953 survey of consumer finances; purchases of durable goods in 1952 and buying plans for 1953. J. Frechtling and T. Smith. Fed Res Bul 39:697-703 Jl '53
Techniques in forecasting consumer durable goods sales. A. C. MacGowan. J Marketing 17:156-62 O '52
Trends in industrial output. Survey of Cur Bsns 33:7-8+ My '53

DURALUMIN
Thin metals that remain flat after machining. J. C. Wagner. il Metal Prog 63:92-4 Je '53

DURENE
Substitution in polymethylbenzenes; the course of the nitration of durene in sulfuric acid-chloroform mixtures. G. Illuminati and M. P. Illuminati. bibliog Am Chem Soc J 75:2159-61 My 5 '53

DURKIN, Martin Patrick, 1894-
Durkin vs. the inquisitors. por Bsns W p 142+ Ja 24 '53
Eisenhower is still naming names. por(p29) Bsns W p30 D 6 '52
Getting ready to be labor's advocate. pors Bsns W p 118+ D 20 '52
Labor secretary Martin P. Durkin gets construction industry backing. Eng N 149:29 D 11 '52
Slow going for Secretary. por Bsns W p 135-6 Je 27 '53

DUROMETERS. See Hardness—Testing

DUROQUINONE
Quinone-hydroquinone exchange reactions; duroquinone and durohydroquinone exchange in buffered methanol solution. A. A. Bothner-By. bibliog diag Am Chem Soc J 75:728-30 F 5 '53

DUST
Concentrations of particulates found in air. M. W. First and P. Drinker. A M A Archives Ind Hygiene & Occup Med 5:387-8 Ap '52; Same. Heat & Ven 49:92 N '52
Dust and engine wear; abstract and discussion. E. S. Dahl and K. H. Rhodes. S A E J 61:42-3 Mr '53
Filter efficiency and standardization of test dust. H. Heywood. bibliog Inst Mech Eng Proc (B) 1B no 5:169-74, pl 1-2; Discussion. il diags 175-84 '52
Physico-chemical studies on dusts; accuracy of chemical estimation of free silica in rocks and mineral dusts. W. M. Cumming, P. B. Dempster and P. D. Ritchie. bibliog J Ap Chem 2:658-63 N '52
Practical aspects of dust suppression. W. B. Lawrie. il Nat Safety 67:26-7+ F; 28-9+ My '53
Statistics of liquid spray and dust electrification by the Hopper and Laby method. E. E. Dodd. bibliog il J Ap Phys 24:73-80 Ja '53
Toxicity of uranium dioxide influenced by particle size. H. H. Schrenk. Ind & Eng Chem 44:sup 107A-8+ D '52

See also
Dust removal
Flue dust
Foundry dust
Mine dust
Silicosis

DUST collectors
Air pollution ordinances. J. M. Kane. il Foundry 80:104-7+ O '52
Cyclone dust collectors for boilers. A. J. ter Linden. diags A S M E Trans 75:433-40 Ap '53
DEP curtain-type dust collector used as filter, dryer, cooler, or scrubber. L. C. McCabe. diags Ind & Eng Chem 44:sup 123A-5A N '52
Design of exhaust systems; separators and arresters. F. H. Stebbins. diags Sheet Metal Worker 43:50-2 S '52; 44:93-4 Ja; 68-9+ My '53
Dust; abstract. R. W. Love. Glass Ind 33:612 N '52
Dust collection within the gas industry. J. L. Schumann. Am Gas Assn Proc 1952:551-2
Dust-collector tube replacement made easy. J. J. Bronchik. diag Elec World 139:138+ F 23 '53
Dust control for sure; Duquesne brewing co. il Safety Maint & Prod 106:69-70 O '53
Dust control from hoppers; detail sheet. diags Heat & Ven 50:9-10 Jl '53
Dust control pays for itself; Storage battery division of Thomas A. Edison, inc. W. O. Vedder. il Safety Maint & Prod 104:107-8+ O '52
Dust exhaust system. Heat & Ven 50:108-9 My '53
Dust? not here! Willard storage battery co. il Safety Maint & Prod 105:54-5 Mr '53
Dust removal's a must! il Safety Maint & Prod 104:66-8 N '52
Dust suppression on grinding machines. il diag Engineer 195:277 F 20 '53; Engineering 175:218 F 13 '53
Dust was an explosion hazard, but now this plant clears the air with automatic continuous filtering. il diag Factory Management 111:100-1 Ap '53
Fly ash collection in industrial experience; abstract. B. S. Norling. Nat Safety N 68:56 Ag '53
Frit dust reclaim ends needless loss. il Cer Ind 59:80 O '52
Graphical selector for air cleaners. J. R. Kayse. Heat & Ven 50:80-3 Jl '53
Lead blast furnace gas handling and dust collection. R. Bainbridge. flow sheet diags J Metals 4:Trans 1302-6 D '52
Modern control devices keep shops cleaner, cut maintenance costs. Iron Age 171:188-9 Mr 12 '53
Performance of inertial collectors. L. Silverman. bibliog il diags Heat & Ven 50:87-92 F '53
Power engineers abate air pollution. Power Eng 57:110 Je '53
Principles of present-day dust collectors and their application to mining and metallurgical industries. J. M. Kane and R. H. Walpole. diags Min Eng 5:Trans 85-8 Ja '53
Schlitz defeats dust. L. E. Slater. il diag Food Eng 25:61-3+ Ap '53
Secondary collectors for recovery of fine dust. E. Weller. il Rock Prod 55:114 D '52
Self-cleaning dust collector. il Automotive Ind 109:86 O 1 '53
Self-contained unit type dust collector saves time in installation. il Mill & Factory 52:140-1 Mr '53
Silicone-treated dust collectors in high temperature dust-control systems. L. C. McCabe. il Ind & Eng Chem 45:sup104A-6A F '53
Sturtevant dust arrester. il Engineer 195:762 My 29 '53
Unit dust collector. il Engineer 194:427 S 26 '52

See also
Dust sampling

DUST control
What about dust control? cost data. G. E. Stephenson. Roads & Eng Constr 91:152+ Mr '53

DUST diseases. See Lungs—Dust diseases

DUST explosions
Spontaneous ignition and dust explosion hazards of certain soybean products; abstract. Safety Maint & Prod 105:66+ My '53; Same. East Underw 54:36 Mr 30 '53

DUST removal
Control and recovery of dust and fume in industry. R. Ashman. bibliog il diags Inst Mech Eng Proc (B) 1B no 5:157-68 '52
Controlling grinding-wheel dust. N. Palmer. diag Am Mach 96:161 N 24 '52
Dust and fume elimination investigated; Electric furnace steel conference fume control session, Pittsburgh, Dec. 4-6; with abstracts of papers. Steel 131:82+ D 29 '52

DUST removal—*Continued*

Electro-filter as a secondary recovery device. W. A. Thompson. il diags Pulp & Pa of Can (Convention no) 54:174-7+ [F] '53

Scrubber traps high dust load. il Chem Eng 60:250 My '53

Separation of airborne dust and particles. C. N. Davies. bibliog diags Inst Mech Eng Proc (B) 1B no 5:185-98; Discussion. il 199-213 '52

Surface active agent phenomena in dust abatement. P. L. Walker, jr., E. E. Petersen and C. C. Wright. bibliog Ind & Eng Chem 44:2389-93 O '52

To sweep up dust, damp it down! E. W. Merritt. il Safety Maint & Prod 105:27-9 My '53

Ventilating system changes air every 10-12 minutes; Ford Cleveland foundry. il Foundry 81:184-7 Mr '53

Ventilation. bibliog il Nat Safety N 67:57-8 Mr '53

See also

Air filters

Dust collectors

Electric precipitation

Exhaust systems

DUST sampling

Air sampling with membrane filters. M. W. First and L. Silverman. bibliog il diags A M A Archives Ind Hygiene & Occup Med 7:1-11 Ja '53

Counting of dust particles by phase microscopy. G. Crossmon. bibliog il A M A Archives Ind Hygiene & Occup Med 6:416-20 N '52

Gravimetric sampling of dust in coal mines. H. H. Watson and T. G. Morris. bibliog il diags Engineering 174:228-9 Ag 22 '52

Portable electrostatic precipitator operating from 110 volts a.c. or six volts d.c. A. D. Hosey and H. H. Jones. bibliog il plan diags A M A Archives Ind Hygiene & Occup Med 7:49-57 Ja '53

Preparation of dust samples for microscopic sizing. M. W. First. bibliog A M A Archives Ind Hygiene & Occup Med 7:58-60 Ja '53

DUTCH language

Dictionaries

Dutch-English and English-Dutch dictionary. F. G. Renier. 571p $2.50 Dover publications, inc, 1780 Broadway, New York 19 '52

DUVAL sulphur and potash company

Profit prospects favorable. Barron's 33:31 Mr 23 '53

DYE analysis

Analysis of dyes for man-made fibers. A. F. Schneid. bibliog il Am Dyestuff Rep 41:565-72 S 15 '52

Controlled vat dyeing; instrumental and analytical measurement. G. L. Royer. bibliog il diags Am Dyestuff Rep 41:601-8 S 29 '52

Dye control with the *R*-cam and ruler. B. S. Pritchard and E. I. Stearns. bibliog Opt Soc Am J 42:752-3 O '52

Quantitative analysis of azo and other dyes and intermediates. F. M. Arshid and others. bibliog diag Soc Dyers & Col J 69:11-18 Ja '53

DYE industry

Alphabetical list of new products developed since Nov. 1951. il diags Am Dyestuff Rep 41:795-838+ D 8 '52

Dye battle; Germany's hold on Latin American market. Bsns W p 168-9 Mr 14 '53

Place of the technologist in our industry. F. L. Goodall. Soc Dyers & Col J 69:7-11 Ja '53

Ralph Gutekunst; traveling man. G. Boyo. Mod Textiles Mag 34:35+ Ap '53

Statistics

Dyes production in '52 decreased 23 percent. Oil Paint & Drug Rep 163:4+ Je 8 '53

Scotland

Turkey red dyeing in Scotland; its heyday and decline. R. A. Peel. bibliog Soc Dyers & Col J 68:496-505 D '52

DYE laboratories

Commission-dyehouse laboratory. A. W. Grover. Am Dyestuff Rep 41:622-3 S 29 '52

DYE manufacture

Polycyclic aromatic hydrocarbons as starting materials for the synthesis of dyestuffs. T. Holbro. J Ap Chem 3:1-9 Ja '53

DYE patents

Patent digest. P. Wengraf. Published in biweekly numbers of American dyestuff reporter

DYE research

Silicon-containing azo dyes; dyeing properties and lightfastness. S. V. Sunthankar and H. Gilman. bibliog Textile Res J 23:53-8 Ja '53

DYE standards. See Dye testing—Standards

DYE testing

Accelerated light fastness testing methods; abstract. Rabe. Am Dyestuff Rep 41:748-9 N 10 '52

Integrating light meter for fading tests. O. E. Miller. il diag Opt Soc Am J 42:661-2 S '52

Relation between certain defects in dyed fabrics and mechanical damage in wet processing. D. M. Cates and others. bibliog il Textile Res J 22:623-30 O '52

Simple technique for investigating the effect of humidity on the fading and degradation of dyed fabrics by sunlight, and some observations on dyed cotton. D. Ashton and M. E. Probert. bibliog diags Textile Inst J Trans 44:T 1-11 Ja '53

See also

Dyes, Fastness of

Standards

International progress on colorfastness tests reached at meetings of American standards association. Standardization 23:415+ D '52

Standard dye tests and standard records; a plea. L. A. Olney. Am Dyestuff Rep 41:684 O 13 '52

Swiss standards association textiles; textile testing methods; tr. by C. Z. Draves. Am Dyestuff Rep 41:701-17 O 27 '52

DYEHOUSES

See also

Dye laboratories

Equipment

Cost-cutting equipment offered for wet processing and finishing. il diags Textile World 102:121-5+ N '52

New ideas and new techniques keep this dyehouse modern; Globe dye works co. G. M. Moisson. il Textile World 103:120-1 F '53

See also

Dyeing machines

DYEING machines

Air makes a blue shirt blue; pneumatic roll loading. W. H. Ridley. il diags Comp Air Mag 58:272-4 O '53

Barotor; pressurized fabric-dyeing machine. P. M. Cole. il diag Am Dyestuff Rep 42:32-5 Ja 19 '53

Belgian dye machine uses controlled pressure. il Textile World 102:158 D '52

Bond dyeing machine uses shotgun technique. G. M. Moisson. il diags Textile World 102:123 D '52

Bond machine demonstrated. il diag Am Dyestuff Rep 41:721-2 O 27 '52; Abstract. Mod Textiles Mag 33:69 N '52

Continuous dyeing of vat dyes (the standfast molten metal technique). J. Ardron and others. bibliog pl diag Soc Dyers & Col J 68:249-56 Jl '52

Do your oval-reel continuous-chain washers give trouble? W. O'Keefe. diags Textile World 103:126-7+ Ja '53

New pressure dyeing machine; Barotor dyer. il diag Machine Design 25:121 F '53

Pressurized wet processing uses package-dyeing principles. il Textile World 103:120 Ap '53

DYES, Effect of light on

Simple technique for investigating the effect of humidity on the fading and degradation of dyed fabrics by sunlight, and some observations on dyed cotton. D. Ashton and M. E. Probert. bibliog diags Textile Inst J Trans 44:T 1-11 Ja '53

DYES, Fastness of

Dyeing halfwool with benzo fast copper dyes; abstract. Wojatschek. Am Dyestuff Rep 41:748 N 10 '52

DYES, Fastness of—*Continued*

For washable woolens make your colors washable. G. M. Moisson. il Textile World 103:110-11 Jl '53

International progress on colorfastness tests reached at meetings of American standards association. Standardization 23:415+ D '52

Investigations into fastness to perspiration. Soc Dyers & Col J 68:392-4 O '52

Silicon-containing azo dyes; dyeing properties and lightfastness. S. V. Sunthankar and H. Gilman. bibliog Textile Res J 23:53-8 Ja '53

Swiss standards association textiles; textile testing methods; tr. by C. Z. Draves. Am Dyestuff Rep 41:701-17 O 27 '52

DYES and dyeing

Adsorption of sensitizing dyes in photographic emulsions. W. West, B. H. Carroll and D. H. Whitcomb. bibliog J Phys Chem 56:1054-67 D '52

Alphabetical list of new products developed since Nov. 1951. il diags Am Dyestuff Rep 41:795-838+ D 8 '52

Application of ultrasonics to textile processes. A. A. de Araujo. bibliog Am Dyestuff Rep 41:615-19 S 29 '52

Common sense on colour in textiles. C. M. Whittaker. Textile Inst J 44:P237-46 Jl '53

Dyeing and finishing of hosiery. H. L. De Turck. Am Dyestuff Rep 41:739-43 N 10 '52

In dyeing nothing is left to chance. il Can Chem Process 36:54+ S '52

Lixate brine; percolated salt solutions offer savings in labor, power, space. E. Weller. Mod Textiles Mag 34:56+ My '53

Relation between certain defects in dyed fabrics and mechanical damage in wet processing. D. M. Cates and others. bibliog il Textile Res J 22:623-30 O '52

See also

American association of textile chemists and colorists
Aniline black
Color matching
Color printing
Dye industry
Dyeing machines
Dyes, Fastness of
Metachromasis
Pigments
Stains and staining (microscopy)
Textile printing
Ultramarine

Aluminum

See Aluminum—Coloring

Bibliography

Abstracts from British and foreign journals and patents. Published in monthly numbers of Journal of the Society of dyers and colourists

Chemistry

Absorption spectra of the direct dye benzopurpurine 4B and related structures. H. A. Standing and M. Stein. bibliog Textile Inst J Trans 44:T224-9 My '53

Benzotriazole analogs of certain naphthalene dye intermediates. M. Scalera and F. H. Adams. bibliog Am Chem Soc J 75:715-18 F 5 '53

Colour and constitution; aromatic hydrocarbons. M. J. S. Dewar. Chem Soc J p3532-44 S '52

Colour and constitution; polyphenyls, polyenes, and phenylpolyenes; and the significance of cross-conjugation. M. J. S. Dewar. Chem Soc J p3544-50 S '52

Continuous dyeing of vat dyes (the standfast molten metal technique). J. Ardron and others. bibliog pl diag Soc Dyers & Col J 68:249-56 Jl '52

Contribution to the theory of light absorption of symmetrical polymethine dyes. K. Fukui and others. J Chem Phys 21:186-7 Ja '53

Controlled vat dyeing; leuco potentials. E. E. Lineken and others. bibliog Am Dyestuff Rep 41:608-10 S 29 '52

Controlled vat dyeing; the stabilization of vat dyes at elevated temperatures. C. L. Zimmerman and others. bibliog il Am Dyestuff Rep 41:597-601 S 29 '52

Kinetics of the formation of the carbinol of crystal violet. J. C. Turgeon and V. K. LaMer. bibliog Am Chem Soc J 74:5988-95 D 5 '52

$(NH_4)_2HPO_4$ provides automatic pH control in chrome dyeing. Chem & Eng N 30:5160 D 8 '52

Oxonols derived from azol-5-ones. E. B. Knott. Chem Soc J p2399-401 Je '52

Polarographic reduction of crystal-violet, brilliant-green, malachite-green, and auramine. R. C. Kaye and H. I. Stonehill. Chem Soc J p3231-9 Ag '52

Polycyclic aromatic hydrocarbons as starting materials for the synthesis of dyestuffs. T. Holbro. J Ap Chem 3:1-9 Ja '53

Polymethin dyes from 4 : 5-disubstituted thiazoles. E. B. Knott. Chem Soc J p4099-106 N '52

Principles of copper dyeing of polyacrylonitrile fibers; the controlled redox-potential method. R. H. Blaker. il diags Am Dyestuff Rep 42:76-80 F 2 '53; Same cond. Mod Textiles Mag 33:56+ N '52

Reduction properties of vat dyes. W. J. Marshall and R. H. Peters. bibliog 3 pls diags Soc Dyers & Col J 68:289-99 Ag '52

Relation between the absorption spectra and the chemical constitution of dyes; effect of solvent and of temperature on the *cis-trans* isomerization of azo dyes. W. R. Brode, J. H. Gould and G. M. Wyman. bibliog Am Chem Soc J 75:1856-9 Ap 20 '53

Relation between the absorption spectra and the chemical constitution of dyes; phototropism and *cis-trans* isomerism in aromatic azo compounds. W. R. Brode, J. H. Gould and G. M. Wyman. bibliog Am Chem Soc J 74:4641-6 S 20 '52

Some trinuclear cyanine dyes; attempted synthesis of dyes isomeric with those of the neocyanine type. F. M. Hamer. Chem Soc J p3197-211 Ag '52

Stabilities of metal derivatives of *o*-substituted azo dyes. F. A. Snavely and W. C. Fernelius. bibliog Science 117:15-16 Ja 2 '53

Structures and properties of some metal derivatives of azo and azomethine dyes. J. C. Bailar, jr. and C. F. Callis. bibliog Am Chem Soc J 74:6018-21 D 5 '52

Studies of metallated dye complexes; copper (II) complexes with 2-carboxyphenyl-azo-β-naphthol and 2-carboxyphenyl-azo-β-naphthylamine. H. B. Jonassen and J. S. Wilson. bibliog Am Chem Soc J 75:4201-4 S 5 '53

Synthesis of water-repellent dyes. C. C DeWitt and P. D. Shroff. bibliog(31 ref) Ind & Eng Chem 45:302-7 F '53

Use of sulfamic acid derivatives in the application of oxidation blacks; Solanile black. C. Zuber and B. Jomain. Soc Dyers & Col J 68:241-8 Jl '52; Abstract. Am Dyestuff Rep 41:750 N 10 '52

Control

Pressure and flow controls make winding and dyeing uniform; Dundee mills. E. D. White. il diag Textile World 103:90-1 Jl '53

Processing controls reduce effluent waste; abstract. R. H. Souther. Textile World 102:143 D '52

Single instrument controls batch-dyeing time and temperature. il diags Textile World 102:152+ D '52

Cotton

Desorption of a direct cotton dye from cellulosic fibres. J. H. E. Jackson and H. A. Turner. bibliog Soc Dyers & Col J 68:345-52 S '52

Direct cotton dyes for diazotisation and development on the fibre; General Aniline. Soc Dyers & Col J 68:273 Jl '52

Ethylenimine-treated cotton. G. L. Drake, jr. and others. bibliog Textile Res J 23:639-41 S '53

Polyazodyes; aliphatic amines and copper complex compounds added; patent. Am Dyestuff Rep 41:627 S 29 '52

Pressure and flow controls make winding and dyeing uniform; Dundee mills. E. D. White. il diag Textile World 103:90-1 Jl '53

Simple technique for investigating the effect of humidity on the fading and degradation of dyed fabrics by sunlight, and some observations on dyed cotton. D. Ashton and M. E. Probert. bibliog diags Textile Inst J Trans 44:T 1-11 Ja '53

DYES and dyeing—Cotton—*Continued*

Some practical procedures for dyeing cotton and for the high-temperature dyeing of synthetic fibers. A. P. Roy. Am Dyestuff Rep 41:844-6 D 8 '52
Synthesis of water-repellent dyes. C. C. DeWitt and P. D. Shroff. bibliog(31 ref) Ind & Eng Chem 45:302-7 F '53
Textile wet processing; cotton textiles. W. W. Evans. bibliog Am Dyestuff Rep 41:658-61 O 13 '52
Turkey red dyeing in Scotland; its heyday and decline. R. A. Peel. bibliog Soc Dyers and Col J 68:496-505 D '52
Variables affecting dye fixation in padding. bibliog Am Dyestuff Rep 42:108-16 F 16 '53

Dacron

Aqueous dyeing of Orlon and Dacron. W. G. Rhoads. Mod Textiles Mag 34:57-8 F '53
Dyeing Dacron under pressure. Textile World 103:158 Mr '53
Dyeing fabrics under pressure. J. E. Reith and R. J. Andres. Am Dyestuff Rep 42:35-8 Ja 19 '53
Principles of dyeing Dacron polyester fiber. W. R. Remington. diags Am Dyestuff Rep 41:859-60 D 22 '52
Thermosol method of dyeing. J. W. Gibson, jr. and others. diag Am Dyestuff Rep 42:1-2 Ja 5 '53

Dynel

Carbide research cuts dynel dyeing cost. Textile World 103:160 F '53; Am Dyestuff Rep 42:83 F 2 '53
Latest procedures for dyeing dynel; abstract. T. A. Field, jr. Am Dyestuff Rep 42:3-4 Ja 5 '53
Lixate brine; percolated salt solutions offer savings in labor, power, space. E. Weller. Mod Textiles Mag 34:56+ My '53

Fluorescence

Anisotropic dissolution and the orientation of the phosphorescent dye, trypaflavin, in the crystal of citric acid. D. Yamamoto. il diags J Chem Phys 20:1974-5 D '52
Recent advances in fluorescent materials; increasing variety of applications. A. E. Williams. il Chem Age (Lond) 67:823-6 D 20 '52

History

Foradlad textil (finished textiles); review translated from Swedish. Am Dyestuff Rep 42:81-2 F 2 '53

Hosiery

Dyeing and finishing of hosiery. H. L. De Turck. Am Dyestuff Rep 41:739-43 N 10 '52

Metachrome process

Metachromatic effects of anionic polysaccharides and detergents. A. Levine and M. Schubert. bibliog Am Chem Soc J 74:5702-6 N 20 '52
New method of pH control in dyeing and some observations on the metachrome process. R. J. Hannay and others. bibliog Soc Dyers & Col J 68:373-80 O '52

Nylon

Dyeing fabrics under pressure. J. E. Reith and R. J. Andres. Am Dyestuff Rep 42:35-8 Ja 19 '53
How to use the Irgalans. R. C. Allison. Mod Textiles Mag 34:62+ Ap '53
Investigations into the effect of carbonizing processes on nylon yarn and fabric; abstract. Am Dyestuff Rep 41:585 S 15 '52
Modern Textiles handbook. L. Mauer and H. Wechsler. il diag Mod Textiles Mag 33:45+ D '52
New tricot-dyeing method saves cloth, time, chemicals. G. M. Moisson. il Textile World 103:84-5 Ap '53

Orlon

Aqueous dyeing of Orlon and Dacron. W. G. Rhoads. Mod Textiles Mag 34:57-8 F '53
Dyeing fabrics under pressure. J. E. Reith and R. J. Andres. Am Dyestuff Rep 42:35-8 Ja 19 '53
Dyes for Orlon and their application. P. L. Meunier. diag Am Dyestuff Rep 42:39-43 Ja 19 '53
Principles of copper dyeing of polyacrylonitrile fibers; the controlled redox-potential method. R. H. Blaker. il diags Am Dyestuff Rep 42:76-80 F 2 '53; Same cond. Mod Textiles Mag 33:56+ N '52
Some of the variables connected with the dyeing of Orlon. G. D. Fronmuller. bibliog Am Dyestuff Rep 41:578-80 S 15 '52
Type 42 Orlon staple is more heat-stable, dyeable. Textile World 103:128 Je '53

Package dyeing

Streamlined package-dyeing system eliminates six handlings; Ankokas dyeing & processing co. G. M. Moisson. il Textile World 103:154-5+ S '53
These tips will help vat dyeing on packages. E. L. Caswell. Textile World 103:97+ O '53

Paper

Dyeing of paper. H. A. Lips. Paper Tr J 135:322+ N 14 '52
Effect of dye structure on dye adsorption on pulp fibers; progress report; abstract. E. F. Thode. Paper Tr J 136:17 Je 5 '53; Same. Pulp & Pa of Can 54:139 Je '53
Surface area of pulp fibres, an important factor in papermaking; abstract. J. W. Beamesderfer. Pulp & Pa of Can 54:138-9 Je '53

Rayon

Desorption of a direct cotton dye from cellulosic fibres. J. H. E. Jackson and H. A. Turner. bibliog Soc Dyers & Col J 68:345-52 S '52
Genray process for rayon gives level vat dyeings, better penetration. G. M. Moisson. il diag Textile World 103:104-5 Ag '53
Variables affecting dye fixation in padding. bibliog Am Dyestuff Rep 42:108-16 F 16 '53

Standards

See also
Dye testing—Standards

Stripping

Dyestripping without fabric damage. A. R. Globus. Mod Textiles Mag 33:58+ D '52
Stripping agents; abstract. A. Chemaster. Am Dyestuff Rep 42:47 Ja 19 '53

Synthetic fibers

ASME checks up on dyeing and finishing developments. J. B. Goldberg. Textile World 103:119+ Ag '53
Analysis of dyes for man-made fibers. A. F. Schneid. bibliog il Am Dyestuff Rep 41:565-72 S 15 '52
Celaperm, the acetate with sealed-in colour. A. F. Tesi. Can Chem Process 37:68 Ag '53
Copper sulfate reduction. R. H. Blaker. il diags Mod Textiles Mag 33:56+ N '52
Dyeing and finishing of fabrics containing acetate; abstract. F. Fortess and G. C. Ward. Can Chem Process 36:93 O '52
Dyeing cellulose acetate by acid vat padding, drying and reducing again; patent. Am Dyestuff Rep 42:19 Ja 5 '53
Dyeing of blends containing acetate rayon; abstract. C. P. Tattersfield. Am Dyestuff Rep 42:3 Ja 5 '53
Dyeing the blends. J. M. Morahan. Mod Textiles Mag 33:33-4+ N '52
Finishing the blends. Mod Textiles Mag 34:34-5 Mr '53
New ideas and new techniques keep this dyehouse modern; Globe dye works co. G. M. Moisson. il Textile World 103:120-1 F '53
New techniques with colored fibers make new fabrics possible. G. M. Moisson. Textile World 103:141, 232+ O '53
Printing acrylic and polyester fibers. Am Dyestuff Rep 42:99-107 F 16 '53
Redox potential control simplifies cuprous-ion dyeing; abstract. R. H. Blaker. Textile World 102:143 D '52
Some practical procedures for dyeing cotton and for the high-temperature dyeing of synthetic fibers. A. P. Roy. Am Dyestuff Rep 41:844-6 D 8 '52
Textile wet processing; present-day synthetic fibers and blends. E. J. Chornyei. il Am Dyestuff Rep 41:661-5 O 13 '52
Theory and practice in dyeing vinyl fibers; abstract. A. M. Baron. Am Dyestuff Rep 42:4 Ja 5 '53

DYES and dyeing—Synthetic fibers—*Cont.*

Thermosol method of dyeing. J. W. Gibson, jr. and others. diag Am Dyestuff Rep 42:1-2 Ja 5 '53

Tips on dyeing 11 fiber blends. E. Szlosberg. Textile World 103:125+ Ag '53

See also

Dyes and dyeing—Dacron
Dyes and dyeing—Dynel
Dyes and dyeing—Nylon
Dyes and dyeing—Orlon
Dyes and dyeing—Rayon

Vat dyes

Ager for developing vat dyes in two separate chambers; patent. diag Am Dyestuff Rep 41:747 N 10 '52

Anthraquinonoid vat dyes and intermediates derived from azodiphenyl-4 : 4'-dicarboxylic acid. Soc Dyers & Col J 68:273-4 Jl '52

Continuous dyeing of vat dyes (the standfast molten metal technique). J. Ardron and others. bibliog pl diag Soc Dyers & Col J 68:249-56 Jl '52

Controlled vat dyeing. C. L. Zimmerman and others. bibliog il diags Am Dyestuff Rep 41:597-610 S 29 '52

Efficiency of vat-color ageing depends on temperature control. T. N. Patrick. Textile World 103:147+ Je '53

Genray process for rayon gives level vat dyeings, better penetration. G. M. Moisson. il diag Textile World 103:104-5 Ag '53

Influence of particle size on the dyeing properties of vat dyes. T. Flanagan. Soc Dyers & Col J 69:18-23 Ja '53; Discussion. 69:119-20 Ap '53

Reduction properties of vat dyes. W. J. Marshall and R. H. Peters. bibliog 3 pls diags Soc Dyers & Col J 68:289-99 Ag '52

Review and practice of the vat acid process; abstract. J. A. Heyder and G. N. Sandor. Am Dyestuff Rep 42:3 Ja 5 '53

These tips will help vat dyeing on packages. E. L. Caswell. Textile World 103:97+ O '53

See also

Ciba yellow

Wool

Dyeing wool with chromatable dyes; diammonium phosphate and ammonium sulfate added; patent. Am Dyestuff Rep 41:626-7 S 29 '52

Dyeing wool with metallized azo dyes; treatment with aldehydes having affinity for wool; patent. Am Dyestuff Rep 42:92 F 2 '53

Effect of copper in wool dyeing. L. F. Story. Soc Dyers & Col J 68:512 D '52

For washable woolens make your colors washable. G. M. Moisson. il Textile World 103:110-11 Jl '53

Interchangeability of sodium sulfate and common salt in acid-dyeing wool. H. W. Leitch. Am Dyestuff Rep 41:678-81 O 13 '52

New method of pH control in dyeing and some observations on the metachrome process. R. J. Hannay and others. bibliog Soc Dyers & Col J 68:373-80 O '52

Pacific mills DAP process improves wool dyeing. G. M. Moisson. il Textile World 103:110-11+ F '53

Reaction between wool and nickelammonium hydroxide; the adsorption of nickel by wool from solutions of nickelammonium hydroxide. J. W. Bell and C. S. Whewell. bibliog Soc Dyers & Col J 68:299-305 Ag '52

Reaction of formaldehyde and phenols with wool; the coupling of linked phenols to give covalent linked dyes. K. G. Johnson. bibliog Textile Res J 23:457-62 Jl '53

Relation between dyeing properties of wool and modifications of the fiber. G. Lagermalm and others. bibliog Textile Res J 23:398-400 Je '53

Relationship between various surface properties of wool fibers; sorption of dyes and acids in wool fibers. J. Lindberg. bibliog Textile Res J 23:573-84 Ag '53

Role of sodium chloride and sodium sulfate in acid-dyeing wool. J. D. Justice and W. W. Ewing. bibliog diags Am Dyestuff Rep 41:668-77 O 13 '52

Synthesis of water-repellent dyes. C. C. DeWitt and P. D. Shroff. bibliog(31 ref) Ind & Eng Chem 45:302-7 F '53

Tips on dyeing 11 fiber blends. E. Szlosberg. Textile World 103:125+ Ag '53

Use an oxalic-acid pretreatment before chrome-dye stripping of wool. D. Frishman. Textile World 102:252 D '52

DYKTOR, Herbert George, 1892-1952

Sketch. P. Drinker. por A M A Archives Ind Hygiene & Occup Med 6:534 D '52

DYNAMICS

Automobile dynamic loads. T. K. Garrett. diags Automobile Eng 43:60-4 F '53

Current status of dynamic stability theory; abstract. F. E. Bothwell. Elec Eng 71:1101 D '52

Dynamics of pulsative flow through sharp-edged restrictions, with special reference to orifice-metering. R. C. Baird and I. C. Bechtold. bibliog il diags A S M E Trans 74:1381-7 N '52; Same. Instruments 25:481-6 Ap '52; Same. Pet Eng 24:D41-2+ Jl '52

Measurement of dynamic modulus in adhesive joints at ultrasonic frequencies. A. G. H. Dietz and others. il diags Am Soc T M Proc 50:1414-27 '50

Problem of the dynamic vibration absorber. R. E. D. Bishop and D. B. Welbourn. diags Engineering 174:796 D 19 '52

Radial impact on an elastically supported ring. E. Wenk, jr. il diags Am Soc C E Proc 78 [no 157]:1-25 N '52

Techniques and equipment for generation of dynamic high pressures. E. J. Mickevicz. il diags A S M E Trans 75:325-7 Ap '53

See also

Aerodynamics
Entropy
Hydrodynamics
Machinery—Design
Mechanics
Moments of inertia
Thermodynamics
Vibration

DYNAMICS of a particle

Turbulent diffusion and erosion. R. W. Davies. diag J Ap Phys 23:941-8 S '52

DYNAMITE

Dynamite spacers. il Mod Plastics 30:184 F '53

DYNAMOMETERS

Axle-testing machine simulates actual driving conditions in laboratory. il Elec Eng 72:275 Mr '53

Dynamometer for the human calf muscles. O. C. J. Lippold and others. diags J Sci Instr 29:365-6 N '52

Dynamometers change art to science. E. J. Tangerman. il diags Am Mach 96:130-4 O 13 '52

Dynamometers for automotive testing. F. Slamar and C. P. Croco. il diags Westinghouse Eng 13:114-17 Jl '53; Excerpt. Automotive Ind 109:38-41 Jl 15 '53

Flexure pivots; design formulas and charts. A. G. Thorp, 2d. il diags Product Eng 24:192-200 F '53

Fractional horsepower dynamometer. J. Lerner and M. A. Lindeman. il diags Machine Design 24:127-8 D '52

Large capacity hydraulic dynamometer; Heenan and Froude, ltd. il diag Engineer 195:560-1 Ap 17 '53

Whys's and wherefore's of brake dynamometers mapped out for users of new SAE brake test code. il S A E J 61:100-1+ Mr '53

DYNAMOS. See Electric generators, Direct current

DYNEL

Checking on regularity tests. A. G. C. Pilavachi. Mod Textiles Mag 34:70 O '53

Modern Textiles handbook; acrylics. L. Mauer and H. Wechsler. il diag Mod Textiles Mag 34:42-4+ F '53

New fiber gives excellent service in dust fume bags; Bradley co.'s Yellow Pine mine & smelter. il Eng & Min J 154:121 Ja '53

Progress in acrylics. G. Boyo. il Mod Textiles Mag 34:50-2 S '53

See also

Dyes and Dyeing—Dynel

DYSPROSIUM

Some magnetic and electrical properties of gadolinium, dysprosium, and erbium metals. S. Legvold and others. Rs Mod Phys 25:129-30 Ja '53

Isotopes

Dysprosium 157. T. H. Handley and E. L. Olson. Phys R 90:500-1 My 1 '53

E

EDTA. See Ethylenediamine tetraacetic acid

EAR

Brownian motion and the transmission of energy in the cochlea. H. L. de Vries. diags Acoustical Soc Am J 24:527-33 S '52

Dimensions of the cochlea (guinea pig). C. Fernandez. diags Acoustical Soc Am J 24:519-23 S '52

Gross localization of the place of origin of the cochlear microphonic. G. v. Békésy. diags Acoustical Soc Am J 24:399-409 Jl '52

Possible mechanism of excitation of nerve impulses in the cochlea; abstract. H. Davis and I. Tasaki. Science 116:519-20 N 14 '52

Space-time pattern of the cochlear microphonics (guinea pig), as recorded by differential electrodes. I. Tasaki and others. il diags Acoustical Soc Am J 24:502-19 S '52

Injuries

Tentative estimate of a hearing damage risk criterion for steady-state noise. H. C. Hardy. Acoustical Soc Am J 24:756-61 N '52

Protection

Conservation of hearing. Nat Safety N 67:98 Mr '53

New types of ear protectors. J. Zwislocki. il diag Acoustical Soc Am J 24:762-4 N '52

Unsolved problems relating to hearing loss in industry. G. D. Hoople. Acoustical Soc Am J 24:765-6 N '52

EAR, Mechanical

Early work on the instrumental ear. H. O. Taylor. Acoustical Soc Am J 25:158 Ja '53

EARNED surplus (term)

Wanted; a clear, unambiguous, unequivocal replacement for the term earned surplus. A. P. Wendt. J Account 95:206-9 F '53

EARNEST, G. Brooks

Sketch. por Civil Eng 22:959-60 N '52

EARTH

Earth is born. H. C. Urey. Science 117:509-10 My 8 '53

Earth's electricity. J. E. McDonald. il diags Sci Am 188:32-7 Ap '53

See also

Continents
Geochemistry
Geology
Geophysics
Ore deposits
Paleontology
Volcanoes
Water, Underground

Age

Variations in the relative abundances of the isotopes of common lead. C. B. Collins and others. bibliog Phys R 88:1275-6 D 15 '52

Internal structures

Long-wave seismograph. Sci Am 188:50+ Ap '53

Rotation

Sea level and the rotation of the earth. W. Munk and R. Revelle. bibliog Am J Sci 250:829-33 N '52

Surface

See also

Geosyncline
Ocean bottom

EARTH currents

Some characteristics of the earth as a conductor of electric current. M. C. McCall and L. H. Harrison. 5pls U S Bur Mines Rep of Invest 4903:1-9 '52

EARTH movements

See also

Earthquakes
Landslides
Subsidences (earth movements)

EARTH pressure

Culvert under high fill is research laboratory. il diags Eng N 149:38+ N 20 '52

Vector solution of soil pressures. W. D. Bigler. diags Eng N 150:110+ Ap 16 '53

EARTH satellite vehicle. See Rockets

EARTH temperature

Residential heat pump experiments in Philadelphia; earth as a heat source; abstract. A. H. Kidder and J. H. Neher. Elec Eng 72:123 F '53

See also

Soil temperature

EARTHENWARE. See Pottery—Manufacture

EARTHQUAKES

Abstracts of papers at Seismological society of America 1952 meeting. Geol Soc Bul 63:1349-56 pt 2 D '52

Earth tremor 5000 miles away is noticed in Timken laboratory. Iron Age 170:203 D 4 '52

Turbidity currents and submarine slumps, and the 1929 Grand Banks earthquake. B. C. Heezen and M. Ewing. map Am J Sci 250:849-73 bibliog(p871-3) D '52

California

Earthquake damage in Kern county. W. T. Rintoul. il Pet Eng 25:A74+ F '53

Men and machines blitz earthquake damage; Southern Pacific railroad. il Constr Methods 34:55-6 O '52

Recent Arvin-Tehachapi, southern California, earthquake. J. P. Buwalda and P. St Amand. il map diag Science 116:645-50 D 12 '52

EARTHQUAKES and building

Comprehensive numerical method for the analysis of earthquake resistant structures. C. S. Whitney and others. bibliog diags Am Concrete Inst J 23:5-28 S '51; Discussion. 24:28^1-28^3 pt 2 D '52

Earthquake stresses in shear buildings. M. G. Salvadori. bibliog diags Am Soc C E Proc 79 [no 177]:1-23 Mr '53

Most quake damage due to improper construction. J. T. Silveira; D. F. Moran. Nat Underw 56:30 N 6 '52

Multistory buildings designed to resist earthquakes. J. J. Gould. il plans Am Concrete Inst J 23:29-36 S '51; Discussion. 24:36^1-36^3 pt 2 D '52

Quake-induced surge damages sewage tank. il Eng N 149:36 O 9 '52

Scientists shake building in seismic test; rigid-frame building for Reader's digest in Tokyo. il plan diags Eng N 149:36-7 D 25 '52

EARTHQUAKES and oil lands

Does oil withdrawal cause earthquakes? remedial measures to overcome subsidence in California may increase recovery. R. Sneddon. il map plan Pet Eng 24:A59-60+ O '52

Earthquake damage in Kern county. W. T. Rintoul. il Pet Eng 25:A74+ F '53

EARTHWORK

Construction of compacted earth-fill dam in New Brunswick. J. V. Daniliauskas and D. F. Coates. il plan diags Roads & Eng Constr 91:122-5+ Ag '53

Contour method of grade design and earthwork calculation. C. V. Kane. maps diags Roads & Sts 95:53-4+ D '52; Abstract. Pub Works 84:64 F '53

Contractors level plant site in week-end. il Roads & Sts 96:60 Jl '53

Contractors make dirt fly for popular cause; Minneapolis-Honeywell regulator co. site graded for new factory. il Constr Methods 35:63 My '53

High-production grading in Texas. E. F. London. il Constr Methods 35:88+ Ja '53

Lower Bhavani dam, Madras. R. D. Rajan. il map diags Engineering 174:777-80 D 19 '52

Ten ways to cut cycle time. il Roads & Sts 96:136 My '53; Abstract. Constr Methods 35:62-3 Ap '53

You can doze in winter. il diags Constr Methods 35:50-3 Ja '53

See also

Dams
Dikes (engineering)
Drainage
Drilling and boring (earth and rocks)
Excavating machinery
Excavation
Filling
Foundation soils
Foundations
Levees
Prospecting—Geophysical methods—Engineering applications
Railroads—Earthwork
Roads—Grading
Roads—Subgrades
Rollers (earthwork)
Soil mechanics
Tamping machines
Tunnels and tunneling

Tables, calculations, etc.

Better method of earthwork computation. T. E. Nicholas. diags Pub Works 84:74-5 Jl '53

EAST and West
East and West over five centuries; Turkey and Europe, 1453 and 1953; political moods and changes. Economist 167:580-1 My 30 '53

EAST ST LOUIS, Illinois

Bridges

East St Louis Veterans memorial bridge. A. L. R. Sanders. diags Am Soc C E Proc 78[no 150]:1-7 S '52

EAST TENNESSEE natural gas company
Debentures offered. Comm & Fin Chr 177:1679 Ap 20 '53

EASTERN air lines
Colonial merger with Eastern air lines. Bsns W p92 Je 27 '53
EAL's 1952 profit tops $8.5 million. Aviation W 58:83 Mr 30 '53
Eastern reports salaries. Aviation W 58:22+ Ap 20 '53
1952 revenues and earnings. Comm & Fin Chr 177:1367 Mr 30 '53

EASTERN Europe. See Europe, Eastern

EASTERN gas and fuel associates
Public utility securities. O. Ely. Comm & Fin Chr 177:1660 Ap 16 '53

EASTERN underwriters association
Annual meeting, New York. East Underw 53:62 D 12 '52; Nat Underw 56:2+ D 11 '52

EASTMAN chemical products, inc.
Eastman chemical products set up with Stone at head. Oil Paint & Drug Rep 163:68 Ja 12 '53

EASTMAN Kodak company
Five companies paying dividends in stock and cash; with comparative balance sheet items. Mag of Wall St 92:223 My 16 '53
Security I like best. A. Huber. Comm & Fin Chr 177:1850+ Ap 30 '53

EASTON, Pennsylvania

Sewerage

Sewage treatment plant is showplace of city. H. C. Herbert. flow diag il Pub Works 84:76-7+ Ap '53

EASTON trust company
Security I like best. H. F. Atwater. Comm & Fin Chr 178:346 Jl 30 '53

EBULLIOMETRY. See Boiling points

EBULLITION. See Boiling

EBURICOIC acid
Chemistry of fungi; dehydroeburicoic acid. R. M. Gascoigne, A. Robertson and J. J. H. Simes. Chem Soc J p 1830-7 Je '53
Chemistry of fungi; the cyclic system of eburicoic acid. J. S. E. Holker and others. Chem Soc J p2414-22 Ag '53
Chemistry of fungi; the structure of eburicoic acid. J. S. E. Holker and others. Chem Soc J p2422-9 Ag '53

ECHELLE spectrographs. See Spectrum

ECHO
Accuracy of reverberation time measurements with warble tones and white noise. W. Furrer and A. Lauber. Acoustical Soc Am J 25:90-1 Ja '53
Submarine topographic echoes from explosive sound. B. Luskin and others. bibliog Geol Soc Bul 63:1053-68. pl 1-7 O '52

ECHO ranging
Porpoise sounds as sonar signals. W. N. Kellogg and others. bibliog il Science 117:239-43 Mr 6 '53

ECHO sounding. See Sounding

ECHO whale finder. See Whaling

ECHOES, Radio. See Radio echoes

ECKER, Frederic W. 1896-
Career of Frederick W. Ecker. C. Axman. por East Underw 54:3-4+ My 1 '53
New president of Metropolitan Life. East Underw 54:1+ My 1 '53; Weekly Underw 168:1209+ My 2 '53

ECKMAN, Horace H.
How to become dealer of year; award by Brand names foundation. por Nat Pet N 45:35-6 Ap 22 '53

ECLIPSES, Solar
Phototubes observe total solar eclipse. F. J. Heyden. il diag Electronics 26:176-9 S '53

ECONOMETRY. See Economics, Mathematical

ECONOMIC advisers, Council of. See United States—Council of economic advisers

ECONOMIC commission for Europe
East-West trade at ECE. Economist 166:858-9 Mr 28 '53

ECONOMIC conditions
Attitudes and altitudes for 1953. I. U. Cobleigh. Comm & Fin Chr 177:92 Ja 8 '53
Economic consequences of peace. P. Einzig. Comm & Fin Chr 177:1650 Ap 16 '53
Economic prospect. Economist 166:185-6 Ja 24 '53
Home outlook good; but not so abroad. S. M. Kempner. Comm & Fin Chr 177:1326+ Mr 26 '53
International problems awaiting solution. M. Winkler. Comm & Fin Chr 177:15 Ja 1 '53
Must we go it alone after all? V. L. Horoth. il Mag of Wall St 92:499-501+ Jl 25 '53
Shall we have global parity prices? M. Palyi. Comm & Fin Chr 176:2325+ D 18 '52
We must work toward new long-term tariff policy. C. R. Sligh, jr. Comm & Fin Chr 178:114-15 Jl 9 '53
What business did six years ago it can do again now; times call for brains, not panaceas. Credit & Fin Management 55:11 F '53
Why should we fear peace? M. S. Rukeyser. Comm & Fin Chr 177:1638+ Ap 16 '53
World economic outlook. R. C. Turner. Comm & Fin Chr 176:1613+ O 30 '52
World economic outlook. A. W. Zelomek. Comm & Fin Chr 177:888+ F 26 '53
World economic problems. W. W. Aldrich. Comm & Fin Chr 177:2637+ Je 18 '53
World economic report. Economist 167:27-8, 165-6 Ap 4, 18 '53
World social situation. W. Kotschnig. Mo Labor R 75:400-1 O '52
World-wide credit situation and our foreign investments. R. M. Binney. Comm & Fin Chr 177:896 F 26 '53

See also

Business conditions
Business depression
Cost of living
Economic policy
Economic statistics
Food supply
Labor supply
Prosperity
Standard of living

also subdivision Economic conditions under names of countries, e.g. Great Britain—Economic conditions; United States—Economic conditions

ECONOMIC development, Committee for. See Committee for economic development

ECONOMIC education of employees. See Economics—Study and teaching

ECONOMIC lot sizes. See Quantities (in production)

ECONOMIC planning
Forest production goals; a critical analysis. H. J. Vaux and J. A. Zivnuska. bibliog Land Econ 28:318-27 N '52
Role of planning in Puerto Rico. R. Picó. Ann Am Acad 285:70-5 Ja '53
What the Russians know about long-range planning. Bsns W p 116-18 N 1 '52

ECONOMIC planning, International

See also

Coal-steel pool
Raw materials—International aspects

ECONOMIC policy
Actions, consequences, and causal relations. G. H. Orcutt. R Econ & Stat 34:305-13 N '52
Are new fluid monetary theories all wet? goods are real wealth. J. S. Draper. Credit & Fin Management 55:14-15 My '53
Challenge of the big change. A. B. Homer. Comm & Fin Chr 177:788 F 19 '53
Getting back to sound economic fundamentals. G. A. Renard. Comm & Fin Chr 177:887+ F 26 '53
New economic climate in Washington. G. B. Bookman. Comm & Fin Chr 177:1312+ Mr 26 '53
No magic panacea for basic economic ills! K. H. Campbell. Comm & Fin Chr 178:209 Jl 16 '53
Plan to maintain stability. Banking 45:97 F '53
Progress through personal initiative. G. C. Neff. Edison Elec Inst Bul 21:39-40+ F '53
World economic plan. E. Johnston. East Underw 53:42 D 12 '52

See also

Capitalism
Communism
Free trade and protection
Government ownership
Government regulation of industry

ECONOMIC policy—See also—*Continued*
- Industrial mobilization
- Industry and state
- Money
- Socialism
- Subsidies
- Tariff
- Taxation

also subdivision Economic policy under names of countries, e.g. Great Britain—Economic policy; United States—Economic policy

ECONOMIC relations

See also
- Balance of payments
- United States—Economic relations

ECONOMIC research

Economic research, a tool for bank management. W. R. Lamb. il Bankers Mo 70:7-8+ Ap '53

Teaming up for local economic research. Bsns W p 100-2 Ja 24 '53

ECONOMIC statistics

National economic accounting; reorientation needed. J. Margolis. R Econ & Stat 34:291-304 N '52

National income and product in 1952; with tables, 1950-1952. Survey of Cur Bsns 33:4-10 F '53

National income and product of the United States, 1952; with detailed tables, 1929-1952. Survey of Cur Bsns 33:6-32 Jl '53

Review of national income and product in the third quarter, 1952. Survey of Cur Bsns 32:3-6+ N '52

Review of national income and product in the first quarter. Survey of Cur Bsns 33:2-7 My '53

Review of national income and product in the second quarter. Survey of Cur Bsns 33:3-6+ Ag '53

We've got the statistical doodlers worried. E. B. Weiss. Ptr Ink 241:75 O 17 '52

You can't make head or tail out of business statistics. E. B. Weiss. Ptr Ink 241:56 O 31 '52

See also
- Agriculture—Statistics
- Business statistics
- Consumption (economics)—Statistics
- Employment—Statistics
- Income—Statistics
- Index numbers (economics)
- Production—Statistics
- Saving—Statistics
- Wages—Statistics

ECONOMIC surveys

1952 survey of consumer finances. Fed Res Bul 38:739-55, 861-76, 974-1001 Jl-S '52

1953 survey of consumer finances. Fed Res Bul 39:588-96, 697-703, 816-21, 940-7 Je-S '53

Students counsel a county. il Bsns W p78-80+ My 16 '53

Survey of consumer expenditures in 1950. M. C. Ruark and A. Hurwitz. Mo Labor R 75:125-33 Ag '52; Correction. 75:262 S '52

Survey of consumer expenditures in 1950; interpretation and use of the results. Mo Labor R 75:425-8 O '52

ECONOMICS

See also
- Agriculture—Economic aspects
- Balance of payments
- Banks and banking
- Business cycles
- Capital
- Capitalism
- Commerce
- Competition
- Consumption (economics)
- Cost
- Cost of living
- Credit
- Debts, Public
- Demography
- Distribution (economics)
- Economic policy
- Finance
- Government regulation of industry
- Housing
- Income
- Index numbers (economics)
- Industrial relations
- Industry
- Interest
- Labor and laboring classes
- Land
- Manufactures
- Money
- Monopolies
- Population
- Prices
- Production
- Profit
- Profit sharing
- Rent
- Saving
- Standard of living
- Strikes
- Tariff
- Taxation
- Trade unions
- Transportation
- Trusts, Industrial
- Wage payment plans
- Wages

Dictionaries

Dictionary of economics. H. S. Sloan and A. J. Zurcher. 3d ed 356p pa $1.75 Barnes and Noble, 105 Fifth av, New York 3 '53

Psychological aspects

Psychology for marketing and economics. W. Alderson. bibliog J Marketing 17:119-35 O '52

Study and teaching

Economic education of supervisors. M. M. Blair. World Oil 135:73-5 O '52

Executive minces no words in talk on economics; employee economics education. F. C. Minaker. Am Bsns 23:36 My '53

For youth coming of age; workshops in economic education for teachers in various communities. D. R. Lewis. il Banking 45:51+ Ap '53

Foremen get diplomas; Youngstown Sheet & Tube teaches free enterprise facts of life. R. M. Lorz. Iron Age 171:75 Ap 9 '53

Selling our economic system through informal employe meetings. il Sales Management 69:46+ pt 2 O 1 '52

Teaching a city economics; Rochester, N.Y. il Bsns W p78-80+ Je 20 '53

ECONOMICS, Engineering. See Engineering economics

ECONOMICS, Mathematical

Cycles in economics and nature. G. T. Altman. Science 115:51-3 Ja 18 '52; Discussion. G. R. Price. 117:335-6; Reply. 336-9 Mr 27 '53

Finding new tools to study business; input-output. il Bsns W p 141-5 Ja 10 '53

ECONOMISTS

Business economist on the prowl. il Bsns W p 134-8+ Ja 10 '53

ECTROMELIA, Infectious

Outbreak of mouse-pox (infectious ectromelia) in the United States. J. J. Trentin and B. A. Briody. bibliog Science 117:226-8 F 27 '53

ECUADOR

Economic conditions

Economic conditions abroad. For Comm W 49:7+ Je 22 '53

Ecuador makes economic gains; fiscal position continues tight. For Comm W 48:2 D 15 '52

EDDY currents

Eddy-currents in solid cylindrical cores having non-uniform permeability. H. Aspden. diags J Ap Phys 23:523-8 My '52

EDINBURGH

Water supply

Completion of a water supply scheme. Engineer 194:832-3 D 19 '52

EDISON, Thomas Alva, 1847-1931

Edison, most useful American. H. F. Unger. Pub Util 51:777-83 Je 4 '53

EDISON, Thomas A., inc.

Central research laboratory

How to upgrade a research program. il Bsns W p90+ My 9 '53

EDISON electric institute

Accounting and commercial committees prepare for busy year. Edison Elec Inst Bul 20:375-87 N '52

Achievement is EEI committee trademark. Edison Elec Inst Bul 20:327 O '52

Annual convention, 21st, Atlantic City, June 1-4. Edison Elec Inst Bul 21:219-24+ Jl '53

Annual convention, 21st, Atlantic City, June 1-4; program, committee members, speakers. Edison Elec Inst Bul 21:131-9 My '53

Annual meeting, 21st, Atlantic City. Pub Util 52:49-57 Jl 2 '53

Annual prize awards signify electric industry advancement. Edison Elec Inst Bul 20:363-5 O '52

Annual sales conference, 19th, Chicago, March 30-April 2. Edison Elec Inst Bul 21:141-6+ My '53

Committees. Edison Elec Inst Bul 20:328-36 O '52

Conventions and meetings; April-October 1953. Edison Elec Inst Bul 21:98 Ap '53

EEI prize awards for 1952. Edison Elec Inst Bul 20:434 D '52

EDISON electric institute—*Continued*

EEI publications and service material. Edison Elec Inst Bul 21:27, 29-30, 125-6, 165-6, 324-5 Ja, Ap-My, Ag '53

Meter and service committee enters its twentieth year. F. A. Redding and C. V. Morey. Edison Elec Inst Bul 20:406-7 N '52

Personnel of EEI committees for 1952-1953. Edison Elec Inst Bul 20:345-62 O '52

Report of the committee on atomic power. Edison Elec Inst Bul 21:292-4 Jl '53

EDISON medal

Vladimir K. Zworykin, Edison medalist for 1952; presentation by E. W. Engstrom; response by V. K. Zworykin. il Elec Eng 72:207-9 Mr '53

Zworykin wins Edison medal. Elec World News ed 139:24 Ja 5 '53

EDITING

Editorial prerogatives. K. H. L. Key and others. Science 116:693-5; 117:484-6 D 19 '52, My 1 '53

See also

Moving pictures—Editing

EDITORS

See also

Employees' magazines—Editors

Trade journals—Editors

EDMAN, Gösta

Hanbury medal awarded. Chem Age (Lond) 68:305 F 21 '53

EDUCATION

Education and public policy. H. T. Heald. Elec Eng 72:196-9 Mr '53

Thoughts on contemporary problems. J. S. Dickey. J Eng Educ 43:371-2 Mr '53

See also

Chemical education

Colleges and universities

Correspondence schools and courses

Education of workers

Employees, Training of

Engineering—Study and teaching

Engineering education

Industrial education

Journalism schools

Learning, Psychology of

Technical education

Television in education

United nations educational, scientific and cultural organization

Vocational education

Statistics

World handbook of educational organization and statistics. 469p United nations educational, scientific and cultural organization; for sale by Columbia univ. press, 2960 Broadway, New York 27 '52 (pa $6.50)

Africa

Education and the African. Economist 166:721-2 Mr 15 '53

Alabama

Alabama story. il Manuf Rec 122:98-100 Je '53

Great Britain

American at Oxford. E. B. Skolnikoff. il Tech R 55:155-7+ Ja '53

Character versus brains. Economist 167:11 Ap 4 '53

Educating leaders. Economist 167:145 Ap 18 '53

Fateful intelligence test. Economist 165:739 D 13 '52

Labour and the schools. Economist 167:807 Je 20 '53

Public school privilege. Economist 166:862 Mr 28 '53

Public schools; their place in the educational system of the country. Economist 164:731-2 S 27 '52

Rising cost of education. Economist 166:795 Mr 21 '53

School and privilege. Economist 166:616-17 Mr 7 '53

Schools without selection. Economist 166:710-12 Mr 14 '53

Sex inequality at school. Economist 167:726 Je 13 '53

State education in England and Wales; charts. Economist 167:895 Je 27 '53

Israel

Politics in Israel's schools. Economist 166:30-1 Ja 3 '53

Middle Atlantic states

Resources for the chemical industry in the United States; educational and research facilities. H. K. Work. bibliog il Ind & Eng Chem 45:513-16 Mr '53

New England

Educational and research resources. C. M. Alter. il Ind & Eng Chem 44:2535-7 N '52

Russia

Scientific personnel in the USSR. D. Shimkin. Science 116:512-13 N 7 '52

Southern states

South's schools at stake. Bsns W p 170+ Jl 25 '53

Tennessee

Tennessee's schools among Nation's best. il Manuf Rec 121:115-16 N '52

United States

Lost question; analysis of liberal education. J. H. Whitney. Barron's 33:3+ Je 8 '53

EDUCATION and industry

Chemical executives and educators join in mutual relations conference designed to acquaint teachers with the commercial and social economic roles of the chemical industry. Oil Paint & Drug Rep 163:7+ My 25 '53

Cooperation between industry and education. J. T. Rettaliata. Paint Oil & Chem R 115:36-8 D 4 '52

Corporation support of higher education. J. A. Pollard. Harvard Bsns R 30:111-26 S '52

For youth coming of age; workshops in economic education for teachers in various communities. D. R. Lewis. il Banking 45:51+ Ap '53

It's up to the colleges; business-college controversy. Bsns W p 106 Ja 10 '53

Telling the teachers about instalment credit; Philadelphia educators symposium on consumer credit. F. Parker. Burroughs Clearing House 37:36-7+ Je '53

EDUCATION and state

Great Britain

Self-improvement and the state. Economist 167:285-6 My 2 '53

State of the schools. Economist 167:887 Je 27 '53

EDUCATION of adults

See also

Forum, Open

Trade unions—Educational work

Bibliography

Select bibliography of adult education in Great Britain. T. Kelly, ed. 83p 12s 6d National inst. of adult education, London '52

EDUCATION of workers

Can foremen teach economics to employees? F. Rudge. Glass Ind 33:360-2 Jl '52; Same. Paper Tr J 135:15-16+ N 7 '52

Comic books are serious aids to community education. M. B. Andrews. il Textile World 103:145+ My '53

Economic education; new way to tell workers about taxes; illustrations with text. Factory Management 111:102-3 Ja '53

Economic education of supervisors. M. M. Blair. World Oil 135:73-5 O '52

Executive minces no words in talk on economics; employee economics education. F. C. Minaker. Am Bsns 23:36 My '53

Foremen get diplomas; Youngstown Sheet & Tube teaches free enterprise facts of life. R. M. Lorz. Iron Age 171:75 Ap 9 '53

Here is a new twist in economics; Husky oil co. J. R. McNulty. il Am Bsns 22:22 D '52

Management note; how to keep employes politically informed. R. Newcomb and M. Sammons. Ind Marketing 38:65+ Ja '53

Sears uncovers hidden talents with home-study courses. M. French. il Am Bsns 22:16-17+ O '52

Self-improvement and the state. Economist 167:285-6 My 2 '53

See also

Trade unions—Educational work

Vocational education

EDUCATIONAL guidance

Science teaching in the secondary schools. A. Postl. Science 117:567 My 22 '53

EDUCATIONAL measurements

Simplified technique for item analysis. R. O. Swalm. J Eng Educ 43:394-9 Mr '53

EELWORM. See Nematodes

EFFICIENCY

How temperature affects efficiency. C. W. Wing, jr. Heating-Piping 25:80-2 O '53

EFFICIENCY, Industrial

Cases in methods improvement; Fenwal, inc.; illustrations with text. Factory Management 111:92-5 Je '53

Developing engineering efficiency. A. R. Smith. il Machine Design 24:106-10 N '52

Experimental study of pirn-winding. R. Conrad and G. J. Siddall. Textile Inst J 44: P215-22 Je '53

Fundamentals of getting work done through others. F. G. Rudge. Advanced Management 18:7-10 Ja '53

How busy are your key men? W. E. Dewey. Factory Management 111:230+ Jl '53

How to reduce lease operating expenses by methods studies. R. C. Filson. diags World Oil 136:60-1+ F '53

Management effectiveness index. E. J. Benge. Advanced Management 17:12-15 Ag '52

Methods engineering. Iron Age 171:169-70 F 5 '53

Operating shorts; illustrations with text. Published in monthly numbers of Factory management and maintenance

Ten years' progress in management; work simplification and work measurement. D. B. Porter and E. Rosa, jr. bibliog A S M E Trans 75:667-71 My '53

$3,000 flier in work simplification pays back $100,000 in 2½ years; Birtman electric co. J. E. Allen. il Factory Management 110: 101-7 O '52

Top management by mathematics; linear programming. il Bsns W p86+ My 30 '53

Use of science and technology in industry; need for greater appreciation by management; discussion. E. Smith and others. Chem Age (Lond) 68:19-20 Ja 3 '53

With work simplification, a lab goes mass production; International minerals & chemical corp. T. M. Ware. il Factory Management 111:96-8 Mr '53

Work measurement. H. Flitcraft. Life Ins Courant 58:38+ Mr; 39-40 My '53

Work simplification. B. S. Graham; J. Murtha. Am Gas Assn Proc 1952:158-65

Work-simplification program saves $61,000 in first year; Bell & Howell co. W. Norris. il Am Bsns 22:8-11 N '52

You can use work sampling this way to measure indirect work for cost control. C. A. Bogenrief. Factory Management 110:113-14 D '52

You can use your time better. W. E. Dewey. Factory Management 111:84-9 F '53

See also

Ability tests
Color in industry
Employees—Rating
Employment management
Executives
Factory management
Foundry management
Industrial engineering
Industrial management
Labor productivity
Labor standards
Machine shop management
Machinery, Replacement of
Mechanical handling
Motion study
Office management
Planning
Standardization
Time study

EGBERT, Perry T.

At American Locomotive, P. T. Egbert elected president. por Ry Age 133:85 D 8 '52

Businessmen in the news. por Fortune 47:40 Ja '53

EGG beaters

Rating

Tests of Sears, Wards, and Rival egg beaters. il Consumers Res Bul 31:23 Ap '53

EGG trade

Smaller supplies indicate strong 1953 egg market. Barron's 33:35 Ja 12 '53

Great Britain

Nationalised waterglass. Economist 166:475 F 21 '53

EGGS

Mechanization reaches egg processing; illustrations with text. Elec West 109:101 O '52

Sorting eggs by shell color. diag Electronics 26:198 Ap '53

EGLOFF, Gustav, 1886-

Dr Gustav Egloff receives the Washington award for 1953. por Elec Eng 72:375 Ap '53

Petroleum scientist honored for engineering achievement. Chem & Eng N 31:868-9 Mr 2 '53

Petroleum's peripatetic prime mover. por (cover) Chem & Eng N 31:869 Mr 2 '53

EGYPT

See also

Electric apparatus industry—Egypt
Petroleum laws and regulations—Egypt

Antiquities

Paints of the ancient Egyptians; abstract. H. E. Wulkan. Paint Oil & Chem R 115:38 O 9 '52

See also

Cleopatra's needle, London

Biography

Who's who in Egypt and the Near East, 1953. E. J. Blattner and J. E. Blattner, eds. 19th ed 644p Who's who in Egypt and the Near East, 50, Kasr-El-Nile st, Cairo; for sale by W. S. Heinman, 400 E. 72d st, N.Y. 21 '53 ($14)

Commercial policy

Controls on international trade. For Comm W 48:7 N 10 '52; 49:20 Ja 19 '53

Egypt has new export-import plan; barter extended to non-essentials. For Comm W 49:9 Ap 27 '53

Egyptian ports may be made free zones. For Comm W 49:5 Ja 12 '53

Economic conditions

Economic conditions abroad (cont). For Comm W 49:3+ My 18 '53

Economic policy

Establishment of Permanent council for development of national production. For Comm W 48:3 O 27 '52

Reform movement sweeps over Egypt. W. W. Birge, jr. For Comm W 48:16-17 N 17 '52

Foreign relations

Egypt and Middle East defence. Economist 167:159-60 Ap 18 '53

Sudan; it may be the world's next independent nation. il Bsns W p 168-70 F 21 '53

Great Britain

Egypt and the Canal zone. Economist 166: 880-1 Mr 28 '53

London, Cairo and the Sudan. Economist 166:63-4 Ja 10 '53

Neguib's two voices. Economist 166:465-7 F 21 '53

Industries and resources

Egypt planning new industries. For Comm W 49:17 My 4 '53

Politics and government

Neguib against odds. Economist 165:664-6 D 6 '52

Neguib and the junta. Economist 165:241 O 25 '52

Neguib broadens his base. Economist 165: 735-6 D 13 '52

Neguib versus Nahas. Economist 165:107-8 O 11 '52

Neguib's long-term aims. Economist 166:269 Ja 31 '53

EICOSANOIC acid. See Arachidic acid

EIDOPHOR system. See Moving picture theaters—Television

EINSTEIN, Albert, 1879-

Fields unified? Sci Am 188:54-5 My '53

EINSTEIN theory

Einstein vindicated. Sci Am 188:38+ F '53

EINSTEIN'S unified field theory. See Unified field theory

EINTHOVEN triangle. See Electrocardiograph

EISENHOWER, Dwight David, 1890-

Another front for Ike to open. Fortune 46: 109-10 O '52

Appealing to the people. por Bsns W p27-8 My 23 '53

Changing the business climate; what Eisenhower's election means. Bsns W p27-31 N 8 '52

Eisenhower delivers his first state of the Union message. por Comm & Fin Chr 177: 577+ F 5 '53

Eisenhower shapes a businessman's government. Bsns W p30-2 Ja 17 '53

Election of General Dwight D. Eisenhower means a new look in federal power policy. por Elec World News ed 138:7+ N 10 '52

Getting ready to take over; shift of power to Republican hands. por Bsns W p27-31 N 15 '52

Inaugural address. por Comm & Fin Chr 177: 281+ Ja 22 '53

No hundred days; criticism of first hundred days of Eisenhower regime. F. Morley. Barron's 33:3 Ap 27 '53

Seat of power shifts: government-in-embryo. il Bsns W p25-6 D 27 '52

What's to be press deal under Ike? R. Erwin. Ed & Pub 85:9+ N 15 '52

EISENHOWER, Milton Stover, 1899-

Portraits. Bsns W p94 F 21; p 164 Ap 18 '53

EITEL, Wilhelm, 1891-

Eitel; independence is the key to research. pors Bsns W p 120-2+ Je 13 '53

EJECTING devices (machine work)

Ejector for removal of electronic components uses gravity. il diags Product Eng 24: 158-9 Ap '53

How to design strippers and ejectors for progressive and forming dies; drawings with text. P. Balsells. Am Mach 97:95-8 Mr 30 '53

EJECTORS

Corrosion problems in steam-jet vacuum equipment. D. H. Jackson. il diags Chem Eng Prog 49:102-4 F '53

Ejectors show low first cost. J. C. Tallman. diags Chem Eng 60:176-9 Ja '53

Multistage ejectors for high vacuum. V. V. Fondrk. diag Chem Eng Prog 49:3-7 Ja '53

EKCO. See Radar aids to aviation

EKCO products company

Debenture and common stock offerings. Comm & Fin Chr 177:1799 Ap 27 '53

New gains in sales, profits likely. Barron's 32:23 D 15 '52

ELAIDIC acid

Anodic syntheses; unsaturated and hydroxy-acids; a direct stereochemical connection of oleic and elaidic with erucic and brassidic acids. D. G. Bounds, R. P. Linstead and B. C. L. Weedon. Chem Soc J p2393-400 Ag '53

Binary freezing-point diagrams for acetamide with oleic and elaidic acids. R. R. Mod and E. L. Skau. J Phys Chem 56:1016-17 N '52

Oxidation of monoethenoid fatty acids and esters; catalytic oxidation of elaidic acid, methyl elaidate, and *n*-propyl elaidate; the oxidation products. J. H. Skellon and M. N. Thruston. Chem Soc J p 138-42 Ja '53

ELASTIC stop nut corporation of America

Security I like best. O. B. Zeman. Comm & Fin Chr 176:1722+ N 6 '52

ELASTICITY

Analysis of elastic structures by matrix transformation with special regard to semimonocoque structures. B. Langefors. bibliog diags J Aeronautical Sci 19:451-8 Jl '52; Discussion. H. Falkenheiner. 20:293-4 Ap '53

Change of the elastic constants of β-brass with composition. H. Jones. J Ap Phys 23: 697 Je '52

Collapsing load of a strut with elastically-fixed ends. M. J. Gercke. Engineering 176: 67-70 Jl 17 '53

Computation of mean Debye temperature of cubic crystals from elastic constants. S. L. Quimby and P. M. Sutton. Phys R 91:1122-7 S 1 '53

Critical evaluation of the Norelco high angle X-ray spectrometer for elastic strain measurements. S. R. Maloof and H. R. Erard. diags R Sci Instr 23:687-92 D '52

Effect of straining rate on the compressive strength and elastic properties of concrete. D. Watstein. il diags Am Concrete Inst J 24:729-44 Ap '53

Elastic constants of beta-brass single crystals. R. A. Artman and D. O. Thompson. bibliog diags J Ap Phys 23:470-4 Ap '52

Elastic constants of Cu-4 percent Si. C. S. Smith and J. W. Burns. bibliog J Ap Phys 24:15-18 Ja '53

Elastic constants of nickel. J. R. Neighbours and others. bibliog J Ap Phys 23:389-93 Ap '52

Elastic wave propagation in solid media. R. A. Mapleton. bibliog diags J Ap Phys 23:1346-54 D '52

Evidence for domain structure in antiferromagnetic CoO from elasticity measurements. M. E. Fine. Phys R 87:1143 S 15 '52

Flexural response of a submerged solid to a pulsating gas bubble. G. Chertock. diags J Ap Phys 24:192-7 F '53

Hardness, elastic modulus, and wear of metals; abstracts. T. L. Oberle. S A E J 60:42-5 Ag '52; Automotive Ind 106:37-8 F 15 '52; Product Eng 23:254+ Mr '52; Machine Design 24:228+ My '52; Metal Prog 63:137-8 F '53; Discussion. S A E J 60:45-6 Ag '52

Kinetics of the disorder-order transformation in Cu_3Au. N. W. Lord. bibliog diags J Chem Phys 21:692-9 Ap '53

Measurement of dynamic modulus in adhesive joints at ultrasonic frequencies. A. G. H. Dietz and others. il diags Am Soc T M Proc 50:1414-27 '50

Mechanics of elastic performance of textile materials; factors affecting the translation of certain mechanical properties of cordage fibers into cordage yarns. M. M. Platt and others. bibliog diags Textile Res J 22: 641-67 O '52; Discussion. 22:827-9 D '52

Mechanics of elastic performance of textile materials; some aspects of elastic behavior at low strains. W. J. Hamburger and others. bibliog diags Textile Res J 22:695-729 N '52; Correction. 22:829 D '52

Molecular theory of stress relaxation in polymeric media. K. W. Scott and R. S. Stein. bibliog diags J Chem Phys 21:1281-6 Jl '53

Phase-plane construction in problems of elastic impact. R. E. D. Bishop. diags Engineer 196:168-70 Ag 7 '53

Piezoelectric, dielectric, and elastic properties of $ND_4D_2PO_4$ (deuterated ADP). W. P. Mason and B. T. Matthias. bibliog diag Phys R 88:477-9 N 1 '52

Propagation of elastic waves in a cylindrical bore containing a fluid. M. A. Biot. diags J Ap Phys 23:997-1005 S '52

Radial impact on an elastically supported ring. E. Wenk, jr. il diags Am Soc C E Proc 78 [no 157]:1-25 N '52

Relationship between the modulus of reinforced rubber compounds and the physical properties of various carbon blacks. M. L. Studebaker. India Rubber World 127:215-19+ N '52

Screw dislocations in thin rods. J. D. Eshelby. diags J Ap Phys 24:176-9 F '53

Some acoustical properties of lead and other substances at liquid nitrogen temperature. P. J. Ernst and P. Zayon. Acoustical Soc Am J 25:152-3 Ja '53

Some statistical mechanical models of elastic polyelectrolytes and proteins. T. L. Hill. bibliog diags J Chem Phys 20:1259-73 Ag '52

Sonic analysis for solid bodies. N. N. Ault and H. F. G. Ueltz. bibliog diag Am Cer Soc J 36:199-203 Je 1 '53

Sound scattering by thin elastic shells. M. C. Junger. bibliog diags Acoustical Soc Am J 24:366-73 Jl '52

Statistical theory of networks of non-Gaussian flexible chains. Ming Chen Wang and E. Guth. bibliog J Chem Phys 20:1144-57 Jl '52

Statistical thermodynamics of rubber elasticity. H. M. James and E. Guth. diags J Chem Phys 21:1039-49 Je '53

Temperature dependence of the elastic moduli and internal friction of silica and glass. J. W. Marx and J. M. Sivertsen. bibliog diags J Ap Phys 24:81-7 Ja '53

ELASTICITY—*Continued*

Temperature dependence of Young's modulus and internal friction of single crystals of beta-brass. R. A. Artman. il J Ap Phys 23:475-82 Ap '52

Theory of the linear viscoelastic properties of dilute solutions of coiling polymers. P. E. Rouse, jr. bibliog J Chem Phys 21: 1272-80 Jl '53

Thermal stresses in a partially clamped elastic half-plane. J. H. Huth. bibliog diag J Ap Phys 23:1234-7 N '52

Thermodynamics of stretching cellulosic fibers. H. Wakeham and W. F. Gerrow, jr. bibliog Textile Res J 23:593-4 Ag '53

Time-temperature dependence of linear viscoelastic behavior. F. Schwarzl and A. J. Staverman. bibliog J Ap Phys 23:838-43 Ag '52

Torsion pendulum of improved design for measuring damping capacity. J. W. Jensen. il diag R Sci Instr 23:397-401 Ag '52

Torsional-flexural buckling of columns. H. L. Langhaar. bibliog Franklin Inst J 255:101-12 F '53

Torsional vibration notes with solutions for an untuned viscous damper and flexible coupling with nonlinear elasticity. F. P. Porter. diags A S M E Trans 75:241-62; Discussion. 262-8 F '53

Variation of the elastic constants of crystalline aluminum with temperature between 63°K and 773°K. P. M. Sutton. bibliog diag Phys R 91:816-21 Ag 15 '53

Viscoelastic properties as functions of the distribution of activation energies. W. J. Lyons. bibliog J Ap Phys 24:217-21 F '53

See also

Compressibility
Creep of materials
Deformation (mechanics)
Friction, Internal
Photoelasticity
Plasticity
Springs (mechanism)
Strains and stresses
Strength of materials
Torsion

ELASTICITY of demand. See Supply and demand

ELASTOMERS. See Elasticity, Rubber, Artificial

ELASTOVISCOSITY. See Viscosity

ELBS reaction

Polynuclear heterocyclic systems; syntheses using the Elbs reaction. G. M. Badger and R. Pettit. Chem Soc J p2774-8 S '53

ELECTIONS

Race for the Senate. D. Norton-Taylor. il Fortune 46:121-5+ O '52

UNIVAC on election night. A. F. Draper. il Elec Eng 72:291-3 Ap '53

See also

Presidents (United States)—Election
Voting

Austria

Austria keeps its coalition. Economist 166: 577 F 28 '53

Iraq

Iraq; when deputy meets constituents; result of Iraq's first general election. map Economist 166:214+ Ja 24 '53

Restless Iraq. map Economist 165:516-18 N 22 '52

Italy

Counting Italy's votes. Economist 165:531 N 22 '52

Italy's Scylla and Charybdis. Economist 167: 743-4 Je 13 '53

Operation Nenni? Economist 167:911-12 Je 27 '53

Untidy triangle in Italy; general elections, June 7. Economist 167:451-2 My 16 '53

Will election paralyze Italy? Bsns W p 164+ Mr 28 '53

Japan

More trouble ahead for Japan. il Bsns W p 160-1 Ap 25 '53

United States

Watch on Washington; foreign reactions to the election results. Economist 165:462-3 N 15 '52

Venezuela

Venezuela votes. map Economist 165:631-2 N 29 '52

ELECTRETS

Automatic charge measuring and recording apparatus. G. R. Feaster and others. diag R Sci Instr 23:763-4 D '52

Plastic electrets. H. H. Wieder and S. Kaufman. bibliog diags J Ap Phys 24:156-61 F '53

Plastic electrets and their applications. H. H. Wieder and S. Kaufman. bibliog diags Elec Eng 72:511-14 Je '53

ELECTRIC accidents. See Electricity, Injuries from

ELECTRIC advertising. See Electric signs

ELECTRIC alarms

Boats for drilling personnel fitted with warning devices as a guard against explosions. il Oil & Gas J 52:127 Je 8 '53

Microwave vehicle approach alarm operates on Doppler reflection principle. W. C. White. il diag Tele-Tech 11:48+ D '52

Novel capacitance relay. R. Graham. il diag Radio & Tv N 48:50-1+ D '52

Test cell protection at Westinghouse jet engine plant; vapor analyzing and alarm instruments. il Automotive Ind 107:33+ O 15 '52

ELECTRIC analogies. See Aerodynamics—Electric analogies; Gas distribution—Electric analogies; Heat transmission—Electric analogies; Hydraulics—Electric analogies; Hydromechanics—Electric analogies; Mechanics—Electric analogies; Piping—Electric analogies; Refrigeration and refrigerating machinery—Electric analogies

ELECTRIC and musical industries, limited

EMI records in America. Economist 167: 182+ Ap 18 '53

ELECTRIC apparatus and appliances

Electrical engineering in 1952. il map Engineer 195:93-6 Ja 16 '53

Electrical equipment for food production; abstract. F. E. Rowland. Elec J 150:2125-7 Je 12 '53

Movement of air at high velocity by electrical means. il Elec J 149:1833-5 D 12 '52

1952 engineering developments. il Elec Eng 72:1-24 Ja '53

Winning employees with electricity; recreation building has helped solve employee problem for McCulloch motors corp. il Elec World News ed 138:39 N 10 '52

See also

Airplanes—Electric equipment
Armatures
Commutators
Electric apparatus and appliances, Domestic
Electric apparatus industry
Electric batteries
Electric cables
Electric capacitors
Electric circuit breakers
Electric coils
Electric controllers
Electric equipment
Electric furnaces
Electric fuses
Electric generators
Electric instruments
Electric inverters
Electric lamps
Electric machinery
Electric meters
Electric motors
Electric precipitation
Electric protective apparatus
Electric rectifiers
Electric switchgear
Electric transformers
Electricity in mining
Electricity on the farm
Electromagnets
Galvanometers
Oscillators
Photoelectric cells
Potentiometers
Radar
Radio apparatus
Reactors
Refrigerators, Electric
Relays
Spark plugs
Storage batteries
Voltage regulators

Design

Design of small apparatus, how large is the field? L. T. Rader. il diags Gen Elec R 56: 17-20 My '53

Exhibitions

Appliance train; GE introduces 1953 line to distributors. il Bsns W p 124 N 22 '52

Bath and West show; application of electricity to rural industries. il Elec R (Lond) 152:1377-8 Je 12 '53

British industries fair, Birmingham and London, April 27. il plans Elec J 150:1394-421, 1549-50 Ap 24-My 1 '53; Elec R (Lond) 152:898-939, 983-1000 Ap 24-My 1 '53

Catering exhibition. il Elec R (Lond) 152: 367-8 F 13 '53

ELECTRIC apparatus and appliances—Exhibitions—*Continued*

Engineering and marine exhibition, 19th, London; electrical exhibits. Elec J 151:637-45 Ag 28 '53

Factory equipment exhibition. Elec R (Lond) 152:719 Mr 27 '53

G-E appliances try the trains. il Elec West 110:99 Ja '53

Motors and electronics. il Elec J 150:541-2 F 13 '53

New products bow at exhibit; National power show. il Elec World News ed 138:34-5 D 22 '52

Torquay exhibition. il plan Elec J 150:1979-2001 Je 5 '53; Elec R (Lond) 152:1271-84 Je 5 '53

Manufacture

Induction brazing can be used for copper and copper-alloy parts. E. M. Laughner. il diags Am Mach 96:138-40 N 24 '52

Midland electric manufacturing company's factory extension. il Elec R (Lond) 152:713-14 Mr 27 '53

Thin phos-copper strips speed brazing; Westinghouse electric corp. R. E. Ballentine. il Am Mach 97:124-6 F 2 '53

Welding in the electrical industry. J. Heuschkel. Elec Eng 71:1095-100 D '52

Merchandizing

Distributor style supermart; Northwest electric supply co. il Elec West 111:110 Ag '53

Intensified selling will pave the road ahead. G. F. Hessler. Elec World 139:71-4 Ja 12 '53

See also

Electric apparatus and appliances, Domestic—Merchandizing

Electric apparatus industry

Electric utilities—Appliance selling

Electric utilities—Dealer relations

ELECTRIC apparatus and appliances, Domestic

Domestic appliance design. Elec R (Lond) 152:1023 My 1 '53

Domestic appliance design; E.A.W. inquiry into the user's point of view. Elec R (Lond) 151:1105-6 N 21 '52

Engineering highlights of 1952; home appliances. C. A. Scarlott. il Westinghouse Eng 13:44-5 Ja '53

General Electric new domestic appliances. il Elec J 150:785-6 Mr 6 '53

Load research essential today for tomorrow's appliance sales. Elec World 139:141-64 My 18 '53

Research and engineering progress, 1952; appliances. il Gen Elec R 56:56-9 Ja '53

See also

Dishwashing machines

Electric stoves

Electric water heaters

Electricity in the home

Refrigerators, Electric

Washing machines

Exhibitions

British industries fair; functions and exhibits. il Elec R (Lond) 152:993-6 My 1 '53

Change; that's appliance show motif, Chicago. il Elec World 139:131-2 F 9 '53

'53 seen as good year for appliances; 74th Home goods market show, San Francisco, Feb. 2-6. il Elec World News ed 139:18 F 16 '53

History

Electric home appliances; 100 years. F. Thornton, jr. Elec Eng 71:1087-90 D '52

Merchandizing

Adequate wiring primes appliance sales. S. Halle. il Elec West 109:93 N '52

Appliance, tv futures told at Bureau 20th anniversary. Elec West 109:104-6 N '52

Bureau of home appliances of San Diego county winter conference, Balboa Park, Feb. 18. Elec West 110:122-4 Ap '53

Can this be utilities' classless society? Bureau of home appliances of San Diego county. J. H. Collins. Pub Util 51:830-6 Je 18 '53

Chicago launches four-part electric dryer campaign. Elec World News ed 138:41 N 10 '52

Dealer training; selling the "Jet 99" vacuum cleaner. il Mod Ind 24:54-5 N '52

In side show promotes freezers, refrigerators; Cincinnati gas & electric co. il Elec World News ed 138:38-9 N 24 '52

Post-sale demonstrations pay off in good will and leads for G-E. il Sales Management 69:28-30 N 20 '52

Retailers can, and will, sell. M. Farr. Elec World 139:110-12 F 23 '53

Sales planning for more abundant electrical living. B. L. England. Edison Elec Inst Bul 21:35-8+ F '53

We must boost our selling tempo. B. Gross. Elec World 138:84-7 N 3 '52

Why G-E aims a camera at the prospect's kitchen. il Sales Management 70:65-6 Ja 1 '53

"Yes-but" contest helps appliance salesmen answer 25 buyer objections. il Elec World 139:132+ Ap 6 '53

Repair

Trains for the automatics. il Elec West 111:115-16 Ag '53

Safety measures

Branch-circuit overcurrent protection for appliance loads. F. V. Von Hoorn. Elec Eng 72:778-9 S '53

Motor overload protection for domestic appliances. W. H. Farrell. Elec Eng 72:694-6 Ag '53

ELECTRIC apparatus industry

Appliance sales make a spotty pattern. il Bsns W p43-6 Ap 25 '53

Appliances in show business. il Elec West 110:100-1 Mr '53

Bright '53 seen by NEMA for the electrical manufacturing industry. Elec World 139:136 Ja 12 '53

Employment outlook in the electrical equipment industry. A. Rosenberg. Mo Labor R 75:507-10 N '52

Equipment manufacturer and power education. H. N. Muller, jr. Elec Eng 72:295-7 Ap '53

Hotpoint's president talks to 10,000 dealers; four-minute recording; player carried by distributor salesmen. il Sales Management 70:102 Mr 15 '53

How appliance makers boost sales. il Bsns W p41-2 D 20 '52

Letter to Ben Franklin. K. W. Keith. Pub Util 51:769-76 Je 4 '53

Manufacturers expand facilities. Elec World News ed 138:48 D 8 '52

Manufacturers optimistic about '53. Elec World News ed 139:46+ Ja 5 '53

New help for wholesalers' salesmen; Sylvania electric products. D. C. Lash, jr. il Ptr Ink 242:42-4 Ja 23 '53

No appliance price boost yet. Bsns W p52 Je 27 '53

Outlook for appliance and television industries. R. D. Siragusa. Comm & Fin Chr 177:2190+ My 21 '53

Recharging of Westinghouse. E. P. Smith. il Fortune 46:118-23+ D '52

Retailers can, and will, sell. M. Farr. Elec World 139:110-12 F 23 '53

Steel products used in electrical appliances; shipments to electric appliance industry, 1947-1952; tabulation. Iron Age 171:438 Ja 1 '53

$3-billion income forecast for utilities by 1960 from major electric appliance usage. C. H. Linder. Elec World News ed 138:46 N 10 '52

We must boost our selling tempo. B. Gross. Elec World 138:84-7 N 3 '52

Westinghouse brass get an earful. J. D. Lee and H. L. Wiler. il Sales Management 69:48-50 O 1 '52

What's ahead for appliances; electrical appliances. il Dom Eng 181:118 F '53

When you help dealers, they'll help you; Sylvania contractor campaign. E. J. Dever, jr. il Ptr Ink 241:92-6+ O 17 '52

See also

Electric utilities—Appliance selling

General electric company

Knapp-Monarch company

National electrical manufacturers association

ELECTRIC apparatus industry—*Continued*

Advertising

Prospect watches birdie while salesman talks; G-E snaps pictures of prospects at trade show exhibit. Sales Management 69:114+ O 15 '52

To correct public's impression of bigness in business. N. Keine. il Ptr Ink 242:40-2 F 13 '53

Directories

Directory of appliance service and repair parts; manufacturers' western service station and parts depots. Elec West 110:76-92 pt 2 Ap '53

Directory of representatives; listing by states and cities of manufacturers' western representatives handling electrical lines. Elec West 110:71-5 pt 2 Ap '53

Directory section of the 1953-1954 Electronics buyers' guide. Electronics 26:D 1-149 Mid-Je '53

Statistics

Electric appliance sales index, employment, wages; tabulations. Iron Age 171:445 Ja 1 '53

Electrical appliances; toasters, freezers, flat irons, coffee makers, washers, dryers, etc.; tabulations. Iron Age 171:446 Ja 1 '53

Load research essential today for tomorrow's appliance sales. Elec World 139:141-64 My 18 '53

New lines gain. Bsns W p49-50 Ja 17 '53

Post-war devices hold up 1952 appliance sales. Elec World 139:204-5 Ja 26 '53

Trends in electrical manufacturing. Elec World 139:172-3 Ja 26 '53

Africa, East

British East African trade. Elec R (Lond) 152:1379-80 Je 12 '53

Promising African markets. Elec R (Lond) 152:225 Ja 23 '53

Australia

Australian electrical trade. Elec R (Lond) 152:1368 Je 12 '53

Brazil

International General Electric expansion continues in Brazil. W. R. Herod. Elec World 138:194 O 20 '52

Canada

Canadian electrical imports; first half of 1951 compared with first half of 1952. Elec R (Lond) 152:41 Ja 2 '53

Canadian electrical imports, 1950 and 1951 compared. Elec R (Lond) 151:316, 522 Ag 8, S 5 '52

Canadian imports; 1952 and 1951 compared. Elec R (Lond) 153:56 Jl 3 '53

Electrical equipment for Canada. Elec R (Lond) 152:31-2 Ja 2 '53

Caribbean region

Venture in the Caribbean. I. Williams. il Elec J 150:517-19 F 13 '53

Ceylon

Ceylon's electrical imports. Elec R (Lond) 153:346 Ag 14 '53

Egypt

Conditions in Egypt. Elec R (Lond) 151:446 Ag 29 '52

Egyptian imports, 1950 and 1951 compared. Elec R (Lond) 151:394 Ag 22 '52

Germany

German electrical exports, 1952. Elec R (Lond) 152:889-90 Ap 17 '53

Western Germany's electrical exports. R. E. Kaan. Elec R (Lond) 151:1349-51 D 19 '52

Great Britain

Britain ready for export drive. L. Gamage. Elec R (Lond) 152:895-7 Ap 24 '53

Census of production; details of electrical industries. Elec R (Lond) 152:1246-7 My 29 '53

Consolation prize for English Electric. Economist 167:835 Je 20 '53

Developments at Bushbury. il Elec R (Lond) 152:811-15 Ap 10 '53

Electrical equipment for Canada. Elec R (Lond) 152:31-2 Ja 2 '53

Electrical export survey. il Elec J 150:1505-37 My 1 '53

Electrical imports and exports. Elec J 151:260-1 Jl 24 '53

Engineering outlook; coal-mining, steam-raising and heavy electrical plant. Engineering 175:232-5 F 20 '53

Engineering outlook; the light electrical industry, and the electrical wire and cable industry. Engineering 175:421-4 Ap 3 '53

Imports and exports; fall in values for first quarter compared with 1952. Elec J 150:1544-5 My 1 '53

Manufacturers' activities. il Elec J 149:1920-1; 150:135-6, 303-4, 375-6, 539-40, 621-2, 875-7 D 19 '52, Ja 9, 23-30, F 13-20, Mr 13 '53

Manufacturing progress, 1952. il Elec R (Lond) 152:95-8, 220-2, 273-6, 325-6, 383-5, 437-8, 491-3 Ja 9, 23-F 27 '53

Nationalized customers; revision of selling methods. M. C. Blythe. Elec R (Lond) 151:379-80 Ag 22 '52

Prospects for electrical exports. Economist 167:178+ Ap 18 '53

Trading conditions in the Commonwealth. M. J. Gartside. Elec J 150:885-6 Mr 13 '53

Wholesale distribution. Elec J 150:1058 Mr 27 '53; Elec R (Lond) 152:709-10 Mr 27 '53

India

Indian electrical imports; 1950-1952. Elec R (Lond) 151:786 O 10 '52

Japan

Japanese electrical industry. R. E. Kaan. Elec R (Lond) 152:103-4 Ja 9 '53

Malaya

Malayan electrical imports, 1951 and 1952 compared. Elec R (Lond) 152:1318 Je 5 '53

Mexico

Mexican market. Elec R (Lond) 152:646 Mr 20 '53

Netherlands

Netherlands electrical trade; 1952 and 1951 compared. Elec R (Lond) 153:58 Jl 3 '53

Rhodesia

Southern Rhodesian imports, 1951 and 1950. Elec R (Lond) 151:1124 N 21 '52

Rumania

Rumanian electrical industry. J. Cardew. il Elec R (Lond) 152:1191-3 My 22 '53

South Africa

Manufacture in South Africa. Elec R (Lond) 152:1321-4 Je 5 '53

Prospects in South Africa. T. Atherton. Elec J 150:1514-15 My 1 '53

Sweden

Sweden's external trade; 1951 and 1952 compared. Elec R (Lond) 152:554 Mr 6 '53

Switzerland

Exports from Switzerland. Elec R (Lond) 152:1392 Je 12 '53

Exports from Switzerland, 1950 and 1951 compared. Elec R (Lond) 151:418 Ag 22 '52

Swiss electrical imports; 1951 and 1952 compared. Elec R (Lond) 152:956 Ap 24 '53

Turkey

Promising Turkish market; 1950 and 1951 compared. Elec R (Lond) 151:865 O 17 '52

Turkey's electrical imports; 1951 and 1952 compared. Elec R (Lond) 153:478 Ag 28 '53

Western states

How to visualize the West's 1953 market opportunity. il Elec West 110:124-33 F '53

ELECTRIC arc

Arc interruption phenomena in a magnetic field at altitude; abstract. J. P. Dallas. Elec Eng 72:770 S '53

Arc suppression on mercury-arc rectifiers. S. R. Judd. il diags Engineering 176:100-2 Jl 24 '53

Arcing at electrical contracts on closure; development of an arc. L. H. Germer and J. L. Smith. il diags J Ap Phys 23:553-62 My '52

ELECTRIC arc—*Continued*

Arcing time of high-voltage air-break contactors at low currents; abstract. C. A. Lister. diag Elec Eng 72:589 Jl '53

Characteristics of the high current tungsten arc in argon, helium, and their mixtures. M. Skolnik and T. B. Jones. bibliog il diags J Ap Phys 23:643-52 Je '52; Same. Welding J 32:sup55-64 Ja '53

Electric arc in argon and helium; abstract. T. B. Jones and others. Elec Eng 72:429 My '53

Field emission initiated vacuum arc. W. P. Dyke and others. bibliog il diags Phys R 91:1043-57 S 1 '53

Field emission; large current densities, space charge, and the vacuum arc. W. P. Dyke and J. K. Trolan. bibliog il diags Phys R 89:799-808 F 15 '53

Hissing arc and radio-frequency self-generated oscillations in the d-c carbon arc. B. H. List and T. B. Jones. diag Elec Eng 72:683-6 Ag '53

Improved arc process for the preparation of diborane; purification of diborane. H. I. Schlesinger and others. Am Chem Soc J 75:191 Ja 5 '53

Investigation of the arc-quenching behavior of sulphur hexafluoride; abstract. H. J. Lingal and others. Elec Eng 72:335 Ap '53

Low-frequency self-generated oscillations in the d-c carbon arc. B. H. List and T. B. Jones. il diags Elec Eng 72:612-16 Jl '53

Mechanism for the fuse pre-arcing period; abstract. E. B. Carne. diags Elec Eng 72:610 Jl '53

Simple calorimeter for measurement of arc energy. M. W. Sims and A. M. Krakower. diags Automotive Ind 107:65+ O 1 '52

Spectrum of an argon-nitrogen mixture excited in an high voltage arc. R. W. Nicholls. bibliog J Chem Phys 21:568 Mr '53

Water-cooled carbon arc source for infrared spectroscopy. C. S. Rupert. bibliog diag Opt Soc Am J 42:684 S '52

See also

Electric lamps, Arc

Electric welding, Arc

ELECTRIC associations

See also

National electrical manufacturers association

ELECTRIC batteries

Battery case fabricated from thick copolymer sheet. il Mod Plastics 30:173 O '52

Colloidal graphite used in atomic battery. P. E. Ohmart. il Elec Eng 72:569-70 Je '53; Same. Tele-Tech 12:353-4 Je '53

Nickel-cadmium battery promises longer life, no maintenance. il Eng & Min J 154:107 Ag '53

Power requirements for transistor circuits. J. Dalfonso. bibliog Electronics 26:204+ Je '53

Railway batteries; signal and telecommunication requirements for India. H. C. Towers. il Elec R (Lond) 151:431-4 Ag 29 '52

Study of iodide-iodine solutions with the emf centrifuge. D. A. MacInnes and M. O. Dayhoff. bibliog diags J Chem Phys 20:1034-8 Je '52

See also

Electrolytic cells

Photoelectric cells

Storage batteries

Fuel cells

Fuel cells; account of research and present state of development. A. P. Paton. bibliog diag Elec R (Lond) 151:888-90 O 24 '52; Same abr. Engineer 195:290 F 20 '53

Rating

Flashlight batteries. il Consumers Res Bul 32:12-15 Ag '53

ELECTRIC blankets

New applications for electric heat. R. F. Sambleson. il Gen Elec R 56:28-31 S '53

Straw men sell electric blankets for utility. il Elec World News ed 139:38 Ja 19 '53

ELECTRIC boat company

So they named it General Dynamics. il Fortune 47:134-7+ Ap '53

ELECTRIC bond and share company

Asset value up. Comm & Fin Chr 177:2783 Je 29 '53

Wall Street on the integration plan. O. Ely. Pub Util 51:376-7 Mr 12 '53

ELECTRIC brakes. See Brakes, Electric

ELECTRIC breakdown. See Dielectrics

ELECTRIC bulbs. See Electric lamps

ELECTRIC burns. See Electricity, Injuries from

ELECTRIC buses

Italian I.C., electric bus. il Elec J 149:1852 D 12 '52

ELECTRIC cable reels

Cut service installation time with reel trailer. C. G. Dahlgren. il Elec World 138:138+ D 15 '52

Emergency brake on reel holds wire at proper tension. R. P. Miller. il Elec World 139:124 F 9 '53

Pick up reels with folding lifter. A. J. Scott. il Elec World 138:136 O 6 '52

ELECTRIC cables

Assessment of the impregnated pressure cable. L. G. Brazier and others. bibliog Engineer 195:745-8 My 22 '53; Abstract. Elec R (Lond) 152:1065; Discussion. 1065-6 My 8 '53; Elec J 150:1657-8 My 8 '53

Auxiliary power and control cables for steam-electric generating stations; abstract. F. V. Smith and E. G. Norell. Elec Eng 71:1013 N '52

Brunswick Wharf oil-filled cables. il Elec J 150:1809 My 22 '53; Elec R (Lond) 152:1165-6 My 22 '53

Cable handling device includes new features. J. E. Ortloff. il diags World Oil 136:107-8+ Ap '53

Cables for mining work. C. C. Barnes. bibliog Electrician 149:399-403 Ag 8 '52

Development of high-voltage cables; abstract. J. S. Hastie. Inst E E Proc 100 pt 1:79 Mr '53

Electric wire and cable recommendations for the pulp and paper industry. A. O. Mortenson. Tappi 36:sup 161A-3A Ag '53

Electrical noise from instrument cables subjected to shock and vibration. T. A. Perls. bibliog il diags J Ap Phys 23:674-80 Je '52

Noise-free instrument cable. il Commun Eng 13:22+ Mr '53

Oil-filled cables for the Midlands. il Elec J 149:1848 D 12 '52

They spin their own aluminum cable; Arizona public service co. T. A. Phillips. il Elec West 110:90-2 Ap '53

Typical cable applications in generating stations; data sheet. Power 97:105 Jl '53

What you need to know about connectors for aluminum wire and cable. J. St Andre. il diags Factory Management 110:120-3 O '52

See also

Electric lines

Cooling

Artificial cooling of power cable. F. H. Buller. Elec Eng 72:35 Ja '53

Installation

Concrete envelope prevents cable migration. B. M. Carothers. il Elec World 139:174 My 18 '53

How Consolidated Edison installed New York's first aluminum cable. A. F. Newman and F. J. Johnson. il diags Elec World 138:90-2 D 1 '52

Install control cable ducts 64 at a time. S. J. Ward. il Elec World 139:108 Mr 9 '53

Oil-filled cable link. il Elec R (Lond) 151:1409 D 26 '52

Joints

How to weld grounding cables; powdered metal, firing charge; illustrated instructions. il diag Power 97:123-5 Mr '53

Shop made sleeves cut cable splicing time. C. A. Steele. il Elec World 139:180+ My 18 '53

Manufacture

Cable test sets. il Electronics 26:277-80 Ag '53

Cables and chemistry. il Can Chem Process 36:82-3 O '52

Capacitors in production; Helsby works. il diags Elec J 150:2270-5 Je 26 '53

ELECTRIC cables—Manufacture—*Continued*

Corrugated aluminium-sheathed cable; Pirelli-General cable works, ltd. il Metallurgia 46:237-40 N '52; Engineer 194:548-9 O 24 '52; Engineering 174:614-15 N 7 '52; Elec J 149:1257-8 O 24 '52; Elec R (Lond) 151:915-16 O 24 '52

Traction-tread machine pulls out cable. il diag Machine Design 25:144 Mr '53

Training cable-lacers. il Electronics 25:218+ D '52

Protection

Current preference in control cable design; insulated conductors committee of AIEE. W. T. Peirce. Elec World 138:150 N 17 '52

Pirelli-General fire resisting cables. Engineer 196:119 Jl 24 '53; Engineering 176:182 Ag 7 '53; Elec R (Lond) 153:206-7 Jl 24 '53

Protection of underground cable sheaths. T. W. Alexander, jr. diags Iron & Steel Eng 30:97-100; Discussion. 100-2 Ap '53

Repair

Cable repairs and leak detection. C. E. Wissinger. il Min Cong J 38:56-7+ D '52

New method for on-the-spot cable splicing. Rubber Age 73:369 Je '53

Sheathing

Aluminium as a cable sheathing material. D. McAllister. bibliog il diags Engineer 194: 819-23, 854-7 D 19-26 '52; Abstract. Metal Prog 63:208-11 Ap '53

Aluminum cable sheathing. il diags Engineer 194:410-12 S 26 '52; Engineering 174:404-5, 408 S 26 '52; Elec R (Lond) 151:691-3 S 26 '52; Electrician 149:909-12 S 26 '52; Metallurgia 46:175-8 O '52

Aluminum; its application as a cable sheathing material and as a conductor. D. McAllister. il Elec J 150:1225-32, 1301-5 Ap 10-17 '53

Bell System cable sheath problems and designs. F. W. Horn and R. B. Ramsey. il maps diags Elec Eng 70:1070-5 D '51; Abstract. Metal Prog 63:164+ F '53

Bit about sheathing. H. G. Burd. Elec World 138:172 D 15 '52

Corrugated aluminium-sheathed cable; Pirelli-General cable works, ltd. il Metallurgia 46:237-40 N '52; Engineer 194:548-9 O 24 '52; Engineering 174:614-15 N 7 '52; Elec J 149:1257-8 O 24 '52; Elec R (Lond) 151:915-16 O 24 '52

Gas heating of lead-melting pots for cable sheathing. Engineering 175:585 My 8 '53

Large aluminum tube for cable sheathing. il Engineering 175:596 My 8 '53

Plasticizer drip considered at Underwriters' conference. Rubber Age 72:501 Ja '53

Properties of synthetic rubbers and thermoplastics as insulation for electric cables. E. W. Davis. Tappi 36:78-82 F '53

Shielding factor of underground cable sheaths; abstract. F. Jones. diags Inst E E Proc 100 pt 2:195-6 Ap '53

Surface discharges from cable sheaths and their relation to electric shock; abstract. E. W. Greenfield. Elec Eng 72:152 F '53

Weathering and crack resistance of black polyethylene for wire and cable. W. A. Haine and others. bibliog il diag Elec Eng 71:1113-17 D '52

Standards

Commonwealth cable conference, London, July 14-22. Engineer 196:175 Ag 7 '53; Engineering 176:190 Ag 7 '53; Elec J 151:346+ Jl 31 '53; Elec R (Lond) 153:237-8 Jl 31 '53

Revised cable standards. Elec J 151:428 Ag 7 '53

Temperature

Hot wires and the safety orders; demonstration meetings and forums, Los Angeles and San Francisco. Elec West 110:80-1 Ja '53

Rapid measurement of the thermal resistivity of soil; abstract. V. V. Mason and M. Kurtz. Elec Eng 71:985 N '52

Terminals

Precast cable terminal pedestals cut costs. S. J. Ward. il Elec World 139:148+ Ap 20 '53

Testing

Cable test sets. il Electronics 26:277-80 Ag '53

Crompton Parkinson mobile high-voltage testing unit. il Engineer 195:907-8 Je 26 '53; Elec R (Lond) 152:1458 Je 26 '53; Engineering 176:62 Jl 10 '53

How to use high-voltage dc for cable testing, fault location. R. A. Nelson. il diags Coal Age 58:108-13 My '53

Impulse puncture characteristics of mass-impregnated paper-insulated cables, with special reference to testing procedures. P. R. Howard. Inst E E Proc 100 pt 2:315-18 Je '53

Jumper cable test panel. il diags Ry Loco & Cars 127:67-8 F '53

Staythorpe-West Melton section of the 275kv grid. il Engineer 196:117 Jl 24 '53

Versatility provided in cable fault locating. E. J. Steeve. il Elec World 139:98 My 4 '53

ELECTRIC cables, Submarine

Cross channel cable. J. H. M. Sykes. map Engineer 194:792-3 D 12 '52

Cross-channel cable-laying trials. Engineer 195:900-1 Je 26 '53; Elec J 150:2300 Je 26 '53

Cross-channel power project; tests to be completed early next year. Elec R (Lond) 153:44 Jl 3 '53

132kv underwater impregnated pressure cable. il Engineer 195:799 Je 5 '53; Engineering 175:596 My 8 '53; Elec J 150:1533 My 1 '53; Elec R (Lond) 152:1053 My 8 '53

Submarine cables link Florida Keys. R. P. Balin. il map diags Elec World 138:104-7 D 15 '52

Submarine power cables between England and France. il Engineering 176:31, 170 Jl 3, Ag 7 '53; Elec J 151:414-16 Ag 7 '53; Elec R (Lond) 153:303-4 Ag 7 '53

Submarine power project from the Swedish mainland to the island of Gotland. Elec J 150:988 Mr 20 '53; Elec World News ed 139: 20 Ap 27 '53

See also

Cable laying and supply ships

ELECTRIC capacitance

Capacitance effects in thin conductive films. J. N. Humphrey and others. bibliog diags Phys R 90:111-14 Ap 1 '53

Geometric capacitance and resistance obtained for cylindrical electrodes; engineering reference sheet. E. W. Greenfield. Elec World 139:108 Ap 6 '53

Measurement of blade-tip clearances in aircraft turbines by a capacitance method. I. A. Mossop and F. D. Gill. bibliog diags Inst E E Proc 100 pt 2:377-84; Discussion. 384-6 Ag '53

Measuring minute capacitance changes; bridge system permits resolution of minute mechanical motions. G. W. Cook. il diags Electronics 26:105-7 Ja '53

Novel capacitance relay. R. Graham. il diag Radio & Tv N 48:50-1+ D '52

Q-meter correction chart for distributed capacitance. R. Lafferty. Tele-Tech 11:63 N '52

ELECTRIC capacitors

Capacitor serves three-phase motors from single-phase line. R. Bakes. il diag Elec World 139:74-5 My 4 '53

Capacitors in power systems with rectifier loads; abstract. A. Schmidt, jr. diag Elec Eng 72:611 Jl '53

Capacitors pay off within first year zooming power factor from 72 to 95 per cent; Halle brothers Shaker Square store. E. W. Dougherty. il diag Power 97:84-5 Jl '53

Case study shows savings through power factor correction. A. R. Waehner. Elec World 139:108-9 F 23 '53

Condenser paradox; how is the power loss accounted for?. J. Webb. diags Elec R (Lond) 151:625-6 S 19 '52

Condenser paradox; some further observations. J. C. Moore. diags Elec R (Lond) 151:1263-6 D 12 '52

Controlling capacitors; circuit-breaker and fuse selection for use up to 11 kv. E. A. Reeves. Elec J 151:409-12 Ag 7 '53

Conversion of 230 volt motors for 208 volt operation. L. R. Smith. Refrig Eng 61:381-2+ Ap '53

ELECTRIC capacitors—*Continued*

D-c motor as a capacitor. A. Boyajian. bibliog diags Elec Eng 72:154-5 F '53

40mva synchronous condenser for Australia. il Engineer 195:361-2 Mr 6 '53; Engineering 175:294-6 Mr 6 '53; Elec J 150:761-4 Mr 6 '53; Elec R (Lond) 152:515-17 Mr 6 '53

GE capacitor is small but rugged. il Aviation W 58:48 F 23 '53

Low-voltage vehicular bypass capacitors. il Product Eng 23:212 N '52

Measurement of the thickness of capacitor paper. W. Souder and S. B. Newman. bibliog il U S Nat Bur Stand Circ 532:1-10; pa 15c Supt. of doc. '52

Permitol capacitors; correction of fluorescent lamp circuit power factor. T. F. Robinson and G. H. Dyer. il diags Elec R (Lond) 151:329-32 Ag 15 '52

Physical concepts of corona in capacitors; abstract. J. R. Nye. diags Elec Eng 72:631 Jl '53

Power capacitors. A. F. Coventry. il Elec J 150:1532-3 My 1 '53

Series shunt capacitors reduce voltage dips of power shovel. T. Wren. il diag Elec World 139:144 Mr 23 '53

Stacked capacitors for high voltage. R. E. Marbury and W. H. Cuttino. il diag Elec World 139:114-15+ F 23 '53

See also

Radio condensers

Manufacture

Capacitor winding techniques. il Electronics 26:274+ Ap '53

Capacitors in production; Helsby works. il diags Elec J 150:2270-5 Je 26 '53

Dipping capacitors in wax. il Electronics 26:286-7 Ag '53

V-notched soldering jig for capacitor pigtails. il Electronics 26:277-9 Je '53

Testing

Capacitor breakdown tester. C. R. Schafer. il diag Electronics 25:292+ O '52

Capacitor test set. il diags Electronics 26:254-6 Ja '53

ELECTRIC cells. See Electric batteries; Electrolytic cells; Photoelectric cells

ELECTRIC charges

Charge transfer and the mobility of rare gas ions. J. A. Hornbeck. bibliog J Phys Chem 56:829-31 O '52

Determination of electrokinetic charge and potential by the sedimentation method; silica in some aqueous chloride solutions. C. I. Dulin and G. A. H. Elton. Chem Soc J p 1168-72 Ap '53

Determinations of electrokinetic charge and potential by the sedimentation method. D. P. Benton, G. A. H. Elton and C. I. Dulin. Chem Soc J p2096-101 Jl '53

Determinations of electrokinetic charge and potential by the sedimentation method; pyrex glass in aqueous potassium chloride solutions. G. A. H. Elton and F. G. Hirschler. Chem Soc J p2953-5 Ag '52

Effects of electronic charge transfer between adsorbate and solid on chemisorption and catalysis. P. B. Weisz. bibliog diags J Chem Phys 21:1531-8 S '53

Statistics of liquid spray and dust electrification by the Hopper and Laby method. E. E. Dodd. bibliog il J Ap Phys 24:73-80 Ja '53

See also

Electrets

Electric field

Space charge

ELECTRIC circuit breakers

Circuit-breaker operation by means of a pneumo-hydraulic stored energy device. il diags Elec J 149:1575-7 N 21 '52; Elec R (Lond) 151:1111-13 N 21 '52; Engineer 194:684-5 N 21 '52; Engineering 174:769-70 D 12 '52

Circuit breakers get simpler. il Steel 132:48 Ja 19 '53

Coming of age; some comments, facts and fallacies; voltage-operated earth-leakage circuit breaker. T. C. Gilbert. diags Elec R (Lond) 151:341-7 Ag 15 '52

Controlling capacitors; circuit-breaker and fuse selection for use up to 11 kv. E. A. Reeves. Elec J 151:409-12 Ag 7 '53

Demonstrator teaches synchronizing. E. M. Humphries. il diags Elec World 139:128-9 Ap 20 '53

Developing a superspeed trip-free reclosing circuit-breaker mechanism; abstract. L. J. Linde and H. L. Peek. diag Elec Eng 72:69 Ja '53

Direct-on-line starting. E. C. Slater. il diag Elec R (Lond) 153:278-84 Ag 7 '53

Engineering highlights of 1952; circuit interruption. C. A. Scarlott. il Westinghouse Eng 13:10-12 Ja '53

High-speed multiple-reclosing oil circuit breaker for 161 kv 10,000 kva. B. P. Baker and G. B. Cushing. il Elec Eng 72:166 F '53

Instantaneous energy release for closing high-capacity circuit breakers. il diags Machine Design 25:116 Je '53

Marine switchgear; Whipp & Bourne, ltd. il Elec R (Lond) 152:881-3 Ap 17 '53

Motor reactance for duty calculations of 600-v circuit breakers and buses. F. E. Reeves. Elec World 139:172 My 18 '53

One circuit breaker less on line connecting Kearny plant with Bergen substation. I. D. Perry. il diags Elec World 138:100-1 N 3 '52

Peak load on circuit breakers. T. M. Rohan. il Iron Age 171:79-80 Mr 19 '53

Pneumatic operating mechanisms for power circuit breakers. R. C. Van Sickle and others. il Elec Eng 72:143 F '53

Pneumo-hydraulic operator closes breakers. E. R. Perry and N. W. Morelli. il diags Elec World 139:180+ Ja 26 '53

Protection for an industrial plant connected to a utility system with reclosing breakers. D. F. Langelwalter. bibliog diags Tappi 36:199-203 My '53

Reyrolle new circuit breaker unit. il Elec J 151:493-4 Ag 14 '53; diag Elec R (Lond) 153:434-6 Ag 28 '53

Some researches on current chopping in high-voltage circuit-breakers. A. F. B. Young. bibliog diags Inst E E Proc 100 pt 2:337-53 Ag '53; Abstract. Engineering 175:190 F 6 '53; Discussion. Inst E E Proc 100 pt 2:354-61 Ag '53; Elec J 150:459-60 F 6 '53; Elec R (Lond) 152:311-12 F 6 '53

Maintenance and repair

How to maintain insulation in air circuit breakers. Textile World 103:202+ Ag '53

Manufacture

Faster, better welds for breaker tanks; Pacific electric mfg. co. il Iron Age 170:165 D 11 '52

Oilless

Air-blast circuit-breaker for arc furnace control. il Engineer 194:629 N 7 '52; Engineering 174:638 N 14 '52

Arc-furnace control; air-blast breakers at steel works. il Elec R (Lond) 151:943 O 31 '52; Elec J 149:1350 O 31 '52; Metallurgia 46:282 D '52

Mechanism stores energy in air circuit breaker. il diag Machine Design 25:139 My '53

New compressed-air circuit breaker for arc-furnace switching duty; abstract. J. E. Schrameck and J. K. Walker. il Elec Eng 72:633 Jl '53

New 14.4-kv indoor compressed air circuit breaker; abstract. J. E. Schrameck. il Elec Eng 71:1130 D '52

New line of low-voltage air circuit breakers; abstract. B. S. Beall, 3d and V. N. Stewart. il Elec Eng 72:534 Je '53

Small size

5-mva high rupturing-capacity miniature circuit-breakers. Engineering 175:89 Ja 16 '53; Elec J 150:2289-90 Je 26 '53

Miniature circuit breakers. il Elec R (Lond) 153:111-12 Jl 10 '53

Permanent circuit protector fits standard base fuseholder. il Eng N 150:171 F 19 '53

Standards

A.c. oil circuit breakers; comparison of old and new standard specifications. D. E. Lambert. il Elec R (Lond) 152:187-91 Ja 23 '53

Comparison of American and British standards for oil circuit breakers; table; engineering reference sheet. Elec World 138:128 D 15 '52

ELECTRIC circuit breakers—*Continued*

Testing

BPA field tests of circuit breakers. S. E. Schultz. Elec World 138:172 D 15 '52

Field tests on 135-kv 3.5-million kva low-oil-content circuit breaker; abstract. L. Morgan and others. il Elec Eng 72:223 Mr '53

Miniature circuit breakers. il Elec R (Lond) 153:111-12 Jl 10 '53

Unit tests plane circuit breakers. Aviation W 57:68+ N 3 '52

Tripping

Bimetal yoke trips miniature circuit breaker. il Product Eng 23:142-3 D '52

ELECTRIC circuits

Adaptable circuit for constant temperature baths. E. Levens and R. S. Cass. bibliog diags Anal Chem 24:1685-6 O '52

Algebraic theory of linear transmission networks. M. G. Arsove. diags Franklin Inst J 255:301-18, 427-44 Ap-My '53

Circuit calculations in National certificate classes. J. E. Macfarlane. bibliog diags Elec R (Lond) 152:345-9 F 13 '53

Cockcroft-Walton voltage multiplying circuit. E. Everhart and P. Lorrain. bibliog diags R Sci Instr 24:221-6 Mr '53

Continuous recorder keep-alive circuit uses multivibrators. R. L. Ives. il diags Electronics 25:161-3 N '52

Diesel-electrics; how to keep 'em rolling; some simple battery circuits. J. L. Judy and W. S. O'Kelly. il diags Ry Locomotives & Cars 127:80-7 Ja '53

Fast differential pulse-height selector circuit. E. Fairstein and F. M. Porter. diags R Sci Instr 23:650-1 N '52

Frequency errors in negative-sequence segregating networks; abstract. E. A. Livingston. bibliog diags Inst E E Proc 100 pt 2: 61-2 F '53

Frequency feedback. H. E. Hollmann. il diags Tele-Tech 12:91-3+ Mr '53

Geometry of the unbalanced star. E. Wilkinson. diags Elec R (Lond) 152:1155-7 My 22 '53

Gyrator as a three-terminal element. J. Shekel. diags Inst Radio Eng Proc 41:1014-16 Ag '53

High-impedance artificial delay lines. W. S. Carley and E. F. Seymour. bibliog il diags Electronics 26:188-92+ Ap '53

Improving gas-tube grid circuit reliability. J. H. Burnett. bibliog diags Elec Eng 72:341-6 Ap '53

Packaged circuits. il Machine Design 25:118 My '53

Phase-bistable transistor circuit. H. Baker and others. diags Inst Radio Eng Proc 41: 1119-24 S '53

Producing circuits with molten metal spray. il Electronics 26:262+ Je '53

Quantum theory of a damped electrical oscillator and noise. J. Weber. bibliog diags Phys R 90:977-82 Je 1 '53

Solution of passive electrical networks by means of mathematical trees. W. S. Percival. diags Inst E E Proc 100 pt 3:143-50 My '53

Some applications of permanently magnetized ferrite magnetostrictive resonators. W. V. Roberts. diags RCA R 14:3-16 Mr '53

Source of computing voltage with continuously-variable output. R. W. Williams and G. M. Parker. diags J Sci Instr 29:322-4 O '52

Study of non-blocking switching networks. C. Clos. diags Bell System Tech J 32:406-24 Mr '53

Synthesis of the transfer function of two-terminal pair networks; abstract. R. Kahal. diag Elec Eng 71:1014 N '52

Terminology and equations for linear active four-terminal networks including transistors. L. J. Giacoletto. bibliog diags RCA R 14:28-46 Mr '53

Transducer circuits. T. R. Breunich. diags Product Eng Hdbk p I 29-31 '53

Transistors in switching circuits. A. E. Anderson. il diags Inst Radio Eng Proc 40: 1541-58 N '52; Correction. 40:1732-3 D '52; Same. Bell System Tech J 31:1207-49 N '52

Two synchronized clock circuits. D. Sachs. diag Electronics 26:244+ Ap '53

See also

Electric contacts	Electric rectifiers
Electric distribution	Radio circuits

Mechanical analogies

Duality in mechanics. P. Le Corbeiller and Y. Yeung. bibliog diags Acoustical Soc Am J 24:643-8 N '52

Miniature circuits

Heat transfer in subminiature electronic equipment. D. T. Drake. il diag Tele-Tech 12:111-13+ Je '53

Microminiature variable inductors for transistorization. J. W. Eng. bibliog il Tele-Tech 12:74-5+ Ag '53

Miniature airborne telemetering system. H. M. Hill, jr. il diags Tele-Tech 11:68-72+ D '52

Miniaturization of airborne filter chokes. W. E. Tanner. diag Electronics 26:180-3 Ap '53

Plastics embedment

Casting resins for electronic equipment. W. R. Cuming. il Tele-Tech 12:68-9+ Mr '53

Liquid potting of electronic components. E. J. Hebert. diags Electronics 26:236+ Je '53

New casting resin for potting components. il Electronics 25:252+ N '52

Potting; resin retains good electrical properties from −60° to 200°C. Iron Age 171:149 F 12 '53

Potting transistors. il Electronics 26:274-6 Ag '53

Printed and potted electronic circuits. G. W. A. Dummer and D. L. Johnston. bibliog diags Inst E E Proc 100 pt 3:180-6 Jl '53; Excerpts. Engineering 175:87 Ja 16 '53; Discussion. Inst E E Proc 100 pt 3:187-91 Jl '53

Selection of casting resins. diag Electronics 26:254+ F '53

Plated circuits

Plated circuit process for radio production; illustrations with text. Tele-Tech 11:56-7 N '52

With plated circuits Motorola takes big step toward automatic assembly. E. H. Waverling. il diags Factory Management 110:84-7 O '52

Printed circuits

Accelerated etching processes for printed circuits. diags Electronics 25:232+ D '52

Automatic factory near for electronics; General Electric developing machinery for manufacture of printed-circuit electronic assemblies. P. Klass. il Aviation W 57:36+ N 17 '52

Automatic production machine for close-tolerance printed resistors; Autobrader. J. Bayha. il diags Tele-Tech 12:78-80+ S '53

Cold soldering technique for printed circuits. Electronics 26:259-60 Ja '53

Economical etched circuit method. il Tele-Tech 12:203 Ag '53

Foil strain gauge. Engineer 194:348-9 S 12 '52

Metal-clad laminates used in printed circuitry. N. A. Skow. Machine Design 25: 284+ S '53; Excerpts. Midwest Eng 5:19-20 My '53

New pocket-size military multimeter uses printed circuit methods. H. Cahn. il diag Tele-Tech 12:82-4+ My '53; Excerpts. Electronics 26:226+ My '53

Printed and potted electronic circuits. G. W. A. Dummer and D. L. Johnston. bibliog diags Inst E E Proc 100 pt 3:177-86 Jl '53; Excerpts. Engineering 175:86-7 Ja 16 '53; Discussion. Inst E E Proc 100 pt 3:187-91 Jl '53

Printed circuit components mass-produced by photoetching. Elec Eng 72:660 Jl '53

Printed circuit multi-conductor plug; Novacon. W. D. Novak. il Tele-Tech 12:64-6+ Ja '53

Printed circuit techniques for the laboratory. G. E. Broomhall. diags Tele-Tech 12:36-8+ Jl '53

Printed circuitry for transistors. S. F. Danko and R. A. Gerhold. il Inst Radio Eng Proc 40:1524-8 N '52

Printed circuits. R. H. Warring. Elec R (Lond) 152:66-8 Ja 9 '53

ELECTRIC circuits—Printed circuits—*Cont.*

Printed circuits for home radio receivers. E. Waverling. il Electronics 25:140-2 N '52

Production control of printed resistors. W. H. Hannahs and J. W. Eng. il Electronics 25:106-9 O '52

Project Tinkertoy; boon to electronics industry. flow chart il Am Mach 97:208-9 O 12 '53

Techniques for photographic silk screen printed circuits. W. Bornemann. il diags Tele-Tech 11:62-3+ O '52

Use of printed circuit conductors. R. J. Watts. bibliog il R Sci Instr 24:75-6 Ja '53

ELECTRIC circuits, Equivalent

Equivalences for the analysis of circuits with small nonlinearities. W. J. Cunningham. diags J Ap Phys 23:653-7 Je '52

Junction transistor equivalent circuits and vacuum-tube analogy. L. J. Giacoletto. bibliog diags Inst Radio Eng Proc 40:1490-3 N '52

Natural frequencies of coils and windings determined by equivalent circuits; abstract. P. A. Abetti and F. J. Maginniss. diag Elec Eng 72:781 S '53

Transistors; theory and application; equivalent transistor circuits and equations. A. Coblenz and H. L. Owens. diags Electronics 26:156-61 S '53

ELECTRIC clocks. See Clocks, Electric

ELECTRIC codes

See also

National electrical code

ELECTRIC coils

Development in coils and insulating materials. D. E. Stafford. Iron & Steel Eng 29: 97-100 O '52

See also

Radio coils

Reactors

ELECTRIC communication

Better communications for utilities. R. T. King. Pub Util 50:780-8 N 20 '52

Communications and electronics. M. J. Kelly. Elec Eng 71:965-9 N '52

Electrical noise from instrument cables subjected to shock and vibration. T. A. Perls. bibliog il diags J Ap Phys 23:674-80 Je '52

1952 engineering developments. il Elec Eng 72:1-3 Ja '53

See also

Radio communication

Radio telegraph

Radio telephone

Telephone

Teletype

Television

ELECTRIC commutators. See Commutators

ELECTRIC companies, National association of. See National association of electric companies

ELECTRIC condensers. See Electric capacitors

ELECTRIC conductivity

Anomalous critical current effect in superconducting NbN. F. C. Haley and D. H. Andrews. bibliog Phys R 89:821-3 F 15 '53

Application of rate-process theory to glass; electrical conductivity. D. A. Stuart and O. L. Anderson. bibliog diag Am Cer Soc J 36:27-30 Ja 1 '53

Automatic recording of carbon dioxide by conductometry; method for determination of rates of combustion. R. D. Goodwin. diags Anal Chem 25:263-5 F '53

Brillouin zone investigation of Mg alloys; Hall effect and conductivity. A. I. Schindler and E. I. Salkovitz. bibliog diags Phys R 91: 1320-2 S 15 '53

Conductance at 25° of lithium chloride, sodium and potassium bromides and potassium iodide in methanol and of lithium chloride, sodium bromide and potassium iodide in water. R. E. Jervis and others. bibliog Am Chem Soc J 75:2855-8 Je 20 '53

Conductance curves speed triode r-c amplifier design. K. A. Pullen. Tele-Tech 12:80-1+ My '53

Conductivity change in polyethylene during γ-irradiation. S. Mayburg and W. L. Lawrence. diags J Ap Phys 23:1006-11 S '52

Conductivity, now a useful nondestructive testing tool. H. N. Staats. il Materials & Methods 38:124-6 O '53

Conductivity of oxide emitters. R. C. Hughes and P. P. Coppola. diags Phys R 88:364-8 O 15 '52

Conductivity of potassium chloride in mixed solvents. J. Daly and C. G. Smith. diags Chem Soc J p2779-84 S '53

Conductivity of thin films in a longitudinal magnetic field. E. Koenigsberg. diags Phys R 91:8-9 Jl 1 '53

Constant current conductance. R. P. Taylor and N. H. Furman. bibliog diags Anal Chem 24:1931-3 D '52

Continuous determination of small percentages of methane in gases. H. Nash, jr. and others. diag Anal Chem 24:1650-2 O '52

Crystal structure and superconductivity of lanthanum. W. T. Ziegler, R. A. Young and A. L. Floyd, jr. bibliog Am Chem Soc J 75:1215-21 Mr 5 '53

Determination of calcium and strontium in a mixture. G. O. Assarsson and A. Balder. bibliog Anal Chem 24:1679 O '52

Effect of the anion on the conductive properties of triphenylmethane dye salts. R. C. Nelson. J Chem Phys 20:1327-8 Ag '52

Electrical conduction in fluid-saturated rocks. B. F. Howell, jr. bibliog diags World Oil 136:113-14+ F; 142+ Mr '53

Electrical conductivity and thermoelectric power of (BaSr)O and BaO. J. R. Young. diags J Ap Phys 23:1129-38 O '52

Electrical conductivity of liquid dinitrogen tetroxide. C. C. Addison and J. Lewis. diag Chem Soc J p4079-80 O '52

Electrical conductivity of mechanically disturbed germanium surfaces. E. N. Clarke and R. L. Hopkins. bibliog Phys R 91:1566-7 S 15 '53

Electrical conductivity of molten cryolite and potassium, sodium, and lithium chlorides. J. D. Edwards and others. bibliog il diag Electrochem Soc J 99:527-35 D '52; Discussion. 100:294-5 Je '53

Electrical conductivity of single crystals of graphite. A. K. Dutta. bibliog Phys R 90: 187-92 Ap 15 '53

Electrical conductivity of some alkaline earth titanates. E. K. Weise and I. A. Lesk. bibliog J Chem Phys 21:801-6 My '53

Electrical conductivity of some commercial refractories in the temperature range 600° to 1500°C. V. E. J. Chiochetti and E. C. Henry. bibliog diag Am Cer Soc J 36: 180-4 Je 1 '53

Electrical properties of porous semiconductors. E. B. Hensley. diags J Ap Phys 23:1122-9 O '52

Electrolytic conductance of the nitric acid-nitrogen dioxide-water system at 32°F. G. D. Robertson, jr., D. M. Mason and B. H. Sage. bibliog diag Ind & Eng Chem 44:2928-30 D '52

Electron-lattice interaction and superconductivity. K. S. Singwi. bibliog Phys R 87: 1044-7 S 15 '52

Evaluation of the pH and conductivity methods of slag control. P. D. S. St Pierre. bibliog il J Metals 5:Trans 41-3 Ja '53

Field emission from tantalum in the normal and superconducting state. R. Gomer and J. K. Hulm. il J Chem Phys 20:1500-2 S '52

Forces acting on superconductors in magnetic fields. I. Šimon. bibliog il diags J Ap Phys 24:19-24 Ja '53

High field conductance of copper sulfate relative to potassium chloride at 25°. D. Berg and A. Patterson, jr. Am Chem Soc J 74: 4704-5 S 20 '52

Induced conductivity in luminescent powders; ac impedance measurements. H. Kallman and others. bibliog Phys R 89:700-7 F 15 '53

Influence of impurities on electrical conductivity of rutile. G. H. Johnson. bibliog Am Cer Soc J 36:97-101 Mr 1 '53

Infrared photoconductivity due to neutral impurities in silicon. E. Burstein and others. Phys R 89:331-2 Ja 1 '53

Initiation of electrical breakdown in vacuum. L. Cranberg. bibliog J Ap Phys 23: 518-22 My '52

Irradiation-induced photoconductivity in magnesium oxide. H. R. Day. bibliog Phys R 91:822-7 Ag 15 '53

Low-temperature physics proceedings of NBS semicentennial symposium. bibliog il diags U S Nat Bur Stand Circ 519:1-291; $1.75 Supt. of doc. '52

ELECTRIC conductivity—*Continued*

Luminescence and photoconductivity in cadmium sulfide at the absorption edge. C. C. Klick. bibliog Phys R 89:274-7 Ja 1 '53

Measurement of electrolytic conductivity. G. F. Rucker. il Instruments 25:1418-19+ O '52

Mobility in high electric fields. E. M. Conwell. bibliog Phys R 88:1379-80 D 15 '52

Nature of conduction in liquid iron oxide and iron silicates. M. T. Simnad and G. Derge. bibliog J Chem Phys 21:933-4 My '53

Nature of solids. G. H. Wannier. il diags Sci Am 187:39-48 D '52

n-Type surface conductivity on *p*-type germanium. W. L. Brown. bibliog diags Phys R 91:518-27 Ag 1 '53

New thermal resistivity maximum in superconducting alloys. R. J. Sladek. bibliog Phys R 91:1280-1 S 1 '53

Oxygen-induced surface conductivity on germanium. E. N. Clarke. Phys R 91:756-7 Ag 1 '53

Photoconduction in anodic Ta_2O_5. L. Apker and E. A. Taft. Phys R 88:58-9 O 1 '52

Photoconductivity of violanthrone. H. Akamatu and H. Inokuchi. J Chem Phys 20:1481-3 S '52

Similarity properties of the two-fluid model of super-conductivity. E. Maxwell. Phys R 87:1126-7 S 15 '52; Correction. 88:1434 D 15 '52

Solutions in sulphuric acid; electrical conductivity measurements. R. J. Gillespie and S. Wasif. Chem Soc J p221-31 Ja '53

Solutions in sulphuric acid; the electrical conductivity of solutions of hydrogen disulphates and the self-dissociation of sulphuric acid. H. J. Gillespie and S. Wasif. Chem Soc J p964-70 Mr '53

Solutions in sulphuric acid; the electrical conductivity of the water-sulphur trioxide system in the region of the composition of sulphuric acid. R. J. Gillespie and S. Wasif. diags Chem Soc J p204-8 Ja '53

Studies of compounds for superconductivity. W. T. Ziegler and R. A. Young. bibliog Phys R 90:115-19 Ap 1 '53

Superconductive transition in tantalum. H. Preston-Thomas. Phys R 88:325-7 O 15 '52

Superconductivity below 1°K. M. C. Steele. Phys R 87:1137-8 S 15 '52

Superconductivity; new electronic horizon. il Tele-Tech 12:83+ S '53

Superconductivity of indium-thallium solid solutions. J. W. Stout and L. Guttman. bibliog Phys R 88:703-12 N 15 '52

Superconductivity of rhenium. J. G. Daunt and T. S. Smith. bibliog diags Phys R 88:309-11 O 15 '52

Surface photoconductivity in cadmium sulfide crystals. R. H. Bube. diags J Chem Phys 21:1409-10 Ag '53

Temperature, current, magnetic field phase diagram of superconductivity. W. Meissner and others. Phys R 90:709 My 15 '53

Transport phenomena in a completely ionized gas. L. Spitzer, jr. and R. Härm. bibliog Phys R 89:977-81 Mr 1 '53

Two-fluid models of superconductivity with application to isotope effects. P. M. Marcus and E. Maxwell. bibliog Phys R 91:1035-42 S 1 '53

Where electrically conductive rubbers are proving useful. P. O'Keefe. il Materials & Methods 37:96-7 Ap '53

See also

Dielectrics
Electric conductors
Electric resistance
Electrolytes—Conductivity
Hall effect

ELECTRIC conductors

Aluminum; its application as a cable sheathing material and as a conductor. D. McAllister. il Elec J 150:1225-32, 1301-5 Ap 10-17 '53

Code interpretations and conductor selection for cranes and hoists. L. Price. Iron & Steel Eng 29:130-6 N '52

Current-carrying wire loops in a simple inhomogeneous region. J. R. Wait. J Ap Phys 23:497-8 Ap '52

Field emission from photoconductors. L. Apker and E. Taft. Phys R 88:1037-8 D 1 '52

Force on a conductor in a slot. C. R. Cahn and D. W. Spencer. diag Elec Eng 71:485; 72:474-5 My '52, My '53

Free energies and phase transition of a cylindrical superconductor. P. M. Marcus. bibliog diags Phys R 88:373-81 O 15 '52

Have Europeans solved Al-Cu connection problem? diags Elec World News ed 138:32-4 N 10 '52

Magnetic dipole antenna immersed in a conducting medium. J. R. Wait. bibliog Inst Radio Eng Proc 40:1244-5 O '52

Magnetic resonance absorption in conductors. N. Bloembergen. bibliog J Ap Phys 23:1383-9 D '52

Mathematical theory of laminated transmission lines. S. P. Morgan, jr. diags Bell System Tech J 31:883-949, 1121-206 S-N '52

Paramagnetic effect in superconductors. T. S. Teasdale and H. E. Rorschach, jr. Phys R 90:709 My 15 '53

Penetration depth of superconductors. M. C. Steele and M. F. M. Osborne. Phys R 91:1281 S 1 '53

Some characteristics of the earth as a conductor of electric current. M. C. McCall and L. H. Harrison. 5pls U S Bur Mines Rep of Invest 4903:1-9 '52

Some properties of superconductors below 1°K. T. S. Smith and others. Phys R 89:654 F 1 '53

Some properties of superconductors below 1°K; Zr, Hf, Cd, and Ti. T. S. Smith and J. G. Daunt. bibliog Phys R 88:1172-6 D 1 '52

Superconducting compounds of nonsuperconducting elements. B. T. Matthias. Phys R 90:487 My 1 '53

Superconducting properties of cobalt disilicide. B. T. Matthias and J. K. Hulm. Phys R 89:439-41 Ja 15 '53

Superconducting silicides and germanides. G. F. Hardy and J. K. Hulm. Phys R 89:884 F 15 '53

Theoretical and experimental heat capacities of superconducting metals. R. D. Worley and others. bibliog Phys R 87:1142-3 S 15 '52

Thermal resistivity of superconductors. D. P. Detwiler and H. A. Fairbank. Phys R 88:1049-52 D 1 '52

Transmission properties of laminated Clogston type conductors. E. F. Vaage. diags Bell System Tech J 32:695-713 My '53

Universal skin-effect chart for conducting materials. H. A. Wheeler. bibliog Electronics 25:152-4 N '52

Uses of earthed signal conductors on transmission circuits. W. Casson. diags Inst E E Proc 100 pt 2:277-88 Je '53; Abstract. Elec R (Lond) 151:1381 D 26 '52; Discussion. Inst E E Proc 100 pt 2:288-95 Je '53; Elec R (Lond) 151:1381-2 D 26 '52; Elec J 149:2011-12 D 26 '52

Watercooled flexible conductor solves induction heating problem. il Power Eng 57:114 O '53

See also

Aluminum—Electrotechnical uses
Busbars
Electric cables
Electric distribution
Electric wire
Wave guides

Semiconductors

Adiabatic Hall effect in semiconductors. V. A. Johnson and F. M. Shipley. bibliog Phys R 90:523-9 My 15 '53

Chemical effects due to the ionization of impurities in semiconductors. H. Reiss. bibliog J Chem Phys 21:1209-17 Jl '53

Current carrier mobility ratio in semi-conductors. L. P. Hunter. bibliog Phys R 91:579-81 Ag 1 '53

Cyclotron resonances, magnetoresistance, and Brillouin zones in semiconductors. W. Shockley. diags Phys R 90:491 My 1 '53

Determining properties of bulk semiconductors oscillographically by pulse-heating method. R. B. McQuistan. bibliog diags Electronics 26:150-5 Je '53

Diffusion currents in the semiconductor Hall effect. R. Landauer and J. Swanson. bibliog diag Phys R 91:555-60 Ag 1 '53

Dc field distribution in a swept intrinsic semiconductor configuration. R. C. Prim. Bell System Tech J 32:665-94 My '53

Electrical conductivity and thermoelectric power of (BaSr)O and BaO. J. R. Young. diags J Ap Phys 23:1129-38 O '52

ELECTRIC conductors—Semiconductors—*Cont.*

Electrical properties of porous semiconductors. E. B. Hensley. diags J Ap Phys 23:1122-9 O '52

Electrical properties of titanium dioxide semiconductors. R. G. Breckenridge and W. R. Hosler. bibliog diags Phys R 91:793-802 Ag 15 '53

Electron spin resonance in a silicon semiconductor. A. M. Portis and others. Phys R 90:988-9 Je 1 '53

Electronic conduction in silicon carbide. J. T. Kendall. bibliog il diags J Chem Phys 21:821-7 My '53

Energy states of overlapping impurity carriers in semiconductors. C. Erginsoy. bibliog Phys R 88:893-4 N 15 '52

Hall effect. O. Lindberg. diags Inst Radio Eng Proc 40:1414-19 N '52

Junction fieldistors. O. M. Stuetzer. il diags Inst Radio Eng Proc 40:1377-81 N '52

Lifetime of injected carriers in germanium. D. Navon and others. bibliog diag Inst Radio Eng Proc 40:1342-7 N '52

Mechanism of conductivity in semiconducting phosphors. J. E. Rosenthal and A. Bramley. J Chem Phys 20:1496 S '52

New method of studying lattice defects in solids by Debye absorption; case of semiconductors. M. Freymann and R. Freymann. bibliog J Chem Phys 20:1970-1 D '52

New photoelectric devices utilizing carrier injection. K. Lehovec. bibliog diags Inst Radio Eng Proc 40:1407-9 N '52

Possible mechanism for 1/*f* noise generation in semiconductor filaments. L. Bess. Phys R 91:1569 S 15 '53

Pressure-welded *p-n* junctions in germanium. R. G. Shulman and D. M. Van Winkle. il J Ap Phys 24:224 F '53

Properties of junction transistors. K. D. Smith. bibliog il diags Tele-Tech 12:76-8+ Ja '53

Radio progress during 1952; semi-conductors. bibliog il Inst Radio Eng Proc 41:460-2 Ap '53

Semiconducting intermetallic compounds. R. G. Breckenridge. Phys R 90:488-9 My 1 '53

Semiconductor material; compound of aluminum and antimony. Mech Eng 75:401 My '53

Sensitive recording alternating-current Hall effect apparatus. E. M. Pell and R. L. Sproull. bibliog diags R Sci Instr 23:548-52 O '52

Shot noise in semiconductors. A. van der Ziel. J Ap Phys 24:222-3 F '53

Space-charge limited emission in semi-conductors. W. Shockley and R. C. Prim. bibliog diags Phys R 90:753-8 Je 1 '53

Theory of noise in *p-n* junctions and related devices. R. L. Petritz. bibliog diags Inst Radio Eng Proc 40:1440-56 N '52

Theory of the magnetoresistive effect in semiconductors. V. A. Johnson and W. J. Whitesell. bibliog Phys R 89:941-7 Mr 1 '53

Transition probability for photoelectric emission from semiconductors. H. B. Huntington and L. Apker. bibliog Phys R 89:352-6 Ja 15 '53

Transport of added current carriers in a homogeneous semiconductor. W. van Roosbroeck. bibliog diag Phys R 91:282-9 Jl 15 '53

See also
Transistors

Standards

ASTM standards on metallic electrical conductors. 252p pa $3 Am. soc. for testing materials, 1916 Race st, Philadelphia 3 '52

ELECTRIC conduits

Height to erect conduit service risers above roofs of residences; engineering reference sheet. H. M. Williams. il diag Elec World 139:98 Ja 12 '53

Plastic pipe used for underground conduits for power lines. il Elec Eng 71:998 N '52; Mod Plastics 30:94 D '52

ELECTRIC connectors

Bell wraps solderless connections for joint economy. C. Emerson. il Am Mach 97:100-1 Ag 31 '53

Blackburn's new process ups connector efficiency. Elec World News ed 139:48 Ja 5 '53

Connectors retard use of aluminum wire. C. Baugh. il Elec West 109:72-5 D '52

Elastic reserve is key to wrapped wire-terminal joints; review. A. H. Allen. il diags Metal Prog 64:161-4+ Jl '53

Have Europeans solved Al-Cu connection problem? diags Elec World News ed 138:32-4 N 10 '52

How to select connectors for aluminum conductors. H. Dupre. il Materials & Methods 38:96-9 Ag '53

Miniature electrical connectors; Varicons. il Mod Plastics 30:176 O '52

Multi-contact electrical connectors. L. Baird. il diags Product Eng 23:184-8 N '52

Necessary conditions for obtaining a permanent solderless wrapped connection. W. P. Mason and T. F. Osmer. il diag Metal Prog 64:242+ O '53

New wiring tools make solderless connections. il Electronics 26:272+ Je '53

Novel connectors aid miniaturization; GE Novacon units may remove the last obstacle to automatic-factory assembly of printed circuits. P. Klass. il Aviation W 57:54+ N 10 '52

Nylon jackets for connectors. il Mod Plastics 30:95 F '53

Printed circuit multi-conductor plug; Novacon. W. D. Novak. il Tele-Tech 12:64-6+ Ja '53

Resistance welding of dissimilar metals to magnesium for electrical connections. P. Klain and H. W. Croisant. il Welding J 32:217-24 Mr '53

Simple splicing mold simplifies repair of battery connectors. il Iron Age 171:185 Ap 2 '53

Solderless bonds. il Bsns W p 114+ Ap 25 '53; Mach 59:211 Ag '53

Solderless wrapped connections. J. W. McRae and others. il diags Bell System Tech J 32:523-610 My '53

Solderless wrapped connections; structure and tools. R. F. Mallina. il diags Bell System Tech J 32:525-55 My '53

Story of the AN connector. G. R. Lawson. il Gen Elec R 56:51-2 Mr '53

Tinned Cu braid joins Al buses. il Elec World News ed 139:34 F 16 '53

What you need to know about connectors for aluminum wire and cable. J. St Andre. il diags Factory Management 110:120-3 O '52

Standards

Performance standards adopted for connectors. Elec World News ed 138:32-3 O 27 '52; Discussion. F. Pennell. 138:204 N 17 '52

Testing

Investigation of the performance of power connectors for use outdoors with aluminum conductors. H. R. Harrison and R. W. Honebrink. il diags Elec Eng 72:393-7 My '53

ELECTRIC consumers information committee

Information committee set up to carry out principles established at Electric consumers conference. Elec World 138:86 O 6 '52

ELECTRIC contactors

Allis-Chalmers heavy-duty dc contactor. il diags Machine Design 24:119 D '52

Arcing time of high-voltage air-break contactors at low currents; abstract. C. A. Lister. diag Elec Eng 72:589 Jl '53

Circuits and applications of contactor control devices. S. Davis and A. Gronner. diags Product Eng 24:204-13 Ap '53

See also
Brushes (electric machinery)

ELECTRIC contacts

Arcing at electrical contacts on closure; development of an arc. L. H. Germer and J. L. Smith. il diags J Ap Phys 23:553-62 My '52

Behaviour of metallic contacts at low voltages in adverse environments. A. Fairweather. diags Inst E E Proc 100 pt 1:174-82 Jl '53

Contribution to the theory of the silicon carbide contact. E. Holm. bibliog il diags J Ap Phys 23:509-17 My '52

ELECTRIC contacts—*Continued*

Convention on electrical contacts, Loughborough, April 7-9, 1952; abstracts of papers. Inst E E Proc 100 pt 1:154-7 Jl '53; Engineering 173:501 Ap 18 '52; Electrician 148:1159-60 Ap 11 '52

Effect of inductance on fine transfer between platinum contacts. J. Warham. bibliog il diags Inst E E Proc 100 pt 1:163-8 Jl '53

Hand-operated double-action press sets copper contacts. H. Gifford. diag Am Mach 97:132 Ag 17 '53

How to prevent sticking contacts and relays. R. S. Kercher and L. E. Markle. il Coal Age 58:112 Ag '53

Initiation of discharges at electrical contacts. F. L. Jones. bibliog Inst E E Proc 100 pt 1:169-73 Jl '53

Investigation of the selenium rectifier for contact protection. H. F. Herbig and J. D. Winters. il diags Elec Com 30:96-105 Je '53

Long-life contacts for unidirectional currents of 1-20 amperes. A. L. Allen. diags Inst E E Proc 100 pt 1:158-62 Jl '53

Make and break. R. H. Warring. diags Elec J 150:2194-8 Je 19 '53

ELECTRIC contractor-dealers

For the guidance of contractors; hire purchase and credit sales. Elec J 149:1511-12 N 14 '52

ELECTRIC contractors

Breach of contract. Elec J 150:607-8 F 20 '53

Contractors discover the values of selling. E. J. White. Elec World 138:64-7 D 29 '52

Contractor's opportunity. W. T. Trace. Elec R (Lond) 152:117-18 Ja 16 '53

Contracts of employment. Elec J 150:279-80 Ja 23 '53

Electronics and contracting; abstracts. W. H. Smith. Elec R (Lond) 152:1478-9 Je 26 '53; Elec J 151:35-6 Jl 3 '53

Let's not be killed with kindness. W. R. Grasle. Elec West 111:103 Jl '53

Misrepresentation, the legal aspect. F. E. Sugden. Elec R (Lond) 152:93-4 Ja 9 '53

Some commercial aspects of electrical contracting and retailing; abstracts and discussion. J. M. Hawkins. Elec R (Lond) 152:1476-8 Je 26 '52; Elec J 151:33-5 Jl 3 '53

Whose property? some legal points on hiring and repairs. C. F. Mayson. Elec R (Lond) 151:1121-2 N 21 '52

Advertising

Can direct mail help contractors sell? il Elec West 110:107 Ap '53

Electrical contractors launch $500,000 campaign for new business. il Ind Marketing 38:54-6 Je '53

ELECTRIC control

Automatic-control equipment for Diesel engines; Mirrlees, Bickerton and Day, limited. Engineering 176:235 Ag 21 '53; Elec J 151:277-8 Jl 24 '53

Automatic controller for radiofrequency induction-heating units. J. J. Theron. diag R Sci Instr 24:281-2 Ap '53

Automatic controls insure emergency power when needed. diag Automotive Ind 107:45+ D 15 '52

Automatic process control; simple, reliable, versatile. il diag Mill & Factory 53:103-4 S '53

Circuits and applications of contactor control devices. S. Davis and A. Gronner. diags Product Eng 24:204-13 Ap '53

Compensation of feedback-control systems subject to saturation. G. C. Newton, jr. bibliog diags Franklin Inst J 254:281-96, 391-413 O-N '52

Control in industry. A. W. Schmitz and H. L. Palmer. il diags Gen Elec R 56:48-51+ S '53

Electric regulation systems; key to higher production. W. R. Harris. il diags Power Eng 57:76-9 Je '53

Electrical control of dangerous machinery and processes; electrically interlocked guards on machines. W. F. Cooper. il diags Inst E E Proc 98 pt 2:349-57 Je '51; Discussion. 98 pt 2:358-61; 100 pt 2:183-7 Je '51, Ap '53

Electrical control of dangerous machinery and processes; remote and supervisory control. W. F. Cooper. bibliog il diags Inst E E Proc 99 pt 2:349-61 Ag '52; Discussion. 99 pt 2:362-5; 100 pt 2:187-90 Ag '52, Ap '53

Electronic prevention of drill breakage. il Engineering 175:278-9 F 27 '53

Elevators controlled by electrical brains. il Eng N 150:32-4 My 7 '53

Engineering highlights of 1952; drives and controls. C. A. Scarlott. il Westinghouse Eng 13:20-3 Ja '53

High-speed router is remote controlled. il Steel 131:126 D 15 '52

Industrial applications of feedback control systems. R. W. Moore. il diags Westinghouse Eng 12:178-83 N '52; Same cond. diags Machine Design 24:190-1+ D '52

Industrial control gear. il Elec R (Lond) 151:1191 N 28 '52

Industrial regulating systems. M. H. Fisher. il diags Westinghouse Eng 13:162-7 S '53

Industrial regulators; role of the Anacom. J. T. Carleton. il diags Westinghouse Eng 12:184-6 N '52; Same cond. Machine Design 24:173-4+ N '52

Integrating electrical elements of automatic machine tools. K. O. Tech. il Tool Eng 30:143-5 Je '53

Machine tools on show. il Electrician 149:925-8 S 26 '52

Magnetic amplifier in control circuits. R. W. Moore. il diags Iron & Steel Eng 30:67-73 Jl '53

Modern crane control for steel plants. W. R. Wickerham and G. E. Mathias. il diags Iron & Steel Eng 29:100-11; Discussion. 111-15 N '52

Modulating motors for step-by-step control. il Elec J 149:1317-20 O 31 '52

New control for trolley coaches; abstract. N. H. Willby. il Elec Eng 71:1118 D '52

New unit stabilizes heating value of mixed utility gas. R. A. Schoger. flow diag il Am Gas J 178:14-15+ Je '53

Non-electronic automatic drive system. diag Paper Tr J 136:18 Ja 9 '53

Packaged control; system monitors nuclear reactors. Iron Age 171:137 Je 11 '53

Power control with magnetic amplifiers. E. L. Harder. il diags Electronics 25:115-17 O '52

Push-button control of natural-gas flow; Houston pipe line co. J. F. Collerain and E. M. DeMouche. il diags Oil & Gas J 51:254-6+ O 13 '52

Recent development in ingot chariot control. A. W. Leadbeater and R. B. Jamieson. il diags Iron & Steel Inst J 172:264-7 N '52

Regulators for the marine industry. S. A. Haverstick. il diags Westinghouse Eng 13:130-4 Jl '53

Remote control of underground storage field; Southern California gas co. R. V. Gray. il Oil & Gas J 51:261-3 O 13 '52

Selection and analysis of regulating systems for mill drives. W. E. Miller and F. S. Rothe. bibliog il diags Iron & Steel Eng 29:81-91; Discussion. 91-7 D '52

Signal component control; abstract. D. J. Gimpel and J. F. Calvert. Elec Eng 72:49 Ja '53

Simplified automatic ingot buggy. I. N. Tull; H. S. Fegely. il diags Iron & Steel Eng 30:84-9; Discussion. 90-1 Mr '53

Special control gear; M.T.E. control gear, ltd. il Elec R (Lond) 151:863-4 O 17 '52

Temperature and humidity control; Humicon system. il diag Elec R (Lond) 152:1313-15 Je 5 '53

Transducer circuits. T. R. Breunich. diags Product Eng Hdbk p I 29-31 '53

See also

Carrier current control
Electric controllers
Electric generators, Direct current—Control
Electric motors—Control
Electric switchgear
Electrohydraulic control
Electropneumatic control
Photoelectric cells—Control uses
Radio control
Selsyn apparatus
Servomechanisms
Thyratron
Transistors—Control uses
Vacuum tubes—Control uses
Valves—Electric control
Valves, Hydraulic—Electric control
Voltage regulation

ELECTRIC controllers

Automatic acceleration equipment for trolleybuses. il Elec J 151:573-4 Ag 21 '53

ELECTRIC controllers—*Continued*

Crane controls for iron and steel works; modern developments in master controllers. L. N. Bramley. bibliog 4pls Iron & Steel Inst J 173:53-9 Ja '53

Maintenance of electric controllers. L. E. Markle. il Paper Ind 34:74-8 Ap '52; Same. Pet Processing 7:950-5 Jl '52; Same. Water & Sewage Works 100:204-9 My '53; Same cond. Textile World 102:126-9+ Ja '52

ELECTRIC converters

Design of high-voltage high-power mercury-arc convertors. H. von Bertele and R. Tucker. bibliog(30 titles) diags Inst E E Proc 99 pt 2:555-74; Discussion. 574-81 D '52; Elec R (Lond) 150:911-12 My 2 '52

Mercury arc convertors; effect of grid control. J. P. Wolfenden. il diags Elec R (Lond) 151:276-80 Ag 8 '52

See also
Electric inverters

ELECTRIC cooking

Catering exhibition. il Elec R (Lond) 152: 367-8 F 13 '53

Conduct meat shrinkage tests; gas and electric range comparisons; A.G.A. laboratories. Am Gas Assn Mo 34:14-15+ Jl-Ag '52; 35: 14-16 F '53

Gas versus electric cooking. W. J. L. James. Elec R (Lond) 151:841-2 O 17 '52

Importance of the cooking load; abstract. N. F. Marsh. Elec R (Lond) 152:760 Ap 3 '53

Infrared roasting attracts customers, increases profits; turkeys and hams roasted under infrared lamps. T. R. Warren. il Elec World 138:138+ O 6 '52

Neglected load; commercial electric cooking. il Elec World 139:113-20 Mr 23 '53

New fat fryer developed by Hotpoint co. il Elec World News ed 139:35 My 25 '53

ELECTRIC cranes. See Cranes, derricks, etc.—Electric equipment

ELECTRIC current integrators. See Integrators

ELECTRIC current limiters

Branch feeder protection; low-voltage current limiting reactions. R. Bell. il Elec West 109:94-5 O '52

ELECTRIC currents

Acousto-electric effect. R. H. Parmenter. bibliog diags Phys R 89:990-8 Mr 1 '53

Current flow in cylinders. W. R. Smythe. bibliog diags J Ap Phys 24:70-3 Ja '53

Current increasing; does the velocity of the electrons, or their number, increase? J. Webb. Elec R (Lond) 151:1336-7 D 19 '52

Determination of arc furnace optimum current. D. R. Cochran. diag Blast F & Steel Pl 41:1031-6 S '53

Electric curtain stabilizes wet ground for deep excavation. H. W. Richardson. il plan diag Constr Methods 35:52-8 Ap '53

Fundamental electronic circuits; cathode-ray tube circuits for voltage and current analysis. R. B. Immel. diags Product Eng 24: 182-3 Ja '53

Long-life contacts for unidirectional currents of 1-20 amperes. A. L. Allen. diags Inst E E Proc 100 pt 1:158-62 Jl '53

Movement of overhead conductors due to flow of fault currents. L. P. Works. Midwest Eng 5:11+ F '53

Oil by shock? electric current through sands may raise output. C. M. Davis. il Oil & Gas J 51:64-5 N 3 '52

Some researches on current chopping in high-voltage circuit-breakers. A. F. B. Young. bibliog diags Inst E E Proc 100 pt 2:337-53; Discussion. 354-61 Ag '53

Use of radioactive material for the generation of high voltage. E. G. Linder and S. M. Christian. il diags J Ap Phys 23: 1213-16 N '52

See also
Earth currents
Eddy currents
Electric circuits
Electric conductivity
Electric conductors
Electric distribution
Electric measurements
Electric meters
Electric switchgear
Electric transformers
Electric transient phenomena
Hall effect
Stray currents

ELECTRIC currents, Alternating

Alternating-current resistance standards. A. H. M. Arnold. bibliog il diag Inst E E Proc 100 pt 2:319-28 Je '53

See also
Electric generators, Alternating current
Electric motors, Alternating current

ELECTRIC cutouts

See also
Electric fuses

ELECTRIC cutting

Britain, too, has electro-spark machining; illustrations with text. diag Am Mach 96: 159-60 N 10 '52

Machining hard metals; the spark-cutting process. Elec R (Lond) 152:955-6 Ap 24 '53

New electric arc torch cuts ceramics and concrete; DynaTrode. il Electronics 26:264+ Je '53

Refractory-cutting arc; process for cutting and piercing stone, cement, concrete and refractory materials. Steel 132:134+ Ap 27 '53; Elec Eng 72:473 My '53

Self-contained arc. il Constr Methods 35: 150+ Ap '53; Eng N 150:104 Ap 2 '53; Iron Age 171:181-2 Ap 2 '53; Materials & Methods 37:141 My '53; Power Eng 57:89 Ag '53

Unorthodox methods of machining hard materials. P. Grodzinski. bibliog(29 ref) Metallurgia 47:34-8 Ja '53

Wickman introduces spark machining with unit built by Sparcatron. il Am Mach 97: 172-3 My 25 '53

ELECTRIC detonators. See Detonators, Electric

ELECTRIC discharges

Active nitrogen. S. K. Mitra. bibliog Phys R 90:516-21 My 15 '53

Active nitrogen, airglow. O. Oldenberg. bibliog Phys R 90:727-30 Je 1 '53

Ball of fire discharge with a pronounced current saturation. G. K. Medicus. diag J Ap Phys 24:233-4 F '53

Comparison of electron density in different regions of a dc glow discharge. B. J. Udelson and J. E. Creedon. Phys R 88:145 O 1 '52

Contribution to the theory of impulse breakdown. F. R. Dickey, jr. diags J Ap Phys 23:1336-9 D '52

Diffusion, de-excitation, and ionization cross sections for metastable atoms. M. A. Biondi. bibliog diag Phys R 88:660-5 N 1 '52

Discharge mechanism in argon counters. L. Colli and U. Facchini. bibliog il diag Phys R 88:987-98 D 1 '52

Dynamic characteristics of the plasma in discharges through gases. H. N. Olsen and W. S. Huxford. bibliog il diags Phys R 87:922-30 S 15 '52

Effect of minority carriers on the breakdown of point contact rectifiers. E. Billig. Phys R 87:1060-1 S 15 '52

Electric discharge tube; patent. diag Electronics 26:252+ S '53

Electrical discharges in gases; abstract. F. L. Jones. Engineer 194:381 S 19 '52

Electrical discharges in gases; summary of British Association papers. Elec R (Lond) 151:619-20 S 19 '52

Electrical fields in the Crookes dark space of a low pressure glow discharge in air and N_2. R. P. Stein. bibliog diags Phys R 89: 134-42 Ja 1 '53

Electron removal in krypton afterglows. J. M. Richardson. bibliog il diag Phys R 88: 895-900 N 15 '52

Emission characteristics of vacuum spark discharge. J. C. Wahr and others. il Opt Soc Am J 43:151-6 Mr '53

Enhancement of the green continuum of Hg by a rare gas. C. Kenty and D. A. Larson. bibliog Phys R 89:180-1 Ja 1 '53

Formation of the imine radical in the electrical discharge. F. O. Rice and M. Freamo. Am Chem Soc J 75:548-9 F 5 '53

Formative time lags of uniform field breakdown in argon. G. A. Kachickas and L. H. Fisher. bibliog Phys R 91:775-9 Ag 15 '53

Formative time lags of uniform field breakdown in N_2. G. A. Kachickas and L. H. Fisher. bibliog Phys R 88:878-83 N 15 '52

ELECTRIC discharges—*Continued*

Gaseous discharge super-high-frequency noise sources. H. Johnson and K. R. Deremer. bibliog il diags Inst Radio Eng Proc 39:908-14 Ag '51; Discussion. H. L. Steele, jr. 40:1603-4 N '52

Glow-discharge electrolysis; the anodic formation of hydrogen peroxide in inert electrolytes. R. A. Davies and A. Hickling. diag Chem Soc J p3595-602 S '52

High frequency breakdown in neon. A. D. MacDonald. Phys R 88:420 O 15 '52

Influence of irradiation on discharge current in an ozonizer. S. Deb and others. bibliog il diag J Chem Phys 21:1486-92 S '53

Influence of light on the secondary emission in a low frequency electrodeless discharge; Joshi effect. A. P. Saxena and N. A. Ramaiah. bibliog diags J Chem Phys 20:1342 Ag '52

Initiation of discharges at electrical contacts. F. L. Jones. bibliog Inst E E Proc 100 pt 1:169-73 Jl '53

Interaction of microwaves propagated through a gaseous discharge plasma. L. Goldstein and others. bibliog il Phys R 90:151-2 Ap 1 '53

Ion concentrations and recombination in expanding low pressure sparks. R. G. Fowler and others. il diags Phys R 87:966-70 S 15 '52

Measurements of the physical properties of active nitrogen. J. M. Benson. bibliog il diags J Ap Phys 23:757-63 Jl '52

Mechanism for active nitrogen. R. W. Nicholls. bibliog J Chem Phys 20:1040 Je '52

Mechanism of the ring discharge in negative point-to-plane corona. A. Greenwood. bibliog il diags J Ap Phys 23:1316-19 D '52

Methods of measuring the properties of ionized gases at high frequencies; measurement of discharge admittance and electron density. D. J. Rose and S. C. Brown. diags J Ap Phys 23:1028-32 S '52

Methods of measuring the properties of ionized gases at high frequencies; measurements of *Q*. S. C. Brown and D. J. Rose. diags J Ap Phys 23:711-18 Jl '52

Microwave technique for studying discharges in gases. M. A. Lampert and A. D. White. diags Elec Com 30:124-8 Je '53

Noise in gas discharges. A. van der Ziel. J Ap Phys 24:223-4 F '53

Photoionization as an important secondary process in a low frequency electrodeless discharge. A. P. Saxena and others. diag J Chem Phys 21:365 F '53

Processes involving ions and metastable atoms in mercury afterglows. M. A. Biondi. bibliog diag Phys R 90:730-7 Je 1 '53

Quenching of afterglow in gaseous discharge plasmas by low power microwaves. L. Goldstein and others. il Phys R 90:486-7 My 1 '53

Reliability of probe measurements in hot cathode gas diodes. G. Wehner and G. Medicus. bibliog il diags J Ap Phys 23:1035-46 S '52

Seat of Joshi effect in a/c silent discharges. S. R. Khastgir. J Chem Phys 20:1052-3 Je '52

Shock waves in low pressure spark discharges. R. G. Fowler and others. il Phys R 88:137-8 O 1 '52

Simple way to build quartz shielded W probes for gas discharge measurements. G. Medicus. diags R Sci Instr 23:646-7 N '52

Surface discharges from cable sheaths and their relation to electric shock; abstract. E. W. Greenfield. Elec Eng 72:152 F '53

Vacuum bell jar discharge may solve flying saucer mystery. N. W. Scott. Elec Eng 71:1055 N '52

See also

Corona (electricity)	Ionization, Gaseous
Electric arc	Lightning
Electric spark	Vacuum tubes

ELECTRIC distribution

Application of completely self-protected banking transformers in secondary banks. H. R. Moore and S. L. Corbin. il diag Elec Eng 71:1109-11 D '52

Buried cable distribution serves Hawaiian subdivisions. C. H. Williams. il plans diag Elec World 138:106-8 O 6 '52

Case study shows savings through power factor correction. A. R. Waehner. Elec World 139:108-9 F 23 '53

Chuquicamata sulphide plant; electrical distribution. S. F. French. il diag Min Eng 4:1203-7 D '52

Developments in electricity supply productivity. Engineering 174:298-9 S 5 '52

Distribution engineering in the nationalized supply industry. H. S. Moody. Inst E E Proc 100 pt 1:16-17 Ja '53

Do something about distribution. T. A. Phillips. Elec West 110:118-19 Je '53

Electric distribution in iron and steel works. T. B. Rolls and E. C. Slater. diags Iron & Steel Inst J 173:163-76 F '53; Discussion. 174:260-4 Jl '53

Electric power for refineries. R. F. Lawrence and H. B. Thacker. diags Pet Processing 8:364-7 Mr '53

Electric system of Lehigh's Bunnell, Fla. plant. A. Smith. il plan diags Rock Prod 56:90-9+ S '53

Electric systems in the New York Port Authority bus terminal. W. Henschel and H. W. Wenson, jr. diags Elec Eng 71:979-84 N '52

Electricity and productivity; American and British practice. Elec R (Lond) 151:503-4 S 5 '52

Electricity and productivity; review of action taken following teams' U.S.A. visit. Electrician 149:673-4 S 5 '52

Electricity and productivity; statement reviewing action taken on report of electricity supply productivity teams. Engineer 194:327-8 S 5 '52

Engineering highlights of 1952; distribution. C. A. Scarlott. il Westinghouse Eng 13:14-16 Ja '53

How to plan power distribution. W. B. Wilson. plan diags Chem Eng 60:199-203 Ap '53

Losses in distributors. J. G. Boggis. diags Elec R (Lond) 151:373-7 Ag 22 '52

Modernization of electrical distribution system at Powell river. E. N. Walton. il diags Pulp & Pa of Can (Convention no) 54:210-14 [F] '53

Modernize distribution; Angelus bldg., Los Angeles. il Elec West 110:91 Ja '53

More power for potash mines through better distribution. A. B. Chafetz. il Eng & Min J 153:92-6 D '52

New approach to cold load restoration; method of calculating relay performance. O. Ramsaur. Elec World 138:101-3 O 6 '52

Planning of an electricity board's distribution system. G. O. McLean. bibliog maps diags Inst E E Proc 98 pt 2:331-41 Je '51; Discussion. 98 pt 2:341-8; 100 pt 2:129-44 Je '51, Ap '53

Planning picture for Kansas City power & light co. C. M. Little and J. S. Palmer. maps Edison Elec Inst Bul 21:83-7+ Mr '53

Power and light aid Sears to sell. il Elec West 111:98-100 Ag '53

Power for underground mines. J. Z. Linsenmeyer and A. G. Owen. il diag Westinghouse Eng 13:135-9 Jl '53

Power system planning pays off in potential. F. L. Aime. diags Steel 131:72-3 D 29 '52

Primer on power system design; General Electric's new jet engine center. R. M. Wilson. il plan diag Gen Elec R 56:23-5+ S '53

Renovation roundup; electrical distribution and application. diags Power 97:80+ Mid-S '53

Telemetering for system operation. R. H. Dunn and C. H. Chambers. bibliog diags Inst E E Proc 100 pt 1:39-51 Mr '53; Abstract. Elec R (Lond) 151:1079 N 14 '52; Discussion. Inst E E Proc 100 pt 1:51-6 Mr '53; Elec R (Lond) 151:1079-80 N 14 '52; Elec J 149:1515-16 N 14 '52

Today's electrical practice; supply, distribution, utilization in the industrial plant. J. J. O'Connor. diags Power 97:73-124 O '53

Trends in electrical distribution. il diags Factory Management 111:B 198-223 pt 2 My '53

ELECTRIC distribution—*Continued*

Voltage up, wiring cost down; four-wire distribution in Twin Falls school. A. I. Sawyer. il diags Elec West 109:82-4 D '52

See also

Busbars
Electric cables
Electric circuit breakers
Electric conductors
Electric conduits
Electric fuses
Electric lines
Electric plants—Interconnection
Electric power
Electric rectifiers
Electric service, Rural
Electric substations
Electric switchgear
Electric transformers
Electric transmission
Electric wiring
Voltage regulation

Change over

Conversion substation location and equipment. J. A. Dunn. il diags Min Cong J 38:41-4 S; 60-3 O '52

Cost

Comparative cost of distribution systems with 4.16-kv or 13.2-kv primary feeders; abstract. H. G. Barnett and D. N. Reps. Elec Eng 72:496 Je '53

Grounding

Are your station grounds safe? R. S. Horn. diags Power Eng 57:86-7 O '53

Cost and efficiency of earthing on low- and medium-voltage overhead line systems. L. Gosland. diags Inst E E Proc 97 pt 2:563-81 O '50; Discussion. 97 pt 2:581-6; 98 pt 2: 287-93; 100 pt 2:328-32 O '50, Ap '51, Je '53

Fighting underground corrosion at the new Fairless works; how piping and other services are protected. W. E. Coleman and H. G. Frostick. diag Heating-Piping 25:85-7 Ap '53

Ground faulty relay protection; abstract. J. L. Blackburn. Elec Eng 71:1119 D '52

Ground your cranes! A. A. Wolf. Roads & Sts 96:92 Mr '53

How to avoid electric tool shock. E. L. Lotz. il Constr Methods 35:69+ Ap '53

How to ground portable electrical equipment. H. B. Whitaker. il Power 97:122-3 Ja '53

Industrial systems should operate grounded. E. C. Soares. diags Elec West 110:82-4 Ja '53

Neutral earthing; tests on 33kv liquid resistor. diag Elec R (Lond) 152:1174-5 My 22 '53

Reversed polarity for mine circuits; Tennessee coal and iron division. H. B. Buckingham. il Min Cong J 39:18-21 S '53

Why wye for low-voltage distribution. W. D. Vincent. il diags Elec West 109:90-2 O '52

Grounds and faults

Fault locator weeds out incipient cable faults. J. L. Redmond. il Elec World 138: 88+ D 29 '52

How to use high-voltage dc for cable testing, fault location. R. A. Nelson. il diags Coal Age 58:108-13 My '53

Isolating neutral of Y-delta transformers prevents sympathetic tripping of feeders. P. A. Oakes. diags Elec World 139:126-7 Ap 20 '53

Locate circuit grounds at substations. F. M. Duff. il diag Elec World 139:104+ Ap 6 '53

Movement of overhead conductors due to flow of fault currents. L. P. Works. Midwest Eng 5:11+ F '53

Suitable current polarizing sources for ground type relays. O. A. Lentz. diags Elec World 138:74-6 D 29 '52

Trouble shooting the electronic way; radar-type transmission line fault locator. R. L. Brinton. il Elec West 110:86-7 Mr '53

Maps

Putting Philadelphia Electric's territory on the map. il Edison Elec Inst Bul 21:16-17 Ja '53

Utility fly-films Philadelphia. J. Dragonetti. il Elec World News ed 139:22-3 Ja 5 '53

Network analyzers

Power system analog and network computer; Detroit Edison co. il diags Power Eng 57: 68-70 F '53

Restriking voltage transients; network analyser studies on the 132 kv grid. Electrician 149:854-5 S 19 '52

Seven electric companies sponsor world's largest network analyzer. il Edison Elec Inst Bul 21:78 Mr '53; Elec Eng 72:374 Ap '53; Franklin Inst J 255:344-6 Ap '53

Some experience with a British a.c. network analyser. G. Lyon. il map diags Inst E E Proc 97 pt 2:697-714 bibliog(64 titles, p713-14) D '50; Discussion. 97 pt 2:714-25; 99 pt 2:607-15 D '50, D '52

Transformer-analogue network analysers; summary and discussion. M. W. H. Davies and G. R. Slemon. Elec J 150:1151 Ap 3 '53

Primary network units

Develop 120-square mile primary network. R. O. Askey and others. il diags Elec World 138:68-72 D 29 '52

Stability

Automatic regulation of generators overcomes rapid load fluctuations. M. P. Roller and H. B. Ruud. diags Elec World 139:94-6 Ap 6 '53

Electric system reliability required in petroleum refining. E. R. Felton. diag Elec Eng 72:522-4 Je '53

Problems of power supply for three-phase packaged air-conditioner units. B. M. Gallaher. Edison Elec Inst Bul 21:11-15 Ja '53

System stability limitations and generator loading; abstract. H. C. Anderson and others. Elec Eng 72:417 My '53

Tables, calculations, etc.

How to calculate short circuits in your electrical system; maintenance data sheet. R. Loewe and P. F. Lovato. diag Factory Management 111:162+ O '53

ELECTRIC double layer

Diffuse double layer theory for electrolytes of unsymmetrical valence type. D. C. Grahame. J Chem Phys 21:1054-60 Je '53

ELECTRIC driving

Adjustable voltage ore bridge drive at Otis works. E. C. Juhnke and C. B. Risler. il Iron & Steel Eng 30:87-92; Discussion. diag 92-6 Ap '53

Analogies for hydraulic and electric drives in servomechanisms. Yaohan Chu and L. A. Gould. bibliog diags A S M E Trans 75: 851-7 Jl '53

Caboose generator drives. E. K. Lofton and others. il Ry Loco & Cars 127:93-5 Mr '53

D-c drives for multisection machines. L. F. Lewis. il diags Elec Eng 71:1000-5 N '52

Electric carrier drive for sawmill; data sheet. W. P. Riordan. il Elec West 110:95 Mr '53

Electric drive provides dependable air. G. C. Jamison. Elec World 139:108 My 4 '53

Electric drives for earthmoving and construction machinery; abstract. D. K. Heiple. diag S A E J 61:83 Jl '53

Electric power system practices for sewage plants. M. C. Boggis and N. L. Hadley. il diags Sewage & Ind Wastes 25:391-404; Discussion. R. Kennedy. 404-5 Ap '53

Electric regulation systems; key to higher production. W. R. Harris. il diags Power Eng 57:76-9 Je '53

Engineering highlights of 1952; drives and controls. C. A. Scarlott. il Westinghouse Eng 13:20-3 Ja '53

Engineering highlights of 1952; wind-tunnel drives. C. A. Scarlott. il Westinghouse Eng 13:24-5 Ja '53

Forum on technical progress; drives and controls. il Steel 132:336-8+ Ja 5 '53

How adjustable speed electronic drives compare. T. R. Breunich. il diags Product Eng 23:189-96 N '52

Lift drive; E. A. Foulds, ltd. il Elec R (Lond) 151:1289-90 D 12 '52

Motors and motor control; Chemical Engineering report. V. J. Kropf. il diags Chem Eng 58:123-36 Jl '51; Same abr. Product Eng Hdbk p H2-13 '53

Providing adequate power in computer drives. M. Felstein. bibliog il diags Machine Design 25:156-62 Ja '53

What size driving motor? W. R. Harris. il diags Power Eng 56:68-70 N '52

ELECTRIC driving—*Continued*

What's ahead the next ten years in materials and components; electrical equipment. Am Mach 96:A 12-16 Mid-N '52

See also

Cranes, derricks, etc.—Electric equipment
Electric motors
Electric shovels
Electricity in mining
Gearmotors
Hoisting machinery, Electric
Locomotives, Diesel-electric
Locomotives, Gas turbine-electric
Machine tools—Electric driving
Mine hoisting, Electric
Mine pumping, Electric
Pumping machinery, Electric
Ship propulsion, Electric

Hoisting machinery

See Hoisting machinery, Electric

Paper mills

Analysis of variable speed requirements. E. A. Gahl. il Paper Ind 34:1235 Ja '53

Driven dandy rolls. P. S. Sinclair. Pulp & Pa of Can 54:112-13 Ag '53

Modern cylinder machine wet-end helper drive at the E. B. Eddy co. A. C. McLaren. il diags Pulp & Pa of Can 54:117-20 Mr '53

Modern paper mill electrical installation; St Regis paper co. C. W. Bush. il Paper Tr J 136:36-8 Ap 17 '53

Paper machine drive fundamentals. E. J. Justus. il diags Paper Tr J 135:394-6+ N 14 '52

Powell River's electrical loop. plan Tappi 36: sup92A+ S '53

Regulation systems; key to higher supercalender production. W. R. Harris. il diags Paper Tr J 136:22-3 F 13 '53

Sectional paper machine drive and operating efficiency. C. D. Beck. il diag Paper Ind 34:862-5 O '52

Wood chipper and chipper motor selection. J. E. Irvine and E. W. Henderson. Pulp & Pa of Can (Convention no) 54:247-52 [F] '53

Power plant auxiliaries

Today's power plant motors. C. D. Lawton. il Blast F & Steel Pl 41:1202-4 O '53 (to be cont)

Rolling mills

Application and control of a-c motors on intermittent loads. R. H. Wright. il diags Iron & Steel Eng 30:65-71; Discussion. 71-2 Ja '53

Control of strip thickness in cold rolling by varying the applied tensions. R. B. Sims and others. bibliog diags Iron & Steel Inst J 173:343-54 Ap '53

Developments in electrical drives for steel mill applications. W. R. Harris. il plan diags Iron & Steel Eng 29:69-73; Discussion. 73-4 D '52

Electric drives for continuous hot mills. G. R. Wilson. il diags Iron & Steel Inst J 172:215-25 O '52; Discussion. 173:420-5 Ap '53

Electric motors over three hundred horsepower applied to main roll drives in the iron and steel and allied industries during 1952; tabulation. Iron & Steel Eng 30:162 Ja '53

Electrical developments in 1952. W. E. Miller. il Blast F & Steel Pl 41:63-8 Ja '53

Electrical drive for a 42½ inch cogging mill; Redbourn works of Richard Thomas and Baldwins, ltd. il diag Engineer 194:281-4 Ag 29 '52; Same cond. Electrician 149:683-4 S 5 '52

Electrical equipment for the Jones & Laughlin blooming mill; abstract. A. W. Smith and G. Kaufman. Steel 132:94 Je 29 '53

Electrical equipment in steel plants. A. F. Kenyon. il diag Blast F & Steel Pl 41: 81-6, 192-7 Ja-F '53

Electrical plant for the metal industries; progress in 1952 reported. il Metallurgia 47: 59-62, 141-4 F-Mr '53

Electrically-driven 42½-in. cogging mill; Redbourn works of Messrs R. Thomas and Baldwins, ltd. il diag Engineering 175:633-5, pl 19 My 15 '53

Electricity speeds production of tinplate from Trostre. il diag Electrician 149:829-32 S 19 '52

Engineering highlights of 1952; metal working. C. A. Scarlott. il Westinghouse Eng 13:30-1 Ja '53

Hot strip rolling; Port Talbot works. il Elec R (Lond) 151:1311-18, 1365-70 D 19-26 '52

Inertia studies for modern mill drives. T. B. Montgomery and J. F. Sellers. il diags Iron & Steel Eng 30:89-97; Discussion. 98 F '53

Mechanization of 12-in. bar mill. G. A. Henderson. il diags Iron & Steel Eng 30:107-13 Mr '53

Mercury arc rectifiers for main roll drives. H. E. Larson. il plans diags Iron & Steel Eng 29:61-73 N '52

Modern high speed side trimming lines. J. R. Erbe. il diags Blast F & Steel Pl 41:514-19 My '53

Multiple generators for processing lines. E. E. Vonada. il diags Iron & Steel Eng 29:77-82; Discussion. 83-6 N '52

New hot strip mill at Pittsburgh Steel. J. C. Peth and F. E. Fairman, 3d. il plans diags Blast F & Steel Pl 41:926-38+ Ag '53

Operating experience with regulating systems for the steel industry. W. R. Harris. il diags Iron & Steel Eng 29:113-22+ O '52

Pickling lines for steel; a start-stop process made continuous; illustrations with text. Westinghouse Eng 13:64-5 Mr '53

Rectifier applications on steel mill drives. G. B. Scheer. Iron & Steel Eng 29:107-9; Discussion. 110-12 O '52

Regulating systems for the steel industry. W. R. Harris. il diags Westinghouse Eng 12:187-94 N '52; Same cond. Steel 131:106+ N 3; 112+ N 10 '52

Regulation systems, the key to higher production. W. R. Harris. il diags Blast F & Steel Pl 41:302-6 Mr '53

Reversing hot strip mill. A. F. Kenyon. il diags Iron & Steel Eng 30:62-70 Je '53

Selection and analysis of regulating systems for mill drives. W. E. Miller and F. S. Rothe. bibliog il diags Iron & Steel Eng 29:81-91; Discussion. 91-7 D '52

Synchronous motor torque requirements for steel mill applications. W. A. Thomas. il Iron & Steel Eng 30:73-81; Discussion. 81-3 Ag '53

Temper mill drives at the Trostre tinplate works. il diags Engineer 196:265-8 Ag 28 '53

Trostre tin-plate works of the Steel company of Wales. il Engineering 174:649-52, pl 51 N 21 '52

Works trial of the T method of automatic gauge control. R. B. Sims and others. il diags Iron & Steel Inst J 173:354-60 Ap '53

Textile mills

A.c. range drive has variable-speed control. diag Textile World 103:152 My '53

How to take care of electric motors. J. L. Watts. diags Textile World 103:126-7+ F '53

Improved loom drive requires few adjustments. il Textile World 103:146 Ag '53

ELECTRIC energy, inc.

Electric energy, inc. wins Charles A. Coffin award. Edison Elec Inst Bul 21:234 Jl '53; Elec Eng 72:760 Ag '53

ELECTRIC engineering

AIEE fall meeting, New Orleans, Oct. 13-17. Elec World 138:105-8 N 3 '52

AIEE winter meeting, New York, Jan. 19-23; abstracts of papers. Elec World 139:85-91+ F 9 '53

Developments in electricity supply productivity. Engineering 174:298-9 S 5 '52

Electrical development during the lifetime of the Queen. il diags Elec J 150:1885-9 My 29 '53

Electrical engineering in 1952. il map Engineer 195:26-8, pl 5, 63-5, 93-6 Ja 2-16 '53

Electricity and productivity; American and British practice. Elec R (Lond) 151:503-4 S 5 '52

Electricity and productivity; review of action taken following teams' U.S.A. visit. Electrician 149:673-4 S 5 '52

ELECTRIC engineering—*Continued*

Electricity and productivity; statement reviewing action taken on report of electricity supply productivity teams. Engineer 194:327-8 S 5 '52

Engineering for economy. F. L. Lawton. Edison Elec Inst Bul 21:49-52 F '53

Engineering highlights of 1952. C. A. Scarlott. il Westinghouse Eng 13:2-48, back cover Ja '53

Engineering in Europe; survey of current literature (cont). Elec R (Lond) 151:501-2, 563-4, 633-4, 745-6, 787-8, 891-2, 1007-8, 1057-8, 1171-2, 1215-16, 1319-20; 152:17-18, 64-5, 195-6, 309-10, 353-4, 459-60, 567-8, 737-8, 853-4, 951-2, 1067-8, 1128, 1211-12, 1305-6, 1382, 1416-17; 153:13-14, 97-8, 297-8, 333-4, 423-4, 467-8 S 5-19, O 3-10, 24, N 7-14, 28-D 5, 19 '52, Ja 2-9, 23, F 6-13, 27, Mr 13, Ap 3, 17-24, My 8-15, 29-Je 19, Jl 3-10, Ag 7-28 '53

New principles, new materials; keys to future electrical progress. il diags Power Eng 57:76-80 Ja '53

1952 engineering developments. il Elec Eng 72:1-24 Ja '53

Research and engineering progress, 1952. il Gen Elec R 56:9-59 Ja '53

See also

Armatures
Electric apparatus and appliances and other headings beginning Electric
Electricity in mining
Electricity in the petroleum industry
Electricity on the farm
Electricity supply
Hydroelectric plants
International conference on large high tension electric systems
Radio communication and other headings beginning Radio
Railroads—Electrification
Ship propulsion—Electric
Telegraph
Telephone
Voltage regulation

Bibliography

EEI publications and service material. Edison Elec Inst Bul 21:27, 29-30, 125-6, 165-6, 324-5 Ja, Ap-My, Ag '53

History

Eighty years ago; high lights in our first issue. il Elec R (Lond) 151:1052-3 N 14 '52

75 years of weekly publication. il diags Elec J 150:1900-4 My 29 '53

What were the early days really like? W. M. Furniss. Elec J 150:1905-7 My 29 '53

Periodicals

Periodical literature for electrical engineers. R. C. Coile. J Doc 8:209-26 D '52

Safety measures

See also

Electric equipment—Safety measures
Electric lines—Safety measures
Linemen's equipment

Study and teaching

Education in electrical engineering. B. H. Leeson. Engineer 194:492 O 10 '52

Electrical engineering curriculum; present-day problems and time limitations; electrical engineering conference, 1st, East Lansing, Mich. June 25-29, 1951; abstracts of papers. J Eng Educ 43:420-8 Mr '53

Electrical training and future developments. J. Hacking. Engineering 174:190-1 Ag 8 '52; Same abr. Engineer 194:219-20 Ag 15 '52; Abstract. Electrician 149:261-2 Jl 25 '52

Engineering training and education; General Electric's technician program and the simplified drafting project. il Gen Elec R 56:41 Ja '53

Integration versus options in electrical engineering. G. S. Brown. Elec Eng 72:595-7 Jl '53

Options and ornamentalities. A. G. Conrad. J Eng Educ 43:177-8 N '52

Summer school in electrical engineering. il Electrician 149:254-60 Jl 25 '52; Elec R (Lond) 151:226-30 Ag 1 '52

What are contemporary demands on engineering curricula? electrical engineering. W. L. Everitt. J Eng Educ 43:294-7 Ja '53

Tables, calculations, etc.

Calculation of energy flow using the Laplace transformation; abstract. A. C. Sim. bibliog diag Inst E E Proc 99 pt 2:624 D '52

Calculation of transients. M. G. Say. bibliog diags Elec J 150:31-5, 200-5 Ja 2, 16 '53

Determinants. E. H. Sibley. diags Elec R (Lond) 152:621-4, 699-704 Mr 20-27 '53

Engineer and accountant work together on solving a technical problem. E. D. Cowles. diags Edison Elec Inst Bul 21:345-6 S '53

Forced oscillations with nonlinear restoring force. C. Hayashi. diags J Ap Phys 24:198-207 F '53

Mathematical fancy; energy distribution along the time dimension. D. G. Sandeman. Elec R (Lond) 151:775-6 O 10 '52

Short cuts in short circuit calculations for plant systems; engineering reference sheet. F. E. Reeves. Elec World 138:154 N 17 '52

Solution of passive electrical networks by means of mathematical trees. W. S. Percival. diags Inst E E Proc 100 pt 3:143-50 My '53

Synthesis of the transfer function of two-terminal pair networks; abstract. R. Kahal. diag Elec Eng 71:1014 N '52

Vector addition; advantages of the polar form. J. G. Boggis. diags Electrician 149:325-8 Ag 1 '52

Russia

Engineering behind the iron curtain. P. A. Abetti. Gen Elec R 56:21-3+ My '53

ELECTRIC engineers

Equipment manufacturer and power education. H. N. Muller, jr. Elec Eng 72:295-7 Ap '53

Management looks ahead in the electric power industry. W. L. Cisler. Elec Eng 71:1079-81 D '52

Management's responsibility for development of engineers. F. K. McCune. Elec Eng 72:491-5 Je '53

Manpower shortage in power education. J. D. Ryder. Elec Eng 72:25-7 Ja '53

New unity plan proposal. J. C. Dutton and others. Elec Eng 72:349-51 Ap '53

Outstanding young electrical engineers, 1936-1951; Eta kappa nu. V. L. Dzwonczyk. Elec Eng 72:399-404 My '53

Some things we can do about our engineering manpower dilemma. A. S. Bennion. il Elec West 109:67-8 D '52

Take steps now to assure future engineering leaders. H. N. Muller. il Elec West 110:101-3 Je '53

See also

American institute of electrical engineers
Illuminating engineering society
Seastone, John

ELECTRIC equipment

Developmental transistorized equipments. il Tele-Tech 12:75 Ja '53

Engineering highlights of 1952. C. A. Scarlott. il Westinghouse Eng 13:2-48, back cover Ja '53

Research and engineering progress, 1952. il Gen Elec R 56:9-59 Ja '53

Trends in electrical design. F. R. Benedict. Power 96:88-9 N '52

See also

Brushes (electric machinery)
Electric apparatus and appliances
Electric cables
Electric capacitors
Electric control
Electric distribution
Electric driving
Electric fittings
Electric instruments
Electric lighting
Electric plants (central stations)—Equipment
Electric switchgear
Electric wire
Electricity in mining
Electricity on the farm

also subdivision Electric equipment under special subjects, e.g.

Airplanes
Automobiles
Cars
Coal mines and mining
Cranes, derricks, etc.
Factories
Petroleum refineries
Rolling mills
Steel works

Exhibitions

Public works exhibition, London. il Elec R (Lond) 151:1071-3 N 14 '52

ELECTRIC equipment—*Continued*

Maintenance and repair

Accidents to electrical equipment. R. F. O'Connell. Pulp & Pa of Can 54:119-20 Je '53

How many men for electrical maintenance? Power 97:136-7+ My '53

How to maintain electrical equipment. J. Petruska. Safety Maint & Prod 104:14-16 N '52

Maintenance and repair of electrical equipment. E. Zucker. Can Chem Process 37:50+ Mr '53

Maintenance experience on 600-volt rectifiers. R. T. Lucas and H. K. Fish. il Iron & Steel Eng 30:184-7; Discussion. diag 187-90 S '53

Maintenance of electric controllers. L. E. Markle. il Paper Ind 34:74-8 Ap '52; Same. Pet Processing 7:950-5 Jl '52; Same. Water & Sewage Works 100:204-9 My '53; Same cond. Textile World 102:126-9+ Ja '52

Maintenance of electric equipment in modern aircraft. A. J. Mustard. Elec Eng 72:312-17 Ap '53

Maintenance of electronic controls in paper mills. C. J. Meloun. il diag Paper Tr J 137:14-18 Jl 17; 21-6 Ag 7 '53

Maintenance of industrial electronic equipment. W. Few. il diags Iron & Steel Eng 30:179-82 S '53

Mobile workshop speeds electrical construction; Charles Pfizer & co. il Power 97:126 Je '53

Pfizer's three-pronged approach to electrical maintenance. il Power 97:107-13 F '53

Manufacture

How one new machine doubled a small company's output; Penn electrical co. C. O. Herb. il Mach 59:157-62 F '53

Quality control of airborne equipment. B. Hecht. Tele-Tech 12:119+ Je '53

Protection

Deterioration of equipment; effects of climatic conditions. Elec R (Lond) 153:231-2 Jl 31 '53

Expect the impossible from an electrician? J. Whitson. il Elec West 110:100-1 Ap '53

How to apply vibration isolators. R. J. Dickie. diags Electronics 25:126-30 D '52

Moisture protection for electrical equipment. il Min Eng 5:788 Ag '53

Plastic protection added for parts in storage. W. B. Lewellen. Elec World 139:120+ Mr 9 '53

Safety measures

Colors label one-shot bus relays for system safety. F. W. Cornetet. il Elec World 138:134+ O 20 '52

Electric equipment. bibliog il Nat Safety N 67:182+ Mr '53

Electrical control of dangerous machinery and processes; remote and supervisory control. W. F. Cooper. bibliog il diags Inst E E Proc 99 pt 2:349-61 Ag '52; Discussion. 99 pt 2:362-5; 100 pt 2:187-90 Ag '52, Ap '53

Electrical hazards in the pulp and paper industry. W. Schweisheimer. Pulp & Pa of Can 54:184, 188 Mr '53

End to blinkers? points for the I.E.E. earthing committee to consider. T. C. Gilbert. Elec R (Lond) 153:382-5 Ag 21 '53

High voltage barriers for buss bar connectors. il Nat Safety N 66:62 D '52

How to ground portable electrical equipment. H. B. Whitaker. il Power 97:122-3 Ja '53

How to keep explosion-proof equipment explosion-proof; maintenance data sheet. Factory Management 111:150 Jl '53

How to maintain electrical equipment. J. Petruska. Safety Maint & Prod 104:14-16 N '52

How to protect your power distribution. J. W. St Andre. il Factory Management 111:148-9 O '53

Industrial safety; exhibition and congress, Birmingham. Elec R (Lond) 152:1457-8 Je 26 '53

Low voltage, high hazard. H. Heinrich. Nat Safety N 68:122-3+ O '53

Safe installations. S. L. M. Barlow. il Elec R (Lond) 152:127-30 Ja 16 '53

Safety regulations and how they affect the electrical industry. L. D. Price. Elec Eng 72:480-2 Je '53

Trolley system; copper conductor bus replaces steel in crane systems. Iron Age 170:190 D 11 '52

See also
Insulation (electric)

Standards

Development tool for electrical utilities. H. P. Seelye. il Standardization 24:45-8 F '53

ELECTRIC fans

Fans in agriculture; abstracts. W. Cover and R. C. Dick. Elec J 149:1845-6 D 12 '52; Elec R (Lond) 151:1292 D 12 '52

ELECTRIC fans, Ventilating

Exhaust fans, a lucrative market. il Sheet Metal Worker 44:72-3 Jl '53

Get better output from your fans with right care. J. P. Holtzclaw. il Power 97:124-5 F '53

How to install the attic fan. il diags Am Bld 75:52+ F '53

Tie attic fans to summer cooling business. A. Stout. il Sheet Metal Worker 44:49-50 My '53

Advertising

Pay-off for a low-budget campaign; Viking residential window fans. Sales Management 69:80+ N 1 '52

Noise

Facts about sound levels for axial and propeller fans; data sheet. Heating-Piping 25:107-8 O '53

ELECTRIC field

Accurate mapping of electric fields in an electrolytic tank. K. F. Sander and J. G. Yates. diags Inst E E Proc 100 pt 2:167-75; Discussion. 176-83 Ap '53

Current density tables for field emission theory. W. W. Dolan. bibliog Phys R 91:510-11 Ag 1 '53

Dielectric relaxation and the internal field. J. G. Powles. bibliog J Chem Phys 21:633-7 Ap '53

Dc field distribution in a swept intrinsic semiconductor configuration. R. C. Prim. Bell System Tech J 32:665-94 My '53

Electric field and energy in dipole lattices. E. F. Bertaut. Phys R 91:415 Jl 15 '53

Electric fields within cyclotron dees. R. L. Murray and L. T. Ratner. diags J Ap Phys 24:67-9 Ja '53

Electric resonance transitions in a tapered electric field. J. N. Goldberg and others. Phys R 89:278-81 Ja 1 '53

Electrical fields in the Crookes dark space of a low pressure glow discharge in air and N_2. R. P. Stein. bibliog diags Phys R 89:134-42 Ja 1 '53

Electrolytic analogue in the design of high-voltage power transformers. D. McDonald. bibliog il diags Inst E E Proc 100 pt 2:145-66; Discussion. 176-83 Ap '53

Electromagnetic field of a rotating uniformly magnetized sphere. A. Baños, jr. and R. K. Golden. bibliog diags J Ap Phys 23:1294-9 D '52

Excitation of heavy nuclei by the electric field of low-energy protons. C. L. McClelland and C. Goodman. bibliog Phys R 91:760-1 Ag 1 '53

Experimental confirmation of relation between pulse drift mobility and charge carrier drift mobility in germanium. M. B. Prince. Phys R 91:271-2 Jl 15 '53

High field mobility in germanium with impurity scattering dominant. E. M. Conwell. bibliog Phys R 90:769-72 Je 1 '53

Indications of the interaction of electric field gradients and nuclear electric quadrupole moments in angular correlation. R. M. Steffen. bibliog Phys R 90:1119 Je 15 '53

Influence of a direct-current electric field on the adhesion tension. Z. László. diag J Chem Phys 20:1807 N '52

Influence of electric fields on luminescence. F. Matossi and S. Nudelman. Phys R 89:660-1 F 1 '53

Infrared absorption induced by static electric fields. M. F. Crawford and I. R. Dagg. bibliog Phys R 91:1569-70 S 15 '53

ELECTRIC field—*Continued*

Integrable case of electron motion in electric and magnetic field. H. Poritsky and R. P. Jerrard. diags J Ap Phys 23:928-30 Ag '52

Methods of measuring the properties of ionized gases at high frequencies; measurement of electric field. D. J. Rose and S. C. Brown. diags J Ap Phys 23:719-22 Jl '52

Mobility in high electric fields. E. M. Conwell. bibliog Phys R 88:1379-80 D 15 '52

Mobility of holes and electrons in high electric fields. E. J. Ryder. diag Phys R 90: 766-9 Je 1 '53

Motion of gaseous ions in strong electric fields. G. H. Wannier. diags Bell System Tech J 32:170-254 Ja '53

New property of two-dimensional fields; abstract. A. D. Moore. diags Elec Eng 72: 290 Ap '53

Ortho-para conversion of deuterium in molecular electric fields. Y. L. Sandler. bibliog J Chem Phys 20:1050 Je '52

Radiation from a horizontal dipole in a semi-infinite dissipative medium. R. H. Lien. bibliog diag J Ap Phys 24:1-4 Ja '53

Radiofrequency field quenching of ultraviolet excited phosphors. T. Miller. diags J Ap Phys 23:1289-93 D '52

Relaxation methods; application to electric field problems. H. McKibbin and J. Webb. il diags Elec R (Lond) 153:67-70, 190-3 Jl 10, 24 '53

Unipolar field-effect transistor. W. Shockley. bibliog diags Inst Radio Eng Proc 40:1365-76 N '52

See also

Electromagnetic field
Stark effect
Unified field theory

ELECTRIC filters

D.c. amplifiers with low-pass feedback. J. A. Colls. diags Wireless Eng 29:321-5 D '52

Electro-filter as a secondary recovery device. W. A. Thompson. il diags Pulp & Pa of Can (Convention no) 54:174-7+ [F] '53

See also

Radio filters

ELECTRIC fires

Common causes of electrical fires. P. Lindholm. Factory Management 110:132-4 N '52

Electrical fires mean this; prevention means this. J. E. Appel and J. A. Bono. il Safety Maint & Prod 106:66-71 S '53

Engineering safety into electric equipment. C. F. Hedlund. Elec Eng 72:771-6 S '53

Fire causes analysed. Elec R (Lond) 153:104-5 Jl 10 '53

Fire research; investigation of causes. Elec R (Lond) 151:408-9 Ag 22 '52

Fire research, 1951. Electrician 149:476 Ag 15 '52

Static electricity starts fires and explosions. V. R. Croswell. bibliog Ind & Eng Chem 44:sup 129A-30A+ N '52

ELECTRIC fittings

Domestic socket-outlets. R. J. Courtenay. il diag Elec R (Lond) 152:1009-12 My 1 '53

Research and engineering progress, 1952; for building construction. il Gen Elec R 56:55 Ja '53

ELECTRIC furnaces

Arc-melting of non-metallic materials and a re-determination of the beryllia-thoria system. G. A. Geach and M. E. Harper. bibliog il Metallurgia 47:269-71 My '53

Control

Furnace constant temperature controller and its modification as a programme controller. J. R. Beattie and A. J. Milne. bibliog diags J Sci Instr 29:290-2 S '52

ELECTRIC furnaces, Annealing

Flash annealing of light alloys. R. T. Staples. Metal Prog 63:208+ Ja '53

ELECTRIC furnaces, Enameling

Vertical furnace for enamelling. il plan diags Metallurgia 47:145-6 Mr '53

ELECTRIC furnaces, Forging

Induction furnace doubles forging output; Commercial forgings co. F. A. Kender. il Elec World 138:142 N 3 '52

ELECTRIC furnaces, Foundry

Electric furnaces merit greater promotion; Price-Pfister brass mfg. co. L. B. Reed. il Elec West 109:97 O '52

Foundries report on basic electric arc practices. T. N. Armstrong. il Iron Age 170:103-5 N 27 '52

Heating elements for electric resistance furnaces cast from inoculated alloys; abstract. N. S. Kreshtshanovsky and A. D. Sventshansky. Metal Prog 64:166+ S '53

20-ton arc melting furnace in a Sheffield foundry. il Engineer 195:243-4 F 13 '53; Engineering 175:204-5, pl 4 F 13 '53

See also

Electric furnaces, Iron founding
Electric furnaces, Non-ferrous melting

ELECTRIC furnaces, Heat treating

Electric heat treating improves steel products. K. P. Allen. il Elec World 138:136 D 1 '52

Furnace treats 110-ft pieces. Steel 132:86 Ja 12 '53

Heat treatment furnaces. A. J. Blackwell. il diags Elec R (Lond) 152:1149-54 My 22 '53

Induction heat treatment plant; Electric furnace co. il Metallurgia 48:18-20 Jl '53

Jet part plant expanded; Bingham-Herbrand corp. Steel 132:174+ Je 1 '53

Atmosphere control

Heat-treating jet-engine components; Ryan aeronautical co. il Mach 59:169-71 F '53

Ipsen draw-quench furnace is automatic, sealed unit. il Am Mach 97:162 Mr 2 '53

ELECTRIC furnaces, High frequency

License granted for induction furnace; Pittsburgh Lectromelt furnace corp. Blast F & Steel Pl 41:689 Je '53

Simple high-temperature induction furnace. I. Gordon. diag Am Cer Soc Bul 32:207-8 Je 15 '53

ELECTRIC furnaces, Iron founding

Low-frequency induction melting employed in malleable foundry. C. Pollock. il diag Foundry 81:108-11+ Jl '53

ELECTRIC furnaces, Laboratory

Furnace helps solve ceramic problems at Argonne. il Chem & Eng N 31:1756 Ap 27 '53

High-temperature high-vacuum furnace for experimental work. H. D. Blakelock and C. F. Machin. bibliog il diag Engineer 196: 83-4 Jl 17 '53

High-temperature tube furnace. il Engineer 195:459 Mr 27 '53; Engineering 175:416 Mr 27 '53; Metallurgia 47:211-12 Ap '53

Muffle furnaces. il Engineer 194:263 Ag 22 '52; Engineering 174:253 Ag 22 '52

Two laboratory furnaces for melting titanium alloys. J. A. Rees and R. J. L. Eborall. il diags Metallurgia 46:186-90 O '52

ELECTRIC furnaces, Metallurgical

Conference on electric heating, Detroit, May 26-27; with abstracts of papers. Metal Prog 64:103-6 Jl '53

Electric smelting at Bureau of mines seeks utilization of Northwest ores. R. T. C. Rasmussen. bibliog il J Metals 4:1273-9 D '52

Further development of the Sterling process. W. M. Peirce. il diag Min Cong J 39:46-9+ Mr '53

Industrial electric furnaces. J. C. Howard. Iron & Steel Inst J 173:285-91 Mr '53; Discussion. il diag 174:251-9 Jl '53

New compressed-air circuit breaker for arc-furnace switching duty; abstract. J. E. Schrameck and J. K. Walker. il Elec Eng 72:633 Jl '53

See also

Electric furnaces, Steel making
Electric furnaces, Vacuum melting

Control

Hydraulic arc furnace electrode control. il Metallurgia 47:291+ Je '53

ELECTRIC furnaces, Non-ferrous melting

Arc-furnace equipment and its operation at the Kennecott Utah refinery. H. A. Shaw and H. G. G. Whitton. il plan diag J Metals 5:Trans 197-203 F '53

Arc furnace for melting refractory metals. J. W. Pugh and others. il diags Metal Prog 63:70-1 Mr '53

Arc melts of titanium-rich alloys. G. Welter and others. bibliog il diag Can Min J 74: 59-69 Mr '53

ELECTRIC furnaces, Non-ferrous melting—*Continued*

Germanium melting furnace. il Electronics 26:278+ My '53

Heating metals in suspension in an electromagnetic field. il diags Engineer 195:431-2 Mr 20 '53

Induction melting in a nonferrous jobbing foundry; City pattern foundry & machine co. V. C. Reid. il plan diag Foundry 81:102-7 Ap '53

ELECTRIC furnaces, Steel making

Determination of arc furnace optimum current. D. R. Cochran. diag Blast F & Steel Pl 41:1031-6 S '53

Dust and fume elimination investigated; Electric furnace steel conference fume control session, Pittsburgh, Dec. 4-6; with abstracts of papers. Steel 131:82+ D 29 '52

Effects of melting practice in refractory consumption, furnace and ladles; abstract. M. P. Fedock. Metal Prog 63:198+ Ap '53

Electric furnace steel committee 10th annual conference, Pittsburgh, Dec. 4-6; chairmen, committee members; program. J Metals 4:1263+ D '52

Electric furnace with electric stirrer goes into service. Blast F & Steel Pl 40:1242-3 O '52; Iron Age 170:116 O 2 '52

Electric furnaces challenge the open hearth. Manuf Rec 122:37 Ag '53; Same. Iron & Steel Eng 30:130+ Ag '53

Electric melting furnaces. A. J. Blackwell. il diags Elec R (Lond) 152:1041-4 My 8 '53

Flicker control in arc furnace power supply. R. F. Lawrence and R. L. Tremaine. bibliog il diags Steel 132:102+ F 23; 96+ Mr 2 '53

Induction stirrer for arc furnace. E. G. Malmlow and Q. Graham. il Iron & Steel Eng 30:120+ F '53; Same. bibliog Blast F & Steel Pl 41:311-13 Mr '53; Same. Steel 132:104+ My 4 '53

Induction stirrer for electric arc furnaces. il diags Engineering 175:428-9 Ap 3 '53

Induction stirrers for electric arc furnaces. Engineer 195:469 Mr 27 '53

Large electrode furnace. il Elec R (Lond) 152:613-16 Mr 20 '53; Metallurgia 47:126-8 Mr '53

More electric furnaces produce carbon steel. il Materials & Methods 38:7 S '53

Research project points out advantages in electric furnace steelmaking. Elec Eng 72:850-1 S '53

Steelmaking; top-charge electric furnaces. il Metal Prog 63:88 F '53

Timken replaces open hearths with electric furnaces. il Iron & Steel Eng 29:139-40+ D '52; Same. Blast F & Steel Pl 41:57-62 Ja '53; Excerpts. diag Iron Age 170:82-4 D 25 '52

Control

Air-blast circuit-breaker for arc furnace control. il Engineer 194:629 N 7 '52; Engineering 194:638 N 14 '52; Elec R (Lond) 151:943 O 31 '52; Metallurgia 46:282 D '52

Control of demand and power factor on electric arc furnaces. H. G. Heath. Iron & Steel Eng 29:78-81; Discussion. 81-3 O '52

ELECTRIC furnaces, Vacuum melting

Development of commercial vacuum furnaces for melting metals and alloys. J. H. Moore. plan diags Metal Prog 64:161-4+ S '53

High-temperature high-vacuum furnace for experimental work. H. D. Blakelock and C. F. Machin. bibliog il diag Engineer 196:83-4 Jl 17 '53

Some aspects of vacuum-melted metal. J. H. Moore. Metal Prog 64:103-5 O '53

Vacuum furnaces for melting or processing of metals. G. J. Crites. diags Metal Prog 63:161-2+ My '53

Vacuum melting lengthens fatigue life, improves impact properties. J. H. Moore. il Iron Age 171:154-6 Ap 2 '53

Vacuum metallurgy grows; can you use it? A. G. Gray. il diags Steel 132:88-91 Je 29 '53

ELECTRIC fuses

Controlling capacitors; circuit-breaker and fuse selection for use up to 11 kv. E. A. Reeves. Elec J 151:409-12 Ag 7 '53

Mechanism for the fuse pre-arcing period; abstract. E. B. Carne. diags Elec Eng 72:610 Jl '53

Replace all fuses by stick from ground. W. B. Morton. il diag Elec World 138:116+ N 3 '52

Switch and fuse gear. il Elec R (Lond) 151:357-8 Ag 15 '52

300-ampere high rupturing capacity fuse; Brush electrical engineering co. il Engineering 174:744 D 5 '52

ELECTRIC gages. See Gages, Electric

ELECTRIC generator sets

Aircraft starting unit. il Engineer 195:876 Je 19 '53; Engineering 175:780 Je 19 '53; Elec J 150:2215-16 Je 19 '53; Elec R (Lond) 152:1437-8 Je 19 '53

Away from the grid; all-electric country house. il Elec J 151:435-6 Ag 7 '53

Comparative efficiencies of central-station reheat and nonreheat steam-turbine-generator units. C. W. Elston and P. H. Knowlton. diags A S M E Trans 74:1389-98; Discussion. 1398-9 N '52

Emergency power switching systems. V. T. Callahan. il diag Commun Eng 13:25-6 Mr '53; Same. Diesel Power 31:32-5 My '53

1.25 kw Diesel generating plant; Dale electric (Yorkshire), ltd. il Engineer 196:185-6 Ag 7 '53; Engineering 176:213 Ag 14 '53

Range of 3½kva generator sets. il Engineer 194:329 S 5 '52

ELECTRIC generators

Advances in the design of large turbine generators; based on papers by C. E. Kilbourne and others. diags Power Eng 57:98-100+ Ag '53

Aluminum alloy enables manufacture of more powerful steam turbine-generators. il Elec Eng 71:1052 N '52; Elec World 138:178 O 6 '52

Application of relays for unbalanced faults on generators; abstract. J. E. Barkle and F. von Roeschlaub. Elec Eng 72:542 Je '53

Britain tries a new approach to power from the wind; anemoplant. il diag Elec World News ed 139:32-4 Ap 13 '53

Coal battery. Sci Am 187:40+ O '52

Design and application of large steam turbine driven generators. C. E. Kilbourne and J. B. McClure. Power 97:154+ Je '53

Engineering highlights of 1952; generators. C. A. Scarlott. il Westinghouse Eng 13:4-6 Ja '53

Inspecting turbine-driven generators. J. B. Swering. il Power Eng 57:84-5 F '53

Life begins for a generator shaft. il Elec World News ed 139:32-3 Mr 16 '53

Multiple generators for processing lines. E. E. Vonada. il diags Iron & Steel Eng 29:77-82; Discussion. 83-6 N '52

Operating experience with large generating units. P. Liverside. Power 97:204+ Je '53

Plant economy starts at the turbo-generator. E. H. Krieg. il Elec World 139:130-2 Ap 20 '53

Record output of turbine-generators. il Blast F & Steel Pl 41:665-6 Je '53

Story of direct mechanical drive for caboose generators. W. S. H. Hamilton. il diags Ry Loco & Cars 127:95-100 Je '53

System stability limitations and generator loading; abstract. H. C. Anderson and others. Elec Eng 72:417 My '53

Thermoelectric generators. C. T. Chase. Franklin Inst J 254:415-16 N '52

Wind-driven generator. il diags Engineer 195:242 F 13 '53; Engineering 175:213-14 F 13 '53; Elec R (Lond) 152:377-9 F 13 '53

Wind to vacuum to power. J. Grindrod. il diags Power Eng 57:91+ S '53

See also
Electric machinery
Radio generators

Control

Automatic regulation of generators overcomes rapid load fluctuations. M. P. Roller and H. B. Ruud. diags Elec World 139:94-6 Ap 6 '53

Development of a modern amplidyne voltage regulator for large turbine generators; abstracts. W. A. Hunter and M. Temoshok. il Elec Eng 72:289 Ap '53; Power Eng 57:96+ Jl '53

ELECTRIC generators—*Continued*

Cooling

Inner-cooled turbine generators. J. W. Batchelor. Power 97:208+ Je '53

Liquid generator cooling under development. C. E. Kilbourne and J. B. McClure. diags Elec World 139:137 Ap 20 '53

Present status of supercharged cooling. W. L. Ringland and L. T. Rosenberg. Power 97:200+ Je '53

Manufacture

Balancing turbine-generator rotors. L. P. Grobel. il diags Gen Elec R 56:22-5 Jl '53

Parallel operation

Adjust exciters for parallel operation. L. Donavant, jr. il diag Elec World 138:116 N 3 '52

Paralleling compound generators. S. Martinez. diags Power 97:127 Je '53

Protection

Automatic system for fire protection guards this generator installation; Charles Pfizer & co., inc. il diags Power 97:96-7 My '53

Standards

Revision of AIEE-ASME preferred standards for steam turbine-generators; with table. Mech Eng 75:176 F '53

Testing

D-c overpotential testing experience on high-voltage generators; abstract. R. J. Alke. Elec Eng 71:1131 D '52

Studies of impulse strength and impulse testing problems on high-voltage generators; abstract. G. L. Moses and R. J. Alke. Elec Eng 72:525 Je '53

Transportation

Big cars haul assembled generators. il Elec World News ed 139:23 F 2 '53

ELECTRIC generators, Alternating current

Airborne generator. il Aviation W 58:71-2 Je 1 '53

Caboose generator drives. E. K. Lofton and others. il Ry Loco & Cars 127:93-5 Mr '53

4·75 mw turbo-alternator set; Lower White River hydro-electric power station, Jamaica. Engineer 194:661-2 N 14 '52

Generator foundation for cosmotron meets unique requirements. J. M. Ruddy. il diags Eng N 150:44-5 Mr 26 '53

Permanent magnet fractional horsepower motors and generators; abstract. W. R. Goss. Power 97:158+ My '53

Report on round table on alternating-current generating systems for trucks and buses; SAE summer meeting, Atlantic City, June 2. S A E J 61:53-4 Ja '53

Significance of generator short-circuit ratio. C. M. Laffoon. Westinghouse Eng 12:207-8 N '52

Small close-regulation alternator; Stavolt. A. H. Maggs. il diags Engineer 196:69-71 Jl 17 '53

Transient stability of alternators; a graphical solution of the two-machine case; abstract. J. C. Prescott. bibliog Inst E E Proc 99 pt 2:623 D '52

Under excited operation of large turbine generators on Pacific gas and electric co.'s system; abstract. V. F. Estcourt and others. Power 97:222+ My '53

Cooling

General Electric alternator for operating in high ambient temperatures. il diag Engineering 175:281 F 27 '53

Hydrogen cooling for turbine generators. J. W. Batchelor. il Westinghouse Eng 13:74-6 Mr '53

Liquid-cooled generator. G. B. Warren. Mech Eng 75:238 Mr '53

Self-contained alternator and air cooler; General electric co. il Engineering 195:28 Ja 2 '53; Elec R (Lond) 152:154 Ja 16 '53

Design

Design of high-speed salient-pole a.c. generators for water-power plants. E. M. Johnson and C. P. Holder. bibliog il diags Inst E E Proc 99 pt 2:479-90; Discussion. 490-4 O '52

New alternator design. il diags Elec J 150:1721-2 My 15 '53; Elec R (Lond) 152:1119-20 My 15 '53

Square path alternators. il Elec J 150:1730-1 My 15 '53; Elec R (Lond) 152:1117-18 My 15 '53

Protection

Generator insulation inspection; progress report. J. S. Johnson. il Westinghouse Eng 13:126-7 Jl '53

Insulation impulse strength of high-voltage generators. G. L. Moses. Westinghouse Eng 13:88-90 My '53

Overvoltage cutoff protects alternators. il Aviation W 57:56+ O 27 '52

Sensitive ground relaying of a-c generators; abstract. E. T. B. Gross. diags Elec Eng 72:115 F '53

Repair

Unorthodox procedure straightens shaft. R. N. Sarver. il diag Elec West 110:84-5 Mr '53

Testing

Blondel test; accurate determination of leakage reactance. T. F. Wall. diags Elec R (Lond) 152:1107-8 My 15 '53

Windings

Field studies of generator windings; abstract. H. C. Marcroft. Elec Eng 72:298 Ap '53

ELECTRIC generators, Direct current

Flashover torque of a d-c generator; abstract. O. C. Coho. Elec Eng 72:638 Jl '53

Operating experience with regulating systems for the steel industry. W. R. Harris. il diags Iron & Steel Eng 29:113-22+ O '52

Transient performance of d-c machinery; abstract. J. Cybulski and others. Elec Eng 72:598 Jl '53

Transition between metadyne and amplidyne modes in a d.c. cross-field generator. E. J. Davies. bibliog diag Inst E E Proc 100 pt 2:191-5 Ap '53

See also

Amplidyne generator

Control

Inherent current, voltage and speed control in dynamo-electric machinery. J. C. Macfarlane and others. bibliog il diags Inst E E Proc 99 pt 2:421-34 O '52; Abstract. Elec R (Lond) 150:453 F 29 '52; Discussion. Inst E E Proc 99 pt 2:434-9 O '52; Elec R (Lond) 150:453-5 F 29 '52; Electrician 148:681-2 F 29 '52

Manufacture

Careful materials selection speeds production of special generator. J. McGinnis. il Materials & Methods 37:112-13 Je '53

Repair

Shop-made oven cuts repair cost on generators; Modern coach co. il Bus Transportation 32:48-9 S '53

ELECTRIC generators, Electrostatic

Electron beams sterilize food and drugs. E. A. Burrill and A. J. Gale. il diags Electronics 25:98-101 N '52

Facts about cold sterilization. W. M. Urbain. il diags Food Eng 25:45-6+ F '53

Radiofrequency ion source for Bartol Van de Graaff generators. C. P. Swann and J. F. Swingle, jr. diag R Sci Instr 23:636-8 N '52

ELECTRIC generators, Portable

Electricity anywhere on the job; illustrations with text. Constr Methods 35:122 F '53

ELECTRIC generators, Synchronous

Analysis of partly symmetrical machines by means of unitary transformation. D. W. C. Shen and H. N. G. Broadbent. bibliog Franklin Inst J 254:473-85 D '52

Generator negative-sequence currents for line-to-line faults; abstract. R. F. Lawrence and R. W. Ferguson. Elec Eng 72:390 My '53

Operating characteristics of salient-pole machines. J. H. Walker. bibliog diags Inst E E Proc 100 pt 2:13-24 F '53

Quicker voltage regulator response does improve generator stability. H. A. Cornelius and others. diag Elec World 138:108-11 D 15 '52

ELECTRIC generators, Synchronous—*Cont.*

Rotating-field theory and general analysis of synchronous and induction machines. Y. H. Ku. bibliog diags Inst E E Proc 100 pt 2: 63-7 F '53

Synchronous generators; operation at voltages and power factors differing from the rated values. W. Szwander. Elec R (Lond) 151:475-81 S 5 '52

Synchronous machines; introduction to the two-axis theory. P. Hammond. diags Elec J 149:1313-15 O 31 '52

Synchronous machines with rotating permanent-magnet fields; abstract. W. W. Brainard; F Strauss. il Elec Eng 72:246-7 Mr '53

Control

Magamp regulation for synchronous machines. J. E. Barkle and others. diag Westinghouse Eng 12:204-7 N '52; Same abr. Mech Eng 74:915-16 N '52; Same cond. Power Eng 56:92-3+ O '52; Abstract. Elec World 138:104-5 O 6 '52

Protection

Interlaminar insulation test for synchronous machine stators; abstract. H. R. Tomlinson. diags Elec Eng 71:1024 N '52

ELECTRIC hardening. See Case hardening—Electric hardening

ELECTRIC heaters

Future of the electric fire. A. W. Moss. Elec R (Lond) 151:447-9 Ag 29 '52; Same. Elec World News ed 138:41-2 D 8 '52

Guards for heaters. C. F. Mayson. Elec R (Lond) 152:819 Ap 10 '53

Off-peak space heating; General electric co. il Elec J 150:306 Ja 23 '53; Elec R (Lond) 152:318 F 6 '53; Engineering 175:183 F 6 '53; Metallurgia 47:265 My '53

Step up plant efficiency with electric heaters. il diags Mill & Factory 51:86-90 N '52

ELECTRIC heating

Air conditioning loads can be handled economically. G. L. Kenny, jr. il diag Elec World 139:82-4 Mr 9 '53

Caution advised in estimating house heating. C. W. Cheatham. Elec World 139:161-2 Mr 23 '53

Controlling the house heating load; with table. J. C. Beckett. Elec World 138:150 D 15 '52

Electric heating a feature; all-electric home in Detroit. il Am Bld 74:170 D '52

Electricity heats, ventilates Hungry Horse power plant. L. L. DeLong. il diag Heating-Piping 25:73-6 Ag '53

Heat pump test; Utah power & light co. il Elec West 109:89 N '52

Logical approach to the problems of space warming by electricity. D. H. Parry. bibliog plans diags Inst E E Proc 99 pt 1:233-43 N '52; Excerpts. Engineering 173:476 Ap 11 '52; Elec R (Lond) 150:767-8 Ap 11 '52; Electrician 148:1081-2 Ap 4 '52; Discussion. Inst E E Proc 99 pt 1:243-51 N '52; Elec R (Lond) 150:768 Ap 11 '52; Electrician 148:1151-2 Ap 11 '52

Office heating. il Elec R (Lond) 152:397-9 F 20 '53

Residential heat pump experiments in Philadelphia; suggested possibilities for practical applications; abstract. C. Bary. Elec Eng 72:122 F '53

Control

Modulating and load-limiting controls for electric house heating. W. F. Friend. Heat & Ven 50:82-6 Ag '53

Panel system

Church warming. il Elec R (Lond) 152:1455-6 Je 26 '53

Cleveland utility explains electric house heating. Elec World 138:146 O 20 '52

Electric room heating in Norway. E. Bjerkeseth. il diag Heat & Ven 50:82-3 Je '53

Electricity heats housing project. H. E. Samson. il plan Elec World 138:139-40 N 3 '52

Handy radiant heat. il Bsns W p72+ Ja 17 '53

Health centre heating installation. il Elec R (Lond) 153:196 Jl 24 '53

Mobile theatre. il Elec R (Lond) 152:505-6 Mr 6 '53

Radiant glass heating panels. P. R. Achenbach. il plan diag Heat & Ven 50:88-91 Ja '53; Same cond. Glass Ind 34:267+ My '53; Abstract. Heating-Piping 25:124 My '53

Radiant heating panel uses electrically conductive rubber. il Elec Eng 72:183 F '53; Mech Eng 75:233 Mr '53

Regulating radiant heaters. il diag Elec J 150:995 Mr 20 '53

ELECTRIC heating, Industrial

Anglo-Iranian oil co. heats oil pipe lines with electricity. diags Oil & Gas J 51:252+ D 22 '52

Conference on electric heating, Detroit, May 26-27; with abstracts of papers. Metal Prog 64:103-6 Jl '53

Coremaking speeded by use of heated corebox. W. M. Peterson. il Foundry 81:106-7+ Jl '53

Curves cut work in determining electric energy for heating. J. Gialanella. Chem Eng 60:234 My '53

Develop electric heating for cold-weather pours. Eng N 150:56+ Mr 5 '53

Dual frequency heating; lower costs open new fields. M. E. Hackstedde. il Steel 132: 140-1 Ap 13 '53

Dual-frequency induction heating lowers process costs. R. S. Segsworth. il diags Iron Age 171:113-16 Ap 16 '53

Economical snow melting with electric switch-heaters. H. C. Griffith, jr. il diags Ry Age 133:77-8+ D 8 '52

Electric drying tunnel increases production of varnished mica coil insulation strips. A. C. Sutton. il Elec World 138:146 D 15 '52

Electric glass welding. M. R. Shaw. bibliog il diags Elec Eng 72:31-4 Ja '53

Electric heat pays off for galvanizing. J. S. Case and G. H. Hoffman. il Elec World 139:96-7 Mr 9 '53

Electric heaters increase oil production. H. H. Douglas. il Elec West 109:93 O '52

Electric melting pot saves lead. R. H. Harrod. il Elec World 138:148 O 20 '52

Electric welding of glass; Quickfit and Quartz, ltd. il Engineering 175:746 Je 12 '53; Elec R (Lond) 152:1359 Je 12 '53

Electricity is an efficient chore boy; heating of asphalt and fuel oil in plant of S&F construction co. W. L. King. il Elec West 109:92 O '52

Eliminating fire hazard with hexane; Combined metals reduction co. O. Duke. il Elec West 109:96 O '52

Engineering highlights of 1952; heating and welding. C. A. Scarlott. il Westinghouse Eng 13:27-8 Ja '53

Grain drying; large all-electric installation at Fakenham. il Elec R (Lond) 151:1026-8 N 7 '52

Heating cable keeps chocolate flowing. C. H. Swenson. Elec World 139:166 Mr 23 '53

Heating; worth using electricity? R. D. Raddant. Iron Age 171:61 Je 11 '53

Induction heating branching into many metalworking fields. il Am Mach 97:145 Mr 2 '53

Induction heating; large aluminum ingot heated to 750°F in 50 min. Iron Age 171:152 Ap 9 '53

Induction heating of aluminium alloy billets at mains frequencies. R. H. Barfield. il Metallurgia 47:305-6 Je '53

International machine tool exhibition, London, Sept. 17-Oct. 4. il Elec R (Lond) 151:604-6 S 19 '52

Large electrically heated roller. il Engineer 194:562-3 O 24 '52; Engineering 174:584 O 31 '52; Elec R (Lond) 151:839 O 17 '52

Low-frequency heating. D. I. Bohn. Mech Eng 75:408 My '53

Low frequency induction heater. il Metallurgia 46:281-2 D '52

Number and types of induction heating units; applications in 405 plants; tabulations. Iron Age 171:464-5 Ja 1 '53

Optical thermometer for induction heating. il Electronics 26:330+ Mr '53

Resistance heating anneals copper tubing; Super cold corp. il Elec West 109:105 O '52

Safe strip heaters cut lubricant waste. W. D. Zimmerman. Elec World 139:194+ My 18 '53

Step up plant efficiency with electric heaters. il diags Mill & Factory 51:86-90 N '52

ELECTRIC heating, industrial—*Continued*

Typical industrial uses of electric heating elements; drawings with text. Product Eng 24:184-5 Mr '53

Unique immersion assembly heats 12 tanks. A. D. Spillman. il Elec World 138:148 O 20 '52

Watercooled flexible conductor solves induction heating problem. il Power Eng 57:114 O '53

Watts keep Diesels warm. Steel 132:124+ Mr 9 '53

See also

Case hardening—Electric hardening
Electric furnaces
Electric furnaces, Heat treating
Electric welding
Electric welding, Arc
Infrared rays—Industrial heating

High frequency heating

Automatic controller for radiofrequency induction-heating units. J. J. Theron. diag R Sci Instr 24:281-2 Ap '53

Black-bolt heading plant with induction heating. il Engineering 175:193-5 F 13 '53

Dielectric heating cuts woodworking costs. R. E. Nelson. bibliog il diags Electronics 26:178-83 Je '53

Drying time for ceramic extrusions cut 70 per cent. W. G. Davies. il Elec World 138:104 D 29 '52

Finish first, glue last. L. B. Reed. il Elec West 110:90 Mr '53

Heat treatment; development of high frequency induction methods. il Elec R (Lond) 153:325-8 Ag 14 '53

Hf brazes high-vacuum joints; Western Electric. H. W. Garbe. il diags Am Mach 97:131-5 Mr 16 '53

H-f gluing turns liability into asset; Inlaid floor co. il Elec West 109:102 O '52

High frequency heating. A. E. Williams. il Engineer 194:215-19 Ag 15 '52

Induction brazing can be used for copper and copper-alloy parts. E. M. Laughner. il diags Am Mach 96:138-40 N 24 '52

Induction firing in the study of furnace atmospheres. W. J. Plankenhorn and A. I. Andrews. bibliog il diag Am Cer Soc J 36:69-75 Mr 1 '53

Induction heat treatment plant; Electric furnace co. il Metallurgia 48:18-20 Jl '53

Induction heating; automobile applications. D. W. Brown. il diags Automobile Eng 43:379-85 S '53

Induction heating cuts costs on many fronts. il Steel 132:80-2 Mr 23 '53

Induction heating for better blast hole drill bits. J. H. Hearding, jr. il Min Eng 5:974-6 O '53

Induction heating helps produce better gears; Greenlee bros. & co. L. G. Miller. il Metal Prog 63:109-10+ Je '53

Induction sealing of pencil triodes. il Electronics 26:262+ F '53

Induction soldering setups. il Electronics 26:260-2 Ja '53

Making small trees into large lumber. L. B. Reed. il Elec West 110:90-1 Ja '53

New insulation for radiofrequency leads in high vacuum work. M. Hoch. diag R Sci Instr 23:651 N '52

Production of board from waste. il Elec J 150:2013-14 Je 5 '53

Radio-frequency edge-gluing machine. il Engineer 196:121 Jl 24 '53

Radio-frequency gun sets glue, displaces nails. il Elec West 109:99 O '52

What to do about certifying your induction heater. O. Noeske. il diag Am Mach 97:144-6 Mr 16 '53; Same. Rubber Age 73:230 My '53; Same. Mill & Factory 52:104-7 Je '53; Same cond. Textile World 103:104+ Je '53; Excerpts. Elec World 139:112-13 Ap 20 '53

See also

Case hardening—Electric hardening

ELECTRIC heating elements

Designing electric heating elements; reference book sheet. J. Gialanella. Product Eng 23:205, 207 O '52

Heating elements for electric resistance furnaces cast from inoculated alloys; abstract. N. S. Kreshtshanovsky and A. D. Sventshansky. Metal Prog 64:166+ S '53

Silicon carbide heating elements; development, uses, chemical and physical investigations. T. H. Elmer. bibliog Am Cer Soc Bul 32:23-5; Discussion. B. A. Bovee. 26-7 Ja 15 '53

ELECTRIC heating of clothing. See Clothing, Electrically heated

ELECTRIC ignition

Flare stacks of unusual design. il diags Engineer 195:712 My 15 '53; Engineering 175:599 My 8 '53; Elec J 150:1640 My 8 '53

Microchronometric Schlieren study of gaseous expansion from an electric spark. H. L. Olsen and others. il diag J Ap Phys 23:1157-62 O '52

Microdetermination of flash point on petroleum products. P. McCutchan and D. A. Young. bibliog diags Anal Chem 24:1974-6 D '52

Spark ignition; effect of molecular structure. H. F. Calcote and others. bibliog diags Ind & Eng Chem 44:2656-62 N '52

ELECTRIC industries

Electric homes exhibitions

Ideal home exhibition, London, March 3. il Elec J 150:777-9 Mr 6 '53; Elec R (Lond) 152:522-5 Mr 6 '53

Exhibitions

Chicago's electric theater, Museum of science and industry's electric industry exhibit. Chicago. W. H. Bromage. Pub Util 50:495-9 O 9 '52

Electrical engineers' exhibition, 2d, London, March 25-28. Engineering 175:424-5 Ap 3 '53

Electrical engineers' exhibition, 2d, London, March 25-28. il plan Elec J 150:953-72 Mr 20 '53; Elec R (Lond) 152:667-83 Mr 27 '53

Modernisation of Electrical section of the Scottish building centre. il Elec J 149:1181 O 17 '52

Materials

British plastics convention, London, June 8-18; abstracts of papers of electrical interest. Elec R (Lond) 152:1045-8 My 8 '53

Electrical materials; survey of the position in 1952. Elec R (Lond) 152:27-30 Ja 2 '53

Electro-plastics; electrical aspects of the British plastics exhibition. il Elec R (Lond) 152:1307-12 Je 5 '53

Germanium for electrical purposes. A. G. Thomson. Elec R (Lond) 152:39-41 Ja 2 '53

Iron atoms in the service of the electrical engineer. C. Goodeve. bibliog il diags Inst E E Proc 99 pt 1:225-32 N '52; Same cond. Engineer 193:599-600 My 2 '52; Abstracts. Engineering 173:551 My 2 '52; Elec R (Lond) 150:971-2 My 2 '52; Electrician 148:1435-6 My 2 '52

Metal-carbon composites for mechanical and electrical parts. E. P. Eaton, jr. il Product Eng 23:173-5 N '52

Plastics exhibition, London, June 8-17. Elec J 150:2129-30 Je 12 '53

Plastics in the service of the general post office; abstract. A. A. New. Chem & Ind p 1197-8 D 6 '52

Research and engineering progress, 1952; chemical and metallurgical. il Gen Elec R 56:52-4 Ja '53

Silicones for the electrical industry. Engineer 195:434 Mr 20 '53

Statistics

Annual report on the electrical industry, 49th. maps Elec World 139:133-76 Ja 26 '53

Australia

Australian notes. Elec R (Lond) 151:858; 152:165 O 17 '52, Ja 16 '53

Brazil

Brazilian notes. Elec R (Lond) 152:816 Ap 10 '53

Brazilian trade facilitated. Elec R (Lond) 152:479-80 F 27 '53

Canada

Annual year-end summary of the status of the electrical industry in Canada. H. M. Turner. Roads & Eng Constr 91:64 Ja '53

ELECTRIC industries—*Continued*

Great Britain

British electrical power convention, 5th, Torquay, June 8-12; with abstracts of papers. Engineering 175:758-9, 789-91, 829-31 Je 12-26 '53; Elec J 150:2089-129, 2199-207 Je 12-19 '53; Elec R (Lond) 152:1335-55, 1419-29 Je 12-19 '53

Contracts and sales. C. F. Mayson. Elec R (Lond) 151:297-9, 348-50, 405-7 Ag 8-22 '52

Electrical development association sales and service conference; with abstracts of papers. Elec J 150:1709-10 My 15 '53

Electrical development during the lifetime of the Queen. il diags Elec J 150:1885-9 My 29 '53

Electricity and current affairs. B. H. Leeson. Inst E E Proc 100 pt 1:1-9 Ja '53; Abstracts. Elec J 149:1157-8 O 17 '52; Elec R (Lond) 151:830-2 O 17 '52

Electricity and national prosperity; abstracts B. H. Leeson. Engineering 175:766-7 Je 12 '53; Elec J 150:2097-8+ Je 12 '53; Elec R (Lond) 152:1345-6 Je 12 '52; Discussion. Engineering 175:789-90 Je 19 '53; Elec J 150:2101-2 Je 12 '53; Elec R (Lond) 152: 1423-5 Je 19 '53

Employment in 1952; Ministry of labour report. Elec R (Lond) 153:266 Jl 31 '53

Housecraft conference, London. Elec R (Lond) 152:759-61 Ap 3 '53

Joint consultation; supply industry experience and possibilities. W. Walsh. Elec R (Lond) 151:1384-6 D 26 '52

National and international production. J. Prince. Inst E E Proc 100 pt 1:18-19 Ja '53

Nationalized industry; reassessment and appraisal by the trade unions. Elec R (Lond) 153:401-3 Ag 21 '53

Presidential address before Electrical contractors' association; abstracts. W. T. Trace. Elec R (Lond) 152:1472+ Je 26 '53; Elec J 151:30+ Jl 3 '53

Royal links with the industry. il Elec J 150: 1890-2 My 29 '53

Salesmanship needed. A. C. Johnson. Elec R (Lond) 151:457-8 Ag 29 '52

South eastern electricity board meeting with manufacturers, 10th, Brighton, May 11. Elec J 150:1719-20 My 15 '53

India

Electrical notes from Asia. Elec J 150:139 Ja 9 '53

Indian five-year plan. Elec J 150:1392 Ap 24 '53

Prospects in India. R. Owen. Elec R (Lond) 152:825-6 Ap 10 '53

Norway

Natural power in harness. M. B. Marris. Elec J 150:301-2 Ja 23 '53

South Africa

Electricity in South Africa. H. J. Beard. il maps Elec R (Lond) 151:219-25, 291-3 Ag 1-8 '52

United States

Annual report on the electrical industry, 49th. maps Elec World 139:133-76 Ja 26 '53

Electric industry in 1952. B. L. England. Pub Util 51:115-17 Ja 15 '53

Favor low tariffs on a selective basis. G. A. Price. Elec World News ed 139:46 My 11 '53

Wales

Electrical contractors' association and South Wales electricity board 3d joint conference, Porthcawl, April 24. Elec J 150:1558-9 My 1 '53

Western states

Annual review number. il Elec West 110: 87-133 F '53

ELECTRIC inspectors

What is a good electrical inspector? C. H. Hefner. Elec West 110:84 Ja '53

ELECTRIC instruments

Besson & Robinson electro-mechanical devices. il Elec R (Lond) 153:471-2 Ag 28 '53

Bridge for precise comparison of ac and dc voltages. W. J. Cunningham and E. W. Vaughan. diags R Sci Instr 24:152-5 F '53

Bridge-type design toughens new instrument. il diags Product Eng 24:144-5 Mr '53

Butterfly curve tracer for magnetic materials. G. M. Ettinger. bibliog il diags Electronics 26:119-21 Mr '53

Capacitively coupled field mapper for two-dimensional distributed-source field problems. E. O. Gilbert and E. G. Gilbert. il diags Elec Eng 72:600-5 Jl '53

Capacitor breakdown tester. C. R. Schafer. il diag Electronics 25:292+ O '52

Check overcurrent relay elements with portable tester. E. D. Andrews. il diags Elec World 138:92+ D 29 '52

Check relays with portable current and voltage supply. il diags Elec World 138:118 D 1 '52

Corrosion detection by rotogeneration; d-c corrosion currents used to generate a-c potentials. il diag Electronics 26:146+ Ja '53

Electric dew point meter cooled by the Vortex tube. F. C. Hooper and I. S. Juhasz. bibliog il diags Refrig Eng 60:1196-7 N '52

Electrical noise from instrument cables subjected to shock and vibration. T. A. Perls. bibliog il diags J Ap Phys 23:674-80 Je '52

Electronic instruments for production testing of camera shutters. R. W. Lavender. il diags Elec Eng 72:336-40 Ap '53

Electronic instruments' symposium, London. Electrician 149:689-90 S 5 '52

Engineering highlights of 1952; measurement and test. C. A. Scarlott. il Westinghouse Eng 13:28-9 Ja '53

Exporting electrical instruments. C. L. Lipman. il Elec J 150:1522-4 My 1 '53

Fault locator weeds out incipient cable faults. J. L. Redmond. il Elec World 138:88+ D 29 '52

High-frequency simulator for the analysis of power systems. S. Kaneff. bibliog diags Inst E E Proc 100 pt 2:405-16 Ag '53

Impedance measuring device; patent. diags Electronics 26:258+ Ag '53

Instrument electronics (cont). M. H. Aronson. il diags Instruments 25:1263-5+, 1426-7+, 1572-5+; 26:108-12+ S-N '52, Ja '53

Instrument for the control of soluble sulfates in ceramic raw materials. W. E. Brownell. il Am Cer Soc Bul 32:45-6 F 15 '53

Measuring minute capacitance changes; bridge system permits resolution of minute mechanical motions. G. W. Cook. il diags Electronics 26:105-7 Ja '53

Modern instruments, old traditions; Elliott brothers (Lewisham), ltd. il Elec J 149:1497-500 N 14 '52

Noise-free instrument cable. il Commun Eng 13:22+ Mr '53

Portable load-measuring set; Boulton Paul aircraft, limited. il Engineering 175:93 Ja 16 '53

Research and engineering progress, 1952; testing and measuring. il Gen Elec R 56:16-19 Ja '53

Ruggedized instruments represent complete redesign. il diags Product Eng 23:146-7 D '52

Sensitive recording alternating-current Hall effect apparatus. E. M. Pell and R. L. Sproull. bibliog diags R Sci Instr 23:548-52 O '52

Single instrument controls batch-dyeing time and temperature. il diags Textile World 102:152+ D '52

Successful product design. I. F. Kinnard. bibliog il diags Machine Design 25:108-14 Je '53

Tester for germanium diodes. N. Dewolf and N. E. Schick. il diags Electronics 25:150+ D '52

Want to trim costs? electrical instruments can help you. J. P. Thompson. il Mill & Factory 51:81-7 D '52

See also

Ammeters
Bolometers
Dynamometers
Electric apparatus and appliances
Electric measurements
Electric meters
Electrometers
Gages, Electric
Galvanometers
Hearing aids, Mechanical
Measuring instruments, Electric
Oscillators
Photoelectric cells
Potentiometers
Radio instruments
Recording instruments, Electric
Telemetering
Vacuum tubes—Measurement uses
Voltmeters

ELECTRIC instruments—*Continued*

Exhibitions

British instruments industries exhibition, Olympia, June 30-July 11. il Elec J 150:2277-87 Je 26 '53; Elec R (Lond) 153:3-13 Jl 3 '53

Maintenance and repair

Maintaining electric and electronic instruments. L. Walter. il diags Can Chem Process 36:42+ O '52

Testing

Corona resistors. T. A. Ledward. il diag Electrician 149:981-2 O 3 '52

Electrical instruments can take it. il Steel 132:84-5 F 23 '53

ELECTRIC insulation. See Insulation (electric)

ELECTRIC inverters

Study of a magnetic inverter for amplification of low-input-power d.c. signals. E. H. Frost-Smith. diags Inst E E Proc 100 pt 2: 362-71; Discussion. 371-5 Ag '53

Synchronous inverter. il Automotive Ind 107: 68 O 15 '52

ELECTRIC irons

Rating

Electric irons. il Consumers Res Bul 32:5-9 Ag '53

ELECTRIC laboratories

Admiralty proving station; engineering laboratories for marine equipment. il Electrician 149:841 S 19 '52

High-potential lab highlights safety features; Hartford electric light co. il Elec World 138:123-4 D 15 '52

High voltage test laboratory; Brush electrical engineering co. il Engineer 194:191 Ag 8 '52; Engineering 174:172-3 Ag 8 '52; Elec R (Lond) 151:271-4 Ag 8 '52; Electrician 149:409-11 Ag 8 '52

India's high-voltage laboratory. G. K. M. Pfestorf and D. J. Badkas. il plans Elec Eng 72:320-4 Ap '53

Kema, the Dutch electrical research station. il Elec J 150:1243-5 Ap 10 '53

Motor development and test facility announced by General electric co. il Elec Eng 71:1154-5 D '52; Mech Eng 74:1021 D '52; Mod Ind 24:133 N '52

ELECTRIC lamps

Engineering highlights of 1952; lamps and lighting. C. A. Scarlott. il Westinghouse Eng 13:40-3 Ja '53

GE light bulbs nominated for packaging's Hall of fame. il Mod Packaging 26:96-102+, cover Ja '53

Lamps and lighting; vision of the future. J. N. Aldington. il Illum Eng 48:82-8; Discussion. 88-90 F '53

Light intensity; the primary standard and the new international unit. A. G. Thomson. il Elec R (Lond) 151:657-60 S 26 '52

Lighting progress. W. J. Jones. il Elec J 150:1517-18 My 1 '53

Lighting progress in 1951-1952. bibliog il Illum Eng 48:105-19 F '53

Progress in electric lighting; abstracts. W. J. Jones. Elec J 149:1917 D 19 '52; Elec R (Lond) 151:1348 D 19 '52

Questions and answers on light sources (cont). Illum Eng 47:575, 636, 692; 48:171, 278, 504 O-D '52, Mr, My, S '53

Questions they ask; inquiries put to lamp retailers are discussed and answered by a lighting specialist. il diags Elec J 150:436-9 F 6 '53

Research and engineering progress, 1952; lighting. il Gen Elec R 56:48-51 Ja '53

What lamp is best for that industrial lighting job? J. R. Jones. Elec World 138:111-14 O 20 '52

See also
Safety lamps, Electric

Advertising

Lamp sales publicity. il Elec J 151:648 Ag 28 '53

Lamp sales publicity. il Electrician 149:688, 776+, 1005-6 S 5-12, O 3 '52; Elec R (Lond) 151:509-10 S 5 '52

Cleaning

Practical reduction of dirt accumulation in high wattage luminaires. J. W. Steiner. il diags Illum Eng 48:184-6 Ap '53

Flashing

Build this electronic flash. C. I. Hellman. il diags Radio & Tv N 49:52-3+ Mr '53

Manufacture

Production and productivity in electric lamp manufacture. S. R. Eade. il diags Engineer 194:259-62 Ag 22 '52

Sealing metal to glass; problem of varying rates of expansion. R. H. Warring. diags Elec R (Lond) 151:301-4 Ag 8 '52

Temperature

Effect of ambient temperature on fluorescent lamp performance; abstract. C. M. Holden. il Illum Eng 48:476-7 S '53

ELECTRIC lamps, Arc

Characteristics of the high current tungsten arc in argon, helium, and their mixtures. M. Skolnik and T. B. Jones. bibliog il diags J Ap Phys 23:643-52 Ja '52; Same. Welding J 32:sup55-64 Ja '53

ELECTRIC lamps, Fluorescent

Accessible mounting for ceiling lights. il Engineering 174:288 Ag 29 '52

Applied principles solve inspection problem; Industrial aids, inc. R. B. Hatfield. il Illum Eng 48:355-6 Jl '53

Approximate direct illumination at a point from a circular fluorescent luminaire. W. A. Hedrich. bibliog il diags Illum Eng 47:612-15 N '52

Built-in sidewalk lighting. il Illum Eng 47: 657 D '52

Characteristics and applications of high-frequency fluorescent lighting. J. H. Campbell and others. il diags Illum Eng 48: 95-102; Discussion. 102-3 F '53

Clip-releasing tool aids fluorescent fixture maintenance. J. Stupensky. diags Elec World News ed 139:40 Ap 27 '53

Compact shelving; lighting problem; Archives building of the Illinois state library. F. Babiak, jr. and J. W. Marquardt. il plan Illum Eng 48:393-4 Ag '53

Comparative rating guide for fluorescent lighting fixtures. L. V. James. Illum Eng 48:539-55 O '53

Control room lighting. il Elec R (Lond) 151: 242 Ag 1 '52

Cost and comfort appraisal of industrial lighting systems. G. J. Taylor and R. D. Bradley. bibliog(31 titles) il Illum Eng 48:213-20 Ap '53; Same cond. Arch Rec 113:189-91+ F '53; Discussion. Illum Eng 48:220-30 Ap '53

Dimming hot cathode fluorescent lamps; abstract. J. H. Campbell and others. il diag Illum Eng 48:456-7 S '53

Dimming of fluorescent lamps to increase their versatility. Elec Eng 71:977 N '52

Dual light source in machine shop. G. P. Leyes. il Illum Eng 48:23-4 Ja '53

Effect of ambient temperature on fluorescent lamp performance; abstract. C. M. Holden. il Illum Eng 48:476-7 S '53

Effect of temperature on electrical and color parameters of 40T12 fluorescent lamps; abstract. C. W. Jerome. Illum Eng 48:478-9 S '53

Effect of temperature on fluorescent street lighting luminaires; abstract. J. E. Bock and J. S. Franklin. il Illum Eng 48:465-6 S '53

Efficiency and appearance factors in luminous panels; abstract. M. E. Haskins, jr. Illum Eng 48:485-6 S '53

Elimination of toxic properties of fluorescent lamps. Pulp & Pa of Can 53:131 N '52

Evaluation of color rendition by fluorescent lamps. A. C. Barr and others. bibliog Illum Eng 47:649-53; Discussion. 654-6 D '52

Filling a high ceiling area with light. D. A. Naftzger. il Elec World 139:138+ Mr 9 '53

Fluorescent discharge-tube circuits and operating problems. J. Cates. bibliog diags Inst E E Proc 100 pt 2:389-400; Discussion. 400-4 Ag '53; Elec J 150:692 F 27 '53

ELECTRIC lamps, Fluorescent—*Continued*

Fluorescent floodlights solve airport apron lighting problem; Logan international airport, Boston. H. N. McIntyre. il Elec World 138:144+ D 15 '52

Fluorescent mercury aids jig assembly. F. E. Cooper. il diag Elec World 139:129-30 Ap 6 '53

Fluorescent mine lighting. il Elec R (Lond) 151:753 O 3 '52

Fluorescent street lighting here and abroad. P. H. Houser. bibliog il Illum Eng 48:529-33 O '53

High-ceiling fluorescent fixture relights banking area; Howard saving institution, Newark, N.J. il diag Elec World 138:132 D 1 '52

High-frequency fluorescents may be the answer to your tough lighting problems. J. W. St Andre. il Factory Management 111:82-3 Ag '53

How store lights fade pickles. F. W. Fabian and F. L. Baldwin. Food Eng 25:61+ Je '53

Improved fluorescent lighting system for trolleybuses. Engineer 195:137 Ja 23 '53

Industrial lighting; Universal lighting system of Fluorescent applications, ltd. il diags Elec J 150:127-8 Ja 9 '53

Light and colour. il Elec J 150:772-5 Mr 6 '53

Lighting a cotton classing room; data sheet. il diags Illum Eng 48:527-8 O '53

Lighting a drafting room. il plan diag Illum Eng 47:647-8 D '52

Lighting a large office. P. Lindholm. il plan Illum Eng 48:169-70 Mr '53

Lighting a machine shop; data sheet. P. S. Schmidt and L. E. Mueller. il plan Illum Eng 48:383-4 Jl '53

Lighting a nylon factory; an extensive hot-cathode installation. il plan Elec R (Lond) 151:443-5 Ag 29 '52

Mercury lighting; whiter, more versatile. E. W. Beggs. il diag Westinghouse Eng 13:50-3 Mr '53

Moving striations in fluorescent lamps. il Illum Eng 47:sup25A O '52

New lead-lag ballast for discharge lamps. C. H. Burns and H. E. Bachman. il diags Illum Eng 47:534-8 O '52; Discussion. 47:671-2 D '52

Overhead canopy modernizes Y.M.C.A. il diag Illum Eng 48:253 My '53

Permitol capacitors; correction of fluorescent lamp circuit power factor. T. F. Robinson and G. H. Dyer. il diags Elec R (Lond) 151:329-32 Ag 15 '52

Photographing fluorescent lighting installations in color; abstract. W. Allphin. Illum Eng 48:487-8 S '53

Physical basis for some aspects of fluorescent lamp behavior. E. F. Lowry. Illum Eng 47:639-44; Discussion. 645-6 D '52

Predict fluorescent-lamp burnouts; chart. L. J. Murphy. Mill & Factory 52:178 Ap '53

Press room lighting; lighting data sheet. E. F. McDonnell, jr. il Illum Eng 48:13-14 Ja '53

Seattle tries fluorescents; Alaska Way viaduct. Elec West 110:98 My '53

Specification of color-rendering properties of fluorescent lamps. C. W. Jerome and D. B. Judd. bibliog Illum Eng 48:259-67 My '53

Street lighting fitting. il Elec J 150:1916-17 My 29 '53; Elec R (Lond) 152:1213-14 My 29 '53

Thorn automatic machine for testing glow starter switches. il Engineer 195:843 Je 12 '53

Trouble-shooting on fluorescent systems. Mill & Factory 52:117-19 Ja '53

What is meant by good lighting. H. Miedendorp. il Mod Textiles Mag 34:82-3 Ag '53

Cold cathode

Cold cathode lighting. il Elec J 151:284 Jl 24 '53

Cold cathode lighting; Heaton works of C. A. Parsons and co. il Elec J 149:1601-2 N 21 '52; Elec R (Lond) 151:1107-8 N 21 '52; Engineer 194:810 D 12 '52

Cold cathode power sources; abstract. R. C. Hultgren. diags Illum Eng 48:458 S '53

Starters

Ballasts designed for rapid-start fluorescent lamps. Elec World 138:140 O 6 '52

Electrical characteristics of fluorescent lamps and ballasts; abstract. W. C. Gungle. Illum Eng 48:455-6 S '53

New fluorescent lamp and ballast design for rapid starting. A. E. Lemmers and W. W. Brooks. diags Illum Eng 47:589-94; Discussion. 594-600 N '52

Proposed starter standards. G. A. Freeman. il diags Standardization 24:54 F '53

ELECTRIC lamps, Incandescent

Incandescent lamp bulbs in voltage stabilizers. W. J. Cunningham. diags J Ap Phys 23:658-62 Je '52

Industrial lighting; high wattage translucent and blended fittings. J. G. Holmes. il Elec R (Lond) 151:993-8 N 7 '52

Trouble-shooting on incandescent and mercury lighting systems. il Mill & Factory 53:114-15 Ag '53

See also

Electric lamps, Tungsten

ELECTRIC lamps, Mercury vapor

Development of highway lighting in metropolitan Chicago and northern Illinois. R. J. Seitz and E. M. Prims. il diag Illum Eng 48:534-8 O '53; Discussion. 48:636-8 D '53

Discomfort glare; comparison of mercury, sodium and tungsten light sources. H. M. Ferguson and others. Elec R (Lond) 153:355-8 Ag 14 '53

Industrial lighting; high wattage translucent and blended fittings. J. G. Holmes. il Elec R (Lond) 151:993-8 N 7 '52

Lamps for street lighting. F. H. Pulvermacher. il Elec R (Lond) 153:72-5 Jl 10 '53

Low pressure mercury discharges; xenon-argon and xenon-neon. G. Meister and J. H. Heine. Illum Eng 47:660-4; Discussion. 664-6 D '52

Mercury lamp starting requirements for outdoor applications; abstract. A. E. Binder. map Illum Eng 48:453-4 S '53

Mercury lighting; whiter, more versatile. E. W. Beggs. il diag Westinghouse Eng 13:50-3 Mr '53

New approach to underpass lighting. H. G. Hrivnatz. il Illum Eng 48:121-3 Mr '53

Photoelectric cell stabilizes mercury-arc lamp light intensity. Elec Eng 72:169 F '53

Short-arc mercury lamp, boon to searchlights. Westinghouse Eng 13:79 Mr '53

Trouble-shooting on incandescent and mercury lighting systems. il Mill & Factory 53:114-15 Ag '53

ELECTRIC lamps, Metal vapor

Electrodeless discharge lamps containing metallic vapors. M. Zelikoff and others. il diag Opt Soc Am J 42:818-19 N '52

ELECTRIC lamps, Neon

Hodoscope unit with the neon lamps normally off. R. Arce and others. R Sci Instr 23:441-2 Ag '52

Let's use neon bulbs as indicators and oscillators. L. G. McCoy. il diags Q S T 37:22-5+ Jl '53

Neon in the sky; form of aerial advertising in which neon lighting is employed. Electrician 149:1086 O 10 '52

Neon lamp flip-flop and binary counter. H. A. Vuylsteke. diags Electronics 26:248+ Ap '53

ELECTRIC lamps, Photoflash

Electrical and radiation characteristics of flashlamps. H. N. Olsen and W. S. Huxford. bibliog il diags Soc Motion Picture & Tv Eng J 55:285-98 S '50; Abstract. Electronics 26:208+ Ja '53

Flash-bulb pocket pack. il Mod Packaging 26:107 My '53

Microsecond photography of rocket in flight. E. Barkofsky and others. il diags Electronics 26:142-7 Je '53

ELECTRIC lamps, Safety

Simplex flameproof handlamp. il Engineer 196:175 Ag 7 '53

ELECTRIC lamps, Sodium vapor

Discomfort glare; comparison of mercury, sodium and tungsten light sources. H. M. Ferguson and others. Elec R (Lond) 153:355-8 Ag 14 '53

ELECTRIC lamps, Sodium vapor—*Continued*

Lamps for street lighting. F. H. Pulvermacher. il Elec R (Lond) 153:72-5 Jl 10 '53

Sodium lamps. E. F. Edwards. il Elec R (Lond) 152:403-6 F 20 '53

ELECTRIC lamps, Tungsten

Discomfort glare; comparison of mercury, sodium and tungsten light sources. H. M. Ferguson and others. Elec R (Lond) 153: 355-8 Ag 14 '53

Precision color temperature meter for tungsten illumination. G. H. Dawson and others. il diags Soc Motion Picture & Tv Eng N 59:309-12 O '52

Tungsten in the lamp industry. G. Moritz. il Illum Eng 48:397-401 Ag '53

Tungsten in the lamp industry. G. R. Moritz and W. E. Anderson. il Westinghouse Eng 13:82-7 My '53

Tungsten, its application in electric lamps. W. E. Anderson. Illum Eng. 48:402-4 Ag '53

ELECTRIC leakage

Blondel test; accurate determination of leakage reactance. T. F. Wall. diags Elec R (Lond) 152:1107-8 My 15 '53

Reliability of earth leakage trips. T. C. Gilbert. diags Elec R (Lond) 152:1406-8 Je 19 '53

ELECTRIC light fittings association

Annual luncheon, London, March 31. Elec J 150:1247-8 Ap 10 '53; Elec R (Lond) 152: 803-5 Ap 10 '53

ELECTRIC lighting

Boston Edison customers get a 3-D view of lighting. R. B. Brown, jr. and W. Allphin. il Elec World News ed 139:34-5 My 25 '53

Electrical measurements on electroluminescent lamps with zinc sulfide phosphors. C. W. Jerome and W. C. Gungle. bibliog diags Electrochem Soc J 100:34-8 Ja '53

Engineering highlights of 1952; lamps and lighting. C. A. Scarlott. il Westinghouse Eng 13:40-3 Ja '53

Illuminating holiday; lighting in France, Spain and Andorra. Elec J 149:1335-6 O 31 '52

Light, color, and shadow stressed in sales boosting New Orleans exhibit. J. D. Haverkamp. il Elec World News ed 139:38-9 F 16 '53

New showrooms; Ekco-Ensign, ltd. il Elec J 149:1182 O 17 '52; Elec R (Lond) 151:851 O 17 '52

Promote lighting with spectacle and story. il Elec World 138:171 N 17 '52

Publicity value of electric lighting; abstract. H. Carpenter. Inst E E Proc 100 pt 1:74 Mr '53

Research and engineering progress, 1952; lighting. il Gen Elec R 56:48-51 Ja '53

Selling creates the lighting market. R. H. Humbert. Elec World 139:102-5 F 9 '53

See also

Airports—Lighting
Art galleries and museums—Lighting
Drafting rooms—Lighting
Electric lamps
Factories—Lighting
Office lighting
School buildings—Lighting
Store buildings—Lighting
Street lighting

Flicker

Flicker control in arc furnace power supply. R. F. Lawrence and R. L. Tremaine. bibliog il diags Steel 132:102+ F 23; 96+ Mr 2 '53

Pulsed light measures flicker perception. F. H. Ireland. bibliog il diags Electronics 26:189-91 Je '53

Two new instruments measure rapid voltage fluctuations. M. Fisher, jr. and others. diags Elec World 139:116-18+ F 23 '53

ELECTRIC lighting sets

Nife emergency lighting sets for smaller buildings. il Engineer 195:735 My 22 '53

ELECTRIC lines

Chemical treatment of right-of-ways; engineering reference sheet. Elec World 138: 124 D 1 '52

Connectors retard use of aluminum wire. C. Baugh. il Elec West 109:72-5 D '52

FPC's carrier clause upheld; can impose conditions on lines of private company crossing public lands; Idaho power co. vs Federal power commission. Elec World 138: 107 N 17 '52

First basal spray gives 90 per cent kill. L. A. Phillips. il Elec World 138:122+ N 3 '52

Southern Bell switches to chemical brush control. il Elec World 139:122-3 Mr 23 '53

See also

Electric cables
Electric conduits
Electric fuses
Electric plants—Interconnection
Electric service, Rural
Electric transmission
Electric utilities
Electric wiring
Overvoltage (electric lines)
Radio lines
Telephone cables
Trolley buses

Construction

Cotton cord and biplane lay line on tough terrain. Elec World 139:118+ Mr 9 '53

Determine anchor holding power by class of soil; engineering reference sheet. Elec World 138:130 O 20 '52

Modern methods cut costs for steel tower line. J. A. Rawls. il Elec World 139:141+ Mr 23 '53

Read line angles quickly with protractor. il Elec World 138:116 D 1 '52

Semi-underground in Roanoke defers full underground. J. L. White. diag Elec World 138:56-7 D 29 '52

They spin their own aluminum cable; Arizona public service co. T. A. Phillips. il Elec West 110:90-2 Ap '53

Tie wire machine increases production. W. B. Sullivan. il Elec World 139:136+ F 23 '53

See also

Electric lines—Overhead construction
Electric lines—Poles and towers

Cost

Installed cost of three-phase lines with most economical conductor for kva transmitted; engineering reference sheet. D. D. Clark. Elec World 138:136 N 3 '52

Crossarms

Gin arm speeds crossarm replacement. il Elec World 139:102 My 4 '53

No electrical hazard from pentachlorophenol. F. S. Glaza and R. M. Gooch. Elec World 139:88 Mr 9 '53

Damage from floods

Floods; damage caused by the North Devon and West Somerset floods, August 15 and 16, to the electricity supply system. Electrician 149:1085-6 O 10 '52

Damage from storms

Emergency procedures of utilities prove soundness as ice storm hits. il Elec World News ed 139:32-4 Mr 30 '53

Hot food in a cold emergency; Pennsylvania Power & Light feeds crew repairing storm damage. il Elec World News ed 139:16-17 F 2 '53; Edison Elec Inst Bul 21:80 Mr '53

Storm hearing; Connecticut Public utilities commission. Elec World News ed 139:7 Mr 16 '53

Storms dim Northeast homes. il Elec World News ed 139:8-9 Ja 19 '53

Texas tornadoes damage distribution systems. Elec World 139:135 My 18 '53

Design

New 230-kv line design proved by tests to destruction. W. A. Schulz. il diags Elec World 139:76-9 Ap 6 '53

Power limits of transmission lines; abstract. L. E. Saline. diag Elec Eng 71:1078 D '52

Reducing transmission costs? J. F. Sinnott. il Elec West 110:115-17 Je '53

Grounding

See Electric distribution—Grounding

Ice problem

Ice melting and prevention practices on transmission lines; abstract. V. L. Davies and L. C. St Pierre. diags Elec Eng 72:251 Mr '53

ELECTRIC lines—*Continued*

Inductive interference

Determination of unbalance of untransposed lines; abstract. R. F. Lawrence and D. J. Povejsil. Elec Eng 71:972 N '52

Tv interference; the utility's story. il diag Elec World 139:116-17 Ap 20 '53

Maintenance and repair

Breaks in electric power lines located rapidly with radar. Iron Age 171:128 Ja 29 '53

Equipment facilitates power-line maintenance; Hydro Sky-Worker. il Munic Util 91:16 Ag '53

Florida Power & Light prefers a small plane. L. Inabnit. il Elec World News ed 139: 16-17 Mr 30 '53

Hot joints detected by telescope. P. J. Sandiford. il Elec World 139:140+ Ap 20 '53

Operation woodpecker poses maintenance problem. il Elec World 138:116+ O 6 '52

Portable work-bench aids field maintenance of reclosers. G. E. Hill, jr. il diags Elec World 138:118+ N 3 '52

Pulling new 220-kv line in with old 66-kv saves dollars. il plan Elec World 138:156+ N 17 '52

Removable hoisting reel saves time and labor. D. G. Fritz. il Elec World 138:84 D 29 '52

Simple method for detecting hot joints on electrical transmission lines. P. J. Sandiford. R Sci Instr 23:644 N '52

Truck-mounted insulator washer solves contamination problem; Florida power and light co. H. L. Allen. il Elec World 138: 158+ N 17 '52

Two men replace six with hydraulic boom truck. il Elec World 138:94 D 29 '52

See also

Linemen's equipment

Models

Models save time, money, equipment, manhours in utility design and construction. W. B. Morton. il Elec World 138:92-4 N 3 '52

Moving

Pulling new 220-kv line in with old 66-kv saves dollars. B. Griffin. il plan Elec World 138:156+ N 17 '52

Overhead construction

Check clearances with three-joint pole. H. M. Williams. il Elec World 139:152+ Ap 20 '53

Conductor stringing with the help of rockets. Engineer 196:119 Jl 24 '53; Same. Elec R (Lond) 153:144 Jl 17 '53

Cost and efficiency of earthing on low- and medium-voltage overhead line systems. L. Gosland. diags Inst E E Proc 97 pt 2:563-81 O '50; Discussion. 97 pt 2:581-6; 98 pt 2: 287-93; 100 pt 2:328-32 O '50, Ap '51, Je '53

Grid-line stringing. il Elec R (Lond) 151: 1127-8 N 21 '52

How Consolidated Edison installed New York's first aluminum cable. A. F. Newman and F. J. Johnson. il diag Elec World 138: 90-2 D 1 '52

Large overhead line cable. il Elec R (Lond) 151:362 Ag 15 '52

Movement of overhead conductors due to flow of fault currents. L. P. Works. Midwest Eng 5:11+ F '53

New 138-kv transmission line uses single-pole structures. W. C. Schmidt and C. E. Waits. il diags Elec World 139:100-2 Mr 9 '53

Overhead distribution scheme; economics of an all-aluminium low voltage network. A. E. Somers. il Elec R (Lond) 152:742-4 Ap 3 '53

Staythorpe-West Melton section of the 275kv grid. il Engineer 196:74-6 Jl 17 '53; map diags Engineering 176:122-3, pl 9 Jl 24 '53

Stringing power lines; three-sheave traveller of Canadian design. il Elec R (Lond) 151: 393-4 Ag 22 '52

Three-pulley block has 25-in. bending radius. il Elec World 139:148 Mr 23 '53

275kv supergrid inauguration of Staythorpe-West Melton section. il Elec J 151:263-7 Jl 24 '53; Elec R (Lond) 153:169-75 Jl 24 '53

Unbalances of untransposed overhead lines. E. T. B. Gross. bibliog diags Franklin Inst J 254:487-97 D '52

Uses of earthed signal conductors on transmission circuits. W. Casson. diags Inst E E Proc 100 pt 2:277-88; Discussion. 288-95 Je '53

See also

Electric lines—Crossarms

Electric railroads—Overhead construction

Poles and towers

Aluminum towers get backing. Elec World News ed 139:9 My 25 '53

Concrete caissons and long spans. E. G. Lambert and G. L. Coltrin. il diags Elec West 111:94-6 Ag '53

Deep-water piers are precast concrete. il Eng N 150:30-1, cover Mr 5 '53

Design of a light-weight 275-kv transmission tower. P. J. Ryle. il diags Engineering 175: 225-7 F 20 '53

Heavy precast members make sturdy tower foundations. L. L. Wise. il Constr Methods 35:60-2 Mr '53

How poles are set quicker with a hinged derrick. il Elec West 110:79 Mr '53

It pays to treat tops of standing poles. S. J. Pearson. il Elec West 110:97 Ap '53

Mountain-to-the-sea tower raising. il Constr Methods 35:88-90 Ap '53

New 115-kv double-circuit H-frame lowers line costs. J. A. Rawls. il Elec World 139: 136 Mr 23 '53

New preservative treatment for poles. Elec World 138:136+ D 15 '52

132-kv wood H-frame structures based on steel tower design. L. W. Toye. il diags Elec World 138:106-8 O 20 '52

Operation woodpecker poses maintenance problem. il Elec World 138:116+ O 6 '52

Preassembled towers save $120 each. W. L. Pilsbury. il Elec World 138:146+ N 17 '52

Preserving wood poles; Cobra process. il diags Elec R (Lond) 152:739-41 Ap 3 '53

Steel mesh solves woodpecker problem. W. L. Rush. il Elec World 139:116 F 9 '53

Transmission-line piers built under water without cofferdams. B. C. Gerwick, jr. il diags Civil Eng 23:221-5 Ap '53

275kv transmission line towers. il Engineer 195:19 Ja 2 '53; Engineering 175:96 Ja 16 '53; Elec J 150:29-30 Ja 2 '53; Elec R (Lond) 152:24 Ja 2 '53

See also

Electric lines—Crossarms

Protection

American Gas & Electric and Westinghouse conduct lightning tests. Elec World 139:234 Ap 20 '53

Design, specification and performance of high-voltage surge diverters. H. F. Jones and C. J. O. Garrard. il diags Inst E E Proc 97 pt 2:365-79 Je '50; Discussion. 97 pt 2:379-88; 98 pt 2:261-70; 100 pt 2:100-2 Je '50, Ap '51, Ap '53

Developments in high-voltage insulators; abstract. J. H. Pirie. Inst E E Proc 100 pt 1: 76 Mr '53

Ground fault relay protection; abstract. J. L. Blackburn. Elec Eng 71:1119 D '52

Guide for application of ground-fault neutralizers; abstract. Elec Eng 72:606 Jl '53

Low-cost sectionalizing builds better service. il diag Elec World 139:96 Ja 12 '53

One circuit breaker less on line connecting Kearny plant with Bergen substation. I. D. Perry. il diags Elec World 138:100-1 N 3 '52

Power system transients. R. H. Golde. bibliog diags Elec J 149:1924-6; 150:854-61 D 19 '52, Mr 13 '53

Reclosing sectionalizers; how they work. Elec World 138:120+ N 3 '52

Review of backup relaying practices; AIEE committee report; abstract. Elec Eng 72: 328 Ap '53

Selection of a relaying system. R. C. Cheek and J. L. Blackburn. diags Commun Eng 13:30-3+ Ja '53

Switchgear and equipment high-voltage isolators with ice breaking contacts. il Engineer 195:908 Je 26 '53

ELECTRIC lines—Protection—*Continued*

275-kv post insulators. il Engineering 175: 326 Mr 13 '53; Elec J 150:862 Mr 13 '53; Elec R (Lond) 152:565-6 Mr 13,'53; Engineer 195:842-3 Je 12 '53

Safety measures

Cable spiking. il Elec R (Lond) 152:639-40 Mr 20 '53

Wire stringing method solves problems. il Elec World 139:156 Mr 23 '53

Sleet problem

42 years' experience combating sleet accumulation; abstract. A. N. Shealy and others. diags Elec Eng 72:131 F '53

Sleet-melting practices; Niagara Mohawk system; abstract. H. B. Smith and W. D. Wilder. Elec Eng 72:318 Ap '53

Tables, calculations, etc.

Calculation of transmission-line constants. R. Q. Kapp. Engineering 174:315-16 S 5 '52; Same. Electrician 149:849-53 S 19 '52

Compensator settings for regulators in open delta; engineering reference sheet. W. C. Sealey. diag Elec World 138:134 N 3 '52

Testing

Field surge testing of extra-high-voltage lines. P. Sporn and A. C. Monteith. il Elec Eng 72:287-8 Ap '53

Underground lines

Buried cable distribution serves Hawaiian subdivisions. C. H. Williams. il plans diag Elec World 138:106-8 O 6 '52

British Columbia

B.C. Electric completes 345-kv line. il Elec World 139:123 Ja 26 '53

Longest power-line span of its type in the world completed by Dominion bridge co. il Roads & Eng Constr 90:82 O '52

Nechako-Kemano hydro-electric scheme in British Columbia. il Engineer 195:811-12 Je 5 '53

Power generating and transmission project is under construction in British Columbia. il diag Elec Eng 71:1153-4 D '52

Great Britain

Staythorpe-West Melton section of the 275kv grid. il Engineer 196:74-6, 116-17 Jl 17-24 '53; map diags Engineering 176:122-3, pl 9 Jl 24 '53

275kv supergrid inauguration of Staythorpe-West Melton section. il Elec J 151:263-7 Jl 24 '53; Elec R (Lond) 153:169-75 Jl 24 '53

Ohio

Bucking the line; Ohio power co.'s new high tension line. Bsns W p 138 N 8 '52

Sweden

380-kv power-transmission system in Sweden. il map diags Engineering 174:781-4 D 19 '52

Western states

Western utilities maintain record pace of '52. il Elec West 110:90-123 F '53

ELECTRIC locomotives

All-service electrics for Australia. il Ry Loco & Cars 127:77 Jl '53

Electric locomotives; cheapest and most efficient. C. M. Cock. Electrician 149:931-2 S 26 '52

Electric locomotives for its birthday; Niagara Junction railway. il Ry Age News ed 134:15 Mr 30 '53

Electric locomotives for Niagara Junction's expanding traffic. W. A. Bailey. il diag Ry Loco & Cars 127:94-6 Ap '53

Electric locomotives of American design for the Netherlands railways. il Engineering 176:65-6 Jl 17 '53

Electric traction in France. il Elec J 150: 197-8 Ja 16 '53

Electric traction in 1952. J. H. Cansdale. il Elec J 150:525-7 F 13 '53

Electrification of the Paris-Lyons railway. il Engineering 174:656-7 N 21 '52

Engineering highlights of 1952; rail transportation. C. A. Scarlott. il Westinghouse Eng 13:37-9 Ja '53

4,800-h.p. 1,500-volt electric locomotive of the French national railways. il Engineering 175:641-4, pl 20-1 My 22 '53

Improved riding control for locomotive bogies. diag Engineering 176:285 Ag 28 '53

Milwaukee rebuilds old electrics. il Ry Age News ed 135:11 Jl 20 '53

See also

Locomotives, Diesel-electric

Locomotives, Gas turbine-electric

ELECTRIC locomotives, Mine

Electric and Diesel-electric locomotives at Chuqui have unusual features. H. J. Tyler. il Eng & Min J 154:116-17 My '53

Mine-built remote-control moves trip locomotive in shuttle-car sections. il Coal Age 57:89 N '52

Mine trolley locomotive installation; Sandhole colliery. il Engineer 196:239 Ag 21 '53; Engineering 176:279 Ag 28 '53; Elec R (Lond) 153:396 Ag 21 '53

New coal haulage unit developed. Min Cong J 39:70 Ag '53

World's largest mine locomotive reduces costs, ton-miles. Elec Eng 72:784 S '53

ELECTRIC logging. See Petroleum—Well logging

ELECTRIC losses

Increased losses in a d-c motor when operated from grid-controlled rectifiers; abstract. C. R. Reiter and C. R. Ammerman. Elec Eng 71:1025 N '52

Losses in distributors. J. G. Boggis. diags Elec R (Lond) 151:373-7 Ag 22 '52

Mathematical theory of laminated transmission lines. S. P. Morgan, jr. diags Bell System Tech J 31:883-949, 1121-206 S-N '52

See also

Electric machinery—Losses

ELECTRIC machinery

Accurate computation of two-machine stability; abstract. R. D. Goodrich, jr. Elec Eng 72:210 Mr '53

Force on a conductor in a slot. C. R. Cann and D. W. Spence. diag Elec Eng 71:485; 72: 474-5 My '52, My '53

Rotating electrical machinery; review of progress since 1940. W. N. Kilner. Inst E E Proc 99 pt 1:280-5 N '52

See also

Brushes (electric machinery)
Commutators
Cranes, derricks, etc.—Electric equipment
Electric apparatus and appliances
Electric driving
Electric generators
Electric locomotives
Electric motors
Electric protective apparatus
Electric shovels
Electric transformers
Electric welding machines
Electricity in mining
Electricity on the farm
Hoisting machinery, Electric
Hydroelectric plants
Mine hoisting, Electric
Pumping machinery, Electric
Refrigerators, Electric
Rotors (electric machinery)
Ship propulsion, Electric
Voltage regulators

Cooling

Study of aircraft cooling systems for rotating electric equipment; abstract. C. G. Martin. Elec Eng 71:1112 D '52

Design

Nonlinear analysis of electro-mechanical problems. Y. H. Ku. bibliog diags Franklin Inst J 255:9-31 Ja '53

Solution of field problems by tank systems; discussion of two papers. Elec J 149:1759-60 D 5 '52

Losses

Losses in iron laminations. Elec R (Lond) 153:335-6 Ag 14 '53

Manufacture

Alternators to aircraft; Stafford and Preston works. il Elec J 151:45-7 Jl 3 '53; Elec R (Lond) 153:49-50 Jl 3 '53

Westinghouse doubles generator production capacity. il Iron & Steel Eng 30:137+ My '53

Protection

Modern varnishing practice. S. F. Philpott. il Elec R (Lond) 151:1043-50 N 14 '52

ELECTRIC machinery—Protection—*Continued*

New applications for thermalastic insulation. G. L. Moses and others. il Westinghouse Eng 13:167-9 S '53

Temperature

Built-up mica plate for high-temperature applications. C. L. Dawes and W. R. Mansfield. bibliog il diags Elec Eng 72:145-50 F '53

Transportation

See also

Electric transformers —Transportation

Windings

Carbon grounds cleared in place; Elco machine. il Ry Loco & Cars 127:96-7 Mr '53

Forces in machine end windings; abstract. D. Harrington. diags Elec Eng 72:153 F '53

Natural frequencies of coils and windings determined by equivalent circuits; abstract. P. A. Abetti and F. J. Maginniss. diag Elec Eng 72:781 S '53

ELECTRIC measurements

Direct comparison of the Kelvin and electron beam methods of contact potential measurement. P. A. Anderson. bibliog diag Phys R 88:655-8 N 1 '52

D-c current-measuring reactor. Franklin Inst J 254:559 D '52

Electrical measurements and chemistry. L. Hartshorn. diag Inst E E Proc 100 pt 2:1-4 F '53; Abstracts. Elec J 149:1341-2 O 31 '52; Elec R (Lond) 151:944 O 31 '52

Electrical measurements on electroluminescent lamps with zinc sulfide phosphors. C. W. Jerome and W. C. Gungle. bibliog diags Electrochem Soc J 100:34-8 Ja '53

Harmonic-response-testing equipment for linear systems. D. O. Burns and C. W. Cooper. diags Inst E E Proc 100 pt 2:213-21; Discussion. 221-2 Je '53

High-frequency simulator for the analysis of power systems. S. Kaneff. bibliog diags Inst E E Proc 100 pt 2:405-16 Ag '53

Measurement of power factor, and active and reactive power, of balanced *n*-phase *n*-wire systems. J. E. Parton. bibliog(37 titles) diags Inst E E Proc 99 pt 2:620-3 D '52

Measurement of the load angle of synchronous machines; abstract. E. A. Livingston. diags Inst E E Proc 100 pt 2:333-5 Je '53

Measurement of turbulent velocity fluctuations by the method of electromagnetic induction. L. M. Grossman and A. F. Charwat. il diags R Sci Instr 23:741-7 D '52

Methods of measuring the properties of ionized gases at high frequencies; measurement of electric field. D. J. Rose and S. C. Brown. diags J Ap Phys 23:719-22 Jl '52

Methods of measuring the properties of ionized gases at high frequencies; measurements of *Q*. S. C. Brown and D. J. Rose. diags J Ap Phys 23:711-18 Jl '52

New method for the measurement of surge voltages in windings. B. C. Robinson and A. Gray. diags Inst E E Proc 100 pt 2:38-40 F '53

Polarization in electrolytic solutions; measurements. G. Jaffé and J. A. Rider. bibliog diags J Chem Phys 20:1077-87 Jl '52

Precision megohm ratio unit for high voltage measurements. J. N. Harris. il diags R Sci Instr 23:409-13 Ag '52

Primary current distribution around capillary tips used in the measurement of electrolytic polarization. S. Barnartt. bibliog diags Electrochem Soc J 99:549-53 D '52; Discussion. 100:295-6 Je '53

Principles of high-frequency titrimetry. C. N. Reilley and W. H. McCurdy, jr. bibliog diags Anal Chem 25:86-93 Ja '53

Radiation resistance of resonant transmission lines. R. A. Chipman and others. bibliog diags J Ap Phys 23:613-20 Je '52

Ten-cycle to ten-megacycle gain and phase angle measuring set; abstract. F. B. Anderson. diag Elec Eng 72:245 Mr '53

Transductor magnetic amplifiers measure high direct currents. Westinghouse Eng 13:80 Mr '53

Wheatstone bridge for admittance determinations of highly conducting materials at low frequencies; abstract. H. P. Schwan and K. Sittel. Elec Eng 72:483 Je '53

See also

Dielectric constants
Dielectrics
Dynamometers
Electric conductivity
Electric engineering —Tables, calculations, etc.
Electric instruments
Electric meters
Electric resistance
Electric units
Electrometers
Frequency meters
Magnetic measurements
Oscillographs
Photoelectric cells—Measurement uses
Potential, Electric
Radio measurements
Vacuum tubes—Measurement uses
Voltmeters
Watt hour meters

ELECTRIC meters

Crystal impedance meters replace test sets. A. C. Prichard and M. Bernstein. il diags Electronics 26:176-80 My '53

Masking tape holds meters. il Electronics 26:268+ F '53

Meter problems and consumers' load characteristics; abstracts and discussion. L. B. S. Gold and P. Schiller. Elec J 150:1647-8 My 8 '53; Elec R (Lond) 152:1105-6 My 15 '53

Meters abroad. C. R. F. Taylor. il Elec J 150:1515-16 My 1 '53

New pocket-size military multimeter uses printed circuit methods. H. Cahn. il diag Tele-Tech 12:82-4+ My '53; Excerpts. Electronics 26:226+ My '53

Service-disconnect methods outlined. J. A. Morris. il Elec World 139:138 Ap 20 '53

See also

Ammeters
Demand meters
Electric measurements
Frequency meters
Ohmmeter
Voltmeters
Watt hour meters
Wattmeters
Wavemeters

Installation

Meter grouping for commercial service; engineering reference sheet. H. M. Williams. diags Elec World 139:147 Mr 23 '53

Meter grouping for residential service; engineering reference sheet. H. M. Williams. diags Elec World 139:110 Mr 9 '53

Manufacture

Plant frills proved practical; Duncan electric mfg. co.; illustrations with text. E. J. Tangerman. Am Mach 97:119-24 Jl 20 '53

Testing

Controls and provisions for ensuring the accuracy of electricity meters; abstract. F. Seddon. Inst E E Proc 100 pt 1:77 Mr '53

Meter testing; abstract. A. J. Baggott. Elec R (Lond) 152:439 F 20 '53

New meter shop designed for assembly-line meter testing. L. P. Grover. il plan Elec World 138:100-1 O 20 '52

Recent developments in comparative methods of testing a.c. electricity meters. S. F. Musson and R. E. Mell. bibliog diags Inst E E Proc 97 pt 2:97-108 Ap '50; Discussion. 97 pt 2:108-12, 436-8; 100 pt 2:45-7 Ap, Ag '50, F '53

Test panel for checking metering equipment. M. D. Jester. diag Elec World 139:106 Ap 6 '53

Torque checker cuts register testing time by 75 per cent. R. Marshall. il Elec World 139:142 Ap 20 '53

ELECTRIC mine hoisting. See Mine hoisting, Electric

ELECTRIC moment

Application of the Fermi-Thomas model in computing the dipole moment of iodine chloride. H. Glazer and H. Reiss. bibliog diag J Chem Phys 21:903-7 My '53

Dielectric polarisation of solutions; the polarisations and apparent dipole moments of various primary, secondary, and tertiary amines in solutions in non-polar solvents and in the liquid state. E. G. Cowley. Chem Soc J p3557-70 S '52

Dipole moment and infra-red spectrum of diosphenol. R. J. W. Le Fèvre, F. Maramba and R. L. Werner. Chem Soc J p2496-8 Ag '53

Dipole moment of pyrrole measured in the dissolved and in the gaseous state. A. D. Buckingham, B. Harris and R. J. W. Le Fèvre. diag Chem Soc J p 1626-7 My '53

ELECTRIC moment—*Continued*

Dipole moment of thioacetoacetic ester in solution. C. F. Ferraro, J. J. Draney and M. Cefola. bibliog Am Chem Soc J 75:1206-8 Mr 5 '53

Dipole moments and conformations of androstane-3,17-dione and of etiocholane-3,17-dione. H. R. Nace and R. B. Turner. bibliog il Am Chem Soc J 75:4063-6 Ag 20 '53

Dipole moments and near ultraviolet absorption of some monosubstituted benzenes; the effect of solvents and hydrogen bonding. S. Nagakura and H. Baba. bibliog Am Chem Soc J 74:5693-8 N 20 '52

Dipole moments and structures of *cis*- and *trans*-1,2-dichlorocyclohexane. A. Tulinskie, A. Di Giacomo and C. P. Smyth. bibliog diag Am Chem Soc J 75:3552-4 Jl 20 '53

Dipole moments of furan and thiophen measured in the dissolved and in the gaseous state. B. Harris, R. J. W. Le Fèvre and E. P. A. Sullivan. Chem Soc J p 1622-6 My '53

Dipole moments of hydrocarbons. A. P. Altschuller. bibliog J Phys Chem 57:538-40 My '53

Dipole moments, ultraviolet spectra and structure of azo-bis-(chloroformamidine) and azo-bis-(nitroformamidine). W. D. Kumler. Am Chem Soc J 75:3092-3 Jl 5 '53

Electric dipole moments of several molecules from the Stark effect. S. N. Ghosh and others. bibliog J Chem Phys 21:308-10 F '53

Electric moments and intermolecular hydrogen bonds of cyclic amides and oxazolidones. E. Fischer. Chem Soc J p4525-7 N '52; Correction. p2836 S '53

Electric moments and structures of organosilicon compounds. H. Freiser, M. V. Eagle and J. Speier. bibliog Am Chem Soc J 75:2821-7 Je 20 '53

Electric moments of some aliphatic peroxides, disulfides and diselenides. M. T. Rogers and T. W. Campbell. bibliog Am Chem Soc J 74:4742-3 O 5 '52

Electric moments of some derivatives of azobenzene. T. W. Campbell, W. A. McAllister and M. T. Rogers. bibliog Am Chem Soc J 75:864-5 F 20 '53

Electric moments of some derivatives of cinnoline, pyridine and quinoline. M. T. Rogers and T. W. Campbell. bibliog Am Chem Soc J 75:1209-10 Mr 5 '53

Electric moments of some methyl ketones. G. K. Estok and J. H. Sikes. bibliog Am Chem Soc J 75:2745-7 Je 5 '53

Electric moments of some sulfur and selenium compounds. M. T. Rogers and K. J. Gross. bibliog Am Chem Soc J 74:5294-6 N 5 '52

Evidence for nonadditivity of nucleon moments in heavy nuclei. M. Ross. bibliog Phys R 88:935-42 N 15 '52

Indications of the interaction of electric field gradients and nuclear electric quadrupole moments in angular correlation. R. M. Steffen. bibliog Phys R 90:1119 Je 15 '53

Influence of the nuclear quadrupole moment on the α-γ angular correlation in radiothorium. A. Abragam and R. V. Pound. Phys R 89:1306-7 Mr 15 '53

Interaction with molecular rotation of the nuclear electric quadrupole moments of two nuclei having spins 3/2. G. W. Robinson and C. D. Cornwell. bibliog J Chem Phys 21:1436-42 S '53

Internuclear distance and dipole moment of the LiF molecule. J. W. Trischka. J Chem Phys 20:1811-12 N '52

Microwave spectra, structure, dipole moment, and chlorine nuclear quadrupole coupling constants of methylene chloride. R. J. Myers and W. D. Gwinn. bibliog J Chem Phys 20:1420-7 S '52

Microwave spectrum and dipole moment of ethylenimine. R. D. Johnson and others. J Chem Phys 21:1425 Ag '53

Molecular polarisation and molecular interaction; the apparent dipole moments of mesidine, aminodurene, and methylmesidine in benzene and dioxan solutions. J. W. Smith. Chem Soc J p 109-13 Ja '53

Molecular structure, dipole moment, and *g* factor of ozone from its microwave spectrum. R. Trambarulo and others. bibliog il J Chem Phys 21:851-5 My '53

New rigorous lower bound on the range of the triplet neutron-proton interaction. L. L. Foldy. bibliog Phys R 89:1251-4 Mr 15 '53

Nuclear electric quadrupole spectra in solids. R. Bersohn. bibliog J Chem Phys 20:1505-9 O '52

Nuclear photoprocesses at high energy. J. G. Brennan and R. G. Sachs. bibliog Phys R 88:824-7 N 15 '52

Nuclear quadrupole resonance in rhombic sulfur and the quadrupole moments of S^{33} and S^{35}. H. G. Dehmelt. bibliog Phys R 91:313-14 Jl 15 '53

Pure nuclear quadrupole spectrum of Bi^{209} in bismuth-triphenyl. H. G. Robinson and others. bibliog Phys R 89:1305 Mr 15 '53

Pure quadrupole spectra of solid chloroacetic acids and substituted chloroacetic acids. H. C. Allen, jr. bibliog Am Chem Soc J 74:6074-6 D 5 '52

Quadrupole moment of Li^7. E. G. Harris and M. A. Melkanoff. bibliog Phys R 90:585-7 My 15 '53

Quadrupole moment ratio of I^{129} and I^{127} from pure quadrupole spectra. R. Livingston and H. Zeldes. Phys R 90:609-10 My 15 '53

Relation between configuration and conjugation in diphenyl derivatives; the dipole moments of the monohalogeno- and mononitro-diphenyls. A. C. Littlejohn and J. W. Smith. Chem Soc J p2456-63 Ag '53

Second-order effects in nuclear electric quadrupole interaction of Al^{27} in spodumene. H. E. Petch and others. Phys R 88:1201-2 D 1 '52

Surface properties of germanium. W. H. Brattain and J. Bardeen. diags Bell System Tech J 32:1-41 Ja '53

Table of dielectric constants and electric dipole moments of substances in the gaseous state. A. A. Maryott and F. Buckley. U S Nat Bur Stand Circ 537:1-29; pa 20c Supt. of doc. '53

Theory of multipole radiation. J. B. French and Y. Shimamoto. Phys R 91:898-9 Ag 15 '53

Vapor dipole moments of some organic molecules containing the trifluoromethyl group. J. J. Conradi and N. C. Li. bibliog diags Am Chem Soc J 75:1785-8 Ap 20 '53

ELECTRIC motors

Annual handbook of product design for 1953; motors, engines, and controls. diags Product Eng Hdbk p H 1-27+ '53

Compounds characteristics from shunt wound machines. H. D. James. diags Product Eng 24:164-6 Mr '53

Crown Products picks motors to match jobs. il Rubber Age 72:482-4 Ja '53

Electric motor exports, 1940 to 1952 (7 months); tabulation. Iron Age 171:458 Ja 1 '53

Electric motors over three hundred horsepower applied to main roll drives in the iron and steel and allied industries during 1952; tabulation. Iron & Steel Eng 30:162 Ja '53

Engineering highlights of 1952; motors. C. A. Scarlott. il Westinghouse Eng 13:17-19 Ja '53

Fitted-clutch drive for electric motors; Marine engineering co. il diag Engineering 176:183 Ag 7 '53

Modern miller. il Elec J 150:358-60 Ja 30 '53

Modulating motors for step-by-step control. il Elec J 149:1317-20 O 31 '52

Most powerful electric motors installed in wind tunnel. il Elec Eng 72:852 S '53

Motor and gear train selection for automatic control systems. A. M. Fuchs. il diags Product Eng 24:128-33 Mr '53

Motors and motor control; Chemical Engineering report. V. J. Kropf. il diags Chem Eng 58:123-36 Jl '51; Same abr. Product Eng Hdbk p H2-13 '53

Packaged power; application of the concept to office equipment such as desk calculators. J. L. Moody and L. Freiberg. il Machine Design 25:163-4 Ag '53

Tomorrow's motors. F. R. Benedict. Chem Eng 60:340-2 Ap '53

Why does this motor reverse? il Power 97:132-3 Ap '53

ELECTRIC motors—*Continued*

Wind tunnels require largest motors, compressors. il Machine Design 25:218 Mr '53

See also

Armatures
Commutators
Electric driving
Electric locomotives
Electric machinery
Electric motors, Direct current
Electric motors, Induction
Electric motors, Railway
Gearmotors

Bearings

Don't overload motor and lineshaft bearings. Mill & Factory 51:91 N '52

Control

Improved control for wound-rotor motors; abstract. W. J. Heacock. Machine Design 25:422+ Ap '53

Design

European design of electric motors; abstract. W. H. Formhals. Tool Eng 31:139-40 S '53

Proper motors required for long-life hermetic compressors. A. C. Dickson. il diags Refrig Eng 61:504-6 My '53

Drying

Hookup to dry out induction motors. J. C. Ferrante. diag Power 96:142 D '52

Fractional horsepower

Design of single-phase motors to minimize voltage dips; abstract. J. E. Williams. diag Elec Eng 72:516 Je '53

Geared motor for toys or models. il Mod Plastics 30:200 N '52

Motor market; strong but how long? Steel 132:52 Je 15 '53

Power factor correction of fractional horsepower motors. H. I. Miller. Edison Elec Inst Bul 21:317-18+ Ag '53

Trouble-shooting on fractional horsepower a-c motors. il diags Mill & Factory 52:108-12 Ja '53

Lubrication

Are you lubricating motors properly? F. H. Walker, jr. and W. J. O'Meara. diag Pet Refiner 32:127-31 My '53; Same. Pet Eng (Ref annual) 25:C28+ Jl 15 '53; Same cond. Oil & Gas J 52:172+ My 25 '53; Abstract. Pet Processing 8:693 My '53

New high temp lubricants increase range of motors. Brick & Clay Rec 121:80+ O '52; Machine Design 24:224+ N '52; Power 96:132-3 D '52; Chem Eng 59:231-2 N '52

Maintenance and repair

Are you misusing your wound-rotor motors? R. F. Woll. il Factory Management 111:122-3 Ag '53

Eight enemies of electric motors. Textile World 103:264+ My '53

How to take care of electric motors. J. L. Watts. diags Textile World 103:126-7+ F '53

Improved materials handling speeds motor repair. W. G. Patton. il Iron Age 171:104-6 Ja 15 '53

Trouble-shooting on industrial equipment. il Mill & Factory 52:106-16 Ja '53

See also

Electric motors, Railway—Maintenance and repair

Manufacture

Flame beats sugar for lengthening die life. J. A. Goodbar. il Am Mach 97:122-3 F 2 '53

Fractional h.p. motors; new Crompton Parkinson factory. il Elec R (Lond) 151:749-53 O 3 '52

Proper motors required for long-life hermetic compressors. A. C. Dickson. il Refrig Eng 61:506-8 My '53

Quick project pays off fast. il Bsns W p 152-4 Ja 17 '53

Sewing machine motors; Sewtric, ltd. il Elec R (Lond) 151:391-2 Ag 22 '52

Mounting

Hinged motor. W. F. Schaphorst. diags Water & Sewage Works 99:sup97A-8A N '52

Mounting keeps vibration in its place. W. C. Gallmeyer. il diags Steel 132:90-1 My 18 '53; Same cond. Tool Eng 31:82 Jl '53

Protection

Are you protecting your large motors? E. N. Gigot. il diags Factory Management 110:118-20 N '52

Developments in coils and insulating materials. D. E. Stafford. Iron & Steel Eng 29:97-100 O '52

Do you know what silicones will do for your motors? J. St Andre. Factory Management 110:156+ N '52

Don't guess, check your overload relays! M. Coben. il Safety Maint & Prod 106:19-20 S '53

Functional evaluation of motor insulation systems; abstract. G. A. Cypher and R. Harrington. il Elec Eng 71:1019 N '52

Method of evaluating insulation systems in motors; abstract. C. B. Leape and others. Elec Eng 72:704 Ag '53

Motor overload protection for domestic appliances. W. H. Farrell. Elec Eng 72:694-6 Ag '53

Motor protection; device checks circuit breakers, helps cut industrial fires. il Iron Age 171:155 My 14 '53

New idea for protecting large motors; Thermalastic insulation. M. R. Lory and G. L. Moses. il Factory Management 111:93 S '53

Proper overload protection prevents motor failures. M. R. Brice. il diags Textile World 103:122-3+ Ag '53

Rating

Inertia studies for modern mill drives. T. B. Montgomery and J. F. Sellers. il diags Iron & Steel Eng 30:89-97; Discussion. 98 F '53

Starting

Direct-on-line starting. E. C. Slater. il diag Elec R (Lond) 153:278-84 Ag 7 '53

Passive compensator for voltage flicker. P. A. Cartwright. bibliog il diags Elec Eng 71:1032-5 N '52

Tables, calculations, etc.

What size driving motor? W. R. Harris. il diags Power Eng 56:68-70 N '52

Temperature

Heat generation in electric motors. Elec R (Lond) 152:461-4 F 27 '53

Overheating of motors. diag Elec R (Lond) 152:787-90 Ap 10 '53

Windings

Will class H insulation pay off on motor rewinds? J. G. Noest. il Power 97:123 Ag '53

ELECTRIC motors, Alternating current

Application and control of a-c motors on intermittent loads. R. H. Wright. il diags Iron & Steel Eng 30:65-71; Discussion. 71-2 Ja '53

Capacitor serves three-phase motors from single-phase line. R. Bakes. il diag Elec World 139:74-5 My 4 '53

Electric motors to pack more horsepower in smaller frames using new materials. C. O. Hedges. Heat & Ven 50:140+ S '53

Stamford self-regulating alternator. il diags Engineer 195:698 My 15 '53; Engineering 175:694 My 29 '53

See also

Electric motors, Induction
Electric motors, Synchronous

Control

Slip ring controller problem remedied. J. Foster. Power Eng 56:81 D '52

Design

Square-path self-excited self-regulating alternators. il Engineering 175:733 Je 5 '53

Square-path self-regulating alternators. il Engineer 195:774 My 29 '53

ELECTRIC motors, Alternating current—*Cont.*

Starting

Can three-phase motors start single phase? F. J. Schneaubelt. diag Power Eng 57:78 My '53

Starters for industrial type a-c motors. G. W. Heumann. il diags Heat & Ven 50:111-26 Ap '53

ELECTRIC motors, Direct current

D-c motor as a capacitor. A. Boyajian. bibliog diags Elec Eng 72:154-5 F '53

Engine starter motors; some views on multipole designs. W. Subak. diag Elec R (Lond) 151:721-3 O 3 '52

Increased losses in a d-c motor when operated from grid-controlled rectifiers; abstract. C. R. Reiter and C. R. Ammerman. Elec Eng 71:1025 N '52

Novel form of d.c. motor. G. W. O. Howe. diags Wireless Eng 29:285-7 N '52

Trouble-shooting on d-c motors. il Mill & Factory 52:113-16 Ja '53

Why d-c machines flash over. A. T. McClinton and J. P. O'Connor. il diags Power Eng 57:83-5 My '53

Control

D-c mill motor brake standard. diags Iron & Steel Eng 29:131-4; Discussion. 134 D '52

Direct-current relays and devices for industrial motor controllers. R. B. Immel. il diags Product Eng 23:181-93 D '52

Electronic control for glass grinding machines. il diags Engineer 195:458-9 Mr 27 '53; Engineering 175:574-5 My 1 '53; Elec R (Lond) 152:797-9 Ap 10 '53

Electronic speed control; applications to d.c. motors; abstracts. J. C. Rankin. Elec R (Lond) 152:422 F 20 '53; il Elec J 150:604-6 F 20 '53

New industrial motor control circuits. E. F. Kubler. diags Electronics 25:110-15 Mr '52; Same cond. Product Eng Hdbk p H 18-23 '53

Windings

Rewinding a dc shunt motor. W. J. Prise. il Power 96:120-3 N; 138-9 D '52

ELECTRIC motors, Induction

Applying the wound-rotor motor. R. F. Woll. il Westinghouse Eng 13:54-7 Mr '53; Same cond. Machine Design 25:340+ Je '53

Axial magnetic forces on induction-motor rotors; abstract. C. E. Bradford and R. G. Rhudy. Elec Eng 72:599 Jl '53

Causes of reduced speed in a-c motors; abstract. Product Eng 24:294-6 My '53

Energy flow in induction machines. P. L. Alger and W. R. Oney. il diag Gen Elec R 56:56-60 Mr '53; Same cond. Machine Design 25:300+ My '53

High-slip motor for high inertia loads. il Product Eng 24:210 Ja '53

How to select textile motors. F. D. Snyder. diags Textile World 103:128-9+ O '53

Induction motor rotor bars. W. E. Bruges. diags Electrician 149:539-41 Ag 22 '52

Motor reactance for duty calculations of 600-v circuit breakers and buses. F. E. Reeves. Elec World 139:172 My 18 '53

Rotating-field theory and general analysis of synchronous and induction machines. Y. H. Ku. bibliog diags Inst E E Proc 100 pt 2:63-7 F '53

Slipping the induction motor. R. Y. Newton. il diag Gen Elec R 55:41-2+ S '52; Same cond. Machine Design 25:268+ F '53

Tapered rotor supplies built-in motor brake. il diag Product Eng 24:146-7 Mr '53

Today's power plant motors. C. D. Lawton. il Blast F & Steel Pl 41:1202-4 O '53 (to be cont)

Trouble-shooting on induction motors. Mill & Factory 52:106-7 Ja '53

See also
Electric motors, Synchronous

Control

D-c dynamic braking of squirrel-cage induction motors; abstract. W. A. LaPierre and N. Metaxes. Elec Eng 72:785 S '53

Protection

Thermal relay for protecting induction motors. il diag Engineer 194:731-2 N 28 '52; Engineering 174:757 D 12 '52; Elec R (Lond) 151:1181-2 N 28 '52

Starting

British Thomson-Houston direct-on-line contactor starter. il Engineer 196:111 Jl 24 '53

Get moving stairways off to a good start. F. A. Annett. il diags Power 97:120-2 Ag '53

Starting of induction motors. Elec R (Lond) 152:847-52 Ap 17 '53

Tables, calculations, etc.

Calculation of torque of a three-phase motor of the synchronous or induction type. S. A. Swann. bibliog Elec J 151:101-5 Jl 10 '53

Temperature

How much temperature will a squirrel cage motor stand? diag Heat & Ven 50:123-4 Je '53

Testing

Testing miniature motors. C. R. Schafer. il diag Electronics 25:246+ D '52

Windings

General method of analysis of three-phase induction motors with asymmetrical primary connections. J. E. Brown and O. I. Butler. bibliog diags Inst E E Proc 100 pt 2:25-34 F '53

Three-phase induction motors; operation from a single-phase supply. S. A. Swann. bibliog diags Elec J 149:1993-7 D 26 '52

ELECTRIC motors, Railway

Bearings

Maintaining traction motor bearings. F. S. Ball. il diags Diesel Power 31:74-8 Ja '53

Reclaiming traction motor suspension bearings. diags Ry Mech & Elec Eng 126:69 D '52

Maintenance and repair

Dust-free commutator grinding. il Ry Mech & Elec Eng 126:89 O '52

Field coil insulation. il Ry Loco & Cars 127:74 F '53

Flashovers; causes and remedies. Ry Mech & Elec Eng 126:87-8 O '52; [cont as] Ry Loco & Cars 127:76-7 O '53; Discussion. J. K. Stotz. 127:107 N '53

Northern Pacific's South Tacoma electric shop. il Ry Loco & Cars 127:74-9 Ja '53

Reconditioning traction motor housings; Louisville and Nashville. il Ry Mech & Elec Eng 126:82-3 O '52

Removing coil ends from commutator risers. C. F. Steinbrink. il Ry Loco & Cars 127:70-1 Jl '53

Rewinding in the medium-sized shop. il Ry Loco & Cars 127:78-81 O '53

Seaboard has model motor shop at Jacksonville. il Ry Loco & Cars 127:101-4+ S '53

Testing

Motor development and test facility announced by General electric co. il Elec Eng 71:1154-5 D '52; Mech Eng 74:1021 D '52; Mod Ind 24:133 N '52

This new plant will test traction motors. il Ry Age 133:60-2 D 15 '52

ELECTRIC motors, Squirrel cage. See Electric motors, Induction

ELECTRIC motors, Synchronous

Hysteresis motor for synchronous power. S. Davis. il diags Product Eng 23:167-71 D '52

Largest motor in the world; Arnold engineering development center. il Power Eng 57:70 S '53

Measurement of the load angle of synchronous machines; abstract. E. A. Livingston. diags Inst E E Proc 100 pt 2:333-5 Je '53

Rotating-field theory and general analysis of synchronous and induction machines. Y. H. Ku. bibliog diags Inst E E Proc 100 pt 2:63-7 F '53

Synchronous machines; introduction to the two-axis theory. P. Hammond. diags Elec J 149:1313-15 O 31 '52

Synchronous motor torque requirements for steel mill applications. W. A. Thomas. il Iron & Steel Eng 30:73-81; Discussion. 81-3 Ag '53

ELECTRIC motors, Synchronous—*Continued*

Control

Merchants' refrigeration warehouse in Hopkins, Minn.; unattended plant runs smooth with remote signals. N. R. Bernz. il plan diags Power 97:90-3 Ja '53

Tables, calculations, etc.

Calculation of torque of a three-phase motor of the synchronous or induction type. S. A. Swann. bibliog Elec J 151:101-5 Jl 10 '53

ELECTRIC network analyzers. See Electric distribution—Network analyzers

ELECTRIC networks. See Electric distribution

ELECTRIC organ. See Organ, Electric

ELECTRIC outages. See Electric power—Interruptions

ELECTRIC ovens

Electric oven eliminates fire hazard. il Elec World 139:212 Ja 26 '53

Stress relieving off-peak; Crawford & Doherty foundry. il Elec West 109:102 O '52

ELECTRIC ovens, Baking

Biscuit oven for Brazil. il Engineer 196:205 Ag 14 '53; Same. Elec R (Lond) 153:309-10 Ag 7 '53

ELECTRIC plants

See also

Electric generator sets

Electric plants (central stations)

Electric substations

Power plants

Steam plants

Interconnection

Automatic regulation of generators overcomes rapid load fluctuations. M. P. Roller and H. B. Ruud. diags Elec World 139:94-6 Ap 6 '53

Backbone of GPU system will be 220-kv tie. map Elec World News ed 138:6-7 N 24 '52

Command post routes mountain power over huge USBR network. il map Elec World News ed 139:14-15+ My 11 '53

Contract integrates Arizona systems. map Elec World News ed 139:22-3 My 11 '53

FPC reports on California-Oregon interconnection study. Pub Util 52:595-7 O 22 '53

Handling load regulating problems on interconnected power systems; abstracts. C. Nichols. Power 97:234+ My '53; Elec Eng 72:798 S '53

Missouri-Illinois pool set up. map Elec World News ed 139:35 Ap 13 '53

Prime mover speed governors and the interconnected system; abstract. P. G. Ipsen and J. R. Norton. Power 97:158 My '53

Principles of load allocation among generating units. E. E. George. bibliog Elec Eng 72:526-9 Je '53

Relay system between Public Service Electric & Gas, Philadelphia Electric stations. Elec World 138:83 D 1 '52

Staythorpe-West Melton section of the 275kv grid. il Engineer 196:74-6, 116-17 Jl 17-24 '53; map diags Engineering 176:122-3, pl 9 Jl 24 '53

Telemetering solves tie line problems; Central power & light co., Texas. P. Taylor. il map diag Elec World 138:100-2 D 15 '52

275-kv developments on the British grid system. D. P. Sayers and others. bibliog maps diags Inst E E Proc 99 pt 2:582-600; Discussion. 600-6 D '52; Elec R (Lond) 150: 1161-3 My 30 '52; Electrician 148:1873-4 Je 6 '52

275kv supergrid inauguration of Staythorpe-West Melton section. il Elec J 151:263-7 Jl 24 '53; Elec R (Lond) 153:169-75 Jl 24 '53

USBR envisions 500-kv grid in West. maps Elec World News ed 139:22-3 Ja 19 '53

Wheeling contracts face test. Elec World News ed 139:9 My 11 '53

Industrial plants

Combined electricity and heat supplies. H. S. Prosser and A. W. Pedder. Engineer 196: 25-7 Jl 3 '53

Electronic frequency changer tie between ac power systems; abstracts. H. Winograd. Power 97:232+ My '53; Elec Eng 72:398 My '53

Joint heat-electricity generation. G. K. Alston. il Elec R (Lond) 153:117-24 Jl 17 '53

Parallel operation of private plant and public electricity supply systems. O. Howarth. Engineering 174:230 Ag 22 '52

Isolated plants vs purchased power

Renovation roundup; tips on buying and making power. diags Power 97:70+ Mid-S '53

Should your plant produce power? W. B. Wilson. il diag Chem Eng 60:235-8 Mr '53

ELECTRIC plants (central stations)

Air pollution prevention in electric generating stations. H. A. Bauman. bibliog diag Elec Eng 72:200-4 Mr '53

Caissons support riverfront power plant; Cincinnati gas and electric co.'s new Walter C. Beckjord station. C. E. Burtch. il Eng N 149:33-5 N 27 '52

Industrial water use; electric utility industry. C. J. McLean. Am Water Works Assn J 44:1037-42 N '52

1953 design survey of typical new steam central-station installations; tabulation. Power 97:38-41 Mid-S '53

Power plant shortage; the present position as viewed from the United States. J. G. B. Hamilton. il Elec R (Lond) 151:778-82 O 10 '52

St Clair grows every day; illustrations with text. Power Eng 56:84-5 N '52

Steam-electric stations; world's two largest stations to be erected on sites on the Ohio river; will supply power requirements of uranium-diffusion plant near Portsmouth, Ohio. Mech Eng 75:28-9 Ja '53

TVA puts first unit on line at Shawnee. il Elec World 139:114 Ap 20 '53

Trends in utility plants. Power 97:36-7 Mid-S '53

See also

Electric distribution

Electric utilities

Hydroelectric plants

Steam plants

Costs

Cost comparisons of small steam turbine and oil engine parts. H. B. Reynolds. Power Eng 57:102+ S '53

New turbines cut kwh costs 26 per cent; Menasha, Wis. municipal plant. il Power Eng 57:74-5 S '53

Plant economy starts at the turbo-generator. E. H. Krieg. il Elec World 139:130-2 Ap 20 '53

Design

Co-op plant produces low-cost power from lignite; William J. Neal station of Central power cooperative. A. C. Soderholm and F. D. Troxel. il diags Elec World 138:58-61 D 29 '52

Design of British power stations. S. D. Whetman and A. E. Powell. Engineering 175: 349-50, 447-8, 474-5 Mr 13, Ap 3-10 '53; Abstract. Elec R (Lond) 152:585; Discussion. 585-6 Mr 13 '53; Elec J 150:871-2 Mr 13 '53

Design saves construction dollars on Contra Costa power plant. E. J. Garbarini. il diags Civil Eng 23:297-9 My '53

Location and proximity to load guide new steam plant design; West Springfield plant. J. W. Bennett and C. Rauch. il diags Elec World 139:76-8 My 4 '53

Low cost, high efficiency at Etiwanda. T. M. Hotchkiss. il diag Elec West 111:89-94 Ag '53

Montana winter tests Frank W. Bird outdoor station design. il Power Eng 57:88 Mr '53

Today's trends in steam plant design. J. B. McClure and A. G. Mellor. il diag Elec World 138:117-19 S 8; 93-6 O 20; 96-9 N 3 '52

Diesel engine stations

Diesels integrated with hydro and steam; Northern states power co. il Diesel Power 31:50-2 Jl '53

Dual fuel conversion cuts power cost to record low; Weatherford, Texas, municipal power plant. il Pub Works 83:73 D '52

Dual fuel engines cut costs; Denton, Texas municipal power plant. il Diesel Power 30:60-2 N '52

50 percent reduction in power cost; David City, Nebr., municipal power plant. il Pub Works 83:62 D '52

ELECTRIC plants (central stations)—Diesel engine stations—*Continued*

First Supairthermal duafuel installation. C. H. Guernsey, jr. il Diesel Power 31:38-40 Je '53
Murray City, Utah Diesel power plant. il Diesel Power 31:32-3 S '53
Natural gas furnishes cheap power in Minnesota. il Pub Works 84:80 My '53
New engine carries 71 per cent of output; Baldwin, Kansas municipal plant. L. Whitted. il Diesel Power 31:36-7 F '53
New Mexico co-op serves rugged area; Kit Carson electric cooperative power plant. il Diesel Power 30:34-6 D '52
Opposed-piston goes dual fuel; Wells, Minn., municipal power plant. il Power Eng 57:90 Mr '53
Radial Diesels at Milaca municipal power plant. D. L. Cochrane. il diag Power Eng 57:58-60 Jl '53
Rayville boasts first dual fuel opposed-piston. il Diesel Power 31:75-7 Jl '53
Sioux Center, Iowa municipal generating station. il Diesel Power 31:40-1 Ag '53
Tarboro cuts costs. R. M. Weatherly. il Diesel Power 31:28-30 My '53
Tarboro cuts power costs by using heavy fuel oil. R. M. Weatherly. il Pub Works 84:79+ Ag '53
Tools and equipment for greater plant efficiency; Wolverine electric cooperative. J. Keen. il Diesel Power 31:46-8+ F '53
Woodsfield, Ohio cuts cost with dual-fuel. L. W. Marples. il Diesel Power 31:64-5 Ap '53

Employees

Training of employees in the electricity supply industry. Engineer 194:414-15 S 26 '52; Engineering 174:400 S 26 '52; Elec R (Lond) 151:681-2 S 26 '52; Electrician 149:929-30 S 26 '52

Equipment

Auxiliary power and control cables for steam-electric generating stations; abstract. F. V. Smith and E. G. Norell. Elec Eng 71:1013 N '52
Bankside B. il Elec J 150:274-8 Ja 23 '53; plan Elec R (Lond) 152:204-10 Ja 23 '53
Bankside power station. il diag Engineer 195:143-4, 167-70 Ja 23-30 '53; Engineering 175:107-9, 112 Ja 23 '53
Battle report on pollution control. il diag Power 97:73-6+ Ap '53
Benning expansion calls for second look at insulation. J. H. Hanna, jr. il Power Eng 57:86+ F '53
Bigger and better power plants to meet soaring demand economically. C. R. Earle. il diags Power Eng 57:70-5 Ja '53
Blow torch in a fan; Trenton channel plant of the Detroit Edison co. il Power Eng 57:83 S '53
Branch feeder protection; low-voltage current limiting reactions. R. Bell. il Elec West 109:94-5 O '52
Brighton B generating station. il Elec R (Lond) 152:1078-80 My 8 '53
Brighton B power station. il plan diag Engineer 195:663-5, 709-10 My 8-15 '53
Brighton B power station of the British electricity authority. il Engineering 175:665-6 My 22 '53
Brighton B station. il Elec J 150:1641-3 My 8 '53
British electricity system. Engineer 195:636-8, 676 My 1-8 '53
Broadway steam plant must take 50 per cent load swing every 20 min. C. O'Connor. plan diags Power Eng 57:78-81+ Ag '53
Butler's Gorge power station. il Elec J 150:1293-5 Ap 17 '53
Coal handling plant for Castle Donington. plan Elec J 150:1296-7 Ap 17 '53; Elec R (Lond) 152:817-18 Ap 10 '53
Connaught Bridge power station. il Elec J 150:1146-50 Ap 3 '53; Elec R (Lond) 152:773-7 Ap 3 '53
Delhi B power station. il diag Elec R (Lond) 152:1399-405 Je 19 '53; Same cond. Elec J 150:2189-92 Je 19 '53
Design and operation of Dunston B generating station with particular reference to 50-megawatt turbo-alternators unitized with reheater boilers. A. Howell and J. B. Jackson. plans diags Inst Mech Eng Proc (A) 167 no 1:81-96 '53; Same abr. Engineer 194:593-5, 629-32 O 31-N 7 '52; Same cond. Engineering 174:802-4, 836-8 D 19-26 '52; Discussion. Inst Mech Eng Proc (A) 167 no 1:97-108 '53
Economical utilization of electric power equipment. H. Halperin. Elec Eng 72:446-51 My '53
Electrical engineering in 1952. il Engineer 195:26-8, pl 5, 63-5, 93 Ja 2-16 '53
Elrama uses flywheel-motor-driven exciters; Duquesne light co. H. G. Frus and others. il diag Power Eng 57:94-5 S '53
Europe's latest power plant; Västerås station. il diags Elec J 151:121-4 Jl 10 '53
Good instrumentation program pays off; City of Pasadena light and power department. C. O'Connor. il Power Eng 57:72-3 F '53
Hutchings station has conditioned air; Dayton power and light co.; illustrations with text. Power 97:74-7 Mr '53
Joppa; big plant, fast, for more AEC power. P. E. Gourdon. il diag Power Eng 56:60-3 N '52
Kanawha and Muskingum plants add 200,000-kw, 1050-F units to AG&E. il diag Power Eng 56:60-2+ D '52
Keep coal dust down. il Power Eng 57:80-2 Je '53
Milesburg, three features; West Penn power co. W. V. Drake and R. A. Mycoff. il diags Power Eng 57:54-7 Mr '53
Milwaukee gains efficiency through low back pressure design. O. J. Stallkamp. flow diag il diag Elec World 139:103-5 F 23 '53
Neal station burns pulverized lignite. D. W. DeLaurier and R. L. Hein. il diag Power 97:71-4+ Ja '53
150-mw power station at Singapore. il Engineering 176:283-4 Ag 28 '53; Elec J 151:568-72 Ag 21 '53; Elec R (Lond) 153:411-14 Ag 21 '53
Peat power in Ireland. il Elec J 151:337-40 Jl 31 '53
Performance of natural-draught water-cooling towers. H. Chilton. bibliog plan diags Inst E E Proc 99 pt 2:440-52; Discussion. 452-6 O '52
Plymouth B. il Elec J 149:1327-9 O 31 '52
Plymouth B power station of the British electricity authority. il Engineering 174:674-5 N 21 '52
Power station control; method of communicating orders. il Elec R (Lond) 151:1383 D 26 '52
Power station instrumentation. il Elec R (Lond) 151:885-6 O 24 '52
Reheat unit extends Goudey capacity. W. Greacen, 3d. il diags Power 97:71-5 F '53
Remote control at Brighton B. il Elec J 151:656 Ag 28 '53
Savings in over-all plant initial costs; Public service co. of New Mexico. H. A. Person. il Elec West 109:76-8 D '52
Semi-outdoor plant invades cold Minnesota; Minnesota power & light company's Aurora station now under construction. F. S. Rice and H. Carpenter. il diag Elec World 138:106-8 D 1 '52
Television for monitoring stack emission. E. R. Thomas and W. L. Norvell. il diags Elec Eng 72:224-7 Mr '53
Tv pictures combustion conditions inside furnaces; Port Jefferson installation of Long Island lighting co. L. M. Exley. il diag Elec World 139:92-5 F 9 '53
Those early stations. W. E. Warrilow. il Elec R (Lond) 152:1375-6 Je 12 '53
Tools for the job. C. M. Cock. Inst E E Proc 100 pt 2:5-8 F '53; Excerpts. Elec J 149:1425-6 N 7 '52; Abstract. Elec R (Lond) 151:1019-20 N 7 '52
Utilities save with Diesel-electric switching. J. A. Ferriss. il Power Eng 56:70 D '52

Extensions

Adds 250,000 new kilowatts at Delaware station. D. F. Schick, jr. and U. S. Shuman. il diags Elec World 139:66-70 Ja 12 '53
Extension of Belfast station. Elec J 150:1715 My 15 '53

ELECTRIC plants (central stations)—*Cont.*

Fires and fire protection

How Detroit Edison company teaches fire fighting. il Power Eng 57:88-9 Ap '53

Two utility losses total $3 million, only one insured. Nat Underw 57:24 Mr 19 '53

Flood damage

Flood and gale damage. il Elec J 150:443-4 F 6 '53; Elec R (Lond) 152:305 F 6 '53

Flood damage; progress of restoration and repairs. Elec R (Lond) 152:361-2 F 13 '53

Flood recovery. il Elec J 150:535-6 F 13 '53

Fuel

Auxiliary oil firing; St Pancras power station. il Elec R (Lond) 152:762-4 Ap 3 '53

Coal handling plant for Castle Donington. plan Elec J 150:1296-7 Ap 17 '53; Elec R (Lond) 152:817-18 Ap 10 '53

Combined firing at St Pancras power station. il Engineer 195:495-7 Ap 3 '53; Engineering 175:427, 432 Ap 3 '53

How Consolidated Edison packs and seals coal piles. il Power Eng 57:62-3 My '53

How Philadelphia Electric increased its coal shortage. il Elec World 138:116 O 6 '52

Neal station burns pulverized lignite. D. W. DeLaurier and R. L. Hein. il diag Power 97:71-4+ Ja '53

Operation of Sunbury steam-electric station using pulverized-anthracite fuel. T. B. Richards. diags A S M E Trans 75:427-32 Ap '53

Pulverized lignite. Elec R (Lond) 152:512 Mr 6 '53

Rebuilt bunkers eliminate hot spots and explosions caused by dead coal with high sulphur content. J. D. Williamson. il Elec World 139:113 F 9 '53

Selling coal for power. C. H. Frick. il Coal Age 57:70-5 N '52

Gas engine stations

Why Osawatomie changed from oil to gas for electric and water works plant; with cost data. J. Higgins. il Gas Age 112:28-30 S 24 '53

Gas turbine auxiliaries

15mw gas turbine alternator set at Trafford power station. flow diag il plan diags Engineer 194:343-5 S 12 '52; Engineering 174:335-7, pl 19-20 S 12 '52; Elec R (Lond) 151:527-31 S 12 '52

First B.E.A. gas turbine put on load last week. il Elec R (Lond) 151:355-6 Ag 15 '52; Electrician 149:489, 761-4 Ag 15, S 12 '52

Gas turbine in relation to fuel economy. Karrer. diags Engineer 194:274-7 Ag 29 '52

Gas turbine power plants more and bigger; tabulation by company and location. L. Schneitter. Elec World 138:100 D 1 '52

Regenerative gas turbine-generator for central station service. H. C. Davis and R. L. Jackson. il diags Power 97:84+ Je '53

Gas turbine stations

Gas-turbine progress report; stationary electric generation. L. Schneitter. diags A S M E Trans 75:201-9 F '53

Is the gas turbine tomorrow's prime mover? B. G. Hatch. il diags Elec World 138:101-5 D 1 '52

Thermal generation in France. D. A. Picken. il diags Elec R (Lond) 152:166-8 Ja 16 '53

Interconnection

See Electric plants—Interconnection

Lighting

Some aspects of power station lighting; abstract. P. D. Figgis. Elec J 150:208 Ja 16 '53

Load

Air conditioning loads can be handled economically. G. L. Kenny, jr. il diag Elec World 139:82-4 Mr 9 '53

Building up utilities profits. J. R. Hartman. Comm & Fin Chr 177:2515+ Je 11 '53; Same. Edison Elec Inst Bul 21:252-4+ Jl '53

Effect of air conditioning on load of Oklahoma gas & electric co. B. Brady. diag Edison Elec Inst Bul 21:315-16 Ag '53

Heat pump; new load on utility horizon. P. F. O'Neill. il Gen Elec R 56:47-50 Mr '53

Load forecasting; method based on economic factors. F. W. Brooks. Elec World 139:63-5+ Ja 12 '53

Load forecasts reflect weather conditions. C. R. Williams and F. A. Leslie. il Elec World 139:86-8 Ap 6 '53

Load research essential today for tomorrow's appliance sales. Elec World 139:141-64 My 18 '53

Planning for expanding power requirements in upstate New York. H. L. Harrington. Edison Elec Inst Bul 21:203-9 Je '53

Principles of load allocation among generating units. E. E. George. bibliog Elec Eng 72:526-9 Je '53

Role of the weather correction in load forecasting. A. Thomas and J. J. Drummond. Edison Elec Inst Bul 21:306-10 Ag '53

Tv and the electric industry. A. B. Marvin. Pub Util 51:357-63 Mr 12 '53

Why utilities promote the load they do. R. H. Cockfield. Elec West 110:73-6 My '53

Maintenance and repair

Factors affecting power station plant availability. H. Weston. Inst E E Proc 100 pt 1:20-1 Ja '53

Outdoor stations

Unique outdoor hydroelectric plant. H. E. Rhoades. il plan diags Elec Eng 72:803-7 S '53

Photographs

Albright plant poses for news photo contest. il Elec World News ed 138:21-3 D 8 '52

Safety measures

Are your station grounds safe? R. S. Horn. diags Power Eng 57:86-7 O '53

Safety tagging works well for West Penn. T. C. Montgomery. il diag Power Eng 57:58-61+ My '53

Statistics

Annual report on the electrical industry, 49th. maps Elec World 139:133-76 Ja 26 '53

Steam distribution

Combined electricity and heat supplies; with cost data. H. S. Prosser and A. W. Pedder. Engineer 195:901-3; 196:25-7 Je 26-Jl 3 '53; Abstracts. Engineering 175:790-1 Je 19 '53; Elec J 150:2108-10 Je 12 '53; Elec R (Lond) 152:1348-9 Je 12 '53; Discussion. Elec J 150:2114 Je 12 '53

Supervisory systems

Supervisory control of hydro; new Michigamme station. il map Elec World 139:80-1 My 4 '53

This 33,750 kw hydro plant has no operators. H. E. Rhoades. il Elec World News ed 139:28-30+ Ja 5 '53

Underground stations

Big underground powerplant put in service in Sweden. il Eng N 150:77 Mr 26 '53

Underground hydro plant boosts Rio power. E. A. Johanson. map plans diags Elec World 139:130-3 Mr 23 '53

Underground power stations in Scotland. map Engineer 194:329 S 5 '52

Water power in the Italian Alps. il map plans diags Engineer 195:266-9 F 20 '53

World's largest underground power plant in northern British Columbia. L. L. Wise. il plans diags Eng N 149:31-2+ N 13 '52

Australia

South Fremantle power station. il Engineer 194:232 Ag 15 '52

Belfast, Ireland

Extension of Belfast station. Elec J 150:1715 My 15 '53

Bulgaria

Developments in Bulgaria. il Elec R (Lond) 152:1241-2 My 29 '53

Connecticut

Connecticut site battle shifts back to Norwalk from Stamford; plan for offshore plant opposed in both communities. Elec World News ed 138:8 O 13 '52

ELECTRIC plants (central stations)—*Cont.*

England

Brighton B generating station. il Elec R (Lond) 152:1078-80 My 8 '53
Brighton B power station. il plan diag Engineer 195:663-5, 709-10 My 8-15 '53
Brighton B power station of the British electricity authority. il Engineering 175:665-6 My 22 '53
Brighton B station. il Elec J 150:1641-3 My 8 '53
Design and operation of Dunston B generating station with particular reference to 50-megawatt turbo-alternators unitized with reheater boilers. A. Howell and J. B. Jackson. plans diags Inst Mech Eng Proc (A) 167 no 1:81-96 '53; Same abr. Engineer 194: 593-5, 629-32 O 31-N 7 '52; Same cond. Engineering 174:802-4, 836-8 D 19-26 '52; Abstract. Elec J 149:1333 O 31 '52; Discussion. Inst Mech Eng Proc (A) 167 no 1:97-108 '53
Design of British power stations. S. D. Whetman and A. E. Powell. Engineering 175: 349-50, 447-8, 474-5 Mr 13, Ap 3-10 '53; Abstract. Elec R (Lond) 152:585; Discussion. 585-6 Mr 13 '53; Elec J 150:871-2 Mr 13 '53
Electricity in the South West. il Elec J 150: 2005-6 Je 5 '53
Plymouth B. il Elec J 149:1327-9 O 31 '52
Plymouth B power station of the British electricity authority. il Engineering 174:674-5 N 21 '52

France

Thermal generating in France. D. A. Picken. il diags Elec R (Lond) 152:166-8 Ja 16 '53

Great Britain

B.E.A. generating plant construction in 1952; tabulation. Engineer 195:62 Ja 9 '53; Engineering 175:41 Ja 9 '53; Elec J 150:133 Ja 9 '53; Elec R (Lond) 152:100 Ja 9 '53
British electricity system. Engineer 195:636-8, 676 My 1-8 '53
Electrical engineering in 1952. il Engineer 195:26-8, pl 5, 63-5, 93 Ja 2-16 '53
Generation in Great Britain; with list of stations. map Elec R (Lond) 152:1285-98 Je 5 '53
Nature of power stations; Fine art commission's opinions. Elec R (Lond) 153:417 Ag 21 '53
Those early stations. W. E. Warrilow. il Elec R (Lond) 152:1375-6 Je 12 '53

India

India brings in first postwar power from Damodar Valley scheme, by steam. Eng N 150:199 F 19 '53

Ireland

Electricity supply developments in southern Ireland. il map diags Engineer 194:252-4, 292-4 Ag 22-29 '52
Peat power in Ireland. il Elec J 151:337-40 Jl 31 '53

Italy

Electricity supply in Italy. il Engineering 174:134-6 Ag 1 '52

London

Bankside B. il Elec J 150:274-8 Ja 23 '53; plan Elec R (Lond) 152:204-10 Ja 23 '53
Bankside power station. il diag Engineer 195: 143-4, 167-70 Ja 23-30 '53; Engineering 175: 107-9, 112 Ja 23 '53
Combined firing at St Pancras power station. il Engineer 195:495-7 Ap 3 '53; Engineering 175:427, 432 Ap 3 '53
Power station construction; abstract. J. A. Derrington and A. G. S. Lance. Elec R (Lond) 152:403-6 F 20 '53

Malaya

Connaught Bridge power station. il Elec J 150:1146-50 Ap 3 '53; Elec R (Lond) 152:773-7 Ap 3 '53

New Delhi

Delhi B power station. il diag Elec R (Lond) 152:1399-405 Je 19 '53; Same cond. Elec J 150:2189-92 Je 19 '53

Philadelphia

Adds 250,000 new kilowatts at Delaware station. D. F. Schick, jr. and U. S. Shuman. il diags Elec World 139:66-70 Ja 12 '53
Innovations at Cromby station; new plant will have controlled circulation boilers. Elec World 139:81 Mr 9 '53

Rumania

New power plants in Rumania. il Elec J 149: 1653-6 N 28 '52

Singapore

150-mw power station at Singapore. il Engineering 176:283-4 Ag 28 '53; Elec J 151: 568-72 Ag 21 '53; Elec R (Lond) 153:411-14 Ag 21 '53

Sweden

Europe's latest power plant; Västerås station. il diags Elec J 151:121-4 Jl 10 '53
380-kv power-transmission system in Sweden. il map diags Engineering 174:748-50 D 12 '52

Tasmania

Butler's Gorge power station. il Elec J 150: 1293-5 Ap 17 '53

Western states

Western utilities maintain record pace of '52. il Elec West 110:90-123 F '53

ELECTRIC plants, Cooperative

Are REA super co-op leases valid? R. L. Arnold. Pub Util 51:761-8 Je 4 '53
Co-op plant produces low-cost power from lignite; William J. Neal station of Central power cooperative. A. C. Soderholm and F. D. Troxel. il diags Elec World 138:58-61 D 29 '52
New Mexico co-op serves rugged area; Kit Carson electric cooperative power plant. il Diesel Power 30:34-6 D '52
1953 design survey; typical municipal, federal and cooperative installations; tabulation. Power 97:42-3 Mid-S '53
Power firms challenge REA loans to co-ops as bypassing Congress. il Eng N 150:27 Ja 22 '53
Setback for SPA. Elec World News ed 139:7 Mr 2 '53
Tools and equipment for greater plant efficiency; Wolverine electric cooperative. J. Keen. il Diesel Power 31:46-8+ F '53
Trimming down public power. Bsns W p34 Mr 7 '53

ELECTRIC plants, Municipal

Dual fuel engines cut costs; Denton, Texas municipal power plant. il Diesel Power 30: 60-2 N '52
50 percent reduction in power cost; David City, Nebr., municipal power plant. il Pub Works 83:62 D '52
First Supairthermal duafuel installation. C. H. Guernsey, jr. il Diesel Power 31:38-40 Je '53
Murray City, Utah Diesel power plant. il Diesel Power 31:32-3 S '53
New engine carries 71 per cent of output; Baldwin, Kansas municipal plant. L. Whitted. il Diesel Power 31:36-7 F '53
New turbines cut kwh costs 26 per cent; Menasha, Wis. municipal plant. il Power Eng 57:74-5 S '53
1953 design survey; typical municipal, federal and cooperative installations; tabulation. Power 97:42-3 Mid-S '53
Opposed-piston dual fuel; Wells, Minn., municipal power plant. il Power Eng 57:90 Mr '53
Radial Diesels at Milaca municipal power plant. D. L. Cochrane. il diag Power Eng 57:58-60 Jl '53
Rayville boasts first dual fuel opposed-piston. il Diesel Power 31:75-7 Jl '53
Sebewaing fights on; battle between residents and a privately owned electrical utility. Diesel Power 31:96-7 O '53
Sioux Center, Iowa municipal generating station. il Diesel Power 31:40-1 Ag '53
Tarboro cuts costs. R. M. Weatherly. il Diesel Power 31:28-30 My '53
Tarboro cuts power costs by using heavy fuel oil. R. M. Weatherly. il Pub Works 84:79+ Ag '53
Woodsfield, Ohio cuts cost with dual-fuel. L. W. Marples. il Diesel Power 31:64-5 Ap '53

ELECTRIC plants, Municipal—*Continued*

Finance

Dual fuel conversion cuts power cost to record low; Weatherford, Texas, municipal power plant. il Pub Works 83:73 D '52
Natural gas furnishes cheap power in Minnesota. il Pub Works 84:80 My '53
New York Commission raps municipal plant power costs. Pub Util 51:177-8 Ja 29 '53

ELECTRIC potential. See Potential, Electric

ELECTRIC power

Electric power and the atomic bomb; abstract. P. Sporn. Elec Eng 72:108 F '53
Electric power in industry. F. R. Benedict. il Elec Eng 71:1061-7 D '52
Freedom and power; theme of sound-color motion picture. Pub Util 50:515-16 O 9 '52
How much electricity does industry purchase? Elec World 139:122 Ap 20 '53
Huge power grid pool proposed for future. Bsns W p34 Ja 3 '53
Population growth and its effect on future power development. A. W. Kramer. map Power Eng 57:66-9 Ja '53
Power for tomorrow. il Gen Elec R 56:8-14 S '53
Power; getting juice for atom plants; AEC contracts for electric power. R. M. Stroupe. Iron Age 170:67 O 23 '52
Power supply for nuclear research laboratories. C. T. Grauer. il diags Elec Eng 72:212-18 Mr '53.
Production of electric power in millions of kw-hr, 1936-1952; tabulation. Iron Age 171:445 Ja 1 '53
Research and engineering progress, 1952; power. il Gen Elec R 56:20-6 Ja '53
Steam and electric power, its past and future; abstract. T. Baumeister. Pub Util 51:708 My 21 '53
Supplying power to industry; West Penn power co. F. F. Dickmann. diags Power Eng 57:94+ Ja '53
Today's electrical practice; supply, distribution, utilization in the industrial plant. J. J. O'Connor. diags Power 97:73-124 O '53
What is ahead in generation? W. L. Chadwick. il Elec West 110:112-14 Je '53

See also

Electric distribution
Electric driving
Electric engineering
Electric plants
Electric plants (central stations)
Electric transmission
Electric welding—Power supply
Electricity supply
Hydroelectric power
Power factor
Power plants
Reactive power
Telephone exchanges—Power
Voltage regulation

Interruptions

Bushing failure causes Toledo Edison outage. Elec World 139:107 Ap 20 '53
Electronic line outage monitor. R. L. Brinton and C. E. Comstock. il diag Elec West 111:86-7 Jl '53
New approach to cold load restoration; method of calculating relay performance. O. Ramsaur. Elec World 138:101-3 O 6 '52
Protection for an industrial plant connected to a utility system with reclosing breakers. D. F. Langenwalter. bibliog diags Tappi 36:199-203 My '53

Interstate transfer

Export ban fails; bills to prevent sale of power needed in California to other states are blocked. Elec World News ed 139:15 Ap 27 '53

Statistics

Electric power and gas; Nov.-Dec. 1951-Jan.-Nov. 1952. Survey of Cur Bsns 33:S26 Ja '53 [cont monthly]
How much energy do manufacturers purchase? 1950, 1947; tabulation. Elec World 139:92 Mr 9 '53
World power resources and their utilisation; review of Statistical year book of the World power conference no. 6; annual statistics for 1948-1950. Engineering 175:18 Ja 2 '53
World power statistics. Elec R (Lond) 151:1132 N 21 '52

ELECTRIC precipitation

Air pollution prevention in electric generating stations. H. A. Bauman. bibliog diag Elec Eng 72:200-4 Mr '53
Battle report on pollution control. il diag Power 97:73-6+ Ap '53
Continuous rapping bars dust buildup. il Steel 132:123-4 Mr 9 '53
Electrical resistivity of fly ash. H. J. White. Power 97:172 O '53
Electronic barriers against invisible dirt. il Can Chem Process 37:50+ Je 1 '53
High efficiency air cleaning process. I. M. Davidson and D. R. Whittet. il diag Engineer 196:211-13 Ag 14 '53
Open hearth shop announces successful smoke control; Torrance works. diag Blast F & Steel Pl 41:1195 O '53
Portable electrostatic precipitator operating from 110 volts a.c. or six volts d.c. A. D. Hosey and H. H. Jones. bibliog il plan diags A M A Archives Ind Hygiene & Occup Med 7:49-57 Ja '53
Precipitator has wet bottom; circulating soda pulp black liquor. il Chem Eng 59:182 N '52
Pulse method for supplying high-voltage power for electrostatic precipitation; abstract. H. J. White. diag Elec Eng 72:236 Mr '53
Separation of airborne dust and particles. C. N. Davies. Inst Mech Eng Proc (B) 1B no5:194-6 '52
Smoke control; rapping unit improves efficiency of electrostatic precipitators. il diag Iron Age 170:184 N 6 '52; Mech Eng 75:156-7 F '53
Southern pulp mill gets wet-bottom precipitator. il Chem Eng 60:142+ Ap '53

ELECTRIC properties

Apparatus for measurement of electrical properties of colloidal suspensions in oils. C. J. Penther and A. Bondi. J Phys Chem 57:540-1 My '53
Changes in the electrical, thermal, and thermoelectrical properties of monovalent metals by lattice distortions. A. W. Sáenz. bibliog Phys R 91:1142-51 S 1 '53
Electrical properties of gold-germanium alloys. W. C. Dunlap, jr. Phys R 91:1282 S 1 '53
Electronic properties of barium sulfide. W. Grattidge and H. John. diags J Ap Phys 23:1145-51 O '52
In 18-8 stainless wire use right draw speeds for better electrical properties. S. Storchheim. il Iron Age 171:135-8 Ap 9 '53
Mathematical theory of the faradaic admittance; pseudocapacity and polarization resistance. D. C. Grahame. bibliog diags Electrochem Soc J 99:sup370C-85C D '52
New demands lead to new directions in engineering materials; materials with better electrical properties. T. C. Du Mond. il Materials & Methods 37:72-4 Je '53
Properties of a tetragonal antiferroelectric crystal. W. P. Mason. Phys R 88:480-4 N 1 '52
Properties of silicon and germanium. E. M. Conwell. bibliog Inst Radio Eng Proc 40:1327-37 N '52
Properties of thermally treated germanium. L. Esaki. bibliog diags Phys R 89:1026-34 Mr 1 '53
Some electrical properties of colloidal suspensions in oils. A. Bondi and C. J. Penther. bibliog il J Phys Chem 57:72-9 Ja '53
Some electrical properties of strontium titanate. A. Linz, jr. Phys R 91:753-4 Ag 1 '53
Some magnetic and electrical properties of gadolinium, dysprosium, and erbium metals. S. Legvold and others. Rs Mod Phys 25:129-30 Ja '53
Theory of the faradaic admittance; analysis of the current-interrupter method. D. C. Grahame. J Phys Chem 57:257-61 Mr '53
Thermal and electrical properties and crystal structure of tungsten oxide at high temperatures. S. Sawada. Phys R 91:1010-11 Ag 15 '53

See also

Glass—Electric properties
Plastic materials—Electric properties
Rubber—Electric properties

ELECTRIC propulsion of ships. See Ship propulsion, Electric

ELECTRIC protective apparatus

Branch-circuit overcurrent protection for appliance loads. F. V. Von Hoorn. Elec Eng 72-778-9 S '53

Moving-coil relay applied to modern high-speed protective systems. C. Ryder and others. diags Inst E E Proc 100 pt 2:261-73; Discussion. 273-6 Je '53

Protection of electrical power systems; a critical review of present-day practice and recent progress. H. Leyburn and C. H. W. Lackey. bibliog diags Inst E E Proc 99 pt 2:47-59 F '52; Discussion. 99 pt 2:59-66; 100 pt 2:48-61 F '52, F '53

Reliability of earth leakage trips. T. C. Gilbert. diags Elec R (Lond) 152:1406-8 Je 19 '53

See also

Electric circuit breakers
Electric distribution—Grounding
Electric fuses
Electric lines—Protection
Electric motors—Protection
Electric switchgear
Electric transformers—Protection
Lightning protection
Reactors
Relays

ELECTRIC pumping machinery. See Pumping machinery, Electric

ELECTRIC railroads

Short-haul passenger service a problem in Los Angeles, too; Pacific Electric. O. A. Smith. il map Ry Age 133:43-7 O 27 '52

See also

Cars, Electric railroad
Electric locomotives
Electric motors, Railway
Railroads—Electrification

Braking

Electric-traction braking. T. F. Wall. diags Engineering 175:244-5, 324, 419-21, 615-16, 712-14 F 20, Mr 13, Ap 3, My 15, Je 5 '53

Cars

See Cars, Electric railroad

Overhead construction

Economic aspects of overhead equipment for d.c. railway electrification. O. J. Crompton and G. A. Wallace. diags Inst E E Proc 100 pt 1:133-45 Jl '53; Abstract. Engineering 174:819 D 26 '52; Discussion. il map Inst E E Proc 100 pt 1:146-53 Jl '53; Elec J 149: 1839-40 D 12 '52; Elec R (Lond) 151:1283-4 D 12 '52

Overhead construction for 50-cycle single-phase traction. il Engineering 175:12, 16 Ja 2 '53

Railway electrification; design of overhead equipment. F. B. Kitchin and J. Holland. diags Engineering 169:365-7 Mr 31 '50; Discussion. Inst E E Proc 100 pt 1:33-6 Ja '53

Tubular steel structures for railway electrification; abstracts. O. J. Crompton and G. A. Wallace. il Engineer 195:146 Ja 23 '53; Engineering 175:185 F 6 '53

Power

Energy consumption tests with steel and light alloy trains. il Engineer 195:630-1 My 1 '53; Engineering 175:560, 566-7 My 1 '53

Fixed and mobile rectifier substations on the Netherlands railways. il map diag Engineering 174:208, 217-20 Ag 15 '52

Remote signaling and control of electric railway power networks. J. Van Cauwenberghe. il map diags Elec Com 30:106-17 Je '53

Tests on district line trains; comparative energy consumption with steel and light alloy stock. il Elec J 150:1636 My 8 '53

Signals

Push button signalling control at Ealing Broadway. il Engineer 194:723 N 28 '52; Engineering 174:737 D 5 '52; Elec J 149:1664 N 28 '52; Elec R (Lond) 151:1211 D 5 '52

Remote signaling and control of electric railway power networks. J. Van Cauwenberghe. il map diags Elec Com 30:106-17 Je '53

Track

Installation of long conductor rails on the Southern Region. il Engineer 195:352-3 Mr 6 '53

France

Electric traction in France. il Elec J 150:197-8 Ja 16 '53

Great Britain

Fifty years of electric traction on the Mersey railway. Engineering 175:600 My 8 '53

Netherlands

Electric locomotives of American design for the Netherlands railways. il Engineering 176:65-6 Jl 17 '53

Fixed and mobile rectifier substations on the Netherlands railways. il map diag Engineering 174:208, 217-20 Ag 15 '52

ELECTRIC rates

CVP rates criticized as too low. Elec World News ed 139:18+ Mr 16 '53

Do your customers know your rates are regulated? B. G. Getsinger, jr. Pub Util 51:146-51 Ja 29 '53

Exploded myth; Jamestown, N.Y. model municipal utility disappoints public power advocates. Barron's 33:13 F 16 '53

FPC is upheld; court affirms commission's right to fix rates of power sold to federal agencies. Elec World 139:124+ Ap 20 '53

Limiting factors in tariff structure. B. Wehberg. Elec R (Lond) 153:385 Ag 21 '53

McKay tackles surcharges. Elec World News ed 139:15 F 16 '53

Modern proof of the present value rate base. J. S. Hartt. Pub Util 51:267-74 F 26 '53

Muddle over rates in Colorado. Elec World News ed 138:46 D 8 '52

Northwest surcharge battle continues. Elec World News ed 139:18 Mr 2 '53

Power companies granted increased pumping rates; Idaho power co. and Utah power & light co. Elec West 110:138 My '53; Same. Elec World 139:159 My 4 '53

Seeboard standardised tariffs. Elec J 150:1920 My 29 '53

Surcharge hearing authorized by Oregon PUC. Elec World News ed 139:45 Ap 13 '53

Surcharge suit against Portland General Electric rates. Elec World 139:77 Mr 9 '53

Surcharges; northwest storm signal. Elec World News ed 139:15 F 2 '53

Two important decisions allow rates of return above six per cent. O. Ely. Pub Util 52:312-14+ Ag 27 '53

ELECTRIC reactors. See Reactors

ELECTRIC rectifiers

Arc suppression on mercury-arc rectifiers. S. R. Judd. il diags Engineering 176:100-2 Jl 24 '53

Capacitors in power systems with rectifier loads; abstract. A. Schmidt, jr. diag Elec Eng 72:611 Jl '53

Double three-phase rectifier with inter-phase reactor excited from a frequency tripler. L. R. Blake. diags Inst E E Proc 100 pt 2: 310-14 Je '53

Effect of minority carriers on the breakdown of point contact rectifiers. E. Billig. Phys R 87:1060-1 S 15 '52

Effect of transit time on Ge rectifier behavior. R. Bray and B. R. Gossick. bibliog Phys R 91:1011-12 Ag 15 '53

Evaporated point contact rectifiers. E. G. Roka and others. diag J Ap Phys 24:228-9 F '53

Fixed and mobile rectifier substations on the Netherlands railways. il map diag Engineering 174:208, 217-20 Ag 15 '52

Influence of a-c reactance on voltage regulation of six-phase rectifiers; abstract. R. L. Witzke and others. Elec Eng 72:689 Ag '53

Investigation of the selenium rectifier for contact protection. H. F. Herbig and J. D. Winters. il diags Elec Com 30:96-105 Je '53

Light weight selenium rectifier d.c. welder. il Materials & Methods 38:168+ O '53

Maintenance experience on 600-volt rectifiers. R. T. Lucas and H. K. Fish. il Iron & Steel Eng 30:184-7; Discussion. diag 187-90 S '53

Mercury arc rectifiers for main roll drives. H. E. Larson. il plans diags Iron & Steel Eng 29:61-73 N '52

Mercury-arc rectifiers for medium-voltage applications; review of progress since 1940. J. C. Read. bibliog(60 titles) il plan diags Inst E E Proc 99 pt 1:252-70 N '52

ELECTRIC rectifiers—*Continued*

Mercury-arc rectifiers; how reactance affects regulation. F. T. Bennell. diags Elec R (Lond) 151:459-60 Ag 29 '52

New rectifier tube for extremely high power and voltage levels. T. H. Rogers. bibliog il diags Elec Eng 72:51-6 Ja '53

Oil-immersed 110-kv 440-kw rectifier unit for resnatron plate supply; abstract. R. P. Featherstone and others. il diag Elec Eng 72:634 Jl '53

Poisoning hazard in radio and tv sets; selenium rectifiers. Consumers Res Bul 30:26-7 O '52

Power conversion with a 300-kw selenium rectifier; Crucible mine. il plan Coal Age 58:100-4 My '53

Rectifier applications on steel mill drives. G. B. Scheer. Iron & Steel Eng 29:107-9; Discussion. 110-12 O '52

Rectifier for engine starting. il Engineering 175:460 Ap 10 '53

Resistance-capacitance loading of selenium rectifiers. C. E. Hamann. Tele-Tech 11:58-9+ N '52

Reverse characteristics of high inverse voltage point contact germanium rectifiers. J. H. Simpson and H. L. Armstrong. bibliog diags J Ap Phys 24:25-34 Ja '53

Steady vapour rectifiers. il diag Elec R (Lond) 151:613-15 S 19 '52; Same. Electrician 149:842-4 S 19 '52; Abstract. Engineering 174:373 S 19 '52

Thermal treatment of silicon rectifiers. L. Esaki. Phys R 89:398-9 Ja 15 '53

Thermoelectric study of the electrical forming of germanium rectifiers. M. Kikuchi and T. Onishi. bibliog diags J Ap Phys 24:162-6 F '53

Titanium dioxide rectifier. Engineer 194:392 S 19 '52; R Sci Instr 23:515 S '52

Unrecognized hazards in electronics: dangers of carbon tet and selenium. T. R. Hughes. Radio & Tv N 49:96+ Ap '53

Voltage regulation of 12-phase double-way rectifiers; abstract. R. L. Witzke and others. Elec Eng 72:617 Jl '53

See also

Electric inverters
Ignitron
Radio rectifiers
Thyratron

Manufacture

Graphite blocks trepanned to save $20 each. E. Walker. il diags Am Mach 96:122-3 N 10 '52

Testing

Recent developments and life characteristics of selenium rectifiers. C. E. Brigham. il Metal Finishing 51:56-9+ My '53

ELECTRIC refrigerators. See Refrigerators, Electric

ELECTRIC relays. See Relays

ELECTRIC research

British electrical and allied industries research association annual meeting and luncheon, London, April 10. Elec J 150:1298-300 Ap 17 '53; Elec R (Lond) 152:861-3 Ap 17 '53

Electrical research association in 1952. Engineer 195:571-2 Ap 17 '53

Electrical research; reports on the work of the E.R.A. Elec R (Lond) 153:70-1 Jl 10 '53

Engineering highlights of 1952; new knowledge. C. A. Scarlott. il Westinghouse Eng 13:46-7 Ja '53

Bibliography

E.R.A. technical reports. Elec J 149:1854; 150:310, 1160, 1732; 151:370 D 12 '52, Ja 30, Ap 3, My 15, Jl 31 '53; Elec R (Lond) 151:1277-8; 152:243-4, 635-6, 1175-6; 153:227-8 D 12 '52, Ja 30, Mr 20, My 22, Jl 31 '53

ELECTRIC resistance

Accurate wire resistance method for the measurement of pulsating pressures. N. Gross and P. H. R. Lane. il diags J Sci Instr 30:1-2 Ja '53

Activation energy of heat treatment introduced lattice defects in germanium. R. M. Baum and C. S. Hung. bibliog Phys R 88:134-5 O 1 '52

Alternating-current resistance standards. A. H. M. Arnold. bibliog il diag Inst E E Proc 100 pt 2:319-28 Je '53

Anisotropic resistivities of selenium crystals at high frequencies. H. W. Henkels and J. Maczuk. bibliog Phys R 91:1562-3 S 15 '53

Contribution to the theory of the silicon carbide contact. E. Holm. bibliog il diags J Ap Phys 23:509-17 My '52

Current carrier lifetimes deduced from Hall coefficient and resistivity measurements. L. P. Hunter and others. Phys R 91:1315-20 S 15 '53

Dynamics of transistor negative-resistance circuits. B. G. Farley. diags Inst Radio Eng Proc 40:1497-508 N '52

Earth resistivity in groundwater studies in Illinois. M. B. Buhle. maps Min Eng 5:Trans 395-9 Ap '53

Effect of current frequency on measurement of electrical resistance of cement pastes. J. Calleja. Am Concrete Inst J 24:329-32 D '52; Discussion. diags 25:332^1-332^4 pt 2 D '53

Effect of electrode spacing on the equivalent base resistance of point-contact transistors. L. B. Valdes. diags Inst Radio Eng Proc 40:1429-34 N '52

Effect of wettability on the electrical resistivity of sand. G. V. Keller. bibliog diags Oil & Gas J 51:62-5 Ja 5 '53

Electric resistivity of interstitial compounds of graphite. S. Mrozowski. bibliog J Chem Phys 21:492-5 Mr '53

Electrical resistance measurements on fibers and fiber assemblies. S. P. Hersh and D. J. Montgomery. bibliog diags Textile Res J 22:805-18 D '52

Electrical resistance of binary metallic mixtures. R. Landauer. bibliog diags J Ap Phys 23:779-84 Jl '52

Electrical resistance of graphite at low temperatures. J. M. Reynolds and others. bibliog Phys R 91:1152-5 S 1 '53

Electrical resistance of some refractory oxides and their mixtures in the temperature range 600° to 1500° C. J. R. Hensler and E. C. Henry. bibliog diags Am Cer Soc J 36:76-83 Mr 1 '53

Electrical resistance of textile materials. J. W. S. Hearle. bibliog diags Textile Inst J Trans 44:T 117-98 Ap '53

Electrical resistivity of artificial graphite. J. Okada and T. Ikegawa. J Ap Phys 23:1282-3 N '52

Electrical resistivity of indium-thallium solid solutions. J. W. Stout and L. Guttman. Phys R 88:713-14 N 15 '52

Electrokinetic processes in parallel and series combinations. P. B. Lorenz. bibliog J Phys Chem 57:341-3 Mr '53

Electromagnetic reflection and transmission by gratings of resistive wires. E. A. Lewis and J. P. Casey, jr. bibliog J Ap Phys 23:605-8 Je '52

Extra-resistivity owing to vacancies in copper. P. Jongenburger. bibliog Phys R 90:710-11 My 15 '53

Geometric capacitance and resistance obtained for cylindrical electrodes; engineering reference sheet. E. W. Greenfield. Elec World 139:108 Ap 6 '53

Magnetoresistance of Mg, Cu, Sb, and Al at liquid helium temperatures. G. B. Yntema. bibliog Phys R 91:1388-94 S 15 '53

Minimum of electrical resistance at low temperatures. D. K. C. MacDonald. bibliog Phys R 88:148-9 O 1 '52

Multiple contact resistance. W. B. Kouwenhoven and D. R. Hagner. bibliog il diags Welding J 32:sup432-40 S '53

Parallel-paired resistance values. C. F. White. Tele-Tech 12:81 Ap '53

Quenching-in of lattice vacancies in pure gold. J. W. Kauffman and J. S. Koehler. Phys R 88:149-50 O 1 '52

Radiation damage and recovery in Cu, Ag, Au, Ni, and Ta. J. W. Marx and others. bibliog diags Phys R 88:106-12 O 1 '52

Residual resistance in dilute copper alloys. D. K. C. MacDonald and W. B. Pearson. Phys R 88:149 O 1 '52

Resistivities of water from subsurface formations. M. L. Ayers and others. maps Pet Eng 24:B36+ D '52

Resistivity of Cu_3Au during neutron irradiation. H. L. Glick and others. Phys R 87:1074 S 15 '52

Resistivity of lanthanum, cerium, praseodymium, and neodymium at low temperatures. N. R. James and others. bibliog Phys R 88:1092-8 D 1 '52

ELECTRIC resistance—*Continued*

Temperature dependence of electrical resistance. W. V. Houston. bibliog Phys R 88:1321-3 D 15 '52

Theory of the magnetoresistive effect in semiconductors. V. A. Johnson and W. J. Whitesell. bibliog Phys R 89:941-7 Mr 1 '53

Thermal conductivity, electrical resistivity, and thermoelectric power of graphite. W. W. Tyler and A. C. Wilson, jr. bibliog diag Phys R 89:870-5 F 15 '53

Thermal resistivity of mercury in the intermediate state. J. K. Hulm. Phys R 90:1116 Je 15 '53

Thermal resistivity of superconducting mercury in the intermediate state. R. T. Webber and D. A. Spohr. bibliog Phys R 91:414-15 Jl 15 '53

Viscosity and electrical resistivity of molten alkali borates. L. Shartsis and others. bibliog diag Am Cer Soc J 36:319-26 O 1 '53

See also
Ohmmeter

ELECTRIC resistors

Corona resistors. T. A. Ledward. il diag Electrician 149:981-2 O 3 '52

Enamel covered glass resistors. J. K. Davis. il Tele-Tech 11:55+ N '52

High-temperature carbon-film resistors. diag Electronics 26:148+ Ja '53

Neutral earthing; tests on 33 kv liquid resistor. diag Elec R (Lond) 152:1174-5 My 22 '53

Properties of thermistor infrared detectors. E. M. Wormser. il diags Opt Soc Am J 43:15-21 Ja '53

Thermistors for depth thermometry. W. R. Ree, jr. bibliog il diag Am Water Works Assn J 45:259-63 Mr '53

See also
Electric heating elements
Radio resistors

ELECTRIC saws. See Saws, Electric

ELECTRIC service, Rural

Costs of rural electricity. Economist 167:894 Je 27 '53

Electricity for agriculture. C. A. C. Brown. Engineer 195:861-3; Discussion. 866 Je 19 '53

Electricity in remote areas; creating a demand for electrical appliances. J. Ritchie. bibliog il Elec R (Lond) 151:1205-8 D 5 '52

Farming in Cornwall. il map Elec R (Lond) 152:3-10 Ja 2 '53

More power for farms; abstracts. Lord Citrine. Elec J 150:2128-9 Je 12 '53; Elec R (Lond) 152:1355 Je 12 '53

National rural electric cooperative association annual meeting, San Francisco. Pub Util 51:315-17 F 26 '53

Pioneering and development of electrical service to the farm. A. E. Silver. Elec Eng 71:700-2 Ag '52; Same. Edison Elec Inst Bul 20:403-5+ N '52

Power for Australian farmers. P. Davison. il Elec R (Lond) 151:1390-2 D 26 '52

Rural electrification in Ireland, five years' progress; abstract. P. J. Dowling. Inst E E Proc 100 pt 1:72-3 Mr '53

Rural electrification statistics. Elec World 139:150-1 Ja 26 '53

Rural market opportunities unlimited. E. O. George. Edison Elec Inst Bul 21:155-7 My '53

Sprinkler irrigation, do you want it? C. C. Warren. il Elec West 109:116-17 O '52

United nations begins program to promote rural electrification. Elec Eng 72:98 Ja '53

See also
Electricity on the farm
Rural electrification administration
Telephone service, Rural

Cooperative lines

Are REA super co-op leases valid? R. L. Arnold. Pub Util 51:761-8 Je 4 '53

Co-op plan for Clark Hill power. Elec World 139:75 Mr 9 '53

Co-op victory; court paves way for East Kentucky Electric Cooperative to build distribution. Elec World News ed 138:7 N 24 '52

Iowa co-op plans. Elec World News ed 139:24 F 16 '53

Power firms challenge REA loans to co-ops as bypassing Congress. il Eng N 150:27 Ja 22 '53

Statewide cooperative hits the road to tell wiring story with panels. W. E. Stuckey. il Elec World News ed 139:22-3 Mr 2 '53

Warns against monopoly trends. C. Wickard. Pub Util 50:503-4 O 9 '52

ELECTRIC shavers

Safety blades and electric shavers enjoy paradoxical boom. N. Willatt. Barron's 33:11-12 F 16 '53

ELECTRIC ship propulsion. See Ship propulsion, Electric

ELECTRIC shock

How to avoid electric tool shock. E. L. Lotz. il Constr Methods 35:69+ Ap '53

Surface discharges from cable sheaths and their relation to electric shock; abstract. E. W. Greenfield. Elec Eng 72:152 F '53

See also
Electricity, Injuries from

ELECTRIC shops (repair)

What space does to speed service; Ets-Hokin & Galvin. il Elec West 110:92-3 Ja '53

ELECTRIC shops (retail trade)

Three brothers and their Arc. il Elec West 111:108-9 Ag '53

ELECTRIC shovels

Efficient big-shovel stripping Midland electric coal corp. il Coal Age 57:84-8 N '52

ELECTRIC signals

Power station control; method of communicating orders. il Elec R (Lond) 151:1383 D 26 '52

Uses of earthed signal conductors on transmission circuits. W. Casson. diags Inst E E Proc 100 pt 2:277-88 Je '53; Abstract. Elec R (Lond) 151:1381 D 26 '52; Discussion. Inst E E Proc 100 pt 2:288-95 Je '53; Elec R (Lond) 151:1381-2 D 26 '52; Elec J 149:2011-12 D 26 '52

See also
Electric alarms
Fire alarms
Light signals
Mine signals, Electric
Railroads—Signals

ELECTRIC signs

London cinema's display. il Electrician 149:348 Ag 1 '52

Simple sign makes sense. W. G. Darley. il diags Illum Eng 47:601 N '52

ELECTRIC spark

Formation of the electric spark; abstract. E. H. Cohen. Elec J 150:689 F 27 '53

Microchronometric Schlieren study of gaseous expansion from an electric spark. H. L. Olsen and others. il diag J Ap Phys 23:1157-62 O '52

ELECTRIC standards

Alternating-current resistance standards. A. H. M. Arnold. bibliog il diag Inst E E Proc 100 pt 2:319-28 Je '53

International electrotechnical commission; actions taken at the recent meetings in Holland. H. S. Osborne. Elec Eng 72:101-4 F '53; Same. Standardization 23:408-11+ D '52

Units and standards of electrical measurement; review of progress since 1942. L. Hartshorn. bibliog(46 ref) diag Inst E E Proc 99 pt 1:271-9 N '52

See also
Electric units
Frequency standards
Radio standards
also subdivision Standards under special headings, e.g.
Electric connectors
Electric equipment
Electric transformers
also International electrotechnical commission

ELECTRIC stoves

Electric cooker design. Elec R (Lond) 151:1165-7 N 28 '52

Infrared on the front burner. il Bsns W p48 Ap 11 '53; Elec World News ed 139:39 Ap 27 '53

Infrared top heating units introduced in electric ranges. il Elec Eng 72:661 Jl '53

New cooker design. il Electrician 149:538 Ag 22 '52

ELECTRIC stoves—*Continued*

New low-priced cooker; British national electrics, ltd. il Elec J 149:1432 N 7 '52

Revo monarch cooker. il Elec J 150:2222 Je 19 '53

Advertising

Perfection proves merit of if you can't lick 'em, join 'em; changing from oil to gas and electric ranges. L. Bushfield. il Sales Management 69:82+ N 1 '52

Merchandizing

Utility's range campaign aids summer sales. H. J. Newbauer. Elec World News ed 139:36 F 2 '53

Rating

Electric ranges. il Consumers Res Bul 32:11-16 Jl '53

ELECTRIC substations

Conversion substation location and equipment. J. A. Dunn. il diags Min Cong J 38:41-4 S; 60-3 O '52

Fixed and mobile rectifier substations on the Netherlands railways. il map diag Engineering 174:208, 217-20 Ag 15 '52

Garden club landscapes a substation. il Elec World 139:125 Ap 20 '53

Locate circuit grounds at substations. F. M. Duff. il diag Elec World 139:104+ Ap 6 '53

Modern power distribution system now serves Benicia arsenal. il Power Eng 57:78-9 O '53

Serve growing load with pole-top substation. il Elec World 138:164+ N 17 '52

Trends in electrical distribution. J. W. St Andre. il diags Factory Management 111:B205-10 pt 2 My '53

Design

One-line diagram saves engineering time. F. W. Smith. il diags Elec World 139:118-19 Ap 20 '53

Pre-cast concrete slabs reduce building cost. S. J. Ward. il Elec World 139:110 Ap 6 '53

Standardized steel switchhouses. F. E. Brown. il Elec World 139:72-3 My 4 '53

We cut our substation building time in two; Los Angeles Department of water and power. J. W. Erven. il Elec World 138:104-5 O 20 '52

Employees

Demonstrator teaches synchronizing. E. M. Humphries. il diags Elec World 139:128-9 Ap 20 '53

Equipment

Check relays with portable current and voltage supply. il diags Elec World 138:118 D 1 '52

How to install high capacity aluminum buses. J. E. Housley. il Elec World 138:112-14 D 15 '52

Replace all fuses by stick from ground. W. B. Morton. il diag Elec World 138:116+ N 3 '52

Staythorpe-West Melton section of the 275kv grid. il Engineer 196:116-17 Jl 24 '53; map diags Engineering 176:122-3, pl 9 Jl 24 '53

380-kv power-transmission system in Sweden. il diags Engineering 174:781-2 D 19 '52

275kv supergrid inauguration of Staythorpe-West Melton section. il Elec J 151:263-7 Jl 24 '53; Elec R (Lond) 153:169-75 Jl 24 '53

Lighting

Ontario transformer station; new type ceiling lighting in control room. il Elec J 150:1065-6 Mr 27 '53

Models

Models save time, money, equipment, manhours in utility design and construction. W. B. Morton. il Elec World 138:92-4 N 3 '52

Protection

Insulation co-ordination. C. F. Wagner and others. Elec Eng 72:497-503 Je '53

Safety measures

Are your station grounds safe? R. S. Horn. diags Power Eng 57:86-7 O '53

ELECTRIC substations, Automatic

Automatic phase angle and voltage control of unattended Marcus Hook substation; abstract. W. A. Derr and others. diag Elec Eng 72:164 F '53

ELECTRIC substations, Outdoor

Simplified substation structure saves money and outages. K. S. Garrett. il diag Elec World News ed 139:32-3 F 16 '53

ELECTRIC switches. See Electric switchgear

ELECTRIC switchgear

11kv outdoor fuse switch ringmain unit; Ferguson Pailin, ltd. il Engineer 195:860 Je 19 '53; Engineering 176:96 Jl 17 '53

Fault-making load-breaking ring-main unit; Crompton Parkinson, ltd. il Engineer 195:905-6 Je 26 '53

Ferguson Pailin Carmarthen Bay switchgear. Elec J 151:259 Jl 24 '53; Elec R (Lond) 153:260-1 Jl 31 '53

Glass-polyester switch insulation; Glastic. il Materials & Methods 37:114 My '53

How to keep 'em sailing; how to maintain switchgear. W. A. Hall. il Marine Eng 58:70-5 O '53

Interrupter switch gives economical 110-kv operation. il Elec World 138:122 D 1 '52

Investing two years to revamp a product; linestarters. il Bsns W p 156-7 Ja 17 '53

Ironclad switchgear. il Engineer 194:159 Ag 1 '52

Low-cost sectionalizing builds better service. il diag Elec World 139:96 Ja 12 '53

New design concepts applied to a side-break outdoor disconnecting switch; abstract. H. R. Harrison. il diag Elec Eng 72:238 Mr '53

New heavy-duty three-phase oil circuit recloser; abstract. A. Van Ryan. il diag Elec Eng 72:307 Ap '53

New high-voltage outdoor load interrupter switch. H. J. Lingal and J. B. Owens. il diags Elec Eng 72:324-7 Ap '53

120-v Nicad batteries power a-c, d-c switchgear; General cable corp. il diag Power Eng 57:71+ O '53

Selector switches for transformer tap changing. il diag Elec J 150:1315-17 Ap 17 '53

Silicone sealed switch. il Mod Plastics 30:194 N '52

Subminiature switch. il Aero Digest 66:62 My '53

Switch and fuse gear. il Elec R (Lond) 151:357-8 Ag 15 '52

Switchgear economy. L. J. Bamber. Elec R (Lond) 151:951-2 O 31 '52

Switchgear for Venezuela. il Elec R (Lond) 153:205-6 Jl 24 '53

Switchgear maintenance in petroleum refineries. H. B. Wortman. il Oil & Gas J 52:105-6+ Je 8 '53

Voltage transformers and current transformers associated with switchgear. W. Gray and A. Wright. bibliog diags Inst E E Proc 100 pt 2:223-36; Discussion. 237-43 Je '53

Why does this switch blade arc? diag Power Eng 57:81-2 F '53

See also

Electric circuit breakers

Manufacture

Air press assembles tiny switches; Mirco division, Minneapolis-Honeywell regulator co. P. R. Enzler. il diags Am Mach 97:142-3 F 16 '53

Rating

Canopy switches. il Consumers Res Bul 32:26-7 Ag '53

Testing

Climatically tested switchgear. R. Cox. il Elec J 150:1534-7 My 1 '53

1,100,000-kva short-circuit transformer in the new high-capacity switchgear testing laboratory; abstract. B. A. Cogbill. il Elec Eng 72:50 Ja '53

Short-circuit testing of switchgear. il Elec J 150:1917 My 29 '53

Thorn automatic machine for testing glow starter switches. il Engineer 195:843 Je 12 '53

ELECTRIC symbols

JIC electrical symbols; reference sheets. diags Tool Eng 31:89-90 O '53

ELECTRIC symbols—*Continued*

New symbols. il Tele-Tech 12:80-1 Je '53

Sign of reactive-power. R. O. Kapp. diags Electrician 149:470-2 Ag 15 '52

ELECTRIC testing

See also

Dynamometers

Electric instruments

Electric laboratories

Electric measurements

also subdivision Testing under special subjects, e.g. Insulation (electric)—Testing

ELECTRIC testing of metals

Conductivity, now a useful nondestructive testing tool. H. N. Staats. il Materials & Methods 38:124-6 O '53

ELECTRIC tools

Do-it-yourself field beckons industrial producers; Skil corp. W. H. Ferry. il Ind Marketing 38:52-4+ Ap '53

Integral die-cast handle simplifies drill design; Thor power tool co. il diag Machine Design 25:133 Jl '53

New packages help Magna break bottleneck at the retail counter; family dress identifies this line of power tool accessories. R. L. Chambers. il Sales Management 69:76+ N 10 '52

Power tools for home use gain sales. il Steel 132:63 Ap 27 '53

Stop wasting man hours and use power tools. S. Elonka. il Power 97:132-3 O '53

Advertising

Skil helps 'em find it in the telephone book. C. McWade. il Sales Management 69:104+ N 1 '52

Manufacture

Multi-spindle automatics boost short run production; Independent pneumatic tool co. J. P. Bank. il Iron Age 171:142-4 F 26 '53

Plan parts flow; flexibility in new plant design; Black & Decker mfg. co. Iron Age 171:269+ My 7 '53

ELECTRIC tools, Portable

Electric hammer drill bit rotates automatically. il diag Machine Design 25:158 Ag '53

Electric-powered wrench speeds this job; illustrations with text. Constr Methods 35:132 Ag '53

Let power tools do the work. il Diesel Power 31:36-7 My '53

Seven ways Anderson mill uses electric tools. J. L. Burriss. il Textile World 103:162-3+ S '53

What's ahead the next ten years in tools and tooling; portable tools. Am Mach 96:C7-8 Mid-N '52

Safety measures

Check it to check accidents. G. MacDonald. il Nat Safety N 67:34-5+ F '53

How to avoid electric tool shock. E. L. Lotz. il Constr Methods 35:69+ Ap '53

ELECTRIC traction

Electric traction in 1952. J. H. Cansdale. il Elec J 150:525-7 F 13 '53

Electric traction; present situation and future prospects for overseas markets. J. H. Cansdale. il Elec J 150:1527-9 My 1 '53

Railway electrification, Diesel-electric locomotives, and some future aspects of electric traction; abstract. G. Huldschiner. Elec Eng 72:228 Mr '53

See also

Electric locomotives

Electric railroads

Railroads—Electrification

Rapid transit

Subways

Trolley buses

ELECTRIC tractors, Industrial

Electric tractor for railway service; Austin Crompton Parkinson electric vehicles, ltd. il Engineering 174:690 N 28 '52

Tractor for railway goods depots; Scott electric vehicles, ltd. il Engineer 195:149 Ja 23 '53

ELECTRIC transformers

British Thomson-Houston transformers for super-grid. il Elec R (Lond) 152:277-8 Ja 30 '53; Elec J 150:457-8 F 6 '53

Core materials for small transformers. C. C. Horstman. il Tele-Tech 11:40-2+ O '52

Differential transformer for control indication. W. D. MacGeorge. diags Product Eng Hdbk p I 16-21 '53

Distribution transformers. G. O. McLean and R. S. Peacock. bibliog Elec R (Lond) 151:1371-3 D 26 '52

Double three-phase rectifier with inter-phase reactor excited from a frequency tripler. L. R. Blake. diags Inst E E Proc 100 pt 2:310-14 Je '53

Economics of distribution-type transformers; abstract. H. F. Ostman and W. A. Sumner. Elec Eng 71:999 N '52

Engineering highlights of 1952; transformers. C. A. Scarlott. il Westinghouse Eng 13:7-10 Ja '53

Metropolitan-Vickers super-grid transformers. il Elec R (Lond) 152:150 Ja 16 '53

Modern transformer construction; abstract. A. J. W. Beckey. Elec J 149:1932 D 19 '52

New apparatus bushing with improved characteristics; abstract. R. N. Anderson and D. L. Johnston. il Elec Eng 71:1006 N '52

New liquid-filled current transformer with novel features; abstract. L. W. Marks. il Elec Eng 72:406 My '53

100 mva transformer; Ferranti, ltd. il Engineer 194:704 N 21 '52

1,100,000-kva short-circuit transformer in the new high-capacity switchgear testing laboratory; abstract. B. A. Cogbill. il Elec Eng 72:50 Ja '53

Orienting grains in transformer steel. M. J. Bolton. il Gen Elec R 56:13-16 My '53

Quadrature-phase-shift voltage transformer device and its applications; abstract. R. L. Hupp and F. W. Suhr. diag Elec Eng 72:42 Ja '53

Selection of transformers for use in distribution networks. E. Tobin. bibliog diag Inst E E Proc 96 pt 2:485-93 Je '49; Discussion. 96 pt 2:493-7; 97 pt 2:28; 100 pt 2:40-2 Je '49, F '50, F '53

380-kv power-transmission system in Sweden. il maps diags Engineering 174:748-50, 781-4 D 12-19 '52

Transformer-analogue network analysers; summary and discussion. M. W. H. Davies and G. R. Slemon. Elec J 150:1151 Ap 3 '53

Voltage transformers and current transformers associated with switchgear. W. Gray and A. Wright. bibliog diags Inst E E Proc 100 pt 2:223-36 Je '53; Conclusions. Elec R ((Lond) 151:1337-8 D 19 '52; Discussion. Inst E E Proc 100 pt 2:237-43 Je '53; Elec R (Lond) 151:1338-9 D 19 '52; Elec J 149:1939-40 D 19 '52

See also

Electric substations

Radio transformers

Autotransformers

Passive compensator for voltage flicker. P. A. Cartwright. bibliog il diags Elec Eng 71:1032-5 N '52

Connections

Application of completely self-protected banking transformers in secondary banks. H. R. Moore and S. L. Corbin. il diag Elec Eng 71:1109-11 D '52

Circuit calculations in National certificate classes. J. E. Macfarlane. bibliog diags Elec R (Lond) 152:345-9 F 13 '53

Compensator settings for regulators in open delta; engineering reference sheet. W. C. Sealey. diag Elec World 138:134 N 3 '52

Isolating neutral of Y-delta transformers prevents sympathetic tripping of feeders. P. A. Oakes. diags Elec World 139:126-7 Ap 20 '53

Parallel operation of transformers; engineering reference sheet. J. B. Hodtum. diags Elec World 139:132 F 23 '53

Suitable current polarizing sources for ground type relays. O. A. Lentz. diags Elec World 138:74-6 D 29 '52

Transformer ampere-turn balance requirements; engineering reference sheet. J. B. Hodtum. diags Elec World 139:120 F 9 '53

Transformer excitation connections; engineering reference sheet. J. B. Hodtum. diags Elec World 139:184 Ja 26 '53

Voltage up, wiring cost down; four-wire distribution in Twin Falls school. A. I. Sawyer. il diags Elec West 109:82-4 D '52

Why wye for low-voltage distribution. W. D. Vincent. il diags Elec West 109:90-2 O '52

ELECTRIC transformers—*Continued*

Cooling

Are transformer fans justified? J. V. McGuire. Elec World 138:112+ D 1 '52

Cool transformers, when? H. A. Fohrhaltz. Elec World 139:85 Mr 9 '53

Design

Design chart for a single-layer air-core transformer; abstract. A. C. Hudson. diag Elec Eng 72:248-9 Mr '53

Electrolytic analogue in the design of high-voltage power transformers. D. McDonald. bibliog il diags Inst E E Proc 100 pt 2:145-66; Discussion. 176-83 Ap '53

Model approach to design; lighter and more efficient transformers result; abstract. L. Wetherill. Steel 132:107+ F 9 '53

Transformer models for the determination of transient voltages; abstract. P. A. Abetti. il Elec Eng 72:618 Jl '53

Drying

Drying oven for large transformers. il Engineer 194:665-6 N 14 '52; Engineering 174:739 D 5 '52; Elec R (Lond) 151:1054-6 N 14 '52

Fires and fire protection

Relation of transformer design to fire protection; abstract. E. D. Treanor and L. C. Whitman. Elec Eng 72:158 F '53

Installation

Three-phase transformer banks on wye circuits; engineering reference sheet. Elec World 138:152 N 17 '52

Manufacture

Transformer production; Bonar, Long & co. il Elec R (Lond) 152:1462-4 Je 26 '53

Noise

Transformer noise problem. T. D. Gordy and W. S. Hill. il diag Elec World 138:94-7 D 15 '52

Oil

See Insulating oil

Protection

Aging evaluation of dry-type transformer insulating systems; abstract. H. C. Stewart and others. Elec Eng 72:490 Je '53

400kv transformer bushing. P. G. Ashley. il diags Engineer 194:645-7 N 14 '52

Insulation co-ordination. C. F. Wagner and others. Elec Eng 72:497-503 Je '53

Interrupter switch gives economical 110-kv operation. il Elec World 138:122 D 1 '52

Preserving transformer oil; which system? E. V. De Blieux. il diags Gen Elec R 56:56-9 My '53

Sudden gas pressure relay for transformer protection; abstract. R. L. Bean and H. L. Cole. Elec Eng 72:440 My '53

Sudden-pressure relay for power transformers. Westinghouse Eng 13:79 Mr '53

Thermal relay gives overload indication. J. F. Brubaker and E. A. Thompson. il Elec World 138:132+ O 20 '52

Standards

ASA transformer standards C57.22; temperature rise tests on transformers. Elec Eng 72:70-4 Ja '53

Power transformers now covered by new American standard. E. V. De Blieux. il Elec World 138:88-90 O 6 '52

Tables, calculations, etc.

How to load transformers by Depa regulation. L. M. Limpus. Elec World 138:90-1 N 3 '52

Transformer vector diagram. T. H. Barton and F. A. Benson. diags Electrician 149:601-2 Ag 29 '52

Tap changing

Selector switches for transformer tap changing. il diag Elec J 150:1315-17 Ap 17 '53

Temperature

ASA transformer standards C57.22; temperature rise tests on transformers. Elec Eng 72:70-4 Ja '53

Life expectancy of oil-immersed insulation structures; abstract. W. A. Sumner and others. Elec Eng 72:632 Jl '53

Temperature classes for dry-type transformers as determined by functional tests; abstract. P. Narbut. Elec Eng 72:639 Jl '53

Transformer loading. G. O. McLean and R. S. Peacock. bibliog Elec R (Lond) 152:11-13 Ja 2 '53

Testing

Check current transformers with high-current source. E. D. Andrews. il diag Elec World 139:190 Ja 26 '53

Effects of transients on plant; impulse tests on transformers. R. W. Flux. bibliog il diags Elec J 150:682-6 F 27 '53

Electromagnetic models used in determining transient voltages in transformers. il Elec Eng 72:472 My '53

High voltage test laboratory; Brush electrical engineering co. il Engineer 194:191 Ag 8 '52; Engineering 174:172-3 Ag 8 '52; Elec R (Lond) 151:271-4 Ag 8 '52; Electrician 149:409-11 Ag 8 '52

Impulse testing of power transformers. T. F. Monahan. diags Inst E E Proc 100 pt 2:35-7 F '53

Impulse testing of power transformers. D. H. Smith. il diags Elec J 150:1044-8 Mr 27 '53

Impulse tests on prototype 275kv transformer. il Engineering 195:99 Ja 16 '53

Transportation

Design transformer trailer for many uses. il diag Elec World 139:112+ Ap 6 '53

Transformer trolleys for British railways. diags Engineer 194:168 Ag 1 '52

Windings

Aluminum windings in transformers. J. W. St Andre. il Factory Management 110:136-7 D '52

Current transformer test windings. B. D. Jenkins. il diags Elec J 150:1785-7 My 22 '53

Effects of transients on plant; transformers. R. W. Flux. diags Elec J 150:520-4 F 13 '53

Frequency tripler. L. R. Blake. il diags Inst E E Proc 100 pt 2:296-309 Je '53

New method for the measurement of surge voltages in windings. B. C. Robinson and A. Gray. diags Inst E E Proc 100 pt 2:38-40 F '53

Rating of transformer tertiary windings. R. W. Flux. diags Elec J 151:184-9 Jl 17 '53

ELECTRIC transient phenomena

Approximation of transient response from frequency response data; abstract. C. H. Dawson. diag Elec Eng 72:687 Ag '53

Compound sweep circuit. J. H. Porter. diag Electronics 25:172+ O '52

Initial conditions in transient analysis. L. Tasny-Tschiassny. diags Wireless Eng 30:28-31 F '53

Magnetic amplifier transient analyzer. W. A. Geyger. bibliog il diag Electronics 26:189-91 Jl '53

Photomechanical wave analyser for Fourier analysis of transient waveforms. T. B. Whiteley and L. R. Alldredge. diags J Sci Instr 29:358-62 N '52

Power system transients. E. O. Taylor and others. bibliog diags Elec J 149:1742-9, 1922-6; 150:31-5, 200-5, 354-7, 520-4, 682-6, 854-61, 1044-8 D 5, 19 '52, Ja 2, 16, 30, F 13, 27, Mr 13, 27 '53

Restriking voltage transients; network analyser studies on the 132 kv grid. Electrician 149:854-5 S 19 '52

Simple connection between closed-loop transient response and open-loop frequency response. J. C. West and J. Potts. bibliog il diags Inst E E Proc 100 pt 2:201-8; Discussion. 209-12 Je '53

Some transients in the pulse response of point-contact germanium diodes. H. C. Waltz. il diags Inst Radio Eng Proc 40:1483-7 N '52

Transient analysis by time selection. R. Winfield. il diags Electronics 26:184-7 Ag '53

Transient measurements of feedback control systems; abstract. F. H. Ferguson and C. H. Looney. Elec Eng 72:444 My '53

ELECTRIC transient phenomena—*Continued*
Transient response of r.f. and i.f. filters to a wave packet. A. W. Gent. bibliog diags Inst E E Proc 99 pt 3:414-16 N '52

ELECTRIC transmission
Algebraic theory of linear transmission networks. M. G. Arsove. diags Franklin Inst J 255:301-18, 427-44 Ap-My '53
Application of power-line carrier-coupling equipment to typical field installations. F. B. Gunter. Elec Eng 72:163 F '53
Command post routes mountain power over huge USBR network. il map Elec World News ed 139:14-15+ My 11 '53
Economics and developments to expect in transporting energy. C. N. Phillips. Edison Elec Inst Bul 21:271-6+ Jl '53
Electric transmission of water power adopted at Niagara Falls in 1891. C. A. Pohl. Civil Eng 22:885-6 O '52
Factors affecting selection of power-line carrier. R. C. Cheek. bibliog il diags Westinghouse Eng 13:107-11, 121-5 My, Jl '53
Generation and flow of harmonics in transmission systems. S. Whitehead and W. G. Radley. bibliog diags Inst E E Proc 96 pt 2:29-48 F '49; Discussion. 97 pt 2:541-2; 100 pt 2:42-5 Ag '50, F '53
New nerve center in foothills of Rockies dispatches power and water from remote dams. il map Eng N 150:38-9 Je 4 '53
Problems of power transmission at voltages above 225 kv. F. Cahen. il Elec R (Lond) 151:494-6 S 5 '52
Some variational principles for problems in transmission lines. M. Namiki and H. Takahashi. J Ap Phys 23:1056-7 S '52
Tensorial analysis of integrated transmission systems; abstract. G. Kron. Elec Eng 72:63 Ja '53
Theory of the single-wire transmission line. T. E. Roberts, jr. bibliog diags J Ap Phys 24:57-67 Ja '53
Tomorrow's transmission voltages. P. L. Bellaschi. maps Elec World 138:84-8 D 1 '52; Discussion. H. P. St Clair. 139:188; Reply. 188+ Ap 20 '53
Tools for the job. C. M. Cock. Inst E E Proc 100 pt 2:5-8 F '53
Transmission properties of laminated Clogston type conductors. E. F. Vaage. diags Bell System Tech J 32:695-713 My '53
What's ahead in high-voltage transmission? S. B. Crary. Gen Elec R 55:41-3+ N '52
See also
Electric cables
Electric conductors
Electric distribution
Electric driving
Electric lines
Electric plants—Interconnection
Electric power
Electric switchgear
International conference on large high tension electric systems
Voltage regulation

Tables, calculations, etc.

Electric power transmission calculations. W. T. Taylor. Elec R (Lond) 152:297-9 F 6 '53

ELECTRIC trucks
Economic basis of battery electric road vehicle operation and manufacture. H. W. Heyman. bibliog Inst E E Proc 99 pt 2:465-72; Discussion. 473-8 O '52; Elec R (Lond) 150:887-8 Ap 25 '52; Electrician 148:1313-14 Ap 25 '52
Electrical equipment of battery road vehicles. W. D. Sheers. Inst E E Proc 99 pt 2:457-64; Discussion. 473-8 O '52
Railway delivery work; experiments with electric horses. il Elec R (Lond) 151:965 O 31 '52

ELECTRIC trucks, Industrial
Baker-Raulang versatile fork-lift truck. il Mech Eng 75:402 My '53
Fork truck eases down girder. il Iron Age 171:158 Je 18 '53
How batteries are maintained at Grand Central terminal. il diags Ry Mech & Elec Eng 126:84-6 O '52
Italian fork lift truck; Turrinelli co. il Elec J 150:1240 Ap 10 '53
Lansing Bagnall pedestrian-controlled fork lift truck. il Engineer 196:152 Jl 31 '53; Engineering 176:203 Ag 14 '53
Palletized materials handling speeds truck loading; Columbia metal stamping co. il Iron Age 170:208-9 D 4 '52; Steel 131:110+ D 1 '52
Playing cards and a contest boost lift-truck battery sales; Electric storage battery co. Ind Marketing 38:51 My '53
Power saves man-hours at Armstrong. il Paint Oil & Chem R 116:10-11 Ja 1 '53
Radio-controlled industrial trucks expedite materials handling; Electric storage battery co. T. Mac New. il Automotive Ind 108:38-9+ My 15 '53
Recommended voltages for industrial trucks. C. S. Schroeder. Iron & Steel Eng 30:84-6; Discussion. 86-7 Ja '53
Replacing damaged battery covers extends useful life. il Brick & Clay Rec 122:32 Ja '53; Same. Ry Loco & Cars 127:77-8 F '53; Same. Power Eng 57:73 My '53
Two industrial fork-lift trucks; Cleco electric industries, ltd. il Engineer 194:845-6 D 19 '52
What to do, what not to do with fork trucks. il Can Chem Process 37:78 Mr '53

ELECTRIC units
Extension and dissemination of the electrical and magnetic units by the National bureau of standards. F. B. Silsbee. il diags U S Nat Bur Stand Circ 531:1-33 bibliog(p28-33); pa 25c Supt. of doc. '52
Units and standards of electrical measurement; review of progress since 1942. L. Hartshorn. bibliog(46 ref) diag Inst E E Proc 99 pt 1:271-9 N '52

ELECTRIC utilities
1953 outlook for electric utilities; abstract. E. Etherington. Pub Util 51:706+ My 21 '53
Television's increasing service to utility industry. C. B. Jolliffe. Comm & Fin Chr 176:1628+ O 30 '52
Top priority to plants supplying AEC. Elec World 139:74 Mr 9 '53
Utility company supply for atomic energy development. G. W. Keith. Pub Util 51:364-71 Mr 12 '53
See also
Commonwealth Edison company
Detroit Edison company
Electric industries
Electric lines
Electric plants (central stations)
Electric service, Rural
Electricity supply
Florida power corporation
Holding companies
Middle South utilities, inc.
Niagara Mohawk power corporation
Southern California Edison company

Accidents

Accidents feared rising; meeting of EEI's accident prevention committee. Elec World News ed 138:16 S 29 '52
Fatal accidents in the electric light and power industry. D. C. Stewart. Edison Elec Inst Bul 20:391 N '52
Fatal accidents in the electric light and power industry; with tabulated review and classification of 165 fatal accidents reported in 1951. S. H. Young. Edison Elec Inst Bul 21:147-50 My '53
Review and classification of 141 fatal accidents reported during 1950 within the Electric light and power industry; EEI accident prevention committee; chart. D. C. Stewart. Edison Elec Inst Bul 20:388-90 N '52

Accounting

Accounting treatment of accelerated amortization by state public service commissions. Elec World 138:42-3 O 13 '52; 139:77 Ja 12; 93-4 Mr 9 '53; Elec World News ed 139:44-5 Ap 27 '53
Accounting trends in utility regulation. S. P. Eddy. Edison Elec Inst Bul 21:180-2+ Je '53
Amortization fight shaping up. Elec World News ed 139:42 Mr 16 '53
Analysts view fast amortization. M. H. Cruthers. Elec World 138:117-18 O 20 '52
Cost of plant and cost of supply. D. J. Bolton. Elec R (Lond) 151:937-42 O 31 '52
Credit picture. Edison Elec Inst Bul 20:392 N '52
Developing criteria for effective internal auditing. L. P. Hourihan. Edison Elec Inst Bul 21:183-8+ Je '53
EEI-AGA conference, Chicago, April 20-22. Edison Elec Inst Bul 21:171-6 Je '53
Estimating utility plant life. P. H. Jeynes. Elec World 138:73+ D 29 '52

ELECTRIC utilities—Accounting—*Continued*

Interest on construction credit. Pub Util 51: 579-80 Ap 23 '53

Punching their way out of a paper snag; accounting department of Wisconsin electric power co. il Elec World News ed 139: 16-17 F 16 '53

Rapid tax write-off debate on accelerated amortization and rates. Elec World News ed 139:7 Mr 30 '53

Statement of principles in accelerated amortization; Edison electric institute and American gas association. Elec World 138:111 N 3 '52

Subtle socialization by accounting. R. A. Gilbert. Pub Util 51:837-42 Je 18 '53

Advertising

Booklet pinpoints needs, ups sales; New Orleans public service inc. J. D. Haverkamp. il Elec World 138:98+ D 29 '52

Detroit Edison gets going in home lighting promotion. E. J. Hurley. il Elec World News ed 138:38-9 S 29 '52

Do your customers know your rates are regulated? B. G. Getsinger, jr. Pub Util 51:146-51 Ja 29 '53

Penn Power sells creatively, and industry buys kw's by the billions. J. M. Stedman and S. F. Diffenderfer. il map Sales Management 69:48-50+ N 10 '52

$200,000 promotion by G&T co-op and its members wins farmers. il Elec World 138: 94-6 O 6 '52

Appliance selling

Boston Edison customers get a 3-D view of lighting. R. B. Brown, jr. and W. Allphin. il Elec World News ed 139:34-5 My 25 '53

Edison electric institute sales conference. Elec World 139:108-11+ Ap 20 '53

In side show promotes freezers, refrigerators; Cincinnati gas & electric co. il Elec World News ed 138:38-9 N 24 '52

Straw men sell electric blankets for utility. il Elec World News ed 139:38 Ja 19 '53

Today's challenge to our industry; sell, or else. C. E. Oakes. Elec World 138:102-3 O 20 '52

Buildings

Air distribution studies for louvered or eggcrate ceiling, Detroit Edison co.'s new office building. R. V. Martelli and H. O. Scarlett. il plans diags Heating-Piping 24:77-82 N '52; Discussion. W. O. Huebner. 25:119-20 Ja '53

Dedication marks naming of new Arkansas power and light co. head. il Manuf Rec 121:37+ O '52

High in the saddle; office and salesroom of Southern Colorado power co. il Elec West 109:93 D '52

Consolidation

Alabama Power and Birmingham merge. il map Elec World News ed 138:16-18 D 8 '52

Basic terms of Puget Power, WWP merger approved. Elec West 110:132 My '53

FPC, public bodies get WWP-Puget merger plan. Elec World 139:88+ My 4 '53

League formed to combat proposed merger of Puget Power & Light with Washington Water Power. Elec World News ed 139:43 Mr 16 '53

Merger would up earnings; study of Washington Water Power proposal for purchase of Puget Sound Power & Light. Elec World News ed 138:42 O 27 '52

Puget directors to vote this week on merger with Washington Water Power. F. McLaughlin. Elec World News ed 139:42 Mr 30 '53

Washington Water Power OKs plan to merge with Puget Sound Power & Light. Elec World 139:127 Mr 23 '53

WWP-Puget plan opposed. Elec World News ed 139:44 My 25 '53

Will Puget go public or private? il Elec World 138:90-1 O 20 '52

Costs

Economics and developments to expect in transporting energy. C. N. Phillips. Edison Elec Inst Bul 21:271-6+ Jl '53

Maintenance costs reduced. Elec World 139: 176 Ja 26 '53

Total construction expenditures. map Elec World 139:138-9 Ja 26 '53

What further efficiencies can be expected in electric utility operations; with charts of factors in electric utility efficiency. F. S. Black. Pub Util 50:923-6 D 18 '52

Customer relations

Central Hudson's Reddy rhyme collects bills not paid on time. il Edison Elec Inst Bul 21:88 Mr '53

Dealer relations

Detroit Edison gets going in home lighting promotion. E. J. Hurley. il Elec World News ed 138:38-9 S 29 '52

Utility's range campaign aids summer sales. H. J. Newbauer. Elec World News ed 139: 36 F 2 '53

Development work

Area development institute at the University of Michigan. J. F. Gaskill. il Edison Elec Inst Bul 21:311-12 Ag '53

Area development institute conducted at Yale university. Edison Elec Inst Bul 20:426 D '52

Area development program for utilities; Pennsylvania power and light co. D. L. Diehl. Pub Util 51:286-93 F 26 '53

Case history of a vacationland; Ulster-Greene counties; development work of Central Hudson gas & electric corp. E. M. Huben. Edison Elec Inst Bul 20:423-5 D '52

Helping to build a finer Carolina. L. V. Sutton. Edison Elec Inst Bul 21:263-6 Jl '53

How community development can help your city. C. E. Wright. il Pub Works 84:78-9 Ap '53

Second Area development institute scheduled at University of Michigan. J. F. Gaskill. Edison Elec Inst Bul 21:119-20 Ap '53

Your community spirit is showing. C. E. Wright. Pub Util 51:679-86 My 21 '53

Employees

After five years; how electricity supply nationalization has affected employees. W. Walsh. Elec R (Lond) 152:745-6 Ap 3 '53

At Montana Power the employees are taking stock of their company. il Elec World News ed 139:20-1 My 25 '53

California utility charges IBEW with unfair acts. Elec World News ed 139:18 Ap 27 '53

California utility strike ends. Elec World 139: 135 My 18 '53

Course for CEI co. executives; first group completes progressive management. Elec World News ed 139:35 Mr 30 '53

Detroit Edison wins OK for fringe benefits. Elec World News ed 139:40 F 2 '53

EEI resuscitation awards emphasize importance of intensive safety training. Edison Elec Inst Bul 21:19-24+ Ja; 55-8 F '53

Edison, IBEW local sign agreement. Elec West 110:166 Je '53

Employee benefit plans protect electric and gas workers. Elec World News ed 138: 40 O 27 '52

Evaluation of Vepco's employee information program. W. E. Wood. Edison Elec Inst Bul 21:67-8+ Mr '53

Executive development program using job rotation; Consolidated Edison company of New York. D. S. Sargent. Personnel J 31: 405-9 Ap '53

Firemen at school; Consolidated Edison system of New York. W. E. Rossnagel. il Nat Safety N 66:118-19+ O '52

Five issues stall agreement between Detroit Edison and UWUA on a new contract. Elec World News ed 138:35 N 10 '52

Hot food in a cold emergency; Pennsylvania Power & Light feeds crew repairing storm damage. il Elec World News ed 139:16-17 F 2 '53; Edison Elec Inst Bul 21:80 Mr '53

How to make better drivers; Pacific gas and electric co. E. F. Hockenbeamer. il plan Elec West 110:80-3 Mr '53

Importance of good employee relations. H. P. Taylor. Edison Elec Inst Bul 21:343-4 S '53

IBEW local ends strike at California Electric. Elec World News ed 139:7 Ap 13 '53

Mediation board boosts pay 13c to Derby Gas & Electric workers. Elec World News ed 138:40 N 24 '52

ELECTRIC utilities—Employees—*Continued*

Operators set up training course at Public service co. of New Mexico. D. F. Duncan. il Elec World News ed 139:18 Mr 30 '53

People are our business. A. King. Edison Elec Inst Bul 21:341-2+ S '53

Some things we can do about our engineering manpower dilemma. A. S. Bennion. il Elec West 109:67-8 D '52

Strike against Edison continues. il Elec West 110:129+ My '53

Successful applications of resuscitation recognized by EEI awards. Edison Elec Inst Bul 21:349-53 S '53

Supervisor's role in industrial relations program. J. C. Arnell and others. il Elec World 138:119-42 N 17 '52

Supervisors' support asked to help bring about better labor relations. W. J. Kenefick. Elec World News ed 138:44 S 29 '52

Take steps now to assure future engineering leaders. H. N. Muller. il Elec West 110:101-3 Je '53

Utility, union in bitter struggle; Southern California Edison. il Elec World 139:73 Ap 6 '53

Wages, employment set record. Elec World 139:168-9 Ja 26 '53

Workers to buy stock; Pacific power and light co. J. Dierdorff. Elec World 139:282 My 18 '53

Workers to hold strike vote at Seattle City Light. Elec World News ed 138:40 D 22 '52

See also

Electric plants (central stations)—Employees
Linemen
Utility workers union of America

Equipment and supplies

Better methods double storage capacity. J. E. Dubbs. il Elec World 139:150+ Mr 23 '53

Carry poles or transformers on four-wheel dolly. il Elec World 138:128+ O 6 '52

Design transformer trailer for many uses. il diag Elec World 139:112+ Ap 6 '53

Electronics will lower costs. R. H. Miller. il Elec West 110:110-12 Je '53

Large crane makes big utility jobs easy. il Elec West 110:79 Ja '53

Packaged cans more flexible for bulkhead and current coil enclosures. il Elec West 109:92 N '52

Principles of fleet management. T. L. Preble. Edison Elec Inst Bul 21:199-202 Je '53

Retracting hydraulic crane cuts job time. J. S. Strasbourger. il Elec World 138:126 O 20 '52

Truck-mounted insulator washer solves contamination problem; Florida power and light co. H. L. Allen. il Elec World 138:158+ N 17 '52

Two men replace six with hydraulic boom truck. il Elec World 138:94 D 29 '52

Utility splicer's truck features detachable canopy. il Elec World 138:132 O 20 '52

Why utilities still have steel troubles. J. F. Fairman. Elec World 138:80-1 N 3 '52

Exhibits

Light, color, and shadow stressed in sales boosting New Orleans exhibit. J. D. Haverkamp. il Elec World News ed 139:38-9 F 16 '53

Statewide cooperative hits the road to tell wiring story with panels. W. E. Stuckey. il Elec World News ed 139:22-3 Mr 2 '53

Utility packs 'em in at county fairs. il Elec World News ed 139:39 Mr 30 '53

Finance

Are utility earnings vulnerable? H. J. Flagg. Pub Util 51:574-9 Ap 23 '53

Assisted power schemes; some activities of the International bank. J. C. Hancock. Elec R (Lond) 151:783-4 O 10 '52

Confidence keynote of electric industry. P. L. Smith. il map Trusts & Estates 91:899-902 D '52

Credit picture; survey under joint supervision of the credit and collection committees, EEI Accounting division and AGA Accounting section. Edison Elec Inst Bul 21:108+ Ap '53

Dangers of constantly declining utility profit margins. O. Ely. Pub Util 50:799-800 N 20 '52

Energy for the atom; new private financing method breaks public power monopoly. O. Ely. Barron's 33:17-18 Ap 13 '53

Financial public relations. W. F. Merkel. Elec World News ed 139:44 My 11 '53

Financial statistics of public utilities. 189p C. A. Turner, 327 S. La Salle st, Chicago 4 '52 ($12.50)

Gulf States Utilities higher earnings and dividends likely. P. Sutor. Barron's 33:15+ F 2 '53

How would a recession affect utilities? E. R. Abrams. Pub Util 52:135-40 Jl 30 '53

National association of railroad and utilities commissioners report on depreciation; with charts and revenues and net income trends. Pub Util 51:42-5 Ja 1 '53

Power progress; multi-billion dollar expansion pays off for utilities. E. R. Abrams. Barron's 33:9-10 Ap 6 '53

Revenue up 8.5 per cent, tops $6 billion. Elec World 139:156-7 Ja 26 '53

Southwest electric utilities report biggest gain in net; with 1952 earnings of first 60 electric utilities with net incomes of $1 million or more to report. Barron's 33:27 Mr 23 '53

Southwestern Public Service; growth record best in south central area. O. Ely. Barron's 33:17-20 Ja 5 '53

Study of annual reports to stockholders for 1951; report of joint EEI-AGA subcommittee on financial reporting. E. E. Roll. Edison Elec Inst Bul 20:427-9 D '52

Utility operating income and business recession. H. J. Flagg. Comm & Fin Chr 177:2080-1 My 14 '53

Utility regulation by the stock market. J. H. Bickley. Pub Util 51:15-23 Ja 1 '53

Western utilities maintain record pace of '52. il Elec West 110:90-123 F '53

What the security analyst wants to know about your company. M. Chandler. Edison Elec Inst Bul 21:240-3+ Jl '53; Same abr. Comm & Fin Chr 177:2520+ Je 11 '53

See also

Electric rates
Electric utilities—Securities
Electric utilities—Taxation
Louisville gas and electric company
Pacific gas and electric company

Government ownership

After five years; how electricity supply nationalization has affected employees. W. Walsh. Elec R (Lond) 152:745-6 Ap 3 '53

Encroachment; the drive toward federal control of power. A. A. Smith. Edison Elec Inst Bul 20:337-42 O '52

Federal electric power, an evil force of creeping socialism. H. Hoover. Comm & Fin Chr 177:1641+ Ap 16 '53

Federal power in Connecticut not justified. S. R. Knapp. Edison Elec Inst Bul 20:344 O '52

Future of utility ownership. A. M. Cooper. Pub Util 52:150-6 Jl 30 '53

Information committee set up to carry out principles established at Electric consumers conference. Elec World 138:86 O 6 '52

McKay speaks up on public power. Pub Util 51:248-51 F 12 '53

Menace of public power to private investment; report of IBA public service securities committee. Comm & Fin Chr 176:2350+ D 18 '52

Mexico to buy up five utilities. Elec World News ed 139:34 F 2 '53

1953 design survey; typical municipal, federal and cooperative installations; tabulation. Power 97:42-3 Mid-S '53

Political facts of life. D. D. Smalley. Elec West 110:90-1 Je '53

Power contracts. Bsns W p32 Je 13 '53

Power up to sixth on best issue list; issue in the presidential campaign. il Elec World News ed 138:7+ O 13 '52

Public power is here to stay. D. McKay. Comm & Fin Chr 177:2201+ My 21 '53

Rails, power industry are bulwarks of free enterprise. B. L. England. Pub Util 51:52-4 Ja 1 '53

Socialist super-power program. C. B. Boulet. Edison Elec Inst Bul 21:5-9 Ja '53

Some measurements of size of the federal power empire. H. B. Sargent. maps Elec West 109:75-9 N '52

ELECTRIC utilities—Government ownership—*Continued*

Stemming the tide of federalized electric power. B. L. England. Comm & Fin Chr 176:905+ S 11 '52; Same. Edison Elec Inst Bul 20:323-6+ O '52; Abstract. Pub Util 50:506-9+ O 9 '52

That itch for public power. B. Reinhardt. Elec West 110:104-5 Je '53

Uncle Sam's light and power company. R. Moley. Elec West 110:95-100 Je '53; Abstract. Pub Util 52:180-3 Jl 30 '53

Use of economic leverage to eclipse private power. J. D. Garwood. Pub Util 50:481-5 O 9 '52

We are pioneers. B. L. England. Edison Elec Inst Bul 20:371-4+ N '52

What are the power needs and resources of New England? A. A. Cree. Edison Elec Inst Bul 20:393-7+ N '52

Where will the GOP take it? map Bsns W p 112-16+ My 9 '53

See also

Hydroelectric plants—Government ownership

Law

FPC's carrier clause upheld; can impose conditions on lines of private company crossing public lands; Idaho power co. vs Federal power commission. Elec World 138:107 N 17 '52

Recent developments in the gas and electric fields of public utility law. M. Springer. Pub Util 50:581-4 O 23 '52

Report on recent cases relating to electric utilities. J. Lloyd, jr. Pub Util 52:515-21 O 8 '53

Management

Building up utilities profits. J. R. Hartman. Comm & Fin Chr 177:2515+ Je 11 '53; Same. Edison Elec Inst Bul 21:252-4+ Jl '53

Do we need to step up our selling efforts now? M. F. Gill. Edison Elec Inst Bul 20:421-2+ D '52

Electric utilities must sell. Elec World 138:94-5 D 1 '52

Evaluation of capacity differences in the economic comparison of alternative facilities; abstract. P. H. Jeynes. Elec Eng 71:992 N '52

Farm market sales tactics that leave quotas far behind; Penn. power & light co. J. M. Stedman and R. T. Jones. il Sales Management 69:30-2+ D 1 '52

How Cleveland electric illuminating co. makes long term plans for industrial sales. R. C. Hienton. Elec World 139:86-7+ Mr 9 '53

How it's being done. A. B. Collins. Edison Elec Inst Bul 21:250-1 Jl '53

Insurance department. H. P. Liversidge. Pub Util 51:858-9 Je 18 '53

Leadership, its place in planning for the future. G. C. Neff. Edison Elec Inst Bul 21:244-6 Jl '53

Long-range forecasting. H. H. Scaff. Edison Elec Inst Bul 20:399-402 N '52

Management development plan for utilities. T. E. Hurns. Pub Util 52:416-24 S 24 '53

Management looks ahead in the electric power industry. W. L. Cisler. Elec Eng 71:1079-81 D '52

Neglected load; commercial electric cooking. il Elec World 139:113-20 Mr 23 '53

Outline of the skills of management. R. M. Besse. Edison Elec Inst Bul 21:331-6 S '53

Planning picture for Kansas City power & light co. C. M. Little and J. S. Palmer. maps Edison Elec Inst Bul 21:83-7+ Mr '53

Reaching the industrial market. J. H. Jewell. Edison Elec Inst Bul 21:158-60+ My '53

Take another look at your long-term planning program. S. M. Campbell. Elec World News ed 139:32-4 F 2 '53

Today and tomorrow in our industry. B. L. England. Edison Elec Inst Bul 21:151-4+ My '53

Today's challenge to our industry; sell, or else. C. E. Oakes. Elec World 138:102-3 O 20 '52

Utility executive objectives and duties. W. E. Wood. Edison Elec Inst Bul 21:337-40 S '53

Utility officials class bound; summer course on management at Georgia institute of technology. Elec World News ed 138:22-3 N 24 '52

What further efficiencies can be expected in electric utility operations; with charts of factors in electric utility efficiency. F. S. Black. Pub Util 50:923-6 D 18 '52

Why utilities promote the load they do. R. H. Cockfield. Elec West 110:73-6 My '53

Meter shops

New meter shop designed for assembly-line meter testing. L. P. Grover. il plan Elec World 138:100-1 O 20 '52

Municipal ownership

Change at Tacoma City Light; city charter provides that municipal utilities be run by a five-member board. Elec World 138:110 N 17 '52

Detroit Edison woos villagers; tries to convince Sebewaing residents it can give them more efficient service than municipal plant. Elec World News ed 139:18 F 2 '53

Exploded myth; Jamestown, N.Y. model municipal utility disappoints public power advocates. E. R. Abrams. Barron's 33:13 F 16 '53

Public relations

Contest stimulates kitchen modernization interest. R. A. Shank. il Elec World 138:142 O 20 '52

Detroit Edison woos villagers; tries to convince Sebewaing residents it can give them more efficient service than municipal plant. Elec World News ed 139:18 F 2 '53

Helping to build a finer Carolina. il Elec World News ed 139:16-18, cover Mr 2 '53

Promoting the Sacramento municipal utility district. C. L. Richey and E. A. Combatalade. Elec World News ed 139:20-1 My 11 '53

Public information program; challenge to the industry. R. E. Ginna. Pub Util 51:747-53 Je 4 '53

Public relations is what you do. Edison Elec Inst Bul 21:53-4+ F '53

Public relations' priceless ingredients; deeds, character, neighborliness. B. L. England. Edison Elec Inst Bul 21:177-9+ Je '53

Salesmanship can improve public relations. C. E. Oakes. Edison Elec Inst Bul 21:255-9+ Jl '53; Excerpts. Comm & Fin Chr 177:2543 Je 11 '53

Utility industry in cartoons. A. B. Marvin. Pub Util 51:88-94 Ja 15 '53; Same. Edison Elec Inst Bul 21:45-8 F '53

Utility promotes grass raising. il Elec World 139:84 My 4 '53

Purchasing

What is the correct approach in dealing with escalation and progress payments? G. H. Cole. Edison Elec Inst Bul 21:189-92+ Je '53

Radio communication

Fault clearing, control, and communication; microwave does all three in Baltimore. C. Wasserman. il map Elec World 139:82-3 Ja 12 '53

Microwave links hydroelectric plants in Pacific Northwest. L. A. Carter. il map diag Elec World 139:84-6 Ja 12 '53

Microwave relieves our overloaded circuits; Union electric co. G. W. Fox and M. G. Staton. il plans diags Elec World 139:79-81+ Ja 12 '53

Microwave remote control for Yale plant; Pacific power & light co. E. R. de Luccia. il Elec West 109:80-1 N '52

Passive repeater bends microwave beam. H. Magnuski and T. F. Koch. il map diag Electronics 26:134-7 F '53

Power for microwave system must be very reliable and permit quick changeover. F. C. Krings. Elec World News ed 139:34 F 16 '53

Power utility mobile radio service. W. C. Phillips. Edison Elec Inst Bul 21:112 Ap '53

Southern California Edison co. adopts system-wide microwave. K. E. Dueker. il diag Elec West 109:83-5 N '52

Telemetering solves tie line problems; Central power & light co., Texas. P. Taylor. il map diag Elec World 138:100-2 D 15 '52

ELECTRIC utilities—Radio communication—*Continued*

$250,000 two-way radio-telephone network established for Montana-Dakota utilities. il Elec Eng 72:181-2 F '53
Vhf radio relay does the job; Cumberland valley electric co. L. P. Scarborough. il map diag Elec World 139:98-9 F 23 '53

Regulation

Accounting trends in utility regulation. S. P. Eddy. Edison Elec Inst Bul 21:180-2+ Je '53
New look at utility regulation. E. S. Loughlin. Comm & Fin Chr 177:2523+ Je 11 '53; Same. Edison Elec Inst Bul 21:229-33 Jl '53
Regulations limiting resale of electricity approved. Pub Util 51:804-5 Je 4 '53
Trimming down public power. Bsns W p34 Mr 7 '53

See also
Defense electric power administration

Reports

Filmosound equipment for annual report; Ohio Edison co. Elec World 138:93 D 1 '52
Reporting generating capacities to the investor. H. A. Diamant. Edison Elec Inst Bul 21:116-18 Ap '53
Simplifying utility reports to federal agencies. W. B. Bourne, jr. Pub Util 52:141-5 Jl 30 '53

Safety measures

Accident frequency reduction award approved by EEI Board of directors. Edison Elec Inst Bul 21:92 Mr '53
High-potential lab highlights safety features; Hartford electric light co. il Elec World 138:123-4 D 15 '52
Lives, dollars, friends! W. W. Lynch. Edison Elec Inst Bul 21:260-2 Jl '53
Planned work area for street safety OK'd by cab drivers; Consolidated Edison's program. il Elec World 138:103 D 15 '52
Safety is our business. E. L. Goldshalk. Edison Elec Inst Bul 21:69-70 Mr '53
Safety merit award rules and regulations clarified. Edison Elec Inst Bul 21:61 F '53

See also
Electric lines—
Safety measures
Linemen's equipment

Salesmen

Penn Power sells creatively, and industry buys kw's by the billions. J. M. Stedman and S. F. Diffenderfer. il map Sales Management 69:48-50+ N 10 '52
Sales acting brings selling action. J. L. McDonald. il Elec West 110:87-9 Ap '53
Selecting and training utility salesmen. P. M. Alden and A. G. Garrigues. Pub Util 52:487-93 O 8 '53

Securities

Barcelona; Spanish lesson for investors. H. Bratter. Pub Util 51:556-68 Ap 23 '53
Cost of common stock money. J. F. Childs. Pub Util 52:586-9 O 22 '53
Dividend policy. O. Ely. Pub Util 52:109-13 Jl 16 '53
Electric utility commons and the institutional investor. W. T. Hyde, jr. Trusts & Estates 91:904-7 D '52
Electric utility companies; sound investments. C. C. Adsit. Trusts & Estates 91:629 S '52
Gas and electric utilities' rights financing, 1950-52. O. Ely. Pub Util 51:106-11 Ja 15 '53
Generating interest in utilities. I. U. Cobleigh. Comm & Fin Chr 177:2517 Je 11 '53
Higher financing costs for utilities. F. J. McDiarmid. Pub Util 52:78-85 Jl 16 '53
Is the decline in electric utility stocks warranted? O. Ely. Comm & Fin Chr 177:2530 Je 11 '53
Menace of public power to private investment; report of IBA public service securities committee. Comm & Fin Chr 176:2350+ D 18 '52
$100 million in new money sought by larger utility companies during the last quarter. Elec World News ed 138:42 N 24 '52
Political power of the small shareholder. E. F. Lloyd. Pub Util 51:498-501 Ap 9 '53
Power companies are feeling their oats. Bsns W p54-6+ F 28 '53
Record securities issued in '52. Elec World 139:99-100 F 9 '53
Self-funded retirement plans favor utility bonds. Elec World 139:280+ My 18 '53
Should the SEC continue to study utility system operations? open letter to Donald C. Cook, chairman of SEC. W. A. Paton. Pub Util 50:473-80 O 9 '52
Special study of the public utility industry; with statistics of important electric utilities. O. Ely. Mag of Wall St 92:326-30+ Je 13 '53
Stemming the tide of federalized electric power. B. L. England. Comm & Fin Chr 176:905+ S 11 '52; Same. Edison Elec Inst Bul 20:323-6+ O '52; Abstract. Pub Util 50:506-9+ O 9 '52
Subtle socialization by accounting. R. A. Gilbert. Pub Util 51:837-42 Je 18 '53
Those safe utilities; with financial data, 1946, 1951. E. R. Abrams. Barron's 32:15-16 D 8 '52
Utility pay-out; recent dividend increases haven't shown up marketwise. E. R. Abrams. Barron's 33:11+ Je 8 '53
What the security analyst wants to know about your company. M. Chandler. Edison Elec Inst Bul 21:240-3+ Jl '53; Same abr. Comm & Fin Chr 177:2520+ Je 11 '53

Service

Person to person calls sell wiring. il Elec World News ed 139:28-9 My 11 '53
Why should an electric company promote adequate wiring? C. T. Bremicker. Edison Elec Inst Bul 21:113-15 Ap '53

See also
Electric service,
Rural

Statistics

Annual report on the electrical industry, 49th. maps Elec World 139:133-76 Ja 26 '53
Biggest electric utilities in the U.S.; with tables of statistical data. Elec World News ed 138:1, 32-3 D 22 '52
Electric utility trends of the past decade; with charts. Pub Util 50:510-12 O 9 '52
Electrical research statistics; electric light and power industry covering 100 per cent of industry, Dec. 1951-52. Edison Elec Inst Bul 21:cover Ap '53

Stores systems

Spending dollars to save dimes; free access materials plan for fast-moving, low-unit-cost items cuts stores accounting costs. W. J. Nolan. Elec West 109:86-8 N '52
What are the correct measures of stores inventory? H. E. Hodgson. Edison Elec Inst Bul 21:193-5 Je '53

Taxation

Brake on tax write-off. Bsns W p 192+ Ap 18 '53
Needed reform for utility tax depreciation. F. W. Brooks. Pub Util 52:407-15 S 24 '53
Public power group assails tax certificate award. Pub Util 52:457-9 S 24 '53
Tax savings from accelerated amortization should be explained. Pub Util 50:729-31 N 6 '52; Discussion. 51:45-6 Ja 1 '53
Tax write-offs; Pacific P&L receives PSC order on how to handle accelerated amortization. Elec World 139:94-5 Mr 9 '53

Valuation

Modern proof of the present value rate base. J. S. Hartt. Pub Util 51:267-74 F 26 '53

Arkansas

PUD in Arkansas voted down. Elec World 138:108 N 17 '52
Selfish Arkansas Power. il maps Fortune 46:126-31+ O '52

California

See also
Central Valley project, California

Canada

Canadian utilities budget $1½ billion for '53. Elec World 139:174-5 Ja 26 '53

ELECTRIC utilities—*Continued*

Colombia

Colombia frees private power companies of tax. For Comm W 49:32 Ap 27 '53

Colorado

Muddle over rates in Colorado. Elec World News ed 138:46 D 8 '52

Connecticut

Federal power in Connecticut not justified. S. R. Knapp. Edison Elec Inst Bul 20:344 O '52

Storm hearing; Connecticut Public utilities commission. Elec World News ed 139:7 Mr 16 '53

Florida

Florida Power & Light is keeping pace with Florida's rapid growth. il map Elec World News ed 138:16-18 O 27 '52

Iowa

Iowa plan. N. B. Gussett. maps Edison Elec Inst Bul 21:267-70 Jl '53

Mexico

Mexico to buy up five utilities. Elec World News ed 139:34 F 2 '53

Missouri

Missouri case goes to trial. Elec World 138:97 O 20 '52

New England

What are the power needs and resources of New England? A. A. Cree. Edison Elec Inst Bul 20:393-7+ N '52

Northwestern states

Turn of the wheel; private power wins a victory in the Pacific Northwest. R. M. Bleiberg. Barron's 32:3+ D 1 '52

Ohio

AEC buys a $400-million package of power; to serve Pike County uranium refinery. Bsns W p90-2+ O 25 '52

See also

Ohio Valley electric corporation

Oregon

PUD in Oregon to serve Willamette area. Elec World News ed 139:24 My 25 '53

Southwestern states

Southwest Power integration seen. D. G. Wright. Elec World 139:74 Ap 6 '53

Spain

Barcelona; Spanish lesson for investors. H. Bratter. Pub Util 51:556-67 Ap 23 '53

United States

Electric industry in 1952. B. L. England. Edison Elec Inst Bul 21:3-4 Ja '53; Same cond. Elec World News ed 139:7 Ja 5 '53; Abstract. Power 97:152+ F '53

Electric industry in perspective. B. L. England. Edison Elec Inst Bul 21:101-4+ Ap '53

Electric light and power industry looking ahead. B. L. England. Pub Util 50:883-96 D 18 '52

Electric power build-up way behind schedule. H. Murphy. Barron's 32:16 O 13 '52

High lights of 1952 electric utility reports. O. Ely. Pub Util 51:789-91 Je 4 '53

Leadership and the electric industry. H. Hildreth. Edison Elec Inst Bul 21:247-9 Jl '53

Looking forward to a better 1953; executives of electric companies anticipate continued growth of their systems. T. G. Dignan. Elec World News ed 139:8-10 Ja 5 '53

President's address before Edison electric institute. B. L. England. Edison Elec Inst Bul 21:225-8+ Jl '53; Same. Comm & Fin Chr 177:2509+ Je 11 '53

Utility construction program cut back; based on papers by F. Black and G. C. Tenney. Pub Util 51:377-9 Mr 12 '53

Utility construction program for 1953-56. O. Ely. Pub Util 52:113-14 Jl 16 '53

We are pioneers. B. L. England. Edison Elec Inst Bul 20:371-4+ N '52

What power companies are planning for future construction work. Eng N 150:102-3 Je 11 '53

Virginia

Virginia electric & power co.'s 1952 projects nearing completion. il Manuf Rec 121:59 N '52

Washington (state)

Kitsap PUD makes changes. Elec World 138:117 D 15 '52

See also Washington water power company

Western states

Annual review number. il Elec West 110:87-133 F '53

Clouds with a silver lining; four western power companies are now experimenting with cloud seeding. R. Bollay. il diag Elec West 110:73-7 Mr '53

Teamwork pays big dividends. H. H. Lenhart. il Elec West 110:93-4 Je '53

ELECTRIC vehicles

Commercial motor show; electric vehicles to meet special requirements. Elec R (Lond) 151:737-8 O 3 '52

Michrotaxi; Italy's electric rickshaw. il Elec J 149:1315 O 31 '52

Trackless train; Tournatrain, Diesel-electric rubber-tired trackless train. Bsns W p56 Je 20 '53

See also

Electric trucks

Electric trucks, Industrial

ELECTRIC water heaters

Booster heater permits sterilizing dishes. L. K. Franke. Elec World 138:142 O 6 '52

Dual-purpose domestic heat pump. G. O. McLean. il Elec R (Lond) 152:289-91 F 6 '53

Economics of water heating. Elec R (Lond) 152:1409-11 Je 19 '53

Electric steam steriliser and hot water heater. diag Engineer 195:906 Je 26 '53

15kw electrode water heater; G.W.B. electric furnaces, ltd. il Engineer 195:743 My 22 '53

Immersion-heaters in post-war housing. P. Schiller. Elec J 150:1801-3 My 22 '53

Water heating; data sheet. W. A. Lowry. il Elec West 111:117 Ag '53

Advertising

Four big cards, one brochure, develop new business for dealers in one-month test. N. Kelne. il Ptr Ink 242:46+ Mr 6 '53

Control

Centralized water heater control reduces system peaks. H. A. Schimelpfenig and L. Rietow. il Elec World 139:98-9 Mr 9 '53

ELECTRIC waves

Propagation of space-charge waves in infinite and finite electron beams. P. Parzen. bibliog diags Elec Com 30:134-8 Je '53

Square waves for audio testing. G. E. Bauder. il Radio Com 12:22-3 O '52

Using cathode ray tubes for voltage wave form analysis. R. B. Immel. diags Product Eng 23:190-1 O '52

See also

Harmonics (electric waves)

Radio waves

Wave guides

ELECTRIC welding

Advanced planning leads to consistent, high quality spotwelds. J. Heuschkel. il Materials & Methods 37:88-91 Mr '53

Anderson Ranch Dam penstock test fracture repaired by welding. P. J. Bier. il plan diags Welding J 32:313-19 Ap '53

Automatic stamping and welding of sheet metal parts; Chrysler corp. il Automotive Ind 109:48-9 O 1 '53

Automatic track rail welder; Armor welding service. il Elec West 109:106 O '52

Beryllium copper spot welded without change in properties. D. I. Brown. il diag Iron Age 171:142-4 Mr 12 '53

Butt welding thin stainless steel. il Tool Eng 29:54 D '52

Correct welding procedure. L. F. Spencer. il diags Sheet Metal Worker 44:51-4 N '52; 59-62+ F; 74+ Mr; 70-2+ Ap; 63+ Je; 102-3+ Ag; 87-9 S; 45:61-2+ O '53 (to be cont)

Designing for spotwelding. Machine Design 25:157-9 F '53

Designing with plug welds. O. Blodgett. il diags Machine Design 24:152-3 N '52

ELECTRIC welding—*Continued*

Distortion in welding; abstract. A. R. Jenkins. Elec R (Lond) 151:849-50 O 17 '52

Electrical resistance flash welding of railway rails; abstract. R. Keuhnel. Metal Prog 64: 138+ Jl '53

Fast roll-spot technique doubles welding speeds; Ryan aeronautical co. J. R. Fullerton. il Automotive Ind 109:46-7+ Ag 15 '53

Forum on technical progress; joining and assembling. il diags Steel 132:406-7+ Ja 5 '53

How to butt-weld 0.005-in. stainless. M. S. Weinstein. il diags Am Mach 97:102-4 Ag 31 '53

How to save cost by designing for structural welding. A. E. Pearson. il diags Welding J 31:1129-35 D '52

How we weld titanium; Rohr aircraft corp. T. R. Bradley. il Am Mach 96:123-5 O 13 '52

Indexing machine automatically welds tubular assembly. B. Weight. il diag Mach 59: 162-3 Mr '53

Joining aluminum by spot welding. C. Raphael. il diags Product Eng Hdbk p G 18-23 '53

Line welding speeds new armored hulls for the army's new personnel carrier. il Am Mach 96:120-1 O 27 '52

Materials handling devices speed resistance welding. il Welding J 32:144 F '53

Multiple contact resistance. W. B. Kouwenhoven and D. R. Hagner. bibliog il diags Welding J 32:sup432-40 S '53

New demands lead to new directions in engineering materials; welding and joining. T. C. Du Mond. Materials & Methods 37:95-6 Je '53

Plant welding applications. H. J. Ralston. il Iron & Steel Eng 30:105-12 S '53

Preheating and postheating of pressure vessel steels. R. D. Stout. bibliog(60 titles) il Welding J 32:sup 14-22 Ja '53; Excerpts. Metal Prog 64:295-6+ O '53

Quality control for spot welding in a job shop. P. G. Poetto. Welding J 31:1017-22 N '52

Quality control of resistance welding by statistical methods. J. F. Radford and R. K. Waldvogel. bibliog il Welding J 32:521-6 Je '53

Resistance welding applications in aircraft stainless steels. D. O. Samuelson. il Welding J 32:603-11 Jl '53

Resistance welding gives better glass-to-metal joints. A. J. Wyzenbeek. il diags Iron Age 171:146-8 Ap 9 '53

Resistance welding in aircraft industry. il Aero Digest 66:42 Ja '53

Resistance welding of aircraft structures. J. Starr. il Aero Digest 65:50+ D '52

Resistance welding shines as volume producer. J. Ogden. il diags Steel 132:92-4 Je 8 '53

Spot welded joint details for lower cost assembly; drawings with text. W. A. Stanley. Product Eng Hdbk p G24-5 '53

Spot welding of magnesium with three-phase low frequency equipment. P. Klain and others. il Welding J 32:7-18 Ja '53; Discussion. J. J. Riley. 32:323 Ap '53

Successful welds made by new technique, report of U.S. Naval ordnance laboratory; abstract. Metal Prog 62:176 N '52

Telescoping tubes spotwelded faster. il Aviation W 57:28+ O 27 '52

Temperature distribution during the flash welding of steel. E. F. Nippes and others. il Welding J 30:sup585-601; 32:sup 113-22 D '51, Mr '53

$2250 in prizes for papers on resistance welding. Welding J 32:68 Ja '53

Watch expansion and contraction during welding. B. H. Higgs. diags Welding J 32: 230-1 Mr '53

Wear and operation problems in maintenance; Gary steel works. F. J. Gaydos. il Welding J 32:44-9 Ja '53

Welded and brazed parts. H. R. Clauser. il diags Materials & Methods 36:123-38 N '52 (reprints 25c)

Welding and welded connections. W. Gerritsen. diags Engineer 194:394-5 S 19 '52

Welding; production assembly without removal of grease film reported. il Iron Age 170:174-5 N 13 '52

Welding the stainless steels. H. Thielsch. bibliog il diags Materials & Methods 37:115-30 My '53 (reprints 25c)

Yoder mills developed for high-speed welding of non-ferrous tubing. il Mach 59:212-13 Ag '53

Control

Increased multispot production with limited power supply. C. R. Whitney, jr. il diags Welding J 31:1029-34 N '52

Resistance welding control. Welding J 32:784 Ag '53; Same abr. Blast F & Steel Pl 41: 1096 S '53

Electrodes

Cylinder specimen for testing the cracking tendency of steels and electrodes. P. Werthebach. diag Welding J 32:sup302 Je '53

Dry-store your welding rods. il Factory Management 111:99 Mr '53

Packaging welding electrodes increases sales 100 per cent; Harnischfeger corp. il Ind Marketing 38:100 My '53

Rotating electrode simplifies handling of big wing tanks. il Iron Age 171:159-60 Ap 23 '53; Welding J 32:630 Jl '53

Welding electrode shipments, 1941-1952; tabulation. Iron Age 171:460 Ja 1 '53

Welding electrodes; shipments, 1939-1952; tabulation. Steel 132:180 Ja 5 '53

Power supply

Frequency changer for resistance welding. M. E. Bivens. il diags Electronics 26:108-14 F '53

Increased multispot production with limited power supply. C. R. Whitney, jr. il diags Welding J 31:1029-34 N '52

Three-phase balancer for welding loads; Standard resistance welders, ltd. il diags Engineer 194:797 D 12 '52

Two new instruments measure rapid voltage fluctuations. M. Fisher, jr. and others. diags Elec World 139:116-18+ F 23 '53

Testing

Corrosion of structural spot welds. B. Karnisky and others. bibliog il diags Welding J 31:903-16 O '52; Excerpts. Metal Prog 63: 174+ Je '53

Notch impact tests of weld metal at low temperatures. M. Lefèvre and J. Lemoine. diags Welding J 32:sup 122-4 Mr '53

Resistance welding of dissimilar metals to magnesium for electrical connections. P. Klain and H. W. Croisant. il Welding J 32: 217-24 Mr '53

Welding for low-temperature service; abstract. R. W. Bennett. Metal Prog 63:190+ My '53

Unionmelt process

Automatic welding builds up track links. il Constr Methods 35:105-6+ Ja '53

Developments in submerged melt welding for steel plant maintenance. D. E. Knight. il diags Iron & Steel Eng 30:98-104 S '53

Drill collars reclaimed in less time with faster welding unit. il Iron Age 171:154 Mr 26 '53; Steel 132:155 Ap 20 '53

Role of weld metal area in welding hardenable steels. C. R. McKinsey and J. F. Collins. il Welding J 32:sup 125-31 Mr '53

Shielding arc-welding processes for jet-engine components. K. H. Koopman. il Welding J 32:103-15 F '53

Unionmelt cladding of mild steel roll by series-arc technique. J. F. Collins and others. il Welding J 31:1050-1 N '52

Unionmelt welding helps move mountains. il Welding J 32:626 Jl '53

Unusual welding setup speeds remodeling of gondola cars. il Iron Age 171:152 My 14 '53; Same. Steel 132:135 My 18 '53; Same. Welding J 32:741 Ag '53

Welded desks cut school expansion costs. il Welding J 32:744-5 Ag '53

Welding; submerged melt method deposits sound metal at low cost; abstract. D. E. Knight. il Iron Age 170:221-2 N 6 '52

ELECTRIC welding, Arc

Aft frames. il Welding J 32:527-9 Je '53

Arc-welding the Nash Rambler; illustrations with text. Mach 59:180-1 F '53

ELECTRIC welding, Arc—*Continued*

Automatic arc welding aids assembly of Diesel engine parts. H. Chase. il diags Mach 60:153-7 O '53

Automatic field welding of girth joints of large storage tanks. P. C. Arnold. il diags Welding J 32:399-406 My '53

Automatic welding of tool joints made practical. il Oil & Gas J 51:110-11 D 8 '52

Casting design improved by welding. A. L. Phillips. il Foundry 81:148+ F '53

Change spider save part; illustrations with text. G. C. Farrington. Am Mach 96:147 O 13 '52

Control of penetration and melting ratio with welding technique. C. E. Jackson and A. E. Shrubsall. bibliog il diags Welding J 32:sup 172-8 Ap '53

Development of welded bridge construction. N. W. Morgan. il diags Welding J 32:923-7 O '53

Faster, better welds for breaker tanks; Pacific electric mfg. co. il Iron Age 170:165 D 11 '52

Fillet and butt joints are welded by manual hidden arc. il Steel 132:160 Ap 6 '53

Fusion welding techniques for jet aircraft components. A. S. Rose and M. A. Braun. il diag Welding J 31:1121-8 D '52

High-speed photographic techniques for the study of the welding arc. I. L. Stern and J. H. Foster. il Soc Motion Picture & Tv Eng J 60:400-4 Ap '53

How to improve enamel shop welding. Cer Ind 59:70 D '52

Joining of ductile iron by several arc welding methods. T. E. Kihlgren and H. C. Waugh. il Welding J 32:947-56 O '53

Landing gear struts induction preheated before arc welding. M. W. McLaughlin. il Automotive Ind 109:40-1 S 15 '53

Large-scale welding done on Chevrolet front frame members. L. E. Feeney. il Welding J 31:1154-6 D '52

Maintenance welding pays. R. Kembel. il Power 97:105-7 S '53

Manual hidden arc lowers fabricating time; Phillips & Davies mfg. co. J. Quigley. il Steel 132:74-5 F 16 '53

Manual hidden arc welders halve time on earth mover components. W. T. Potter. il diag Welding J 32:324-8 Ap '53

Metal arc welding of stainless steel; illustrations with text. E. M. Rains. diags Sheet Metal Worker 44:44-5 N '52

Production welding large copper vessels. il Welding J 32:52 Ja '53

Scope of stud-welding. R. W. Taylor. il Engineering 175:315-16 Mr 6 '53; Abstract. Elec J 150:695-6 F 27 '53

Selection and evaluation of methods of hard facing. J. J. Barry. il Welding J 32:119-26 F '53

Silicon bronze weldment replaces cast iron in Venturi fabrication. il Am Mach 97:199 Mr 16 '53

Steel walking crank of 30-cu. yd. shovel reclaimed. J. X. Merkt. il Welding J 32:864-5 S '53

Stud welding saves time; Canadian car and foundry co. il Welding J 31:1049-50 N '52

Stud welding speeds parts processing; lugs welded to hard-to-handle parts for easier handling. R. M. Lorz. il Iron Age 171:71 Mr 12 '53

Studies of the crack sensitivity of aircraft steels. A. W. Steinberger and J. Stoop. bibliog il Welding J 31:sup527-42 N '52; Discussion. 32:sup157-60 Mr '53

Submerged arc welding at Atlas steels, ltd. C. Ekwall. il Iron & Steel Eng 29:55-60 O '52

Troubles down, output up with welded studs; farm machinery rasp bars; International harvester co. il Steel 132:110 Mr 9 '53; Welding J 32:631-2 Jl '53

Welding aids tool and die business; Premium die & tool corp. C. Larson. il Mill & Factory 53:132-3 O '53

Welding axle housings in automatic machines. L. E. Feeney. il Automotive Ind 109:54-5 Jl 15 '53

Electrodes

Effects of electrodes and heat treatments on mild steel weldments. E. F. Nippes and A. Lesnewich. bibliog(29 titles) il diags Welding J 32:sup353-74 Ag '53

Fumes and gases in arc welding. E. Thrysin and others. bibliog il A M A Archives Ind Hygiene & Occup Med 6:381-403 N '52

Low-hydrogen welding rods. J. D. Fast. bibliog il Welding J 32:516-20 Je '53

New Murex welding electrodes. Metallurgia 47:317-18 Je '53

Proper surfacing alloy gives maximum wear. Brick & Clay Rec 122:68-72 F '53

Russian welding practice. C. A. Zapffe. bibliog Welding J 32:842-5 S '53

Shaking out, cleaning, welding, steel castings. diags Foundry 81:96-7+ Ap '53

Stranded electrode materials for aircomatic welding. H. Robinson and H. C. Cook. il diags Welding J 32:692-702 Ag '53

Use of thoriated tungsten electrodes in inert gas-shielded arc welding; investigation of potential hazard; abstract. A. J. Breslin and W. B. Harris. Nat Safety N 67:94+ Ap '53

Heliarc process

Automatic Heliarc welding. il Elec Com 30:83 Je '53

Drawing and welding two-piece fenders. H. Chase. il Automotive Ind 107:68-71 N 1 '52

Heliarc welding helps fabricate nickel pipe. il Welding J 32:743 Ag '53

How we weld titanium; Rohr aircraft corp. T. R. Bradley. il diags Am Mach 96:123-5 O 13 '52

Redesign boosts torch's capacity; Heliarc welding torches. il diag Product Eng 23:164-5 O '52; Materials & Methods 36:160+ N '52

Simple controller cuts welding gas bills. il Steel 132:94 Mr 23 '53

Timer cuts Heliarc welding costs. il Welding J 32:742-3 Ag '53

Welded desks cut school expansion costs. il Welding J 32:744-5 Ag '53

Hygienic aspects

Fumes and gases in arc welding. E. Thrysin and others. bibliog il A M A Archives Ind Hygiene & Occup Med 6:381-403 N '52

Make your electric welding operations safer. W. Schweisheimer. Iron Age 71:160-1 Ap 2 '53

Potential hazard from use of thoriated tungsten electrodes. A. J. Breslin and W. B. Harris. Welding J 32:134 F '53

Use of thoriated tungsten electrodes in inert gas-shielded arc welding; investigation of potential hazard; abstract. A. J. Breslin and W. B. Harris. Nat Safety N 67:94+ Ap '53

Inert gas shielding

Aircomatic welding process for aluminium. il Engineering 175:397 Mr 27 '53

Argon-arc welding of copper; abstract. J. H. Cole. Metal Prog 63:206-8 Ap '53

Argonarc welding torch for welding stainless steels; Argonarc process. il Engineer 194:666 N 14 '52; Engineering 174:807 D 19 '52

Argonaut welding process. il Metallurgia 47:266 My '53; Automobile Eng 43:238 Je '53

Comparison of shielding mixtures for gas-shielded arc welding. J. W. Cunningham and H. C. Cook. il diags Welding J 32:834-41 S '53

Cone arc welding. P. Patriarca and G. M. Slaughter. il diags Welding J 32:597-602 Jl '53

Consumable electrode inert gas welding unit; Fillerarc. il Materials & Methods 38:164+ O '53

Continuous shielded arc welding. il Engineer 195:605 Ap 24 '53

Controlled internal-contour shielded-root welds without backing rings; K-weld. C. Diehl and others. il diags A S M E Trans 75:1103-10; Discussion. 1110-15 Ag '53

Designing around inert-gas metal arc welded stainless, nickel and stainless clads, copper, copper base alloys, aluminum. J. H. Berryman. il diag Product Eng 24:171-3 Ap '53

ELECTRIC welding, Arc—Inert gas shielding —*Continued*

Ductile welding of zirconium. F. G. Cox. il Welding J 32:sup92-8 F '53

Effect of alloying elements on welds in titanium. G. E. Faulkner and others. il diags Welding J 32:sup481-97 O '53

Effect of atmospheric contaminants on arc welds in titanium. J. C. Barrett and others. il Welding J 32:sup283-91 Je '53

Fillerarc welding process. R. W. Tuthill. il Welding J 32:703-7 Ag '53

Fusion welding techniques for jet aircraft components. A. S. Rose and M. A. Braun. il diag Welding J 31:1121-8 D '52

Gas flow requirements for inert-gas-shielded arc welding. G. J. Gibson. il diags Welding J 32:sup 198-208 Ap '53

Gases produced by inert arc welding. J. J. Ferry and G. B. Ginther. bibliog Welding J 32:396-8 My '53; Abstract. Nat Safety N 67:46 Mr '53

Heavy-duty Heliarc torch. il Blast F & Steel Pl 41:968-9 Ag '53

Inert arc welding of 90-10 cupro-nickel. L. H. Hawthorne. il Welding J 32:31-5; Discussion. 36 Ja '53

Inert-arc welding technique for eliminating backing rings in piping. R. A. Mueller and W. B. Root. il diags Welding J 32:205-14; Discussion. 214-16 Mr '53

Inert gas doubly shields improved pipe welds; K-weld process. il diags Power 97:94-7 Ag '53

Inert-gas metal-arc welding of mild and low-alloy steel. F. G. Harkins. il Welding J 32:683-9 Ag '53

Inert-gas-shielded metal-arc welding process. W. H. Wooding. il diags Welding J 32:299-312, 407-23 Ap-My '53

Inert-gas shielding of the metallic arc. W. L. Green and R. J. Krieger. bibliog il Welding J 31:sup582-6 D '52

Joining of copper by use of Heliwelding. H. A. Huff, jr. il Welding J 32:625-6 Jl '53

New maintenance tool for steel mill use. J. J. Barry. il Iron & Steel Eng 30:92-7 Mr '53

Nickel-clad steels welded by shielded metal-arc process. R. G. Lyall. il diag Iron Age 171:102-3 Ja 15 '53

Porosity in the welding of carbon steel. G. W. Oyler and R. D. Stout. il Welding J 32:sup454-60 S '53

Practical aspects of welding titanium alloys. J. J. Chyle and I. Kutuchief. il diags Welding J 32:sup65-73 F '53

Production welding of steels by gas-shielded arc welding. C. J. Sullivan. il diags Welding J 32:391-6 My '53

Restoration of ductility in alloy titanium welds. A. J. Rosenberg and others. il Welding J 32:708-14 Ag '53

Role of weld metal area in welding hardenable steels. C. R. McKinsey and J. F. Collins. il Welding J 32:sup 125-31 Mr '53

Semiautomatic inert-gas metal-arc welding of aluminum alloys. C. T. Gayley and others. il diags Welding J 32:sup 179-90 Ap '53; Discussion. 32:sup385-6 Ag '53

Shielding arc-welding processes for jet-engine components. K. H. Koopman. il Welding J 32:103-15 F '53; Excerpts. Steel 131:76-80 D 29 '52; Abstract. Iron Age 171:110-12 Ja 22 '53

Stranded electrode materials for aircomatic welding. H. Robinson and H. C. Cook. il diags Welding J 32:692-702 Ag '53

Thoriated tungsten electrodes pay; three ways to boost aluminum welding production. H. A. Huff, jr. il Iron Age 171:146-7 Je 4 '53

Tow carts fabricated by inert-gas metal-arc welding. il Welding J 31:1059 N '52

Welded light alloy yacht. il Engineer 196:138-9 Jl 31 '53; Engineering 176:180-2 Ag 7 '53

Welding Diesel locomotive parts; report of Master boiler makers' association. il Ry Mech & Elec Eng 126:65-8 N '52

Safety measures

Relation between welding current and appropriate transmission of filter glasses. T. Rosskopf. Welding J 32:689-91 Ag '53

Standards

Arc welding time standards; management data sheet. P. Broadstone. Factory Management 111:154, 156 Ja '53

Testing

Arc welding of ferritic and austenitic nodular cast iron. J. Sohn and others. il diag Welding J 32:823-33 S '53

Arc welding of low chromium-molybdenum steel pipe. J. Bland. bibliog il Welding J 32:803-14 S '53

Chromium recovery during submerged-arc welding. J. G. Kerr and D. A. Elmer. bibliog il Welding J 31:sup431-8 S '52; Discussion. F. G. Harkins. 32:sup 111-12 F '53

Controlled thermal severity cracking test simulates practical welded joints. C. L. M. Cottrell. bibliog il diags Welding J 32:sup257-72 Je '53

Effects of carbon, oxygen and nitrogen on welds in titanium. D. C. Martin. il diags Welding J 32:sup 139-54 Mr '53

Fatigue properties of weld metal. L. A. Harris and others. bibliog il diags Welding J 32:sup 441-53 S '53

Gas flow requirements for inert-gas-shielded arc welding. G. J. Gibson. il diags Welding J 32:sup 198-208 Ap '53

Initiation and propagation of brittle fracture in structural steels. P. P. Puzak and others. bibliog il diags Welding J 31:sup561-81 D '52

Semiautomatic inert-gas metal-arc welding of aluminum alloys. C. T. Gayley and others. il diags Welding J 32:sup 179-90 Ap '53; Discussion. 32:sup385-6 Ag '53

Strength joints to steel with aluminum bronze filler metals. W. G. Groth and R. E. Maersch. il diags Welding J 31:1042-8 N '52

Thermal cycles in the arc welding of ½-in. titanium plate. E. F. Nippes and others. bibliog il diags Welding J 32:sup461-74 S '53

Vacuum tightness of welded and brazed aluminum containers. M. A. Miller and A. S. Russell. diags Welding J 32:116-18 F '53

Welded joints between dissimilar metals in high-temperature service. R. W. Emerson and W. R. Hutchinson. il diag Welding J 31:sup 126-41 Mr '52; Same cond. Metal Prog 63:194-6+ Ja '53

ELECTRIC welding machines

Air and ideas make spotwelder automatic; Stewart-Warner corp. R. P. Roberts. il diags Am Mach 96:104-5 D 22 '52

Arc-welding machine for steel girders. il Engineering 174:645 N 14 '52

Arcwelding set orders, 1935-1952; tabulation. Iron Age 171:460 Ja 1 '53

Automatic arc welding aids assembly of Diesel engine parts. H. Chase. il diags Mach 60:153-7 O '53

Automatic field welding of girth joints of large storage tanks. P. C. Arnold. il diags Welding J 32:399-406 My '53

Automatic welding spurs auto frame production. H. G. Schultz. il diag Iron Age 170:84-7 O 30 '52

Automatic wheel welder saves labor and material. il Coal Age 58:97 Jl '53

Beating worn drum problem by automatic welding. il Welding J 32:857-8 S '53

Combination bender and welder makes freezer cabinets. il Am Mach 97:148 S 28 '53

Combination forming and welding machine. il Mach 59:221 Ja '53

Combination welding and forming machine. J. Maloney. il Welding J 32:231 Mr '53

Diesel welding plant. il Elec J 151:584 Ag 21 '53

Doubles welding speeds with fast roll-spot technique; Ryan aeronautical co. il Welding J 32:148-9 F '53

G-E consumable-electrode gas-shielded welder. il Mach 60:213-14 S '53

How to burn foundation holes; illustrated instructions. Power 97:139 Je '53

Improvised welder meets a crisis. R. Avery. il Steel 132:112-13 My 18 '53

Ingenious machines weld thin-wall stainless tanks; Bell aircraft corp. R. L. Brown. il diags Am Mach 96:125-8 N 24 '52

ELECTRIC welding machines—*Continued*

Large automatic arc welding machine. il Engineer 194:551 O 24 '52

Light weight selenium rectifier d.c. welder. il Materials & Methods 38:168+ O '53

Machine arc welding; exhaust pipes for Buick V-8 overhead-valve engine. il Metal Prog 63:105-6 Mr '53

Machines plus ingenuity make resurfacing easier, better. il Coal Age 58:114 F '53

Magnetic force welding. M. Zucker and G. Cubitt-Smith. il diags Welding J 31:1141-53 D '52

Manual hidden arc welders halve time on earth mover components. W. T. Potter. il diag Welding J 32:324-8 Ap '53

Mechanical octopus turns out grating at high speed. il Iron Age 171:150-1 My 14 '53

Moving head, not work, speeds welding. il Iron Age 171:59 Je 11 '53

Multi-transformer welding presses; abstract. J. Ogden. Automotive Ind 108:124 Je 15 '53

Novel methods arc weld high-strength alloys; Solar aircraft co. F. G. Harkins and H. C. Thompson. il diags Am Mach 96:119-24 D 8 '52

Resistance welding machine. il Welding J 32:778+ Ag '53

Resistance welding then and now. J. Harner. diag Sheet Metal Worker 44:62+ My '53

Rolling up cone seams. il Steel 132:102+ Je 29 '53

Rotating band welding machine for projectiles. il Am Mach 97:180 Je 22 '53

Sciaky multiple welder. il Tool Eng 31:103 O '53

Skip welding ring gear to flywheel. H. Chase. il Tool Eng 29:63-4 N '52

Solar rollwelder cuts jet costs. il Aviation W 58:62+ My 25 '53

Welding developments; Vauxhall motors, ltd. il Automobile Eng 43:247-57 Je '53

Welding of high alloys doubled with new roll-spot technique; Ryan aeronautical co. J. R. Fullerton. il Materials & Methods 37:166+ F '53

Welding troubles, causes and cures. L. Gilbert. Brick & Clay Rec 122:84+ Ja '53

Advertising

Business publication ad lands a new customer and an $80,000 sale; A. O. Smith corp. il Ind Marketing 37:44-5+ D '52

Maintenance and repair

Maintaining resistance welding machinery. T. A. Dickinson. il Mill & Factory 52:120-2 Mr '53

Trouble-shooting on rotating arc welders. il Mill & Factory 52:136 Ja '53

Why does welder overheat rods? diags Power 97:132+ Mr '53

Manufacture

Welding machine yoke is cast around nickel tubing. il Foundry 81:262 O '53

ELECTRIC winches. See Winches, Electric

ELECTRIC wire

Development of enamelled strip. il Elec J 150:295-6 Ja 23 '53

Dow Corning presents new magnet wire enamel. Elec World 139:260+ My 18 '53

Plasticizer drip considered at Underwriters' conference. Rubber Age 72:501 Ja '53

What you need to know about connectors for aluminum wire and cable. J. St Andre. il diags Factory Management 110:120-3 O '52

Wire for wet locations. il Paper Tr J 135:27 O 31 '52; Same. Rubber Age 72:224 N '52

Stripping

Stripping techniques for insulating films on wire. R. G. Roesch. il Electronics 26:116-19 Ja '53

Wire-stripping machine. diag Electronics 26:250+ F '53

Wire stripping; various methods of insulation removal. Elec R (Lond) 152:1210-11 My 29 '53

Weatherproofing

Weathering and crack resistance of black polyethylene for wire and cable. W. A. Haine and others. bibliog il diag Elec Eng 71:1113-17 D '52

ELECTRIC wiring

Adapters speed wiring and equipment change. il Product Eng 23:228 N '52

Adequate wiring primes appliance sales. S. Halle. il Elec West 109:93 N '52

British industries fair, Birmingham; functions and exhibits. il Elec R (Lond) 152:997-9 My 1 '53

Common sense of school wiring. M. J. Feron. Illum Eng 48:321-2 Je '53

Domestic socket-outlets. R. J. Courtenay. il diag Elec R (Lond) 152:1009-12 My 1 '53

Domestic wiring. P. Honey. il Elec R (Lond) 153:293-5 Ag 7 '53

Economies in wiring practice; discussion. Elec J 150:1152 Ap 3 '53; Elec R (Lond) 152:758 Ap 3 '53

Economy in building; proposals relating to installation work. Elec R (Lond) 151:246-7 Ag 1 '52

Elastic reserve is key to wrapped wire-terminal joints; review. J. H. Allen il diags Metal Prog 64:161-4+ Jl '53

Fiber ducts save time in wiring machine panels. R. T. Johnstone. il Am Mach 96:105 D 8 '52

Flexible installation; Liverpool exchange buildings. il Elec R (Lond) 152:1050-3 My 8 '53

Height to erect conduit service risers above roofs of residences; engineering reference sheet. H. M. Williams. il diag Elec World 139:98 Ja 12 '53

It's the electric age; are your houses wired to meet it? il plan Am Bld 74:87 D '52

Move cold junction compensator to save thermocouple extension wire. R. A. Terry. diag Chem Eng 59:175 O '52

Necessary conditions for obtaining a permanent solderless wrapped connection. W. P. Mason and T. F. Osmer. il diag Metal Prog 64:242+ O '53

Person to person calls sell wiring. il Elec World News ed 139:28-9 My 11 '53

Remote-control wiring for your new home. E. E. Smith. il plans Gen Elec R 56:24-9 My '53

Research and engineering progress, 1952; for building construction. il Gen Elec R 56:55 Ja '53

Residential wiring requirements in National electric code. Elec West 109:87-8 D '52

Re-wiring a hospital. il Elec J 151:654 Ag 28 '53

Re-wiring Lancaster House. il Elec J 151:273-4 Jl 24 '53

Royal festival hall; electrical installation. J. G. Hunter. il diags Inst E E Proc 100 pt 2:69-81; Discussion. 81-6 Ap '53

Selling wiring under the big top. il Elec World 139:104 Ja 12 '53

Socket outlets. T. J. Gilbert. Elec J 150:2221-2 Je 19 '53

Solderless wrapped connections; structure and tools. R. F. Mallina. il diags Bell System Tech J 32:525-55 My '53

Statewide cooperative hits the road to tell wiring story with panels. W. E. Stuckey. il Elec World News ed 139:22-3 Mr 2 '53

Vertical rising mains. il Elec R (Lond) 151:1175-6 N 28 '52

Why should an electric company promote adequate wiring? C. T. Bremicker. Edison Elec Inst Bul 21:113-15 Ap '53

Wiring queries; interpretations of I.E.E. regulations. Elec R (Lond) 151:243 Ag 1 '52

See also

Electric cables
Electric conduits
Electric distribution
Electric fittings
Electric fuses
Electric lighting
Electric lines
Electric transmission
National electrical code

Diagrams

Get the most from electrical diagrams. J. Sparks. diags Power 96:140-1 D '52; Same cond. Coal Age 58:86-7 Mr '53

Embedding in concrete

Duct wiring; preformation in concrete without conduit; Ductube co. il Elec R (Lond) 151:1321-3 D 19 '53

ELECTRIC wiring—*Continued*

Safety measures

Hot wires and the safety orders; demonstration meetings and forums, Los Angeles and San Francisco. Elec West 110:80-1 Ja '53

ELECTRIC wiring tools

Bell wraps solderless connections for joint economy. C. Emerson. il Am Mach 97:100-1 Ag 31 '53

New general purpose relay for telephone switching systems; tools for wiring relays. A. C. Keller. il Bell System Tech J 31: 1061-6 N '52

New wiring tools make solderless connections. il Electronics 26:272+ Je '53; Elec Eng 72:656 Jl '53

Solderless wrapped connections; structure and tools. R. F. Mallina. il diags Bell System Tech J 32:525-55 My '53

ELECTRIC workers

Court restraining order issued in IBEW strike. Elec West 110:138 Ap '53

Electrical trades' union annual conference, Clacton, May 11-15. Elec J 150:1729, 1799-800 My 15-22 '53; Elec R (Lond) 152:1115-16, 1173 My 15-22 '53

Electricians' strike; statements by E.T.U. and N.F.E.A. Elec R (Lond) 153:450-1 Ag 28 '53

Employment outlook in the electrical equipment industry. A. Rosenberg. Mo Labor R 75:507-10 N '52

Joint consultation; supply industry experience and possibilities. W. Walsh. Elec R (Lond) 151:1384-6 D 26 '52

Kuhlman Electric strike ends after five months. Elec World News ed 139:9 Mr 16 '53

Staffing for productivity. V. Clements. Elec R (Lond) 152:63-4 Ja 9 '53

Where is self-respect? clamor for welfare without contributing to it is making mere tools of electrical workers. Elec West 110: 96 Mr '53

See also

Electric utilities—Employees

International union of electrical, radio and machine workers

ELECTRICAL association for women

Annual meeting, 28th, London, April 15. Elec J 150:1432-3 Ap 24 '53; Elec R (Lond) 152: 963-5 Ap 24 '53

ELECTRICAL contractors' association

Annual conference, 18th, Bournemouth; with abstracts of papers. Elec R (Lond) 152: 1471-9 Je 26 '53; Elec J 151:29-36 Jl 3 '53

Annual dinner, London, Jan. 28. Elec J 150:440-2 F 6 '53; Elec R (Lond) 152:313-14 F 6 '53

ELECTRICAL inspectors, International association of. See International association of electrical inspectors

ELECTRICAL journal (periodical)

75 years of weekly publication. il diags Elec J 150:1900-4 My 29 '53

ELECTRICAL manufacturers association, National. See National electrical manufacturers association

ELECTRICAL, radio and machine workers, International union of. See International union of electrical, radio and machine workers

ELECTRICAL review (periodical)

Eighty years ago; high lights in our first issue. il Elec R (Lond) 151:1052-3 N 14 '52

ELECTRICITY

Light from the dark ages, or the evolution of electricity supply; abstract. A. R. Cooper. Elec J 150:701 F 27 '53

See also

Armatures
Corona (electricity)
Dielectrics
Electric currents
Electroacoustics
Electrons
Electrophysiology
Electrostatics
Electrotherapeutics
Hall effect
Insulation (electric)
Ionization, Electrolytic
Photoelectric cells
Photoelectric effect
Photoelectricity
Piezoelectricity
Potential, Electric
Radio communication
Telegraph
Telephone
Thermoelectricity

ELECTRICITY, Accidents from

Electrical inspector of mines report for 1950. Electrician 149:340 Ag 1 '52

Electricity in mines; principal inspector's report for 1950. Elec R (Lond) 151:295-6 Ag 8 '52

See also

Electricity, Injuries from

ELECTRICITY, Atmospheric. See Atmospheric electricity

ELECTRICITY, Injuries from

Accidents feared rising; meeting of EEI's accident prevention committee. Elec World News ed 138:16 S 29 '52

Accidents in the home. Elec R (Lond) 151: 797 O 10 '52

Comparative studies of new push-pull methods for pole-top resuscitation. A. S. Gordon and others. bibliog il Elec Eng 72: 132-7; Discussion. E. W. Oesterreich. 137-40 F '53

Dangerous installations; liability of occupier and supply authority. C. F. Mayson. Elec R (Lond) 153:453-4 Ag 28 '53

Domestic electrical accidents. Engineering 174:608 N 7 '52

EEI resuscitation awards emphasize importance of intensive safety training. Edison Elec Inst Bul 21:19-24+ Ja; 55-8 F '53

Electrical accidents; analysis of principal causes. il Elec R (Lond) 151:549-51 S 12 '52

Electrical accidents; report on fatalities during 1950. Electrician 149:695-6+ S 5 '52

Electrical hazards in the pulp and paper industry. W. Schweisheimer. Pulp & Pa of Can 54:184, 188 Mr '53

Electricity in factories; legal decisions on the regulations. C. F. Mayson. bibliog Elec R (Lond) 153:363-5 Ag 14 '53

Factory inspector's report. Elec R (Lond) 152:795-6 Ap 10 '53

Fatal accidents in the electric light and power industry. D. C. Stewart. Edison Elec Inst Bul 20:391 N '52

Fatal accidents in the electric light and power industry; with tabulated review and classification of 165 fatal accidents reported in 1951. S. H. Young. Edison Elec Inst Bul 21:147-50 My '53

Film festival awards Oscar to Institute motion picture, Poletop rescue. il Edison Elec Inst Bul 21:304-5 Ag '53

Improved methods of pole-top resuscitation. J. E. Appel. bibliog il Nat Safety N 67: 22-5+ Ap '53

Liability for electrical accidents. Elec J 151: 491-2 Ag 14 '53

Low voltage, high hazard. H. Heinrich. Nat Safety N 68:122-3+ O '53

Occupational hazard; electric burns and shocks. W. Schweisheimer. Power Eng 57: 93 Ap '53

Review and classification of 141 fatal accidents reported during 1950 within the electric light and power industry; EEI accident prevention committee; chart. D. C. Stewart. Edison Elec Inst Bul 20:388-90 N '52

Successful applications of resuscitation recognized by EEI awards. Edison Elec Inst Bul 21:349-53 S '53

Treatment of low-voltage burns. H. S. Brown. Ind Med 21:575-6 D '52; Same abr. Nat Safety N 67:38+ Je '53

See also

Electric shock

ELECTRICITY, Static

Advisory committee on static electricity New York section; report. Am Dyestuff Rep 41:783-4 N 24 '52

Conductive rubber has many safety uses. Nat Safety N 67:140 Je '53; Same. Weekly Underw 168:1066 Ap 18 '53

Discharge your static electricity. il Safety Maint & Prod 104:29-30+ N '52

Electrification; its generation and behavior in hospital operating rooms. R. Beach. diag Elec Eng 72:329-34 Ap '53; Discussion. F. L. Hermach. 72:664-5 Jl '53; Reply. 72:854 S '53

Electrostatic processing methods are still in the exploratory stage; abstract. H. M. Brown. Textile World 103:133 My '53

Fading menaces in the oil industry. G. F. Prussing. il Nat Safety N 68:20-2+ S '53

ELECTRICITY, Static—*Continued*

From philosopher's toy to industry's headache; story of static electricity. S. M. Edelstein. bibliog il Am Dyestuff Rep 42:70-5 F 2 '53

Industrial fires and explosions from electrostatic origin. R. Beach. bibliog diag Mech Eng 75:307-13 Ap '53

Metals in radioactive static eliminators. J. D. Graves. il diag Metal Prog 62:94-6 N '52

Problem of static electricity. Rubber Age 72:63 O '52

Reducing the charge. il Chem W 71:65-7 N 15 '52

Static charge tester. il Paper Tr J 135:22-3 N 7 '52

Static conductivity measuring device; patent. diag Electronics 26:244+ S '53

Static control stops fires in powder plant. Safety Maint & Prod 106:64+ Ag '53

Static electricity. Nat Safety N 67:171-2 Mr '53

Static electricity and anti-static agents. il Consumers Res Bul 31:20-1 Ja '53

Static electricity hazards can be virtually eliminated; abstract. R. Beach. Safety Maint & Prod 105:66+ F '53

Static electricity in hospital operating suites; direct and related hazards and pertinent remedies. P. G. Guest and others. bibliog il diags U S Bur Mines Bul 520:1-58; pa 40c Supt. of doc. '53

Static electricity in industry; abstract. R. C. Smart. Engineering 174:548 O 24 '52

Static electricity starts fires and explosions. V. R. Croswell. bibliog Ind & Eng Chem 44:sup 129A-30A+ N '52

Static grounds out; area detection system. il Chem Eng 60:254 Mr '53

Static hazards in hospitals. il Safety Maint & Prod 105:77-9 Mr '53

Static prevention; vinyl polymers treated with high alkylsulfates of guanidine; patent. Am Dyestuff Rep 42:17-18 Ja 5 '53

See also

Textile fabrics—Electrostatic properties

ELECTRICITY in air conditioning

Air conditioning loads can be handled economically. G. L. Kenny, jr. il diag Elec World 139:82-4 Mr 9 '53

Conversion of 230 volt motors for 208 volt operation. L. R. Smith. Refrig Eng 61:381-2+ Ap '53

Effect of air conditioning on load of Oklahoma gas & electric co. B. Brady. diag Edison Elec Inst Bul 21:315-16 Ag '53

Engineering highlights of 1952; refrigeration and air cleaning. C. A. Scarlott. il Westinghouse Eng 13:43-4 Ja '53

Future of room air-conditioning sales, a vast business. J. M. Otter. Edison Elec Inst Bul 21:163-4 My '53

Heat pump; new load on utility horizon. P. F. O'Neill. il Gen Elec R 56:47-50 Mr '53

Home cooler market is growing. Elec World News ed 139:50 F 16 '53

Packaged air conditioners demand balanced three-phase voltage. B. M. Gallaher. Elec World 139:120, 220+ Ap 20 '53

Problem of low power factor air conditioning. R. F. Scott. Edison Elec Inst Bul 21:313-14 Ag '53

Problems of power supply for three-phase packaged air-conditioner units. B. M. Gallaher. Edison Elec Inst Bul 21:11-15 Ja '53

Report of the joint committee on air conditioning and refrigerating equipment. J. W. Anderson. Edison Elec Inst Bul 21:121 Ap '53

Research and engineering progress, 1952; air conditioning. il Gen Elec R 56:40 Ja '53

Room air conditioners need adequate wiring. Heating-Piping 25:104 F '53

ELECTRICITY in mining

Cables for mining work. C. C. Barnes. bibliog Electrician 149:399-403 Ag 8 '52

Electric power supply problems of the South African gold mining industry. E. F. Rendell. il maps Can Min J 74:65-8 Jl '53

Electricity applied to mining. B. L. Metcalf. bibliog il diags Inst E E Proc 100 pt 1:59-71 Mr '53

Moisture protection for electrical equipment. il Min Eng 5:788 Ag '53

Portable dry-type power centers. H. S. Gates and J. Z. Linsenmeyer. il diags Eng & Min J 154:91-3 O '53

Power for underground mines. J. Z. Linsenmeyer and A. G. Owen. il diag Westinghouse Eng 13:135-9 Jl '53

Who will supply power for processing taconite? il map Elec World News ed 138:32-3 N 24 '52

See also

Coal mines and mining—Electric equipment
Coal mines and mining—Power
Electric locomotives, Mine
Mine hoisting, Electric
Mine pumping, Electric
Mine signals, Electric
Mining engineering—Power

Safety measures

American standard safety code for installing and using electrical equipment in and about coal mines (M2.1). diags U S Bur Mines Bul 514:1-28; pa 20c Supt. of doc. '52

ELECTRICITY in refrigeration

Report of the joint committee on air conditioning and refrigerating equipment. J. W. Anderson. Edison Elec Inst Bul 21:121 Ap '53

See also

Refrigerators, Electric

ELECTRICITY in the home

Accidents in the home. Elec R (Lond) 151:797 O 10 '52

Away from the grid; all-electric country house. il Elec J 151:435-6 Ag 7 '53

Domestic development. N. F. Marsh. il Elec R (Lond) 153:176-9 Jl 24 '53

Domestic socket-outlets. R. J. Courtenay. il diag Elec R (Lond) 152:1009-12 My 1 '53

Domestic wiring. P. Honey. il Elec R (Lond) 153:293-5 Ag 7 '53

Electricity in domestic economy and in the national economy. R. Y. Sanders. Elec R (Lond) 151:1212-14 D 5 '53

Electricity in the farmhouse. W. J. Guscott. il Elec R (Lond) 153:221-5 Jl 31 '53

Electricity policy for housing; abstract. V. W. Dale. Elec J 149:1935-6 D 19 '52

Heat, light and power in the home; abstract. Lady Railing. Elec J 149:1674 N 28 '52

How electric living affects the load curve; eight sample studies. Elec World 139:155-64 My 18 '53

Is the home to become a substation? A. Gruber. Elec West 110:78 Ja '53

It's the electric age; are your houses wired to meet it? il plan Am Bld 74:87 D '52

Labour-saving homes at Hartcliffe. Elec J 149:1516 N 14 '52

Remote-control wiring for your new home. E. E. Smith. il plans Gen Elec R 56:24-9 My '53

See also

Electric apparatus and appliances, Domestic

History

Electricity at the turn of the century. J. H. Jupe. il Elec J 150:1908-9 My 29 '53

ELECTRICITY in the petroleum industry

Electric power for gas system operation. il Pet Eng 25:D20+ Ja '53

Petroleum electric power association 24th annual meeting, Tulsa, Oct. 1-3. Oil & Gas J 51:177 O 13 '52

See also

Petroleum—Pumping, Electric
Petroleum pipe lines—Pumping stations, Electric
Petroleum refineries—Electric equipment

ELECTRICITY in war

Barges keep south Korea in power. il map Elec World News ed 139:22-4, cover Mr 16 '53

ELECTRICITY on the farm

Agricultural shows; electrical displays. Elec R (Lond) 153:180 Jl 24 '53

Bath and West show; application of electricity to rural industries. il Elec R (Lond) 152:1377-8 Je 12 '53

ELECTRICITY on the farm—*Continued*

Efficient poultry keeping; appliances on view at Olympia. il Elec R (Lond) 151:1179-80 N 28 '52
E.R.A. field station. il Elec J 150:1625-6 My 8 '53
Electrical equipment for food production; abstracts. F. E. Rowland. Elec J 150:2125-7 Je 12 '53; Elec R (Lond) 152:1354 Je 12 '53
Electrical research and agriculture. il Engineer 195:707-8 My 15 '53; Engineering 175:619-21 My 15 '53
Electricity and food production; abstracts. S. F. Steward. Engineering 175:829-30 Je 26 '53; Elec J 150:2116-18 Je 12 '53; Elec R (Lond) 152:1350-1 Je 12 '53
Electricity for agriculture. C. A. C. Brown. Engineer 195:861-3 Je 19 '53; Abstracts. Elec J 150:2119-21 Je 12 '53; Elec R (Lond) 152:1351-2 Je 12 '53; Engineering 175:830 Je 26 '53; Discussion. Engineer 195:866 Je 19 '53; Engineering 175:830-1 Je 26 '53
Electricity helps alfalfa keep its vitamin A. il Elec World News ed 139:43 Ja 5 '53
Electricity in farm crop-drying. C. A. C. Brown and P. G. Finn-Kelcey. bibliog diags Inst E E Proc 100 pt 2:115-24; Discussion. 125-9 Ap '53; Elec J 149:1679-80 N 28 '52; Elec R (Lond) 151:1157-8 N 28 '52
Electricity in the farmhouse. W. J. Guscott. il Elec R (Lond) 153:221-5 Jl 31 '53
Fans in agriculture; abstracts. W. Cover and R. C. Dick. Elec J 149:1845-6 D 12 '52; Elec R (Lond) 151:1292 D 12 '52
Farm food cooking. E. C. Claydon. il Elec R (Lond) 153:296 Ag 7 '53
Farm market sales tactics that leave quotas far behind; Penn. power & light co. J. M. Stedman and R. T. Jones. il Sales Management 69:30-2+ D 1 '52
Farming in Cornwall. il map Elec R (Lond) 152:3-10 Ja 2 '53
Grain drying. E. C. Claydon. il Elec R (Lond) 152:350-2 F 13 '53
Graphic proof of all-electric values presented by co-op; chart. F. Sahlman. Elec World 139:118 My 4 '53
Great Yorkshire show. il Elec R (Lond) 153: 329 Ag 14 '53
Infra-red heating units for farm stock. il Engineer 196:284 Ag 28 '53
Kent county show, Maidstone. il Elec R (Lond) 153:85 Jl 10 '53
Latest in farm electrical equipment. W. D. Hemker. il Elec World News ed 138:38-9 D 22 '52
Making electricity do more and earn more for the farmer. B. L. England. Edison Elec Inst Bul 20:417-20+ D '52
Mechanical ventilation can prevent grain spoilage. V. Marvin and C. C. Connolly, jr. il Elec World News ed 139:34-5 Mr 2 '53
Milking machines. H. S. Hall. Elec R (Lond) 152:245 Ja 30 '53
On the farm; 66th annual dairy show. il Elec J 149:1263-4 O 24 '52; Elec R (Lond) 151: 931-5 O 31 '52
Recent developments in grain drying; abstract and discussion. H. T. Horsman. Elec R (Lond) 152:429-30 F 20 '53
Research in rural electrification; E.R.A. field station, Shinfield. il Elec R (Lond) 152: 1130-2 My 15 '53
Royal and Kent shows. il Elec J 151:125-6 Jl 10 '53
Royal show, Blackpool. il Elec R (Lond) 153:140-4 Jl 17 '53
Smithfield show and agricultural machinery exhibition, London. Elec R (Lond) 151: 1291-2 D 12 '52
Takes the show to the farm. D. J. McGonigle. il Elec West 111:96-7 Jl '53
To up electricity use on the farm, power company stages tours. J. C. Cahill. il Elec World News ed 139:38-9 Mr 16 '53

See also
Electric service, Rural
Electrohorticulture
Rural electrification administration

Cost

Farm power costs revealed in survey. Elec World 138:140 O 6 '52

ELECTRICITY supply

Developments in electricity supply productivity. Engineering 174:298-9 S 5 '52
Electricity and productivity; American and British practice. Elec R (Lond) 151:503-4 S 5 '52
Electricity and productivity; statement reviewing action taken on report of electricity supply productivity teams. Engineer 194:327-8 S 5 '52
Fuel-power-raw materials; tabulations. Steel 132:200-1 Ja 5 '53
Power plant shortage; the present position as viewed from the United States. J. G. B. Hamilton. il Elec R (Lond) 151:778-82 O 10 '52

See also
Electric lines
Electric plants
Electric power
Electric utilities

Statistics

United nations finds power production pressing 900 billion kwhr a year. Elec World News ed 138:14-18 N 24 '52

Africa, East

Electricity in east Africa; abstract. C. M. Taylor. Elec R (Lond) 151:1399 D 26 '52

Alabama

Alabama story; power and fuel. il Manuf Rec 122:89-91 Je '53

Alaska

Hearing held on Eklutna bill. Elec World News ed 139:17 Mr 16 '53

Arizona

Contract integrates Arizona systems. map Elec World News ed 139:22-3 My 11 '53

Arkansas

Setback for SPA. Elec World News ed 139: 7 Mr 2 '53

Australia

South Australian report. Elec R (Lond) 152: 529 Mr 6 '53

Belfast, Ireland

Belfast electricity; year ending March 31. Electrician 149:614 Ag 29 '52

Bombay

Power supply in Bombay. Engineer 194:169 Ag 1 '52

Boston

Regulations limiting resale of electricity approved. Pub Util 51:804-5 Je 4 '53

Brazil

Brazil electrification plan. Elec R (Lond) 151: 499-500 S 5 '52
Brazil's shortage of power may be eased. For Comm W 49:8 Je 22 '53
Developments in Brazil. Elec R (Lond) 151: 773 O 10 '52
End to Sao Paulo shortage? Elec World News ed 139:8 Mr 2 '53
News from Brazil. Elec R (Lond) 151:1408 D 26 '52
Power shortage in Brazil. Elec R (Lond) 152:1304 Je 5 '53

California

See also
Central Valley project, California

Canada

Canada sets record for new hydroelectric capacity; further expansion scheduled. For Comm W 49:4 Ja 26 '53
Record Canadian development. Elec R (Lond) 152:317-18 F 6 '53

Chile

Study made of power situation in Chile. For Comm W 49:4 Ja 12 '53

Colombia

Colombia approves funds for plants. For Comm W 50:5 Jl 20 '53

Cornwall

Farming in Cornwall. il map Elec R (Lond) 152:3-10 Ja 2 '53

ELECTRICITY supply—*Continued*

Devon, England

Devon sub-area. G. T. Garwood. il map Elec R (Lond) 152:1259-69 Je 5 '53

Egypt

Egyptian electric power shows steady increase. For Comm W 49:2 Je 22 '53

Europe

Electrical geography; international power exchanges. map Elec R (Lond) 151:734-6 O 3 '52

European co-operation; electric power prospects. Elec R (Lond) 152:293 F 6 '53

European electricity supply. Elec R (Lond) 152:656 Mr 20 '53

European trade in electric power; ECE report. Engineer 194:449-51 O 3 '52

Recent development in the electric power situation in Europe, 1951-1952. Elec J 150:1393 Ap 24 '53

United nations reports on European power. diag Electrician 149:1089-90 O 10 '52

Finland

Finland is building new power plants. For Comm W 48:9 N 24 '52

Great Britain

American advice for BEA; report by American team, Anglo-American productivity council. Economist 167:622-3 My 30 '53

Annual report of the British electricity authority. Engineer 194:493-4 O 10 '52

Britain tries a new approach to power from the wind; anemoplant. il diag Elec World News ed 139:32-4 Ap 13 '53

BEA's expansion program under fire; 4th annual report. il Elec World News ed 138:16-17 N 10 '52

Case for electrical development; proceedings of 5th British electrical power convention. Engineering 175:620 My 15 '53

Costs of rural electricity. Economist 167:894 Je 27 '53

Distribution engineering in the nationalized supply industry. H. S. Moody. Inst E E Proc 100 pt 1:16-17 Ja '53

Electricity and gas; analysis of administrative costs. Elec J 150:364 Ja 30 '53

Electricity and industrial production. E. R. Wilkinson. Engineer 195:837-40 Je 12 '53; Abstracts. Elec J 150:2102-4 Je 12 '53; Elec R (Lond) 152:1346-7 Je 12 '53; Discussion. Elec J 150:2114 Je 12 '53

Electricity and national prosperity; abstracts. J. Hacking. Engineering 175:758-9 Je 12 '53; Elec J 150:2093-4+ Je 12 '53; Elec R (Lond) 152:1343-5 Je 12 '53

Electricity and productivity; conference organised by the British electrical development association. Engineer 194:623-4 N 7 '52

Electricity and the national economy; abstract. C. H. A. Collyns. Inst E E Proc 100 pt 1:78 Mr '53

Electricity and water supply. H. R. Lupton. il Elec J 150:1041-3; 151:40-4, 341-5, 633-6 Mr 27, Jl 3, 31, Ag 28 '53

Electricity at the plant. Economist 167:836-7 Je 20 '53

Electricity in domestic economy and in the national economy; abstract. R. Y. Sanders. Elec J 149:1673-4 N 28 '52

Electricity in the areas. Elec R (Lond) 151:859-60, 907-9, 956-7, 1025, 1051 O 17-N 14 '52

Electricity policy for housing; abstract. V. W. Dale. Elec J 149:1935-6 D 19 '52

Electricity supplies for industry; abstracts. J. O. Johnson and C. P. Holder. Engineering 175:790 Je 19 '53; Elec J 150:2105-7 Je 12 '53; Elec R (Lond) 152:1347 Je 12 '53; Discussion. Elec J 150:2114 Je 12 '53

Electricity supply costs. Elec R (Lond) 152:581-2 Mr 13 '53

Electricity supply in 1951-52; B.E.A.'s fourth report. Elec R (Lond) 151:765-72 O 10 '52; Electrician 149:1069-71 O 10 '52

Electricity supply industry. Lord Citrine. Elec J 150:1067-8 Mr 27 '53

Electricity supply prospects; monthly tables of statistics. Electrician 149:465-6, 622-3 Ag 15, 29 '52

Fuel and power; debate in House of Commons, sequel to Ridley report. Elec J 149:1316 O 31 '52

Gas-electric co-operation; proposals by Chambers of commerce. Elec R (Lond) 152:247-8 Ja 30 '53

Generation in Great Britain; with list of stations. map Elec R (Lond) 152:1285-98 Je 5 '53

Generation in 1952. Elec R (Lond) 152:202-3 Ja 23 '53

Individual results of area boards. Electrician 149:1072-5 O 10 '52

More kw in Britain; record 1,539,000 kw put on line during 1952. Elec World News ed 139:15 Ja 19 '53

National fuel policy; Ridley committee's recommendations for the use of fuel and power resources. Elec R (Lond) 151:543-4, 617-18 S 12-19 '52

National policy for the use of fuel and power. Engineer 194:346-7 S 12 '52

New frontiers for electricity; comments on BEA's annual report. Economist 165:115-17 O 11 '52

Parallel operation of private plant and public electricity supply systems. O. Howarth. Engineering 174:230 Ag 22 '52

Place of electricity in the Nation's welfare; abstracts. C. T. Melling. Elec J 149:1259-60 O 24 '52; Elec R (Lond) 151:909-10 O 24 '52

Planning of an electricity board's distribution system. G. O. McLean. bibliog maps diags Inst E E Proc 98 pt 2:331-41 Je '51; Discussion. 98 pt 2:341-8; 100 pt 2:129-44 Je '51, Ap '53

Power for industry. Economist 166:749-51; 167:836 Mr 14, Je 20 '53

Power for prosperity. il map Elec J 150:1893-6 My 29 '53

Preserving amenities; annual report of the National parks commission for 1951-52. Elec R (Lond) 151:1267-8 D 12 '52

Recovery in power sales; report of British electricity authority. Economist 167:251 Ap 25 '53

Report on electricity supply by a United States team. Elec R (Lond) 152:1024-6 My 1 '53; Elec J 150:1551-2 My 1 '53

Ridley report. Electrician 149:749-52 S 12 '52

Sale of electricity; signs of a declining trend. Elec R (Lond) 151:356 Ag 15 '52

Seeboard standardised tariffs. Elec J 150:1920 My 29 '53

Trends in electricity consumption. Engineering 174:201-2 Ag 15 '52

275-kv developments on the British grid system. D. P. Sayers and others. bibliog maps diags Inst E E Proc 99 pt 2:582-600; Discussion. 600-6 D '52; Elec R (Lond) 150:1161-3 My 30 '52; Electrician 148:1873-4 Je 6 '52

U.K. expands power plant installations. For Comm W 49:6 Ja 5 '53

What the B.E.A. told the Ridley committee. Electrician 149:845-6 S 19 '52

What were the early days really like? W. M. Furniss. Elec J 150:1905-7 My 29 '53

See also

British electricity authority

Harlow, England

Harlow New Town; provision of electrical facilities. il map Elec R (Lond) 151:877-82 O 24 '52

Hawaiian Islands

Buried cable distribution serves Hawaiian subdivisions. C. H. Williams. il plans diag Elec World 138:106-8 O 6 '52

India

Electricity production in 1951. Engineer 196:220 Ag 14 '53

Ireland

Electricity in Ireland; abstract. P. G. Murphy. Elec R (Lond) 151:1085 N 14 '52

Electricity supply developments in southern Ireland. il map diags Engineer 194:252-4, 292-4 Ag 22-29 '52

ELECTRICITY supply—Ireland—*Continued*

How the Irish got their power. il Elec World News ed 138:9 O 13 '52
Irish Board's report. Elec R (Lond) 151: 1021-2 N 7 '52
Irish Board's silver jubilee. Electrician 149: 484 Ag 15 '52
Irish Board's silver jubilee; rapid and continuing expansion. il diag Elec R (Lond) 151:395-7 Ag 22 '52
Northern Ireland electricity board 20th annual report, year ended Dec. 31, 1951. Electrician 149:404 Ag 8 '52
Northern Ireland electricity supply. Elec J 151:425-6 Ag 7 '53
Report on Ireland's electricity. Elec J 149: 1434 N 7 '52
Rural electrification in Ireland, five years' progress; abstract. P. J. Dowling. Inst E E Proc 100 pt 1:72-3 Mr '53
Supply in northern Ireland. Elec R (Lond) 153:479 Ag 28 '53
Ulster programme revised. Elec R (Lond) 151:284 Ag 8 '52

Italy

Italian power development. Elec J 150:2018 Je 5 '53
Italian power, 1952. Elec J 150:853 Mr 13 '53
Italian power output reaches record level. For Comm W 49:8 My 11 '53
Italian power report. il Elec J 151:353-4 Jl 31 '53

Jamaica

Electricity in Jamaica. D. Edmonds. il diag Elec R (Lond) 152:1451-4 Je 26 '53

Japan

Japan adopts EEI power survey method as aid in solving electricity crisis. F. D. Campbell. Edison Elec Inst Bul 21:10+ Ja '53
Japan seeks dollars for power expansion. H. Bratter. Pub Util 52:359-66, 425-33 S 10-24 '53
Japan's power industry. Elec J 151:349 Jl 31 '53

Korea

Barges keep south Korea in power. il map Elec World News ed 139:22-4, cover Mr 16 '53

Mexico

Electricity in Mexico. Elec R (Lond) 152:94 Ja 9 '53

Netherlands

Netherlands electrical system. il map Elec R (Lond) 151:719-20 O 3 '52

Nevada

Hoover Dam unit in dispute. Elec World News ed 139:9 Mr 2 '53
Nevada shortage. Elec World News ed 139:23 F 16 '53

New England

Power resources. W. F. Uhl. Ind & Eng Chem 44:2538-41 N '52

See also
New England electric system

New South Wales

Power for Australian farmers. P. Davison. il Elec R (Lond) 151:1390-2 D 26 '52

New York (state)

Planning for expanding power requirements in upstate New York. H. L. Harrington. Edison Elec Inst Bul 21:203-9 Je '53

New Zealand

Geothermal power in New Zealand. J. Grindrod. il Electrician 148:1217-18 Ap 18 '52; Mech Eng 74:917-18 N '52
Hutt Valley electric-power report. Electrician 149:940 S 26 '52
Prospects in New Zealand. Elec R (Lond) 151:1109 N 21 '52

Nigeria

Plan for Nigeria. map Elec R (Lond) 153: 29-30 Jl 3 '53

Northumberland

Remote supply; serving a new forestry scheme in Northumberland. il map Elec R (Lond) 152:14-16 Ja 2 '53

Northwestern states

Balance of power; Mr McKay moves to restore it in the Columbia basin. R. M. Bleiberg. Barron's 33:3 Je 29 '53
Cooperation beat the Northwest power shortage. il map Elec World News ed 139:21-4 Mr 30 '53
Kw pinch off in Northwest. Elec World 139: 126 Ja 26 '53
McKay tackles surcharges. Elec World News ed 139:15 F 16 '53
More power cuts. Bsns W p 156 N 22 '52
NW interruptible loads cut. Elec World News ed 139:9 Ap 27 '53
Northwest utilities ask conservation. Elec World 138:111 N 17 '52
Power deficit affects Alcoa; Harvey machine co. aluminum enterprises in Northwest. Elec World 138:124 D 29 '52
Power is the key to more Northwest industry. E. Schrier. il map Chem Eng 59:376+ D '52
Residents put to test; voluntary power conservation. J. H. Gumz. Elec World News ed 138:15 D 8 '52
Surcharges; NW storm signal. Elec World News ed 139:15 F 2 '53
Who will get Northwest's power in harness? Bsns W p92-4+ F 14 '53

Nyasaland

Electricity in the Rhodesias. J. E. Mitchell. il map Elec R (Lond) 153:63-6 Jl 10 '53

Ontario

See also
Ontario—Hydro-electric power commission

Pakistan

Pakistan power supply; development schemes in active preparation. F. H. Sharpe. maps Elec R (Lond) 151:323-8 Ag 15 '22

Pennsylvania

Backbone of GPU system will be 220-kv tie. map Elec World News ed 138:6-7 N 24 '52

Peterlee, England

Peterlee; electricity supply arrangements for the new town. il map Elec R (Lond) 153: 429-33 Ag 28 '53

Philadelphia

Putting Philadelphia Electric's territory on the map. il Edison Elec Inst Bul 21:16-17 Ja '53
Utility fly-films Philadelphia. J. Dragonetti. il Elec World News ed 139:22-3 Ja 5 '53

Queensland

Serving small townships. Elec R (Lond) 152:299 F 6 '53

Rhodesia

Electricity in the Rhodesias. J. E. Mitchell. il map Elec R (Lond) 153:63-6 Jl 10 '53
Southern Rhodesian electricity supply; Commission's report for 1951-52. D. Spencer. Elec R (Lond) 152:407-8 F 20 '53

Rumania

Developments in Rumania. J. Wild. il Elec R (Lond) 151:1279-80 D 12 '53
New power plants in Rumania. il Elec J 149:1653-6 N 28 '52

Scotland

North of Scotland electrical exhibition, Perth, March 10-14. il Elec J 150:991-2 Mr 20 '53

South Africa

Electricity in South Africa. H. J. Beard. il maps Elec R (Lond) 151:219-25, 291-3 Ag 1-8 '52
News from South Africa. Elec R (Lond) 151: 1358 D 19 '52
Plans to expand electric power. For Comm W 49:5 Mr 16 '53

ELECTRICITY supply—South Africa—*Cont.*

South Africa electricity supply and sales increase in 1951. For Comm W 48:4 O 27 '52

South African demand. Electrician 149:779 S 12 '52

South African expansion. Elec R (Lond) 151:586 S 19 '52

Spain

Electricity production in Spain. J. M. Ruiz-Morales. Elec R (Lond) 152:587 Mr 13 '53

Power curbed in Central-Levante area of Spain. For Comm W 50:5 Jl 20 '53

Sweden

380-kv power-transmission system in Sweden. il maps diags Engineering 174:748-50, 781-4 D 12-19 '52

Sydney, New South Wales

Sydney reorganization. Elec R (Lond) 151:1009 N 7 '52

Tasmania

Power supply in Tasmania. Elec R (Lond) 152:445 F 20 '53

Tennessee

Tennessee story; power and fuel great factor in industrial development. il Manuf Rec 121:107-9 N '52

Tennessee valley

Freedom for TVA captive cities. G. A. Dondero. Pub Util 52:455-7 S 24 '53

Toronto

Toronto electric commissioners 42d annual report, 1952. Elec J 151:369 Jl 31 '53

Toronto system changes. Elec R (Lond) 151:274 Ag 8 '52

Trinidad

Trinidad's power prospects. Elec R (Lond) 152:33 Ja 2 '53

Uganda

Owen Falls. il map Elec R (Lond) 152:570-2 Mr 13 '53

Uganda electricity board 5th annual report year ended Dec. 31, 1952. Elec J 150:775 Mr 6 '53

United States

Coal seen as main source of energy for electric power expansion. C. N. Phillips. Comm & Fin Chr 177:2522 Je 11 '53

Depa studies defense production goals to predict peak load. C. R. Beardsley. Elec World 138:88-9 N 3 '52

On thin ice; reserve margin small. Bsns W p33 D 6 '52

Population and power; annual forecast, 1953. il map diags Power Eng 57:65-80 Ja '53

Views on material controls. D. McKay. Pub Util 51:860-2 Je 18 '53

See also

Defense electric power administration

Western states

Annual review number. il Elec West 110:87-133 F '53

Power unlimited for Rocky Mountain area. L. R. Patterson. Elec West 110:76-8 Ja '53

Reclamation bureau looks at West's power future. maps Power 97:90-3 Mr '53

USBR envisions 500-kv grid in West. maps Elec World News ed 139:22-3 Ja 19 '53

ELECTRIFICATION. See Electric charges

ELECTROACOUSTIC transducers

Echo whale finders; Kelvin and Hughes, ltd. il diag Engineer 194:756-7 D 5 '52; Engineering 175:90-1 Ja 16 '53

Electronic-acoustical devices in medical research. J. K. Hilliard. il Tele-Tech 12:62-3+ Ag '53

Temperature invariant impedance point in the frequency response of circular barium titanate transducers. T. F. Hueter. Acoustical Soc Am J 25:152 Ja '53

Theoretical sensitivity of a transversely loaded, circular bimorph transducer. E. G. Thurston. diags Acoustical Soc Am J 24:656-9 N '52

See also

Loud speaking apparatus

Microphones

ELECTROACOUSTICS

Radio progress during 1952. bibliog Inst Radio Eng Proc 41:464-6 Ap '53

ELECTROBIOLOGY. See Electrophysiology

ELECTROCAPILLARITY

Electrocapillarity in dielectrics and in poorly conducting systems. G. J. Kahan and C. L. Gravel. bibliog diag J Phys Chem 57:239-42 F '53

ELECTROCARDIOGRAPH

Einthoven triangle; an observation regarding the validity of the originally proposed triangular representation of the human body. D. A. Brody and others. diags Science 116:659-60 D 12 '52

Electric potential produced by two point current sources in a homogeneous conducting sphere. E. Frank. bibliog J Ap Phys 23:1225-8 N '52

High-speed cine-electrocardiography. J. J. Fields and others. il diags Soc Motion Picture & Tv Eng J 59:493-7 D '52

ELECTROCHEMICAL analysis

Electrochemical analysis of silver solder. R. W. C. Broadbank and B. C. Winram. Metallurgia 47:155-7 Mr '53

Electrochemical method of gas analysis; abstract. P. Hersch. Chem Age (Lond) 67:565 O 25 '52

Importance of polarisation curves in electrochemical determinations; abstract. R. Gauguin. Chem Age (Lond) 67:498-9 O 11 '52

Recent developments in metallurgical analysis; electrochemical analysis. T. S. West. bibliog(58 ref) Metallurgia 46:313-16 D '52

Removal of oxygen from solutions and the determination of traces of oxygen with the stationary platinum microelectrode. A. M. Peers. bibliog diags Chem & Ind p969-71 O 4 '52

ELECTROCHEMICAL industries

Chloro-alkali industry, 1902-52. D. O. Hubbard. Electrochem Soc J 99:sup307C-9C N '52

Progress in the electrolytic manufacture of chlorates and perchlorates in the United States and Canada since 1902. W. Wallace. Electrochem Soc J 99:sup309C-10C N '52

India

Development of the electrochemical industry in India. T. L. Rama Char. il Electrochem Soc J 100:sup7C-10C Ja '53

New electrochemical research laboratory. Chem & Eng N 31:1550 Ap 13 '53

Niagara area

Niagara frontier. P. S. Brallier and others. il map Electrochem Soc J 100:sup57C-64C Mr '53

Ohio

Chemical Shore, product of a giant chain reaction in the Cleveland-northeast Ohio area. R. C. Hienton. il Electrochem Soc J 100:sup27C-35C F '53

ELECTROCHEMICAL society

Meeting, 104th, Wrightsville, N.C. Sept. 13-16; with abstracts of papers. Metal Finishing 51:75-7+ O '53

Spring meeting, New York. Chem & Eng N 31;1742-3 Ap 27 '53

Corrosion division

History of the Corrosion division. H. R. Copson. Electrochem Soc J 99:sup273C-4C O '52

ELECTROCHEMISTRY

Electrical effects of substituent groups in saturated systems; reactivities of 4-substituted bicyclo[2.2.2]octane-1-carboxylic acids. J. D. Roberts and W. T. Moreland, jr. bibliog Am Chem Soc J 75:2167-73 My 5 '53

Electrochemical constants. U S Nat Bur Stand Circ 524:1-310; $2 Supt. of doc. '53

Electrochemistry of boron trifluoride coordination compounds. N. N. Greenwood and R. L. Martin. Chem Soc J p751-64 Mr '53

ELECTROCHEMISTRY—*Continued*

Electrochemistry of boron trifluoride coordination compounds; degrees of ionic dissociation in the molten state. N. N. Greenwood and R. L. Martin. Chem Soc J p 1427-32 My '53

Electrochemistry of gallium. W. M. Saltman and N. H. Nachtrieb. bibliog Electrochem Soc J 100:126-30 Mr '53

Electrochemistry of ionic crystals. C. Wagner. Electrochem Soc J 99:sup346C-54C bibliog(119 ref, sup352C-4C) D '52

Electrolytic processes in chemical and metallurgical industry; principles of electrolytic processes. H. J. T. Ellingham. bibliog Chem & Ind p 1115-18 N 15 '52

Electro-organic chemical preparations. S. Swann, jr. bibliog Electrochem Soc J 99: 219-26 Je '52; Same. Ill U Eng Exp Sta Reprint 50:1-19 '52 (pa 20c)

Nernst memorial lecture. J. R. Partington. bibliog Chem Soc J p2856-8 S '53

New chemical works; electrolytic process for producing chlorine and caustic soda from brine; Murgatroyd's salt & chemical co. il Elec R (Lond) 151:423-9 Ag 29 '52

Postwar industrial electrochemical and related chemical developments in the Niagara area. M. S. Kircher. il Electrochem Soc J 100:sup58C-60C Mr '53

Theory of electrolysis at constant current in unstirred solution; consecutive electrochemical reactions. T. Berzins and P. Delahay. bibliog Am Chem Soc J 75:4205-13 S 5 '53

See also

Electric precipitation
Electrochemical analysis
Electrodeposition of metals
Electrodes
Electrolysis
Electrolytes
Electrolytic cells
Electroplating
Ionization, Electrolytic
Passivity
Reduction, Electrolytic

History

Fifty years of electrochemical theory. W. J. Hamer. Electrochem Soc J 99:sup331C-43C bibliog(168 ref, sup341C-3C) D '52

ELECTROCUTION of animals

Electricity and animals; methods of electrocution reviewed. P. G. Croft. Elec J 149: 1771 D 5 '52

ELECTRODE potential. See Potential, Electric

ELECTRODEPOSITION of metals

Cathode polarization potential during the electrodeposition of copper; effect of the cathode base upon the cathode polarization potential and the crystal structure of the deposit. L. L. Shreir and J. W. Smith. bibliog il Electrochem Soc J 99:450-6 N '52

Designing electroformed parts. W. H. Metzger, jr. and V. A. Lamb. il diags Machine Design 25:124-31 S '53

Electrodeposition behavior of cadmium and of thallium at mercury cathodes. L. B. Rogers and C. Merritt, jr. diag Electrochem Soc J 100:131-5 Mr '53

Electrodeposition of zinc-tin alloy. E. Bertorelle and F. Fogliani. diag Chem Age (Lond) 68:253-4 F 7 '53

Electro-finishing of metals; RIC lecture and discussion. S. Wernick. Chem Age (Lond) 67:773 D 6 '52; Same. Chem & Ind p 1219-20 D 13 '52

Oscillographic polarographic waves for the reversible deposition of metals on solid electrodes. T. Berzins and P. Delahay. bibliog diag Am Chem Soc J 75:555-9 F 5 '53

Progress in electroforming. diags Factory Management 111:123 F '53

Rapid determination of bismuth, copper and lead in aluminum alloys by electrodeposition. G. Norwitz. Metallurgia 47:157 Mr '53

Rare earths; some observations on solutions of certain rare earth metal salts in basic solvents. T. Moeller and P. A. Zimmerman. bibliog Am Chem Soc J 75:3940-3 Ag 20 '53

Reflectivity of copper electrodeposits. W. H. Gauvin and C. A. Winkler. bibliog Electrochem Soc J 99:447-9 N '52

See also

Electroplating

ELECTRODES

Anodes for electroplating. A. C. West. Metal Finishing 51:66-70+ Ag '53

Anodic behavior of iron in H_2SO_4. J. H. Bartlett and L. Stephenson. bibliog diag Electrochem Soc J 99:504-12 D '52

Brief summary of hydrogen electrode kinetics. J. O. Bockris. bibliog Electrochem Soc J 99:sup366C-9C D '52

Coal for electrodes in the aluminum industry. R. J. Campbell, jr. and others. Coal Age 58:86-7 Ag '53

Effect of electrode spacing on the equivalent base resistance of point-contact transistors. L. B. Valdes. diags Inst Radio Eng Proc 40: 1429-34 N '52

Electrode phenomena and the thermodynamics of irreversible processes. P. Van Rysselberghe. bibliog diags J Phys Chem 57:275-80 Mr '53

Geometric capacitance and resistance obtained for cylindrical electrodes; engineering reference sheet. E. W. Greenfield. Elec World 139:108 Ap 6 '53

How to plan a practical magnesium-anode program. J. N. Hunter, jr. diag Oil & Gas J 51:284+ O 13 '52

Hydrogen overvoltage and atomic hydrogen electrodes. P. Van Rysselberghe. bibliog J Chem Phys 20:1522-3 O '52

Hydrogen overvoltage on bright platinum. S. Schuldiner. bibliog il Electrochem Soc J 99:488-94 D '52

Ion exchanger electrodes. G. Scatchard. bibliog Am Chem Soc J 75:2883-7 Je 20 '53

Magnesium anode system resurveyed after 2½ years; Chocolate Bayou transmission lines of Pan American gas co. C. E. Sonntag, jr. il Oil & Gas J 51:303-4+ O 13 '52

Oscillographic polarographic waves for the reversible deposition of metals on solid electrodes. T. Berzins and P. Delahay. bibliog diag Am Chem Soc J 75:555-9 F 5 '53

Performance of magnesium galvanic anodes in underground service; abstract. O. Osborn and H. A. Robinson. Am Water Works Assn J 45:sup62 Ap '53

Preparation of low-ash coal for production of electrodes. A. L. Werner and A. C. Richardson. flow sheet diag Min Eng 4:Trans 1059-61 N '52

Preparation of pure sodium hydroxide solution for use in electrode kinetics. E. C. Potter. bibliog diags Chem & Ind p 1149-50 N 22 '52

Self-cleaning antimony pH electrode. P. Hart and R. C. King. diag Oil & Gas J 52:113 Je 1 '53

Solution of the Debye-Hückel equations for a polarized electrode. B. Breyer and F. Gutmann. bibliog J Chem Phys 21:1323-6 Ag '53

Studies on some metal electrodes; the temperature coefficients of the copper and antimony electrodes in solutions initially free from their ions; the mode of oxidation of these metals. A. R. Tourky and E. M. Khairy. Chem Soc J p2626-33 Jl '52

Thermogalvanic potentials; nickel in neutral sulfate solution. D. S. Carr and C. F. Bonilla. bibliog(56 ref) diag Electrochem Soc J 99:475-82 D '52

Time dependence of the potential in electrode reactions. W. R. Busing and W. Kauzmann. bibliog diags J Chem Phys 20: 1129-43 Jl '52

Unitized rotating platinum electrode assembly for amperometric titration. E. J. Agazzi and others. bibliog il Anal Chem 24:1688 O '52

What's the matter with magnesium? secret of success as a corrosion mitigator is proper use. M. E. Parker. World Oil 135: 314+ O '52

See also

Cathodes
Electric welding—Electrodes
Electric welding, Arc—Electrodes
Electrolytic cells
Overvoltage

ELECTRODES, Glass

Deuterium and hydrogen electrode characteristics of lithia-silica glasses. D. Hubbard and G. W. Cleek. bibliog J Res Nat Bur Stand 49:267-72 O '52

ELECTRODIAGNOSIS

See also

Electroencephalography

ELECTRODYNAMICS

Conservation laws in classical electrodynamics. O. Bergmann. Phys R 90:315 Ap 15 '53

Gauge invariance and classical electrodynamics. L. Motz. Phys R 89:60-6 Ja 1 '53

Gravitation and electrodynamics; modification of Einstein's unified field theory. B. Kurşunoğlu. bibliog Phys R 88:1369-79 D 15 '52

Unified field theory and Born-Infeld electrodynamics. G. Rickayzen and B. Kurşunoğlu. Phys R 89:522-3 Ja 15 '53

See also

Quantum electrodynamics

ELECTROENCEPHALOGRAPHY

Brain waves and unit discharge in cerebral cortex. C. Li and others. bibliog il Science 116:656-7 D 12 '52

ELECTROFORMING. See Electrodeposition of metals

ELECTROHORTICULTURE

Electrical floriculture. T. W. Reynolds. Heat & Ven 50:109-10 S '53

Electricity for horticulture. A. W. Gray. Engineer 196:44-6 Jl 10 '53; Abstracts. Engineering 175:830 Je 26 '53; Elec J 150:2122-4 Je 12 '53; Elec R (Lond) 152:1353-4 Je 12 '53; Discussion. Engineering 175:830-1 Je 26 '53

ELECTROHYDRAULIC control

Control of fluid-driven fans. J. F. Tobin. il diag Power Eng 56:64-5 N '52

Hydraulic control systems. R. Hadekel. diags Machine Design 25:168-75 Je '53

Hydraulic servos incorporating a high-speed hydraulic-amplifier-actuated valve; abstract. R. L. Scrafford. diag Elec Eng 72:504 Je '53

New Sperry units will steer any size ship. il Marine Eng 58:75 O '53

ELECTROLUMINESCENCE. See Luminescence

ELECTROLYSIS

Alkali metal phosphides; electrolysis studies in liquid ammonia. E. C. Evers and J. M. Finn, jr. bibliog J Phys Chem 57:559-63 Je '53

Anodic behaviour of copper in neutral and alkaline chloride solutions. H. Lal and H. R. Thirsk. Chem Soc J p2638-44 S '53

Anodic syntheses; electrolyses of mono-, di-, and tri-phenylacetic acids in non-aqueous solutions. R. P. Linstead, B. R. Shephard and B. C. L. Weedon. Chem Soc J p3624-7 S '52

Automatic titrator using electrolytically generated titrants. W. N. Carson, jr. bibliog diags Anal Chem 25:226-30 F '53

Diffusion and convection in electrolysis; a theoretical review. C. W. Tobias and others. bibliog diag Electrochem Soc J 99:sup359C-65C D '52

Electrolytic interaction of nylon with sodium hydroxide solutions at different temperatures. F. T. Wall and P. M. Saxton. bibliog J Phys Chem 57:370-5 Mr '53

Electrolytic oxidation of salts of aliphatic acids by the Hofer-Moest reaction; formation of methanol from sodium acetate. T. Kunugi. bibliog Am Chem Soc J 75:1597-9 Ap 5 '53

Electrolytic processes in chemical and metallurgical industry; principles of electrolytic processes. H. J. T. Ellingham. bibliog Chem & Ind p 1115-18 N 15 '52

Experimental production of small tensile specimens by electrolytic solution (electroturning). M. H. Farmer and G. H. Glaysher. il diags J Sci Instr 30:9-10 Ja '53

Glow-discharge electrolysis; the anodic formation of hydrogen peroxide in inert electrolytes. R. A. Davies and A. Hickling. diag Chem Soc J p3595-602 S '52

Influence of impurities in the electrolyte in chlorine-caustic electrolysis by the mercury cell process; investigation of the influence of metallic impurities upon the decomposition rate of sodium amalgam. G. Angel and others. bibliog Electrochem Soc J 99:435-46; 100:39-44 N '52, Ja '53

Theory of electrolysis at constant current in unstirred solution; consecutive electrochemical reactions. T. Berzins and P. Delahay. bibliog Am Chem Soc J 75:4205-13 S 5 '53

Theory of electrolysis at constant current with partial or total control by diffusion; application to the study of complex ions. P. Delahay and T. Berzins. bibliog diag Am Chem Soc J 75:2486-93 My 20 '53

Transmission of hydrogen through palladium by electrolysis. H. B. Wahlin and V. O. Naumann. J Ap Phys 24:42-4 Ja '53

See also

Electrochemical analysis
Electrolytic cells
Overvoltage
Water purification—Electrolytic treatment

ELECTROLYTES

Comparative investigations on electropolishing efficiencies of a phosphoric-sulfuric acid electrolyte and acetic-perchloric acid electrolytes; abstract. J. Heyes. Metal Finishing 50:71-2 D '52

Critical concentrations of potassium *n*-alkanecarboxylates as determined by the change in color and spectrum of pinacyanole. S. H. Herzfeld. bibliog J Phys Chem 56:953-9 N '52

Diffuse double layer theory for electrolytes of unsymmetrical valence type. D. C. Grahame. J Chem Phys 21:1054-60 Je '53

Effect of salt on the critical concentrations of potassium *n*-alkanecarboxylates as determined by the change in color of pinacyanole. S. H. Herzfeld. bibliog J Phys Chem 56:959-63 N '52

Effects of electrolytes on urease activity. G. B. Kistiakowsky and others. bibliog Am Chem Soc J 74:5015-20 O 20 '52

Electrolyte-solvent interaction; quaternary salts in methanol-nitromethane and methanol-benzene mixtures. R. C. Miller and R. M. Fuoss. bibliog Am Chem Soc J 75:3076-80 Jl 5 '53

Electrolytes in soap making. F. Mock. Soap & San Chem 28:95 D '52

Electrolytic properties of aqueous solutions of polyacrylic acid and sodium hydroxide; the rate of sodium ion exchange between polyacrylate and free sodium ions. F. T. Wall and others. J Chem Phys 20:1206-11 Ag '52

Electrophoretic contributions to the diffusion of electrolytes. R. H. Stokes. Am Chem Soc J 75:2533-4 My 20 '53

Electrophoretic corrections to the diffusion coefficient of an electrolyte solution. R. H. Stokes. bibliog Am Chem Soc J 75:4563-6 S 20 '53

Interaction of the alkali ions with some linear polyelectrolytes. A. Veis. bibliog J Phys Chem 57:189-94 F '53

Molecular configuration of polyelectrolytes. P. J. Flory. J Chem Phys 21:162-3 Ja '53

Moving boundaries formed by strong electrolyte systems. E. B. Dismukes and E. L. King. bibliog Am Chem Soc J 74:4798-801 O 5 '52

Polyphosphates as polyelectrolytes; light scattering and viscosity of sodium polyphosphates in electrolyte solutions. U. P. Strauss, E. H. Smith and P. L. Wineman. bibliog Am Chem Soc J 75:3935-40 Ag 20 '53

Size and shape of polyelectrolyte molecules in solution. T. L. Hill. bibliog J Chem Phys 20:1173-4 Jl '52

Solubilities of naphthalene and biphenyl in aqueous solutions of electrolytes. M. A. Paul. bibliog Am Chem Soc J 74:5274-7 N 5 '52

Solubilization in alcohol-soap micelles; electrolytes as additives. H. B. Klevens. bibliog Am Chem Soc J 74:4624-6 S 20 '52

Some statistical mechanical models of elastic polyelectrolytes and proteins. T. L. Hill. bibliog diags J Chem Phys 20:1259-73 Ag '52

Thermodynamic functions from Mayer's theory of ionic solutions. J. C. Poirier. bibliog J Chem Phys 21:965-85 Je '53

See also

Electric double layer
Electrolytic cells

Conductivity

Bolaform electrolytes; conductance of bis-quaternary salts of dicarboxylic acid bis-β-tertiaryaminoalkyl amides in methanol. H. Eisenberg and R. M. Fuoss. bibliog il diags Am Chem Soc J 75:2914-17 Je 20 '53

ELECTROLYTES—Conductivity—*Continued*

Calculation of the temperature and pressure coefficients of conductivity and the ultrasonic effect in dilute electrolytes from Onsager's theory. S. Barnartt. bibliog diags J Chem Phys 21:908-11 My '53

Conductance of aluminum chloride in sulfuryl chloride on adding benzophenone or sulfur monochloride. A. R. Pray and C. R. McCrosky. bibliog Am Chem Soc J 74:4719-21 S 20 '52

Conductances, transference numbers and activity coefficients of aqueous solutions of some rare earth halides at 25°. F. H. Spedding and I. S. Yaffe. bibliog Am Chem Soc J 74:4751-5 O 5 '52

Conductivities and densities of the system ammonium chloride-zinc chloride-methanol from -50° to 20°C. L. R. Dawson and others. bibliog Electrochem Soc J 99:536-41 D '52

Conductivities of five substances in trifluoroacetic acid. J. H. Simons and K. E. Lorentzen. diags Am Chem Soc J 74:4746-50 O 5 '52

Electrolytic conductance of solutions of phosphorus pentachloride. D. S. Payne. Chem Soc J p 1052-5 Ap '53

High field conductance of acetic acid from 5 to 55° relative to hydrochloric acid. F. E. Bailey, jr. and A. Patterson, jr. bibliog Am Chem Soc J 74:4756-9 O 5 '52

High field conductance of an aqueous solution of cadmium chloride at 25°. F. E. Bailey, jr. and A. Patterson, jr. Am Chem Soc J 75:1471-2 Mr 20 '53

High field conductance of aqueous solutions of glycine at 25°. D. Berg and A. Patterson, jr. bibliog Am Chem Soc J 75:1482-4 Mr 20 '53

High field conductance of lanthanum ferricyanide at 25°. D. Berg and A. Patterson, jr. bibliog Am Chem Soc J 75:1484-6 Mr 20 '53

Ion association of 2-1 salts in methanol. F. M. Sacks and R. M. Fuoss. bibliog Electrochem Soc J 99:483-7 D '52

New method for measurement of the high field conductance of electrolytes (the Wien effect). J. A. Gledhill and A. Patterson, jr. bibliog diags J Phys Chem 56:999-1005 N '52

ELECTROLYTIC cells

Apparatus for studying electrogravitational separations; some experiments on the extraction of sodium chloride from solution in a flow system. G. W. Murphy and D. Batzer. diags Electrochem Soc J 99:520-6 D '52

Chlor-alkali industry, 1902-52. D. O. Hubbard. Electrochem Soc J 99:sup307C-9C N '52

Electrical measurements and chemistry. L. Hartshorn. diag Inst E E Proc 100 pt 2: 1-4 F '53

Polarographic analysis using flowing samples; continuous automatic measurement of sulfur dioxide in corn steep liquor. L. D. Wilson and R. J. Smith. diags Anal Chem 25:334-6 F '53

Polarographic analysis using flowing samples; effect of cell design and flow rate on diffusion current. L. D. Wilson and R. J. Smith. bibliog diags Anal Chem 25:218-20 F '53

Trend to bigger cells; Hooker deposited-diaphragm cells. il diags Chem Eng 59: 234+ N '52

ELECTROLYTIC corrosion

Relation of the anodic corrosion of lead and lead-antimony alloys to microstructure. J. B. Burbank and A. C. Simon. bibliog il diag Electrochem Soc J 100:11-14 Ja '53

Stray-current corrosion. diag Oil & Gas J 52: 151 Je 15 '53

ELECTROLYTIC grinding. See Grinding, Electrolytic

ELECTROLYTIC ionization. See Ionization, Electrolytic

ELECTROLYTIC polishing. See Polishing, Electrolytic

ELECTROLYTIC reduction. See Reduction, Electrolytic

ELECTROMAGNETIC field

Calculation of sky-wave field strength. K. Rawer. bibliog il diags Wireless Eng 29: 287-301 N '52

Canonical transformation for an electron-positron field coupled to a time-independent electromagnetic field. H. E. Moses. Phys R 89:115-22 Ja 1 '53

Energy-momentum tensor of the electromagnetic field inside matter. N. L. Balazs. diag Phys R 91:408-11 Jl 15 '53

Heating metals in suspension in an electromagnetic field. il diags Engineer 195:431-2 Mr 20 '53

Interaction between classical electron and quantized electromagnetic field. I. R. Senitzky. bibliog Phys R 91:1309-11 S 15 '53

Interaction between electron and one-dimensional electromagnetic field. N. Rosen. Phys R 87:940-2 S 15 '52

New property of two-dimensional fields; abstract. A. D. Moore. diags Elec Eng 72:290 Ap '53

S-matrix and casualty conditions; Maxwell field. N. G. van Kampen. bibliog Phys R 89:1072-9 Mr 1 '53

See also

Field theories (physics)

ELECTROMAGNETIC shielding

Use of sheet steel for the construction of shielded rooms; abstract. A. M. Intrator. Elec Eng 72:809 S '53

ELECTROMAGNETIC theory

New universal right-hand rule. P. M. Honnell. bibliog diags Elec Eng 72:346-9 Ap '53

ELECTROMAGNETIC waves

Completeness relations for loss-free microwave junctions. T. Teichmann. bibliog diag J Ap Phys 23:701-10 Jl '52

Diffraction of a shock or an electromagnetic pulse by a right-angled wedge. J. B. Keller. J Ap Phys 23:1267-8 N '52

Diffraction of electromagnetic waves by an aperture in an infinite screen. G. Bekefi. J Ap Phys 23:1403 D '52

Diffraction patterns in circular apertures less than one wavelength in diameter. H. L. Robinson. J Ap Phys 24:35-8 Ja '53

Electromagnetic field in the plane of a circular aperture due to incident spherical waves. D. C. Hogg. bibliog J Ap Phys 24: 110-11 Ja '53

Electromagnetic reflection and transmission by gratings of resistive wires. E. A. Lewis and J. P. Casey, jr. bibliog J Ap Phys 23: 605-8 Je '52

Propagation in electron-ion streams. R. Q. Twiss. diags Phys R 88:1392-407 D 15 '52

Radiation from a dielectric wave guide. R. M. Whitmer. diags J Ap Phys 23:949-53 S '52

Reflection of electromagnetic waves obliquely from an inhomogenous medium. J. R. Wait. J Ap Phys 23:1403-4 D '52

Reflection of microwaves from metal-plate media. J. J. Brady and others. il diags J Ap Phys 23:964-75 S '52

See also

Radio waves

ELECTROMAGNETISM

Electromagnetic field of a rotating uniformly magnetized sphere. A. Baños, jr. and R. K. Golden. bibliog diags J Ap Phys 23:1294-9 D '52

Electromagnetic levitation of solid and molten metals. E. C. Okress and others. il diags J Ap Phys 23:545-52 My '52; Correction. 23: 1413 D '52

See also

Faraday effect
Magnetic field
Unified field theory

ELECTROMAGNETS

Cosmotron doughnut magnet is 288 shop-made sandwiches. il Am Mach 96:128-31 N 10 '52; Welding J 32:145-7 F '53

Electromagnetic pumps for high temperature liquid metal. J. F. Cage, jr. il diag Machine Design 25:178-9+ Mr '53

Means of stabilizing the field of an electromagnet. G. Suryan. diag J Sci Instr 29:335-6 O '52

New 2½-ton electromagnet used to magnetize radio speakers. il Iron Age 171:140 My 28 '53

Nomographs for designing electromagnets; reference book sheet. K. W. Henderson. Product Eng 24:229, 231, 233 My '53

ELECTROMAGNETS—*Continued*

Water cooled magnet charger; rotary hearth furnace machine. il Metallurgia 47:182 Ap '53; Same. Elec R (Lond) 152:846 Ap 17 '53

See also

Chucks, Magnetic

Magnetic separators

ELECTROMECHANICAL transducers

Electromechanical properties of BaTiO₃ compositions showing substantial shifts in phase transition points. D. A. Berlincourt and F. Kulcsar. Acoustical Soc Am J 24:709-13 N '52

Sensitive direct-writing plethysmograph. T. Winsor. bibliog(27 titles) il diags Elec Eng 72:619-23 Jl '53

Vibrating-plate viscometer. J. G. Woodward. il diag Acoustical Soc Am J 25:147-51 Ja '53

Wide-range calibrator for vibration pickups; uses nonloading displacement transducer. W. A. Yates and M. Davidson. bibliog il diags Electronics 26:183-5 S '53

ELECTRO METALLURGICAL company

Improving stainless steel; three new alloy products; Simplex ferrochrome, electrolytic manganese and electrolytic chromium. il Bsns W p92+ Je 6 '53

ELECTROMETALLURGY

Forging of arc-melted chromium. H. L. Gilbert and others. bibliog il diags J Metals 5:Trans 63-5 Ja '53

Industrial electrolysis; fifty years' progress in electrowinning and electrorefining. A. C. Loonam. bibliog Electrochem Soc J 99:sup295C-8C N '52

New electrochemical process for indium. J. R. Mills and others. bibliog flow sheet diag Electrochem Soc J 100:136-40 Mr '53

See also

Aluminum metallurgy—Electrometallurgy

Electric furnaces, Metallurgical

Electrodeposition of metals

Electroplating

Iron metallurgy—Electrometallurgy

Manganese metallurgy—Electrometallurgy

Steel metallurgy—Electrometallurgy

Zinc metallurgy—Electrometallurgy

ELECTROMETERS

Direct reading electrometer. R. M. Dowben. diag R Sci Instr 23:506-7 S '52

Exceptionally stable regulated power supply for electrometer tubes. W. P. Senett and R. W. Pierce. bibliog diags R Sci Instr 23:534-7 O '52

Precision obtained with vibrating reed electrometer in radioassaying meta- and para-substituted benzoic-alpha-carbon-14 acids. V. F. Raaen and G. A. Ropp. Anal Chem 25:174-5 Ja '53

Vacuum tube electrometer amplifier. W. T. Hughes and J. J. Lander. diag R Sci Instr 24:331-2 Ap '53

ELECTROMETRIC titration. See Volumetric analysis

ELECTROMOTIVE force. See Potential, Electric

ELECTROMYOGRAPHY. See Myography

ELECTRON accelerators

Axial motion of an electron in a constant wave velocity section of a linear accelerator. D. Caplan and E. Akeley. bibliog J Ap Phys 23:774-8 Jl '52

Electron linear accelerator unveiled by Stanford university. Elec Eng 72:184 F '53

Electronic sterilisation; its uses for pharmaceutical products. Electrician 149:775 S 12 '52

15-Mev linear electron accelerator. il diag Engineering 174:161-2 Ag 8 '52

Multiple-cavity linear electron accelerator. B. L. Miller. il diag R Sci Instr 23:401-8 Ag '52

Neutron detection system for use with pulsed accelerators. J. Halpern and others. diags R Sci Instr 23:678-80 D '52

100-billion-volt accelerator. E. D. Courant. il diags Sci Am 188:40-5 My '53

Stanford linear accelerator placed in preliminary operation. il Chem & Eng N 31:64-5 Ja 5 '53

See also

Betatron

Cyclotron

ELECTRON gun

Electron gun modification for the control of beam current in the RCA electron microscope. F. W. Bishop. il R Sci Instr 24:73-4 Ja '53

GE shows internal magnetic focus tube. il Tele-Tech 12:130 My '53

Versatile electrostatic electron gun. A. J. Druce. diags R Sci Instr 23:499-500 S '52

Testing

Air comparator tests electron guns. il Electronics 26:256 My '53

ELECTRON lens. See Electron optics

ELECTRON microscope

Cantilever microtome for precision sectioning in electron and light microscopy. G. G. Cocks and C. M. Schwartz. il diags R Sci Instr 23:615-18 N '52

Combination of electron microscopy and optical phase-contrast microscopy. S. Yamaguchi. il J Ap Phys 23:1404-5 D '52

Determination of surface geometry and structure by microscopy and diffraction. C. F. Tufts. bibliog il diags Anal Chem 24:1700-4 N '52

Direct measurement of images in the electron microscope. H. Froula. il diag R Sci Instr 24:304-6 Ap '53

Electron diffraction instrument. R. S. Page and R. G. Garfitt. il diags J Sci Instr 29:398-401 D '52

Electron gun modification for the control of beam current in the RCA electron microscope. F. W. Bishop. il R Sci Instr 24:73-4 Ja '53

Electron-microscope power monitor. F. W. Bishop. il diag Electronics 26:124-5 Ja '53

Electron microscope study of the effect of cold work on the subgrain structure of copper. L. Delisle. bibliog il diags J Metals 5:Trans 660-6 My '53

Electron microscopic studies of some paraffinic sodium soaps. M. L. E. Chwalow. bibliog il diag J Phys Chem 57:354-8 Mr '53

Electron-microscopy of degraded cellulose fibres. S. M. Mukherjee and others. bibliog il Textile Inst J Trans 43:T 196-201 Ap '52; Discussion. 43:T563-4 N '52

Electron microscopy of soil clays and related materials. E. B. Kinter and others. bibliog(24 titles) il diags Pub Roads 27:89-100 D '52

Electron microscopy of synthetic latices. S. H. Maron and others. il J Ap Phys 23:900-5 Ag '52

Electron microscopy of ultrathin frozen sections of pollen grains. H. Fernández-Morán and A. O. Dahl. bibliog il Science 116:465-7 O 31 '52

Electron microstructure of steel. il Am Soc T M Proc 50:444-92 '50

Examination of porcelain enamel with the electron microscope. I. Buck. il Am Cer Soc Bul 32:114-17 Ap 15 '53

Externally adjustable objective aperture for an electron microscope. M. E. Gettner. bibliog il diag R Sci Instr 23:761-3 D '52

Field emission from nickel surfaces. R. Gomer. bibliog il J Chem Phys 21:293-303 F '53

Field emission microscope and flash filament techniques for the study of structure and adsorption on metal surfaces. J. A. Becker and C. D. Hartman. bibliog il diags J Phys Chem 57:153-9 F '53

Formation of the diffraction image with electrons in the Gabor diffraction microscope. M. E. Haine and T. Mulvey. bibliog il diags Opt Soc Am J 42:763-73 O '52

Improved boat for collecting thin sections for electron microscopy. F. W. Bishop. il diag R Sci Instr 24:78-9 Ja '53

Improved scanning electron microscope for opaque specimens. D. McMullan. bibliog il diags Inst E E Proc 100 pt 2:245-56; Discussion. 257-9 Je '53; Elec J 150:199 Ja 16 '53

Metallic shadow-casting using a nozzle system. T. Hibi. il diag J Ap Phys 23:957-63 S '52

Methods in electron microscopy of solids. R. D. Heidenreich. il R Sci Instr 23:583-94 N '52

ELECTRON microscope—*Continued*
Molecular images with the projection microscope; the ionization potential of zinc phthalocyanine. R. Gomer and D. A. Speer. bibliog il J Chem Phys 21:73-80 Ja '53
New external objective aperture centering and interchanging device for the RCA EMU electron microscope. F. W. Bishop. il diag R Sci Instr 24:269-71 Ap '53
Preparation of uniformly dispersed specimens of particulate matter for electron microscopy. R. E. Hartman and others. il J Ap Phys 24:90-2 Ja '53
Products of fragmentation of textile fibres, as seen in the electron microscope; cellulose fibres. D. G. Drummond. bibliog il Textile Inst J Trans 44:T53-8 F '53
Reliability of internal standards for calibrating electron microscopes. J. H. L. Watson and W. L. Grube. bibliog il diag J Ap Phys 23:793-8 Jl '52
Research instruments aid engine maintenance; based on papers by J. L. Broughten and others. il diags S A E J 61:44-50 Jl '53
Revolving specimen stage for the electron microscope. F. W. Bishop. il diags R Sci Instr 23:504-5 S '52
Sectioning of hydrocarbon gels for the electron microscope. R. F. Baker and others. il R Sci Instr 24:79 Ja '53
Specimen charging in the electron microscope and some observations on the size of polystyrene latex particles. S. G. Ellis. bibliog il diags J Ap Phys 23:728-32 Jl '52
Step wedge for sensitometry with the electron microscope. J. Hamilton. il diag R Sci Instr 24:309-12 Ap '53
Structure of metal surfaces; investigation of mechanically and electropolished surfaces by the electron microscope; abstract. H. Raether. Metal Finishing 51:81-2 O '53
Surface of a glass fracture in the electron microscope; tr. by F. W. Preston. N. Térao and S. Okada. bibliog il Glass Ind 34:71-2 F '53
X-ray and electron-microscope examination of potassium cobaltinitrite precipitates; abstract. J. W. Robinson. Chem Age (Lond) 67:495-6 O 11 '52

Replica technique

Electron microscope study of plasticized latices. E. B. Bradford. il J Ap Phys 23:609-12 Je '52
Markings found in the oxide replicas for electron microscopy. S. Yamaguchi. il diags J Ap Phys 23:935-6 S '52
Replica method for study of the structure of lead-antimony alloys. J. Burbank. il J Metals 5:Trans 55-6 Ja '53
Structure of oxide replicas for electron microscope. S. Yamaguchi. il J Ap Phys 23:445-7 Ap '52

ELECTRON microscope society of America
Proceedings, annual meeting, Cleveland, Nov. 6-8; abstracts of papers. J Ap Phys 24:111-18 Ja '53

ELECTRON multipliers
Electron multiplying device; patent. diag Electronics 26:212+ Ap '53
Remodulation in electron multiplier cascades. H. E. Kallman. diag Inst Radio Eng Proc 41:282-3 F '53

ELECTRON optics
Angular aberrations in sector shaped electromagnetic lenses for focusing beams of charged particles. E. G. Johnson and A. O. Nier. bibliog diags Phys R 91:10-17 Jl 1 '53
Electron optical image of an electron beam. L. Mayer. il diag J Ap Phys 24:105-6 Ja '53
Electronic camera in film-making. N. Collins and T. C. MacNamara. bibliog diags Soc Motion Picture & Tv Eng J 59:445-57; Discussion. 458-61 D '52
Field plotting in deflection yoke design. E. Sieminski. bibliog il diags Electronics 25:122-6 O '52
Method for the measurement of spherical aberration of an electrostatic electron lens. D. W. Shipley. bibliog il diags J Ap Phys 23:1310-16 D '52
Reflection of microwaves from metal-plate media. J. J. Brady and others. il diags J Ap Phys 23:964-75 S '52
See also
Electron microscope
Electronics
Oscillographs, Cathode ray
Television

ELECTRON tubes. See Vacuum tubes

ELECTRONEGATIVITY (term)
Electronegativities in inorganic chemistry. R. T. Sanderson. bibliog J Chem Educ 29:539-44 N '52

ELECTRONIC (term)
First uses in 1832 and 1929. Tele-Tech 12:60-1 My '53

ELECTRONIC computers. See Calculating machines

ELECTRONIC organ. See Organ, Electric

ELECTRONIC service affiliates, National industrial. See National industrial electronic service affiliates

ELECTRONIC switch. See Vacuum tubes—Control uses

ELECTRONIC voltmeters. See Voltmeters, Vacuum tube

ELECTRONICS
Annual handbook of product design for 1953; electrical and electronic components. il diags Product Eng Hdbk p I 1-33+ '53
Changed outlook for television-electronics; with statistical data on electronics and television companies. S. Devlin. Mag of Wall St 92:22-5+ Ap 4 '53
Collective bargaining; radio, television, and electronics industry. A. Bercowitz and others. U S Bur Labor Statistics Bul 1089: 1-32; pa 20c Supt. of doc. '52
Communications and electronics. M. J. Kelly. Elec Eng 71:965-9 N '52
Development of electronics and the foundation for industrial application. J. E. Hobson. Elec Eng 71:986-91 N '52
Electronic control and stabilization of aircraft; symposium. il diags Aeronautical Eng R 12:38-55; Discussion. 55-69 My '53
Electronic equipment in fighter aircraft. A. R. Andersen. Elec Eng 72:64-7 Ja '53
Electronic structure of the germanium crystal. F. Herman and J. Callaway. Phys R 89:518-19 Ja 15 '53
Electronics; adaptability to aircraft engine control. J. D. Peterson and R. W. Curran. il diags Aeronautical Eng R 12:70-4 My '53
Electronics; an integrated, mature and progressive industry. R. W. Galvin. Comm & Fin Chr 177:995+ Mr 5 '53
Electronics and contracting; abstracts. W. H. Smith. Elec R (Lond) 152:1478-9 Je 26 '53; Elec J 151:35-6 Jl 3 '53
Electronics and the engineer. D. Sarnoff. Inst Radio Eng Proc 41:836-8 Jl '53; Same abr. Comm & Fin Chr 177:1421+ Ap 2 '53
Electronics for defense and industry. E. W. Engstrom. Franklin Inst J 255:1-7 Ja '53
Electronics; from pocket radio to Captain Video. I. U. Cobleigh. Comm & Fin Chr 177:891 F 26 '53
Electronics in the modern office. R. W. Fairbanks. flow chart il diags Harvard Bsns R 30:83-98 S '52
Electronics industry enters dynamic age; with data on electronics and television companies. L. A. Lukens. Mag of Wall St 91:70-2+ O 18 '52
Electronics stakes out the future; Institute of radio engineers convention, New York. Bsns W p27-8 Ap 4 '53
Electronics symposium and exhibition, London, Sept. 2-5. Engineer 194:323 S 5 '52; Elec R (Lond) 151:511-12 S 5 '52
Hughes aircraft co.; plum for sale? Bsns W p85-6+ My 23 '53
Hughes takes wraps off avionics giant. P. Klass. il Aviation W 58:14-16 My 25 '53
Impact of electronic research on the development of the West. A. M. Zarem. Tele-Tech 12:60-1+ Ag '53
Industrial electronics; a young giant with growing pains. A. Zimmerman and T. F. Hruby. il Steel 132:96-9 Mr 16 '53
IAS summaries. Aviation W 58:32 F 23 '53
Instrument electronics (cont). M. H. Aronson. il diags Instruments 25:1263-5+, 1426-7+, 1572-5+; 26:108-12+ S-N '52, Ja '53
Insurance enters its electronic age. T. O. Carlson. il Spectator 161:26-7+ My '53

ELECTRONICS—*Continued*

Is complexity of military electronics necessary? R. J. Nordlund. Inst Radio Eng Proc 41:965-7 Ag '53

Isotope missionaries; selling of isotopes and radioactive instruments. il Chem W 72: 61-2+ F 21 '53

Low temperatures in electronics. Electronics 26:222+ Jl '53

Measuring pressures electronically. R. M. Shuffler. il diags Pet Eng 25:D96-8 My '53

National electronics conference, Chicago, Sept. 28-30; technical program. Elec Eng 72:816-19 S '53; Tele-Tech 12:150-2 S '53

Preview of new equipment at National electronics conference, Chicago, Sept. 29-Oct. 1. Tele-Tech 11:64-5 O '52

Proceedings, American physical society 5th annual conference on gaseous electronics, Princeton, Sept. 4-6, 1952; with abstracts of papers. Phys R 89:335-40 Ja 1 '53

Reliability of airborne electronic components. B. G. Bromberg and R. D. Hill, jr. Inst Radio Eng Proc 41:513-16 Ap '53

Research and engineering progress, 1952; electronics. il Gen Elec R 56:42-6 Ja '53

Role of electronics in geophysical instrumentation. F. F. Segesman. diag Oil & Gas J 51:152+ O 20 '52

Search is on for electronics reliability; National electronics conference, Chicago. P. Klass. il diag Aviation W 57:51-3+ N 24 '52

Systematic cooling of air-borne electronic equipment. W. Robinson. bibliog il diags Aeronautical Eng R 12:81-91 My '53

Television; its realities and eventualities; dynamic quality of electronics industry. P. A. Just. Comm & Fin Chr 177:993+ Mr 5 '53

Transistor electronics; imperfections, unipolar and analog transistors. W. Shockley. bibliog diags Inst Radio Eng Proc 40:1289-313 N '52

Truth about electronic business machines. H. O. Brayer. il Am Bsns 23:10-11+ Jl; 16-17+ Ag; 20-1+ S '53

Unrecognized hazards in electronics; dangers of carbon tet and selenium. T. R. Hughes. Radio & Tv N 49:96+ Ap '53

WESCON, 1953; West Coast manufacturers and engineers convention, San Francisco, Aug. 19-21; technical paper program. Tele-Tech 12:76-8+ Ag '53

What you need to know about electronic controls. N. Weissman. il Factory Management 111:118-27 S '53

See also

Electron microscope
Electron optics
Electrons
Oscillographs, Cathode ray
Photoelectric cells
Radio engineering
Television
Vacuum tubes

Definition

Electronics, how shall it be defined? A. B. Smith and others. Inst Radio Eng Proc 41:667-8 My '53

Let us re-define electronics. W. L. Everitt. Inst Radio Eng Proc 40:899 Ag '52

Exhibitions

Electronics exhibition, 8th, Manchester. il Elec J 151:275-6 Jl 24 '53

Industrial electronics; review of 8th Manchester exhibition, July 15-21. il Elec R (Lond) 153:125-8 Jl 17 '53

Patents

Pertinent patents. diags Electronics 26:158+ F; 164+ Mr; 200+ Ap; 248+ Jl; 246+ Ag; 240+ S '53

Study and teaching

Demonstration equipment for electronic courses. il Electronics 26:196+ Ap '53

ELECTRONICS laboratory. See United States—Navy—Electronics laboratory

ELECTRONS

Absorption of light by trapped electrons. R. C. O'Rourke. bibliog Phys R 91:265-70 Jl 15 '53

Acceptors produced in germanium by quenching from high temperatures. C. Goldberg. diag Phys R 88:920-4 N 15 '52

Acousto-electric effect. R. H. Parmenter. bibliog diags Phys R 89:990-8 Mr 1 '53

Analytical method for the approximate determination of the eigenfunctions and energies of electrons in atoms. R. Gáspár. J Chem Phys 20:1863-5 D '52

Anomalous magnetic moment of the electron. S. H. Koenig and others. bibliog diags Phys R 88:191-9 O 15 '52

Application of the theory of numbers to the magnetic properties of a free electron gas. M. C. Steele. bibliog Phys R 88:451-64 N 1 '52

Atomic moments in alloys. J. E. Goldman. bibliog diags Rs Mod Phys 25:108-13 Ja '53

Average energy of secondary electrons in anthracene due to gamma-irradiation. G. D. Prestwich and others. Phys R 87:1030-1 S 15 '52

Band structures of one-dimensional crystals with square-well potentials. G. Allen. bibliog diag Phys R 91:531-3 Ag 1 '53

Bremsstrahlung cross section of 60-Mev electrons in lead. C. D. Curtis. bibliog diag Phys R 89:123-30 Ja 1 '53

Calculation of *F* center energy levels. J. A. Krumhansl and N. Schwartz. bibliog diag Phys R 89:1154-5 Mr 1 '53

Calculation of some electronic energy levels of sulfur hexafluoride. A. B. F. Duncan. bibliog J Chem Phys 20:951-60 Je '52

Canonical transformation for an electron-positron field coupled to a time-independent electromagnetic field. H. E. Moses. Phys R 89:115-22 Ja 1 '53

Catalysis of the cerous-ceric electron exchange reaction by fluoride. H. C. Hornig and W. F. Libby. bibliog J Phys Chem 56: 869-71 O '52

Comparison of electron density in different regions of a dc glow discharge. B. J. Udelson and J. E. Creedon. Phys R 88:145 O 1 '52

Configuration interaction between the odd terms in the iron group. N. Rosenzweig. bibliog Phys R 88:580-6 N 1 '52

Correlation between electron and recoil nucleus in He^6 decay. B. M. Rustad and S. L. Ruby. bibliog diag Phys R 89:880-1 F 15 '53

Current carrier mobility ratio in semiconductors. L. P. Hunter. bibliog Phys R 91:579-81 Ag 1 '53

Determination of electron affinities. H. O. Pritchard. Chem R 52:529-63 bibliog(p560-3) Je '53

Diamagnetism of an enclosed electron gas. H. A. Nye. Phys R 89:1305-6 Mr 15 '53

Direct comparison of *m/e* for the positron and the electron. L. A. Page and others. bibliog diag Phys R 89:1273-7 Mr 15 '53

Dissociation of cyclopropane under electron impact. F. H. Field. bibliog J Chem Phys 20:1734-9 N '52

Distortion of inner shell electrons. J. M. Cahill and C. R. Mueller. bibliog J Chem Phys 21:1415 Ag '53

Effects of electronic charge transfer between adsorbate and solid on chemisorption and catalysis. P. B. Weisz. bibliog diags J Chem Phys 21:1531-8 S '53

Effects of radioactive disintegrations on inner electrons of the atom. J. S. Levinger. bibliog diags Phys R 90:11-25 Ap 1 '53

Electron deficient compounds; the structure of the trimethylaluminum dimer. P. H. Lewis and R. E. Rundle. bibliog il diags J Chem Phys 21:986-92 Je '53

Electron distribution in molecules; F^{19} nuclear magnetic shielding and substituent effects in some benzene derivatives. H. S. Gutowsky and others. bibliog il diag Am Chem Soc J 74:4809-17 O 5 '52

Electron distribution in molecules; proton and fluorine magnetic resonance shifts in the halomethanes. L. H. Meyer and H. S. Gutosky. bibliog il J Phys Chem 57:481-6 My '53

Electron distribution in molecules; the proton magnetic spectra of simple organic groups. L. H. Meyer, A. Saika and H. S. Gutowsky. bibliog il Am Chem Soc J 75: 4567-73 S 20 '53

Electron exchange polymers; counter-current applications. H. G. Cassidy, M. Ezrin and I. H. Updegraff. il Am Chem Soc J 75:1615-17 Ap 5 '53

ELECTRONS—*Continued*

Electron exchange-polymers; polymers and copolymers of vinylhydroquinone. M. Ezrin, I. H. Updegraff and H. G. Cassidy. Am Chem Soc J 75:1610-14 Ap 5 '53

Electron excitation of nuclei. J. A. Thie and others. Phys R 87:962-5 S 15 '52

Electron impact studies in CH_4, CH_3Cl, CH_3Br and CH_3I. H. Branson and C. Smith. bibliog Am Chem Soc J 75:4133-8 S 5 '53

Electron impact studies of the vinyl ion and radical. F. H. Field. bibliog J Chem Phys 21:1506-10 S '53

Electron-induced showers in copper. A. Kantz and R. Hofstadter. bibliog il diag Phys R 89:607-17 F 1 '53

Electron-lattice interaction and super-conductivity. K. S. Singwi. bibliog Phys R 87:1044-7 S 15 '52

Electron multiplication in silicon and germanium. K. G. McKay and K. B. McAfee. bibliog Phys R 91:1079-84 S 1 '53

Electron-neutron interaction as deduced from pseudoscalar meson theory. B. D. Fried. bibliog diags Phys R 88:1142-9 D 1 '52

Electron-positron annihilation in flight. S. A. Colgate and F. C. Gilbert. diag Phys R 89:790-2 F 15 '53

Electron removal in krypton afterglows. J. M. Richardson. bibliog il diag Phys R 88:895-900 N 15 '52

Electron spin resonance in a silicon semiconductor. A. M. Portis and others. Phys R 90:988-9 Je 1 '53

Electron track recognition in nuclear emulsions. A. Beisler. diags R Sci Instr 23:500-1 S '52

Electron transfer processes and the oxidation-reduction reactions of hexacyanoferrate(III) ion in aqueous solution. A. W. Adamson. bibliog J Phys Chem 56:858-62 O '52

Electron trapping states in phosphors. R. T. Ellickson. Opt Soc Am J 43:196-7 Mr '53

Electron traps in the thallium-activated potassium chloride phosphor. P. D. Johnson and F. E. Williams. bibliog diags J Chem Phys 21:125-30 Ja '53

Electronic barrier layer phenomena in chemisorption and catalysis. P. B. Weisz. J Chem Phys 20:1483-4 S '52

Electronic component at low altitudes produced by π-meson decay. E. D. Palmatier. bibliog diags Phys R 88:761-72 N 15 '52

Electronic emission spectrum of $C^{13}O^{16}$. K. E. McCulloh and G. Glockler. bibliog Phys R 89:145-7 Ja 1 '53

Electronic energy bands in metals. G. Parzen. bibliog diag Phys R 89:237-43 Ja 1 '53

Electronic spectra of *o*-dichlorobenzene in the solid state. S. C. Sirkar and H. N. Swamy. bibliog J Chem Phys 20:1177 Jl '52

Electronic states in crystals under large over-all perturbations. P. Feuer. bibliog diag Phys R 88:92-100 O 1 '52

Electronic structure of *F* centers; hyperfine interactions in electron spin resonance. A. F. Kip and others. bibliog Phys R 91:1066-71 S 1 '53

Electronic structure of *F* centers; saturation of the electron spin resonance. A. M. Portis. bibliog diag Phys R 91:1071-8 S 1 '53

Electronic structure of ferrocene. H. H. Jaffé. J Chem Phys 21:156-7 Ja '53

Electronic structure of the diamond crystal. F. Herman. bibliog Phys R 88:1210-11 D 1 '52; Reply. G. G. Hall. 90:317 Ap 15 '53

Electronic structures and spectra of some molecules related to oxygen. L. E. Orgel. Chem Soc J p 1276-8 Ap '53

Electronic transitions in the luminescence of zinc sulfide phosphors. R. H. Bube. bibliog diag Phys R 90:70-80 Ap 1 '53

Energy spectra of cosmic-ray photons and electrons from plastic scintillation counter measurements. C. N. Chou. bibliog diags Phys R 90:473-6 My 1 '53

Exchange frequency electron spin resonance in ferrites. J. Kaplan and C. Kittel. J Chem Phys 21:760-1 Ap '53

Exchange potential in an electron gas at nonzero temperature. H. Zirin. Phys R 90:795 Je 1 '53

Excitation of molecular rotation-vibration by electron impact. P. M. Morse. bibliog Phys R 90:51-5 Ap 1 '53

Excited electronic state of the 2600A transition in benzene. A. C. Albrecht and W. T. Simpson. J Chem Phys 21:940 My '53

Excited electronic states and molecular vibrations of thiophosgene. J. Duchesne. bibliog J Chem Phys 21:548-9 Mr '53

Excited levels in Ti^{48}. M. M. Miller. Phys R 88:516-17 N 1 '52

Experimental confirmation of relation between pulse drift mobility and charge carrier drift mobility in germanium. M. B. Prince. Phys R 91:271-2 Jl 15 '53

Experimental verification of the relationship between diffusion constant and mobility of electrons and holes. Phys R 88:1368-9 D 15 '52

Explanation of chemical variations within periodic major groups. R. T. Sanderson. bibliog Am Chem Soc J 74:4792-4 O 5 '52

Fast electron and X-ray decomposition of the alkyl halides. R. H. Schuler and W. H. Hamill. bibliog diag Am Chem Soc J 74:6171-4 D 20 '52

Field emission. R. Gomer. J Chem Phys 21:764 Ap '53

Free-electron model for discussing reactivity in unsaturated hydrocarbons. K. Fukui and others. diag J Chem Phys 21:174-6 Ja '53

Free-electron model for π-molecular complexes. K. E. Shuler. bibliog diags J Chem Phys 20:1865-71 D '52

Free-electron network model for conjugated systems. C. W. Scherr and K. Ruedenberg. bibliog diags J Chem Phys 21:1413-14, 1565-96 Ag-S '53

Free-electron network model for conjugated systems; a demonstration model showing bond order and free valence in conjugated hydrocarbons. J. R. Platt. il J Chem Phys 21:1597-600 S '53

Generalized free-electron model of conjugated polycyclic hydrocarbons. J. S. Griffith. J Chem Phys 21:174 Ja '53

Generation of *F* centers at low temperature. F. Seitz. bibliog Phys R 89:1299 Mr 15 '53

Hall effect. O. Lindberg. diags Inst Radio Eng Proc 40:1414-19 N '52

Improvement in the π-electron approximation in LCAO MO theory. R. Pariser. J Chem Phys 21:568-9 Mr '53

Influence of σ-electrons on the lower excited electronic levels of benzene. K. Niira. J Chem Phys 20:1498-9 S '52

Integrable case of electron motion in electric and magnetic field. H. Poritsky and R. P. Jerrard. diags J Ap Phys 23:928-30 Ag '52

Interaction between classical electron and quantized electromagnetic field. I. R. Senitzky. bibliog Phys R 91:1309-11 S 15 '53

Interaction between electron and one-dimensional electromagnetic field. N. Rosen. Phys R 87:940-2 S 15 '52

Interaction of closed shells. H. Margenau and P. Rosen. bibliog J Chem Phys 21:394-8 Mr '53

Interference terms of the electron-neutrino angular correlation. M. Morita. Phys R 90:1005-6 Je 1 '53

Interpretation and generalization of Dirac's theory of the electron. W. Wessel and S. J. Czyzak. bibliog Phys R 91:986-94 Ag 15 '53

Interpretation of *e/m* values for electrons in crystals. W. Shockley. Phys R 88:953 N 15 '52

Interpretation of the electron-inertia experiment for metals with positive Hall coefficients. N. Rostoker. bibliog Phys R 88:952-3 N 15 '52

Ionization and dissociation of methyl siloxanes by electron impact. V. H. Dibeler and others. J Chem Phys 21:180-1 Ja '53

Ionization loss and straggling of fast electrons. E. L. Goldwasser and others. diag Phys R 88:1137-41 D 1 '52

Isotope shift anomalies and nuclear structure. L. Wilets and others. bibliog diags Phys R 91:1488-500 S 15 '53

Kinetics of elementary reactions in flames and its relation to the energy distribution of active species. K. E. Shuler. bibliog diag J Phys Chem 57:396-403 Ap '53

LCAO self-consistent field calculations of the π-electrons energy levels and electronic structure of fulvene. G. Berthier. diag J Chem Phys 21:953-4 My '53

ELECTRONS—*Continued*

Low temperature diamagnetism of electrons in a cylinder. W. Band. diag Phys R 91:249-55 Jl 15 '53

Magnetic resonance; magnetic resonance of electrons. K. K. Darrow. bibliog diags Bell System Tech J 32:384-405 Mr '53

Magnetic susceptibility of a diamagnetic electron gas; the role of small effective electron mass. E. N. Adams, 2d. bibliog diags Phys R 89:633-48 F 1 '53

Mean free paths of electrons in evaporated metal films. F. W. Reynolds and G. R. Stilwell. bibliog Phys R 88:418-19 O 15 '52

Measurement of electron exchange in gases at low pressure. E. E. Muschlitz, jr. and J. H. Simons. bibliog diags J Phys Chem 56:837-41 O '52

Mechanism of electron transfer in solution. H. Taube, H. Myers and R. L. Rich. Am Chem Soc J 75:4118-19 Ag 20 '53

Mechanisms of reduction of cumene hydroperoxide; reduction by electron transfer with ferrocyanide ion. H. Boardman. bibliog Am Chem Soc J 75:4268-71 S 5 '53

Method for estimating electronic repulsion integrals over LCAO MO'S in complex unsaturated molecules. R. G. Parr. J Chem Phys 20:1499 S '52

Microwave observation of the collision frequency of electrons in germanium. T. S. Benedict and W. Shockley. bibliog Phys R 89:1152-3 Mr 1 '53

Microwave spin resonance absorption by conduction electrons in metallic sodium. T. W. Griswold and others. il Phys R 88:951-2 N 15 '52

Mobility of electrons in germanium. P. P. Debye and E. M. Conwell. Phys R 87:1131-2 S 15 '52

Mobility of holes and electrons in high electric fields. E. J. Ryder. diags Phys R 90:766-9 Je 1 '53

Mobility of slow electrons in polar crystals. F. E. Low and D. Pines. Phys R 91:193-4 Jl 1 '53

Motion of slow electrons in a polar crystal. T. D. Lee and others. bibliog Phys R 90:297-302 Ap 15 '53

Motion of slow electrons in polar crystals. T. Lee and D. Pines. bibliog Phys R 88:960-1 N 15 '52

Nature of solids. G. H. Wannier. il diags Sci Am 187:39-48 D '52

Neutron-electron interaction. D. J. Hughes and others. Phys R 90:497-8 My 1 '53

New electronic state in benzene. J. S. Ham. il J Chem Phys 21:756-8 Ap '53

Nonadiabatic transitions. H. Aroeste. J Chem Phys 21:181 Ja '53

Number theory and the magnetic properties of an electron gas. M. F. M. Osborne. bibliog diags Phys R 88:438-51 N 1 '52

Orbital effect in neutron-electron magnetic scattering. W. H. Kleiner. bibliog Phys R 90:168-9 Ap 1 '53

Oxidation of aromatic compounds in aqueous solution by free radicals produced by photo-excited electron transfer in iron complexes. H. G. C. Bates and N. Uri. bibliog Am Chem Soc J 75:2754-9 Je 5 '53

Oxidation of hydrazine in aqueous solution; the nature of 1- and 2-electron-transfer reactions, with particular reference to the oxidation of hydrazine. W. C. E. Higginson, D. Sutton and P. Wright. Chem Soc J p 1380-6 My '53

Positron-electron scattering at 1.3 Mev. H. A. Howe and K. R. MacKenzie. bibliog diag Phys R 90:678-82 My 15 '53

Propagation in electron-ion streams. R. Q. Twiss. diags Phys R 88:1392-407 D 15 '52

Properties of the π electron distribution in conjugated system. H. H. Greenwood. J Chem Phys 20:1333 Ag '52

Radiation by electrons in large orbits. D. R. Corson. bibliog il diag Phys R 90:748-52 Je 1 '53

Radiation of a high energy electron in a constant magnetic field. M. Neuman. bibliog Phys R 90:682-9 My 15 '53

Radiations from RaD and RaE. C. S. Wu and others. bibliog diags Phys R 91:319-27 Jl 15 '53

Range correction for electron pick-up. W. H. Barkas. bibliog Phys R 89:1019-22 Mr 1 '53

Ratio of plateau to minimum grain density for electrons. R. P. Michaelis and C. E. Violet. Phys R 90:723-4 My 15 '53

Relativistic configuration space formulation of the multi-electron problem. M. Günther. Phys R 88:1411-21 D 15 '52

Rotational magnetic moment, magnetic susceptibilities, and electron distribution in the hydrogen molecule. N. J. Harrick and N. F. Ramsey. bibliog Phys R 88:228-32 O 15 '52

Rydberg constant and the atomic mass of the electron. E. R. Cohen. bibliog diag Phys R 88:353-60 O 15 '52

Semi-empirical theory of the electronic spectra and electronic structure of complex unsaturated molecules. R. Pariser and R. G. Parr. bibliog J Chem Phys 21:466-71, 767-76 Mr, My '53

Similarity theory of relativity and the Dirac-Schrödinger theory of electrons. B. Hoffmann. bibliog Phys R 89:52-9; 91:751-2 Ja 1, Ag 1 '53

Spatial correlation of electrons in molecules. J. E. Lennard-Jones. bibliog diags J Chem Phys 20:1024-9 Je '52

Specific primary ionization of H_2, He, Ne, and A by high energy electrons. G. W. McClure. bibliog diags Phys R 90:796-803 Je 1 '53

Specific probable ionization of electrons observed with a Wilson cloud chamber. R. H. Frost and C. E. Nielsen. bibliog diags Phys R 91:864-70 Ag 15 '53

Speculation on the formation of *F*-centers during irradiation. J. J. Markham. bibliog diag Phys R 88:500-9 N 1 '52

Stopping power of *K*-electrons. M. C. Walske. bibliog Phys R 88:1283-9 D 15 '52

Structures as an aid in understanding π-electron spectra. W. T. Simpson. bibliog Am Chem Soc J 75:597-603 F 5 '53

Symmetry assignments for the first two excited singlet electronic states of the naphthalene molecule. O. Schnepp and D. S. McClure. bibliog J Chem Phys 21:959 My '53

Temporary traps in silicon and germanium. J. R. Haynes and J. A. Hornbeck. Phys R 90:152-3 Ap 1 '53

Theoretical and experimental status of the collective electron theory of ferromagnetism. E. P. Wohlfarth. bibliog Rs Mod Phys 25:211-19 Ja '53

Theoretical considerations concerning Hammett's equation; calculation of ρ-values. H. H. Jaffé. bibliog J Chem Phys 21:415-19 Mr '53

Theoretical considerations concerning Hammett's equation; σ-values for pyridine and other aza-substituted hydrocarbons. H. H. Jaffé. J Chem Phys 20:1554-5 O '52

Theory of absorption spectra of carotenoids according to Tomonaga-gas model of π-electrons. G. Araki and T. Murai. J Chem Phys 20:1661-2 O '52

Theory of electron exchange reactions in aqueous solution. W. F. Libby. bibliog diag J Phys Chem 56:863-8 O '52

Threshold law for single ionization of atoms or ions by electrons. G. H. Wannier. bibliog Phys R 90:817-25 Je 1 '53

Transistor electronics; imperfections, unipolar and analog transistors. W. Shockley. bibliog diags Inst Radio Eng Proc 40:1289-313 N '52

Transistors; theory and application; physical properties of electrons in solids. A. Coblenz and H. L. Owens. il diag Electronics 26:162-5 My '53

Transport of added current carriers in a homogeneous semiconductor. W. van Roosbroeck. bibliog diag Phys R 91:282-9 Jl 15 '53

Two-electron example of ferromagnetism. J. C. Slater and others. bibliog diags Phys R 91:1323-41 S 15 '53

Two-electron self-consistent field. A. O. Williams, jr. bibliog Phys R 90:803-7 Je 1 '53

ELECTRONS—*Continued*

Variational approach to the unipotential many-electron problem. R. T. Sharp and G. K. Horton. Phys R 90:317 Ap 15 '53

See also

Auger effect
Beta rays
Cathode rays
Counters (electrons, ions, etc.)
Electric discharges
Electromagnetic theory
Electronics
Ions
Neutrons
Photoelectric effect
Positronium
Positrons
Vacuum tubes

Beams

Characteristics of the synchrotron beam. M. Camac. diags R Sci Instr 24:290-7 Ap '53

Debunching of electron beams constrained by strong magnetic fields. M. Chodorow and others. diag Inst Radio Eng Proc 41:999-1003 Ag '53

Direct comparison of the Kelvin and electron beam methods of contact potential measurement. P. A. Anderson. bibliog diag Phys R 88:655-8 N 1 '52

Effect of velocity distribution in a modulated electron stream. D. A. Watkins. bibliog J Ap Phys 23:568-73 My '52

Electron-beam interferometer. il diag Tele-Tech 12:84+ Ag '53

Electron beam interferometer. L. Marton and others. il Phys R 90:490-1 My 1 '53

Electron beam plotting in cathode-ray tubes. L. S. Allard and D. B. Clayson. diags J Sci Instr 29:377-8 N '52

Electron beams sterilize food and drugs. E. A. Burrill and A. J. Gale. il diags Electronics 25:98-101 N '52

Facts about cold sterilization. W. M. Urbain. il diags Food Eng 25:45-6+ F; 77-8+ Mr '53

Polyethylene to be toughened by electron bombardment. il Materials & Methods 38:6 Jl '53

Propagation of space-charge waves in infinite and finite electron beams. P. Parzen. bibliog diags Elec Com 30:134-8 Je '53

Shadow of an electron beam. H. M. Smith and S. Hansen. il diag J Ap Phys 23:1054-5 S '52

6BN6 gated-beam tube as a fast coincidence circuit. J. Fischer and J. Marshall. diags R Sci Instr 23:417-20 Ag '52

Capture

Atomic excitation and ionization accompanying orbital electron capture by nuclei. H. Primakoff and F. T. Porter. bibliog Phys R 89:930-7 Mr 1 '53

Capture and loss of electrons by fission fragments. G. I. Bell. bibliog diag Phys R 90:548-57 My 15 '53

Electron capture by protons passing through hydrogen. J. D. Jackson and H. Schiff. bibliog diag Phys R 89:359-65 Ja 15 '53

Upper limit for atomic orbital electron ejection accompanying K-capture in Fe^{55}. F. T. Porter and H. P. Hotz. bibliog Phys R 89:938-40 Mr 1 '53

Diffraction

Application of Eller's optical machine to the determination of the molecular structure of gases by electron diffraction. L. Bru and others. il J Chem Phys 20:1069-70 Jl '52

Application of Eller's optical machine to the determination of the molecular structure of gases by electron diffraction; nonrigid molecules. L. Bru and others. il J Chem Phys 20:1911-13 D '52

Effect of accelerating voltage and specimen morphology on electron diffraction patterns. S. G. Ellis. J Ap Phys 23:1024-8 S '52

Electron diffraction and microwave investigation of tertiary butyl fluoride. F. Andersen and others. J Chem Phys 21:373 F '53

Electron diffraction from small crystals. C. R. Berry. bibliog Phys R 88:596-9 N 1 '52

Electron diffraction instrument. R. S. Page and R. G. Garfitt. il diags J Sci Instr 29:398-401 D '52

Electron diffraction investigation of hexamethylcyclotri- and octamethylcyclotetrasilazanes. M. Yokoi and K. Yamasaki. Am Chem Soc J 75:4139-41 S 5 '53

Electron diffraction investigation of polished surfaces. T. S. Renzema. J Ap Phys 23:1412 D '52

Electron diffraction investigation of the molecular structures of ketene, carbonyl fluoride and tetrafluoroethylene. T. T. Broun and R. L. Livingston. bibliog Am Chem Soc J 74:6084-91 D 5 '52

Electron diffraction investigation of the molecular structures of 1,1,1-trichloroethane, 2,2-dichloropropane and 2-chloro-2-methylpropane. J. W. Coutts and R. L. Livingston. bibliog Am Chem Soc J 75:1542-7 Ap 5 '53

Electron diffraction studies on the oxidation of pure copper and pure zinc between 200° and 500°C. E. A. Gulbransen and W. R. McMillan. bibliog il Electrochem Soc J 99:393-401 O '52

Electron diffraction study of disulfur decafluoride. R. B. Harvey and S. H. Bauer. bibliog Am Chem Soc J 75:2840-6 Je 20 '53

Electron diffraction study of some glasses. G. O. McClurg. bibliog J Chem Phys 20:1398-400 S '52

Investigation of electron distribution in atoms by electron diffraction. L. S. Bartell and L. O. Brockway. bibliog Phys R 90:833-8 Je 1 '53

Molecular structures of octafluorocyclobutane and of methylcyclobutane. H. P. Lemaire and R. L. Livingston. bibliog Am Chem Soc J 74:5732-6 N 20 '52

Plural electron scattering and its influence on electron diffraction patterns. S. G. Ellis. bibliog Phys R 87:970-6 S 15 '52

Reinvestigation of the structure of difluoromethane by electron diffraction. W. C. Hamilton and K. Hedberg. Am Chem Soc J 74:5529-30 N 5 '52

Theory of electron diffraction. R. Glauber and V. Schomaker. bibliog Phys R 89:667-71 F 15 '53

Emission from metals

Azimuthal distribution of photoelectrons produced by 0.5-Mev polarized photons. F. L. Hereford and J. P. Keuper. bibliog diags Phys R 90:1043-6 Je 15 '53

Conductivity of oxide emitters. R. C. Hughes and P. P. Coppola. diags Phys R 88:364-8 O 15 '52

Corrected values of Fowler-Nordheim field emission functions $v(y)$ and $s(y)$. R. E. Burgess and others. Phys R 90:515 My 15 '53

Electron ejection from Mo by He^+, He^{++}, and He_2^+. H. D. Hagstrum. bibliog diags Phys R 89:244-55 Ja 1 '53

Electron ejection from Ta by He^+, He^{++}, and He_2^+. H. D. Hagstrum. Phys R 91:543-51 Ag 1 '53

Extension of Makinson's theory of photoelectric emission to a periodic potential. H. B. Huntington. Phys R 89:357-8 Ja 15 '53

Field emission from tantalum in the normal and superconducting state. R. Gomer and J. K. Hulm. il J Chem Phys 20:1500-2 S '52

Field emission initiated vacuum arc. W. P. Dyke and others. bibliog il diags Phys R 91:1043-57 S 1 '53

Photoemission from silver into AgCl, KBr, NaCl, and new bands of photosensitivity in AgCl. M. A. Gilleo. bibliog diags Phys R 91:534-42 Ag 1 '53

Photoemission of tungsten in the region of predicted Schottky deviations. E. E. Buder and others. bibliog diag Phys R 91:561-6 Ag 1 '53

Slope of logarithmic plots of the Fowler-Nordheim equation. J. M. Houston. Phys R 88:349 O 15 '52

Transition probability for photoelectric emission from semiconductors. H. B. Huntington and L. Apker. bibliog Phys R 89:352-6 Ja 15 '53

Velocity distribution of electrons in field emission; resolution in the projection microscope. R. Gomer. bibliog diag J Chem Phys 20:1772-6 N '52

Pairs

Momentum transfer and angle of divergence of pairs produced by photons. A. Borsellino. bibliog Phys R 89:1023-5 Mr 1 '53

Pair creation in intermediate coupling theory. R. G. Moorhouse. bibliog diags Phys R 89:958-65 Mr 1 '53

ELECTRONS—Pairs—*Continued*

Pair production by electrons. M. Camac. bibliog diags Phys R 88:745-50 N 15 '52

Production of high-energy electron pairs by negative pions in nuclear collisions. M. Schein and others. bibliog diags Phys R 91:973-80 Ag 15 '53

Total Compton and pair production cross sections at 19.5 Mev. A. I. Berman. bibliog diags Phys R 90:210-17 Ap 15 '53

Z-dependence of the pair production cross section at 1.33 and 2.62 Mev. I. E. Dayton. bibliog diag Phys R 89:544-51 F 1 '53

Recombination

Lifetime of injected carriers in germanium. D. Navon and others. bibliog diag Inst Radio Eng Proc 40:1342-7 N '52

Measurement of minority carrier lifetime in germanium. L. B. Valdes. bibliog il diags Inst Radio Eng Proc 40:1420-3 N '52

Reflection, scattering, etc.

Backscattering of positrons and electrons. H. H. Seliger. bibliog diags Phys R 88:408-12 O 15 '52

Complex amplitudes for electron scattering by atoms. J. A. Hoerni and J. A. Ibers. bibliog Phys R 91:1182-5 S 1 '53

Coulomb scattering of relativistic electrons and positrons by nuclei. H. Feshbach. bibliog Phys R 88:295-7 O 15 '52

Deflection of high-energy electrons in magnetized iron. S. Berko and F. L. Hereford. bibliog diag Phys R 91:1127-30 S 1 '53

Electron-electron scattering at 6.1 Mev. W. C. Barber and others. bibliog il diags Phys R 89:950-7 Mr 1 '53

Electron scattering and the photoemission from cesium antimonide. L. Apker and others. bibliog diags Opt Soc Am J 43:78-80 F '53

Exchange scattering of an electron by an atom and inverse Auger effect. T. Wu. Phys R 87:1012-15 S 15 '52

Exchange scattering of an electron by the hydrogen atom. S. Altshuler. Phys R 91:1167-71 S 1 '53

Excitation cross section for helium atoms. S. Altshuler. Phys R 87:992-4; 89:1093-5 S 15 '52, Mr 1 '53

Fredholm theory of scattering in a given time-dependent field. A. Salam and P. T. Matthews. bibliog Phys R 90:690-5 My 15 '53

High field mobility in germanium with impurity scattering dominant. E. M. Conwell. bibliog Phys R 90:769-72 Je 1 '53

Plural electron scattering and its influence on electron diffraction patterns. S. G. Ellis. bibliog Phys R 87:970-6 S 15 '52

Scattering of high-energy electrons and the method of nuclear recoil. R. Hofstadter and others. Phys R 91:422-3 Jl 15 '53

Straggling distribution for electrons in passing through thin foils. F. Kalil and R. D. Birkhoff. bibliog diag Phys R 91:505-9 Ag 1 '53

Symmetry requirements in electron scattering by an atom. L. E. H. Trainor and T. Wu. bibliog Phys R 89:273-4 Ja 1 '53

Tables for second born approximation scattering from various potential fields. L. Mower. Phys R 89:947-9 Mr 1 '53

Temperature dependence of electrical resistance. W. V. Houston. bibliog Phys R 88:1321-3 D 15 '52

Transmission of electrons through thin metallic foils. C. H. Chang and others. bibliog Phys R 90:544-7 My 15 '53

Scattering

See Electrons—Reflection, scattering, etc.

Secondary emission

Atomic electron ejection in large-angle scattering. M. E. Ebel and W. F. Fry. il diag Phys R 88:1306-8 D 15 '52

Auger peaks in the energy spectra of secondary electrons from various materials. J. J. Lander. bibliog diags Phys R 91:1382-7 S 15 '53

Current density tables for field emission theory. W. W. Dolan. bibliog Phys R 91:510-11 Ag 1 '53

Field emission; large current densities, space charge, and the vacuum arc. W. P. Dyke and J. K. Trolan. bibliog il diags Phys R 89:799-808 F 15 '53

Field emission microscope and flash filament techniques for the study of structure and adsorption on metal surfaces. J. A. Becker and C. D. Hartman. bibliog il diags J Phys Chem 57:153-9 F '53

Investigation of back diffusion of photoelectrons in various standard gases as it affects secondary electron emission coefficients. J. K. Theobald. bibliog diag J Ap Phys 24:123-7 F '53

Mechanism of field dependent secondary emission. H. Jacobs and others. diags Phys R 88:492-9 N 1 '52

Mechanism of self-sustained electron emission from magnesium oxide. D. Dobischek and others. diags Phys R 91:804-12 Ag 15 '53

Neutralization of ions and ionization of atoms near metal surfaces. L. J. Varnerin, jr. diag Phys R 91:859-63 Ag 15 '53

Photocurrent, space-charge buildup, and field emission in alkali halide crystals. A. von Hippel and others. bibliog diags Phys R 91:568-79 Ag 1 '53

Secondary electron emission of crystalline MgO. J. B. Johnson and K. G. McKay. bibliog il diags Phys R 91:582-7 Ag 1 '53

Theory of secondary emission. J. F. Marshall. Phys R 88:416-17 O 15 '52

Thermionic emission

Bariated tungsten emitters. R. C. Hughes and P. P. Coppola. J Ap Phys 23:1261-2 N '52

Effect of impurity migrations on thermionic emission from oxide cathodes. I. E. Levy. bibliog Inst Radio Eng Proc 41:365-8 Mr '53

Electronic properties of barium sulfide. W. Grattidge and H. John. diags J Ap Phys 23:1145-51 O '52

Luminescence and thermionic emission of barium oxide. V. L. Stout. bibliog diags Phys R 89:310-14 Ja 1 '53

Proposed method of test for relative thermionic emissive properties of materials used in electron tubes. diags Am Soc T M Proc 50:142-58 '50

Space-charge limited emission in semiconductors. W. Shockley and R. C. Prim. bibliog diags Phys R 90:753-8 Je 1 '53

Space-charge limited hole current in germanium. G. C. Dacey. bibliog diags Phys R 90:759-63 Je 1 '53

Survey of present knowledge of thermionic emitters. D. A. Wright. diag Inst E E Proc 100 pt 3:125-39 bibliog(70 ref, p 138-9) My '53; Conclusions. Elec R (Lond) 151:1220 D 5 '52; Discussion. Inst E E Proc 100 pt 3:140-2 My '53

Thermionic emission and electrical conductivity of oxide-coated cathodes. S. Narita. J Ap Phys 23:599 My '52

Thermionic emission from oxide-coated tungsten filaments. C. P. Hadley. bibliog J Ap Phys 24:49-52 Ja '53

Transient behaviour of thermionic filaments with temperature-limited emission. F. H. Hibberd. bibliog J Sci Instr 29:280-3 S '52

Velocity

Drift velocity of electrons in argon and argon mixtures. J. M. Kirshner and D. S. Toffolo. bibliog il diags J Ap Phys 23:594-8 My '52

Effect of velocity distribution in a modulated electron stream. D. A. Watkins. bibliog J Ap Phys 23:568-73 My '52

Influence of initial velocities on electron transit time in diodes. J. T. Wallmark. bibliog diag J Ap Phys 23:1096-9 O '52

Velocity distribution of electrons in field emission; resolution in the projection microscope. R. Gomer. bibliog diag J Chem Phys 20:1772-6 N '52

See also

Electron accelerators

ELECTRO-OPTICS

Electro-optical instrument analyzes chemical streams with infrared. il diag Product Eng 24:174-5 My '53

See also

Kerr effect

ELECTRO-OSMOSIS. See Osmosis

ELECTROPHORESIS

Distribution of allergic and blocking activity in human serum proteins fractionated by electrophoresis convection. M. H. Loveless and J. R. Cann. bibliog Science 117: 105-8 Ja 30 '53

Electrochemistry in biology, 1902-52. L. G. Longsworth. bibliog Electrochem Soc J 99: sup355C-8C D '52

Electrophoresis-convection apparatus. il R Sci Instr 23:774-5 D '52

Electrophoresis-convection applied to substances forming soluble complexes. S. J. Singer, S. N. Timasheff and J. G. Kirkwood. bibliog Am Chem Soc J 74:5985-8 D 5 '52

Electrophoresis-convection applied to the complexed insulin-protamine system. S. N. Timasheff and J. G. Kirkwood. bibliog Am Chem Soc J 75:3124-6 Jl 5 '53

Electrophoresis of pigments; abstract. H. Britzinger and others. Paint Oil & Chem R 116:20 F 12 '53

Electrophoretic analysis of protein interaction; explanation of a boundary anomaly in the system bovine serum albumin-methyl orange. J. R. Colvin and D. R. Briggs. bibliog J Phys Chem 56:717-22 Je '52

Electrophoretic contributions to the diffusion of electrolytes. R. H. Stokes. Am Chem Soc J 75:2533-4 My 20 '53

Electrophoretic corrections to the diffusion coefficient of an electrolyte solution. R. H. Stokes. bibliog Am Chem Soc J 75:4563-6 S 20 '53

Fractionation of D-amino acid oxidase by electrophoresis-convection. J. R. Cann and W. R. Frisell. bibliog Am Chem Soc J 75: 2425-7 My 20 '53

Fractionation of insulin by electrophoresis-convection. S. N. Timashieff, R. A. Brown and J. G. Kirkwood. bibliog Am Chem Soc J 75:3121-4 Jl 5 '53

Improved infrared photography for electrophoresis. G. L. Miller. bibliog il diag Science 116:687-8 D 19 '52

Investigations on lignin and lignification; electrophoresis of native and enzymatically liberated lignins. W. J. Schubert and others. bibliog Am Chem Soc J 75:1869-73 Ap 20 '53

Ionophoresis in non-aqueous solvent systems. M. H. Paul and E. L. Durrum. diags Am Chem Soc J 74:4721-2 S 20 '52

Ionophoresis of some carbohydrate derivatives. A. B. Foster and M. Stacey. bibliog J Ap Chem 3:19-21 Ja '53

Ionophoresis of some disaccharides. A. B. Foster. Chem Soc J p982-6 Mr '53

Lipid detection in paper electrophoresis. E. L. Durrum and others. bibliog il Science 116: 428-30 O 17 '52

Modifications of apparatus used for electrophoresis-convection. D. M. Tennent and M. Kniazuk. bibliog il diags Anal Chem 24:1661-2 O '52

Nonequilibrium thermodynamics of the sedimentation potential and electrophoresis. S. R. de Groot and others. bibliog J Chem Phys 20:1825-9 D '52

Simplified apparatus for filterpaper ionophoresis. A. B. Foster. bibliog il diag Chem & Ind p 1050-1 O 25 '52

Some physical investigations of the behaviour of bacterial surfaces; the electrophoretic mobility of aerobacter aerogenes. P. J. Barry and A. M. James. Chem Soc J p3340-5 S '52

Some physical investigations of the behaviour of bacterial surfaces; the variation of the electrophoretic mobility of aerobacter aerogenes with the age of the culture and the nature of the culture medium. P. J. Barry and A. M. James. Chem Soc J p 1264-7 Ap '53

Surface properties of rosin size precipitate. E. F. Thode and others. bibliog Tappi 36: 310-19 Jl '53

Ultracentrifugal properties of human γ-globulins prepared by electrophoresis-convection. J. R. Cann. bibliog Am Chem Soc J 75:4213-17 S 5 '53

ELECTROPHYSIOLOGICAL research

Multibeam ophthalmoscope for the study of retinal physiology. S. A. Talbot and S. W. Kuffler. il diag Opt Soc Am J 42:931-6 D '52

ELECTROPHYSIOLOGY

Bio-electric and lunarcyclic phenomena. L. R. C. Haward. Elec R (Lond) 153:229-30 Jl 31 '53

Electrochemistry in biology, 1902-52. L. G. Longsworth. bibliog Electrochem Soc J 99: sup355C-8C D '52

Electrophysiology; nerves and electrical impulses. E. D. Adrian. Elec J 149:1741 D 5 '52

Hibernation and cortical electrical activity in the woodchuck (marmota monax). C. P. Lyman and P. O. Chatfield. bibliog Science 117:533-4 My 15 '53

Nerve impulse. B. Katz. il diags Sci Am 187:55-64 N '52

Simple test of the normality of twenty-four distributions of electrical skin conductance. H. Schlosberg and W. C. Stanley. bibliog Science 117:35-7 Ja 9 '53

See also

Electricity, Injuries from	Electroencephalography
Electrocardiograph	

Apparatus

Bioelectric integrator gages strain and effort. A. Ford. il diags Electronics 26:172-4 Ap '53

Electronic sleep-teaching. H. Stockman. diags Inst Radio Eng Proc 41:160 Ja '53

Lie detector; instrument measures changes in skin resistance. E. Bohr. il diag Radio & Tv N 49:56-7+ Je '53

ELECTROPLATING

American electroplaters society 40th annual convention, Philadelphia; abstracts of papers. Iron Age 171:134-5 Je 25 '53; Steel 132:114+ Je 8; 114+ Je 29 '53

Anodes for electroplating. A. C. West. Metal Finishing 51:66-70+ Ag '53

Effect of temperature on the cathode potential during nickel plating. D. R. Turner. bibliog diags Electrochem Soc J 100:15-21 Ja '53

Electrochemical society meeting, 102d, Montreal, Oct. 26-30; abstracts of papers presented at the sessions on electrodeposition. Metal Finishing 50:70-4 N '52

Electrochemical society 104th meeting, Wrightsville, N.C. Sept. 13-16; with abstracts of papers. Metal Finishing 51:75-7+ O '53

Electrodeposition of tin-nickel alloy plate from chloride-fluoride electrolytes. J. W. Cuthbertson and others. bibliog Electrochem Soc J 100:107-19 Mr '53; Excerpts. Metal Finishing 51:64-9 Jl '53

Electrodeposition of zinc on uranium metal. L. Silverman. Metal Finishing 50:75 N '52

Electrometallurgy of tin and its alloys. E. S. Hedges and J. W. Cuthbertson. bibliog Chem & Ind p 1250-4 D 27 '52

Electroplating on beryllium. J. G. Beach and C. L. Faust. flow sheet Metal Finishing 51:68-70+ O '53

Elements of electroplating. R. T. Kimmel. flow chart il plan diag Tool Eng 30:75-84 Je '53

Experimental plating of internal engine parts. G. W. Grupp. Metal Finishing 51:53-5 Jl '53

Extracts from the world's plating literature (cont). Metal Finishing 50:84-5 N; 70-2 D '52; 51:101-2 Ja; 78-80 F; 82-4 Mr; 82-4 Ap; 77-9 My; 110-12 Je; 70-1 Jl; 79-80 Ag; 78-80 S; 81-3 O '53

Hydride bath for the electrodeposition of aluminum. D. E. Couch and A. Brenner. bibliog il diags Electrochem Soc J 99:234-44 Je '52; Abstract. Metal Prog 64:126+ Jl '53

Immersion brass coatings on steel. H. W. Richter. Metal Finishing 51:66-7+ My '53

It will pay you to examine surface treatment methods. A. G. Gray. il Steel 132:92-4+ My 18 '53

Manufacturing name plates; etching, anodizing and plating operations; Chicago thrift-etching corp. R. E. Pettit. il Metal Finishing 51:60-4+ Mr '53

My experience with analytical control of electroplating solutions. G. B. Hogaboom. Metal Finishing 51:93-6+ Je '53

Platers continue search for substitutes. il Steel 132:54 Je 15 '53

ELECTROPLATING—*Continued*

Plating adhesion and base-metal surface condition; abstract. H. Reininger. Metal Finishing 51:111-12 Je '53

Plating methods explored; fundamental investigations discussed by electrochemists at their Montreal meeting; abstracts of papers. il diags Steel 131:82-4+ D 1 '52

Plating on aluminum; zincate immersion pretreatment. W. G. Zelley. il Steel 132:76-8 F 16 '53

Recent developments in protective coatings. A. G. Gray. il Metal Prog 62:90-3 N '52

Review of recent developments in electroplating. H. Silman. bibliog il diag Metallurgia 46:283-8+ D '52

Rôle of the analyst in the electroplating industry; abstract and discussion. K. E. Langford. Chem Age (Lond) 68:277-80 F 14 '53

Technical developments of 1952. N. Hall. il Metal Finishing 51:92A-92B, 93-100 bibliog and patent list(246 ref, p99-100) Ja '53

Trends in better finishes for automobiles. J. Parina, jr. il Metal Prog 64:83-6 Jl '53

Volume plating method increases gun tube life. il Steel 131:89 N 17 '52

What's ahead the next ten years in finishing. Am Mach 96:H4-6 Mid-N '52

See also

Aluminum plating
Brass plating
Chromium plating
Copper plating
Electric circuits—Plated circuits
Electrodeposition of metals
Nickel plating
Plastic materials—Plating
Silver plating

Defects

Defects in barrel and drum plating; abstract. O. Niedermeyer. Metal Finishing 51:82 Mr '53

Peeling of nickel deposits. E. T. Richards. bibliog(53 ref) Metal Finishing 51:64-7 Ap; 60-5 My '53

History

Fifty years of electroplating. F. A. Lowenheim. Metal Finishing 51:78-80 Ja '53

50 years' progress in the testing and specification of electroplated coatings. W. Blum. il diags Metal Finishing 51:82-5 Ja '53

Plater in 1903. G. B. Hogaboom. bibliog il Metal Finishing 51:72-7+ Ja '53

Reminiscences of an old timer; meetings leading to formation of National electroplaters' association of the United States and Canada. R. F. Clark. Metal Finishing 51:81 Ja '53

Power

Recent developments and life characteristics of selenium rectifiers. C. E. Brigham. il Metal Finishing 51:56-9+ My '53

Safety measures

Air control in electroplating. H. Harrison. il Safety Maint & Prod 104:36-8+ O '52

Electroplating made safer. il diag Nat Safety N 68:28-9 S '53

Tables, calculations, etc.

Triangular logarithmic net for the calculation of plating thicknesses. D. R. Curry. Metal Finishing 51:79-81 Ap '53

Temperature effect

Temperature in electroplating practice; abstract. J. Liger. Metal Finishing 51:82-3 Mr '53

Testing

Electrochemical method of measurement of the adhesion of plated coatings; abstract. A. T. Vagramyan and Y. S. Tsareva. Metal Finishing 51:80 S '53

50 years' progress in the testing and specification of electroplated coatings. W. Blum. il diags Metal Finishing 51:82-5 Ja '53

Waste

Colorimetric determination of cyanide, cyanate, and thiocyanate in sewage and plating wastes. J. M. Kruse and M. G. Mellon. bibliog Sewage & Ind Wastes 24:1254-9 O '52; Same. Metal Finishing 51:99-102 Je '53

Critical review of the literature of 1952 on sewage, waste treatment, and water pollution; plating. bibliog Sewage & Ind Wastes 25:642-4 Je '53

Cyanide waste disposal survey. P. R. Carlson. Sewage & Ind Wastes 24:1541-3 D '52

Determination of residual chlorine in metal finishing wastes. H. C. Marks and N. S. Chamberlin. bibliog Anal Chem 24:1885-7 D '52

Methods for treating metal-finishing wastes. Metal Prog 64:130+ Ag '53

Plating room waste water disposal. S. F. O'Connor. il diags Metal Finishing 51:56-8+ F '53

Plating waste treatment. C. F. Paulson. il diag Metal Prog 64:84-7 Ag '53; Abstract. Steel 132:177+ My 25 '53

Practical methods for in-plant reduction of metal finishing wastes. W. L. Pinner. Sewage & Ind Wastes 24:1432-5 N '52

Reduction of plating waste losses by reclaim tanks; Delco-Remy division, General motors corp. C. F. Hauri. il diags Sewage & Ind Wastes 25:586-90 My '53

Treatment of chromium and other plating room waste waters. M. E. Hodges. il plan Metal Finishing 51:60-4 O '53

Water-softener sludge put to work; used to treat metal plating wastes by Ranco, inc. diags Eng N 149:45 O 9 '52

See also

Chromium plating—Waste

ELECTROPNEUMATIC control

Air-powered electrically controlled rotary index work-feed table. il diag Mach 59:200-1 N '52

Electro Methods pneumatic time-delay relay. il Engineering 176:218 Ag 14 '53

Electro-pneumatic fuel transfer system. diag Engineering 176:151 Jl 31 '53

Electropneumatic index table. il diag Machine Design 24:181-2 D '52

ELECTROPOLISHING. See Polishing, Electrolytic

ELECTROSTATIC analyzer

Electrostatic analysis of nuclear reaction energies. D. S. Craig and others. Phys R 88:808-11 N 15 '52

Electrostatic analysis of nuclear reaction energies. D. J. Donahue and others. bibliog Phys R 89:824-6 F 15 '53

ELECTROSTATIC electric generators. See Electric generators, Electrostatic

ELECTROSTATIC paint spraying. See Paint spraying, Electrostatic

ELECTROSTATIC separators

High voltage removes filth; electrostatic separator perfected by Quaker Oats. E. D. Andrews. flow diag il diag Food Eng 24:53-4+ Jl '52; Discussion. 24:114+ D '52

ELECTROSTATICS

Application of the Bjerrum ion association theory to the binding of anions by proteins. J. A. Schellman. bibliog J Phys Chem 57:472-5 Ap '53

Electrostatics create flash smoking; coating. R. E. Morse and D. B. Pivan. il diag Food Eng 25:70-1+ S '53

Printing becomes electric; process known as XeroX. il Elec West 110:88-9 Mr '53

See also

Electric capacitance
Electric capacitors
Electric charges
Electric discharges
Electricity, Static
Textile fabrics—Electrostatic properties

ELECTROTECHNICAL commission, International. See International electrotechnical commission

ELECTROTHERAPEUTICS

Apparatus and supplies

Past and present forms of electric apparatus in physical medicine. F. T. Jung. Elec Eng 71:993-8 N '52

Research and engineering progress, 1952; electromedical. il Gen Elec R 56:47 Ja '53

History

Past and present forms of electric apparatus in physical medicine. F. T. Jung. Elec Eng 71:993-8 N '52

ELECTROTURNING machine

Experimental production of small tensile specimens by electrolytic solution (electroturning). M. H. Farmer and G. H. Glaysher. il diags J Sci Instr 30:9-10 Ja '53

ELECTROTYPESETTERS. See Teletypesetters

ELEMENTS, Chemical. See Chemical elements

ELEVATED roads. See Roads, Elevated

ELEVATORS

Elevator service is 30 per cent faster at General Shoe. Am Bsns 23:30 Ja '53
Elevator shaft lined with Blocrete. il Eng N 150:78 F 26 '53
Engineering highlights of 1952; elevators. C. A. Scarlott. il Westinghouse Eng 13:40 Ja '53
Mechanical installations in buildings. P. T. Fletcher. plan Inst Mech Eng Proc (A) 166 no 3:363-5, pl 1-2,'52
Replacement of hydraulic lifts by London Transport. il Engineer 194:703 N 21 '52; Elec J 149:1580 N 21 '52
Unregulated utility. A. B. Marvin. Pub Util 52:480-6 O 8 '53

Accidents

Elevator accidents analyzed in report. Safety Maint & Prod 104:82-3 O '52

Advertising

Westinghouse's big photos go after elevator market. il Ind Marketing 38:65 Mr '53

Control

Controls ups and downs; Automatic traffic pattern control. Bsns W p 134 Ap 11 '53
Electronic brain provides automatic elevator service. il Elec Eng 72:853 S '53
Elevator system thinks for itself; memory cells alter traffic pattern to meet demand, eliminate starter and dial system. il Eng N 150:118 Ap 9 '53; Machine Design 25:272+ Je '53
Elevators controlled by electrical brains. il Eng N 150:32-4 My 7 '53
Lift drive; E. A. Foulds, ltd. il Elec R (Lond) 151:1289-90 D 12 '52
Robot elevators; passengers run bank of elevators with aid of electronics. Iron Age 170:211 N 6 '52

Cost of operation

How to estimate elevator costs. Eng N 150:33 My 7 '53

History

Elevator's century of progress. il Nat Safety N 68:124-5 O '53

Maintenance and repair

Elevator belt maintenance. diags Brick & Clay Rec 121:68-9+ D '52
How to maintain electric elevators. L. J. Murphy. il Mill & Factory 51:93-6 D '52

Safety measures

Safe elevator loads; abstract. F. Hochstrasser. Safety Maint & Prod 104:22 N '52
Too big a load, elevator won't move. diag Nat Safety N 67:96 My '53

ELEVATORS, Grain. See Grain elevators

ELEVATORS, Portable

Portable elevators lift goods to lower handling costs. J. E. Hyler. il Mill & Factory 53:122-6 O '53

ELFORD, William Joseph, 1900-1952

Sketch. J. Walker. Chem Soc J p4549-50 N '52

ELGIN national watch company

Earnings outlook favorable. Barron's 33:21-2 My 4 '53
How to meet low tariffs. Fortune 47:207 Mr '53

ELLER, Peter W.

Portrait. Bsns W p 113 F 7 '53

ELLER'S optical machine. See Optical instruments

ELLIOTT company

Security I like best. J. C. Luitweiler. Comm & Fin Chr 177:282 Ja 22 '53

ELLIPSE

Constants for layout of ellipses; reference book sheet. D. E. Sweet. diag Am Mach 97:179 S 14 '53

ELLIPTIC integrals. See Functions, Elliptic

ELLIS, James Hervey Stewart, 1893-

Businessmen in the news. por Fortune 46:58 O '52

EL PASO natural gas company

Common stock offered. Comm & Fin Chr 177:1367 Mr 30 '53
Deal for the economics textbooks; cooperation between Northern Natural and El Paso. maps Bsns W p96+ Jl 18 '53
El Paso Natural Gas planning big new expansion program. Barron's 33:27-8 Je 15 '53
Preferred stock offered. Comm & Fin Chr 178:295-6 Jl 27 '53
Special section on Company's expansion. il maps Oil & Gas J 51:241-6+ Ap 27 '53

EL SALVADOR. See Salvador

ELY, Van Horn, jr.

This I believe; thoughts of one water works man. por Water & Sewage Works 99:445 N '52

EMANATION. See Radon

EMBANKMENTS

Control of embankment material by laboratory testing. F. C. Walker and W. G. Holtz. bibliog il diags Am Soc C E Proc 77[no 108]:1-25 D '51; Discussion. 78[no D-108]:1-13 N '52
Effect of rock content and placement density on consolidation and related pore pressure in embankment construction. H. J. Gibbs. il diags Am Soc T M Proc 50:1343-60; Discussion. 1361-3 '50
Embankment design for relocations at John H. Kerr reservoir project. J. A. Rhodes and G. E. Weber. il map diags Roads & Sts 96:52-8 Ja '53
Reversed dozer blade finegrades slope. Roads & Sts 96:69 Mr '53

See also

Causeways
Dikes (engineering)
Levees
Railroads—Earthwork
Rivers—Bank protection

EMBARGO

Effects of the embargo on Soviet trade. N. Spulber. Harvard Bsns R 30:122-8 N '52
Progress made under Battle act reported; security controls over exports to the Soviet bloc. W. A. Harriman. For Comm W 48:3+ O 20 '52

EMBEZZLEMENT

Do you know your Joes and Marys? V. L. Sailor. Bankers Mo 70:7-8+ Ja '53
Fraud can take place in well-designed system if working rules are not followed. H. N. Schisler. J Account 95:176-8 F '53; Same abr. Rough Notes 96:38+ Je '53
Methods of embezzlement and protective measures. R. C. Taylor. N A C A Bul 34:747-54 F '53
NABAC offers anti-fraud kit to all banks. il Bankers Mo 70:36+ F '53
Patterns on defalcations and fidelity losses in savings and loan associations. R. T. Wood. Weekly Underw 168:1175-6+ Ap 25 '53; Same. Nat Underw 57:11-13 Je 25 '53; Same cond. East Underw 54:48-9 Mr 27 '53
Smallness does not guarantee fidelity; audit control is a life-saver. H. G. Fox. il Bankers Mo 69:52-3+ S '52
Some examples of bank embezzlement resulting from poorly-organized internal control and recommendations for improving the system. L. A. Pratt. J Account 95:457-9 Ap '53
Troubles at home often lead honest employees to embezzlement. Rough Notes 96:27 Ja '53

EMBOSSING (textiles)

Embossing cellulosic resin impregnated textiles; patent. Am Dyestuff Rep 41:626 S 29 '52

EMBROIDERY

Reineer offers first U.S. Schiffli embroiderers. il Mod Textiles Mag 34:88 Ap '53
$62,000 machine embroiders 15 yd. of fabric at a time. il Textile World 103:119 Ap '53

EMBRYOLOGY

Embryologist and the protozoon. P. B. Weisz. il diags Sci Am 188:76-8+ Mr '53
How to arrest a frog. Sci Am 187:42+ O '52
Respiration of the parts of the hybrid gastrula rana pipiens x rana sylvatica. L. C. Sze. bibliog diag Science 117:479-80 My 1 '53

EMERGENCY facilities

Accounting

Taking emergency facilities into property accounting. J. M. Whalen. N A C A Bul 34:670-8 Ja '53

EMETINE

Synthesis of emetine and related compounds; the synthesis of (±)-rubremetinium bromide. A. R. Battersby, H. T. Openshaw and H. C. S. Wood. Chem Soc J p2463-70 Ag '53

EMETINE, Analogs of

Chemical constitution and amoebicidal action; synthesis of 2-(1 : 2 : 3 : 4-tetrahydro-6 : 7-dimethoxy-2-methyl-1-*iso*quinolylmethyl)-1-(1 : 2 : 3 : 4-tetrahydro-6 : 7 - dimethoxy - 1 - *iso*quinolyl)-butane and -pentane and other analogues of emetine. J. M. Osbond, J. D. Fulton and D. F. Spooner. Chem Soc J p4785-92 D '52

EMIGRATION. See Immigration and emigration

EMINENT domain

Bucking the line; Ohio power co.'s new high tension line. Bsns W p 138 N 8 '52

EMMET, William LeRoy, 1859-1941

W. L. R. Emmet memorial. E. S. Lee. por Gen Elec R 55:6 N '52

EMPIRE district electric company

Overcomes dilution in earnings per share. Barron's 33:24 Jl 20 '53

Public utility securities. O. Ely. Comm & Fin Chr 176:2245 D 11 '52

EMPIRE State building

Multiple television and frequency-modulation transmitting antenna installation on the Empire State building. J. B. Dearing and others. il diags Inst Radio Eng Proc 41: 324-37 Mr '53

EMPLOYEE embezzlement. See Embezzlement

EMPLOYEE handbooks. See Employees' manuals

EMPLOYEE turnover. See Labor turnover

EMPLOYEES

Blood donations on a local basis. Mod Ind 25:115-16+ My '53

Deferred compensation plan for executives and key employees. M. K. Collie. Am Gas Assn Proc 1952:173-8

Employees aided in solving financial problems; Standard register co. il Am Bsns 23:56 Mr '53

Fine art of goldbricking. P. Lockwood. Factory Management 111:235-6+ S '53

Handicapped; it is good business to employ them. R. O. Jaynes. il Steel 132:86-7 My 11 '53

Occupational vision program. R. Feinberg. il Nat Safety N 66:38-9+ N '52

Progress report; hearing conservation at Allis-Chalmers. M. F. Biancardi and P. J. Whitaker. il Factory Management 110:110-12 D '52

Report issued on study of prolonged non-occupational illness. Weekly Underw 167: 1706 D 27 '52; Same. Safety Maint & Prod 105:38+ F '53; Same cond. Nat Underw 56:29 D 18 '52; Same cond. Nat Underw (Life ed) 56:12 D 19 '52

Taxes and compensation of employees. M. M. Goldstein. Comm & Fin Chr 177:2083 My 14 '53

See also

Ability tests
Absenteeism (labor)
Advertising—Employees, Appeal to
Age and employment
Apprentices
Arbitration, Industrial
Bank employees
Bonus system
Building trades—Labor conditions
Chemical workers
Collective bargaining
Disabled—Rehabilitation
Efficiency, Industrial
Electric workers
Employees' benefit plans
Employees' representation in management
Employment management
Employment systems
Eye—Examination
Foremen
Government employees
Handicapped
Hygiene, Industrial
Industrial relations
Job analysis
Labor and laboring classes
Labor productivity
Medical service, Industrial
Metal workers
Military service—Labor problems
Motor truck drivers
Negroes—Employment
Office workers
Payrolls
Pensions, Industrial
Petroleum workers
Physical examinations
Radio workers
Research workers
Salesmen
Saving
Servants
Sickness
Steel workers
Suggestion systems
Supervisory workers
Textile workers
Trade secrets
Wage payment plans
Wages
Woman—Employment

also subdivision Employees under special subjects, e.g.

Accountants, Public
Airplane factories
Automobile factories
Brick works
Electric utilities
Gas companies
Motor bus lines
Paint factories
Paper mills
Petroleum refineries
Public utilities
Railroads
Rubber factories
Shipyards
Telephone companies

Attitude

See Employees—Opinion polls

Clothing

See Clothing, Protective

Length of service

Job tenure of American workers. S. L. Wolfbein. Mo Labor R 75:257-62 S '52

Old-timer recognition; effective morale builder; abstract. Management R 41:659-60 O '52

See also

Labor turnover

Opinion polls

Action-oriented attitude surveys. L. A. Allen. Personnel 29:141-52 S '52

How employee opinion poll aids company communications; B. F. Goodrich co. F. C. Minaker. Am Bsns 23:26+ O '53

How we survey attitudes periodically. A. O. England. Personnel J 31:202-5 N '52

Inside a worker's head. Bsns W p81-2 Ja 31 '53

Measuring employe morale. E. J. Benge. Pet Refiner 32:128-30 F '53

What employes think of management policies. R. Hersey. Mill & Factory 51:75-9 N '52

What workers think of their job, boss, company. E. J. Benge. Textile World 103:142-3+ S '53

Promotion

Job-hunting in your own plant. A. Uris. Factory Management 111:84-9 Jl '53

Promotion from within; fact or farce? J. M. Elliott. Personnel 29:227-33 N '52

Road map to top jobs in big companies. E. Whitmore. Am Bsns 23:8-9+ Mr '53

Telling a man he's promoted. il Bsns W p 186-8+ F 21 '53

See also

Employees—Rating

Rating

Employee profile development; Allen B. DuMont laboratories, inc. W. M. Stocker, jr. Am Mach 97:146-9 Je 8 '53

Employees merit-rate one another. P. J. Madden. Factory Management 111:120-2 Je '53

How to make rating easier. J. E. Gardner. Textile World 103:164+ F '53

How work sampling can help you rate your key people. E. H. Mac Niece. Factory Management 110:98-100 O '52

Methods used in upgrading shop employees. Bus Transportation 32:46-7 Mr '53

Procedure for measuring employee productivity. M. Kriesberg. Advanced Management 17:6-8 Ag '52

Survey of 130 merit-rating plans. R. Benjamin, jr. Personnel 29:289-94 N '52

What workers think about merit rating. E. J. Benge. Factory Management 111:310+ F '53

See also

Executives—Rating
Supervisory workers—Rating

Testing

See Ability tests

EMPLOYEES, Age of. See Age and employment

EMPLOYEES, Dismissal of

Making discharges stick. B. Werne. Factory Management 111:308+ O '53

EMPLOYEES, Dismissal of—*Continued*

Private lives, can an employer regulate the off-duty conduct of his workers? W. Baade and L. Stessin. Mill & Factory 52:79-81 Mr '53

See also

Wages—Dismissal wage

EMPLOYEES, Economic education of. See Economics—Study and teaching

EMPLOYEES, Government See Government employees

EMPLOYEES, New. See Employment management—New employees

EMPLOYEES, Reports to

Employee reports need a change; abstract. Management R 41:755-6 N '52

EMPLOYEES, Retirement of. See Retirement

EMPLOYEES, Training of

Accelerated training program pays off; Builders iron foundry. A. A. Erkkinen and D. J. Dresselhuys. il Foundry 81:148+ O '53

Bowater's prove value of systematic vocational training. W. G. Smith. il Pulp & Pa of Can 54:44-8 F '53

Building a career; training in Armstrong cork co. H. W. Prentis, jr. il Dun's R 61:31-2+ F '53

Burlington believes in economic education down the line. M. B. Andrews. Textile World 103:148 Ap '53

Conducting a training meeting. D. J. Wood. Mill & Factory 52:97-8 Ap '53

Creole job-training program objectives. H. C. Bobertz and J. Green, jr. il Oil & Gas J 51:270-1+ D 22 '52

Demonstrator teaches synchronizing. E. M. Humphries. il diags Elec World 139:128-9 Ap 20 '53

Developing the managerial abilities of employees. F. J. Curtis. Engineer 196:281-2 Ag 28 '53

Distribution department of Peoples Gas trains its fitters thoroughly. il Gas Age 111:20-3 Ja 29 '53

Don't chop up your trainees. H. D. Rhodenbaugh. Am Mach 97:111 Ag 17 '53

Engineer selection and training; Island creek coal co. W. C. Nelson and J. J. Yorke. il Min Cong J 38:49-52+ O '52

Engineers for tomorrow; Detroit Arsenal training program. W. M. Trevarrow. il Tool Eng 31:41-5 O '53

First step to prove need and benefits of training; convince management. K. B. Haas. Credit & Fin Management 55:24-5 Ap '53

Focusing the training on what workers need to know; Canadair's plan. Bsns W p 186-8 N 22 '52

Fork truck operators help train themselves; Monsanto chemical co. A. G. Erdman and S. A. Marino. il Factory Management 111:138-41 Mr '53

General Petroleum's classroom aids sales training. il Nat Pet N 45:50 F 4 '53

Here's how Detroit street railway trains their own mechanics. il Bus Transportation 32:35-7 O '53

How a good foreman trains his men. Roads & Sts 95:68 N '52

How air line sells job applicants on company. M. French. il Am Bsns 23:14-15+ Ja '53

How Enka trains for instrumentation. W. G. Baker, jr. il Mod Textiles Mag 34:44-5 Ag '53

How Sohio trains its exploration personnel. M. W. Sherwin. Oil & Gas J 51:109-10 My 4 '53

How to make machinists from scratch. G. F. Meyer. il Mill & Factory 51:135-8 N '52

How to organize a staff training program to teach actual working audit procedures. W. C. Wilson. J Account 94:624+ N '52

How to train new dealers for stations. G. Meador. Nat Pet N 45:42 Ja 21 '53

How's your training program? Iron Age 171:89 Ap 23 '53

Increase your shop efficiency with training and upgrading; Crescent stages, inc. il diags Bus Transportation 32:42-4 Mr '53

Induction and training of new employees; symposium. A. E. O'Brien and others. Can Min J 74:76-81 S '53

Instruction principles win if practised. W. R. Blackler. Credit & Fin Management 55:32 Ja '53

Instructional courses and certification for waterworks personnel. G. H. Strickland. Munic Util 91:21+ My '53

It pays to have engineers production-minded; shop-familiarization courses Northrop aircraft, inc. T. A. Dickinson. il Mill & Factory 52:94-5 Ja '53

Labor; Republic trains jig makers. W. B. Olson. il Iron Age 171:37 Ja 22 '53

Loomfixer training; Henderson cotton mills. R. B. Pressley. il Textile World 103:100-1 Je '53

Mechanics of the learning curve. W. A. Raborg, jr. il Aero Digest 65:17-21 N '52

Methods of training for mobile operations. J. E. Neason and W. H. Fleming. il Min Cong J 38:32-4+ D '52

New classroom methods keep trainees off plant floor; Boeing airplane co. il Am Mach 97:110 Ag 17 '53

New Orleans school for servicemen covers variety of timely subjects. W. C. Grant. il Gas Age 111:32-3 F 26 '53

Officials and employes praise gasoline plant short course. il Pet Refiner 32:128-9 Ap '53

Oklahoma firm making training tools for industry; Technical training aids, inc. il Manuf Rec 122:39 Ap '53

Operators set up training course at Public service co. of New Mexico. D. F. Duncan. il Elec World News ed 139:18 Mr 30 '53

Paced-piece maker helps trainees reach standard sooner. F. L. Hertig. il Factory Management 111:150-1 O '53

Petroleum technical school at Prabumulih trains Indonesians for specific occupations. il Oil & Gas J 51:329-30 D 22 '52

Pinch-hitters in production; Lewyt corp. A. Lewyt. il Dun's R 61:30-2+ Je '53

Planning today for tomorrow's electronics; Peoples gas light and coke co. Am Gas Assn Mo 35:26-7 S '53

Plant-of-the-future training plan; Dow chemical co. il Factory Management 111:132-7 Ap '53

Practice unit aids operator training program at Monsanto Chemical plant. F. L. Resen. flow sheet il Oil & Gas J 51:144+ F 16 '53

Revamping from below; Cleveland post office. il Bsns W p 102-3 Je 27 '53

Selecting and training fork-truck operators. D. R. Holm. Mech Eng 74:568-72 Jl '52; Discussion. 74:1033-4 D '52

Selecting, training engineers. M. S. Viteles. bibliog Am Gas Assn Mo 35:13-14+ Je '53

Selection and training of personnel. E. E. Moore. Blast F & Steel Pl 40:1200-2+ O '52

Short-time training program in an aircraft engine plant. il U S Women's Bur Bul 245:1-11; pa 10c Supt. of doc. '53

Status of training courses and certification in the United States. Am Water Works Assn J 45:971-96 S '53

Supervisor's part in management development. F. T. De Vyver. Textile World 103:153+ Je '53

Too small for a training program? G. S. Odiorne. Am Mach 97:125 Jl 20 '53

Tool for analyzing training needs; training evaluation check list. R. M. Bellows and others. Personnel 29:412-18 Mr '53

Training cable-lacers. il Electronics 25:218+ D '52

Training engineers; General motors corp. K. A. Meade. il Tool Eng 30:39-42 Je '53

Training for maintenance men; panel discussion. Factory Management 111:266+ Jl '53

Training graduate engineers for a professional career. J. Gammell. Elec Eng 72:761-3 S '53

Training in industry. K. R. Sturley. bibliog Inst E E Proc 100 pt 1:22-3 Ja '53

Training meter shop employees. J. W. Chrisman. Am Gas Assn Proc 1952:402-3; Same cond. Am Gas J 177:25+ Jl '52

Training of emergency personnel. H. P. Orland. Sewage & Ind Wastes 25:849 Jl '53

Training of employees in the electricity supply industry. Engineer 194:414-15 S 26 '52; Engineering 174:400 S 26 '52; Elec R (Lond) 151:681-2 S 26 '52; Electrician 149:929-30 S 26 '52

EMPLOYEES, Training of—*Continued*

Training of personnel for operations of Lp-gas plants. S. C. Symnoski. Am Gas Assn Proc 1952:621-5; Same cond. Am Gas J 177: 14-15 Ag '52

Training of radiologists for industry. J. C. Rockley. Engineer 195:448-52 Mr 27 '53

Training programs for maximum manpower effectiveness. (Industrial relations center Research and technical report 12) 57p pa $1.50 William C. Brown co, 915 Main st, Dubuque, Iowa '52

Training tax assistants. W. H. Harrison, jr. Edison Elec Inst Bul 21:196-8+ Je '53

Vocational training; underlying principles and methods of conduct; abstract. K. R. Sturley. Elec R (Lond) 151:886-7 O 24 '52

What to emphasize in training new employees. J. E. Gardner. Textile World 103: 162+ Ja '53

What's ahead for high-level skill training? W. H. Minor. Factory Management 110: 288+ D '52

When customer relations suffer from inside employe neglect Bausch & Lomb make service people part of sales team. R. Marks. il Sales Management 69:74+ D 1 '52

Work-simplification program saves 162,845 hours a year; Ford motor company of Canada. D. G. Baird. il Am Bsns 23:12-13+ My '53

Workshop gives prestige to training; Koppers co. il Mod Ind 25:115 My '53

See also

Apprentices
Bank employees—Training
Employees' manuals
Executives—Training
Foremen—Training
General motors institute of technology
Instruments—Study and teaching
Railroads—Employees—Training
Safety instructions and training
Salesmen—Training
Supervisory workers—Training

EMPLOYEES as owners

Employes cut short their purchase period; Daily Nugget Canada's first employe-owned daily newspaper. C. M. Fellman. Ed & Pub 85:44 N 29 '52

McDevitt will gives firm to five employes. J. Walker. Ed & Pub 86:9 F 14 '53

Workers will buy Cleveland company through profit-sharing trust plan. Eng N 150:82 Ja 29 '53; Steel 132:41 Ja 26 '53

EMPLOYEES as stockholders

At Montana Power the employees are taking stock of their company. il Elec World News ed 139:20-1 My 25 '53

Ben Fairless' speech. Fortune 46:107 D '52

Company stock. Bsns W p 148 My 16 '53

Does American industry offer stock purchase plans for its workers? results of survey. Mill & Factory 52:67-8 Mr '53

Fight Marxism by giving employees stake in profits! T. D. Brophy. Comm & Fin Chr 177:198+ Ja 15 '53

Giving them a stake in the company. Bsns W p 130-2 Mr 28 '53

Stock purchase plans studied. Trusts & Estates 92:268 My '53

Tongue in cheek! stock purchase plans offered by corporations to their employees should not be regarded as a public offering; SEC proposed form S-8. Comm & Fin Chr 177: 1729+ Ap 23 '53

When employee-stockholders go to a meeting. il Bsns W p60-2 My 9 '53

Workers become owners. Steel 132:63 Ap 6 '53

EMPLOYEES' attitudes. See Employees—Opinion polls

EMPLOYEES' benefit plans

Employee benefit plans protect electric and gas workers. Elec World News ed 138:40 O 27 '52

Employee benefits; 1952 developments in a typical community. Management R 41:585-6 S '52

Fringes become industry's standard. Steel 132:41 Je 29 '53

How hidden wages affect corporate profits. T. L. Godey. Mag of Wall St 91:59-61 O 18 '52

Meeting the six goals of executive compensation. J. K. Lasser and M. M. Goldstein. Dun's R 61:25-6+ Jl '53

Small printer can provide fringe benefits. P. R. Russell. Inland Ptr 130:38-9 F '53

Survey shows hidden pay costs average $644 per employee. Am Bsns 22:38-9 O '52

Tax aspects and trends in executive compensation. V. H. Rothschild, 2d. Comm & Fin Chr 178:6+ Jl 2 '53

Tax men eye wage fringes. Bsns W p 120-1 Jl 18 '53

Trends in employee benefit plans. M. M. Goldstein. Trusts & Estates 92:497 Jl '53

Wages and related benefits for 40 labor markets, 1951-1952. L. E. Lewis and others. U S Bur Labor Statistics Bul 1113:1-62; pa 35c Supt. of doc. '52

What makes men work? pro's and con's of employe benefit plans. D. F. Tver. Pet Refiner 31:89+ D '52

What price security? H. C. McClellan. il Dun's R 61:1+ Jl '53

See also

Pensions, Industrial
Profit sharing

EMPLOYEES' buildings

Winning employees with electricity; recreation building has helped solve employee problem for McCulloch motors corp. il Elec World News ed 138:39 N 10 '52

EMPLOYEES' Christmas parties. See Christmas parties, Employees'

EMPLOYEES' clothing. See Clothing, Protective; Work clothes

EMPLOYEES' clubs

Bank's toastmasters club. R. Maclean. il(p97) Banking 45:59 S '52

EMPLOYEES' conferences

How the Southern Pacific cultivates human relations. il Ry Age 133:37-40 O 20 '52

Lunch with the president; communications story of Airtron, inc. il Mod Ind 24:60-1 O '52

See also

Foremen's conferences

Rating

Conference timed-analysis; a new technique for improving the effectiveness of conferences. R. S. Harrison. Personnel 29:241-52 N '52

EMPLOYEES' contests

Everybody's in the act in successful plant-wide contest. E. T. Jones. il Ptr Ink 242: 30-2 Mr 6 '53

Quality competition; Allison division of General Motors. D. G. Baird. Mill & Factory 52:111-13 Ap '53

Year-long contest gets workers into clean-up habit; Elastic stop nut corporation of America. il Factory Management 111:142-4 S '53

EMPLOYEES' counselors

Developing a program for counseling bank women. M. DeMartini. il Burroughs Clearing House 37:32-3+ Mr '53

Employes gripe, they listen; Employe counseling service for Standard oil co. (N.J.). A. Reese. World Oil 135:82+ O '52

EMPLOYEES' entertainment

Will a company show help your employee and public relations? K. Taylor. Ptr Ink 241:74+ N 14 '52

EMPLOYEES' inventions. See Inventions, Employees'

EMPLOYEES' lunches. See Lunches, Employees'

EMPLOYEES' lunchrooms and cafeterias. See Lunchrooms and cafeterias, Employees'

EMPLOYEES' magazines

He proves to scoffers that employes want company news, not gossip alone; Guy Berghoff. Ind Marketing 38:97 Jl '53

House organs; liked, believed, read. G. G. Carr. Iron Age 171:58 Ap 16 '53

How effective is your employee magazine? Factory Management 111:270+ Je '53

How to play the house organ. il Fortune 46:144-7+ O '52

Management learns what to talk about in company magazines. R. Newcomb and M. Sammons. il Ind Marketing 37:68+ O '52

New approach; Mr Employe meet Mr Customer. R. Newcomb and M. Sammons. il Ind Marketing 38:65+ F '53

EMPLOYEES' magazines—*Continued*

Packy weds Fluffy; company editor dramatizes a merger. R. Newcomb and M. Sammons. il Ind Marketing 38:97+ O '53

This company newspaper helps the mill community; Textiles review, Textiles-Incorporated. M. B. Andrews. il Textile World 103:145+ O '53

What does management do? Pullman tells its workers. R. Newcomb and M. Sammons. Ind Marketing 38:116+ Je '53

See also

American railway magazine editors' association

Editors

Busy editor of two employe papers gathers his news all over the map; Robert S. Smith. Ind Marketing 37:65 S '52

Her annual report to management tells the employe story of Avisco; Margaret Gleason. Ind Marketing 38:120 Mr '53

If you love people, you understand them is philosophy of Claribel Thompson; editor of Lone Star's employee paper. W. C. Grant. il Gas Age 111:42-4+ My 7 '53

She makes friends in shop, shoots her own pictures and wins a promotion; Nadia Monberg. Ind Marketing 38:118 Je '53

What it takes to edit a company publication. R. Newcomb and M. Sammons. il Ind Marketing 37:64+ S '52

When a milkman put out a fire, this company editor knew what to do; Charles DeLacy. Ind Marketing 37:72 O '52

Illustrations

Learn how to pose your photos so they look unposed. R. Newcomb and M. Sammons. Ind Marketing 37:130+ N '52

EMPLOYEES' manuals

Booklet series reveals company step by step to new employes; Post cereal division of General Foods. R. Newcomb and M. Sammons. Ind Marketing 38:118+ Mr '53

Organization manuals improve communication. L. L. Parrish. Advanced Management 17:22-5 S '52

Training manual will help to reduce circular-knitting costs. J. H. Blore. il diags Textile World 103:86-7+ Ap '53

EMPLOYEES' publications

Foreman press; what are your supervisors reading? il Mod Ind 24:57-8 O '52

His monthly military newsletter rivals the good ones in industry; Col. Robert K. Haskell. Ind Marketing 38:144 My '53

See also

Employees, Reports to
Employees' magazines
Employees' manuals

EMPLOYEES' recreation. See Recreation

EMPLOYEES' representation in management

Informal work group in management. J. J. Gillespie. Engineering 175:167-8 F 6 '53

Worker; creator or robot? P. A. McGhee. Credit & Fin Management 55:14-15 F '53

EMPLOYEES' suggestions. See Suggestion systems

EMPLOYEES' trusts

Employees' profit-sharing trusts, key to solving retirement problems. G. P. Jochum and R. E. Fulton. Comm & Fin Chr 176:2335+ D 18 '52

Financing profit sharing plans. Trusts & Estates 92:137-8 F '53

Investing for pension and profit sharing trusts. J. H. Weedon. Comm & Fin Chr 176:2333+ D 18 '52

Joint capital trust. G. Simons. Harvard Bsns R 31:57-69 Mr '53

Patterns in pension trusts; self-employed plans, equity funds, profit sharing. C. A. Bethel. Trusts & Estates 91:934-7 D '52

Pension and profit-sharing trusts; administrative functions of a committee; ABA committee report. Trusts & Estates 91:762-4 O '52

Pension rules restated. F. J. Amer. Trusts & Estates 92:322-3 My '53

Profit-sharing much like life insurance; has shortcomings. E. A. Starr. Nat Underw (Life ed) 56:8 N 21 '52

Profit-sharing plans and trusts offer corporation way to cut down tax bill. V. R. Wolder. Credit & Fin Management 55:30-1 Mr '53

Profit-sharing plans with deferred compensation. V. R. Wolder. Comm & Fin Chr 176:2503 D 25 '52

Workers will buy Cleveland company through profit-sharing trust plan. Eng N 150:82 Ja 29 '53

See also

Pension trusts

EMPLOYERS' liability

Breach of statutory duty; the electricity regulations under the factories acts. Elec J 150:2225 Je 19 '53

Contractor and sub-contractor; liability for workmen's injuries. W. Ball. Engineer 196:274 Ag 28 '53

Electricity in factories; legal decisions on the regulations. C. F. Mayson. bibliog Elec R (Lond) 153:363-5 Ag 14 '53

Employers and negligence claims. F. E. Sugden. Elec R (Lond) 152:1184 My 22 '53

Injury caused by breakage in machinery. Engineering 175:231 F 20 '53

Occupational risks of firemen. Engineering 175:421 Ap 3 '53

What is moving machinery? Engineering 176:99 Jl 24 '53

See also

Insurance, Employers' liability
Workmen's compensation

EMPLOYERS' reinsurance corporation

Annual report. East Underw 54:35 F 13 '53

Sharp profits upturn in the making. Barron's 33:27-8 Ap 6 '53

EMPLOYMENT

Employment and wages in the United States. W. S. Woytinsky and others. 777p $7.50 Twentieth century fund, 330 W. 42d st, New York 36 '53

Employment outlook in air transportation. il U S Bur Labor Statistics Bul 1128:435-56; pa 20c Supt. of doc. '53

Employment outlook in metalworking occupations. il map U S Bur Labor Statistics Bul 1130:186-224; pa 30c Supt. of doc. '53

Employment outlook in printing occupations. il map U S Bur Labor Statistics Bul 1126:299-330; pa 25c Supt. of doc. '53

Employment outlook in the automobile industry. E. E. Rings and others. il U S Bur Labor Statistics Bul 1138:1-30; pa 25c Supt. of doc. '53

Employment outlook in the electrical equipment industry. A. Rosenberg. Mo Labor R 75:507-10 N '52

Employment, prices, and monopolistic competition. H. Brems. diags R Econ & Stat 34:314-25 N '52

Future production and employment in the United States. I. Lubin. Mo Labor R 75:401-3 O '52

Looking for employment in foreign countries. J. L. Angel. 25 l pa $1 World trade academy press, suite 518, 11 W. 42d st, New York 36 '53

National policy on youth employment. Mo Labor R 75:299 S '52

Post-election employment outlook. R. W. Babson. Comm & Fin Chr 176:2220 D 11 '52

Program to maintain full employment. W. P. Reuther. Comm & Fin Chr 178:23 Jl 2 '53

See also

Absenteeism (labor)
Age and employment
Applications for positions
Discrimination in employment
Employment departments
Handicapped
Labor supply
Negroes—Employment
Unemployment
Woman—Employment

Stability

Stabilization of employment is good management. C. C. Gibbons. Comm & Fin Chr 177:1638+ Ap 16 '53

See also

Labor turnover

Statistics

Employment and earnings, metalworking plant data; tabulations. Iron Age 171:479-88 Ja 1 '53

Employment and labor conditions in 1952. Survey of Cur Bsns 33:30-2 F '53

EMPLOYMENT—Statistics—*Continued*

Employment and population; Nov.-Dec. 1951-Jan.-Nov. 1952. Survey of Cur Bsns 33:S 10-15 Ja '53 [cont monthly]

Employment in nonagricultural establishments, by industry division, 1944-1951; monthly Nov. 1951-Nov. 1952. Fed Res Bul 39:54 Ja '53 [cont monthly]

Heating manpower volume. map Sheet Metal Worker 44:46+ D '52

Labor force; tabulations. Automotive Ind 108:326 Mr 15 '53

Labour in engineering. Economist 167:759 Je 13 '53

Labor market developments. Fed Res Bul 39:581-7 Je '53

Manufacturing production-worker employment index; revised series; monthly figures and monthly averages, 1919-1950. Survey of Cur Bsns 32:20 O '52

Metalworking wages and hours; production workers; employment; tabulations. Steel 132:194 Ja 5 '53

Production worker employment in manufacturing industries; monthly, Nov. 1951-Nov. 1952. Fed Res Bul 39:52-3 Ja '53 [cont monthly]

Steel employment, wages, hours and payrolls, 1937-1952; tabulations. Steel 132:195 Ja 5 '53

Total U.S. employment, 1937-1952; tabulations. Steel 132:195 Ja 5 '53

Great Britain

Employment in 1952; Ministry of labour report. Elec R (Lond) 153:266 Jl 31 '53

Graduates' employment. Economist 167:81 Ap 11 '53

Very full employment; Great Britain. Economist 167:759 Je 13 '53

EMPLOYMENT, Discrimination in. See Discrimination in employment

EMPLOYMENT act of 1946

Eisenhower assures Reuther of his intention to maintain high employment. Comm & Fin Chr 177:1876 Ap 30 '53

Operation forecast; the Employment act points a dangerous road. Barron's 33:1 Ja 19 '53

EMPLOYMENT contracts. See Labor contracts

EMPLOYMENT departments

Dollars and sense in personnel administration. J. R. Clarke. Personnel J 31:242-6 D '52

Records

Better personnel records at less cost at Ford. W. J. O'Sullivan. il Personnel J 31:288-90 Ja '53

Employee profile development; Allen B. DuMont laboratories, inc. W. M. Stocker, jr. Am Mach 97:146-9 Je 8 '53

Quick method for computing employee tenure. N. Friedman. Personnel 29:257-60 N '52

Records at work. A. T. Baldwin. Personnel J 31:206-8 N '52

Right-man, right-job recipe; no one lost in the shuffle. il Chem W 72:8-10 Ja 3 '53

Types and uses of personnel forms and records. R. D. Henderson. Mill & Factory 51:133-7 O '52

Visible index organization chart; Hooker electrochemical co. il Factory Management 111:117 F '53

See also

Pensions, Industrial
—Records
Time clocks

EMPLOYMENT management

ABC's of supervision. Oil & Gas J 51:121-8+ F 16 '53

Big-city mill cultivates a small-town spirit. M. B. Andrews. Textile World 103:141 Jl '53

Booklet series reveals company step by step to new employes; Post cereal division of General Foods. R. Newcomb and M. Sammons. Ind Marketing 38:118+ Mr '53

Cake is cut at Armco. J. C. Aspley. il Am Bsns 23:8-10+ My '53

Company personnel administration conferences for educators. N. Belfer. Personnel 29:437-40 Mr '53

Developing new programs for full utilization of technical skills. W. von Pechmann. Ind & Eng Chem 44:sup89A-90A+ D '52

Employee dynamics and engineering technology. R. M. Bellows. Advanced Management 17:11-16 N '52

Employee morale depends on job satisfaction. D. Williams. Textile World 103:117+ O '53

Employe relations; National lime association panel discussion. Rock Prod 55:100-1 N '52

Engineer shortage; challenge to management. D. M. Laughlin. Personnel 29:418-21 Mr '53

Evaluating personnel administration. R. Saltonstall. Harvard Bsns R 30:93-104 N '52

Fundamentals of getting work done through others. F. G. Rudge. Advanced Management 18:7-10 Ja '53

Gas Age training course; personnel management. W. L. Riehl. Gas Age 110:34-6 N 6 '52

Gas industry's man-power problems. F. O. Rouse. Pub Util 50:705-14 N 6 '52

Getting the most from your engineers. Chem & Eng N 30:5026-9 D 1 '52; Aviation W 57:21-2+ D 1 '52; Chem Eng 59:290+ D '52; Iron Age 170:106-7 D 4 '52

Getting to know your people; employee survey. il Mod Ind 25:36-40 Ap '53

Going to the heart of an employee. Mod Ind 25:46-7 Ap '53

Gorman-Rupp's free-wheeling formula for good employee relations in a small plant. il Factory Management 111:102-5 Mr '53

Handbook of personnel management. G. D. Halsey. rev ed 468p $6 Harper & bros, 49 E. 33d st, New York 16 '53

How airline keeps costs low, employee morale high; American airlines. L. Stemp. Am Bsns 23:40-1 My '53

How the Southern Pacific cultivates human relations. il Ry Age 133:37-40 O 20 '52

How to belong to your workers; Parker pen co. R. H. Wilcox. il Mill & Factory 53:80-2 Jl '53

How to build good will with neighbors and employees. R. H. Herrmann. Foundry 81:111+ Ag '53

How to cut cost of labor turnover. Mod Ind 24:96+ N '52

How to establish a policy and make it work; pointers for supervisors. F. T. De Vyver. Textile World 103:141+ Mr '53

How to give orders. A. E. Schneider. Mill & Factory 51:93 O '52

How to obtain and retain superior personnel. C. M. Edwards, jr. J Retailing 29:53-6+ Summer '53

Human bean. E. C. Schleh. Management R 41:580-2 S '52

Human being, the most difficult measurement and control problem of all. H. A. Black. Tappi 36:sup 154A-6A S '53

Human relations for improved shop performance. R. Smith. J Metals 4:1280-1 D '52

Humbugs of the personnel movement. W. E. Shurtleff. Personnel J 31:381-5 Mr '53

I wish I had a job there; some reasons why certain companies tend to attract better employees than others. E. Whitmore. il Am Bsns 22:8-11 D '52

Importance of good employee relations. H. P. Taylor. Edison Elec Inst Bul 21:343-4 S '53

Importance of impressions. E. P. Johnson. Personnel J 31:328-9 F '53

Important facts about time study men. Factory Management 111:126-7 F '53

Industrial relations round-table. Am Gas Assn Mo 35:20+ My; 12+ Je; 18+ Jl-Ag; 14+ S; 24+ O '53

Industry accepts vocational guidance responsibility. E. J. Benge. Pet Refiner 31:69+ O '52

Inventory of skills; General Motor's Fisher body division. il Mod Ind 24:40-1 O '52

Keeping that well-trained assistant. E. W. Fair. Am Mach 97:136 S 14 '53

Labor; profit split pays two ways; profit sharing plan at Bath plant helps both management and labor. R. M. Lorz. Iron Age 171:41 Ja 15 '53

Laborgrams. L. Stessin. Published in monthly numbers of Mill and factory

Limitations of personnel management. W. H. Knowles. Personnel J 31:138-44 S '52

Making employees' work more interesting. F. H. Joiner. Personnel 29:309-13 Ja '53

Management and the professional employee. P. F. Drucker. Harvard Bsns R 30:84-90 My '52; Abstract. Chem Eng 59:294-5 N '52

EMPLOYMENT management—*Continued*

National personnel conference of the gas industry, 5th, Chicago, April 9-10. Am Gas Assn Mo 35:26 My '53

New emphasis in cost reduction. A. V. MacCullough. Advanced Management 17:16-19 Ag '52

Open-door policy in operation; W. T. Grant co. G. F. Davis. Personnel 29:507-10 My '53

Out of the army, back to the plant; Armco steel corp. program for servicemen. il Mod Ind 24:97-8 O '52

Pacific Northwest personnel management association conference, Victoria, B.C. Personnel J 31:339-40 F '53

Pay isn't everything! C. H. Broaded. Bankers Mo 70:40+ F '53

People are our business. A. King. Edison Elec Inst Bul 21:341-2+ S '53

People have a place in your planning. A. J. Miller, jr. Tappi 35:sup 10A+ N '52

Perking up personnel policies; Inland Steel Products. il plan Mod Ind 26:44-9 Jl '53

Personnel management, a major problem; Western petroleum refiners association regional meeting, Beaumont, Feb. 12-13; abstracts of four papers. Pet Eng 25:C41-2 Mr '53

Personnel practices in industrial laboratories. L. W. Steele. Personnel 29:469-76 My '53

Personnel; the job you can't avoid. M. J. Wise, jr. Textile World 103:181+ S '53

Pinch-hitters in production; Lewyt corp. A. Lewyt. il Dun's R 61:30-2+ Je '53

Plan for stretching engineer supply. Aviation W 57:21-2+ D 1 '52

Plant tours for employes; Pheoll manufacturing co. R. Newcomb and M. Sammons. il Mill & Factory 52:102-4 Ja '53

Private lives, can an employer regulate the off-duty conduct of his workers? W. Baade and L. Stessin. Mill & Factory 52:79-81 Mr '53

Quality supervision in the small jobbing foundry. E. Fry. Foundry 81:97+ F '53

Sad case of company X as seen through the eyes of a new staff man. Factory Management 111:84-8 O '53

Selection and training of personnel. E. E. Moore. Blast F & Steel Pl 40:1200-2+ O '52

Stimulating employee proprietor-mindedness; abstract. P. Hull. Paper Tr J 136:44 Ap 17 '53

Supervisor's role in industrial relations program. J. C. Arnell and others. il Elec World 138:119-42 N 17 '52

Supervisors' support asked to help bring about better labor relations. W. J. Kenefick. Elec World News ed 138:44 S 29 '52

Ten ways to encourage teamwork; Parker pen co. il Am Bsns 23:22-3 Je '53

Ten years' progress in management; personnel administration. H. S. Hall. A S M E Trans 75:686-91 My '53

Tips to good human relations for factory executives. M. J. Murphy. Factory Management 111:128-9 Ap '53

To be a group leader, learn the various approaches. A. Uris. Textile World 103:126-7 Mr '53

Wages and salaries, how to administer them. D. Tver. Pet Refiner 31:104-5 O '52

What employes think of management policies. R. Hersey. Mill & Factory 51:75-9 N '52

What is your answer; foremen oppose new assistant superintendant. Personnel J 31:251-3 D '52

What is your human management rating? Mod Ind 25:44-5 Ap '53

What keeps workers happy? W. Schweisheimer. Pulp & Pa of Can 54:198, 202 S '53

What to do when the union knocks at your door. J. M. Black and J. G. Piccolli. Factory Management 111:108-12 Je '53

Why labor turnover is low at Sheaffer pen co. il map Am Bsns 22:16-17 N '52

Worker; creator or robot? P. A. McGhee. Credit & Fin Management 55:14-15 F '53

Worker turnover bites into profits. B. Blai, jr. Personnel J 31:367-72 Mr '53

See also

Ability tests
Absenteeism (labor)
Advertising—Employees, Appeal to
Apprentices
Bank employees
Bonus system
Building trades—Labor conditions
Collective bargaining
Efficiency, Industrial
Employees—Opinion polls
Employees—Promotion
Employees—Rating
Employees, Reports to
Employees, Training of
Employees' benefit plans
Employees' contests
Employees' counselors
Employees' magazines
Employees' manuals
Employees' publications
Employees' representation in management
Employment departments
Employment systems
Factory management
Foremen
Hygiene, Industrial
Incentives in industry
Industrial relations
Job analysis
Labor and laboring classes
Labor turnover
Lunches, Employees'
Lunchrooms and cafeterias, Employees'
Medical service, Industrial
Mine foremen
Music in industry
Overtime
Profit sharing
Psychology, Industrial
Recreation
Safety devices and measures
Sales management
Suggestion systems
Supervisory workers
Time study
Wage payment plans
Woman—Employment

Alcohol problem

Industry's stake in the rehabilitation of problem drinkers. G. F. Wilkins. Ind Med 22:29-33 Ja '53

Problem drinker in industry; abstract. R. C. Page and others. A M A Archives Ind Hygiene & Occup Med 7:68-9 Ja '53

Problem drinking and industry; five years with a company program. S. C. Franco. Edison Elec Inst Bul 21:109-11 Ap '53

What about your alcoholic employee? Am Mach 97:142-3 Ja 5 '53

Bibliography

Books. Published in monthly numbers of Personnel journal

In perspective; selected reviews of management literature. Personnel J 31:345-7 F '53

Costs

Employment-relations functions and budgets. D. Yoder and L. N. Wilson. Personnel 29:218-26 N '52

Grievances

Find and cure that grievance. C. H. Broaded. Bankers Mo 69:32-4 N '52

Strategy in union negotiations. B. H. Fitzpatrick. Personnel J 31:330-2 F '53

Information sharing

Captive-audience doctrine in NLRB elections. W. L. Daykin. Personnel 30:38-45 Jl '53

Company head takes to road to tell financial story to field force; Robert C. Hood of Ansul chemical co. il Am Bsns 23:28 My '53

Employer's duty to supply data for collective bargaining. J. E. Shanklin. bibliog Mo Labor R 75:381-7 O '52

Evaluation of Vepco's employee information program. W. E. Wood. Edison Elec Inst Bul 21:67-8+ Mr '53

He delegates authority and communication comes easier; H. C. McClellan. Ind Marketing 38:106 Ap '53

He mounts soapbox to talk to employes and builds $1,000 into $2,500,000; Bryant Essick. Ind Marketing 37:118 D '52

Heinz' reading rack offers scoops in company literature. R. Newcomb and M. Sammons. il Ind Marketing 38:138-9+ Ag '53

Here you have communication. G. L. New. Chem Eng 59:280+ O '52

How supervisors can communicate better. K. Davis. Personnel J 31:417-20 Ap '53

EMPLOYMENT management—Information sharing—*Continued*

How to write better letters to employees. J. M. Black. Factory Management 111:84-9 S '53

Little things go over big on company match books. R. Newcomb and M. Sammons. il Ind Marketing 38:96+ Jl '53

Must salesmen know company finances? Ansul explains them. Ind Marketing 38: 108+ Je '53

Novel communications device provides workers with checks on company spending; Westinghouse electric corp. il Mill & Factory 52:113 Je '53

Organization manuals improve communication. L. L. Parrish. Advanced Management 17:22-5 S '52

Outline of communication practice. J. D. Cooper. Personnel 29:422-30 Mr '53

Plant bulletin boards rival news broadcasts, win readers. R. Newcomb and M. Sammons. il Ind Marketing 38:102 Ap '53

Reading rack spreads word; Good reading rack service. Bsns W p75-6 Ja 31 '53

Roper story, or, how to set up a successful employe communications program. R. Newcomb and M. Sammons. il Mill & Factory 52:79-85 Ap '53

Seminar for management; Illinois Central. Ry Age 134:70-3 My 4 '53

Sun Oil uses an exhibit to further employe relations. R. Newcomb and M. Sammons. il Ind Marketing 38:152+ S '53

What does management do? Pullman tells its workers. R. Newcomb and M. Sammons. Ind Marketing 38:116+ Je '53

See also
Bulletin boards
Communication

Interviewing

Exit interviews conserve manpower; Manufacturers trust co., New York. A. H. Planteroth. il Bankers Mo 70:5-7+ Jl '53

New employees

Assigning sponsors to new employes makes workers want to stay; Olympic radio & television, inc.; illustrations with text. Mill & Factory 52:110-11 F '53

Be kind to beginners. B. S. Eckles. Personnel J 31:182-5 O '52

Care of new employees. J. C. Boyter. Ptr Ink 242:59 F 6 '53

Du Pont's new employees are made to feel at home. F. J. McCall. Textile World 103: 132-3+ S '53

Here's how to help new employees get started. F. T. De Vyver. Textile World 102:169+ D '52

How to welcome new employees; reference book sheet. J. B. Bennet. Am Mach 96: 151, 153 O 27 '52

Later orientation prevents mental indigestion; Citizens and southern national bank. B. W. Cardwell. Personnel J 31:364-6 Mr '53

Let the foreman in on induction. K. Davis and W. G. Broehl, jr. Personnel 29:408-11 Mr '53

Roper story, or, how to set up a successful employe communications program. R. Newcomb and M. Sammons. il Mill & Factory 52:79-85 Ap '53

Sponsors cut employee turnover; Olympic radio & television co. il Electronics 26:20+ Mr '53

Start new workers off right. D. J. Wood. Mill & Factory 52:137-8 My '53

See also
Employees' manuals

Records

Personnel records for the small company. J. S. Kornreich. Personnel 29:431-6 Mr '53

Study and teaching

Basic aims in teaching personnel administration. D. E. McFarland. Personnel 30:45-8 Jl '53

EMPLOYMENT management associations

Directories

Directory of local personnel and training groups, 1952. Personnel 29:295-304 N '52

EMPLOYMENT managers

Belief in dignity of the working man swept him into a new kind of job; Marion J. Allen. Ind Marketing 38:68 F '53

Bringing personnel administration closer to the president. E. W. Reilley. Personnel 29: 381-9 Mr '53

Evolution of a personnel man. Personnel J 31:218-19 N '52

If you can't lick 'em, make 'em laugh it off; his credo rarely fails; Fred Smith. Ind Marketing 38:154 S '53

Personnel management's future. D. Yoder. Personnel J 31:412-16 Ap '53

Personnel salaries and ratios; 1953. D. Yoder and L. P. N. Wilson. Personnel 30:5-12 Jl '53

Press relations often a personnel function. R. Simon. Personnel J 31:377-80 Mr '53

Training plan for the personnel staff; developing civilian personnel managers in the army. O. F. Peterson. Personnel 29:484-92 My '53

What's the personnel man's job? R. W. Sherman. Factory Management 111:132-3 Je '53

EMPLOYMENT systems

Bounty on workers; GE's Syracuse plan. Bsns W p 156+ N 22 '52

Check list for selecting, placing new employees. Inland Ptr 130:40 N '52

Conducting an effective program of campus recruitment. L. A. Allen. Personnel 30:17-26 Jl '53

Effect of organizational environment on personnel selection. M. M. Mandell. Personnel 30:13-16 Jl '53

Executive development; choosing prospects for future jobs. B. Seltzer. Am Bsns 23: 32+ Mr '53

Here's a program for employee selection; Fieldcrest mills. J. E. Gardner. Textile World 103:132-3+ S '53

How we pick good employees. A. D. Loken. Rough Notes 96:34 My '53

Industry snaps up the grads. Bsns W p 116-19 My 2 '53

Internal recruiting; a solution to the manpower shortage; abstract. Management R 41:787-8 D '52

Modern techniques in employee selection and training. K. W. McLaren. il Burroughs Clearing House 37:34-5+ D '52

Need more workers? catch them at home; Bell aircraft corp. Bsns W p 116 N 29 '52

Personnel selection; a viewpoint and a method. H. N. Wasserman. diags J Retailing 28:123-30+ Fall '52

Pre-placement examination program for workers assigned to heavy jobs. W. F. Becker. Ind Med 22:8-10 Ja '53; Abstract. Nat Safety N 67:60 My '53

Recruitment and use of university graduates by industry. E. Ginzberg. Personnel 29: 461-6 My '53

Reject analysis, a way to check your hiring skill. M. Tydlaska and W. Melton. Factory Management 110:138 D '52

Right man for the right job; Naval supply center, Oakland, Calif. R. A. Hicks and others. bibliog Ind Med 22:69-75 F '53

Select engineer employees scientifically. F. R. Morral. bibliog J Metals 5:37-8 Ja '53; Same cond. Min Eng 5:383 Ap '53

Selecting, training engineers. M. S. Viteles. bibliog Am Gas Assn Mo 35:13-14+ Je '53

Selection of technical personnel. J. E. Todd. Paper Tr J 136:17-18 Mr 27 '53; Same. Tappi 36:sup 123A-4A Ap '53; Excerpts. Paper Ind 35:78 Ap '53

Tests; psychology sifts out misfits; Armco uses tests to streamline selection of new employees. J. B. Delaney. Iron Age 171: 61-2 F 19 '53

Using existing technical personnel to better advantage; abstract. G. M. Muschamp. Paper Tr J 136:42+ Ap 17 '53

See also
Ability tests
Age and employment
Civil service
Disabled—Rehabilitation
Discrimination in employment
Employees—Rating
Employment management
Executives
Handicapped
Job analysis
Labor recruiting
Physical examinations
Salesmen—Selection

EMPLOYMENT systems—*Continued*

Advertising aids

Firm satisfied with paid space house organ; George D. Roper corp. Ed & Pub 85:17 O 11 '52
Help wanted; advertising can help recruit needed skills. J. E. Bedford. Mill & Factory 52:90-2 F '53

Age barriers

See Age and employment

Interviews

Employment interview; research areas, methods, and results. W. J. E. Crissy. Personnel J 31:226 N '52
How to pick people better. J. D. Weinland. Factory Management 110:134-9 O '52
Method for summarizing behavioral aspects of the employment interview. W. Gobetz and others. Personnel 29:332-4 Ja '53
Planned interviewing gives more information in less time. F. Laslie. Textile World 103: 101+ Ag '53
Plant tour interview; illustrations with text. Factory Management 110:100-1 N '52
What to ask an applicant; management data sheet. R. D. Henderson and A. C. Blair. Factory Management 111:134+ Ag '53

Want ads

See Advertisements, Classified—Want ads

EMPLOYMENT tests. See Ability tests

EMULSIFIERS

Ban on softeners. Bsns W p34 Ja 3 '53
Compact emulsifier employs ultrasonics. il Food Eng 25:147+ Je '53
Ethylene oxide derivatives and their uses in the textile industry. G. Trinchieri. bibliog Am Dyestuff Rep 41:729-32+ N 10 '52
Surface activity of naturally occurring emulsifiers. G. F. Dasher. bibliog Science 116: 660-3 D 12 '52
Whipping emulsification cuts cake costs, raises quality. L. B. Crossland and H. K. Beasley. il Food Eng 25:77+ Je '53

EMULSIONS

Behaviour of wool wax and its constituents in water-in-oil emulsions. J. Tiedt and E. V. Truter. bibliog J Ap Chem 2:633-8 N '52
Colored oil-in-water emulsions; pigments and resins in outer phase; patent. Am Dyestuff Rep 42:51 Ja 19 '53
Effect of protein dispersion on freeze-thaw stability of latex emulsion, by the Northwestern club. Paint Oil & Chem R 115:52-4+ D 4 '52; Abstract. Oil Paint & Drug Rep 162:78 N 24 '52
Emulsion drilling fluids. D. L. Wilson. Pet Eng 24:B89+ N '52
Emulsion polymers for paints. H. Naidus. bibliog Ind & Eng Chem 45:712-17 Ap '53
Improved portland cement mortars with polyvinyl acetate emulsions. J. M. Geist, S. V. Amagna and B. B. Mellor. bibliog il Ind & Eng Chem 45:759-67 Ap '53
Mills use colloidal silica to make better wool emulsions. il Textile World 103:119 F '53

See also
Colloids
Foam
Petroleum—Emulsions

EMULSIONS, Photographic. See Photographic emulsions

ENAMEL (paint). See Paint

ENAMEL and enameling

Airless blast saves enameler $154 per day. il Cer Ind 59:56 D '52
Baked clay joins the jet age; coatings and cermets. Bsns W p41-2+ Jl 11 '53
Big fly sign took plenty of groundwork. J. Zaniboni. diag Cer Ind 61:53 Ag '53
Builds plant, starts production in six weeks; ceramic coating of aircraft components. il Cer Ind 60:64-5+ My '53
Carbon absorption cut; ceramic coatings prevent carbon absorption by stainless steels used in aircraft exhaust systems. Steel 131:116+ Ag 18 '52; Iron Age 170:184+ S 11 '52; Cer Ind 59:69 N '52
Catalytic combustion of odor-producing agents; heat recovery. L. C. McCabe. il diag Ind & Eng Chem 45:sup109A-10A+ Mr '53
Ceramic coating applied to nickel. Materials & Methods 38:240+ O '53
Ceramic coatings boost alloy steel use. F. D. Shaw. il Steel 132:110+ Ap 13 '53
CI two minute ideas for the enamel plant operator. il Cer Ind 60:63-5 Ap '53 [cont monthly]
Cleveland artist pioneers in vitreous enameled aluminum; Edward Winter. il Cer Ind 61:49+ O '53
Coating process improved. il Steel 132:130+ F 9 '53
Curtain wall construction appeals to builders. C. F. Block. il Cer Ind 61:74-5+ O '53
Cuts milling cost 22 per cent by using heavy balls; Kaiser metal products, inc. W. Clay. Cer Ind 60:70 My '53
Designer's guide to vitreous coatings. R. L. Stedfeld. bibliog il Machine Design 24:165-72 D '52; 25:141-9 Ja; 166-76 F '53
Enamel batches; recipes. Cer Ind 60:140-1 Ja '53
Enamel prolongs tube life. il Steel 132:148 Ap 20 '53
Enameled pipe. il Iron Age 171:158-9 F 12 '53
Enameled pipe dried in rotary drier. il Cer Ind 60:57 Mr '53
Enameling aluminum in seven easy steps. Cer Ind 61:73 O '53
Examination of porcelain enamel with the electron microscope. I. Buck. il Am Cer Soc Bul 32:114-17 Ap 15 '53
Forum hears progress in ceramic coatings and aluminum enamels. Cer Ind 59:118-19+ O '52
Fundamental aspects in research on titania-opacified enamels. S. S. Cole. bibliog Am Cer Soc J 35:181-8 Jl 1 '52
Harold Martin, newcomer, but a pioneer in enamel technique. il Cer Ind 60:58-9+ Mr '53
Heat radiation suppression; bonding of refractory coatings to metal components. Automobile Eng 43:323-4 Ag '53
High temperature ceramic coatings in industrial applications. D. K. Krosch. il Materials & Methods 37:162+ Ja '53
Hi-temp coatings sparked by nickel shortage; Bulwark co. il Cer Ind 61:60-1+ S '53
How Cameo does ceramic coating. il Cer Ind 60:54-5 Mr '53
How to get best results from high density grinding balls. B. D. Landes. Cer Ind 60: 53-4 F '53
How to improve enamel shop welding. Cer Ind 59:70 D '52
Hung ware licks hung-up production. M. E. McHardy. il Cer Ind 60:103 Je '53
Induction firing in the study of furnace atmospheres. W. J. Plankenhorn and A. I. Andrews. bibliog il diag Am Cer Soc J 36: 69-75 Mr 1 '53
Industrial porcelain enamel coatings. E. Mackasek. il Product Eng Hdbk p C 10-11 '53
Makes blacklight signs in porcelain enamel. il Cer Ind 59:64-5 D '52
Modern porcelain enameling. G. H. Smith. Cer Ind 59:64-5 N; 73-4 D '52; 60:55-6 F '53
More about ceramic coatings. bibliog il Product Eng 23:134-41 O '52
New look at ceramic coatings. W. A. Barrows. il Chem Eng 59:270+ O '52
New methods pay off for high temperature ceramic coating. il plan Steel 132:88-90 Je 22 '53
Porcelain coatings; ingenuity is the progress factor. W. A. Barrows. il Steel 132:72-4 Ja 12 '53
Porcelain cylinder liner protects pump for corrosive chemicals. il diags Product Eng 24:166-7 My '53
Porcelain enamel. Chem Eng 60:229 F '53
Porcelain enamel in architecture. E. Winter. Am Cer Soc Bul 31:400 O 15 '52
Porcelain enamel industry advances. T. Metaxas. Iron Age 171:84 Ap 9 '53
Porcelain enamel institute meeting, Champaign, Ill.; abstracts of papers. Iron Age 170:104-7 O 2 '52
Porcelain enamel; life of thermocouple protective tubes extended. il Iron Age 171:157 My 21 '53
Porcelain enamel; orphan of the metal finishing industry. E. M. Smith. il Metal Finishing 51:71-4 Ag '53

ENAMEL and enameling—*Continued*

Porcelain enamelers develop new markets. il Steel 132:67 My 25 '53

Porcelain enamels serve and save for industry. W. A. Barrows. il Iron Age 170:160-1 N 13 '52

Problems of utilizing ceramics in aircraft power plant construction. R. A. Jones and L. T. Fuszara. il Am Cer Soc Bul 32:107-9 Ap 15 '53

Progressive improvements speed production, keep costs down, reduce rejects; Norris-Thermador corp. il Cer Ind 60:100-1+ Je '53

Pyrophyllite in refractory enamels. G. J. Bishop, 3d. il Am Cer Soc Bul 31:493-6 D 15 '52

Rapid expansion of aluminum enameling is imminent. Cer Ind 61:62 S '53

Reduces costs, boosts production by conveyorizing; Barrows porcelain enamel co. il Cer Ind 60:121-2 Ap '53

Simple verbal picture of porcelain enamel. W. A. Barrows. Cer Ind 61:50-1+ Ag '53

Solar expects big future for coatings. il Cer Ind 59:96-7+ O '52

Use of porcelain enamel on aluminum. E. C. Woodland. Cer Ind 59:116+ O '52

We worked all angles to get production off the shelf; enameling of a phone booth corner shelf. W. E. Burns. il Cer Ind 61:63 Jl '53

See also

Enamel spraying	Sheet metal, Enameled
Enameled ware	

Adherence

Contribution to the theory of enamel adherence. M. Berg and M. Humenik, jr. il diags Am Cer Soc Bul 31:329-31 S 15 '52

Study of some phenomena associated with the adherence of sheet iron ground coats. R. F. Patrick and others. bibliog il Am Cer Soc J 36:305-13 S 1 '53

Alkali resistance

Relative action of various alkaline solutions on enamels. H. R. Toler and J. T. Roberts. il Am Cer Soc Bul 32:92-5 Mr 15 '53

Defects

Bucket brigade washes away enamel pits; Lawndale enameling co. A. J. Holloway. il Cer Ind 60:115 Ap '53

Factors affecting the rusting and spalling of titania enamels under alternate freezing and thawing in the presence of moisture. R. F. Patrick. il Am Cer Soc Bul 31:334-9 S 15 '52

Investigation of gases evolved during firing of porcelain enamels. D. G. Moore and M. A. Mason. bibliog il diags Am Cer Soc J 36:241-9 Ag 1 '53

Study of fishscaling produced by induction of hydrogen into enameled iron. E. E. Bryant and others. bibliog il Am Cer Soc Bul 32:248-52 Jl 15 '53

Study of gases in porcelain enameling. P. K. Chu and others. bibliog il diag Am Cer Soc J 36:48-59 F 1 '53

Study of the enameling of sheet nickel. J. H. Healy and A. I. Andrews. Am Cer Soc Bul 32:119 Ap 15 '53

Research

Complete laboratory dedicated to enameling research; United States steel corp. Research and development laboratory. H. L. Conaway. il plan Cer Ind 60:69 My '53

Safety measures

Use of respirators assures workers' safety; Richmond radiator co. il Cer Ind 60:128 Je '53

Terminology

Terms used in porcelain enameling. Machine Design 24:169 D '52

Testing

Determination of strains between enamel and iron by means of split rings. J. D. Walton, jr. and B. J. Sweo. bibliog il diags Am Cer Soc J 36:335-41 O 1 '53

Factors affecting the rusting and spalling of titania enamels under alternate freezing and thawing in the presence of moisture. R. F. Patrick. il Am Cer Soc Bul 31:334-9 S 15 '52

Interferometer procedure applied to the study of the chemical durability of silicates, enamels, and metals. R. G. Pike and D. Hubbard. bibliog J Res Nat Bur Stand 50:87-93 F '53

Method for studying the resistance of enamels to abrasion by rapidly moving particles suspended in high-temperature flames. N. E. Poulos. il diags Am Cer Soc Bul 31:380-3 O 15 '52

Preliminary study of the compressive stress relief of titania-opacified cover-coat enamels. D. C. Bowman and A. V. Sharon. bibliog il Am Cer Soc J 35:300-3 N 1 '52

ENAMEL spraying

Charts build spray efficiency. Cer Ind 59:67 D '52

Handy porcelain spray. Bsns W p52+ My 30 '53

Spray application and control of porcelain enamel. M. L. Pouilly. il Can Chem Process 37:50+ Ap '53

ENAMELED sheet metal. See Sheet metal, Enameled

ENAMELED ware

Enameling industry of Japan. M. L. Simmons. il Am Cer Soc Bul 31:453-5 N 15 '52

Recommended practices for designing porcelain enamel products; drawings with text. P. F. Metz. Product Eng 23:176-7 N '52

Where you can sell enameled products. C. P. Lohman. Cer Ind 60:125+ Ap '53

Manufacture

Added unit on pickling machine insures a thorough cleaning of ware. Cer Ind 59:67 D '52

Ceramic manufacturing in an Argentine plant; Ferrum S.A. de ceramica y metalurgia. E. E. Antaki. il Am Cer Soc Bul 32:160-1 Ap 15 '53

Control holds enamelware rejects to half of a percent in firing; Smoot-Holman co. il Cer Ind 59:66 N '52

New West Coast enamel plant goes utilitarian; Globe brass and copper co. il Cer Ind 61:76-7 O '53

Redesigning burning tools cuts costs; Ingersoll product div., Borg-Warner corp. il Cer Ind 59:62-3 N '52

ENAMELING furnaces. See Furnaces, Enameling

ENANTHOTOXIN

Chemistry of oenanthotoxin and cicutoxin; abstract. B. Lythgoe. Chem & Ind p242 Mr 14 '53

Oenanthotoxin and cicutoxin; isolation and structures. E. F. L. J. Anet and others. Chem Soc J p309-22 Ja '53

ENCEPHALITIS, Epidemic

Wild birds may carry encephalitis virus. F. M. Burnet. Pub Health Rep 68:102 Ja '53

ENCEPHALOGRAPHY

See also

Electroencephalography

ENCEPHALOMYELITIS

Quantitative studies on proteolipide as incitant of disseminated encephalomyelitis in mice. C. Tal and P. K. Olitsky. bibliog Science 116:420-1 O 17 '52

ENCYCLOPAEDIA Britannica

White elephant that paid its way. Bsns W p75-6+ My 9 '53

ENCYCLOPEDIAS

Columbia-Viking desk encyclopedia. W. Bridgwater, ed. 1092p $8.95 Viking press, 18 E. 48th st, New York 17 '53

ENDICOTT Johnson corporation

Five timely selections in risk free stocks; with comparative balance sheet items. Mag of Wall St 92:279 My 30 '53

ENEMY property

General Aniline accord report denied by OAP. Oil Paint & Drug Rep 164:3+ Ag 24 '53

Interhandle given three months to prop General Aniline claim. Oil Paint & Drug Rep 163:4 F 23 '53

Spoils of war; government's World war II seizure of the General aniline & film corp. as enemy property. R. M. Bleiberg. Barron's 33:5+ Ap 20 '53

ENEMY property—*Continued*
Western European, Japanese property in US freed. Oil Paint & Drug Rep 164:5+ Jl 6 '53

ENERGY. See Force and energy; Free energy

ENFIELD cables, ltd.
Enfield Cables investigation. Elec R (Lond) 152:603 Mr 13 '53

ENGEL, Louis
Portrait. Bsns W p 107 Ap 18 '53

ENGINEER corps. See United States—Army—Engineer corps

ENGINEERING
Annual engineering materials review and forecast. T. C. Du Mond. il diag Materials & Methods 37:101-16 Ja '53 (reprints 25c)
Annual handbook of product design for 1953; general engineering. il diag Product Eng Hdbk p A 1-23+ '53
Applications of scale models in engineering. R. Hammond. il maps plans diags Engineer 194:181-4, 212-15 Ag 8-15 '52
Art of the practical engineer. D. Pye. il diags Inst Mech Eng Proc (A) 166 no 3: 265-71 '52; Same abr. Engineer 194:555-7 O 24 '52; Same abr. Engineering 174:542-4 O 24 '52
Century of progress. J. W. Towle. Advanced Management 17:9-10 N '52
Engineer and the scientist. W. F. G. Swann. J Eng Educ 43:241-8 D '52
Engineering advances to be faster. H. A. Winne. Mech Eng 75:432 My '53
Engineering in small manufacturing plants. D. B. Chenoweth. il Mech Eng 75:393-4 My '53
Engineering problems in the utilization of atomic energy. W. E. Kelley. J Eng Educ 43:95-8 O '52
First hundred years; excerpts from centennial papers. Chem Eng Prog 48:sup40+ O '52
Future of plastics in engineering. J. E. Gordon. Engineer 194:733-4 N 28 '52; Same. Engineering 174:701-2, 770 N 28, D 12 '52
Historical relations of medicine and engineering. W. S. McCann. A M A Archives Ind Hygiene & Occup Med 7:87-92 F '53
Management of engineering work. T. M. Linville. Elec Eng 71:1091-5 D '52
Research and the engineering process. H. E. Merritt. Engineer 194:807-9 D 12 '52
Synergism between engineering and petroleum; abstract. R. E. Wilson. S A E J 61:62 Mr '53
Years, ideas, and engineers. S. W. Sparrow. S A E J 60:17-29 O '52

See also
Aeronautic engineering
Agricultural engineering
Air conditioning
Airports
Aqueducts
Automobile engineering
Blasting
Breakwaters
Bridges
Chemical engineering
City planning
Civil engineering
Concrete construction
Construction equipment
Dams
Dikes (engineering)
Docks
Drainage
Drilling and boring (earth and rocks)
Earthwork
Electric engineering
Engineers
Foundations
Gas engineering
Harbors
Heating
Highway engineering
Hydraulic engineering
Industrial engineering
Irrigation
Lighting
Machinery
Marine engineering
Mechanical engineering
Mechanical handling
Military engineering
Mining engineering
Pavements
Petroleum engineering
Pipe laying
Plastics engineering
Public works
Pumping
Radio engineering
Railroad engineering
Railroads—Construction
Refrigerating engineering
Refrigeration and refrigerating machinery
Reservoirs
Roads
Sanitary engineering
Sewerage
Standards, Engineering
Steam engines
Steel construction
Strains and stresses
Streets
Strength of materials
Structural engineering
Surveying
Technology
Telephone
Tunnels and tunneling
Ventilation
Water supply engineering

also Centennial of engineering, 1952

Bibliography

Engineer's library. Published in monthly numbers of Machine design
Reviews of books and notes on books received in the Engineering societies library. Published in monthly numbers of Mechanical engineering

History

See also
Centennial of engineering, 1952

Periodicals

Recommended list of basic periodicals in engineering and the engineering sciences. 42p pa 75¢ Association of college and reference libraries, Univ. of Illinois library, Chicago undergraduate div, Chicago 11 '53

Social aspects

Engineering and politics. R. E. Flanders. Mech Eng 75:16-18 Ja '53
Management's debt to the engineer. L. F. Urwick. Mech Eng 75:374-9+ My '53
Technology in a troubled world. W. C. Foster. Mech Eng 74:784-6+ O '52

Study and teaching

Early teaching of engineering in Cambridge university. E. G. Sterland. Engineering 175: 796-7, 826-7 Je 19-26 '53
Educating engineers for 2000 A.D. C. C. Furnas. J Eng Educ 43:23-30 S '52
Improvement of engineering teaching; report of committee on improvement of teaching. J Eng Educ 43:33-46 S '52

See also
Aeronautic engineering—Study and teaching
Electric engineering—Study and teaching
Engineering colleges
Engineering education
Mechanical engineering—Study and teaching

Tables, calculations, etc.

Engineering with digital computers. A. Keller. diags Tool Eng 31:125 Jl '53
Projecting data by algebraic and graphical techniques. E. C. Varnum. il Machine Design 25:123-7 Mr '53

Australia

Engineer's impression of Australia. W. L. Lowe-Brown. il Engineer 194:151-3 Ag 1 '52

Brazil

New construction projected by Brazil-U.S. commission. Eng N 150:82 Mr 26 '53

California

Engineering in California; ASCE meeting, San Francisco. Eng N 150:23-4 Mr 12 '53

Canada

American know-how moving across border. J. Montagnes. Barron's 32:17-18 D 22 '52
U.S. firms open Canadian offices. il Eng N 150:56+ Ja 8 '53

India

India builds for self-support. C. H. Vivian. il Comp Air Mag 58:122-7 My '53

Kashmir

Five-year plan for Kashmir. Engineer 194: 700-1 N 21 '52

ENGINEERING, Centennial of. See Centennial of engineering, 1952

ENGINEERING, Structural. See Structural engineering

ENGINEERING colleges
Designed for 600-lb live loads; Engineering building, University of California, Los Angeles campus. il plans Arch Rec 112:154-8 O '52

ENGINEERING colleges—*Continued*

ECPD lists accredited metallurgical engineering colleges. J Metals 5:455 Mr '53

See also

Engineering graduates

Engineering students

also Cambridge university, England—Engineering school; Hatfield technical college; Massachusetts institute of technology; Royal technical college, Glasgow

Curriculum

Electrical engineering curriculum; present-day problems and time limitations; electrical engineering conference, 1st, East Lansing, Mich. June 25-29, 1951; abstracts of papers. J Eng Educ 43:420-8 Mr '53

Estimate of the success of the five-year mineral engineering programs. W. B. Plank. J Eng Educ 43:103-6 O '52

Modern engineer should be educated as a scientist; in college. G. S. Brown. J Eng Educ 43:274-81 D '52

Should engineering schools teach engineering? T. K. Sherwood. J Eng Educ 43:383-6 Mr '53

What are contemporary demands on engineering curricula? W. L. Everitt and others. J Eng Educ 43:294-315 Ja '53

Why options anyway? K. B. McEachron, jr. Elec Eng 72:305-6 Ap '53

Enrollment

Bureau of labor statistics on enrollment. E. Clague. Eng N 150:11-12+ Ap 23 '53

Educational institutions enrolling the most engineering students in the United States. Elec World News ed 139:41 Ap 27 '53

Engineering enrollments and degrees, 1952. R. C. Story and H. H. Armsby. J Eng Educ 43:1-16 F '53; Excerpt. Mech Eng 75:314-15 Ap '53

Entrance requirements

Minimum mathematical requirements for engineering college admission and factors which affect this problem; panel discussion. G. C. Ernst and others. J Eng Educ 43:136-44 N '52

Subject admission requirements of engineering colleges. M. I. Mantell. J Eng Educ 43:404-9 Mr '53

Graduate work

Post-graduate courses for engineers. W. A. Tuplin. Engineering 175:725-6 Je 5 '53

Libraries

ASEE proceedings, 1952; a review. G. S. Bonn. Special Lib 44:71 F '53

Professors and instructors

More emphasis on practical experience proposed for teachers by examiners. Eng N 149:43 D 25 '52

Where is the challenge? J. F. Lee. J Eng Educ 43:400-3 Mr '53

Salaries

Report of committee on salaries, Southeastern section. J Eng Educ 43:201-12 N '52

Relations with industry

See also

Engineering education—Industry co-operation

Research

Participation by the colleges in engineering research. E. A. Walker. Heating-Piping 25:137-8 S '53

Role of sponsored research in training research personnel. R. A. Morgen. J Eng Educ 43:145-8 N '52

Student selection

Secondary school as a source of candidates for engineering training. H. A. Jager. J Eng Educ 43:159-66 N '52

ENGINEERING contracts

Breach of contract. Elec J 150:607-8 F 20 '53

Construction by contract method, an American tradition. H. E. Foreman. il Civil Eng 22:646-50+ S '52

Engineering contract policy altered. Eng N 150:21 Ja 22 '53

Legal decisions; summaries of decisions relating to construction (cont). I. V. Werbin. Eng N 149:66+ O 23; 56-8 O 30; 83+ N 6; 68+ N 13; 78 D 4; 54 D 25 '52; 150:47 Ja 1; 67 Ja 8; 95 Ja 15; 64 Ja 22; 62-3 Ja 29; 92-3 F 5; 214 F 19; 80-1 Mr 12; 96+ Mr 26; 66+ Ap 2; 73 Ap 9; 90+ Ap 16; 95 My 14; 99-100 Je 4; 75 Je 18; 151:94+ Jl 16; 66 Jl 23; 70 Ag 13; 88+ Ag 20; 76 S 3; 302-3 O 8 '53

Legal responsibility of the registered engineer. W. C. Sadler. Civil Eng 23:311 My '53

Time clauses in engineering contracts. Engineering 174:442 O 3 '52

See also

Building contracts

Contracts, Letting of

Roads—Contracts

ENGINEERING departments

Developing engineering efficiency. A. R. Smith. il Machine Design 24:106-10 N '52

Engineers must consider production costs; Lockheed aircraft corp. R. H. Luders. diags Am Mach 97:116-19 Jl 6 '53

Getting the most from your engineers. Chem & Eng N 30:5026-9 D 1 '52; Aviation W 57:21-2+ D 1 '52; Chem Eng 59:290+ D '52; Iron Age 170:106-7 D 4 '52

How an inventor and engineer operates; Dr L. A. Philipp combines the two functions as vice president in charge of Kelvinator engineering. il Steel 131:79-91 N 10 '52

How dual-engineering assures multi-plant efficiency. J. G. Brown. Food Eng 24:106-9+ N '52

How materials engineering works at Northrop. C. M. Miller. il Materials & Methods 37:83-5 Ap '53

Improving engineering department operation. S. Mead. Product Eng Hdbk p A 16-23 '53

ENGINEERING drawing

Easy sketching system. P. Swain. diags Power 96:156 S; 140 O; 140 N; 156 D '52; 97:140 Ja; 144 F; 140 Mr; 142 Ap; 146 My; 142 Je; 142 Jl; 140 Ag; 138 S '53

Engineering perspective drawing. J. F. Lane. diags Machine Design 25:106-11 Ja '53

How to get faster, better, less expensive plant layout drawings without drafting. G. L. Thuering. plan diags Factory Management 110:88-9 O '52

Kuhlmann perspective draughting machine. il diag Engineering 176:202-3 Ag 14 '53

Men on the boards. E. A. Kehoe. Machine Design 25:272+ S '53

Simplified pictorial drawing. S. B. Elrod. diags Machine Design 25:128-39 Mr '53

There's no trick to spacing poles in perspective. diags Power 97:100 Ap '53

Training the sheet metal draftsmen; sheet metal sketcher's standards. W. J. Hornung. diags Sheet Metal Worker 44:95-7 Jl '53

ENGINEERING economics

Status of engineering economy. W. D. McIlvaine, jr. J Eng Educ 43:85-9 O '52

ENGINEERING education

Art of the practical engineer. D. Pye. il diags Inst Mech Eng Proc (A) 166 no 3:265-71 '52; Same abr. Engineer 194:555-7 O 24 '52; Same abr. Engineering 174:542-4 O 24 '52

Education of Tom, Dick, and Harry. A. Boyajian. il Tech R 55:262-4+ Mr '53

EUSEC conference on engineering education. Mech Eng 75:395-6 My '53

EUSEC conference on engineering education, London, Jan. 12-17. Engineer 195:182-3 Ja 30 '53; Same cond. Elec J 150:353 Ja 30 '53

Goal for American engineering education. S. C. Hollister. J Eng Educ 43:6-12 S '52

Human factor in engineering; can you succeed without it? R. W. McFall. il Gen Elec R 56:49-50 My '53

Is the traditional program in college mathematics adequate for the training of prospective engineers and scientists? K. L. Noble. J Eng Educ 43:121-3 O '52

June jobs; overexpansion of engineering education. R. W. Babson. Comm & Fin Chr 177:2628 Je 18 '53

Letters on engineering education. Midwest Eng 5:24-5 Mr; 21+ Ap; 22-3 My '53

ENGINEERING education—*Continued*
Looking ahead in engineering education. L. M. K. Boelter. J Eng Educ 43:249-57 bibliog(p256-7) D '52; Excerpt. S A E J 61:84-5 Ag '53
Looking ahead in engineering education. S. C. Hollister. J Eng Educ 43:258-62 D '52
Modern engineer should be educated as a scientist; in college. G. S. Brown. J Eng Educ 43:274-81 D '52
Modern engineer should be educated as a scientist; in industry. H. K. Ihrig. J Eng Educ 43:269-73 D '52
Plan for training women in engineering. F. C. Morris. J Eng Educ 43:174-6 N '52
Post-war problems in engineering education. L. J. Kastner. Engineering 175:283-4, 317, 327 F 27-Mr 13 '53
Progress in engineering training. A. P. M. Fleming. Engineering 175:214-15 F 13 '53; Abstract. Elec R (Lond) 152:410 F 20 '53
Raise the lead curtain. W. N. Carey. Midwest Eng 5:20-1 Ap '53
Research versus trial and error. M. L. Meyer. il Engineer 195:770-2 My 29 '53
Should engineering schools teach engineering? T. K. Sherwood. J Eng Educ 43:383-6 Mr '53
Stronger engineering graduates. G. E. Doan. Mech Eng 74:877+ N '52
To fill the gap; catch 'em young. Bsns W p60+ My 2 '53
Training of engineering designers. E. M'Ewen. Engineer 195:724-5 My 22 '53
Westinghouse establishes engineering professorship. E. A. Walker. Elec Eng 72:758-9 Ag '53
Why options anyway? K. B. McEachron, jr. Elec Eng 72:305-6 Ap '53
Youth and engineering. D. D. Eisenhower. J Eng Educ 43:131-2 N '52; Excerpts. Mech Eng 75:23 Ja '53

See also
Engineering colleges
Engineering students
Technical education
also subdivision Study and teaching under engineering subjects, e.g.
Electric engineering
Mathematics
Mechanical engineering
also Engineers council for professional development; Massachusetts institute of technology

Cooperative plan

Co-op prepares for engineering. C. F. Arnold. J Eng Educ 43:390-3 Mr '53
Cooperative education in Britain. R. L. Mateer. Factory Management 111:305 Mr '53
Cooperative engineering education; how program works in practice. W. F. Wagner, jr. il Factory Management 110:104-9 N '52

See also
General motors institute of technology

Finance

Financing engineering education. J. D. Millett. J Eng Educ 43:289-92 Ja '53

History

Achievements in engineering education. T. Saville. J Eng Educ 43:222-35 D '52
History of engineering education. F. T. Mavis. J Eng Educ 43:214-21 D '52

Industry cooperation

What does industry owe the young engineer? K. B. McEachron, jr. Gen Elec R 55:58-60 N '52

Russia

Tough training backs Russian engineers. il Product Eng 24:204-6 F '53; Abstract. Mech Eng 75:397-8 My '53

ENGINEERING education, American society for. See American society for engineering education

ENGINEERING foundation
Annual report. Mech Eng 75:93 Ja '53

ENGINEERING geology
Geological research and its practical application. J. E. Richey. Engineering 174:702-3, 738 N 28-D 5 '52

ENGINEERING graduates
Athlone fellowship scheme for the practical training in industry of Canadian engineering graduates in Great Britain. W. Abbott. Engineer 195:561-3 Ap 17 '53; Discussion. 195:567-8, 587-8 Ap 17-24 '53
AEC work siphons engineer graduates. Eng N 150:27 Ja 29 '53
June engineering graduates have wide job choice. Machine Design 25:243-4 My '53
Post-graduate courses for engineers. W. A. Tuplin. Engineering 175:725-6 Je 5 '53
Selection and appraisal of engineering graduates; a case study. D. Adamson. Personnel 29:175-93 S '52
Stronger engineering graduates. G. E. Doan. Mech Eng 74:877+ N '52; Discussion. 75:336-7 Ap '53
Training graduate engineers for a professional career. J. Gammell. Elec Eng 72:761-3 S '53
What does industry owe the young engineer? K. B. McEachron, jr. Gen Elec R 55:58-60 N '52

See also
Engineering colleges
—Graduate work

ENGINEERING Institute of Canada
Annual meeting, 67th, Halifax; abstracts of papers. Roads & Eng Constr 91:127-8+ Ag '53
Officers. Roads & Eng Constr 91:88 My '53

ENGINEERING laboratories
British coal utilisation research association; new research building for the study of domestic appliances. Engineering 176:20 Jl 3 '53
G.E. building turbine product development laboratory. W. E. Saupe. Blast F & Steel Pl 41:1070 S '53
Industrial lighting; Benjamin electric, ltd. il Elec J 149:1501-3 N 14 '52; Elec R (Lond) 151:1083-4 N 14 '52
Mies designs new lab for railroad research. il Arch Rec 113:330 F '53
Mobile engineering laboratory. C. W. Newberry and R. S. Jerrett. il plans Engineering 175:669-71 My 22 '53
Nottingham university engineering laboratories. il Metallurgia 47:272-4 My '53
Nottingham university extension opened. il Elec J 150:1327 Ap 17 '53
Nottingham university's new engineering laboratories. il Engineering 175:500-1 Ap 17 '53; Engineer 195:644-5 My 1 '53
Organization of a small engineering laboratory. A. W. Pomper. bibliog il Tappi 36: sup 171A-5A Ap '53
Research laboratory of the Guest, Keen and Nettlefolds group. il Engineering 175:715-16, 720 Je 5 '53

See also
Aeronautic laboratories
Automobile laboratories
Electric laboratories
Massachusetts institute of technology—Metals processing laboratory

ENGINEERING law
New York law prohibiting engineering practice by corporations under attack. Eng N 150:21-2 Mr 12 '53

ENGINEERING libraries

See also
Engineering colleges
—Libraries
Technical libraries

ENGINEERING manpower commission. See Engineers joint council—Engineering manpower commission

ENGINEERING materials. See Materials

ENGINEERING reports
Don't write reports, engineer them. Chem Eng 60:303-6+ Ja '53

See also
Technical writing

ENGINEERING research
Application of research to the gas turbine. H. Constant. Engineering 175:30-1, 61-3 Ja 2-9 '53; Same abr. Engineer 195:186-8 Ja 30 '53
Application of statistics to engineering problems. M. D. J. Brisby. bibliog Engineering 174:294-6 S 5 '52
Engineering research report, 1951. Engineer 194:727 N 28 '52

ENGINEERING research—*Continued*

High-pressure research in Chemical engineering department of Yale university. B. F. Dodge. bibliog il diags A S M E Trans 75:331-43 Ap '53

Mechanical engineering research board report for 1951. Engineering 174:730 D 5 '52

Mechanical engineering research board report for 1952. Engineer 196:173-4 Ag 7 '53

Mechanical engineering research; progress at East Kilbride laboratory. Metallurgia 48:70 Ag '53

Pametrada; progress report for 1952. Engineer 195:762 My 29 '53

Research activities, 1951-52; engineering schools and departments, Purdue university. Purdue Univ Eng Exp Sta, Research Ser 119:1-123 '53

Research and the engineering process. H. E. Merritt. Engineer 194:807-9 D 12 '52

Research versus trial and error. M. L. Meyer. il Engineer 195:770-2 My 29 '53

See also

Aeronautic research
Electric research
Engineering colleges —Research
Engineering laboratories
Fulmer research institute
Gas research
Highway research
Hydraulic research
Industrial research
Lighting research
Petroleum research
Railroad research
Scientific research

ENGINEERING societies

Engineering societies of America. W. N. Carey and others. il Gen Elec R 55:34-6 S; 34-6 N '52; 56:53-5 Mr; 41-3 My; 48-50 Jl; 34-6 S '53

Engineering unity. R. Johnson. Mech Eng 74:839-40 O '52

New unity plan proposal. J. C. Dutton and others. Elec Eng 72:349-51 Ap '53

Organization of the engineering profession. D. A. Quarles. Elec Eng 71:963-4 N '52

See also

American institute of chemical engineers
American institute of electrical engineers
American institute of mining and metallurgical engineers
American society of civil engineers
American society of mechanical engineers
Centennial of engineering, 1952
Engineers guild
Illuminating engineering society
Institution of electrical engineers
Institution of radio engineers
Pan American union of engineering societies
Society of women engineers
Verein deutscher ingenieure

Directories

Associations and societies, Canada. Roads & Eng Constr 91:222+ Je '53

Engineering societies; alphabetical listing of professional societies, industry associations and technical organizations serving the radio-tv-electronic and allied fields. Tele-Tech 12:298 Je '53

History

Evolution of the American institute of electrical engineers. M. D. Hooven. Elec Eng 71:973-7 N '52

ENGINEERING societies library, New York

Annual report. Mech Eng 75:92-3 Ja '53

ENGINEERING standards. See Standards, Engineering

ENGINEERING students

Anatomy of engineering; from an engineering freshman's point of view. W. P. Wallace and H. W. Case. Mech Eng 75:19-20 Ja '53

Open-book examinations. R. H. Upson. J Eng Educ 43:429-30 Mr '53

Simplified technique for item analysis. R. O. Swalm. J Eng Educ 43:394-9 Mr '53

ENGINEERING teachers

See also

Engineering colleges —Professors and instructors

ENGINEERS

ASME honors engineers; biographies of recipients of honorary membership and awards. Mech Eng 75:74-9 Ja '53

Atomic energy gets the cream of engineering and physical science graduates. Bsns W p 120+ Ja 24 '53

Can engineers man a company? E. G. Bailey. Midwest Eng 5:5+ D '52; Same. Mech Eng 75:21-2 Ja '53; Same. J Eng Educ 43:322-4 Ja '53

Components department aids project engineers. S. Kramer and S. Gurian. il Electronics 26:141-3 Ag '53

Develop cooperation between engineers and contractors. R. E. DeSimone. Civil Eng 22:850-3 O '52

Educators discuss engineer shortage. Roads & Sts 96:77+ Ap '53

Elderly engineer. C. E. R. Sams. Engineer 196:198-9 Ag 14 '53

Engineer and the art of persuasion. A. Anson. Pet Refiner 32:116-18 Ja '53

Engineer as a social, economic and moral force. H. Hoover. Tele-Tech 12:154+ Ag '53

Engineer becomes a professional manager. H. Rubey. J Eng Educ 43:338-41 Ja '53

Engineer, his growth. A. C. Monteith. Elec Eng 72:191-5 Mr '53

Engineer lack laid to industry. Eng N 150:72 Mr 12 '53

Engineer-scientist of today. C. C. Furnas. J Eng Educ 43:264-8 D '52

Engineer shortage; challenge to management. D. M. Laughlin. Personnel 29:418-21 Mr '53

Engineer shortage; treatment but no cure. Bsns W p29 My 23 '53

Engineering centenaries in 1953. Engineering 175:19 Ja 2 '53

Engineering in management. J. G. Pleasants. Mech Eng 74:781-3+ O '52

EMC urges deferment requests follow 19-step outline. Elec Eng 71:1052-3 N '52; Tele-Tech 11:33 N '52

Engineers. H. Hoover. J Eng Educ 43:133-5 N '52

Engineers face major responsibilities in the next hundred years. C. S. Proctor. Civil Eng 22:619-21 S '52

Engineers for tomorrow; Detroit Arsenal training program. W. M. Trevarrow. il Tool Eng 31:41-5 O '53

Engineers must be upgraded to solve manpower shortage. S. C. Hollister. Civil Eng 22:666-7+ S '52

Engineers with ideals the need of civilization. A. A. Potter. Midwest Eng 5:30 N '52

Getting the most from your engineers. Chem & Eng N 30:5026-9 D 1 '52; Aviation W 57:21-2+ D 1 '52; Chem Eng 59:290+ D '52; Iron Age 170:106-7 D 4 '52

Government reviews engineer shortage; report made by the National manpower commission. Eng N 150:27 My 21 '53

Guide posts to an engineering career. C. G. A. Rosen. Mech Eng 74:973-9 D '52

How to develop the development engineer. I. F. Kinnard. Gen Elec R 56:10-11 Mr '53

How to get ahead. R. L. Demmerle. Oil & Gas J 51:141 D 22 '52

Human factor in engineering; can you succeed without it? R. W. McFall. il Gen Elec R 56:49-50 My '53

Incentive pay plan for engineers. H. B. Richmond. Tele-Tech 12:76-7+ S '53

Industry's responsibility in the shortage of engineers. H. P. Liversidge. Edison Elec Inst Bul 21:302-3+ Ag '53

Labor legislation, as it affects the engineer. Min Eng 5:880 S '53

Legal responsibility of the registered engineer. W. C. Sadler. Civil Eng 23:311 My '53

Management's debt to engineers. L. Urwick. Advanced Management 17:5-12 D '52

Management's responsibility to engineering; abstract. W. R. Woolrich. Machine Design 25:302+ Ag '53

Manpower commission study urges better use of engineers. Product Eng 23:203 O '52

Manpower utilization and national security. C. H. Brown. Mech Eng 74:892-6+ N '52; Same. J Eng Educ 43:328-37 Ja '53; Same. Midwest Eng 5:3-5+ F '53

Military service will cut number of engineers available. Elec Eng 72:662 Jl '53

More efficient use of engineers needed as shortage continues. Pet Refiner 32:143 Ja '53

ENGINEERS—*Continued*

More engineers; Boy Scout magazine poll. Bsns W p74+ O 25 '52

Needed, 30,000 engineers a year. Steel 132:78 Mr 16 '53

Opportunities for young engineers in the new Edison research laboratory, West Orange, N.J. Mech Eng 75:429-30 My '53

Pledge of faith in America's future. A. C. Jacobs. Mech Eng 74:980-2 D '52

Premium on engineers. Comp Air Mag 58:83 Mr '53

Professional engineer defined by a Wage stabilization board interpretation. Heat & Ven 49:126+ N '52

Putting engineers to work. Bsns W p 123 D 6 '52

Qualities industry wants in its engineers. J. K. Salisbury. Gen Elec R 55:16-19 My '52; Same cond. Machine Design 24:199-201+ O '52; Same cond. Coal Age 58:108+ F '53

Select engineer employees scientifically. F. R. Morral. bibliog J Metals 5:37-8 Ja '53; Same cond. Min Eng 5:383 Ap '53

Selecting, training engineers. M. S. Viteles. bibliog Am Gas Assn Mo 35:13-14+ Je '53

Some problems that challenge engineers today. L. M. Gilbreth. Midwest Eng 5:5-6+ O '52

Some things we can do about our engineering manpower dilemma. A. S. Bennion. il Elec West 109:67-8 D '52

Spectacular salary advantages enjoyed today by engineers. J. Gammell. Midwest Eng 5:27 Ap '53

Stretching the supply of engineers. Product Eng 24:197 Ja '53

To fill the gap; catch 'em young. Bsns W p60+ My 2 '53

Training engineers; General motors corp. K. A. Meade. il Tool Eng 30:39-42 Je '53

Use older engineers. M. D. Dunnette. Personnel J 31:213-17 N '52

Using existing technical personnel to better advantage; abstract. G. M. Muschamp. Paper Tr J 136:42+ Ap 17 '53

Utilizing engineers. Chem Eng 59:326-7 N '52

What makes a successful design engineer? G. H. Logan. Product Eng 24:279-80+ Ap '53

Younger generation of engineers; quality partly offsets a shortage. il Eng N 150:24-5 My 14 '53

See also
Aeronautic engineers
Centennial of engineering, 1952
Chemical engineers
Electric engineers
Engineering colleges
Engineering education
Engineering graduates
Engineering societies
Engineers and scientists of America
Engineers' council for professional development
Railroad engineers
Safety engineers
Sanitary engineers
Women as engineers

Directories

American society for engineering education officers and council members, divisions, committees for 1952-53; with list of members. J Eng Educ 43:19-275 F '53

Western society of engineers year book. Midwest Eng 5:1-136 pt 2 F '53

Foreign service

Overseas appointments for civil engineers. C. F. Armstrong. Engineer 196:263-5 Ag 28 '53

Public relations

Bringing the engineering viewpoint to bear on public affairs. G. B. Warren. Mech Eng 74:967-8+ D '52

Engineers needed on new frontier. A. E. Perlman. Civil Eng 22:1008-9 D '52

Technology in a troubled world. W. C. Foster. Mech Eng 74:784-6+ O '52

Registration

Arkansas revises contractors' bond provisions and engineer licensing law. Eng N 150:27-8 Ap 9 '53

Dodges architect-engineer distinction in suit over licensing provisions. Eng N 150:26 Ja 15 '53

How to file for N.Y. state professional engineer's license. J. D. Constance. Power Eng 57:86 Ap '53

Legal interpretation enables firms to get N.Y. state engineering licenses. Eng N 150:25 Je 18 '53

License change out; backers withdraw bill to change New York license law. Eng N 150:24 Mr 26 '53

Licensing laws; Colorado legislates new engineer-architect acts following court upsets. Eng N 150:24 Ap 9 '53

Professional licensing laws attacked. Eng N 150:23 Mr 19 '53

Raising the status of the professional engineer. R. W. Sorensen. Elec Eng 71:1082-7 D '52

Registration of professional engineers. Tappi 36:sup64A+ Ja '53

Salaries

Civil engineers' income averages $7,100. Eng N 150:26 Ap 30 '53

Employers of professional engineers warned regarding wage stabilization. J. D. Cooper. Elec Eng 71:1053 N '52

Higher salaries; states paying them will be able to keep engineers. Eng N 150:60 Ap 9 '53

See also
Sanitary engineers—Salaries

California

Professional engineering in California. R. W. Sorensen. Elec Eng 71:1082-7 D '52

Canada

Employment prospects for engineers in Canada. Roads & Eng Constr 91:59+ F '53

Colorado

New Colorado law adopted; prescribes subjects for engineer-in-training and professional engineer tests. Elec World News ed 139:41 Ap 27 '53

Great Britain

See also
Engineers' guild

Ontario

Engineer registration reaches record number, but shortage of engineers is still acute. Roads & Eng Constr 90:92 N '52

Russia

Engineers; Russians overtaking us. R. M. Stroupe. Iron Age 171:66 Je 11 '53

ENGINEERS, Sanitary. See Sanitary engineers

ENGINEERS and scientists of America

Annual meeting, 1st, Los Angeles, Feb. 21-23. Eng N 150:26 Mr 5 '53

Engineer union plans expansion. Aviation W 58:33-4 Mr 30 '53

New association of bargaining groups activated for engineers. Eng N 150:31 Ja 15 '53

Upper level unionizing. Chem W 72:24+ F 14 '53

ENGINEERS as salesmen

Opportunities in sales for chemical engineers. J. C. Leppart. Chem Eng Prog 48:437-9 S '52

ENGINEERS as witnesses

How good a technical witness are you? C. M. Hudspeth. Chem Eng 60:282+ Ap '53

ENGINEERS' council for professional development

Annual meeting, 20th, Chicago, Sept. 5-6. Mech Eng 74:942-4 N '52

ENGINEERS' guild

Engineers' guild, a review. R. Chalmers. Engineer 194:759-61 D 5 '52

ENGINEERS joint council

EJC prepares for reorganization; adopts new constitution. Mech Eng 75:180-1 F '53

Meeting, New York, Jan. 23. Mech Eng 75:269 Mr '53

Organization for engineering unity; report to the membership published at the direction of the IRE board of directors. Inst Radio Eng Proc 41:1067 Ag '53

ENGINEERS joint council—*Continued*

Engineering manpower commission

Manpower utilization and national security. A. S. Adams. J Eng Educ 43:325-7 Ja '53

Manpower utilization and national security. C. H. Brown. Mech Eng 74:892-6+ N '52; Same. J Eng Educ 43:328-37 Ja '53; Same. Midwest Eng 5:3-5+ F '53

1953 manpower program. T. A. Marshall, jr. Mech Eng 75:227-8 Mr '53

ENGINEERS' wives

Engineer's wife; illustrations with text. Gen Elec R 56:41-7 S '53

ENGINES

See also

Air engines
Air turbines
Airplane engines
Automobile engines
Crankcases
Diesel engines
Gas engines
Gas turbines
Internal combustion engines
Locomotives
Motor bus engines
Motor truck engines
Pistons
Pumping machinery
Rocket engines
Steam engines
Steam turbines

ENGLAND

See also

Electric plants (central stations)—England

ENGLISH, Earl

Portrait. Fortune 46:103 N '52

ENGLISH electric company

Statement by the chairman. G. Nelson. Economist 166:841 Mr 21 '53

ENGLISH language

Book on connectives. R. Ellard. Ed & Pub 86:48 F 7 '53

Di-section; a dorsalgic errata. Science 116: 486-8 O 31 '52

English; chemical engineering tool. J. A. Field. bibliog Chem Eng Prog 48:482-5 O '52

Growing illiteracy. R. D. Paine, jr. Advanced Management 18:11-12 Ja '53

Guides to annoying expressions. D. A. Laird. Banking 45:164 F '53

Writing clearly. R. Ellard. Ed & Pub 86:62 Ja 24 '53

See also

Technical writing

Dictionaries

Webster's new world dictionary of the American language. college ed 1724p $5; $6 thumb-indexed World pub. co, 2231 W. 110th st, Cleveland 2 '53

Study and teaching

Improving the linguistic skill of students. J. S. Miller. J Chem Educ 29:610 D '52

Synonyms

Thesaurus of English words and phrases. D. C. Browning. rev ed 572p $3.75 E. P. Dutton and co, 300 4th av, New York 10 '52

ENGLISH oil company

Stock offered. Comm & Fin Chr 177:1900-1 My 4 '53

ENGRAVING machines

Electro-mechanical engraver; Hell Klischograph. diag Elec J 150:39 Ja 2 '53

ENOLS

Aromatic keto-enols; some new 2 : 3-dihydro-1 : 4-naphthaquinones and -anthraquinones. D. B. Bruce and R. H. Thomson. Chem Soc J p2759-66 Jl '52

Steroidal sapogenins; the reaction of peracids with enol acetates of Δ^8-7-keto and Δ^8-11-keto steroidal sapogenins. O. Mancera and others. bibliog Am Chem Soc J 75:4428-9 S 20 '53

Structure of the enol acetate derivatives of steroid 7- and 11-ketones. R. Hirschmann and N. L. Wendler. bibliog Am Chem Soc J 75:2361-4 My 20 '53

ENTEROTOXIN. See Toxins and anti-toxins

ENTHALPY. See Thermodynamics

ENTOMOLOGICAL society of America

National entomological societies merge. C. F. W. Muesebeck. Science 117:546-7 My 22 '53

ENTRANCE requirements. See Engineering colleges—Entrance requirements

ENTRANCES

Architects' offices; entrances. il Arch Rec 113:141-2 Ja '53

Heating store and building entrances. L. R. Fuller. il diags Heat & Ven 50:75-9 S '53

ENTROPY

Absolute entropies in liquid ammonia. W. M. Latimer and W. L. Jolly. bibliog Am Chem Soc J 75:4147-8 S 5 '53

Complex-ion formation; the entropies of formation of some metal ammines. W. S. Fyfe. Chem Soc J p2023-7 Je '52

Empirical considerations of entropy; a structural approach to the entropies of aqueous organic solutes and complex ions. J. W. Cobble. bibliog J Chem Phys 21:1451-6 S '53

Empirical considerations of entropy; the entropies of inorganic complex ions. J. W. Cobble. bibliog J Chem Phys 21:1446-50 S '53

Empirical considerations of entropy; the entropies of the oxy-anions and related species. J. W. Cobble. bibliog J Chem Phys 21:1443-6 S '53

Entropies of activation in metallic diffusion. G. J. Dienes. bibliog Phys R 89:185-8 Ja 1 '53

Entropy changes accompanying association reactions in solution. E. L. King. bibliog J Chem Educ 30:71-7 F '53

Entropy changes in free radical reactions. A. F. Trotman-Dickenson. bibliog J Chem Phys 21:211-14 F '53

Entropy of a system undergoing irreversible processes. M. Kerker. J Chem Educ 30:39 Ja '53

Entropy of fluorine. G. M. Murphy and E. Rubin. bibliog J Chem Phys 20:1179-80 Jl '52

Entropy of ionization of protonic solvents. W. L. Jolly. bibliog Am Chem Soc J 74: 6199-201 D 20 '52

Entropy of liquid He^3. Tien Chi Chen and F. London. bibliog Phys R 89:1038-40 Mr 1 '53

Entropy of solution of nonelectrolytes. J. H. Hildebrand and R. L. Scott. bibliog J Chem Phys 20:1520-1 O '52

Equilibrium reaction $NiCl_2+H_2=Ni+2HCl$; ferromagnetism and the third law of thermodynamics. R. H. Busey and W. F. Giauque. bibliog diag Am Chem Soc J 75:1791-4 Ap 20 '53

Estimation of entropy. G. Hood. Am Chem Soc J 75:2257-8 My 5 '53

Free energies and entropies of hydrogen, chlorine and hydrogen chloride from spectroscopic data. R. H. Sherman and W. F. Giauque. bibliog Am Chem Soc J 75:2007-8 Ap 20 '53

Heat capacities at low temperatures and entropies at 298.16°K. of sodium superoxide, potassium superoxide and sodium peroxide. S. S. Todd. Am Chem Soc J 75: 1229-31 Mr 5 '53

Heats and entropies of successive steps in the formation of AlF_6^{---}. W. M. Latimer and W. L. Jolly. bibliog Am Chem Soc J 75:1548-50 Ap 5 '53

Influence of the solvent on rates of ionization, entropies, and heats of activation. R. G. Pearson. bibliog J Chem Phys 20:1478-80 S '52

Low temperature heat capacities of inorganic solids; the heat capacity and entropy of red mercuric oxide. T. W. Bauer and H. L. Johnston. bibliog Am Chem Soc J 75:2217-19 My 5 '53

Magnesium-cadmium alloys; the cadmium-rich alloys; some lattice parameters and phase relationships between 25 and 300°; structure of the $MgCd_3$ superlattice; Schottky defects and the anomalous entropy. D. A. Edwards, W. E. Wallace and R. S. Craig. bibliog Am Chem Soc J 74:5256-61 N 5 '52

Nuclear alignment and the entropy of liquid He^3. B. Weinstock and others. bibliog Phys R 89:787-9 F 15 '53

Partition functions for relating entropy to disorder in the melting of pure metals. J. F. Lee. J Chem Phys 21:382 F '53

ENTROPY—*Continued*

Separation of relative free energies of activation to three basic contributing factors and the relationship of these to structure. R. W. Taft, jr. bibliog Am Chem Soc J 75:4534-7 S 20 '53

Vapor pressure and entropy of liquid He^3. D. ter Haar. Phys R 91:1018-19 Ag 15 '53

Vapor pressure of germanic iodide; the entropies of germanic halides; the disproportionation of germanous iodide. W. L. Jolly and W. M. Latimer. bibliog Am Chem Soc J 74:5754-7 N 20 '52

Vibrational frequencies and the entropy of decaborane. W. E. Keller and H. L. Johnston. bibliog diags J Chem Phys 20:1749-51 N '52

See also

Heat
Thermodynamics

ENVELOPES

Open for inspection; Baker Brush's pressure-seal envelope. il Mod Packaging 26:98-9 Jl '53

Manufacture

From art to science in envelope manufacturing. P. B. Davidson. Tappi 36:sup56A+ Je '53

ENVIRONMENT

Aerial view of the earth and how man has changed it, not always for the best; review of Our world from the air, by E. A. Gutkind. J. R. Newman. il Sci Am 188:96-8 Mr '53

APHA conference report; a better environment. Pub Health Rep 68:236-42 F '53

Environmental conditions cause fifth of deaths. Pub Health Rep 68:203 F '53

ENVIRONMENTAL health center. See United States—Public health service

ENYART, William R.

Portrait. Bsns W p 170 My 9 '53

ENZYMES

Action of formaldehyde on proteins; the hydrolysis of formaldehyde-hardened proteins by enzymes. R. D. Haworth, R. MacGillivray and D. H. Peacock. Chem Soc J p2981-7 Ag '52

Additional evidence on the enzymatic transformation of histidine into glutamic acid. J. P. Fournier and L. P. Bouthillier. Am Chem Soc J 74:5210-11 O 20 '52

Alternative reaction patterns in autosynthetic systems. C. N. Hinshelwood. Chem Soc J p 1304-10 Ap '53

Application of ion exchange chromatography to the enzymatic resolution of amino acids. C. G. Baker and H. A. Sober. bibliog Am Chem Soc J 75:4058-60 Ag 20 '53

Curve fitting of enzymatic reactions based on the Michaelis-Menten equation. G. A. Fleisher. bibliog Am Chem Soc J 75:4487-90 S 20 '53

Effect of enzyme concentration on the apparent equilibrium constant for an enzyme-catalyzed reaction. R. A. Alberty. bibliog Am Chem Soc J 75:1925-8 Ap 20 '53

Effect of nearest neighbor substrate interactions on the rate of enzyme and catalytic reactions. T. L. Hill. Am Chem Soc J 74:4710-11 S 20 '52

Enzymatic degradation of the cholesterol side chain in cell-free preparations. C. B. Anfinsen and M. G. Horning. bibliog Am Chem Soc J 75:1511-12 Mr 20 '53

Enzymatic oxidation of *d*- and *l*-β-hydroxybutyrate. A. L. Lehninger and G. D. Greville. bibliog Am Chem Soc J 75:1515-16 Mr 20 '53

Enzymatic phosphorylation of *l*-aspartate. S. Black and N. M. Gray. bibliog Am Chem Soc J 75:2271-2 My 5 '53

Enzymatic synthesis of D-glutamine and related hydroxamic acids. L. Levintow and A. Meister. bibliog Am Chem Soc J 75:3039-40 Je 20 '53

Enzyme models; the kinetics of an artificial carboxylase catalysis. R. E. Schachat, E. I. Becker and A. D. McLaren. bibliog il diag J Phys Chem 56:722-6 Je '52

Enzyme treatment of high-solids starch-pigment mixtures. J. E. Wilber. bibliog diags Tappi 36:sup 156A-61A F '53

Enzymes of the fatty acid cycle; ethylene reductase. W. Seubert and F. Lynen. bibliog Am Chem Soc J 75:2787-8 Je 5 '53

Enzymic synthesis and degradation of starch; the minimum chain-length for Q-enzyme action. S. Peat, W. J. Whelan and J. M. Bailey. Chem Soc J p 1422-7 My '53

Estimation of the relative activities of a series of specific substrates. R. J. Foster and C. Niemann. bibliog Am Chem Soc J 75:3590-1 Jl 20 '53

Evaluation of the constants V_m and K_m in enzyme reactions. B. H. J. Hofstee. Science 116:329-31 S 26 '52; Discussion. G. S. Eadie. 116:688 D 19 '52

Fractionation of an enzyme by foaming. M. London, M. Cohen and P. B. Hudson. bibliog Am Chem Soc J 75:1746-7 Ap 5 '53

How enzymes improved sludge digestion. A. C. Bryan. Pub Works 83:69-70 D '52

5-Hydroxytryptophan decarboxylase; a new route of metabolism of tryptophan. S. Udenfriend, C. T. Clark and E. Titus. Am Chem Soc J 75:501-2 Ja 20 '53

Lipoic acid conjugase. L. J. Reed and B. G. DeBusk. Am Chem Soc J 74:4727-8 S 20 '52

Model reactions of phosphorus-containing enzyme inactivators; interaction of imidazole, pyridine and some of their derivatives with dialkyl halogeno-phosphates. T. Wagner-Jauregg and B. E. Hackley, jr. bibliog Am Chem Soc J 75:2125-30 My 5 '53

New enzymes. E. G. Snyder. bibliog il Food Eng 25:89-90+ Je '53

Polarographic reduction of some natural and artificial hydrogen-carriers in bacterial enzyme systems. R. C. Kaye and H. I. Stonehill. Chem Soc J p3244-7 Ag '52

Possible significance of Fenton's reaction in relation to oxidations effected by enzyme systems. D. J. Mackinnon and W. A. Waters. Chem Soc J p323-8 Ja '53

Reconstruction of the fatty acid oxidizing system of animal tissues. H. Beinert and others. bibliog Am Chem Soc J 75:4111-12 Ag 20 '53

Relationship between Michaelis constants, maximum velocities and the equilibrium constant for an enzyme-catalyzed reaction. R. A. Alberty. bibliog Am Chem Soc J 75:1928-32 Ap 20 '53

Steric inhibition of amide resonance and its possible significance in enzyme action. R. W. Holley. bibliog Science 117:23-5 Ja 9 '53

Structure of glycogen and enzyme patterns in glycogen storage disease; abstract. G. T. Cori. Science 116:519 N 14 '52

Synthesis of sugars from simpler substances; enzymic synthesis of a pentose. L. Hough and J. K. N. Jones. Chem Soc J p4047-52 O '52

Synthesis of sugars from simpler substances; enzymic synthesis of D-idoheptulose. P. A. J. Gorin and J. K. N. Jones. Chem Soc J p 1537-8 My '53

Synthesis of sugars from simpler substances; enzymic synthesis of 6-deoxy-D-fructose and 6-deoxy-L-sorbose. L. Hough and J. K. N. Jones. Chem Soc J p4052-5 O '52

Synthesis of sugars from simpler substances; enzymic synthesis of 5-deoxy-D-xylulose. P. A. J. Gorin, L. Hough and J. K. N. Jones. Chem Soc J p2140-2 Jl '53

Synthesis of sugars from simpler substances; enzymic synthesis of sedoheptulose. L. Hough and J. K. N. Jones. Chem Soc J p342-5 Ja '53

Xylose isomerase. R. M. Hochster and R. W. Watson. bibliog Am Chem Soc J 75:3284-5 Jl 5 '53

See also

Acylase
Amylases
Anticholinesterase
Carboxylases
Cholinesterase
Chymotrypsin
Codecarboxylase
Coenzymes
Deaminases
Dehydrogenases
Desoxyribonuclease
Fermentation
Fumarase
Galactosidase
Glucuronidase
Lysozyme
Oxidases
Pepsin
Peroxidases
Phosphorylase
Protease
Ribonuclease
Sulfatases
Thrombin
Trypsin
Urease
Xanthine oxidase

EOLIAN sand. See Sand dunes

EPIANDROSTERONE

Experiments on the synthesis of substances related to the sterols; completion of the syntheses of androgenic hormones and of the cholesterol group of sterols. H. M. E. Cardwell and others. Chem Soc J p361-84 F '53

Total synthesis of epiandrosterone. W. S. Johnson and others. Am Chem Soc J 75:2275-6 My 5 '53

EPICHLOROHYDRIN

Riding the epoxy comet; Shell chemical corp. only commercial producer. il diag Chem Eng 60:262-3 My '53

Shell Chemical expanding epichlorohydrin production. il Paint Oil & Chem R 116:30 Ap 23 '53

Styrenation of esters of bisphenol-epichlorohydrin condensates. J. W. McNabb and H. F. Payne. bibliog Ind & Eng Chem 44:2394-7 O '52

EPICHOLESTERYL acetate

Chromic acid oxidation of epicholesteryl acetate. E. J. Tarlton, M. Fieser and L. F. Fieser. bibliog Am Chem Soc J 75:4423-4 S 20 '53

EPICYCLIC gearing. See Gearing, Planetary

EPIDEMICS

Insect and rodent control in epidemics and disasters. J. S. Wiley and P. A. Stephens. il Pub Health Rep 68:334-7 Mr '53

See also

Infectious diseases

EPIDERMIS. See Skin

EPIHYDROCORTISONE

Steroidal cyclic ketals; the conversion of 11-keto- to 11α-hydroxysteroids; the preparation of 11-*epi*-hydrocortisone, and Δ^4-androstene-11α-ol-3,17-dione. S. Bernstein, R. Littel and J. H. Williams. bibliog Am Chem Soc J 75:1481-2 Mr 20 '53

EPILEPSY

See also

Anticonvulsants

EPIMERIZATION. See Isomerization

EPINEPHRINE. See Adrenalin

EPINONE

Cyclodehydration of *o*-phenoxyphenylacetic acids to dihydrodibenz(b,f)oxepinones. M. Kulka and R. H. F. Manske. bibliog Am Chem Soc J 75:1322-4 Mr 20 '53

EPITAXY. See Crystallization

EPON

Styrenation of esters of bisphenol-epichlorohydrin condensates. J. W. McNabb and H. F. Payne. bibliog Ind & Eng Chem 44:2394-7 O '52

EPON resins. See Resinous products

EPOXIDES

Further study of the course of ring-opening of unsymmetrical epoxides with nucleophilic reagents. G. D. Zuidema, P. L. Cook and G. Van Zyl. bibliog Am Chem Soc J 75:294-6 Ja 20 '53

Quantitative correlation of relative rates; comparison of hydroxide ion with other nucleophilic reagents toward alkyl halides, esters, epoxides and acyl halides. C. G. Swain and C. B. Scott. bibliog Am Chem Soc J 75:141-7 Ja 5 '53

Reaction of alkali thiocyanates with epoxides. C. C. Price and P. F. Kirk. bibliog Am Chem Soc J 75:2396-400 My 20 '53

Some derivatives of *cis*-1 : 2 : 3 : 6-tetrahydrophthalic anhydride. J. E. Gill and J. Munro. Chem Soc J p4630-2 D '52

EPOXYBUTENE

Concentration effects in the lithium aluminum hydride reduction of 3,4-epoxy-1-butene. R. Fuchs and C. A. VanderWerf. bibliog Am Chem Soc J 74:5917-18 D 5 '52

EPOXY compounds

Chemistry of epoxy compounds; reaction of *cis*-9,10-epoxystearic acid with ammonia and amines. D. Swern and T. W. Findley. Am Chem Soc J 74:6139-41 D 5 '52

Epoxy ether transformations; abstract. C. L. Stevens. Chem & Eng N 31:1295 Mr 30 '53

Epoxy glycitols; synthesis and properties of 3,4-anhydro-2,5-methylene-1,6-ditrityl-D-talitol (=D-altritol). S. B. Baker and G. Kohanyi. bibliog Am Chem Soc J 75:2140-3 My 5 '53

Reaction of bisulfite with epoxy compounds. R. T. E. Schenck and S. Kaizerman. bibliog Am Chem Soc J 75:1636-41 Ap 5 '53

Studies in the steroid group; preparation and reactions of 5α : 8α-epoxy-$\Delta^{9(11)}$-steroids. R. B. Clayton and others. Chem Soc J p2009-14 Jl '53

EQUATION of motion

Classical equations of motion of point particles. P. Havas. bibliog Phys R 91:997-1007 Ag 15 '53

Equation of motion of a dislocation. J. D. Eshelby. bibliog Phys R 90:248-55 Ap 15 '53

Interaction between classical electron and quantized electromagnetic field. I. R. Senitzky. bibliog Phys R 91:1309-11 S 15 '53

Strong conservation laws and equations of motion in covariant field theories. J. N. Goldberg. bibliog Phys R 89:263-72 Ja 1 '53

EQUATION of state

Compressibility of and an equation of state for gaseous neopentane. J. A. Beattie and others. J Chem Phys 20:1619-20 O '52

Compressibility of and an equation of state for gaseous normal pentane. J. A. Beattie, S. W. Levine and D. R. Douslin. bibliog Am Chem Soc J 74:4778-9 O 5 '52

Compressibility of krypton; an equation of state for krypton and the weight of a liter of krypton. J. A. Beattie and others. J Chem Phys 20:1613-15 O '52

Constants in the equation of state of a gas. L. F. Epstein. bibliog J Chem Phys 20:1981-2 D '52

Equation of state calculations by fast computing machines. N. Metropolis and others. diags J Chem Phys 21:1087-92 Je '53

Equation of state computations. J. E. Mayer and G. Careri. J Chem Phys 20:1001-14 Je '52

Equations of state. R. F. Nielsen. Oil & Gas J 51:405 Ja 26; 97 F 2; 135 F 9 '53

Free volume equation of state for hard spheres. L. H. Lund. J Chem Phys 20:1977-8 D '52

Free volume equation of state for hard spheres. W. W. Wood. J Chem Phys 20:1334 Ag '52

Radial distribution functions and the equation of state of fluids composed of molecules interacting according to the Lennard-Jones potential. J. G. Kirkwood and others. bibliog J Chem Phys 20:929-38 Je '52

Radial distribution functions and the equation of state of monatomic fluids. R. W. Zwanzig and others. bibliog J Chem Phys 21:1268-71 Jl '53

Tables of the Lennard-Jones and Devonshire equation of state at high temperatures and densities. W. Fickett and W. W. Wood. J Chem Phys 20:1624-6 O '52

See also

Van Der Waals equation

Virial coefficients

EQUATIONS

Analog computer for the roots of algebraic equations. L. Löfgren. diags Inst Radio Eng Proc 41:907-13 Jl '53

Baule-Mitscherlich limiting factor equation. J. Verduin. Science 117:392 Ap 10 '53

Equation specifying equilibrium populations. C. C. Li. bibliog Science 117:378-9 Ap 10 '53

Finding an empirical equation algebraically. R. F. Nielsen. Oil & Gas J 51:183 O 20 '52

Finding an empirical equation graphically. R. F. Nielsen. Oil & Gas J 51:135 O 6 '52

See also

Differential equations

Integral equations

EQUATIONS, Integral. See Integral equations

EQUATIONS, Simultaneous

Analog computers for coordinate transformation. N. L. Fritz. il diags R Sci Instr 23:667-71 D '52

Determinants; solution of simultaneous equations. E. H. Sibley. diags Elec R (Lond) 152:699-704 Mr 27 '53

Electrical computer for the solution of linear simultaneous equations. A. Many and others. diag R Sci Instr 24:112-16 F '53

EQUILIBRIUM, Chemical. See Chemical equilibrium

EQUIPMENT industries

Heyday is dawning for innovations. Bsns W p52 My 30 '53

Producers' equipment, growth, replacement, and stock. R. Nassimbene and D. G. Wooden. Survey of Cur Bsns 33:12-16+ Je '53

See also

- Automobile accessories industry
- Bloom engineering company
- Clark equipment company
- Construction equipment
- Electric apparatus industry
- Industrial market
- Machine tool industry
- Machinery industry
- Office equipment industry
- Petroleum equipment industries
- Plumbing supplies industry
- Printing supplies industry
- United engineering and foundry company

Advertising

See also

- Office equipment industry—Advertising

Directories

Buyer's guide; international directory of construction equipment. Roads & Eng Constr 91:384+ Je '53

Canadian association of equipment distributors; list of members. Roads & Eng Constr 91:226 Je '53

Equipment distributors, Canada; listing the principals whom they represent. Roads & Eng Constr 91:140+ Je '53

Equipment suppliers for the Ford engine castings foundry. Foundry 81:188-9 Mr '53

Manufacturers; their products and their distributors in Canada. Roads & Eng Constr 91:320+ Je '53

National safety congress and exposition, 40th, Chicago, Oct. 20-24; guide, floor plans, directory of exhibitors. Nat Safety N 66:1-10 O '52

National safety congress and exposition, 41st, Chicago, Oct. 19-23; guide, floor plans, directory of exhibitors. Nat Safety N 68: 1-10 O '53

1953 American Machinist production preview. il Am Mach 97:145-280 Ja 19 '53

1953 buyers' guide; bus parts, materials, accessories, shop equipment and tools. Bus Transportation 32:65+ Je '53

Rock Products directory of manufacturers' equipment, 1953. Rock Prod 56:279-314 Ja '53

Statistics

Capital goods demand high for early 1953; expenditures on new plant and equipment by U.S. business, 1951-53; with table. Survey of Cur Bsns 32:3-4 D '52

Capital goods demand higher in third quarter. Survey of Cur Bsns 33:2-3 Je '53

Machinery and equipment; tabulations. Steel 132:180-3 Ja 5 '53

United States

Tripling capital goods exports. Bsns W p 156-7 Jl 25 '53

EQUIPMENT trust certificates. See Railroads—Equipment trust certificates

EQUITABLE gas company

Preferred stock offered. Comm & Fin Chr 177:724 F 16 '53

EQUITABLE society

Dalager, Dow, Klem made senior vice-presidents of Equitable society; others receive new titles. Nat Underw (Life ed) 57:1+ Mr 27 '53

EQUITY and law life assurance society

Statement by the chairman. R. Hopkins. Economist 167:188 Ap 18 '53

ERBIUM

Paramagnetic scattering of neutrons by trivalent ions of Nd and Er. W. C. Koehler and E. O. Wollan. Rs Mod Phys 25:128-9 Ja '53

Some magnetic and electrical properties of gadolinium, dysprosium, and erbium metals. S. Legvold and others. Rs Mod Phys 25: 129-30 Ja '53

Isotopes

Isotope shifts in erbium. L. Wilets and L. C. Bradley, 3d. bibliog diags Phys R 87:1018-22 S 15 '52

EREMOPHILONE

Structure of eremophilone. T. A. Geissman. bibliog Am Chem Soc J 75:4008-11 Ag 20 '53

ERGOSTADIENEOL

Rearrangement of 9α,11α-oxido-$\Delta^{7,22}$-ergostadiene-3β-ol acetate with magnesium bromide. W. E. Bachmann, J. P. Horwitz and R. J. Warzynski. bibliog Am Chem Soc J 75:3268-9 Jl 5 '53

ERGOSTANYL acetate

Steroids; 22 : 23-dibromo-9ξ : 11α-dihydroxyergostan-3β-yl acetate and related compounds. R. Budziarek and F. S. Spring. Chem Soc J p956-9 Mr '53

ERGOSTENYL acetate

Steroids; reactions of 22 : 23-dibromo-7ξ : 11α-dihydroxyergost-8-en-3β-yl acetate. R. Budziarek, J. C. Hamlet and F. S. Spring. Chem Soc J p778-82 Mr '53

ERGOSTEROL

Origin of some of the carbon atoms of the side chain of C^{14}-ergosterol. D. J. Hanahan and S. J. Wakil. bibliog Am Chem Soc J 75:273-5 Ja 20 '53

Permanganate oxidation of ergosterol. M. Fieser and others. bibliog Am Chem Soc J 75:4066-71 Ag 20 '53

i-Steroid hydrocarbon from ergosterol. M. Fieser, W. E. Rosen and L. F. Fieser. bibliog Am Chem Soc J 74:5397-403 N 5 '52

Steroids; 22 : 23-dibromoergosta-7 : 9(11)-dien-3β-yl acetate (ergosteryl-D acetate 22 : 23-dibromide). R. C. Anderson, R. Stevenson and F. S. Spring. Chem Soc J p2901-6 Jl '52

Steroids; oxidation of ergosteryl-D acetate 22 : 23-dibromide. R. Budziarek, R. Stevenson and F. S. Spring. Chem Soc J p4874-8 D '52

Steroids; 11-oxygenated steroids from ergosteryl-D acetate. R. Budziarek and others. Chem Soc J p2892-900 Jl '52

Steroids; the reduction of ergosteryl-D acetate 22 : 23-dibromide. R. Budziarek, F. Johnson and F. S. Spring. Chem Soc J p534-9 F '53

Studies in the steroid group; reduction of ergosterol epidioxide. R. B. Clayton, H. B. Henbest and E. R. H. Jones. Chem Soc J p2015-21 Jl '53

ERGOSTERYL acetate

11-Oxygenated steroids from ergosteryl-*D* acetate. R. Budziarek and F. S. Spring. Chem & Ind p 1102-3 N 8 '52

ERIE, Lake

Hydrodynamic effects of gales. G. H. Keulegan. bibliog map diags J Res Nat Bur Stand 50:99-109 F '53

ERIE railroad

What it takes to be a railroad traffic vice-president. Bsns W p 128-30 F 7 '53

ERIE resistor corporation

Preferred stock offered. Comm & Fin Chr 177:2783 Je 29 '53

ERIOCHROME black T

Colorimetric determination of magnesium with Eriochrome black T. A. E. Harvey, jr., J. M. Komarmy and G. M. Wyatt. bibliog Anal Chem 25:498-500 Mr '53

ERITREA

Ethiopian Council to include Eritreans. For Comm W 48:4 D 8 '52

Two flags for Eritrea. Economist 165:828 D 20 '52

EROSION

Arroyos of the Southwest. S. Judson. il diags Sci Am 187:71-4+ D '52; Discussion. J. L. Gardner. 188:4 F '53

Erosion control in reservoir areas; task group report. Am Water Works Assn J 45:790-6 bibliog(56 titles, p794-6) Ag '53; Abstract. Water & Sewage Works 100:348-9 S '53

Ground-cover plants for erosion control. Roads & Sts 95:118-20 N '52

Hypsometric (area-altitude) analysis of erosional topography. A. N. Strahler. bibliog maps diags Geol Soc Bul 63:1117-41, pl 1 N '52

EROSION—*Continued*

Lake Michigan erosion studies. J. R. Hardin and W. H. Booth, jr. map plan diags Am Soc C E Proc 78 [no 115]:1-12 F '52; Discussion. 78 [no D-115]:1-10 N '52

Soil conditioner to assist in controlling erosion; Bondite. Roads & Eng Constr 91:70 Jl '53

Turbulent diffusion and erosion. R. W. Davies. diag J Ap Phys 23:941-8 S '52

See also

Canyons, Submarine

Bibliography

Bibliography on erosion control and watershed management. Am Water Works Assn J 45:795-6 Ag '53

EROSION of metals

Corrosion and erosion in the synthetic-fuels demonstration plant. G. D. Gardner and J. T. Donovan. il diag A S M E Trans 75: 525-33 My '53

How to combat erosion in fluid cat crackers. J. S. Clarke. il diags Oil & Gas J 51:262-4+ Mr 23 '53

ERUCIC acid

Anodic syntheses; unsaturated and hydroxy-acids; a direct stereochemical connection of oleic and elaidic with erucic and brassidic acids. D. G. Bounds, R. P. Linstead and B. C. L. Weedon. Chem Soc J p2393-400 Ag '53

ERYTHRITAN

Threitan and erythritan and their reaction with periodate. H. Klosterman and F. Smith. bibliog Am Chem Soc J 74:5336-9 N 5 '52

ERYTHROGENIC acid

Synthesis of erythrogenic (isanic) acid. H. K. Black and B. C. L. Weedon. bibliog Chem & Ind p40-1 Ja 10 '53

ERYTHROHEXANETETROL

Synthesis of carbohydrates by use of acetylenic precursors; erythro-hexane-1 : 3 : 4 : 6-tetrol. R. A. Raphael and C. M. Roxburgh. Chem Soc J p3875-6 O '52

ERYTHROIDINE

Characterization of α-erythroidine. V. Boekelheide and M. F. Grundon. bibliog Am Chem Soc J 75:2563-6 Je 5 '53

Hofmann degradation studies on β-erythroidine; the structure of des-N-methyldihydro-β-erythroidinol. J. Weinstock and V. Boekelheide. bibliog Am Chem Soc J 75:2546-50 Je 5 '53

Structure of β-erythroidine and its derivatives. V. Boekelheide and others. bibliog Am Chem Soc J 75:2550-8 Je 5 '53

Study of the hydrogenation of desmethoxy-β-erythroidine. V. Boekelheide, A. E. Anderson, jr. and G. L. Sauvage. bibliog Am Chem Soc J 75:2558-63 Je 5 '53

ESCALATOR wage clauses. See Trade agreements—Wage clauses

ESCALATORS

Fire tests of escalator shutters. Safety Maint & Prod 104:59-60 N '52

Get moving stairways off to a good start. F. A. Annett. il diags Power 97:120-2 Ag '53

Get to know moving stairs before they catch up with you. F. A. Annett. il Power 97: 122-5 Ap '53

Install high-speed public escalators. il Eng N 149:52 D 11 '52

ESCHERICHIA coli

Adaptation of some bact. coli strains to utilise sucrose. N. M. Mims and C. Hinshelwood. Chem Soc J p663-6 F '53

Agent from *E. coli* causing hemorrhage and regression of an experimental mouse tumor; some nitrogenous components of the phospholipide moiety. M. Ikawa and others. bibliog diag Am Chem Soc J 75:3439-42 Jl 20 '53

Agent from *E. coli* causing hemorrhage and regression of an experimental mouse tumor; the component fatty acids of the phospholipide moiety. M. Ikawa and others. bibliog Am Chem Soc J 75:1035-8 Mr 5 '53

Agent from *E. coli* causing hemorrhage and regression of an experimental mouse tumor; the component monosaccharides. M. Ikawa and others. bibliog Am Chem Soc J 74: 5219-20 O 20 '52

Competitive action of isonicotinic acid hydrazide and pyridoxal in the amino acid decarboxylation of escherichia coli. M. Yoneda and N. Asano. bibliog Science 117: 277-9 Mr 13 '53

Induced and other variations in bacterial cultures; the effect of ultra-violet irradiation on bact. coli with special reference to nutritional mutants. A. C. R. Dean and C. Hinshelwood. Chem Soc J p2817-31 Jl '52

Isolation of 4-amino-5-imidazolecarboxamide riboside from the culture medium of sulfonamide-inhibited escherichia coli. G. R. Greenberg. bibliog Am Chem Soc J 74:6307-8 D 20 '52

Lauryl tryptose broth for coli determinations in chlorinated sewage. C. T. Mudgett. Sewage & Ind Wastes 25:557-9 My '53

Purification and kinetics of β-D-galactosidase from escherichia coli, strain K-12. S. A. Kuby and H. A. Lardy. bibliog Am Chem Soc J 75:890-6 F 20 '53

Water quality yardsticks. W. L. Mallmann. bibliog Am Water Works Assn J 45:917-25; Discussion. 925-6 S '53

ESPARTO

Hemicelluloses of esparto grass (stipa tenacissima, L.); the arabinose-rich fraction. G. O. Aspinall and others. Chem Soc J p 1631-4 My '53

ESSENTIAL oils

Australian oils examined. Soap & San Chem 28:97+ D '52

Chemistry of western Australian plants; the essential oil of eucalyptus eudesmioides bark. A. Blumann, M. Michael and D. E. White. Chem Soc J p788-9 Mr '53

Egypt's essential oil industry shows gains. For Comm W 48:19 D 8 '52

Essential oils; abstract and discussion. G. E. Smith. Chem & Ind p 1242-3 D 20 '52

Essential oils, other aromatics. Published in weekly numbers of Oil, paint and drug reporter

European and African essential oil outlook. E. Guenther. Soap & San Chem 29:40-1 Ja '53

Volatile oil of metrosideros scandens. A. J. Birch. Chem Soc J p715 F '53

See also

Flavoring materials

Terpenes

Analysis

Review of analytical chemistry; essential oils and related products, 1951 and 1952. E. Guenther and E. E. Langenau. Anal Chem 25:12-17 bibliog(153 ref, p 15-17) Ja '53

Prices

Essential oils, other aromatics; 1952 market trends. Oil Paint & Drug Rep 163:48-51 sec 2 Ja 26 '53

ESSO standard oil company

Esso moves to help its distributors operate facilities more efficiently. Nat Pet N 45:23 Ap 29 '53

ESTATE planning

Business-estate planning; plans given impetus by tax laws. E. J. Mintz. Trusts & Estates 92:12+ Ja '53

Conducting an estate planning forum. R. O. Ellis. il Burroughs Clearing House 37:32-3+ Jl '53

Contingent insurance trust in estate planning. E. W. Nippert. Trusts & Estates 92: 535 Jl '53

Converting an agency to estate planning basis is well worth effort. S. L. Zeigen. Nat Underw (Life ed) 57:2 My 15 '53

Coordinating employee benefits with estate planning. F. J. Campbell, jr. Trusts & Estates 92:403-5 Je '53

Estate planning for investors. A. C. Strasburger. Mag of Wall St 92:494-5+ Jl 25 '53

Family dollar; factors in estate planning. E. S. MacNeill. Banking 45:78-9 F; 68-9 Mr; 52-3 Ap; 65-6 My; 65-6+ Je; 46:59-60 Jl; 64-5 Ag '53

Gordon's book on estates and heirs; review of You, your heirs and your estate, by G. B. Gordon. East Underw 54:3 Mr 13 '53

Huber produces slide-film on estate planning. S. Huber. Nat Underw (Life ed) 57:6 Mr 13 '53

ESTATE planning—*Continued*

Sol Huber associates estate planning film. East Underw 54:12 Ja 30 '53

Use of trusts in small estates. J. C. Stephens, jr. Trusts & Estates 92:242-4 Ap '53

What is estate planning? E. S. MacNeill. Banking 45:64-5 Ja '53

Why joint ownership? estate tax saving may incur income tax penalty? R. Wallace. Trusts & Estates 92:88-90 F '53

See also

Insurance, Life—
Estate protection

ESTATE tax. See Inheritance tax

ESTATES (law)

Factors in estate planning; the law. E. S. MacNeill. Banking 45:65-6 Je '53

1953 legislation on trusts and estates. Trusts & Estates 92:290, 371-2, 471, 541-3, 604-5 Ap-Ag '53

What common law residents should know about estate administration in Quebec. K. Heming. Trusts & Estates 92:450-2 Je '53

See also

Joint tenancy
Perpetuities
Probate law

ESTATES, Decedents'

Income of decedents; report of ABA committee on state and federal taxation. bibliog Trusts & Estates 91:745-50 O '52

Merrier widows. Economist 166:5-6 Ja 3 '53

See also

Wills

ESTERIFICATION

Effect of esterification of the carboxyl groups of collagen upon its combination with chromium compounds. K. H. Gustavson. bibliog Am Chem Soc J 74:4608-11 S 20 '52

Effect of esterification on anticholinesterases as determined by three different enzymes. H. Tauber and E. L. Petit. bibliog Am Chem Soc J 75:1257 Mr 5 '53

Esterification catalysis by metal halides. M. E. Hill. Am Chem Soc J 75:3020-1 Je 20 '53

ESTERS

Action of lithium aluminum hydride on nitrate and nitrite esters. L. M. Soffer, E. W. Parrotta and J. Di Domenico. bibliog Am Chem Soc J 74:5301-3 N 5 '52

Action of sulfuric acid and oleum on carbamic esters. T. I. Bieber. bibliog Am Chem Soc J 75:1409-12 Mr 20 '53

Action of sulfuric acid on isocyanic esters. T. I. Bieber. bibliog Am Chem Soc J 75:1405-8 Mr 20 '53

Acyloin condensation of aralkyl esters. E. Van Heyningen. bibliog Am Chem Soc J 74:4861-4 O 5 '52

Aldol condensation of esters with ketones or aldehydes to form β-hydroxy esters by lithium amide; comparison with the Reformatsky reaction. C. R. Hauser and W. H. Puterbaugh. bibliog Am Chem Soc J 75:1068-72 Mr 5 '53

Aldol type condensation of ketones and esters in the presence of diethylaminomagnesium bromide and related compounds. K. Sisido, H. Nozaki and O. Kurihara. bibliog Am Chem Soc J 74:6254-6 D 20 '52

Alkyl esters of isodehydroacetic acid. R. H. Wiley, N. R. Smith and J. A. Bauer. Am Chem Soc J 75:244-5 Ja 5 '53

Alkyl-oxygen fission in carboxylic esters; reactions of secondary alcohols containing the 2 : 4 : 6-trimethoxyphenyl radical. J. Kenyon and R. F. Mason. Chem Soc J p4964-9 D '52

Alkylation of 2-naphthol by esters of aliphatic acids. S. Patai and M. Bentov. Am Chem Soc J 74:6118 D 5 '52

Analgesics; esters of 4-dialkylamino-1,2-diphenyl-2-butanols. A. Pohland and H. R. Sullivan. bibliog Am Chem Soc J 75:4458-61 S 20 '53

Anhydrous chlorination of thioesters and related compounds. I. B. Douglass and C. E. Osborne. Am Chem Soc J 75:4582-3 S 20 '53

Antispasmodics; basic esters and amides of some heterocyclic N-carboxylic acids. A. W. Weston, R. W. DeNet and R. J. Michaels, jr. Am Chem Soc J 75:4006-8 Ag 20 '53

β-Arylserine ethyl esters. W. H. Hartung, T. T. Dittrich and Y. Chang. bibliog Am Chem Soc J 75:238-9 Ja 5 '53

Associating effect of the hydrogen atom; the S-H-N bond; esters of thion- and dithiocarbamic acids. A. A. Burrows and L. Hunter. Chem Soc J p4118-22 N '52

Attempted Fries reaction of thiolesters; the formation of trithioörthoesters. D. S. Tarbell and A. H. Herz. bibliog Am Chem Soc J 75:1668-72 Ap 5 '53

Autoxidation of the saturated aliphatic diesters. M. W. Rigg and H. Gisser. bibliog Am Chem Soc J 75:1415-20 Mr 20 '53

5-Benziloyloxymethylfurfuryltrimethylammonium chloride. A. S. Bailey, D. H. Bates and H. R. Ing. Chem Soc J p4534 N '52

Benzyl esters of glutamic acid. H. Sachs and E. Brand. bibliog Am Chem Soc J 75:4610-11 S 20 '53

Bromomagnesium salts of dialkyl phosphites as intermediates in the synthesis of substituted hydroxymethyl phosphonic acid esters. O. Gawron and others. bibliog Am Chem Soc J 75:3591-2 Jl 20 '53

Carbazic acid esters as carbonyl reagents. N. Rabjohn and H. D. Barnstorff. Am Chem Soc J 75:2259-61 My 5 '53

Citric acid ester plasticizers. F. J. Prescott and G. O. Cragwell. bibliog Mod Plastics 30:134+ O '52

Condensation of oxalic esters with esters of β-alanine and N-substituted β-aminopropionic acids; synthesis of some derivatives of 2,3-dioxopyrrolidine and 2-oxo-3-methoxy-3-pyrroline. P. L. Southwick and R. T. Crouch. bibliog Am Chem Soc J 75:3413-17 Jl 20 '53

Countercurrent distribution of methyl esters of higher fat acids. J. A. Cannon, K. T. Zilch and H. J. Dutton. bibliog Anal Chem 24:1530-2 O '52

Cyanoethylation of α-amino acids; N-2-carbalkoxyethyl derivatives. L. L. McKinney and others. Am Chem Soc J 74:5183-5 O 20 '52

Derivatives of piperazine; addition of 1-arylpiperazines to α,β-unsaturated nitriles and esters. C. B. Pollard, E. G. Rietz and R. Robbins. bibliog Am Chem Soc J 75:2989-90 Je 20 '53

Direct method for the preparation of some α-chloro-carboxylic esters, and notes on other α-halogeno-carboxylic esters. A. D. Campbell and D. R. D. Shaw. Chem Soc J p5042-3 D '52

Effect of structure on reactivity; the energies of activation and the entropies of activation for the ammonolysis of esters. F. H. Wetzel, J. G. Miller and A. R. Day. bibliog Am Chem Soc J 75:1150-3 Mr 5 '53

Electrolytic reduction of simple nitrate esters. F. Kaufman, H. J. Cook and S. M. Davis. bibliog Am Chem Soc J 74:4997-5001 O 20 '52

Elimination reactions of esters. R. P. Linstead, L. N. Owen and R. F. Webb. Chem Soc J p 1211-31 Ap '53

Ester and lactone linkages in acidic polysaccharides. M. A. G. Kaye and P. W. Kent. Chem Soc J p79-83 Ja '53

Esters containing phosphorus; ethylphosphonic dichloride containing ^{32}P. B. C. Saunders and T. S. Worthy. diags Chem Soc J p2115-17 Jl '53

Esters of pyrazinoic and pyrazine-2,3-dicarboxylic acids. I. A. Solomons and P. E. Spoerri. bibliog Am Chem Soc J 75:679-81 F 5 '53

Esters of γ-(tetrahydro-2-furyl)-alkanols. C. R. Russell and others. bibliog Am Chem Soc J 75:2161-2 My 5 '53

Esters of 1,4,7-trihydroxyalkanes. C. R. Russell and others. Am Chem Soc J 75:726-7 F 5 '53

Experiments on the synthesis of carbonyl compounds; a new general synthesis of ketones and β-keto-esters. R. E. Bowman and W. D. Fordham. Chem Soc J p3945-9 O '52

Fluorinated esters; diesters of carboxylic acids with fluorine-containing alcohols and glycols. R. Filler and others. bibliog Am Chem Soc J 75:2693-5 Je 5 '53

Fluorinated esters; diesters of perfluorocarboxylic acids with alcohols and glycols. R. Filler and others. bibliog Am Chem Soc J 75:966-8 F 20 '53

ESTERS—*Continued*

Fluorinated esters; esters of perfluoro monocarboxylic and dicarboxylic acids with 1,1-dihydroperfluoroalcohols and α,α,ω,ω-tetrahydroperfluoroglycols. M. Hauptschein and others. bibliog Am Chem Soc J 75:87-9 Ja 5 '53

Fluorinated esters; surface tension and parachor studies. R. Filler. bibliog Am Chem Soc J 75:3016-17 Je 20 '53

Fluorinated esters; the effect of neighboring fluorine atoms on the ester carbonyl frequency. G. Rappaport and others. bibliog Am Chem Soc J 75:2695-7 Je 5 '53

Hydrogen-bonding of esters and lactones; site of bonding and effect of ring size. S. Searles, M. Tamres and G. M. Barrow. bibliog Am Chem Soc J 75:71-3 Ja 5 '53

Hydroxynaphthoate series; a synthesis of 4-hydroxynaphthoic acid and its simple esters. G. W. K. Cavill and J. R. Tetaz. Chem Soc J p3634-6 S '52

Improved method of preparing testosterone, dihydrotestosterone and some of their esters. A. Ercoli and P. de Ruggieri. bibliog Am Chem Soc J 75:650-3 F 5 '53

Infrared spectrum and structure of glycolate nitrate esters. W. D. Kumler. Am Chem Soc J 75:4346-7 S 5 '53

Interaction of phosphorus trichloride with alcohols and with hydroxy-esters. W. Gerrard and others. Chem Soc J p 1920-6 Je '53

Local anesthetics; aminoesters of chlorobenzoic and chlorocinnamic acids. E. R. Andrews, M. G. Van Campen and E. L. Schumann. bibliog Am Chem Soc J 75:4003-6 Ag 20 '53

Metathetical reactions of silver salts in solution; the synthesis of nitrate esters. A. F. Ferris and others. Am Chem Soc J 75:4078 Ag 20 '53

Methoxyindan and methoxytetralin esters. E. C. Horning and G. N. Walker. Am Chem Soc J 75:4592-3 S 20 '53

Mycomycin; stereoisomeric 3,5-diene fatty acid esters. W. D. Celmer and I. A. Solomons. bibliog Am Chem Soc J 75:3430-5 Jl 20 '53

Nucleotides; the action of ribonuclease on simple esters of the monoribonucleotides. D. M. Brown and A. R. Todd. Chem Soc J p2040-9 Jl '53

Organic peroxides; esters of the monopercarbonic acids. A. G. Davies and K. J. Hunter. Chem Soc J p 1808-11 Je '53

Ortho esters, imidic esters and amidines; the acid-catalyzed hydrolysis of N,N′-diphenylformamidine in aqueous dioxane solutions. R. H. DeWolfe and R. M. Roberts. bibliog Am Chem Soc J 75:2942-7 Je 20 '53

Oxidation of monoethenoid fatty acids and esters; catalytic oxidation of elaidic acid, methyl elaidate, and *n*-propyl elaidate; the oxidation products. J. H. Skellon and M. N. Thruston. Chem Soc J p 138-42 Ja '53

Oxidation of monoethenoid fatty acids and esters; the preparation and catalytic oxidation of highly purified brassidic acid by gaseous oxygen. J. H. Skellon and C. G. Taylor. Chem Soc J p 1433-5 My '53

Photochemical reactions of diazomethane with polyhalomethanes and α-haloesters. W. H. Urry and J. R. Eiszner. bibliog Am Chem Soc J 74:5822-6 D 5 '52

Polarographic behavior of organic compounds; carbon-halogen bond fission in system acid-anion-ester; estimation of acid half-wave potentials. I. Rosenthal, C. Tang and P. J. Elving. bibliog Am Chem Soc J 74:6112-13 D 5 '52

Polarographic behavior of organic compounds; chloroacetic acids and their ethyl esters; *p*H-independence of carbon-halogen bond fission; wave splitting due to buffer interaction. P. J. Elving and C. Tang. bibliog Am Chem Soc J 74:6109-12 D 5 '52

Polyene acids; half methyl esters and amides of the muconic acids. J. A. Elvidge, R. P. Linstead and P. Sims. Chem Soc J p 1793-9 Je '53

Polymerization of esters of cinnamic acid. C. S. Marvel and G. H. McCain. bibliog Am Chem Soc J 75:3272-3 Jl 5 '53

Preparation and reactions of fluorine-containing acetoacetic esters. E. T. McBee and others. bibliog Am Chem Soc J 75:3152-3 Jl 5 '53

Preparation and reactions of *o*-hydroxycinnamic acids and esters. R. Adams and T. E. Bockstahler. bibliog Am Chem Soc J 74:5346-8 N 5 '52

Preparation of δ-ketoacids and δ-ketonitriles from monocyanoethylated β-ketoesters. C. W. Yoho and R. Levine. bibliog Am Chem Soc J 74:5597-9 N 20 '52

Preparation of ketones and their enol esters by the base-catalyzed condensation of acids and acid derivatives with anhydrides. G. G. Smith. bibliog Am Chem Soc J 75:1134-7 Mr 5 '53

Preparation of sodium borohydride by the high temperature reaction of sodium hydride with borate esters. H. I. Schlesinger, H. C. Brown and A. E. Finholt. bibliog Am Chem Soc J 75:205-9 Ja 5 '53

Properties of thiolesters; kinetics of hydrolysis in dilute aqueous media. L. H. Noda, S. A. Kuby and H. A. Lardy. bibliog Am Chem Soc J 75:913-17 F 20 '53

Quantitative correlation of relative rates; comparison of hydroxide ion with other nucleophilic reagents toward alkyl halides, esters, epoxides and acyl halides. C. G. Swain and C. B. Scott. bibliog Am Chem Soc J 75:141-7 Ja 5 '53

Reaction rates by distillation; the effect of changes in structure on the basicity of selected ketones, esters, ethers and alcohols. E. F. Pratt and K. Matsuda. bibliog Am Chem Soc J 75:3739-44 Ag 5 '53

Reactions of orthoesters with active methylene compounds. R. G. Jones. bibliog Am Chem Soc J 74:4889-91 O 5 '52

Reactions of orthoesters with ureas; a new synthesis of pyrimidines. C. W. Whitehead. bibliog Am Chem Soc J 75:671-5 F 5 '53

Reactions of phenyl esters of phosphorous acid with iodine. J. P. Forsman and D. Lipkin. bibliog Am Chem Soc J 75:3145-8 Jl 5 '53

Reactions of vanillin and its derived compounds; ethers of protocatechuic acid and their ethyl esters. I. A. Pearl and D. L. Beyer. bibliog Am Chem Soc J 75:2630-3 Je 5 '53

Reversed phase paper chromatography of parathion and related phosphate esters. R. L. Metcalf and R. B. March. bibliog Science 117:527-8 My 15 '53

Sodium dispersions in acetoacetic ester condensation. O. D. Frampton and J. F. Nobis. bibliog diags Ind & Eng Chem 45:404-10 F '53

Some dicarboxylic acids and esters containing the phosphine oxide group. P. W. Morgan and B. C. Herr. bibliog Am Chem Soc J 74:4526-9 S 20 '52

Some esters of unsaturated acids. V. Satta, M. L. Fein and E. M. Filachione. bibliog Am Chem Soc J 75:4101 Ag 20 '53

Some ethers of pentaerythritol and their nitrate esters. R. Evans and J. A. Gallaghan. Am Chem Soc J 75:1248-9 Mr 5 '53

Some new pyrethrin-type esters. Y. Chen and W. F. Barthel. bibliog Am Chem Soc J 75:4287-9 S 5 '53

Specific effects in acid catalysis by ion exchange resins; hydrolysis of esters in 70 per cent aqueous acetone. S. A. Bernhard and L. P. Hammett. bibliog Am Chem Soc J 75:1798-800 Ap 20 '53

Structure-property relationships in polyethylene terephthalate co-polyesters. O. B. Edgar and E. Ellery. pl Chem Soc J p2633-43 Jl '52

Studies in the polyene series; the synthesis of two pentaene esters related to vitamin A. K. R. Bharucha and B. C. L. Weedon. Chem Soc J p 1578-84 My '53

Studies on model compounds for coenzyme A; a kinetic study of aminolysis and hydrolysis of ethyl thioacetate and β-acetaminoethyl thioacetate in aqueous solution. P. J. Hawkins and D. S. Tarbell. bibliog Am Chem Soc J 75:2982-5 Je 20 '53

Styrenation of esters of bisphenol-epichlorohydrin condensates. J. W. McNabb and H. F. Payne. bibliog Ind & Eng Chem 44:2394-7 O '52

ESTERS—*Continued*

3-Substituted thiophenes; alkamine esters of phenyl-3-thienylglycolic acid. E. Campaigne and R. C. Bourgeois. bibliog Am Chem Soc J 75:2702-4 Je 5 '53

Sulfonic acid esters of 2-nitro-2-methyl-1-propanol. R. N. Boyd and R. H. Hansen. bibliog Am Chem Soc J 75:3737-9 Ag 5 '53

Synthesis of dimethyl 6,7,8,9-tetrahydro-5H-cycloheptabenzene - 5-acetate-6-propionate. A. G. Anderson, jr. and H. F. Greef. bibliog Am Chem Soc J 74:5203-4 O 20 '52

Synthesis of nitric esters by the addition of nitric acid to the ethylene oxide ring. P. L. Nichols, jr., A. B. Magnusson and J. D. Ingham. bibliog Am Chem Soc J 75:4255-8 S 5 '53

Synthesis of N-phosphoryl amino acid esters. S. Li. bibliog Am Chem Soc J 74:5959-61 D 5 '52

Synthesis of 2,3,4-trimethoxybenzosuberene-and 2,3,4-trimethoxybenzosuberancarboxylic acids and esters. J. Koo and J. L. Hartwell. bibliog Am Chem Soc J 75:1625-8 Ap 5 '53

Synthesis of 4,5,6-trimethoxyindene- and 4,5,6-trimethoxyindanecarboxylic acids and esters. J. Koo. bibliog Am Chem Soc J 75:1889-91 Ap 20 '53

Synthetic hypotensive esters from germine. F. L. Weisenborn and J. W. Bolger. bibliog Chem & Ind p 197-8 F 28 '53

Thermochemistry of organo-arsenic compounds; esters of arsenious acid. T. Charnley, C. T. Mortimer and H. A. Skinner. Chem Soc J p 1181-4 Ap '53

Thermochemistry of organo-boron compounds; esters of boric acid. T. Charnley, H. A. Skinner and N. B. Smith. Chem Soc J p2288-91 Je '52

Ultraviolet absorption spectra of fully aromatic esters and thiolesters. G. Cilento. bibliog Am Chem Soc J 75:3748-50 Ag 5 '53

Vapor pressure of acetylated amino acid ethyl esters. E. F. Mellon, S. J. Viola and S. R. Hoover. J Phys Chem 57:607-8 Je '53

See also

Cellulose esters

ESTIMATES

Analysis of cost estimating principles and practices. L. E. Doyle. Tool Eng 28:37-40 My; 43-6 Je; 29:55-8 Jl; 61-4 Ag '52; Same cond. Product Eng Hdbk p A2-9 '53

Direct data cuts estimating time 66 per cent. P. Anjanos. il diags Am Mach 97:172-7 Mr 16 '53

Methods for estimating construction costs; new cost data; field-erected storage tanks. F. L. Plummer. il Tappi 36:sup 14A+ Jl '53

Predicting casting costs with accurate design yardsticks. P. Tripoli. il diags Machine Design 25:139-54 Je '53

Procedure and forms for estimating cooling in residences. il plan Sheet Metal Worker 44:70-1+ Jl '53

Simplify your cost estimates. L. Lynn and J. R. McKlveen. bibliog Chem Eng 60:193-5 Ap '53

See also

Air conditioning—
  Estimates

Building—Estimates

ESTRADIOL

Biosynthesis of estrone and β-estradiol in the perfused ovary. N. T. Werthessen and others. bibliog Science 117:380-1 Ap 10 '53

Chromatographic separation of estrone, estradiol, and estriol. J. Bitman and J. F. Sykes. bibliog Science 117:356-8 Ap 3 '53

ESTRATRIENOLONE

16-Substituted steroids; 1,3,5(10)-estratrien-3-ol-16-one. M. N. Huffman and M. H. Lott. bibliog Am Chem Soc J 75:43 7-9 S 5 '53

ESTRIOL

Chromatographic separation of estrone, estradiol, and estriol J. Bitman and J. F. Sykes. bibliog Science 117:356-8 Ap 3 '53

ESTROGENS

Aromatic cyclodehydration; 3-hydroxy-9-(*p*-hydroxyphenyl)-10-ethylphenanthrene, an estrogen analog. C. K. Bradsher and W. J. Jackson, jr. Am Chem Soc J 74:4880-3 O 5 '52

Chemistry of subterranean clover; synthesis and reduction of *iso*flavones related to genistein and formononetin. R. B. Bradbury and D. E. White. Chem Soc J p871-6 Mr '53

Effect of estrogen on the isometric tension of rabbit uterine strips. A. I. Csapo and G. W. Corner. bibliog Science 117:162-4 F 13 '53

Photoöxidation of crystalline estrogens in the presence of flavins. J. F. Nyc and others. bibliog Am Chem Soc J 75:907-10 F 20 '53

Synthetic estrogens; derivatives of 1-phenylphenanthrene. R. E. Juday. bibliog Am Chem Soc J 75:3008-13 Je 20 '53

Synthetic estrogens; derivatives of 2-phenylphenanthrene and 1-ethyl-2-benzylnaphthalene. R. E. Juday. bibliog Am Chem Soc J 75:4071-4 Ag 20 '53

Synthetic œstrogens; the synthesis of 2 : 3-di-*p*-hydroxyphenyl-2 : 3-dimethylbutane, an isomer of hexœstrol. R. L. Huang and F. Morsingh. Chem Soc J p 160-2 Ja '53

Unknown compound may be metabolite of estrogen. Chem & Eng N 31:159 Ja 12 '53

ESTRONE

Biosynthesis of estrone and β-estradiol in the perfused ovary. N. T. Werthessen and others. bibliog Science 117:380-1 Ap 10 '53

Chromatographic separation of estrone, estradiol, and estriol. J. Bitman and J. F. Sykes. bibliog Science 117:356-8 Ap 3 '53

ESTUARIES

Computation of pollution in a vertically mixed estuary. H. Stommel. diags Sewage & Ind Wastes 25:1065-71 S '53

Discharge of sewage and industrial wastes to estuaries; abstract. B. A. Southgate and W. S. Preddy. Am Water Works Assn J 45:sup78 S '53

Sewage disposal in tidal estuaries. A. N. Diachishin and others. diags Am Soc C E Proc 79 [no 167]:1-14 Ja '53

ETCHING (metals)

Accelerated etching processes for printed circuits. diags Electronics 25:232+ D '52

Cathodic etching; method highlights surface characteristics of metal specimens. Iron Age 170:193 N 13 '52

Dip and etch simplify aluminum forging inspection. A. H. Pope. il Iron Age 170:102-3 O 2 '52

Manufacturing name plates; etching, anodizing and plating operations; Chicago thrift-etching corp. R. E. Pettit. il Metal Finishing 51:60-4+ Mr '53

Preferential etch for use in optical determination of germanium crystal orientation. R. H. Wynne and C. Goldberg. il J Metals 5: Trans 436 Mr '53

Sequestering agents in aluminum etching. F. J. Prescott and others. bibliog il Metal Finishing 51:65-7 O '53

Small copper tabs control etching. Ed & Pub 86:52 Ja 10 '53

ETCHING (minerals)

Investigation of crystal growth by thermal etching and oriented overgrowth. A. Smakula and M. W. Klein. bibliog il J Chem Phys 21:100-4 Ja '53

ETHANE

Correlating ethane pyrolysis data. R. A. Carpenter and F. C. Fowler. bibliog Pet Refiner 32:153-4 Ap '53

Dielectric constant of some chlorine derivatives of ethane in the liquid and the solid states. M. Yasumi and M. Shirai. J Chem Phys 20:1325-6 Ag '52

Elastic scattering and neutralization of low velocity hydrogen ions in ethane and propane. J. H. Simons and S. A. McAllister. bibliog J Chem Phys 20:1431-6 S '52

Energy difference of rotational isomers of some dihalogenoethanes in the gaseous and liquid states. K. Kuratani and others. bibliog J Chem Phys 21:1411-12 Ag '53

Gas production in the photolysis of liquid methyl iodide. R. H. Schuler and C. T. Chmiel. bibliog Am Chem Soc J 75:3792-6 Ag 5 '53

Infrared and Raman spectra of fluorinated ethanes. J. R. Nielsen and others. bibliog J Chem Phys 21:1060-76 Je '53

Liquid-vapor equilibrium relations in ethane-hydrogen sulfide system. W. B. Kay and D. B. Brice. bibliog Ind & Eng Chem 45:615-18 Mr '53

Mercury photo-sensitized oxidation of ethane and methane. J. A. Gray. diags Chem Soc J p3150-4 Ag '52

Oxidation of ethane, and cool flames. J. A. Gray. Chem Soc J p741-50 Mr '53

ETHANE—*Continued*

Physical adsorption from mixtures of gases; ethane and carbon dioxide on chromic oxide gel at -78°. L. White, jr., C. H. Schneider and W. W. Robinson, jr. bibliog Am Chem Soc J 74:5796-8 N 20 '52

Solubilities and structures in aqueous aliphatic hydrocarbon solutions. W. F. Claussen and M. F. Polglase. bibliog diag Am Chem Soc J 74:4817-19 O 5 '52

Third virial coefficient of ethane. H. G. David and others. J Chem Phys 20:1973 D '52

ETHANESULFONIC acid

Electrolytic reduction of perrhenate; studies in perchloric, ethanesulfonic, trifluoroacetic and hydrochloric acids. J. C. Hindman and P. Wehner. bibliog Am Chem Soc J 75:2869-72 Je 20 '53

ETHANETETRAACETIC acid

Preparation of 4 : 4′-bistetrahydropyranyl and of ethane-1 : 1 : 2 : 2-tetra-acetic acid. C. T. Blood, N. J. Cartwright and R. P. Linstead. Chem Soc J p2268-72 Je '52

ETHANOL. See Alcohol

ETHANOLAMINE

Evidence of an ethanolamine structure in the garrya alkaloids and atisine; and a partial synthesis of garryine. M. F. Bartlett and others. Chem & Ind p323 Ap 4 '53

Operating glycol-amine gas treating plants. M. Atcheson and A. A. Cohn. bibliog flow diag il World Oil 135:297-300 O '52

Removal of hydrogen sulfide and carbon dioxide from synthesis gas using di- and tri-ethanolamine. H. W. Wainwright and others. bibliog 6pls U S Bur Mines Rep of Invest 4891:1-19 '52

Spectrophotometric investigation of the copper(II) ion-triethanolamine complex. J. M. Bolling and J. L. Hall. bibliog Am Chem Soc J 75:3953-5 Ag 20 '53

Synthesis of O-(ʟ-α-glycerylphosphoryl)-ethanolamine and some comments on the stereochemical aspects of the biosynthesis of glycerolphosphatides from carbohydrates. E. Baer and H. C. Stancer. bibliog Am Chem Soc J 75:4510-14 S 20 '53

Use of monoethanolamine in the production of dry ice; abstract. N. Tkachev. Refrig Eng 61:627 Je '53

ETHANOLYSIS. See Alcoholysis

ETHER of space

Genesis of the query is there an ether? H. E. Ives. Opt Soc Am J 43:217-18 Mr '53

ETHERS

Alicyclic compounds; the preparation of *cyclo*hexane-1 : 3-diones and their enol ethers. E. G. Meek, J. H. Turnbull and W. Wilson. Chem Soc J p811-15 Mr '53

6-Aminosalicylic acid; the hydrolysis of 2-carboxytrinitrodiphenyl ethers. A. A. Goldberg and H. A. Walker. Chem Soc J p2049-52 Jl '53

Basic character of some aromatic ketones and of their methyl ethers. L. A. Wiles. and E. C. Baughan. Chem Soc J p933-40 Mr '53

Chloramines as a source of iodine chloride; the preparation of iodo-phenols, -naphthols, and -aromatic ethers by means of a chloramine and an iodide. B. Jones and E. N. Richardson. Chem Soc J p713-15 F '53

Complexes of iodine with an ether and an alcohol. J. S. Ham. bibliog J Chem Phys 20:1170 Jl '52

Dissociation of certain benzohydryl ethers. Ti Li Loo. bibliog Am Chem Soc J 74:4717-18 S 20 '52

Equilibrium constants for the interaction of halogens with alcohols and ethers. R. M. Keefer and L. J. Andrews. bibliog Am Chem Soc J 75:3561-4 Jl 20 '53

Ethylene glycol ethers of pentaerythritol. S. Wawzonek and C. Issidorides. bibliog Am Chem Soc J 75:2373-5 My 20 '53

Heterocycles containing *p*-phenylene units; ethers. R. C. Fuson and H. O. House. bibliog Am Chem Soc J 75:1325-7 Mr 20 '53

Instability of Grignard reagents from γ-bromopropyl ethers. N. Rabjohn and M. S. Cohen. bibliog Am Chem Soc J 74:6290-1 D 20 '52

Mode of addition of a Grignard reagent to an aryl allyl ether. R. I. Meltzer and J. A. King. bibliog Am Chem Soc J 75:1355-9 Mr 20 '53

Molecular addition compounds of titanium tetrachloride with several ethers. P. M. Hamilton and others. bibliog Am Chem Soc J 75:2881-3 Je 20 '53

Open-chain acylals, formals and ethers containing terminal double bonds. C. D. Hurd and others. Am Chem Soc J 74:5128-30 O 20 '52

Perfluorinated cyclic ethers. A. L. Henne and S. B. Richter. bibliog Am Chem Soc J 74:5420-2 N 5 '52

Reaction rates by distillation; the effect of changes in structure on the basicity of selected ketones, esters, ethers and alcohols. E. F. Pratt and K. Matsuda. bibliog Am Chem Soc J 75:3739-44 Ag 5 '53

Reactions of haloalkyl ethers with phenyllithium. L. Summers and M. L. Larson. bibliog Am Chem Soc J 74:4498-500 S 20 '52

Reactions of vanillin and its derived compounds; ethers of protocatechuic acid and their ethyl esters. I. A. Pearl and D. L. Beyer. bibliog Am Chem Soc J 75:2630-3 Je 5 '53

Some ethers of pentaerythritol and their nitrate esters. R. Evans and J. A. Gallaghan. Am Chem Soc J 75:1248-9 Mr 5 '53

Some theoretical considerations of ether decompositions. B. G. Gowenlock. bibliog J Chem Phys 21:941-2 My '53

Synthesis of polyglycidyl ethers. S. G. Cohen and H. C. Haas. bibliog Am Chem Soc J 75:1733 Ap 5 '53

See also

Cellulose ethers
Ethyl ether
Vinyl ethers

ETHFORANE. See Hexafluoroethane

ETHICS

See also

Accounting ethics
Advertising ethics
Conduct of life
Loyalty tests
Newspaper ethics

ETHIOPIA

Ethiopian Council to include Eritreans. For Comm W 48:4 D 8 '52

Foreign relations

Great Britain

Ethiopia and Britain. map Economist 165:895-6 D 27 '52

ETHIOPIANS

Rh and ABO blood group distributions in Japanese and Ethiopians. G. J. Stein and others. bibliog Science 117:100-2 Ja 30 '53

ETHOXYLINE resins. See Resinous products

ETHYL acetate

Acid-catalyzed hydrolysis of ethyl acetate. O. R. Pierce and G. Gorin. bibliog Am Chem Soc J 75:1749-50 Ap 5 '53

Dielectric constants of water-ethyl acetate mixtures. A. P. Altshuller. J Chem Phys 21:562 Mr '53

Solubility of ethyl acetate in water. A. P. Altshuller and H. E. Everson. bibliog Am Chem Soc J 75:1727 Ap 5 '53

ETHYL acetoacetate

*cyclo*Propanes; the condensation of 1 : 4-dibromobut-2-ene with ethyl cyano- and aceto-acetate. R. W. Kierstead, R. P. Linstead and B. C. L. Weedon. Chem Soc J p 1799-803 Je '53

Preparation of 2-substituted-4-methyl-5-carbethoxythiazoles; condensation of ethyl acetoacetate with substituted thioureas. M. K. Rout and H. K. Pujari. bibliog Am Chem Soc J 75:4057-8 Ag 20 '53

Synthesis of oxazoles from ethyl acetoacetate; ring-fission of some oxazole-5-carboxylic acids. J. W. Cornforth and Mrs R. H. Cornforth. Chem Soc J p93-8 Ja '53

ETHYL acrylate

New $8,000,000 plant in Houston to make acrylate. F. L. Resen. il Oil & Gas J 51:92-3+ My 4 '53

ETHYL alcohol. See Alcohol

ETHYLAMINE

Evidence for a cyclic intermediate in the reaction of diarylethylamines with nitrous acid. P. S. Bailey and J. G. Burr, jr. bibliog Am Chem Soc J 75:2951-5 Je 20 '53

Migration ratios observed in the reaction of diarylethylamines with nitrous acid. L. S. Ciereszko and J. G. Burr, jr. bibliog Am Chem Soc J 74:5431-3 N 5 '52

ETHYLAMINE—*Continued*

Optically active forms of 1-methyl-2-2′-pyridylethylamine. N. B. Chapman and J. F. A. Williams. Chem Soc J p2797-9 S '53

Reaction of ethylamine-1-C^{14} with nitrous acid. J. D. Roberts and J. A. Yancey. bibliog Am Chem Soc J 74:5943-5 D 5 '52

True identity of the solvated free radical triphenylsilicyl ethylammine; the multiple addition of lithium to an aromatic system in ethylamine. R. A. Benkeser, R. E. Robinson and H. Landesman. Am Chem Soc J 74:5699-701 N 20 '52

ETHYL aniline

Heterocyclic compounds from ethylanilines. W. S. Emerson, R. A. Heimsch and T. M. Patrick, jr. bibliog Am Chem Soc J 75:2256-7 My 5 '53

ETHYL benzene

t-Alkyl groups; orientation of *t*-alkylation products of toluene and ethylbenzene. M. J. Schlatter and R. D. Clark. bibliog Am Chem Soc J 75:361-9 Ja 20 '53

Disproportionation of alkylbenzenes; product distribution and rate studies. A. P. Lien and D. A. McCaulay. bibliog Am Chem Soc J 75:2407-10 My 20 '53

Koppers makes ethylbenzene at Port Arthur plant. F. L. Resen. flow diag il Oil & Gas J 52:142-3 Je 15 '53

Molecular refractions of the SO_3 and SO_2Cl groups in *p*-ethylbenzenesulfonyl chloride and the methyl, ethyl and *n*-butyl esters of *p*-ethylbenzenesulfonic acid. R. H. Wiley and R. P. Davis. bibliog Am Chem Soc J 74:6142-4 D 5 '52

ETHYL benzoate

Alkaline hydrolysis of ethyl *p*-alkylbenzoates. E. Berliner and others. bibliog Am Chem Soc J 74:4940-4 O 5 '52

Effect of nuclear substituents on the C^{14} isotope effect in the saponification of carboxyl-labeled ethyl benzoates at 25°C. G. A. Ropp and V. F. Raaen. J Chem Phys 20:1823 N '52

ETHYL benzylnaphthalene

Synthetic estrogens; derivatives of 2-phenylphenanthrene and 1-ethyl-2-benzylnaphthalene. R. E. Juday. bibliog Am Chem Soc J 75:4071-4 Ag 20 '53

ETHYL bromide

Dissociation of ethyl bromide and iodide by neutron capture. S. Wexler and T. H. Davies. bibliog diag J Chem Phys 20:1688-94 N '52

Kinetics of the decompositions of ethyl, isopropyl and *n*-propyl bromides. A. T. Blades and G. W. Murphy. bibliog Am Chem Soc J 74:6219-21 D 20 '52

ETHYL bromoacetate

Synthesis of ethyl ethoxybromoacetate and ethyl ethoxycyanoacetate. A. Bendich and G. C. Clements. Am Chem Soc J 75:4075 Ag 20 '53

ETHYL butyrate

C-14 tracer studies in the rearrangements of unsymmetrical α-diketones; ethyl α,β-diketobutyrate to methyltartronic acid. H. W. Davis, E. Grovenstein, jr. and O. K. Neville. bibliog Am Chem Soc J 75:3304-5 Jl 20 '53

ETHYL cellulose

Impact properties of molded ethyl cellulose. il Product Eng Hdbk p C 18-19 '53

Mixed ethylcellulose-butylhydroxyethyl-cellulose films. H. C. Haas, L. C. Farney and C. Valle, jr. bibliog Ind & Eng Chem 45:564-6 Mr '53

See also
Hydroxyethyl cellulose

ETHYL cellulose phthalate

Analysis

Analysis of phthalic acid esters of cellulose and of polyvinyl alcohol. C. J. Malm, L. B. Genung and W. Kuckmy. bibliog Anal Chem 25:245-9 F '53

ETHYL chloride

Friedel-Crafts reactions between gaseous benzene and ethyl chloride on solid aluminum chloride. M. Blau and J. E. Willard. bibliog Am Chem Soc J 75:3330-3 Jl 20 '53

Polymerisation of α-methylstyrene catalysed by stannic chloride in ethyl chloride solution. F. S. Dainton and R. H. Tomlinson. Chem Soc J p 151-60 Ja '53

Steric factor and activation energy of the reaction $Na+C_2H_5Cl=NaCl+C_2H_5$. R. J. Cvetanović and D. J. Le Roy. bibliog diags J Chem Phys 20:1016-20 Je '52

Studies on unimolecular chlorohydrocarbon decompositions. K. E. Howlett. Chem Soc J p3695-701 O '52

Variation of the viscosity of ethyl chloride vapor with temperature. M. El Nadi. bibliog J Phys Chem 57:589-91 Je '53

ETHYL chloroacetate

Anhydrous $AlCl_3$-catalyzed alkylation of ethyl cyanacetate by ethyl chloroacetate. C. Raha. Am Chem Soc J 75:4098-9 Ag 20 '53

ETHYL chlorocarbonate

Thermal decomposition of ethyl chlorocarbonate. L. E. Roberts and others. Am Chem Soc J 74:5787-8 N 20 '52

ETHYL cyanoacetate

Anhydrous $AlCl_3$-catalyzed alkylation of ethyl cyanacetate by ethyl chloroacetate. C. Raha. Am Chem Soc J 75:4098-9 Ag 20 '53

*cyclo*Propanes; the condensation of 1 : 4-dibromobut-2-ene with ethyl cyano- and aceto-acetate. R. W. Kierstead, R. P. Linstead and B. C. L. Weedon. Chem Soc J p 1799-803 Je '53

Synthesis of ethyl ethoxybromoacetate and ethyl ethoxycyanoacetate. A. Bendich and G. C. Clements. Am Chem Soc J 75:4075 Ag 20 '53

ETHYL cyanomethyl pentanoate

Unsymmetrical quaternary carbon compounds; the alkylation of ethyl 2-cyano-3-methyl-2-pentenoate with aliphatic Grignard reagents. F. S. Prout. bibliog Am Chem Soc J 74:5915-17 D 5 '52

ETHYL ether

Dehydration of ethyl alcohol over alumina. H. Feilchenfeld. bibliog Ind & Eng Chem 45:855-7 Ap '53

Natural vibrations of rectangular quartz plates and determination of the dispersion of sound in ethyl ether. B. Özdoğan. diag Acoustical Soc Am J 24:541-2 S '52

ETHYL glyoxylate

Ethyl trithioörthoglyoxylate. M. L. Wolfrom and E. Usdin. bibliog Am Chem Soc J 75:4619-20 S 20 '53

ETHYL group

Reactions of ethyl radicals. K. J. Ivin, M. H. J. Wijnen and E. W. R. Steacie. bibliog J Phys Chem 56:967-72 N '52

ETHYL iodide

Dissociation of ethyl bromide and iodide by neutron capture. S. Wexler and T. H. Davies. bibliog diag J Chem Phys 20:1688-94 N '52

ETHYL levulinate

Reaction of kojic acid with ethyl levulinate. L. L. Woods. Am Chem Soc J 75:2009 Ap 20 '53

ETHYL magnesium bromide

Reaction of ethylmagnesium bromide with alkyl aryl ketones. B. F. Landrum and C. T. Lester. bibliog Am Chem Soc J 74:4954-5 O 5 '52

ETHYL magnesium halides

Action of Grignard reagents on anhydro-sugars of ethylene oxide type; the behaviour of 4 : 6-benzylidene 2 : 3-anhydro-α-methyl-D-alloside towards ethyl- and phenyl-magnesium halides. G. N. Richards and L. F. Wiggins. Chem Soc J p2442-6 Ag '53

ETHYL malonate

Alkaline hydrolysis of monoethyl malonate ion in isodielectric media. W. J. Svirbely and B. W. Lewis. bibliog J Phys Chem 56:1006-8 N '52

Conjugate addition of ethyl malonate to 3,5-cholestadien-7-one. J. M. Ralls. bibliog Am Chem Soc J 75:2123-5 My 5 '53

Mechanism of the bromination of ethyl malonate. R. P. Bell and M. Spiro. diag Chem Soc J p429-35 F '53

ETHYL mercuric compounds. See Mercury compounds

ETHYL methyl nicotinate

Some 5-substituted derivatives of ethyl 2-methylnicotinate. P. E. Fanta. bibliog Am Chem Soc J 75:737-8 F 5 '53

ETHYL nitrite

Decomposition in diethyl peroxide in the presence of nitric oxide and ethyl nitrite. J. B. Levy. bibliog Am Chem Soc J 75:1801-3 Ap 20 '53

ETHYL peroxide

Decomposition of diethyl peroxide in the presence of nitric oxide and ethyl nitrite. J. B. Levy. bibliog Am Chem Soc J 75:1801-3 Ap 20 '53

ETHYL phosphonic acid

Esters containing phosphorus; ethylphosphonic dichloride containing ^{32}P. B. C. Saunders and T. S. Worthy. diags Chem Soc J p2115-17 Jl '53

ETHYL pyridine

2-Ethylpyridine as a constituent of coal-tar bases. A. B. Densham, D. J. Langston and A. J. Simpson. Chem Soc J p5044 D '52

ETHYL pyridineacetic acid

Convenient preparation of ethyl 2-pyridylacetate. N. N. Goldberg, B. M. Perfetti and R. Levine. Am Chem Soc J 75:3843 Ag 5 '53

ETHYL silicates

Ethyl silicate for foundry use. Engineering 176:239 Ag 21 '53

Ethyl silicate has five advantages in refractories. Brick & Clay Rec 123:71 Ag '53

ETHYL sulfide

3-Thiapentane; heat capacity, heats of fusion and vaporization, vapor pressure, entropy, heat of formation and thermodynamic functions. D. W. Scott and others. bibliog diags Am Chem Soc J 74:4656-62 S 20 '52

ETHYL trifluoroacetate

Reaction of sodium with ethyl trifluoroacetate. E. T. McBee and others. Am Chem Soc J 75:4090-1 Ag 20 '53

ETHYL trifluorocrotonate

Addition reactions to ethyl γ,γ,γ-trifluorocrotonate. H. M. Walbrosky and M. Schwarz. bibliog Am Chem Soc J 75:3241-3 Jl 5 '53

ETHYLENE

Acetylene and ethylene esters; recent synthetic work in Italy. Chem Age (Lond) 67:539-40 O 18 '52

Electronic orbitals, shapes, and spectra of polyatomic molecules; hexatomic molecules; ethylene. A. D. Walsh. Chem Soc J p2325-9 Ag '53

Ethylene and ethyl alcohol as quenching agents in external-cathode Geiger counters. R. L. Chasson and M. L. MacKnight. R Sci Instr 24:212-13 Mr '53

Formation of azides in the reaction of hydrogen azide with diarylethylenes. S. N. Ege and K. W. Sherk. bibliog Am Chem Soc J 75:354-7 Ja 20 '53

Highly polarizable C=C double bonds (fulvenes and thermochromic ethylenes). E. D. Bergmann. bibliog Am Chem Soc J 75:2761-2 Je 5 '53

Kinetics of the oxidation of ethylene by nitrogen dioxide. T. L. Cottrell and T. E. Graham. Chem Soc J p556-63 F '53

Market outlook for ethylene; abstract. P. W. Cornell. Oil Paint & Drug Rep 163: 58-9 Je 8 '53

Molecular kinetics of hydrogenation and exchange reactions of ethylene at surfaces. K. J. Laidler and others. bibliog J Chem Phys 21:949-50 My '53

Now acetylene joins petrochemicals. C. F. Ruebensaal. diag Chem Eng 59:159-62 N '52

Oxidation of ethylene and propylene in the gas phase. J. H. Burgoyne and R. A. Cox. diag Chem Soc J p876-83 Mr '53

Oxidation of ethylene to ethylene oxide. S. Wan. bibliog Ind & Eng Chem 45:234-8 Ja '53

Potential function of ethylene. B. L. Crawford, jr. and others. bibliog diags J Chem Phys 21:678-86 Ap '53

PVT relations of nitrogen and ethylene mixtures at high pressure. W. P. Hagenbach and E. W. Comings. bibliog il diags Ind & Eng Chem 45:606-9 Mr '53

Reaction of 1,1-diarylethylenes with thionyl chloride; preparation of 2,2-diarylethene-1-sulfinic acids and some N-aryl-2,2-diphenylethene-1-sulfinamides. S. Patai and A. Patchornik. bibliog Am Chem Soc J 74:4494-6 S 20 '52

Reaction of Hg($^3P_1$) with ethylene. B. D. Darwent. bibliog J Chem Phys 20:1673-8 N '52

Removal and recovery of traces of ethylene in air by silica gel. F. Stitt and Y. Tomimatsu. bibliog diag Anal Chem 25:181-3 Ja '53

Solubility of naphthalene in supercritical ethylene. G. A. M. Diepen and F. E. C. Scheffer. J Phys Chem 57:575-7 Je '53

Suggested reaction mechanism for the copolymerization of ethylene and carbon monoxide. W. G. Barb. bibliog Am Chem Soc J 75:224-6 Ja 5 '53

Synthesis of βγ-unsaturated α-keto-acids from 1 : 1-diarylethylenes. F. Bergmann and A. Kalmus. Chem Soc J p4521-2 N '52

Synthetic lubricants from ethylene. J. H. Boyd. Pet Eng 25:C62 Ap '53

Thermal *trans-cis* isomerization of dideuteroethylene. B. S. Rabinovitch and others. bibliog J Chem Phys 20:1807-8 N '52

Thermodynamics of combustion gases; temperatures of methane-air, propane-air, and ethylene-air flames. R. W. Smith, jr. and others. bibliog U S Bur Mines Rep of Invest 4983:1-21 '53

Vibrational Raman spectrum of gaseous ethylene. B. P. Stoicheff. J Chem Phys 21: 755-6 Ap '53

Manufacture

Aliphatic building blocks for petrochemical textiles. P. W. Sherwood. bibliog il Pet Processing 7:1633-8 N '52

Catalyst improves purity of ethylene produced by pyrolysis of ethane; patent. diags Pet Processing 8:735-6 My '53

Correlating ethane pyrolysis data. R. A. Carpenter and F. C. Fowler. bibliog Pet Refiner 32:153-4 Ap '53

Ethylene manufacture by cracking; Lummus co. flow diag Pet Refiner 31:246-7 S '52

Ethylene; pictured flowsheet. Chem Eng 60: 272-5 Mr '53

Ethylene production and recovery. C. C. King and J. Warburton. diags Pet Processing 7: 1644-7 N '52; Same. Oil & Gas J 51:92-4+ D 8 '52

Ethylene production; Stone & Webster-Badger. flow diag Pet Refiner 31:250-1 S '52

Natural gas to ethane to ethylene. D. J. Stark. bibliog diags Pet Processing 8:897-9 Je '53; Same abr. flow diag Oil & Gas J 52:85-7 Je 1 '53

World's largest ethylene plant is placed on stream. il Oil & Gas J 51:177-8 Mr 16 '53

ETHYLENE bromide

Rotational isomerism and the vibrational spectrum of *sym*-dideuterodibromoethane. H. J. Bernstein and others. bibliog diags J Chem Phys 20:1227-31 Ag '52

ETHYLENE chloride

Spectrometer for the far infrared and the spectrum of 1,2 dichloroethane. C. R. Bohn and others. bibliog diag J Chem Phys 21: 719-21 Ap '53

Studies on unimolecular chlorohydrocarbon decompositions. K. E. Howlett. Chem Soc J p3695-701, 4487-91 O-N '52

ETHYLENE compounds

Potential chemical pituitary inhibitors of the polyarylethylene series. N. D. Kuong and N. P. Buu-Hoï. Chem Soc J p3741-4 O '52

Preparation of the 3-ethylenedioxy derivatives of 11-ketoprogesterone, dehydrocorticosterone acetate and cortisone acetate. J. M. Constantin, A. C. Haven, jr. and L. H. Sarett. bibliog Am Chem Soc J 75:1716-18 Ap 5 '53

Studies in organic sulfur compounds; cyclic ethylene and trimethylene hemithioketals. C. Djerassi and M. Gorman. bibliog Am Chem Soc J 75:3704-8 Ag 5 '53

ETHYLENEDIAMINE

Dissociation constants of substituted ethylenediamines. F. Basolo, R. K. Murmann and Yun Ti Chen. bibliog Am Chem Soc J 75:1478-80 Mr 20 '53

Ethylenediamine; carbonate-free alkali for carbon dioxide absorption. R. W. Swick, D. L. Buchanan and A. Nakao. Anal Chem 24:2000-1 D '52

N,N′-dialkylethylenediamines by reduction of dialkyloxamides. L. M. Rice and others. Am Chem Soc J 75:1750 Ap 5 '53

ETHYLENEDIAMINE—*Continued*

Steric effects and the stability of complex compounds; the chelating tendencies of N-alkylethylenediamines, with copper(II) and nickel(II) ions. F. Basolo and R. K. Murmann. bibliog Am Chem Soc J 74:5243-6 N 5 '52

Synthesis of *NN*-dialkyl-*N′*-benzyl(or -ethyl)-*N′*-1(or 2)-naphthylethylenediamines as potential histamine antagonists. N. B. Chapman, J. W. James and J. F. A. Williams. Chem Soc J p4024-6 O '52

Viscosities of several liquids. D. M. Mason, O. W. Wilcox and B. H. Sage. bibliog diag J Phys Chem 56:1008-10 N '52

ETHYLENEDIAMINE diacetic acid

Stability of metal chelates; N,N′-ethylenediaminediacetic acid and N,N′-ethylenediaminediacetic-N,N′-dipropionic acid. S. Chaberek, jr. and A. E. Martell. Am Chem Soc J 74:6228-31 D 20 '52

ETHYLENEDIAMINE tetraacetic acid

Complex for results. il Chem W 71:29-31 N 1 '52

Complexes of various metals with ethylenediaminetetraacetic acid. A. E. Martell and R. C. Plumb. bibliog J Phys Chem 56:993-6 N '52

Effect of potassium chloride on the equilibrium between ethylenediaminetetraacetate and calcium ions. F. F. Carini and A. E. Martell. bibliog Am Chem Soc J 74:5745-8 N 20 '52

Metal complexing agents in soap and detergent products. H. W. Zussman. bibliog Soap & San Chem 28:79+ N '52

Polarographic characteristics of vanadium complexed with ethylenediamine tetraacetic acid. R. L. Pecsok and R. S. Juvet, jr. bibliog Am Chem Soc J 75:1202-5 Mr 5 '53

Separation of the lanthanons with the aid of ethylenediaminetetra-acetic acid (enta acid); sodium lanthanon sulphate precipitation from sodium lanthanon enta solution. J. K. Marsh. Chem Soc J p4804-11 D '52

Spectrophotometric titrations with ethylenediaminetetraacetic acid; determination of iron, copper, and nickel. P. B. Sweetser and C. E. Bricker. bibliog diags Anal Chem 25:253-5 F '53

Stability of the rare earth complexes with ethylenediaminetetraacetic acid. E. J. Wheelwright, F. H. Spedding and G. Schwarzenbach. bibliog Am Chem Soc J 75:4196-201 S 5 '53

Stereochemistry of complex inorganic compounds; the stereochemistry of hexadentate ethylenediaminetetraacetic acid complexes. D. H. Busch and J. C. Bailar, jr. bibliog Am Chem Soc J 75:4574-5 S 20 '53

Use of calcium ethylenediaminetetraacetate in cases of lead intoxication. H. Foreman and others. A M A Archives Ind Hygiene & Occup Med 7:148-51 F '53

Use of calcium ethylenediaminetetraacetate in treating heavy-metal poisoning. A M A Archives Ind Hygiene & Occup Med 7:137-47 F '53

Versene complexes. R. L. Pecsok. bibliog J Chem Educ 29:597-9 D '52

ETHYLENE dichloride. See Ethylene chloride

ETHYLENE glycol. See Glycol

ETHYLENE halides

Effect of halogen atoms on the reactivity of other halogen atoms in the same molecule; the SN2 reactivity of ethylene halides. J. Hine and W. H. Brader, jr. bibliog Am Chem Soc J 75:3964-6 Ag 20 '53

ETHYLENE imine. See Ethylenimine

ETHYLENE oxide

Action of acidic reagents on ethylene oxide anhydro-sugars; methyl 3 : 4-anhydro-α-D-galactoside. V. Y. Labaton and F. H. Newth. Chem Soc J p992-6 Mr '53

Action of acidic reagents on ethylene oxide anhydro-sugars; the action of hydrochloric acid on methyl 2 : 3-anhydro-4 : 6-*O*-benzylidene-α-D-mannoside. F. H. Newth and R. F. Homer. Chem Soc J p989-92 Mr '53

Aliphatic building blocks for petrochemical textiles; the monomers. P. W. Sherwood. bibliog il Pet Processing 7:1804-7+ D '52

Alkylation of malonic ester by ethylene oxide catalyzed by anhydrous $AlCl_3$. C. Raha. bibliog Am Chem Soc J 75:4098 Ag 20 '53

Anomalous susceptibilities of three-membered ring compounds. J. R. Lacher and others. bibliog J Chem Phys 20:1047-8 Je '52

Burning velocity of ethylene oxide decomposition flames. R. Friedman and E. Burke. J Chem Phys 21:165 Ja '53

Conversion of ethylene oxides into ethylene sulphides. C. C. Culvenor, W. Davies and W. E. Savige. Chem Soc J p4480-6 N '52

Ethylene oxide derivatives and their uses in the textile industry. G. Trinchieri. bibliog Am Dyestuff Rep 41:729-32+ N 10 '52

Hydrogen bonding ability and structure of ethylene oxides. S. Searles, M. Tamres and E. R. Lippincott. bibliog Am Chem Soc J 75:2775-7 Je 5 '53

Modified distribution functions for ethylene oxide-type polymerizations. L. Gold. J Chem Phys 20:1651-2 O '52

New route to 11-ketosteroids by fission of a $\Delta^{9(11)}$-ethylene oxide. H. Heyman and L. F. Fieser. bibliog Am Chem Soc J 74:5938-41 D 5 '52

Synthesis of nitric esters by the addition of nitric acid to the ethylene oxide ring. P. L. Nichols, jr., A. B. Magnusson and J. D. Ingham. bibliog Am Chem Soc J 75:4255-8 S 5 '53

Manufacture

New ethylene oxide process. A. L. Foster. flow chart il Pet Eng 25:C38-9 Ap '53

New process for ethylene oxide by direct oxidation. T. E. Corrigan. flow diag il Pet Refiner 32:87-9 F '53

New way to ethylene oxide; fluidized catalyst system. flow sheet il Chem Eng 60:134+ F '53

Oxidation of ethylene to ethylene oxide. S. Wan. bibliog Ind & Eng Chem 45:234-8 Ja '53

U.S. ethylene oxide production; direct oxidation coming into its own. Chem Age (Lond) 67:593-5 N 1 '52

ETHYLENE sulfide

Conversion of ethylene oxides into ethylene sulphides. C. C. Culvenor, W. Davies and W. E. Savige. Chem Soc J p4480-6 N '52

ETHYLENIMINE

2,2-Diphenyl-3,3-dimethylethylenimine and related compounds. H. M. Kissman, D. S. Tarbell and J. Williams. bibliog Am Chem Soc J 75:2959-62 Je 20 '53

Ethylenimine-treated cotton. G. L. Drake, jr. and others. bibliog Textile Res J 23:639-41 S '53

Microwave spectrum and dipole moment of ethylenimine. R. D. Johnson and others. J Chem Phys 21:1425 Ag '53

Microwave spectrum and general properties of ethylene imine. W. S. Wilcox and others. J Chem Phys 21:563-4 Mr '53

Preliminary analysis of the microwave spectrum of ethylenimine. T. E. Turner and others. J Chem Phys 21:564-5 Mr '53

Preparation of 1-*p*-diphenylylethyleneimine. J. N. Baxter and J. Cymerman-Craig. Chem Soc J 1940-2 Je '53

Reactions of ethylenimines with carbon disulfide. L. B. Clapp and J. W. Watjen. bibliog Am Chem Soc J 75:1490-2 Mr 20 '53

ETIOCHOLANE

11-Oxygenated steroids; the reduction of 11-carbonyl to 11α-hydroxyl in the etiocholane series. H. L. Herzog, M. A. Jevnik and E. B. Hershberg. bibliog Am Chem Soc J 75:269-72 Ja 20 '53

ETIOCHOLANEDIONE

Dipole moments and conformations of androstane-3,17-dione and of etiocholane-3,17-dione. H. R. Nace and R. B. Turner. bibliog Am Chem Soc J 75:4063-6 Ag 20 '53

ETIOCHOLANIC acid

Steroids derived from bile acids; Barbier-Wieland degradation in the 11-keto series. R. B. Turner and others. bibliog Am Chem Soc J 74:5814-18 D 5 '52

Steroids derived from bile acids; degradation of 3α,9α-epoxy-11-ketonorcholanic acid to 3α,9α-epoxy-11-ketoetiocholanic acid. V. R. Mattox and others. Am Chem Soc J 74:5818-19 D 5 '52

EUCALYPTUS
Chemistry of western Australian plants; oleanolic acid acetate from eucalyptus calophylla bark. D. E. White and L. S. Zampatti. Chem Soc J p5040 D '52
Chemistry of western Australian plants; the essential oil of eucalyptus eudesmioides bark. A. Blumann, M. Michael and D. E. White. Chem Soc J p788-9 Mr '53

EUDESMIC acid
Eudesmic acid; its identity with 3 : 4 : 5-trimethoxybenzoic acid. A. J. Birch and Mrs P. Elliott. Chem Soc J p355-6 Ja '53

EUGENITIN
New synthesis of eugenitin. W. B. Whalley. Am Chem Soc J 74:5795-6 N 20 '52

EUGENOL
Chloromethylation of eugenol and the preparation of some new *iso*quinoline bases. G. R. Clemo and R. W. Temple. Chem Soc J p678-83 F '53

EULER'S centrifugal pump theory. See Pumps, Centrifugal

EUPHENYL acetate
Chemistry of the triterpenes; some aspects of the chemistry of tetracyclic triterpenes. M. C. Dawson, T. G. Halsall and R. E. H. Swayne. Chem Soc J p590-4 F '53

EUROPE
European situation today. E. T. Weir. Comm & Fin Chr 178:1+ Jl 2 '53
Must we go it alone after all? V. L. Horoth. il Mag of Wall St 92:499-501+ Jl 25 '53
Problem of European unity. P. van Zeeland. Comm & Fin Chr 177:1438-9 Ap 2 '53
Unification of Europe and the Atlantic community. W. H. Draper, jr. Comm & Fin Chr 176:1532 O 23 '52
What Europe told me; results of a tour throughout western Europe. G. A. Bowie. Comm & Fin Chr 178:106-7 Jl 9 '53

See also
Electricity supply—Europe
Petroleum industry and trade—Europe
Steel industry and trade—Europe
Textile industry—Europe

Bibliography

United States and Europe; a bibliographical survey of thought expressed in American and British writings of 1951-1952. H. F. Conover. 255p pa $1.75 Card division, Library of Congress, Washington '53

Commerce

Convertibiilty à la Muette. Economist 166:887-8 Mr 28 '53
Epitaph on East-West trade; with table of eastern bloc exports to western Europe. Economist 165:695-6 D 6 '52
European export subsidies. Economist 164:769-70 S 27 '52
Europe's export difficulties. J. van Galen. Comm & Fin Chr 177:94 Ja 8 '53
Europe's trade still on crutches; review of Trade and payments in western Europe, by W. Diebold, jr. Bsns W p 166-7 N 8 '52
How Europeans feel toward Made in U.S.A. G. Hoffman. Dun's R 61:36+ My '53
Western Europe needs trade, not aid. R. G. Gibbs. Chem & Eng N 30:5420+ D 29 '52

See also
European payments union

Commercial policy

New styles in economic unions. Economist 166:712-13 Mr 14 '53

Defenses

Between devil and EDC. Economist 165:215-16 O 25 '52
Europe shivers on the brink. Economist 165:799-800 D 20 '52
Europe's third chance; dollars for defence industries. Economist 165:759-60, 827 D 13-20 '52
Keeping NATO going is Eisenhower's problem in Europe. il Bsns W p27-8 Ja 17 '53

See also
European defense community

Economic conditions

Another look at Europe. H. D. Wheaton. Comm & Fin Chr 178:202-3 Jl 16 '53
European competition strengthens as Korean boom fades. il Steel 131:76-7 D 8 '52
Europe's economy since the war. Economist 166:812+; 167:31-2 Mr 21, Ap 4 '53
Europe's fourth stocktaking. Economist 165:893-4 D 27 '52
Europe's third chance; dollars for defence industries. Economist 165:759-60, 827 D 13-20 '52
New styles in economic unions. Economist 166:712-13 Mr 14 '53
1953; turning point for U.S. tariffs. Bsns W p 160-2 Mr 21 '53
Progress and handicaps in Europe. M. B. Folsom. il map Dun's R 61:27-8+ Ja; 33+ F '53
Recent inflation developments in western Europe. V. Lutz. Comm & Fin Chr 176:2332+ D 18 '52
Secretary Sawyer's survey of Europe. C. Sawyer and others. For Comm W 48:15-20 D 22 '52

Economic relations

Buying arms abroad to build up west Europe; offshore procurement. il Bsns W p 154-6 My 16 '53

United States

U.S. businessmen change their tune. Bsns W p 126-7 My 30 '53

Economic union

See also
Coal-steel pool

Industries and resources

Industry; American and European plan. R. W. Jacoby. Am Dyestuff Rep 41:611-12+ S 29 '52

Politics and government

Big Europe and little Europe; proposals for establishment of a continental political community. Economist 166:86-7 Ja 10 '53
Blue print for Europe's constitution. Economist 164:760 S 27 '52
Cold spring in Strasbourg; draft treaty for a European political community (EPC) considered. Economist 167:448-9 My 16 '53
Fresh formulas at Strasbourg. Economist 166:193-4 Ja 24 '53
Hard choice for Europe; weak French governments and European integration movement. Economist 167:493-5 My 23 '53
Little Europe; legislators of Schuman powers draft its constitution. B. deJouvenel. Barron's 33:7 Ja 5 '53

See also
European defense community

EUROPE, Eastern
Crisis in east Europe. map Bsns W p31-2 Jl 18 '53
Free world and eastern Europe. Economist 165:174, 313-14, 551-2 O 18, N 1, 22 '52

See also
Chemical industries—Europe, Eastern

Commerce

Exports to east Europe cut to mere fraction. For Comm W 50:21 Jl 20 '53

Economic conditions

Economic integration in eastern Europe; satellites' linked economies. Economist 167:609-10, 824+ My 30, Je 20 '53
Europe's economy since the war; industrial revolution behind the Curtain. Economist 167:31-2 Ap 4 '53
Satellites are getting out of line. Bsns W p 126-8 F 14 '53

Industries and resources

Lopsided expansion behind the iron curtain. il Steel 132:67 Mr 2 '53

EUROPEAN agricultural community (proposed)
Ripples in the green pool. Economist 166:789 Mr 21 '53

EUROPEAN defense community
Can the West pool armies? Bsns W p 144-5 My 23 '53
Dr Adenauer and the EDC. Economist 167:376 My 9 '53

EUROPEAN defense community—*Continued*
Europe of Charlemagne? French views on the European defense community. Economist 165:238-9 O 25 '52
European union? common government wins wider support than six-nation army. Barron's 33:5 Mr 9 '53
Roads from Rome. Economist 166:554 F 28 '53
West Germany's army nearer. Economist 166:859 Mr 28 '53
Why France balks at European unity; opposition to European defense community. il Bsns W p 136+ N 1 '52

EUROPEAN economic co-operation, Organization for. See Organization for European economic cooperation

EUROPEAN federation of chemical engineering
Chemical engineering group started in Paris. Oil Paint & Drug Rep 164:7 Jl 20 '53

EUROPEAN organisation for nuclear research
European organisation for nuclear research. Engineer 196:151 Jl 31 '53

EUROPEAN payments union
Convertibility à la Muette. Economist 166:887-8 Mr 28 '53
Debtors change places. Economist 166:509-10 F 21 '53
Differences in EPU. Economist 166:825 Mr 21 '53
EPU extended. Economist 167:922 Je 27 '53
Franco-German contrasts. Economist 167:922+ Je 27 '53
Record rise in reserves. Economist 166:380-1 F 7 '53
Three creditors in Europe. Economist 167:543 My 23 '53

EUROPEAN recovery program
Illusion about trade-and-aid. A. W. May. Comm & Fin Chr 178:5+ Jl 2 '53

EUROPIUM
Kinetics of the europium(II)-europium(III) exchange reaction. D. J. Meier and C. S. Garner. bibliog J Phys Chem 56:853-7 O '52
Use of nuclear induction in the kinetic study of the reaction $Eu^{+3}+\varepsilon \rightarrow Eu^{+2}$. T. W. Hickmott and P. W. Selwood. J Chem Phys 20:1339 Ag '52

Isotopes

Radioactive europium 150 and gadolinium 150. R. C. Mack and others. bibliog Phys R 91:903-4 Ag 15 '53

EUTECTICS
Heat transfer to molten lead-bismuth eutectic in turbulent pipe flow. H. A. Johnson and others. bibliog diags A S M E Trans 75:1191-8 Ag '53

EVANS, Richard
Portrait. Sales Management 69:29 N 1 '52

EVAPORATION
Adiabatic flow of evaporating fluids in pipes of uniform bore. D. L. Linning. bibliog il diags Inst Mech Eng Proc (B) 1B no 2:64-72; Discussion. 72-5 '52
Chemical engineering unit operations. W. L. Badger and R. A. Lindsay. bibliog(61 ref) il Ind & Eng Chem 45:55-8 Ja '53
Determination of diffusion coefficients from rates of evaporation. D. D. Kimpton and F. T. Wall. bibliog diag J Phys Chem 56:715-17 Je '52
Evaporation and recovery of ammonia-base waste sulphite liquor. L. C. Jenness and others. bibliog diags Tappi 36:337-42 Ag '53
Evaporation; Chemical Engineering report. E. Lindsey. bibliog flow sheet il diags Chem Eng 60:227-40 Ap '53
Evaporation from liquids in high vacuum. K. C. D. Hickman and D. J. Trevoy. bibliog il diags Chem Eng Prog 49:105-9 F '53
Evaporation technique is key to adhesion studies. Franklin Inst J 254:350 O '52
Evaporative cooling of fruits and vegetables. D. H. Dewey. bibliog il Refrig Eng 60:1281-3+ D '52
Heat transfer to boiling liquids at low temperatures and elevated pressures. A. G. Monroe, H. A. S. Bristow and J. E. Newell. bibliog diags J Ap Chem 2:613-24 N '52
Infrared spectra of evaporated films. J. E. Tyler and S. A. Ehrhardt. bibliog il Anal Chem 25:390-4 Mr '53
Local coefficients of mass transfer by evaporation of water into an air jet. M. Spielman and M. Jakob. bibliog il A S M E Trans 75:385-92; Discussion. 392-4 Ap '53
Molecular evaporation of group IVB elements. R. E. Honig. J Chem Phys 21:573-4 Mr '53
New apparatus for studying the evaporation of water through monolayers. F. Sebba and N. Sutin. diag Chem Soc J p2513-16 Jl '52
Study determines lake evaporation and tests new measurement methods. il Eng N 150:71 Mr 19 '53
Submerged combustion evaporation. W. I. Weisman. diag Tappi 36:383-4 Ag '53

EVAPORATORS
Calculating ammonia shell and tube evaporators; abstract. W. Jakobson. Refrig Eng 61:626-7 Je '53
Concentration control. diag Chem & Eng N 31:949 Mr 2 '53
Consolidated puts $500,000 plant for evaporating liquor into operation. il Paper Ind 35:39-40 Ap '53; Same cond. Paper Tr J 136:12 Mr 13 '53; Same cond. Tappi 36:sup 100A+ Ap '53
Draining feedwater heaters and evaporators. F. T. Elder. il diags Power 96:75-7 N '52
Evaporation; Chemical Engineering report. E. Lindsey. bibliog flow sheets il diags Chem Eng 60:227-40 Ap '53
Evaporator has Scotch touch; new unit for recovery of waste sulphite liquor. diags Chem Eng 60:140-2+ Mr '53
Flash vaporization; analysis of fluid mechanical and mass-transfer problems. R. R. Hughes, H. D. Evans and C. V. Sternling. bibliog flow sheet diags Chem Eng Prog 49:78-87 F '53
Heat transfer coefficients evaluated; climbing film evaporator tests described. J. M. Coulson and others. Chem Age (Lond) 68:421-4 Mr 21 '53; Abstract. Chem & Ind p301 Mr 28 '53
Northern spins the valves on new Rosenblads and liquor burner. il Paper Tr J 137:44 O 16 '53
Recent work on evaporator coefficients in the concentration of waste liquor; abstracts. H. E. Snow. Paper Tr J 136:14 Je 5 '53; Pulp & Pa of Can 54:135-6 Jl '53
Rhinelander Paper puts $400,000 evaporating plant into operation. il diag Paper Ind 34:1074-6 D '52; Same. Paper Tr J 135:11-12+ D 26 '52; Same cond. Tappi 36:sup 87A-9A Ja '53
Scale formation in sea-water distilling plants and its prevention. H. Hillier. diag Inst Mech Eng Proc (B) 1B no 7:295-311, pl 1-2 '52; Same cond. Engineering 175:284-5, 378-80, 442-4 F 27, Mr 20, Ap 3 '53; Same cond. Engineer 195:208-9, 255-6 F 6-13 '53; Discussion. Inst Mech Eng Proc (B) 1B no 7:311-22 '52
Simple laboratory evaporator. P. Numerof and K. Reinhardt. diags Anal Chem 25:364 F '53
Solvent evaporator for rotary vacuum pump. J. S. George. diag J Sci Instr 29:413 D '52
Stainless steel in the Swedish pulp industry; circulating systems for sulphite digesters, and evaporators for black liquor in sulphate mills. E. G. Lindh. bibliog il diags Pulp & Pa of Can (Convention no) 54:239-46+ [F] '53
Sulphate black liquor evaporator tube plugging; progress report. W. J. Hall. il diags Tappi 36:127-30 Mr '53
Use of steel tube evaporators for home freezers. R. E. Cappel. Refrig Eng 61:971-2 S '53
What's best place for evaporator in cycle? diags Power 96:130-2 N '52

See also
Drying apparatus

Design

High-vacuum concentration; its realm in the chemical industry. E. J. Kelly. flow diag il diag Chem Eng Prog 48:589-93 D '52

EVEREST, Mount
Mount Everest expedition oxygen equipment. il Engineer 195:890-1 Je 26 '53; Same. Engineering 175:779-80 Je 19 '53

EVERGLADES
Drill barge rides Everglades muck. H. W. Richardson. il Constr Methods 35:52-6 My '53

EVERGLADES—*Continued*
Everglades floods to be controlled. il map diag Eng N 149:34-6 O 2 '52
Levee construction through Florida's Everglades. C. R. Sparf. il Explosives Eng 30:175-9 N '52

EVIDENCE (law)
Legal aspects of machine documentation. A. S. Davis, jr. bibliog Special Lib 44:5-10 Ja '53
See also
Accountants as witnesses

EVIDENCE, Documentary
Examination of questioned documents; abstract. J. A. C. McClelland. Chem & Ind p 17 Ja 3 '53

EVIDENCE, Expert. See Expert evidence

EVOLUTION
See also
Species, Origin of

EWALD, Henry Theodore, 1885-1953
Henry Ewald, 50 years in advertising, leaves his mark in civic work, too. por Ptr Ink 242:89 Ja 16 '53
Sketch. por Adv Agency 46:69 F '53

EXAMINATIONS
Use of propositions in examinations for the doctor's degree. L. Pauling. Science 116:667-9 D 12 '52

EXCAVATING machinery
Annual earthmoving industry conference, 4th, Peoria, April 8-9. S A E J 61:106-7 My '53
Big equipment moves in on Palisades dam, Reclamation bureau's biggest earth fill. il Constr Methods 35:96-7+ Mr '53
Compressed air does the heavy work in the operation of dragline. il Brick & Clay Rec 122:35-8 F '53
Cost of big draglines justified by advantages obtained. P. H. Woods. il Eng & Min J 154:107-9 Ja '53
Diesel power in the Delta country; silt levee constructed to hold fresh water for mining operations. il Diesel Power 31:39 Ja '53
Dozer blocks old road for new dam as shovel, trucks, scraper supply fill; Lexington dam. il Constr Methods 35:119-20 Mr '53
Dragline handles cableway bucket in novel hook-up. il Roads & Sts 96:66 Ap '53
Earthmoving and excavating equipment; shipments tabulated. Steel 132:182 Ja 5 '53
15-X, Baker's new, husky no-pushbeam bulldozer. J. M. Connolly. il Constr Methods 35:107-8 F '53
Gradall has heavy undercarriage and remote control. il Eng N 150:122 Mr 12 '53
Harvester steps closer to its long-term goal. Bsns W p 26 My 30 '53
Heavy-duty tractor bulldozer tester. il Eng N 150:171 My 14 '53
How post-war mechanical advances have brought more efficient earthmoving. A. S. McClimon. il Roads & Sts 96:76-8 My '53
Hydraulically sprung frame eliminates bulldozer pushbeam. il diag Machine Design 25:132 Jl '53
Jaeger enters loader field with torque-converter unit. il Eng N 150:176+ Ap 16 '53
Labor saving equipment speeds the work. L. M. Bailey. il Pub Works 84:55 Ja '53
Less than one man hour required to change hoe to crane. il Pub Works 84:102-3 My '53
Locating lost dipper teeth by radioactivity. il Min Cong J 39:79 Ag '53
Mechanization has revolutionized construction work. F. Donaldson. il Civil Eng 22:637-45 S '52
Modern excavation methods and equipment. H. H. Everist, jr. il Civil Eng 22:659-61 S '52
New developments in military earth moving equipment. D. A. Hausmann. Roads & Sts 96:80+ Ja '53
New Zealanders design ten-ft. bucket to use on backhoe for ditchwork, and it's towed along by a tractor. il Eng N 150:209 F 19 '53; Same. Constr Methods 35:148 Mr '53
Priestman universal excavator. il Engineer 195:701 My 15 '53
Reversed dozer blade finegrades slope. Roads & Sts 96:69 Mr '53
Schield puts bantams on crawlers. H. W. Richardson. il Constr Methods 35:87+ Ag '53
300-ton dragline has eight-yard bucket. il Eng N 149:92 N 27 '52
Transportability of earthmoving equipment. H. W. Rockwell. il S A E J 61:53-4; Discussion. 54-5 Jl '53
What's needed and what's coming in military earth-moving equipment. Constr Methods 35:150+ F '53
World's largest walking dragline. J. Grinrod. il diag Can Min J 74:58-60 Ja '53
You can doze in winter. il diags Constr Methods 35:50-3 Ja '53
See also
Cable laying
Dredges
Electric shovels
Mining machinery
Road making machinery
Rock drills
Scrapers
Shoveling machines
Trenching machinery

Lubrication

Develop new grease for walking cams. D. R. Oberlink. il Min Cong J 39:51+ Ja '53

Maintenance and repair

Preventive maintenance routine that won't fizzle out. G. M. Perry. il Roads & Sts 96:78-80+ Ap '53

Manufacture

Manual hidden arc welders halve time on earth mover components. W. T. Potter. il diag Welding J 32:324-8 Ap '53

Transportation

What's being done to make your big rigs more transportable. H. W. Rockwell. il Roads & Sts 96:54-62 Ag '53

EXCAVATION
Electric curtain stabilizes wet ground for deep excavation. H. W. Richardson. il plan diag Constr Methods 35:52-8 Ap '53
Electricity dries wet silt; principle known as electro-osmosis. il diag Eng N 150:36+ Ap 30 '53
How wellpoints aided anchorage excavation; suspension bridge over the Lempa river in El Salvador. B. J. Prugh. il plan diag Eng N 150:39-40 My 21 '53
Little rig deepens cellar after entry thru window. il Constr Methods 35:61-3 Ja '53
Modern excavation methods and equipment. H. H. Everist, jr. il Civil Eng 22:659-61 S '52
Motorized buggies go underground to handle excavation beneath terrace; Kentucky state capitol. W. J. Pouchot. il Constr Methods 34:58-9+ N '52
Relocating a mountain highway in North Carolina. O. M. Davis. il Explosives Eng 30:146-51+ S '52
Spadework is last in big footing. C. S. Adams. il Eng N 150:48 Ap 16 '53
See also
Blasting
Drilling and boring (earth and rocks)
Excavating machinery
Shaft sinking
Street openings
Trenching machinery
Tunnels and tunneling
Wellpoint system

EXCAVATION (archeology)
Delving into the past with modern tools. C. R. Steen. il diag Comp Air Mag 58:100-3 Ap '53
From cave to village; birth of agriculture and animal husbandry. R. L. Braidwood. il map Sci Am 187:62-6 O '52

EXCAVATION, Subaqueous
Mapping the sea bottom. Comp Air Mag 58:142-3 My '53
Submarine pipeline is too high, so jet-action trencher lowers it 17 ft. and weights hold it there at elevation -80. H. T. Perez. il Constr Methods 35:50-3 Ag '53
See also
Blasting, Subaqueous
Petroleum—Well drilling, Subaqueous
Sulfur mines and mining—Subaqueous mining

EX-CELL-O corporation
Stocks with pronounced growth prospects. G. L. Merton. Mag of Wall St 91:705 Mr 21 '53

EXCELSIOR

Economical cushioning; Haeger potteries finds pads and blankets less costly than loose excelsior. il Mod Packaging 27:152-3+ O '53

EXCEPTIONS, Principle of

Introduction to statistical cost control. L. W. Smith, jr. N A C A Bul 34:509-15 D '52

EXCESS profits tax

Bad tax; in a free economy there are no excess profits. Barron's 32:1 O 6 '52

Borrowed capital loopholes; Mahoney motor co. bibliog J Account 94:752-3 D '52

Brokerage house surveys excess profits tax bite; with table. P. A. Johnston. Barron's 33:37-9 Mr 30 '53

Businessmen read the tax outlook. Bsns W p27 F 28 '53

Companies that will and will not benefit from repeal of EPT. H. Wingate. Mag of Wall St 92:207-9+ My 16 '53

Excess-profits-credit toughie. J. D. Bierman. J Account 95:218-19 F '53

Excess profits tax is bad, but we need the revenue! G. M. Humphrey. Comm & Fin Chr 177:2405+ Je 4 '53

Excess profits tax puts the brakes on small firms. Steel 132:50 Mr 23 '53

EPT repeal and profits. Trusts & Estates 92:336 My '53

Federal taxation committee of IBA foresees federal deficits, with only moderate tax cuts. Comm & Fin Chr 176:2354+ D 18 '52

How EPT end will affect aircraft. S. Altschul. Aviation W 58:56-7 My 18 '53

New kink in EP taxes. J Account 95:71-2 Ja '53

Tax outlook. Nat City Bank p28-30 Mr '53

Tax tangle. Barron's 33:1 Je 1 '53

Accounting

EPT liability resulting from installment sales under current law, contrasted with 1942 law; abstract. J. E. Brown. J Account 95:65-6 Ja '53

EXCHANGE, Foreign. See Foreign exchange

EXCHANGE agreements. See Gasoline industry—Exchange agreements

EXCHANGE rates. See Foreign exchange—Rates

EXCHANGES

Commodity markets; Nov.-Dec. 1951-Jan.-Nov. 1952. Survey of Cur Bsns 33:S 19 Ja '53 [cont monthly]

See also

Cotton exchanges

New York mercantile exchange

EXCHANGES, Stock. See Stock exchange

EXCISE tax

Forgotten excises. R. M. Bleiberg. Barron's 33:3 Mr 9 '53

Manufacturers excise taxes hit rebuilders; questions prepared by the Automotive engine rebuilders association. Diesel Power 30:56-7 O '52

EXCITATION equipment

Adjust exciters for parallel operation. L. Donavant, jr. il diag Elec World 138:116 N 3 '52

Diesel-electrics; how to keep 'em rolling; locomotive excitation system. B. L. Judy and A. V. Johansson. diags Ry Loco & Cars 127:80-4 My; 74-7 Jl '53

Double three-phase rectifier with inter-phase reactor excited from a frequency tripler. L. R. Blake. diags Inst E E Proc 100 pt 2:310-14 Je '53

Elrama uses flywheel-motor-driven exciters; Duquesne light co. H. G. Frus and others. il diag Power Eng 57:94-5 S '53

Excitation systems, 1952 style. S. R. Folger. il diags Power Eng 56:96-8 S; 88-91+ D '52

Excitation systems, 1953 style. S. R. Folger. il diag Power Eng 57:60-1+ Mr '53

Magamp regulation for synchronous machines. J. E. Barkle and others. diag Westinghouse Eng 12:204-7 N '52; Same abr. Mech Eng 74:915-16 N '52; Same cond. Power Eng 56:92-3+ O '52; Abstract. Elec World 138:104-5 O 6 '52

EXCLUSIVE agencies

Merchandise needs more exposure. E. B. Weiss. Ptr Ink 242:45 Mr 6 '53

EXCLUSIVE sales contracts. See Restraint of trade

EXECUTIVE ability

Executive art. D. Orton. Advanced Management 18:15-17 Ja '53

Knack of delegating authority. W. Norris. Am Bsns 23:8-9+ Ja '53

EXECUTIVES

Aid to executive development; reading business magazines for profit. W. K. Beard, jr. Oil & Gas J 52:255+ My 18 '53

Analysis and description of high-level jobs. E. N. Hay and D. Purves. Personnel 29:344-54 Ja '53

Announcing an American business management development program. Am Bsns 22:32-3 O '52

Basis for executive development. M. Brown. Personnel 29:401-8 Mr '53

Can engineers man a company? E. G. Bailey. Midwest Eng 5:5+ D '52; Same. Mech Eng 75:21-2 Ja '53; Same. J Eng Educ 43:322-4 Ja '53

Conducting an effective program of campus recruitment. L. A. Allen. Personnel 30:17-26 Jl '53

Detroit auto makers; tempo shapes a type. il Bsns W p56+ Ap 25 '53

Economic facts for executives; what today's management does and thinks about reports. Mod Ind 24:48-51 D '52

Effective executive development. E. W. Jochim. Advanced Management 17:1 S '52

Engineer becomes a professional manager. H. Rubey. J Eng Educ 43:338-41 Ja '53

Executive-development plan for a small plant's officers; So-Lo Marx rubber co. Mod Ind 25:124 My '53

Executive neurosis. R. N. McMurry. Harvard Bsns R 30:33-47 N '52

Executives' financial preparation for retirement. H. R. Hall. Harvard Bsns R 31:83-96 Ja '53

Go ahead, fire the guy! E. Winslow. Ptr Ink 241:106 O 31 '52

Hold onto your key men. Steel 132:47-8 My 18 '53

How busy are your key men? W. E. Dewey. Factory Management 111:230+ Jl '53

How they climb. Bsns W p 106-7 D 6 '52

How to find executive talent. S. N. Stevens. Credit & Fin Management 54:8-9 S; 18-20 O '52

How to have a nervous breakdown. Mod Ind 25:54-6 Ap '53

How to improve your memory. W. Schweisheimer. Am Bsns 23:18-19+ O '53

How to retire an executive. Bsns W p66+ Ap 25 '53

Industry calls in the doctor. R. C. Page. Harvard Bsns R 31:109-17 S '53

Is executive turnover rate rising? W. Norris. Am Bsns 23:10-13 Je '53

Management development. L. A. Russ. Elec Eng 72:379-82 My '53

Nine hundred. map Fortune 46:132-5+ N '52

Pace that kills. W. Schweisheimer. Am Bsns 23:16-17 S '53

Prepare to retire; opportunities for financially trained executives. R. Reeder. Trusts & Estates 91:818-19 N '52

Relax and produce more. il Mod Ind 25:42-3 Mr '53

Sales or production, which is best background for a top executive? Ind Marketing 38:52-4+ Ja '53

Self development. F. J. Curtis. Chem & Eng N 30:4610-13 N 3 '52

Selling; the big job for many top men. Bsns W p60 Jl 4 '53

Some causes of executive job dissatisfaction. A. M. Fisher. Advanced Management 17:9-12 S '52

Some executives you may know; cartoons with text. C. McPherson. Am Bsns 23:18-19 Jl '53

Staff assistant, wise or otherwise? A. S. Thompson, jr. Personnel 29:136-40 S '52

Standard Oil studies executive health. W. Schweisheimer. il Am Bsns 22:12-13 D '52

Ten big benefits you enjoy when you put your policies in writing; Aldens, Chicago mail order company. J. C. Staehle. Sales Management 70:24-5+ Ja 1 '53

EXECUTIVES—*Continued*

Transients; management man has become the real migratory worker. W. H. Whyte, jr. il Fortune 47:112-17+ My '53

Utility executive objectives and duties. W. E. Wood. Edison Elec Inst Bul 21:337-40+ S '53

We are going to need more executives. C. H. Greenewalt. Chem & Eng N 31:2172-4 My 25 '53

What is your human management rating? Mod Ind 25:44-5 Ap '53

When utility vice presidents turn into professors; Pacific telephone & telegraph co. J. H. Collins. Pub Util 52:298-305 Ag 27 '53

Who does the moving? Bsns W p 118-20 My 2 '53

Whoa! can't live forever! E. W. Fair. Credit & Fin Management 55:16-17 Je '53

You can use your time better. W. E. Dewey. Factory Management 111:84-9 F '53

See also

Advertising managers
Business management
Clay, Lucius DuBignon
Corporations—Directors
Credit managers
Efficiency, Industrial
Employment management
Factory management
Foremen
Insurance companies—Officials
Organization in industry
Sales managers
Supervisory workers
Women as executives

Rating

Executives; their personality and its appraisal. B. B. Gardner. Advanced Management 18:13-15 Ja '53

Make your executive merit rating realistic! E. C. Schleh. Personnel 29:480-4 My '53

Merit rating plan for executives; Bell & Howell co. W. Hodge. Factory Management 111:102-5 O '53

Yardstick to measure executives; United parcel service; forced-choice ratings. Bsns W p62+ Je 6 '53

Salaries

Are executives paid enough? A. Patton. Fortune 47:106-7+ Ja '53

Better way out; stock sold subject to temporary restrictions. H. Greenfield. Bsns W p 10 My 16 '53

Cautious look at extra-salary plans. Bsns W p 144 Ap 18 '53

Deferred compensation plan for executives and key employees. M. K. Collie. Am Gas Assn Proc 1952:173-8

Deferred pay; how and why. Bsns W p 103-4 My 30 '53

Executive compensation in small companies. J. M. Rosow. Harvard Bsns R 31:55-63 My '53

Executive compensation in the federal government. J. M. Rosow. Personnel 29:390-401 Mr '53

Executive compensation plans. J. A. Keller. Paper Ind 35:793 O '53

Executives behind the parade in pay in a living cost spiral. Credit & Fin Management 55:25 F '53

Executive's paycheck. Am Bsns 23:10-12 Ag '53

How to hold executives. Bsns W p78+ F 14 '53

Management pay: trend levels out. Bsns W p 110+ My 23 '53

Meeting the six goals of executive compensation. J. K. Lasser and M. M. Goldstein. il Dun's R 61:25-6+ Je; 25-6+ Jl '53

Needed; more incentive for management. A. Patton. Ptr Ink 242:37-9 Ja 16 '53

Tax aspects and trends in executive compensation. V. H. Rothschild, 2d. Comm & Fin Chr 178:6+ Jl 2 '53

Top management reviews its paychecks; compensation of principal executives in the radio and television industry. Electronics 26:14 F '53

Two tools for determining executive compensation policies; external comparison, internal evaluation. A. M. Fisher. J Account 94:622+ N '52

Yardstick for management salaries. Bsns W p72+ Ja 31 '53

Training

Brain food for the boss. A. R. Hahn. Sales Management 70:90-1 Mr 1 '53

Building executives for the future. L. A. Allen. Advanced Management 17:18-21 N '52

B-school speeds up course for executives. Bsns W p68 Je 6 '53

Business schools and executive development. S. F. Teele. Advanced Management 18:25-8 Ja '53

Can executives be taught to think? P. Stryker. il Fortune 47:138-41+ My '53

Course for CEI co. executives; first group completes progressive management. Elec World News ed 139:35 Mr 30 '53

Developing leaders through the conference method; reprinted from Jan. 1938 issue. H. C. Metcalf. Advanced Management 17:6-12 O '52

Developing the managerial abilities of employees. F. J. Curtis. Engineer 196:281-2 Ag 28 '53

Executive courses spread. il Bsns W p76-80 Ap 4 '53

Executive development. Chem & Eng N 31:1172-4 Mr 23 '53

Executive development. B. Seltzer. Am Bsns 23:14-15+ F; 32+ Mr; 26+ Ap '53

Executive development program; Blue cross and Blue shield. R. J. Koch. Personnel J 31:333-5 F '53

Executive development program using job rotation; Consolidated Edison company of New York. D. S. Sargent. Personnel J 31:405-9 Ap '53

Executive personnel development. J. C. Worthy. Advanced Management 18:5-8+ F '53

Executive trainees earn while they learn. E. D. Fraser. J Retailing 29:71-8+ Summer '53

Executive training program in speed-reading; Adult reading center, Western reserve university. J. O. Jacobson. il Burroughs Clearing House 37:29 Je '53

Executive training programs. Steel 132:56-7 Ja 19 '53

Executives get basic training; reading for profit. H. Judson. il Oil & Gas J 52:250-2 My 18 '53

Great American man hunt. G. A. Price. Advanced Management 17:22-5 D '52

Group training in higher management development. R. R. Crow. Personnel 29:457-60 My '53

Growing illiteracy. R. D. Paine, jr. Advanced Management 18:11-12 Ja '53

Growing your own executives. W. H. Conant. il Am Bsns 23:16-17+ Jl '53

How REA finds executive talent. Ry Age 134:52-3 F 16 '53

In small company new management plan trains junior executives. Product Eng 23:197 D '52

Management course packed with intensive meetings. W. H. Kushnick. il Sales Management 69:32+ pt 2 O 1 '52

Need for executive development; what it takes to be a good executive. P. F. Drucker. Advanced Management 18:5-7 Ja '53

Pattern for executive growth; executive operations technique (EOT) as applied at Williamson-Dickie manufacturing co. C. D. Williamson. Dun's R 61:28-9+ Ap '53

Production control is the best place to train college grads; Aeroquip corp. M. Betley. Factory Management 111:296+ O '53

Professional societies, a tool for executive development. T. M. Linville. Advanced Management 18:31-3 Ja '53

Survey of executive development across the country. Mod Ind 25:62+ F '53

Talent without tears; a Radcliffe experiment expands. B. Lefferts. Barron's 33:7 Mr 9 '53

Teaching the total management function through job rotation and other ways. H. V. Olsen. Advanced Management 18:17-20 Ja '53

Training for hard selling. il Bsns W p66+ Jl 4 '53

21 top executives learn to read 216 per cent faster. C. J. Mullins and H. W. Mowry, 3d. Personnel J 31:336-8 F '53

EXECUTIVES—Training—*Continued*
University of Georgia's executive development program. il Manuf Rec 122:44-5 Ag '53
Why all the fuss about executive development? Chem Eng 60:248+ F '53

EXERCISE Mainbrace. See Naval maneuvers

EXHAUST steam
Separate oil from your steam the modern way. G. S. Emmerson. diags Power Eng 57:90-1+ Je '53

EXHAUST systems
Air pollution ordinances. J. M. Kane. il Foundry 80:104-7+ O '52
Combined supply and return air kitchen hoods. W. L. Broemel. il diags Sheet Metal Worker 44:45-6 Je '53
Constructing ventilation systems for radioactive work. W. W. McIntosh. il Heating-Piping 25:98-102 Je; 98-102 Jl '53
Crushing plant dust control at the Ray mines division, Kennecott copper corp. J. F. Knudsen. bibliog flow sheet il Min Eng 5:Trans 689-95 Jl '53
Design of exhaust systems (cont). F. H. Stebbins. il plans diags Sheet Metal Worker 44:32-4 D '52; 93-4 Ja; 57-8+ F; 72-3 Mr; 77-9 Ap; 68-9+ My '53
Design of exhaust systems; new series. F. H. Stebbins. diags Sheet Metal Worker 44:67-9+ Je; 88+ Jl; 82+ S; 45:56-8+ O '53
Design of kitchen range hoods. J. M. Dalla-Valle. il diags Heat & Ven 50:95-100 Ag '53
Dust exhaust system. Heat & Ven 50:108-9 My '53
Efficient fume removal; Winters and Crampton plating plant. il Metal Finishing 51:73-4 F '53
Paper mill ventilation with closed hoods at Iroquois Falls. J. C. Jordan. il plans diags Pulp & Pa of Can (Convention no) 54:253-66 [F] '53
Practical aspects of dust suppression. W. B. Lawrie. il Nat Safety N 67:26-7+ F; 28-9+ My '53
Recover waste heat in plant exhaust air to cut steam and fuel costs. H. McCall. il diag Power 97:84-5 Mr '53
Steel foundry research on grinding machine exhaust systems; major development in dust control. il diags Metallurgia 47:137-8 Mr '53
Triple-threat fume disposal system; Kaiser aluminum and chemical plant. il Chem Eng 59:262-3 D '52

EXHIBITION buildings
Curved roof on cables spans big arena; livestock judging pavilion at Raleigh, N.C. F. S. Merritt. il diags Eng N 150:31-4+ F 5 '53
Design for industry; architecture as sculpture; exhibit at 1952 Milan world's fair of La Breda co. il plan Arch Rec 112:18 O '52
High line crew places novel roof over North Carolina state fair Live stock judging pavilion. il Constr Methods 35:52-4 F '53
Something new in framing; oblique concrete arches to carry steel catenary roof; livestock judging pavilion built at the North Carolina State fair grounds. il Eng N 149:33 O 2 '52

EXHIBITIONS
Basic materials conference and exposition, New York, June 15-19; list of committee members, sponsors, exhibitors; program. Materials & Methods 37:131+ Je '53
Do-it-yourself idea on parade. il Bsns W p32-3 Mr 21 '53
Fairs and exhibitions. Published irregularly in Foreign commerce weekly
Hannover schedules Industries fair for spring of next year. For Comm W 48:17 D 29 '52
Industrial shows. Published in monthly numbers of Industrial marketing

See also
British industries fair
Fairs
National exposition of power and mechanical engineering

also subdivision Exhibitions under special subjects, e.g.
Aeronautics
Automobiles
Chemical industries
Construction equipment
Electric apparatus and appliances
Electric industries
Electric instruments
Heating industry
Machinery
Motor buses
Motor trucks
Packaging
Physical instruments
Radio apparatus
Road making machinery
Textile machinery
Welding

Great Britain

Information services of the Festival of Britain. J. W. Triggs. Aslib Proc 4:225-31; Discussion. 231-2 N '52

EXHIBITORS advisory council
Conclave for squeezing most out of exhibit dollar. Sales Management 69:43-5 pt 2 O 1 '52

EXHIBITS
Booth location isn't vital, demonstration is, study finds. R. W. Mulcahy. il plan Ind Marketing 37:60-1+ N '52
Can peep show sell hard goods? Viking tries it, says yes. B. Enos. il Ind Marketing 38:104-5+ Mr '53
Company promotes trade show exhibit with triple-invitation. il Ind Marketing 37:124 N '52
Conference in exhibit; Du Pont at National plastics exposition. Sales Management 70:15 pt 2 Ja 1 '53
Exhibit clinic. D. I. Splay. Sales Management 70:66-8 pt 2 Ja 1 '53
Exhibitors favor show audits. Ind Marketing 38:40 S '53
First show to promote trade shows sheds new light for exhibitors. il Sales Management 69:51-2+ pt 2 O 1 '52
How publication advertising methods can help your show exhibits. A. Lowell. il Ind Marketing 38:46-7+ F '53
How Saran managed the debut of its new synthetic fiber; press preview. il Sales Management 69:74+ N 20 '52
How to use trade show medium for sales forecasting studies. J. T. Fosdick. Sales Management 70:19-20 pt 2 Ja 1 '53
Lukens brings top steel to New York to meet the press. il Welding J 32:854-7 S '53
Prospect watches birdie while salesman talks; G-E snaps pictures of prospects at trade show exhibit. Sales Management 69:114+ O 15 '52
Sun Oil uses an exhibit to further employe relations. R. Newcomb and M. Sammons. il Ind Marketing 38:152+ S '53
Ten ways for admen to benefit indirectly from trade shows. G. Wedereit. il Ind Marketing 38:48-9 F '53
Ten ways to get publicity at a trade show. E. Greif. Sales Management 70:45-50 pt 2 Ja 1 '53

See also
Banks and banking—Exhibits
Electric utilities—Exhibits
Gas companies—Exhibits
Museum exhibits

EXHIBITS, Jobbers'
Distributor's trade show a new approach to merchandising education for retailers. il Sales Management 70:22+ pt 2 Ja 1 '53
Pointers for manufacturers on a distributor's open house. L. H. Brendel. Sales Management 69:81-2+ D 15 '52

EXHIBITS, Traveling
Appliance train; GE introduces 1953 line to distributors. il Bsns W p 124 N 22 '52
Byron goes inside classroom and out after the buyer. W. N. Beadle. il Ind Marketing 37:60+ S '52
DoAll shows 'em with visual catalog. il Sales Management 69:33 N 20 '52
G-E appliances try the trains. il Elec West 110:99 Ja '53
He drives a bus full of cheesecake, watta job! traveling fashion show bus owned by the Hess department store. J. Breslin. il Bus Transportation 31:60 D '52
Honeywell profits from others' mistakes when its show goes out to sell. R. H. Jacobs. il Sales Management 69:14-15+ pt 2 O 1 '52
Lift trucks play one-night stands; Yale & Towne manufacturing co. traveling materials handling equipment show. il Iron Age 171:71 F 26 '53; Nat Safety N 68:60 S '53
Machine tools hit the road. il Bsns W p 166 Ap 18 '53

EXHIBITS, Traveling—*Continued*

Mobile units bring product and prospect face to face. il Sales Management 70:65-6 Mr 1 '53

"Reading is fun" fair goes to the children. T. S. Irvin. Ed & Pub 85:46 S 20 '52

Rolling showroom; Peerless plumbers supply co. il Dom Eng 181:93+ Je '53

Statewide cooperative hits the road to tell wiring story with panels. W. E. Stuckey. il Elec World News ed 139:22-3 Mr 2 '53

Takes the show to the farm. D. J. McGonigle. il Elec West 111:96-7 Jl '53

Ten essentials Budweiser learned in staging a traveling convention. J. E. Barsi. il Sales Management 69:71-2 pt 2 O 1 '52

To build the market, try a trailer. il Paint Oil & Chem R 116:8-9 Jl 30 '53

Westinghouse salesmen learn how to use traveling display. il Ind Marketing 38:142+ Jl '53

What's inside Reynolds' trailers? aluminum foil military and industrial packaging, and farm building products. il Sales Management 69:89-90+ N 1 '52

Yale & Towne materials handling show starts two-year transcontinental tour. il Steel 132:180 Mr 2 '53; Ind Marketing 38:30 Ap '53

EXPANDED shale institute

Meeting, Kansas City, April 13-15. Concrete 61:14 My '53; Brick & Clay Rec 122:30 My '53

Midyear meeting, Dallas, Tex. Dec. 1-3. Rock Prod 56:185+ F '53

EXPANDED sheet metal. See Sheet metal, Expanded

EXPANSION (heat)

Behavior of materials under conditions of thermal stress. S. S. Manson. Machine Design 25:364+ O '53

Design and construction of a self-calibrating dilatometer for high-temperature use. A. Lieberman and W. B. Crandall. diags Am Cer Soc J 35:304-8 N 1 '52

Experimental evaluation of expansion factors for steam. J. W. Murdock and C. J. Foltz. A S M E Trans 75:953-9 Jl '53

How expansion and contraction effect welding results. L. M. Amburgey. diags Welding J 32:142-4 F '53

Low expansion nickel alloys; engineering file facts. Materials & Methods 37:123 Ja '53

Magnetic moment orientation and thermal expansion of antiferromagnetic CrSb. A. I. Snow. diag Rs Mod Phys 25:127 Ja '53

Provide for expansion and contraction. J. A. Fluharty. il diags Welding J 32:620-1 Jl '53

Sealing metal to glass; problem of varying rates of expansion. R. H. Warring. diags Elec R (Lond) 151:301-4 Ag 8 '52

Temperature expansion and contraction stresses in buried pipe lines. F. Karge. Pet Eng 24:D42+ O '52

Thermal expansion of nonmetallic crystals. J. B. Austin. il diags Am Cer Soc J 35:243-53 O 1 '52

Thermal expansion of solids. J. S. Dugdale and D. K. C. MacDonald. Phys R 89:832-4 F 15 '53

Volume-time-temperature relationship of polystyrene. J. J. Millane and S. M. McLaren. bibliog diags J Ap Chem 2:554-6 S '52

EXPENSE accounts. See Salesmen—Expenses

EXPERIMENT, inc.

In business for research. il Bsns W p 107-8 My 23 '53

EXPERIMENTAL biology, Federation of American societies for. See Federation of American societies for experimental biology

EXPERT evidence

Expert testimony. C. P. McCord. Ind Med 22:56-62 F '53

How good a technical witness are you? C. M. Hudspeth. Chem Eng 60:282+ Ap '53

Incriminating stains. C. E. O'Hara and J. W. Osterburg. il Sci Am 188:58-60+ F '53; Discussion. W. F. Meggers. 188:2+; Reply. 4 Ap '53

EXPLOSIONS

Blow torch in a fan; Trenton channel plant of the Detroit Edison co. il Power Eng 57:83 S '53

Chief engineer at Longview explains blow tank explosion. Paper Tr J 136:11-12 F 13 '53

Explosion liabilities suggest precautions for utilities. L. T. Parker. Am Gas J 177:18-19 O '52

Explosion-proof devices; install them right. J. W. St Andre. il diag Factory Management 111:106-7 Je '53

Explosions in chlorine absorption systems. E. A. Mason and others. bibliog diags Tappi 36:274-8 Je '53

Hydrogen explosions from water decomposition in fires are rare. Safety Maint & Prod 104:48 O '52

Industrial fires and explosions from electrostatic origin. R. Beach. bibliog diag Mech Eng 75:307-13 Ap '53

Initial behavior of a spherical blast. J. A. McFadden. J Ap Phys 23:1269-75 N '52

Insurance loss in Aiken explosion set at $350,000. Nat Underw 57:8 F 26 '53

Solution of the Poisson-Boltzmann equation with application to the theory of thermal explosions. P. L. Chambré. bibliog J Chem Phys 20:1795-7 N '52

Texas City case argued before United States Supreme court. East Underw 54:28 Ap 17 '53

To prevent explosions avoid maximum oxygen limits. J. D. Constance. Power 97:99 Ag '53

U.S. Supreme court hears appeal on liability for nitrate explosion. East Underw 54:18 Ja 2 '53

U.S. wins Texas City case. East Underw 54:20 Je 12 '53; Nat Underw 57:2+ Je 11 '53; Weekly Underw 168:1607 Je 13 '53

Your plant, too, could go boom! J. W. St Andre. il Factory Management 111:142-4 Ap '53

See also

Coal mines and mining—Accidents and explosions
Crankcases—Explosions
Detonation
Diesel engines—Explosions
Hydrogen peroxide
Inflammable liquids
Inflammable mixtures
Photography of explosions

EXPLOSIONS, Photography of. See Photography of explosions

EXPLOSIVES

Experimental technique used to measure transient waves through solids. W. A. Allen and C. L. McCrary. bibliog il diags R Sci Instr 24:165-71 F '53

Experimental verification of the theory of jet formation by charges with lined conical cavities. R. J. Eichelberger and E. M. Pugh. il diags J Ap Phys 23:537-42 My '52

Free surface properties of explosive-driven metal plates. R. G. Shreffler and W. E. Deal. il diags J Ap Phys 24:44-8 Ja '53

Improving well yields by use of vibratory explosives. H. A. Mylander. il diag Water & Sewage Works 99:502-11 D '52; Same cond. Am Water Works Assn J 44:39-48 Ja '52

Solution to the caking problem of ammonium nitrate and ammonium nitrate explosives. J. Whetstone. bibliog il Ind & Eng Chem 44:2663-7 N '52

Theory of jet formation by charges with lined conical cavities. E. M. Pugh and others. diags J Ap Phys 23:532-6 My '52

See also

Blasting
Detonation
Nitrocellulose
Nitromethane

Safety measures

Don'ts; latest revision of don'ts adopted by the Institute of makers of explosives, May 5, 1951. Explosives Eng 30:191-2 N '52

Transportation

Another explosive round. Chem W 71:48-9 D 6 '52

Explosives transport regulations revamped. Oil Paint & Drug Rep 164:5 S 7 '53

Res ipsa loquitur held only theory applicable in dynamite explosion case; Pope v. Edward M. Rude carrier corp. Weekly Underw 168:1648 Je 13 '53

Trucks called safe for explosives. B. E. Stillwell. Ry Age 134:12-13 My 4 '53

EXPORT advertising. See Advertising, Foreign

EXPORT credit insurance. See Insurance, Export credit

EXPORT credits guaranty department. See Great Britain—Export credits guaranty department

EXPORT-import bank of Washington

Changes at the Eximbank. H. Bratter. Banking 45:53 Je '53

Larger annual dividend paid by export-import bank. For Comm W 50:24 Jl 13 '53

Portugal to receive credit for railway. For Comm W 49:4 Ja 26 '53

Summarizes activities for 1952. For Comm W 49:3 Ja 26 '53

United States extends credit line to Brazil. For Comm W 49:3 Mr 9 '53

EXPORT tax. See Tariff (export duties)

EXPORT trade

American exporters look for a way out. il Steel 131:73 N 3 '52

Chemical export selling; past, present, future. il Chem W 72:16-23+ Ja 3 '53

Elasticity of demand for the exports of a single country. F. B. Horner. R Econ & Stat 34:326-42 N '52

Electrical export survey. il Elec J 150:1505-37 My 1 '53

Exporter who does his stuff may add to his share of business in '53. D. McIntosh. Credit & Fin Management 54:37 S '52

Fewer requests filed for licenses to export irrigation systems. For Comm W 48:10-11 N 24 '52

Foreign assets up, buying lags. Bsns W p90+ Jl 4 '53

Going abroad for business, Jervis B. Webb co. Bsns W p 128-9 F 14 '53

Licensing against rice export allocation nears completion. For Comm W 48:32 D 8 '52

Nudging the inevitable, a proposal for freer foreign trade. R. G. Gettell. Comm & Fin Chr 177:2196+ My 21 '53

Our money, media, markets in modern Latin America. Sales Management 70:130+ Ja 15 '53

Prospects for foreign trade in 1953. V. L. Horoth. Mag of Wall St 91:393-5+ Ja 10 '53

Rice exporters meet with OIT, discuss licensing procedures. For Comm W 48:35 D 15 '52

Tripling capital goods exports. Bsns W p 156-7 Jl 25 '53

World trade leads. Published in Foreign commerce weekly

See also

Balance of payments
Commerce
Foreign exchange
Tariff
United States—Commerce

Advertising

See Advertising, Foreign

Bibliography

World trade publications. Published irregularly in Foreign commerce weekly

Commodity classification schedules

Correct Schedule B numbers. For Comm W 48:2 O 13 '52

Finance

Banning export bonuses? International monetary fund and program for abolishing dollar retention schemes. Economist 167:614 My 30 '53

See also

Export-import bank of Washington

Government aid

Field offices provide practical service. C. Hayward. For Comm W 48:9+ D 29 '52

See also

Insurance, Export trade

Marketing

Congo, Indonesia, Venezuela loom as new world markets; with maps. Ind Marketing 38:47-50 Mr '53

Creation and promotion of foreign markets. H. D. Arneson. Comm & Fin Chr 178:258+ Jl 23 '53

Licensing and mental attitude push Lindberg sales abroad. C. H. Stevenson. Ind Marketing 38:62+ Mr '53

OIT improves its trade list service. For Comm W 49:13 Je 29 '53

Overseas publicity. Elec J 150:1519-21 My 1 '53

Selling to southeast Asia? diplomacy with dealers is key. Ind Marketing 38:51 Mr '53

Ten ways to avoid costly headaches when you market abroad. R. F. Anderson. Sales Management 69:102+ D 1 '52

Regulation

Chemical export control procedures are changed. Oil Paint & Drug Rep 164:3+ S 21 '53

Controls on international trade. Published in Foreign commerce weekly

Delivery verifications. For Comm W 49:2 My 4 '53

Field offices and export control. For Comm W 49:2 Ap 27 '53

Firm policy urged on steel scrap exports. For Comm W 49:24 Je 1 '53

Four firms denied export privileges. For Comm W 49:30-1 Mr 16 '53

India announces licensing policy; few changes effected in OGL. For Comm W 49:8 F 2 '53

Multiple transaction consignee statement. For Comm W 49:2 Ja 5 '53

New export licensing procedures announced by Office of international trade. For Comm W 49:27 My 18 '53

OIT announces IC-DV procedure revisions. For Comm W 49:22 Mr 9 '53

Office of international trade comments. Published in Foreign commerce weekly

OIT eases controls on exports. C. P. Henry. For Comm W 49:16 Ap 27 '53

OIT eases up export controls for chemicals. Oil Paint & Drug Rep 163:5+ Ja 5 '53

OIT loosens controls over export business. Oil Paint & Drug Rep 164:3+ Ag 17 '53

OIT simplifies export licensing. For Comm W 49:4 Ap 20 '53

Order upheld against two foreign firms; N.Y. firms export suspension extended. For Comm W 49:8-9 Ap 13 '53

Orders issued against U.S. foreign firms. For Comm W 49:23-4 My 11 '53

Summary of foreign control regulations applying to imports from the United States. For Comm W 49:13-15 Ap 27 '53

U.S. fueling of ships engaged in red China trade to be restricted. For Comm W 49:23 Je 15 '53

U.S. government actions. Published in Foreign commerce weekly

U.S., Hong Kong firms lose export rights. For Comm W 49:9 Je 8 '53

Western Germany simplifies controls on commissions to foreign sales agents. For Comm W 49:6 F 2 '53

Statistics

First-quarter '53 export quotas set for steel, copper, aluminum. For Comm W 48:22 N 10 '52

Taxation

How to arrange foreign sales so title will pass outside the U.S. for tax purposes. S. T. Dean and J. B. Leake. J Account 94:457-9 O '52

EXPOSURE meters

Exposure time measurement in electron microscopy using a visual photometer. A. E. Ennos. J Sci Instr 29:299-300 S '52

Integrating light meter for fading tests. O. E. Miller. il diag Opt Soc Am J 42:661-2 S '52

EXPRESS companies

See also

Railway express agency

EXPRESS rates

Express rates or animals? W. Hegener. Science 117:234 F 27 '53

EXPRESSWAYS

Baltimore beltway plans revealed. Eng N 149:47 D 25 '52

Connecticut plans expressway network. map Eng N 150:25 Ap 9 '53

Consultants propose expressway plan to relieve Milwaukee's congestion. plan Eng N 149:47-8 D 4 '52

EXPRESSWAYS—*Continued*

Expressway plan developed for city of Milwaukee. plan Civil Eng 22:1052-3 D '52

Hard luck clover leaf for utilities; effect of Los Angeles freeway. J. H. Collins. Pub Util 51:30-6 Ja 1 '53

Mexico opens expressway. Eng N 149:66+ D 18 '52

$150-million expressway system proposed for Miami's traffic problem. Eng N 150:51 Ja 15 '53

$180-million expressway program passes the one-third mark. il Eng N 149:44 O 30 '52

Plan completion of major expressway. Eng N 149:119 D 4 '52

Providence expressway westbound lanes to open. Eng N 149:45 O 30 '52

San Antonio expressway progresses. map Eng N 149:53-4 O 23 '52

Tunnel and viaduct to ease Seattle's traffic troubles. R. W. Finke. il plan Civil Eng 22:1025-9 D '52

EXTRA editions. See Newspapers—Extra editions

EXTRA expense insurance. See Insurance, Extra expense

EXTRACTION apparatus

Better solvent extraction. diag Chem Eng 60:124+ My '53

Cold extractor. C. R. Parks. diag Anal Chem 25:536 Mr '53

Laboratory extraction unit. J. P. E. Human. diags Chem & Ind p 1052 O 25 '52

Liquid-liquid extractor has unusual plate construction. diag Chem Eng 60:335-6 Ja '53

Lukenweld designs packaged solvent extraction plant. Chem Eng 60:147-8 Ap '53

Small laboratory liquid-liquid extraction apparatus. J. F. Short. diag Chem Soc J p 1278-81 Ap '53

Solution of transient stagewise operations on an analog computer. A. Acrivos and N. R. Amundson. il diags Ind & Eng Chem 45:467-71 F '53

Spray tower extraction. M. L. Newman; C. J. Geankoplis. diags Ind & Eng Chem 44:2457-8 O '52

EXTRACTION processes

Aromatics recovery by hydroforming and phenol extraction. J. J. Swift and others. flow diag il diag Pet Processing 8:81-7 Ja '53

Catalytic cycle-stock treating unit. C. F. Tears. flow sheet Oil & Gas J 52:119+ Je 15 '53; Same. Pet Eng (Ref annual) 25:C 12-14 Jl 15 '53

Chayen's impulse. diag Ind & Eng Chem 45: sup 11A+ Mr '53

Chemical engineering unit operations; solvent extraction. R. E. Treybal. Ind & Eng Chem 45:58-67 bibliog(381 ref, p64-7) Ja '53

Cold rendering displaces extraction processes; Chayen process. flow diag il Can Chem Process 36:38+ D '52

Cold rendering of fats; British glues and chemicals, ltd., develop new process. il Chem Age (Lond) 67:627-8 N 8 '52

Cold rendering process for oils and fats, impulse rendering. il Engineer 194:627 N 7 '52; Abstract. Engineering 174:595 N 7 '52

Cut phenols in waste by 99.9 per cent. J. A. Biehl. flow diag Pet Processing 7:1435-7 O '52

Diffusion phenomena in solvent deresination of guayule rubber. T. F. Banigan, jr. bibliog Ind & Eng Chem 45:577-81 Mr '53

Direct solvent process aids small operators; packaged plants for cottonseed. il Food Eng 25:89 Ag '53

Filtration-extraction of cottonseed. E. L. D'Aquin and others. bibliog flow diags il diag Ind & Eng Chem 45:247-54 Ja '53

Fractional liquid extraction approach to steady state conditions. E. G. Scheibel. diag Ind & Eng Chem 44:2942-4 D '52

HF extraction; Standard oil co. (Indiana). flow diag Pet Refiner 31:188-9 S '52

High-frequency impulses blast fats, oils from cellular matter; Chayen process. flow sheet il Chem & Eng N 30:5266+ D 15 '52

High-quality rubber by acetone deresination of guayule. F. E. Clark and others. bibliog Ind & Eng Chem 45:572-6 Mr '53

Mass transfer data for furfural extraction. L. Garwin and E. C. Barber. bibliog diags Pet Refiner 32:144-8 Ja '53

Mixtures for oil recovery by solvent methods. R. F. Nielsen. Oil & Gas J 51:135 N 24 '52

New extraction process for vegetable oils at Toronto elevators. il Can Chem Process 37:28-9 Ja '53

New process offers boon to small oilseed crushers; Lukenweld process. Chem Eng 59:236 O '52

Nitrobenzene extraction; Atlantic refining co. flow diag Pet Refiner 31:194-5 S '52

Phenol extraction; M. W. Kellogg co. flow diag Pet Refiner 31:194-5 S '52

Propane deasphalting; M. W. Kellogg co. flow diag Pet Refiner 31:198-9 S '52

Separation of antimony by solvent extraction. C. E. White and H. J. Rose. Anal Chem 25:351-3 F '53

Separation of phenols from coal-tar hydrocarbons by means of glycerol and aqueous triethylene glycol; development of a process. A. P. C. Cumming. flow diags J Ap Chem 3:98-106 Mr '53

Shock waves expel cold fat; Chayen process. il Chem Eng 60:118+ F '53

Simple hookup solves problem in liquid-liquid extraction. J. D. Ross. diag Chem Eng 60:213 Ap '53

Studies of the solvent extraction behavior of the transition elements; order and degree of fractionation of the trivalent rare earths. D. F. Peppard and others. bibliog J Phys Chem 57:294-301 Mr '53

Two routes to rendering; shock blast, flash heat; Chayen and Kingam processes. il Chem W 71:42+ D 20 '52

See also

Leaching

Solvents

Tables, calculations, etc.

Two-component separations by double-solvent extraction; diagrams for determining operating conditions. A. Klinkenberg. diag Ind & Eng Chem 45:653-7 Mr '53

EXTRUSION machines

Big doings mark coming of monster presses; based on papers presented at symposium on heavy presses for light metal forgings and extrusions. il diag S A E J 61:31-7 My '53

Big presses tax design ingenuity. M. D. Stone. il diags Iron Age 171:99-103 Ja 8 '53

Extruding giants coming along. I. Stone. il Aviation W 57:42+ D 1 '52

Extrusion experience yields new design. il Steel 132:137 Ap 6 '53

Heavy press program gets the ax. Steel 132:44 Je 29 '53

Large extrusion-press operation and production problems in aluminum. T. F. McCormick. il Aeronautical Eng R 12:27-33 F '53; Same cond. Iron Age 170:158-61 D 11 '52; Same cond. Machine Design 25:184-5+ My '53; Abstracts. Automotive Ind 108:44-5 Ja 15 '53; Metal Prog 63:114+ Mr '53

Symposium on heavy presses for light metal forging and extrusion. Metal Prog 63:111-14+ Mr '53

20,000 ton extrusion press. M. D. Stone. Automotive Ind 108:45+ Ja 15 '53

Watson-Stillman long-stroke aluminum extrusion press. il Am Mach 97:216 Je 8 '53

Where AF heavy press program stands. I. Stone. diags Aviation W 58:98-100+ Mr 2 '53

EXTRUSION machines (for plastics)

Machinery market booms; extruders and auxiliary equipment. H. R. Simonds. il diag Iron Age 171:142-5 Ap 9 '53

New pipe extrusion equipment. il Mod Plastics 30:124+ O '52

Plastic flow paths in an extruder worm. L. F. Street. diags Mod Plastics 30:130+ Ap '53

Plastics machinery; permanent market for press makers. il Steel 132:69 Mr 16 '53

EXTRUSION plastometers. See Plastometers

EXTRUSION process

American application of the Ugine-Séjournet extrusion process. il diag Engineer 194:680-1+ N 21 '52

Automotive hot extrusions; abstract. J. H. Friedman. Automotive Ind 108:64 My 1 '53

Cold extrusion conference, London, May 12-13. Iron Age 171:124-5 Je 11 '53

Cold extrusion of steel. H. J. Pessl and H. H. Hauttmann. il diags Metal Prog 64:97-102 Jl; 69-73 Ag '53

EXTRUSION process—*Continued*

Cold extrusion ready to invade metalworking markets. D. I. Brown. il diags Iron Age 171:152-5 Ap 23 '53

Cold extrusion; résumé of American developments. il Automobile Eng 43:187-9 My '53

Cold extrusion saves time and material in making rocket elements. J. Geschelin. il Automotive Ind 108:62-5 Ja 1 '53

Cold shaping of steel by compression reaches commercial applications. A. H. Allen. il Metal Prog 64:65-8 Ag '53

Complex steel parts available as hot extrusion takes hold. il Materials & Methods 37: 205-6+ Ap '53

Conference on cold extrusion of steel, London. Metal Prog 64:74-7 Ag '53

Conveyors carry cold-extruded rockets to high production level; Pontiac division, General motors corp. W. G. Patton. il diag Iron Age 171:225-31 My 7 '53

Drill press extrusion cuts costs of thin-wall parts; Uniskan extrusion method. W. N. Parker. il diags Iron Age 171:171-5 Mr 5 '53

Experts analyze heavy press problems. I. Stone. il plan diags Aviation W 58:20-1+ Ja 5 '53

Extruded gear stock. il Am Mach 95:112 Ag 20 '51; Same. Product Eng Hdbk p D7 '53

Extrusion goes commercial. il Steel 132:106+ Ap 27 '53

Extrusion of steel; equipment, operation, production. J. Sejournet. diags Iron & Steel Eng 30:73-7; Discussion. 77-8 Ja '53

Extrusion review and forecast. diags Iron Age 171:302 Ja 1 '53

High strength aluminum impact extrusions. M. P. Meinel. il diags Materials & Methods 36:110-13 N '52

Hole extruding punches; reference book sheet. P. Balsells. diags Am Mach 97:195, 197 O 12 '53

Hot and cold extrusions; illustrations with text. S A E J 61:69-70 My '53

How National Tube hot extrudes stainless steel tubing; Ugine-Sejournet process used. D. I. Brown. il diags Iron Age 171:129-33 Mr 19 '53

How to make impact extrusions of high-strength aluminum; Lockheed aircraft corp. J. D. Shoemaker. il diags Am Mach 97: 129-40 Jl 6 '53

Intricate steel shapes now cold extruded. M. W. Riley. il Materials & Methods 38: 100-1 S '53

Magnesium; direct extrusion of alloys. J. Alico. bibliog il Light Metal Age 11:10-11+ Ap '53

Metallurgical requirements of steels for cold extrusion. D. V. Wilson. Metal Prog 64: 182+ Ag '53

National Tube now extruding tubes and shapes at Gary. il Blast F & Steel Pl 41: 397-8 Ap '53; Same. Mill & Factory 52: 252+ Je '53; Same. Iron & Steel Eng 30: 155+ Mr '53; Same. Midwest Eng 5:20-1 Mr '53; Abstract. Steel 132:67 Mr 9 '53

Plastic flow in a lead extrusion. C. T. Yang and E. G. Thomsen. bibliog il diags A S M E Trans 75:575-9 My '53

Plastic forming of metals. il diags Fortune 46:138-41+ N '52

Pontiac cold-extrudes rocket projectiles. B. C. Brosheer. il diag Am Mach 97:118-20 Ja 5 '53

Press-extruded forgings; Northrop aircraft corp. L. M. Christensen. il diag Machine Design 25:124-7 Jl '53

Requirements for large, light-metal forgings and extrusions in the aircraft industry. G. W. Papen. bibliog il plan diags Aeronautical Eng R 12:24-33 Ja '53; Excerpts. Automotive Ind 108:41-4 Ja 15 '53

Shape of steel to come. Ind & Eng Chem 44: sup 18A+ D '52

Symposium on heavy presses for light metal forging and extrusion. Engineer 195:183-5 Ja 30 '53; Metal Prog 63:111-14+ Mr '53

Ugine-Sejournet extrusion process. J. Strauss. il Blast F & Steel Pl 40:1184-9 O '52; Abstracts. Iron & Steel Eng 29:119-21 Ag '52; Iron Age 169:91-2 My 29 '52; Steel 130:98+ My 26 '52

What's ahead the next ten years in presswork and forging. Am Mach 96:D 11 Mid-N '52

EXTRUSION process (plastics)

Dynamite spacers. il Mod Plastics 30:184 F '53

Extruded plastic parts. R. S. Perkins. il diags Product Eng 23:150-3 O '52

Extrusion of polystyrene; abstract. E. Kropscott. Tool Eng 31:134 S '53

Fluorothene wire insulation; with suggestions for extrusion techniques. B. H. Maddock and W. M. Land. diag Mod Plastics 30: 126+ D '52

How to cut costs by vacuum-forming extruded plastic sheet. D. Woodruff, jr. il Am Mach 97:153-8 S 14 '53

Multi-screw extrusion of rigid vinyls. S. H. Greenwood. il India Rubber World 129:73-5 O '53

Plastics extrusions. W. Schack. il diag Machine Design 25:145-8 Mr '53

EYE

Destruction of epinephrine by the DOPA-oxidase system of ocular tissue. W. J. Angenent and G. B. Koelle. bibliog Science 116:543-4 N 14 '52

Eye protection program. D. J. Wood and H. Kohn. bibliog Ind Med 21:433-7 S '52

See also

Color sense
Optics, Physiological
Retina
Sight

Accommodation and refraction

Duration and light-dark ratio of intermittent preadaptation as factors influencing human dark adaptation. E. R. Adair. Opt Soc Am J 43:22-7 Ja '53

Effect of high intensity and short duration versus low intensity and long duration of intermittent pre-exposure upon human dark adaptation. F. A. Mote and E. C. Reed. bibliog Opt Soc Am J 42:521-5 Ag '52

Luminance thresholds for the resolution of visual detail during dark adaptation. J. L. Brown and others. Opt Soc Am J 43:197-202 Mr '53

Measurement of accommodation in dim light and in darkness by means of the Purkinje images. M. Koomen and others. il Opt Soc Am J 43:27-31 Ja '53

Mechanisms in peripheral dark adaptation. M. A. Bouman. bibliog Opt Soc Am J 42: 941-50 D '52

Peripheral contrast thresholds for various and different wavelengths for adapting field and test stimulus. M. A. Bouman. diag Opt Soc Am J 42:820-31 N '52

Diseases and defects

Bilateral lenticular opacities occurring in a technician operating a microwave generator. F. G. Hirsch and J. T. Parker. bibliog il A M A Archives Ind Hygiene & Occup Med 6:512-17 D '52

Certain physiologic and pathologic effects of microwaves. J. F. Herrick and F. H. Krusen. bibliog il diags Elec Eng 72:239-44 Mr '53

Is there a glass workers cataract? Cer Ind 59:79+ N '52

Malingering, with reference to the eye, ear, nose and throat. S. L. Shapiro. Ind Med 22:65-6 F '53

See also

Conjunctivitis

Examination

Bad eyes cost you money. G. G. Carr. diags Iron Age 171:63 F 19 '53

Eye health evaluation and maintenance. A. K. Peterson. A M A Archives Ind Hygiene & Occup Med 6:248-51 S '52

Industrial medicine in an optic plant. E. M. Pettis. Ind Med 21:572 D '52

℞ fitted glasses protect more than eyes; Allis-Chalmers manufacturing co. M. F. Biancardi. Am Mach 97:192-3 Ap 13 '53

Visual acuity, contrast, and flicker, as measures of retinal sensitivity. R. H. Peckham and W. J. Arner. bibliog Opt Soc Am J 42: 621-5 S '52

See also

Color sense—Testing
Ophthalmoscope

Injuries

First aid and emergency care of eye injuries. H. S. Kuhn. il Nat Safety N 68: 120-1+ O '53

EYE—Injuries—*Continued*

Which rays injure the eyes? A. L. Koven. Safety Maint & Prod 105:30-2+ Ap '53

Protection

Bad eyes cost you money. G. G. Carr. diags Iron Age 171:63 F 19 '53

B-D day; Westinghouse workers keep a voluntary date with blindness. il Nat Safety N 68:68+ Jl '53

Eye conservation. bibliog il Nat Safety N 67:83-4+ Mr '53

Eye health evaluation and maintenance. A. D. Ruedemann. A M A Archives Ind Hygiene & Occup Med 6:243-7 S '52

Eye protection program. D. J. Wood and H. Kohn. bibliog Ind Med 21:433-7 S '52

Man and machine. Safety Maint & Prod 104:70-1 D '52

No accident records are not accidental; Whirlpool corp. il Safety Maint & Prod 105:17-18+ Ja '53

Occupational vision program. R. Feinberg. il Nat Safety N 66:38-9+ N '52

Operation Wise owl. il Safety Maint & Prod 106:13+ S '53

Shattering ignorance about eye safety. il Safety Maint & Prod 105:22-3 Mr '53

Tool-up the working eye. il Safety Maint & Prod 106:15-16+ Ag '53

Wear these against chemicals. T. W. Roy, jr. il Safety Maint & Prod 105:14-16+ My '53

What good vision can do for management. R. Clair. il Nat Safety N 67:30-1+ F '53

See also

Goggles

EYE, Photography of

Application of high speed flash tube to photographing the fundus of the eye in color. M. Jacobs and K. N. Ogle. il diags R Sci Instr 24:52-5 Ja '53

EYE make-up products. See Cosmetics

EYELETTING machines

Eyelet machine products versus screw machine products. W. E. Allan. il diags Product Eng 23:181-3 N '52

F

FABRICS, Military. See Military fabrics

FACSIMILE transmission

Big fax board presents latest news, pictures. il Ed & Pub 85:54 O 4 '52

FACTORIAL design. See Statistical methods

FACTORIES

Built for employee comfort; Duncan electric mfg. co. il Factory Management 111:B90-3 pt 2 My '53

Century electric co., St Louis. il plan Arch Rec 112:136-8 S '52

Euclid works of the Lincoln electric co. il plans diag Engineer 194:860-3 D 26 '52

Factory service lines go underground; Lily-Tulip cup corporation's new plant in Springfield, Mo. il plan diag Eng N 149:30-2+ D 25 '52

Factory services placed in central core; manufacturing plant of the International business machines corp. E. E. Seelye and C. M. Throop. il plan diags Eng N 150:37-8 F 12 '53

50 years in the factories. Economist 167:114 Ap 11 '53

Functionalism; keynote of today's industrial architecture. R. L. Geddes. il Gen Elec R 56:18-21 Jl '53

General Electric's Appliance Park plant will be big, flexible and efficient. R. E. Linton and J. C. Nowell. il Eng N 150:32+ Je 25 '53

Industrial building booms in Gulf Coast region. il Eng N 150:136-8 Ja 15 '53

New ideas in plant construction. il Mod Ind 24:45-9 N '52

New plant at a discount; Willard storage battery co. il Mill & Factory 53:113 O '53

19th annual plant building issue. il plans diags Factory Management 111:B 1-25+ pt 2 My '53

Noise; does your plant deafen workers? T. Metaxas. Iron Age 171:55-7 Je 11 '53

Plan parts flow; flexibility in new plant design; Black & Decker mfg. co. Iron Age 171:269+ My 7 '53

Planned for ease of maintenance; Lily-Tulip cup corp. il Factory Management 110:150-2 O '52

Reinforced concrete factory near Harwich; Standard yeast co. il diag Engineer 194:647-8 N 14 '52; Engineering 175:220-1 F 13 '53

Right plant site and design can save you money. R. Barancik. il Iron Age 171:104-6 Ap 30 '53

Tunnel under tracks to link buildings; Thompson products, inc. E. L. Fountain. il Factory Management 111:148 F '53

What does new industry mean? C. R. Walker. Manuf Rec 122:34+ Ag '53

See also

Airplane factories
Automobile factories
Branch factories, Foreign
Brick works
Canneries
Carpet factories
Cement plants
Chemical plants
Clay products plants
Concrete products plants
Cotton mills
Factory management and other headings beginning Factory
Flour mills
Food factories
Foundries
Glass factories
Ice cream factories
Industrial buildings
Lavatories
Machine shops
Machine works
Metal working plants
Metallurgical plants
Munition factories
Paint factories
Paper mills
Petroleum refineries
Potteries
Rayon mills
Rock products plants
Rolling mills
Rubber factories
Shoe factories
Soap factories
Steel works
Textile mills
Tire factories
Water supply for factories

Accounting

Cost controls for the road ahead. S. Z. Bronner. N A C A Bul 34:607-15 Ja '53

Facts and figures guide our purchase of new equipment; Harris-Seybold co. R. W. Blosser. il Factory Management 111:108-9 Ap '53

How fixed-variable cost control helps produce profits. C. L. Wallace. Factory Management 111:126-9 Je '53

Many techniques combine for good cost control. R. A. Powell. N A C A Bul 34:385-401 N '52

Wanted; finger-tip facts; punched card accounting proves economical in a small plant. R. G. Brumby. il Steel 132:160+ Ap 20 '53

See also

Machine shops—Accounting
Overhead expense
Payrolls—Accounting

Air conditioning

Advanced design featured in the Lincoln electric co.'s new plant. il Heating-Piping 24:90-4 N '52

Air-to-air heat pump installation provides winter heating and summer cooling. il Heating-Piping 25:88-9 Ap '53

Comfort cooling keeps absentees at one per cent at Auto Specialties' windowless plant. P. A. Messner. il Factory Management 111:90-1 F '53

Does it pay to air condition your plant? H. P. Bailey. il diag Am Mach 97:115-19 F 2 '53

Industrial air conditioning. S. M. Miner. bibliog il Heating-Piping 24:84-9 D '52

Meeting varying needs for air conditioning; Marlin Rockwell corp. J. M. Brown and M. Y. Huyett. il Heating-Piping 25:97-8 Ag '53

Plant air conditioning sends costs down, morale up; Airtemp division of Chrysler corp. W. G. Patton. il Iron Age 171:159-63 Je 18 '53

Right thing to do: Sheaffer Pen air conditions. il Heating-Piping 25:86-7 Je '53

See also

Air conditioning, Industrial
Packing houses—Air conditioning
Textile mills—Air conditioning

FACTORIES—*Continued*

Aisles

Get the most out of the least plant handling space; determining in-plant trailer train aisle widths. J. J. Sichman. il diags Steel 131:101-2 N 10 '52

Cleaning

Clean plant is a well-run plant; illustrations with text. Mill & Factory 52:91-3 Ja '53

Clean washrooms, on schedule! J. M. Pomranz. il Safety Maint & Prod 105:46-8+ My '53

Heat and pressure potent team for industrial cleaning. E. J. Clement. il diags Mill & Factory 51:130-2 N '52

Incentives for janitors make them more efficient and happier. E. A. Cyrol and W. K. Conway. il Mill & Factory 53:83-8 Jl '53

Let vacuums eat your dust! R. L. Stephenson. il Safety Maint & Prod 106:14-16 Jl '53

Plant housekeeping. bibliog Nat Safety N 67:21-2 Mr '53

Using work measurement to cut housekeeping costs. R. M. Shea and D. Granato. Factory Management 111:118-20 Ag '53

See also

Packing houses—Cleaning

Cleanliness

Best way to dispose of wastes; burn 'em in an incinerator. K. Hesselberg. il Factory Management 111:124-5 F '53

Cleaning up the plant. il Chem W 72:66-8 Ap 4 '53

Facilities that aid housekeeping; Diamond alkali co. il Nat Safety N 68:74 Jl '53

Incinerators; your best answer for waste disposal. J. C. McQuay. il Mill & Factory 52:93-5 F '53

Seven keys to cleanliness. A. D. Buschmann. il Factory Management 111:78-80 My '53

Year-long contest gets workers into clean-up habit; Elastic stop nut corporation of America. il Factory Management 111:142-4 S '53

See also

Factory sanitation

Steel works—Cleanliness

Electric equipment

Breach of statutory duty; the electricity regulations under the factories acts. Elec J 150:2225 Je 19 '53

Electric power in industry. F. R. Benedict. il Elec Eng 71:1061-7 D '52

Electric regulation systems; key to higher production. W. R. Harris. il diags Power Eng 57:76-9 Je '53

Electrical maintenance; coming through in a pinch. S. Martinez, jr. il diags Power 97:120-1 Ja '53

Electricity and industrial production. E. R. Wilkinson. Engineer 195:837-40 Je 12 '53; Abstracts. Engineering 175:790 Je 19 '53; Elec J 150:2102-4 Je 12 '53; Elec R (Lond) 152:1346-7 Je 12 '53; Discussion. Elec J 150:2114 Je 12 '53

Electricity in factories; legal decisions on the regulations. C. F. Mayson. bibliog Elec R (Lond) 153:363-5 Ag 14 '53

Factory equipment exhibition. Elec R (Lond) 152:719 Mr 27 '53

Factory inspector's report. Elec R (Lond) 152:795-6 Ag 10 '53

Fifty years of factory progress; Chief inspector's report for 1951. Elec J 150:1137 Ap 3 '53

How many men for electrical maintenance? Power 97:136-7+ My '53

How to calculate short circuits in your electrical system; maintenance data sheet. R. Loewe and P. F. Lovato. diag Factory Management 111:162+ O '53

How to keep explosion-proof equipment explosion-proof; maintenance data sheet. Factory Management 111:150 Jl '53

How to protect your power distribution. J. W. St Andre. il Factory Management 111:148-9 O '53

If you are creating tv interference FCC now cracks down. il Factory Management 111:126-9 Jl '53

Industrial applications of electricity; abstracts. T. B. Rolls. Engineering 175:791 Je 19 '53; Elec J 150:2111-13 Je 12 '53; Elec R (Lond) 152:1349-50 Je 12 '53; Discussion. Elec J 150:2114 Je 12 '53

Joe's department; electrical ideas every plant man can use. J. St Andre. Published in monthly numbers of Factory management and maintenance

Making bicycles; Raleigh industries, ltd. il Elec R (Lond) 153:253-8, 377-81 Jl 31, Ag 21 '53

120-v Nicad batteries power a-c, d-c switchgear; General cable corp. il diag Power Eng 57:71+ O '53

Petrol lighter manufacture; electrical distribution system; Ronson products, ltd. il Elec R (Lond) 151:1153-6 N 28 '52

Plywood factory. H. Richards. il diag Elec R (Lond) 152:341-4 F 13 '53

Power system planning pays off in potential. F. L. Aime. diags Steel 131:72-3 D 29 '52

Primer on power system design; General Electric's new jet engine center. R. M. Wilson. il plan diag Gen Elec R 56:23-5+ S '53

Renovation roundup; electrical distribution and application. diags Power 97:80+ Mid-S '53

Research and engineering progress, 1952; industry. il Gen Elec R 56:27-33 Ja '53

Shooting industrial plant troubles; illustrated instructions. J. R. Miller. Elec World 139:134-5 F 9 '53

Today's electrical practice; supply, distribution, utilization in the industrial plant. J. J. O'Connor. diags Power 97:73-124 O '53

Trends in electrical distribution. il diags Factory Management 111:B 198-223 pt 2 My '53

Want to trim costs? electrical instruments can help you. J. P. Thompson. il Mill & Factory 51:81-7 D '52

Why wye for low-voltage distribution. W. D. Vincent. il diags Elec West 109:90-2 O '52

See also

Electric driving

Electric welding machines

Paper mills—Electric equipment

Equipment

Bay City report; industrials. E. M. Stephenson. il Dom Eng 180:158-63 N '52

Can you use an idea? maintenance and production ideas; illustrations with text. W. Rudolph. Mill & Factory 52:114-15 Mr '53

Checked your temperature lately? R. H. Wilcox. il Mill & Factory 52:125-30 Ap '53

Do plant air systems need a new look? L. B. Schramm. il plans diags Power 97:75-7+ Ja '53

Equipment policy; National center of education and research in dynamic equipment policy, Illinois institute of technology. Bsns W p66 Jl 25 '53

Ingenuity begins at home; Cleveland pneumatic tool co.; illustrations with text. W. Rudolph. Mill & Factory 52:124-5 My '53

Lower-cost production for today's and tomorrow's needs; new equipment, here's what industry plans to spend. Factory Management 111:56-7 My '53

New literature to help cut costs. Published in monthly numbers of Mill and factory

1953 American Machinist production preview; plant service equipment; parts and materials. il Am Mach 97:253-80 Ja 19 '53

Plant equipment previews. Published in monthly numbers of Mill and factory

Quick ideas for buildings and grounds. il diag Factory Management 111:B22-5 pt 2 My '53

To tickle your imagination; advance notice of unusual and exciting developments. Factory Management 111:140-1 S '53

Trends in plant services. C. G. Wyder. il Factory Management 111:B78-89 pt 2 My '53

Twin keys to production; safety and efficiency at new Mennen plant. il Safety Maint & Prod 105:37-8+ Je '53

What's new in equipment. Published in monthly numbers of Factory management and maintenance

FACTORIES—Equipment—*Continued*

Yeast factory at Dovercourt; Standard yeast co. flow diag il Engineering 176:76-7 Jl 17 '53

See also

Chemical plants—Equipment
Conveying machinery
Factory communication
Lavatories
Machinery, Replacement of
Mechanical handling
Power plants
Workbenches

Expansion

Midland electric manufacturing company's factory extension. il Elec R (Lond) 152: 713-14 Mr 27 '53
New plant and equipment, '53-'56; survey by McGraw-Hill. Am Mach 97:194-5 Ap 13 '53
Trends in buildings and grounds; expandibility. R. A. Dilley. il Factory Management 111:B5-6 pt 2 My '53
Westinghouse doubles generator production capacity. il Iron & Steel Eng 30:137+ My '53
What are industry's expansion plans? Mill & Factory survey. Mill & Factory 53:67-8 Ag '53
Year-old plant already doubling its size; Black & Decker mfg. co. il Factory Management 111:B20-1 pt 2 My '53

Fire protection

See Factory fire brigades; Fire protection

Floors

Concrete floors; how to lay and maintain them. P. Saint-Amour. il Safety Maint & Prod 105:20-2+ Ja '53
Floors and their upkeep. il Nat Safety N 68:30-1+ Jl '53
Hard-top concrete that ends floor troubles; Bridgeport brass co. J. D. Brown. il Factory Management 111:102-4 Je '53
Industrial floors. il Nat Safety N 67:11+ Mr '53
Making floor maintenance work. J. A. Manley. il Mill & Factory 52:79-84 Je '53
New life for old floors. W. R. Wakefield. il Safety Maint & Prod 105:24-5 F '53
Plant man's encyclopedia of floor maintenance; handy listing of the more important terms. D. E. Smalley. il Mill & Factory 52:105-8 F; 103-5 Mr '53
To sweep up dust, damp it down! E. W. Merritt. il Safety Maint & Prod 105:27-9 My '53
What floor machines do for floors. J. V. Connell. il Safety Maint & Prod 105:20-2 Ap '53

Foreign branches

See Branch factories, Foreign

Heating and ventilation

Checks and more checks are way to better heating maintenance. il Power 97:118-19 Ja '53
Consider high-temperature water for your process and space-heating jobs. A. Kuli. il diags Power 97:96-8 Ja '53
Decentralized system clips 67 per cent off heat bill. il Factory Management 111:105 Je '53
Do your production areas have enough air? nomograph. Mill & Factory 52:87 Ja '53
Factory offices; warm air heated. A. Holton. il Sheet Metal Worker 44:64-5 N '52
Heat relief in industry. B. R. Small. il Iron & Steel Eng 29:71-8 Ap '52; Same. Heating-Piping 24:114-17 O '52; Discussion. Iron & Steel Eng 29:78-83 Ap '52; Heating-Piping 25:90-5 F '53
How to figure air for plant heating. L. J. Murphy. Mill & Factory 53:78 S '53
Installation of elevated spot unit heaters. H. E. Smith. Heat & Ven 50:112-13 Mr '53
On-the-spot fume control; with portable ventilators. E. Kundig. il diag Safety Maint & Prod 104:64-7 D '52
Practical aspects of dust suppression. W. B. Lawrie. il Nat Safety N 67:26-7+ F; 28-9+ My '53
Side wall vents substitute for chimneys. il Sheet Metal Worker 44:62-3+ Mr '53
Ventilation. bibliog il Nat Safety N 67:57-8 Mr '53
Ventilation system utilizes waste process heat to knock $12,000 off the fuel bill; Chatham electronics corp. A. Scala. diag Factory Management 111:96-8 O '53

See also

Airplane factories—Heating and ventilation
Exhaust systems
Foundries—Heating and ventilation
Paper mills—Heating and ventilation

Layout

Better handling saves building space. J. E. Wiltrakis. il plan Am Mach 96:136-8 D 8 '52
Built for good production flexibility; Frigidaire div., General motors corp. il plans Factory Management 111:B290-5 pt 2 My '53
Case of the cross-eyed waif; a study in plant layout. H. H. Dasey. il plan Iron Age 171: 200-4 My 7 '53
Easy handling, smooth flow cut costs; Standard pressed steel co. il plan Mill & Factory 52:122-3 Je '53
14 cost-cutting extras with shop layout blueprints; Parker appliance co. S. A. Rogers. Factory Management 111:145 O '53
How to get faster, better, less expensive plant layout drawings without drafting. G. L. Thuering. plan diags Factory Management 110:88-9 O '52
Plant design and layout. il Nat Safety N 67:9+ Mr '53
Plant layout; three dimensions help. E. C. Kellogg. il Iron Age 171:75-6 Mr 19 '53
Production flow gets green light; Atwood vacuum machine co. il Steel 132:120-1 My 11 '53
With two and three dimensional models, plant layout is simplified. il Mill & Factory 53:137-8 S '53

See also

Foundries—Layout
Machine works—Layout

Lighting

Better lighting maintenance; illustrations with text. Safety Maint & Prod 105:30-1 Ja '53
Clean lamps save you money. il Mill & Factory 52:98-100 F '53
Cold cathode lighting; Heaton works of C. A. Parsons and co. il Elec J 149:1601-2 N 21 '52; Elec R (Lond) 151:1107-8 N 21 '52; Engineer 194:810 D 12 '52
Colour and light in industry. R. F. Wilson. il Elec R (Lond) 151:652-4 S 26 '52
Factory lighting can help pay dividends. E. A. Linsday. il Standardization 23:396-8 D '52
High-frequency fluorescents may be the answer to your tough lighting problems. J. W. St Andre. il Factory Management 111: 82-3 Ag '53
Industrial lighting; high wattage translucent and blended fittings. J. G. Holmes. il Elec R (Lond) 151:993-8 N 7 '52
Industrial lighting; Universal lighting system of Fluorescent applications, ltd. il diags Elec J 150:127-8 Ja 9 '53
Lamplighters, modern style. R. G. Edsall. il Safety Maint & Prod 106:31-2+ O '53
Leases system of lighting; maintenance company contracts to do periodic cleaning and relamping. Am Bsns 23:42 F '53
Lighting and accident prevention. M. A. McTaggart. il Elec R (Lond) 151:661-3 S 26 '52
Lighting for production. K. S. Adie. Elec R (Lond) 151:650-1 S 26 '52
Lighting the workplace. il Nat Safety N 67: 10+ Mr '53
New lighting for old, by rental; Parker appliance co. E. C. Hartley. il Factory Management 111:136-8 Jl '53
People work better when they see better. il Mill & Factory 52:86-9 Mr '53
Recommended practice for supplementary lighting; subcommittee on supplementary lighting. il diags Illum Eng 47:623-35 N '52
Trouble-shooting on incandescent and mercury lighting systems. il Mill & Factory 53:114-15 Ag '53
Upping industrial lighting. J. M. Adams. il Illum Eng 47:637-8 D '52

FACTORIES—Lighting—*Continued*

Visioneering; a new concept in industrial lighting. P. Hildebrand. il Elec World 139:100-2+ F 23 '53

Why lighting is protection! H. L. Logan. map diags Safety Maint & Prod 106:18-20+ Ag '53

Works lighting. W. Puckey. il Elec R (Lond) 151:647-9 S 26 '52

See also

Machine shops—Lighting

Steel works—Lighting

Textile mills—Lighting

Location

Choosing a plant site. R. F. Wallace. il Mill & Factory 51:107-9 O '52

Cost-cutting advantages of southern plant locations. S. Fish. Manuf Rec 122:34-5 Jl '53

Firm's move from city saves money, ups efficiency; Master rule mfg. co. I. Shyke. il Am Bsns 23:28+ O '53

Industrial future and the chemical industry. B. Dewey. Ind & Eng Chem 44:2548-50 N '52

Industry goes suburban. il plan Mill & Factory 51:100-1 O '52

Industry; how to move back to farm; what management can expect when moving to rural site. J. B. Delaney. Iron Age 170:197-8 O 9 '52

New plant site selection techniques place greater emphasis on southern locations for industry. S. Fish. Manuf Rec 121:42-3 O '52

Picking plant sites; what to look for in selecting locations; abstract. L. C. Yaseen. Steel 132:65 F 9 '53

Program for locating the new plant. R. M. Atkins. Harvard Bsns R 30:113-21 N '52

Should industry move South? J. O. Tomb. Harvard Bsns R 31:83-90 S '53

So you're going to build a factory. E. J. Clement. il plan Mill & Factory 52:92-6 Je '53

Stream pollution problems are rooted within the mistakes of community planning. H. R. Murdock. Ind & Eng Chem 45:sup 102A+ Mr '53

Trends in buildings and grounds; better plant location. R. A. Dilley. il Factory Management 111:B4-5 pt 2 My '53

Westinghouse seeks places to spend construction money. Eng N 149:84-6 O 2 '52

What does York have that others don't have? A. N. Wecksler. il map Mill & Factory 52:75-8 Mr '53

When selecting a plant site. il Chem W 72:36+ F 21 '53

When you need a site. Can Chem Process 36:13-14 O '52

Which community to build in. R. B. Peterson. Factory Management 111:312+ S '53

Lunchrooms

See Lunchrooms and cafeterias, Employees'

Maintenance and repair

Automation; pressure on upkeep; streamlined methods outlined at Cleveland. R. M. Lorz. Iron Age 171:60 Ja 29 '53

Cards slash maintenance; Thermoid corp. T. J. Ellis. il Power 97:109-11 Je '53

Change your maintenance budget from a club to a useful tool. A. D. Buschmann. Factory Management 110:142-4 N '52

Concentrate your preventive maintenance where it will do the most good. R. P. Neuschel. il Mill & Factory 52:86-9 Ap '53

Controlling maintenance costs; abstract. Management R 41:795-6 D '52

Daily maintenance schedules for 1000 men in 15 man-hours; Ethyl corp. M. C. Hudgins. Factory Management 110:92-5 O '52

Efficient maintenance constantly improves a plant. H. E. Jackson. il Mill & Factory 51:123-6 O '52

Eight fundamentals of preventive maintenance. A. D. Buschmann. Factory Management 111:87-90 Ag '53

Forum on technical progress; servicing and maintenance. il Steel 132:450-1+ Ja 5 '53

How to find and control your maintenance costs. H. E. Bliss. Factory Management 111:113-34 Mr '53

How to maintain electric elevators. L. J. Murphy. il Mill & Factory 51:93-6 D '52

How to set up effective maintenance schedules. R. P. Neuschel. il Mill & Factory 52:80-5 My '53

Ideal lubrication program for a small plant. il Factory Management 111:130-1 Ap '53

Little ingenuity, a lot of time saved; ideas used at American Sterilizer; illustrations with text. W. Rudolph. Mill & Factory 51:104-5 D '52

Maintenance costs and budgets; panel discussion. Factory Management 111:86-8 My '53

Maintenance ideas you can use; illustrations with text. W. Rudolph. Mill & Factory 51:121-3 N '52

Maintenance pointers for plant operating executives. C. G. Wyder. Published in monthly numbers of Factory management and maintenance

Maintenance reorganized for more efficient operation; Penn brass & copper co. W. Rudolph. il Mill & Factory 52:96-7 F '53

Maintenance responsibilities split three ways; Carboloy department of General electric co. D. G. Baird. il Mill & Factory 52:86-9 Je '53

Maintenance weldry saves money, time, space; illustrations with text. T. L. Dempsey. Mill & Factory 51:92-3 N '52

Mobile workshop rolls to the job; Shopmobile. il Factory Management 111:162-3 Mr '53

Modern plant upkeep; aid to profits. il Steel 132:39 Ja 26 '53

Now, the perfect training plan for maintenance apprentices; Hercules powder co. D. W. Hill and W. O. Edwards. il Factory Management 111:96-9 S '53

Planned maintenance for a longer life span; power transmission equipment. J. Sparks. il Power 97:114-15 Ja '53

Planning and scheduling maintenance work; panel discussion. Factory Management 111:134-6+ Je '53

Plant maintenance; British productivity team's report. Elec J 149:1998 D 26 '52

Plant maintenance conference and show, 4th, Cleveland; abstracts of papers. Factory Management 111:328+ F '53

Preventive maintenance; the quantitative approach. C. A. Turner. Management R 41:677-9 O '52

Set up a planned overhaul schedule for your bottle-neck equipment. T. L. Golden. il Mill & Factory 52:82-5 Mr '53

Some considerations regarding a factory maintenance engineering department. M. Bentham. diags Inst Mech Eng Proc (B) 1B no 1:33-9; Discussion. 40-8 '52; Engineer 193:510-11 Ap 11 '52

Take maintenance out of the Mr Fix-it stage. R. P. Neuschel. il Mill & Factory 52:77-81 Ja '53

Tired legs are the trade mark of a good maintenance superintendent; illustrations with text. G. C. Close. Mill & Factory 51:102-3 D '52

Top management men direct this maintenance program; Union carbide and carbon corp. O. W. Gravely. Textile World 103:118+ O '53

Trends in buildings and grounds; low-cost maintenance. R. A. Dilley. il Factory Management 111:B8-10 pt 2 My '53

Trends in incentives for production and maintenance employees. J. W. Roberts. Advanced Management 18:49-52 Ja '53

Trouble-shooting on industrial equipment. il diags Mill & Factory 52:105-36 Ja '53 (reprints 25c)

Want to get more out of maintenance dollars? F. F. Middleswart. Factory Management 111:300 F '53

What should maintenance cost? survey of 542 plants. Factory Management 111:113-35 Ja '53

What's good and not so good about maintenance today. Factory Management 111:136-8 F '53

Work measurement in maintenance; panel discussion. Factory Management 111:118-20 Ap '53

FACTORIES—Maintenance and repair—*Cont.*

Work sampling; newest way to check maintenance efficiency. E. H. Mac Niece. Factory Management 111:110-12 Jl '53

See also

Automobile factories—Maintenance and repair
Factories—Painting
Maintenance departments
Motor trucks, Industrial—Maintenance and repair
Repair parts

Moving

When you move don't forget; Mennen co.; illustrations with text. Mod Ind 25:9-10+ Mr '53

Painting

Color; paint plants scientifically. T. Metaxas. Iron Age 171:142-4 My 7 '53

Color's many uses. il Nat Safety N 67:24+ Mr '53

Dynamic painting in steel plants. J. K. Seyler. Iron & Steel Eng 30:71-3 Je '53

Have you got painting problems? R. H. Wilcox. il Mill & Factory 53:89-92 Jl '53

Painting for people and protection. H. Ketcham. il Safety Maint & Prod 105:20-2+ Je '53

Protection

Defense department to push industrial security. Product Eng 24:207 F '53

Plant protection; American district telegraph co. fire and bell alarm system. Steel 131:72 O 20 '52

Preparing for disaster control. A. D. O'Connor. Nat Safety N 67:34+ Mr '53

See also

Factory fire brigades

Records

Daily maintenance schedules for 1000 men in 15 man-hours; Ethyl corp. M. C. Hudgins. Factory Management 110:92-5 O '52

Make your paper work pay off in good maintenance control. R. P. Neuschel and J. T. Garrity. il Mill & Factory 53:75-9 Jl '53

Materials control plan for a job shop; Specialty assembling & packing co. S. Eisenberger. Factory Management 111:99-101 O '53

See also

Employment departments—Records
Orders
Production control
Punched card system

Sanitation

See Factory sanitation

Visitors

See Visitors

Water supply

See Water supply for factories

Yards

Lighting

Floodlighting permits 24-hr utilization of outdoor area; plant of North American aviation, inc. il Elec World 138:142 N 3 '52

FACTORIES, Underground

How Plessey plant escaped buzz bombs. il Aviation W 58:44 Ap 13 '53

FACTORS

Functions of factoring and commercial financing. H. R. Silverman. Comm & Fin Chr 178:212-13 Jl 16 '53

FACTORY accounting. See Factories—Accounting

FACTORY communication

Ultra-fast communication is key to effective centralized production control. C. W. Boyce. il Factory Management 111:94-5 Ja '53

See also

Bulletin boards
Employees' manuals
Radio telephone in factories

FACTORY costs

Cost reduction, prescription for tomorrow's profits. A. M. Hartogensis. N A C A Bul 34:616-26 Ja '53

How to find and control your maintenance costs. H. E. Bliss. Factory Management 111:113-34 Mr '53

Lower-cost production for today's and tomorrow's needs; new equipment, here's what industry plans to spend. Factory Management 111:56-7 My '53

Maintenance costs and budgets; panel discussion. Factory Management 111:86-8 My '53

Manufacturing cost control. E. H. Anderson. Steel 131:53-5 O 27 '52

What should maintenance cost? survey of 542 plants. Factory Management 111:113-35 Ja '53

See also

Labor cost
Power cost

FACTORY fire brigades

Decentralized fire brigade; Eaton manufacturing co. il Safety Maint & Prod 104:54 D '52

Don't let fire put you out of business. G. F. Wahl. il Mill & Factory 51:79-85 O '52

Industrial fire forces defeat 87 per cent of all fires. Weekly Underw 168:1173-4 Ap 25 '53

Keeping a suburban plant fire-safe; Evans products co. L. R. Anglin. il Factory Management 111:110-11 Ag '53

Know-how and enthusiasm aid Pan American fire fighters. il plan Pet Refiner 32: 226+ Ap '53

Small industries keep down city's fire loss. il Nat Safety N 68:24-5 Jl '53; Safety Maint & Prod 106:65-6 Ag '53

This company doesn't play with fire; Ansul chemical co. L. Stessin. il Mill & Factory 51:86-7 O '52

FACTORY inspection

See also

Drug factories—Inspection
Food factories—Inspection

FACTORY insurance association

Annual meeting, 63d, New York, March 18. East Underw 54:27 Ap 3 '53

FACTORY laws and legislation

See also

Employers' liability

Great Britain

Factory regulations for public works. Engineer 194:219 Ag 15 '52

Safety provisions of the Factories acts. C. F. Mayson. bibliog Engineering 174:214-15 Ag 15 '52

FACTORY management

Allocation of machines to operators. T. F. O'Connor. Inst Mech Eng Proc (B) 1B no 1:19-25; Discussion. 25-32 '52

Better administration through better methods. W. C. Marks. N A C A Bul 34:627-34 Ja '53

Cases in methods improvement; DeLamar bed spring co.; illustrations with text. Factory Management 111:124-6 Ap '53

Cases in methods improvement; F. E. Myers & bro. co.; illustrations with text. Factory Management 110:90-3 N '52

Cases in methods improvement; Fenwal, inc.; illustrations with text. Factory Management 111:92-5 Je '53

Cases in methods improvement; Parker appliance co.; illustrations with text. Factory Management 111:100-1 S '53

Cases in methods improvement; Pohl metal products co.; illustrations with text. Factory Management 111:142-4 Mr '53

Cases in methods improvement; Westinghouse electric corp. appliance division; illustrations with text. Factory Management 111: 90-1 Jl '53

Control of property leaving a manufacturing plant. W. E. Cuyler. N A C A Bul 34:796-804 F '53

Cycle charting, with handligs; quick new way to analyze and improve your materials handling methods. W. W. Phillips and S. W. Earle. Factory Management 111: 105-7 Ag '53

Developing engineering efficiency. A. R. Smith. il Machine Design 24:106-10 N '52

Engineering in small manufacturing plants. D. B. Chenoweth. il Mech Eng 75:393-4 My '53

Every man his own inspector; every foreman his own boss at Graflex. E. J. Tangerman. il diags Am Mach 97:95-114 F 2 '53

Good management pays off anywhere. W. C. Mattox. Factory Management 111:234+ F '53

How business gets done in Russia. il Fortune 47:122-4+ F '53

FACTORY management—*Continued*

How to cut your power bill. Factory Management 111:107-9 S '53

How to find and control your maintenance costs. H. E. Bliss. Factory Management 111:113-34 Mr '53

How we doubled lot size, and cut indirect labor costs; International resistance co. W. C. Cooling. il Factory Management 111:114-15 Ap '53

Industry takes a new look at cost-cutting. Steel 132:58-9 My 18 '53

Integrate materials handling with management. Am Mach 97:144-5 My 11 '53

Lower-cost production for today's and tomorrow's needs. H. T. Hallowell, jr. and others. Factory Management 111:52-66 My '53

Make it simple but not too simple. W. C. Cooling. il diags Mill & Factory 52:90-3 Ap '53

Making the foreman part of management. M. Robson. Iron & Steel Eng 30:105-6 Je '53

Manufacturing cost control. E. H. Anderson. Steel 131:53-5 O 27 '52

Passing the buck up. L. A. Appley. Factory Management 111:262+ Ag '53

Pittsburgh Plate Glass's ten steps to plant modernization. Factory Management 111:316+ O '53

Plant study; picking out the flaws; management consultant sees firm's afflictions with overall approach. R. M. Lorz. Iron Age 171:56 Ja 29 '53

Predetermined time values; first aid in planning new products; Birtman electric co. J. E. Allen. il Factory Management 111:145-7 Ap '53

Production of Girling brakes and dampers for motor vehicles. il Engineering 175:599 My 8 '53

So you're going to build a factory. E. J. Clement. il plan Mill & Factory 52:92-6 Je '53

Specially designed questionnaire for spotting managerial weaknesses. W. von Pechmann. Ind & Eng Chem 45:sup96A-8A F; sup97A-8A+ Mr; sup99A-100A+ Ap '53

Survey shows need for closer plant liaison. Steel 132:79 Mr 16 '53

Ten years' progress in management; industrial-plant operation. L. C. Morrow. A S M E Trans 75:675-80 My '53

Testing brightens profit picture. W. E. Thomas. flow sheet il Steel 132:104-8+ F 2 '53

See also

Airplane factories—Management
Assembling methods
Bulletin boards
Chemical plants—Management
Control boards
Efficiency, Industrial
Employees
Employees' benefit plans
Employees' representation in management
Employment management
Employment systems
Executives
Factories—Accounting
Factories—Cleaning
Factories—Heating and ventilation
Factories—Maintenance and repair
Factories—Records
Factory costs
Factory transportation
Foremen
Foundry management
Hygiene, Industrial
Industrial engineering
Industrial management
Inspection
Inventories
Job analysis
Machine shop management
Maintenance departments
Material control
Material handling
Mechanical handling
Medical service, Industrial
Metal waste
Metal working plants—Management
Motion study
Music in industry
Noise
Office management
Orders
Packaging
Packing for shipment
Piece work
Planning
Production and sales, Coordination of
Production control
Purchasing
Purchasing departments
Safety devices and measures
Salvage (waste, etc.)
Shipment of goods
Simplification in industry
Standardization
Stores systems
Suggestion systems
Textile mills—Management
Time study
Tool engineering
Tool rooms
Traffic departments, Industrial
Visitors
Wage payment plans

Quality control

Demonstration devices make statistical methods easier to understand. il Factory Management 111:92-5 F '53

Discovery sampling cuts costs in quality control. J. R. Crawford. Iron Age 171:114-17 Ja 29 '53

Elements of statistical quality control. W. W. Kauffman. diag Tool Eng 31:59-63 Ag '53

Factors of safety in tolerance specifications. N. G. Meagley. Product Eng 24:155-9 Mr '53

How to attain results with quality control; report of panel discussion. S A E J 61:37-40 Jl '53

Practice of quality control. A. G. Dalton. diags Sci Am 188:29-33 Mr '53

Quality control; communicating data effectively. W. W. Kauffman. il diag Tool Eng 31:54-60 S '53

Quality control in practice; Hoover co. J. W. Greve. il diags Tool Eng 31:69-78 Jl '53

Quality control methods; their use in design. D. Shainin. il Machine Design 24:102-8 Jl; 171-5 Ag; 168-74 S; 193-8 O; 161-8 N; 173-9 D '52; 25:150-5 Ja; 160-5 F; 165-9 Mr; 176-80 My '53

Quality control of airborne equipment. B. Hecht. Tele-Tech 12:119+ Je '53

Quality control review and forecast. Iron Age 171:304 Ja 1 '53

Quality control through the introduction of statistical methods; International harvester co. il Automobile Eng 42:533-4 D '52

Scientific sampling. R. K. Mueller. il Mod Plastics 30:79-84 Ap '53

Statistical evaluation of rational and stratified methods of sampling. J. V. Strela. il Tool Eng 29:37-40 Ag; 61-6 S; 55-60 O; 56-61 N; 70-2 D '52

Statistical quality control makes tolerances behave; report of panel discussion. I. W. Schoeninger. S A E J 61:23-6 Je '53

Ten years' progress in management; statistical quality control. E. R. Ott. bibliog A S M E Trans 75:660-3 My '53

See also

Candy factories—Quality control
Carpet factories—Quality control
Food factories—Quality control
Foundry management—Quality control
Glass factories—Quality control
Inspection
Paper mills—Quality control
Petroleum refineries—Quality control
Steel works—Quality control
Textile mills—Quality control
Welding shops—Quality control

FACTORY sanitation

Change rooms can make a difference. il Safety Maint & Prod 106:30-4 Jl '53

Eliminate offensive plant odors. A. W. Williams. il Mill & Factory 53:122-4 Jl '53

Isotopes aid sanitation. il Nat Safety N 67:76 Ap '53

Making it easy to keep clean; Bridgeport brass co. il Nat Safety N 67:36-7 Ja '53

Rodent and insect control. Nat Safety N 67:68-9 Mr '53

Washrooms and lockers. il Nat Safety N 67:59+ Mr '53

See also

Dust collectors
Factories—Air conditioning
Food factories—Sanitation
Hygiene, Industrial
Lavatories

FACTORY signs. See Signs

FACTORY tours. See Visitors

FACTORY transportation

Clay products transport techniques; illustrations with text. Brick & Clay Rec 122:40 My; 46-7 Jl '53

Materials life-line; mechanized handling by Continental gin machinery co. il Steel 131:252-3 O 13 '52

FACTORY transportation—*Continued*

Mechanization knocks M-H manhours for a loop; Roman cleanser co. D. G. Baird. il Mill & Factory 52:88-90 Ja '53

Simplified automatic ingot buggy. I. N. Tull; H. S. Fegely. il diags Iron & Steel Eng 30:84-9; Discussion. 90-1 Mr '53

They glide through the air with the greatest of ease; handling in new Scarborough, Ont. plant of Frigidaire Products. il Can Chem Process 37:58 Ja '53

Transfer cars keep assembly moving; Reliance electric & engineering co. E. L. Brainard. il plan Am Mach 96:132-4 N 10 '52

See also

Conveying machinery
Electric trucks, Industrial
Material handling
Monorail conveyors
Motor trucks, Industrial
Pallets
Tractors, Industrial
Trucks

FACTORY waste. See Trade waste

FADING. See Dyes, Fastness of

FAIR employment practices. See Discrimination in employment

FAIR trade laws. See Price fixing, Resale

FAIRBANKS, Alaska

Sewerage

Flush tank used to prevent sewer freezing. E. M. Lamphere. Sewage & Ind Wastes 25:100-2 Ja '53

FAIRLESS, Benjamin Franklin, 1890-

They're reshuffling Big Steel. por Bsns W p27-8 D 6 '52

FAIRMAN, James F. 1896-

Fairman record. por Elec World News ed 138:7-8 D 8 '52

FAIRS

Distributor shows retailers how to become better merchants; Bass merchandising and equipment fair. E. J. Dever, jr. il Ptr Ink 241:68-70 N 7 '52

Evaluation of international fair after five years. il Sales Management 69:40+ pt 2 O 1 '52

Fairs and exhibitions. Published irregularly in Foreign commerce weekly

Frankfurt International fall fair to be held in Sept. 1953. For Comm W 49:20 Ja 26 '53

GE puts its name in lights; Aircraft gas turbine division, Evendale, Ohio. il Bsns W p 188+ Mr 14 '53

Let's go to the fair. il Dom Eng 182:97+ Jl '53

Omaha meets the world; Omaha world trade fair and institute. il Bsns W p 124-5 Je 27 '53

Toronto; once a year, the world's marketplace; Canadian international trade fair. il Bsns W p 122-4+ Je 20 '53

See also

Exhibitions

Accounting

Fair, rain or shine; county fairs. J. C. Ellis. N A C A Bul 34:376-84 N '52

FALCONBRIDGE nickel mines, ltd.

Falconbridge Nickel boosts ore reserves. Barron's 32:23-4 D 15 '52

FALLING bodies

Comparative drag measurements at transonic speeds of rectangular and sweptback NACA 65-009 airfoils mounted on a freely falling body. C. W. Mathews and J. R. Thompson. il diag U S Nat Advisory Com for Aeronautics 1950:685-91 '51

Motion of a tumbling body; airplanes incorporating releasable nose sections to facilitate pilot escape. A. M. O. Smith. il diags J Aeronautical Sci 20:73-84 F '53

FALLS

It's not the fall, it's the sudden stop; impact loads on tail lines for safety belts. W. E. Rossnagel. Constr Methods 35:112+ F '53

Prevention of falls down openings in mines. il Nat Safety N 66:116-17+ O '52

FAMILY

Family anatomy; with charts illustrating findings on households and families; preliminary results of 1951 census. Economist 165:518-20 N 22 '52

Tax shelter for the family. W. J. Casey and J. K. Lasser. Comm & Fin Chr 177:1339 Mr 26 '53

FAMILY budget. See Budget, Household

FAMILY of products

See also

Leaders (merchandizing)
Package design—Family of products

FAMILY partnerships. See Partnership—Taxation

FAMILY taxation. See Income tax—Family taxation

FAMOUS foods of America, inc.

Stock offered. Comm & Fin Chr 177:724 F 16 '53

FANNY Farmer candy shops

Fanny Farmer. Fortune 47:240 F '53

FANS, Automobile. See Automobile engines—Fans

FANS, Electric. See Electric fans

FANS, Mechanical

Centrifugal fan selection. R. G. Lubinsky. il plan diags Heat & Ven 49:75-9 D '52; Discussion. J. T. Inatome. 50:154 F '53

Control of fluid-driven fans. J. F. Tobin. il diag Power Eng 56:64-5 N '52

Direct air cooling of engine jacket water by automatic variable-speed hydraulically driven fans. M. M. Shilling. il diag Oil & Gas J 51:250-2 O 13 '52

Fabricating practices in fan making. H. W. Houtrouw. il diags Sheet Metal Worker 44:77-9 F '53

Fan replaces stack for faster burning. il Brick & Clay Rec 121:46 N '52

Fans and blowers. M. Van Winkle. diags Oil & Gas J 51:109 S 1; 127 S 8; 131 S 15; 133 S 22; 307 S 29; 133 O 6; 181 O 20; 135 O 27; 129 N 3; 159 N 10; 419 N 17; 133 N 24 '52

Flow and fan; principles of moving air through ducts. C. H. Berry. diags Heat & Ven 50:81-7 Ja; 93-8 F; 87-94 Mr; 103-10 Ap; 88-94 My; 91-6 Je; 85-90 Jl; 103-6 Ag; 103-6 S; 90-4 O; 88-93 N; 102-7 D '53

How does water get into fan bearings? T. Hicks. diags Power 97:130-1 Ja '53

Newly-developed, liquid plastic coating makes better blades for cooling-tower fans. il Mill & Factory 52:147-8 Je '53

See also

Electric fans, Ventilating

Costs

Blower and fan costs. R. E. Denzler. Chem Eng 59:130-4 O '52

Manufacture

Nodular iron, plywood, hot dip coating make better fans. S. H. Fedan. il Materials & Methods 37:106-9 Je '53

Testing

Fan performance tests. Engineering 175:246 F 20 '53

FANS, Mine

Exhaust fan driven by 350-hp motor cleans nickel mine air. Iron Age 171:168 F 5 '53

FANS, Motor bus engine. See Motor bus engines—Fans

FANSTEEL metallurgical company

Newcomers on the New York stock exchange. J. S. Williams. Mag of Wall St 91: 664+ Mr 7 '53

FAR EAST

See also

Asia
China
Japan

Commerce

United States-Far East trade declines. For Comm W 48:3 O 6 '52

U.S.-Far East trade expansion favored by long-term trend. E. M. Braderman. For Comm W 48:12 N 3 '52

U.S.-Far East trade shows import surplus in third quarter of '52. For Comm W 49: 3+ Ja 5 '53

FARADAY effect

Faraday effect in deuterium and certain other gases. L. R. Ingersoll and W. L. James. Opt Soc Am J 42:985 D '52

FARADAY effect—*Continued*

Ferromagnetic Faraday effect at microwave frequencies and its applications. C. L. Hogan. bibliog diags Rs Mod Phys 25:253-62; Discussion. 262-3 Ja '53

Microwave magnetometer. P. J. Allen. il diags Inst Radio Eng Proc 41:100-4 Ja '53

Sensitive photoelectric method for measuring the Faraday effect. L. R. Ingersoll and W. L. James. bibliog il diags R Sci Instr 24:23-5 Ja '53

Theory of the microwave permeability tensor and Faraday effect in nonsaturated ferromagnetic materials. G. T. Rado. Phys R 89:529 Ja 15 '53

See also

Verdet constant

FARADAY medal

E. O. Lawrence, Faraday medalist. J. Hacking. Elec Eng 71:970-1 N '52

FARADAY society

Golden jubilee meeting, London, April 16-18. Chem & Eng N 31:2105 My 18 '53

FARBE (periodical)

New German scientific journal. Am Dyestuff Rep 42:85 F 2 '53

FARES. See Airlines—Fares; Motor bus lines—Fares; Railroads—Fares; Rapid transit—Fares

FARM buildings

See also

Barns and stables
Dairies
Granaries

Valuation

Sell your farm customer adequate fire coverage; appraising farm buildings. A. Quast. Rough Notes 96:44+ Je '53

FARM chemurgic council, National. See National farm chemurgic council

FARM credit. See Agricultural credit

FARM engineering. See Agricultural engineering

FARM fires. See Fire protection, Rural

FARM houses. See Farmhouses

FARM income

Agricultural production and income in 1952; with figures for the years 1945-1952. Survey of Cur Bsns 33:14-16 F '53

Don't sell agriculture short; farming trends; prices and income. E. Butz. Burroughs Clearing House 37:31-3+ Ap '53

Farm income and marketings; revised data; monthly, January 1950-July 1951 and yearly totals, 1950-1951. Survey of Cur Bsns 32:19 O '52

Industry to feel reduced farm income. A. G. Erpf. Trusts & Estates 92:247-8 Ap '53

What about the five per cent drop in farm income? J. Owen. Mag of Wall St 91:630-1+ Mr 7 '53

FARM labor

Attitudes relating to mechanization and farm labor changes in the Yazoo-Mississippi delta. H. A. Pedersen. Land Econ 28:353-61 N '52

FARM loans. See Agricultural credit

FARM machinery. See Agricultural machinery

FARM management

Enterprise on the prairies. C. M. Williams. Harvard Bsns R 31:97-102 Mr '53

Farm management as a trust service. N. T. Robinson. Banking 45:150 My; 104 Je '53

Guide to a farm program in easy-to-read outline. T. H. LeCroy. Banking 45:57-8 N '52

Lay-away plan for farmers. W. W. Campbell. il Banking 45:60-1 O '52

Trust service for farmers. R. S. Davis. Trusts & Estates 91:944-6 D '52

Study and teaching

Bankers learn why some farms pay and some don't. J. J. Macklin. il Banking 45:68 O; 60 N '52

FARM market

Co-op effort on survey produces data for all; U.S. farm market. Ed & Pub 86:18 Ja 3 '53

Farm market sales tactics that leave quotas far behind; Penn. power & light co. J. M. Stedman and R. T. Jones. il Sales Management 69:30-2+ D 1 '52

How long does it take to change habits? answer for farm market, shows importance of repetition. Ptr Ink 242:93-4 Ja 16 '53

If you serve the farm market, establish friendly alliance with America's teachers of vocational agriculture. T. K. Wolfe. il Sales Management 69:76+ O 1 '52

Life on the farm gets better and better. R. Y. Giles. Ptr Ink 241:30 O 31 '52

Sale I never forgot; breakfast calls paid off. W. J. Grede. il Ptr Ink 241:33 D 19 '52

What IHC says to farmers' wives about food freezers. R. H. Burnside and J. H. Coats. il Sales Management 70:30-2+ F 1 '53

See also

Advertising—Farmers, Appeal to
Electricity on the farm
Plumbing trade—Farm market

FARM mortgages. See Mortgages, Farm

FARM produce

Can industry and agriculture supply the evergrowing population? B. T. Shaw. Oil Paint & Drug Rep 163:7+ Mr 23 '53

Farm problem; one of the stickiest. Bsns W p 150-1 Jl 25 '53

Problem of surplus farm production. H. H. Gordon. Comm & Fin Chr 177:2190+ My 21 '53

See also

Dairy products
Grain
Livestock
Wheat

By-products

Characteristics of pulp fibers from agricultural residues. E. C. Lathrop. Tappi 35: sup60A+ N '52

See also

Grain—By-products

Marketing

Farming without boards; fruit growers' rejection of apple and pear marketing scheme. Economist 167:280-2 My 2 '53

See also

Commodity credit corporation
Produce terminals

Price supports

Are price supports the answer? O. B. Jesness. il Bankers Mo 69:43+ S '52

Facing up to farm forces. Bsns W p30-1 F 14 '53

Farm price-support issue. Nat City Bank p 104-7 S '52; p79-81 Jl '53

Nationalised waterglass. Economist 166:475 F 21 '53

Our farm price problems. E. T. Benson. Comm & Fin Chr 177:998-9 Mr 5 '53

Root of the evil; price supports. Barron's 33:1 Jl 27 '53

Prices

Don't sell agriculture short; farming trends; prices and income. E. Butz. Burroughs Clearing House 37:31-3+ Ap '53

How farm laws tie in with politics. il Bsns W p96+ Je 20 '53

Our inherited farm problems. E. T. Benson. Comm & Fin Chr 177:1648-9 Ap 16 '53

What hit farm prices; graph. Fortune 47: 34 Ap '53

Statistics

Yearbook of food and agricultural statistics, 1952; pt 2, Trade. v6 290p $3.50 Food and agriculture organization of the United nations; for sale by Columbia univ. press, 2960 Broadway, New York 27 '53

FARMERS

See also

Advertising—Farmers, Appeal to
Agricultural credit
Farm income
Farm labor
Farm market
Insurance, Life—Farmers as prospects

Accounting

How to get livestock farmers out of accrual-basis tax trap. A. Morris. J Account 94:616-17 N '52

Insurance requirements

Farm session at Indianapolis draws record crowd. Nat Underw 56:22+ N 20 '52

FARMERS—Insurance requirements—*Cont.*
- Summons farm mutuals to raise sights much higher. R. R. Botts. Nat Underw 56:4+ O 23 '52

See also
- Insurance, Fire—
  - Farm policies

FARMHOUSES
- From desert to $75,000 farm in 24 hours. il plan Am Bld 74:278-80 O '52
- Modern farm house serves today's farm needs. il plans diag Am Bld 74:148-51 N '52

FARMING, Cooperative. See Agriculture, Cooperative

FARMS
- Meadowlark farming; stripped and reserve coal lands; illustrations with text. Coal Age 58:88-93 Ag '53

See also
- Safety on the farm

FARRELL, Lawrence K.
- Unusual honors paid Lawrence Farrell who is retiring after 48 years in industry. por Weekly Underw 167:1524 D 6 '52

FASHION
- Fashion's foibles. S. Eastman. Am Dyestuff Rep 42:9-10+ Ja 5 '53
- Silhouette for 1953; Olympic or just pads? W. L. Day. Adv Agency 45:98 O '52
- When a mere upstart challenges big-name competition; Rose Marie Reid's swimsuits. B. L. Kamberg. il Sales Management 69:128-32 O 15 '52

FASS, John
- John Fass and the Hammer Creek press. P. K. Thomajan. Inland Ptr 130:42-3 N '52

FASTENINGS
- Annual handbook of product design for 1953; fastening and joining. il diags Product Eng Hdbk p G 1-25+ '53
- Defense proposes new fastener specs. Aviation W 58:22+ My 11 '53
- Demand strains facilities. K. W. Bennett. Iron Age 171:76 Mr 12 '53
- Design details; retaining rings. Machine Design 25:152-3 Jl '53
- Engineered fastening for reduced materials handling. L. H. Flora. il diags Tool Eng 30:57-60 Mr '53
- Fastener market returns to normal. il Steel 132:49 My 18 '53
- Fastener sales climb. Steel 132:66 Ap 13 '53
- Fastening of inserts in molded and cast parts; drawings with text. Product Eng Hdbk p G 16-17 '53
- Forum on technical progress; joining and assembling. il diags Steel 132:406-7+ Ja 5 '53
- Plane fastener fight nears end; military may accept Camloc quick-release type. A. McSurely. Aviation W 58:17-18 F 9 '53
- Plug-in stands to speed servicing. il Aviation W 58:80+ Ap 6 '53
- Spring-action fasteners; drawings with text. Machine Design 25:158-9 S '53
- Use of rivets and other fasteners; report of panel on fastening and mechanical joining. R. L. Hand. il S A E J 61:41-3 Je '53
- Will Snag-Pruf unzip competitors' markets? E. M. Kelley. il Sales Management 69:40+ N 1 '52

See also
- Bolts and nuts
- Rail fastenings

FASTNESS of dyes. See Dyes, Fastness of

FAT
- Digestibility of fats; abstract and discussion. H. Wilkinson. Chem & Ind p 15-16 Ja 3 '53
- New Zealand researches on animal fats; abstract. F. B. Shorland. Chem & Ind p 1079 N 1 '52

See also
- Oils and fats

FATIGUE
- Fatigue cause of 2,000,000 casualties. J. V. Grimaldi. Weekly Underw 168:1499 My 30 '53
- Fatigue cures for industry. L. Brouha. Safety Maint & Prod 106:48 S '53; Same abr. Mill & Factory 53:234+ Ag '53
- Fatigue; how to measure it and reduce it. L. Brouha. Am Mach 97:130-1 My 25 '53
- How fatigue affects productivity. L. E. Davis and P. D. Josselyn. bibliog Personnel 30:54-9 Jl '53
- Industry studies ways of reducing and measuring fatigue. Chem & Eng N 31:2018 My 11 '53
- Relation of critical fusion frequency to fatigue in reading. T. A. Ryan and others. bibliog Illum Eng 48:385-91 Jl '53
- Visual fatigue; abstract. H. C. Weston. Elec J 149:1832 D 12 '52
- What makes them tired? J. V. Grimaldi. bibliog Nat Safety N 67:24-5+ Ja '53

FATIGUE in metals
- Bearing failure; with emphasis on fatigue. B. P. Robertson. Machine Design 25:318+ Je '53
- Design criterion for fatigue of wings. P. B. Walker. Roy Aeronautical Soc J 57:12-18 Ja '53
- Dislocation theory of the fatigue of metals. E. S. Machlin. bibliog il diags U S Nat Advisory Com for Aeronautics 1949:183-92 '51
- Effect of chromium plating of steel on the fatigue limit. G. M. Cabble, jr. bibliog Metal Finishing 51:106-8 Je; 60-3 Jl '53
- Effect of inclusions on the fatigue strength of S.A.E. 4340 steel; abstract. J. T. Ranson. Metal Prog 64:206+ O '53
- Effect of shot peening and the fatigue life of steel. A. G. H. Coombs. il diags Engineering 174:545-6, 580-1 O 24-31 '52
- Effect of stress amplitude on statistical variability in fatigue life of 75S-T6 aluminum alloy. G. M. Sinclair and T. J. Dolan. bibliog A S M E Trans 75:867-70; Discussion. 870-2 Jl '53
- Effect of various treatments on the fatigue strength of notched S-816 and Timken 16-25-6 alloys at elevated temperatures. W. E. Jones, jr. and G. B. Wilkes, jr. il diags Am Soc T M Proc 50:744-60; Discussion. 761-2 '50
- Effects of anodic coatings on the fatigue strength of aluminum alloys. G. W. Stickley and F. M. Howell. il diags Am Soc T M Proc 50:735-43 '50
- Effects of grinding and other finishing processes on the fatigue strength of hardened steel. L. P. Tarasov and H. J. Grover. bibliog il diags Am Soc T M Proc 50:668-87; Discussion. 687-98 '50
- Endurance of helical springs related to properties of the wire. H. C. Burnett and C. L. Staugaitis. il Metal Prog 64:77-81 S '53
- Fatigue. H. L. Cox. il diags Roy Aeronautical Soc J 57:559-65 S '53; Abstract. Engineering 175:570 My 1 '53; Discussion. Roy Aeronautical Soc J 57:589-91 S '53
- Fatigue and creep testing of aircraft-engine materials. il diag Engineering 175:353-4 Mr 20 '53
- Fatigue from the metallurgist's viewpoint. E. R. Gadd. Roy Aeronautical Soc J 57:565-80 bibliog(78 ref, p579-80) S '53; Abstract. Engineering 175:570 My 1 '53
- Fatigue in aircraft design. B. E. Stephenson. diags Roy Aeronautical Soc J 57:584-8 S '53; Abstract. Engineering 175:571 My 1 '53; Discussion. Roy Aeronautical Soc J 57:589-91 S '53
- Fatigue in engine design. F. M. Owner. Roy Aeronautical Soc J 57:580-4 S '53; Abstract. Engineering 175:570-1 My 1 '53; Discussion. Roy Aeronautical Soc J 57:589-91 S '53
- Fatigue in ship structures; abstract and discussion. R. Weck. Engineering 175:648-9 My 22 '53
- Fatigue life of wing components for civil aircraft. K. Williams. bibliog Roy Aeronautical Soc J 56:842-8 N '52
- Fatigue notch-sensitivities of some aircraft materials. H. J. Grover. bibliog Am Soc T M Proc 50:717-29; Discussion. 730-4 '50
- Fatigue of metals; facts and theories reviewed; abstract. B. R. Byrne. Engineer 194:864 D 26 '52
- Fatigue of metals; Orowan's theory and its practical implications. F. A. Pope. diags Automobile Eng 42:529-31 D '52
- Fatigue properties of springs as affected by heat treatment. R. L. Rickett and A. O. Mason. Metal Prog 63:107-10 Mr '53
- Fatigue properties of weld metal. L. A. Harris and others. bibliog il diags Welding J 32:sup441-53 S '53

FATIGUE in metals—*Continued*
Fatigue properties of Z-section test pieces completely machined from an aluminium alloy extrusion conforming to D.T.D. 364B. G. Forrest and others. il diags Roy Aeronautical Soc J 57:103-7 F '53
Fatigue strength of steel through the range from ½ to 30,000 cycles of stress. M. H. Weisman and M. H. Kaplan. bibliog il plans diags Am Soc T M Proc 50:649-65; Discussion. 666-7 '50
Fatigue testing; General Motors research fatigue-testing machine. il Mech Eng 75:321 Ap '53
Fatigue testing; its machines and methods. T. R. Breunich. il diags Product Eng 24:128-34 F; 148-54 Mr '53
Fatigue tests of steel girders. H. Bühler. bibliog diag Welding J 32:sup52-4 Ja '53
Flexural fatigue strength of anodized 24ST aluminum-alloy sheet. C. B. Cliett. diags Aeronautical Eng R 11:29-30+ D '52
Full-scale fatigue testing of compressor cylinders. T. O. Kuivinen. il diags A S M E Trans 75:467-72 Ap '53; Same. Pet Eng (Ref annual) 25:D5-8+ Jl 15 '53
High pressure fuel pipes; failures on C.I. engines and their prevention. il diags Automobile Eng 43:235-7 Je '53; Engineer 195:628-30 My 1 '53; Engineering 175:585-7 My 8 '53
Improving fatigue life; tests on roller chain link plates. M. K. Gerla. il diags Machine Design 25:171-3 Ja '53
Improving fatigue resistance of bolted joints; drawings with text. J. P. Vidosic. Product Eng 24:190-1 Ap '53
Influence of corrosion on the cracking of pressure vessels. H. R. Copson. bibliog(101 titles) il Welding J 32:sup75-91 F '53
Influence of surface condition on the fatigue strength of steel; abstract. R. J. Love. Metal Prog 62:144 D '52
Investigation of statistical nature of fatigue properties. E. Epremian and R. F. Mehl. Machine Design 25:276+ Ja '53
Mechanism of fatigue in metals; abstract. W. A. Wood and A. K. Head. Metal Prog 63:162+ Mr '53
Methods for improvement of drill-collar joints evaluated by full size fatigue tests. L. E. Trishman. il diags Pet Eng 25:B98+ F '53
Optical dynamic weighbar for a fatigue-testing machine. P. G. Forrest. il diags Engineering 174:801 D 19 '52
Report of the task group on effect of speed of testing on fatigue test results. Am Soc T M Proc 50:421-4 '50
Reverting of hard-drawn copper to soft condition under variable stress. J. N. Kenyon. il Am Soc T M Proc 50:1073-81; Discussion. 1082-4 '50
Some metallographic observations on the fatigue of metals. P. J. E. Forsyth. Metal Prog 63:214+ Ja '53
Symposium on fatigue with emphasis on statistical approach. (Special tech. pub. no. 137) il diags 91p Am. soc. for testing materials, 1916 Race st, Philadelphia 3 '53 (pa $2)

FATS and oils. See Oils and fats

FATTY acids. See Acids, Fatty

FAULTS (geology)
Evidence for variable vertical movement in central Utah. C. T. Hardy. map diag Geol Soc Bul 64:245-7 F '53
Probable large lateral displacement on San Gabriel fault, southern California. J. C. Crowell. bibliog il maps Am Assn Pet Geologists Bul 36:2026-35 O '52
Relation between the mechanism of the formation of fault troughs and volcanic activity. B. G. Escher. Geol Soc Bul 63:749-56 bibliog(p754-6) Ag '52
Salt-ridge hypothesis on origin of Texas Gulf Coast type of faulting. M. Quarles, jr. diags Am Assn Pet Geologist Bul 37:489-508 Mr '53
San Andreas, Garlock, and Big Pine faults, California. M. L. Hill and T. W. Dibblee, jr. bibliog maps diags Geol Soc Bul 64:443-58, pl 1-4 Ap '53
Structural environments of the lead deposits in the southeastern Missouri mining district. J. A. James. maps diag Econ Geol 47:650-60 S '52

FEATHERBEDDING ban. See Trade unions—Law

FECUNDITY
Phosphorylated hesperidin. G. J. Martin. Science 117:363 Ap 3 '53
Physiologic control of fertility. P. S. Henshaw. Science 117:572-82 bibliog(167 ref, p580-2) My 29 '53

FEDDERS-QUIGAN corporation
Preferred stock offered. Comm & Fin Chr 177:1580 Ap 13 '53

FEDERAL and state relations. See State governments—Federal relations

FEDERAL barge lines. See Inland waterways corporation

FEDERAL commissions. See United States—Executive departments

FEDERAL communications commission
Information on new FCC form 400. Radio Com 12:21+ D '52
See also
Radio laws and regulations

FEDERAL crop insurance corporation
Study expansion of FCIC program. Nat Underw 57:31 Je 4 '53

FEDERAL electric products company
Common stock and debentures sold. Comm & Fin Chr 177:2128-9 My 18 '53
Stock offered. Comm & Fin Chr 176:2162 D 8 '52

FEDERAL employees. See Government employees

FEDERAL Fawick corporation
Signposts; two mergers; Harvester story; Federal story. Bsns W p33 N 1 '52

FEDERAL government
See also
State governments—Federal relations

FEDERAL housing administration
Compulsory home warranties urged after probe of GI and FHA housing. Eng N 149:27 D 11 '52
Easier FHA terms. Bsns W p64 Je 27 '53
FHA water heater standards. Elec World 139:115 Ap 20 '53
Loans insured by Federal housing administration, 1947-1951; monthly Nov. 1951-Nov. 1952. Fed Res Bul 39:55 Ja '53 [cont monthly]
More mortgages at higher rates. Bsns W p27 My 9 '53
Move to ease FHA terms out as Congress speeds housing. Eng N 150:104 Je 15 '53
New FHA chief; leader in Baltimore plan, Guy Hollyday, nominated. Eng N 150:23 Ap 16 '53
1,000-unit Coast project delayed by FHA details. Eng N 150:52 Ja 15 '53

Insured mortgage plan

Insured FHA home mortgages (Title II) held in portfolio, by class of institution. Fed Res Bul 39:55 Ja '53 [cont monthly]
Lenders, home builders hail charge added to FHA low-cost home mortgages. Eng N 150:140 Ja 15 '53

FEDERAL mediation and conciliation service. See United States—Federal mediation and conciliation service

FEDERAL national mortgage association
Fannie Mae goes on. Eng N 150:81 Ap 30 '53
Reprieving FNMA. Bsns W p 124 My 2 '53

FEDERAL paper board company, inc.
Stock offered. Comm & Fin Chr 177:1048 Mr 9 '53

FEDERAL power commission
Brake on tax write-off. Bsns W p 192+ Ap 18 '53
Court cuts FPC's licensing powers. Elec World 139:58-9 Ja 12 '53
Empire builders; Jerome K. Kuykendall, new member. J. C. Perham and J. C. W. Schaie. Barron's 33:5-6 My 18 '53
FPC authorizations in last half of 1952 will add 1¼ billion cu. ft. daily. Gas Age 111:37-9+ Mr 12 '53
FPC engineers favor plan to build part of St Lawrence power project. Eng N 149:25 D 11 '52
FPC gas jurisdiction will go to high court. Bsns W p56-7 D 27 '52
FPC is upheld; court affirms commission's right to fix rates of power sold to federal agencies. Elec World 139:124+ Ap 20 '53

FEDERAL power commission—*Continued*

FPC's carrier clause upheld; can impose conditions on lines of private company crossing public lands; Idaho power co. vs Federal power commission. Elec World 138: 107 N 17 '52

Kuykendall appointed to FPC. Elec World 139:105 Ap 20 '53

Private power; Roanoke Rapids project. Bsns W p31 Mr 21 '53

Senate confirms Kuykendall. Elec World 139: 61 My 4 '53

Today the accent is on constructive regulation. Elec World News ed 138:22-4 N 10 '52

FEDERAL reserve banks

Appointments of chairmen, deputy chairmen, and directors. Fed Res Bul 39:9-11 Ja '53

Collection of checks by Federal reserve banks. Fed Res Bul 39:597-8 Je '53

Demonetizing the federal debt. W. E. Spahr. Comm & Fin Chr 177:1955+ My 7 '53

Earnings and expenses of the Federal reserve banks in 1952 and 1951; condensed comparative statement. Fed Res Bul 39:7-8 Ja '53

Federal reserve and savings banks. A. Sproul. Comm & Fin Chr 177:685+ F 12 '53

Federal reserve bank responsibilities. W. M. Martin, jr. Fed Res Bul 39:451-5 My '53

Interest on deposits by member banks; time certificate with alternate maturities. Fed Res Bul 39:721-2 Jl '53

More money; lower reserve requirements. Barron's 33:1 Je 29 '53

Striking new quarters; Detroit, Michigan branch of the Federal reserve bank of Chicago. il Burroughs Clearing House 37:26-7 Ap '53

Directors

Directors of Federal reserve banks and branches. Fed Res Bul 39:110-23 F '53

Member banks

Member bank earnings, first half of 1952; with comparisons 1948-1952. Fed Res Bul 38:1103-4, 1159 O '52

Member bank earnings, 1952, and comparisons; with tables. R. C. Kolb. Fed Res Bul 39:463-8, 536-46 My '53

FEDERAL reserve board

Backing away from tight money. Bsns W p34 Je 27 '53

Banking under decontrol. J. M. Naughton. il Burroughs Clearing House 37:31-3+ Je '53

More borrowing by consumers is reflected in Reserve board's new estimates. Bsns W p32 My 2 '53

Revision of monthly bank debits and weekly reporting member bank series. Fed Res Bul 39:355-7 Ap '53

Credit policy

Credit supply and demand. Nat City Bank p 124-7 N '52

Free money market? prospects of continued flexible credit policy. H. F. Jonsson. Trusts & Estates 91:634-5 S '52

More money; lower reserve requirements. Barron's 33:1 Je 29 '53

New York clearing house urges changes in Federal Reserve legislation; comment on study. Bankers Mo 70:28-9 Jl '53

Praises flexible policy of Federal Reserve. M. A. Schapiro. Comm & Fin Chr 177:2527 Je 11 '53

See also
Instalment plan—
Regulation

FEDERAL reserve system

Decline in long Treasuries is over. O. K. Burrell. Comm & Fin Chr 178:101+ Jl 9 '53

Fed under microscope; New York clearing house study. il Burroughs Clearing House 37:6-7 Jl '53

Federal Reserve re-examined. Banking 46: 53+ Jl '53

For a better dollar. Bsns W p 156 Ja 31 '53

Free Federal reserve system. E. A. Goldenweiser. Dun's R 60:23-4+ S '52

In defense of the Federal reserve system. W. M. Martin, jr. Comm & Fin Chr 177:2200+ My 21 '53

Is Treasury's sound money policy feasible now? J. C. Cresswill. Mag of Wall St 92: 376-8+ Je 27 '53

Monetary system of the United States. R. A. Young. Fed Res Bul 39:98-109 F '53

Money market flexibility. Trusts & Estates 92:501-3 Jl '53

Nature and functions of the Federal reserve system. J. L. Robertson. Comm & Fin Chr 176:1832+ N 13 '52

Plan to maintain stability. Banking 45:97 F '53

Re-examines Federal reserve system; New York clearing house study. Comm & Fin Chr 177:2428 Je 4 '53

Tight money policy unwarranted. M. S. Eccles. Comm & Fin Chr 178:351 Jl 30 '53

Tighter money; rediscount rates. Bsns W p28-9 Ja 24 '53

Time to ease the money squeeze. Bsns W p200 My 9 '53

Transition to free markets. W. M. Martin, jr. Comm & Fin Chr 177:1629+ Ap 16 '53; Same. Fed Res Bul 39:330-5 Ap '53

FEDERAL savings and loan associations

How banks can meet savings and loan competition. J. B. Mack, jr. Comm & Fin Chr 177:684 F 12 '53

FEDERAL security agency. See United States—Federal security agency

FEDERAL trade commission

Chesterfield wins in court against FTC's ad charge. J. Shoenfeld. Sales Management 69:46+ D 15 '52

Company mergers; how, why. Bsns W p29-30 Mr 7 '53

Congress awaits nod from Eisenhower on choices of FTC member, chairman. Nat Pet N 45:37 F 18 '53

Court dismisses tire suits against FTC. Nat Pet N 44:19 D 3 '52

Face lifting for FTC. Chem W 72:15 Mr 28 '53

Fairer treatment coming. Steel 132:39-40 Je 29 '53

FTC and the advertising industry exploring closer liaison to fight false advertising. il Ptr Ink 242:10-11 Mr 27 '53

FTC chairman orders complete enforcement machinery overhaul. Oil Paint & Drug Rep 164:3+ S 28 '53

FTC loses case vs. buyer under Robinson-Patman. Bsns W p60 Je 13 '53

FTC temporary injunctions; the big stick for the small offense. G. H. Weil. Ptr Ink 242: 48+ F 6 '53

FTC will fight court ruling on Chesterfield cigarettes. Bsns W p80 D 13 '52

Good cop; Mason prefers horse sense to the big whip. B. Lefferts. Barron's 32:5+ D 29 '52

Hot time at FTC. Bsns W p48 Ja 31 '53

In answer to FTC's armchair adventurers. J. T. Duce. Nat Pet N 44:40-2 O 1 '52

Is criticism of FTC free speech or contempt? G. H. Weil. Ptr Ink 242:33-4 Ja 9 '53

Lead pigment makers target of FTC attack. Oil Paint & Drug Rep 163:3+ Ja 19 '53

Mason advocates FTC policy changes. Nat Pet N 45:22 F 25 '53

New look coming in antitrust. Bsns W p29 Jl 4 '53

Squeeze on citrus growers. Bsns W p90 Ja 10 '53

Testing the new merger law; decision in Pillsbury Mills case. Bsns W p29 My 9 '53

Will FTC change its ideas? Bsns W p29-30 Ap 4 '53

FEDERATED department stores, inc.

Federated department stores; front-runner of the industry, with financial data, 1942-1951. L. R. Kahn. Barron's 32:13+ O 27 '52

Stocks with pronounced growth prospects. G. L. Merton. Mag of Wall St 91:706+ Mr 21 '53

FEDERATION of American scientists

Scientists' committee on loyalty and security

New government employee security program; statement by Scientists' committee on loyalty and security. Science 117:sup3 Je 5 '53

FEDERATION of American societies for experimental biology
- Annual meeting, 37th, Chicago; with abstracts of papers. Chem & Eng N 31:1630-2 Ap 20 '53

FEDERATION of paint and varnish production clubs
- Annual meeting, Chicago. Paint Oil & Chem R 115:24-7, 30-1 D 4 '52
- Annual meeting, 30th, Chicago, Nov. 20-22. Chem & Eng N 30:5052+ D 1 '52
- Annual meeting, 30th, Chicago, Nov. 20-22; abstracts of papers. Oil Paint & Drug Rep 162:73-9 D 1 '52
- Annual meeting, 30th, Chicago, Nov. 20-22; program; registration list. Paint Oil & Chem R 115:27-31, 54-8+ N 6 '52
- Annual meeting, 31st, Atlantic City, Oct. 27-31; program. Paint Oil & Chem R 116:26-7 O 8 '53

FEDERATION of sewage and industrial wastes associations
- Annual meeting, New York. Eng N 149:27 O 16 '52
- Annual meeting, 25th, New York, Oct. 6-9. Sewage & Ind Wastes 25:104-9 Ja '53
- Annual meeting, 25th, New York, Oct. 6-9. Water & Sewage Works 99:468-9, 486-90; 100:27-33 N '52-Ja '53
- Annual year book and list of members, 1953. Sewage & Ind Wastes 25:353-90 Mr '53
- Federation; past and future. C. A. Emerson and A. Wolman. Sewage & Ind Wastes 25:123-32 F '53
- Silver anniversary. H. R. Murdock. Ind & Eng Chem 44:sup 117A-19A O '52

FEEBLE minded
- Mental deficiencies. G. A. Jervis. bibliog Ann Am Acad 286:25-33 Mr '53

FEED mechanisms
- Automatic feeding of small parts. C. E. Kraus. il diags Tool Eng 30:47-50 Mr '53
- Hopper feeds for bottle caps. J. Waitkus and V. Waitkus. diags Mach 58:180-1 Je '52; 59:176-7 Ja; 184-5 F; 200-1 Mr; 192-4 Ap; 186-7 My '53
- Jamproof feeding mechanism. H. Murro. diags Mach 59:199-200 Ja '53
- Long feed unit for presses. il Engineer 196:110-11 Jl 24 '53; Engineering 176:278-9 Ag 28 '53
- Sensitive feed arrangement for coil-winding machine. P. Grodzinski. diag Mach 59:207 Ap '53
- Sorting and feeding shells closed end first. W. M. Halliday. diags Mach 59:206-8 Je '53
- Speeder feed speeds tube straightening; Metal forming corp. il Am Mach 97:141 Ap 27 '53

FEED water
- Caustic cracking in marine Scotch boilers. W. McClimont. bibliog Engineering 175:219-20 F 13 '53
- Concentration films; their role in boiler scale and corrosion problems; abstract. H. M. Rivers. Am Water Works Assn J 44:sup62+ N '52
- Contamination of condensate of heat-exchanger-tube alloys. J. D. Ristroph and E. B. Powell. bibliog il diag A S M E Trans 75:729-38; Discussion. 738-45 Jl '53
- Field estimation of sulfites in waters. S. Sussman and I. L. Portnoy. Anal Chem 24:1652-4 O '52
- Is rain water OK for boiler feed? Power 97:132+ Ag '53

See also
Feed water purification

Testing

- Detector for organic chlorides in condensate. P. Hart and R. C. King. diag Oil & Gas J 51:293 Ap 27 '53
- Estimation of dissolved oxygen in deaerated water. J. Arnott and J. McPheat. Engineering 176:103 Jl 24 '53
- New boiler water test uses ion exchange resin. il Power Eng 57:76 Jl '53

FEED water heaters
- Deaerating heater proves versatile tool in large, expanding plants. V. J. Calise and R. K. Stenard. il diags Power 97:78-80+ F '53
- Draining feedwater heaters and evaporators. F. T. Elder. il diags Power 96:75-7 N '52
- Graph your deaerator for flashing mixtures; Heater state triangle. F. R. Alex. diag Power Eng 57:102-4 Ap '53
- Rehabilitating feedwater equipment. C. W. Bell. il diags Power Eng 57:94-5+ Je; 64-5+ Jl '53

FEED water heating
- How to unitize preheater. il World Oil 135:169-70 N '52
- Simple figuring for minor feed heating cycle changes. W. F. Allen, jr. diag Power Eng 56:98+ N '52

FEED water pumps. See Pumps, Feed water

FEED water purification
- Automatic boiler chemical injector. L. L. Potthoff and S. Summers. Pet Processing 8:255 F '53
- Boiler-water treatment to prevent corrosion. U. R. Evans. diags Engineering 175:602-4 My 8 '53
- Caustic cracking in boilers; prevention by chemical methods. C. D. Weir and P. Hamer. bibliog Chem & Ind p 1040-9 O 25 '52
- Caustic cracking in steam boilers; caustic cracking of boilers in the United States. A. A. Berk. Chem & Ind p360-4 Ap 18 '53
- Dealkalization, without acid; chloride anion exchanger. diags Power Eng 57:68+ Mr '53
- Deionization yields low-silica feedwater. il diag Power Eng 57:60-1+ F '53
- Demineralization advantageous for boiler make-up water. J. D. Yoder. diags Elec World 139:80-1 Ap 6 '53
- Demineralization passes in review. S. B. Applebaum. il diag Power 97:88-91+ Ag '53
- Feedwater handling is planned in Illinois state power plants. R. W. Lane. bibliog il Power Eng 56:91-3+ N '52
- Mixed-bed vs two-step demineralizing. M. E. Gilwood and C. Calmon. flow diag il diag Power 97:73-6 My '53
- Mixed bed vs two-step demineralization of high pressure boiler feed water. M. E. Gilwood and C. Calmon. diags Paper Tr J 136:22-5 My 22 '53; Same. Blast F & Steel Pl 41:660-2, 788-91 Je-Jl '53; Same abr. Can Chem Process 37:36+ Je 20 '53
- Modern feedwater treatment practice. E. R. Welsh. il Can Chem Process 36:32+ D '52
- Modification of the feedwater treatment system at Port Arthur division, Provincial paper, limited. E. E. Valley and R. T. Hanlon. il diags Pulp & Pa of Can (Convention no) 54:190-4+ [F] '53
- New regeneration method improves feed water; Martin-Century farms. Food Eng 25:62 F '53
- Our first year with a hot lime and zeolite feedwater treatment plant. M. R. Rivers and K. J. Linehan. Tappi 36:sup 130A-2A F '53
- Proper water treatment for packaged boilers. P. Brindisi. il diags Power 97:76-7+ Je '53
- Reducing return line corrosion by new make-up treatment. F. N. Kemmer and N. C. Stratton. il diags Heat & Ven 49:105-7 N '52
- Silica removal characteristics of highly basic anion exchangers. M. E. Gilwood and others. bibliog diag Am Water Works Assn J 44:1057-64 N '52
- Troublefree chemical feed system results from an integrated design. R. C. Alexander. il diags Power 97:78-9 Mr '53
- Use of amines in low make-up steam plant; abstract. H. J. Guillory. Power 97:152 Ag '53
- Water treatment engineering. L. W. Fitzpatrick. Power Eng 57:82-3 Ja '53
- Water treatment engineering; chemicals used in water conditioning. L. W. Fitzpatrick. Power Eng 57:74-5 F '53
- Water treatment engineering; raw water treatment. L. W. Fitzpatrick. Power Eng 57:70-3 Mr '53
- Water treatment for low-pressure heating boilers. L. I. Pincus. diags Power 97:118-19 Ag '53

FEED water sampling
- Sample your boiler water effectively. D. V. De Geer. il diags Power Eng 57:98-9 S '53

FEEDBACK in amplifiers. See Amplifiers, Vacuum tube

FEEDBACK phenomena

Analysis of sampled-data systems; abstract. J. R. Ragazzini and L. A. Zadeh. diag Elec Eng 71:1102 D '52
Approximation of transient response from frequency response data; abstract. C. H. Dawson. diag Elec Eng 72:687 Ag '53
Cathode-follower as high-impedance input stage. D. A. Bell and H. O. Berktay. diags Wireless Eng 29:313-16 D '52
Coding by feedback methods. B. D. Smith. il diags Inst Radio Eng Proc 41:1053-8 Ag '53
Coulomb friction in feedback control systems; abstract. V. B. Haas, jr. diag Elec Eng 72:405 My '53
Feedback, heart of automatic process control. P. Lindholm. diags Factory Management 111:106-9 O '53
Feedback system engineering expanding professional field. G. S. Brown. Elec Eng 71:1067-71 D '52; Same cond. Machine Design 25:386+ Ap '53
Feedback theory; some properties of signal flow graphs. S. J. Mason. diags Inst Radio Eng Proc 41:1144-56 S '53
Field-mapping method for analysis and synthesis of linear closed-loop systems. M. W. Fossier and H. A. Rosen. bibliog diags J Aeronautical Sci 20:205-9 Mr '53
Frequency feedback. H. E. Hollmann. il diags Tele-Tech 12:91-3+ Mr '53
How to design notch networks; with nomographs. C. J. Savant, jr. diags Electronics 26:188-91 My '53
Industrial applications of feedback control systems. R. W. Moore. il diags Westinghouse Eng 12:178-83 N '52; Same cond. diags Machine Design 24:190-1+ D '52
Principle of a servo-type mechanism requiring variable elements. R. Drenick. diag Inst Radio Eng Proc 41:373-7 Mr '53
Relative damping criterion for linear systems; abstract. J. F. Koenig. bibliog diag Elec Eng 72:697 Ag '53
Signal component control; abstract. D. J. Gimpel and J. F. Calvert. Elec Eng 72:49 Ja '53
Simple connection between closed-loop transient response and open-loop frequency response. J. C. West and J. Potts. bibliog il diags Inst E E Proc 100 pt 2:201-8; Discussion. 209-12 Je '53
Stabilization of nonlinear feedback control systems. R. L. Cosgriff. bibliog diags Inst Radio Eng Proc 41:382-5 Mr '53
Transient measurements of feedback control systems; abstract. F. H. Ferguson and C. H. Looney. Elec Eng 72:444 My '53

Bibliography

Radio progress during 1952; feedback-control systems. il Inst Radio Eng Proc 41:480-2 Ap '53

FEEDER airlines. See Airlines—Feeder airlines

FEEDERS

Continuous proportioning catalyst of the automatic plant. L. Lowy. il diags Food Eng 25:72-6+ Jl '53
Determination of feeding systems. R. A. Cech. bibliog diags Foundry 81:128-31 O '53
Dry chemical feeder. il Can Chem Process 37:56 Ap '53
Electronic control of a constant-weight feeder. il diags Engineer 195:145 Ja 23 '53; Engineering 175:40 Ja 9 '53; Elec J 149:1999-2000 D 26 '52
Fundamental principles of handling chlorine; chlorine feeders. V. W. Langworthy. il Water & Sewage Works 100:318-22 Ag '53
Guides for selecting chemical feeders. P. A. Coffman, jr. il diags Water & Sewage Works 100:338-43 S '53
New feeder for loose solids; patent. diags Chem Eng 60:374 Ap '53
Novel solids feeding system. diag Chem Eng 60:332 Ja '53
Rabble bin feed controlled automatically; Denver (Colo.) fire clay co. il Brick & Clay Rec 122:73 Ap '53
Solids feeders. T. R. Olive. il diags Chem Eng 59:163-78 N '52

FEEDING and feeding stuffs

Amino acid content of dehydrated giant African snails (achatina fulica Bowdich). A. R. Mead and A. R. Kemmerer. bibliog Science 117:138-9 F 6 '53
Biochemistry and increased livestock production. J. Duckworth. Chem & Ind p333-6 Ap 11 '53
Boosting food output; antibiotics have nutritional effect on animals. Bsns W p96-8+ N 22 '52
Grain distillery feeds and wastes. C. S. Boruff and R. K. Blaine. bibliog(27 ref) flow diag Sewage & Ind Wastes 25:1179-86 O '53
Integrate complex operation and make a better feed from peel; Minute maid corp. feed mill. W. H. Harte. flow sheet(p 118-21) il Food Eng 25:84-6+ Mr '53
New source of revenue discovered in sewage sludge by Milwaukee sewage plant researchers. J. F. Friedrick and R. E. Zinn. Munic Util 91:18+ Je '53
Problem of high feed prices vs. cheaper meat prices. L. N. Burch. Banking 46:64-5 Jl '53
Waste material now valuable by-product; feed recovery at Hiram Walkers. il Can Chem Process 37:28+ My '53

See also

Poultry—Feeding
Poultry food—Advertising
Swine—Feeding

Analysis

Qualitative detection of urea in commercial livestock feeds. G. L. Baker and L. H. Johnson. bibliog Anal Chem 24:1625-6 O '52

FELAND, Faris Robison, 1887-

Brown's job. Ptr Ink 241:128 N 21 '52

FELDSPAR

Chlorite-calcite pseudomorphs after orthoclase phenocrysts, Ray, Ariz. G. M. Schwartz. bibliog diag Econ Geol 47:665-72 S '52
Effect of fluxes on the properties of semi-vitreous dinnerware. J. C. Kyonka and R. L. Cook. bibliog Am Cer Soc Bul 32:233-8 Jl 15 '53
Effect of temperature on the symmetry of high-temperature soda-rich feldspars. W. S. MacKenzie. bibliog Am J Sci Bowen vol p319-42 '52
Feldspar, 1952. B. L. Gunsallus. Eng & Min J 154:110 F '53
Kona plant features flexibility in feldspar flotation. G. P. Lutjen. flow sheet il diag Eng & Min J 154:92-5 My '53
Optical studies on alkali feldspars. O. F. Tuttle. bibliog diags Am J Sci Bowen vol p553-67 '52
Study of eutectic glasses as fluxes in whiteware bodies. A. S. Watts and others. Am Cer Soc Bul 31:456-61 N 15 '52
Symmetry change in the high-temperature alkali-feldspar series. G. Donnay and J. D. H. Donnay. bibliog Am J Sci Bowen vol p 115-32 '52
Thermochemistry of plagioclase and alkali feldspars. F. C. Kracek and K. J. Neuvonen. Am J Sci Bowen vol p293-318 bibliog(p316-18) '52
Twinning frequency in feldspar phenocrysts from a quartz latite sill at Sierra Blanca, Tex. E. Ingerson. il maps Am J Sci Bowen vol p 189-202 '52

See also

Anorthite
Perthite
Plagioclase

FELT, Paper

Buying and use of roofing rags. O. A. Bigler. Paper Tr J 135:18+ D 5 '52
New felt machine at Bird Phillipsdale mill. il Paper Tr J 136:24-5 My 8 '53

FELT, Roofing

Built-up roofing industry; perforated felt. T. M. Dantz. Sheet Metal Worker 44:29-30 D '52
Buying and use of roofing rags. O. A. Bigler. Paper Tr J 135:18+ D 5 '52
Determination of per cent voids filled in roofing. C. E. Wilkinson. diag Pet Eng 24:C37-8+ D '52
Vapor barriers; roll roofing can be used as slab moisture seal. Eng N 150:68+ My 21 '53

FELTS (paper making)
Manufacture, structural design and testing of felts for the paper-making and allied industries. E. Race. bibliog fold pls il diags Textile Inst J 44:P406-29; Discussion. P429-32 Ag '53
Performance of paper machine wet felts; further studies of the plugging of felts. D. W. French. bibliog il Tappi 36:20-35 Ja '53

FENCES
All-purpose fence builder. il Constr Methods 35:174 Mr '53

Painting

Roller-coater used to paint fences. E. J. Higgins. il Elec World 138:133+ D 15 '52

FENCHOLIC acid
Ketimines; from fencholonitrile. P. L. Pickard and E. F. Engles. Am Chem Soc J 74:4607-8 S 20 '52

FENDERS, Automobile. See Automobiles—Fenders

FENTON'S reaction
Possible significance of Fenton's reaction in relation to oxidations effected by enzyme systems. D. J. Mackinnon and W. A. Waters. Chem Soc J p323-8 Ja '53

FENUGREEK
Mannose-containing polysaccharides; the galactomannan of fenugreek seed (trigonella fœnum-græcum). P. Andrews, L. Hough and J. K. N. Jones. Chem Soc J p2744-50 Jl '52

FERGUSON, Harry George, 1884-
Pulling tractors out of a hole. pors Bsns W p76+, cover Ja 17 '53

FERGUSON, Homer Lenoir, 1873-1953
Sketch. por Marine Eng 58:98 Ap '53

FERGUSON, Hugh S.
Businessmen in the news. por Fortune 47:38 Ja '53

FERMENTATION
Analysis of a mixture of glucose, maltose, and fermentable oligosaccharides; improved yeast fermentation method. S. C. Pan, L. W. Nicholson and P. Kolachov. bibliog diags Anal Chem 25:231-7 F '53
Effect of aeration on citric acid production in 50-gallon tanks. G. H. Buelow and M. J. Johnson. bibliog il diag Ind & Eng Chem 44:2945-6 D '52
Fermentation products of wheat germ; identification of methoxy- and 2 : 6-dimethoxy-*p*-benzoquinone; infra-red absorption of some quinones and 1 : 2-dicarbonyl compounds. D. J. Cosgrove and others. Chem Soc J p4821-3 D '52
Itaconic acid by fermentation with aspergillus terreus. V. F. Pfeifer, C. Vojnovich and E. N. Heger. bibliog flow sheet Ind & Eng Chem 44:2975-80 D '52
Yeast producer thrives on B_{12}. il diags Chem Eng 59:244+ N '52

See also
Bacteriology
Enzymes
Fusel oil—Analysis
Wine—Manufacture
Yeasts

FERMI-THOMAS theory
Application of the Fermi-Thomas method to molecules. W. A. Bowers. J Chem Phys 21:1117-18 Je '53

FERRATES
Analysis of measurements on magnetic ferrites. C. D. Owens. bibliog il diags Inst Radio Eng Proc 41:359-65 Mr '53
Characteristics of the magnetic attenuator at uhf. F. Reggia and R. W. Beatty. bibliog il diags Inst Radio Eng Proc 41:93-100 Ja '53
Deformation of ferrite single crystals. F. L. Vogel, jr. and R. M. Brick. bibliog il diags J Metals 5:Trans 700-6 sec 2 My '53
Ferrite core inductors. H. A. Stone, jr. bibliog il diags Bell System Tech J 32:265-91 Mr '53
Ferrites at microwaves. N. G. Sakiotis and H. N. Chait. bibliog diags Inst Radio Eng Proc 41:87-93 Ja '53
Ferrites speed digital computers. D. R. Brown and E. Albers-Shoenberg. il diags Electronics 26:146-9 Ap '53
Ferromagnetism at very high frequencies; temperature dependence of the magnetic spectrum of a ferrite. G. T. Rado and others. bibliog Phys R 88:909-15 N 15 '52
Flow and fracture of single crystals of high-purity ferrites; abstract. R. P. Steijn and R. M. Brick. Metal Prog 64:264+ O '53
Low temperature transformation in ferrites. L. R. Bickford, jr. bibliog il diags Rs Mod Phys 25:75-9 Ja '53
Magnestostriction devices and mechanical filters for radio frequencies. W. V. Roberts. diags Q S T 37:24-7 Je; 28-30+ Jl; 32-5+ Ag '53
Magnetic ceramics; ferrites; the latest in magnetic materials for r.f. F. E. Vinal. il Q S T 37:44-6 F '53
Magnetic spectra of ferrites. G. T. Rado. bibliog Rs Mod Phys 25:81-9 Ja '53
Measurement of permeability tensor in ferrites. J. O. Artman and P. E. Tannenwald. il Phys R 91:1014-15 Ag 15 '53
Microwave magnetometer. P. J. Allen. il diags Inst Radio Eng Proc 41:100-4 Ja '53
Motion of domain walls in ferrite crystals. J. K. Galt and others. bibliog Rs Mod Phys 25:93-7 Ja '53
Neutron diffraction study of magnesium ferrite. L. M. Corliss and others. bibliog diags Phys R 90:1013-18 Je 15 '53
New non-reciprocal waveguide medium using ferrites. E. H. Turner. diags Inst Radio Eng Proc 41:937 Jl '53
Resonance phenomena in ferrites. D. Polder and J. Smit. bibliog diags Rs Mod Phys 25:89-90 Ja '53
Richter type after-effect in ferrites containing ferrous and ferric ions. H. P. J. Wijn and H. van der Heide. bibliog Rs Mod Phys 25:98-9 Ja '53
Specific heat discontinuity in antiferromagnets and ferrites. L. N. Howard and J. S. Smart. bibliog Phys R 91:17-19 Jl 1 '53

FERREIREA spectabilis
Chemistry of extractives from hardwoods; constituents of the heartwood of ferreirea spectabilis. F. E. King, M. F. Grundon and K. G. Neill. Chem Soc J p4580-4 D '52
Chemistry of extractives from hardwoods; the constitution of ferreirin and of homoferreirin. F. E. King and K. G. Neill. Chem Soc J p4752-6 D '52

FERRIC chloride. See Iron chlorides

FERRIS, George Floyd, 1902-
Sketch. por Explosives Eng 30:140-1 S '52

FERRIS, Theodore E. d 1953
Sketch. por Marine Eng 58:64-5 Jl '53

FERRITES. See Ferrates

FERROALLOYS
Domestic chrome and manganese ores can be upgraded and utilized. H. A. Doerner. J Metals 5:39-40 Ja '53
Ferroalloy metals, 1952. Eng & Min J 154:96-9+ F '53
Ferroalloys; market shifting. R. L. Hatschek. il Iron Age 170:98 N 13 '52
Ferroalloys; world's largest plant; Electro metallurgical co. W. V. Packard. il Iron Age 171:70-1 My 28 '53
New ferro-alloys and alloying metals; Electro metallurgical co.'s new plant at Marietta, Ohio. il Metal Prog 64:87-8 Jl '53
New plant makes available increased supply of alloys; Electro metallurgical co. C. Longenecker. il Blast F & Steel Pl 41:1171-5 O '53
Niagara frontier; recent developments in the ferroalloy and carbon industries. W. T. Dunlap, jr. Electrochem Soc J 100:sup61C Mr '53
Outlook for ferro alloys in 1953. W. C. Keeley. Blast F & Steel Pl 41:224-5 F '53
Product and process developments mark new alloys plant; Electro metallurgical co. il Foundry 81:172+ Jl '53
Steel hormones and the ferro-alloy industry. W. C. Keeley. Comm & Fin Chr 176:1621+ O 30 '52

Statistics

Pig iron and ferroalloys output by countries; tabulation. Steel 132:160 Ja 5 '53

FERROCENE. See Iron compounds

FERROCHROMIUM
Cheaper, better stainless; Simplex ferrochromium; Electro metallurgical co.'s ferroalloy plant. il Steel 132:70 My 25 '53

FERROCYANIDES
See also
Sodium ferrocyanide

FERROELECTRIC amplifier. See Amplifiers

FERROELECTRIC effect

Ferro-electric materials as storage elements for digital computers and switching systems; abstract. J. R. Anderson. diags Electronics 26:204+ Jl '53

Ferroelectricity in oxides of face-centered cubic structure. W. R. Cook, jr. and H. Jaffe. Phys R 89:1297-8 Mr 15 '53

Ferroelectricity in oxides of fluorite structure. W. R. Cook, jr. and H. Jaffe. Phys R 88:1426 D 15 '52

FERROMAGNETISM. See Magnetism

FERROMAGNETS. See Magnets

FERROMANGANESE

Ferromanganese cleaning plant starts up on Duquesne furnace; United States steel corp. il Iron & Steel Eng 30:136+ Ag '53

Ferromanganese shipments, 1932-1952; tabulation. Iron Age 171:436 Ja 1 '53

New ferroalloys producer; Tenn-Tex alloy and chemical corp. il Chem Eng 60:116 F '53

Prices

Ferromanganese, 80 per cent, 1936-1952; tabulation. Iron Age 171:435 Ja 1 '53

FERROSILICON

Ferrosilicon imports for consumption; ferrosilicon production, 1935-1952; tabulations. Iron Age 171:436 Ja 1 '53

Prices

50 per cent ferrosilicon, 1936-1952; tabulation. Iron Age 171:435 Ja 1 '53

FERRUGINOL

9-Ketoferruginol and its identity with sugiol. C. W. Brandt and B. R. Thomas. Chem Soc J p2442-3 Je '52

FERRY terminals

Car-ferry terminal at Dover. il Engineering 176:55-6 Jl 10 '53

Ferry slip unaffected by high tides; portals allow bridge to rise 34 ft. il Eng N 150:68 Je 4 '53

FERRYBOATS

Ferries converted to Diesel reduce operating costs. il Marine Eng 58:77-8 Ag '53

Michigan State ferry Vacationland. il Engineer 194:361-3 S 12 '52

Spaulding designs new San Diego ferryboat. Marine Eng 58:49 Jl '53

Trouble for trailerships. il Bsns W p 190+ Ap 25 '53

FERTILITY. See Fecundity

FERTILIZATION (biology)

Does phosphorylated hesperidin affect fertility? M. C. Chang and G. Pincus. bibliog Science 117:274-6 Mr 13 '53

Physiology of mammalian germ cells; Ciba conference, London, June 17-20. Science 116:498-9 N 7 '52

FERTILIZATION of plants

Studies on natural pollination of hevea brasiliensis in Brazil. H. E. Warmke. bibliog Science 116:474-5 O 31 '52

FERTILIZER association, National. See National fertilizer association

FERTILIZER factories

See also

Ammonium sulfate
—Manufacture

FERTILIZER industry

Early figures indicate rising supply, demand for fertilizer. Chem & Eng N 30:5044-5+ D 1 '52

Fertilizer industry; C&EN annual review. E. C. Kapusta. Chem & Eng N 31:28-30 Ja 5 '53

N-P-K head for dizzy peaks. diag Chem Eng 60:202-3 Mr '53

Now is time to press for fertilizer market expansion; abstract. L. Ware. Oil Paint & Drug Rep 163:7 Je 22 '53

Problem; down on the farm. Chem W 72:34+ Mr 7 '53

Product they found in the Oakland garbage heap; Com-Co. R. Stovroff. il Sales Management 69:30-2+ O 15 '52

TVA fertilizer distribution policy investigation needed, House told. E. C. Gathings. Oil Paint & Drug Rep 163:3+ F 16 '53

Triple growth meets a growing need. Chem W 71:54-5 D 20 '52

See also

American plant food council
International minerals and chemicals corporation
Lime as fertilizer
National fertilizer association

Statistics

Agricultural chemicals. Published in weekly numbers of Oil, paint and drug reporter

Fertilizer consumption reached all-time high during 1951-52. Oil Paint & Drug Rep 164:3 Jl 20 '53

Canada

Fertilizers. Can Chem Process 37:10+ Je 20 '53

Great Britain

Intensive research results. F. G. C. Fison. Chem Age (Lond) 67:803-4 D 13 '52

Lifting of sulfur bottlenecks and those caused by machinery shortages urged in chemical fertilizer production plans in Britain. Chem & Eng N 31:450-1 F 2 '53

FERTILIZER research

Intensive research results. F. G. C. Fison. Chem Age (Lond) 67:803-4 D 13 '52

FERTILIZERS

Chemical market research association studies current farm chemical trends. Oil Paint & Drug Rep 163:5+ Mr 2 '53

Crop surplus and crop shortage; abstract. R. Coleman. Oil Paint & Drug Rep 163:52 Je 22 '53

Fertilizer, phosphorus and allied industries; abstract and discussion. B. Raistrick. Chem & Ind p345 Ap 11 '53

Fertilizer use increase recommended by USDA. Oil Paint & Drug Rep 163:4 Ap 20 '53

Liquid diet for leaves. Ind & Eng Chem 45: sup 15A Ap '53

Manuring of grasslands; abstracts and discussion. R. A. Hamilton and others. Chem & Ind p 149-50 F 14 '53

Plant food output method; abstract. F. T. Nielsson and others. Oil Paint & Drug Rep 164:45 S 14 '53

Plant food subsidizing to reflect budget cut. Oil Paint & Drug Rep 163:5 Ap 20 '53

Plant nutrient 1953-54 supply seen 13 percent above record. Oil Paint & Drug Rep 164:3+ O 5 '53

Tests for phosphate fertilisers; potentialities of dicalcium phosphate. Chem Age (Lond) 68:139-40 Ja 17 '53

Trace elements for plant growth incorporated in glass matrix. diag Can Chem Process 37:73 My '53

Trace elements for soil offered in a new form. Chem & Eng N 30:5372 D 22 '52

See also

American plant food council
Ammonium sulfate
Calcium cyanamide
Lime as fertilizer
Phosphates
Refuse as fertilizer
Sewage sludge as fertilizer

Analysis

Colorimetric determination of phosphorus pentoxide in fertilizers using a standard calibration plot. G. L. Bridger, D. R. Boylan and J. W. Markey. bibliog Anal Chem 25:336-8 F '53

Review of analytical chemistry; supplementing 1949 and 1950 reviews. G. L. Bridger. Anal Chem 25:17-24 bibliog(295 ref, p21-4) Ja '53

Manufacture

Concentrated fertilizers from phosphate rock and waste gas. Can Chem Process 37:112 S '53

Producing granular fertilizers. flow diag il Can Chem Process 36:76+ N '52

Production of fertilizer from phosphate rock by fusion with magnesium and potassium sulfates. G. L. Bridger and D. R. Boylan. bibliog flow sheet il Ind & Eng Chem 45:646-52 Mr '53

Quick cure for fertilizers. il Chem W 71:50-2 N 22 '52

See also

Phosphates—Manufacture

FERTILIZERS—*Continued*

Prices

Agricultural chemicals; 1952 market trends. Oil Paint & Drug Rep 163:41-3 sec 2 Ja 26 '53

Transportation

See also
Railroads—Rates—Fertilizers

FESTIVAL of Britain. See Exhibitions—Great Britain

FETAL deaths. See Fetus, Death of

FETUS, Death of

Reporting of fetal deaths in New York city. C. L. Erhardt. Pub Health Rep 67:1161-7 D '52

FEUCHT, Paul E.

Feucht to succeed Williams as North Western's head. por Ry Age 133:42-3 D 29 '52

FEULGEN reaction

Chemistry of gram staining and of the Feulgen and Dische reactions for nuclear material. M. Stacey. Chem & Ind p 124 F 7 '53

FEVER

Fever from infection not corrected by environment. R. W. Keeton. Heating-Piping 25:107 Mr '53

See also
Hemorrhagic fever
Malaria
Typhus fever

FEYMAN diagrams. See Quantum theory

FIBER board

Economical use of fibreboard; study of master shipping containers for pre-packaged tomatoes. B. C. Robertson and W. A. Aronow. il diags Mod Packaging 26:141-3 N '52

Forest products research society, Pacific Northwest section, Hardboard division meeting, Eugene, Ore. Paper Tr J 137:30+ Jl 10 '53

Hardboard output facilities undergoing broad expansion. Materials & Methods 37:208+ Ap '53

Revolution in lumber; cheap, strong hardboards are among new products made from yesterday's waste. il House & Home 2:144+ S '52

Stitched fiber replaces sheet metal; air ducts in automobiles. il Machine Design 25:131 S '53

Trend to fibre for produce. il Mod Packaging 27:138-41+ O '53

Use of asphalt emulsions in the manufacture of insulating board products. J. J. Perot. Tappi 36:69-70 F '53

See also
Wall board

Analysis

Infrared determination of biphenyl in treated fiberboard cartons. L. R. Knodel and E. J. Elvin. Anal Chem 24:1824-6 N '52

Manufacture

Anacortes Veneer's hardboard plant. il Paper Tr J 136:16-18 Mr 6 '53

Continuous production of timber board; Bartrev process. il Engineer 195:806-8 Je 5 '53; Engineering 175:748-9, 752 Je 12 '53; Pulp & Pa of Can 54:122-5 S '53

Drying of insulating board. H. C. Jessen. bibliog il plan diags Tappi 35:455-67 O '52

Fire hazards in hot processing of fiberboards; abstract. A. Hägglund. Paper Ind 35:89 Ap '53

How two companies are applying flow principles to a batch-type operation. il Factory Management 111:146-7 S '53

Huge press produces board by continuous process. il Machine Design 25:132-3 S '53

Interrelationships of temperature, pressure, and pressing time in the production of hardboard from Douglas-fir fiber. H. Wilcox. Tappi 36:89-94 F '53

New automatic machine makes board from wood waste. il Paper Ind 35:554-6 Ag '53

New hardboard process; plywood waste is put to use in semi-dry process. il Chem Eng 60:138+ Ja '53

Peculiarities of white oak hardboard stock; abstract. S. L. Schwartz. Paper Tr J 136:98 F 20 '53

Production of board from waste. il Elec J 150:2013-14 Je 5 '53

Union of South Africa operates new fiberboard mill. For Comm W 48:15 N 10 '52

Testing

Effects of pressing temperature and heat treatments on the relationships between head speed, span, and modulus of rupture of hardboard. H. Wilcox. Tappi 36:189-92 Ap '53

FIBER pipes. See Pipes, Fiber

FIBERFRAX. See Heat resisting materials

FIBERGLAS. See Glass fibers

FIBERGLAS fabrics. See Glass fabrics

FIBERS

Aid in paper microscopy; Du Pont fiber identification Stain A. G. K. Boger, jr. bibliog Paper Tr J 136:21-2 Ap 3 '53

Characteristics of pulp fibers from agricultural residues. E. C. Lathrop. Tappi 35:sup60A+ N '52

Electron microscopic and other studies on a copper-cystine complex. H. Kahler, B. J. Lloyd, jr. and M. Eden. bibliog il J Phys Chem 56:768-70 Je '52

Fiber analysis of paper and paperboard; revision of TAPPI tentative standard T 401 m-42. bibliog Tappi 36:sup 170A-8A Ag '53

Fiber flocculation. D. E. Beasley. Tappi 36:sup 159A-60A S '53

Fiber length and coarseness of pulp by projection. diags Tappi 36:sup 121A-3A S '53

Fiber length of pulp by classification. bibliog Tappi 36:sup 125A-6A S '53

Interpretation of infrared dichroism in fibrous protein structures. R. D. B. Fraser. bibliog diags J Chem Phys 21:1511-15 S '53

Man-made fibers keep climbing. il Chem Eng 60:205 Mr '53

Mixture of structures in a mechanical pulp as a key to the knowledge of its technological properties. W. Brecht and K. Klemm. bibliog diags Pulp & Pa of Can 54:72-80 Ja '53

Palmetto fibre; Florida's little known big industry. il Manuf Rec 122:34-5+ Ja '53

Studies of the nucleation and growth reactions of selected types of insulin fibrils. D. F. Waugh and others. bibliog Am Chem Soc J 75:2592-600 Je 5 '53

Surface area of pulp fibres, an important factor in papermaking; abstract. J. W. Beamesderfer. Pulp & Pa of Can 54:138-9 Je '53

Wood fibers and tree bark yield effective lost-circulation material. T. R. Frost and R. A. Waldron. Oil & Gas J 51:289+ S 29 '52

See also
Bast fibers
Cotton fibers
Flotation process (fibers)
Glass fibers
Hair
Jute
Rayon fibers
Textile fibers

FIBRIN

Conversion of fibrinogen to fibrin; light scattering studies of bovine fibrinogen. S. Katz and others. bibliog Am Chem Soc J 74:5706-9 N 20 '52

Conversion of fibrinogen to fibrin; light scattering studies on clotting systems inhibited by hexamethylene glycol. J. D. Ferry and others. bibliog Am Chem Soc J 74:5709-15 N 20 '52

FIBRINOGEN

Conversion of fibrinogen to fibrin; light scattering studies of bovine fibrinogen. S. Katz and others. bibliog Am Chem Soc J 74:5706-9 N 20 '52

Conversion of fibrinogen to fibrin; light scattering studies on clotting systems inhibited by hexamethylene glycol. J. D. Ferry and others. bibliog Am Chem Soc J 74:5709-15 N 20 '52

Effect of toluidine blue on the coagulation of fibrinogen by thrombin. T. J. Haley and B. Rhodes. bibliog Science 117:604-6 My 29 '53

Effects of ionic strength on the interaction of bovine fibrinogen and thrombin. D. F. Waugh and M. J. Patch. bibliog J Phys Chem 57:377-82 Mr '53

FIBRINOLYSIN
Existence of antifibrinolysin activity in platelets. S. A. Johnson and C. L. Schneider. bibliog Science 117:229-30 F 27 '53

FIBROGRAPH. See Cotton fibers

FIBROIN
Adsorption of water vapor on acetyl derivatives of collagen and of silk fibroin. R. W. Green and K. P. Ang. bibliog Am Chem Soc J 75:2733-6 Je 5 '53
Effect of moisture on compressibility of natural high polymers. C. E. Weir. bibliog J Res Nat Bur Stand 49:135-9 S '52
Sorption of ammonia by silk fibroin. P. A. Marshall and W. J. Moore. bibliog Am Chem Soc J 74:4779-83 O 5 '52

FICKE, Florence
Portrait. Ptr Ink 241:128 N 7 '52

FICTION
See also
Business—Fiction

FIDELITY insurance. See Insurance, Surety and fidelity

FIDELITY insurance company of Tennessee
Bad auto titles. Bsns W p 147 Ap 25 '53

FIDELITY-PHENIX fire insurance company
Continental and Fidelity-Phenix joining ranks of century old insurance companies. C. Axman. East Underw 54:19-20 Ja 16 '53

FIELD glasses
Binoculars for those who must wear spectacles. Consumers Res Bul 32:21 Ag '53

FIELD museum of natural history. See Chicago natural history museum

FIELD theories (physics)
Capacitively coupled field mapper for two-dimensional distributed-source field problems. E. O. Gilbert and E. G. Gilbert. il diags Elec Eng 72:600-5 Jl '53
Classical and quantum field theories in the Lagrangian formalism. P. G. Bergmann and R. Schiller. bibliog Phys R 89:4-16 Ja 1 '53
Classical equations of motion of point particles. P. Havas. bibliog Phys R 91:997-1007 Ag 15 '53
Connection between fusion theory of bosons and nonlocal field theory. S. Watanabe. Phys R 91:771-2 Ag 1 '53
Construction of conservation equations for nonlocal field theories. C. Gregory. Phys R 91:770 Ag 1 '53
Construction of potentials in quantum field theory. K. A. Brueckner and K. M. Watson. bibliog Phys R 90:699-708 My 15 '53; Reply. A. Klein. 91:1285 S 1 '53
Crystal field theory in the rare earths. R. J. Elliott. bibliog Rs Mod Phys 25:167-9 Ja '53
Field theory. F. J. Dyson. il diag Sci Am 188:57-62+ Ap '53
Generalized method of field quantization. H. S. Green. bibliog Phys R 90:270-3 Ap 15 '53
Mass-renormalization with the Tamm-Dancoff method. F. J. Dyson. Phys R 91:421-2 Jl 15 '53
New equation in the affine field laws. G. Bandyopadhyay. bibliog Phys R 89:1161 Mr 1 '53
Quantum field theory in the light of distribution analysis. W Güttinger. bibliog Phys R 89:1004-19 Mr 1 '53
Spherically symmetric solutions in nonsymmetrical field theories; the skew symmetric tensor. P. C. Vaidya. bibliog Phys R 90:695-8 My 15 '53
Strong conservation laws and equations of motion in covariant field theories. J. N. Goldberg. bibliog Phys R 89:263-72 Ja 1 '53
Use of the Tamm-Dancoff method in field theory. F. J. Dyson. Phys R 90:994 Je 1 '53
See also
Unified field theory

FIELDISTORS. See Amplifiers

FIGS
Syrian apricot and fig production lower in '52. For Comm W 49:11 Ja 26 '53
Turkey's largest fig crop reaches many markets. For Comm W 49:14 F 16 '53

FIGS, Dried
Dried fig output in Greece declines. For Comm W 48:22 D 8 '52

FILARIA
Survival of microfilariae of diroflaria immitis in rats and mice. P. H. Mann and I. Fratta. Science 117:18 Ja 2 '53

FILARIASIS
Chemotherapy of filariasis. J. S. Morley. Chem Soc J p4002-14 O '52

FILBERTS
Italian filbert crop and exports decrease. For Comm W 49:16 F 16 '53
Quota imposed on filbert imports. For Comm W 49:32 Je 22 '53

FILE cabinets
Testing
Mechanical muscle; ingenious test mechanism checks life of filing cabinet drawers. diag Iron Age 170:137 O 23 '52

FILE cabinets, Plastic
Plusses in plastics file drawers. il Mod Plastics 30:88-9 F '53

FILES and filing (documents, etc)
Air line agents answer calls faster with lazy susan filing device. il Am Bsns 22:30+ O '52
Centralizing records control; abstract. E. P. Strong. Management R 42:25 Ja '53
Construction data file. E. T. Nettleton. Roads & Sts 96:138-40 Mr '53
Decentralized filing with centralized control; abstract. W. A. Kleinschrod. Management R 41:602-3 S '52
File highlights sales facts. Am Bsns 22:46-7 N '52
How to cut duplicating costs. H. Herslow. Am Bsns 23:28+ Ap '53
How to keep sales literature in order and up to date. B. Aitchison. Ind Marketing 37:20+ S '52
How to revamp your copy file for use. R. R. Maxwell. diag Ptr Ink 242:26-7 Ja 2 '53
Money in the wastebasket. P. Stryker. il Fortune 47:144-5+ F '53
Petroleum-engineering file on punched cards. R. K. Guthrie and others. il diags Oil & Gas J 51:62-4+ F 2 '53
Realistic approach to records management. A. McDonald. Special Lib 44:93-5 Mr '53
Terminal digit method of filing for bank use. M. C. Miller. Banking 45:72+ Je '53
Word-subject filing system. il Ry Age 134:78-9 Mr 23 '53

FILES and rasps
Use the right file properly. R. H. Wilcox. il diags Mill & Factory 53:92-4 Ag '53

FILICIN. See Filixic acid

FILING machines
Band filing machine. il Engineer 195:256 F 13 '53

FILIXIC acid
Interaction of dimethylmalonyl chloride with malonic ester; a new synthesis of filicinic acid. E. B. Reid and T. E. Gompf. bibliog Am Chem Soc J 75:1661-3 Ap 5 '53

FILLERARC welding. See Electric welding, Arc—Inert gas shielding

FILLING
Asphalt membranes; their service record on Gulf Freeway fills. W. J. Van London. il diags Roads & Sts 96:104-6+ Ap '53
Building a 1,000,000 cu. yd. fill. il diag Roads & Sts 95:45-7 O '52
Culvert under high fill is research laboratory. il diags Eng N 149:38+ N 20 '52
Filling on soft mud without dredging. Pub Works 83:84-5 N '52
Heavy corrugated culverts take creek under high fill. il Constr Methods 35:92-3+ F '53
Sanitary fill as a means of reclaiming waste land. G. H. Richards. il Munic Util 90:40+ N '52
Sanitary fills pay off in Seattle. R. F. Karolevitz. il Pub Works 83:78-9+ D '52
Sanitary landfill operated by contract; Oneonta, New York. il Pub Works 84:63+ Mr '53
Sluicing pumps wash fines out of fill, create impervious core in earthfill dam. il Constr Methods 35:62-4 Ag '53
Thruway problems in Montezuma swamp. W. Robinson. il map diag Roads & Sts 95:44-7+ D '52
Use of scrapers for shovel-mix. J. W. Gulledge. il Roads & Sts 96:99 F '53

FILLING machines
Air-gap weighing cuts overfill; new net weight packaging principle. il diag Food Eng 25:62-3+ Mr '53

FILLING machines—*Continued*
- Automatic drum filler cuts costs. B. MacDonald. flow diag il diag Pet Eng 25:C33+ Mr '53
- Automatic filler for non-uniform drums. B. MacDonald. il Factory Management 111:145 Ja '53
- Automatic filling grows up; lube oil filling line at Richmond refinery. il Chem W 71:56-7 N 15 '52
- Automatic unit fills beans into cans. il Food Eng 25:111 Jl '53
- Better barrel filling; Standard oil co. of California Richmond refinery. D. H. Stormont. il Oil & Gas J 52:78-9 Je 1 '53
- Drum filler cuts costs. il Chem Eng 59:208 D '52
- Electronic tablet counter; Warner-Chilcott laboratories. il Mod Packaging 26:154-7+ Ap '53
- Fill check by X-ray. H. Schreiber. il diags Mod Packaging 26:197-9 Ap '53
- Getting optimum performance from filling equipment; panel discussion. E. P. Lee and others. Mod Packaging 26:137-9 Je '53
- Mobile drum filler saves time, manpower. F. Breese. il Nat Pet N 44:64-5 O 15 '52
- New system for candies; Heide's carton filler. il diag Mod Packaging 26:108-9 Jl '53
- Now beams monitor fill-levels and lift barrier on packaging speeds; Pabst brewing co. G. Cram. il Food Eng 25:47+ Je '53
- Packaged before it's filled; pre-packaged wafer sandwich. il Mod Packaging 26:80-2 Mr '53
- Progress in squeeze-bottle filling. il Mod Packaging 27:114-19+ S '53
- Salad by machine; National tea co. il Mod Packaging 27:108-9+ S '53
- Save time, men with mobile drum filler. il Pet Processing 8:567+ Ap '53

See also
Bag filling machines

FILLING materials
See also
Paper making—Fillers

FILMOGRAPH
- Visuals clinic; new audi-visual techniques and products; filmograph, spectrochrome magnetic board, etc. il Sales Management 70:51-4 pt 2 Ja 1 '53

FILMS
- Accommodation coefficient technique applied to a study of molecular oxygen film on tungsten. J. L. Morrison and W. E. Grummitt. bibliog J Chem Phys 21:654-8 Ap '53
- Adsorption on monolayers; adsorption of the isomeric hexanes on condensed stearic acid monolayers and on clean water surfaces. K. E. Hayes and R. B. Dean. bibliog J Phys Chem 57:80-3 Ja '53
- Automatic recording of the pressure-area, pressure-time, and area-time characteristics of monomolecular films. P. A. Anderson and A. A. Evett. plan diags R Sci Instr 23:485-8 S '52
- Bonding of thin films. H. P. Meissner and J. Byrne. bibliog diag J Ap Phys 23:1170-3 O '52
- Capacitance effects in thin conductive films. J. N. Humphrey and others. bibliog diags Phys R 90:111-14 Ap 1 '53
- Characteristics of flow in falling liquid films. A. E. Dukler and O. P. Bergelin. bibliog flow diag il diags Chem Eng Prog 48:557-63 N '52
- Conductivity of thin films in a longitudinal magnetic field. E. Koenigsberg. diags Phys R 91:8-9 Jl 1 '53
- Heat capacities of multimolecular layers of methane adsorbed on rutile. K. S. Dennis, E. L. Pace and C. S. Baughman. Am Chem Soc J 75:3269-70 Jl 5 '53
- Helium II; film transport rates over various surfaces. B. Smith and H. A. Boorse. bibliog Phys R 90:156-7 Ap 1 '53
- Infrared spectra of evaporated films. J. E. Tyler and S. A. Ehrhardt. bibliog il Anal Chem 25:390-4 Mr '53
- Interference films on glass; some observations during acid leaching of X-ray plate glass. S. Anderson and D. D. Kimpton. Am Cer Soc J 36:175-9 Je 1 '53
- Limiting thickness of an electrolyzed gas film capable of sustaining a given negative pressure. L. J. Briggs. diags J Chem Phys 21:779-81 My '53
- Linear film growth in tarnishing reactions. R. C. Williams and P. R. Wallace. J Chem Phys 21:1294-5 Jl '53
- Meaning of commutator film. L. D. Cook. il Iron & Steel Eng 30:74-9; Discussion. 79-83 Je '53
- Mechanism of film formation of latex paint. W. A. Henson, D. A. Taber and E. B. Bradford. il Ind & Eng Chem 45:735-9 Ap '53
- Mixed ethylcellulose-butylhydroxyethylcellulose films. H. C. Haas, L. C. Farney and C. Valle, jr. bibliog Ind & Eng Chem 45:564-6 Mr '53
- Multifilament vapor source and spherical holder for interference filters. L. Holland and N. J. Newman. diags R Sci Instr 23:642-3 N '52
- New apparatus for studying the evaporation of water through monolayers. F. Sebba and N. Sutin. diag Chem Soc J p2513-16 Jl '52
- Permeability to water of thin films of pure compounds. B. L. Harris and A. Bialecki. bibliog Paint Oil & Chem R 115:88+ D 4 '52
- Properties of freshly formed surfaces. C. C. Addison and D. Litherland. diag Chem Soc J p 1143-55 Ap '53
- Radioactive monolayers; a new approach to surface research. D. E. Beischer. bibliog il diag J Phys Chem 57:134-8 F '53
- Reflectance of thin cellulose nitrate films. L. Harris and J. K. Beasley. Opt Soc Am J 42:634-6 S '52
- Researches on monolayers; the effect of mono- and di-hydric phenols on monolayers of certain aromatic compounds. C. H. Giles and E. L. Neustädter. Chem Soc J p3806-13 O '52
- Resistor temperature coefficients of pyrolytic-deposited-carbon resistors and metal-film resistors. F. A. Paul. il Tele-Tech 12:52-3, 120 Ja '53
- Sorption of vapors by monolayers; the differential heats of adsorption of *n*-hexane on stearic acid monolayers. R. B. Dean and K. E. Hayes. bibliog Am Chem Soc J 74:5982-4 D 5 '52
- Synthetic fatty acid triglycerides and natural drying oils; film studies. P. S. Hess and G. A. O'Hare. Ind & Eng Chem 44:2424-8 O '52
- Thermodynamics of the helium film. O. K. Rice and B. Widom. Phys R 90:987 Je 1 '53
- Thickness of the saturated helium II film. R. Bowers. bibliog Phys R 91:1016-17 Ag 15 '53
- Transfer rate of the liquid helium II film near zero level difference. G. S. Picus. Phys R 90:719-20 My 15 '53
- Unbacked thin films. G. A. Sawyer. bibliog il R Sci Instr 23:604-6 N '52
- Water penetration of emulsion polymer films. G. L. Brown and J. P. Scullin. Ind & Eng Chem 45:743-5 Ap '53

See also
Oil films

FILMS, Metallic
- Analysis; minute quantities of elements identified in thin films. Iron Age 170:194+ N 6 '52; Tool Eng 30:55 F '53
- Conducting films on glass. Elec R (Lond) 152:1069-72 My 8 '53
- Isolation and examination of films from metal surfaces; an improved technique. T. J. Nurse and F. Wormwell. bibliog il J Ap Chem 2:550-4 S '52
- Mean free paths of electrons in evaporated metal films. F. W. Reynolds and G. R. Stilwell. bibliog Phys R 88:418-19 O 15 '52
- Nature of the films formed by passivation of iron with solutions of sodium phosphate. M. J. Pryor and others. bibliog Electrochem Soc J 99:542-5 D '52
- Passivity of metals; the anodic behaviour of iron oxide films. U. R. Evans and I. D. G. Berwick. diag Chem Soc J p3432-7 S '52
- Photoelectric effect of thin Bi films. D. J. Fourie. Phys R 91:803 Ag 15 '53
- Thin films of ferromagnetic materials. E. C. Crittenden, jr. and R. W. Hoffman. bibliog diags Rs Mod Phys 25:310-15 Ja '53

FILMS, Metallic—*Continued*

Tracer method for the thickness measurement of thin Bi films. J. J. Antal and A. H. Weber. bibliog il R Sci Instr 23: 424-6 Ag '52

FILMSTRIPS. See Slide films

FILTER bags

Bag filtration of aerosols. R. T. Pring. diags Heat & Ven 49:97-9 D '52

New fiber gives excellent service in dust fume bags; Bradley co.'s Yellow Pine mine & smelter. il Eng & Min J 154:121 Ja '53

FILTER cloth

See also

Filter bags

FILTER paper

Dynamic midget; story of the Cellulo co. P. E. Jacobs. il Paper Tr J 137:14-18 S 11 '53

Netone filter paper. Paper Tr J 136:32 My 1 '53

Preparation and utilization of metallic aerosols for filter paper testing. J. Kohl and R. D. Zentner. bibliog diag J Phys Chem 57:68-72 Ja '53

Simplified apparatus for filterpaper ionophoresis. A. B. Foster. bibliog il diag Chem & Ind p 1050-1 O 25 '52

Throw-away filter medium. Can Chem Process 36:50+ D '52

FILTERS, Air. See Air filters

FILTERS, Electric. See Electric filters

FILTERS and filtration

Application of the microstrainer to water treatment in Great Britain. R. Hazen. il plan diags Am Water Works Assn J 45: 723-34; Discussion. 734-7 Jl '53; Abstract. Water & Sewage Works 100:266-8 Jl '53

High rate filtration of water in rapid sand filters. C. R. Cox. Water & Sewage Works 100:400-2 O '53

High-rate water filtration at Chicago. Pub Works 84:117-18 F '53

Micro-straining as adjunct to rapid sand filtration of water. A. W. Consoer. il Eng N 150:36-8 Ap 9 '53

New design in filter bottoms for rapid sand filters in Holland. C. W. Hulsbergen. il diags Water & Sewage Works 99:481-5 D '52

New filter used for testing drinking water. Pub Works 84:104 My '53

Providing large industrial water supplies by induced filtration. F. H. Klaer, jr. bibliog diag Min Eng 5:Trans 620-4 Je '53

Rapid sand filtration at Lethbridge. J. C. Neufeld. il Munic Util 90:22-3+ O '52

Use of the membrane filter in the bacteriological examination of water. E. W. Taylor. Chem & Ind p 124-5 F 7 '53

Water impurities and electroplating. J. B. Smith. bibliog(68 ref) il diag Metal Finishing 51:65-9 Mr '53

See also

Filtration plants

Sewage disposal—Filtration

FILTERS and filtration (bacteriology)

Application of molecular filter techniques to the bacterial assay of sewage. A. Goetz. bibliog il diags Sewage & Ind Wastes 25: 1136-44 O '53

Concentrometer method of applying molecular filter membranes. A. Goetz. bibliog il diags Am Water Works Assn J 45:933-44 S '53

Domestic and European molecular filter membranes. H. F. Clark and others. Am Water Works Assn J 44:1052-6 N '52

New bacteria spotter; millipore filter. C. P. Burke. il Food Eng 25:47+ S '53

New bacteriological technique for testing water and sewage; MF Millipore filters. J. H. Bush. bibliog il diag Water & Sewage Works 100:151-3 Ap '53

New medium for bacteriological analysis with molecular filter membranes. G. S. Yee and others. bibliog il Am Water Works Assn J 45:945-51 S '53

FILTERS and filtration (technical chemistry)

Chemical engineering unit operations; filtration. S. A. Miller. il Ind & Eng Chem 45: 68-73 bibliog(221 ref, p71-3) Ja '53

Diatomaceous earth; staff-industry collaborative report. W. Q. Hull and others. bibliog flow sheet il diags Ind & Eng Chem 45: 256-69 F '53

Diatomite for filtration. diag Can Chem Process 37:76+ My '53

Doulton pipe-line filter units. Engineer 196: 261 Ag 28 '53

Edge and variable compression filters for aerosols. L. Silverman and M. W. First. bibliog il diags Ind & Eng Chem 44:2777-83 N '52

Filtering superheated alcoholic solutions. A. W. Billitzer. diags Ind & Eng Chem 44: 2417-18 O '52

Filtration-extraction of cottonseed. E. L. D'Aquin and others. bibliog flow diags il diag Ind & Eng Chem 45:247-54 Ja '53

Flue dust recovery plant for blast furnaces, Aliquippa works. il Engineer 195:810-11 Je 5 '53

Hydroextraction relation between hydroextraction and filtration permeabilities. M. M. Haruni and J. A. Storrow. il diags Ind & Eng Chem 44:2756-63 N '52

Investigation of the mechanism of water removal from pulp slurries. W. L. Ingmanson. bibliog(25 ref) diag Tappi 35:439-48 O '52

Metal powder filters. A. J. Langhammer and P. Glick. il diags Product Eng 24:179-82 Ap '53

Microfiltration with resin-impregnated wool filters. E. D. Kane. bibliog il diags Ind & Eng Chem 45:860-4 Ap '53

Plastics move into filters. Steel 132:134+ Je 15 '53

Purification of potassium nitrate process liquors; comparison between the filtration, froth flotation and sedimentation of insolubles. S. A. Chodkiewicz. J Ap Chem 2: 639-41 N '52

Removal of radioactive iodine by laboratory trickling filters. M. W. Carter. bibliog il Sewage & Ind Wastes 25:560-5 My '53

Vacuum filters

Theory, scale-up, and operating variables of the Peterson top feed reservoir. R. J. Piros and others. bibliog flow diag Min Eng 4: Trans 1236-43 D '52

FILTERS and filtration, Domestic

Filters and conditioners for the water supply. Consumers Res Bul 32:17-19 Ag '53

FILTRATION plants

Buffalo's water supply illustrates progressive engineering development. F. W. Crane. il Munic Util 91:29-30+ My '53

Chicago prepares site for navy pier filter plant. plan Water & Sewage Works 99:511 D '52

Forming arches seen cheaper than reinforcing slabs; water filters in West Hartford, Conn. il diags Eng N 149:36+ N 27 '52

Pollution loads and their effect on plant operation. J. R. Baylis and J. C. Vaughn. Munic Util 91:28-30+ Ag '53

Works of the Stirlingshire and Falkirk water board. E. W. Denholm. Engineer 194:348 S 12 '52

Equipment

Dehumidified pipe galleries; Chicago's south district filtration plant. W. W. DeBerard. flow diag il plan diag Heating-Piping 25:73-8 F '53

Design of filtration plant at New Toronto affected by space limitations. R. W. Angus. il plan diags Munic Util 91:28-32+ Je '53

Effluent rate control for rapid sand filters; from the Venturi tube to automatic control and master supervision devices. C. G. Richardson. il diags Water & Sewage Works 100:133-41 Ap '53

Multiple-treatment units for water purification; with cost data. E. H. Aldrich. il Am Water Works Assn J 44:1107-16 D '52

Slurry feeding of activated carbon. J. R. Baylis. il diag Am Water Works Assn J 44:1161-8 D '52

Turbidity and odor problems overcome in filter plant design; Springfield, Tenn. J. W. Finney, jr. il diag Pub Works 83:60-1+ N '52

FILTROL corporation

Common stock oversubscribed. Comm & Fin Chr 177:140 Ja 12 '53

Registers with SEC. Comm & Fin Chr 176: 2162 D 8 '52

Unscrambled merger. Chem W 72:19-20 Ja 24 '53

FINANCE

How money flows through an economic system; moneyflow system. Bsns W p 144-6 Ja 10 '53

See also

Amortization
Banks and banking
Bonds
Budget
Capital
Credit
Debt
Debts, Public
Deflation (finance),
Finance companies
Foreign exchange
Gold as money
Holding companies
Housing finance
Income
Income tax
Inflation (finance)
Insurance
Interest
Investment trusts
Investments
Loans, Bank
Mining industry and finance
Money
Municipal finance
Prices
Profit
Securities
State finance
Stock exchange
Stocks
Trusts, Industrial

also subdivision Finance under special subjects, e.g.

Chemical industries
Colleges and universities
Corporations
Electric utilities
Gas companies
Insurance, Life
Insurance companies
Public utilities
Railroads
Roads
Scientific research
Sewerage
Waterworks

Alabama

Alabama story; state finance. il Manuf Rec 122:95-6 Je '53

Alberta

Oil revenues make Alberta debt-free. For Comm W 49:5 Mr 23 '53

Argentina

Improvement in Argentine economy halted by shortages, price rise. For Comm W 49: 4+ My 11 '53

Australia

Australia; price of growth; background to inflation. map Economist 166:686+ Mr 7 '53

Surplus for Australia? Economist 167:181-2 Ap 18 '53

Bolivia

Bolivia establishes 1953 budget; new income sources investigated. For Comm W 49:5+ Ap 13 '53

California

California municipal financing. J. L. Beebe. Comm & Fin Chr 177:1230 Mr 19 '53

Canada

Canada in 1952 and after. J. Muir. Comm & Fin Chr 177:197+ Ja 15 '53

Canadian picture is still bright. H. S. Backus. Comm & Fin Chr 177:3+ sec 2 Je 25 '53

Dip in Canadian dollar. Burroughs Clearing House 37:6 D '52

See also

Budget—Canada

Colombia

Colombia to have control of enterprises financed by government-guaranteed loans. For Comm W 49:6 Mr 9 '53

Europe

Europe's capital; it is pouring into investments all over the world. E. Kaskeline. Barron's 33:7+ Ap 6 '53

Monetary orthodoxy in Europe. Economist 165:497-8+ N 15 '52

France

Credit control in France. Economist 165:506+ N 15 '52

Vicious circle for French finances. Economist 167:97-8 Ap 11 '53

See also

Budget—France
Money—France

Germany

See also

Debts, Public—Germany

Great Britain

Axe or pruning knife. Economist 165:138-9 O 18 '52

Bloom on the gold reserves. Economist 165: 711 D 6 '52

Britains' Colonial sterling balances. P. Einzig. Comm & Fin Chr 176:2339 D 18 '52

Britain's external finances show improvement. For Comm W 49:3 My 25 '53

British treasury financing and inflation. P. Einzig. Comm & Fin Chr 176:1632 O 30 '52

Corpse in the capital market. Economist 166: 375-8 F 7 '53

Doubts about development. Economist 165: 838-40 D 20 '52

External surplus. Economist 167:103-6 Ap 11 '53

Gilt-edged and the deficit. Economist 167: 317-18 My 2 '53

Gold surplus. Economist 165:402+ N 8 '52

Golden tide. Economist 166:95-7 Ja 10 '53

Inflation in Britain. P. Einzig. Comm & Fin Chr 177:2651 Je 18 '53

Pooh-bah in gilt-edged. Economist 165:899-900 D 27 '52

See also

Bonds, Government—Great Britain
Budget—Great Britain

Greece

Greece under Papagos; trading nation in a shrunken world. Economist 167:525-6 My 23 '53

Prices of Greek bonds foreshadow settlement. Barron's 33:14 Je 1 '53

India

IBRD grants loan for projects in India. For Comm W 49:8 F 9 '53

Italy

Limited savings strain Italian stock markets. L. J. Wollemberg. Barron's 33:14 My 25 '53

Japan

Japan and sterling markets. Economist 167: 113 Ap 11 '53

Year of the snake in Japan. Economist 166: 151-2 Ja 17 '53

New England

Financial aid for the new and small; development credit corporations. Bsns W p 112+ Jl 4 '53

New York (city)

City Hall can't make ends meet either. Bsns W p61-2+ D 6 '52

City hall studies plans to cut deficit. Bsns W p86-8+ Ap 18 '53

Puerto Rico

Financial institutions in Puerto Rican development. B. Ruml. Ann Am Acad 285:91-4 Ja '53

Rhodesia

Southern Rhodesian budget aims at economics. For Comm W 49:2 Je 29 '53

Russia

Savings from the Russians. Economist 167: 893 Je 27 '53

Tanganyika

New loan for Tanganyika. Economist 167:681 Je 6 '53

United States

Administration's economic program and chemical industry. S. Weeks. Comm & Fin Chr 177:2635 Je 18 '53

Consumer credit can safely expand by $18 billions. A. H. Johnson. Comm & Fin Chr 177:1536+ Ap 9 '53

Credit and monetary review for 1952. Fed Res Bul 39:91-7 F '53

Federal financial measures for economic stability. R. A. Young. Fed Res Bul 39:456-62 My '53

Federal fiscal policy in the near future. P. Studenski. Comm & Fin Chr 176:2502+ D 25 '52

Federal government finance, 1937-1952; purchasing power of the 1935-1939 dollar, corporate profits before and after taxes, 1935-1952; tabulations. Automotive Ind 108:323 Mr 15 '53

Federal government finance, Nov.-Dec. 1951-Jan.-Nov. 1952. Survey of Cur Bsns 33:S 16-17 Ja '53 [cont monthly]

FINANCE—United States—*Continued*
56 economists fear further debt monetization in absence of redeemable dollar; members of Economists' national committee on monetary policy. Comm & Fin Chr 178:363 Jl 30 '53
Is America going bankrupt? J. P. Wernette. Comm & Fin Chr 177:2415+ Je 4 '53
Is Treasury's sound money policy feasible now? J. C. Cresswill. Mag of Wall St 92: 376-8+ Je 27 '53
Lessons of American monetary policy. Economist 165:495-7 N 15 '52
Monetary management on trial. E. S. Adams. Comm & Fin Chr 178:22-3 Jl 2 '53
Money, men mould the future of a nation. il Bankers Mo 69:16-18+ S '52
Real situation in Nation's finances. W. W. Williams. Comm & Fin Chr 178:9+ Jl 2 '53
Restrictive credit policy and the banking outlook. F. F. Florence. Comm & Fin Chr 177:2512+ Je 11 '53
Return to sound money policies. C. L. Clements. Comm & Fin Chr 178:354-5 Jl 30 '53
Sound dollar and debt management. P. Bush. Comm & Fin Chr 178:101+ Jl 9 '53
Tight money policy unwarranted. M. S. Eccles. Comm & Fin Chr 178:351 Jl 30 '53
Time to ease the money squeeze. Bsns W p200 My 9 '53
Treasury receipts, expenditures, and related items; with details of budget expenditures, trust and other accounts; yearly 1949-1952; monthly Dec. 1951-Dec. 1952. Fed Res Bul 39:40-1 Ja '53 [cont monthly]
See also
Bonds, Government—United States
Budget—United States
Debts, Public—United States
Government expenditures
Income tax—United States
Inflation (finance)
Money—United States
Taxation—United States
United States—Appropriations and expenditures
United States—Treasury department

FINANCE, International
Foreign aid in fiscal year 1952; with tables by program and by country, July 1945 through June 1952. C. E. Shepler. map Survey of Cur Bsns 32:6-11 O '52
Foreign dollar position improved during first quarter. Survey of Cur Bsns 33:4-8 Je '53
International flow of gold and dollars, 1952. Fed Res Bul 39:209-16 Mr '53
Problems of trade equilibrium. Fed Res Bul 38:1089-97 O '52
Prospects for foreign trade in 1953. V. L. Horoth. Mag of Wall St 91:393-5+ Ja 10 '53
Terms set for Germany to pay Austrian debts. For Comm W 49:8 Ap 27 '53
Trade, finance and balance of payments. D. F. Heatherington. Comm & Fin Chr 176:2035+ N 27 '52
See also
Balance of payments
Foreign exchange
International bank for reconstruction and development
Loans, Foreign
also International monetary fund

FINANCE, Municipal. See Municipal finance

FINANCE, Personal
Family dollar. E. S. MacNeill. Banking 45: 56-8 O; 54-5 N; 86-7 D '52; 64-6 Ja; 78-80 F; 68-70 Mr; 52-5 Ap; 65-7 My; 65-6+ Je; 46:59-61 Jl; 64-6 Ag; 58-60 S; 56-8 O; 64-6 N '53
Family finance; review of Managing your money, by J. K. Lasser and Sylvia Porter. Bsns W p 124+ Mr 21 '53
Family income, expenditures, and savings in 1950; preliminary report (revised). U S Bur Labor Statistics Bul 1097:1-66; pa 35c Supt. of doc. '53
1953 survey of consumer finances; general financial position and economic outlook of consumers. I. Schweiger. Fed Res Bul 39: 588-96 Je '53
Teach your wife to be a widow; summary of book by, D. I. Rogers. Weekly Underw 168: 15 sec 2 My 9 '53
Your finances. R. W. Babson. Comm & Fin Chr 177:2317 My 28 '53
See also
Estate planning
Women as investors

FINANCE, State. See State finance

FINANCE companies
Business prospects affecting commercial banking. S. M. Zinner. Comm & Fin Chr 176:1738-9 N 6 '52
Capital from receivables; specialized finance companies co-operate with banks by servicing receivables. T. H. Silbert. Bankers Mo 69:7-8+ D '52
Commercial finance companies boom. il Bsns W p86-8 F 7 '53
Credit bulge; consumer finance companies wonder how high is high. V. F. Morris. Barron's 33:13-14 My 4 '53
Economic appraisal of convenience and advantage licensing by small-loan statutes. M. Upton. J Bsns 25:249-63 O '52
Federal court opinion based on market research findings; trade symbol; Household finance corporation vs. Federal finance corporation. H. M. Cobb. J Marketing 17:289-91 Ja '53
Finance people hold huddle on uniform licensing problem. Nat Underw 57:1+ Ja 22 '53
Functions of factoring and commercial financing. H. R. Silverman. Comm & Fin Chr 178:212-13 Jl 16 '53
How a business finance company works with banks; Walter E. Heller & co., Chicago. W. E. Heller. il Burroughs Clearing House 37:38-40+ Je '53
Investment bankers' role in finance companies. J. J. Minot. Comm & Fin Chr 176: 1819+ N 13 '52
Leasing of Yale & Towne lift trucks hints at new marketing trend; experimental leasing plan of Yale & Towne and C.I.T. corp. Ind Marketing 38:68+ Mr '53
Let's give them credit; look-in on personal finance companies. I. U. Cobleigh. Comm & Fin Chr 176:2220 D 11 '52
100 largest specialized finance companies; list. Bankers Mo 69:14 D '52
See also
Commercial credit company

Advertising

Urges want ad program for loan companies. D. L. Lionel. Ed & Pub 85:36-7 D 13 '52

FINANCE forum of America, Women's. See Women's finance forum of America

FINANCIAL advertising. See Bank advertising

FINANCIAL analysts societies, National federation of. See National federation of financial analysts societies

FINANCIAL departments
Panel underlines human element in business. Credit & Fin Management 55:37-8 Je '53

FINANCIAL employees' guild
Unfair to CIO; Cleveland trust workers. Bsns W p 138 Mr 7 '53

FINANCIAL libraries
Municipal statistics. J. B. Whitbeck. Special Lib 43:396-400 D '52
See also
Bank libraries

FINANCIAL public relations association
Annual convention, 37th, Coronado. Banking 45:58-9+ D '52
Annual convention, 37th, Coronado, Oct. 19-23. Trusts & Estates 91:814-15 N '52

FINANCIAL ratios
Do you stack up as a growth company? Chem W 71:24+ D 20 '52
Fourteen important ratios for 36 manufacturing lines. R. A. Foulke, comp. Dun's R 60:28-9+ D '52
Fourteen important ratios for wholesaling and retailing; with tables. R. A. Foulke. Dun's R 60:32-3+ N '52

FINANCIAL reports. See Corporations—Reports and yearbooks

FINANCIAL statements
How inflation is being recognized in financial statements in the Netherlands. A. Goudeket. J Account 94:448-52 O '52
More on the accrual-basis statement for cash-basis taxpayer situation. J Account 94:469-70 O '52

FINANCIAL statements—*Continued*

Proposal for the adoption of standards of disclosure for changing price levels. P. Grady. J Account 94:565-9 N '52

Some of the dangers inherent in quarterly financial statements. J Account 95:221-2 F '53

See also

Financial ratios
Fund statements

FINANCIAL statistics

Finance, Nov-Dec. 1951-Jan.-Nov. 1952. Survey of Cur Bsns 33:S 15-20 Ja '53 [cont monthly]

Financial, industrial, and commercial statistics, United States. Published in monthly numbers of Federal reserve bulletin

International financial statistics. Published in monthly numbers of Federal reserve bulletin

Purchasing power of the dollar, 1939-1952; gross national product or expenditure, 1932-1952; U.S. revenues, expenditures, debt, 1917-1952; corporate income, taxes, dividends, 1944-1952; tabulations. Steel 132: 199 Ja 5 '53

See also

Assets, Liquid

FINANCIAL treaties and agreements

U.S., Germany sign further agreement on dollar bonds. For Comm W 49:8 Ap 13 '53

FINCH, John Wellington, 1873-1951

Memorial. T. S. Harrison. bibliog por(pl 6) Geol Soc Proc 1952:97-100 Je '53

FINCHES

Darwin's finches. D. Lack. il maps Sci Am 188:66-8+ Ap '53

FINGER nails. See Nails, Finger

FINGERS

White fingers and vitamins. F. J. Jarsen. Ind Med 22:82 F '53

FINISHING materials

Annual engineering materials review and forecast; finishes and coatings. T. C. Du Mond. il Materials & Methods 37:113-15 Ja '53

Annual handbook of product design for 1953; non-metallic materials and finishes. il diags Product Eng Hdbk p C 1-33+ '53

Colored silicone finishes. M. A. Glaser and E. Miller. il Product Eng 24:167-74 Mr '53

Comparison of European and American finishes. E. S. Johnson. Paint Oil & Chem R 116:16-18 Jl 2 '53

15th biennial report on materials of construction; how protective coatings fight corrosion. K. Tator. il diags Chem Eng 59:143-90 D '52

New demands lead to new directions in engineering materials; coatings and finishes. T. C. Du Mond. il Materials & Methods 37: 92-3 Je '53

Organic finishes for metal products. Product Eng Hdbk p C6-9 '53

Selection of interior finish for home freezers. O. J. Spawn. diag Refrig Eng 61:972-3 S '53

See also

Floor wax
Lacquer and lacquering
Neoprene
Paint
Pearl essence
Resinous products—Finishing material
Textile finishing
Waxes

Analysis

Review of analytical chemistry; coatings. R. W. Stafford and J. F. Shay. Anal Chem 25: 8-11 bibliog(138 ref, p 10-11) Ja '53

Directories

Directory of trade names and producers of protective coatings. Chem Eng 59:171-90 D '52

Testing

Accelerated and outdoor weathering of colored vinyl films. F. G. Clark. bibliog il diags Ind & Eng Chem 44:2697-709 N '52

Evaluation of adhesion of organic coatings by ultracentrifugal and other methods. A. M. Malloy and others. bibliog il diags Paint Oil & Chem R 116:14-19 Ag 27; 26-32+ S 10 '53

Gas checking of baking finishes; abstract. L. R. Rogers. Paint Oil & Chem R 116:21 Ap 23 '53

Method for determining pressure and consistency of aerosol coatings. R. W. Morrow and F. S. Palmer. diags Soap & San Chem 28:139-40+ S '52

Practical applications of radioisotopes in protective coatings. H. Gottlieb. il diags Paint Oil & Chem R 116:56-8+ O 8 '53

Spray testing with natural and synthetic sea water; a study of organic coatings. A. L. Alexander and T. P. May. il Am Soc T M Proc 50:1144-50 '50

FINISHING publications, inc.

Fifty years of publishing. T. A. Trumbour. il Metal Finishing 51:86-92 Ja '53

FINLAND

See also

Automobile industry and trade—Finland
Paper mills—Finland

FIR

Chemical composition of grand fir bark. E. F. Kurth and G. M. Tokos. bibliog Tappi 36:301-4 Jl '53

Chemical nature of the extractives from white fir bark. H. L. Hergert and E. F. Kurth. bibliog il Tappi 36:137-44 Mr '53

Influence of bracken fern on establishment of spruce and fir seedlings. I. M. M. Place. Pulp & Pa of Can 54:169-70+ Ag '53

See also

Douglas fir

FIRE

See also

Combustion
Fires
Flames
Fuel
Heat
Heating
Smoke

FIRE alarms

Find fires promptly; fire detection and alarm equipment. P. C. Hensler. il diag Safety Maint & Prod 104:18-20+ N '52

Locating fire alarm circuit troubles. Safety Maint & Prod 104:50+ O '52

FIRE apparatus

Rip track fire fighting wagon. il Ry Loco & Cars 127:68 Jl '53

See also

Fire extinguishers
Sprinkling systems

FIRE apparatus, Motor

Circulating system prevents fire truck freeze-ups. il diag Machine Design 25:242 Ap '53

Dry chemical fire truck for oil and gas flames. il Safety Maint & Prod 106:63-4 Ag '53

Fire truck reaches anywhere in plant. il Mill & Factory 52:139 Ja '53

Foam for use in fighting refinery fires is sped to scene by specially equipped trucks. F. L. Resen. il Oil & Gas J 51:189 F 23 '53

Merryweather fire-engine with self-supporting escape ladder. il Engineering 175:537 Ap 24 '53; Engineer 195:700 My 15 '53

Merryweather hose-laying fire engine. il Engineer 195:99 Ja 16 '53; Engineering 175:121 Ja 23 '53

FIRE boats

Air-sea crash rescue tender. il Engineer 194: 525-6 O 17 '52; Engineering 174:577 O 31 '52

Alden designs Long Beach fireboat. plans diag Marine Eng 58:81-2 Mr '53

Mathis yard building powerful fireboat for New York. il Marine Eng 58:50 Jl '53

New York to have powerful fireboat. il Marine Eng 58:79-80 F '53

FIRE brick

Combinations of brick required for rings; data sheet. Foundry 81:163-4 Ap '53

First quality fire clay brick; prices, 1946-1952; tabulation. Iron Age 171:436 Ja 1 '53

Permeability of firebrick. il diag Glass Ind 34:427+ Ag '53

Properties and uses of semisilica brick. G. B. Remmey. il diag Iron & Steel Eng 30:94-100; Discussion. 100-2 My '53

Reactions of sodium sulfate with alumina-silica refractories. W. A. Lambertson. Am Cer Soc J 35:161-5 Jl 1 '52

Some considerations in the classification of fire-clay brick. W. S. Debenham and G. R. Eusner. Am Cer Soc Bul 32:272-6 Ag 15 '53

See also

Silica brick

FIRE brick—*Continued*

Manufacture

Quality control as applied to fire clay and alumina-diaspore fire-clay brick. E. B. Hunt and A. R. Lesar. Am Cer Soc Bul 32: 74-6; Discussion. 76-7 Mr 15 '53

Quality control of ladle brick. J. A. Roslund. Am Cer Soc Bul 32:78-9; Discussion. H. J. Purnell. 79 Mr 15 '53

Specifications

Fire brick specifications from the maker's angle. C. E. Moore. Brick & Clay Rec 122: 61-2+ F '53

Testing

Determining porosity of refractory brick. T. Yoshii and Y. Murakami. diag Rock Prod 55:78 N '52

Factors influencing premature failure of ceramic digester linings in sulfite pulp mills. H. J. Kelly and others. il diags Am Cer Soc J 36:18-26 Ja 1 '53

Flow characteristics of fire-clay refractories at high temperatures. P. G. Herold and C. Knudsen. bibliog diag Am Cer Soc J 35:220-5 S 1 '52

Long-time load tests on commercial classes of fire-clay brick. J. A. Crookston and D. R. Torgeson. il diag Am Cer Soc J 35: 265-71 O 1 '52

Spalling of fire-clay brick. G. R. Eusner and W. S. Debenham. il diag Am Cer Soc Bul 31:489-92 D 15 '52

Study on permeability to air of various fire bricks and of refractory-clay pots used for melting glass. il diag Brick & Clay Rec 123:39-40 O '53

FIRE brigades, Factory. See Factory fire brigades

FIRE clay
See also
Fire brick

Testing

Proposed method of test for disintegration of fireclay refractories in an atmosphere of carbon monoxide. Am Soc T M Proc 50: 207-8 '50

FIRE damp

European developments in firedamp control. D. W. Gillings. plans diag Min Cong J 39:46-9+ S '53
See also
Methane

FIRE department instructors conference

Annual meeting, 25th, Memphis, Feb. 24-27. East Underw 54:1+ F 6 '53

FIRE departments
See also
Radio telephone—
Fire department use

FIRE detectors. See Detectors

FIRE extinction

Air agitation snuffs fire like magic. il Nat Pet N 44:58-60 D 3 '52

Air agitation stops fuel oil fire. il Elec World 138:84 D 29 '52

Electrical fires mean this; prevention means this. J. E. Appel and J. A. Bono. Safety Maint & Prod 106:69-71 S '53

How to put out class A and B fires. J. A. Bono. il Safety Maint & Prod 106:94-6+ O '53

They put it out in 37 seconds; fighting oil fires. il Chem Eng 60:111-12+ Ja '53

Water on trouble oils. il Ind & Eng Chem 45:sup 11A+ Ap '53
See also
Fire boats
Fire extinguishers
Fire service (water supply)
Sprinkling systems

Study and teaching

Firemen at school; Consolidated Edison system of New York. W. E. Rossnagel. il Nat Safety N 66:118-19+ O '52

How Detroit Edison company teaches fire fighting. il Power Eng 57:88-9 Ap '53

How we teach fire fighting to power engineers; Consolidated Edison co. of New York. W. E. Rossnagel. il plan Power Eng 57:68-70 S '53

They set their school on fire everyday; U.S. navy's fire fighting school. il Safety Maint & Prod 106:104-5 O '53

FIRE extinguishers

ABC's of fire extinguishers. P. C. Hensler. il Safety Maint & Prod 104:20-1+ O '52

Carbon tetrachloride mixtures in fire fighting. H. H. Fawcett. bibliog A M A Archives Ind Hygiene & Occup Med 6:435-40 N '52

Comparative inhalation toxicities of four halogenated hydrocarbons to rats and mice in the presence of gasoline fires. C. C. Comstock and F. W. Oberst. A M A Archives Ind Hygiene & Occup Med 7: 157-67 F '53

Dry chemical extinguisher rechargeable at any air hose. il Eng N 149:91-2 N 27 '52

Fire extinguisher housed in urea. il Mod Plastics 30:95 O '52

Fire extinguishers are important station tool. il Nat Pet N 45:64+ Mr 18 '53

First-aid extinguishers. il Nat Safety N 67: 198+ Mr '53

Flame fighting twist; air in, fire out. il Chem W 71:50-2 D 6 '52

Foam chokes off alcohol fires. il Chem Eng 59:230 D '52

Stabilized CB for fire extinguishers. Aviation W 58:65-6 Ja 5 '53

Tool kit for truck fires. il Safety Maint & Prod 106:41 Ag '53

FIRE extinguishers, Carbon dioxide

Automatic system for fire protection guards this generator installation; Charles Pfizer & co., inc. il diags Power 97:96-7 My '53

CO_2 extinguishers placed at strategic points in refinery. il Oil & Gas J 51:145 Mr 16 '53

CO_2 fire-extinguishing system protects new Esso tugs. il Marine Eng 58:63+ Mr '53

Fire protection system guards scrap baler. M. Lissner. il Iron Age 171:126-7 Ap 16 '53

Quick refills for fire extinguishers; rolling fire extinguisher maintenance shop. il Nat Safety N 67:52-3 My '53

FIRE insurance. See Insurance, Fire

FIRE losses

Annual fire loss in the United States for seventy-eight years, 1875-1952 inclusive on a basis of paid losses; table. Rough Notes 96:50 Je '53

Estimated distribution of U.S. building fire losses by causes, 1951; tabulation. Gas Age 110:5 D 4 '52

Exhibit of known causes of fires over the past ten years; table. Nat Underw 57:28 My 14 '53

Fire losses in 1952 reached all-time high. East Underw 54:23 Ja 23 '53; Nat Underw 57:1 Ja 22 '53; Weekly Underw 168:252+ Ja 24 '53; Safety Maint & Prod 105:76 Mr '53

Heavy '53 fire loss. P. Bugbee. Weekly Underw 167:1485+ D 6 '52

Mounting fire costs; abstract. J. R. Cooney. Safety Maint & Prod 104:61 N '52

1952 fire losses over $815,000,000. W. L. Nolen. East Underw 54:29 My 15 '53

Religious institutions have high fire losses. J. J. Lefebvre. Nat Safety N 68:72 Jl '53

U.S. 1952 fire losses reach all-time high. Safety Maint & Prod 106:55 Jl '53

Warehouses have largest average fire loss in any type of industry. J. T. W. Babcock. East Underw 54:29 Je 12 '53

FIRE marks. See Firemarks

FIRE protection

Adequate fire protection system important adjunct to Spalding expansion program. il Rubber Age 72:223 N '52

Advancements in science of fighting fire. C. R. Welborn. Weekly Underw 168:648-51 Mr 7 '53

Atomic energy and fire protection. E. J. Kehoe. il Nat Safety N 67:46+ My '53

Check up on your fire defenses. Safety Maint & Prod 105:64+ Ap; 67-70 My '53

Defense against fire. il Nat Safety N 67:197+ Mr '53

Don't let fire put you out of business. G. F. Wahl. il Mill & Factory 51:79-85 O '52

Fire and the engineer. W. F. Kuffel. Midwest Eng 5:9+ Ja '53

Fire can send your profits up in smoke. G. G. Carr. Iron Age 171:71-3 My 21 '53

Fire protection engineering as a profession. J. J. Ahern. Weekly Underw 167:1503-4 D 6 '52

FIRE protection—*Continued*

Fire protection in malt drying. Safety Maint & Prod 106:72 S '53

Fire tests of escalator shutters. Safety Maint & Prod 104:59-60 N '52

Grading of municipal fire protection and its effect on fire insurance. J. A. Neale. Weekly Underw 168:45-6 Ja 3 '53

Guarding against fire; Taylor fibre co.'s plant. W. E. Morgan. il Mod Plastics 30:115+ Ap '53

Heat detector ends belt fires. diags Safety Maint & Prod 106:59-60 Jl '53

Industry's choice; prevention or suicide. J. J. Ahern. Safety Maint & Prod 105:75 Mr '53

LongLac fire protection organization. Pulp & Pa of Can 54:185+ Je '53

Preplan your fire protection. G. H. Tryon, 3d. il Constr Methods 34:101+ O '52

Pre-planning vital to meet disasters. L. A. Vincent. East Underw 54:1+ F 27 '53

Putting the heat on education; Illinois institute of technology, Chicago. il Bsns W p 128-9 Je 6 '53

Safety set-up; Chemstrand corp. Safety Maint & Prod 106:107-8 O '53

Small industries keep down city's fire loss. il Nat Safety N 68:24-5 Jl '53; Safety Maint & Prod 106:65-6 Ag '53

Welding torch fires. H. E. Beaven. Factory Management 111:132-3 Jl '53

Why gamble with fire? C. I. Babcock. il Factory Management 110:126-9 O '52

See also

Fire boats
Fire extinction
Fire extinguishers
Fire resisting materials
Fire service (water supply)
Fireproof construction
Forest fires
Insurance, Fire—Preventive work
Magnesium—Fire hazards
National fire protection association
Oil tanks—Fire protection
Paint, Fire resisting
Records, Preservation of
Sprinkling systems
Underwriters' laboratories

also subdivision Fires and fire protection under special subjects, e.g.

Air compressors
Airplanes
Motor trucks
Petroleum refineries
Railroads
Ships

Contests and awards

Cameras catch the drama of fire; Fire foto of the year contest. il Nat Safety N 68:28-9 Jl '53

Memphis gets grand award in fire contest. East Underw 54:18 Ja 16 '53; Nat Underw 57:2 Ja 15 '53

National Board names gold medal winners. East Underw 54:26+ Ap 10 '53; Same cond. Nat Underw 57:6 Ap 9 '53; Same cond. Weekly Underw 168:999+ Ap 11 '53

Winners of the 1952 Inter-Chamber national fire waste contest. East Underw 54:39 Ap 10 '53; Same. Weekly Underw 168:1072 Ap 18 '53

Standards

New fire prevention standards for modern transit operation. Bus Transportation 32:52 Ja '53; Safety Maint & Prod 105:45-6 Ja '53

FIRE protection, Rural

How to control farm fires! Safety Maint & Prod 106:73-6 S '53

Lightning is expected to cause 30,000 farm fires during 1953. East Underw 54:25 Mr 27 '53; Same cond. Safety Maint & Prod 105:42-3 Je '53

FIRE protection association, National. See National fire protection association

FIRE resisting materials

How to select fire retardants. P. C. Hensler. Safety Maint & Prod 104:28-30 D '52

New hazards in construction. L. A. Vincent. Credit & Fin Management 54:26-7 O '52

New tobacco barn is designed to cut high fire losses; use of gypsum sheathing. il plan diags Am Bld 74:164-5 S '52

Non-inflammable hydraulic fluid; Aroclor 1248. Engineering 175:438 Ap 3 '53

Pirelli-General fire resisting cables. Engineer 196:119 Jl 24 '53; Engineering 176:182 Ag 7 '53; Elec R (Lond) 153:206-7 Jl 24 '53

See also

Concrete construction—Fire resistance
Fireproofing of textiles
Paint, Fire resisting
Plastic materials—Fire resistance
Refractory materials

FIRE resisting paint. See Paint, Fire resisting

FIRE service (water supply)

Fire-protection requirements of waterworks systems. C. P. Wright. Munic Util 90:17-18+ D '52

Rates for recovery of capital and operating costs of fire protection service. R. H. Ellis. Munic Util 91:27-8+ My '53

Water supply for community fire requirements. J. N. Pryce. Munic Util 91:56+ Ap '53

FIRE underwriters, National board of. See National board of fire underwriters

FIRE underwriters association of the Pacific

Annual meeting, San Francisco. Nat Underw 57:2+ Mr 12 '53

FIREARMS

American firearms makers. A. M. Carey. bibliog 146p $5 Thomas Y. Crowell co, 432 Fourth av, New York 16 '53

See also

Guns
Revolvers

Sights

See also

Lyman gun sight corporation

FIREBOATS. See Fire boats

FIREDAMP. See Fire damp

FIREMAN'S fund insurance company

Nine decades of fireman's fund operations; some fireman's fund group careers. East Underw 54:23-4+ F 27 '53

Tharp named controller of fireman's fund group. Weekly Underw 167:1691 D 27 '52

FIREMAN'S insurance company of San Francisco

Bank and insurance stocks. H. E. Johnson. Comm & Fin Chr 177:1324 Mr 26 '53

FIREMARKS

Footprints of assurance. A. E. Bulau. Weekly Underw 168:1473 My 30 '53

FIREMEN

Fresh air for firemen. il Safety Maint & Prod 105:62+ Je '53

FIREPLACES

Circular fireplace; detail plate. K. R. O'Neal. il plans diags Am Bld 75:226-7 Ja '53

Fireplace and barbeque; detail plate. K. R. O'Neal. il plan diags Am Bld 74:134-5 D '52

Fireplace and corner window; detail plate. K. R. O'Neal. il plan diags Am Bld 74:154-5 N '52

Fireplaces and cocktail bar; detail plates. K. R. O'Neal. il plan diags Am Bld 74:158-9 S; 182-3 O '52

How to make a projecting corner fireplace. plan diags Am Bld 74:60 N '52

FIREPLACES, Outdoor

Here are the do's for installing an outdoor fireplace. il Am Bld 74:58 D '52

FIREPROOF construction

Elevator shaft lined with Blocrete. il Eng N 150:78 F 26 '53

Improved methods for fireproofing structures. C. J. Kuhasz. il diags Pet Processing 7:1616-19 N '52

Lightweight fireproofing for steel framing. il diags Eng N 149:34-6+ N 6 '52

Metal lath membrane fireproofing; with timesaver standards. diags Arch Rec 112:211+ N; 187+ D '52; 113:199 F '53

New metal lath helps fireproof columns. il Constr Methods 35:135 O '53

Self-furring metal lath simplifies plaster application. il diags Am Bld 74:234+ S '52

See also

Concrete construction—Fire resistance

FIREPROOFING of textiles

Behavior of nylon Oxford cloth 41 on pyrolysis. T. Hasselstrom and others. bibliog Textile Res J 22:742-8 N '52

Flammability hazards of fabrics. J. M. Church. bibliog il Chem & Eng N 31:325-9 Ja 26 '53

4500° F. won't ignite flameproofed clothing. il Safety Maint & Prod 106:93+ O '53

Patents

Flameproofing; afterglow avoided by using polyphosphoryl amides. Am Dyestuff Rep 41:769-70 N 24 '52

FIRES

Amazing recovery from Hydra-Matic fire. J. Geschelin. il Automotive Ind 109:54-8+ O 1 '53

Atomic age fires. H. Bond. Safety Maint & Prod 104:54+ O '52

Death toll in Haber corp. fire set at 34; 24 hospitalized. Nat Underw 57:23 Ap 23 '53

Fire causes analysed. Elec R (Lond) 153: 104-5 Jl 10 '53

Haber fire graphic lesson in working with combustibles. Nat Underw 57:19 Je 25 '53

Hydrogen explosions from water decomposition in fires are rare. Safety Maint & Prod 104:48 O '52

In 1952 there were 275 big fires of $250,000 or more, NFPA reports. East Underw 54: 26 F 13 '53

Industrial fires and explosions from electrostatic origin. R. Beach. bibliog diag Mech Eng 75:307-13 Ap '53

Industry's worst fire razes $75-million GM automatic transmission plant. il Am Mach 97:130-3 Ag 31 '53

Injection plant destroyed by fire. W. R. McLain. il plans Mod Plastics 30:86-8+ Mr '53

North Carolina fire outsped sprinklers along oxidized rafters. Nat Underw 57:2 Mr 19 '53

Our fire weaknesses, 1952. Safety Maint & Prod 105:65-6 My '53

Risks of city conflagrations not yet eliminated. J. A. Neale. East Underw 53:1+ D 5 '52

When the fire bell rings. Brick & Clay Rec 121:76 O '52

Why gamble with fire? C. I. Babcock. il Factory Management 110:126-9 O '52

See also

Arson
Electric fires
Fire extinction
Fire protection
Forest fires
Inflammable liquids
Insurance, Fire
Oil fires
Plastic materials—Fire hazards
Spontaneous combustion

also subdivision Fires and fire protection under special subjects, e.g.

Air compressors
Airplanes
Electric plants (central stations)
Motor trucks
Paper mills
Petroleum refineries
Railroads
Ships

FIRES at sea. See Ships—Fires and fire protection

FIRESTONE tire and rubber company

How it's done at Firestone. Bsns W p60+ Jl 4 '53

Ten potential market leaders for 1953; with comparative balance sheet items. Mag of Wall St 91:641 Mr 7 '53

FIREWORKS

Art and craft of firework making. A. S. H. Brock. bibliog il Chem & Ind p250-6 Mr 21 '53

FIRING

See also

Blowers
Boilers—Firing
Combustion
Kilns—Firing
Open hearth furnaces—Firing
Stokers, Mechanical

FIRST aid in illness and injury

Care of the injured. bibliog il Nat Safety N 67:222-3+ Mr '53

First aid and emergency care of eye injuries. H. S. Kuhn. il Nat Safety N 68:120-1+ O '53

First-aid devices protect alkali-metal workers. P. C. Ziemke. diag Chem Eng 60:210 Ap '53

First aid, fast! mine rescue organization mobile rescue stations. il Safety Maint & Prod 105:55-6 My '53

First-aid in the field. R. P. Whitney. il Safety Maint & Prod 105:24-6+ Ap '53

Gas Age training course; safety. W. L. Riehl. il diags Gas Age 110:66-8+ N 20 '52

National first-aid and mine rescue contest, Columbus, Ohio, Oct. 2-4, 1951. W. H. Tomlinson. 4pls U S Bur Mines Information Circ 7658:1-71 '53

Thorough training can cut accidents involving chemicals. diags Iron Age 171:148 F 12 '53

Unit first-aid kits for field and small plant use; data sheet. il Nat Safety N 67:38-9+ F '53

See also

Burns and scalds
Respiration, Artificial

FIRST national bank, Mobile, Alabama

America's oldest banks. il Trusts & Estates 91:867 N '52

FIRTH carpet company

Sharp earnings comeback in sight for Firth Carpet. Barron's 33:27 Ja 19 '53

FISCAL year

Business year or calendar year? opportunity to the banker to render customer service. Bankers Mo 70:24+ My '53

December pension jam eased by fiscal-year shifts. Nat Underw (Life ed) 56:2 D 26 '52

Technical considerations for the public accountant in changing client to a natural business year. J Account 95:325-31 Mr '53

FISCHER and Porter company

Growth; case study of healthy management. il Mod Ind 24:40-4 N '52

Preference stock. Comm & Fin Chr 176:2162 D 8 '52

FISCHER reagent

Determination of moisture in oils and greases. R. Y. Meelheim and J. N. Roark. diag Anal Chem 25:348-9 F '53

FISCHER-TROPSCH process

Adsorption of hydrogen and carbon monoxide and their mixtures by cobalt Fischer-Tropsch catalysts. J. C. Ghosh, M. V. C. Sastri and K. A. Kini. bibliog diag Ind & Eng Chem 44:2463-70 O '52

Comparison of the fixed-bed, liquid-phase (slurry), and fluidized-bed techniques in the Fischer-Tropsch synthesis. C. C. Hall and others. bibliog 2pls diags Inst Pet J 38: 845-67; Discussion. 867-76 O '52

Fluidization as applied to the Fischer-Tropsch process. C. C. Hall and P. Crumley. bibliog il J Ap Chem 2(sup no 1):S47-55 '52

Hexagonal iron carbide as an intermediate in the carbiding of iron Fischer-Tropsch catalysts. M. Manes and others. bibliog Am Chem Soc J 74:6207-9 D 20 '52

NPC says synthetic liquid fuels production is uneconomic. Chem & Eng N 31:1088+ Mr 16 '53

Nature of the active substrate in Fischer-Tropsch synthesis over cobalt catalysts. M. V. C. Sastri and S. R. Srinivasan. bibliog Am Chem Soc J 75:2898-900 Je 20 '53

Oils from coal. Engineer 196:278 Ag 28 '53

Studies of the Fischer-Tropsch synthesis; structural changes of a reduced iron catalyst on reoxidation and on formation of interstitial phases. W. K. Hall, W. H. Tarn and R. B. Anderson. bibliog J Phys Chem 56:688-91 Je '52

Synthesis of alcohols by hydrogenation of carbon monoxide. R. B. Anderson, J. Feldman and H. H. Storch. bibliog Ind & Eng Chem 44:2418-24 O '52

FISH, Canned. See Canned fish

FISH, Frozen

Fish with a flourish; Blue Water brand. il Mod Packaging 26:116-18+ Ag '53

Frozen fish in new form and tailored sizes. il Food Eng 25:192 Ap '53

Hard-to-fill answer; Atlantic Coast Fisheries' machine feeds and fills fish fillets. il Mod Packaging 26:146-8+ S '52

FISH as food

See also

Canned fish
Fish, Frozen
Tuna fish

Preservation

Antibiotic ice. Can Chem Process 37:110 S '53

Fish preservation down the ages. C. L. Cutting. bibliog Chem & Ind p 1110-15 N 15 '52

FISH oil
Wet steam upgrades fish oil. il Chem Eng 60:122 My '53

FISH poisons
Appraisal of a chemical waste problem by fish toxicity tests. L. A. Gillette and others. Sewage & Ind Wastes 24:1397-401 N '52
Aquatic organisms as an aid in solving waste disposal problems. R. Patrick. bibliog Sewage & Ind Wastes 25:210-14; Discussion. 214-17 F '53
Critical review of literature on the toxicity of industrial wastes and their components to fish. P. Doudoroff and M. Katz. Sewage & Ind Wastes 25:802-39 bibliog(155 titles, p834-9) Jl '53
Critical review of the literature of 1952 on sewage, waste treatment, and water pollution; biology. bibliog Sewage & Ind Wastes 25:659-67 Je '53
Effect of kraft mill waste components on certain salmonoid fishes of the Pacific Northwest. E. P. Haydu and others. bibliog Tappi 35:545-9 D '52
Fish kills by industrial poisons. Sewage & Ind Wastes 25:590 My '53
Lethality of methyl mercaptan to king salmon as influenced by variations of the volume of test solution. E. P. Haydu and others. Tappi 36:131-3 Mr '53
Measurement of toxicity of substances to fish; abstract. D. W. M. Herbert. Sewage & Ind Wastes 24:1439-40 N '52
Pollution of the Spanish river studied biologically. R. G. Ferguson. Munic Util 91:31-2+ F '53
Standardized method for determining toxicity of pure compounds to fish. L. Freeman. bibliog Sewage & Ind Wastes 25:845-8 Jl '53
State accuses city of killing 10,000 fish. Eng N 149:62 D 18 '52
Toxicity of some organic insecticides to fish. P. Doudoroff and others. bibliog Sewage & Ind Wastes 25:840-4 Jl '53

FISH ponds
Arkansas corp rotation; rice, fish, and sportsmen. il Bsns W p 100-3 Jl 18 '53

FISH preservation. See Fish as food—Preservation

FISH products
Natural resources from the sea and soil available to New England. L. C. Jenness. bibliog Ind & Eng Chem 44:2526-7 N '52

FISH protection
Bringing fish out alive is easy at Contra Costa plant. il diag Elec World News ed 139:28-9 My 25 '53

FISH trade
American Samoa invites bids for leasing fish cannery. For Comm W 48:12 N 17 '52
Boston fish pier; a dock, a market, and a storehouse. il Bsns W p84-90 F 14 '53
He made million at old game; Lowell Wakefield goes fishing for Alaska king crab. R. M. Harmer. il Am Bsns 22:22+ N '52
See also
Tariff—United States
—Fish

By-products

By-product utilization brings hope to fish industry. Chem & Eng N 31:1862+ My 4 '53

Belgium

Belgian fish catch and trade increase. For Comm W 49:18 Ap 20 '53

Canton Island

Airline angels a fish business; Pan American world airways carries Canton Island catch to Hawaii. il Bsns W p 116-17 N 8 '52

Japan

Japan's fish trade rises sharply. For Comm W 48:29 D 15 '52

Norway

Norway earns dollars with fish exports. For Comm W 48:20 O 20 '52

Pacific coast

Salmon pack; Pacific canners face mounting cost squeeze. R. H. Syring. Barron's 33:17-18 Ap 6 '53

FISHER, Harry L. 1885-
Sketch. por Rubber Age 72:511 Ja '53

FISHER, Raymond G.
Businessmen in the news. por Fortune 47:40 Ja '53

FISHERIES

Oregon

Attack Pelton dam; Oregon fish interests launch assault on Portland GE's hydro project. Elec World News ed 139:15 Mr 2 '53

FISHES
See also
Coelacanths
Hydroelectric plants
—Fish problem
Sticklebacks
Trout

FISHING boats
Life on a fishing trawler. D. S. Blanchard. Int Labour R 66:207-20 S '52

FISHING tackle
Fishing reel funnels line. il Machine Design 24:132-3 N '52

FISONS, limited
Statement by the chairman at 59th annual general meeting. F. G. C. Fison. Economist 165:787-9 D 13 '52

FISSION. See Atoms—Disintegration

FITS (machinery)
Design aid for shrink-fit calculations. S. Archer. Engineering 176:228-9 Ag 21 '53
Hole fits. G. E. Hieber. diags Machine Design 25:116-20 Ja '53
Oil injection shrink fitting. J. A. Abrahams. diags Iron & Steel Inst J 173:118 F '53
Principles and practice governing interchangeability and the specification of manufacturing limits of size, as influenced by statistical considerations. G. C. Adams. diags Inst Mech Eng Proc (A) 167 no 2:154-63; Discussion. 164-74 '53
Temperature for shrink fits; reference book sheet. T. Hicks. Am Mach 97:163 Ap 27 '53
See also
Tolerance

Standards

Report of ISO committee on limits and fits, and limit gaging. Standardization 23:279-80 S '52

FITZGERALD, Harry J.
New OAAA head. por Ptr Ink 242:68 Ja 2 '53

FIVE- and ten-cent stores
Experimenting with the five and dime; newer trends include upgrading of merchandise, more self service, departmentalizing. il Bsns W p54-6+ N 8 '52
See also
Woolworth, F. W., company

FIXTURES, Lighting. See Lighting fixtures

FIXTURES, Machine tool. See Machine tools—Fixtures

FLAGELLA, Bacterial. See Bacteria

FLAME hardening. See Case hardening

FLAME photometers. See Photometers

FLAME plating. See Tungsten carbide coating

FLAME propagation
Current theoretical concepts of steady-state flame propagation. M. W. Evans. Chem R 51:363-429 bibliog(p426-9) D '52
Effect of Reynolds number in turbulent-flow range on flame speeds of Bunsen burner flames. L. M. Bollinger and D. T. Williams. bibliog il diag U S Nat Advisory Com for Aeronautics 1949:231-8 '51
Flame propagation in carbon monoxide. G. McDonald. J Chem Phys 20:1497-8 S '52
Flame velocities in carbon monoxide-oxygen mixtures. T. W. Price and J. H. Potter. bibliog il diags A S M E Trans 75:91-6 Ja '53
Flame velocities of liquid hydrocarbons. R. E. Albright, D. P. Heath and R. H. Thena. bibliog il diags Ind & Eng Chem 44:2490-6 O '52
Microchronometric Schlieren study of gaseous expansion from an electric spark. H. L. Olsen and others. il diag J Ap Phys 23:1157-62 O '52
Nondimensional correlation of flame propagation at subatmospheric pressures. R. E. Cullen. bibliog il diag A S M E Trans 75:43-7; Discussion. 48-9 Ja '53
Stability of laminar flame fronts. M. Lessen. J Aeronautical Sci 19:852+ D '52

FLAME propagation—*Continued*

Theory of flame propagation. J. A. Hirschfelder, C. F. Curtiss and D. E. Campbell. bibliog J Phys Chem 57:403-14 Ap '53

FLAMES

Acoustical oscillations of flames. A. A. Putnam. Science 117:sup3 Mr 20 '53

Burning velocity of ethylene oxide decomposition flames. R. Friedman and E. Burke. J Chem Phys 21:165 Ja '53

Decomposition of sulphuric acid in town's gas flames. R. F. Littlejohn and G. Whittingham. diags Chem Soc J p3304-8 Ag '52

Detection of atoms and free radicals in flames by mass spectrometric techniques. S. N. Foner and R. L. Hudson. bibliog il diags J Chem Phys 21:1374-82 Ag '53

Effect of high-frequency sound waves on an air-propane flame. C. J. Kippenhan and H. O. Croft. bibliog il diags A S M E Trans 74:1151-4; Discussion. 1154-5 O '52

Effect of Reynolds number in turbulent-flow range on flame speeds of Bunsen burner flames. L. M. Bollinger and D. T. Williams. bibliog il diag U S Nat Advisory Com for Aeronautics 1949:231-8 '51

Effects of self-absorption on rotational temperatures of OH in flames. H. P. Broida. bibliog J Chem Phys 21:1165-9 Jl '53

Experimental evidence for anomalous population temperatures of OH in flames. S. S. Penner. bibliog J Chem Phys 20:1334-5 Ag '52

Flame radiation research at Ijmuiden. il Engineer 193:822-4 Je 20 '52; Same abr. Blast F & Steel Pl 40:1465-6+ D '52; Excerpts. Steel 131:94+ S 1 '52; Am Cer Soc Bul 31:404-5 O 15 '52

Flame radiation research; discussion on Joint Committee's work, London, Feb. 24. Chem Age (Lond) 68:383 Mr 7 '53

Formation and excitation of atomic sodium in hydrogen diffusion flames. L. Lindner and others. J Chem Phys 21:161-2 Ja '53

High-speed chemistry. L. P. Lessing. il diags Sci Am 188:29-35 My '53

Hydrodynamic stability of flame fronts. H. Einbinder. bibliog J Chem Phys 21:480-9 Mr '53

Hydrogen-fluorine flame temperatures. D. Altman and M. Farber. J Chem Phys 21:1118 Je '53

Infrared absorption of the flame of a simple double-base powder. H. F. White and others. J Chem Phys 21:1399 Ag '53

Intensity of spectral lines produced in nonhomogeneous flames. A. C. Kolb and E. R. Streed. bibliog J Chem Phys 20:1872-8 D '52

Kinetics of elementary reactions in flames and its relation to the energy distribution of active species. K. A. Shuler. bibliog diag J Phys Chem 57:396-403 Ap '53

Kinetics of OH radicals from flame emission spectra; a study of the acetylene-oxygen flame. K. E. Shuler and H. P. Broida. bibliog il J Chem Phys 20:1383-8 S '52

Lifting and blowoff of flames from short cylindrical burner ports. C. W. Wilson. bibliog il diag Ind & Eng Chem 44:2937-42 D '52; Discussion. C. W. Wilson. 45:1822 Ag '53

Oxidation of ethane, and cool flames. J. A. Gray. Chem Soc J p741-50 Mr '53

Polyhedral flames with hydrogen and hydrocarbons. H. Broida and W. Kane. il J Chem Phys 20:1042-3 Je '52

Quantitative studies of apparent rotational temperatures of OH in emission and absorption (spectral lines with Doppler contour). S. S. Penner. bibliog J Chem Phys 21:31-41 Ja '53

Relation of smoke point to molecular structure. R. A. Hunt, jr. bibliog Ind & Eng Chem 45:602-6 Mr '53

Rotational and vibrational temperatures of CH in flames at atmospheric pressure. H. P. Broida. bibliog J Chem Phys 21:340-6 F '53

Rotational temperatures of OH in diluted flames. W. R. Kane and H. P. Broida. bibliog il J Chem Phys 21:347-54 F '53

Rotational temperatures of OH in several flames. H. P. Broida and G. T. Lalos. bibliog il J Chem Phys 20:1466-71 S '52

Temperature of the cyanogen-oxygen flame. J. B. Conway, R. H. Wilson, jr. and A. V. Grosse. bibliog Am Chem Soc J 75:499 Ja 20 '53

Theoretical model of a gaseous combustion wave governed by a first-order reaction. R. Friedman and E. Burke. bibliog J Chem Phys 21:710-14 Ap '53

Thermodynamics of combustion gases; temperatures of methane-air and propane-air flames at atmospheric pressure. R. W. Smith, jr. and others. bibliog U S Bur Mines Rep of Invest 4938:1-3 '53

Two-path method for eliminating the effects of self-absorption on temperature for isothermal flames. S. S. Penner. J Chem Phys 20:1341-2 Ag '52

Validity of anomalous population temperatures in flames. S. S. Penner. bibliog J Chem Phys 20:1175-6 Jl '52

Validity of spectroscopic temperature determinations in flames. K. E. Shuler. bibliog J Chem Phys 20:1176-7 Jl '52

See also
Combustion
Ignition
Oxyacetylene flame

FLAMOMETER

Flamometer. il R Sci Instr 23:449 Ag '52

FLANGES

Flanged parts made by splitting flat stock. M. Huisman. il Am Mach 97:120-1 F 2 '53

See also
Pipe flanges

FLARE stacks. See Petroleum refineries—Flare stacks

FLARSHEIM, Edna

How to teach your wife business. Fortune 47:142 Ja '53

FLASH point

Automatic flash-point instrument. R. B. Jacobs. flow diag il diag Oil & Gas J 51:124+ N 10 '52

Flash points in a flash. il diag Chem Eng 60:220+ F '53

FLASH welding. See Electric welding

FLASHING

Expansion joints in base flashings. il Sheet Metal Worker 44:63-4 Ap '53

Flexible flashing; reinforced synthetic rubber can be applied with brush. il House & Home 2:113 S '52

FLASHING lamps. See Electric lamps—Flashing

FLASHLIGHT photography. See Photography, Flashlight

FLASHOVER of commutators. See Commutators—Failure

FLATS, Optical. See Optical flats

FLAVANONES

Infrared spectra in lignin and related compounds; characteristic carbonyl and hydroxyl frequencies of some flavanones, flavones, chalcones and acetophenones. H. L. Hergert and E. F. Kurth. bibliog Am Chem Soc J 75:1622-5 Ap 5 '53

FLAVANTHRONE

Chemistry of indanthrone; 3 : 3′-dimethyl derivatives of indanthrone and flavanthrone. W. Bradley and H. E. Nursten. Chem Soc J p924-7 Mr '53

Formation of flavanthrones from derivatives of 2-aminoanthraquinone. W. Bradley and H. E. Nursten. Chem Soc J p2944 Jl '52

FLAVASPIDIC acid

Constituents of filix mas; albaspidin. A. McGookin, A. Robertson and T. H. Simpson. Chem Soc J p 1828-9 Je '53

FLAVINS

Nucleotides; some preliminary experiments on a projected synthesis of flavinadenine dinucleotide; new methods for the preparation of riboflavin-4′ : 5′ phosphate. H. S. Forrest, H. S. Mason and A. R. Todd. Chem Soc J p2530-5 Jl '52

Occurrence of a new flavin dinucleotide (FAD-X). F. M. Huennekens and others. bibliog Am Chem Soc J 75:3611-12 Jl 20 '53

Photoöxidation of crystalline estrogens in the presence of flavins. J. F. Nyc and others. bibliog Am Chem Soc J 75:907-10 F 20 '53

Analysis

Isolation of flavin nucleotides. E. Dimant, D. R. Sanadi and F. M. Huennekens. bibliog Am Chem Soc J 74:5440-4 N 5 '52

FLAVONES
Chelate systems. B. L. Shaw and T. H. Simpson. Chem Soc J p5027-32 D '52
Chemistry of extractives from hardwoods; the isolation of 5 : 4′-dihydroxy-7-methoxy-*iso*flavone (prunetin) from the heartwood of pterocarpus angolensis and a synthesis of 7 : 4′ - dihydroxy-5-methoxy*iso*flavone hitherto known as prunusetin. F. E. King and L. Jurd. Chem Soc J p3211-15 Ag '52
Flavone glycosides of parsley. C. G. Nordström and others. bibliog Chem & Ind p85-6 Ja 24 '53
Infrared spectra in lignin and related compounds; characteristic carbonyl and hydroxyl frequencies of some flavanones, flavones, chalcones and acetophenones. H. L. Hergert and E. F. Kurth. bibliog Am Chem Soc J 75:1622-5 Ap 5 '53
Orientation in the isoflavone series. W. Baker and others. bibliog Chem & Ind p277 Mr 21 '53
Thermal cyclization of *o*-aroyloxyacetoarones; further syntheses in the flavone series (diflavones and flavonols). H. M. Lynch, T. M. O'Toole and T. S. Wheeler. Chem Soc J p2063-7 Je '52

FLAVONOIDS
Flavonoid glycosides of dahlia variabilis; general introduction; cyanidin, apigenin, and luteolin glycosides from the variety dandy. C. G. Nordström and T. Swain. Chem Soc J p2764-73 S '53
Flavonoids of various prunus species; the flavonoids in the wood of prunus yedoensis. M. Hasegawa and T. Shirato. bibliog Am Chem Soc J 74:6114-15 D 5 '52
Hydrolysis of some flavonoid rhamnoglucosides to flavonoid glucosides. D. W. Fox, W. L. Savage and S. H. Wender. bibliog Am Chem Soc J 75:2504-5 My 20 '53

Analysis

Adsorption chromatography of flavonoid compounds. C. H. Ice and S. H. Wender. bibliog Anal Chem 24:1616-17 O '52
Identification of flavonoid compounds by filter paper chromatography; additional R*f* values and color tests. H. W. Casteel and S. H. Wender. bibliog Anal Chem 25:508-9 Mr '53

FLAVONOLS. See Flavones

FLAVOPROTEINS
Reduction of tetrazolium salts by an isolated bacterial flavoprotein. A. F. Brodie and J. S. Gots. bibliog Science 116:588-9 N 28 '52

FLAVOR
Effect of odors on food flavor. A. Turk. Heat & Ven 50:91 Ja '53
Food flavor rarely impaired by proper use of pesticides. Chem & Eng N 30:5446-7 D 29 '52
New coating process traps full flavor; Sealva process. G. Wellner. il Food Eng 25:94+ Ag '53
Preservation of natural colours and flavours in foods; abstract and discussion. G. R. A. Short and W. W. Reid. Chem & Ind p213-15 Mr 7 '53

FLAVORING materials
Better artificial vanilla flavor; propenyl quaethol. C. A. Tyler. il Food Eng 25:62-3+ Ja '53
British company exports plant and know-how to Canada. il Can Chem Process 37:36 Ja '53
Versatile licorice. il Food Eng 25:82-3+ Ag '53
See also
Essential oils
Limonene
Vanilla

FLAX
Decortication and pulping of seed flax straw. S. D. Wells. diag Tappi 36:sup 176A-8A Ap '53

FLAX institute
Annual meeting, Minneapolis. Oil Paint & Drug Rep 162:5+ N 17 '52

FLAXSEED
World output increase seen in 1952. Oil Paint & Drug Rep 163:5 Mr 2 '53

FLEMMING, Arthur Sherwood, 1905-
Portrait. Bsns W p94 F 21 '53

FLETCHER, Andrew, 1895-
Sketch. por J Metals 5:208-9 F '53; Same. Min Eng 5:214-15 F '53

FLEXIBLE shafting. See Shafting, Flexible

FLEXOGRAPHY (term)
Flexographic (aniline) process growing rapidly. R. Dietz. il Inland Ptr 130:35-7 F '53

FLEXOMETERS
Study of the Goodrich flexometer with synthetic polymer compounds. B. G. Labbe. India Rubber World 128:193-8 My '53

FLICKER. See Electric lighting—Flicker

FLIES
APHA conference report; fly control. Pub Health Rep 68:267-9 F '53
Bugs got you down? Safety Maint & Prod 106:39 Ag '53
Identifying common flies. H. R. Dodge. bibliog diags Pub Health Rep 68:345-50 Mr '53
Insects v. insecticides. R. L. Metcalf. il Sci Am 187:21-5 O '52
See also
Drosophila
Fly sprays and repellents

FLIGHT
See also
Aerodynamics
Aviation

FLIGHT, Interplanetary. See Interplanetary flight

FLIGHT simulator. See Aviators—Training; Aviators, Military—Training

FLOAT and sink process. See Sink and float process

FLOCCULATION
Apparatus for collecting flocculated samples. A. J. Fischer and A. Hillman. diags Water & Sewage Works 100:R 120 My '53
Apparatus for measurement of electrical properties of colloidal suspensions in oils. C. J. Penther and A. Bondi. J Phys Chem 57:540-1 My '53
Fiber flocculation. D. E. Beasley. Tappi 36: sup 159A-60A S '53

FLOCK gas and oil corporation, ltd.
Stock offered. Comm & Fin Chr 177:2129 My 18 '53

FLOOD control
Army engineers finding many flaws in Kansas River flow-way plan. Eng N 150:26 Ap 23 '53
Building an earthfill dam in the tropics; Presidente Aleman dam. il maps Eng N 149:34-5 O 9 '52
Conemaugh dam will restrain floods. il Eng N 149:28 O 30 '52
Dam harnesses the Roanoke. il Eng N 149:28 O 9 '52
Development of a flood-control plan for Houston, Tex. E. I. Davis. maps Am Soc C E Proc 78 [no 159]:1-19 D '52
Everglades floods to be controlled. il map diag Eng N 149:34-6 O 2 '52
Flood control pilot plant funds asked. Eng N 150:22 My 21 '53
Flood-control plan at Bagnell dam meets opposition from FPC. Eng N 150:27 F 5 '53
Flood protection in the Kansas River basin. N. T. Veatch and others. map Am Water Works Assn J 45:685-93 Jl '53; Abstract. Water & Sewage Works 100:348 S '53
Free flood control by utilities on Wisconsin rivers. A. T. Lenz. Pub Util 50:843-9 D 4 '52
How a serious flood problem was solved. Pub Works 84:127-8 Ap '53
Kansas River flow-way plan. N. T. Veatch. Eng N 150:23 My 21 '53
Levee construction through Florida's Everglades. C. R. Sparf. il Explosives Eng 30: 175-9 N '52
Policy fight brewing over Kansas Basin survey report. map Eng N 150:21-2 Mr 5 '53
Shakeup urged in flood control. Eng N 149:21 D 18 '52
Techniques and trends; river use and control; description of major projects. il Eng N 150:105-6+ F 19 '53
Trend toward multipurpose developments. J. S. Bowman. il Civil Eng 22:736-9 S '52
See also
Central Valley project, California
Dams
Dikes (engineering)
Levees
Rivers—Bank protection
Rivers—Regulation

FLOODLIGHTING. See Light projection

FLOODS

Methods of general application developed for finding peak flood flow. A. H. Davison. diags Civil Eng 22:418-20 Je '52; Discussion. T. Dalrymple. 22:888+ O '52; Reply. 23:112-13+ F '53

See also

Flood control
Petroleum refineries—Flood damage
Railroads—Damage from floods, storms, etc.

Bibliography

Floods. (Bibliographic bul. no. 4) 10p Linda Hall lib, 5109 Cherry st, Kansas City 4, Mo. '53

Florida

Everglades floods to be controlled. il map diag Eng N 149:34-6 O 2 '52

Great Britain

British, Dutch rush flood repair work. map Eng N 150:47 F 12 '53
Cruel sea. Economist 167:81 Ap 11 '53
Flood and gale damage. il Elec J 150:443-4 F 6 '53; Elec R (Lond) 152:305 F 6 '53
Flood bill; salvaging the land; scope of insurance cover; magnitude of risks. Economist 166:381-2 F 7 '53
Flood damage; progress of restoration and repairs. Elec R (Lond) 152:361-2 F 13 '53
Flood damage to railways in the Eastern Region. il(p400) Engineering 175:395 Mr 27 '53; Engineer 195:470 Mr 27 '53
Flood intensities and frequencies on British catchments. G. Bransby-Williams. maps Engineer 194:247-51 Ag 22 '52
Flood recovery. il Elec J 150:535-6 F 13 '53
Flood relief. Economist 166:859-60 Mr 28 '53
Floods; damage caused by the North Devon and West Somerset floods, August 15 and 16, to the electricity supply system. Electrician 149:1085-6 O 10 '52
Lynmouth flood of Aug. 1952. C. H. Dobbie. map Engineer 195:797-8 Je 5 '53
Plants damaged; unprecedented flood hit British, Dutch refineries. il Oil & Gas J 51:109 F 16 '53
Who gives, gives twice; flood losses and costs. Economist 166:556 F 28 '53

Houston, Texas

Development of a flood-control plan for Houston, Tex. E. I. Davis. maps Am Soc C E Proc 78 [no 159]:1-19 D '52

Louisiana

Louisiana suffers heavy flood damage, but drainage program pays dividends. Eng N 150:24 Je 4 '53

Mexico

Building an earthfill dam in the tropics; Presidente Aleman dam. il maps Eng N 149:34-5 O 9 '52

Netherlands

Allies on the dikes. map Economist 166:399-400 F 14 '53
British, Dutch rush flood repair work. map Eng N 150:47 F 12 '53
Dike rebuilding in Netherlands poses great engineering problems. map Eng N 150:48 F 26 '53
Holland after the flood. Economist 167:375-6 My 9 '53
International underwriters corporation donates sum of $10,000 to Holland flood sufferers. Weekly Underw 168:508 F 21 '53

New England

Flood waters force closing of New England mills. il map Paper Tr J 136:11-12 Ap 3 '53

New Hampshire

Brown co. survives worst flood in 17 years on Androscoggin. il Paper Ind 35:432+ Jl '53

Omaha

How Nebraska contractors turned flood fighters. il diag Roads & Sts 95:59-60 N '52

St Joseph, Missouri

Missouri is channeled to rescue St Joe. il Eng N 149:28 O 16 '52

FLOOR cleaning

Floor maintenance goes to the country; travelling one-day clinic. Safety Maint & Prod 106:82-3 O '53

FLOOR cleaning machines

Cleaning Diesel shop floors. il Ry Mech & Elec Eng 126:73-4 D '52
What floor machines do for floors. J. V. Connell. il Safety Maint & Prod 105:20-2 Ap '53

FLOOR coverings

It's a different house; different floors. Bsns W p 144+ F 21 '53
Vinyl floor coverings. R. W. Jackson. Can Chem Process 37:86+ My '53

See also

Carpets
Linoleum

FLOOR finishes

Oleoresinous floor finishes. C. R. Given. Soap & San Chem 28:141-3+ S '52

FLOOR wax

Conductive floor waxes. W. W. Walton. Soap & San Chem 28:159+ O '52
How Feinberg brought Freewax to big city; insect-killing floor wax. il Bsns W p62-4+ N 1 '52
Montan wax; its place and that of its derivatives in the floor wax industry. C. J. Marsel. bibliog diags Soap & San Chem 29:120-1+ Ja '53
Wax, floor polish trade practice rules revamped. Oil Paint & Drug Rep 163:3 Mr 23 '53
Wax industry, government still at odds following trade practice hearing. Oil Paint & Drug Rep 163:3 Ap 20 '53

Testing

Safety-wax research. Safety Maint & Prod 106:52+ O '53

FLOORING

Flooring that fights oil. Bsns W p75 Jl 25 '53
How the flooring is made for Reading reconstruction piers. il Ry Age 133:46 D 22 '52
Industrial floors. il Nat Safety N 67:11+ Mr '53
Use of alternative varieties of timber and the durability of flooring; discussion. F. C. Harper and B. A. Jay. Chem & Ind p 1241-2 D 20 '52

FLOORS

Heat exchanges in a floor panel heated room. L. F. Schutrum and others. il plan Heating-Piping 25:133-8 Jl '53
How much can your floor hold? il Safety Maint & Prod 106:23-4+ Ag '53

See also

Bridges—Floors
Factories—Floors
Flooring

Anti-slip surfaces

Safe treads are steps to safety. P. C. Crawford. il diags Safety Maint & Prod 104:14-16+ D '52

FLOORS, Asphalt

How to install asphalt tile flooring. diags Am Bld 74:244+ O '52

FLOORS, Cement

How to check oxychloride cement flooring; report of ASA committee A88. Standardization 23:385-6 N '52; Same abr. Safety Maint & Prod 105:32-3 Mr '53; Excerpts. Iron Age 170:154-5 D 18 '52

FLOORS, Concrete

Cement-mud raises concrete slabs. il Constr Methods 35:103+ F '53
Cinder blocks as heat conductors. diags Am Bld 74:205 N '52
Concrete floors; how to lay and maintain them. P. Saint-Amour. il Safety Maint & Prod 105:20-2+ Ja '53
Estimating the heat loss from slab floors and basements. M. Baker and others. Heating-Piping 24:95-7 N '52
Fire resistance of reinforced concrete floors. J. P. Thompson. plan diags Am Concrete Inst J 24:677-80 Mr '53
Hard-top concrete that ends floor troubles; Bridgeport brass co. J. D. Brown. il Factory Management 111:102-4 Je '53
Heat loss in slab floors. N. S. Billington. Heat & Ven 50:89-90 Je '53

FLOORS, Concrete—*Continued*

Heavy duty concrete floors. E. E. Eckert. il Am Concrete Inst J 24:109-16 O '52

New business; slab analysis by photograph; Presan corp. il Eng N 149:44 O 16 '52

New life for old floors. W. R. Wakefield. il Safety Maint & Prod 105:24-5 F '53

On-grade floors; procedures for laying concrete floor slabs. Eng N 150:71+ My 21 '53

Prestressed girders support garage floor. il plan diags Eng N 149:38-9 N 13 '52

Six ways to finish concrete floors. il diags Am Bld 74:194+ S '52

Tests of pre-cast prestressed concrete floor beams. il diag Engineering 174:154-5 Ag 1 '52

Vapor barriers; roll roofing can be used as slab moisture seal. Eng N 150:68+ My 21 '53

Standards

Minimum standard requirements for precast concrete floor units. diags Am Concrete Inst J 25:1-15 S '53

Proposed revision of minimum standard requirements for precast concrete floor units (ACI 711-46). il diags Am Concrete Inst J 24:169-84 N '52

FLOORS, Steel

Cuts pipe drying by five days; steel grating floors. A. P. Potts and F. S. Trumbower. il Brick & Clay Rec 122:78 Ap '53

FLOORS, Wood

Floor planer. il Engineering 175:64 Ja 9 '53

FLORIDA

Florida's rivals; Caribbean islands, South America plug for Southland's vacationers. N. Willatt. Barron's 32:9-10 N 3 '52

Nation's Florida, everybody's playground. H. Colee. il J Eng Educ 43:364-70 Mr '53

Selling Florida to the Latins. Bsns W p 152 N 15 '52

See also

Architecture, Domestic—Florida
Floods—Florida
Geology—Florida
Mines and mineral resources—Florida
Paper industry and trade—Florida
Petroleum industry and trade—Florida
Phosphate rock—Florida
Water, Underground—Florida

Industries and resources

Florida; its industrial development. M. Smith and R. B. Roberts. Comm & Fin Chr 176:10+ sec 2 N 13 '52

Palmetto fibre; little known big industry. il Manuf Rec 122:34-5+ Ja '53

FLORIDA Everglades. See Everglades

FLORIDA power and light company

Bonds offered. Comm & Fin Chr 177:1580 Ap 13 '53

Earnings have more than doubled since 1945; with financial data, 1945-1952. O. Ely. map Barron's 32:17-18 D 8 '52

Stocks with pronounced growth prospects. G. L. Merton. Mag of Wall St 91:706 Mr 21 '53

FLORIDA power corporation

Bonds offered. Comm & Fin Chr 176:2162 D 8 '52

Low-priced stocks headed for higher levels. J. S. Williams. Mag of Wall St 91:238 N 29 '52

FLORIDA southern college

Florida southern college revisited for glimpse of the administration group in Wright's organic campus. il plans Arch Forum 97:120-7 S '52

FLORIDA telephone corporation

Stock offered. Comm & Fin Chr 176:2063 D 1 '52

FLORIDA university

Pulp and paper research. W. J. Nolan. Paper Ind 35:185-7 My '53

FLORISTS

Packaged flowers. Bsns W p45 Ja 3 '53

Advertising

Dailies' role in helping florists' sales to bloom; Florists' telegraph delivery association. R. B. McIntyre. il Ed & Pub 85:18+ D 13 '52

FLORISTS' shops

Selling flowers the supermarket way in Virginia; Hecht co., Arcadian Gardens. il Bsns W p 126-8 Ap 18 '53

This design stops traffic; flower shop is in Elma, Wash. il plan Am Bld 74:124-5 D '52

FLOTATION agents

Chemicals in ore dressing; abstract. R. W. Forsythe. Oil Paint & Drug Rep 164:4+ S 21 '53

Testing

Magma copper uses factorial design for better testing. F. T. Davis and A. C. Dorenfeld. Eng & Min J 154:97-9 Ag '53

FLOTATION process

Adsorption of calcium and sodium on pyrite. A. M. Gaudin and W. D. Charles. bibliog Min Eng 5:Trans 195-200 F '53

Beryl recovery; new flotation process will permit use of low-grade ores. Iron Age 171:182-3 Je 18 '53

Double-bond reactivity of oleic acid during flotation. A. M. Gaudin and R. E. Cole. Min Eng 5:Trans 418 Ap '53

Effects of alkalinity on the flotation of lead minerals. M. G. Fleming. bibliog Min Eng 4:Trans 1231-6 D '52; Discussion. 5:Trans 1121 N '53

Flotation rates and flotation efficiency. N. Arbiter. bibliog Min Eng 3:Trans 791-6 S '51; Discussion. 3:Trans 991-2; 4:Trans 1074-5 N '51, N '52

Humboldt iron will be recovered by flotation. D. K. Campbell and L. J. Erck. flow sheet il plans diags Eng & Min J 154:128-31 F '53

Investigation of the collecting effects of fatty acids in tall oil on oxide minerals, particularly on ilmenite. R. T. Hukki and O. Vartiainen. bibliog il Min Eng 5:Trans 818-20 Ag '53

Kona plant features flexibility in feldspar flotation. G. P. Lutjen. flow sheet il diag Eng & Min J 154:92-5 My '53

Quantitative bubble pick-up methods. S. C. Sun and R. C. Troxell. Min Eng 5:Trans 715 Jl '53

Slime coatings; how to explain and control them in flotation processes. A. C. Dorenfeld. bibliog il Eng & Min J 154:87-91 My '53

FLOTATION process (coal)

Low-cost matte flotation. il plan Coal Age 57:96-100 D '52

FLOTATION process (fibers)

Improved apparatus for the quantitative separation of fibre mixtures by flotation. C. H. Giles and I. S. Shaw. diag Textile Inst J Trans 44:T406 Ag-S '53

Quantitative separation of fibre mixtures by flotation. S. H. Mhatre and G. P. Tawde. bibliog diag Textile Inst J Trans 44T70-5 F '53

FLOTATION process (non-metals)

Air flotation recovers grease from waste liquids. Comp Air Mag 58:55 F '53

Cement rock beneficiation at the Universal atlas cement co., Northampton, Pa. L. J. Boucher. bibliog flow sheet il diag Min Eng 5:Trans 289-93 Mr '53; Abstract. Rock Prod 55:133-4 Ap '52

1952 industrial wastes forum. Sewage & Ind Wastes 25:706-11 Je '53

Purification of potassium nitrate process liquors; comparison between the filtration, froth flotation and sedimentation of insolubles. S. A. Chodkiewicz. J Ap Chem 2:639-41 N '52

FLOUR

Interaction of chlorine dioxide with flour; abstract. T. Moran and others. Food Eng 25:156-7 My '53

Quality of cereals and their industrial uses; biscuit flour. J. Sword. bibliog Chem & Ind p389-97 Ap 25 '53

Standards set for flour; Costa Rica. For Comm W 49:11 F 9 '53

Manufacture

QMC develops extremely stable whole wheat base. il Food Eng 25:79+ Ap '53

Transportation

Modified hoppers for bulk flour. Ry Age News ed 134:10 My 11 '53

FLOUR handling

Discharging flour by compressed air. il Engineering 174:742 D 5 '52

From bags to process by air. E. T. Slackford. il diag Food Eng 25:69+ Ap '53

FLOUR mills

Electric equipment

Modern miller. il Elec J 150:358-60 Ja 30 '53

Equipment

Flour mill conveying system. il Engineer 194:230 Ag 15 '52

Giant package pays off; returnable corrugated bins; Fisher flouring mills co. H. A. Herzog. il Food Eng 25:57-60 Jl '53

FLOW birefringence. See Refraction, Double

FLOW meters

Design of a square-root-extracting, force-balance, pneumatic transmitter, including derivation of formulas. A. Goldberg. diags A S M E Trans 75:501-6 My '53

Electronic flowmeter is new method for measuring air currents or fluid flow. il diag Elec Eng 72:371-2 Ap '53; Same. Franklin Inst J 255:333-5 Ap '53; Same. Pet Processing 8:731+ My '53; Same. Pet Eng 25: D34-6 Jl '53; Same cond. Oil & Gas J 52: 149 Je 15 '53; Excerpts. Mech Eng 75:313 Ap '53

Fast-response true-mass-rate flowmeter. Yao Tzu Li and S. Lee. il diags A S M E Trans 75:835-41 Jl '53

Gas check; research on viscosity of gases at elevated temperatures and pressures. Mill & Factory 52:276+ Je '53

Instrument for the study of double refraction of flow at low and intermediate velocity gradients. J. T. Edsall and others. bibliog il diags R Sci Instr 23:695-701 D '52

Instrumentation handbook; flow measurement and control. L. K. Spink. diags Pet Refiner 31:98-103 D '52

Mass flowmeter integrates flow and density; Gavco electronic mass flowmeter. il Pet Processing 8:601 Ap '53

Measurement of flow. diags Can Chem Process 37:100-2+ S '53

Measurement of pulsating flow with propeller and turbine-type meters. R. B. Dowdell and A. H. Liddle, jr. bibliog il diags A S M E Trans 75:961-6; Discussion. 966-8 Jl '53

Measures true mass flow; making practical use of the effect known as Coriolis acceleration. il diag Chem Eng 60:124+ Mr '53

Meter measures fuel flow in pounds. il Aviation W 58:62+ Ap 6 '53

Meter uses sound to gauge fluid flow. Aviation W 58:34+ Mr 30 '53

Metering liquid sulfur. E. S. Boe, C. E. Butterworth and J. R. West. Chem Eng Prog 49:73-7 F '53

Method for adjustment of the zero setting of an electromagnetic flow meter without interruption of flow. A. Kolin. il diags R Sci Instr 24:178-9 F '53

New device measures weight flow only. diags Pet Processing 8:426 Mr '53

New flow meters save steam and improve cost accounting at Hiram Walker distillery. W. I. Bingaman and R. E. Johnson. flow chart il diag Heating-Piping 25:140-2 Ja '53

New meter measures mass flow. il diag Aviation W 58:69 Mr 30 '53; Food Eng 25:163 Ap '53

Some problems of fluid-flow measuring devices. F. V. A. Engel. bibliog diags Engineering 176:6-10, 35-7 Jl 3-10 '53

Strain gage transducers for measurement and control. R. J. Fyffe and A. Arobone. il diags Product Eng 23:136-9 N '52

This new flowmeter measures true mass-rate. Y. T. Li and P. A. Lapp. bibliog il diags World Oil 136:215-18 Je '53; Same. Pet Refiner 32:119-22 Ag '53

Versatile flow meter measures flow in two directions. H. L. Shulman and others. diag Chem Eng 60:173-4 F '53

Wide range metering of oxygen in steel plants. M. S. Gare. flow charts diags Iron & Steel Eng 30:74-81; Discussion. 81-2 Jl '53

See also

Anemoclinometer	Pitot tubes
Gas meters	Venturi meters
Orifice meters	Water meters

FLOW of fluids. See Fluids; Turbulence

FLOW regulators

Butterfly control valves. C. A. Dally. il diags Instruments 25:1717-19+ D '52

Continuous flow production. il diag Chem Age (Lond) 68:9-10 Ja 3 '53

Electronic control of a constant-weight feeder. il diags Engineer 195:145 Ja 23 '53; Engineering 175:40 Ja 9 '53; Elec J 149:1999-2000 D 26 '52

Flow control system balances pumping capacity and flow rate. diags Machine Design 25:176 Je '53

Improved flow control with long lines. W. E. Vannah and A. R. Catheron. bibliog diags Instruments 25:1733-7 D '52

Instrument for regulating metered air supplies; Pneumerstat. il diag Engineering 176:63 Jl 10 '53

Instrumentation handbook; flow measurement and control. L. K. Spink. diags Pet Refiner 31:98-103 D '52

Measurement and regulation of flow by remote control. G. C. Wilson. il diags Oil & Gas J 52:82-4 Je 1 '53

New flow system insures against excessive electric power charges. W. W. Holt, jr. diags Oil & Gas J 51:246-7 O 13 '52

Pipe-line control; abstract. H. A. Altorfer. Oil & Gas J 51:143 S 29 '52

Positive displacement liquid flow divider. il Product Eng 23:208 N '52

Simple gas-flow-control of high efficiency. D. H. James and C. S. G. Phillips. bibliog diags J Sci Instr 29:362-3 N '52

Valve panels control flow; Glidden co.'s Naval stores division. R. L. Hedberg. il Heating-Piping 24:93 D '52

FLOW sheets

How to simplify your flow sheets and process control diagrams. flow sheets diags Pet Processing 7:1786-9 D '52

Ore testing to determine flowsheet prior to plant design. B. Irwin and others. Min Eng 5:868-9; Discussion. 869 S '53

Process flow sheets and instrument control diagrams. W. L. Willoughby. flow sheets diags Instruments 25:1566-7+ N '52

FLOWER pots

Manufacture

Visit to American container co. il Brick & Clay Rec 122:58-9 My '53

FLOWER shops. See Florist's shops

FLOWERING of plants. See Plants, Flowering of

FLOWERS, Color of. See Color of flowers

FLOWMETERS. See Flow meters

FLUE dust

Air pollution prevention in electric generating stations. H. A. Bauman. bibliog diag Elec Eng 72:200-4 Mr '53

British producing germanium from flue dust. J. A. Gay. Min Eng 5:782 Ag '53

Cyclone dust collectors for boilers. A. J. ter Linden. diags A S M E Trans 75:433-40 Ap '53

Dust and fume elimination investigated; Electric furnace steel conference fume control session, Pittsburgh, Dec. 4-6; with abstracts of papers. Steel 131:82+ D 29 '52

Electrical resistivity of fly ash. H. J. White. Power 97:172 O '53

Experience with fly-ash blends in a test pavement built in 1938. W. T. McClenahan. il Eng N 150:32-4 Mr 12 '53

Field testing of stack-dust emission needs simplifying. il diags Power 97:76-7 Ag '53

Flue dust recovery plant for blast furnaces, Aliquippa works. il Engineer 195:810-11 Je 5 '53

Fly ash collection in industrial experience; abstract. B. S. Norling. Nat Safety N 68:56 Ag '53

Fly ash, its effects when used in plastic concrete and concrete products. Rock Prod 56:186-8 F '53

FLUE dust—*Continued*

Highway department tests fly-ash in pavement mixes. W. L. Chilcote. il Eng N 149:40-1 O 23 '52; Abstract. Elec World 139: 62 Ja 12 '53

Indianapolis clears the air. R. H. Herrmann. il Foundry 81:212+ My '53

Now! no more flyash; George C. Brown and co. il diag Power 97:134-5 O '53

Power engineers abate air pollution. Power Eng 57:110 Je '53

Quality control of blast furnace flue-dust sinter; abstract. Rudolphy and Carney. Steel 132:131 Je 1 '53

Reducing dust from small spreader stokers. Power Eng 57:104 Ag '53

Some experiences with air pollution abatement in the steel industry. C. A. Bishop. diag Blast F & Steel Pl 40:1448-53 D '52; Same abr. Iron & Steel Eng 29:122-6 D '52

Strength and durability of concrete containing Chicago fly ash. G. W. Washa and N. H. Withey. Am Concrete Inst J 24:701-12 Ap '53

Television for monitoring stack emission. E. R. Thomas and W. L. Norvell. il diags Elec Eng 72:224-7 Mr '53

FLUE gas

Air-preheater design as affected by fuel characteristics. H. Karlsson and W. E. Hammond. bibliog il diags A S M E Trans 75:711-18; Discussion. 718-22 Jl '53

Catalytic combustion of odor-producing agents; heat recovery. L. C. McCabe. il diag Ind & Eng Chem 45:sup 109A-10A+ Mr '53

Clean air; activated carbon, catalytic burners eliminate complaints. il Iron Age 170:170 D 18 '52

Cleaner air; stack effluent from atom power lab cleaner than normal air. J. J. Fitzgerald. Iron Age 170:182-3 D 11 '52; Same. Materials & Methods 37:158+ Ja '53

Cleaning industrial gases. J. J. Seaver. diags Iron & Steel Eng 29:84-91 O '52

Don't let heat go up your flue; burning carbon monoxide in cracking unit flue gas; oxidation catalyst method. W. C. Uhl. flow diag il Pet Processing 7:1444-6 O '52

Flue gas removal of sulphur oxides; no commercially successful recovery so far. Chem Age (Lond) 67:827-9 D 20 '52

Fuel research and sulphur recovery; work of the Fuel research board in 1951. il Chem Age (Lond) 67:623-6 N 8 '52

Furnace heat absorption in a spreader-stoker-fired steam generator; furnace heat-absorption efficiency as shown by enthalpy of gases leaving the furnace. J. W. Myers and R. C. Corey. bibliog diags A S M E Trans 75:909-23 Jl '53

Greater heat recovery from catalytic flue gas; new catalytic oxidation unit. G. Weber. flow diag il diag Oil & Gas J 51:346-7+ O 13 '52

Open hearth shop announces successful smoke control; Torrance works. diag Blast F & Steel Pl 41:1195 O '53

Removal of oxides of sulphur from flue gases. R. L. Rees. bibliog Engineer 194:842-4 D 19 '52; Abstracts. Elec J 149:1931-2 D 19 '52; Elec R (Lond) 151:1340 D 19 '52

Resistance of cast Fe-Cr-Ni alloys to corrosion in oxidizing and reducing flue-gas atmospheres. J. H. Jackson and others. bibliog flow chart il A S M E Trans 75: 1021-35 Ag '53

Some experiences with air pollution abatement in the steel industry. C. A. Bishop. diag Blast F & Steel Pl 40:1448-53 D '52; Same abr. Iron & Steel Eng 29:122-6 D '52; Abstract. Steel 130:177+ Mr 10 '52

See also

Blast furnace gas
Flue dust

Sampling

Experiences with oxygen control in open hearth flue gases. F. P. Hubbell. diags Iron & Steel Eng 30:53-6; Discussion. 57-8 Ag '53

FLUES

Vitrified clay flue liners used in unusual venting system; Allen-Bradley co. il Brick & Clay Rec 123:48 O '53; Heating-Piping 25:82 O '53

FLUID hydroforming process. See Gasoline—Manufacture

FLUIDIZATION

Chemical engineering unit operations; fluid dynamics. M. Weintraub and M. Leva. Ind & Eng Chem 45:74-82 bibliog(299 ref, p79-82) Ja '53

Comparison of the fixed-bed, liquid-phase (slurry), and fluidized-bed techniques in the Fischer-Tropsch synthesis. C. C. Hall and others. bibliog 2pls diags Inst Pet J 38:845-67; Discussion. 867-76 O '52

Distillation of hardwood in a fluidized bed. L. W. Morgan, G. M. Armstrong, jr. and H. C. Lewis. bibliog diags Chem Eng Prog 49:98-101 F '53

Experimental study of the mechanism of fluidization. R. Jottrand. bibliog il J Ap Chem 2(sup no 1):S 17-26 '52

Fluidization as applied to the Fischer-Tropsch process. C. C. Hall and P. Crumley. bibliog il J Ap Chem 2(sup no 1):S47-55 '52

Fluidization in beds of coal and coke particles; some effects of size of particles and viscosity, density and velocity of gas. L. J. Jolley and J. E. Stantan. J Ap Chem 2(sup no 1):S62-8 '52

Fluidization of solid particles in liquids. E. W. Lewis and E. W. Bowerman. bibliog diag Chem Eng Prog 48:603-9; Discussion. 609-10 D '52

Fluidized solids; Chemical Engineering report. M. Sittig. il diags Chem Eng 60:219-31 My '53

Fluidized-solids technique in the petroleum industry. R. C. Gunness. il diags Chem Eng Prog 49:113-19 Mr '53

Heat transfer and fouling of fluidized beds. H. L. Olin and O. C. Dean. diags Pet Eng 25:C23-4+ Mr '53

Heat transfer between fluidized beds and vertically inserted tubes. H. A. Vreedenberg. bibliog J Ap Chem 2(sup no 1):S26-33 '52

Hydrodynamic relationships in particulate fluidization. R. J. Young. bibliog J Ap Chem 2(sup no 1):S55-61 '52

Mass transfer from benzoic acid granules to water in fixed and fluidized beds at low Reynolds numbers. G. C. Evans and C. F. Gerald. bibliog diag Chem Eng Prog 49: 135-40 Mr '53

Mass transfer in a fluidized bed. Ju Chin Chu and others. bibliog diag Chem Eng Prog 49:141-9 Mr '53

Measurement of fluidization quality. W. W. Shuster and P. Kisliak. bibliog diags Chem Eng Prog 48:455-8 S '52

More data on heat transfer to fluidized solids. W. E. Schmid and others. bibliog Chem Eng 59:172-3 O '52

New way to ethylene oxide; fluidized catalyst system. flow sheet il Chem Eng 60:134+ F '53

Problems of plant design for fluidized processes. S. A. Gregory. bibliog(60 ref) J Ap Chem 2(sup no 1):S 1-7 '52

Rate processes in chemical reactors. R. H. Wilhelm. diags Chem Eng Prog 49:150-4 Mr '53

Some fundamental characteristics of the fluidized state. C. Van Heerden. bibliog J Ap Chem 2(sup no 1):S7-17 '52

Some practical applications of fluidization. P. Evans and H. Kepper. J Ap Chem 2(sup no 1):S33-9 '52

SO_2 by fluidization; pictured flow sheet. Chem Eng 60:238-41 Ja '53

Theory of fluidization and its application to gas purification. J. E. Garside and A. L. Roberts. diags J Ap Chem 2(sup no 1):S39-47 '52

FLUIDS

Acoustical radiation from the velocity field in a compressible fluid. E. N. Parker. Phys R 90:240-2 Ap 15 '53

Adiabatic flow of evaporating fluids in pipes of uniform bore. D. L. Linning. bibliog il diags Inst Mech Eng Proc (B) 1B no 2: 64-72; Discussion. 72-5 '52

Calculator solves fluid flow problem. il Chem Eng 59:224 N '52

Comparison between the longitudinal correlation and the time correlation in a turbulent flow. F. N. Frenkiel. Phys R 88:1380-2 D 15 '52

FLUIDS—*Continued*

Curved shocks in steady plane flow of an ideal fluid. C. Truesdell. J Aeronautical Sci 19: 826-8 D '52

Direct determination of the flow curves of non-Newtonian fluids. I. M. Krieger and others. bibliog J Ap Phys 23:147-9; 24:134-6 Ja '52, F '53

Effect of friction on compression and rarefaction waves of finite amplitude. F. J. Wallace and M. Nassif. diag Engineering 175:674-7, 708-9 My 29-Je 5 '53

Effect of Reynolds number in turbulent-flow range on flame speeds of Bunsen burner flames. L. M. Bollinger and D. T. Williams. bibliog il diag U S Nat Advisory Com for Aeronautics 1949:231-8 '51

Effects of variations in Reynolds number between 3.0X10^6 and 25.0X10^6 upon the aerodynamic characteristics of a number of NACA 6-series airfoil sections. L. K. Loftin, jr. and W. J. Bursnall. bibliog U S Nat Advisory Com for Aeronautics 1950: 307-26 '51

Extension of Heisenberg's model of turbulence to critical Reynolds numbers. E. N. Parker. bibliog Phys R 90:221-3 Ap 15 '53

Flow factor chart for comparing fluid flows. J. D. Constance. Power Eng 57:78 Jl '53

Flow of concentrated suspensions. P. S. Williams. J Ap Chem 3:120-8 Mr '53

Flow visualization in high vacuums. R. G. Folsom. bibliog il diags Chem Eng Prog 48:542-8 N '52

Invariants in the turbulence in compressible viscous fluids. M. Z. E. Krzywoblocki. Franklin Inst J 254:317-22 O '52

Mass transfer between solid wall and fluid streams. C. S. Lin, R. W. Moulton and G. L. Putnam. bibliog il diags Ind & Eng Chem 45:636-46 Mr '53

Molecular distribution functions in a one-dimensional fluid. Z. W. Salsburg and others. bibliog J Chem Phys 21:1098-107 Je '53

Multitube differential pressure manometer for measuring the average flow of fluids in closed ducts. G. B. Clark. il diags Ill U Eng Exp Sta Bul 410:1-30 '53 (pa 30c)

New instrument measures viscosity continuously, accurately; Ultra-Viscoson. Iron Age 171:64-5 Ap 16 '53

Periodic fluid flow through circular orifices. G. B. Thurston and C. E. Martin, jr. bibliog il diag Acoustical Soc Am J 25:26-31 Ja '53

Pressure drop in blast furnace and in cupola. S. Ergun. bibliog diag Ind & Eng Chem 45:477-85 F '53

Propagation of elastic waves in a cylindrical bore containing a fluid. M. A. Biot. diags J Ap Phys 23:997-1005 S '52

Significance of flow-patterns for initial convection in porous media. H. L. Morrison and F. T. Rogers, jr. bibliog J Ap Phys 23: 1058-9 S '52

Some problems of fluid-flow measuring devices. F. V. A. Engel. bibliog diags Engineering 176:6-10, 35-7 Jl 3-10 '53

Stability of a limiting case of plane Couette flow. B. Zondek and L. H. Thomas. bibliog Phys R 90:738-43 Je 1 '53

Stability of plane Poiseuille flow. L. H. Thomas. Phys R 91:780-3 Ag 15 '53

Stability of the laminar parabolic flow of a viscous fluid between parallel fixed walls. C. L. Pekeris. bibliog Phys R 74:191-9 Jl 15 '48; Discussion. T. Tatsumi. 87:1127-8 S 15 '52

Thermal conductivity of solids and fluids from studies of aggregate matter. H. S. Strickler. bibliog J Chem Phys 20:1333-4 Ag '52

See also

Aerodynamics
Air flow
Drops
Equation of state
Flow meters
Gas flow
Gases
Hydraulics
Hydrodynamics
Jets
Liquids
Rectification
Turbulence
Vaporization
Vapors
Viscosity
Water flow

FLUKES

Effects of soils and sunlight on dilute concentrations of sodium pentachlorophenate. C. G. Dobrovolny and W. T. Haskins. Science 117:501-2 My 8 '53

FLUOR corporation

Stock offered. Comm & Fin Chr 176:2531 D 29 '52

FLUORANTHENE

Polycyclic aromatic hydrocarbons as starting materials for the synthesis of dyestuffs. T. Holbro. J Ap Chem 3:1-9 Ja '53

Synthesis of fluoranthenes; iodination of tetrahydrofluoranthenes, leading to the syntheses of 3-methyl-1 : 2-5 : 6-dibenzopyracylene. J. M. Beaton and S. H. Tucker. Chem Soc J p3870-4 O '52

Synthesis of fluoranthenes; 10-methylfluoranthene; correction of its melting point. S. H. Tucker and M. Whalley. Chem Soc J p3187-9 Ag '52

FLUORAPATITE. See Apatite

FLUORENAMINE

Convenient synthesis of 2-β-hydroxyethylaminofluorene. E. Sawicki. Am Chem Soc J 75:4596 S 20 '53

Effect of 2-aminofluorene on the utilization of S^{35} DL-methionine. A. W. Wase and others. bibliog Science 116:536-7 N 14 '52

FLUORENE

3 : 6-Disubstituted fluorenes; the attempted introduction of a 6 : 6′-methylene bridge directly into 3 : 3′-diaminodiphenyl and some of its derivatives. A. Barker and C. C. Barker. Chem Soc J p2034-6 Jl '53

Vapour pressure and lattice energy of some aromatic ring compounds. R. S. Bradley and T. G. Cleasby. Chem Soc J p 1690-2 Je '53

FLUORENE compounds

Ultraviolet spectra and carcinogenic activities of some fluorene and biphenyl derivatives. R. B. Sandin and others. bibliog Am Chem Soc J 74:5073-5 O 20 '52

FLUORENOL

Interaction of triphenylmethanol, fluoren-9-ol, and diphenylmethanol with hydrazoic acid in the presence of sulphuric acid. C. L. Arcus and R. J. Mesley. Chem Soc J p 178-81 Ja '53

FLUORENONE

Some experiments on the nitrofluorenones and related nitrophenanthridones, and observations on the Ullmann fluorenone synthesis. A. J. Nunn, K. Schofield and R. S. Theobald. Chem Soc J p2797-803 Jl '52

FLUORESCENCE

Absolute quantum yields of the fluorescence of chlorophyll solutions. L. S. Forster and R. Livingston. bibliog diag J Chem Phys 20:1315-20 Ag '52

Black light spots defects in materials. N. E. Walters. il Materials & Methods 36:105-7 N '52

Calcination and fluorescence in the evaluation of samples of the sillimanite minerals. W. R. Foster and others. bibliog Am Cer Soc Bul 31:326-8 S 15 '52

Correction for absorption and fluorescence in the determination of molecular weights by light scattering. B. A. Brice, G. C. Nutting and M. Halwer. bibliog Am Chem Soc J 75:824-8 F 20 '53

Determination of the fluorescence lifetimes of dissolved substances by a phase shift method. E. A. Bailey, jr. and J. K. Rollefson. bibliog diags J Chem Phys 21:1315-22 Ag '53

Field dependent fluorescence of vitreous Zn$_2$SiO$_4$ phosphor. A. Bramley and J. E. Rosenthal. Phys R 87:1125 S 15 '52

Fluorescence in ultraviolet light in the study of boron deficiency in celery. A. R. Spurr. bibliog il Science 116:421-3 O 17 '52

Fluorescence obtained from formic acid, carbonyl chloride, and methylene iodide. P. J. Dyne and D. W. G. Style. pl Chem Soc J p2122-4 Je '52

Fluorescence of biacetyl vapor. H. J. Groh, jr. bibliog J Chem Phys 21:674-7 Ap '53

Fluorescence, phosphorescence, and photostimulation of NaCl(AgCl) with high-energy irradiation. M. Furst and H. Kallmann. bibliog il diags Phys R 91:1356-67 S 15 '53

Fluorescence studies of some simple benzene derivatives in the near ultraviolet; benzotrifluoride. M. L. N. Sastri and H. Sponer. bibliog il J Chem Phys 20:1428-31 S '52

Fluorescent light yields with alpha, beta, and gamma radiations. M. Furst and H. Kallmann. bibliog Phys R 91:766-7 Ag 1 '53

FLUORESCENCE—*Continued*

Inter- and intramolecular energy transfer processes; hydrocarbon-hydrocarbon systems. M. M. Moodie and C. Reid. bibliog J Chem Phys 20:1510-15 O '52

Inter- and intramolecular energy transfer processes; nitro-compounds and hydrocarbons. C. Reid. J Chem Phys 20:1212-13 Ag '52

Mechanism of acetone vapor fluorescence. H. J. Groh, jr. and others. bibliog J Chem Phys 21:115-18 Ja '53

Origins of the fluorescences obtained from formic acid and methylene iodide. D. W. G. Style and J. C. Ward. Chem Soc J p2125-7, pl 1-2 Je '52

Polarized fluorescence of molecules of some single organic crystals. S. C. Ganguly and N. K. Choudhury. bibliog il J Chem Phys 21:554-7 Mr '53

Recent advances in fluorescent materials; increasing variety of applications. A. E. Williams. il Chem Age (Lond) 67:823-6 D 20 '52

Scintillation process in plastic solid solutions. R. K. Swank and W. L. Buck. bibliog Phys R 91:927-33 Ag 15 '53

Scintillation study of As^{77} and Br^{77}. M. E. Bunker and others. bibliog Phys R 91:1021-2 Ag 15 '53

Spectroscopic studies in the near ultraviolet of the three isomeric dimethylbenzene vapors; fluorescence of *meta*-dimethylbenzene. V. R. Rao and M. L. N. Sastri. il J Chem Phys 20:1552-3 O '52

Vibrational analysis of the fluorescence of naphthalene vapor. O. Schnepp and D. S. McClure. bibliog il J Chem Phys 20:1375-83 S '52

X-ray fluorescent analysis provides fast control. il Materials & Methods 37:226+ Je '53

See also

Dyes and dyeing—Fluorescence

Luminescence

Quenching

Quenching of mercury resonance radiation; the production of metastable $(^3P_0)$ atoms. B. D. Darwent and F. G. Hurtubise. bibliog J Chem Phys 20:1684-8 N '52

Radiofrequency field quenching of ultraviolet excited phosphors. T. Miller. diags J Ap Phys 23:1289-93 D '52

FLUORESCENT lamps. See Electric lamps, Fluorescent

FLUORIDATION of milk. See Milk—Fluorine content

FLUORIDATION of water. See Water supply—Fluorine content

FLUORIDES

Catalysis of the cerous-ceric electron exchange reaction by fluoride. H. C. Hornig and W. F. Libby. bibliog J Phys Chem 56:869-71 O '52

Fluoride model systems; the binary systems CaF_2-BeF_2, MgF_2-BeF_2, and LiF-MgF_2. W. E. Counts and others. bibliog Am Cer Soc J 36:12-17 Ja 1 '53

Fluoride model systems; the system NaF-BeF_2 and the polymorphism of Na_2BeF_4 and BeF_2. D. M. Roy and others. Am Cer Soc J 36:185-90 Je 1 '53

Fluoride models for oxide systems of dielectric interest; the systems KF-MgF_2 and AgF-ZnF_2. R. C. DeVries and R. Roy. bibliog Am Chem Soc J 75:2479-84 My 20 '53

Infrared spectrum of some complex fluorides. A. de Lattre. J Chem Phys 20:1180 Jl '52

Kinetics of the exchange reactions between iron(II) ion and the fluoride complexes of iron(III). J. Hudis and A. C. Wahl. bibliog Am Chem Soc J 75:4153-8 S 5 '53

Magnetic anisotropy of the iron-group fluorides. J. W. Stout and L. M. Matarrese. bibliog diags Rs Mod Phys 25:338-43 Ja '53

Magnetic resonance spectrum of a linear three-spin system; the configuration of the bifluoride ion. J. S. Waugh, F. B. Humphrey and D. M. Yost. bibliog J Phys Chem 57:486-90 My '53

Organic fluorides; the high-temperature dimerisation of chlorotrifluoroethylene. M. W. Buxton and others. Chem Soc J p3830-4 O '52

Organic fluorides; the synthesis of some aromatic fluoro- and chloro-compounds. L. V. Johnson and others. Chem Soc J p4710-13 D '52

Precipitation of fluorides in glassy systems; abstract. R. J. Callow. Glass Ind 34:82-3 F '53

Solubility of fluorides of metals in liquid hydrogen fluoride. A. W. Jache and G. H. Cady. bibliog J Phys Chem 56:1106-9 D '52

Studies in co-ordination chemistry; the magneto-chemistry of simple and complex fluorides of transition metals. R. S. Nyholm and A. G. Sharpe. Chem Soc J p3579-87 S '52

Synthetic mica investigations; role of fluorides in mica batch reactions. W. Eitel and others. bibliog Am Cer Soc J 36:341-8 O 1 '53

See also

Chlorine fluorides

Fluorspar

Water purification—Fluoride removal

Analysis

Critical factors in fluoride distillation technique. S. Megregian and I. Solet. bibliog diags Am Water Works Assn J 45:1110-16 O '53

Determination of fluoride in water by the aluminum-hemotoxylin method. M. J. Price and O. J. Walker. bibliog Anal Chem 24:1593-5 O '52

Induced reaction method for determination of fluoride ion. J. L. Lambert. Anal Chem 25:271-4 F '53

New spectrophotometric method aids determination of fluorides. Chem & Eng N 31:874 Mr 2 '53

Spectrophotometric method for determination of the fluoride ion. H. E. Bumsted and J. C. Wells. bibliog Anal Chem 24:1595-7 O '52

Physiological effect

Absorption and excretion of inhaled fluorides. G. H. Collings, jr. and others. A M A Archives Ind Hygiene & Occup Med 6:368-73 O '52

FLUORINATION

Fluorination of carbon disulfide and carbonyl sulfide. G. A. Silvey and G. H. Cady. Am Chem Soc J 74:5792-3 N 20 '52

Industrial fluoro-chemicals. J. O. Hendricks. bibliog(64 ref) il Ind & Eng Chem 45:99-105 Ja '53

FLUORINE

Action of elementary fluorine upon organic compounds; a new type of reactor and the mild fluorination of carbon disulfide. E. A. Tyczkowski and L. A. Bigelow. bibliog diags Am Chem Soc J 75:3523-6 Jl 20 '53

Dissociation energy of fluorine. P. W. Gilles and J. L. Margrave. J Chem Phys 21:381-2 F '53

Electron distribution in molecules; proton and fluorine magnetic resonance shifts in the halomethanes. L. H. Meyer and H. S. Gutowsky. bibliog il J Phys Chem 57:481-6 My '53

Entropy of fluorine. G. M. Murphy and E. Rubin. bibliog J Chem Phys 20:1179-80 Jl '52

Fluorine content of associated human and extinct animal bones from the Conkling cavern, New Mexico. T. D. Stewart. bibliog Science 116:457-8 O 24 '52

Intermolecular force constants of fluorine. D. White and others. bibliog diag J Chem Phys 21:1149-52 Jl '53

Nucleophilic displacement of fluorine from aromatic compounds. C. W. L. Bevan. Chem Soc J p655-7 F '53

Physical properties of liquid fluorine. G. W. Elverum, jr. and R. N. Doescher. diag J Chem Phys 20:1834-6 D '52

Some recent advances in fluorine chemistry. H. J. Emeléus. bibliog Chem & Ind p 1235-8 D 20 '52

Unified orbital theory of the excited states of the fluorine molecule. C. R. Mueller. bibliog J Chem Phys 21:1013-17 Je '53

See also

Water supply—Fluorine content

FLUORINE—*Continued*

Analysis

Determination of fluorine in plant materials. L. F. Remmert and others. bibliog Anal Chem 25:450-3 Mr '53

Rapid method for determination of urinary fluorine. R. F. Miller and P. H. Phillips. bibliog Anal Chem 25:172-3 Ja '53

Isotopes

Absolute determination of resonant energies for the radiative capture of protons by boron, carbon, fluorine, magnesium, and aluminum in the energy range below 500 kev. S. E. Hunt and W. M. Jones. diag Phys R 89:1283-7 Mr 15 '53

Angular correlations in the reaction $F^{19}(p,\alpha\gamma)O^{16}$. J. Seed and A. P. French. bibliog diags Phys R 88:1007-16 D 1 '52

Angular distributions of protons from the reaction $F^{19}(d,p)F^{20}$. D. A. Bromley and others. bibliog Phys R 89:396-8 Ja 15 '53

Beta-decay of F^{20}. D. E. Alburger. bibliog Phys R 88:1257-61 D 15 '52

Electron distribution in molecules; F^{19} nuclear magnetic shielding and substituent effects in some benzene derivatives. H. S. Gutowsky and others. bibliog il diag Am Chem Soc J 74:4809-17 O 5 '52

Isotope exchange reactions of fluorine with halogen fluorides. R. B. Bernstein and J. J. Katz. bibliog J Phys Chem 56:885-8 O '52

Magnetic analysis of the $F^{19}(d,p)F^{2}$ and $F^{19}(d,\alpha)O^{17}$ reactions. H. A. Watson and W. W. Buechner. bibliog Phys R 88:1324-31 D 15 '52

Radiofrequency spectra of Li^6F^{19} by the molecular beam electric resonance method. J. C. Swartz and J. W. Trischka. bibliog diags Phys R 88:1085-92 D 1 '52

Therapeutic use

What should a city do to its water? Bsns W p66+ Mr 21 '53

FLUORINE compounds

Acidity and infrared absorption of fluorinated alcohols. A. L. Henne and W. C. Francis. Am Chem Soc J 75:991-2 F 20 '53

A.C.S. committee on nomenclature, spelling, and pronunciation; use of H to designate the positions of hydrogens in almost completely fluorinated organic compounds. Chem & Eng N 30:4515 O 27 '52

Carcinogenic nitrogen compounds; fluorine-containing 1 : 2- and 3 : 4-benzacridines. N. P. Buu-Hoï and P. Jacquignon. Chem Soc J p4173-5 N '52

Chlorination of fluorine-containing alcohols. E. T. McBee, O. R. Pierce and W. F. Marzluff. bibliog Am Chem Soc J 75:1609-10 Ap 5 '53

Fluorinated esters; diesters of carboxylic acids with fluorine-containing alcohols and glycols. R. Filler and others. bibliog Am Chem Soc J 75:2693-5 Je 5 '53

Fluorinated esters; esters of perfluoro monocarboxylic and dicarboxylic acids with 1,1-dihydroperfluoroalcohols and $\alpha,\alpha,\omega,\omega$-tetrahydroperfluoroglycols. M. Hauptschein and others. bibliog Am Chem Soc J 75:87-9 Ja 5 '53

Fluorinated esters; surface tension and parachor studies. R. Filler. bibliog Am Chem Soc J 75:3016-17 Je 20 '53

Fluorinated esters; the effect of neighboring fluorine atoms on the ester carbonyl frequency. G. Rappaport and others. bibliog Am Chem Soc J 75:2695-7 Je 5 '53

Fluorine. E. M. Ott. il Chem & Eng N 31:1626-8 Ap 20 '53

Fluorochemicals, today and tomorrow. T. J. Brice and others. il Chem & Eng N 31:510-13 F 9 '53

Fluoro-olefins; the synthesis of hexafluorobuta-1 : 3-diene. R. N. Hazeldine. Chem Soc J p4423-31 N '52

Hydrazine; the hydrazinium salts of complex fluoro-acids of tin, antimony, and bismuth. W. Pugh. Chem Soc J p 1934-6 Je '53

Industrial fluoro-chemicals. J. O. Hendricks. bibliog(64 ref) il Ind & Eng Chem 45:99-105 Ja '53

Infrared and Raman spectra of fluorinated ethanes. J. R. Nielsen and others. bibliog J Chem Phys 21:1060-76 Je '53

Organometallic and organometalloidal fluorine compounds. G. R. A. Brandt, H. J. Emeléus and R. N. Haszeldine. Chem Soc J p2549-55 Jl '52

Organometallic and organometalloidal fluorine compounds; the electrochemical fluorination of dimethyl sulphide and carbon disulphide. A. F. Clifford and others. diag Chem Soc J p2372-5 Ag '53

Organometallic and organometalloidal fluorine compounds; trifluoromethyl arsenicals. H. J. Emeléus, R. N. Haszeldine and E. G. Walaschewski. Chem Soc J p 1552-64 My '53

Organometallic and organometalloidal fluorine compounds; trifluoromethyl compounds of phosphorus. F. W. Bennett, H. J. Emeléus and R. N. Haszeldine. Chem Soc J p 1565-71 My '53

Organometallic and organometalloidal fluorine compounds; trifluoromethyl derivatives of sulphur. G. A. R. Brandt, H. J. Emeléus and R. N. Haszeldine. Chem Soc J p2198-205 Je '52

Preparation and reactions of fluorine-containing acetoacetic esters. E. T. McBee and others. bibliog Am Chem Soc J 75:3152-3 Jl 5 '53

Preparation of two fluorinated *p*-dihalobenzenes. M. Hellman and A. J. Bilbo. Am Chem Soc J 75:4590-1 S 20 '53

Properties of fluorochemical N-43 (heptacosafluorotributylamine) liquid dielectric and heat transfer fluid; engineering reference sheet. Elec World 138:126 D 15 '52

Properties of fluorochemical O-75; fluorinated cyclic ether; liquid dielectric and heat transfer fluid; engineering reference sheet. Elec World 138:96 D 29 '52

Reactions of highly fluorinated organic compounds; reactions of perfluorodi*cyclo*hexyl and perfluoro (*iso*propyl*cyclo*hexane). G. B. Barlow and J. C. Tatlow. Chem Soc J p4695-8 D '52

Synthesis and polymerization of some fluorinated styrenes. M. Prober. bibliog Am Chem Soc J 75;968-73 F 20 '53

Synthesis of fluorine-containing olefins. E. T. McBee, O. R. Pierce and M. C. Chen. Am Chem Soc J 75:2324-6 My 20 '53

Toxic fluorine compounds containing the C-F link; preparation of carbon-labelled sodium fluoroacetate on a micro-scale. B. C. Saunders and T. S. Worthy. diags Chem Soc J p 1929-34 Je '53

Vapor pressures of some substituted benzotrifluorides. S. Kardon and J. H. Saylor. Am Chem Soc J 75:1997 Ap 20 '53

See also

Carbonyl fluoride
Chlorotrifluoroethylene
Fluorocarbons
Teflon
Trifluoroacetic acid

Analysis

Use of magnesium oxide in determination of carbon and hydrogen in fluoro-organic compounds. W. H. Throckmorton and G. H. Hutton. bibliog Anal Chem 24:2003-4 D '52

FLUORITE. See Fluorspar

FLUOROACETATES

Reactions of metallic salts of acids with halogens; some reactions of salts of fluorohalogenoacetates and of perfluoro-acids. R. N. Haszeldine. Chem Soc J p4259-68 N '52

See also

Sodium fluoroacetate

FLUOROBENZENE

Vibrational spectra of fluorinated aromatics; fluorobenzene. D. C. Smith and others. bibliog J Chem Phys 21:1475-9 S '53

FLUOROBENZONITRILE

Spectra of *p*-fluorobenzonitrile in the near ultraviolet. C. D. Cooper. bibliog J Chem Phys 21:379-80 F '53

FLUOROCARBONS

Colloidal properties of highly fluorinated alkanoic acids. C. H. Arrington, jr. and G. D. Patterson. bibliog J Phys Chem 57:247-50 F '53

Effects of structure on the viscosities of perfluoroalkyl ethers and amines. T. J. Brice and R. I. Coon. bibliog Am Chem Soc J 75:2921-5 Je 20 '53

FLUOROCARBONS—*Continued*

Fluorocarbon plastics. Chem Eng 60:264 My '53

Fluorocarbon plastics. P. O'Keefe. il Materials & Methods 37:110-14 Ap '53

Fluorocarbon plastics; tabulation; engineering file facts. Materials & Methods 37:133 Ap '53

Fluorocarbons face fame and fortune; specific applications. il Mod Plastics 30:79-87+ D '52

Industrial fluoro-chemicals. J. O. Hendricks. bibliog(64 ref) il Ind & Eng Chem 45:99-105 Ja '53

Ionization of fluorocarbon gases by U-234 α-particles. M. E. Steidlitz and others. diag J Phys Chem 56:1010-12 N '52

Mass spectra of fluorocarbons. F. L. Mohler and others. bibliog J Res Nat Bur Stand 49:343-7 N '52

Organometallic and organometalloidal compounds containing fluoroalkyl groups. H. J. Emeléus and R. N. Haszeldine. bibliog Science 117:311-15 Mr 27 '53

Plans for fluorocarbons. Mod Plastics 30:157-8+ Ja '53

Properties of *n*-butforane and its mixtures with *n*-butane. J. H. Simons and J. W. Mausteller. diag J Chem Phys 20:1516-19 O '52

Reactions of fluorocarbon radicals; addition to trifluoromethyl-substituted acetylenes. R. N. Haszeldine. Chem Soc J p3490-8 S '52

Reactions of fluorocarbon radicals; alternative synthesis for γγγ-trifluorocrotonic acid. R. N. Haszeldine. Chem Soc J p922-3 Mr '53

Reactions of fluorocarbon radicals; synthesis and reactions of pentafluoropropionic acid. R. N. Haszeldine and K. Leedham. Chem Soc J p 1548-52 My '53

Reactions of fluorocarbon radicals; the hydration of trifluoromethyl- and pentafluoroethyl-substituted acetylenes. R. N. Haszeldine and K. Leedham. Chem Soc J p3483-90 S '52

Solubility of organic solids in fluorocarbon derivatives. J. H. Simons and M. J. Linevsky. bibliog Am Chem Soc J 74:4750-1 O 5 '52

Solutions of fluorocarbons and hydrocarbons; the energy of mixing. R. Dunlap. bibliog J Chem Phys 21:1293-4 Jl '53

Some fluorinated liquid dielectrics; abstract. N. M. Bashara. Elec Eng 72:424 My '53

Some recent advances in fluorine chemistry. H. J. Emeléus. bibliog Chem & Ind p 1235-8 D 20 '52

See also

Tetrafluoroethylene

FLUORODINITROBENZENE

Reactivity of *meta*-nitrofluorobenzene and 3 : 5-dinitrofluorobenzene with sodium methoxide. C. W. L. Bevan and G. C. Bye. Chem & Ind p981-2 O 4 '52

FLUOROETHANE

Some reactions of fluoroethanes with sodium ethoxide. P. Tarrant and J. A. Young. bibliog Am Chem Soc J 75:932-4 F 20 '53

FLUOROFORM

Infrared spectrum of CF_3D. S. R. Polo and M. K. Wilson. bibliog J Chem Phys 21:1129-31 Jl '53

Infrared spectrum of fluoroform from 2.2 to 20μ. H. D. Rix. bibliog J Chem Phys 21:1077-9 Je '53

Rotation vibration bands of some symmetric top molecules under high resolution. T. A. Wiggins and others. bibliog J Chem Phys 21:1368-73 Ag '53

FLUOROMETHANE

Dielectric properties of compressed fluoromethane. H. G. David and others. bibliog J Chem Phys 20:969-72 Je '52

FLUOROMETRIC analysis

Analysis of high temperature alloys by X-ray fluorescence. R. M. Brissey. il Anal Chem 25:190-2 Ja '53

Analysts find important uses for X-ray fluorescence spectroscopy. Chem & Eng N 31:1082-4 Mr 16 '53

Fluorometric analysis; report of round-table discussion. bibliog Anal Chem 24:1965-8 D '52

Fluorometric determination of N_1-methylniacinamide. M. Kato and others. Science 116:462 O 24 '52

Fluorophotometric determination of uranium. G. R. Price, R. J. Ferretti and S. Schwartz. bibliog diags Anal Chem 25:322-31 F '53

Intensity calculation for determining weight percentage in a binary alloy by X-ray fluorescent analysis. P. K. Koh and others. J Ap Phys 23:698 Je '52

Metallurgical applications of X-ray fluorescent analysis. P. K. Koh and B. Caugherty. bibliog J Ap Phys 23:427-33 Ap '52

FLUOROPHENYLALANINE

p-Amino- and *p*-fluoro-β-phenylalanine. E. D. Bergmann. bibliog Am Chem Soc J 74:4947-8 O 5 '52

FLUOROPLATINATES

Fluoroplatinates; lanthanum, cerium, praseodymium and neodymium fluoroplatinates. T. P. Perros and C. R. Naeser. Am Chem Soc J 75:2516-17 My 20 '53

FLUOROSCOPY

Electronic fluoroscope. F. Marshall. il diag Westinghouse Eng 13:70-1 Mr '53

Industrial fluoroscope for mass inspection of light alloy castings. il Materials & Methods 38:114 Jl '53

FLUOROSILANE

Microwave spectrum and structure of SiD_3F. B. Bak and others. J Chem Phys 21:752-3 Ap '53

Organosilicon compounds; some sterically hindered compounds. C. Eaborn. Chem Soc J p2840-6 Jl '52

Organosilicon compounds; the preparation of organofluorosilanes. C. Eaborn. Chem Soc J p2846-9 Jl '52

Organosilicon compounds; the reaction between organofluorosilanes and aluminium halides. C. Eaborn. Chem Soc J p494-501 F '53

FLUOROTHENE. See Chlorotrifluoroethylene

FLUOROTOLUENE

Carcinogenic nitrogen compounds; Friedel-Crafts reactions with *m*- and *p*-fluorotoluene. N. P. Buu-Hoï and N. D. Xuong. Chem Soc J p386-8 F '53

FLUOROXYMETHFORANE

Infrared and Raman spectra of CF_3OF. R. T. Lagemann and others. J Chem Phys 20:1768-71 N '52

FLUORSPAR

Crystal Mountain fluorite deposits, Ravalli county, Mont. J. W. Taber. 2pls U S Bur Mines Rep of Invest 4916:1-8 '52

Fluorine. E. M. Ott. il Chem & Eng N 31:1626-8 Ap 20 '53

Fluorspar; a race for solvency. Iron Age 170:35-6 O 30 '52

Fluorspar, 1952. H. W. Davis. Eng & Min J 154:107-8 F '53

How Minerva oil co. produces high-grade ceramic fluorspar. O. E. Anderson. flow sheet il Eng & Min J 154:72-8 Mr '53

Investigation of the thermoluminescence of fluorite colored by X-ray irradiation. J. J. Hill and J. Aron. bibliog J Chem Phys 21:223-8 F '53

Kaiser streamlines mining and processing of Nevada fluorspar. flow sheet il Eng & Min J 154:96-8 O '53

Mining on credit; fluorspar in Newfoundland. Fortune 46:236 N '52

FLUOSILICATES

Solubility of ammonium, magnesium and zinc fluosilicates from 2 to 68°. E. A. Simpson and E. M. Glocker. bibliog J Phys Chem 57:529-30 My '53

FLUX

Brazing; flux-in-flame gives better joints, lowers rebuilding cost. il Iron Age 170:100 O 30 '52

Effect of fluxes on the properties of semi-vitreous dinnerware. J. C. Kyonka and R. L. Cook. bibliog Am Cer Soc Bul 32:233-8 Jl 15 '53

Effect of raw materials on cupola operation. B. P. Mulcahy. Foundry 80:236+ N '52

How vapor flux brazing produces quality joints; manufacture of household refrigerators at the Erie works of General electric co. H. S. Card. il diags Materials & Methods 37:120-2 Je '53

Study of eutectic glasses as fluxes in whiteware bodies. A. S. Watts and others. Am Cer Soc Bul 31:456-61 N 15 '52

FLUXMETERS
Rotating coil fluxmeter. M. S. Wills. bibliog diags J Sci Instr 29:374-6 N '52

FLY ash. See Flue dust

FLY sprays and repellents
Fly factor in attractant studies. C. S. Barnhart and L. E. Chadwick. il Science 117: 104-5 Ja 30 '53

FLYING boats
Flying boats tested in huge steel dock. il Automotive Ind 109:49 Jl 15 '53; Machine Design 25:184 S '53
Future development of the flying-boat airliner. H. Knowler. il Engineering 174:451-3, 485-6 O 3-10 '52
How Convair puts navy R3Y-1 together. il Aviation W 57:41-2 O 13 '52; Automotive Ind 107:88 N 1 '52
New frontiers of aeronautic engineering; hydrofoils and skis. D. A. Anderton. diag Aviation W 57:25-6+ N 17 '52
Packing the Princess flying boats for storage. Engineering 175:203 F 13 '53
Princess flying boat. il diags Engineering 174:289-93, pl 13-14, 371-3, pl 23, 429-31, 495-8, 591-4 S 5, 19, O 3, 17, N 7 '52

Design

Effect of afterbody length and keel angle on minimum depth of step for landing stability and on take-off stability of a flying boat. R. E. Olson and N. S. Land. il diags U S Nat Advisory Com for Aeronautics 1949:69-81 '51

FLYING bombs. See Guided missiles

FLYING saucers
CAA says radar needs saucer filter. Aviation W 57:14 D 29 '52
Cool weather chills flying saucer reports. Product Eng 23:199 O '52
Of spots before the eyes. E. F. Mauer. Science 116:693 D 19 '52
Saucer shape seen best for spaceship. W. F. Hilton. Aviation W 57:34+ N 3 '52
Saucers? M. Thomson. Science 116:640-1 D 5 '52
Vacuum bell jar discharge may solve flying saucer mystery. N. W. Scott. Elec Eng 71: 1055 N '52

FLYING tiger lines, inc.
CAB approval forecast in cargo merger; Flying Tiger-Slick consolidation appears assured. L. Moore. map Aviation W 58:91-2 Ap 6 '53
Marriage of convenience; Flying tiger line merger with Slick airways. il Bsns W p 172+ Ap 11 '53
Tigers, Slick file merger arguments. Aviation W 58:18 My 25 '53

FLYWHEELS
Skip welding ring gear to flywheel. H. Chase. il Tool Eng 29:63-4 N '52

FOAM
Action of detergents in sewage treatment; study by industry. W. R. Gowdy. il plan Sewage & Ind Wastes 25:255-60; Discussion. W. N. Wells. 260-1 Mr '53
Foam chokes off alcohol fires. il Chem Eng 59:230 D '52
Froth and foam, the bases for tower sizing. F. A. Zenz. bibliog diags Pet Refiner 32: 150-4 Ja '53
Improved apparatus for the study of foams. C. Walling, E. E. Ruff and J. L. Thornton, jr. bibliog diag J Phys Chem 56:989-93 N '52
Study of the components of jack pine groundwood white water with special emphasis on the foam phenomenon. J. W. Green and R. L. Leaf, jr. bibliog il diags Tappi 35: 468-80 O '52
Taking the terror out of fire; how Ashland refining company protects Kenova oil pumping station. R. James. il Comp Air Mag 58:278-9 O '53
Water on troubled oils. il Ind & Eng Chem 45:sup 11A+ Ap '53

FOAM glass. See Glass, Cellular

FOAM plastics. See Plastic materials, Cellular

FOAM rubber. See Rubber, Sponge

FOAMCLAY. See Clay products

FOAMING
Foaming of non-ionic surface active agents. M. N. Fineman, G. L. Brown and R. J. Myers. bibliog J Phys Chem 56:963-6 N '52
Fractionation of an enzyme by foaming. M. London, M. Cohen and P. B. Hudson. bibliog Am Chem Soc J 75:1746-7 Ap 5 '53

FOCUS (optics)
Focusing method for large accelerators. T. Kitagaki. diags Phys R 89:1161-2 Mr 1 '53
Origin of the strong-focusing principle. E. D. Courant and others. Phys R 91:202-3 Jl 1 '53
Radial focusing in the linear accelerator. J. P. Blewett. Phys R 88:1197-9 D 1 '52
Strong-focusing synchroton, a new high energy accelerator. E. D. Courant and others. diags Phys R 88:1190-6 D 1 '52

FOG
Cost of fog. Economist 166:352 F 7 '53
Possible method of fog dispersal. G. A. H. Elton. Chem & Ind p219 Mr 7 '53

FOG lamps. See Automobiles—Lighting

FOGG, Philip S.
Tightrope management builds profits in physics lab. por(cover) Bsns W p 170-2 N 15 '52

FOLDING doors. See Doors, Folding

FOLDING machines
Universal folders. il Metallurgia 48:95-6 Ag '53
Universal folding machine. il Engineer 195: 152 Ja 23 '53; Engineering 175:159 Ja 30 '53

See also

Paper folding machines

FOLIC acid
Effects of hydrogenation upon the microbiological activities of N^{10}-methylpteroylglutamic acid, aminopterin and A-methopterin. G. P. Wheeler and others. Am Chem Soc J 74:4725-6 S 20 '52
7-Isomer of pteroylglutamic acid. C. W. Waller and others. bibliog Am Chem Soc J 74:5405-7 N 5 '52
7-Methylpteroylglutamic acid and some related compounds. J. H. Boothe and others. bibliog Am Chem Soc J 74:5407-9 N 5 '52
Nutrition studies expanded by vitamin research group. Chem & Eng N 31:1086+ Mr 16 '53
Production of folinic acid from folic acid by lactobacillus casei. T. J. Bond. bibliog Science 117:563-4 My 22 '53
Quantitative study of folic acid requirements and reversal of aminopterin inhibition in drosophila. T. Hinton. Science 116:708-10 D 26 '52
Some pteridines related to folic acid; 2-deamino-analogues. D. J. Brown. Chem Soc J p 1644-5 My '53
Synthesis of pteroic and pteroylglutamic acids. D. I. Weisblat and others. bibliog Am Chem Soc J 75:3625-9 Ag 5 '53

FOLINIC acid
Production of folinic acid from folic acid by lactobacillus casei. T. J. Bond. bibliog Science 117:563-4 My 22 '53

FOLLOW-up systems
Follow up those advertising inquiries! C. P. Adams. Ptr Ink 241:60+ O 17 '52
Stop, look and think. D. Perrill. Ptr Ink 241: 58-9 O 24 '52

FOLSOM, Marion Bayard, 1893-
Treasury's new team. por Bsns W p70+ D 20 '52

FOOD
Advanced food processing with improved fats and oils. il Food Eng 25:99-100+ Je '53
Better pectins. G. H. Joseph. il Food Eng 25:71-3+ Je '53
Gum type stabilizers perform new vital functions. il Food Eng 25:105+ Je '53
Heat, moisture-sensitive foods sterilized in new unit. il Food Eng 25:99 Ag '53
Identification of leuco-anthocyanins as tannins in foods. E. C. Bate-Smith and T. Swain. bibliog Chem & Ind p377-8 Ap 18 '53
Mono- and diglycerides termed safe as food additives by NRC. Oil Paint & Drug Rep 163:3+ Ja 19 '53
New enzymes. E. G. Snyder. bibliog il Food Eng 25:89-90+ Je '53
New packages and products. il Published in monthly numbers of Food engineering
Starches tailormade for users. T. A. White. il Food Eng 25:95+ Je '53

FOOD—*Continued*

Synthetic vitamin A aids food fortification. J. C. Bauernfeind and others. bibliog(41 ref) il Food Eng 25:81-2+ Je '53

See also

Bakers and bakeries
Bread
Butter
Cake
Canned food
Cereals, Prepared
Dairy products
Diet
Eggs
Farm produce
Fish as food
Flavor
Flour
Food, Frozen
Food preservation
Food supply
Fruit
Grain
Infants' food
Jelly, jam, etc.
Meat
Milk
Nutrition
Potatoes
Poultry
Restaurants
Shortening
Sugar
Vegetables
Vitamins
Yeasts

Analysis

Review of analytical chemistry; Dec. 1951 to Oct. 1952. J. R. Matchett and H. W. von Loesecke. Anal Chem 25:24-30 bibliog(206 ref, p28-30) Ja '53

Bacteriology

Enterobacteriaceae; abstract and discussion. J. Taylor. Chem & Ind p347-8 Ap 11 '53

Epidemiology of bacterial food poisoning; abstract. W. C. Cockburn. Chem & Ind p346-7 Ap 11 '53

Pinning down bag-borne bacteria. W. L. Owen. il Food Eng 25:57-8+ Ja '53

Staphylococci and other gram-positive cocci; abstract and discussion. R. E. O. Williams. Chem & Ind p347-8 Ap 11 '53

Technical problems associated with microbiological standards for foods; discussion. Chem & Ind p 12-15 Ja 3 '53

Chemistry

Chemistry in the food industry. J. H. Nair. J Chem Educ 29:576-80 N '52

Growing role of phosphates. R. A. Barackman and R. N. Bell. il Food Eng 25:68-70+ Je '53

Color

See also
Browning

Contamination

See Food contamination

Insect infestation

See also Grain—Insect infestation

Manufacture

Proportioning. L. Lowy. Food Eng 25:163-4+ O '53

Quality control; instruments, ingredients. Food Eng 25:90-1 O '53

Separation. il Food Eng 25:149-50+ O '53

Size reduction. Food Eng 25:157+ O '53

Patents

Just what is patentable? J. M. Mason. il Food Eng 24:76-8 N '52

Recent inventions. Published in monthly numbers of Food engineering

Prices

Consumers' price indexes, 1943-1951; monthly Nov. 1951-Nov. 1952. Fed Res Bul 39:85 Ja '53 [cont monthly]

Cost-of-eating. R. W. Babson. Comm & Fin Chr 177:1540 Ap 9 '53

International comparisons of food price levels; indices, Oct. 1951. Int Labour R Stat Sup 66:99 O '52

Retail prices of food, 1950; including historical tables of item indexes, 1939-50. F. H. Martin. U S Bur Labor Statistics Bul 1055: 1-37; pa 25c Supt. of doc. '52

Retail prices of food, 1951 and 1952. F. H. Martin. U S Bur Labor Statistics Bul 1141:1-37; pa 25c Supt. of doc. '53

Standards

Farm bureau federation backs pretesting of chemical additives. Oil Paint & Drug Rep 163:3 Ap 13 '53

Technical problems associated with microbiological standards for foods; discussion. Chem & Ind p 12-15 Ja 3 '53

Storage

See also
Cold storage
Food, Frozen—Storage

Transportation

Compartmentized car. il diag Food Eng 25:77 Ja '53

New unit heats food cargo via engine-cooling system. il diag Food Eng 25:64+ F '53

They didn't spare the distribution; Wolf's huge new Detroit warehouse. il Food Eng 24:145-7 N '52

Truck tankers; versatile-plus in carrying liquid foods; Arrow transportation co. il Food Eng 25:71+ Jl '53

FOOD, Concentrated

Moisture removal. Food Eng 25:143+ O '53

FOOD, Dried

Moisture removal. Food Eng 25:143+ O '53

See also
Fruit, Dried
Milk, Dried

FOOD, Frozen

Food freezer plan; what it is, how it works. C. A. Ray. il Sales Management 69:65-6 N 1 '52

Freezer; rocking the food industry. il Bsns W p64-6+ Mr 28 '53

Frozen foods. E. W. Williams. Tappi 36: sup 10A+ F '53

Is the freezer-food plan here to stay? W. Lapin. Sales Management 69:102+ O 15 '52

Rise of food plans; tie-in sale of a food freezer with frozen foods. R. R. Henry. J Retailing 29:35-6+ Spring '53

Tennessee ice plant converted to quick freezing for higher profits. il Refrig Eng 61: 296 Mr '53

See also

Bread, Frozen
Fish, Frozen
Freezers
Freezers, Domestic
Freezing
Fruit juices, Frozen
Ice cream
Orange juice, Frozen
Shrimps, Frozen

Advertising

Trade character comes to life; Teddy Snow Crop. E. J. Dever, jr. il Ptr Ink 242:42-4 F 20 '53

Packages

Chicken for everybody; Keeshin's five-color waxed wrapper for cut-up frozen fowl. il Mod Packaging 26:103-5 Ja '53

Fish with a flourish; Blue Water brand. il Mod Packaging 26:116-18+ Ag '53

Frozen foods in cans. il Mod Packaging 26: 85-90+ N '52

Storage

30 million pounds of food in one freezer. G. Benjamin. il Can Chem Process 37:82+ My '53

Transport and storage of perishables in Canada. C. P. Lentz and W. H. Cook. bibliog diags Refrig Eng 61:160-2; Discussion. 162-3+ F '53

Testing

Mobile research lab. il Mod Packaging 27:198 S '53

Transportation

Frozens run cross-country in reefer-truck test. Food Eng 25:192 Jl '53

Novel Thermo Train developed in Sweden freezes perishables on the spot anywhere. il Refrig Eng 61:295 Mr '53

Transport and storage of perishables in Canada. C. P. Lentz and W. H. Cook. bibliog diags Refrig Eng 61:160-2; Discussion. 162-3+ F '53

FOOD and drug administration. See United States—Food and drug administration

FOOD and nutrition institute, National. See National food and nutrition institute

FOOD choppers

Rating

Food choppers without table clamps. il Consumers Res Bul 31:8-9 F '53

FOOD containers

Hot food for fighters; army food container, insulated with shredded urea foam. il Mod Plastics 30:87-8 S '52

New packages and products. il Published in monthly numbers of Food engineering

Tear-tape shippers; General Mills' quick-opening shipping case for Betty Crocker pie crust mix. il Mod Packaging 26:83-5 Mr '53

Tensile strength in waxes. R. T. Edwards. il Mod Packaging 26:123-7+ F '53

See also

Candy boxes
Food packages
Milk containers

FOOD contamination

Analytical and pharmacological problems arising from the use of organic chemicals as processing aids and hygiene aids in the food industry; abstract. J. B. M. Coppock. Food Eng 24:166+ N '52

Pinning down bag-borne bacteria. W. L. Owen. il Food Eng 25:57-8+ Ja '53

FOOD cutters

Food slicer. il Mod Plastics 30:156 Ja '53

FOOD factories

Food plant of the future. il Food Eng 25:82-5 O '53

New food plants reflect industrial growth. S. Fish. il Manuf Rec 122:42-3 F '53

See also

Bakers and bakeries
Candy factories
Canneries
Flour mills
Packing houses
Sugar factories

Air conditioning

Air conditioning. Food Eng 25:131-2+ O '53

Air conditioning design data for food industries; reference data. Heat & Ven 50:178a-178b Ap '53

Electric equipment

Unusual conversion; ice rink to preserves factory. il Elec R (Lond) 151:1397-9 D 26 '52

Equipment

Air-gap weighing cuts overfill; new net weight packaging principle. il diag Food Eng 25:62-3+ Mr '53

Air-operated pump for liquid foods. il Food Eng 25:105 Ja '53

Automatic control. diags Food Eng 25:98-100+ O '53

Bulk-handling dry ingredients. W. G. Hoskins. il diags Food Eng 25:94-100 My '53

Centralized lubrication; Exchange lemon products co. il Food Eng 24:76-7+ D '52

Complex process yields to robots. W. T. Force and J. H. Elliot. il Food Eng 25:54-5 Je '53

Continuous proportioning catalyst of the automatic plant. L. Lowy. il diags Food Eng 25:72-6+ Jl '53

Double-quicked packages keep pace with fast process; Kraft foods co. il Food Eng 25:62+ Je '53

Electronic separation cuts labor, boosts quality; John F. Renshaw co. E. Grosz. il Food Eng 25:95+ Ag '53

Engineering quality pectins; Exchange lemon products co. G. H. Joseph and C. R. Havighorst. flow sheet(p 134-7) il Food Eng 24:87-9+ N '52

Equipment makers aid cost reduction through innovations in machines. J. V. Ziemba. il Food Eng 25:101+ Ap '53

Heat transfer. diag Food Eng 25:121-4+ O '53

Holding a tight rein on truck operating costs; Kellogg co. D. G. Baird. il Mill & Factory 53:98-100 S '53

Insulating for food quality and savings. M. F. Allen. il Food Eng 25:62-3+ S '53

Materials handling. Food Eng 25:95-7+ O '53

New continuous plant pays off in efficiency, quality, sanitation; A. Zerega's son's, inc. J. V. Ziemba. flow sheet(p 134-7) il Food Eng 24:78-81+ D '52

New equipment and supplies. il Published in monthly numbers of Food engineering

Picking the proper screens for most efficient sifting. A. T. Templin. diag Food Eng 25:78-9+ Ja '53

Processors size up problems and find what it takes to cut costs. il Food Eng 25:97-9+ Ap '53

Quality plus efficiency; Blue Plate foods, inc. F. K. Lawler. il diag Food Eng 25:44-6 Je '53

Refrigeration. Food Eng 25:127-9 O '53

Rice bran oil; paying product. J. A. Lee. il Food Eng 24:98-9 D '52

Selecting and installing vibrators. F. Marich. diags Food Eng 25:77-9 Jl '53

Untouched by human hands; processing corn flakes. il Can Chem Process 36:64+ N '52

Wire belt conveyors. J. F. Reid. il diags Food Eng 25:90-2+ Jl; 72-3+ Ag '53

See also

Food machinery

Inspection

Factory inspection bill endorsed by House group over three dissents. Oil Paint & Drug Rep 164:3+ Jl 13 '53

Factory inspection bill, H.R. 5740 passed by the House. Oil Paint & Drug Rep 164:3+ Jl 20 '53

FDA details steps taken to use its new plant inspection powers. Oil Paint & Drug Rep 164:3+ Ag 31 '53

Plant inspection backed by trade; lawmakers want checks on power. Oil Paint & Drug Rep 163:3+ My 25 '53

Plant inspection legislation clears Congress despite last-minute snarl. Oil Paint & Drug Rep 164:3+ Ag 10 '53

Maintenance and repair

Preventive maintenance. G. J. Martin. il Food Eng 25:73-6+ Mr; 83-4+ Ap '53

Management

How dual-engineering assures multi-plant efficiency. J. G. Brown. Food Eng 24:106-9+ N '52

Preventive maintenance. G. J. Martin. il Food Eng 25:73-6+ Mr; 83-4+ Ap '53

Painting

Benefits high with engineered plant colors. F. Birren. il Food Eng 25:45-6+ S '53

Quality control

Processed-paced quality control; pickle operations, M. A. Gedney co. D. Wallace. flow sheet(p 174-7) il Food Eng 25:80-2+ Ap '53

Quality control; instruments, ingredients. Food Eng 25:88-91+ O '53

Quality control simplified for practical product improvement. A. Kramer. il Food Eng 24:100-8 D '52

Quality plus efficiency; Blue Plate foods, inc. F. K. Lawler. il diag Food Eng 25:44-6 Je '53

Their abuse and field tests assure quality after as well as before; Minute Maid. C. H. Brokaw. il Food Eng 25:94-5 Jl '53

Sanitation

Sanitation. K. Fitch. Food Eng 25:92-4 O '53

Sanitation in the food industry. V. Dvorkovitz. Can Chem Process 36:60+ N '52

Selling insecticides to food plants. R. T. Orr. Soap & San Chem 28:147-8 O '52

Seven musts in sanitary-plant layout. H. L. Stackhouse. il diags Food Eng 25:68-72 Mr '53

Tips on curbing insects in plants. T. L. Huge and E. L. Holmes. il Food Eng 25:58-9+ S '53

Waste

Spray irrigation of food processing wastes. J. M. Dennis. il Sewage & Ind Wastes 25:591-5 My '53

Waste disposal. H. Heukelekian. Food Eng 25:137-8+ O '53

FOOD fair stores, inc.

Debenture offering oversubscribed. Comm & Fin Chr 177:832 F 23 '53

Food fair stores' expansion outstripping industry average. Barron's 33:25-6 Ja 5 '53

Increase in cash dividend seen. Barron's 33:21-2 Jl 20 '53

FOOD handling

Examination of food handlers; proposed Baltimore ordnance intended to require all food handlers to be medically examined. Safety Maint & Prod 104:70 N '52

Farm-truck to freezer in 19 min.; Biscayne frozen foods. A. L. Stahl and C. J. John. il Food Eng 24:142-3+ N '52

FOOD industry and trade

Economics of technical progress. Food Eng 25:72-81 O '53

Engineering unifies industry; all converge into one. Food Eng 25:70-1 O '53

Foods and nutrition; C&EN annual review. C. G. King. Chem & Eng N 31:26-8 Ja 5 '53

Freezer; rocking the food industry. il Bsns W p64-6+ Mr 28 '53

Frozen foods. E. W. Williams. Tappi 36: sup 10A+ F '53

How to increase use of display material; General Foods' answer. P. Lillard. il Ptr Ink 241:36-8 O 24 '52

News by commodities. Published in Foreign commerce weekly

Probing overseas markets by A. C. Nielsen co. Bsns W p 120-1 Ja 31 '53

Six pointed legal Q's and A's of food processors. L. T. Parker. Food Eng 25: 65-6+ F '53

Technical upsurge is big news in $40 billion food industry. F. K. Lawler and others. Ind Marketing 38:42+ Ag '53

See also

Bakers and bakeries
Bread
Candy trade
Canned food
Chain stores
Coffee trade
Dairy products
Farm produce
Food, Dried
Food, Frozen
Food packages
Grocery trade
Infants' food
Jobbers, Wagon
Market stores
Meat industry and trade
National biscuit company
Packing houses
Restaurants
Sugar industry and trade

Accounting

Accounting your way to bigger profits. C. T. Slote. Food Eng 25:80-1+ Ja '53

Bringing delivery route costs under standards. W. D. Holdsworth. N A C A Bul 34:254-62 O '52

Advertising

Decentralized market turns to a.m. papers. Ed & Pub 85:27 N 22 '52

18 food ads selected for McCall's awards. Ed & Pub 85:22 D 20 '52

Heinz buys three-fourths total Sunday readership. Ed & Pub 85:28 N 22 '52

Insurance ads pave the way for dietary and health foods. il Bsns W p46+ D 6 '52

Multiple products are promoted in color ads. Ed & Pub 86:20 Ja 24 '53

Papers can do better job. A. Dimond. Ed & Pub 85:15+ S 27 '52

What sponsors don't like about tv food shows. Sales Management 69:144+ O 15 '52

Bibliography

Catalogs and bulletins. Published in monthly numbers of Food engineering

Finance

Food processors; break in farm prices may help their lean profit margins. J. V. Sherman. Barron's 33:9-10 Mr 2 '53

Patents

Recent inventions. Published in monthly numbers of Food engineering

Regulation

Antibiotics in foods banned in new FDA policy stand. Oil Paint & Drug Rep 163:3 Mr 2 '53

FDA drug export ban power seen in making. Oil Paint & Drug Rep 163:3+ Mr 9 '53

See also

Food laws and legislation

Securities

Investment audit of Standard brands. J. S. Williams. Mag of Wall St 92:26-8+ Ap 4 '53

Upswing in foods and dairies; with statistics on leading food processors. S. Devlin. Mag of Wall St 92:505-7+ Jl 25 '53

Statistics

Dynamic data on key trends; tabulations. Food Eng 25:80-1 O '53

Foodstuffs and tobacco; Nov.-Dec. 1951-Jan.-Nov. 1952. Survey of Cur Bsns 33:S27-30 Ja '53 [cont monthly]

Yearbook of food and agricultural statistics, 1952; pt 2, Trade. v6 290p $3.50 Food and agriculture organization of the United nations; for sale by Columbia univ. press, 2960 Broadway, New York 27 '53

Venezuela

Venezuela requires bulk food labeling. For Comm W 49:11 Ap 13 '53

Venezuela suspends food labeling requirement. For Comm W 49:8 My 25 '53

FOOD laboratories

Food engineering. Engineering 175:818 Je 26 '53

FOOD laws and legislation

Delaney measures face possible thirty-day committee bottleneck. Oil Paint & Drug Rep 163:3+ F 9 '53

Delaney offers two bills tied to probe findings. Oi Paint & Drug Rep 163:3 F 2 '53

Dozen debatable changes sought in food law. Food Eng 25:127+ Mr '53

FDA renews appeal for legislation on pretesting of chemical additives. Oil Paint & Drug Rep 162:3+ D 15 '52

Food needs and food laws. B. L. Oser. il Chem & Eng N 30:4827-9 N 17 '52

Miller offers additives legislation this week. Oil Paint & Drug Rep 163:3+ Ap 27 '53

National research council endorses pretesting of chemical pesticides; statement part of series of studies on question of controlling the use of chemical additives in the production and processing of food. Oil Paint & Drug Rep 163:3+ F 16 '53

New legislation would set up separate sections of Food and drug act. R. G. Gibbs. Chem & Eng N 31:1614-15 Ap 20 '53

Nine tipoffs from the legal scoreboard. L. T. Parker. Food Eng 25:97-8+ Ag '53

See also

Food factories—
Inspection

FOOD machinery

Coating. Food Eng 25:181-2 O '53

Forming. Food Eng 25:175-6+ O '53

New equipment and supplies. il Published in monthly numbers of Food engineering

FOOD machinery and chemical corporation

Five stocks with unique growth prospects; with comparative balance sheet items. Mag of Wall St 92:452 Jl 11 '53

Food Machinery; it has welded many firms into one strong company. P. J. Fitzgerald. Barron's 33:19-21 F 9 '53

Security I like best. M. N. Moes. Comm & Fin Chr 177:1206 Mr 19 '53

Stocks with pronounced growth prospects. G. L. Merton. Mag of Wall St 91:705-6 Mr 21 '53

FOOD mixers

Continuous mixing. J. A. Abbott. il plan Food Eng 25:64-5+ Ag '53

Mixing. T. Jensen. Food Eng 25:169+ O '53

FOOD mixes

New coating process traps full flavor; Sealva process. G. Wellner. il Food Eng 25:94+ Ag '53

Tear-tape shippers; General Mills' quick-opening shipping case for Betty Crocker pie crust mix. il Mod Packaging 26:83-5 Mr '53

FOOD packages

Ann Page; fourth generation; latest label design stresses spot identification with high-fidelity products illustration. il Mod Packaging 26:110-13 O '52

Beef pie in a can that's the baking pan. il Mod Packaging 27:112 O '53

Britain's Vac-Pac. il Mod Packaging 26:110-11 My '53

British spur sales with coronation theme. il Food Eng 25:144 My '53

Cellophane for dry edibles. J. A. Thompson. il diags Mod Packaging 26:151-5+ Je '53

Domino sugar; nominated for packaging's Hall of fame. il Mod Packaging 26:116-21+ S '52

Foil-wrapped ice cream; Central ice cream co. il Mod Packaging 27:138 S '53

Food packaging seminar. Mod Packaging 26: 136-8 D '52

Gift packages promote good-will; McCormick & co. il Food Eng 25:182 S '53

FOOD packages—*Continued*

Good Taste in plastics; John Wagner & sons use molded canister with sift or pour top for new seasoning. il Mod Packaging 26:114-15 S '52

Heinz steps out in sweeping label redesign. il Mod Packaging 26:106-8+ S '52

Meadow Gold butter; nominated to packaging's Hall of fame. il Mod Packaging 27:120-4+, cover O '53

New cheese products, packages take spotlight. il Food Eng 24:154 N '52

New life for pretzels; cellophane overwraps and bags. il Mod Packaging 27:95 S '53

New packages and products. il Published in monthly numbers of Food engineering

Old-fashioned look; Baker Boy packaging attained by color-printing techniques, high-speed wrapping machines. il Mod Packaging 26:114-15 N '52

Orange juice in a bag; package for single fountain servings of frozen concentrate. il Mod Packaging 26:110-13+ S '52

Oven-baking cartons; foil-lined display package becomes baking pan. il Mod Packaging 27:110-12 O '53

Packaging for the food industry. C. M. Woodcock. Tappi 36:sup 150A-1A Je '53

Packaging materials. Food Eng 25:115-18+ O '53

Packaging overhaul; Mead Johnson & co. il Mod Packaging 26:120-4 My '53

Pulling as a team; Thomas' coach-and-four provides unifying trademark in coordination and clean-up of line of baked goods. il Mod Packaging 26:136-7 S '52

Salad by machine; National tea co. il Mod Packaging 27:108-9+ S '53

Testing food packages and food packaging materials. W. L. Hardy. Tappi 36:sup 152A-3A Je '53

Vacuumized dills; H. J. Heinz co.'s new flexible packaging. il Mod Packaging 26:78-9+ Mr '53

Variety in portion control packages. il Food Eng 25:84+ Je '53

See also

Food, Frozen—Packages
Food containers
Fruit—Prepackaging
Ice cream
Meat—Prepackaging
Vegetables—Prepackaging

Protection

Antioxidants for food papers; butylated hydroxyanisole. R. W. Bentz. il Mod Packaging 27:141-3 S '53

Size

This handy chart tells right carton size in a jiffy. R. R. Haugh. diag Food Eng 25:79+ Mr '53

Testing

Moisture equilibria of food products. diags Mod Packaging 26:133-7 Ja '53

Pinning down bag-borne bacteria. W. L. Owen. il Food Eng 25:57-8+ Ja '53

FOOD packaging

Packaging machines. Food Eng 25:109-12 O '53

FOOD poisoning

Coordinated investigation of a food poisoning outbreak. F. A. Korff and others. Pub Health Rep 67:909-13 S '52

Food and water borne disease outbreaks; incidence of infectious hepatitis by state. C. C. Dauer. Pub Health Rep 67:1089-95 N '52

FOOD preservation

Electron beams sterilize food and drugs. E. A. Burrill and A. J. Gale. il diags Electronics 25:98-101 N '52

Facts about cold sterilization. W. M. Urbain. il diags Food Eng 25:45-6+ F; 77-8+ Mr '53

Preservation of natural colours and flavours in foods; abstract and discussion. G. R. A. Short and W. W. Reid. Chem & Ind p213-15 Mr 7 '53

Sterilizing foods by cold gamma rays. L. E. Brownell and others. bibliog il diag Refrig Eng 61:55-7+ Ja '53

Two operations for the future; cold sterilization, ultrasonic processing. diags Food Eng 25:86-7 O '53

See also

Canned food
Canning and preserving
Cold storage
Fish as food—Preservation
Food, Frozen
Food packages—Protection
Fruit—Preservation
Milk—Preservation

FOOD research

Foods and nutrition; C&EN annual review. C. G. King. Chem & Eng N 31:26-8 Ja 5 '53

See also

Food laboratories

FOOD sanitation

APHA conference report; food sanitation. Pub Health Rep 68:260-2 F '53

FOOD stores

Saunders tries again; Foodelectric store. Bsns W p68+ Jl 18 '53

See also

Food fair stores, inc.
Kroger company
Market stores

FOOD supply

Food and the future. F. L. Clark and others. Chem & Ind p98-101, 136-43 Ja 31, F 14 '53

Food in civil defense. Tech R 55:198 F '53

Food supply and emergency feeding in civil defense. P. B. Murphy and others. Pub Health Rep 67:860-3 S '52

Lower diet standard inevitable unless research is stepped up. Chem & Eng N 31:1183-4 Mr 23 '53

Necessary foods for emergency feeding. J. M. Hundley. Pub Health Rep 67:864-6 S '52

Nutritional problems and civil defense. J. Drummond. Pub Health Rep 67:857-9 S '52

Soil science and plant nutrition. J. Tinsley. bibliog il Chem Age (Lond) 68:63-9 Ja 10 '53

Special feeding problems in an emergency. R. E. Butler. bibliog Pub Health Rep 67:867-71 S '52

World food supplies at new high. For Comm W 49:14-15 F 16 '53

See also

Lumber camps—Food supply

Denmark

Denmark's total food consumption higher. For Comm W 49:5 Ja 5 '53

Great Britain

Coming demise of a ministry? cost of the food subsidies. Economist 165:142-3 O 18 '52

Crumbling ration book. Economist 167:717-18 Je 13 '53

Domestic food consumption and expenditure, 1950; annual report of the National food survey committee. Chem & Ind p 119-21 F 7 '53

Food decontrol progresses in U.K. For Comm W 49:5 F 2 '53

Levelling in food budgets. Economist 165:879 D 27 '52

Ration prospect. Economist 167:205-6 Ap 25 '53

Great Britain (colonies)

Food and the future; present methods of attack on the problem. G. A. C. Herklots. Chem & Ind p 136-40 F 14 '53

India

More food for India. Economist 166:496 F 21 '53

Israel

Food and the future; food production in Israel. J. Yudkin. maps Chem & Ind p 140-3 F 14 '53

FOOD technology

Advances in technology. Published in monthly numbers of Food engineering

FOOT

Fewer aches mean more efficiency; foot clinic at Fulton bag & cotton mills. il Bsns W p 152 N 8 '52

Protection

Foot protection. il Nat Safety N 67:88+ Mr '53

See also

Shoes, Safety

FOOT-and-mouth disease
Foot-and-mouth disease in Saskatchewan; abstract. T. Childs. Pub Health Rep 67:979-80 O '52
Foot-and-mouth disease threats emphasized; abstract. M. S. Shahan. Pub Health Rep 68:263 F '53
Good news from Mexico. Sci Am 187:38 O '52

FOOT bridges. See Bridges, Foot

FOOTBALL
Football business folds; Dallas Texans. Bsns W p92 N 29 '52

FOOTE brothers gear and machine corporation
Preferred stock offered. Comm & Fin Chr 177:2129 My 18 '53

FOOTE mineral company
Convertible debentures offered. Comm & Fin Chr 176:1471 O 20 '52

FOOTINGS
Applying graphical methods to square footing designs; procedure in design of stack and tower foundations. C. H. Fork. plans diags Pet Refiner 31:145-50 N '52
Bigger soil-test plate permits bigger pressures under footings. diags Eng N 150:51 Ap 16 '53; Discussion. J. Feld. 150:10+ My 7 '53
Design of rectangular footings. C. H. Fork. diags Pet Refiner 32:110-11 F '53

FOOTINGS, Concrete
Spadework is last in big footing. C. S. Adams. il Eng N 150:48 Ap 16 '53

FORAGE plants
Determination of fluorine in plant materials. L. F. Remmert and others. bibliog Anal Chem 25:450-3 Mr '53
See also
Clover
Teosinte

FORAMINIFERA, Fossil
Biostratigraphy of the Maqfi section, Egypt. L. W. LeRoy. (Memoir 54) 73p, 13pls bibliog(p54-8) Geological soc. of America, 419 W. 117th st, New York 27 '53
Eocene foraminifera from Guam, and their implications. P. E. Cloud, jr. and W. S. Cole. bibliog map Science 117:323-4 Mr 27 '53
Foraminifera, an evaluation. C. C. Church. Oil & Gas J 51:171-3 Mr 30 '53; Abstract. World Oil 136:75 Ap '53
Vicksburg (oligocene) smaller foraminifera from Mississippi. R. Todd. bibliog U S Geol S Professional Pa 241:1-53, pl 1-6 '52

FORBIDDEN lines. See Spectrum—Forbidden lines

FORCE and energy
Derivation of the mass-energy relation. H. E. Ives. Opt Soc Am J 42:540-3 Ag '52
Practical approach to optimum machining; forces and vibration on the tool affect its life. A. B. Albrecht. il diag Am Mach 97:142-5 Je 8 '53
See also
Free energy
Impact

FORCE constants. See Chemical bonds

FORD foundation
Human behavior. Sci Am 188:44 Mr '53

FORD motor company
Figures on Ford. Bsns W p29 D 20 '52
Ford buys assets of Dearborn Motors. Bsns W p32 Je 6 '53
Ford is hale and hearty at fifty. R. D. Raddant. Iron Age 171:88 My 14 '53
Ford reflects on the past, plans for the future at 50-year mark. il Automotive Ind 108:56-61 Je 1 '53
Ford terms earnings report as guess. Automotive Ind 108:33 Ja 1 '53
Ford's foundry; dream come true. il Steel 131:51 D 1 '52
Ford's new managers. Fortune 47:142-3+ My '53
Top goal of Ford's new management; to outsell Chevrolet. il Bsns W p92-6+ Je 13 '53

FORD motor company, England
Statement by the chairman. R. Smith. Economist 167:256 Ap 25 '53

FORD motor company of Canada, ltd.
Ford of Canada spreads out. il Bsns W p90-2+ My 6 '53

FORECASTS (economics)
After defense spending, what? W. W. Williams. Comm & Fin Chr 177:1521+ Ap 9 '53
Best business and financial indicators; symposium. R. R. Dockson and others. Banking 45:41-50 O '52; Discussion. E. C. Zorn, jr. 45:51+ D '52
Business prospect for 1953. F. O. Kiel. Comm & Fin Chr 176:2498-9 D 25 '52
Business roundup. Fortune 47:25-6+ Ja '53
Depression around the corner? an economist presents the other side of the coin. W. S. Woytinsky. Barron's 32:5+ N 24 '52
Economic forecasting. H. Bund. Advanced Management 18:64-9 Ja '53
Economic outlook. M. R. Gainsbrugh. Edison Elec Inst Bul 21:161-2+ My '53
End of the great frontier; review of Great frontier, by W. P. Webb. Bsns W p 160-2 Ja 17 '53
Flustered forecasters. J. A. Livingston. Comm & Fin Chr 177:1643 Ap 16 '53
Plans for tomorrow, future economic outlook. L. Levine. il Dun's R 60:25+ D '52
Taking the measure of 1955's customers. Bsns W p32-4 Ja 3 '53
Your dollars tomorrow. D. I. Rogers. Comm & Fin Chr 177:1426-7 Ap 2 '53
See also
Business forecasting

FORECASTS (technology)
Prediction of technical change. S. C. Gilfillan. R Econ & Stat 34:368-85 N '52

FOREIGN advertising. See Advertising, Foreign

FOREIGN correspondents. See Newspapers—Foreign correspondents

FOREIGN exchange
Canada's floating dollar. Economist 166:365-6 F 7 '53
Canadian dollar. L. Rasminsky. Comm & Fin Chr 177:1217+ Mr 19 '53
Convertibility; its internal and external conditions. D. H. Robertson. Comm & Fin Chr 177:2753 Je 25 '53
Convertibility of currencies. Nat City Bank p8-11 Ja '53
Convertibility of currency; how it works and doesn't. Bsns W p 194-6+ Mr 28 '53
Convertibility today? E. Hesz. Comm & Fin Chr 177:1966 My 7 '53
Current thinking of world's progressive businessmen; International chamber of commerce, 14th, Vienna; importance of early currency convertibility. A. W. May. Comm & Fin Chr 177:2409+ Je 4 '53
Experts brood over dollar gap. Bsns W p68-9 Ja 3 '53
Foreign exchange problems. T. G. Upton. Comm & Fin Chr 177:1421+ Ap 2 '53
U.S. and Canada should spearhead convertibility! Comm & Fin Chr 177:2748 Je 25 '53
Vital problem of currency convertibility. B. H. Beckhart. Comm & Fin Chr 177:97+ Ja 8 '53
World fund and convertible currencies. I. Rooth. Comm & Fin Chr 177:1966-7 My 7 '53
World fund's position on currency convertibility. P. Einzig. Comm & Fin Chr 177:2426 Je 4 '53
See also
Balance of payments
Banks and banking
Commerce
Finance
Money

Rates

Dollar duel or dollar duet? H. Buck. Dun's R 61:25, 30+ Ja '53
Foreign exchange rates. Published in weekly Monday numbers of Commercial and financial chronicle
Foreign exchange rates, 1947-1952; monthly 1952. Fed Res Bul 39:83 Ja '53 [cont monthly]
Free cruzeiro. Economist 166:597 F 28 '53
Latin American exchange rates. Published irregularly in Foreign commerce weekly
Strength of sterling. Economist 166:98 Ja 10 '53
U.S.-European currency relations; new guide; table shows each currency value both ways. For Comm W 49:26 My 18; 17 Je 15 '53
Valuing estates in foreign currency; tax savings possible through informed approach. F. Pick. Trust & Estates 92:392-4+ Je '53

FOREIGN exchange—*Continued*

Regulation

Firm given guaranty on German royalties. For Comm W 50:7 Jl 27 '53

Firms given guaranties on foreign investments. For Comm W 50:12 Jl 13 '53

Foreign control regulations applying to imports from the United States; tabular summary revised as of Sept. 5, 1952. For Comm W 48:9-11 O 13 '52

Austria

Austria widens use of blocked schillings. For Comm W 49:12 My 11 '53

Bolivia

Bolivian currency rate 190 to $1; depreciation surcharges revised. For Comm W 49:5 Je 15 '53

Brazil

How free a cruzeiro? Economist 166:170 Ja 17 '53

Canada

Canadian exchange rate defended. For Comm W 48:5 N 10 '52

Chile

Chile to use two preferential exchange rates for specified imports in 1953. For Comm W 49:10 Mr 16 '53

Cuba

Cuba establishes new exchange controls. For Comm W 48:6 D 29 '52

Europe

Banning export bonuses? International monetary fund and program for abolishing dollar retention schemes. Economist 167:614 My 30 '53

European arbitrage again for authorized banks of eight countries. Economist 167:531-3 My 23 '53

Exchange arbitrage at work. Economist 167:686 Je 6 '53

Germany

Exchange market for Germany. Economist 166:510 F 21 '53

German's exchange market. Economist 167:390+ My 9 '53

Great Britain

Creeping to convertibility. Economist 165:837-8 D 20 '52

Exchange control evasion in England. P. Einzig. Comm & Fin Chr 176:1740 N 6 '52

Freer exchange dealings; effects on sterling. Economist 167:461 My 16 '53

Israel pounds and sheckels. Economist 166:762 Mr 14 '53

Preparing for convertibility. Economist 167:860+ Je 20 '53

Strategy for sterling. Economist 167:677-9 Je 6 '53

U.K. relaxes controls on blocked sterling. For Comm W 49:11 Ap 13 '53

U.K. relaxes exchange controls to permit extension of export credits. For Comm W 49:7 My 18 '53

What price convertibility? Economist 166:549-50 F 28 '53

Japan

Japan sets six-month import budget; tightens controls over imports. For Comm W 49:7 My 25 '53

Morocco

French Morocco adopts bonus exchange plan. For Comm W 50:16 Jl 6 '53

Netherlands

Netherlands permits transfer of accounts. For Comm W 48:6 N 10 '52

Peru

Peru's exchange funds temporarily short. For Comm W 49:4 My 25 '53

Philippine Islands

Philippines defines new rules for licensing exchange for imports. For Comm W 50:12 Jl 20 '53

Yugoslavia

Yugoslavia limits use of foreign exchange. For Comm W 49:9 My 4 '53

FOREIGN investments. See Investments, Foreign

FOREIGN language press

See also

Jewish morning journal, New York

Bibliography

Union lists

Postwar foreign newspapers; a union list. 231p pa $1.60 Library of Congress; for sale by the Card division, Library of Congress, Washington 25 '53

FOREIGN loans. See Loans, Foreign

FOREIGN service

Looking for employment in foreign countries. J. L. Angel. 25 l pa $1 World trade academy press, suite 518, 11 W. 42d st, New York 36 '53

FOREIGN trade. See Commerce

FOREIGN trade council, National. See National foreign trade council

FOREIGN trade zones. See Free ports and zones

FOREIGN visitors

Foreign visitors; list by countries. Published in Foreign commerce weekly

Taxation of the foreign businessman visiting the United States. E. Mayer. J Account 95:56-9 Ja '53

FOREIGN visitors in Russia

Travelling in Russia. map Economist 167:912-13 Je 27 '53

FOREMEN

Can foremen teach economics to employees? F. Rudge. Glass Ind 33:360-2 Jl '52; Same. Paper Tr J 135:15-16+ N 7 '52

Choosing better foremen; abstracts. Factory Management 110:113 N '52; Management R 41:721-2 N '52

Foreman hiring and training practices; abstract. E. J. Martin. Brick & Clay Rec 121:67 N '52

Foreman press; what are your supervisors reading? il Mod Ind 24:57-8 O '52

Foreman's importance grows with industry. Steel 132:79 Ap 20 '53

Foremen; how to pick a good one. R. M. Lorz. Iron Age 171:61-2 Ap 16 '53

Foremen; put them on executive team. Iron Age 171:82 My 21 '53

Good supervision; key to productivity; abstract. R. L. Waddell. Management R 41:785-6 D '52

How a good foreman trains his men. Roads & Sts 95:68 N '52

Let the foreman in on induction. K. Davis and W. G. Broehl, jr. Personnel 29:408-11 Mr '53

Making the foreman part of management. M. Robson. Iron & Steel Eng 30:105-6 Je '53

National survey shows broad range in foremen's pay and duties. Iron & Steel Eng 30:120 My '53; Excerpts. Am Bsns 23:47 Je '53; Abstract. Bsns W p 146 Mr 21 '53

Put new foreman on your team. E. J. Martin. Brick & Clay Rec 121:64 D '52

Spotlight on foreman. Mill & Factory 52:314+ Je '53

Supervisory development conference held by Malleable founders' society, Cleveland, Oct. 10. Foundry 80:152+ D '52

What do your foremen do? G. Nadler. Mill & Factory 53:88-92 O '53

What workers expect of a foreman. M. P. Miller. Textile World 103:147+ My '53

See also

National association of foremen

Supervisory workers

Salaries

Foremen's pay differentials. Factory Management 111:89 O '53

Training

Attitude training vs. technique training. E. E. Jennings. Personnel J 31:402-4 Ap '53

Five steps to leadership. il Mod Ind 25:48-9 Ap '53

FOREMEN—Training—*Continued*

Multiple comparison training. E. E. Jennings. Personnel J 31:325-7 F '53

Short cut to foremen's training needs. W. M. Patton. Factory Management 111:74-5 My '53

See also

Foremen's conferences

Unionization

Foremen unions! how soon? Advanced Management 18:15-17 Mr '53

FOREMEN'S conferences

Conference leading by the pass method. E. E. Jennings. Personnel J 31:361-3 Mr '53

FOREMOST dairies, inc.

Security I like best. C. A. Taggart. Comm & Fin Chr 177:1730+ Ap 23 '53

FOREST conservation

Conservation to better American timber reserves. D. C. Everest. Paper Tr J 137:17 Ag 28 '53

See also

Forest fires

FOREST fires

Arson problem in Louisiana woodlands. Paper Tr J 137:29-30 Jl 31 '53

Fire protection in Victoria, Australia; abstract. E. R. Torbet. Pulp & Pa of Can 53:152 N '52

Forest fire loss in 1952 up from previous year; still below average. Paper Ind 35:542 Ag '53

Forest fire prevention education in northwestern Ontario. T. S. Jones. Pulp & Pa of Can 54:164+ Ap '53

Forest fires in the United States during 1952; tabulation. Paper Ind 35:762 O '53

LongLac fire protection organization. Pulp & Pa of Can 54:185+ Je '53

Mando combats forest fires through public education. il Paper Ind 35:642+ S '53

More than 500 forest fires a day in 1952. Paper Tr J 137:14 Jl 3 '53

Ontario fire fighters prepare for 1953. Pulp & Pa of Can (Convention no) 54:309-10+ [F] '53

Ontario's Forest fire prevention act now in effect. Pulp & Pa of Can 54:182+ Je '53

Operation brimstone; fires all over. il Bsns W p32-3 N 8 '52

Tractor plows effective in fighting southern forest fires. Paper Tr J 137:45 Jl 10 '53

FOREST management

Britain's new forest villages. H. L. Edlin. il Pulp & Pa of Can 54:158+ Je '53

Canada's forest potential; abstract. G. B. Amidon. Pulp & Pa of Can 54:170 Ap '53; Same. Paper Ind 35:53 Ap '53

Coordination of silvicultural systems and wildlife management; abstract. D. R. M. Scott and C. D. Fowle. Pulp & Pa of Can 54:94-5 F '53

Economics in sustained yield forest management. E. Pogacnik. Pulp & Pa of Can 54:126-8+ Mr '53

Examples of wildlife habitat betterment through modifications of forest practices in the Lake states; abstract. E. Swift. Pulp & Pa of Can 54:84+ F '53

Forest management plans insure timber resources. Pulp & Pa of Can 54:141-2 Mr '53

Lake States mining companies also raise trees. J. Calkins. il Min Cong J 39:38-40+ Je '53

Minnesota and Ontario paper co. forestry program. G. B. Amidon. Pulp & Pa of Can 54:76-7 F '53

Newsprint from southern pine; Southland paper mills' forest land ownership and management policy. L. L. Bishop. Paper Tr J 135:26+ O 24 '52

Outlines forestry operations at Mando. G. Amidon. Paper Tr J 135:18+ D 19 '52; Abstract. Pulp & Pa of Can 54:95 F '53

Poisoning small-diameter hardwoods with the Cornell tool. R. D. Shipman. Paper Tr J 137:78 S 18 '53

$65 million Celgar plan approved with provisions. Paper Ind 34:1099 D '52

Sustained yield forest management in British Columbia; abstract. C. D. Orchard. Pulp & Pa of Can 54:96 F '53

Timber investments. A. Z. Nelson. il Banking 45:66 O '52

Where are we now in forest management? J. D. Gilmour. Pulp & Pa of Can 54:227-8+ My '53

FOREST products

Alabama story. il Manuf Rec 122:83-5 Je '53

Timber resources, New England. E. L. Giddings. map Ind & Eng Chem 44:2527-9 N '52

See also

Gums and resins	Wood pulp
Lumber	Wood waste
Wood	

Bibliography

Bibliography for forestry and forest products, Jan.-Dec. 1951. 216p Food and agriculture organization of the United nations, Rome, Italy '52

Bibliography of forestry and forest products, January-June 1952. 131p Food and agriculture organization of the United nations, Rome, Italy '52

Bibliography of forestry and forest products, July-December 1952. 118p Food and agriculture organization of the United nations, Rome, Italy '53

FOREST products industries, American. See American forest products industries

FOREST products research

Swedish forest products research laboratory. Tappi 36:sup 102A+ Je '53

See also

Wood research

FOREST reserves

Recreation plans for the Superior national forest; abstract. G. W. Pike. Pulp & Pa of Can (Convention no) 54:304+ [F] '53

FOREST roads

Build good logging roads. Constr Methods 34:151 N '52

Forest industries of Ontario have spent $6,250,000 on roads in the North since 1940. B. F. Avery. Roads & Eng Constr 91:54 Jl '53

FOREST surveys

Georgia's forest survey shows new trends. E. L. Demmon. map Paper Ind 35:188-90 My '53

FORESTRY laws and regulation

Ontario's Forest fire prevention act now in effect. Pulp & Pa of Can 54:182+ Je '53

FORESTRY research

Expanded research in insect and disease control urged. Paper Ind 34:1332-3 F '53

Industry experimental forests; panel discussion. F. L. Flatt and others. Pulp & Pa of Can 54:140-2+ Jl '53

Sampling in forestry surveys; abstract. A. L. Griffith. Pulp & Pa of Can 53:140 D '52

Tree improvement and its potentialities. K. B. Pomeroy. il diag Paper Tr J 137:18-19 Ag 7 '53

FORESTRY schools and education

Forestry schools accredited by Council of the Society of American foresters. Tappi 36: sup93A-4A Ja '53

Industry develops youthful foresters at Holiday Lake camp. G. W. Dean. il Pulp & Pa of Can (Convention no) 54:272+ [F] '53

St Regis offers forestry scholarships. Paper Tr J 135:14 D 5 '52

University of Maine celebrates fifty years of forestry teaching and forty years of the pulp and paper course. Paper Tr J 137:46-8 O 16 '53

FORESTS and forestry

Biggest Christmas tree grower. il Fortune 46: 140-1+ D '52

British commonwealth forestry conference, 6th, Ottawa, Aug. 11-Sept. 13. Pulp & Pa of Can 53:136-40 O '52

Canadian institute of forestry and Society of American foresters joint meeting; with abstracts of papers. Pulp & Pa of Can 53: 124+ D '52; 54:84+ F; (Convention no) 304+ [F] '53

Canadian pulp and paper association Woodlands section field meeting on silviculture, Manitoulin Island, Sept. 10-12. Pulp & Pa of Can 53:143+ O '52

Department of agriculture report forecasts insect damage. Paper Tr J 136:25 My 8 '53; Paper Ind 35:542 Ag '53

Direct seeding as a means of reforestation. A. P. Leslie. Pulp & Pa of Can 54:180+ bibliog(83 titles, p 184+) Ap '53

FORESTS and forestry—*Continued*

Forest production goals; a critical analysis. H. J. Vaux and J. A. Zivnuska. bibliog Land Econ 28:318-27 N '52

Forestry goes into the insurance business. L. R. Thiesmeyer. il Pulp & Pa of Can 54:49-52 F '53

Forests in relation to rainfall. W. E. Howell. bibliog Pulp & Pa of Can 54:212+ My '53

Interpreting professional forestry to the layman; abstract. J. L. Van Camp. Pulp & Pa of Can (Convention no) 54:306 [F] '53

Reasons for planting and the problems involved. R. C. Hosie. Pulp & Pa of Can 54:109+ Ja '53

Site classification. W. G. E. Brown. Pulp & Pa of Can 54:146-7 Je '53

Site classification. A. Linteau. bibliog Pulp & Pa of Can 54:147-8+ Je '53

Site classification; site climax as an indicator of site conditions. H. D. Long. Pulp & Pa of Can 54:155+ Je '53

Sixth British commonwealth forestry conference. W. A. E. Pepler. Pulp & Pa of Can 54:220+ My '53

Television and forestry; abstract. F. E. Carlson. Pulp & Pa of Can 54:86+ F '53

See also

Forest conservation
Forest fires
Lumber trade
Lumbering
Tree planting
Woodlots

Bibliography

Bibliography of forestry and forest products, Jan.-Dec. 1951. 216p Food and agriculture organization of the United nations, Rome, Italy '52

Bibliography of forestry and forest products, January-June 1952. 131p Food and agriculture organization of the United nations, Rome, Italy '53

Bibliography of forestry and forest products, July-December 1952. 118p Food and agriculture organization of the United nations, Rome, Italy '53

Study and teaching

See Forestry schools and education

Alabama

Alabama story; forest products. il Manuf Rec 122:83-5 Je '53

Alaska

Possibilities for development of the pulp and papermaking industry in Alaska. map Tappi 35:sup38A+ N '52

Australia

Commonwealth forestry conference; abstracts of papers. Pulp & Pa of Can 53:152+ N; 138+ D '52

Establishing pine plantations for pulpwood production in Australia. J. D. Brooks. Pulp & Pa of Can 53:168+ O '52

British Columbia

Forestry and pulp in British Columbia. L. Besley. Pulp & Pa of Can 54:172+ Je '53

Sustained yield forest management in British Columbia; abstract. C. D. Orchard. Pulp & Pa of Can 54:96 F '53

Burma

Timber production in Burma has favorable long-range prospects. For Comm W 49:17 Mr 9 '53

Canada

Canadian forestry association teaches a large class. R. Black. Pulp & Pa of Can 54:207+ My '53

Opportunity for the individual must be safeguarded. J. W. Baikie. Pulp & Pa of Can 54:202+ Ap '53

Finland

Finland; forest and forest industry. Tappi 35:sup96A-9A D '52

Georgia

Georgia's forest survey shows new trends. E. L. Demmon. map Paper Ind 35:188-90 My '53

Great Britain

British forests; their potentialities in relation to the chemical utilization of wood, with special reference to forestry in Scotland. W. M. McNeill. bibliog Chem & Ind p 1087-9 N 8 '52

Louisiana

Arson problem in Louisiana woodlands. Paper Tr J 137:29-30 Jl 31 '53

Maine

How forestry affects Maine's future. L. Whittemore. Paper Tr J 137:50+ O 16 '53

Nebraska

Nebraska forest. il Tappi 35:sup86A+ O '52

New Brunswick

Budworms frustrated, softwood stands saved in 1953's $3 million air-spray assault. il map Pulp & Pa of Can 54:136-7 S '53

New Brunswick attack on spruce budworm declared successful. il Paper Ind 35:541-2 Ag '53

New England

Timber resources. E. L. Giddings. map Ind & Eng Chem 44:2527-9 N '52

New Zealand

Exotic trees in New Zealand. Pulp & Pa of Can 53:138+ D '52

Ontario

Forest industries of Ontario have spent $6,250,000 on roads in the North since 1940. B. F. Avery. Roads & Eng Constr 91:54 Jl '53

How tree seed is procured. R. S. Carman. Pulp & Pa of Can 54:100-2+ Ja '53

Ontario government and industry team up on Lakehead spruce regeneration. L. M. Frost. Pulp & Pa of Can 54:181-2 Je '53

Ontario issues its first forestry inventory. Pulp & Pa of Can 54:173-4+ Jl '53

Preliminary observations on planting in the clay belt. E. Bonner. Pulp & Pa of Can 54:116+ Ja '53

Saskatchewan

Saskatchewan forest survey boosts industrial hopes. Paper Ind 34:1217-18 Ja '53

South Africa

South Africa offers favorable market for U.S. softwoods. For Comm W 49:13 Mr 23 '53

South Africa's forests and paper industry. G. Shipman. Pulp & Pa of Can 54:166+ Jl '53

Southern states

Southern lumber industry plants 65 million seedlings. Manuf Rec 122:58 S '53

Sweden

Piece work in reforestation in northern Sweden. Pulp & Pa of Can 53:178+ O '52

United States

Wood supply. H. J. Perry. il map Paper Tr J 135:102+ N 14 '52

Yugoslavia

Economics in sustained yield forest management. E. Pogacnik. Pulp & Pa of Can 54:126-8+ Mr '53

FORESTS and forestry, Mine

Appalachian coal companies grow timber as a crop. B. Rhodes. il Min Cong J 39:27-30 Ja '53

Lake States mining companies also raise trees. J. Calkins. il Min Cong J 39:38-40+ Je '53

Tree farming in South's mining areas. E. L. De Motte. il Min Cong J 39:25-8 S '53

FORGE shops

Forge shops in operation, by states; tabulation. Iron Age 171:455 Ja 1 '53

Employees

Earnings in forging industry, 1937-1952; tabulation. Iron Age 171:452 Ja 1 '53

Equipment

Automated forging line boosts output, cuts costs; Dodge division. W. G. Patton. il plan Iron Age 170:93-6 O 2 '52

FORGE shops—Equipment—*Continued*

Automation cuts forging costs, improves quality. E. G. de Coriolis and J. D. Nesbitt. il diags Iron Age 170:106-9 N 27 '52
Black-bolt heading plant with induction heating. il Engineering 175:193-5 F 13 '53
Continuous press forging system uses novel furnaces. A. H. Allen. il Metal Prog 63:90-3 F '53
Ideas you can use from Buffalo forge; illustrations with text. W. Rudolph. Mill & Factory 53:120-1 S '53
Push-button controlled wheel forging and rolling plant; Taylor bros. and co. il plan Metallurgia 46:275-80 D '52
Reducer rolls. il Engineer 195:115-16 Ja 16 '53
Salem-Brosius light stock manipulator. il Blast F & Steel Pl 41:684 Je '53
Willys-Overland's aluminum forge. W. Rudolph. il Metal Prog 64:106-11 O '53

See also
Furnaces, Forging

Layout

Take to the air to get things out of the way; Buffalo forge co.; illustrations with text. Mill & Factory 53:127 O '53

FORGERY

Automobile mortgage. F. C. Fiechter, jr. Burroughs Clearing House 37:72 Mr '53

See also
Checks, Fraudulent

FORGING

Better landing gear strut for the Boeing B-47 bomber. il Automotive Ind 109:96+ Jl 1 '53
Cold-forge stainless handles in mid-air; International silver co.; illustrations with text. Am Mach 96:126-7 N 10 '52
Continuous press forging applied to crankshafts. J. Geschelin. il diag Automotive Ind 107:58-9+ O 1 '52
Crankshaft forging; Chrysler corp. il Automobile Eng 43:386-8 S '53
Design problems of large aluminum forgings; abstracts. C. W. Andrews. diags Automotive Ind 109:32-3 Ag 15 '53; Machine Design 25:334+ O '53
Experts analyze heavy press problems. I. Stone. il plan diags Aviation W 58:20-1+ Ja 5 '53
Experts cite flock of forging do's and don'ts; report on panel discussion. S A E J 61:70-1 Jl '53
Flat-die forging of cast-titanium ingots. J. F. Nelson. il Mach 60:164-8 O '53
Forging developments. C. H. Smith, jr. Tool Eng 31:134-6 O '53
Forging of arc-melted chromium. H. L. Gilbert and others. bibliog il diags J Metals 5:Trans 63-5 Ja '53
Forging of titanium requires special techniques. G. S. Tracy. il Mach 59:202-5 Je '53
Forum on technical progress; forming. il Steel 132:368-70+ Ja 5 '53
Header dies; standardized carbide nibs cut costs, improve production. diags Iron Age 171:134-5 Je 11 '53
Impact forging can save you money. F. J. Pesak. il Iron Age 171:153 Ap 2 '53
Lubrication; continuous forging under high heat, pressure a problem. Iron Age 170:178 N 13 '52
New techniques for forging aircraft parts. G. W. Motherwell and others. Automotive Ind 108:146+ Ja 15 '53
One way to handle a big forging job. il Steel 131:76-7 O 6 '52
Press-extruded forgings; Northrop aircraft corp. L. M. Christensen. il diag Machine Design 25:124-7 Jl '53
Selecting forging alloys. L. Spencer. bibliog il Product Eng 24:202-7 My '53
Symposium on heavy presses for light metal forging and extrusion. Engineer 195:183-5 Ja 30 '53; Metal Prog 63:111-14+ Mr '53
Titanium forging experience mounts. R. J. Bullock. il Steel 131:104-7 D 15 '52
Titanium forging practice on typical experimental parts. il Iron Age 170:270-4 O 9 '52
Use impact forging for tough-to-machine parts. L. R. Denny. il diags Iron Age 171:149-52 Ap 2 '53
What's ahead in forging; report of panel on forgings. il S A E J 61:42-3 S '53
What's ahead the next ten years in presswork and forging. Am Mach 96:D-D 10 Mid-N '52
Which metal form for jet engine blades? J. L. Everhart. il Materials & Methods 37:92-6 F '53
Willys' reactivated aluminum forge plant. J. H. Pargeter. il Automotive Ind 109:50-3 Jl 15 '53

See also
Forge shops

FORGING furnaces. See Furnaces, Forging

FORGING machinery

Accumulators; giant forging press powered by hydro-pneumatic system. il Iron Age 170:176 D 11 '52
Aero industry eager to christen monster presses; report of panel on large forgings and castings. S A E J 61:49-54 O '53
Air displaces steam for forging hammers; Coulter steel co. il Elec West 109:106 O '52
Air force heavy press program moves from planning board into fabrication. A. S. Cohan. il J Metals 5:624-6 My '53
Baldwin builds large split die forging press. il Iron & Steel Eng 30:134 Ap '53; Same. Welding J 32:622-3 Jl '53
Big doings mark coming of monster presses; based on papers presented at symposium on heavy presses for light metal forgings and extrusions. il diag S A E J 61:31-7 My '53
Big presses tax design ingenuity. M. D. Stone. il diags Iron Age 171:99-103 Ja 8 '53
Big squeeze; heavy press program. il S A E J 61:29-32 Ja '53
Biggest split-die forge nears completion. il Steel 132:99 My 18 '53
Chambersburg Impacter. il Aero Digest 66:103 Ja '53
Chambersburg Impacter forges in mid-air. il Am Mach 96:194-6 N 10 '52
Controversy rages over air force's justification for drastic cutback in heavy press program. il Am Mach 97:170-1 Jl 6 '53
Design and analysis features of the world's largest forging press. F. T. Morrison and R. G. Sturm. Machine Design 25:293-4+ F '53; Same abr. Automotive Ind 108:150+ Ja 15 '53
Design and construction of a full vibration-controlled forging hammer foundation. A. M. Klein and J. H. A. Crockett. il diags Am Concrete Inst J 24:421-44 Ja '53; Same cond. Civil Eng 23:6-12 Ja '53
Floating foundations cut hammer damage; Ryan aeronautical co. il Steel 132:98+ F 9 '53
Forge support proves tough. il diag Eng N 149:46-7 D 11 '52
Forge with all-hydraulic control. F. H. Towler. il diags Am Mach 97:154-5 Jl 6 '53
Forging a 275-ton ingot for air force's heavy press program at Bethlehem Steel; illustrations with text. Am Mach 97:142-3 Mr 2 '53
Forging hammer of new type. il Comp Air Mag 58:12-14 Ja '53
Forging on the fly; Impacter, product of Chambersburg engineering co. il diag Steel 131:89+ D 1 '52
Forging review and forecast. il Iron Age 171:301 Ja 1 '53
Forging to reduce vibration. diag Metal Prog 63:89 F '53
Heavy press program. C. Ayres. il Light Metal Age 11:8-9+ F '53
Heavy press program gets the ax. Steel 132:44 Je 29 '53
Heavy press program moves forward; progress report. Automotive Ind 108:40 Ja 15 '53
Heavy press program pushed for forged aircraft parts. il Materials & Methods 37:7-8 Ja '53
Heavy presses challenge industry. A. Zietlin. il Steel 131:76-9 D 1 '52
High-speed forging press; E. W. Bliss co. il Engineering 174:159 Ag 1 '52
Huge forging press for producing aluminum, magnesium aircraft parts. il Automotive Ind 107:92 N 1 '52

FORGING machinery—*Continued*

New approach to big press design. il Aviation W 58:50+ Ja 26 '53; Steel 132:76 Ja 12 '53; Mach 59:188 F '53; Eng N 150:25 Ja 8 '53

New automatic unit makes drop forgings in mid air. il diag Iron Age 170:155-7 N 13 '52; Automotive Ind 107:90+ D 1 '52; Mach 59: 192-4 D '52; Steel 131:67 N 3 '52

Novel hammer foundation. R. Hammond. il diags Engineer 195:573-5 Ap 17 '53

Parts forged by collision hammer. I. Stone. il Aviation W 57:32+ D 8 '52

Plane forging. il Bsns W p56+ Ja 3 '53

Presses; giant program moving fast. W. V. Packard. il Iron Age 170:101-2 D 11 '52

Presses; new design for giants; throatless design eliminates support columns, tie rods. R. M. Lorz. il Iron Age 171:41 Ja 8 '53

Processes; press-forging heavy steel parts with split dies. il Product Eng 24:198 Ja '53

Production of large light alloy die forgings; press installed by High duty alloy, ltd. il Metallurgia 47:199-200+ Ap '53

Progress made in heavy forge-press art. I. Stone. il Aviation W 57:50-2+ N 17 '52

Progress of air force heavy press program. il Mach 59:207 Ja '53

75,000-ton throatless forging press being planned for future planes. R. LeGrand. il diags Am Mach 97:122-4 Ja 5 '52

Small parts hot headed in cold-heading machines; Ford's River Rouge plant. H. Chase. il Iron Age 171:124-7 F 19 '53

Symposium on heavy presses for light metal forging and extrusion. Metal Prog 63:111-14+ Mr '53

Throatless presses projected; Hydraulic press manufacturing co. T. Mac New. il Automotive Ind 108:73 F 1 '53

12,000-ton forging press; Redditch works. il diag Engineer 195:347-9 Mr 6 '53; Engineering 175:301, 304 Mr 6 '53

Two way press produces high pressure parts. il diags Steel 132:66-9 Ja 12 '53

Where AF heavy press program stands. I. Stone. diags Aviation W 58:98-100+ Mr 2 '53

World's largest forging press; design and analysis of a 50,000-ton-capacity machine. F. T. Morrison and R. G. Sturm. il Mech Eng 75:191-3+ Mr '53; Same abr. without il. Machine Design 25:293-4+ F '53; Same abr. Automotive Ind 108:150+ Ja 15 '53

See also
Steam hammers

Manufacture

Bethlehem ingots pace air force's giant forging press program. il Am Mach 97: 144-5 F 2 '53

Giant forgings for giant presses. il Metal Prog 63:82-3 Je '53

FORGINGS

Designing magnesium castings and forgings. G. L. Moore. diags Product Eng 23:263-6+ D '52

Dip and etch simplify aluminum forging inspection. A. H. Pope. il Iron Age 170: 102-3 O 2 '52

Precision jet engine blades from rough forgings; Ex-Cell-O corp. J. Geschelin. il diags Automotive Ind 107:44-6+ O 15 '52

Requirements for large, light-metal forgings and extrusions in the aircraft industry. G. W. Papen. bibliog il plan diags Aeronautical Eng R 12:24-33 Ja '53; Excerpts. Automotive Ind 108:41-4 Ja 15 '53

See also
Steel forgings

FORMALDEHYDE

Action of formaldehyde on proteins. R. D. Haworth and others. Chem Soc J p2972-87 Ag '52

Canadian pentaerythritol goes to market; St Maurice chemicals, ltd. flow diag il Can Chem Process 37:70+ S '53

Condensations of primary aliphatic nitramines with formaldehyde. L. Goodman. bibliog Am Chem Soc J 75:3019-20 Je 20 '53

Creaseproofing; glucose ureides plus formaldehyde; patent. Am Dyestuff Rep 41:769 N 24 '52

Emission spectra on autoignited heptane-air mixtures. W. J. Levedahl and H. P. Broida. bibliog il Anal Chem 24:1776-80 N '52

How much formaldehyde? Chem W 71:63-4+ N 22 '52

Interpretive analyses of urea-formaldehyde resins. P. P. Grad. bibliog il diags Paint Oil & Chem R 115:20-1+ D 18 '52; Correction. 116:6B Ja 29 '53

Kinetics of the condensation of melamine with formaldehyde. M. Okano and Y. Ogata. bibliog Am Chem Soc J 74:5728-31 N 20 '52

Near ultraviolet spectrum of formaldehyde. A. D. Walsh. J Chem Phys 20:1502-3 S '52

New urea formaldehyde resins for wet strength. Paper Ind 34:1352-3 F '53

Reaction of formaldehyde and phenols with wool. K. G. Johnson. bibliog(65 titles) il Textile Res J 23:443-62 Jl '53

Reaction of formaldehyde with D-threonine. D. C. Carpenter. bibliog Franklin Inst J 255:209-14 Mr '53

Roles of the amino and hydroxyl groups of collagen in its reactions with formaldehyde, tannic acid and quinone. R. W. Green. bibliog Am Chem Soc J 75:2729-32 Je 5 '53

Stabilizing cellulosic fabrics; dimethylhydantoin-formaldehyde condensates; patent. Am Dyestuff Rep 42:50 Ja 19 '53

Treatment of formaldehyde wastes by activated sludge methods; abstract. T. Waldmeyer. Sewage & Ind Wastes 25:351-2 Mr '53

Urea-formaldehyde and melamine-formaldehyde condensations; mechanisms. H. P. Wohnsiedler. bibliog il Ind & Eng Chem 44:2679-86 N '52

Urea formaldehyde kinetic studies; polarographic studies in dilute solution. L. E. Smythe. Am Chem Soc J 75:574-6 F 5 '53

Urea-formaldehyde kinetic studies; reactions of methylenebisureas. L. E. Smythe. bibliog Am Chem Soc J 75:1508-10 Mr 20 '53

Manufacture

One up on silver. il Chem W 72:67-8 F 28 '53

FORMALIN. See Formaldehyde

FORMALS. See Acetals

FORMAMIDE

Influence of formamide on the bactericidal action of selected chemical compounds. E. A. Cooper and A. E. Goddard. bibliog J Ap Chem 3:129-32 Mr '53

FORMAMIDINE

Dipole moments, ultraviolet spectra and structure of azo-bis-(chloroformamidine) and azo-bis-(nitroformamidine). W. D. Kumler. Am Chem Soc J 75:3092-3 Jl 5 '53

FORMATION, Heat of. See Thermochemistry

FORMIC acid

Chemistry of the triterpenes; the action of formic acid on lupeol. T. R. Ames and others. Chem Soc J p2868-72 Jl '52

Fluorescence obtained from formic acid, carbonyl chloride, and methylene iodide. P. J. Dyne and D. W. G. Style. pl Chem Soc J p2122-4 Je '52

Formic acid rearrangement of 3,4-dimethyl-1-hexyn-3-ol. T. Takeshima. bibliog Am Chem Soc J 75:3309-12 Jl 20 '53

Formic acid rearrangement of 2-phenyl-3-butyn-2-ol. T. Takeshima. bibliog Am Chem Soc J 75:4107-8 Ag 20 '53

Origins of the fluorescences obtained from formic acid and methylene iodide. D. W. G. Style and J. C. Ward. Chem Soc J p2125-7, pl 1-2 Je '52

Some thermodynamic properties of formic acid. W. Waring. bibliog Chem R 51:171-83 Ag '52

FORMING tools

Producing form tools. A. Rylander. diags Tool Eng 30:43 Ja '53

FORMOSA

China's second front. map Economist 165: 896 D 27 '52

Formosa and the Far East. H. A. Bullis. Comm & Fin Chr 177:2305+ My 28 '53

Formosa to the fore; red threat to southeast Asia. F. Morley. map Barron's 33:5-6 My 11 '53

Land utilization in Taiwan. T. Chang. Land Econ 28:362-8 N '52

FORMOSA—*Continued*

Economic conditions

Economic conditions abroad; Taiwan (cont). For Comm W 48:7 O 6; 7 D 1 '52

FORMS and blanks, Business

Improving the efficiency of business forms; abstract. K. E. Goodwin. Management R 41:667-8 O '52

One-writing system; Milway cuts cost with forms. il Am Bsns 22:28 O '52

Simple forms cut maintenance paper work. G. M. Perry. Constr Methods 35:118-21 Jl '53

Ten ways to save paper. H. L. Wylie. Am Bsns 23:14-15 O '53

You can't pick a winner without a good program; forms and procedures vital to credit. L. H. Juengling. Credit & Fin Management 55:8-9+ Ap '53

See also

Railroads—Forms and blanks

FORMYL group

Absorption spectrum of free HCO radicals. D. A. Ramsay. bibliog il J Chem Phys 21: 960-1 My '53

Use of formyl as a protective group in peptide syntheses. S. G. Waley. bibliog Chem & Ind p 107-8 Ja 31 '53

FORMYLATION

Use of dimethylformamide as a formylation reagent. E. Campaigne and W. L. Archer. bibliog Am Chem Soc J 75:989-91 F 20 '53

FORMYLOPIANIC acid

Phthalaldehydes and related compounds; the preparation of 3-formylopianic acid. J. J. Brown and G. T. Newbold. Chem Soc J p4878-81 D '52

FORREST, Thomas Carr, jr.

Texas engineer nominated NSPE head. por Eng N 149:64+ D 4 '52

FORSTERITE

System diopside—forsterite—anorthite. E. F. Osborn and D. B. Tait. bibliog diags Am J Sci Bowen vol p413-33 '52

FORSTMANN, Julius G.

Portrait. Fortune 47:99 Mr '53

FORSYTHE, William Boore, 1897-

New British cousin for Pepsi. por Bsns W p 112+ D 20 '52

FORUMS, Open

Community seminars get ideas across in mill towns; Freedom forums of Alabama mills, inc. M. B. Andrews. il Textile World 103: 145+ F '53

Phoenix meets the people, Know your city forums. D. Smith. il Pub Works 84:75+ O '53

75,000 at women's forums; medium for banking service and public relations. C. A. Bimson. Banking 45:121 N '52

FORWARDING companies (air freight)

Predictability, that's what the shipper wants; interview with John C. Emery. il Ry Age 133:63-5 N 10 '52

FOSS, Martin M. d 1953-

Sketch. Mech Eng 75:190 Mr '53

FOSSIL pollen. See Pollen, Fossil

FOSSIL vertebrates. See Vertebrates, Fossil

FOSSILS. See Paleontology

FOSTER, William Chapman, 1892-

Portrait. Bsns W p34 Ja 24 '53

FOUNDATION garments

See also

Corset trade

FOUNDATION soils

Large scale plant built on sand is nearing completion; Vibroflotation. il Chem & Eng N 30:5156 D 8 '52; Paper Tr J 135:47 D 12 '52; Manuf Rec 122:29 Ja '53; Civil Eng 23: 60 Ja '53; Mech Eng 75:157-8 F '53; Roads & Sts 96:139 My '53

Mystery of the restless substratum. J. H. Thornley. il plan diags Eng N 150:33-4+, cover Mr 19 '53

Permafrost building problems studied by National research council. Arch Rec 112:36 N '52; Same. Roads & Eng Constr 91:64 F '53

What you should know about soil engineering. L. J. Ritter. bibliog il diags Pub Works 84:94-103 Ag; 84-94 S; 95-104 O '53

See also

Dams—Foundations

Roads—Subgrades

Soil mechanics

Oiling

Uniform oil penetration obtained with spray bar. S. G. Feldman. il Eng N 150:64 Ap 2 '53

Testing

Bigger soil-test plate permits bigger pressures under footings. diags Eng N 150: 51 Ap 16 '53; Discussion, J. Feld. 150:10+ My 7 '53

Symposium on direct shear testing of soils. (Special tech. pub. no. 131) il diags 87p Am. soc. for testing materials, 1916 Race st, Philadelphia 3 '53 (pa $2)

FOUNDATIONS

Caissons support riverfront power plant; Cincinnati gas and electric co.'s new Walter C. Beckjord station. C. E. Burtch. il Eng N 149:33-5 N 27 '52

How to use SCR brick on foundation walls. diags Am Bld 74:190-4 N '52

New aid for foundation men; the bore-hole camera. il Eng N 150:39 Je 25 '53

Solving unusual foundation and steel-framing problems. C. D. Carruthers. il Roads & Eng Constr 91:130+ Ag '53

Structural support for plant loads. A. G. Hult. il diags Power 97:80-3+ Ja '53

What size foundation for your stills and towers? A. A. Brown. diags Chem Eng 59: 136-7 O '52

See also

Basementless construction

Bridges—Foundations and piers

Caissons

Cofferdams

Concrete piling

Dams—Foundations

Footings, Concrete

Foundation soils

Machinery—Foundations

Piles and pile driving

Roads—Foundations

Settlement

Movable foundation struts settle with surrounding soil. diags Eng N 150:52 Mr 12 '53

FOUNDATIONS, Charitable and educational

Foundation clinic. Bsns W p 146 My 16 '53

Philanthropy on the carpet. il Bsns W p32 D 13 '52

Private foundations. Bsns W p 172 Ja 24 '53

Investments

Investing results by endowment funds. S. H. F. Goldstein. Comm & Fin Chr 177:2319 My 28 '53

FOUNDATIONS, Industrial. See Industrial foundations

FOUNDATIONS, Subaqueous

See also

Bridges—Foundations and piers

Dams—Foundations

FOUNDING. See Aluminum founding; Brass founding; Bronze founding; Foundry practice; Iron founding; Magnesium founding

FOUNDRIES

Castings; the melt could be heavier; foundry industry pushes for orders to beat slump. R. M. Lorz. Iron Age 170:83 D 18 '52

Ford's foundry; dream come true. il Steel 131:51 D 1 '52

Founders appraise price-hikes. Steel 132: 38 Ja 26 '53

Spic and span foundry quadruples tonnage in five years; Wells mfg. co. il Foundry 81:136 Ja '53

See also Foundry dust and other headings beginning Foundry

Accounting

See Foundry accounting

Employees

Accelerated training program pays off; Builders iron foundry. A. A. Erkkinen and D. J. Dresselhuys. il Foundry 81:148+ O '53

Current status of apprenticeship in the patternmaking industry. W. F. Patterson. Foundry 81:210 O '53

Employment and earnings in gray and malleable iron and steel foundries; tabulations. Iron Age 171:450 Ja 1 '53

How to inventory vocational assets and liabilities. R. L. Bradley. Foundry 80:118-19+ N '52

FOUNDRIES—Employees—*Continued*

Outstanding opportunities for the foundry industry. J. H. Smith. il Foundry 81:100-7 Ag '53

Shipments of non-ferrous castings; wages and hours in non-ferrous foundries and pressed metal shops. Iron Age 171:453 Ja 1 '53

Supervisory development conference held by Malleable founders' society, Cleveland, Oct. 10. Foundry 80:152+ D '52

Equipment and supplies

Aluminum plant and vessel co. works at Crawley. il Engineer 195:730-1 My 22 '53; Engineering 175:673-4, 688 My 29 '53

Automation is the keynote in Ford's Cleveland foundry and engine plant; illustrations with text. S A E J 61:38-45 My '53

Breakage down 50 per cent; installation of Rotoblast table at the Woodruff & Edwards foundry. Steel 132:185 My 25 '53

Buyers and sellers rate each other. R. H. Herrmann. Foundry 81:180-1+ S '53

Casting cleaning costs blasted; Layne & Bowler, inc. il Iron Age 171:107 Ap 30 '53

Castings for measuring instruments; new Kent non-ferrous foundry. il Metallurgia 47:206-8 Ap '53

Coke handled at saving by conveyor unit. il Foundry 80:183+ O '52

Compressed air finds wide foundry use. il Foundry 81:212+ S '53

Conventional equipment used in new shell molding process; Dietert precision molding. diags Foundry 81:169-70 Jl '53

Conveyors make the difference in the production of brass castings; Chase brass & copper co. il plan diag Mill & Factory 52:90-2 Mr '53

Designing an accurate immersion thermocouple. R. E. Bish. il Foundry 81:193+ Ag '53

Device gives one man complete control of crucible handling. A. C. Osborn. il Foundry 81:200 Ap '53

Die casting works extension; Non-ferrous die casting co. Engineer 196:27 Jl 3 '53

Ethyl silicate for foundry use. Engineering 176:239 Ag 21 '53

Ford's Cleveland foundry. il plans diags Foundry 81:139-89 Mr '53

Ford's new foundry combines automation and worker comfort. J. Geschelin. il Automotive Ind 107:42-4 D 15 '52

Fork truck simplifies handling in quenching steel castings. il Foundry 80:214+ O '52

Foundry equipment orders and shipments, 1948-1952; tabulation. Iron Age 171:452 Ja 1 '53

Grinding + mechanization equals 2 x cleaning output; cleaning castings at the Truck engine works of International harvester co. W. M. Fitzsimmons. il Iron Age 171:132-4 My 28 '53

Hot metal receivers; continuous supply of iron for casting. il diags Metallurgia 47:309-10 Je '53; Engineering 176:27 Jl 3 '53

How to specifiy conveyor belting for foundry applications. R. H. Herrmann. bibliog il diags Foundry 81:86-93+ Ag '53

Installs modern sand handling system; Riverside foundry. il diag Foundry 81:202-3 Ag '53

Jobbing and production operations facilitated by lift trucks; Electro-alloys division of American brake shoe co. il Foundry 81:178+ F '53

Laying out a mechanized shell molding foundry. R. Olson. il plans Foundry 81:108-12 Je '53

Making intricate aluminum castings; Acme aluminum alloys, inc. R. H. Herrmann. il Foundry 81:108-13 Ap '53

Manual handling minimized in sixth-floor brass foundry. il plan diag Foundry 80:110-13 N '52

Materials handling; foundry handling costs cut with wider use of industrial trucks. il Iron Age 170:120 O 23 '52

Modern facilities incorporated in new Alabama pipe foundry. W. G. Gude. il Foundry 80:110-13+ O '52

Modern handling commutes hard labor in small foundry. il Iron Age 171:222-3 My 7 '53

Monorail conveyor system reduces blast-cleaning costs. W. I. Gladfelter. il plan diags Foundry 80:104-5+ D '52

New A.P.V. factory and foundries. il Metallurgia 47:295-9 Je '53

New brake shoe foundry operating in California; American brake shoe co. il Foundry 81:132-3 Je '53

New coreroom handles jobbing work efficiently; Midwest foundry co. J. E. Wolf. il Foundry 81:118-19+ Je '53

New grinder hood design improves dust suppression. il diags Foundry 81:226+ Ag '53

New nonferrous foundry lets cranes lighten the load; Seagrave corp. il Foundry 81:176 F '53

New precision investment foundry. T. Opperhall. il Foundry 81:86-93+ Ja '53

New pressure pipe foundry serves West Coast area. il map Foundry 81:98-101 Ja '53

New roll foundry completed in Great Britain. V. Delport. il plan Foundry 81:108-11+ F '53

Re-organisation of die-casting foundry; Non-ferrous die casting co. il Engineering 176:186-7 Ag 7 '53

Silos provide advantages in storing core sand; Ferro machine & foundry, inc. M. F. Degley. il Foundry 81:192-3+ Mr '53

Straightening machine salvages core rods. il Foundry 80:138 D '52

U-shaped monorail section feature of molding unit. L. D. Pridmore. il Foundry 80:144 D '52

Ultrasonic soldering in the foundry. il Metallurgia 46:251-2 N '52

See also

Casting machines
Cupola furnaces
Electric furnaces, Foundry
Foundry equipment manufacturers' association
Foundry machinery
Molding machines
Molds (for casting)
Sand, Foundry

Heating and ventilation

Foundry solves problem of heating and ventilating; Saginaw bearing co. B. Czymbor. il Heating-Piping 24:96-7 D '52

Heating system improves foundry working conditions. il Foundry 81:288 My '53

Proper ventilation improves foundry working conditions; Saginaw bearing co. il Foundry 80:218+ N '52

Ventilating system changes air every 10-12 minutes; Ford Cleveland foundry. il Foundry 81:184-7 Mr '53

Insurance requirements

Are you protected against loss of customers' patterns? Foundry 81:152+ F '53

Layout

Better parts flow trims foundry costs; Buick's new casting cleaning plant. H. Chase. il plan Iron Age 171:97-101 Ap 30 '53

Foundry plan winner in school contest. plan Foundry 81:188+ O '53

Ideal steel jobbing foundry. H. G. Schlichter. il plans diags Foundry 80:84-9+ D '52; 81:102-7+ Ja '53

Laying out a mechanized shell molding foundry. R. Olson. il plans Foundry 81:108-12 Je '53

Lighting

Lighting for foundries. flow chart il diags Illum Eng 48:279-90 My '53

Management

See Foundry management

Safety measures

It's harder to be safe in jobbing shop operations. E. Fry. Foundry 81:113+ Je '53

Making the foundry safe for top production. S. C. Herbine. il Foundry 80:120-3+ N '52

Respiration maintenance program that works. il Foundry 80:194+ O '52

Safety and hygiene; American foundrymen's society annual meeting, Chicago; abstracts of papers. Foundry 81:136+ Jl '53

FOUNDRIES—*Continued*

Statistics

5938 foundries operating in United States and Canada. Foundry 81:134-5 S; 194 O '53
Foundry statistics. Published in monthly numbers of Foundry
Number of die-casting shops and various types of foundries in operation in the United States; tabulations. Iron Age 171: 455 Ja 1 '53
Shipments of castings; alloy and carbon steel, gray iron including pipe, malleable iron production, shipments and orders; tabulations. Iron Age 171:451 Ja 1 '53
Shipments of non-ferrous castings; wages and hours in non-ferrous foundries and pressed metal shops. Iron Age 171:453 Ja 1 '53

Belgium

Special report on European foundry progress. J. F. Goffart. il Foundry 81:108-9 S '53

France

Special report on European foundry progress. il Foundry 81:106-7 S '53

Germany

Special report on European foundry progress. E. Hugo. il Foundry 81:114-15 S '53

Great Britain

Special report on European foundry progress. E. Longden. il Foundry 81:102-5 S '53

India

Technical aid provided foundries of India. il Foundry 81:154+ S '53

Italy

Special report on European foundry progress. M. Olivo. il Foundry 81:110-11 S '53

Netherlands

Special report on European foundry progress. F. W. E. Spies. il Foundry 81:112-13 S '53

New Zealand

Steel foundry plants down under. il Foundry 81:226-8 Jl '53

Switzerland

Special report on European foundry progress. il Foundry 81:116-17 S '53

FOUNDRY accounting

Costing for small captive gray iron foundries. R. E. Fuller. N A C A Bul 34:661-9 Ja '53
Foundry costs; American foundrymen's society annual meeting, Chicago; abstracts of papers. Foundry 81:144+ Jl '53
Meeting competition with good cost methods. A. E. Grover. Foundry 80:102-3+ D '52; 81:108-11+ Ja '53

FOUNDRY costs

Predicting casting costs with accurate design yardsticks. P. Tripoli. il diags Machine Design 25:139-54 Je '53
Shell molding; what does it cost? W. W. Coleman. il plan Foundry 81:156+ O '53

FOUNDRY dust

Air pollution ordinances. J. M. Kane. il Foundry 80:104-7+ O '52
High-speed counting of steel foundry dust particles; use of Flying-Spot microscope. G. M. Michie. il diags Engineer 195:485-7 Ap 3 '53
New grinder hood design improves dust suppression. il diags Foundry 81:226+ Ag '53

FOUNDRY educational foundation

Annual advisory committee conference, Cleveland, March 11-12. Foundry 81:190+ My '53
Foundry educational foundation program achieving engineering education objective. M. J. Allen. Foundry 81:160+ F '53

FOUNDRY equipment manufacturers' association

Annual meeting, 34th, White Sulphur Springs, Oct. 16-18. Foundry 80:157+ D '52

FOUNDRY laboratories

French foundry center completes extensive laboratories. V. Delport. il Foundry 80:106-7+ D '52

FOUNDRY machinery

Autoclino automatic shell mould making machine. il Engineer 195:859-60 Je 19 '53; Engineering 175:745 Je 12 '53; Automobile Eng 43:389-90 S '53
Automatic machine grinds skim cores at high production rate. R. H. Herrmann. il Foundry 81:168 S '53
Automatic, rotating table machine makes shell molds. il Foundry 80:265 N '52
Automatic shell moulder. il Metallurgia 48:43 Jl '53
Buick continues mechanization of foundry operations. H. Chase. il Foundry 81:173 F '53
Cope handler increases versatility of coreblower. il Foundry 81:326 My '53
Cores are blown at ends through 90-degree elbow; core blowing machine. L. D. Pridmore. il Foundry 80:186 O '52
Develops new squeeze type machine. R. L. Lee. il Foundry 81:171 Ja '53
Double lift device assures pattern draw accuracy. L. D. Pridmore. il Foundry 81:144 F '53
Foundry facilities molded to production; Baldwin-Lime-Hamilton corp. il Steel 132: 102-3 F 2 '53
Machine produces shell molds automatically. il Foundry 80:267 O '52
Mechanised shell moulding; Polygram automatic shell moulding machine Mark IV. il Metallurgia 47:91-2 F '53
Mechanised shell mouldings; Polygram casting co. il Engineer 195:96-7 Ja 16 '53; Engineering 175:44-5 Ja 9 '53
Molding department utilizes semiautomatic machines; Ford Cleveland foundry. il plan Foundry 81:158-65 Mr '53
New equipment offered for shell molding. il Machine Design 25:233 Ja '53
Offers complete service on shell molding; Powdered metal products corp. of America. E. F. Ross. il Foundry 80:198-9 O '52
Shell moulding. il Automobile Eng 43:65-9 F '53
Shell molding at International harvester co. G. P. Phillips. il plans diags Foundry 80: 96-101+ D '52; Excerpt. Steel 131:72+ D 22 '52
Shell molding; new machine makes it automatic. il Steel 131:83-4+ O 6 '52

See also
Casting machines
Die casting machines
Molding machines

FOUNDRY management

Are you protected against loss of customers' patterns? Foundry 81:152+ F '53
Foundry maintenance is live topic; plant maintenance show and conference, 4th, Cleveland, Jan. 19-22. Foundry 81:280+ Mr '53
How to build good will with neighbors and employees. R. H. Herrmann. Foundry 81: 111+ Ag '53
How to develop cast products. R. J. Franck. il Foundry 80:120-3+ O '52
How to inventory vocational assets and liabilities. R. L. Bradley. Foundry 80:118-19+ N '52
Ideal steel jobbing foundry. H. G. Schlichter. il plans diags Foundry 80:84-9+ D '52; 81:102-7+ Ja '53
Meeting competition with good cost methods. A. E. Grover. Foundry 80:102-3+ D '52; 81:108-11+ Ja '53
Metals casting conference, 5th, Purdue university, Oct. 30-31. Foundry 81:253-6 Ja '53
Plant engineer, his functions and responsibilities. H. E. Pridmore. Foundry 80:162+ O '52
Sales terms for nonferrous castings. Foundry 81:222 F '53
Supervisory development conference held by Malleable founders' society, Cleveland, Oct. 10. Foundry 80:152+ D '52
Time study and methods; American foundrymen's society annual meeting, Chicago; abstracts of papers. Foundry 81:156+ Jl '53

See also
Castings—Cleaning
Foundries—Employees
Foundry accounting
Foundry practice

FOUNDRY management—*Continued*

Quality control

Choosing the right copper-base alloy. H. J. Roast. il Foundry 81:114-15 O '53

Production control at Alcan's aluminum foundry. V. J. Zabec. il Can Chem Process 37:66-7 Jl '53

Quality control and inspection as part of the manufacturing process of steel castings; abstract. J. R. Rait. Engineering 175:607 My 8 '53

Quality control in the small foundry. W. J. Sommer. il Foundry 80:92-5+ D '52; Same abr. Steel 131:86-8 N 17 '52

Quality in light-metal castings. Engineering 175:533 Ap 24 '53

Quality supervision in the small jobbing foundry. E. Fry. Foundry 81:97+ F '53

Some tools for quality control in the mechanized jobbing foundry. T. W. Curry. il Foundry 81:110-13+ O '53

Your quality control program; is it effective? K. M. Smith. Foundry 80:188+ O '52

FOUNDRY practice

ABC of foundry practice (cont). P. Dwyer and others. diags Foundry 80:185+ D '52; 81:191+ Ja; 195-6+ F; 293-4+ Mr; 217-18+ Ap; 243-4+ My; 215+ Je; 163+ Jl; 195-6+ Ag; 255+ S; 197-9 O '53 (to be cont)

All-Canadian foundry conference, Montreal, Nov. 6-8. Foundry 81:132+ Ja '53

Annual regional foundry conference, 16th, Milwaukee, Feb. 12-13. Foundry 81:196+ Ap '53

Annual Southeastern regional foundry meeting, 21st, Birmingham, Feb. 19-20. Foundry 81:151+ Ap '53

Application of shell molding to the production of magnesium castings; abstract. Metal Prog 64:270+ O '53

British claim patent rights for shell molding; statement issued by Lord Trafgarne, chairman of directors, Polygram casting co. Iron Age 171:99 Ja 15 '53

Cast-weldments, combination of foundry and welding techniques cut costs. H. E. Edsall and F. E. Browne. Iron Age 170:156 D 18 '52

Casting design for heavily loaded parts. E. T. Vincent. il diags Foundry 81:94-7+ Ja '53

Casting in cement bonded sand. J. B. McIntyre. il Foundry 80:90-1+ D '52

Casting magnesium in shell molds. N. Sheptah. Automotive Ind 109:111+ Jl 1 '53

Casting process introduced for economy in production of broader range of alloys; Asarco. il diag Tool Eng 31:98-9 Ag '53

Casting review and forecast. Iron Age 171: 298-9 Ja 1 '53

Cheap sand is no saving when it's for shell molding. M. F. Drumm. Steel 132:180+ My 25 '53; Same. Iron Age 171:144-5 Je 25 '53

Chemicals in foundry work; abstract. E. S. Bauer. Oil Paint & Drug Rep 164:60-1 S 21 '53

Continued wide interest in shell molding shown at AFS meeting. il Iron Age 171: 148-50 My 21 '53

Continuous casting. il diag Mill & Factory 53:97 S '53

Conventional equipment used in new shell molding process; Dietert precision molding. diags Foundry 81:169-70 Jl '53

Creating a thimble; cinder pot manufacturing requires specialized foundry operations. il Steel 131:90-1 O 20 '52

Design and production of shell mold patterns improved. il Iron Age 170:172-4 D 11 '52

Developments in steel castings in the heavy power plant industry. F. Buckley. bibliog diags Inst Mech Eng Proc (A) 167 no 2:177-83, pl 1-4; Discussion. 183-9, pl 5-6 '53

Discussion on shell molding. J. G. Pearce and W. B. Parkes. Metal Prog 64:188+ Ag '53

Forum on technical progress; casting. il Steel 132:264-6+ Ja 5 '53

Foundry developments. E. C. Jeter. Tool Eng 31:139-40 O '53

Foundrymen focus on shell molding; new D-process. Iron Age 171:80-1 My 14; 151-2+ My 21 '53

Heat transfer; American foundrymen's society annual meeting, Chicago; abstracts of papers. Foundry 81:153+ Jl '53

How fast should a mold be poured? H. W. Dietert. diags Foundry 81:205-6 Ag '53

Illinois university conference on foundry safety, health and air pollution, Urbana, Feb. 17-19. Foundry 81:190+ Ap '53

Institute of British foundrymen 50th annual meeting, Blackpool; with abstracts of papers. Metallurgia 48:27-32+ Jl '53; Foundry 81:194+ S '53

Laying out a mechanized shell molding foundry. R. Olson. il plans Foundry 81:108-12 Je '53

Longer life cast into modern slag ladle. il Foundry 80:108-11+ D '52

Mechanised shell moulding; Polygram automatic shell moulding machine Mark IV. il Metallurgia 47:91-2 F '53

Mechanised shell mouldings; Polygram casting co. il Engineer 195:96-7 Ja 16 '53; Engineering 175:44-5 Ja 9 '53

Metal casting methods. J. B. McIntyre. bibliog il plan diags Metallurgia 47:179-82, 231-6, 292-4; 48:21-6, 63-7, 123-9 Ap-S '53

Metal processing at M.I.T.; teaching of metal working, casting, and welding. H. F. Taylor. il Tech R 55:97-100+ D '52

Michigan regional conference, Ann Arbor, Oct. 17-18. Foundry 80:216+ D '52

New England foundrymen, 12th annual regional conference, Cambridge, Oct. 24-25. Foundry 80:160+ D '52

New equipment offered for shell molding. il Machine Design 25:233 Ja '53

New method simplifies shell mold assembly. R. Herold. diags Foundry 80:142+ D '52

Offers complete service on shell molding; Powdered metal products corp. of America. E. F. Ross. il Foundry 80:198-9 O '52

Ohio regional conference, 5th, Columbus, Sept. 26-27. Foundry 80:210+ N '52

Patents pending; squabble in England over shell-molding improvements may have repercussions in the United States. Bsns W p44+ Ap 18 '53

Principles of risering. C. F. Walton. il Foundry 81:100-7+ F '53

Promising new load in shell molding. L. B. Reed. il Elec West 110:87 My '53

Pros and cons of shell molded castings. W. Sololosky. Tool Eng 31:126 Jl '53

Quick machine mounting devices for wooden pattern boards. L. D. Pridmore. diags Foundry 81:146 Ja '53

Schoolboys show foundries a trick; shell molding. il Bsns W p48-50+ F 7 '53

Shaking out, cleaning, welding, steel castings. J. H. Hall. il diags Foundry 81:92-6+ F; 194-5+ Mr; 96-7+ Ap '53

Shell moulding. il Automobile Eng 43:65-9 F '53

Shell molding at International harvester co. G. P. Phillips. il diags Foundry 80:102-7+ N; 96-101+ D '52; Same cond. Steel 131: 68-72+ D 22 '52

Shell molding cartel. Product Eng 24:223 My '53

Shell molding comes of age. A. J. Bzdula and H. A. Taylor. il Gen Elec R 56:38-41+ Jl '53

Shell molding; new machine makes it automatic. il Steel 131:83-4+ O 6 '52

Shell moulding process. D. N. Buttrey. Engineering 176:251-2, 285 Ag 21-28 '53

Shell molding saves through greater mechanization and less machining. il diags Product Eng 23:121-7 O '52

Shell molding stainless-alloy castings. il Mech Eng 74:1016-17 D '52

Shell molding; what does it cost? W. W. Coleman. il plan Foundry 81:156+ O '53

Shell molding's outstanding opportunities for foundry advancement. J. H. Smith. il Automotive Ind 108:68-9+ Je 1 '53

Shell moulds and cores. il Engineer 194:845 D 19 '52

Small, intricate castings produced at low cost; shell molding. il Mill & Factory 52: 120 F '53

Southwest regional conference, 3d, Dallas, Nov. 13-14. Foundry 81:261-3 Ja '53

Special report on European foundry progress. E. Longden and others. il Foundry 81:102-17 S '53

FOUNDRY practice—*Continued*

Stanford students adapt shell molding to small foundry. Materials & Methods 36:11 N '52

Steel founders' society of America 7th annual technical and operating conference, Cleveland, Nov. 6-8. Foundry 81:162+ Ja '53

Straight line setup for casting tank hulls. T. Mac New. il Automotive Ind 109:70-2 Ag 1 '53

Studies high pressure molding; research at the University of Wisconsin. R. Heine and T. Barlow. Foundry 81:146+ Ag '53

Techniques of shell molding; abstract. W. S. Walters. S A E J 61:126+ Ap '53

Things to watch in nonferrous foundry practice. H. Brown. il Foundry 81:108-10+ Ag '53

What's ahead the next ten years in casting and molding. Am Mach 96:B-B7 Mid-N '52

Where does shell molding fit in your parts picture? H. S. Shroka. il Iron Age 171:154-7 Je 18 '53

Where shell mold castings stand today. K. Rose. il Materials & Methods 37:73-7 Ja '53

See also

Aluminum founding
Brass founding
Bronze founding
Cast iron
Casting, Centrifugal
Castings—Cleaning
Cores
Cupola furnaces
Die casting
Iron founding
Lost wax process
Magnesium founding
Molds (for casting)
Pattern making
Sand, Foundry
Steel castings
Steel ingots—Molds

Study and teaching

Education; American foundrymen's society annual meeting, Chicago; abstracts of papers. Foundry 81:128+ Jl '53

Outstanding opportunities for the foundry industry. J. H. Smith. il Foundry 81:100-7 Ag '53

Technical aid provided foundries of India. il Foundry 81:154+ S '53

There's a new relationship between cast metals and the University. R. A. Flinn. plan Foundry 81:162+ S '53

See also

Foundry educational foundation

FOUNDRY research

Effects of vibration during solidification of castings. W. Rostoker and M. J. Berger. bibliog il Foundry 81:100-5+ Jl '53

Research and development division of the British steel founders' association. J. F. B. Jackson. il diags Metallurgia 46:231-6 N '52

Role of the research foundry unit. G. A. Lillieqvist. bibliog il diags Foundry 80:114-19+ O '52

Science, technology and craftsmanship as I see it. E. Longden. Engineering 175:778 Je 19 '53

Special report on European foundry progress. E. Longden and others. il Foundry 81:102-17 S '53

Strain theory of hot tearing. W. S. Pellini. bibliog il diags Foundry 80:124-33+ N '52

Studies high pressure molding; research at the University of Wisconsin. R. Heine and T. Barlow. Foundry 81:146+ Ag '53

Titanium casting research tests shell molded refractories. J. G. Kura. il diags Iron Age 170:88-92 O 30 '52

See also

Foundry laboratories

FOUNDRY sand. See Sand, Foundry

FOUNDRY workers. See Foundries—Employees

FOUNTAIN pens

Ball-point pen blitz. Fortune 47:222 F '53

How to put life in a slow market; Paper-Mate ball point pens. Bsns W p46+ My 23 '53

Advertising

Reorganization paves way for aggressive advertising and selling by old company; Waterman co. sapphire-point pen. N. Keine. il Ptr Ink 241:42 N 14 '52

Sheaffer Pen points up Sunday supplements. R. B. McIntyre. Ed & Pub 86:16 Ja 10 '53

4-H clubs

Building goodwill through community service; First national bank of Winona, Minn. H. Severson. Banking 46:62+ Jl '53

We chose 4-H! First national bank of Smithton, Smithton, Pa. W. C. Knox. il Bankers Mo 70:12+ Mr '53

See also

National 4-H foundation

FOURDRINIER machines. See Paper making machinery

FOURIER'S integrals. See Fourier's series

FOURIER'S series

Analysis of sampled-data systems; Laplace and Fourier transform methods. J. R. Ragazzini and L. A. Zadeh. diag Elec Eng 71:1102 D '52

Dirac delta-function and the summation of Fourier series. M. R. Spiegel. J Ap Phys 23:906-9 Ag '52

Photomechanical wave analyser for Fourier analysis of transient waveforms. T. B. Whiteley and L. R. Alldredge. diags J Sci Instr 29:358-62 N '52

See also

Harmonic analyzers

FRACTIONATION. See Distillation; Separation

FRACTIONATOR. See Distillation apparatus

FRACTOGRAPHY. See Metallography

FRACTURES

Medullary nailing in the treatment of industrial injuries. D. M. Street. bibliog Ind Med 21:485-6 O '52

Value of early mobilization in the treatment of fractures. P. A. Wade. Ind Med 21:469-72 O '52

FRAMBESIA

Pilot study should precede mass treatment of yaws. C. R. Rein. Pub Health Rep 68:136 Ja '53

FRAMED structures

Analysis of rigid frames by an electronic digital computer. R. K. Livesley. diags Engineering 176:230-3, 277-8 Ag 21-28 '53

Column strength under combined bending and thrust. R. L. Ketter and others. bibliog il diags Welding J 31:sup607-22 D '52

Connections for welded continuous portal frames. A. A. Topractsoglou and others. bibliog il diags Welding J 30:sup359-84, 397-405; 31:sup543-60 Jl-Ag '51, N '52

Evaluation of plastic analysis as applied to structural design. B. G. Johnston and others. bibliog(33 titles) il diags Welding J 32:sup224-39 My '53

Group loadings applied to the analysis of frames. I. F. Morrison. diags Am Soc C E Proc 79 [no 183]:1-15 Ap '53

Plane frames not obeying Hooke's law. J. W. H. King. Engineer 196:4-6 Jl 3 '53; Discussion. T. M. Charlton. 196:114 Jl 24 '53

Plastic collapse loads for plane frames. B. G. Neal and P. S. Symonds. bibliog diags Engineer 194:315-19, 363-4 S 5-12 '52

Plastic strength and deflections of continuous beams. K. E. Knudsen and others. bibliog(22 titles) diags Welding J 32:sup240-55 My '53

Steady-state forced vibration of continuous frames. C. T. G. Looney. diags Am Soc C E Proc 78 [no 136]:1-21 Je '52; Discussion. 79 [no D-136]:1-14 Ap '53

Strain energy proof of the elastic centre method for the analysis of frames. D. R. Samson. diag Roy Aeronautical Soc J 57:344-5 My '53

FRAMING (building)

Allen County war memorial coliseum. R. E. Coblentz. il diag Welding J 32:320-3 Ap '53

Analysis of beam-and-girder framing with known column settlements. P. M. Ferguson. diag Am Concrete Inst J 24:77-84 O '52

Built-in deflections cut frame cost. R. W. Waterhouse. diags Eng N 150:45 Mr 26 '53

How to save cost by designing for structural welding. A. E. Pearson. il diags Welding J 31:1129-35 D '52

Lightweight structural framing. diag Engineering 175:672 My 22 '53

Solving unusual foundation and steel-framing problems. C. D. Carruthers. il Roads & Eng Constr 91:130+ Ag '53

FRAMING (building)—*Continued*

Something new in framing; oblique concrete arches to carry steel catenary roof; livestock judging pavilion built at the North Carolina State fair grounds. il Eng N 149: 33 O 2 '52

Steel structural sections replace wood studs, joists. il Eng N 150:103-4 Ja 29 '53

Structural drawings should clearly indicate framing plan. J. G. Loehler. plan Civil Eng 23:320 My '53

Tests on small triangulated steel frames. R. W. Steed. Engineering 175:53 Ja 9 '53

Thin-shell precast concrete; economical framing system. A. Amirikian. Am Concrete Inst J 24:775-9 My '53

FRANCE

See also

Airplanes, Military—France
Budget—France
Communism—France
Electric railroads—France
Hydroelectric plants—France
Money—France
Petroleum industry and trade—France
Petroleum pipe lines—France
Railroads—Electrification—France

Colonies

North Africa; how long can U.S. straddle the fence? il map Bsns W p 110-12 D 20 '52

Commerce

Big export drive urged in France. For Comm W 49:3 Ap 6 '53

Expansion of exports is required to restore balance of trade in France. For Comm W 48:7 N 17 '52

French foreign trade showing improvement. For Comm W 49:4 Ja 5; 8 Je 22 '53

French trade deficit increases in 1952. For Comm W 49:4 Mr 9 '53

Commercial policy

France again cuts imports. Economist 167:77 Ap 11 '53

France's trade deficit. Economist 166:493-4 F 21 '53

Economic conditions

Economic conditions abroad (cont). For Comm W 49:5 F 9 '53

France; sick man of Europe? il Bsns W p 106-7 Jl 18 '53

Front populaire? disinflation and high taxes prepare France for its re-birth. B. deJouvenel. Barron's 32:3 O 6 '52

New French inflation? M. Mayer greases the skids under the franc. Barron's 33:7 F 2 '53

Economic relations

United States

Franco-American quarrel. Economist 165:177 O 18 '52

Our problems with Britain and France. V. L. Horoth. map Mag of Wall St 91:287-9+ D 13 '52

Foreign relations

Case for France. Economist 166:849-50 Mr 28 '53

France shifts to foreign goals. Bsns W p 130-1 Ja 17 '53

United States

On State's desk; Secretary Dulles has some diplomatic damage to repair in France. B. deJouvenel. Barron's 32:3 N 24 '52

Industries and resources

Five years of the Monnet plan. Economist 165:140-1 O 18 '52

Little Ruhr; France puts its chips on Lorraine and the Saar. Barron's 33:5 My 4 '53

Politics and government

Can M. Mayer survive? Economist 167:162 Ap 18 '53

Fourth Republic's weakness. Economist 166: 3-4 Ja 3 '53

France; sick man of Europe? il Bsns W p 106-7 Jl 18 '53

France's crisis of conscience. Economist 167: 795-6 Je 20 '53

French Bevanism. Economist 167:650-1 Je 6 '53

French radicals in ambush. Economist 166: 132 Ja 17 '53

General de Gaulle's dilemma. Economist 165: 545 N 22 '52

General without party; General de Gaulle's Rassemblement du peuple français (RPF). Economist 167:348 My 9 '53

Hard choice for Europe; weak French governments and European integration movement. Economist 167:493-5 My 23 '53

More than Pétain's due. Economist 166:271-2 Ja 31 '53

Reform of the French constitution. Economist 166:28-9 Ja 3 '53

Sick man of Europe. Economist 167:670-1 Je 6 '53

Third Gaullism? Economist 167:522 My 23 '53

FRANCIUM

Alpha-branching of AcK and the presence of astatine in nature. E. K. Hyde and A. Ghiorso. bibliog Phys R 90:267-70 Ap 15 '53

FRANCK, James, 1882-

James Franck. P. Pringsheim. por(front) Rs Mod Phys 24:117-19 Jl '52

FRANCK-CONDON principle

Franck-Condon principle and its application to crystals. M. Lax. bibliog J Chem Phys 20:1752-60 N '52

FRANKFURTERS. See Sausage

FRANKLIN institute

Medal day proceedings. Franklin Inst J 254: 449-72 D '52

Research at the Franklin institute. Metal Prog 63:95-6 F '53

FRANKLIN life insurance company

What's behind the fantastic upsurge in sales. A. R. Hahn. Sales Management 70:24-7+ F 15 '53

FRASCH process. See Sulfur—Manufacture

FRASER, Peter M. 1891-

Sketch. por East Underw 54:12 Ap 17 '53

FRATERNAL actuarial association

Meeting, Cincinnati. Nat Underw (Life ed) 57:11 Je 12 '53

FRATERNAL societies. See Benefit societies

FRAUD

Catching bogus shirtmakers; foreign fakes in Hong Kong. Bsns W p98-9 Jl 4 '53

Hazard of the false affidavit. C. B. Everberg. Credit & Fin Management 55:15 Ja '53

Know what fraud is to avoid money loss. W. H. Hillyer. Heating-Piping 24:110 D '52

See also

Checks, Fraudulent
Embezzlement
Insurance—Fraudulent claims

FRAWLEY, Patrick, Jr.

Ball-point pen blitz. Fortune 47:222 F '53

How to put life in a slow market; Paper-Mate ball point pens. pors Bsns W p46+ My 23 '53

FRAZIL ice. See Hydroelectric plants—Ice protection

FREAS, Howard G. 1900-

Freas, named to I.C.C., approved by Senate group. Ry Age News ed 135:9-10 Jl 20 '53

FREDERICTON, New Brunswick

Water supply

First stage of waterworks improvement program completed. il plan diag Munic Util 91: 21-2+ Ag '53

FREE energy

Calculated approximate values of the free energy function for the OD molecule. G. McDonald. Am Chem Soc J 74:5539-40 N 5 '52

Free energies and phase transition of a cylindrical superconductor. P. M. Marcus. bibliog diags Phys R 88:373-81 O 15 '52

Free energies of formation of tricalcium and tetracalcium phosphates. J. B. Bookey. bibliog diag Iron & Steel Inst J 172:61-6 S '52

Free energy of formation of magnesium phosphate. J. B. Bookey. bibliog Iron & Steel Inst J 172:66-8 S '52

Free energy of vaporization of metals from 0° to 2000°C. J. W. Evans. bibliog J Metals 5:Trans 655-7 My '53

Parameters for the description of transition states. J. E. Leffler. Science 117:340-1 Mr 27 '53

Use of free energy data in the construction of phase diagrams. W. J. Knapp. bibliog Am Cer Soc J 36:43-7 F 1 '53

FREE enterprise. See Capitalism

FREE goods. See Sales policies—Free goods

FREE offers. See Advertising copy—Free offers

FREE piston engines. See Gas Turbines—Free piston engines

FREE ports and zones

Egyptian ports may be made free zones. For Comm W 49:5 Ja 12 '53

FREE radicals. See Radicals (chemistry)

FREE speech

Is criticism of FTC free speech or contempt? G. H. Weil. Ptr Ink 242:33-4 Ja 9 '53

Press should uphold right to be wrong. S. Brown. Ed & Pub 86:14+ Ja 10 '53

FREE trade and protection

Can there be one voice for business? Bsns W p 150+ Ap 4 '53

Free trade is inevitable. Fortune 47:96-9+ Mr '53

Trade not aid; damage to basic U.S. industries which politics would cause. J. E. Kelly. il Min Cong J 39:86-7 Je '53

FREE trials

See also

Advertising copy—Trial offers

FREE zones. See Free ports and zones

FREEDOM. See Liberty

FREEDOM of information

Advises aid in information pact. C. A. Sprague. Ed & Pub 85:12 D 27 '52

All city records in Woonsocket open to press. Ed & Pub 86:46 Ja 31 '53

ASNE publishes book on access to public records; U.S. tells its views on freedom of info. Ed & Pub 86:9+ Ap 11 '53

AP editors ask U.S. to end secrecy rule. R. U. Brown. Ed & Pub 85:15+ N 22 '52

Court's censorship in sex case arouses press, public. R. Erwin. Ed & Pub 86:7+ F 14; 15+ F 21 '53

Editorial best weapon against suppression. J. W. Dragonetti. Ed & Pub 86:8 F 14 '53

It took some digging to get deserter story. Ed & Pub 86:10 Ja 10 '53

Ohio newsmen hear press freedom pleas. Ed & Pub 85:38 S 27 '52

Press freedom clinic is achieving its aim. J. W. Dragonetti. Ed & Pub 86:14 F 21 '53

Right of correction treaty is advanced. K. Teltsch. Ed & Pub 85:11 N 8 '52

Watchdog is advised for official sources. Ed & Pub 85:8+ D 6 '52

See also

Scientific information, Freedom of

FREEDOM of the press

Calls for freedom of expression. A. H. Sulzberger. Ed & Pub 86:14 Ja 17 '53

Fine's central news clearance stirs tempest. Ed & Pub 86:13 F 21 '53

Freedom of an editor. Economist 167:731 Je 13 '53

IAPA report on freedom. Ed & Pub 85:66 O 18 '52

Report from Brazil; Ultima Hora's story. S. Wainer. Ed & Pub 85:4+ D 13 '52

Scholarship to slave countries advocated. A. G. Paz. Ed & Pub 85:63 N 8 '52

Strict censorship clamped on papers in Colombia. il Ed & Pub 85:7-8 S 20 '52

Tony; this is heaven compared to Italy. A. Quintieri. Ed & Pub 85:42 S 20 '52

See also

College newspapers

FREEMAN, Sterry Baines, 1875-1953

Sketch. Engineer 195:391 Mr 13 '53

FREEPORT sulphur company

Bet on nickel; to develop large new deposit in Cuba; will build to test new chemo-metallurgical process. W. F. Boericke. Barron's 33:17 My 18 '53

More nickel in Cuba. Bsns W p33 Ap 25 '53

On the frontier. il Fortune 46:104-5 D '52

Twenty stocks acting best, poorest; with tables. J. S. Williams. Mag of Wall St 92:227+ My 16 '53

FREEWAX corporation

How Feinberg brought Freewax to big city; insect-killing floor wax. il Bsns W p62-4+ N 1 '52

FREEWAYS. See Expressways

FREEZERS

How western processors slash package-freezing costs; Knowles automatic package freezer. il diag Food Eng 25:50-1+ S '53

Rapid-freezer handles multi-sized packages. il Food Eng 25:99 Mr '53

Manufacture

Ingenious devices speed production; Sweden freezer manufacturing co.; illustrations with text. H. E. Jackson. Mill & Factory 53:120-1 Jl '53

FREEZERS, Domestic

Exit freezer promotion headaches; freezer-food plan. B. Rosenthal. il Dom Eng 181:108-12 Ja '53

Food freezer plan; what it is, how it works. C. A. Ray. il Sales Management 69:65-6 N 1 '52

Freezer; rocking the food industry. Bsns W p64-6+ Mr 28 '53

Freezers plus; sales spread to Boston department stores. Bsns W p 132+ N 22 '52

Home freezer broods chicks at 20 F; infrared lamp provided direct heat. W. Kollmayr. il Elec World 139:140+ Mr 9 '53

Home freezers. L. M. S. Cooper and others. il diags Refrig Eng 61:964-73+ S '53

Is the freezer-food plan here to stay? W. Lapin. Sales Management 69:102+ O 15 '52

Rise of food plans; tie-in sale of a food freezer with frozen foods. R. R. Henry. J Retailing 29:35-6+ Spring '53

Satisfied customers provide best leads; Amana freezers. C. J. Swan. il Ptr Ink 241:41-3 N 7 '52

What IHC says to farmers' wives about food freezers. R. H. Burnside and J. H. Coats. il Sales Management 70:30-2+ F 1 '53

What the freezer-food plan means to plumbing dealers. L. J. Sorensen. Dom Eng 181:111+ Ja '53

Advertising

Amana pegs sales appeal to high cost of eating. il Sales Management 69:72+ N 10 '52

We've been gypped by bait advertising; food freezer plans and slick tv repair deals. Sales Management 70:97-8 F 1 '53

Manufacture

Combination bender and welder makes freezer cabinets. il Am Mach 97:148 S 28 '53

Standards

Proposed ASRE standard; method of rating and testing home freezers. plans diags Refrig Eng 61:635-40 Je '53 (reprints 40c)

Testing

Frost deposit in the home freezer. E. C. McCracken and M. G. Fisher. il Refrig Eng 61:166-7+ F '53

FREEZERS, Ice cream. See Ice cream freezers

FREEZING

Better potato dehydrating by slow freezing. R. C. Hall. bibliog il Food Eng 25:90-1+ Mr '53

Effect of protein dispersion on freeze-thaw stability of latex emulsion, by the Northwestern club. Paint Oil & Chem R 115:52-4+ D 4 '52; Abstract. Oil Paint & Drug Rep 162:78 N 24 '52

Freeze-thaw studies of latex paint polymers. F. A. Digioia and R. E. Nelson. bibliog Ind & Eng Chem 45:745-8 Ap '53

Freezing of water in pipes and vessels. R. S. Dill. diags Heat & Ven 50:95-101 O '53

Nonfreezing water and nonfreezing benzene capacities of cottons and modified cottons. F. C. Magne and E. L. Skau. bibliog(36 ref) Textile Res J 22:748-56 N '52

Quicker freeze; Denmark process. Sci Am 181:30+ D '52

Top-rank quick-freeze operation; Lamb-Western, inc. P. Lamb and C. R. Havighorst. flow sheet(p 118-21) il Food Eng 25:68-73 Ja '53

See also

Coal—Freezing
Concrete—Freezing
Food, Frozen
Frost heaving
Refrigeration and refrigerating machinery
Soils—Freezing
Water pipes—Freezing

FREEZING of assets. See Foreign exchange—Regulation

FREEZING points

Basicity of hydrocarbons; cryoscopy of conjugated hydrocarbon and carbinol solutes in sulphuric acid. V. Gold, B. W. V. Hawes and F. L. Tye. diag Chem Soc J p2167-72 Je '52

Binary freezing-point diagrams for acetamide with oleic and elaidic acids. R. R. Mod and E. L. Skau. J Phys Chem 56:1016-17 N '52

Cryoscopic constants of dissociating solvents (with special reference to nitric and sulphuric acids). P. A. H. Wyatt. Chem Soc J p 1175-80 Ap '53

Freezing point and vapor pressure data for solutions of carbon dioxide with some halogen substituted methanes. T. De Vries and W. N. Vanderkooi. Am Chem Soc J 75:2253-4 My 5 '53

Freezing point curves of concentrated aqueous sulfuric acid. J. E. Kunzler and W. F. Giauque. bibliog Am Chem Soc J 74:5271-4 N 5 '52

Freezing point diagram and liquid-liquid solubilities of the system uranium hexafluoride-hydrogen fluoride. G. P. Rutledge, R. L. Jarry and W. Davis, jr. bibliog diag J Phys Chem 57:541-4 My '53

Freezing point lowering and solubility curves of cellulose fibers. J. M. Preston and M. V. Nimkar. bibliog Textile Res J 23:119-20 F '53

Freezing points of hydrocarbons vary widely. W. L. Nelson. Oil & Gas J 52:141 My 11 '53

Vapor pressures and freezing points of the system nitrogen tetroxide-nitric oxide. A. G. Whittaker and others. bibliog diag Am Chem Soc J 74:4794-7 O 5 '52

FREIGHT, Perishable

See also

Refrigerator cars

FREIGHT airplanes. See Airplanes, Freight

FREIGHT and freightage

See also

Air freight service
Airplanes, Freight
Freight cars
Freight handling
Freight ships
Motor trucks in freight service
Packing for shipment
Railroads—Freight
Railway express agency
Shipment of goods
Shipping
Transportation

FREIGHT car service

Agriculture department study sees tight car supply. Ry Age News ed 135:9 Ag 31 '53

B.R.T. favors trailers-on-flats. W. P. Kennedy. Ry Age 135:11 Jl 27 '53

Canadian Pacific, Canadian National inaugurate trailers on flats service. il Ry Age 133:13 D 8 '52

Centralized machine car accounting; Santa Fe. flow chart il Ry Age 135:62-71 O 5 '53

Cross country potato race. il Ry Age 135:101-3 Ag 10 '53

End of 1952 finds car situation favorable. A. H. Gass. Ry Age 133:13 D 29 '52

GM unveils trailer transport. N. C. Dezendorf. il diags Ry Age 135:80-2 O 5 '53

Gondola car shortages slow steel deliveries. Ry Age 133:16 O 27 '52

More device cars. Ry Age 135:13-14 Jl 27 '53

New Haven poses 20 questions on piggybacks. Ry Age News ed 135:34 O 12 '53

1952 figures reflect relatively little progress on car program. Ry Age 134:11 F 2 '53

Operations research in distributing empty cars. Ry Age 134:73-4 Ap 20 '53

Pennsylvania railroad announces $47 million freight service betterment. W. S. Franklin. Ry Age 133:17-18 N 17 '52

Piggy-back brightest hope. D. V. Fraser. Ry Age 135:15 O 19 '53

Piggy backs, good or bad? trailers-on-flatcar service. J. S. Gallagher, jr. il Ry Age 134:80-3 Ap 20 '53

Railroads cut empty box car miles. Ry Age News ed 134:9 My 11 '53

Slow progress in freight car buildup. A. H. Gass. Ry Age 133:11+ D 1 '52

Talk won't sell service! D. J. McGanney. Ry Age News ed 135:11-12 Ag 17 '53

See also

Freight cars—Interchange
Refrigerator cars

Car load

Channelizing by Griffin plan brings better l.c.l. service. il Ry Age 134:75-7 Ap 6 '53

My chief gripe about railroads. J. R. Staley. Ry Age 134:13 Ap 6 '53

Rates, service key to l.c.l. problem; transportation forum. T. C. Burwell and others. Ry Age 135:12-13 Jl 13 '53

FREIGHT cars

Airslide covered hopper car. il diags Ry Loco & Cars 127:78-80 Je '53; Abstract. Ry Age 134:14-15 My 4 '53

Big cars haul assembled generators. il Elec World News ed 139:23 F 2 '53

Chesapeake & Ohio makes grain cars from automobile box cars. il Ry Age 133:71 N 17 '52

Compartmentized car. il diag Food Eng 25:77 Ja '53

For the Western Pacific another 20 compartmentizer cars. il Ry Age 133:58-9 N 17 '52

Freight cars; order backlogs continue rapid slide. E. C. Kellogg. Iron Age 171:95-6 Je 18 '53

Freight cars; output off the track; railroads press once more for 10,000-car goal. K. M. Bennett. Iron Age 170:81 D 18 '52

Modified hoppers for bulk flour. Ry Age News ed 134:10 My 11 '53

More long cars; better floors. E. A. Londahl. Ry Loco & Cars 127:65 Ag '53

New type car broadens bulk-shipment field. il Food Eng 25:145 Je '53

New-type freight cars needed. E. G. Plowman. Ry Age 135:15 Jl 27 '53

NP box cars built in record time. il Ry Loco & Cars 127:75 O '53

Side and end sheets last 19 years. il Ry Age 134:116-17 Je 15 '53

Standard wagons for British railways. il Engineer 195:424 Mr 20 '53; Engineering 175:380-1 Mr 20 '53

Steel requirements for railroad freight cars; tabulation. Iron Age 171:441 Ja 1 '53

This car keeps wet wood pulp from freezing. il Ry Age News ed 135:15 O 12 '53; Same. Paper Ind 35:648 S '53; Same abr. Paper Tr J 137:24 Ag 14 '53

Wagons and containers of British railways. Engineering 175:221-3 F 13 '53

See also

Air brakes
Car department officer's association
Car painting and finishing
Car wheels
Loading and unloading—Cars
Ore cars
Refrigerator cars
Tank cars

Cleaning

Hobart repair yard increases Santa Fe's car output. il plan Ry Mech & Elec Eng 126:61-5 O '52

Design

Car construction; A.A.R. Mechanical division committee report. Ry Loco & Cars 127:56-7 Ag '53

Car design for reduced maintenance. H. L. Price. il Ry Loco & Cars 127:79-81 Mr '53

Factors in hopper-car design on Virginian. L. W. Doggett. Ry Loco & Cars 127:56-7; Discussion. C. Hankins. 57 Jl '53

Pullman-Standard designs all-welded covered hopper. il Ry Age 134:119-21 Mr 9 '53; Same. Ry Loco & Cars 127:74-6 Ap '53; Abstract. Welding J 32:442 My '53

Insect infestation

No weevils here; glass fiber blanket in car ends. il Ry Age News ed 135:26 S 14 '53

Interchange

Boston & Maine, New Haven go independent on per diem. Ry Age 134:16 Je 29 '53

Direct route plan for empties. Ry Age 135.58-9 Jl 27 '53

Graduated per diem would be financial incentive to buy cars. H. K. Norton. il Ry Age 134:66-8 Ap 6 '53

How punch cards help as CPR cuts car hire expense. il Ry Age 135:92-3 S 21 '53

Interchange rules. Ry Loco & Cars 127:112 S; 88-9 O '53

I.C.C. gets per diem dispute. Ry Age News ed 135:11 S 28 '53

FREIGHT cars—Interchange—*Continued*
NYS&W asks per diem damages. Ry Age News ed 135:12-13 Ag 17 '53
What's new in interchange rules? Ry Loco & Cars 127:71-5 My '53

Manufacture

Stud welding saves time; Canadian car and foundry co. il Welding J 31:1049-50 N '52

Painting

See Car painting and finishing

Reconstruction

Box car upgrading on the Chesapeake & Ohio. Ry Mech & Elec Eng 126:70-3 D '52
Frisco improves 600 box cars. il Ry Age News ed 134:23 Ap 27 '53
How the Frisco is making steel grain cars from wood box cars. il Ry Loco & Cars 127:74-7 Je '53
Unusual welding setup speeds remodeling of gondola cars. il Iron Age 171:152 My 14 '53; Same. Steel 132:135 My 18 '53; Same. Welding J 32:741 Ag '53

Renting

Freight cars at bargain rentals. Bsns W p 130 Jl 11 '53
New car-leasing plan offered; abstract. R. L. Morrison. Ry Age News ed 134:13 Je 22 '53

Repair

Car design for reduced maintenance. H. L. Price. il Ry Loco & Cars 127:79-81 Mr '53
Conditioning cars for higher commodity classification; report of Car department officers' association. Ry Mech & Elec Eng 126:102-3 N '52
Hobart repair yard increases Santa Fe's car output. il plan Ry Mech & Elec Eng 126:61-5 O '52
How Santa Fe reduces hot boxes. il Ry Age 135:51-4+ Jl 27 '53
Indoor and outdoor pits for truck repairs; Louisville & Nashville. il Ry Mech & Elec Eng 126:72-6 O '52
Jobs that constitute light freight-car repairs. R. H. Herman. il Ry Loco & Cars 127:85-9 Je '53
One building houses car and Diesel shop; Ann Arbor railroad. il plan diags Ry Mech & Elec Eng 126:66-9 O '52; Same cond. Ry Age 133:108-9 O 6 '52
Shops and procedures for heavy freight-car repairs. R. H. Herman. il Ry Loco & Cars 127:66-70 My '53

Statistics

Freight cars delivered, 1941-1952; tabulation. Iron Age 171:442 Ja 1 '53
37,911 freight-train cars ordered in 1952. C. B. Peck and F. C. Miles. il Ry Age 134:220-5 Ja 12 '53

Testing

What causes stresses in brake beams. R. B. Cottrell. il Ry Loco & Cars 127:45-8 F '53

FREIGHT cars, Aluminum
Six years' experience with an aluminum reefer. il Ry Loco & Cars 127:72-5 Mr '53; Excerpts. Ry Age 134:57-8 F 23 '53

FREIGHT cars, Steel
How the Frisco is making steel grain cars from wood box cars. il Ry Loco & Cars 127:74-7 Je '53
Transformer trolleys for British railways. diags Engineer 194:168 Ag 1 '52

FREIGHT claims. See Railroads—Claims

FREIGHT forwarders. See Forwarding companies (air freight)

FREIGHT handling
Air freight handling operations. C. Froesch and others. Mech Eng 74:837-9 O '52
Freight house goes modern; Santa Fe Corwith freight house. il Nat Safety N 67:34-5+ Ap '53
Questions and answers for the transportation department. Ry Age News ed 134:24 Je 22 '53 [cont bi-weekly]
See also
Airplanes, Freight
Cargo handling
Containers (for shipping)
Freight houses
Grain—Transportation
Loading and unloading—Cars
Motor trucks in freight service
Railroads—Freight
Railroads—Terminals
Train ferries

Store door delivery

Golf tees speed city delivery; Frisco's new method of loading city delivery trucks. il Ry Age 135:96 Ag 10 '53

FREIGHT houses
How the Santa Fe's new station speeds l.c.l. handling. il plan Ry Age 133:75-9 D 1 '52
To speed freight; Santa Fe's less-than-carlot freight terminal, Chicago. il Bsns W p 138 N 8 '52
See also
Railroads—Terminals

Electric equipment

Railway freight handling; speedier electrical aids demonstrated. il Electrician 149:995 O 3 '52

Equipment

Freight house goes modern; Santa Fe Corwith freight house. il Nat Safety N 67:34-5+ Ap '53
Santa Fe builds modern freighthouse for San Francisco. il plan Ry Age 134:42-5 Ja 26 '53
Tow conveyor cuts freight handling costs. il Elec World 139:192+ My 18 '53
Tractor for railway goods depots; Scott electric vehicles, ltd. il Engineer 195:149 Ja 23 '53
Trucking subsidiary gets modern freighthouse and garage. il plan Ry Age 135:60-3 Jl 27 '53

Lighting

Freighthouse electrical equipment; illustrations with text. diag Ry Mech & Elec Eng 126:77-82 D '52
Lighting a railway freight station; data sheet. R. W. Renkel. il plan Illum Eng 48:361-2 Jl '53

FREIGHT rates
Newfoundland finds high freight rates growing burden to economy. For Comm W 49:20 My 11 '53
See also
Railroads—Rates

FREIGHT ships
Bethlehem Quincy yard launches third Mariner. il Marine Eng 58:65 Ja '53
Building the Mariner ships. il plans diags Marine Eng 58:79-117 My '53
Cunard cargo liner Pavia. Engineer 195:891 Je 26 '53; Engineering 176:92 Jl 17 '53
How Mariners perform in service. R. L. Hicks. Marine Eng 58:73+ My '53
Huron adds to Great Lakes fleet; Portland cement co.'s self-unloading bulk cement ships. il Am Concrete Inst J 24:sup 15 My '53
Mariner ships meet growing demands of U.S. industry and commerce. A. W. Gatov. For Comm W 48:15+ O 20 '52
Mariners strengthen United States maritime power. A. W. Gatov. Marine Eng 58:72+ My '53
Pacific transport lines expands service with cargoliner, Japan Transport. il Marine Eng 58:89 O '53
Paul H. Townsend christened. il Marine Eng 58:92 Je '53
Planning the Mariner class fast cargo ships. il Marine Eng 58:74-8 My '53
Self-unloading cement ship. B. Nordberg. il Rock Prod 56:96-9 Je '53
Why Mariners were needed. E. L. Cochrane. Marine Eng 58:71+ My '53
See also
American tramp shipowners association
Barges
Ore ships
Tank ships
Train ferries

Safety measures

See Safety at sea

FREIGHT terminals. See Railroads—Terminals

FREIGHT yards. See Railroads—Yards

FREMY'S salt
Preparation of Fremy's salt. G. Harvey and R. G. W. Hollingshead. Chem & Ind p244-5 Mr 14 '53

FRENCH abbreviations. See Abbreviations, French

FRENCH INDO-CHINA. See Indo-China, French

FRENCH language
See also
Abbreviations, French

FRENCH MOROCCO. See Morocco

FREON. See Chlorofluoromethanes

FREON-12. See Dichlorodifluoromethane

FREON 22. See Chlorodifluoromethane

FREQUENCY changers
Electronic frequency changer tie between ac power systems; abstracts. H. Winograd. Power 97:232+ My '53; Elec Eng 72:398 My '53
Frequency changer for resistance welding. M. E. Bivens. il diags Electronics 26:108-14 F '53
Frequency-shift carrier-current equipment for telemetering and other control functions. R. W. Beckwith. bibliog diags Elec Eng 71:1026-31 N '52
Paralleling synchronous frequency changers. H. H. Roth. il diags Iron & Steel Eng 30:113-15 Ja '53

FREQUENCY control
Constant-frequency control. il Blast F & Steel Pl 41:116 Ja '53; Same. Franklin Inst J 255:91 Ja '53

FREQUENCY distribution (statistics)
Confidence intervals for medians and other position measures. R. S. Woodruff. Am Stat Assn J 47:635-46 D '52

FREQUENCY measurement
Instantaneous measurement of a varying frequency. L. U. Hibbard and D. E. Caro. diags J Sci Instr 29:366-70 N '52
Oscillator for comparison measurement of power frequencies. A. L. Betts. bibliog diags Electronics 26:252+ Je '53
Redundant information supplied in practical applications by the time and frequency-phase responses of a system. M. Levy. J Ap Phys 23:801-2 Jl '52
Telemetering and direct frequency measurement. P. M. Erlandson. diags Tele-Tech 11:52-3+ O; 62-3+ N '52

FREQUENCY meters
Bridge-network unit for frequency indication. il Engineering 175:512 Ap 17 '53
Field problem in instrumentation; isolating vibration from frequency meter. il Diesel Power 31:99 Ap '53
Frequency deviation meter. il diag Tele-Tech 12:85+ Ag '53
Hetromon for frequency checking. J. P. Neil. il diag Q S T 36:32-4+ D '52
Modulation and frequency indicator for vhf and uhf. R. Grimm. il diags Tele-Tech 12:86-7+ Ag '53
Monimeter. L. V. Broderson. il diags Radio & Tv N 50:47+ Jl '53
Production-testing filters. W. Rianda. il diags Electronics 26:300+ Ap '53

FREQUENCY modulation. See Radio frequency modulation

FREQUENCY modulation receivers. See Radio receiving apparatus—Frequency modulation receivers

FREQUENCY standards
Ham shack frequency standard. R. Graham. il diag Radio & Tv N 49:56-7+ Mr '53
Industrial frequency standard. H. W. Kline. il diag Electronics 25:130-1 N '52
Transistor band spotter. P. G. Sulzer. il diags Radio & Tv N 49:52-3+ Je '53
Transistor frequency standard. P. G. Sulzer. diags Electronics 26:206+ My '53
See also
Radio broadcasting—Frequency standards

FRESH water fauna
Aquatic organisms as an aid in solving waste disposal problems. R. Patrick. bibliog Sewage & Ind Wastes 25:210-14; Discussion. 214-17 F '53
Biological effects of pollution in Michigan waters. E. W. Surber. maps Sewage & Ind Wastes 25:79-86 Ja '53
Effect of kraft mill wastes on stream bottom fauna. J. N. Wilson. bibliog maps Sewage & Ind Wastes 25:1210-18 O '53
Pollution of the Spanish river studied biologically. R. G. Ferguson. Munic Util 91:31-2+ F '53
See also
Rotifera

FRETTING corrosion. See Corrosion and anticorrosives

FRICKE, Raymond
Fricke's glad you're abroad, wins him Man of year honors. G. J. MacMurray por Bus Transportation 32:61 Ap '53

FRICTION
Amontons' law and fibre friction. H. G. Howell and J. Mazur. bibliog il diags Textile Inst J Trans 44:T59-69 F '53
Braking distances of vehicles from high speed and tests of friction coefficients. O. K. Normann. il diags Pub Roads 27:159-69 Je '53
Coefficients of friction of rubber samples. J. A. Hurry and J. D. Prock. il diag India Rubber World 128:619-22 Ag '53
Convective heat-transfer and flow-friction behavior of small cylindrical tubes; circular and rectangular cross sections. W. M. Kays and A. L. London. bibliog A S M E Trans 74:1179-89 O '52
Coulomb friction in feedback control systems; abstract. V. B. Haas, jr. diag Elec Eng 72:405 My '53
Effect of friction on compression and rarefaction waves of finite amplitude. F. J. Wallace and M. Nassif. diag Engineering 175:674-7, 708-9 My 29-Je 5 '53
Friction factors for turbulent flow in pipes. E. F. Wilsey. bibliog Am Soc C E Proc 79 [no 197]:1-6 Je '53
Friction losses in round aluminum ducts. F. W. Hutchinson. bibliog il Heating-Piping 25:119-24 My '53
Friction surfaces for spin-up simulation in landing-gear drop tests. D. W. Drake. il A S M E Trans 74:1269-79; Discussion. 1279-81 O '52
General case of friction of a string round a cylinder. H. G. Howell. bibliog diag Textile Inst J Trans 44:T359-62 Ag-S '53
Heat-transfer and flow-friction characteristics of some compact heat-exchanger surfaces; design data for five surfaces. A. L. London and others. bibliog il diags A S M E Trans 74:1167-77 Discussion. 1177-8 O '52
Inter-fibre friction of viscose rayon. J. C. Guthrie and P. H. Oliver. bibliog(31 ref) il Textile Inst J Trans 43:T579-94 D '52
Investigation of the frictional properties of textile fibers under variable fiber stress. B. G. Hood. il diags Textile Res J 23:495-505 Jl '53
Kinetic coefficient of friction of paper. G. Broughton and J. L. Gregg. bibliog il Tappi 35:489-93 N '52
Laws of static friction. H. G. Howell. bibliog Textile Res J 23:589-91 Ag '53
Measurement of friction between single fibers; physicochemical views of interfiber friction. N. Gralen and others. bibliog diags Textile Res J 23:623-9 S '53
Measurements of the influence of finishing agents on the friction of fibres. H. L. Röder. bibliog il diags Textile Inst J Trans 44:T247-65 Je '53
Metal-cutting friction coefficient needs reinterpretation. M. Kronenberg. diag Tool Eng 31:49-50 O '53
Metal transfer and wear. I. Feng. il diags J Ap Phys 23:1011-19 S '52
Nature of the coefficient of friction. J. T. Burwell and E. Rabinowicz. bibliog diag J Ap Phys 24:136-9 F '53
Radioactive tracers reveal friction and wear of metals. J. T. Burwell and C. O. Strang. il diag Metal Prog 60:69-74 S '51; Same cond. Product Eng Hdbk p A 10-12 '53
Stick-slip; method for determining frictional qualities of filament yarns and staple. G. W. Bartlett and others. il Mod Textiles Mag 34:51+ Ap; 50+ My '53; Textile Res J 23:647-57 S '53
Study of the factors affecting the friction of tread compounds on ice. C. S. Wilkinson, jr. bibliog il diags India Rubber World 128:475-81 Jl '53
Two methods of calculating the friction in pipe lines. F. E. Giesecke. diag Heating-Piping 24:120-2 D '52

FRICTION—*Continued*

Useless friction costs as much as useful friction. W. F. Schaphorst. Pulp & Pa of Can 53:100 D '52

See also

Bearings

Lubrication and lubricants

Skin friction

FRICTION, Internal

Anelasticity of zinc. S. Takahashi. il J Ap Phys 23:866-8 Ag '52

Apparatus for measuring internal friction in transversely vibrating metal reeds; Strobotac. W. R. Jewell. diags R Sci Instr 24:5-10 Ja '53

Effects of F centers on the internal friction of rocksalt single crystals. D. R. Frankl and T. A. Read. Phys R 89:663-4 F 1 '53

Temperature dependence of the elastic moduli and internal friction of silica and glass. J. W. Marx and J. M. Sivertsen. bibliog diags J Ap Phys 24:81-7 Ja '53

Temperature dependence of Young's modulus and internal friction of single crystals of beta-brass. R. A. Artman. il J Ap Phys 23:475-82 Ap '52

Viscoelastic properties as functions of the distribution of activation energies. W. J. Lyons. bibliog J Ap Phys 24:217-21 F '53

FRIEDEL-CRAFTS reaction

Acylation and allied reactions catalysed by strong acids; the alleged activity of silver perchlorate as a Friedel-Crafts catalyst. H. Burton and P. F. G. Praill. Chem Soc J p837-9 Mr '53

Carcinogenic nitrogen compounds; Friedel-Crafts reactions with *m*- and *p*-fluorotoluene. N. P. Buu-Hoï and N. D. Xuong. Chem Soc J p386-8 F '53

Esterification catalysis by metal halides. M. E. Hill. Am Chem Soc J 75:3020-1 Je 20 '53

Friedel-Crafts acetylation of *p-tert.*-butyltoluene. E. P. Taylor and G. E. Watts. Chem Soc J p5054 D '52

Friedel-Crafts reaction in elementary organic laboratories. O. L. Wright and others. diag J Chem Educ 29:620-1 D '52

Friedel-Crafts reactions between gaseous benzene and ethyl chloride on solid aluminum chloride. M. Blau and J. E. Willard. bibliog Am Chem Soc J 75:3330-3 Jl 20 '53

Friedel-Crafts reactions of triphenylene. N. P. Buu-Hoï and P. Jacquignon. Chem Soc J p941-2 Mr '53

Friedel-Crafts succinoylation of anthracene; synthesis of 1′- and 4′-hydroxy-1 : 2-benzanthracene. R. Schoental. Chem Soc J p4403-6 N '52

Halogen migration in the Friedel-Crafts acylation of olefins. C. L. Stevens and E. Farkas. bibliog Am Chem Soc J 75:3306-8 Jl 20 '53

Internal condensation of 2,4-diphenyl-1-butanesulfonyl chloride to a five- in preference to a seven-membered cyclic sulfone. W. E. Truce, D. D. Emrick and R. E. Miller. bibliog Am Chem Soc J 75:3359-61 Jl 20 '53

Nitration of phenoxathiin and some new amino derivatives. J. F. Nobis, A. J. Blardinelli and D. J. Blaney. bibliog Am Chem Soc J 75:3384-7 Jl 20 '53

Titanium tetrachloride as a catalyst in the Friedel-Crafts reaction; addition compounds. N. M. Cullinane, S. J. Chard and D. M. Leyshon. Chem Soc J p4106-8 N '52

FRIEDMAN, Edmund

Sketch. por Civil Eng 22:959 N '52

FRIES reaction

Attempted Fries reaction with thiolesters; the formation of trithioörthoesters. D. S. Tarbell and A. H. Herz. bibliog Am Chem Soc J 75:1668-72 Ap 5 '53

FRITO company, Dallas, Texas

Stock offered. Comm & Fin Chr 177:1153 Mr 16 '53

FRITS

Better coating for moly; chromium-frit combination cuts rapid oxidation in jet engine use. Steel 131:97 Ag 11 '52; Cer Ind 59:71 S '52; Iron Age 170:192 S 18 '52; Metal Finishing 50:61 O '52; Mech Eng 74:824 O '52; Glass Ind 34:144 Mr '53

Frit dust reclaim ends needless loss. il Cer Ind 59:80 O '52

FRITZ, Clara W.

Her job is unusual, she seeks wood fungi. Pulp & Pa of Can 54:146+ S '53

FROGS

See also

Amphibia

FROMM and Sichel, inc.

Wine on the U.S. dinner table; Chateau Masson line. il Bsns W p48+ N 8 '52

FRONTIER airlines

Frontier reports '52 salaries, holdings. Aviation W 58:93 Ap 6 '53

FRONTIER and pioneer life

United States

End of the great frontier; review of Great frontier by W. P. Webb. Bsns W p 160-2 Ja 17 '53

FRONTIER formation

Frontier formation, southwest Powder River basin, Wyoming. D. Towse. bibliog maps diags Am Assn Pet Geologists Bul 36:1962-2010 O '52

Frontier formation, Wyoming and adjacent areas. W. A. Cobban and J. B. Reeside, jr. bibliog map diags Am Assn Pet Geologists Bul 36:1913-61 O '52

FRONTIER refining company

Debentures offered. Comm & Fin Chr 176:1863-4 N 17 '52

FROST

Frost deposit in the home freezer. E. C. McCracken and M. G. Fisher. il Refrig Eng 61:166-7+ F '53

Late quaternary geology and frost phenomena along Alaska highway, northern British Columbia and southeastern Yukon. C. S. Denny. maps diags Geol Soc Bul 63:883-921, pl 1-12 bibliog(p920-1) S '52

FROST heaving

How to prevent damage from heaving of piping at regulator stations. C. E. Williams. il diags Gas Age 111:32+ Mr '53

FROTH. See Foam

FROTHING. See Foaming

FROZEN fish. See Fish, Frozen

FROZEN food. See Food, Frozen

FROZEN fruit. See Fruit, Frozen

FROZEN ground. See Soils—Freezing

FROZEN lemon juice. See Lemon juice, Frozen

FROZEN orange juice. See Orange juice, Frozen

FROZEN shrimps. See Shrimps, Frozen

FRUCTOPYRANOSYL bromide

Crystalline tetrabenzoyl-β-D-fructopyranosyl bromide and its reduction by lithium aluminum hydride to 1,5-anhydro-D-mannitol and 1,5-anhydro-L-gulitol. R. K. Ness and H. G. Fletcher, jr. bibliog Am Chem Soc J 75:2619-23 Je 5 '53

FRUCTOSANS

Isolation of sucrose from the partial hydrolysis of the fructosan from lolium perenne. G. O. Aspinall and R. G. J. Telfer. bibliog Chem & Ind p 1244-5 D 20 '52

Studies on fructosans; a fructosan from dactylis glomerata. G. O. Aspinall and others. Chem Soc J p337-42 Ja '53

FRUCTOSE

Degradation of D-glucose, D-fructose and invert sugar in carbonate-buffered water solutions. L. J. Heidt and C. M. Colman. Am Chem Soc J 74:4711-13 S 20 '52

D-Fructose dihydrate. F. E. Young, F. T. Jones and H. J. Lewis. bibliog il diag J Phys Chem 56:738-9 Je '52

D-Fructose hemihydrate. F. E. Young, F. T. Jones and D. R. Black. bibliog Am Chem Soc J 74:5798-9 N 20 '52

D-Fructose-water phase diagram. F. E. Young, F. T. Jones and H. J. Lewis. bibliog J Phys Chem 56:1093-6 D '52

Isolation of fructose from beef serum. F. A. H. Rice. bibliog Am Chem Soc J 75:2262-3 My 5 '53

Malic acid-fructose reaction. G. E. Livingston. bibliog Am Chem Soc J 75:1342-4 Mr 20 '53

Protection against alloxan diabetes by mannose and fructose. G. Bhattacharya. bibliog Science 117:230-1 F 27 '53

Rates of hydrolysis of fructose-6-phosphoric acid. S. L. Friess. Am Chem Soc J 74:5521-2 N 5 '52

FRUCTOSE—*Continued*

Synthesis of sugars from simpler substances; enzymic synthesis of 6-deoxy-D-fructose and 6-deoxy-L-sorbose. L. Hough and J. K. N. Jones. Chem Soc J p4052-5 O '52

Thermal mutarotation of some methylated D-fructoses. D. J. Bell. Chem Soc J p 1231-3 Ap '53

Transaldolase; the formation of fructose-6-phosphate from sedoheptulose-7-phosphate. B. L. Horecker and P. Z. Smyrniotis. Am Chem Soc J 75:2021-2 Ap 20 '53

Validity of the Seliwanoff reaction on fructose. E. Berner and S. Sandlie. Chem & Ind p 1221-2 D 13 '52

Analysis

Estimation of fructose by the cyanohydrin reaction. R. D. Coombs, 3d, A. R. Reid and C. B. Purves. Anal Chem 25:511-12 Mr '53

FRUCTOSYLAMINES

N-substituted glycosylamines; *N*-aryl-D-fructosylamines. C. P. Barry and J. Honeyman. Chem Soc J p4147-50 N '52

FRUEHAUF trailer company

Fruehauf Trailer seen facing bright 1953. Barron's 33:33 Mr 23 '53

That far-away look. R. A. Fruehauf. Dun's R 60:27-8+ N '52

FRUIT

Food flavor rarely impaired by proper use of pesticides. Chem & Eng N 30:5446-7 D 29 '52

Top-of-basket display; simple aluminum foil tray for top layer. il Mod Packaging 26:112-13 Ag '53

Washing and peeling. Food Eng 25:155 O '53

See also

Apples
Bananas
Citrus fruit
Fruit, Dried

Analysis

Determination of arsenic in fruits and vegetables. J. C. Bartlet, M. Wood and R. A. Chapman. bibliog Anal Chem 24:1821-4 N '52

Extraction and determination of total pectic materials in fruits. R. M. McCready and E. A. McComb. bibliog Anal Chem 24:1986-8 D '52

Prepackaging

Adds life, guards quality of prepackaged tomatoes; New England tomato co. C. R. Havighorst. il Food Eng 25:127+ Jl '53

Film-wrapped lemons. il Mod Packaging 26:98-101 Mr '53

Films for produce. H. A. Schomer. il Mod Packaging 26:191-6 Ap '53

Fruit by mail. il Mod Packaging 26:116-19+ Ja '53

Mechanization milestone; Mayfair packing co. il Mod Packaging 26:73-7 Mr '53

Refrigeration of prepackaged fresh fruits and vegetables. H. A. Schomer. Refrig Eng 61:742-4+ Jl '53

Preservation

Fruit and vegetable storage and packaging; report of British team which visited the U.S.A. Chem Age (Lond) 68:241-4 F 7 '53

Preserving fruit; possible process. Chem Eng 59:330+ O '52

Storage

Fruit and vegetable storage and packaging; report of British team which visited the U.S.A. Chem Age (Lond) 68:241-4 F 7 '53

Transportation

Super perishables run; Santa Fe's first train of expedited perishables. Ry Age 134:11 Je 15 '53

Where railroads lose traffic to trucks. Ry Age 135:11-12 Jl 13 '53

FRUIT, Dried

Sunsweet dried fruits; nominated to packaging's Hall of fame. il Mod Packaging 26:92-7+ Jl '53

When the little dealer says, what about me? dried fruits displayed with fresh fruits and vegetables. L. B. Williams. il Sales Management 69:82+ N 20 '52

See also

Apples, Dried
Figs, Dried

FRUIT, Frozen

Quality fruits with corn syrup. E. H. Wiegand. il Food Eng 25:131+ My '53

FRUIT handling

Robots lug-box handling; Calavo Growers of California. C. R. Havighorst. il Food Eng 25:64-5+ Ap '53

FRUIT juice extractors

Citrus juice extractor has high output, protects quality; Lannen process. H. W. Stewart. il diag Food Eng 25:105 My '53

FRUIT juices

Ade on wheels. Bsns W p73 F 14 '53

Laboratory continuous distillation column for concentration of aqueous solutions of volatile flavors. K. P. Dimick and M. J. Simone. bibliog diag Ind & Eng Chem 44:2487-90 O '52

Soft drinks and fruit juices; with comments on their nutritional value. V. L. S. Charley. bibliog Chem & Ind p 1090-7 N 8 '52

See also

Grape juice

FRUIT juices, Dried

Puffed powder from juice. S. I. Strashun and W. F. Talburt. flow diag il Food Eng 25:59-60 Mr '53

FRUIT juices, Frozen

Bagging a new market; fruit-juice film container. il Chem W 72:58-9 Mr 28 '53

See also

Lemon juice, Frozen
Orange juice, Frozen

FRUIT trade

Pick-it-yourself. Bsns W p52 Je 27 '53

See also

Apples
Citrus fruit
United fruit company

Belgium

Belgian fruit crop near record high. For Comm W 49:25 My 4 '53

Germany

German pear and apple crops reach new high. For Comm W 49:18 Ap 20 '53

Great Britain

Farming without boards; fruit growers' rejection of apple and pear marketing scheme. Economist 167:280-2 My 2 '53

Netherlands

Netherlands fruit crop nears peak. For Comm W 48:22 N 24 '52

FRYERS

Expectations realized through research; counter appliance field and deep fat fryers. F. A. Kaiser. Am Gas Assn Proc 1952:210-12

FRYING

Six-factor control assures quality deep fat-fried foods. R. W. Bates. il Food Eng 24:82-3+ D '52

FUCOSE

Manufacture of algal chemicals; laboratory-scale isolation of D-glucose from laminarin and laboratory-scale isolation of L-fucose from brown marine algae; abstract and discussion. W. A. P. Black and others. Chem & Ind p235 Mr 14 '53

Occurrence of L-fucose in soil, peat, and in a polysaccharide synthesized by soil bacteria. R. B. Duff. bibliog Chem & Ind p 1104-5 N 8 '52

FUCOSTEROL

Steroid series; further reactions of fucosterol and 24-ketocholesterol. D. H. Hey, J. Honeyman and W. J. Peal. Chem Soc J p4836-9 D '52

FUEL

AIME-ASME 15th annual joint fuels conference, Philadelphia, Oct. 30-31. Coal Age 57:138+ D '52

Competitive fuels. O. F. Spencer. Am Gas J 178:23-6 Je; 179:25-8 Jl '53

Fuel consumption analysis for multi-family housing projects. R. Skagerberg and J. E. Phifer. Heating-Piping 24:117-22 N '52; Abstract. Heat & Ven 50:164 Ap '53

Fuel future; panel discussion. Heat & Ven 50:142+ O '53

H-bomb in your basement; fuels, the stored energy of nuclear reactions in the sun. F. W. Hutchinson. Heat & Ven 50:84-5 My '53

FUEL *Continued*

Romance of power and fuels. J. E. Tobey. Mech Eng 74:812-15 O '52

Use and abuse of fuels; abstract. W. E. P. Johnson. Elec R (Lond) 152:196 Ja 23 '53

See also

Airplane engines—Fuel
Automobile engines—Fuel
Automotive fuel
Blast furnace gas
Boilers—Firing
Coal
Coal, Pulverized
Coke
Coke oven gas
Combustion
Diesel engines—Fuel
Electric plants (central stations)—Fuel
Fuel economy
Furnaces
Gas as fuel
Gas turbines—Fuel
Gas turbines, Aircraft—Fuel
Gasoline
Heating
Internal combustion engines—Fuel
Kerosene
Lignite
Liquid fuel
Locomotives—Fuel
Oil fuel
Peat
Pitch
Power plants—Fuel
Smoke
Waste fuel

Statistics

Fuels consumed for residential and commercial space heating, 1935-51. A. T. Coumbe and I. F. Avery. 2pls U S Bur Mines Information Circ 7657:1-10 '53; Same cond. Gas Age 111:37-9+ Mr 26 '53

Statistical year-book of the World power conference; number six; annual statistics for 1948-1950. F. Brown, ed. 163p £1 15s World power conference, 201 Grand bldgs, Trafalgar square, London, W.C.2 '52

FUEL cells. See Electric batteries—Fuel cells

FUEL economizers

Hot air recovery system saves thousands each month in cold cash; Minnesota & Ontario paper co. il Factory Management 110:152-3 N '52

Recover waste heat in plant exhaust air to cut steam and fuel costs. H. McCall. il diag Power 97:84-5 Mr '53

Cleaning

Rain of balls cleans economizer. diag Mill & Factory 51:125 N '52

FUEL economy

Fuel savings by armed forces modernization program. Heat & Ven 50:144+ Jl '53

Gas turbine in relation to fuel economy. Karrer. diags Engineer 194:274-7 Ag 29 '52

FUEL oil. See Oil fuel

FUEL pumps. See Pumps, Fuel

FUEL research

Flame radiation research at Ijmuiden. il Engineer 193:822-4 Je 20 '52; Same abr. Blast F & Steel Pl 40:1465-6+ D '52; Excerpts. Steel 131:94+ S 1 '52; Am Cer Soc Bul 31: 404-5 O 15 '52

Fuel research and sulphur recovery; work of the Fuel research board in 1951. il Chem Age (Lond) 67:623-6 N 8 '52

Mechanism of the carbon dioxide-carbon reaction. A. E. Reif. bibliog J Phys Chem 56:785-8 Je '52

Study of the reactions of carbon monoxide with coke. A. E. Reif. bibliog diags J Phys Chem 56:778-84 Je '52

See also

Coal research
Gas research

FUEL supply

Fuel-power-raw materials; tabulations. Steel 132:200-1 Ja 5 '53

Fuel situation. K. Steiner. il Heating-Piping 25:132-5 Ja; 98-9 F '53

See also

Coal supply
Gas supply
Petroleum supply

Great Britain

Electricity and the national economy; abstract. C. H. A. Collyns. Inst E E Proc 100 pt 1:78 Mr '53

Fuel and power; debate in House of Commons, sequel to Ridley report. Elec J 149: 1316 O 31 '52

Fuel and society. G. E. Foxwell. Engineering 175:667-8 My 22 '53

Industrial fuel efficiency organisation. Engineering 176:29-30 Jl 3 '53

National fuel policy; Ridley committee's recommendations for the use of fuel and power resources. Elec R (Lond) 151:543-4, 617-18 S 12-19 '52

National policy for the use of fuel and power. Engineer 194:346-7 S 12 '52

One way to save fuel. Economist 167:931 Je 27 '53

Production and use of energy in Great Britain; abstracts. J. Hacking. Elec J 150: 2093-4+ Je 12 '53; Elec R (Lond) 152:1343-5 Je 12 '53

Ridley report. Electrician 149:749-52 S 12 '52

United States

Romance of power and fuels. J. E. Tobey. Mech Eng 74:812-15 O '52

FULLER, George A., company

Construction has adventure for George A. Fuller co. Eng N 149:49-52 O 30 '52

FULLER'S earth

Adsorption of ammonia on Fuller's earth and gas-adsorbent carbon. G. L. Bridger and R. D. Sinner. Ind & Eng Chem 45:581-2 Mr '53

Percolation decolorization of a lubricating oil fraction by Fuller's earth. W. T. Granquist and H. J. Streich. bibliog Ind & Eng Chem 44:2898-903 D '52

Reforming aided by passing charge through Fullers earth; new platforming unit. W. T. Ziegenhain. flow chart il Pet Eng 24:C42 D '52

FULMER research institute

Fulmer research institute. il Chem Age (Lond) 67:603-7 N 1 '52

Fulmer research institute. il Engineer 194: 496 O 10 '52; Engineering 174:514-15 O 17 '52

Open day at Fulmer research institute; completion of first five years' work on sponsored research. il Metallurgia 46:195-8 O '52; Abstract. Chem & Ind p 1076-7 N 1 '52

Sponsored research; work of the Fulmer institute. il Elec R (Lond) 151:785-6 O 10 '52

FULVENE

Highly polarizable C=C double bonds (fulvenes and thermochromic ethylenes). E. D. Bergmann. bibliog Am Chem Soc J 75:2761-2 Je 5 '53

LCAO self-consistent field calculations of the π-electrons energy levels and electronic structure of fulvene. G. Berthier. diag J Chem Phys 21:953-4 My '53

FUMAGILLIN

Decatetraenedioic acid, a fumagillin degradation product. J. R. Schenck and others. Am Chem Soc J 75:2274 My 5 '53

FUMARASE

Studies of the enzyme fumarase; kinetics and equilibrium. R. M. Bock and R. A. Alberty. bibliog Am Chem Soc J 75:1921-5 Ap 20 '53

FUMARIC acid

Mechanisms of elimination reactions; the alkaline dehydrohalogenation of chloro- and bromo-maleate and fumarate. S. J. Cristol and A. Begoon. Am Chem Soc J 74:5025-9 O 20 '52

FUMES

Central vacuum system draws off soldering fumes. il Electronics 26:256-7 Ja '53

Clay flues vent acid fumes. il Heating-Piping 25:82 O '53

Control and recovery of dust and fume in industry. R. Ashman. bibliog il diags Inst Mech Eng Proc (B) 1B no 5:157-68 '52

Design factors in catalytic fume elimination. R. J. Ruff. il Heat & Ven 50:84-6 S '53

Dust and fume elimination investigated; Electric furnace steel conference fume control session, Pittsburgh, Dec. 4-6; with abstracts of papers. Steel 131:82+ D 29 '52

Efficient fume removal; Winters and Crampton plating plant. il Metal Finishing 51: 73-4 F '53

Fume disposal by catalytic combustion creates new market for gas use. R. J. Ruff. il Gas Age 111:33-6 Mr 26 '53

Fume washing tower. il Metal Finishing 51: 80-1 Jl '53

Fumes and gases in arc welding. E. Thrysin and others. bibliog il A M A Archives Ind Hygiene & Occup Med 6:381-403 N '52

FUMES—*Continued*

Ingot mold wash ends coating fumes. G. P. Michalos and D. J. Girardi. il Steel 131: 106+ D 8 '52

On-the-spot fume control; with portable ventilators. E. Kundig. il diag Safety Maint & Prod 104:64-7 D '52

Triple-threat fume disposal system; Kaiser aluminum and chemical plant. il Chem Eng 59:262-3 D '52

See also

Smoke

FUMIGANTS

See also

Methyl bromide

FUMIGATION

Some recent developments in fumigating under gas-proof sheets. R. H. Thompson and E. E. Turtle. bibliog il Chem & Ind p365-71 Ap 18 '53

Tips on curbing insects in plants. T. L. Huge and E. L. Holmes. il Food Eng 25:58-9+ S '53

FUNCTIONS

Table of the beta function $B(p, q)$. R. W. Smith, jr. and H. E. Edwards. bibliog U S Bur Mines Rep of Invest 4960:1-75 '53

Table of the incomplete beta function $\beta(\frac{1}{2}, p, q)$. R. W. Smith, jr. and H. E. Edwards. U S Bur Mines Rep of Invest 4961:1-138 '53

See also

Struve function

Whittaker's function

FUNCTIONS, Elliptic

Tables of complete elliptic integrals. J. M. Hammersley. J Res Nat Bur Stand 50:43 Ja '53

FUNCTIONS, Potential

Relationship between dissociation energies and interaction constants in the potential function, for polyatomic molecules. P. Torkington. J Chem Phys 20:1174-5 Jl '52

FUND statements

Fund flows and fund statements. W. J. Vatter. J Bsns 26:15-25 Ja '53

FUNERAL chapels. See Mortuary chapels

FUNGI

Chemistry of fungi; asperxanthone and a preliminary examination of aspergillin. N. A. Lund, A. Robertson and W. B. Whalley. Chem Soc J p2434-9 Ag '53

Chemistry of fungi; dehydroeburicoic acid. R. M. Gascoigne, A. Robertson and J. J. H. Simes. Chem Soc J p 1830-7 Je '53

Chemistry of fungi; metabolites of chaetomium indicum Corda. D. H. Johnson, A. Robertson and W. B. Whalley. Chem Soc J p2429-34 Ag '53

Chemistry of fungi; the cyclic system of eburicoic acid. J. S. E. Holker and others. Chem Soc J p2414-22 Ag '53

Chemistry of fungi; the structure of eburicoic acid. J. S. E. Holker and others. Chem Soc J p2422-9 Ag '53

Defibering of ground rubber scrap with cellulose-decomposing fungi. W. D. Stewart and others. India Rubber World 127:794-6+ Mr '53

Effect of fungicidin (Nystatin) in mice injected with lethal mixtures of aureomycin and candida albicans. R. Brown and others. Science 117:609-10 My 29 '53

Effect of moisture and fungus on plastic insulating materials. R. K. Witt and others. diags Mod Plastics 30:119-20+ S '52

Numbers of fungi and bacteria in transatlantic air. S. M. Pady and C. D. Kelly. bibliog Science 117:607-9 My 29 '53

Tight-lock of cotton, associated fungi and pH values in South Carolina in 1952. C. H. Arndt. bibliog Textile Res J 23:533-5 Ag '53

See also

Aspergillus

Coriolus sanguineus

Molds (botany)

Phycomyces

Polyporus

Rusts (botany)

Yeasts

FUNGICIDES

Conference on fungicides. K. V. Thimann. Science 117:sup3 F 27 '53

Copper-based fungicides announced for test. Paper Tr J 135:34 N 7 '52

Fungicide quartet. Chem W 72:56+ Mr 14 '53

Hercules powder co.'s rosin amine D pentachlorophenol. Chem Eng 60:230 F '53

How to choose textile fungicides. C. C. Yeager. Textile World 103:137+ Jl '53

Plant diseases are being controlled; abstract. G. L. McNew. Oil Paint & Drug Rep 164: 74-5 S 14 '53

Poisons rules changes take effect Jan. 19. Oil Paint & Drug Rep 162:4 D 22 '52

Analysis

Estimation of mixed phenyl and ethyl mercuric compounds. D. Polley and V. L. Miller. bibliog Anal Chem 24:1622-3 O '52

Terminology

Fungicidal chemicals. C. C. McDonnell. Soap & San Chem 29:131+ Ja '53

FUNGICIDIN

Effect of fungicidin (Nystatin) in mice injected with lethal mixtures of aureomycin and candida albicans. R. Brown and others. Science 117:609-10 My 29 '53

FUR insurance. See Insurance, Fur

FUR trade

15,000 fox furs go on auction block. il Bsns W p30-1 Ap 25 '53

Mink to beaver lamb; London fur market. Economist 167:345-6 My 9 '53

Trade riding mink too hard. Bsns W p58 Je 6 '53

Advertising

Fur law changes fur ads; but not enough! K. R. Gillespie. bibliog J Retailing 28: 145-54+ Winter '52

FURAMIDE

Studies in the furan series; chloralfuramides and some of their reactions. J. R. Willard and C. S. Hamilton. bibliog Am Chem Soc J 75:2370-3 My 20 '53

FURAN

Deoxy-sugars; conversion of D-glucal into furan derivatives. F. Shafizadeh and M. Stacey. Chem Soc J p3608-10 S '52

Dipole moments of furan and thiophen measured in the dissolved and in the gaseous state. B. Harris, R. J. W. Le Fèvre and E. P. A. Sullivan. Chem Soc J p 1622-6 My '53

2-Hydroxyacetylfuran from sugars. R. E. Miller and S. M. Cantor. Am Chem Soc J 74:5236-7 O 20 '52

New synthesis of arsonic acids; coupling of furan, thiophen, and β-2-thienylacrylic acid with arsanilic acid. W. Freund. Chem Soc J p3073-5 Ag '52

Stereochemistry of some phenylfurans. A. Khawam and E. V. Brown. bibliog Am Chem Soc J 74:5603-5 N 20 '52

Stereochemistry of the furan-maleic acid reaction. J. A. Berson and R. Swidler. bibliog Am Chem Soc J 75:1721-6 Ap 5 '53

Studies in the furan series; reaction of some substituted 2-furamides with phenyl isocyanate. J. R. Willard and C. S. Hamilton. Am Chem Soc J 75:2270-1 My 5 '53

Sulfination of organolithium derivatives of thiophene and furan. W. E. Truce and E. Wellisch. bibliog Am Chem Soc J 74:5177-9 O 20 '52

Thermodynamic properties of furan. G. B. Guthrie, jr. and others. bibliog diags Am Chem Soc J 74:4662-9 S 20 '52

FURANACRYLIC acid

Reaction of diazonium salts with furylacrylic acid. W. Freund. Chem Soc J p3068-71 Ag '52

FURANO compounds

Furano-compounds; some analogues of kellin and visnagin. G. H. Phillips, A. Robertson and W. B. Whalley. Chem Soc J p4951-7 D '52

FURANOSE

1 : 2-*O*-*iso*propylidene-β-D-altrofuranose. F. H. Newth. Chem Soc J p2504-5 Ag '53

FURANOSIDES

α-Maltosyl β-D-fructofuranoside, a trisaccharide enzymically synthesized from sucrose. J. W. White, jr. and J. Maher. bibliog Am Chem Soc J 75:1259-60 Mr 5 '53

FURFURAL

Better yields from cat cracking; furfural refining. C. W. Shelley and C. W. Rackley. bibliog Pet Processing 7:1772-5 D '52

FURFURAL—*Continued*

Determination of pentosans in highly purified wood pulps; furfural analysis methods. E. D. Smith and L. N. Rogers. Tappi 36:390-2 S '53

Esters of γ-(tetrahydro-2-furyl)-alkanols. C. R. Russell and others. bibliog Am Chem Soc J 75:2161-2 My 5 '53

Furfural extraction of gas oils; Texaco development corp. flow diag Pet Refiner 31:184-5 S '52

Furfural refining; Texaco development corp. flow diag Pet Refiner 31:188-9 S '52

Mass transfer data for furfural extraction. L. Garwin and E. C. Barber. bibliog diags Pet Refiner 32:144-8 Ja '53

Mechanism of the reaction of aniline with furfural in the presence of acid. W. M. Foley, jr., G. E. Sanford and H. McKennis, jr. bibliog Am Chem Soc J 74:5489-91 N 5 '52

Photometric determination of microgram quantities of palladium with beta-furfuraldoxime. E. W. Rice. bibliog Anal Chem 24:1995-7 D '52

Polyhydroxyalkanes from furfural condensation products. C. R. Russell and others. bibliog Am Chem Soc J 74:4543-6 S 20 '52

Resin forming reactions of furfural and phenol. L. H. Brown. bibliog Ind & Eng Chem 44:2673-5 N '52

FURFURYL alcohol

Furfuryl alcohol as a resin former. E. A. Reineck. il Mod Plastics 30:127-8+ O '52

FURFURYL compounds

ω-2′-Furylalkane derivatives. R. J. Rallings and J. C. Smith. Chem Soc J p618-22 F '53

FURNACE black. See Carbon black

FURNACE industry and trade

Furnace builders chart new course. R. M. Lorz. Iron Age 171:41 Ja 22 '53

Furnaces; business hot through '53. T. Campbell. Iron Age 171:69 My 28 '53

Statistics

Industrial furnace sales, 1941-1952; tabulation. Iron Age 171:453 Ja 1 '53

FURNACES

Comparison of gas-fitted pyrometric cone equivalent furnaces. H. F. Smalley and R. B. Sosman. bibliog il diags Am Cer Soc Bul 32:5-11 Ja 15 '53

New developments in recovery furnace design. W. J. Darmstadt. Tappi 36:289-91 Jl '53

Nichols Herreshoff furnace for the calcination of dolomitic fines; abstract. G. E. Connolly. il Rock Prod 55:86-7 N '52

See also

Blast furnaces
Cement kilns
Coke ovens
Cupola furnaces
Electric furnaces
Glass furnaces
Glass tanks
Kilns
Lime kilns
Oil burners
Open hearth furnaces
Refractory materials

FURNACES, Annealing

Fast gas furnace anneals at normalizing temperatures. C. A. Turner, jr. and S. L. Yarborough. il diags Iron Age 170:140-2+ N 20 '52

Furnace aids conversion of metals in rerolling operations. il Iron Age 170:200-1 D 4 '52

Transfer car eliminates overhead handling; Bridgeport brass co. W. J. Krailing. il diag Tool Eng 31:50-2 Jl '53

Uniform annealed grain size obtained with radiant-roof furnace. C. R. MacWhirter. il diag Iron Age 171:144-6 Ap 23 '53

See also

Electric furnaces, Annealing

Atmosphere control

Continuous annealing with carbon restoration; abstract. J. D. Armour. Metal Prog 63:188+ F '53

Lithium vapor inhibits scale formation, cuts cleaning cost. il Iron Age 171:185+ Mr 12 '52; Steel 132:112 Mr 9 '53

Control

Instrumentation simplifies annealing; Atlas steels, ltd. H. C. McKinnon. il diag Steel 132:128+ My 25 '53

FURNACES, Boiler

Furnace heat absorption in a spreader-stoker-fired steam generator. J. W. Myers and others. bibliog diags A S M E Trans 75:909-40; Discussion. 940-2 Jl '53

Variation in heat absorption in a natural-gas-fired, water-cooled steam-boiler furnace. A. R. Mumford and R. C. Corey. diags A S M E Trans 74:1191-214; Discussion. 1214-15 O '52

FURNACES, Carburizing

Automatic heat-treating speeds gear and pinion production. H. Chase. il Iron Age 170:128-30 N 20 '52

Pit type carburizing furnaces provide flexible setup; Caterpillar tractor co. D. J. Wright. il diags Automotive Ind 107:46-7+ D 15 '52

FURNACES, Cupola. See Cupola furnaces

FURNACES, Electric. See Electric furnaces

FURNACES, Enameling

Bucket brigade washes away enamel pits; Lawndale enameling co. A. J. Holloway. il Cer Ind 60:115 Ap '53

Stainless blow pipe ends hand dusting. il Cer Ind 59:80 O '52

Atmosphere control

Induction firing in the study of furnace atmospheres. W. J. Plankenhorn and A. I. Andrews. bibliog il diag Am Cer Soc J 36:69-75 Mr 1 '53

FURNACES, Forging

Automation cuts forging costs, improves quality. E. G. de Coriolis and J. D. Nesbitt. il diags Iron Age 170:106-9 N 27 '52

Continuous press forging system uses novel furnaces. A. H. Allen. il Metal Prog 63:90-3 F '53

See also

Electric furnaces, Forging

Lining

Cast refractories replace brick in heating furnaces. W. G. Patton. il Iron Age 170:140-1 D 18 '52

FURNACES, Foundry

See also

Cupola furnaces
Electric furnaces, Foundry

Lining

Combinations of brick required for rings; data sheet. Foundry 81:163-4 Ap '53

Refractories; American foundrymen's society annual meeting, Chicago; abstracts of papers. Foundry 81:146+ Jl '53

FURNACES, Heat treating

Automatic furnace heat treats high-strength torsion bars. R. Graham. il diag Iron Age 171:129-32 My 21 '53

Big ideas you can use for heat-treating units. il Mod Ind 24:136+ O '52

Enamel prolongs tube life. il Steel 132:148 Ap 20 '53

Good handling speeds heat treating of small parts; Ford's River Rouge plant. H. Chase. il diag Iron Age 171:141-3 My 14 '53

Heat treating; pit type furnace is versatile round-the-clock unit. il diag Iron Age 170:177-8+ D 11 '52

Heat-treatment furnace developments. il diag Metallurgia 47:247-62+ My '53

Heating steel in a specialty mill. L. F. Van Mater. Iron & Steel Eng 29:75-6 N '52

High output of quality gears requires tailor-made shop; Fairfield mfg. co. H. J. Bates. il plans Iron Age 171:141-5 Je 4 '53

Ipsen heat-treating unit with forced convection heating. il Mach 59:223 Ja '53; Tool Eng 30:90 F '53

Modern heat treating of axle components; Timken-Detroit axle co. R. F. Lutz. il Automotive Ind 108:48-9+ Ja 1 '53

New furnaces put the heat on jet parts. il Mod Ind 25:145 My '53

1953 American Machinist production preview. il Am Mach 97:234-6 Ja 19 '53

Radiant gas-fired processing equipment makes superior quality oil well casing. il Am Gas J 177:17+ N '52

Roller hearth furnaces toughen tank feet. H. M. Webber. il diag Steel 132:100-1 Ap 27 '53

FURNACES, Heat treating—*Continued*

Tempering furnace has temperature range from 350 to 1000 F. il Am Mach 97:178 Je 22 '53

Unusual heat treating operation boosts output of pipe. il diag Iron Age 170:192-3 D 4 '52

What's ahead the next ten years in heat-treating. Am Mach 96:G-G3 Mid-N '52

See also

Electric furnaces, Heat treating

Atmosphere control

Cost-cutting method of hardening small parts; Keller tool co. C. C. Dierdorf. il Mach 59:158-60 Ja '53

How to cure protective atmosphere troubles. A. G. Hotchkiss and H. M. Webber. bibliog il diags Am Mach 97:153-68 Je 8 '53

Ipsen automatic controlled-atmosphere draw-quench unit. il diag Mach 59:218 Mr '53

Many common metals successfully treated in steam atmospheres. F. L. Spangler. il Materials & Methods 37:85-6 Ja '53

Control

Automatic controls improve furnace operation. L. Walter. diags Iron Age 171:108-11 Ap 30 '53

Maintenance and repair

How to maintain heat-treating equipment. T. A. Frischman. il diag Am Mach 96:135-46 O 13 '52

FURNACES, Heating

Avoiding trouble in soaking pit operation. D. J. McGeary. Iron & Steel Eng 29:92-4; Discussion. 94-6 O '52

Billet heating furnace replaced in 16 days. il Steel 132:98+ Je 22 '53

Bottom ports for soaking pits; patent. diag Iron & Steel Eng 30:24 My '53

Heating steel in a specialty mill. L. F. Van Mater. Iron & Steel Eng 29:74-6 N '52

Operative results of one-way fired recuperative soaking pits. E. H. Cauger and J. C. Stamm, jr. il diags Iron & Steel Eng 29: 98-108; Discussion. 108-10 D '52

Pittsburgh Steel completes open hearth expansion, adds first of new soaking pits. il Blast F & Steel Pl 41:815 Jl '53

Control

Automatic control for regenerative soaking pits. G. L. Isaacs. il diags Iron & Steel Eng 30:75-8; Discussion. 78-82 F '53

Lining

Castable refractories in the steel mill. J. D. McCullough. il diags Iron & Steel Eng 30:84-9; Discussion. 89-93 Je '53

FURNACES, Iron founding

Melting is geared to meet demand for hot metal Ford Cleveland foundry. il plan diags Foundry 81:166-73 Mr '53

See also

Cupola furnaces

Electric furnaces, Iron founding

FURNACES, Laboratory

High temperature resistance thermometer temperature controller. W. B. Crandall and P. M. Hackett. il diag Am Cer Soc Bul 31:377-9 O 15 '52

Laboratory furnace with hydraulically positioned hot zone. H. I. Sephton. diags Am Cer Soc Bul 31:322-3 S 15 '52

FURNACES, Metallurgical

Furnaces; see slight sales dip; makers of industrial furnaces expect a good year in 1953. K. W. Bennett. Iron Age 170:23 D 25 '52

Heat recovery in industrial furnaces. A. Clift and C. Knight. diags Iron & Steel Inst J 172:327-39 N '52; Discussion. 174:60-9 My '53

See also

Blast furnaces

Cupola furnaces

Electric furnaces, Metallurgical

Furnaces, Steel making

Open hearth furnaces

Control

Automatic control of fuel-air ratio in metallurgical furnaces. L. Walter. diags Metallurgia 47:307-9 Je '53

Lining

American foundrymen's society 57th annual meeting, Chicago, May 4-8; abstracts of papers of interest to refractory industry. Brick & Clay Rec 122:77-8 Je '53

FURNACES, Non-ferrous melting

See also

Electric furnaces, Non-ferrous melting

FURNACES, Open hearth. See Open hearth furnaces

FURNACES, Recuperative and regenerative

Experiences with the Escher metallic recuperator on high-temperature furnaces. H. Escher. il diags Iron & Steel Inst J 169: 39-46 S '51; Discussion. 174:60-9 My '53

Progress in the development and application of metallic recuperators for the steel industry; abstract. E. A. Vierow. Iron & Steel Eng 30:154 S '53

Trials of an experimental Austeel-Escher metallic recuperator. J. B. Davis and others. il diags Iron & Steel Inst J 167:66-70 Ja '51; Discussion. 174:60-9 My '53

FURNACES, Steel making

See also

Electric furnaces, Steel making

Furnaces, Heating

Open hearth furnaces

Charging

Water cooled magnet charger; rotary hearth furnace machine. il Metallurgia 47:182 Ap '53; Same. Elec R (Lond) 152:846 Ap 17 '53

FURNACES, Warm air

Converting gravity furnaces to forced air. E. B. Linx. il Sheet Metal Worker 44:44+ Je '53

Side wall vents substitute for chimneys. il Sheet Metal Worker 44:62-3+ Mr '53

You simply must supply air for combustion. S. R. Lewis. Heating-Piping 25:106 My '53

Cleaning

Furnace cleaning opens door to replacement and repairs. A. Stout. il Sheet Metal Worker 44:50-1+ Ap '53

FURNITURE

It's a different house; it takes different furniture. il Bsns W p 142-4 F 21 '53

Pre-packaged furniture lowers costs, boosts sales, puts chrome dinette sets in gift class. il Mod Packaging 26:127 N '52

Pure design research transforms abstract sculpture into new forms for architecture and furniture; work of Harry Bertoia. il Arch Forum 97:142-7 S '52

See also

Office furniture

Manufacture

Carbides increase production of wood products; Rockwell manufacturing co. R. C. DuBrucq. il diags Tool Eng 31:59-62 Jl '53

Comparison of European and American finishes. E. S. Johnson. Paint Oil & Chem R 116:16-18 Jl 2 '53

FURNITURE, Built-in

Built-in entertainment center. il diags Am Bld 75:106 F '53

How to build in a dressing table. il plan diags Am Bld 74:136 N '52

FURNITURE, Metal

Aluminum marine furniture. il Light Metal Age 10:13 O '52

Wrought iron; it's new indoors. il Bsns W p52-4+ Mr 21 '53

Manufacture

How one firm beat the nickel shortage; Daystrom furniture. il diag Metal Finishing 51: 78-81 O '53

FURNITURE, Office. See Office furniture

FURNITURE factories

Trying out prefab methods on furniture; Kroehler mfg. co. il Bsns W p 132-4+ Je 13 '53

Electric equipment

Modern furniture manufacture; H. Morris & co. il Elec R (Lond) 152:647-8 Mr 20 '53

FURNITURE factories—*Continued*

Employees

Earnings in the wood furniture industry, July 1952. J. F. Laciskey. Mo Labor R 75:629-30 D '52

FURNITURE industry and trade

Furniture in the cotton field; Latvian workers on Mississippi plantations use old world skills. il Bsns W p 118+ N 8 '52

Furniture shapes up well. Bsns W p48 Jl 4 '53

It's jubilee year for furniture makers. il Bsns W p46-8 Ja 17 '53

Great Britain

D-day for furniture. Economist 165:411 N 8 '52

End of utility schemes for furniture industry. Economist 165:777 D 13 '52

New trends in furniture. Economist 166:512 F 21 '53

Standards and furniture. Economist 166:236 Ja 24 '53

FURNITURE polish

Modern furniture polishes. M. A. Lesser. bibliog Soap & San Chem 28:162-3+ D '52

FUROIC acid

Vapour pressure and lattice energy of hydrogen-bonded crystals; 2-thenoic, 2-furoic, and pyrrole-2-carboxylic acids. R. S. Bradley and A. D. Care. diag Chem Soc J p 1688-90 Je '53

FURRIERS' customers insurance. See Insurance, Furriers' customers

FURYLACRYLIC acid. See Furanacrylic acid

FURYL group

Kinetics of anionotropic rearrangement; a comparison of the effects of the phenyl, furyl, and thienyl groups on reactivity. E. A. Braude and J. S. Fawcett. Chem Soc J p4158-62 N '52

FUSED quartz. See Silica, Fused

FUSED silica. See Silica, Fused

FUSEL oil

Analysis

Composition of a typical grape brandy fusel oil. A. D. Webb, R. E. Kepner and R. M. Ikeda. bibliog Anal Chem 24:1944-9 D '52

FUSELAGE. See Airplanes—Fuselage

FUSES, Electric. See Electric fuses

FUSIBLE plugs

Aerosol safety plug for Sprey, an aerosol plastic coating. il Mod Packaging 26:110-11 Mr '53

FUSION. See Melting

FUSION, Heat of

Heat capacity, heat of fusion and heat of vaporization of hydrogen fluoride. J. Hu, D. White and H. L. Johnston. bibliog diag Am Chem Soc J 75:1232-6 Mr 5 '53

Heat capacity of gallium from 15 to 320°K.; the heat of fusion at the melting point. G. B. Adams, jr., H. L. Johnston and E. C. Kerr. bibliog diag Am Chem Soc J 74:4784-7 O 5 '52

FUSON, Reynold Clayton, 1895-

Pioneering in abnormal reactions brings Nichols award to Fuson. pors Chem & Eng N 31:1182, 1184, cover Mr 23 '53

FUTURES

Futures for tops. Economist 166:759 Mr 14 '53

Potato futures give bulls a bad day. il Bsns W p 122-5+ O 25 '52

Potato prices slump; futures volume soars. Barron's 33:27-8 F 23 '53

Wash sale provision and commodity futures. J Account 94:602-3 N '52

G

GATT. See Commercial treaties and agreements

GCA. See Radar aids to aviation

GMC truck and coach. See General motors corporation—GMC truck and coach division

GMOODIE. See General motors corporation—Overseas operations division

GADOLINIUM

Microwave resonance absorption in gadolinium metal. A. F. Kip. bibliog Rs Mod Phys 25:229-32 Ja '53

Microwave resonance absorption in gadolinium metal. A. F. Kip and others. Phys R 89:518 Ja 15 '53

Some magnetic and electrical properties of gadolinium, dysprosium, and erbium metals. S. Legvold and others. Rs Mod Phys 25:129-30 Ja '53

Some magnetic properties of gadolinium metal. J. F. Elliot and others. bibliog Phys R 91:28-30 Jl 1 '53

Some magnetization studies of Cr^{+++}, Fe^{+++}, Gd^{+++}, and Cu^{++} at low temperatures and in strong magnetic fields. W. E. Henry. bibliog Rs Mod Phys 25:163-4 Ja '53

Spectrum of gadolinium II. N. Zeldes. bibliog Phys R 90:413-15 My 1 '53

Spin paramagnetism of Cr^{+++}, Fe^{+++}, and Gd^{+++} at liquid helium temperatures and in strong magnetic fields. W. E. Henry. bibliog diag Phys R 88:559-62 N 1 '52

Isotopes

Energy levels associated with the radioactive decay of Gd^{153} and Tb^{161}. J. M. Cork and others. diags Phys R 88:685-6 N 1 '52

Radioactive europium 150 and gadolinium 150. R. C. Mack and others. bibliog Phys R 91:903-4 Ag 15 '53

GADOLINIUM oxide

Quantity separation of rare earths by liquid-liquid extraction; the first kilogram of gadolinium oxide. B. Weaver, F. A. Kappelmann and A. C. Topp. bibliog diags Am Chem Soc J 75:3943-5 Ag 20 '53

GAGARIN, Andrew

Businessmen in the news. por Fortune 46:52 N '52

GAGE, Henry

Portrait. Fortune 46:180 D '52

GAGE, William Patrick

Businessmen in the news. por Fortune 47:60 Mr '53

GAGES

Betameter. D. C. Brunton. diags Pulp & Pa of Can (Convention no) 54:220-4 [F] '53

Betameter in a basis-weight-control application. G. E. Wilson. il Pulp & Pa of Can (Convention no) 54:225-9 [F] '53

Beta-ray gaging in the rubber industry. R. T. Stacy and S. Bernstein. il diag Rubber Age 72:350-2 D '52

Biggest gage; automatic unit checks tolerances of loaded shells for gun fit. Iron Age 170:189 D 11 '52

Bryant groove gage. il diags Mach 59:244-5 Jl '53

Catalyst bin gage has accuracy, long life. il diags Pet Processing 7:1811+ D '52

Dial gages take the pressure off close tolerances; drawings with text. R. H. Wilcox. Mill & Factory 53:79-82 S '53

Dial indicator fixture measures internal grooves. F. Harroy. diag Am Mach 97:149 Je 22 '53

DoAll micro-step gage-block system. il Mach 59:216-17 D '52; Iron Age 170:198+ N 6 '52; Tool Eng 29:92-3 D '52; Factory Management 111:194 Mr '53

Gage blocks; new system widens applications. il diags Steel 131:98-101 N 24 '52

Gage checks snap-ring groove. W. I. Morgan. diags Am Mach 97:185 F 16 '53

Gage control that cuts rejects to two per cent; Aeroquip corp. R. Hixenbaugh. il Factory Management 111:112-15 Ag '53

Gages control tierod tension, eliminate overloading on setup. H. George. diag Am Mach 97:189 O 12 '53

Gages cut hobbing costs $30,000. R. L. Witsche. il diag Am Mach 97:121-4 Je 22 '53

Gaging involute splines. L. N. DeVos. diags Tool Eng 30:43-9 My '53

High-speed gaging clears bottleneck; Couch-Uthe co. il diags Steel 132:112 My 4 '53

Let gages take guesswork out of inspection. H. A. Grenert. il Bus Transportation 32:48-50 Je '53

GAGES—*Continued*

Maximum tool-and-gage control. H. M. Baldwin and A. A. Tumser. il Factory Management 110:110-12 O '52

Measure half-bores with sine principle bore gage. A. Whiteley. il diag Am Mach 97:152 S 28 '53

Modified dial indicator gives direct boresize. A. Clarke. diags Am Mach 97:130 Mr 2 '53

Special gaging for high-precision production. G. E. Durham. il Tool Eng 30:57-8 My '53

Theory of gaging. W. F. Aller. il diags Mech Eng 75:199-204 Mr '53; Same cond. Mach 59:172-9 F '53

Tolimit caliper thread gauges. il Engineering 175:407 Mr 27 '53

Useful shop gage for accurate checking of tapers. W. M. Halliday. diags Mach 59:203-4 N '52

What's ahead the next ten years in inspection and testing; gaging methods. Am Mach 96:I 2-4 Mid-N '52

See also

Betameters
Measuring instruments
Micrometers
Pressure gages
Rain gages
Strain gages
Thickness measurement
Vacuum gages

Manufacture

Gage makers; whose money will finance mobilization expansion? Steel 132:41 Ja 12 '53

How to obtain dimensional stability of gages. W. Dubyk. bibliog diag Am Mach 97:121-3 S 14 '53

Producing gage-blocks to millionths; Continental machines, inc. R. A. Gierlich. il diag Mach 59:147-56 F '53

Tables, calculations, etc.

Common problem in gage and die design. R. L. Wakelee. diags Mach 60:209-10 O '53

Testing

Continuous recording of the effective diameter of screw gauges. P. W. Harrison and Mrs J. G. Wood. il diag Engineer 195:205-6 F 6 '53; Same. Engineering 175:318-19 Mr 6 '53

Micro-inch inspection in the Timken gage laboratory. M. C. Curtis. il Mach 59:180-7 Je '53

Mobile lab aids defense contractors. Product Eng 24:296+ Ap '53

Mobile lab expedites gage checking. il Tool Eng 29:62 N '52

GAGES, Electric

Electronic gaging and sorting applications. A. C. Sanford. il Electronics 26:144-7 S '53

Gaugemeter for strip mills. R. B. Sims. il diag Engineering 175:33-5 Ja 9 '53

Photoelectric width gage for hot-strip steel mills. E. S. Sampson. il diags Electronics 26:114-18 Mr '53

Precise parts sorting on production lines. A. C. Sanford. il diags Electronics 26:142-5 Jl '53

Theory of gaging. W. F. Aller. il diags Mech Eng 75:199-204 Mr '53; Same cond. Mach 59:172-9 F '53

GAGES, Pneumatic

Air gage for testing cylindrical parts. il Automotive Ind 109:66 S 15 '53

Air gaging device for many applications. il diags Automotive Ind 108:78 F 1 '53; Mach 59:219 Mr '53

Computing air gage. il Steel 132:127+ Mr 9 '53

Pneumatic gauging applied to the measurement of surface finish. M. Graneek and H. L. Wunsch. diags Engineer 194:387-9 S 19 '52; Same. Engineering 175:505-7 Ap 17 '53

Precision inspection checks engine components rapidly, accurately. H. Chase. il Iron Age 170:117-19 N 27 '52

Theory of gaging. W. F. Aller. il diags Mech Eng 75:199-204 Mr '53; Same cond. Mach 59:172-9 F '53

GAGES, X ray

Automatic metal gaging using X-rays; abstract. J. F. Howell. il diag Machine Design 25:162 My '53

X-ray gage controls rolling mill equipment. Mach 59:187 Je '53; Iron Age 171:182-4 Ap 2 '53

X-ray gages for inspection and measuring. Materials & Methods 36:180+ D '52

X-ray gaging irons out strip variables. B. H. McGar. il Steel 132:110 My 18 '53

GAGING

Automatic tank gaging facilitates terminal operations installation at Esso's Wilmington, N.C., terminal cuts time, labor. C. C. Roberts. il diag Oil & Gas J 51:144+ N 10 '52

Measuring liquid content of tanks by remote control. il diags Oil & Gas J 52:124 Je 8 '53

Remote oil gauging; Varioplex system. Bsns W p60+ Ap 18 '53

Weir plates helpful in sewer gaging. A. W. Sweeton, 3d. il diags Civil Eng 23:40 Ja '53

GALACTAN

Larch ε-galactan; the isolation of 3-β-L-arabopyranosyl L-arabinose. J. K. N. Jones. Chem Soc J p 1672-5 Je '53

Molecular structure of the galactogen from beef lung. M. L. Wolfrom, G. Sutherland and M. Schlamowitz. bibliog Am Chem Soc J 74:4883-6 O 5 '52

GALACTINOL

Structure of galactinol. E. A. Kabat and others. bibliog Am Chem Soc J 75:4507-9 S 20 '53

GALACTOSIDASE

Purification and kinetics of β-D-galactosidase from escherichia coli, strain K-12. S. A. Kuby and H. A. Lardy. bibliog Am Chem Soc J 75:890-6 F 20 '53

GALACTOSIDES

Action of acidic reagents on ethylene oxide anhydro-sugars; methyl 3 : 4-anhydro-α-D-galactoside. V. Y. Labaton and F. H. Newth. Chem Soc J p992-6 Mr '53

GALACTURONIC acid

Structure of the triuronide from pectic acid. J. K. N. Jones and W. W. Reid. bibliog Chem & Ind p303 Mr 28 '53

GALENA

Kinetics of the oxidation of galena in sodium-hydroxide solutions under oxygen pressure. J. E. Andersen and others. bibliog il diag J Metals 5:Trans 554-8 Ap '53; Discussion. 5:Trans 1556-8 sec 2 N '53

GALES. See Winds

GALL bladder

X-ray diagnostics; cholecystographic agents. D. Papa and others. bibliog Am Chem Soc J 75:1107-10 Mr 5 '53

GALLAHER, limited

Statement by the chairman. E. de Stein. Economist 167:570 My 23 '53

GALLIUM

Electrochemistry of gallium. W. M. Saltman and N. H. Nachtrieb. bibliog Electrochem Soc J 100:126-30 Mr '53

Fragments of chemistry. C. A. Kraus. J Chem Educ 29:549-50 N '52

Gallium. L. Sanderson. Can Min J 74:81-2 Mr '53

Gallium market wanted. Mech Eng 75:400 My '53

Heat capacity of gallium from 15 to 320°K.; the heat of fusion at the melting point. G. B. Adams, jr., H. L. Johnston and E. C. Kerr. bibliog diag Am Chem Soc J 74:4784-7 O 5 '52

Luminescence and trapping in phosphors containing gallium. R. H. Bube and S. Larach. bibliog J Chem Phys 21:5-11 Ja '53

Solubility of silicon and germanium in gallium and indium. P. H. Keck and J. Broder. Phys R 90:521-2 My 15 '53

T^2 dependence of the low temperature specific heat of gallium. W. De Sorbo. bibliog J Chem Phys 21:168 Ja '53

Total fast neutron cross sections of Co, Ga, Se, Cd, Te, Pt, Au, Hg, and Th. M. Walt and others. Phys R 89:1271-2 Mr 15 '53

Vapor pressures of inorganic substances; gallium. R. Speiser and H. L. Johnston. Am Chem Soc J 75:1469-70 Mr 20 '53

Analysis

Gallium and aluminum; abstract. A. Wold and others. Chem & Eng N 31:876 Mr 2 '53

Substituted benzidines and related compounds as reagents in analytical chemistry; the titration of small amounts of gallium. R. Belcher, A. J. Nutten and W. I. Stephen. Chem Soc J p2438-9 Je '52

GALLIUM—*Continued*

Isotopes

Decay of Ga^{64} and Ga^{65}. B. Crasemann. Phys R 90:995-6 Je 1 '53

Gallium-64. B. L. Cohen. Phys R 91:74-5 Jl 1 '53

Gallium 67. B. H. Ketelle and others. bibliog Phys R 90:567-73 My 15 '53

GALLIUM alloys

Constitution of germanium rich germanium-gallium alloys; abstract. E. S. Greiner. J Metals 4:1044 O '52

GALLIUM oxide

Low temperature heat capacities of inorganic solids; the heat capacity of β-gallium oxide from 15 to 300°K. G. B. Adams, jr. and H. L. Johnston. bibliog Am Chem Soc J 74:4788-9 O 5 '52

Polymorphs of alumina and gallia. R. Roy, V. G. Hill and E. F. Osborn. bibliog Ind & Eng Chem 45:819-20 Ap '53

GALLIUM trimethyl

Trimethylgallium; reactions with hydroxy- and similar compounds. G. E. Coates and R. G. Hayter. Chem Soc J p2519-24 S '53

GALLS (botany)

Crown gall suppression by anti-auxin. P. E. Waggoner and A. E. Dimond. Science 117:13 Ja 2 '53

GALVANIC cells. See Electric batteries

GALVANIZED iron. See Iron, Galvanized

GALVANIZING

Corrosion of galvanized steel in soils. I. A. Denison and M. Romanoff. bibliog il J Res Nat Bur Stand 49:299-314 N '52

Electric heat pays off for galvanizing. J. S. Case and G. H. Hoffman. il Elec World 139:96-7 Mr 9 '53

Galvanizing can be automatic; Hotpoint co. L. Baker. flow diag il Steel 132:170-1 My 25 '53

Liquid blanket reduces oxidation of molten zinc. A. A. Paterson. il diag Steel 132:136+ Ap 13 '53

Study made of underground corrosion of galvanized steel. I. A. Denison and M. Romanoff. Heat & Ven 50:113 Mr '53; Same, il Heating-Piping 25:106-7 Mr '53; Same. Diesel Power 31:85-6 Mr '53; Same. Gas Age 111:43+ Mr 21 '53; Same. Am Gas J 178:17 Mr '53; Same. Blast F & Steel Pl 41:sup74+ Ap '53; Same. Iron Age 171:152-3 F 12 '53; Same abr. Oil & Gas J 51:289 Ap 27 '53

Versatile dross pump-separator gets U.S. showing. il Steel 132:137 Je 15 '53

GALVANOMETERS

Chart reader for galvanometer-type recording instruments. B. Manning and M. Sylvester. R Sci Instr 24:71-2 Ja '53

Deflection constants of the dc galvanometer at a specified damping; improved solutions of the unbalanced bridge circuit. P. M. Andress. diags R Sci Instr 24:172-7 F '53

GAMBLING

See also
Betting

GAMES

Money in games; a little industry is striking it rich. N. Willatt. Barron's 33:5 Ja 19 '53

GAMMA globulin. See Globulins

GAMMA ray spectrometer. See Spectrometers, Gamma ray

GAMMA rays

Absolute light emission efficiency of crystal anthracene for gamma-ray excitation. M. Furst and others. bibliog Phys R 89:416-17 Ja 15 '53

Absorption by concrete of X-rays and gamma-rays. B. E. Foster. bibliog Am Concrete Inst J 25:45-63 S '53

Absorption of 5.3-Mev, 10.3-Mev, and 17.6-Mev gamma-rays. E. S. Rosenblum and others. bibliog diags Phys R 88:612-17 N 1 '52

Alpha-gamma angular correlation in radiothorium. J. Battey and others. bibliog Phys R 89:182-5 Ja 1 '53

Angular correlation of gamma-rays in Ti^{48}. P. S. Jastram and C. E. Whittle. diags Phys R 87:1133-4 S 15 '52

Angular correlation of the cascade gamma-rays from the decay of Au^{198}. C. D. Schrader and others. bibliog Phys R 90:159 Ap 1 '53

Angular distribution of gamma-rays and short-range alpha-particles from $N^{15}(p,\alpha\gamma)C^{12}$. A. A. Kraus, jr. and others. Phys R 89:299-301 Ja 1 '53

Angular distribution of 12-Mev gamma rays from proton bombardment of B^{11}. G. L. Jenkins and others. bibliog Phys R 91:915-17 Ag 15 '53

Angular moments of the excited states of Pt^{196}. R. M. Steffen. bibliog diag Phys R 89:665 F 1 '53

Average energy of secondary electrons in anthracene due to gamma-irradiation. G. D. Prestwich and others. Phys R 87:1030-1 S 15 '52

Beta- and gamma-induced Čerenkov radiation in water. M. A. Greenfield and others. Opt Soc Am J 43:42-3 Ja '53

Calorimetric calibration of gamma-ray actinometers. C. J. Hochanadel and J. A. Ghormley. bibliog diags J Chem Phys 21:880-5 My '53

Chemical effects produced in chloroform by γ-rays. J. W. Schulte, J. F. Suttle and R. Wilhelm. bibliog Am Chem Soc J 75:2222-7 My 5 '53

Comparison of gamma-ray reflections from the (550) and (310) planes of quartz. H. C. Hoyt and others. Phys R 90:169-70 Ap 1 '53

Condenser type ion chamber for the measurement of gamma-radiation in the presence of thermal neutrons. E. B. Darden, jr. and others. diags R Sci Instr 23:568-9 O '52

Conductivity change in polyethylene during γ-irradiation. S. Mayburg and W. L. Lawrence. diags J Ap Phys 23:1006-11 S '52

Continuous gamma-radiation accompanying internal conversion in Ba^{137m}. H. B. Brown and R. Stump. diag Phys R 90:1061-3 Je 15 '53

Continuous gamma-ray spectrum accompanying beta-decay. P. Bolgiano and others. bibliog Phys R 89:679-83 F 15 '53

Convenient source of gamma radiation. D. F. Saunders, F. F. Morehead, jr. and F. Daniels. diag Am Chem Soc J 75:3096-8 Jl 5 '53

Density measurement of concrete slabs using gamma radiation. E. E. Smith and A. C. Whiffin. bibliog il diag Engineer 194:278-81 Ag 29 '52

Dependence of gamma-radiation lifetimes on nucleon configurations. R. D. Hill. bibliog Phys R 88:1428-9 D 15 '52

Determination of gamma-ray energies from beta-ray spectroscopy and a table of critical X-ray absorption energies. R. D. Hill and others. bibliog R Sci Instr 23:523-8 O '52

Direction and polarization correlations of successive gamma-rays. J. J. Kraushaar and M. Goldhaber. bibliog diags Phys R 89:1081-9 Mr 1 '53

Effect of gamma irradiation on the ascorbic acid content of green plants. A. R. Cooke. bibliog Science 117:588-9 My 29 '53

Effect of the electric quadrupole interaction on the gamma-gamma directional correlation in Cd^{111}. H. Albers-Schönberg and others. bibliog diag Phys R 90:322-3; 91:199-200, 1287-8 Ap 15, Jl 1, S 1 '53

Electromagnetic spectrum of radium D. P. E. Damon and R. R. Edwards. bibliog il Phys R 90:280-4 Ap 15 '53

Electron-induced showers in copper. A. Kantz and R. Hofstadter. bibliog il diag Phys R 89:607-17 F 1 '53

Evidence of a mixed $E1+M2$ transition and the angular momenta of the Sr^{88} levels. R. M. Steffen. diags Phys R 90:321-2 Ap 15 '53

Experimental K to $L+M$ ratios for internal conversion lines. R. E. Maerker and R. D. Birkhoff. Phys R 89:1159 Mr 1 '53

Explicit γ-γ angular correlations; polarization correlations. S. P. Lloyd. bibliog Phys R 88:906-8 N 15 '52

Fluorescent light yields with alpha, beta, and gamma radiations. M. Furst and M. Kallmann. bibliog Phys R 91:766-7 Ag 1 '53

GAMMA rays—*Continued*

Gamma-gamma angular correlation in Ni^{60}. E. D. Klema and F. K. McGowan. bibliog Phys R 91:616-18 Ag 1 '53

γ-γ Angular correlation measurements. S. Chatterjee and A. K. Saha. diag Phys R 91:200-1 Jl 1 '53

Gamma-gamma directional correlations in Co^{59}, Xe^{131}, and Hg^{198}. D. Schiff and F. R. Metzger. bibliog diag Phys R 90:849-52 Je 1 '53

Gamma penetration. Safety Maint & Prod 104:54 O '52

Gamma radiation following decay of I^{131}. H. C. Hoyt and J. W. M. DuMond. Phys R 91:1027 Ag 15 '53

Gamma-radiation from Am^{241}. J. O. Newton and B. Rose. Phys R 89:1157 Mr 1 '53

Gamma-radiation from arsenic 77. S. A. Reynolds and others. bibliog Phys R 91:333 Jl 15 '53

Gamma radiation from B^{11} bombarded by protons. T. Huus and R. B. Day. bibliog Phys R 91:599-605 Ag 1 '53

Gamma radiation from cobalt-60 can promote chemical reactions; abstract. L. E. Brownell. Chem & Eng N 31:1310 Mr 30 '53

Gamma radiation from inelastic scattering of 2.7-Mev neutrons. V. E. Scherrer and others. Phys R 91:768-9 Ag 1 '53

Gamma-radiation from interaction of 14-Mev neutrons with iron. V. E. Scherrer and others. diags Phys R 89:1268-70 Mr 15 '53

Gamma-radiations from Zr^{95} and Nb^{95}. C. E. Mandeville and others. bibliog diag Phys R 89:559-61 F 1 '53

Gamma-radiography; progress in non-destructive testing. H. Manley. il Chem Age (Lond) 67:795-6 D 13 '52

Gamma radiology; application to detection of cracking in riveted seams of boiler drums. A. R. Haworth. il Elec J 149:1163-72 O 17 '52

Gamma-ray cascade following decay of Sc^{46}. C. E. Whittle and F. T. Porter. Phys R 90:498 My 1 '53

Gamma-ray resonances in the alpha-particle bombardment of beryllium and boron. F. L. Talbott and N. P. Heydenburg. bibliog Phys R 90:186-7 Ap 15 '53

Gamma-ray spectrum of As^{77}. F. Rasetti and E. C. Booth. bibliog Phys R 91:1192-3 S 1 '53

Gamma-ray spectrum of ionium (Th^{230}). F. Rasetti and E. C. Booth. bibliog Phys R 91:315-18 Jl 15 '53

Gamma rays from interaction of 14-Mev neutrons with various materials. V. E. Scherrer and others. Phys R 91:1476-8 S 15 '53

Gamma-rays from Mg^{26}. J. E. May and B. P. Foster. bibliog diags Phys R 90:243-7 Ap 15 '53

Gamma-rays from negative μ-meson capture in lead. G. G. Harris and T. J. B. Shanley. bibliog il Phys R 89:983-90 Mr 1 '53

Gamma-rays from Sn^{125}. C. E. Mandeville and others. Phys R 88:554-5 N 1 '52

Graphs of the Crompton energy-angle relationship and the Klein-Nishina formula from 10 kev to 500 Mev. A. T. Nelms. U S Nat Bur Stand Circ 542:1-89; pa 55c Supt. of doc. '53

High energy gamma-gamma cross section of In^{115}. J. Goldemberg and L. Katz. bibliog Phys R 90:308-14 Ap 15 '53

Hydrogen peroxide formation by cobalt gamma-radiation. T. J. Sworski. bibliog J Chem Phys 21:375-6 F '53

Internal conversion in the *L* subshells. J. B. Swan and R. D. Hill. Phys R 91:424-5 Jl 15 '53

Internal conversion of neutron capture γ-rays. C. T. Hibdon and C. O. Muehlhause. bibliog diags Phys R 88:943-4 N 15 '52

Internal conversion of the Sr^{88} gamma-rays. F. R. Metzger and H. C. Amacher. bibliog Phys R 88:147-8 O 1 '52

Internal pair conversion in Mg^{24}. S. D. Bloom. bibliog diags Phys R 88:312-21 O 15 '52

Internal pair production of γ-rays of mesonic origin; alternate modes of π° decay. P. Lindenfeld and others. bibliog diags Phys R 89:531-7 F 1 '53

$K/(L+M)$ internal conversion ratios for *M*4 transitions. G. A. Graves and others. bibliog Phys R 88:344-8 O 15 '52

Latest isotope weld testing technique. diag Power Eng 57:93 O '53

Mass assignment and gamma-radiations of the seven-hour molybdenum isomer. G. E. Boyd and R. A. Charpie. Phys R 88:681-2 N 1 '52

Natural and artificial sources for gamma radiography. B. N. Clack. il diags Engineer 194:195-8 Ag 8 '52

Neutron capture γ-ray spectra from the elements Z=17-30 and Z=45-57. B. Hamermesh and V. Hummel. bibliog diag Phys R 88:916-19 N 15 '52

Neutron capture γ-rays from scandium, vanadium, manganese, cobalt, and copper. G. A. Bartholomew and B. B. Kinsey. bibliog diags Phys R 89:386-95 Ja 15 '53

Neutron capture γ-rays from titanium, chromium, iron, nickel, and zinc. B. B. Kinsey and G. A. Bartholomew. bibliog diags Phys R 89:375-85 Ja 15 '53

Neutron capture gamma-rays in cadmium, cobalt, and chlorine. W. A. Reardon and others. il diags Phys R 91:334-7 Jl 15 '53

New method of inspecting pipe line welds saves money and promotes safety; gamma ray inspection or radiography. W. C. Grant. il Gas Age 110:19-22 N 6 '52

Nuclear gamma-rays from low energy proton bombardment of sodium, magnesium, and aluminum. H. Casson. bibliog diags Phys R 89:809-20 F 15 '53

Plant inspection; gamma-radiographic equipment. il Chem Age (Lond) 68:212 Ja 31 '53

Pneumatic tubes shift radioactive capsules in pseudo atomic-ray bombarder. il Comp Air Mag 58:252-3 S '53

Polarization correlations of the gamma-rays of Cs^{134} and of annihilation radiation. B. L. Robinson and L. Madansky. bibliog il diags Phys R 88:1065-9 D 1 '52

Polarization of the O^{16} gamma-rays. L. W. Fagg and S. S. Hanna. bibliog Phys R 88:1205-6 D 1 '52

Polarization of the three-photon annihilation radiation. L. Leipuner and others. diag Phys R 91:198-9 Jl 1 '53

Polarized γ-rays from nuclei aligned at low temperatures. G. R. Bishop and others. bibliog Phys R 88:1432-3 D 15 '52

Precision measurement of Co^{60} gamma radiation. G. Lindström and others. Phys R 89:1303-4 Mr 15 '53

Precision measurements of nuclear γ-ray wavelengths of Ir^{192}, Ta^{182}, RaTh, Rn, W^{187}, Cs^{137}, Au^{198}, and annihilation radiation. D. E. Muller and others. bibliog diags Phys R 88:775-93 N 15 '52

Press safety control uses radioactive wristband. M. E. Simonton and J. Yeiser. il diags Electronics 26:114-15 Ja '53

Probability of internal conversion of *K* series radiation of Au arising from the interaction of the *L* subshells. J. W. Mihelich. bibliog Phys R 88:415 O 15 '52

Production of π° mesons by γ-rays on hydrogen. A. Silverman and M. Stearns. bibliog diag Phys R 88:1225-30 D 15 '52

Production of π° mesons in hydrogen and deuterium by high energy γ-rays. G. Cocconi and A. Silverman. bibliog diag Phys R 88:1230-3 D 15 '52

Radiations from RaD and RaE. C. S. Wu and others. bibliog diags Phys R 91:319-27 Jl 15 '53

Radioactive thickness gage controls paper weight. G. J. Leighton. il diags Electronics 25:112-13 D '52

Search for 1-Mev gamma from N^{16} decay. F. Boehm and others. bibliog Phys R 90:1119-20 Je 15 '53

Some effects of cobalt gamma-radiation on aqueous benzene solutions. T. J. Sworski. bibliog J Chem Phys 20:1817-18 N '52

Spectrum of the γ-radiation emitted in the reaction $n+p\rightarrow d+\gamma$. A. Bracci and others. bibliog Phys R 90:162-3 Ap 1 '53

Sterilizing foods by cold gamma rays. L. E. Brownell and others. bibliog il diag Refrig Eng 61:55-7+ Ja '53

Studies on the gamma-radiation-induced polymerization of acrylonitrile. I. A. Berstein and others. bibliog J Chem Phys 21:1303-4 Jl '53

GAMMA rays—*Continued*
Systematic calculations of gamma-ray penetration. H. Goldstein and others. bibliog Phys R 89:1150 Mr 1 '53
Theory of the penetration of γ-rays through thin barriers. J. P. Vinti. bibliog diag Phys R 91:345-8 Jl 15 '53
See also
Spectrometers, Gamma ray

Measurement

Pair measurement of gamma-rays with a lens spectrometer. D. E. Alburger. bibliog diags R Sci Instr 23:671-7 D '52

Scattering

Angular distribution of γ-rays from stripping reactions. G. R. Satchler. bibliog Phys R 90:722-3 My 15 '53
Multiple Compton scattering of low energy gamma-radiation. R. C. O'Rourke. bibliog Phys R 89:999-1003 Mr 1 '53
Scattering of 1.3³ Mev gamma-rays by an electric field. R. R. Wilson. bibliog diag Phys R 90:720-1 My 15 '53

GANGER, Robert Mondell, 1903-
Ganger of Lorillard. por Fortune 47:104-5 Ja '53

GANGPLANKS
Passengers come first; gangplanks for weather protection; illustrations with text. H. M. Henion. S A E J 61:77 Ag '53

GANTRY crane. See Cranes, derricks, etc.

GARAGE doors
Six unusual ways to use standard garage doors. il diag Am Bld 74:161-3 S '52
Transistor-controlled garage door. A. H. Forbes and R. L. Riddle. diags Electronics 26:222+ Je '53

GARAGES
Garage roof of prestressed block beams. A. M. Lount and L. Schenker. il diag Concrete 61:32+ F '53
Many cities are planning garages. il Eng N 150:46+ F 5 '53
Prestressed girders eliminate columns to free parking garage entrance area. il plan diags Arch Rec 112:179-80 D '52
Prestressed girders support garage floor. il plan diags Eng N 149:38-9 N 13 '52
Trucking subsidiary gets modern freighthouse and garage. il plan Ry Age 135:60-3 Jl 27 '53
Wood fibre panel garage. il Am Bld 74:174 D '52
World's heaviest prestressed building girders; garage building. T. Y. Lin. il plan diags Civil Eng 22:927-31 N '52
See also
Motor bus lines—Garages

Electric equipment

New garage at Garston. il Electrician 149:699 S 5 '52

Employees

Garage drive. Bsns W p79-80 D 27 '52

Heating and ventilation

Ventilating system to carry off engine fumes in a repair garage. il Heat & Ven 49:107-9 D '52

Lighting

New Romford bus garage; lighting for easy servicing work. Elec J 151:578 Ag 21 '53

Safety measures

Automatic control of carbon monoxide; New York city's municipal omnibus garage and maintenance center. il Safety Maint & Prod 104:45-6 N '52; Same cond. Heat & Ven 49:99 D '52

GARAGES, Municipal
Parking; Chicago tackles its problem. P. Hirsch. il plan Pub Works 84:68-70 Ap '53

GARAGES, Private
Tie-in the garage with kitchen traffic. il plan Am Bld 74:269 O '52
See also
Garage doors

GARAGES, Underground
Bid approved for underground garage; San Francisco's parking authority. plan diag Eng N 149:48-9 O 16 '52

GARBAGE disposal. See Refuse disposal; Sewage disposal—Sludge and refuse mixing

GARDEN tools
Outdoor power tools; coming up fast. il Bsns W p58-9+ Ap 4 '53
Power weed-cutter and a lawn edger. il Consumers Res Bul 31:25-6 Je '53

GARDENS
Garden lighting after sunset. il Elec West 110:118 My '53

GARDNER, F. C.
Gardner made executive vice president of Ebasco Services. por Elec World News ed 138:28 N 10 '52

GARDNER advertising agency
Story of Gardner advertising co. il Adv Agency 46:52-5+ F '53

GARDNER-DENVER company
Gardner-Denver machinery in continued strong demand. Barron's 33:27 Ja 5 '53

GARMENT industry
See also
Clothing trade
Women's apparel

GARMENT sizes. See Clothing and dress—Standards

GARNETTING. See Wool—Re-use

GARRETT corporation
Garrett's $140 million backlog means two years of peak sales. Barron's 32:20 D 22 '52

GARRETT freightlines, inc.
Debentures offered. Comm & Fin Chr 177:624 F 9 '53

GARRYINE
Evidence of an ethanolamine structure in the garrya alkaloids and atisine; and a partial synthesis of garryine. M. F. Bartlett and others. Chem & Ind p323 Ap 4 '53
Structure of veatchine and garryine. M. F. Bartlett and others. bibliog Chem & Ind p 173 F 21 '53

GAS
American gas fundamentals; a continuing educational and refresher course in gas techniques, operations and management. flow chart Am Gas J 178:23-6 Ja '53 [cont monthly]
Appliance servicing as affected by varying gas conditions. W. C. Peters. Am Gas Assn Proc 1952:429-32; Same cond. Am Gas J 177:14+ Jl '52
See also
Blast furnace gas
Butane
Coal distillation
Coke oven gas
Flue gas
Gas, Natural and other headings beginning Gas
Gases
Liquefied petroleum gas
Propane
Sewage sludge—Gas production

Odorizing

What we learned in a 16-month program of odor testing and record-keeping. A. H. Abbott. Gas Age 111:34-5+ F 26 '53; Same cond. Am Gas J 178:21+ Ja '53

Rates

See Gas rates

GAS, Natural
American gas association transmission and storage conference, Chicago, April 30-May 1. Oil & Gas J 52:79-80 My 11 '53
Chemicals from gas. F. H. Dotterweich. flow chart Am Gas J 178:23-6 Ja '53
Drycleaning machine combats meter shop problem in conversion to natural gas. G. E. Griffin. il plan diag Am Gas J 179:14-15+ Ag '53
Explosive limits of mixtures of natural gas and air. R. F. Nielsen. Oil & Gas J 51:167 N 10 '52
Gas-drilled wells yield more oil. N. C. Wells. il World Oil 135:139-40+ N '52
Gas exports endorsed. Oil & Gas J 51:67 D 8 '52
Gas in the fast-growing chemical industry. G. R. Walton. Am Gas Assn Proc 1952:252-8
Gas-well potentials and gas allowables; how Texas railroad commission operates; its rules, regulations. R. F. Carlson. Oil & Gas J 51:93-4+ Ja 21 '53

GAS, Natural—*Continued*

Gasification of hydrocarbons for production of gases to supplement natural gas in city supplies (cont). J. J. Morgan. bibliog flow diags il map diags Gas Age 110:37-40 N 6; 59-65 N 20; 41-5 D 4; 38-45 D 18 '52; 111:26-32 Ja 29; 57-64 F 12; 42-4 F 26; 51-9 Mr 12; 40-52 Mr 26; 54-60 Ap 9 '53

How Warren Petroleum applies hydrocarbon stripping in its operations. R. L. Lane and B. J. Thompson. flow diag il diags Oil & Gas J 50:174-5+ My 5 '52; Same. Pet Refiner 31:120-3 Je '52; Same. Pet Eng 24: C37-9 N '52

It pays to know your petroleum; explanation of the peculiar way oil and gas act under changing conditions. N. J. Clark. bibliog diags World Oil 136:165-6+ Mr; 208-10+ Ap '53

Natural gas goes to town. R. A. Rosan. il map Trusts & Estates 91:830-5 N '52

Natural gas to ethane to ethylene. D. J. Stark. bibliog diags Pet Processing 8:897-9 Je '53; Same abr, with flow diag. Oil & Gas J 52:85-7 Je 1 '53

Petrochem report; Grace Chemical will make ammonia, urea. il diag Oil & Gas J 52:246-7 My 25 '53

Survey of injection of natural gas before and during water flooding. J. N. Breston. bibliog Pet Eng 24:B64-6+ Je '52; Same cond. Oil & Gas J 51:400+ N 17 '52

Unsteady-state flow of gases in porous media. R. F. Nielsen. diags Oil & Gas J 51:171 F 16; 201 F 23 '53

Why gas plants should be surveyed to determine corrosion damage. E. W. Wallace. Gas Age 112:47-9+ Ag 13 '53; Same abr. Oil & Gas J 52:201-2+ My 25 '53

Will natural gas industry continue growth? with statistical summary of seventeen companies. R. Carleson. Mag of Wall St 91: 24-6+ O 4 '52

See also

Gas as fuel—Natural gas

Gasoline, Natural

Liquefied petroleum gas

Methane

Petroleum

also Consolidated natural gas company

Acidation of wells

Acidizing limestone formations increases production rates of natural gas wells. il diag Am Gas J 179:17-18 Ag '53

Analysis

Absorption index basis of new shortcut gas analysis. T. W. Legatski. Chem & Eng N 31:1980+ My 11 '53

Continuous determination of small percentages of methane in gases. H. Nash, jr. and others. diag Anal Chem 24:1650-2 O '52

New testing method. T. W. Legatski and others. Oil & Gas J 52:77-8 My 11 '53

Small portable combustion tube for Orsat type of gas analysis apparatus. M. L. Robinson. diags Am Gas J 178:14-15+ Mr '53; Same abr. Oil & Gas J 51:346+ Mr 23 '53

Compression

Compressibility factors for natural gas. R. E. Maples. Oil & Gas J 52:147 Je 15 '53

Compressing of natural gas. C. D. Alstadt and H. G. Davis. diags Am Gas J 177: 19-22 D '52

Compressor calculations. R. W. Brooks. bibliog Oil & Gas J 51:163 Ap 20 '53

Gas transmission control problems. J. Procopi and W. W. Drake. flow diag il diags Pet Eng 25:D3-6+ Mr '53

Which to use, I type or M type in high-pressure gas injection? R. L. Slobod and H. A. Koch, jr. bibliog diags Oil & Gas J 51:84-8+ Ap 6 '53

See also

Gas, Natural—Pipe lines—Compressor stations

Conditioning

Design and operation of oil foggers at Baltimore. O. W. Lusby. il diags Am Gas Assn Proc 1952:543-9; Same cond. Am Gas J Hdbk 177:9-10 O 15 '52

Effects of gas conditioning on the distribution system. C. A. Kooke. Am Gas Assn Proc 1952:280-4; Same. il Gas Age 110:35-7+ D 4 '52; Same cond. Am Gas J 177:28+ N '52

El Paso Natural's research project; how corrosion of gas-treating plants is being studied. J. W. Cronenberg. il Oil & Gas J 51: 267-8 Ap 27 '53

El Paso Natural's San Juan River plant; plant gets gas from two sources. W. W. Mize. il Oil & Gas J 51:258+ Ap 27 '53

Extensive use made of gas produced with oil; El Paso natural gas co.'s Permian division. E. A. Scearce. il map Oil & Gas J 51:262+ Ap 27 '53

Gas refrigeration plant designed to extract minimum of natural gasoline. R. B. McLaughlin and C. P. Stanley. flow diag il Oil & Gas J 51:103-4+ Ap 6 '53

Girbotol process; Girdler corp. flow diag Pet Refiner 31:230-1 S '52

Glycol-amine gas treating; Fluor corp. flow diag Pet Refiner 31:234-5 S '52

Instrumentation in scrubbing, regulating, mixing and metering of natural gas. R. P. Saxton. il Gas Age 110:23-4 N 6 '52

New McKamie processing facilities operating at 50 million cubic feet daily. K. G. Pearce. flow sheet il Oil & Gas J 52:152-5 My 25 '53

New separator-scrubbers show good results. B. R. Keller. il diag World Oil 135:249-51 D '52

Oakford project will store 105 billion cubic feet of gas. C. B. Brown. il Oil & Gas J 51:102-3+ O 27 '52

Operating glycol-amine gas treating plants. M. Atcheson and A. A. Cohn. bibliog flow diag il World Oil 135:297-300 O '52

Pressure maintenance, liquids extraction, and crude stabilization at Elk City, Okla. plant. il diag Oil & Gas J 52:214+ My 25 '53

San Juan River treating plant world's largest. B. M. Willis. il Pet Eng 24:D3-6 N '52

UGI cyclic catalytic reforming process; recent developments. E. H. Smoker. Am Gas Assn Proc 1952:843-4

See also

Gas, Natural—Dehydration

Conservation

Conserving natural gas with packaged gasoline plants. G. T. Williamson. flow diags Pet Refiner 32:149-52 Ap '53

Gas flaring reduced in south Louisiana fields. F. L. Resen. Oil & Gas J 51:84 Ap 13 '53

Know-how; New Mexico's oil and gas conservation procedures. R. F. Carlson. Oil & Gas J 52:84-8+ Je 8 '53

Natural gas conservation. E. O. Thompson. diag Am Gas J 178:47-50 My '53

Oil and gas conservation in the province of Alberta; aims and accomplishments. G. W. Govier. Pet Eng 25:B68+ F '53

Spraberry shut in. il map Oil & Gas J 51:57 Mr 30; 60-1 Ap 6 '53

Spraberry suit opens. Oil & Gas J 51:129 Ap 27 '53

Dehydration

Compression and dehydration; United gas pipe line co. F. H. Love. il Pet Eng 24: D24+ N '52

Dehydration economics; relative merits of four basic methods discussed by panel. Oil & Gas J 51:66 N 3 '52

Dehydration of natural gas and light hydrocarbon liquids. J. M. Campbell and others. bibliog(240 ref) flow sheets il diags Pet Refiner 31:65-70 Ag; 106-12 O; 109-16 N '52; 32:138-42 Ja; 131-4 F; 151-6 Mr '53

Design and choice of equipment for gas dehydration. J. M. Campbell. bibliog flow sheets Chem Eng Prog 48:440-8 S '52

Extraction plant strips high pressure gas. il diag Pet Eng 25:A73-4+ Ap '53

Gas transmission control problems. J. Procopi and W. W. Drake. flow diag il diags Pet Eng 25:D3-6+ Mr '53

How to lengthen life of solid desiccants. B. F. Koepke and V. M. Stowe. Oil & Gas J 51:107-8 Ja 12 '53

GAS, Natural—Dehydration—*Continued*

How to mitigate corrosion in a glycol-dehydration plant. N. K. Senatoroff. flow diag il diags Oil & Gas J 51:154+ Ap 27 '53

Oakford project dehydration plant uses single-bed split-flow tower design. C. R. Hetherington. flow diag il Oil & Gas J 51: 96-9+ N 10 '52

Prevention of freezing in measuring and regulating equipment. D. Attaway. flow sheet il diags Pet Eng 25:B90+ F '53

Proper selection and sizing of solid-desiccant-type dehydrators. C. O. Glasgow. il Oil & Gas J 51:73-4 Ja 5 '53

Southern Natural removes distillate and increases pipe-line efficiency. L. N. Brown and J. M. Phillips. il diag Oil & Gas J 51: 88-9+ N 3 '52

Distillate wells

Alberta's sleeping giant. H. D. Ralph. map Oil & Gas J 51:60-1 D 1 '52

Crude oil and lease condensate; by states, by square miles of surface area; tables. Oil & Gas J 52:146 Je 1 '53

Gas-condensate operations at Reddell. D. E. Gregg. flow diag il map Oil & Gas J 52: 190+ Je 22 '53

Mississippi's Black Warrior basin yields gas-condensate. F. F. Mellen. maps diags World Oil 136:77-8+ Je '53

Mustang field; Mustang Island multi-zone field is in Corpus Christi bay, Texas. G. V. Ricks and J. M. David. il maps diags Pet Eng 25:A41-8 Ja '53

Nevis field growing. il map World Oil 135: 324-5 D '52

Straight down to pay; gas-distillate field in Anadarko basin. il map Pet Eng 24:B18 N '52

When does it pay to cycle gas-condensate reservoirs? H. G. Riley and C. M. Cole, jr. Oil & Gas J 51:101-4+ S 22 '52

Corrosion problem

Combating corrosion in oil and gas wells; compiled from papers, reports and discussions at National association of corrosion engineers annual meeting, Chicago. Oil & Gas J 51:106-9+ Ap 13 '53

Geology

Lithologic factors affecting prospects for early paleozoic oil and gas in West Virginia. O. L. Haught. map Am Assn Pet Geologists Bul 37:553-60 Mr '53

What does Peace river mean to western Canada? il maps diags World Oil 135:298+ D '52

Laws and regulations

Developments in the law relating to natural gas during 1952-1953. C. W. Cooper. Pub Util 52:521-8 O 8 '53

Federal regulation of the natural gas industry. N. L. Smith. Pub Util 51:646-9 My 7 '53

Final decision near; end of prolonged fight over Texas' gas-gathering tax in sight. Oil & Gas J 52:80-1 Je 15 '53

Gas companies, GAMA and public opinion kill Kent coal grab bill. Am Gas J 179:16+ Ag '53

Gas crisis near; FPC calls Northern Natural to account for its defiance of a commission order. Oil & Gas J 51:80+ N 24 '52

Gas-well potentials and gas allowables; how Texas railroad commission operates; its rules, regulations. R. F. Carlson. Oil & Gas J 51:93-4+ Ja 12 '53

Impact of FPC rate regulation on natural gas production. E. Falck. Pub Util 51: 420-6 Mr 26 '53

Impact of the Northern Natural Gas decision on financing. R. E. Badger. Pub Util 50:751-60 N 20 '52

Is FPC gas cost allocation equitable? L. Shomaker. Pub Util 50:680-8 N 6 '52

Phillips case. Pub Util 51:843-4 Je 18 '53

Phillips rule upset. B. F. Linz. Oil & Gas J 52:60 Je 1 '53

Recent developments in the gas and electric fields of public utility law. M. Springer. Pub Util 50:581-4 O 23 '52

Regulation of natural gas producers thrown into new confusion by Phillips decision. J. E. Finley. Am Gas J 179:18-19 Jl '53

Roundup of proposed gas legislation. E. Falck. Pub Util 51:641-2 My 7 '53

Test case resumed; Oklahoma commission to rule on whether it can set a minimum price on gas produced with oil in Ringwood field. Oil & Gas J 51:74 Mr 9 '53

Why a PAD order number two; and how long? emergency regulation affecting gas companies. H. B. Noyes. Pub Util 50:673-9 N 6 '52

See also
Gas, Natural—Rates

Maps

U.S. pool maps; principal oil and gas areas. Oil & Gas J 51:103-18 Mr 30 '53

Measurement

Computing gas volumes from orifice-meter charts integrator data, using a punched-card system. A. C. Buchanan, jr. and H. Skinner. flow plan Oil & Gas J 51:72-3+ F 2 '53; Same. World Oil 136:186+ Mr '53

Determination of basic orifice flow factor by indirect interpolation. J. Garrett. Pet Eng 25:D 19 My '53

El Paso Natural's measurement program. C. F. Rittmann, jr. il Oil & Gas J 51:271+ Ap 27 '53

Here's a new time-saving method of calculating orifice-meter charts. C. Hoot. il Oil & Gas J 51:106-7 Mr 9 '53

How New England companies solved problems of orifice metering. R. E. Lasselle. Gas Age 110:25+ N 6 '52

Measurement and regulation of flow by remote control. G. C. Wilson. il diags Oil & Gas J 52:82-4 Je 1 '53

Moisture content

Determination of water vapor in natural gas by direct chemical method. W. F. Brickell. bibliog il diags Am Gas Assn Proc 1952:753-60; Same. Pet Eng 24:D58+ N '52

Odorizing

Controlling nuisance odors at odorization stations. P. L. Covell. Am Gas Assn Proc 1952:776-7

Design of odorizer installations in distribution system. N. A. Manfred. il diag Gas Age 111:31-5 My 7 '53

Experience and practices in gas odorizing in the Niagara Mohawk system. T. C. Moran. Am Gas J Hdbk 177:6+ O 15 '52

Experiences with odorization. G. Corfield and J. S. Powell. Am Gas Assn Mo 35:15-18+ S '53

Odorization of gas. E. L. Henderson. Am Gas Assn Proc 1952:294-303 bibliog(89 titles, p297-303); Same cond. Am Gas J 177:17+ D '52

Properties of natural gas odorants. C. R. Cable and others. bibliog Am Gas J Hdbk 177:7-8+ O 15 '52

What we learned in a 16-month program of odor testing and record-keeping. A. H. Abbott. Gas Age 111:34-5+ F 26 '53; Same cond. Am Gas J 178:21+ Ja '53

Bibliography

Annotated bibliography of gas odorization. E. L. Henderson. Am Gas Assn Proc 1952: 297-303

Peak load

Economics of peak shaving. H. M. Henry. diags Am Gas Assn Proc 1952:818-42

Economics of supplying peak gas loads. J. W. Carroll. Am Gas Assn Proc 1952:761-75

Flexible standby for Washington Gas Light includes new high-pressure storage plant. B. C. White. il Am Gas J 177:14-15+ D '52; Same. Pet Eng 24:D50+ D '52

How to keep LP-gas plants ready for use. D. S. Seifried. Gas Age 112:33-5+ Jl 16 '53

Load factor of pipe lines leads to demand commodity rate for gas utilities. G. L. Wigglesworth, jr. il Heating-Piping 24:83-5 N '52

Natural gas stored underground to solve problems in peak local demand; abstract. C. T. Konecny and B. J. Clarke. Heat & Ven 50:146 My '53

Peak shaving for natural gas systems. C. T. Chave and B. C. White. Am Gas Assn Mo 35:21-3+ O '53

GAS, Natural—Peak load—*Continued*

Proportional peak shaving and automatic stand-by gas mixing control. E. X. Schmidt and C. W. Warner. diags Am Gas Assn Proc 1952:561-4

Strategic underground gas storage promises uninterrupted peak-period service in Chicago. J. F. Oates, jr. map Am Gas J 178: 18-19+ F '53

Stretching the St Louis gas supply; Laclede company increases propane-air system to supplement natural gas. L. M. Liberman. il map Comp Air Mag 58:34-9 F '53

What can be done with dump loads, interruptibles and heating. R. S. Bruns, jr. Gas Age 111:52-3+ Ap 9 '53

See also

Gas, Natural—Storage

Pipe lines

Algonquin lacks ok to use new pipeline. Eng N 149:25 D 4 '52

Algonquin ordered by court to remove installed pipeline section in New York. Am Gas J 178:22 Ja '53

All-American line for Northwest. D. Thornton. Gas Age 112:39+ S 10 '53

A.G.A. transmission and storage conference, 1st, Chicago, April 30-May 1. Gas Age 111:37-40+ My 21 '53; Am Gas Assn Mo 35:4-7 Je '53

Bechtel's pipe dream; natural gas from the Middle East. map Fortune 46:103-4 N '52

Billion American dollars for Canada or the United States? N. H. Gellert. map Gas Age 111:28-31+ Je 4 '53; Same cond. Am Gas J 179:20+ Jl '53

Block Algonquin's New England pipe line project with order to rip out Westchester, N.Y. section. Gas Age 111:35 Ja 29 '53

Brake on tax write-off. Bsns W p 192+ Ap 18 '53

Call answered for more Canadian pipe lines. B. Shiels. il map World Oil 135:252-4+ D '52

Canadian project replete with obstacles. H. C. Plummer. il Pet Eng 24:D 14+ O '52

Control of outlet regulators on Tennessee natural gas lines. D. H. Woods. map Oil & Gas J 57:125 N 3 '52

Crude, products and gas lines planned in 1953. A. L. Given. World Oil 136:238+ F 15 '53

Deal for the economics textbooks; cooperation between Northern Natural and El Paso. maps Bsns W p96+ Jl 18 '53

El Paso Natural completes a circle of communication. B. M. Willis. il map World Oil 136:203-6+ Ja '53

El Paso-Permian exchange agreement eliminates cross-hauling of gas. J. J. Finnegan. il map Gas Age 112:35-8+ S 24 '53

El Paso story. C. L. Perkins. il map World Oil 135:239-44+ N '52

Emergency pipe line suspensions; design and installation procedures. C. A. Swensingsen. diags Gas Age 112:36-9+ Jl 16 '53

FPC authorizations in last half of 1952 will add 1¼ billion cu. ft. daily. Gas Age 111: 37-9+ Mr 12 '53

FPC authorizations in first half of year will add 2¼ billion cu. ft. daily. Gas Age 112: 21-3+ S 24 '53

From Mercedes to Manhattan; story of Transcontinental's line. il Gas Age 110:32-3 D 18 '52

Fuller brush man takes a utility job; door-to-door visits just ahead of pipeline laying have made friends for Southern California gas co. J. H. Collins. Pub Util 51:225-32 F 12 '53

Gas line from Middle East to Europe held sound. S. D. Bechtel. Pet Eng 24:D78 D '52

Gas line nearer; Westcoast clears all Canadian hurdles for moving Alberta gas to U.S. H. D. Ralph. il map Oil & Gas J 51:85-6 O 20 '52

Gas pact revealed; El Paso Natural, Northern Natural, Permian Pipeline negotiate exchange and delivery agreement. P. Reed. maps Oil & Gas J 51:62 Ap 6 '53

Gas transmission control problems. J. Procopi and W. W. Drake. flow diag il diags Pet Eng 25:D3-6+ Mr '53

Grant pipe line projects to seven Columbia subsidiaries. Gas Age 111:68 Je 4 '53

Henry Gellert, fighting for natural gas, takes story to people; uses television and radio to enlist public support for Pacific Northwest line. Gas Age 110:26-7+ N 6 '52

How Lone Star has worked to achieve continuity of supply and service. W. C. Grant. il maps Gas Age 112:34-44+ Ag 27 '53

How natural gas is piped from Saratow to Moscow. il Gas Age 110:38-9+ D 4 '52

How to prevent damage from heaving of piping at regulator stations. C. E. Williams. il diags Gas Age 111:32+ Mr '53

Huge line proposed; system capable of moving billion cubic feet daily from Iraq fields to Paris outlined. D. M. Duff. map Oil & Gas J 51:80+ N 3 '52

Industry spurs pipeline tests. Am Gas Assn Mo 35:9+ S '53

Italian production and consumption of natural gas rapidly increasing. A. Giordano. map Oil & Gas J 51:75 D 29 '52

Line purged with CO_2. il Oil & Gas J 51:77 Ja 5 '53

Load factor of pipe lines leads to demand commodity rate for gas utilities. G. L. Wigglesworth, jr. il Heating-Piping 24: 83-5 N '52

Magnesium anode system resurveyed after 2½ years; Chocolate Bayou transmission lines of Pan American gas co. C. E. Sonntag, jr. il Oil & Gas J 51:303-4+ O 13 '52

Major part of Texas gas project completed. il Pet Eng 25:D33-4 Ap '53

Making a hot tap at 850 psi. under seven ft. of canal water. J. A. Kornfeld. il diags Oil & Gas J 52:211-12 My 25 '53

Measurement and regulation of flow by remote control. G. C. Wilson. il diags Oil & Gas J 52:82-4 Je 1 '53

Methods used to repair broken river lines. K. Bentz. il Pet Eng 25:D 15-16 My '53

Mid-winter peak problem. R. Sneddon. il Pet Eng 25:D14+ Ap '53

Natural gas, Cinderella to glamour girl. Pet Eng 24:D28+ O '52

Natural gas from the Gulf. R. S. Child. Pub Util 51:95-9 Ja 15 '53

Natural-gas pipe line built-in crossing of highway bridge has new features. J. A. Kornfeld. il diags Oil & Gas J 51:163+ O 20 '52

Natural gas pipeline deposits. L. T. Bissey. Am Gas Assn Proc 1952:531-6; Same cond. Am Gas J 177:16-17+ Ag '52

New code for gas system piping is on the way. D. M. Taylor. World Oil 136:210-12 Ja '53

New method of inspecting pipe line welds saves money and promotes safety; gamma ray inspection or radiography. W. C. Grant. il Gas Age 110:19-22 N 6 '52

New 792-mile carrier would be biggest planned for 1953 construction; El Paso natural gas co. J. F. Eichelmann. il Oil & Gas J 51: 254 Ap 27 '53

Northeastern carries gas to New England. il map World Oil 135:262-3 D '52

Northern Natural's growing pains. H. D. Ralph. map Oil & Gas J 51:69+ N 3 '52

Northwest plus; plans to export natural gas to Northwest U.S. have received Canadian government approval. il Chem W 71:15-16 O 25 '52

Nursemaid two thousand miles of pipeline. il Bsns W p 142-4+ Jl 11 '53

Pipe line construction. M. Dennard. Published in monthly numbers of World oil

Pipe line flow calculations. J. W. J. Bercher. Pet Eng 25:D7-8+ Ap '53

Pipeline fracas; who will bring gas to the Pacific Northwest? R. M. Bleiberg. map Barron's 33:5+ F 2 '53

Pipe line fracture tests start at Athens, Ohio. C. F. de Mey. Gas Age 112:33+ Ag 13 '53

Pipe line maintenance procedures. F. H. Love. map Pet Eng 24:D36+ O '52

Pipe line outlook. Pet Eng 25:D 12+ Ja '53

Pipe line projects get 223,308 tons of steel. Gas Age 111:56-7 Mr 26 '53

Pipeliner meets the public. F. M. Banks. Am Gas Assn Mo 35:27-8+ My '53

Pipelines great underground highway. C. A. Scarlott. il Westinghouse Eng 13:146-51 S '53

GAS, Natural—Pipe lines—*Continued*

Pipelines vie for Northwest. Bsns W p31-2 F 28 '53

Plan Permian Basin pipeline system in Texas-New Mexico. Gas Age 111:65 F 26 '53

Plastic pipe solves irrigation problems for rice farmers in south Texas. W. C. Grant. il Gas Age 112:17-18 Jl 2 '53

Postwar development of Italian natural-gas pipe lines. F. Salimbeni. il map Oil & Gas J 51:159 F 16 '53

Push-button control of natural-gas flow; Houston pipe line co. J. F. Collerain and E. M. DeMouche. il diags Oil & Gas J 51:254-6+ O 13 '52

Quarter billion-dollar plan. Pet Eng 24:D48 O '52

Recent developments in the gas and electric fields of public utility law. M. Springer. Pub Util 50:581-4 O 23 '52

Reconditioning 210 miles of 24-year old line. W. A. Johnson. il Oil & Gas J 51:299-300 O 13 '52

Relative pipe diameters for gas-distribution systems. R. F. Nielsen. Oil & Gas J 51:147 D 15 '52

Remote control of underground storage field; Southern California gas co. R. V. Gray. il Oil & Gas J 51:261-3 O 13 '52

Remote measurement and control. W. E. Rufleth. il diags Pet Eng 24:D20+ O '52

Scraper traps for natural-gas lines; illustrations with text. Oil & Gas J 51:136 Ap 13 '53

Soil resistivity instruments and measurements. O. W. Wade. Am Gas Assn Proc 1952:487-8

South Atlantic Gas pipe line to supply fuel to Savannah. il Gas Age 112:42-3 Jl 2 '53

Southwest gas reaches Far Northeast by new Gloucester line. il Gas Age 112:29 Jl 2 '53

Storage capacity of gas pipe lines. R. F. Nielsen. Oil & Gas J 51:149 D 1 '52

Story of El Paso natural gas co.'s quarter century of growth. C. L. Perkins. il map Oil & Gas J 51:242-3+ Ap 27 '53

Stress failure in Big-Inch gas-transmission pipe. J. W. Lodge and G. K. Manning. diags Oil & Gas J 51:344-6+ N 17 '52; Same. Am Pet Inst Proc 32(5):35-41 '52

Tennessee gas transmission co. completes second huge bridge across Brazos. W. C. Grant. il Gas Age 111:14-15 Ja 29 '53

Tennessee Gas Transmission pipe line supplies New England. Gas Age 110:82 N 20 '52

Texas Eastern and Wilcox Trend complete important projects in two states. il Gas Age 112:40-1+ S 10 '53

Texas Gas is still growing. il map World Oil 136:252-3 Ap '53

Thermopile generator produces electricity from a gas flame; El Paso natural gas company is using this method to protect pipe line from corrosion. R. J. Emerson. il map diag World Oil 135:310+ O '52

This pipe line repair job saved $500,000. il diags World Oil 135:248-50+ N '52

Trillion cubic foot gas system; United gas pipe line co. F. H. Love. il map Pet Eng 24:D8-10+ N '52

Two-way fight for gas pipe in New England. map Bsns W p31 D 6 '52

Two-way radio communication speeds valve replacements on main line. W. J. Giddings. map Oil & Gas J 51:269 O 13 '52

United Gas completes expansion program. Manuf Rec 122:53 Ja '53

United gas system serves the Gulf South. il map World Oil 136:264-5 My '53

Unusual internal cleaning problem. C. E. Richards. il map diags Pet Eng 25:D36+ My '53

Well over the billion mark! Tennessee Gas' never-ending program. F. H. Love. il Pet Eng 25:D26+ Ja '53

Why the Pacific Northwest wants natural gas from Canada. C. H. Gueffroy. maps Gas Age 112:25-9+ Jl 2 '53; Same cond. Am Gas J 179:21+ Jl '53

World's longest private system of microwave serves Transcontinental 1840-mile line. R. A. Rhodes and others. il map diags Gas Age 111:55-62+ Ap 23 '53

Compressor stations

Automatic control of gas turbines for pipe line pumping. C. R. Ingemanson and others. diags Gas Age 112:50+ S 10 '53

Bumper crop of gas compressor stations? L. D. Farrar. Pub Util 51:275-85 F 26 '53

Cathodic protection at compressor stations. J. C. Berringer. il Pet Eng 25:D99-100 My '53

Centrifugal compressor; station operation. C. F. Koenig, 3d. Oil & Gas J 51:395 Ja 26; 93 F 2 '53

Compressing of natural gas. C. D. Alstadt and H. G. Davis. diags Am Gas J 177:19-22 D '52

Compression and dehydration; United gas pipe line co. F. H. Love. il Pet Eng 24:D24+ N '52

Compressor plant has growing pains. R. Sneddon. il Pet Eng 25:D 10+ My '53

Compressor station emergency shut-off. C. W. Marvin. il plan diags Pet Eng 24:D3-10+ O '52

Design and performance of an extended-surface regenerator for a gas-turbine plant. S. Holm and R. L. Lyerly. il diags A S M E Trans 74:1163-6 O '52

Direct air cooling of engine jacket water by automatic variable-speed hydraulically driven fans. M. M. Shilling. il diag Oil & Gas J 51:250-2 O 13 '52

Electric power for gas system operation. il Pet Eng 25:D20+ Ja '53

Electricity's contribution to modern pipelining. M. Hyde. il Westinghouse Eng 13:154-61 S '53

Equitable Gas honors D. P. Hartson, pioneer in underground storage; D. P. Hartson compressing station. il Gas Age 111:41 F 26 '53

Full-scale fatigue testing of compressor cylinders. T. O. Kuivinen. il diags A S M E Trans 75:467-72 Ap '53; Same. Pet Eng (Ref annual) 25:D5-8+ Jl 15 '53

Gas pipeline harnesses steam. L. L. Nunley. il map diags Power 97:73-6 S '53

Gas-turbine-driven centrifugal compressors feature of El Paso's Southern division. W. H. Miller. il Oil & Gas J 51:244-6+ Ap 27 '53

Gas-turbine report; performance on El Paso natural gas co's. line. P. Reed. il Oil & Gas J 51:104-5 Ap 20 '53

Gas turbine used to pipe natural gas through pipe lines. P. Kayser. Elec Eng 72:107 F '53

Gas turbines and centrifugal compressors. T. R. Rhea and J. S. Quill. map Oil & Gas J 51:133 F 9; 169 F 16; 197 F 23; 91 Mr 2; 117 Mr 9; 147 Mr 16 '53

Gas turbines for pipelines. T. J. Putz. il diags Westinghouse Eng 13:152-5 S '53

Growth of a natural-gas system; Northern natural co. C. H. Vivian. il map Comp Air Mag 58:2-8 Ja '53

New compressor stations boost pipeline capacity. il Diesel Power 31:41-3 Je '53

New field compressor station completely automatic. C. Smith. il diag Oil & Gas J 51:112-14 S 22 '52

Oakford project will store 105 billion cubic feet of gas. C. B. Brown. il Oil & Gas J 51:102-3+ O 27 '52

P.G.&E. reports good results from snubbers on Super-Inch. il Gas Age 112:44 Ag 13 '53

PG&E uses bypass trimmers at new dispatching station. il Am Gas J 177:17 O '52

Results in prevention of detonation through scavenging-air cooling. F. R. Cramer. diags Gas Age 112:30-2+ Ag 13 '53

Revolution in engines? free-piston gas turbine, may be answer to climbing fuel and labor costs of pipe lines. diag Oil & Gas J 52:146-7 Je 22 '53

Something new in compressor stations; El Paso natural gas company's gas turbine compressor stations. C. L. Moore and C. Homan, jr. flow sheet il World Oil 135:302-4+ O '52

Suppression of air-borne pulsations from compressor engine intakes. W. N. Lindblad. il diags Gas Age 112:30-2+ Jl 16 '53

Trunkline stations, models of compactness. F. L. Resen. il plan diag Oil & Gas J 51:88-9+ Mr 9 '53

GAS, Natural—Pipe lines—Compressor stations *—Continued*

Turbine cost outlined; abstract. G. White. Oil & Gas J 52:217-18 My 18 '53
United Gas' newest compressor plant. il Oil & Gas J 52:128-9 Je 8 '53
What we learned in two years experience with a gas turbine compressor; Mississippi River fuel corp. G. C. Cooper, jr. map Gas Age 112:19-24+ Jl 2 '53
Why El Paso Natural Gas chose gas turbine centrifugal compressors. W. V. Holik. Gas Age 112:38-40+ Jl 30 '53

Contractors

Contractor and the landowner. C. A. Lingo. Pet Eng 25:D36+ Ap '53

Finance

Fair return for natural gas companies. R. E. Badger. Pub Util 50:832-42 D 4 '52
FPC members speak up on gas regulation. Pub Util 50:734-6 N 6 '52
Financing the natural gas pipeline industry. H. C. Hagerty and A. R. LaForce. Pub Util 50:855-8 D 4 '52
Impact of the Northern Natural Gas decision on financing. R. E. Badger. Pub Util 50:751-60 N 20 '52
Is FPC gas cost allocation equitable? L. Shomaker. Pub Util 50:680-8 N 6 '52
Natural gas expansion spurs investment interest. E. R. Abrams. Barron's 33:40 Mr 30 '53
Pipe line stocks, a growing new industry. G. L. Merton. Mag of Wall St 91:346-7+ D 27 '52

Fires and fire protection

How to reduce fire hazards in welding. W. L. Thackrey. Oil & Gas J 51:269+ O 13 '52

Gathering lines

Automatic condensate collectors feature Elk Hills system. D. H. Stormont. il diag Oil & Gas J 51:192-4 O 13 '52
Control system designed to avoid contamination of gas stream. R. B. Tuttle. flow diag diags Oil & Gas J 51:113-14 My 4 '53
Hugoton Plains gathering system 216.4 miles long. P. Reed. map Oil & Gas J 51:191-2 O 13 '52
Problems in producing and gathering low pressure gas. C. L. Ritter. diags Pet Eng 25:B78+ Mr '53
System nearly finished; wet-gas gathering system, along south Texas' Wilcox trend. J. A. Kornfeld. map Oil & Gas J 51:81 Mr 16 '53

Maps

Natural gas pipelines in the United States to April 23, 1953. Gas Age 111:supp Ap 23 '53

Safety measures

Compressor station emergency shut-off. C. W. Marvin. il plan diags Pet Eng 24:D3-10+ O '52
N.Y. state regulates natural gas pipeliners. Eng N 149:106-7 D 11 '52
Pipelines accent safety. S. Owens. Am Gas Assn Mo 35:11+ F '53
Pressure-rate-drop settings for automatic shutdown devices on gas pipe-line valves. G. Proper. il diags Oil & Gas J 52:234-5+ Je 22 '53

Statistics

FPC authorizations in first half of year to add 1¼ billion cu. ft. daily. Gas Age 110:75-7+ O 23 '52

Production estimates

Allocating battery oil and gas production to individual wells; using punched-card computing system. J. W. Amyx and others. diags Oil & Gas J 51:66-9+ F 2 '53
Back-pressure method for measuring capacity of gas wells. R. F. Nielsen. Oil & Gas J 51:135 N 3 '52
How to determine gas well interference graphically. D. Cornell. World Oil 135:187-8 N '52
How you can compute gas reserves more accurately. D. Cornell. bibliog World Oil 135:220+ D '52
Natural gas reserves. E. E. Roth. Am Gas J 178:27-30 F '53
New method estimates gas well performance. D. Cornell. World Oil 136:180+ Ja '53
Permeability determined from production data. D. Cornell. World Oil 136:186 F '53
Producibility guide; curves plotting annual against cumulative output of declining gas pools can indicate performance of new ones; abstract. R. E. Davis and L. H. Meltzer. Oil & Gas J 51:69 O 6 '52

Production methods

Gas wells from depleted oil wells. H. E. Little. diag World Oil 135:262+ O '52
How cycling works to achieve maximum recovery. J. S. Swearingen. il diags Oil & Gas J 52:283-5 Je 22 '53
Operating in the Jumping Pound field. J. Menneer. il diags Pet Eng 24:B49-52 D '52
Problems in producing and gathering low pressure gas. C. L. Ritter. diags Pet Eng 25:B78+ Mr '53
See also
Gas, Natural—Acidation of wells

Prospecting

Significance of oil and gas seeps in world oil exploration. W. K. Link. maps diags Am Assn Pet Geologists Bul 36:1505-40 Ag '52

Rates

Automatic adjustment clauses in gas rate schedules. E. Fleischmann. Pub Util 50:826-31, 897-902 D 4-18 '52
Consumer-producer relations in natural gas industry. E. I. Thompson. Am Gas Assn Proc 1952:143-7; Same cond. Am Gas Assn Mo 34:25-6+ D '52
Cost valuation rebellion reaches FPC. Pub Util 51:300-1 F 26 '53
FPC gas jurisdiction will go to high court. Bsns W p56-7 D 27 '52
FPC members speak up on gas regulation. Pub Util 50:734-6 N 6 '52
Four New York City utilities ask boost in gas rates. Gas Age 111:58+ Je 4 '53
Four reasons why cost-of-capital concept will not be applied universally. il Gas Age 110:79-80+ O 23 '52
Gas-hearing change. Oil & Gas J 51:123 F 23 '53
Gas industry feels price pinch. World Oil 135:83+ O '52
Gas industry regulation. C. P. Rather. Pub Util 51:634-5+ My 7 '53
Gas industry worries over FPC's cost of money rate theory. P. Kayser. Pub Util 50:794-5 N 20 '52
Gas men hit FPC and OPS rulings. Pub Util 50:723-4 N 6 '52
Gas price appealed; Continental, Stanolind ask court to overrule OPS order. Oil & Gas J 51:175 O 13 '52
Gas regulation. N. L. Smith. Pub Util 51:632-4 My 7 '53
Gasoline and cycling plant economics vs increasing cost of gas. H. E. Vaughan. Pet Eng (Ref annual) 25:E 10+ Jl 15 '53; Same cond. Oil & Gas J 52:107-8 Je 1 '53
Impact of FPC rate regulation on natural gas production. E. Falck. Pub Util 51:420-6 Mr 26 '53
Is FPC gas cost allocation equitable? L. Shomaker. Pub Util 50:680-8 N 6 '52
Is the FPC turning a damper on gas expansion? O. Ely. Pub Util 50:725-6+ N 6 '52
Load factor of pipe lines leads to demand commodity rate for gas utilities. G. L. Wigglesworth, jr. il Heating-Piping 24:83-5 N '52
Price of gas can go up and still be attractive to the consumer. C. P. Rather. Gas Age 111:57+ My 21 '53
Rate log-jam; FPC faces hike pleas totaling $200 million. E. R. Abrams. Barron's 33:15 My 4 '53
Rate policy condemned. H. D. Ralph. Oil & Gas J 51:168 O 13 '52
Rate policy of FPC toward natural gas companies. T. C. Buchanan. Comm & Fin Chr 176:1623+ O 30 '52
Rising cost of natural gas major factor in rate increase applications. C. P. Rather. Gas Age 111:82+ Ap 23 '53

GAS, Natural—Rates—*Continued*

There ought to be a law. Bsns W p26 My 30 '53

Who are the real friends of free enterprise? views on Niagara power and federal regulation of natural gas. R. S. Byfield. Manuf Rec 122:54 Je '53

Recycling

Acid dispersal system; La Gloria uses natural gas as lifting medium. il diags Oil & Gas J 51:129-30 F 9 '53

Gasoline and cycling plant economics vs increasing cost of gas. H. E. Vaughan. Pet Eng (Ref annual) 25:E 10+ Jl 15 '53; Same cond. Oil & Gas J 52:107-8 Je 1 '53

How cycling works to achieve maximum recovery. J. S. Swearingen. il diags Oil & Gas J 52:283-5 Je 22 '53

How natural gas used in pressure maintenance benefits gas utilities and customers. E. K. Parks. il diag Gas Age 112:21-3+ Ag 27 '53

Natural-gasoline and cycle plants in the United States, Jan. 1, 1952. D. S. Colby and E. M. Seeley. U S Bur Mines Information Circ 7645:1-11 '52

Pressure maintenance, liquids extraction, and crude stabilization at Elk City, Okla. plant. il diag Oil & Gas J 52:214+ My 25 '53

Profits shrinking; operating costs of natural-gasoline and cycling plants must be cut. H. E. Vaughan. Oil & Gas J 51:75 My 4 '53

Rotative gas lift a success in deep well. J. F. McDonald. flow diag il diag World Oil 135:195-8 D '52

Survey of cycling-plant operations. Oil & Gas J 51:225 Ap 27 '53

When does it pay to cycle gas-condensate reservoirs? H. G. Riley and C. M. Cole, jr. Oil & Gas J 51:101-4+ S 22 '52

Research

Institute of gas technology focuses research on natural gas problems. E. S. Pettyjohn. il Gas Age 111:38-9+ Ja 15 '53

Petroleum and natural-gas research program, Bureau of mines, fiscal year, 1951. R. A. Cattell and others. bibliog 14pls U S Bur Mines Information Circ 7643:1-46 '52

Petroleum and natural gas research program, Bureau of mines, fiscal year 1952. R. A. Cattell and others. bibliog(66 titles) 13pls U S Bur Mines Information Circ 7659:1-46 '53

Statistics

Natural-gas consumption increasing. J. C. Casper. map Oil & Gas J 51:94-5 O 27 '52

Natural gas consumption; production and reserves in the United States, as of Dec. 31, 1951; map. Gas Age 110:supp O 23 '52

Natural gas; production, value increase. World Oil 136:194-6+ F 15 '53

Natural gas reserves up three percent, production up 8.4 per cent. Am Gas J 178: 22 Mr '53

Natural gas sales rose in 1952; tabulation. Gas Age 111:75 Ap 23 '53

Natural gas statistics, 1936-50. D. S. Colby and B. E. Oppegard. U S Bur Mines Information Circ 7644:1-35 '52; Excerpts. Gas Age 110:48 D 4 '52

Natural gas use climbed 19 per cent last year. Gas Age 110:36 N 6 '52

PAD predicts 40 per cent increase in gas sales in five years. Gas Age 110:78 O 23 '52

Proved recoverable reserves of natural gas reach new high of 200 trillion cu. ft. Gas Age 111:49-51+ Ap 9 '53; Same cond. Am Gas Assn Mo 35:2-5+ Ap '53

Record gas year seen. Oil & Gas J 51:37-9 D 29 '52

Reserves at new peak; A.P.I., A.G.A. estimate. Oil & Gas J 51:78-9 Mr 16 '53

Storage

A.G.A. transmission and storage conference, 1st, Chicago, April 30-May 1. Gas Age 111: 37-40+ My 21 '53; Am Gas Assn Mo 35: 4-7 Je '53

Barker Dome gas storage project. A. M. Wiederkehr. il map Pet Eng 24:B7-10 D '52

Capacity of underground storage fields now totals one trillion cubic feet; tabulation. Gas Age 110:sup 1-3 O 23 '52

Columbia System uses underground storage to turn adversity to advantage. C. F. de Mey and E. E. Roth. il map Gas Age 111:45-9 Ap 23 '53

Development and operation of the Benton underground storage project; Ohio fuel gas co. W. E. Ferguson. maps Gas Age 111:45-9+ My 7 '53

Equitable Gas honors D. P. Hartson, pioneer in underground storage; D. P. Hartson compressing station. il Gas Age 111:41 F 26 '53

Flexible standby for Washington Gas Light includes new high-pressure storage plant. B. C. White. il Am Gas J 177:14-15+ D '52; Same. Pet Eng 24:D50+ D '52

Gas companies, GAMA and public opinion kill Kent coal grab bill. Am Gas J 179:16+ Ag '53

Gas-storage center; shallow pools in central Michigan basin. J. A. Kornfeld. map Oil & Gas J 51:123 Ap 27 '53

Gas storage report. Oil & Gas J 52:80-1 My 11 '53

Gas volume at command; underground storage of Ohio Fuel Gas. Pet Eng 24:A71-2 D '52

How Peoples Gas is progressing with Herscher dome storage. J. F. Oates, jr. il Gas Age 111:63-5+ Ap 23 '53

Major expansion planned for largest gas-storage system; Ohio fuel gas co.'s program. J. A. Kornfeld. map Oil & Gas J 51:122-3 F 9 '53

Natural gas industry to spend $120,000,000 for additional underground storage. Gas Age 110:sup4 O 23 '52

Natural gas stored underground to solve problems in peak local demand; abstract. C. T. Konecny and B. J. Clarke. Heat & Ven 50:146 My '53

Oakford project dehydration plant uses single-bed split-flow tower design. C. R. Hetherington. flow diag il Oil & Gas J 51:96-9+ N 10 '52

Oakford project will store 105 billion cubic feet of gas. C. B. Brown. il Oil & Gas J 51:102-3+ O 27 '52

Oakford underground storage project. R. S. Jefferies. il Pet Eng 24:D35-6+ D '52

Profit possibilities in cavern storage of natural gas near major markets; with cost data. L. C. Raymond. diag Gas Age 112: 21-4+ O 8 '53

Remote control of underground storage field; Southern California gas co. R. V. Gray. il Oil & Gas J 51:261-3 O 13 '52

San Diego will store 10,000,000 cu. ft. in underground pipe holder. W. C. Grant. il Gas Age 110:30-1 D 18 '52

Storage fight in Pennsylvania. Bsns W p 112+ Ap 18 '53

Storage of gases or mixtures of gases considering deviations from ideal gas laws. Am Gas J Hdbk 177:133-8 O 15 '52

Strategic underground gas storage promises uninterrupted peak-period service in Chicago. J. F. Oates, jr. map Am Gas J 178: 18-19+ F '53

Underground capacity rises. Am Gas Assn Mo 35:15-16 My '53; Gas Age 111:58+ My 21 '53; Heat & Ven 50:127 Je '53

Underground gas-storage capacities in U.S. now nearly a trillion cubic feet. J. A. Kornfeld. Oil & Gas J 51:135+ F 16 '53

Underground storage and other peak shaving. Gas Age 111:54-6 F 12 '53

Underground storage of natural gas. E. E. Roth. il diags Pet Eng 25:D86+ My '53

Underground storage of natural gas in coal-mining areas. H. P. Wheeler, jr. and W. E. Eckard. bibliog 4pls U S Bur Mines Information Circ 7654:1-11 '52; Same. Gas Age 111:28-31+ F 26 '53; Same. Pet Eng 25: D42-3+ Ap '53

Underground storage of natural gas; its theory and practice; Peoples gas light and coke co. J. F. Oates, jr. il map diags Gas Age 110:23-4+ O 9 '52; Abstract. Pub Util 50:736-8 N 6 '52

What can be done with dump loads, interruptibles and heating. R. S. Bruns, jr. Gas Age 111:52-3+ Ap 9 '53

GAS, Natural—Storage—*Continued*

What's happening in liquid and gas storage. J. O. Jackson. bibliog il diags Pet Eng 24:A59+ D '52

Bibliography

Bibliography of major articles on natural gas storage. Gas Age 110:sup5-8 O 23 '52

Sulfur content

Mexico's sulfur recovery plant ranks second largest in the world. S. Schwartz. il Pet Refiner 32:95-6 F '53

Report of the Girdler corporation. J. S. Cromeans and L. E. Osmer. Am Gas Assn Proc 1952:598-600

Selective absorption of hydrogen sulfide. F. E. Miller and A. L. Kohl. flow diag Oil & Gas J 51:175-6+ Ap 27 '53

Sulfur in gases; abstract. F. C. Riesenfeld and H. K. Orbach. Oil & Gas J 51:176 O 13 '52

Sulfur recovery; Girdler corp. flow diag Pet Refiner 31:254-5 S '52

Sulfur-recovery plant at Keystone has capacity of 15 tons daily. D. H. Huff and R. A. Graff. flow diag il Oil & Gas J 51: 118-19+ F 16 '53

Sulfur recovery practices in oil industry. R. A. Graff. bibliog flow charts il Pet Eng 25:C19+ Ap '53

Sulfur via the belt line. D. P. Thornton, jr. il Pet Processing 8:389-91 Mr '53

Taxation

Bottled-up taxes; Texas legislators see $1,000,000 a month in untouchable revenue from pile up while courts deliberate case. F. L. Resen. Oil & Gas J 51:30 Ja 5 '53

Challenge rule upholding Texas gas gathering tax. Gas Age 111:84 Ap 23 '53

Higher taxes on Texas gas are not advisable. World Oil 136:76-7 My '53

Warns against extension of gas taxes; abstracts. C. P. Rather. Am Gas Assn Mo 35:11 Ap '53; Pub Util 51:571 Ap 23 '53; Gas Age 111:49 My 7 '53

Tideland development

Natural gas from the Gulf. R. S. Child. Pub Util 51:95-9 Ja 15 '53

Well drilling

El Paso Natural's San Juan division; search under way for new gas reserves. R. W. Harris. il Oil & Gas J 51:256+ Ap 27 '53

Gas drilling promises to cut costs. E. R. Bruno. diag World Oil 135:207-8+ O '52

Rotary oil rigs invade Pennsylvania. il Diesel Power 31:39 Mr '53

Straight-hole drilling in lost-circulation zones. J. A. Kornfeld. il map Oil & Gas J 51:221-2+ S 29 '52

Well pressure

New method for direct determination of bottom-hole pressures. J. R. Spencer and W. L. Boyd. map Oil & Gas J 51:122-3 N 10 '52

Well testing

Drill-stem tests opened Utah's Clear Creek gas field. D. Hager. map Oil & Gas J 51: 131 D 15 '52

Alabama, Supply to

Alabama story; power and fuel. il Manuf Rec 122:89-91 Je '53

Alberta

Alberta gas reserves. D. G. Hawthorne. Gas Age 112:65 Jl 16 '53

Alberta's sleeping giant. H. D. Ralph. map Oil & Gas J 51:60-1 D 1 '52

Edmonton plant utilizes gas from Alberta's Leduc field. M. E. Stewart. il Oil & Gas J 51:95-7 D 8 '52

More gas from Alberta. H. D. Ralph. map Oil & Gas J 51:70-1 N 24 '52

Nevis field growing. il map World Oil 135: 324-5 D '52

Operating in the Jumping Pound field. J. Menneer. il diags Pet Eng 24:B49-52 D '52

What does Peace river mean to western Canada? T. A. Link. il maps diags World Oil 135:298+ D '52

Baltimore, Supply to

What we experienced in gas conditioning during two years after conversion; Consolidated gas electric light and power co. of Baltimore. C. A. Kooke. il Gas Age 110: 35-7+ D 4 '52

British Columbia

Largest Canadian gas reserve to date is developing; Peace River region of northeastern British Columbia. L. O. Rowland. maps Pet Eng 24:B54-5+ D '52

California

Mothballing a gas plant at Naval petroleum reserve number one in California. R. Sneddon. il Pet Eng 25:C14-15+ Ja '53

California, Supply to

Mid-winter peak problem. R. Sneddon. il Pet Eng 25:D14+ Ap '53

Canada

Canada feels its strength; question of gas. map Economist 167:310-11 My 2 '53

Canada finds more gas, may pipe it to Northwest. il Bsns W p94-6+ N 1 '52

Canada in 1952. G. M. Wilson. il map World Oil 135:283-8 D '52

More natural gas and pipe lines breed optimism in Canada. R. Latreille. Gas Age 111:42+ Ja 15 '53

Natural gas for the Pacific Northwest from Canada? J. M. Bemis. Pub Util 50:909-16 D 18 '52

Next century belongs to Canada. S. B. Severson. Gas Age 111:43+ Ja 15 '53

Northwest plus; plans to export natural gas to Northwest U.S. have received Canadian government approval. il Chem W 71:15-16 O 25 '52

Principal western Canada oil fields, 1952; listed in the order of their discovery dates. World Oil 135:290+ D '52

Chicago, Supply to

Strategic underground gas storage promises uninterrupted peak-period service in Chicago. J. F. Oates, jr. map Am Gas J 178: 18-19+ F '53

Fredericksburg, Texas, Supply to

What Lone Star Gas service has meant to a colorful city in Texas. C. Thompson. il Gas Age 112:28-33 Ag 27 '53

Gloucester, Massachusetts, Supply to

Southwest gas reaches Far Northeast by new Gloucester line. il Gas Age 112:29 Jl 2 '53

Great Britain

Looking for natural gas; Gas council decides on prospecting for next five years. Economist 167:620 My 30 '53

Italy

Italian production and consumption of natural gas rapidly increasing. A. Giordano. map Oil & Gas J 51:75 D 29 '52

Italy has four favorable areas for oil and gas search. W. F. Hoover. map Oil & Gas J 51:381-3+ Ja 26 '53

Postwar development of Italian natural-gas pipe lines. F. Salimbeni. il map Oil & Gas J 51:159 F 16 '53

Kansas

Greatest gas area grows bigger. P. C. Ingalls. map Oil & Gas J 52:187 Je 15 '53

Kentucky

Relationship of natural gas occurrence and production in eastern Kentucky (Big Sandy gas field) to joints and fractures in Devonian bituminous shale. C. D. Hunter and D. M. Young. il maps diags Am Assn Pet Geologists Bul 37:282-99 F '53

Louisiana

Gas-condensate operations at Reddell. D. E. Gregg. flow diag il map Oil & Gas J 52: 190+ Je 22 '53

Mississippi

Mississippi's Black Warrior basin. F. F. Mellen. maps diags World Oil 136:77-8+ Je; 137:97-8+ Jl '53

GAS, Natural—*Continued*

Moscow, Supply to

How natural gas is piped from Saratow to Moscow. il Gas Age 110:38-9+ D 4 '52

New England, Supply to

Algonquin lacks ok to use new pipeline. Eng N 149:25 D 4 '52

Block Algonquin's New England pipe line project with order to rip out Westchester, N.Y. section. Gas Age 111:35 Ja 29 '53

Gas compromise; Tennessee Gas offers to split New England market at a price. Bsns W p28-9 Jl 11 '53

Gas for New England; more litigation is certain over FPC's determination to split market between two distributors. Oil & Gas J 51:40 Ja 5 '53

New England natural gas market divided by FPC between two utilities; Algonquin, Northeastern. Gas Age 112:48+ Ag 27 '53

New Mexico

San Juan gas fields still growing. P. C. Ingalls. map Oil & Gas J 51:319 Ap 27 '53

New York (city), Supply to

Brooklyn Union natural gas conversion, biggest changeover in the world. D. F. Grozier. il maps Gas Age 111:29-73 Ja 1 '53

From Mercedes to Manhattan; story of Transcontinental's line. il Gas Age 110:32-3 D 18 '52

Northwestern states, Supply to

All-American line for Northwest. D. Thornton. Gas Age 112:39+ S 10 '53

Billion American dollars for Canada or the United States? N. H. Gellert. map Gas Age 111:28-31+ Je 4 '53; Same cond. Am Gas J 179:20+ Jl '53

Bringing natural gas into the Northwest; Gellert the gas man. il Bsns W p 178-80+ O 25 '52

Canada finds more gas, may pipe it to Northwest. il Bsns W p94-6+ N 1 '52

Henry Gellert, fighting for natural gas, takes story to people; uses television and radio to enlist public support for Pacific Northwest line. Gas Age 110:26-7+ N 6 '52

Natural gas battle resumes. Elec World News ed 139:15 Mr 16 '53

Natural gas for the Pacific Northwest? J. M. Bemis. Pub Util 50:909-16 D 18 '52

Pacific Northwest gas utilities support proposal to pipe natural gas into U.S. area from Canada. map Gas Age 111:55 My 7 '53

Pipeline fracas; who will bring gas to the Pacific Northwest? R. M. Bleiberg. map Barron's 33:5+ F 2 '53

Seattle Chamber of commerce endorses U.S. gas for Pacific Northwest. map Gas Age 111:24-6+ F 26 '53

Why the Pacific Northwest wants natural gas from Canada. C. H. Gueffroy. maps Gas Age 112:25-9+ Jl 2 '53; Same cond. Am Gas J 179:21+ Jl '53

Oklahoma

Major natural gas conservation project. B. J. Thompson. flow diag il plan Pet Eng 25: C5-8+ Ja '53

Straight down to pay; gas-distillate field in Anadarko basin. il map Pet Eng 24:B18 N '52

Straight-hole drilling in lost-circulation zones. J. A. Kornfeld. il map Oil & Gas J 51:221-2+ S 29 '52

Russia

How natural gas is piped from Saratow to Moscow. il Gas Age 110:38-9+ D 4 '52

Saskatchewan

Saskatchewan gas policy. J. H. Brockelbank. Gas Age 111:85-6 Ap 9 '53

Savannah, Georgia, Supply to

South Atlantic Gas pipe line to supply fuel to Savannah. il Gas Age 112:42-3 Jl 2 '53

Southeastern states, Supply to

Arrival of natural gas stimulates Mid-Southeastern expansion. A. T. Carper. Gas Age 111:44 Ja 15 '53

Tennessee

Natural gas systems expand rapidly. Manuf Rec 121:109 N '52

Texas

Gas-well potentials and gas allowables; how Texas railroad commission operates; its rules, regulations. R. F. Carlson. Oil & Gas J 51:93-4+ Ja 12 '53

Higher taxes on Texas gas are not advisable. World Oil 136:76-7 My '53

Miocene gas strike spurs Rio Grande embayment work. J. A. Kornfeld. maps diag Oil & Gas J 52:358+ Je 22 '53

Mustang field; Mustang Island multi-zone field is in Corpus Christi bay, Texas. G. V. Ricks and J. M. David. il maps diags Pet Eng 25:A41-8 Ja '53

Natural gas industrializes south Texas. F. H. Dotterweich. il Oil & Gas J 52:294+ Je 22 '53

Val Verde basin offers big gas possibilities. J. K. Petty. maps diag World Oil 135:128+ O '52

United States

Big gas outlay seen. N. L. Smith. Oil & Gas J 51:101-2 Ap 20 '53

Consumer-producer relations in natural gas industry. E. I. Thompson. Am Gas Assn Proc 1952:143-7; Same cond. Am Gas Assn Mo 34:25-6+ D '52

Expansion handicap; large part of rise in price of gas is due to FPC policy. C. H. Hinton. Oil & Gas J 51:80-1 D 15 '52

Gas expansion; higher capital costs fail to discourage it. E. R. Abrams. Barron's 33: 13-14 Jl 20 '53

Natural gas, Cinderella to glamour girl. Pet Eng 24:D28+ O '52

Natural gas consumption, production and reserves in the United States, as of Dec. 31, 1951; map. Gas Age 110:supp O 23 '52

Natural gas; expansion plans reflect industry's long-term optimism. H. Murphy. Barron's 33:9-10 Ap 27 '53

Natural gas; from the investor's standpoint it's not one industry, but five. E. R. Abrams. Barron's 33:13 Ja 26 '53

Natural gas growth carries gas industry to new heights. C. E. Bennett. Pub Util 50: 669-72 N 6 '52

Natural gas in an expanding economy. R. E. Davis. Comm & Fin Chr 176:1826-7+ N 13 '52; Same. Am Pet Inst Proc 32(4):36-41 '52; Same cond. Oil & Gas J 51:394+ N 17 '52; Discussion. Am Pet Inst Proc 32(4): 41-2 '52

Natural-gas production should rise eight per cent. J. A. Kornfeld. Oil & Gas J 51:207-9 Ja 26 '53

Natural gas reserves. Gas Age 111:44-7 F 12 '53

Outlook for natural gas. G. Symonds. Comm & Fin Chr 177:785+ F 19 '53

Place of natural gas, present and future. G. Egloff. Am Gas Assn Proc 1952:31-8; Excerpts. Am Gas Assn Mo 34:11-12+ D '52; Gas Age 110:32-4 D 4 '52

Proved recoverable reserves of natural gas reach new high of 200 trillion cu. ft. Gas Age 11:49-51+ Ap 9 '53; Same cond. Am Gas Assn Mo 35:2-5+ Ap '53

Reserved gas outlook. M. V. Burlingame. Oil & Gas J 52:68-9 Je 8 '53

Reserves up despite record withdrawals. P. C. Ingalls. Oil & Gas J 51:204-6 Ja 26 '53

Survey of natural-gas field processing plants; tabulated by states. Oil & Gas J 51:214+ Ap 27 '53

U.S. pool maps; principal oil and gas areas. Oil & Gas J 51:103-18 Mr 30 '53

Utah

Central Utah gas search intensifies. J. A. Kornfeld. maps Oil & Gas J 51:174+ Ap 13 '53

Drill-stem tests opened Utah's Clear Creek gas field. D. Hager. map Oil & Gas J 51: 131 D 15 '52

Venezuela

Gas program outlined. E. A. Acosta H. Oil & Gas J 51:72-3 My 4 '53

GAS, Natural—*Continued*

West Virginia

Lithologic factors affecting prospects for early paleozoic oil and gas in West Virginia. O. L. Haught. map Am Assn Pet Geologists Bul 37:553-60 Mr '53

Wyoming

Green River basin interest heightens. P. C. Ingalls. map Oil & Gas J 52:141 Je 29 '53

GAS, Oil

High Btu oil gas machine. R. P. Oliveros. diags Am Gas Assn Proc 1952:605-12

Influence of substitute gas compositions on interchangeability with natural gases. D. L. Nicol and others. Am Gas Assn Proc 1952: 634-56

Problems encountered in the operation of a standby high Btu oil gas plant. G. M. Hammond. Am Gas Assn Proc 1952:716-18

Production of oil gases as substitutes for natural gases. H. R. Linden and others. Am Gas Assn Proc 1952:702-15

Substitutibility of high B.t.u. oil gas for natural gas in an emergency. L. J. Willien. il diag Gas Age 111:70-5+ Ap 23 '53

See also

Gas oil

GAS, Water

Activity of an iron oxide-chromium oxide water-gas shift catalyst; effect of added constituents. K. Atwood and M. R. Arnold. bibliog diag Ind & Eng Chem 45:424-6 F '53

Reaction of carbon with steam at elevated temperatures. B. E. Hunt and others. diag Ind & Eng Chem 45:677-80 Mr '53

Manufacture

Methods and economics of producing high B.t.u. gas from anthracite. L. L. Newman. Gas Age 112:22-5+ Jl 30 '53

GAS absorption. See Absorption

GAS analysis

Analysis of gas mixtures containing oxides of nitrogen. C. L. Johnson. bibliog diag Anal Chem 24:1572-5 O '52

Analysis of synthesis gas; rapid and highly accurate method. G. L. Barthauer, A. Haggerty and R. J. Friedrich. bibliog diags Anal Chem 25:256-9 F '53

Analyzer detects gas traces; Microsensor a color comparator. diag Chem Eng 60:210 Ja '53; R Sci Instr 24:83-4 Ja '53

Apparatus for quantitative analysis of gases. il diag Engineering 175:140 Ja 30 '53

Catalytic oxidation procedure for determining sulphur compounds in kraft mill gases. H. W. Bialkowsky and G. G. DeHaas. bibliog diag Pulp & Pa of Can 53:99-105 O '52; Same. Tappi 36:330-6 Jl '53

Chromatography of gases and vapours. D. H. James and C. S. G. Phillips. diags Chem Soc J p 1600-10 My '53

Construction and operation of an automatic ozone analyzer. A. D. Kiffer and L. G. Dowell. bibliog diags Anal Chem 24:1796-8 N '52

Continuous determination of small percentages of methane in gases. H. Nash, jr. and others. diag Anal Chem 24:1650-2 O '52

Continuous photometric determination of carbon dioxide in gas streams. W. D. Maxon and M. J. Johnson. diags Anal Chem 24: 1541-5 O '52

Determination of combustion products. J. H. Potter. Automotive Ind 107:50-1+ O 15 '52

Determination of total gas in stock. J. D. Boadway. diag Tappi 36:sup 128A-9A Jl '53

Determination of trace oxygen in gases. D. D. Williams, C. H. Blachly and R. R. Miller. bibliog diag Anal Chem 24:1819-21 N '52

Electrochemical method of gas analysis; abstract. P. Hersch. Chem Age (Lond) 67: 565 O 25 '52

Infrared analyzers. R. H. Munch. diags Ind & Eng Chem 44:sup81A-3A Ag; sup95A-6A+ S; sup93A-4A+ O '52

Manometric gas analysis apparatus. J. N. Pitts, jr., D. D. DeFord and G. W. Recktenwald. bibliog il diags Anal Chem 24: 1566-8 O '52

Method for analyzing combustible gases; patent. diag Electronics 26:214+ Ap '53

Microwave gas absorption studies possible with coaxial Stark cell. Iron Age 170:136 O 23 '52

Rapid gas analysis by dynamic method; new apparatus using soap film technique. bibliog il diags Metallurgia 47:158-60 Mr '53

Scintillation tube for the measurement of radioactive gases. P. E. Damon and H. I. Hyde. diags R Sci Instr 23:766 D '52

Use of ionization probability curves for the analysis of CO and N_2 mixtures. W. M. Hickam and R. E. Fox. J Chem Phys 20: 1055 Je '52

See also

Air—Analysis
Carbon monoxide—Analysis
Chlorine—Analysis
Gas, Natural—Analysis
Gas sampling
Orsat apparatus
Oxygen—Analysis

GAS appliance industry

Dealer's angle. J. W. Ferry. Am Gas Assn Mo 35:10-11+ My '53

Expectations realized through research; counter appliance field and deep fat fryers. F. A. Kaiser. Am Gas Assn Proc 1952:210-12

Foresee banner appliance year. J. F. Donnelly. Am Gas Assn Mo 35:9-10+ Ja '53; Same. Gas Age 111:31-3 Ja 15 '53; Same abr. il Dom Eng 181:94-5 Ja '53

Manufacture of gas industry equipment and appliances a growing southern activity. Am Gas J 178:53 My '53

Whence, whither, how? L. Ruthenburg. Am Gas Assn Proc 1952:41-6; Same cond. Am Gas Assn Mo 34:19+ D '52

Directories

Gas engineering and appliance directory. Gas Age 111:81-159 Je 18 '53

Statistics

Estimated unit sales of gas appliances; estimated sales of competitive appliances; appliances in use on Dec. 31 of each year, 1947-1952; tabulations. E. R. Martin, comp. Gas Age 112:44-5 Jl 16 '53

GAS appliance manufacturers association

Annual meeting, 18th, White Sulphur Springs, W.Va. May 20-22. Am Gas J 178:43+ Je '53; Gas Age 111:54+ Je 18 '53; Am Gas Assn Mo 35:40-1 Jl-Ag '53

Annual meeting, 18th, White Sulphur Springs, W. Va. May 20-22. Dom Eng 182:235-6+ Jl '53; Excerpts. Sheet Metal Worker 44:97 Jl '53

G.A.M.A. Industrial gas equipment division adopts code of ethics. Gas Age 111:62 My 21 '53

GAMA public relations program extended through 1953. Am Gas J 177:44 D '52; Same. Gas Age 111:33+ Ja 15 '53

Gas appliances battle to regain lost ground. il Bsns W p56-7+ My 30 '53

Officers for 1952-53. Gas Age 110:43 N 20 '52

Utilities, manufacturers launch joint action program; appliance merchandising. Gas Age 111:27-30+ My 7 '53

GAS appliances

Black iron or equivalent. W. M. Myler, jr. Am Gas Assn Proc 1952:849-51

Commercial gas incineration subcommittee; report. Am Gas Assn Proc 1952:203-5

Gas appliances; abstract. A. V. Leudemann. Heat & Ven 50:127+ Je '53

Gas appliances battle to regain lost ground. il Bsns W p56-7+ My 30 '53

Inventors in gas industry are urged to study and follow patent requirements. E. W. Mason. Am Gas J 178:20-1+ F '53

Study gas combustion corrosion. W. M. Myler, jr. Am Gas Assn Mo 34:17-18 N '52

See also

Gas appliances, Domestic
Gas burners
Gas cooking
Gas stoves
Gas water heaters
Refrigerators, Gas

Installation

Avoid these short cuts to trouble in gas appliance installations. C. G. Segeler. Dom Eng 181:91+ Ap '53

GAS appliances—*Continued*

Merchandizing

Commercial gas appliances get boost in coordinated fall promotion. Am Gas J 179: 45 Ag '53

That is the question. F. C. Smith. Am Gas Assn Proc 1952:25-30; Same cond. Am Gas Assn Mo 34:6-8+ N '52

Volume feeding offers growing gas sales potential. J. F. Vollmer. il Am Gas Assn Mo 35:29 Ja '53

Repair

Gas industry servicing policies. C. G. Segeler. Am Gas Assn Mo 35:21-3+ Jl-Ag '53

Safety measures

Annual voluntary inspections of schools assure complete safety for youth. D. E. Hughes. Gas Age 112:33+ O 8 '53

Testing

See also
American gas association—Appliance testing laboratory

Ventilation

Chimney liners. D. L. Drake. Am Gas Assn Proc 1952:425-8

Power venting helps hold and build valuable commercial load. D. C. Draper. diags Gas Age 112:38-40 O 8 '53

Safe venting of recessed type gas heaters studied. Am Gas Assn Mo 35:10 Ap '53

Venting of gas appliances. Dom Eng 181:91+ Ap '53

GAS appliances, Domestic

Advantages of gas clearly demonstrated by House of enchantment; Ohio fuel gas co. il Gas Age 11:40+ Ap 9 '53

All-gas in four-way promotion of high-cost Philadelphia homes. il Am Gas J 178:45-6 Ap '53; Am Gas Assn Mo 35:12-13 My '53

Appliance servicing as affected by varying gas conditions. W. C. Peters. Am Gas Assn Proc 1952:429-32; Same cond. Am Gas J 177:14+ Jl '52

Appliances designed for sales appeal. Am Gas Assn Mo 34:13+ D '52

Clothes dryer sales may exceed washer. Gas Age 112:30 S 24 '53

Home setting sells educators; homemaking classrooms. il Am Gas Assn Mo 35:17 Ap '53

Home show displays feature gas. il Am Gas Assn Mo 34:14-16 N '52

1953 appliances unveiled at GAMA show. il Dom Eng 180:112-14+ D '52

Merchandizing

Babies to theme automatic gas clothes dryer drive. Am Gas Assn Mo 35:36-7 Jl-Ag '53; Same. Gas Age 112:53-4 Ag 27 '53

Can this be utilities' classless society? Bureau of home appliances of San Diego county. J. H. Collins. Pub Util 51:830-6 Je 18 '53

Gas industry clinic stresses important sales points. Am Gas Assn Mo 35:34 F '53

How Chicago opened up the market for gas incinerators; Peoples gas light and coke co. F. C. Kramer. il Gas Age 112:28-9 Ag 13 '53

How Pittsburgh gas companies merchandise gas appliances. il Am Gas J 177:45 N '52

Incinerator promotions reap handsome rewards. N. Wical. il Am Gas Assn Mo 35: 6-8+ F '53

Launch first integrated gas incinerator sales campaign. Am Gas Assn Mo 35:37-8 Jl-Ag '53

Minneapolis enthused dealers and salesmen with sales seminar and workshop. D. M. Lyons. Gas Age 112:25+ Ag 27 '53

Minneapolis promotion accents gas appliances; 1953 kitchen cavalcade. il Am Gas Assn Mo 35:6-8 Ap '53

1954 residential sales promotion program ready. Am Gas Assn Mo 35:34-5 Jl-Ag '53

Ohio promotion plan a success during '52. Am Gas Assn Mo 35:29 Mr '53

Pace your selling to quality. G. D. Sutherin. Am Gas Assn Mo 35:21+ Ja '53

Peoples Gas Hall of flame is feature of Chicago's modern living exposition. il Gas Age 111:44+ My 21 '53

Servel opens on Broadway; musical show gets to hearts of distributors and dealers. il Am Gas J 178:47-8 F '53

Servel promotes 1953 appliance line with million-dollar musical shows. il Am Gas J 178:42 Ja '53

Ten common faults of gas appliance salesmen. K. Jacobson. Gas Age 112:35-9 Jl 2; 41-2+ Jl 16; 41-2+ Jl 30; 45-6+ Ag 13; 26-7+ Ag 27 '53

There is no easy path to residential load, but here are three clear signposts. F. H. Trembly, jr. il Gas Age 111:36-9+ Ap 9 '53

Why companies spend millions to introduce new models to dealers; Servel's million-dollar musical comedy. W. Norris. il Am Bsns 23:20-1 Mr '53

Why gas utilities should promote and sell appliances at retail. F. D. Miller. Gas Age 112:35-8 S 10 '53

See also
Gas companies—Dealer relations

Safety measures

Gas ups home safety record. C. G. Segeler. Am Gas Assn Mo 35:17-18+ F '53

Statistics

Statistics prove wide popularity of gas appliances. Am Gas Assn Mo 35:39 S '53

GAS as fuel

Combustion characteristics of fuel gases. J. Grumer. bibliog Am Gas Assn Proc 1952: 852-6

Competitive fuels. O. F. Spencer. Am Gas J 178:23-6 Je; 179:25-8 Jl '53

Gas; boon to metalworking. il Steel 131:74-5 N 3 '52

Gas fires the furnaces of industry. C. H. Burchenal. Am Gas Assn Proc 1952:222-6

Gas firing in the pottery industry. Engineering 175:533 Ap 24 '53

Influence of fuel gas on the spraying of metal powders. W. McDermott and R. Dickinson. Engineer 196:6-9 Jl 3 '53

Interchangeability of various gases. Am Gas J Hdbk 177:129-32 O 15 '52

Principles of gas combustion. C. R. Bellamy. Am Gas J 177:23-6 O '52

Spark ignition; effect of molecular structure. H. F. Calcote and others. bibliog diags Ind & Eng Chem 44:2656-62 N '52

Study gas combustion corrosion. W. M. Myler, jr. Am Gas Assn Mo 34:17-18 N '52

See also
Blast furnace gas
Boilers—Gas firing
Butane
Coke oven gas
Gas appliances, Domestic
Gas burners
Gas cooking
Gas heaters
Gas heating
Gas heating, Industrial
Gas stoves
Liquefied petroleum gas
Propane
Sewage sludge—Gas production

Natural gas

Cashing in on cheap power. Bsns W p94+ D 13 '52

Dry filters being used in Westex sour-crude areas to clean field gas for fuel. R. F. Carlson. il Oil & Gas J 51:84 Mr 2 '53

Gas industry feels price pinch. World Oil 135:83+ O '52

Influence of substitute gas compositions on interchangeability with natural gases. D. L. Nicol and others. Am Gas Assn Proc 1952: 634-56

Injection of oxygen-reformed natural gas and fuel oil into the blast furnace. J. O. Raick and J. E. Brassert. diag Iron & Steel Eng 29:75-80 D '52

Natural gas; a switch for heat treating. il Steel 132:169-70 Je 1 '53

Natural gas furnishes cheap power in Minnesota. il Pub Works 84:80 My '53

Natural gas improves product and cost in the brick industry. C. G. Hobson. Am Gas J 179:27+ Ag '53

Price of gas can go up and still be attractive to the consumer. C. P. Rather. Gas Age 111:57+ My 21 '53

Shift to gas as precise industrial tool. F. O. Hess. Am Gas J 177:18 D '52

GAS as fuel—Natural gas—*Continued*

Underfiring of coke ovens with natural gas. W. E. Tate and M. Harrison. plan diags Am Gas Assn Proc 1952:678-84

Variation in heat absorption in a natural-gas-fired, water-cooled steam-boiler furnace. A. R. Mumford and R. C. Corey. diags A S M E Trans 74:1191-214; Discussion. 1214-15 O '52

Versatile fuel; natural gas use runs the gamut from kitchen to laboratory. E. R. Abrams. Barron's 32:13-14 O 6 '52

What can be done with dump loads, interruptibles and heating. R. S. Bruns, jr. Gas Age 111:52-3+ Ap 9 '53

Why Osawatomie changed from oil to gas for electric and water works plant; with cost data. J. Higgins. il Gas Age 112:28-30 S 24 '53

GAS associations

Gas Age training course; associations. W. L. Riehl. Gas Age 111:60-2 Mr 12; 53-4 Mr 26 '53

GAS bubbles. See Bubbles

GAS burners

Air-gas mixing systems and burner designs. A. D. Wilcox. Am Gas J 178:18-19 Ap '53

Burner reflects new theory. il diag Chem Eng 60:208-9 F '53

Conversion burners are still profitable load builders for merchandising utilities. W. E. Davis. il Am Gas J 177:55+ O '52

Flameless radiant gas burner. il Engineer 196:141 Jl 31 '53

Gas-fired annealing of locomotive tubes; Ashford locomotive works. il Engineering 175:144 Ja 30 '53

Heat; how it is applied, how it is contained, how it is controlled in all of the ceramic industries. il diags Cer Ind 61:51-5+ O '53; Same. Brick & Clay Rec 123:51-3+ O '53

Lifting and blowoff of flames from short cylindrical burner ports. C. W. Wilson. bibliog il diag Ind & Eng Chem 44:2937-42 D '52; Discussion. C. W. Wilson. 45:1822 Ag '53

Principles of the construction of burners; abstract. E. Pototskaya and V. Pototskaya. diag Glass Ind 34:261-2+ My '53

Voriflow gas burner. diag Blast F & Steel Pl 41:435 Ap '53

Why burners incorporating simmer sections should have these six features. C. C. Lamar. il diag Gas Age 111:36-40+ F 26 '53

See also

Bunsen burner

Control

Operating range of electronic flame failure devices. Engineer 196:174 Ag 7 '53; Engineering 176:171 Ag 7 '53

Design

Heat transfer from luminous gas flames in vertical water-cooled tubes; abstract. M. E. Saleh and R. S. Tailby. Chem Age (Lond) 68:281-3 F 14 '53

Maintenance and repair

Practical notes on gas burner service (cont). J. K. Wadsworth. il diags Sheet Metal Worker 44:74+ N; 56+ D '52; 122-4 Ja; 47-8 F; 67-8 Mr; 52-4 Ap; 54+ My; 50-1 Je; 72+ Ag; 52-3 S; 45:43-4 O '53 (to be cont)

GAS burning equipment

See also

Gas heaters
Gas heating, Industrial
Gas water heaters

GAS carburizing. See Case hardening—Gas carburizing

GAS cleaning

Cleaning industrial gases. J. J. Seaver. diags Iron & Steel Eng 29:84-91 O '52

Dry filters being used in Westex sour-crude areas to clean field gas for fuel. R. F. Carlson. il Oil & Gas J 51:84 Mr 2 '53

Electro-filter as a secondary recovery device. W. A. Thompson. il diags Pulp & Pa of Can (Convention no) 54:174-7+ [F] '53

See also

Blast furnace gas—Cleaning
Gas purification

GAS companies

See also names of companies, e.g. Algonquin gas transmission company; Consolidated natural gas company; New York state electric and gas corporation

Accidents

Cite drop in accident rate. il Am Gas Assn Mo 34:20-1+ D '52

Gas industry is reducing hazards to minimum. C. G. Segeler. Gas Age 11:52 Mr 26 '53

Motor vehicles committee; report of subcommittee on safety and safe practices. Am Gas Assn Proc 1952:340-2

Small companies need more emphasis on safety. A. S. Hancock. Am Gas Assn Mo 34:16 N '52

Accounting

Accounting in utility regulation. S. B. Eddy. Am Gas Assn Mo 35:15-16+ Je '53

Big question in electronics; Utility electronic accounting system. J. H. W. Roper. diags Am Gas Assn Mo 35:25-6 S '53

Electronic equipment simplifies and speeds Columbia's huge accounting operations. il Am Gas J 179:18-19+ S '53

Expedite stockholder records. Am Gas Assn Mo 35:11-12+ Jl-Ag '53

Gas Age training course; administration. W. L. Riehl. Gas Age 110:46-7 D 18 '52

How much auditing is enough? C. J. Nichols. Am Gas Assn Mo 35:25-6+ Jl-Ag '53

Original cost depreciation versus replacement cost. E. A. Steinberger. Pub Util 51:671-8 My 21 '53

Statement of principles in accelerated amortization; Edison electric institute and American gas association. Elec World 138:111 N 3 '52

These mechanical jobs replaced manual ones; customer-billing and accounting procedure at Michigan consolidated gas co. il Am Bsns 22:24+ D '52

Varied program points wide accounting scope. Am Gas Assn Mo 35:22-7+ Je '53; Gas Age 111:42-5+ Je 4 '53

Appliance selling

Chatanooga gas co. rolls appliance showroom—to the customer's door. il Am Gas J 178:75 My '53

Chicago and Philadelphia start contest on single-point-ignition ranges. Gas Age 112:31 S 24 '53

Commercial cooking business and the gas company. T. B. Madole. Am Gas Assn Proc 1952:262-6; Same cond. Am Gas Assn Mo 34:24-6+ N '52; Abstract. Am Gas J 177:45+ D '52

Facing up to the facts. W. L. Hayes. Am Gas Assn Proc 1952:258-62; Excerpts. Am Gas Assn Mo 35:9-10+ F '53

Friday the thirteenth special sale brings good luck at Portland, Me. V. A. Schlich. il Gas Age 112:24+ Ag 27 '53

How East Ohio built $300,000 annual income with gas incinerator promotion. H. E. Eckes. il Gas Age 111:76-7 Ap 23 '53

New York and Richmond company converts 24 per cent of househeating leads to sales. Am Gas J 178:45+ Ja '53

There is no easy path to residential load, but here are three clear signposts. F. H. Trembly, jr. il Gas Age 111:36-9+ Ap 9 '53

Why gas utilities should promote and sell appliances at retail. F. D. Miller. Gas Age 112:35-8 S 10 '53

Combination with electric utilities

See also

Consolidated Edison company of New York

Costs

Gas industry feels price pinch. World Oil 135:83+ O '52

Package design for economy; pipe fittings and nipples. L. R. Michelsen. Am Gas Assn Mo 35:25-6 Ap '53

Rising compensation costs in the gas utility industry. G. J. Stone. Am Gas Assn Proc 1952:116-22

GAS companies—*Continued*

Customer relations

Credit and collection experience; January 1-June 30, 1952. Am Gas Assn Mo 34:21-2 N '52

Credit and collection experience; July 1-December 31, 1952. Am Gas Assn Mo 35:15-16 Ap '53

Customer relations enhanced by high speed telephone center at Con Edison. il map Am Gas J 179:17 Jl '53

Customer relations training project; interim report. B. J. McMillen. Am Gas Assn Proc 1952:169-70

Dealer relations

Commercial cooking business and the gas company. T. B. Madole. Am Gas Assn Proc 1952:262-6; Same cond. Am Gas Assn Mo 34:24-6+ N '52; Abstract. Am Gas J 177:45+ D '52

Dealer cooperation plans grow; abstracts of papers. J. Hunter and others. Am Gas Assn Mo 35:18-20+ Mr '53

Lowell promotion program increases heating sales 220 per cent. il Gas Age 112:27+ Jl 16 '53

Minneapolis enthused dealers and salesmen with sales seminar and workshop. D. M. Lyons. Gas Age 112:25+ Ag 27 '53

New Orleans Public Service helps dealers track down gas appliance sales. W. C. Grant. Gas Age 112:42+ S 10 '53

1953 gas apliance merchandising, Houston Natural style. L. P. Thomas. il Am Gas J 178:69+ My '53

Pattern for profit gives utilities full plan for continuous appliance merchandising. Am Gas J 179:44-5 S '53

To sell gas refrigerators, you have to sell the dealer. V. O'Brien. il Gas Age 112:17-18+ Jl 30 '53

Electric utility competition

Hot war of electric competition. H. R. Carlson. il Gas Age 111:36-9+ My 7; 63-6+ My 21 '53

That is the question. F. C. Smith. Am Gas Assn Proc 1952:25-30; Same cond. Am Gas Assn Mo 34:6-8+ N '52

Employees

Distribution department of Peoples Gas trains its fitters thoroughly. il Gas Age 111:20-3 Ja 29 '53

Firemen at school; Consolidated Edison system of New York. W. E. Rossnagel. il Nat Safety N 66:118-19+ O '52

Gas Age training course; personnel management. W. L. Riehl. Gas Age 110:34-6 N 6 '52

Gas Age training course; welfare. W. L. Riehl. Gas Age 110:46-8 D 4 '52

Gas industry's man-power problems. F. O. Rouse. Pub Util 50:705-14 N 6 '52

How Lone Star tests automobile operators in its new driver's clinic. W. C. Grant. il Gas Age 112:24-5+ S 24 '53

If you love people, you understand them is philosophy of Claribel Thompson; editor of Lone Star's employee paper. W. C. Grant. il Gas Age 111:42-4+ My 7 '53

National personnel conference of the gas industry, 5th, Chicago, April 9-10. Am Gas Assn Mo 35:26 My '53

New Orleans school for servicemen covers variety of timely subjects. W. C. Grant. il Gas Age 111:32-3 F 26 '53

Planning today for tomorrow's electronics; Peoples gas light and coke co. Am Gas Assn Mo 35:26-7 S '53

Selecting, training engineers. M. S. Viteles. bibliog Am Gas Assn Mo 35:13-14+ Je '53

Training of personnel for operations of Lp-gas plants. S. C. Symnoski. Am Gas Assn Proc 1952:621-5; Same cond. Am Gas J 177:14-15 Ag '52

Woman's place in management. V. Green. Am Gas Assn Proc 1952:178-84; Same cond. Am Gas Assn Mo 34:11-12+ N '52

Equipment and supplies

Manufacture of gas industry equipment and appliances a growing southern activity. Am Gas J 178:53 My '53

Modern mechanical slaves help solve distribution problems in New Orleans. il Gas Age 111:52-3 My 7 '53

New tools and improved processes help New Orleans solve main problems. W. C. Grant. il Gas Age 111:68-9 Ap 23 '53

Two emergency kits for trouble shooters. W. C. Grant. il Gas Age 111:48 Ap 9 '53

Exhibits

Gas is out of this world is theme of prize Honolulu display. il Gas Age 112:34 S 24 '53

Gas wins acclaim at Cleveland home and flower show; illustrations with text. Am Gas Assn Mo 35:12-13 Ap '53

New Orleans fetes Louisiana Purchase with modern kitchen-laundry; Public service company exhibit. W. C. Grant. il Gas Age 111:31+ Mr 26 '53

Well-to-user story dramatized; Northern natural gas co. il Am Gas Assn Mo 35:2-3 F '53

Finance

Ample funds deemed available to finance gas industry growth; abstract. M. Nadler. Comm & Fin Chr 176:1616-17 O 30 '52

Are the public utilities racing hell bent for the poor house or haven't they ever had it so good? C. W. Smith and others. Am Gas J 177:27-8 O '52

Capital supply prospects for the gas industry. R. F. Murray. Comm & Fin Chr 176:1618 O 30 '52

Credit picture; survey under joint supervision of the credit and collection committees, EEI Accounting division and AGA Accounting section. Edison Elec Inst Bul 21:108+ Ap '53

Fair return for natural gas companies. R. E. Badger. Pub Util 50:832-42 D 4 '52

Four reasons why cost-of-capital concept will not be applied universally. il Gas Age 110:79-80+ O 23 '52

Gas Age training course; elements of gas utility finance. W. L. Riehl. Gas Age 111:33-4 Ja 29 '53

Gas utility financing declines. Am Gas Assn Mo 34:13 N '52; 35:22 Mr '53

Gas utility revenues for second quarter $636 million. Gas Age 112:44+ O 8 '53

Sound earnings, master key to investor support. T. Walker. Am Gas Assn Proc 1952:52-6; Same abr. Am Gas Assn Mo 34:17-18+ D '52

Study of annual reports to stockholders for 1951; report of joint EEI-AGA subcommittee on financial reporting. E. E. Roll. Edison Elec Inst Bul 20:427-9 D '52

Utility regulation by the stock market. J. H. Bickley. Pub Util 51:15-23 Ja 1 '53

Insurance requirements

Excess public liability insurance and the gas business. H. P. Stellwagen. Am Gas Assn Proc 1952:149-54; Same. Weekly Underw 167:1705+ D 27 '52; Same cond. Am Gas Assn Mo 35:23-4+ Ap '53

Law

Basic familiarity with rate problems held desirable. L. T. Parker. Am Gas J 178:20+ Ja '53

Court decisions indicate possibilities in gas company contract wrangles. L. T. Parker. Am Gas J 177:16+ D '52

Explosion liabilities suggest precautions for utilities. L. T. Parker. Am Gas J 177:18-19 O '52

Gas company liability shown in unusual legal tangles. L. T. Parker. Am Gas J 178:21-2 Ap '53

Law establishes written contract provisions as superior. L. T. Parker. Am Gas J 177:21-2 N '52

Variety of gas utility legal questions answered by court decisions. L. T. Parker. Am Gas J 178:22+ F; 179:19-20 Ag; 20-1+ S '53

See also

Gas, Natural—Laws and regulations

Management

Gas Age training course; administration. W. L. Riehl. Gas Age 110:46-7 D 18 '52

GAS companies—Management—*Continued*

How South Jersey gas co. broke through the electric iron curtain. V. F. Stanton. il Gas Age 110:72+ O 23 '52
Job measurement aids costing. R. F. Ogborn. Am Gas Assn Mo 35:21-2 Ap '53
Mr Corporate Secretary, 1952. J. H. Mathis. Am Gas Assn Proc 1952:137-40
Plan second management study. il Am Gas Assn Mo 35:5+ F '53
Scranton makes promotion news. il Am Gas Assn Mo 35:7-9 O '53
Why there must be correlation between sales and operation. B. T. Franck. Gas Age 111: 24-5+ Ja 29 '53
Work simplification. B. S. Graham; J. Murtha. Am Gas Assn Proc 1952:158-65

Meter shops

Training meter shop employees. J. W. Chrisman. Am Gas Assn Proc 1952:402-3; Same cond. Am Gas J 177:25+ Jl '52

Offices

Mechanizing the small office. K. H. Goss. Am Gas Assn Mo 35:21-2+ My '53

Public relations

AGA seeks broad industry support for expanded public relations program. Am Gas J 178:31 Ja '53; Am Gas Assn Mo 35:9 Mr '53
Editors see the natural gas business; Texas gas transmission corp. il Am Gas Assn Mo 35:12-13 Jl-Ag '53
Educational program teaches story of gas. il Am Gas Assn Mo 35:16-17+ O '53
Fuller brush man takes a utility job; door-to-door visits just ahead of pipeline laying have made friends for Southern California gas co. J. H. Collins. Pub Util 51:225-32 F 12 '53
Gas Age training course; human relations. W. L. Riehl. Gas Age 110:87-8+ O 23 '52
Gas companies have a hit show; public relations movie shown as part of discussion program. J. H. Collins. Pub Util 51:181-2 Ja 29 '53
Gas rate rise seems natural. Sales Management 70:79 Ja 15 '53
How Cincinnati Gas builds good will by Junior achievement program. E. C. Hanford. il Gas Age 111:23-4+ Mr 26 '53
INGAA workshop sketches public relations program. il Am Gas Assn Mo 35:39 O '53
Pipeliner meets the public. F. M. Banks. Am Gas Assn Mo 35:27-8+ My '53
Public relations no longer the poor relation. R. McDowell. Am Gas Assn Mo 35:10-12+ S '53
Public relations program for the gas utilities? J. J. Hassett. Pub Util 50:715-21 N 6 '52
Why there must be correlation between sales and operation. B. T. Franck. Gas Age 111: 24-5+ Ja 29 '53

Rates

See Gas rates

Records

How Oklahoma Natural achieves fast, dependable service. J. A. Myers, jr. il Gas Age 110:70-1 O 23 '52

Regulation

See also
Gas rates

Reports

Gas report leads among all utilities; Financial World magazine's annual survey of financial reports. il Am Gas Assn Mo 34:5+ N '52
Simplifying utility reports to federal agencies. W. B. Bourne, jr. Pub Util 52:141-5 Jl 30 '53

Safety measures

Accident prevention among the brass, when, why and who. J. W. Carpenter. Am Gas Assn Proc 1952:126-8
A.G.A. accident prevention committee 5th annual conference, Buffalo, Sept. 17-18. Am Gas Assn Mo 35:18-20+ O '53
American gas association executive safety committee, its aims and ultimate goals. E. H. Eacker. Am Gas Assn Proc 1952:122-5
Gas Age training course; safety. W. L. Riehl. il diags Gas Age 110:66-8+ N 20 '52
Gas utilities chalk up records for safe operations. Am Gas Assn Mo 35:43 Jl-Ag '53
How southern California companies protect low pressure distribution systems. G. G. Dye. diags Gas Age 110:27-30+ D 4 '52
Life is our first resource. W. T. Rogers. Am Gas Assn Mo 35:24 Jl-Ag '53
Past, present and future of safety in gas distribution. L. B. Bowman. Gas Age 110: 36-7+ D 18 '52
Presentation of safety awards to member companies of the A.G.A. W. H. Adams. Am Gas Assn Proc 1952:128-9
Safety is not an accident. W. H. Adams. Am Gas Assn Mo 35:25-6+ O '53
Safety must be sold as well as engineered. W. H. Adams. Am Gas Assn Mo 35:22 Ja '53
Safety of maintenance employees depends largely on type of scaffolding. E. J. Clary. il diag Gas Age 111:44-5+ Mr 12 '53
Safety pays off in Seattle. A. Willis, jr. Am Gas Assn Mo 35:23 S '53
Safety seminar, its value to your employees. W. T. Rogers. Am Gas Assn Proc 1952:134-6
Size is no bar to need for safety. W. H. Adams. Am Gas Assn Mo 35:14+ Ap '53
Value and use of combustible gas detecting instruments in the gas industry. J. P. Sherwin. Am Gas Assn Proc 1952:129-34
Why the New York Public service commission has issued new safety orders. B. F. Feinberg. Gas Age 110:25-9+ D 18 '52
Wisconsin public service commission issues interim rules for gas distribution safety. Gas Age 110:69+ O 23 '52

Salesmen

Selecting and training utility salesmen. P. M. Alden and A. G. Garrigues. Pub Util 52: 487-93 O 8 '53

Securities

Ample funds in prospect for utility expansion at higher interest. J. F. Falvey. Am Gas J 178:20+ Mr '53
Broader gas industry information held essential to attract individual investment. J. F. Falvey. Am Gas J 177:20+ O '52
Common stock money during 1953 seen as competitive consideration. J. F. Falvey. Am Gas J 178:27+ Ja '53
Expedite stockholder records. Am Gas Assn Mo 35:11-12+ Jl-Ag '53
Gas and electric utilities' rights financing, 1950-52. O. Ely. Pub Util 51:106-11 Ja 15 '53
Gas stocks; Federal power commission had a hand in their decline; with tables E. R. Abrams. Barron's 32:11-12 O 13 '52
Impact of the Northern Natural Gas decision on financing. R. E. Badger. Pub Util 50:751-60 N 20 '52
Index of yields; selected utilities stocks. Am Gas J 177:20 N '52 [cont monthly]
Overall expectation for business future is a better balance of factors. J. F. Falvey. Am Gas J 177:23+ D '52
Pipe line stocks, a growing new industry. G. L. Merton. Mag of Wall St 91:346-7+ D 27 '52
Should the SEC continue to study utility system operations? open letter to Donald C. Cook, chairman of SEC. W. A. Paton. Pub Util 50:473-80 O 9 '52
Utilities paying bigger dividend proportion than other industrials. J. F. Falvey. Am Gas J 178:20+ Ap '53
Will natural gas industry continue growth? with statistical summary of seventeen companies. R. Carleson. Mag of Wall St 91: 24-6+ O 4 '52

Service

A.G.A. home service workshop, a Texas brag. J. Hunter. Am Gas Assn Proc 1952:250-1
Annual voluntary inspections of schools assure complete safety for youth. D. E. Hughes. Gas Age 112:33+ O 8 '53
Appliance servicing as affected by varying gas conditions. W. C. Peters. Am Gas Assn Proc 1952:429-32; Same cond. Am Gas J 177: 14+ Jl '52
Drama served at teacher dinners. S. Mack. Am Gas Assn Proc 1952:238-9

GAS companies—Service—*Continued*

Experimental basis. R. Soule. Am Gas Assn Proc 1952:239-41

Gas industry servicing policies. C. G. Segeler. Am Gas Assn Mo 35:21-3+ Jl-Ag '53; Excerpts. Am Gas J 178:16-17+ Je '53

Handling seasonal peaks in lighting and turning off heating equipment. N. F. Schaberg. Gas Age 112:30-2 O 8 '53

House heater servicing. C. S. Hazel. diag Am Gas Assn Proc 1952:457-74; Same cond. Gas Age 110:25-8+ Jl 3 '52

How Oklahoma Natural achieves fast, dependable service. J. A. Myers, jr. il Gas Age 110:70-1 O 23 '52

Meeting our blind customers. M. N. Hall. Am Gas Assn Proc 1952:237-8

Our best sales tool; service. G. W. Leidholdt. Am Gas Assn Proc 1952:220-2

Serving the homemaker. H. J. Anderson. Am Gas Assn Proc 1952:241-4

Tv widens home service promotion coverage. il Am Gas Assn Mo 35:8-10+ Jl-Ag '53

That the blind may see; gas ranges make cooking easy for sightless. il Gas Age 111:19 Ja 29 '53

Wisconsin Public Service cooking school turned away 200 people a day. S. J. Santy. il Gas Age 110:28+ N 6 '52

Workshop studies sales cooperation. il Am Gas Assn Mo 35:2-5+ Mr '53; Gas Age 111:40-2+ Mr 12 '53

Stores systems

A.G.A. Accounting section national purchasing and stores conference, Milwaukee, April 13-15. Am Gas Assn Mo 35:29-30 My '53

Taxation

Tax treatment of financing cost. J. F. Brennan. bibliog Am Gas Assn Mo 35:15-17+ Mr '53

Telephone

Customer relations enhanced by high speed telephone center at Con Edison. il map Am Gas J 179:17 Jl '53

GAS compressors

Compressor calculations. R. W. Brooks. bibliog Oil & Gas J 51:163 Ap 20; 287 Ap 27; 139-40 My 4; 133 My 11; 259 My 25; 109 Je 1; 133 Je 8 '53

Gas turbines and centrifugal compressors. T. R. Rhea and J. S. Quill. maps Oil & Gas J 51:133 F 9; 169 F 16; 197 F 23; 91 Mr 2; 117 Mr 9; 147 Mr 16 '53

High efficiency air cleaning process. I. M. Davidson and D. R. Whittet. il diag Engineer 196:211-13 Ag 14 '53

How Peoples Gas uses jet compressors for distribution pumping. C. F. Kleck. flow diag il Gas Age 112:31-4 S 10 '53

How Sominco solved maintenance problems at Richard King field. C. M. Davis. il Oil & Gas J 52:97 Je 1 '53

Improving gas compressor operation by testing and research. W. K. Newcomb. il diags Am Gas Assn Proc 1952:577-97

New machinery developments and unique uses; Clark bros. co. F. W. Laverty. il Am Gas Assn Proc 1952:555-61

Roots-Connersville introduces new Spiraxial compressor. il Pulp & Pa of Can 53:202 N '52

Spiraxial compressor. W. H. Thomas. il Am Gas Assn Proc 1952:601-5

Stability of the flow of gas out of a compressor. J. M. Stephenson. diags Roy Aeronautical Soc J 57:345-6 My '53

Welding design for high-pressure gas compressor bottles. C. Wurgler. diags Welding J 32:612-13 Jl '53

See also

Gas, Natural—Compression

Gas, Natural—Pipe lines—Compressor stations

Control

Control system designed to avoid contamination of gas stream. R. B. Tuttle. flow diag diags Oil & Gas J 51:113-14 My 4 '53

Fundamentals of automatic controls for reciprocating compressors. D. H. Whiston. diag Gas Age 112:19-21 Jl 30 '53

Testing

Full-scale fatigue testing of compressor cylinders. T. O. Kuivinen. il diags A S M E Trans 75:467-72 Ap '53; Same. Pet Eng (Ref annual) 25:D5-8+ Jl 15 '53

GAS cooking

All 49 holiday award winners cook with gas. Am Gas Assn Mo 34:16 D '52

Ancient and honorable steak emporium chooses modern gas equipment. W. C. Grant. il Gas Age 110:31+ D 4 '52

Boston cooking festival carries gas story to eastern Massachusetts homes. J. C. Rafferty. il Gas Age 110:32-3 N 6 '52

Commercial cooking business and the gas company. T. B. Madole. Am Gas Assn Proc 1952:262-6; Same cond. Am Gas Assn Mo 34:24-6+ N '52; Abstract. Am Gas J 177:45+ D '52

Conduct meat shrinkage tests; gas and electric range comparisons; A.G.A. laboratories. Am Gas Assn Mo 34:14-15+ Jl-Ag '52; 35:14-16 F '53

Drama served at teacher dinners. S. Mack. Am Gas Assn Proc 1952:238-9

Dual testimonials laud gas. G. A. Trester. il Am Gas Assn Mo 35:19+ Ja '53

Evaluation of proof of profits campaign. E. V. Fineran. Am Gas Assn Proc 1952:216-18

Expectations realized through research; counter appliance field and deep fat fryers. F. A. Kaiser. Am Gas Assn Proc 1952:210-12

Gas cooking festival, Boston, Sept. 22-25. il Am Gas Assn Mo 34:19-20 N '52

Gas versus electric cooking. W. J. L. James. Elec R (Lond) 151:841-2 O 17 '52

Gourmets approve commercial cooking in New Orleans, where they all cook with gas. J. D. Haverkamp. il Am Gas J 178:34-5+ My '53

Group discusses improvements in commercial cooking. Gas Age 110:92 O 23 '52

Less beef shrinkage in gas ranges, AGA research group finds. il Am Gas J 179:46 Ag '53

Meeting our blind customers. M. N. Hall. Am Gas Assn Proc 1952:237-8

Nine reasons why gas is best for commercial cooking. P. Inskeep. Gas Age 111:35-8+ Je 4 '53

Our best sales tool; service. G. W. Leidholdt. Am Gas Assn Proc 1952:220-2

Statler hotel in Los Angeles chooses gas for heating, cooking, incineration. il Gas Age 110:25-6 D 4 '52; Same. Am Gas Assn Mo 35:17-18 Ja '53

That the blind may see; gas ranges make cooking easy for sightless. il Gas Age 111:19 Ja 29 '53

Wisconsin Public Service cooking school turned away 200 people a day. S. J. Santy. il Gas Age 110:28+ N 6 '52

See also

Gas ovens, Baking

GAS detectors

Practical method for teaching mine workers and officials use of gas-detecting equipment. D. S. Kingery and F. D. Baker. 12pls U S Bur Mines Information Circ 7639:1-6 '52

Ultraviolet photometer detects minute gas concentrations. Elec Eng 72:469 My '53

Value and use of combustible gas detecting instruments in the gas industry. J. P. Sherwin. Am Gas Assn Proc 1952:129-34

GAS distribution

Appliance type regulators. F. H. Bunnell. il Am Gas Assn Mo 35:13-14+ O '53

Effects of gas conditioning on the distribution system. C. A. Kooke. Am Gas Assn Proc 1952:280-4; Same. il Gas Age 110:35-7+ D 4 '52; Same cond. Am Gas J 177:28+ N '52

Estimating maximum day and hour demands to design and operate distribution: Portland gas & coke co. R. T. Miller. Gas Age 111:26-30+ Mr 26 '53; Same cond. Am Gas J 178:14-15+ Ap '53

Eyes and ears of public were considered by Milwaukee gas light co. in station designs; regulator buildings. il Am Gas J 178:16-17+ F '53

How Covington protects telemetric control on district and feeder line regulators. H. S. Harris. il diags Gas Age 111:21-3+ F 26 '53

GAS distribution—*Continued*

How Peoples Gas uses jet compressors for distribution pumping. C. F. Kleck. flow diag il Gas Age 112:31-4 S 10 '53

How South Jersey gas co. broke through the electric iron curtain. V. F. Stanton. il Gas Age 110:72+ O 23 '52

How southern California companies protect low pressure distribution systems. G. G. Dye. diags Gas Age 110:27-30+ D 4 '52

Medium and high pressure regulator settings. W. P. Dick. diags Am Gas Assn Proc 1952:489-502

Modern mechanical slaves help solve distribution problems in New Orleans. il Gas Age 111:52-3 My 7 '53

Past, present and future of safety in gas distribution. L. B. Bowman. Gas Age 110:36-7+ D 18 '52

Symposium on methods of load forecasting and its relation to distribution design. diags Gas Age 112:26-34 Jl 30 '53

Why Minneapolis installed 30 miles of 24-inch belt line. K. W. Person. il map Gas Age 111:33-5+ Ap 9 '53

See also

Gas, Natural—Pipe lines

Gas leakage

Gas mixing

Gas pipes

Change over

Brooklyn Union natural gas conversion, biggest changeover in the world. D. F. Grozier. il maps Gas Age 111:29-73 Ja 1 '53

Drycleaning machine combats meter shop problem in conversion to natural gas. G. E. Griffin. il plan diag Am Gas J 179:14-15+ Ag '53

Cost

Economics of supplying peak gas loads. J. W. Carroll. Am Gas Assn Proc 1952:761-75

Electric analogies

Columbia gas system installs analyzer to solve distribution problems. il Gas Age 112:28-9 O 8 '53

Electronic brain reports for work; McIlroy pipline-network analyzer. il Am Gas Assn Mo 35:18-19+ S '53

Gas pipe networks analyzed by direct-reading electric analogue computor. M. S. McIlroy. bibliog il diags Am Gas Assn Proc 1952:433-47; Same cond. Gas Age 110:31-5+ Jl 17 '52

Laclede applies McIlroy network analyzer to design calculations for distribution system. E. F. Trunk. il map Am Gas J 179:14-15+ S '53

Simplify analyzer adaptation; manipulative method coordinates network analyzer to solve distribution and flow pressure problems. R. E. Stephenson and others. bibliog Am Gas Assn Mo 35:27-31+ F '53

Long distance lines

See also

Gas, Natural—Pipe lines

Maps

Aerial pix make exact area maps. il Am Gas Assn Mo 35:10-11+ Ja '53; Same. Gas Age 111:11-13 Ja 29 '53; Same. Pub Works 84:66-7 F '53

Tables, calculations, etc.

Laclede uses three major steps in solving problems. E. F. Trunk. Gas Age 112:33-4 Jl 30 '53

Load forecasting in 600 towns of 250 to 25,000 meters. B. E. Hunt. Gas Age 112:31-3 Jl 30 '53

Use of Hardy Cross analysis for calculating pressures. E. F. Trunk and others. diags Gas Age 112:27-31 Jl 30 '53

Uses and applications of the distribution system calculator. B. E. Hunt. bibliog il diags Am Gas Assn Proc 1952:516-30

GAS engine plants. See Power plants—Gas engine plants

GAS engineering

A.G.A. production and chemical conference, New York, May 25-27. Am Gas Assn Mo 35:30-3 Jl-Ag '53; Gas Age 112:32-4+ Jl 2 '53

American gas handbook. C. R. Bellamy, ed. Am Gas J Hdbk 177:3-200 O 15 '52

International gas conference stressed progress of gas in Europe. L. T. Minchin. Gas Age 110:29-31+ N 6 '52

News from the European gas press. L. T. Minchin. bibliog Gas Age 111:48-50+ Je 4 '53

See also

Gas distribution

Gas heating

Gas manufacture

Gas pipes

Gas works

Bibliography

Bibliography of technical presentations before gas associations, 1951-1952. Am Gas J Hdbk 177:143-5+ O 15 '52

Study and teaching

See also

Institute of gas technology

GAS engines

Clark's turbocharged two-cycle angle compressor. il diags Diesel Power 31:36-7 S '53

Combustion fundamentals of heavy duty gas engines. W. K. Newcomb. diags Diesel Power 30:54-9 N '52

Dual fuel engines for pumping water cut power costs at San Antonio. J. A. Scanlan. il Water & Sewage Works 100:279-81 Jl '53; Same cond. Pub Works 84:65 F '53

Gas-burning radial engines offer low cost, efficient power generation; aluminum industry. R. W. Bayerlein. il diags Gas Age 111:46-50+ Mr 12 '53

New compressor stations boost pipeline capacity. il Diesel Power 31:41-3 Je '53

Nordberg's FSE engines; four-cycle spark-fired gas engines. il diag Diesel Power 31:52-3 F '53

See also

Power plants—Gas engine plants

Cooling

Cooling ½ billion heat units per hour; Reynolds metals company's aluminum reduction plant. il Mill & Factory 52:112-13 Mr '53

Results in prevention of detonation through scavenging-air cooling. F. R. Cramer. diags Gas Age 112:30-2+ Ag 13 '53

Maintenance and repair

How to maintain radial engines. il diag Power Eng 57:64-5 My '53

GAS fitting

Study and teaching

Distribution department of Peoples Gas trains its fitters thoroughly. il Gas Age 111:20-3 Ja 29 '53

GAS flow

Determination of basic orifice flow factor by indirect interpolation. J. Garrett. Pet Eng 25:D 19 My '53

Determination of the transverse permeabilities of large core samples from petroleum reservoirs. R. E. Collins. diags J Ap Phys 23:681-4 Je '52

Discharge coefficient of a critical-flow nozzle. H. Wise. J Ap Phys 23:801 Jl '52

Dynamics of pulsative flow through sharp-edged restrictions, with special reference to orifice-metering. R. C. Baird and I. C. Bechtold. bibliog il diags A S M E Trans 74:1381-7 N '52; Same. Instruments 25:481-6 Ap '52; Same. Pet Eng 24:D41-2+ Jl '52

Factors in gas flow measurement. C. H. Berry. diags Heat & Ven 50:81-7 Ja '53

Gas pipe networks analyzed by direct-reading electric analogue computor. M. S. McIlroy. bibliog il diags Am Gas Assn Proc 1952:433-47; Same cond. Gas Age 110:31-5+ Jl 17 '52

General theory of three-dimensional flow in subsonic and supersonic turbomachines of axial, radial, and mixed-flow types. C. Wu. bibliog(47 titles) diags A S M E Trans 74:1363-80 N '52

Helium diffusion through glass. F. J. Norton. bibliog diags Am Cer Soc J 36:90-6 Mr 1 '53

High vacuum flow analogy. G. W. Monk. J Ap Phys 23:799-800 Jl '52

GAS flow—*Continued*

How to use partially open gate valves as adjustable orifices. W. M. Fredder. Chem Eng 59:175-6 O '52

Influence of binary collisions on molecular gas flow. J. W. Hiby and M. Pahl. bibliog Phys R 88:414 O 15 '52

Influence of unheated starting sections on the heat transfer from a cylinder to gas streams parallel to the axis. W. Tessin and M. Jakob. bibliog il diags A S M E Trans 75:473-81 My '53

Material transfer in turbulent gas streams; concentric flow. W. G. Schlinger and B. H. Sage. bibliog il diags Ind & Eng Chem 45:657-61 Mr '53

Measurement and regulation of flow by remote control. G. C. Wilson. il diags Oil & Gas J 52:82-4 Je 1 '53

Metering of powdered solids in gas-solids mixtures. L. Farbar. bibliog flow diag il diags Ind & Eng Chem 44:2947-55 D '52

New approach to gas flow in capillary systems. R. M. Barrer. bibliog J Phys Chem 57:35-40 Ja '53

Normal shock wave phenomena in a convergent-divergent nozzle. B. W. Martin. diags Roy Aeronautical Soc J 57:455-60 Jl '53

One-dimensional flows of an imperfect diatomic gas. A. J. Eggers, jr. bibliog U S Nat Advisory Com for Aeronautics 1950: 239-49 '51

One-dimensional irreversible gas flow in nozzles. Y. R. Mayhew and G. F. C. Rogers. Engineering 175:355-8 Mr 20 '53

Pipe line flow calculations. J. W. J. Bercher. Pet Eng 25:D7-8+ Ap '53

Pumping speed of a circular aperture in a diaphragm across a circular tube. A. J. Bureau and others. diags R Sci Instr 23:683-6 D '52

Simple gas-flow-control of high efficiency. D. H. James and C. S. G. Phillips. bibliog diags J Sci Instr 29:362-3 N '52

Simplify analyzer adaptation; manipulative method coordinates network analyzer to solve distribution and flow pressure problems. R. E. Stephenson and others. bibliog diags Am Gas Assn Mo 35:27-31+ F '53

Surface area analysis by means of gas flow methods. G. Kraus, J. W. Ross and L. A. Girifalco. bibliog diags J Phys Chem 57: 330-6 Mr '53

Temperature gradients in turbulent gas streams; nonuniform flow. W. G. Schlinger and others. bibliog il diags Ind & Eng Chem 45:662-6 Mr '53

Unsteady-state flow of gases in porous media. R. F. Nielsen. diags Oil & Gas J 51:171 F 16; 201 F 23 '53

Use of Hardy Cross analysis for calculating pressures. E. F. Trunk and others. diags Gas Age 112:27-31 Jl 30 '53

Very accurate measurement of fringe shifts in an optical interferometer study of gas flow. F. D. Werner and B. M. Leadon. il diag R Sci Instr 24:121-4 F '53

See also

Air flow — Gas meters
Fluidization — Turbulence

GAS governors

How Covington protects telemetric control on district and feeder line regulators. H. S. Harris. il diags Gas Age 111:21-3+ F 26 '53

GAS heaters

Factors in the efficient operation of boilers and direct-fired heaters; abstract. O. S. Hubbard. Oil & Gas J 51:64 D 1 '52

Gas-fired heating system; Chandos Gasanair cabinet heater. il diag Engineer 194:876 D 26 '52; Engineering 174:767 D 12 '52

Heating installation cost cut in half; Vahl engineering co. R. B. Richards. il plan Steel 131:94-5 O 20 '52

Power venting helps hold and build valuable commercial load. D. C. Draper. diags Gas Age 112:38-40 O 8 '53

Safe venting of recessed type gas heaters studied. Am Gas Assn Mo 35:10 Ap '53

GAS heating

Chimney liners. D. L. Drake. Am Gas Assn Proc 1952:425-8

Economics of peak shaving. H. M. Henry. diags Am Gas Assn Proc 1952:818-42

Exit summer slump in heating sales! Philadelphia gas heating co. il Dom Eng 181: 104-7+ Je '53

Extra services beat competition to gas heat market; Zien plumbing & heating co. H. Zien. Sheet Metal Worker 44:57-8+ My '53

Gas heating for the home; abstract. C. G. Segeler. Heat & Ven 50:86 Je '53

Gas space heating. Gas Age 111:42-4 F 12 '53

Handling seasonal peaks in lighting and turning off heating equipment. N. F. Schaberg. Gas Age 112:30-2 O 8 '53

House heater servicing. C. S. Hazel. diag Am Gas Assn Proc 1952:457-74; Same cond. Gas Age 110:25-8+ Jl 3 '52

Househeating surpasses estimate. Am Gas Assn Mo 35:5-6 Jl-Ag '53

Lowell promotion program increases heating sales 220 per cent. il Gas Age 112:27+ Jl 16 '53

Million home heating customers added; saturation is now 48 per cent. Gas Age 112: 30-1+ Jl 2 '53

New York and Richmond company converts 24 per cent of househeating leads to sales. Am Gas J 178:45+ Ja '53

Statler hotel in Los Angeles chooses gas for heating, cooking, incineration. il Gas Age 110:25-6 D 4 '52; Same. Am Gas Assn Mo 35: 17-18 Ja '53

Why a PAD order number two; and how long? emergency regulation affecting gas companies. H. B. Noyes. Pub Util 50:673-9 N 6 '52

See also

Gas heaters

GAS heating, Industrial

Certain-Teed dries paper with gas burners. R. P. Copeland. il Paper Tr J 136:14-15 Mr 13 '53

Fast gas furnace anneals at normalizing temperatures. C. A. Turner, jr. and S. L. Yarborough. il diags Iron Age 170:140-2+ N 20 '52

Five ways to use space heaters for process heating. il Factory Management 111:126-7 Ag '53

Flame beats sugar for lengthening die life. J. A. Goodbar. il Am Mach 97:122-3 F 2 '53

Gas cuts glassware heating costs in half and doubles production. E. V. K. Schutt. il Am Gas J 179:23 Jl '53

Gas-fired pipe-bending hearth. il diags Engineering 174:644 N 14 '52

Gas heating of lead-melting pots for cable sheathing. Engineering 175:585 My 8 '53

Heating pickle liquor by submerged combustion; Ozark-Mahoning co. W. I. Weisman. il Steel 131:114+ D 15 '52

High speed heating of spring leaves. il Automotive Ind 107:43 O 15 '52

Importance of gas as an industrial fuel. Gas Age 111:53-4 F 12 '53

Industrial gas school, Detroit. Am Gas Assn Mo 35:28-30+ Je '53; Gas Age 111:38-9 Jl 18 '53

Multi-burner automatic gas heating equipment. il Engineer 195:530 Ap 10 '53

Observations on industrial gas load building. R. C. LeMay. Am Gas Assn Proc 1952:212-16

Radiant gas-fired processing equipment makes superior quality oil well casing. il Am Gas J 177:17+ N '52

Strip annealing is high-speed, continuous in direct-fired radiant-gas mill equipment. C. A. Turner, jr. il diag Am Gas J 178:16-19 Ja '53; Same cond. Steel 130:106+ Ap 14 '52

See also

Gas as fuel

GAS holders

New automatic lubricating system Stacey-Klonne dry seal gas holders. A. E. Harvey. Am Gas Assn Proc 1952:613-14

Report on new developments and equipment of General American transportation corporation. B. K. Duffy and F. E. Seery. il Am Gas Assn Proc 1952:572-7

GAS in air conditioning

Operation achievement; A.G.A. gas summer air conditioning progress awards for 1952. W. P. Jones. Am Gas Assn Proc 1952:234-6

Servel to produce two-ton gas fired all-year air conditioners this year. il Refrig Eng 61: 178 F '53

GAS in refrigeration

See also

Refrigerators, Gas

GAS industry

Gas Age training course (cont). W. L. Riehl. il diags Gas Age 110:34-6 N 6; 66-8+ N 20; 46-8 D 4; 46-7 D 18 '52; 111:33-4 Ja 29; 65-6 F 12; 60-2 Mr 12; 53-4 Mr 26 '53

Gas industry steel use declines. Am Gas Assn Mo 35:16-17 Je '53

Independent natural gas association to tell public story of gas. C. P. Rather. Gas Age 111:78+ Ap 23 '53

Mid-west gas association 48th annual meeting, Colorado Springs, March 30-April 1. Gas Age 111:50-1+ My 7 '53

New England gas association annual meeting, Boston, March 26-27. Am Gas Assn Mo 35:33 Ap '53; Am Gas J 178:16-17 Ap '53; Gas Age 111:66-7+ Ap 23 '53

Straws in the wind. Am Gas Assn Mo 35:2-3+ S '53 [cont monthly]

Where will we be in '53? C. E. Bennett. Am Gas Assn Proc 1952:11-15; Same. Am Gas Assn Mo 34:2-4+ N '52

Why all four major segments must unite in a single gas industry program. H. Hillyer. Gas Age 111:40-1+ Ja 15 '53

See also

Gas companies
Gas distribution
Gas heating
Gas in air conditioning
Gas manufacture
Gas works

Advertising

Ads open Brooklyn's homes to gas men; conversion to natural gas. Ed & Pub 85:22 S 20 '52

Ads point to gas as a bargain. il Am Gas Assn Mo 35:12-13 F '53

A.G.A. ad series to push sales of gas dryers. il Am Gas Assn Mo 35:32-3 Ja '53

A.G.A. dealer sales program nears completion. W. D. Williams. il Am Gas Assn Mo 35:14-15+ Jl-Ag '53

Babies to theme automatic gas clothes dryer drive. Am Gas Assn Mo 35:36-7 Jl-Ag '53; Same. Gas Age 112:53-4 Ag 27 '53

Commercial gas appliances get boost in coordinated fall promotion. Am Gas J 179:45 Ag '53

Dramatize then capitalize; newspaper cooking schools. K. L. Rathbone. il Am Gas Assn Mo 35:18-20+ Ap '53

Dual testimonials laud gas. G. A. Trester. il Am Gas Assn Mo 35:19+ Ja '53

Fly time is incinerator time; American gas association promotion of gas-fired incinerators. il Gas Age 112:40-1 Jl 2 '53

How Pittsburgh gas companies merchandise gas appliances. il Am Gas J 177:45 N '52

Mrs America to cook with gas in '54; American gas association and Better Living magazine will conduct contest. il Am Gas Assn Mo 35:12-13+ S '53; Same cond. Gas Age 112:26+ S 24 '53

New tv package show launched. Am Gas J 178:72 My '53; Am Gas Assn Mo 35:10 Ap '53; il Gas Age 111:40-1 My 7 '53

Posters carry double sales wallop; Columbia gas system, inc. il Am Gas Assn Mo 35:16-17 Jl-Ag '53

Public utility advertising must perform three major jobs in 1953. P. L. Penfield. Gas Age 111:37+ Ja 15 '53

Seattle gas co. says gas is power. Gas Age 111:27 F 26 '53

Single theme coordinates 1953 A.G.A. promotions. il Am Gas Assn Mo 35:12-14 Ja '53

Tv widens home service promotion coverage. il Am Gas Assn Mo 35:8-10+ Jl-Ag '53

United Gas tells Gulf South story to industry of Nation. il Am Gas J 178:36-7+ My '53

See also

Gas stoves—Advertising

Exhibitions

Exhibits at National hotel exposition, New York, Nov. 10-14. il Am Gas Assn Mo 35:27-8 Ja '53

Gas stars across the Nation. il Am Gas Assn Mo 35:18-19 My '53

Gas stars at sellingest restaurant show. il Am Gas Assn Mo 35:30-1 Je '53; Gas Age 111:35-6 Je 18 '53

Peoples Gas Hall of flame is feature of Chicago's modern living exposition. il Gas Age 111:44+ My 21 '53

Finance

Gas expansion; higher capital costs fail to discourage it. E. R. Abrams. Barron's 33:13-14 Jl 20 '53

Gas industry feels price pinch. World Oil 135:83+ O '52

Natural gas; expansion plans reflect industry's long-term optimism. H. Murphy. Barron's 33:9-10 Ap 27 '53

Natural gas expansion spurs investment interest. E. R. Abrams. Barron's 33:40 Mr 30 '53

Natural gas; from the investor's standpoint it's not one industry, but five. E. R. Abrams. Barron's 33:13 Ja 26 '53

Pacific Lighting improved profit picture. E. Etherington. Barron's 33:17-19 My 11 '53

Portable pipe lines. I. U. Cobleigh. Comm & Fin Chr 177:192 Ja 15 '53

See billion-a-year construction; gas utility and pipeline industry, 1953-1956. Am Gas Assn Mo 35:7+ Jl-Ag '53

See also

Gas companies—Finance

History

Chronology of the southern gas industry, 1802-1953. R. R. Suttle, comp. Am Gas J 178:29-33 My '53

Laws and regulations

Government regulation; a threat to free enterprise. H. R. O'Conor. Am Gas Assn Proc 1952:48-52; Same cond. Am Gas Assn Mo 34:9-10+ D '52

Merchandizing

A.G.A. Industrial and commercial gas section sales conference, Philadelphia, April 13-15. Am Gas Assn Mo 35:31-4 My '53; Gas Age 111:59-62+ My 21 '53

Anticipated sales by classes of service. Gas Age 111:39-41 F 12 '53

Boston cooking festival carries gas story to eastern Massachusetts homes. J. C. Rafferty. il Gas Age 110:32-3 N 6 '52

Conversion burners are still profitable load builders for merchandising utilities. W. E. Davis. il Am Gas J 177:55+ O '52

Do you know what sells gas? R. E. Wright. Am Gas Assn Mo 35:19-20+ Jl-Ag '53

Dramatize then capitalize; newspaper cooking schools. K. L. Rathbone. il Am Gas Assn Mo 35:18-20+ Ap '53

Eastern natural gas regional sales conference, 24th, Pittsburgh. Gas Age 111:51-3 Je 4 '53

Eastern natural gas regional sales conference, 24th, Pittsburgh, May 4-5; with abstracts of papers. Am Gas Assn Mo 35:38-41+ Je '53

Evaluation of proof of profits campaign. E. V. Fineran. Am Gas Assn Proc 1952:216-18

Facing up to the facts. W. L. Hayes. Am Gas Assn Proc 1952:258-62; Excerpts. Am Gas Assn Mo 35:9-10+ F '53

Gas cooking festival, Boston, Sept. 22-25. Am Gas Assn Mo 34:19-20 N '52

Industry launches sales and public service development program. Am Gas J 178:48 Je '53

Lay stress on sales training; New England regional sales training clinic. H. S. Walter. Am Gas Assn Mo 35:27-9 Jl-Ag '53

Lowell promotion program increases heating sales 220 per cent. il Gas Age 112:27+ Jl 16 '53

Market management by hunch or fact? A. W. Conover. Am Gas Assn Mo 35:4-6+ S '53

Mid-west regional gas sales conference, Chicago, April 27-29. Am Gas Assn Mo 35:36-8 Je '53; Am Gas J 178:20 Je '53

New York-New Jersey regional gas sales conference, Spring Lake, N.J. June 29-30. Am Gas Assn Mo 35:34-6 S '53

Our future begins on Main street; Gas industry development program. il Am Gas Assn Mo 35:10-12+ O '53

Pattern for profit. W. D. Williams. Am Gas Assn Proc 1952:229-31

Take a choice; sell or shrivel! F. C. Smith. Am Gas Assn Mo 35:2-3+ Je '53

GAS industry—Merchandizing—*Continued*

To sell, ya gotta tell. C. S. Stackpole. Am Gas Assn Proc 1952:232-3

Utilities, manufacturers launch joint action program; appliance merchandising. Gas Age 111:27-30+ My 7 '53; Am Gas Assn Mo 35: 2-5+ My '53

Will utilities' top management maintain markets to assure survival? F. C. Smith. Am Gas J 177:43 N '52

See also

Gas heating

Statistics

Electric power and gas; Nov.-Dec. 1951-Jan.-Nov. 1952. Survey of Cur Bsns 33:S26 Ja '53 [cont monthly]

Facts and figures. Am Gas Assn Mo 35:15 O '53 [cont monthly]

Gas attains new heights in 1952. F. C. Smith. Am Gas Assn Mo 35:2-6+ Ja '53; Same. Gas Age 111:25-30+ Ja 15 '53; Abstract. Pub Util 51:111-12 Ja 15 '53

Gas transmission and distribution to show great gains in 1953-55; report by Petroleum administration for defense. map Gas Age 111:35-56+ F 12 '53

PAD predicts 40 per cent increase in gas sales in five years. Gas Age 110:78 O 23 '52

Record gas year seen. Oil & Gas J 51:37-9 D 29 '52

Utility gas service in the South surveyed by AGA. map Am Gas J 178:51-2 My '53

Terminology

Glossary of gas industry terms. R. M. Poe, comp. Am Gas J 178:27-30 Mr; 31-4 Ap; 179: 23-6 Ag; 23-6 S '53 (to be cont)

Europe

Europe's gas industry modernizing. V. Stark. il Am Gas J 177:48 O '52

International gas conference stressed progress of gas in Europe. L. T. Minchin. Gas Age 110:29-31+ N 6 '52

News from the European gas press. L. T. Minchin. bibliog Gas Age 111:48-50+ Je 4 '53

Great Britain

British gas industry survey. Chem Age (Lond) 67:695-8 N 22 '52

England's gas output is being increased. For Comm W 48:5 N 17 '52

Report of the Gas council. Engineer 194:662 N 14 '52

Midwestern states

More gas and more sales of better appliances are Mid-west goals. A. H. Abbott. Gas Age 111:48 Ja 15 '53

New England

New England companies stress sales and public relations. S. R. Knapp. Gas Age 111: 47-8 Ja 15 '53

Northwestern states

Private utilities in Northwest battle campaign by firms urging public natural gas distribution. Gas Age 110:49 D 4 '52

Pacific coast

Coast gas has bright future. J. S. Moulton. Am Gas Assn Mo 35:4 F '53

Pacific coast foresees continued progress in coming year. J. S. Moulton. Gas Age 111: 46-7 Ja 15 '53

Pennsylvania

Gas bills, appliance sales in Pennsylvania subject to one per cent tax. Gas Age 112: 41-2 S 24 '53

Southern states

Chronology of the southern gas industry, 1802-1953. R. R. Suttle, comp. Am Gas J 178:29-33 My '53

Construction throughout the South includes vast gas sales potentials. map Am Gas J 178:38-9+ My '53

Unity of industry and grass roots approach mark Southern program. J. H. Wimberly. Gas Age 111:45-6 Ja 15 '53

Utility gas service in the South surveyed by AGA. map Am Gas J 178:51-2 My '53

United States

Gas attains new heights in 1952. F. C. Smith. Am Gas Assn Mo 35:2-6+ Ja '53; Same. Gas Age 111:25-30+ Ja 15 '53

Gas; boon to metalworking. il Steel 131:74-5 N 3 '52

Gas industry seems determined to battle some of its major problems this year. H. H. Carlson. Am Gas J 178:14-15+ Ja '53

Gas industry will spend $3,977,000,000 in 1953-56 period on new construction; with tabulation. Gas Age 112:43+ Jl 16 '53

Gas transmission and distribution to show great gains in 1953-55; report by Petroleum administration for defense. map Gas Age 111:35-56+ F 12 '53

Influencing factors on the future of manufactured and mixed gases. E. H. Eacker. Am Gas Assn Proc 1952:147-8

Natural gas growth carries gas industry to new heights. C. E. Bennett. Pub Util 50: 669-72 N 6 '52

See also

American gas association

GAS laboratories

See also

American gas association—Appliance testing laboratory

GAS leakage

How Portland Gas detects leakage in distribution system. V. W. Harper. Gas Age 112:36-7+ O 8 '53; Same cond. Am Gas J 179:16+ Jl '53

How Public Service traces leaks in northern Illinois. il Gas Age 112:32-3 S 24 '53

Wisconsin public service commission issues interim rules for gas distribution safety. Gas Age 110:69+ O 23 '52

GAS lifts

Gas lift as it applies to deep production. C. R. Canalizo. Pet Eng 25:B76 F '53

Gas lift used to produce Plymouth field wells. D. M. Crawford. il diag Oil & Gas J 52: 100-1 My 11 '53

New correlation simplifies pressure gradient calculation in tubing. F. H. Poettmann and P. G. Carpenter. World Oil 136:161-4+ Je '53

New gas lift for solids; Hyperflow. il diag Chem Eng 60:138+ My '53

New gas lift system. R. P. Vincent and L. B. Wilder. il diags Pet Eng 24:B84+ N '52

Rotative gas lift a success in deep well. J. F. McDonald. flow diag il diag World Oil 135: 195-8 D '52

GAS manufacture

A.G.A. production and chemical conference, New York, May 25-27. Am Gas Assn Mo 35: 30-3 Jl-Ag '53; Gas Age 112:32-4+ Jl 2 '53

Concentric catalytic generator design improved. V. Stark. diag Am Gas J 178:21+ Je '53

Continuous pressure gasification of pulverized coal in suspension. C. G. Von Fredersdorff and E. J. Pyrcioch. diag Am Gas Assn Proc 1952:685-701

Fluidization in beds of coal and coke particles; some effects of size of particles and viscosity, density and velocity of gas. L. J. Jolley and J. E. Stantan. J Ap Chem 2(sup no 1):S62-8 '52

Gasification of hydrocarbons for production of gases to supplement natural gas in city supplies (cont). J. J. Morgan. bibliog flow diags il map diags Gas Age 110:37-40 N 6; 59-65 N 20; 41-5 D 4; 38-45 D 18 '52; 111: 26-32 Ja 29; 57-64 F 12; 42-4 F 26; 51-9 Mr 12; 40-52 Mr 26; 54-60 Ap 9 '53

Gasification of lignite in a commercial-scale pilot plant; progress report for 1947-48. A. C. Burr and others. 15pls U S Bur Mines Rep of Invest 4940:1-28 '53

Improvement of catalysts and catalyst supports. C. H. Riesz and others. diag Am Gas Assn Proc 1952:657-63; Same. Pet Eng 24:C 17-18+ D '52

Milestone for chemicals? coal partial combustion. diag Bsns W p 138+ Je 13 '53

Our natural gas supply; when will we need substitutes and how will we get them. C. F. de Mey. Am Gas Assn Proc 1952:290-3; Same cond. Am Gas Assn Mo 34:27-8 N '52; Same cond. Am Gas J 177:16+ N '52

GAS manufacture—*Continued*

Progress report on operation of pressure-gasification pilot plant utilizing pulverized coal and oxygen. G. R. Strimbeck and others. bibliog 24pls U S Bur Mines Rep of Invest 4971:1-27 '53; Same. Am Gas Assn Proc 1952:778-817

Pulverized-coal gasification Ruhrgas processes. K. Traenckner. il diags A S M E Trans 75:1095-100; Discussion. 1100-1 Ag '53

Ruhrgas process gasifies pulverized coal in cyclone. Chem Eng 60:124-5 F '53

Thermal requirements for the gasification of lignite in an externally heated retort. M. H. Chetrick. bibliog 3pls U S Bur Mines Rep of Invest 4957:1-7 '53

V-1 bomb cues gasifier design. il diags Chem Eng 60:144+ My '53

See also

Clark, Walton, medal
Coal mines and mining—Gas generation
Gas, Oil
Gas, Water—Manufacture
Gas companies
Gas works

Coal mine gasification

Gas from the coal seam. Economist 167:768 Je 13 '53

Underground fire. Chem W 71:44+ D 20 '52

Bibliography

Selected bibliography of coal gasification. R. M. Busche and others. U S Bur Mines Rep of Invest 4926:1-28 '52

Cost

Production of methane from coal. L. W. Alberts and others. bibliog flow diag Chem Eng Prog 48:486-93 O '52

GAS masks

Fundamental principles of handling chlorine; chlorine gas masks. V. W. Langworthy. il Water & Sewage Works 100:361-4 S '53

Gas masks for peace time. G. M. Glidden. il Nat Safety N 67:20-1+ Ja '53

GAS measurement

See also

Gas, Natural—Measurement
Gas meters

GAS meters

Apply the preventive ounce; meter reader inspection plan. K. Wood. Am Gas Assn Mo 35:7-8+ Mr '53

Current application of metering economics. G. K. Bachmann. Am Gas Assn Proc 1952: 414-24; Same cond. Gas Age 109:51-4+ Je 5 '52

History and operation of positive displacement gas meters. W. F. Connor. diags Instruments 25:1279-81 S '52

How New England companies solved problems of orifice metering. R. E. Lasselle. Gas Age 110:25+ N 6 '52

How to handle gas meters with safety and maximum efficiency. J. Webb. il Gas Age 112:34-40 Ag 13 '53

Instrumentation in scrubbing, regulating, mixing and metering of natural gas. R. P. Saxton. il Gas Age 110:23-4 N 6 '52

New meter stop causes greater safety; LubOseal. F. H. Mueller. il Gas Age 110: 81+ O 23 '52

Outside reading of inside meters. L. S. Thomas. il Am Gas Assn Mo 35:21 S '53

Principles of orifice measurement. W. A. Griffin. diags Am Gas J 177:23-6 N '52

Standard determination of meter capacities for diaphragm type positive displacement meters (revised 1951). Am Gas Assn Proc 1952:373-5

Telemeter offers gas industry opportunity to read meters outside premises. il Gas Age 112:25-7 Ag 13 '53

Diaphragms

Dry cleaning meters and reoiling diaphragms. F. A. Sharkey. Am Gas Assn Proc 1952:404-7

Installation

New outside reading meter position aids in low-cost housing. L. Newkirk. il Gas Age 112:40 Jl 16 '53

Painting

Residential meter appearance; program for control and improvement. D. L. McLeod. Gas Age 112:43-6+ S 10 '53

Repair

Drycleaning machine combats meter shop problem in conversion to natural gas. G. E. Griffin. il plan diag Am Gas J 179:14-15+ Ag '53

Dry cleaning meters and reoiling diaphragms. F. A. Sharkey. Am Gas Assn Proc 1952: 404-7

How Southern California gas co. maintains a million-and-a-half meters. il Gas Age 111: 50-4 Ap 23 '53

Seventeen possible advantages to be found in centralized meter shop operation. W. V. Davidson, jr. il diags Gas Age 111:41-4+ Ap 9 '53

Training meter shop employees. J. W. Chrisman. Am Gas Assn Proc 1952:402-3; Same cond. Am Gas J 177:25+ Jl '52

GAS mixing

Air-gas mixing systems and burner designs. A. D. Wilcox. Am Gas J 178:18-19 Ap '53

Brooklyn Union natural gas conversion, biggest changeover in the world. D. F. Grozier. il maps Gas Age 111:29-73 Ja 1 '53

Flexible standby for Washington Gas Light includes new high-pressure storage plant. B. C. White. il Am Gas J 177:14-15+ D '52; Same. Pet Eng 24:D50+ D '52

How Peoples Gas uses jet compressors for distribution pumping. C. F. Kleck. flow diag il Gas Age 112:31-4 S 10 '53

New unit stabilizes heating value of mixed utility gas. R. A. Schoger. flow diag il Am Gas J 178:14-15+ Je '53

Peak shaving for natural gas systems. C. T. Chave and B. C. White. Am Gas Assn Mo 35:21-3+ O '53

Proportional peak shaving and automatic stand-by gas mixing control. E. X. Schmidt and C. W. Warner. diags Am Gas Assn Proc 1952:561-4

Stretching the St Louis gas supply; Laclede company increases propane-air system to supplement natural gas. L. M. Liberman. il map Comp Air Mag 58:34-9 F '53

GAS oil

Better yields from cat cracking; furfural refining. C. W. Shelley and C. W. Rackley. bibliog Pet Processing 7:1772-5 D '52

Ethylene production and recovery. C. C. King and J. Warburton. diags Pet Processing 7:1644-7 N '52; Same. Oil & Gas J 51:92-4+ D 8 '52

Furfural extraction of gas oils; Texaco development corp. flow diag Pet Refiner 31: 184-5 S '52

Furfural refining; Texaco development corp. flow diag Pet Refiner 31:188-9 S '52

HF extraction; Standard oil co. (Indiana). flow diag Pet Refiner 31:188-9 S '52

Vacuum unit produces exceptionally clean gas oil. il diag Oil & Gas J 51:113-15 F 9 '53

GAS ovens, Baking

Study the principles of gas oven performance. il Am Gas Assn Mo 34:10 N '52; Same. Gas Age 110:45 D 18 '52

GAS pipes

Design of gas piping on bridges. E. G. Watkins. bibliog il diags Am Gas Assn Proc 1952:502-16

Methods of installing bell joint clamps. M. E. Malone. Am Gas Assn Proc 1952:475-7

New Orleans floats gas mains into place in marshy section of city. il Gas Age 112:27 S 24 '53

New tools and improved processes help New Orleans solve main problems. W. C. Grant. il Gas Age 111:68-9 Ap 23 '53

PGW drives sleeve for a 30-inch main under busy Philadelphia street. il Am Gas J 178: 14-15 F '53

Tractor-trencher advantages shown by Citizens gas and coke utility. il Am Gas J 178:19 Mr '53

Valves for gas mains. il diag Engineering 174:170 Ag 8 '52

See also

Gas, Natural—Pipe lines
Gas distribution

GAS pipes—*Continued*

Cleaning

Dry-ice source of purging gas. D. L. White. il diags Am Gas Assn Mo 35:30-3 S '53

How southern counties developed method for blowing dust from lines. N. K. Senatoroff and E. Niederer, jr. il map diags Gas Age 112:23-6+ Jl 16 '53

Unusual internal cleaning problem. C. E. Richards. il map diags Pet Eng 25:D36+ My '53

Corrosion

Bacterial attack on buried piping regarded as serious cause of rapid corrosion. C. G. Deuber. il Am Gas J 178:31+ F; 23+ Mr '53

Deposits

Control of dust in distribution systems. J. H. Glamser. Am Gas J 178:42+ My '53

Natural gas pipeline deposits. L. T. Bissey. Am Gas Assn Proc 1952:531-6; Same cond. Am Gas J 177:16-17+ Ag '52

Failure

Gas and water mains short-circuited after large building fire; Roanoke gas co. E. P. Game. il Gas Age 112:21-2 Jl 16 '53

Stress failure in Big-Inch gas-transmission pipe. J. W. Lodge and G. K. Manning. diags Oil & Gas J 51:344-6+ N 17 '52; Same. Am Pet Inst Proc 32(5):35-41 '52

Protection

Cathodic protection. diags Am Gas J Hdbk 177:140-2 O 15 '52

Comparison of plastic tape and hot enamels for protective coatings of pipe. N. P. Peifer. il Gas Age 111:41-3+ My 21 '53

Corrosion protection of natural gas main in greater New York. F. E. Kulman. maps plans diags Am Gas Assn Proc 1952:376-92

Economics of corrosion control. A. W. Peabody. Am Gas Assn Proc 1952:284-9; Same cond. Am Gas J 177:27+ N '52

Economics of steel service pipe protection; with cost data. C. L. Woody. Am Gas Assn Proc 1952:448-56

How Montana Power uses cathodic protection for 95 per cent of distribution mains. C. R. Davis. diags Gas Age 111:32-4+ Je 4 '53; Same abr. Am Gas Assn Mo 35:23-5 My '53

How to prevent damage from heaving of piping at regulator stations. C. E. Williams. il diags Gas Age 111:32+ Mr 26 '53

Methods of controlling corrosion. Am Gas J Hdbk 177:139-40 O 15 '52

Pipe protection with unbonded coatings. R. Sneddon. il Pet Eng 25:D12+ F '53

Polyvinyl chloride tape approaches ideal material for pipe protection. G. M. Carter, jr. and T. J. Skotnicki. il Am Gas J 179:14-15+ Jl '53

Stoppers

Safe way of making cutouts on large low-pressure gas mains. H. T. Libby. diags Am Gas J 178:18 Mr '53; Same. Gas Age 111:25+ Mr 26 '53; Same. Oil & Gas J 51:119 Ap 6 '53

Testing

How Portland Gas detects leakage in distribution system. V. W. Harper. Gas Age 112:36-7+ O 8 '53; Same cond. Am Gas J 179:16+ Jl '53

How Public Service traces leaks in northern Illinois. il Gas Age 112:32-3 S 24 '53

Pipe line fracture tests start at Athens, Ohio. C. F. de Mey. Gas Age 112:33+ Ag 13 '53

Radiographic inspection assures good welds on Providence distribution line. L. S. Fletcher. il Gas Age 111:45-7 Ap 9 '53

Stress failure in Big-Inch gas-transmission pipe. J. W. Lodge and G. K. Manning. diags Oil & Gas J 51:344-6+ N 17 '52; Same. Am Pet Inst Proc 32(5):35-41 '52

Use of pigs in hydrostatic tests of large diameter pipe lines. M. J. Binckley. Gas Age 111:16-18+ Ja 29 '53

GAS pipes, Plastic

Plastic pipe solves irrigation problems for rice farmers in south Texas. W. C. Grant. il Gas Age 112:17-18 Jl 2 '53

What has the gas industry experienced to date with plastic pipe? J. F. Fugazzi. Gas Age 111:54+ My 7 '53

GAS producers

Application of automatic control to the coal feed of steelworks gas producers. S. A. Burke and G. A. Sparham. il diag Iron & Steel Inst J 172:257-64 N '52

Automatic control of gas producers. diag Engineer 195:841 Je 12 '53; Engineering 175:751 Je 12 '53; Metallurgia 47:287 Je '53

Producer-gas plant. il Engineering 175:732 Je 5 '53

Works producer gas unit. Engineer 195:645-6 My 1 '53

GAS purification

Adsorption; vapor phase processes serve industry well; solvent recovery, gas purification, dehydration and separation. F. M. Browning. flow diag il Chem Eng 59:158-61 O '52

Application of low-temperature processes to hydrogen-rich gases. J. S. Bardin and D. W. Beery. diags Pet Refiner 32:99-102 F '53

Effects on scrubbing high Btu gases. J. O. Sholar. diag Am Gas Assn Proc 1952:664-6

Gas scrubbing plant. il Engineer 195:576 Ap 17 '53

Girbotol process; Girdler corp. flow diag Pet Refiner 31:230-1 S '52

Producer-gas plant. il Engineering 175:732 Je 5 '53

Removal of hydrogen sulfide and carbon dioxide from synthesis gas using di- and triethanolamine. H. W. Wainwright and others. bibliog 6pls U S Bur Mines Rep of Invest 4891:1-19 '52

Theory of fluidization and its application to gas purification. J. E. Garside and A. L. Roberts. diags J Ap Chem 2(sup no 1):S39-47 '52

See also

Blast furnace gas—Cleaning

Sulfur removal

Air pollution by hydrogen sulfide in Poza Rica, Mex. L. C. McCabe and G. D. Clayton. bibliog flow chart il maps A M A Archives Ind Hygiene & Occup Med 6:199-213 S '52

Catalytic hydrolysis of hydrogen cyanide to ammonia. J. D. F. Marsh, W. B. S. Newling and J. Rich. J Ap Chem 2:681-4 D '52

Flue gas removal of sulphur oxides; no commercially successful recovery so far. Chem Age (Lond) 67:827-9 D 20 '52

Removal of oxides of sulphur from flue gases. R. L. Rees. bibliog Engineer 194:842-4 D 19 '52; Abstracts. Elec J 149:1931-2 D 19 '52; Elec R (Lond) 151:1340 D 19 '52

Report of the Girdler corporation. J. S. Cromeans and L. E. Osmer. Am Gas Assn Proc 1952:598-600

GAS ranges. See Gas stoves

GAS rates

Basic familiarity with rate problems held desirable. L. T. Parker. Am Gas J 178:20+ Ja '53

FPC gas items. Pub Util 52:441-2 S 24 '53

Gas Age training course; rate factors. W. L. Riehl. Gas Age 111:65-6 F 12 '53

Gas rate filing provisions of state utility regulatory laws. R. W. Fouse. Am Gas Assn Proc 1952:67-9

Report of subcommittee on rate adjustment clauses. C. A. Ashby, jr. Am Gas Assn Proc 1952:60-6

Report of the subcommittee on interruptible, off-peak and seasonal gas rates. Am Gas Assn Proc 1952:70-114 bibliog(p106-14)

Two important decisions allow rates of return above six per cent. O. Ely. Pub Util 52:312-14+ Ag 27 '53

See also

Gas, Natural—Rates

Bibliography

Bibliography on interruptible, off-peak and seasonal rates, air conditioning, summer-winter loads and rates, storage, stand-by and other auxiliary service, 1936-51. Am Gas Assn Proc 1952:106-14

GAS refrigerators. See Refrigerators, Gas

GAS research

American gas association 8th research and utilization conference, Cleveland, April 7-8. Am Gas Assn Mo 35:6-9+ My '53; Gas Age 111:54-6+ My 21 '53

Cite A.G.A. research cooperation. R. A. Cattell. Am Gas Assn Mo 35:17+ My '53

Gas production research in review. F. J. Pfluke. Am Gas Assn Proc 1952:628-33

Institute of gas technology focuses research on natural gas problems. E. S. Pettyjohn. il Gas Age 111:38-9+ Ja 15 '53

Preliminary operating results on pressure-gasification pilot plant utilizing pulverized coal and oxygen. G. R. Strimbeck and others. flow sheets diags Am Gas Assn Proc 1952:778-817

See also
Gas, Natural—Research

GAS sampling

Rapid gas sampler for use in research on the mechanism of engine knock. diag Mech Eng 75:31-2 Ja '53; Same. Franklin Inst J 255:61-2 Ja '53

GAS scrubbers. See Gas purification

GAS separators

Field processing of Arabian crude oil. R. A. Boettcher. flow diags il Oil & Gas J 51:165-9+ D 22 '52

GAS storage

Developments in spherical gas storage containers. R. V. McGrath. il Am Gas Assn Proc 1952:552-5

Storage of gases or mixtures of gases considering deviations from ideal gas laws. Am Gas J Hdbk 177:133-8 O 15 '52

See also
Gas, Natural—Storage

GAS stoves

Chambers adds broiler-burner unit to built-in gas cooking equipment. il Am Gas J 178:46 F '53

New approach to consumer-appeal in Universal's dishwasher-in range. il Am Gas J 178:43-4 Ja '53

Roper's new Space-Master ranges top magic of electric appeal. il Am Gas J 177:44 N '52

Why burners incorporating simmer sections should have these six features. C. C. Lamar. il diag Gas Age 111:36-40+ F 26 '53

Advertising

Carnival of gas cooking hits the sawdust trail. Am Gas Assn Mo 35:32-3 F '53

Manufacture

Mechanization cuts costs and improves products; Geo. D. Roper corp. G. Rigeman. il diags Tool Eng 31:61-3 S '53

Merchandizing

Chicago and Philadelphia start contest on single-point-ignition ranges. Gas Age 112:31 S 24 '53

Editors learn of gas kitchen's rising role; automatic gas range conference. Am Gas Assn Mo 35:42 My '53

Gas appliance manufacturers association 4th annual automatic gas range conference, New York, April 22; with abstracts of papers. Gas Age 111:52-3+ My 21 '53

Gas appliance manufacturers association 4th annual automatic gas range conference, New York, plugs gas ranges to editors. Am Gas J 178:40 Je '53

GAMA launches range promotion. il Am Gas Assn Mo 35:10-11+ Mr '53

Gas range manufacturers lead in public housing project sales. Gas Age 111:66 My 21 '53

How to ring fresh change on an old sales theme; Old stove roundup. A. D. Schrodt. il Sales Management 70:65-8 F 1 '53

Matchless ranges at Peoples Gas sold with enthusiasm, confidence. Am Gas J 177:47 N '52

No match for the gas industry. Am Gas Assn Mo 35:27-8 O '53

Old stove round-up finishes with new highs in cooperation and sales. Am Gas J 178:44 Ja '53

Operation sales starts in April with support of GAMA Range division. Am Gas J 178:44-5 Mr '53

PEP sales drive off to flying start. C. C. Hanthorn. Am Gas Assn Mo 35:28-9+ S '53

Philadelphia's Matchless range campaign ignites 2695 sales in three months. F. H. Trembly, jr. il Gas Age 111:35-6+ Mr 12 '53; Same. Am Gas Assn Mo 35:6+ Mr '53

Sales ride high! Am Gas Assn Mo 35:15-16+ Ja '53

Strong finish seems certain for Carnival of cooking. il Am Gas J 179:45 Jl '53

GAS supply

Boston

How Boston handles additions and replacements on system. A. L. Higgins. Gas Age 112:26-7 Jl 30 '53

Great Britain

Electricity and gas; analysis of administrative costs. Elec J 150:364 Ja 30 '53

Gas-electric co-operation; proposals by chambers of commerce. Elec R (Lond) 152:247-8 Ja 30 '53

New York (state)

Why the New York Public service commission has issued new safety orders. B. F. Feinberg. Gas Age 110:25-9+ D 18 '52

GAS testing

See also
Gas sampling

GAS turbine-electric locomotives. See Locomotives, Gas turbine-electric

GAS turbine locomotives. See Locomotives, Gas turbine

GAS turbine plants. See Power plants—Gas turbine plants

GAS turbines

American gas turbines in 1952. il diag Engineer 195:219-21 F 6 '53

Application of research to the gas turbine. H. Constant. Engineering 175:30-1, 61-3 Ja 2-9 '53; Same abr. Engineer 195:186-8 Ja 30 '53; Abstract. Elec J 149:1918-19 D 19 '52

Combustion gas turbine and its applications. B. G. Hatch. bibliog il Elec Eng 72:252-6 Mr '53

Continental gas turbines in 1952. il diags Engineer 195:250-2 F 13 '53

Critical review of gas turbine progress, 1952. Engineer 195:124-7 Ja 23 '53

Design and development of a broad-range, high-efficiency centrifugal compressor for a small gas-turbine-compressor unit. I. E. Speer. bibliog il diags A S M E Trans 75:395-404; Discussion. 404-7 Ap '53

Design and performance of an extended-surface regenerator for a gas-turbine plant. S. Holm and R. L. Lyerly. il diags A S M E Trans 74:1163-6 O '52

Effect of rate of strain on the flow stress of gas turbine alloys at 1200 and 1500 F. M. J. Manjoine. il diags Am Soc T M Proc 50:931-48 bibliog(p947-8); Discussion. 949-50 '50

Effect of rotary regenerator performance on gas-turbine-plant performance. D. B. Harper and W. M. Rohsenow. bibliog diags A S M E Trans 75:759-65 Jl '53

Engineering highlights of 1952; turbines. C. A. Scarlott. il Westinghouse Eng 13:4 Ja '53

15mw gas turbine alternator set at Trafford power station. flow diag il plan diags Engineer 194:343-5 S 12 '52; Engineering 174:335-7, pl 19-20 S 12 '52; Elec R (Lond) 151:527-31 S 12 '52; Electrician 149:761-4 S 12 '52

Gas turbine alloys, ten years later. H. Scott. bibliog Metal Prog 58:503-11 O '50; Same cond. Product Eng Hdbk p B 16-20 '53

Gas-turbine business. Mech Eng 75:235-6 Mr '53

Gas-turbine-driven centrifugal compressors feature of El Paso's Southern division. W. H. Miller. il Oil & Gas J 51:244-6+ Ap 27 '53

Gas turbine in relation to fuel economy. Karrer. diags Engineer 194:274-7 Ag 29 '52

Gas turbine progress report, 1952. bibliog il diags A S M E Trans 75:121-234 F '53

Gas-turbine report; performance on El Paso natural gas co's. line. P. Reed. il Oil & Gas J 51:104-5 Ap 20 '53

GAS turbines—*Continued*

Gas turbine used to pipe natural gas through pipe lines. P. Kayser. Elec Eng 72:107 F '53

Gas turbines. L. N. Rowley and B. G. A. Skrotzki. il diags Power 96:79-110 D '52

Gas turbines and centrifugal compressors. T. R. Rhea and J. S. Quill. map Oil & Gas J 51:133 F 9; 169 F 16; 197 F 23; 91 Mr 2; 117 Mr 9; 147 Mr 16 '53

Gas turbines for pipelines. T. J. Putz. il diags Westinghouse Eng 13:152-5 S '53

Gas turbines in 1952. il diags Engineer 195: 86-9, 134-5 Ja 16-23 '53

Gas turbines in retrospect and prospect. W. E. P. Johnson. Engineering 175:699-700 My 29 '53

Gas turbines ready for your plant? il Mod Ind 25:40-6 Je '53

General theory of three-dimensional flow in subsonic and supersonic turbomachines of axial, radial, and mixed-flow types. C. Wu. bibliog(47 titles) diags A S M E Trans 74: 1363-80 N '52

Instrumentation for axial-flow-compressor research. C. A. Meyer and R. P. Benedict. bibliog il diags A S M E Trans 74:1327-36 N '52

Is the gas turbine tomorrow's prime mover? B. G. Hatch. il diags Elec World 138:101-5 D 1 '52

150-kv X-ray equipment for the radiography of circumferential welds in gas-turbine rotors. F. W. Waterton. bibliog il diags Inst E E Proc 100 pt 2:105-12 Ap '53; Same cond. Engineering 174:774-5 D 12 '52; Discussion. Inst E E Proc 100 pt 2:112-14 Ap '53; Elec J 149:1585-6 N 21 '52; Elec R (Lond) 151:1125-6 N 21 '52

Operating experiences with gas turbines. P. R. Sidler. il diag Midwest Eng 5:3-5+ Ap '53

Pattern of gas-turbine development in Europe and the United States. F. T. Hague. il Mech Eng 74:627-32 Ag '52; Discussion. 74: 1031-3 D '52

Periodic-flow regenerator; a summary of design theory. J. E. Coppage and A. L. London. bibliog diags A S M E Trans 75:779-85; Discussion. 785-7 Jl '53

Portable jet-turbine engine suitable for pumping. il Munic Util 91:8 F '53

Portable turbo-compressors and industrial gas turbines. il Engineering 175:801-2, pl 25 Je 26 '53

Practical solution of a three-dimensional flow problem of axial-flow turbomachinery. L. H. Smith, jr. and others. bibliog diags A S M E Trans 75:789-99; Discussion. 799-803 Jl '53

Radial inward-flow turbines. il diags Power Eng 57:100 S '53

Rotary regenerative air preheater for gas turbines. A. T. Bowden and W. Hryniszak. bibliog diags A S M E Trans 75:767-77 Jl '53

Ruston and Hornsby gas-turbine set at engineering, marine and welding exhibition. Engineering 176:11 Jl 3 '53

Small gas turbines; Turbomeca. il Engineer 194:550-1 O 24 '52

Some investigations with wet compression. J. T. Hamrick and W. L. Beede. bibliog il diags A S M E Trans 75:409-18; Discussion. 418-20 Ap '53

Something new in compressor stations; El Paso natural gas company's gas turbine compressor stations. C. L. Moore and C. Homan, jr. flow sheet il World Oil 135: 302-4+ O '52

Turbine cost outlined; abstract. G. White. Oil & Gas J 52:217-18 My 18 '53

What we learned in two years experience with a gas turbine compressor; Mississippi River fuel corp. G. C. Cooper, jr. map Gas Age 112:19-24+ Jl 2 '53

Where industry can use the gas turbine. W. C. Bloomquist and W. B. Wilson. diags Power Eng 57:64-5+ Mr '53

Why El Paso Natural Gas chose gas turbine centrifugal compressors. W. V. Holik. Gas Age 112:38-40+ Jl 30 '53

See also

Electric plants (central stations)—Gas turbine auxiliaries
Electric plants (central stations)—Gas turbine stations
Locomotives, Gas turbine
Power plants—Gas turbine plants

Blades

Creep tests on Nimonic alloys under varying stress and temperature. D. C. Herbert and D. J. Armstrong. diag Engineering 175: 605-6 My 8 '53

Turbine blade profiles generated by new method. il diag Machine Design 25:136-7 Je '53

Control

Automatic control of gas turbines for pipe line pumping. C. R. Ingemanson and others. diags Gas Age 112:50+ S 10 '53

Cooling

Experimental air-cooled turbine. J. Reeman and others. il diags Engineer 195:674-5, 712-16, 731-4 My 8-22 '53; Discussion. 195:688-90 My 15 '53

Gas-turbine progress report; cooling. A. A. Hafer. bibliog A S M E Trans 75:130-2 F '53

Design

Design features of a 5000-hp gas turbine. B. O. Buckland and D. C. Berkey. bibliog il diags A S M E Trans 74:655-61 Jl '52; Same. Blast F & Steel Pl 40:1134-8, 1472-3+ N-D '52

Experimental air-cooled turbine. J. Reeman and others. il diags Engineer 195:674-5, 712-14, 731-4 My 8-22 '53; Discussion. 195:688-90 My 15 '53

Gas-turbine progress report; cycle components. P. F. Martinuzzi. bibliog il diags A S M E Trans 75:137-51 F '53

Radial-flow compressors and turbines for the simple small gas turbine. L. R. Wosika. bibliog il diags A S M E Trans 74:1337-45; Discussion. 1345-7 N '52

Ruston & Hornsby gas turbine progress. il diag Elec R (Lond) 152:530-4 Mr 6 '53

750 kw open-cycle gas turbine. il diag Engineer 195:381-3 Mr 13 '53; Engineering 175: 321-3, pl 7 Mr 13 '53

Free piston engines

Cooper-Bessemer's free piston engine. R. L. Boyer and R. P. Ramsey. il diags Diesel Power 31:42-4 Ag '53

Free-piston Diesels. il diag Elec J 149:1573-4 N 21 '52

Free piston engine and gas turbine; power French experimental locomotive; development of work undertaken by De Pescara. W. F. Bradley. diags Automotive Ind 107: 74+ O 15 '52

Free-piston engine combustion doubles gas turbine efficiency. il diags Elec World News ed 139:30-1 Ap 27 '53

Free-piston engine development; present status and design aspects. A. L. London and A. K. Oppenheim. bibliog il diags A S M E Trans 74:1349-60 N '52; Excerpts. Machine Design 24:211-13+ Ap '52; Discussion. A S M E Trans 74:1360-1 N '52

Free-piston engine is combined with gas turbine. il Marine Eng 58:69-70 Ag '53

Free-piston engine; U.S. development in high gear. il plan diags Power 97:82-5 My '53

Generating more power from less fuel. il Bsns W p 101-2+ Ap 25 '53

Revolution in engines? free-piston gas turbine, may be answer to climbing fuel and labor costs of pipe lines. diag Oil & Gas J 52:146-7 Je 22 '53

Fuel

Comparative performance of coals of different rank in a film-cooled gas-turbine combustor. T. E. Warren and others. diags A S M E Trans 75:35-40; Discussion. il 40-2 Ja '53

Corrosion aspects of Bunker C combustion in gas turbines. B. O. Buckland and C. M. Gardiner. Power 97:148+ S '53

GAS turbines—Fuel—*Continued*

Flame velocities of liquid hydrocarbons. R. E. Albright, D. P. Heath and R. H. Thena. bibliog il diags Ind & Eng Chem 44:2490-6 O '52

Fuel-oil ash deposition in open-cycle gas turbines. A. T. Bowden and others. diags Engineer 195:639-42 My 1 '53; Discussion. 195:627-8, 659-60 My 1-8 '53

Gas-turbine progress report; fuels. A. A. Hafer. bibliog A S M E Trans 75:132-4 F '53

How they're improving Bunker C for gas turbines. Power Eng 57:108+ Ag '53

Peat-fired open-cycle gas turbine. il diags Engineer 195:350-2 Mr 6 '53; Engineering 175:308-11 Mr 6 '53; Elec R (Lond) 152:559-64 Mr 13 '53

Power from peat. il diag Elec J 150:765-8 Mr 6 '53

Problem for refiners; residual fuel found highly corrosive in locomotive-type gas turbines. D. H. Stormont. Oil & Gas J 51:66 Mr 9 '53

Progress continues on coal-burning gas turbine plant. J. I. Yellott and P. R. Broadley. il diag Power Eng 57:87-9 Je '53

History

Gas turbines in our century. C. Seippel. bibliog A S M E Trans 75:121-2 F '53

Manufacture

Experimental air-cooled turbine. J. Reeman and R. W. A. Buswell. il diag Engineer 195:714-16 My 15 '53

Patents

Power Jets' gas-turbine patents; gas-turbine in industry. diags Engineering 175:803-6 Je 26 '53

GAS turbines, Aircraft

Air and the future. F. R. Banks. Engineering 174:835-6 D 26 '52

Aircraft turbojet engines; abstract. A. M. Rothrock. S A E J 61:111 Ap '53

Aluminum; key to revolutionary gas turbine engine being developed. il Light Metal Age 11:10-11 F '53

AA favors turboprop airliners. C. R. Smith. Aviation W 58:102 My 11 '53

Analysis of performance of jet engine from characteristics of components; interaction of components as determined from engine operation. A. W. Goldstein and others. bibliog il diags U S Nat Advisory Com for Aeronautics 1949:167-82 '51

Avon turbo-jet developments. Engineer 195:425 Mr 20 '53

Cermets may help jets operate hotter. il Aviation W 58:36-8 F 23 '53

C-W naturalizes Sapphire jet engine. I. Stone. il Aviation W 57:21-2 D 22 '52

Development of Rolls-Royce Avon engines. il Engineering 175:448 Ap 3 '53

Ducted fan jet; powerplant for future light aircraft; based on papers by C. F. Bachle and W. Collins. il S A E J 60:26-8 N '52

Elimination of wall effects in axial-flow compressor stages. J. M. Stephenson. diags Roy Aeronautical Soc J 57:241-3 Ap '53

Energy basis for comparison of performance of combustion chambers. J. B. Nichols. diag A S M E Trans 75:29-33 Ja '53

Engines; illustrations with brief descriptions. Aero Digest 66:80+ Mr '53

Family photo of GE jet engines. il Aviation W 57:24 D 22 '52

First U.S. turbine transport indicates air cargo increase; abstract. E. B. Newill. Midwest Eng 5:25 Ap '53

Gas turbine as a commercial power plant; abstract. F. W. Kolk. S A E J 61:115-16 Je '53

Gas-turbine power plant for aircraft. A. B. Cambel. diag J Aeronautical Sci 19:791-2 N '52

High-temperature jet-engine alloys; popular grades listed in order of their descending strategic alloy; tabulation. Iron Age 171:452 Ja 1 '53

Impact of turbines on airlines. E. A. Driessen. diags S A E J 61:40-4 Ja '53

Jet aircraft depend more on steel as speeds and operating temperatures are increased. Blast F & Steel Pl 41:945 Ag '53

Jet engine is small but powerful; Fairchild J-44 jet engine. il Machine Design 25:246 Je '53

Jets; new metals needed for better performance at higher temperatures. Iron Age 171:76 F 12 '53

Liquid-coupled regenerators for turbo-props. A. L. London and W. M. Kays. bibliog diags Aeronautical Eng R 11:42-53+ O '52

New Avons pass military tests. N. McKitterick. il Aviation W 58:39+ Ap 13 '53

New jet engine announced by U.S. navy and Westinghouse electric corp. Mech Eng 74:911-12 N '52

New materials for jet problems. Aviation W 58:158 Mr 2 '53

Price of an engine; Proteus aero-engine. Economist 167:48 Ap 4 '53

SAE national aeronautic meeting, Los Angeles. Automotive Ind 107:48-9+ N 1 '52

Small gas turbines start jets. diag Machine Design 25:230 Ja '53

Some combustion developments in aeronautical turbines. il diag Engineer 194:383 S 19 '52

Some NACA research on centrifugal compressors. I. A. Johnsen and A. Ginsburg. bibliog il diags A S M E Trans 75:805-15; Discussion. 815-17 Jl '53

Split compressors usher in new jet era. R. Hotz. il diag Aviation W 57:13-16 O 20 '52

Study of burner oscillations of the organ-pipe type. A. A. Putnam and W. R. Dennis. diags A S M E Trans 75:15-26; Discussion. 27-8 Ja '53

Thrust of 20,000 lb. predicted by 1960. F. R. Banks. Aviation W 58:15 Mr 30 '53

Titanium; headache with a future. L. R. Frazier. il Aviation W 57:42+ N 3 '52

TWA interest in Viscount reported. Aviation W 57:86-7 N 3 '52

Turbines seek to dethrone piston engines from 'copter realm; based on papers by W. B. Anderson and others. diag S A E J 61:28-31 Je '53

Turbojet research techniques utilized in altitude facilities; abstract. W. A. Fleming and H. D. Wilsted. diag S A E J 61:95+ S '53

Two-dimensional compressible flow in centrifugal compressors with straight blades. J. D. Stanitz and G. O. Ellis. diags U S Nat Advisory Com for Aeronautics 1950:141-63 '51

Two-dimensional compressible flow in turbomachines with conic flow surfaces. J. D. Stanitz. bibliog diags U S Nat Advisory Com for Aeronautics 1949:279-303 '51

Two-shaft gas turbine in helicopters; abstract. W. B. Anderson. Automotive Ind 108:92 F 15 '53

U.S. turboprop transport future. C. R. Smith. il Aero Digest 66:17-19 Je '53

What's different about a turboprop? il diag Aviation W 58:28-9+ My 11 '53

See also

Airplane engines—Compounding

Airplanes, Jet propelled

After burners

Afterburner design pays off. il Product Eng 24:215-16 Ap '53

Engineers meet afterburner challenge. R. Kress. il diags Aviation W 57:21-2+ N 3 '52

Flight testing and operational problems of an afterburner-equipped turbojet installation. R. R. Templeton. il diags Aeronautical Eng R 11:32-7 D '52

Jets; afterburners for added thrust. il Iron Age 170:46-7 O 16 '52

Air supply

Air intakes for aircraft gas turbines. J. Seddon. bibliog il diags Roy Aeronautical Soc J 56:747-73 O '52; Same cond. Engineering 173:94-6 Ja 18 '52; Discussion. Roy Aeronautical Soc J 56:773-81 O '52

Bearings

Jet-engine bearings are stumbling blocks! report on round table on high-speed rolling contact bearings. S A E J 61:55-7 F '53

GAS turbines, Aircraft—Bearings—*Continued*

Operating characteristics of cylindrical roller bearings at high speeds. E. F. Macks and others. bibliog il diags A S M E Trans 74:705-10 Jl '52; Same cond. Product Eng Hdbk p F2-6 '53; Discussion. A S M E Trans 74:711-13 Jl '52

Blades

Analysis of spanwise temperature distribution in three types of air-cooled turbine blade. J. N. B. Livingood and W. B. Brown. diags U S Nat Advisory Com for Aeronautics 1950:753-70 '51

Attainable circulation about airfoils in cascade. A. W. Goldstein and A. Mager. bibliog diags U S Nat Advisory Com for Aeronautics 1950:117-39 '51

Fatigue and creep testing of aircraft-engine materials. il diag Engineering 175:353-4 Mr 20 '53

Fatigue in engine design. F. M. Owner. Roy Aeronautical Soc J 57:580-4 S '53; Abstract. Engineering 175:570-1 My 1 '53; Discussion. Roy Aeronautical Soc J 57:589-91 S '53

Heat transfer over a sweat-cooled surface in laminar compressible flow with a pressure gradient. M. Morduchow. bibliog J Aeronautical Sci 19:705-12 O '52; Correction. 20:294 Ap '53

Inspection problems of modern jet engines. C. Garside. il diags Engineering 175:345-7, 409-12 Mr 13, 27 '53

Manufacturing turbine engine blading; report on panel on jet engine buckets and blades. il S A E J 61:77-80 S '53

Measurement of blade-tip clearances in aircraft turbines by a capacitance method. I. A. Mossop and F. D. Gill. bibliog diags Inst E E Proc 100 pt 2:377-84 Ag '53; Same cond. Engineer 195:291-2 F 20 '53; Abstract. Elec R (Lond) 152:458 F 27 '53; Discussion. Inst E E Proc 100 pt 2:384-6 Ag '53

Milling rotor blades for ram-jet engines. il Mach 59:200-2 My '53

Pattern-controlled shaping machine for turbine blades. il diags Engineering 175:540-1 Ap 24 '53

Precision jet engine blades from rough forgings; Ex-Cell-O corp. J. Geschelin. il diags Automotive Ind 107:44-6+ O 15 '52

Root comparator for turbine blades; British indicators, ltd. il Engineer 195:844 Je 12 '53; Engineering 176:158 Jl 31 '53

Special milling machine designed to machine rotor blades. il Iron Age 171:112 Ja 8 '53; Steel 132:94 Ja 19 '53

Turbine blades automatically; Ex-Cell-O precision profile miller and grinders. il Aero Digest 66:62+ Ja '53

Two-dimensional losses in cascades. A. Charwat. J Aeronautical Sci 19:851-2 D '52

Which metal form for jet engine blades? J. L. Everhart. il Materials & Methods 37:92-6 F '53

Control

General algebraic method applied to control analysis of complex engine types. A. A. Boksenbom and R. Hood. bibliog diags U S Nat Advisory Com for Aeronautics 1950:581-92 '51

Power Jets' gas-turbine patents; automatic control of gas turbines. il diags Engineering 175:583-5 My 8 '53

Pressure-sensing control. Steel 132:191 My 25 '53

Turbo jet power control trends; abstract. C. S. Constantino. S A E J 61:55 Ja '53

Cooling

Power Jets' gas-turbine patents; cooling of turbine blades. diags Engineering 175:706-8 Je 5 '53

Powerful cooler for supersonic jets. diag Aviation W 58:71 My 25 '53

Turbojet installation cooling and associated performance losses; abstract. L. J. Lyons. S A E J 61:42 F '53

Design

Analytical and experimental studies with idealized gas turbine combustors. F. W. Ruegg and H. J. Klug. bibliog il diags J Res Nat Bur Stand 49:279-98 N '52

Application of radial-equilibrium condition to axial-flow compressor and turbine design. C. Wu and L. Wolfenstein. diags U S Nat Advisory Com for Aeronautics 1950:165-94 '51

Design and performance of family of diffusing scrolls with mixed-flow impeller and vaneless diffuser. W. B. Brown and G. R. Bradshaw. diags U S Nat Advisory Com for Aeronautics 1949:305-14 '51

Design considerations for helicopter gas turbine powerplant; abstract. J. L. Koetting and L. R. Wosika. Automotive Ind 108:48-9 F 15 '53

Direct method of design and stress analysis of rotating disks with temperature gradient. S. S. Manson. bibliog diags U S Nat Advisory Com for Aeronautics 1950:103-16 '51

Equilibrium operating performance of axial-flow turbojet engines by means of idealized analysis. J. C. Sanders and E. C. Chapin. diag U S Nat Advisory Com for Aeronautics 1950:673-84 '51

Gas-turbine development; aviation. I. H. Driggs and O. E. Lancaster. bibliog il diags A S M E Trans 75:217-34 F '53

Gas-turbine progress report; cycle components. P. F. Martinuzzi. bibliog il diag A S M E Trans 75:137-41 F '53

Maintenance considerations in design; abstract. M. W. Galliers. diag S A E J 61:40 Jl '53

Plan for broadening jet engine design. il Aviation W 58:24-8+ Mr 16 '53

Redesign for producibility based on new welding technique; welding stainless steel parts to modified nodular cast iron; center main bearing support for Wright Sapphire turbojet engine. il diag Product Eng 23:174-80 D '52

Some general considerations in the design of axial flow gas turbines; abstract. S. Alpert. S A E J 60:70 O '52

Specialization in turbojet engine design. B. Krase and B. Neitzel. il Aero Digest 66:74+ Je '53

Efficiency

Effect of propeller-control parameters on gas-turbine power ratings and flight efficiency. R. C. Treseder and others. Aeronautical Eng R 11:29-33 N '52

Exhaust

Fast thermocouples as control-system elements sensing exhaust-gas temperatures in aircraft gas turbines. J. S. Alford and C. R. Heising. il diag A S M E Trans 75:7-13; Discussion. 13-14 Ja '53

Fuel

Aircraft turbine-fuel supply problems. M. F. Granville. Pet Eng 24:C4-6 N '52; Same cond. Oil & Gas J 51:98+ O 6 '52

Constant-pressure combustion charts including effects of diluent addition. L. R. Turner and D. Bogart. bibliog U S Nat Advisory Com for Aeronautics 1949:315-39 '51

Fueling civil aircraft. J. B. Hill. Oil & Gas J 51:101+ O 6 '52; Same. Pet Eng 24:C17+ N '52

Jet fuel and the refiner. W. F. Krause. Pet Eng 24:C9-10 N '52; Same cond. Oil & Gas J 51:93-4 O 6 '52; Same cond. Pet Processing 7:1428-9 O '52

Jet fuel damages at fields not serious. G. McFadden. Midwest Eng 5:27-8 Mr '53

Jet fuel specifications. C. W. Kelley. Pet Eng 24:C7-9 N '52; Same cond. Oil & Gas J 51:96-8 O 6 '52; Abstract. Pet Processing 7:1427-8 O '52

Jet fuels. bibliog Oil & Gas J 51:35 Ja 5; 119 Ja 12 '53

Jet fuels, present and future; symposium. Pet Processing 7:1425-7 O '52

National annual survey of aviation gasoline and aviation jet fuel, 1952 production. O. C. Blade. 5pls U S Bur Mines Rep of Invest 4982:1-15 '53

Pesco pumps fly on all U.S. jets. G. L. Christian. il diags Aviation 58:52+ F 23 '53

Suitability of jet fuels. E. A. Droegmueller. il Pet Eng 24:C13-15+ N '52

GAS turbines, Aircraft—*Continued*

Ice problem

Power, thrust, and ice. A. A. Brown. il diags S A E J 61:44-7 Je '53

Installation

Power plant installation as a mutual engine-airframe problem; abstract and discussion. W. H. Hand. diags S A E J 61:78 Mr '53

Lubrication

Aircraft turbine engine synthetic lubricants and their lubricating properties; abstract. R. L. Johnson and others. S A E J 61:26 Ag '53

New oil will take hotter jets higher; Standard Oil's Esso aviation turbo oil 15. G. L. Christian. il diag Aviation W 58:72+ Ap 27 '53

Performance of turbo-engine synthetic oils. A. B. Crampton and others. S A E J 61:27-9 Ag '53; Abstract. Oil & Gas J 51:76-7 Mr 2 '53

Synthetics for jet engines. A. L. Foster. Pet Eng 25:C3-4 F '53

Turbo-engine synthetic lubes. il diag Oil & Gas J 52:333 Je 22 '53; Chem & Eng N 31:1756 Ap 27 '53

Maintenance and repair

Cost savings by component replacement in line maintenance; abstract. C. E. Dixon. S A E J 61:36 Jl '53

Manufacture

Aft frames. il Welding J 32:527-9 Je '53

Arc welding of ferritic and austenitic nodular cast iron. J. Sohn and others. il diag Welding J 32:823-33 S '53

Automatic boring machine for jet engine components. il Automotive Ind 108:90 F 1 '53

Automatic controls for surface finishing jet engine parts. R. J. Thomas. il diags Automotive Ind 109:48-50 S 1 '53

Automatic turbine wheel lathe. il Aero Digest 66:96-7 Ja '53

Boeing produces small turbo-jet engines. il Mach 59:149-55 N '52

Bucket airfoils finished by abrasive belts. il diag Am Mach 96:166-7 O 27 '52

Builds plant, starts production in six weeks; ceramic coating of aircraft components. il Cer Ind 60:64-5+ My '53

Canada aviation expands to make Orenda. il diag Aviation W 57:40+ O 20 '52

Carbon dioxide permits improved machining time; A. V. Roe Canada, limited. E. W. Bartle. il Mach 59:157-8 Ap '53

Centrifugally cast jet engine rings; how to rough machine them. F. Meninger. il Steel 131:78-9 O 6 '52

Cone rolling made easy. il Steel 132:122 My 25 '53

Cutting titanium down to size; Aircraft gas turbine division, General electric co. B. L. Coughlin. il diags Mill & Factory 53:114-17 S '53

First U.S. turboprop assembly line; Allison division of General motors corp. il Aviation W 57:44-5 N 10 '52

From single units to mass production in one big move; Solar aircraft co. B. A. Willsey. il Iron Age 171:129-32 Mr 26 '53

Fusion welding techniques for jet aircraft components. A. S. Rose and M. A. Braun. il diag Welding J 31:1121-8 D '52

Greater automaticity in tooling for J-47 turbojet engines; Evendale, Ohio, plant of the General electric co. T. Mac New. il diag Automotive Ind 108:68-72+ My 1 '53

Heat-treating jet-engine components; Ryan aeronautical co. il Mach 59:169-71 F '53

Heat treating; residual stresses in jet engine parts relaxed at Ryan. il Iron Age 170:86-7 D 25 '52

How GE works titanium in production of jet-engine parts. V. L. Coughlin. il diags Am Mach 97:176-81 F 16 '53

How jet-engine combustion chambers are fabricated; Ryan aeronautical co. L. A. Prchal. il Mach 59:189-91 D '52

Hydraulic rams straighten saddles. il Product Eng 23:169 N '52

Jet-engine aft frames by Ryan production methods. L. M. Limbach. il diags Mach 59:172-81 Jl '53

Jet engine parts chilled for assembly. il Automotive Ind 109:63+ Ag 1 '53

Jet engine parts produced in record time; Avco manufacturing corp. J. W. Greve. il diags Tool Eng 30:63-9 My '53

Jet-engine parts produced with minimum scrap loss; Cyril Bath co. C. J. Bath. il Mach 59:180-3 Mr '53

Jet plane parts cast centrifugally; Centri-Die process. il Foundry 81:202+ S '53

Lathe machines both jet cone ends in one setup; Ryan aeronautical co. il Steel 131:100 O 20 '52

Machining of high temperature alloys. P. G. DeHuff and D. C. Goldberg. il Aero Digest 65:92-100 S '52; Same cond. Automotive Ind 106:46-9+ My 1 '52; Same cond. Machine Design 24:270+ S '52; Same cond. Steel 130:76-8 Ap 28 '52

Magnesium castings drilled, reamed, c'bored at high speed; special machine built by Snyder tool and engineering co. W. G. Patton. il Iron Age 170:162-4 D 4 '52

Manufacturing shift slashes production time; Solar aircraft co. J. A. Logan. il diag Steel 131:64-5+ D 22 '52

Planet generating belt grinder forms jet buckets and blades. il Am Mach 97:151-2 Mr 2 '53

Power recovery wheels for Curtiss-Wright turbo-compounds. E. Altholz. il Mach 59:210-13+ Jl '53

Precision rolling forms jet seals at high speed. W. G. Patton. il Iron Age 171:128-30 Je 25 '53

Problems of utilizing ceramics in aircraft power plant construction. R. A. Jones and L. T. Fuszara. il Am Cer Soc Bul 32:107-9 Ap 15 '53

Punch press scheme can save $1 million; hot air ducts on the Scorpion F-89. il Aviation W 58:47-8 Mr 16 '53

Raised system telescopes part production; Ryan aeronautical co. il Steel 132:118 Je 8 '53

Shielding arc-welding processes for jet-engine components. K. H. Koopman. il Welding J 32:103-15 F '53; Excerpts. Steel 131:76-80 D 29 '52; Abstract. Iron Age 171:110-12 Ja 22 '53

Snyder automatic machine for processing jet-engine compressor casings. il Mach 60:204-5 S '53

Solar expects big future for coatings. il Cer Ind 59:96-7+ O '52

Special machines fabricate jet-engine frames; Ryan aeronautical co; illustrations with text. Am Mach 97:132-4 Jl 20 '53

Special tools and fixtures cut machining time; Ryan aeronautical co. il Iron Age 171:137 My 14 '53

Stainless jet parts centrifugally cast. il Iron Age 170:82 D 18 '52

Turbine wheels; special grinding, cutting equipment speeds blade output. il Iron Age 171:146-7 Mr 12 '53

Turbo-jet engines require modern machine tools. E. W. Bartle. il diags Mach 59:154-65 Jl '53

Universal tool performs intricate boring operations; Stokvis, Edera and co. J. Stokvis and E. Edera. il diags Tool Eng 31:44-7 Jl '53

Welding of high alloys doubled with new roll-spot technique; Ryan aeronautical co. J. R. Fullerton. il Materials & Methods 37:166+ F '53

Noise

Acoustic design of aircraft gas turbine test cells. R. O. Fehr and others. bibliog diags Acoustical Soc Am J 24:480-9 S '52

Avro kills Orenda jet test noise. il Aviation W 58:40 My 18 '53

Problem; how to make jet engines quieter. il Bsns W p 124-6+ D 6 '52

Patents

Power Jets' gas-turbine patents. il diags Engineering 175:481-3, 516-19, 549-51, 583-5, 609-12, 644-8, 679-81, 706-8, 743-4, 773-6 Ap 17-Je 19 '53

GAS turbines, Aircraft—*Continued*

Performance

Analytical method of estimating turbine performance. F. D. Kochendorfer and J. C. Nettles. bibliog diags U S Nat Advisory Com for Aeronautics 1949:193-205 '51

Specifications

Leading foreign jet engines; tabulation. Aviation W 58:247 Mr 2 '53

1953 U.S. and British aircraft gas turbines; tabulations. Automotive Ind 108:244-5 Mr 15 '53

U.S. gas turbine engines; tabulation. Aviation W 58:230 Mr 2 '53

Starting

Navy development of pneumatic starting system for gas turbine engines; abstract. A. K. Forney. S A E J 61:118+ Jl '53

Starting jet engines with turbo-compressor. O. H. Jacobson and P. Volkmar. diags Automotive Ind 109:50-2+ O 1 '53

Temperature

Jet temperatures challenge metallurgists; abstract. R. E. Small and R. B. Johnson. S A E J 61:118+ Ap '53

NACA sonic-flow-orifice temperature probe in high-gas-temperature measurement. P. L. Blackshear, jr. diags A S M E Trans 75: 51-4; Discussion. il 55-8 Ja '53

Temperature control of jet-engined aircraft. E. W. Still. il diags Roy Aeronautical Soc J 57:89-102 F '53

Temperature problems limit turbine development; abstract. R. Morrison. S A E J 61:100 Je '53

Testing

Acoustic design of aircraft gas turbine test cells. R. O. Fehr and others. bibliog diags Acoustical Soc Am J 24:480-9 S '52

Flight testing of prototype engines as primary powerplants in new airplanes. J. R. Steding. S A E J 61:47-8 Ap '53

Ground facilities; altitude test chambers, advantages and limitations; abstract. D. M. Ross. S A E J 61:47 Je '53

Inspection problems of modern jet engines. C. Garside. il diags Engineering 175:345-7, 409-12 Mr 13, 27 '53

Jet engine test plant; Coventry works of the Standard motor co. il diags Engineer 195:666-7 My 8 '53; Engineering 175:588-9, pl 18 My 8 '53

Jet engines tested on icy peak. il Aviation W 58:32 Mr 9 '53

Jets; tested on icy mountain perch. il Iron Age 171:120-1 Mr 5 '53

New technique for investigating jet engine compressor stall and other transient characteristics. W. J. Kunz, jr. il diag S A E J 60:53-5 D '52

Operational experiences with flying test bed airplanes. H. B. Archer. il S A E J 61:63-4 Mr '53

Overhaul life of the Avon turbo-jet engine. Engineer 195:648 My 1 '53

Test cell protection at Westinghouse jet engine plant; vapor analyzing and alarm instruments. il Automotive Ind 107:33+ O 15 '52

Testing; high altitude conditions simulated in GE test chamber. il Iron Age 170:158 D 18 '52

Timing and phasing of flight testing in the development of engines; abstract. M. C. Benedict. S A E J 61:124-5 F '53

Ultrasonic inspection insures dependable jet-engine parts. C. V. Garrett. il diags Mach 59:194-201 Jl '53

Thrust augmentation

Constant-pressure combustion charts including effects of diluent addition. L. R. Turner and D. Bogart. bibliog U S Nat Advisory Com for Aeronautics 1949:315-39 '51

Power Jets' gas-turbine patents. il diags Engineering 175:516-19 Ap 24 '53

Theoretical analysis of various thrust-augmentation cycles for turbojet engines. B. T. Lundin. diags U S Nat Advisory Com for Aeronautics 1950:593-609 '51

Theoretical comparison of several methods of thrust augmentation for turbojet engines. E. W. Hall and E. C. Wilcox. diags U S Nat Advisory Com for Aeronautics 1950:727-37 '51

GAS turbines, Automotive

French gas turbine tested in sports car. W. F. Bradley. il diags Automotive Ind 107:32-3 N 15 '52

Future developments in commercial vehicle engines. C. G. A. Rosen. il diags Automotive Ind 107:38-42+ O 15 '52; Excerpts. S A E J 61:33-8 Ja '53

Gas turbine arrangements for automobiles. F. R. Bell. diags Automobile Eng 43:325-30 Ag '53

Gas turbine car. F. R. Bell. diags Automobile Eng 43:96-101 Mr '53

Gas-turbine progress report; automotive. F. L. Schwartz. bibliog il diag A S M E Trans 75:153-60 F '53

Tells of advantages of Boeing 502 turbine; abstract. W. P. Barnes. S A E J 61:116+ My '53

See also

Locomotives, Gas turbine

GAS turbines, Marine

Engines for ships. Economist 167:831-2 Je 20 '53

First gas turbine tanker. Elec R (Lond) 152:538 Mr 6 '53

G.2 naval gas turbine. il diags Engineer 195: 58-9 Ja 9 '53; Engineering 175:129-31, pl 2 Ja 30 '53; Elec J 150:125-6 Ja 9 '53

Gas-turbine operating experience in the tanker Auris. Engineering 174:639-40 N 14 '52

Gas-turbine progress report; marine. W. A. Dolan, jr. and A. A. Hafer. il diag A S M E Trans 75:169-75 F '53

Gas-turbine progress report; merchant vessels. W. A. Dolan, jr. and A. A. Hafer. il diags A S M E Trans 75:177-84 F '53

Gas-turbine progress report; naval vessels. W. A. Dolan, jr. and A. A. Hafer. il diags A S M E Trans 75:185-99 bibliog(146 titles, p 197-9) F '53

Gas-turbine tanker completes first year. Marine Eng 58:51 Ja '53

Gas turbines for the Royal navy. il Engineer 194:873-4 D 26 '52

Jet power unit for marine propulsion. il diag Machine Design 25:177 Jl '53

Marine gas-turbine from the viewpoint of an aeronautical engineer. A. H. Fletcher. bibliog il diags Inst Mech Eng Proc (A) 166 no 2:237-44, pl 1-4 '52; Same abr. Engineer 193:187-9 F 1 '52; Discussion. Inst Mech Eng Proc (A) 166 no 2:245-59 '52; Engineer 193:184-5, 203-5 F 1-8 '52

Navy gas turbines. diag Power Eng 57:110 Ag '53

Pametrada; progress report for 1951. Engineer 194:251 Ag 22 '52; Engineering 174: 278-9 Ag 29 '52

Pametrada; progress report for 1952. Engineer 195:762 My 29 '53

6500 h.p. naval gas turbine. diags Engineer 195:238-9 F 13 '53

U.S. navy orders British gas-turbines. Marine Eng 58:76 F '53

World's highest powered marine gas turbine. il diags Elec J 150:781-5 Mr 6 '53; Elec R (Lond) 152:535-8 Mr 6 '53

Testing

Admiralty test house for gas turbines. il Engineer 195:452-5 Mr 27 '53; Same. Engineering 175:385-7 Mr 27 '53

Gas turbine progress. il Electrician 149:343 Ag 1 '52; Elec R (Lond) 151:293-5 Ag 8 '52

Large capacity hydraulic dynamometer; Heenan and Froude, ltd. il diag Engineer 195:560-1 Ap 17 '53

1000kw marine gas turbine set. il Engineer 194:153-5 Ag 1 '52; Engineering 174:138-40 Ag 1 '52

GAS washing

See also

Gas purification

GAS water heaters

Extending hot water tank life. R. L. Horst. Am Gas Assn Mo 35:10-11+ Je '53

Re-design table-top water heaters. diags Am Gas Assn Mo 34:9-10 N '52

GAS water heaters—*Continued*

Ruud's two-temperature water heater meets new service needs. diag Am Gas J 177:48 D '52

Volume water heating subcommittee; report. Am Gas Assn Proc 1952:202-3

Advertising

Record number of utilities join hot water heater drive. Am Gas Assn Mo 35:32-3 Ja '53; Gas Age 111:49-50 F 26 '53

Merchandizing

Films spark water heater sales. il Am Gas Assn Mo 35:19 F '53

GAS works

Corrosion resistance of aluminium to coal gas; aluminium roof over purification plant, Sevenoaks, Kent, gasworks. Engineer 195: 365 Mr 6 '53; Engineering 175:377 Mr 20 '53; Metallurgia 47:246 My '53

Development progress at Beckton; water gas unit and boiler house opened. il Chem Age (Lond) 67:489-92 O 11 '52

Gas engineers' annual meeting; technical and research progress reviewed. Chem Age (Lond) 67:723-6 N 29 '52

Problems encountered in the operation of a standby high Btu oil gas plant. G. M. Hammond. Am Gas Assn Proc 1952:716-18

Costs

Economics of peak shaving. H. M. Henry. diags Am Gas Assn Proc 1952:818-42

Methods and economics of producing high B.t.u. gas from anthracite. L. L. Newman. Gas Age 112:22-5+ Jl 30 '53

Electric equipment

New unit stabilizes heating value of mixed utility gas. R. A. Schoger. flow diag il Am Gas J 178:14-15+ Je '53

Equipment

Coal handling plant at Nine Elms gas works. il Engineer 194:202-3 Ag 8 '52

Concentric catalytic generator design improved. V. Stark. diag Am Gas J 178:21+ Je '53

Construction and development activities of United engineers & constructors, inc. C. A. Schlegel. il Am Gas Assn Proc 1952:614-20

Dust collection within the gas industry. J. L. Schumann. Am Gas Assn Proc 1952:551-2

Gas engineering and appliance directory. Gas Age 111:81-159 Je 18 '53

High Btu oil gas machine. R. P. Oliveros. diags Am Gas Assn Proc 1952:605-12

Howden gas works. Engineer 194:453 O 3 '52

Instrumentation in scrubbing, regulating, mixing and metering of natural gas. R. P. Saxton. il Gas Age 110:23-4 N 6 '52

Modernisation at Beckton gasworks. il Engineer 194:497-8 O 10 '52

New machinery developments and unique uses; Clark bros. co. F. W. Laverty. il Am Gas Assn Proc 1952:555-61

Reconstruction of the Howdon-on-Tyne gasworks. il diag Engineering 174:809-13, pl 61-3 D 26 '52

Report of Koppers company, inc. G. C. Pfaff and J. H. Taussig, jr. Am Gas Assn Proc 1952:600-1

Report of the gas machinery company. A. M. Cunningham. il diag Am Gas Assn Proc 1952:564-71

Load

Estimating maximum day and hour demands to design and operate distribution; Portland gas & coke co. H. T. Miller. Gas Age 111:26-30+ Mr 26 '53; Same cond. Am Gas J 178:14-15+ Ap '53

How Peoples Gas solves problems affecting million customers. G. A. Morgan. Gas Age 112:35-7+ Jl 30 '53

Observations on industrial gas load building. R. C. LeMay. Am Gas Assn Proc 1952:212-16

Symposium on methods of load forecasting and its relation to distribution to design. diags Gas Age 112:26-34 Jl 30 '53

Why LP-gas has two important values to the gas utility co. D. J. Reimers. Gas Age 112: 48-9 S 10 '53

Peak load

LP plants have future use in utility systems. J. L. Turnan. il diag Am Gas J 179:16-17+ S '53

Power

Application of the gas turbine for recovery of waste heat. W. Gregson. diags Engineering 174:740-1 D 5 '52

Steam and power in the gas industry; abstract. L. J. Clark. Engineering 174:804-5 D 19 '52

Waste

Critical review of the literature of 1952 on sewage, waste treatment, and water pollution; coking. Sewage & Ind Wastes 25: 640-2 Je '53

GASES

Absorption coefficients of gases in the vacuum ultraviolet. K. Watanabe and others. bibliog J Chem Phys 20:1969-70 D '52

Application of Eller's optical machine to the determination of the molecular structure of gases by electron diffraction. L. Bru and others. il J Chem Phys 20:1069-70 Jl '52

Application of Eller's optical machine to the determination of the molecular structure of gases by electron diffraction; nonrigid molecules. L. Bru and others. il J Chem Phys 20:1911-13 D '52

Black liquor oxidation and the absorption of non-condensable digester gases. M. A. Schoening and others. il Tappi 36:176-9 Ap '53

Calculating properties of gases and gas mixtures. I. Granet. bibliog Pet Refiner 32:125-8 Je '53

Calculation of vibrational relaxation times in gases. R. N. Schwartz and others. bibliog diag J Chem Phys 20:1591-9 O '52

Charge transfer in the radiation chemistry of gases. M. Burton and J. L. Magee. bibliog J Phys Chem 56:842-5 O '52

Collision diameters of some gases as functions of temperature. I. Glassman and B. L. Harris. bibliog J Phys Chem 56:797-9 Je '52

Constants in the equation of state of a gas. L. F. Epstein. bibliog J Chem Phys 20: 1981-2 D '52

Design of cooler condensers for vapor-gas mixtures. G. H. Bras. bibliog Chem Eng 60:223-6 Ap; 238-40 My '53

Determination of diffusion coefficients from rates of evaporation. D. D. Kimpton and F. T. Wall. bibliog diag J Phys Chem 56: 715-17 Je '52

Effect of inert gases on unimolecular reactions, and possible cases of *cis*-addition. K. E. Howlett. bibliog Chem & Ind p 1175-6 N 29 '52

Effect of isotopic substitution on the entropy, enthalpy, and heat capacity of ideal gases; systems in thermal equilibrium; chemically reacting systems. J. Bigeleisen. J Chem Phys 21:1333-9 Ag '53

Electrical discharges in gases; abstract. F. L. Jones. Engineer 194:381 S 19 '52

Electrical discharges in gases; summary of British Association papers. Elec R (Lond) 151:619-20 S 19 '52

Emission of radiation from diatomic gases. S. S. Penner and others. bibliog diag J Ap Phys 21:685-95; 22:1164-7; 23:256-63, 825-37 Jl '50, S '51, F, Ag '52

Emissivity for CO_2 at elevated pressures. R. J. Holm and others. J Ap Phys 23:1283 N '52

Energy loss of hydrogen, helium, nitrogen, and neon ions in gases. P. K. Weyl. bibliog diags Phys R 91:289-96 Jl 15 '53

Energy loss of low energy protons in some gases. J. A. Phillips. bibliog diag Phys R 90:532-7 My 15 '53

Equations of state; pure gases. R. F. Nielsen. Oil & Gas J 51:405 Ja 26 '53

Forced convection heat transfer from horizontal cylinders in a rarefied gas. F. M. Sauer and R. M. Drake, jr. bibliog J Aeronautical Sci 20:175-80+ Mr '53

Gas check; research on viscosity of gases at elevated temperatures and pressures. Mill & Factory 52:276+ Je '53

Gaseous detonations; nonsteady waves in CO-O_2 mixtures. G. B. Kistiakowsky and others. bibliog il diags J Chem Phys 20: 994-1000 Je '52

GASES—*Continued*

Heat transfer from spheres to a rarefied gas in supersonic flow. R. M. Drake, jr. and G. H. Backer. bibliog il diags A S M E Trans 74:1241-9 O '52

Interaction coefficients of gas mixtures. R. A. Gorski and J. G. Miller. bibliog diag Am Chem Soc J 75:550-2 F 5 '53

Intermolecular force constants from thermal diffusion and other properties of gases. B. N. Srivastava and M. P. Madan. bibliog J Chem Phys 21:807-15 My '53

Intermolecular potentials from dielectric polarization in polar gases. F. E. Harris and B. J. Alder. bibliog diags J Chem Phys 21:1351-7 Ag '53

Investigation of back diffusion of photoelectrons in various standard gases as it affects secondary electron emission coefficients. J. K. Theobald. bibliog diag J Ap Phys 24:123-7 F '53

Investigation of gases evolved during firing of porcelain enamels. D. G. Moore and M. A. Mason. bibliog il diags Am Cer Soc J 36:241-9 Ag 1 '53

Ionization energy losses of relativistic μ mesons in gases. J. E. Kupperian, jr. and E. D. Palmatier. bibliog diags Phys R 91:1186-91 S 1 '53

Kinetic structure of gases. W. H. Slabaugh. il J Chem Educ 30:68-70 F '53

Limiting thickness of an electrolyzed gas film capable of sustaining a given negative pressure. L. J. Briggs. diags J Chem Phys 21:779-81 My '53

Microwave technique for studying discharges in gases. M. A. Lampert and A. D. White. diags Elec Com 30:124-8 Je '53

Negative cluster concentrations. J. E. Kilpatrick. J Chem Phys 21:1366-7 Ag '53

New methods for the removal of solids and gases from liquid suspensions with particular reference to pulp stock conditioning. H. Freeman and J. D. Boadway. il diags Pulp & Pa of Can 54:102-7 Mr '53; Same. Tappi 36:236-40 My '53

Pair distribution function for a one-dimensional gas. R. L. Sells and others. bibliog J Chem Phys 21:1422-3 Ag '53

Pebble stoves for heating gases to high temperatures. R. C. Buehl and others. bibliog 4pls U S Bur Mines Rep of Invest 4949:1-8 '53

Prediction of gas-adsorbent equilibria. F. D. Maslan, M. Altman and E. R. Aberth. bibliog J Phys Chem 57:106-9 Ja '53

Random walk theory of one-dimensional gases. C. W. Harris and others. J Chem Phys 21:1617-18 S '53

Range-energy relations of 10- to 250-kev protons and helium ions in various gases. C. J. Cook and others. bibliog diags Phys R 91:1417-22 S 15 '53

Representation of gas properties in terms of molecular clusters. H. W. Woolley. bibliog J Chem Phys 21:236-41 F '53

Review of electrochemistry of gases. S. C. Lind. Electrochem Soc J 99:sup344C-5C D '52

Review of physico-chemical data on the state of supercritical fluids. F. G. Smith. diags Econ Geol 48:14-38 bibliog(108 titles, p34-8) Ja '53

Safe handling of fuels, hazardous gases and liquids. F. R. Pullen. Iron & Steel Eng 30:113-16; Discussion. 116-17 S '53

Salting-out of non-electrolytes; the effect of variation in non-electrolyte. T. J. Morrison and F. Billett. diags Chem Soc J p3819-22 O '52

Stopping of heavy ions in gases. G. E. Evans and others. bibliog il diags Phys R 90:825-32 Je 1 '53

Studies of fast reactions which evolve gases; the reaction of sodium-potassium alloy with water in the presence and absence of oxygen. M. Kilpatrick, L. L. Baker, jr. and C. D. McKinney, jr. bibliog il diag J Phys Chem 57:385-90 Ap '53

Table of dielectric constants and electric dipole moments of substances in the gaseous state. A. A. Maryott and F. Buckley. U S Nat Bur Stand Circ 537:1-29; pa 20c Supt. of doc. '53

Translational dispersion in monatomic gases. R. A. Boyer. Acoustical Soc Am J 24:716-17 N '52

Venturi as a meter for gas-solids mixtures. L. Farbar. bibliog flow diag il diags A S M E Trans 75:943-51 Jl '53

See also

Absorption
Accommodation coefficients
Acetylene
Adsorption
Aerodynamics
Air
Ammonia
Arsine
Blast furnace gas
Boltzmann equation
Bubbles
Carbon dioxide
Chlorine
Coke oven gas
Dew points
Diffusion
Electric discharges
Equation of state
Flame propagation
Flue gas
Gas
Gas, Natural
Gas analysis
Gas flow
Helium
Hydrogen
Inflammable mixtures
Ionization, Gaseous
Methane
Nitrogen
Oxygen
Van der Waals equation
Vapor pressure
Vaporization
Vapors

Apparatus

Apparatus for measuring gas permeability of sheet materials. D. W. Brubaker and K. Kammermeyer. bibliog il diag Anal Chem 25:424-6 Mr '53

Apparatus for quantitative analysis of gases. il diag Engineering 175:140 Ja 30 '53

Coaxial stark cell for microwave spectroscopy. il Electronics 25:206+ D '52; Tele-Tech 11:41+ D '52

Diffusion process for separating gases getting attention of petroleum industry; Texas co. patent. diags Pet Processing 7:1817 D '52

Doser for admitting measured amounts of vapor. D. M. Young. diag R Sci Instr 24:77-8 Ja '53

Eleven megacycle interferometer for low pressure gases. M. Greenspan and M. C. Thompson, jr. il diags Acoustical Soc Am J 25:92-6 Ja '53

Fixed path ultrasonic interferometer for absorption measurements on gases. J. F. W. Bell. bibliog diag Acoustical Soc Am J 25:96-100 Ja '53

Gas gravitometers. J. M. Quirk. il diags Instruments 26:102-4+ Ja '53

Mercury piston gas pump. D. L. Buchanan. il diag R Sci Instr 24:79-80 Ja '53

Simple and multiple gas microintroductors for adsorption studies. J. C. P. Mignolet. diags J Sci Instr 30:15-17 Ja '53

Simple method of purifying hydrogen, nitrogen and the inert gases; sodium-potassium alloy trap. E. R. Harrison. bibliog diag J Sci Instr 29:295 S '52

Small self-acting gas pressure regulators. H. R. Ronnebeck. il Engineer 194:309-12 S 5 '52

See also

Nitrites—Analysis

Liquefaction

Big expansion helium liquefier. A. J. Croft. il diag J Sci Instr 29:388-90 D '52

Liquefaction and storage of partially converted liquid hydrogen. E. R. Grilly. bibliog flow diag R Sci Instr 24:1-4 Ja '53

New type of heat interchanger for large liquefiers. J. Nicol and others. il diags R Sci Instr 24:16-19 Ja '53

See also

Chlorine, Liquid

GASES, Asphyxiating and poisonous

Nerve gases. Sci Am 187:38 O '52

Safety in sewage works maintenance and operation; prevention of dangers from noxious gases or vapors and oxygen deficiency. L. W. Van Kleeck. il Water & Sewage Works 100:369-73, 395-9 S-O '53

See also

Arsine
Carbon disulfide
Carbon monoxide poisoning
Hydrogen sulfide
Ketene
Methyl chloride poisoning
Methylene chloride
Nitrogen oxides
Phosgene
Respiratory apparatus

GASES, Compressed

Compressed gases. W. W. Allison. Nat Safety N 67:44-5 Mr '53

Inorganics, gases reported for '51. Oil Paint & Drug Rep 163:3+ Ja 5 '53

GASES, Compressed—*Continued*

Pressure packaging. R. J. Nemmers. il Comp Air Mag 58:160-4 Je '53

See also

Gas, Natural—Compression

Transportation

Regulations for hazardous gases. Chem W 72:51-2 F 7 '53

GASES, Kinetic theory of

Generalized theory of convective heat transfer in a free-molecule flow. A. K. Oppenheim. bibliog diags J Aeronautical Sci 20:49-58 Ja '53

Relation among the kinetic theory cross-section integrals and new relations involving the transport properties of gases. E. M. Holleran and H. M. Hulburt. bibliog J Phys Chem 56:1034-8 D '52

GASES, Liquefied

See also

Gases—Liquefaction
Helium, Liquid
Nitrogen, Liquid

Storage

Liquefaction and storage of partially converted liquid hydrogen. E. R. Grilly. bibliog flow diag R Sci Instr 24:1-4 Ja '53

GASES, Rare

Alpha-particle ionization in mixtures of the noble gases. W. P. Jesse and J. Sadauskis. Phys R 88:417-18 O 15 '52

Charge transfer and the mobility of rare gas ions. J. A. Hornbeck. bibliog J Phys Chem 56:829-31 O '52

Lifetimes of metastable states of noble gases. A. V. Phelps and J. P. Molnar. bibliog il diag Phys R 89:1202-8 Mr 15 '53

See also

Argon
Helium
Krypton
Neon
Xenon

GASKETS

Gasket materials and joint design; drawings with text. E. C. Frazier. Product Eng Hdbk p F 16-17 '53

Gaskets for high-pressure vessels. A. R. Freeman. diags Mech Eng 74:969-72 D '52

High-pressure and high-temperature jointing materials; Metaflex gaskets and Twistele jointing. Engineer 194:844 D 19 '52

Liquid gasket. Tool Eng 30:93 F '53

Mechanical applications of flowed-in gaskets. W. M. Rand, jr. diags Rubber Age 72:477-81 Ja '53

Metallic vacuum-tight gasket. A. W. Knudsen. R Sci Instr 23:566-7 O '52

New flowed-in gaskets. W. M. Rand, jr. il Materials & Methods 37:78-9 Ja '53

New paper materials find use in gaskets, oil filters, embossed sheeting. E. C. Frazier. il Materials & Methods 38:92-3 Ag '53

Rubber ring gasket for conical vacuum joints. G. Medicus. diag R Sci Instr 23:647 N '52

Tylox flexible-rubber pipe gaskets give fast, sure seal. il Eng N 150:142 F 5 '53

Use of silicone rubber gaskets for high vacuum work. R. F. Gale and C. F. Machin. diags J Sci Instr 30:97-8 Mr '53

GASOLINE

Comparison of liquefied petroleum gas, gasoline, and Diesel fuel in city-bus operation. F. C. Burk and others. Pet Refiner 32:119-21 Je '53

Gasoline quality up, third-quarter survey shows. Oil & Gas J 51:74 O 27 '52

Motaloy, a gasoline additive. Bsns W p69 Ap 18 '53

Motor-gasoline survey, summer 1952. O. C. Blade. Oil & Gas J 51:185 Mr 30 '53

National annual survey of aviation gasoline and aviation jet fuel, 1952 production. O. C. Blade. 5pls U S Bur Mines Rep of Invest 4982:1-15 '53

National motor-gasoline survey, summer 1952. O. C. Blade. 3pls U S Bur Mines Rep of Invest 4963:1-24 '53

Peppier gas. Bsns W p32 My 16 '53

Preignition; does it provide roadblock to greater efficiency in fuel utilization? J. R. Sabina and others. bibliog diags Oil & Gas J 52:66-70 Je 29 '53

Refiners forecast volatility increase, end of pre-ignition at fuels session. Nat Pet N 45:41 My 20 '53

Synthetic fuel ideas of Mines bureau hit by National petroleum council. W. S. S. Rodgers. Oil Paint & Drug Rep 163:3+ Mr 2 '53

See also

Airplane engines—Fuel
Anti-freeze solutions
Automobile engines—Fuel
Automotive fuel
Gasoline service stations
Internal combustion engines—Fuel
Motor truck engines—Fuel
Petroleum refining

Alcohol mixtures

Alcohol motor fuels, production and use. S. J. W. Pleeth. bibliog diag Inst Pet J 38:805-19; Discussion. 834-44 O '52

Economic aspects of alcohol in motor fuel. T. C. Owtram. Inst Pet J 38:820-34; Discussion. 834-44 O '52

Analysis

Direct titration of gasoline mercaptans. G. E. Mapstone. Pet Processing 7:1655 N '52

Isolation of olefins from Bradford crude oil. R. E. Putscher. bibliog flow diag Anal Chem 24:1551-8 O '52

Method for determination of tetraethyllead in gasoline. W. S. Levine. il Pet Eng 25:C37-8+ My '53

Save time in TEL analyses; X-ray photometer. H. W. Kellogg and others. diags Pet Processing 7:1430-2 O '52

Selective adsorption of hydrocarbons. G. Spengler and K. Krenkler. diag Pet Refiner 31:133-6 O '52

Spectrophotometric determination of aliphatic sulfides. S. H. Hastings. Anal Chem 25:420-2 Mr '53

Ultraviolet absorption determination of C_9 and C_{10} aromatics. M. S. Norris and N. D. Coggeshall. Anal Chem 25:183-7 Ja '53

See also

Gasoline, Natural—Analysis

Anti-knock and anti-knock mixtures

Article attacks premium gasoline use. H. Ridder. Nat Pet N 45:23 Ja 28 '53

Factors affecting the utilization of anti-knock quality in automobile engines. J. D. Davis. Inst Mech Eng Proc (Auto div pt 3):100-10 '51-52; Abstract. Engineering 173:278 F 29 '52; Discussion. Inst Mech Eng Proc (Auto div pt 3):121-40 '51-52

Gasoline octane ratings rise in 1952 as car compression ratios increase; Du Pont's survey. Nat Pet N 45:41-2 F 4 '53; Oil & Gas J 51:38 F 2 '53

Gasoline octanes continue to climb, survey of ratings in 50 cities finds. Nat Pet N 45:43-4 My 6 '53

1951 CRC car octane survey. S A E J 61:41-3 Jl '53

Octane number of catalytic gasolines. Oil & Gas J 51:188 O 20 '52

Octane trend continues upward. G. Weber. il Oil & Gas J 51:91-4 N 10 '52

Octanes inch upward; Du Pont report. Oil & Gas J 51:74-5 My 4 '53

Oil industry finds fuel additives can help in controlling preignition. R. J. Greenshields. Oil & Gas J 52:71-2 Je 29 '53

Significance of laboratory octane numbers in relation to road anti-knock performance. H. J. Eatwell and J. G. Withers. bibliog il Inst Mech Eng Proc (Auto div pt 3):111-20 '51-'52; Excerpts. Engineering 173:279 F 29 '52; Discussion. Inst Mech Eng Proc (Auto div pt 3):121-40 '51-52

Anti-oxidants

2,6-Di-*tert*-butyl-4-methylphenol as a gasoline antioxidant. M. C. K. Jones, A. R. Jones and B. R. Strickland. bibliog Ind & Eng Chem 44:2721-5 N '52

Blending

Blending octane number of catalytic gasolines. W. L. Nelson. Oil & Gas J 51:139 S 22 '52

Ethyl mixtures

Automatic TEL blending of gasoline for delivery into products pipe line. H. R. Hoyt. il diag Oil & Gas J 51:241+ O 13 '52

GASOLINE—*Continued*

Evaporation losses

Evaporation losses; analysis of equipment for recovering vaporized hydrocarbons. N. H. Prater and R. M. Huff, jr. bibliog diags Oil & Gas J 52:178-80+ Je 22 '53
Losses from cone-roof tanks. bibliog Oil & Gas J 51:275+ N 17 '52
Losses from conservation-roof tanks. Oil & Gas J 51:289-90+ N 17 '52
Paint double-deck, floating-roof tanks white to reduce evaporation during storage. O. Gerbes. il Oil & Gas J 52:286+ Je 22 '53

Manufacture

Aromatics recovery by hydroforming and phenol extraction. J. J. Swift and others. flow diag il diag Pet Processing 8:81-7 Ja '53
Atlantic catalytic reforming. flow diag Pet Refiner 31:114-15 S '52
Better yields from cat cracking; furfural refining. C. W. Shelley and C. W. Rackley. bibliog Pet Processing 7:1772-5 D '52
California polymerization; California research corp.; catalytic polymerization; M. W. Kellogg co. flow diags Pet Refiner 31:156-7 S '52
Can the refiner use more light ends? D. P. Barnard and others. bibliog Pet Refiner 32:135-8 Je '53
Catalytic cracking techniques in review. M. Sittig. flow diags diags Pet Refiner 31:263-316 bibliog(545 refs, p312-16) S '52
Catalytic cycle-stock treating unit. C. F. Tears. flow sheet Oil & Gas J 52:119+ Je 15 '53; Same. Pet Eng (Ref annual) 25:C 12-14 Jl 15 '53
Catalytic polymerization; Universal oil products co.; catalytic alkylation; M. W. Kellogg co. flow diags Pet Refiner 31:160-1 S '52
Changes and expansion boost yields; Onyx refining co. A. L. Foster. il diag Pet Eng 25:C28-30 Ja '53
Cycloversion; Phillips petroleum co. flow diag Pet Refiner 31:116-17 S '52
Duval's new skimming plant now in full operation. F. L. Resen. flow sheet il Oil & Gas J 51:116-17 O 27 '52
Effect of multitesting on refinery production costs. M. R. Morrow and C. T. Shewell. bibliog Ind & Eng Chem 45:240-6 Ja '53
Electrical treater solves problem of desludging cracked gasolines. D. H. Stormont. flow diag il Oil & Gas J 51:125-6 O 27 '52
First commercial catforming unit on stream at McBride refinery. C. S. Faulkner and others. flow diag il Oil & Gas J 51:116-17+ N 24 '52
First fluid hydroformer ready to go. flow sheet il Chem Eng 59:264 D '52
Fluid catalytic cracking; Standard oil development co. flow diag Pet Refiner 31:104-5 S '52
Fluid catalytic cracking; Universal oil products co. flow diag Pet Refiner 31:106-7 S '52
Fluid hydroforming; M. W. Kellogg co. flow diag Pet Refiner 31:118-19 S '52
Gray clay treating; Texaco development corp. flow diag Pet Refiner 31:230-1 S '52
HF alkylation; Phillips petroleum co., Universal oil products co. flow diags Pet Refiner 31:164-5 S '52
Houdriflow; Houdry process corp. flow diag Pet Refiner 31:108-9 S '52
Houdriforming at low pressure. J. C. Dart and others. Pet Eng (Ref annual) 24:C32-4 Jl 15 '52; Same. Am Pet Inst Proc 32 M(3):208-11 '52; Same. Oil & Gas J 51:386+ N 17 '52; Discussion. Am Pet Inst Proc 32 M(3):235-7 '52
Houdriforming economics; effect of feed-stock boiling range and reforming severity. H. D. Noll and others. Pet Refiner 32:113-16 My '53; Same. Pet Eng (Ref annual) 25:C 15-16+ Jl 15 '53
Houdriforming; Houdry process corp. flow diag Pet Refiner 31:132-3 S '52
Houdriforming reactions; studies with pure hydrocarbons; catalytic mechanism. H. Heinemann and others. bibliog Ind & Eng Chem 45:130-7 Ja '53
Houdriforming reactions; studies with sulfur compounds. H. Heinemann, H. Shalit and W. S. Briggs. bibliog Ind & Eng Chem 45:800-2 Ap '53
How paraffin content effects quality of motor fuels from Platforming. V. Haensel and G. R. Donaldson. Pet Processing 8:236-9 F '53
How to improve alkylate feed stock for more and better avgas. J. D. Wall. flow diag Pet Processing 7:1438-43 O '52
Hyperforming; newest development in reforming. C. Berg. flow sheet il diags Pet Refiner 31:131-6 D '52; Same cond. Oil & Gas J 51:286+ Mr 23 '53
Hyperforming; Union oil company of California. flow diag Pet Refiner 31:122-3 S '52
Improve polyform operations with these correlations. R. C. Teitsworth. flow diag Pet Refiner 32:91-4 F '53
Isomate; Standard oil co. (Indiana). flow diag Pet Refiner 31:172-3 S '52
Isomerization of *n*-pentane in presence of molybdena-alumina catalysts at low hydrogen-hydrocarbon ratios. A. Clark and others. bibliog Ind & Eng Chem 45:803-6 Ap '53
Lengthen hydroforming process cycle by adding reducible sulfur to feed; patent. Pet Processing 7:1479 O '52
Mercapsol treating; Pure oil co. flow diag Pet Refiner 31:214-15 S '52
New hydroforming unit produces petrochemicals and AvGas. J. J. Swift and others. il diags Pet Refiner 32:105-9 F '53
New sources for petroleum and petrochemicals. P. F. Swanson and N. R. Adams. Can Chem Process 36:30-1 D '52
Orthoflow and hydroforming; M. W. Kellogg co. flow diags Pet Refiner 31:112-13 S '52
Platforming; Universal oil products co. flow diag Pet Refiner 31:126-7 S '52
Problems solved; here's how a small independent met the octane challenge. J. C. Reidel. il Oil & Gas J 52:60-1 Je 8 '53
Processing Australian shale oil. E. G. Nottes. bibliog(41 ref) il Pet Eng 24:C22-4+ D '52
Recent developments in the catalytic reforming of hydrocarbons. F. Morton. bibliog flow diags Chem Age (Lond) 68:71-8 Ja 10 '53
Reforming aided by passing charge through Fullers earth; new platforming unit. W. T. Ziegenhain. flow chart il Pet Eng 24:C42 D '52
Sinclair has new reforming process. flow diag Pet Refiner 32:143-4 Je '53
Socony airlift TCC. flow diag Pet Refiner 31:110-11 S '52
Tannin solutizer; Shell development co. flow diag Pet Refiner 31:214-15 S '52
Thermal reforming; Universal oil products co. flow diag Pet Refiner 31:144-5 S '52
Thermofor catalytic reforming (TCR). J. W. Payne and others. bibliog flow diags il Am Pet Inst Proc 32:M(3):212-23 '52; Same. Pet Refiner 31:117-23 My '52; Same. Pet Eng 24:C 10+ Je '52; Same. Oil & Gas J 51:357+ N 17 '52; Same cond. Pet Processing 7:966-9 Jl '52; Discussion. Am Pet Inst Proc 32 M(3):235-7 '52
Thermofor catalytic reforming; Socony-Vacuum oil co. flow diag Pet Refiner 31:136-7 S '52
Unisol mercaptan extraction; Universal oil products co. flow diag Pet Refiner 31:218-19 S '52
Vickers Petroleum ups throughput with new package T.C.C. unit. flow chart il Oil & Gas J 51:120+ Mr 16 '53; Same. Pet Refiner 32:118 Mr '53

See also
Gasoline, Natural—Manufacture

Hydrogenation process

Bibliography of pressure hydrogenation. J. L. Wiley and H. C. Anderson. 3 pts U S Bur Mines Bul 485:1-306 pa $1.25; 307-592 pa $1; 593-646 pa 25c Supt. of doc. '50-52
Germany's hydrogenation industry today. P. W. Sherwood. bibliog flow sheet il Pet Refiner 31:93-8 N '52
Hydrogenation; Standard oil development co. flow diag Pet Refiner 31:176-7 S '52

Hydrogenation process (coal)

Composition of gasoline from coal hydrogenation. J. Feldman and M. Orchin. bibliog Ind & Eng Chem 44:2852-6 D '52

GASOLINE—*Continued*

Measurement

Meters keep gasoline dealers paid up. il diag Nat Pet N 45:64+ F 18 '53

Physiological effect

Research on chronic toxic effects from long exposure to vapors of pure gasoline. A. Amorati and others. Ind Med 21:466-8 O '52

Price cutting

Case history of a gasoline war in Memphis, Tenn. J. Barton. il Nat Pet N 45:50-5+ Ja 14 '53
Definition of good faith sought in Detroit case. Nat Pet N 45:35 F 18 '53
FTC rejects good faith plea in Detroit case; editorial. Nat Pet N 45:17-19 Ja 28 '53
Gasoline markets headed for chaos if FTC Detroit case order sticks. C. La Motte. Nat Pet N 45:11 Ja 28 '53

Price fixing, Government

North Carolina gasoline investigators see harm if state controls prices. Nat Pet N 45:25-6 Ja 14 '53

Prices

Average retail gas price drops; with table of dealer and service station prices for regular-grade gasoline in 50 representative cities. Nat Pet N 45:34 Ja 7 '53
Gasoline prices climb in Michigan. Nat Pet N 45:17 My 27 '53
Marketers cite need for more margin, greater manpower with 40-hour week. Nat Pet N 44:34-5 N 5 '52
Normal and subnormal prices get searching scrutiny. H. F. Horning. Nat Pet N 45:26-7 Ap 29 '53
Premium gasoline war hits Milwaukee. il Nat Pet N 45:44 My 6 '53
Price cuts in majority since decontrol. Nat Pet N 45:23-4 Mr 25 '53
Price influence of unbranded gasoline. V. T. Clover. J Marketing 17:388-93 Ap '53
Price-tax comparison. J. C. Casper. Oil & Gas J 52:220 My 18 '53
Standard stations asks price boost for gasoline to match labor costs. Nat Pet N 44:14-15 O 22 '52
Sun explains 1.6c gasoline margin. Nat Pet N 44:39 O 1 '52
Unbranded gasoline shakes pricing structure. L. Castle. map Nat Pet N 44:17-19 O 29 '52

Sulfur content

Determination of sulfur in the presence of halogens. R. R. Jay. Pet Eng 25:C49 Ja '53
Houdriforming reactions; studies with sulfur compounds. H. Heinemann, H. Shalit and W. S. Briggs. bibliog Ind & Eng Chem 45:800-2 Ap '53

Taxation

Caution urged in changing gasoline tax. F. V. DuPont. Nat Pet N 45:20 Ap 22 '53
Demands for gas tax hikes mount as states push road improvements. Nat Pet N 45:25-6 Ja 7 '53
Gasoline taxes; 44 state legislatures will consider higher rates. D. M. Duff. Oil & Gas J 51:33-4 Ja 5 '53
Premium petrol and fuel tax. Economist 167:927-8 Je 27 '53
Road-user and property taxes on selected motor vehicles, 1953; charts and tables. E. M. Cope and R. W. Meadows. maps Pub Roads 27:127-53 Ap '53

Testing

Significance of laboratory octane numbers in relation to road anti-knock performance. H. J. Eatwell and J. G. Withers. bibliog il Inst Mech Eng Proc (Auto div pt 3):111-20 '51-52; Excerpts. Engineering 173:279 F 29 '52; Discussion. Inst Mech Eng Proc (Auto div pt 3):121-40 '51-52

Transportation

See also
Tank trucks

GASOLINE, Natural

New McKamie processing facilities operating at 50 million cubic feet daily. K. G. Pearce. flow sheet il Oil & Gas J 52:152-5 My 25 '53
Recent trends and developments in the natural gasoline industry. J. F. Lynch. Pet Eng 25:C3-4 Ja '53

Analysis

Correct LTFD analysis for vapor holdup. S. T. Preston, jr. bibliog diags Pet Refiner 32:142-4 Ap '53
New use for analyzer; infrared instrument is valuable in natural-gasoline plant; abstract. P. Buchanan. Oil & Gas J 51:65 D 1 '52

Manufacture

Conserving natural gas with packaged gasoline plants. G. T. Williamson. flow diags Pet Refiner 32:149-52 Ap '53
Design of gasoline plants (cont). O. L. Lewis. diags Pet Eng 24:C27-8+ N '52; 25:C20-1+ Ja '53
Direct-fired heaters in natural-gasoline plants. H. J. Born and G. E. Rose. diags Oil & Gas J 51:101-4 Mr 9 '53
Economic aspects of natural gasoline production on the lease. W. Skinner. Oil & Gas J 51:126 D 1 '52
Empresa nacional del Petroleo puts its first natural-gasoline plant on stream at Spring Hill, Chile. flow diag Oil & Gas J 51:257-8 D 22 '52
Extraction plant strips high pressure gas. il diag Pet Eng 25:A73-4+ Ap '53
Field-processing capacity due for large increase. R. B. Tuttle. Oil & Gas J 51:315-16 Ja 26 '53
Five new developments incorporated in design of Ringwood, Okla. natural-gasoline plant. B. J. Thompson. flow sheet il diag Oil & Gas J 51:161-2+ Ap 27 '53
Gasoline and cycling plant economics vs increasing cost of gas. H. E. Vaughan. Pet Eng (Ref annual) 25:E 10+ Jl 15 '53; Same cond. Oil & Gas J 52:107-8 Je 1 '53
Here are unusual features of Sunray's gasoline plant; illustrations with text. Oil & Gas J 51:86+ Mr 2 '53
Hexane-plus fractions serve as absorbent in absorption-refrigeration gasoline plant. D. H. Stormont. flow sheet il Oil & Gas J 51:210-12 Ap 27 '53
How Texas railroad commission operates; its rules, regulations; refineries and natural-gasoline plants. R. F. Carlson. Oil & Gas 51:121 F 9 '53
Hydrocol process; Texaco development corp. flow diag Pet Refiner 31:254-5 S '52
Instrumentation of packaged gasoline plants. T. D. Tabbert. diags Oil & Gas J 51:100+ Mr 16 '53
Major natural gas conservation project. B. J. Thompson. flow diag il plan Pet Eng 25:C5-8+ Ja '53
Natural-gasoline and cycle plants in the United States, Jan. 1, 1952. D. S. Colby and E. M. Seeley. U S Bur Mines Information Circ 7645:1-11 '52
Natural gasoline plants; a safety inspection program. D. Attaway. il Pet Eng 24:C46+ N '52
New gasoline plant boon to Italian market. flow diag il Oil & Gas J 51:320+ D 22 '52
New gasoline plant features unusual stripping steam generation. W. O. Blenkarn and others. flow diags Pet Refiner 32:139-41 Ap '53
Officials and employes praise gasoline plant short course. il Pet Refiner 32:128-9 Ap '53
Portable gasoline plants gain in popularity. C. B. Barry. flow diags il Oil & Gas J 51:96-8+ O 27 '52
Pressure maintenance, liquids extraction, and crude stabilization at Elk City, Okla. plant. il diag Oil & Gas J 52:214+ My 25 '53
Profits shrinking; operating costs of natural-gasoline and cycling plants must be cut. H. E. Vaughan. Oil & Gas J 51:75 My 4 '53
Raw-liquids gathering system, largest superfractionation plant; Phillips' natural-gasoline operations. J. C. Reidel. flow diags il map Oil & Gas J 51:168-70+ Ap 27 '53
Ropes field has refrigeration type gasoline plant. R. F. Carlson. il Oil & Gas J 52:74-5 Je 29 '53
Short cut to gasoline and cycling-plant costs. E. W. Kilgren and C. S. Miller, jr. Oil & Gas J 51:144-52+ Ap 27 '53

GASOLINE, Natural—Manufacture—*Continued*

Sunray uses boiler blowdown to neutralize condensate from its reboilers at Elkton, La., plant. il diag Oil & Gas J 89 F 2 '53

Survey of field processing-plant construction; tabulated. Oil & Gas J 51:226+ Ap 27 '53

Survey of natural-gas field processing plants; tabulated by states. Oil & Gas J 51:214+ Ap 27 '53

Take this short-cut in computing absorber material balance. R. B. Thompson and E. D. Frigar. flow plans Pet Refiner 32:145-8 Ap '53

Transfer gasoline plant to west Texas in record time. A. L. Foster. il Pet Eng 25: C44+ F '53

Ulysses plant now Stanolind's largest. J. C. Reidel. flow diag il Oil & Gas J 52:156-8+ My 25 '53

Why gas plants should be surveyed to determine corrosion damage. E. W. Wallace. Gas Age 112:47-9+ Ag 13 '53; Same abr. Oil & Gas J 52:201-2+ My 25 '53

Statistics

Natural-gas liquids gain of five per cent seen. J. C. Casper. Oil & Gas J 51:219-20 Ja 26 '53

Natural-gasoline and cycle plants in the United States, Jan. 1, 1952. D. S. Colby and E. M. Seeley. U S Bur Mines Information Circ 7645:1-11 '52

Natural gasoline; with table, production of natural gasoline and allied products, by states, by years, 1911-1952. World Oil 136: 192-3 F 15 '53; Same. Pet Refiner 32:121-2 Ap '53

GASOLINE delivery

Clipper delivery the consignee way. F. Breese. il map Nat Pet N 45:48-54 F 11 '53

GASOLINE handling

How to design a modern gasoline loading dock. W. G. Rolf. il Pet Refiner 31:144 D '52

See also

Gasoline pumps

Safety measures

Fill the tanks with safety. W. N. Young. Safety Maint & Prod 104:64+ O '52

Safe car loading of volatile gasolines. W. B. Norris. diags Pet Processing 8:255 F '53

GASOLINE industry

How Pan-Am sees some jobber problems. B. K. Brown. Nat Pet N 44:37-8 D 31 '52

Percentage margins, good or bad? Nat Pet N 45:13-20 Ap 29 '53

Salesmen make one call a day, all day; Pan-Am Southern. D. Markstein. il Ptr Ink 241: 36-7 D 5 '52

See also

Pan-American southern corporation

Exchange agreements

Exchange agreements for refined petroleum products. J. C. Bumgarner. N A C A Bul 34:526-34 D '52

Statistics

Gasoline use up; all-time peak reached in 1952. Oil & Gas J 52:78-9 My 11 '53

Great Britain

British arm for gasoline brand war. il Nat Pet N 45:32 Ja 21 '53

Octane clamp eased. Oil & Gas J 51:52 F 2 '53

Premium or pool at the pump. Economist 166:293-4 Ja 31 '53

Premium petrol and fuel tax. Economist 167: 927-8 Je 27 '53

Michigan

Gasoline prices climb in Michigan. Nat Pet N 45:17 My 27 '53

North Carolina

Majors hit for abandoning jobbers in North Carolina gasoline bidding. Nat Pet N 45:18 My 27 '53

North Carolina gasoline investigators see harm if state controls prices. Nat Pet N 45:25-6 Ja 14 '53

Spain

Gasoline rationing abolished in Spain, Jan. 1. For Comm W 49:6 Mr 9 '53

Texas

Consignee survey finds gloom in Texas. Nat Pet N 44:21-2 D 24 '52

Wichita, Kansas

Competition in Wichita; oil industry has a story to tell. J. Barton. il Nat Pet N 45: 30-5+ Mr 25 '53

GASOLINE pumps

Civil defense hails emergency pumps. il Nat Pet N 45:44 Ja 21 '53

Tightening meter tolerance on gasoline pumps would be expensive to motorist. R. E. Bjorkback. Nat Pet N 45:26-7 Ap 8 '53

GASOLINE service stations

January station building permits continue gains of previous months; with tabulation. Nat Pet N 45:46 Mr 18 '53

Marketers cite need for more margin, greater manpower with 40-hour week. Nat Pet N 44:34-5 N 5 '52

Oil marketers who coach dealers need all the support they can get. F. C. Sturtevant. Nat Pet N 44:76+ O 1 '52

Profit plow-back builds gasoline business; Pendergraft & Williford, inc. M. Reid. il Nat Pet N 44:48-50 O 29 '52

Station gets plastic raincoat. il Nat Pet N 44:91 O 15 '52

What makes a station pull customers? Nat Pet N 45:51-2 My 20 '53

What pulls motorists to a favorite service station? Bsns W p62+ Mr 21 '53

What's wrong with station business? it needs more profit. C. W. Hendrickson. Nat Pet N 44:38 O 8 '52

See also

Motor truck service stations

Accounting

Station accounting shrinks losses. M. Reid. il Nat Pet N 45:59-61 Mr 11 '53

Advertising

Brand Names contests catch on. F. C. Sturtevant. il Nat Pet N 44:43-4 O 15 '52

Automobile accessories

Are your dealers ready for spring sales? il Nat Pet N 45:74+ F 4 '53

Big tire, gasoline sales year seen. F. Sturtevant. Nat Pet N 45:64-5 Ja 7 '53

Complex sales pitch seen an obstacle on road to increased battery volume. W. E. Blank. Nat Pet N 45:92-4 My 6 '53

Educating dealer in sales psychology might stimulate TBA selling effort. F. C. Sturtevant. il Nat Pet N 45:80 F 4 '53

Goodyear puts TBA sales volume at $54.22 per 1,000 gals. Nat Pet N 45:72 Ap 1 '53

How Humble Oil & Refining has conducted TBA operations. A. Sweet. Nat Pet N 44: 77-80 N 26 '52

How one major oil company helps dealers sell tires and services. G. R. Miller. il Nat Pet N 44:80+ N 26 '52

How to boost sales is main theme of Canadian oil-TBA convention. Nat Pet N 44:69-70+ N 5 '52

Jobber plunges, hits TBA pay dirt. R. E. Bjorkback. il Nat Pet N 45:64+ Mr 4 '53

Making a profit on oil filters. il Nat Pet N 44:80+ O 1 '52

Oil-TBA men stress sales push, full service. F. C. Sturtevant. Nat Pet N 44:71-4+ N 26 '52

Sales chief sees growing TBA market, big selling opportunity for 1953. H. D. Smith. Nat Pet N 45:87-8+ Mr 4 '53

Salesmen make TBA program click. il Nat Pet N 45:58-9+ Ja 7 '53

Selling car light replacements. F. Paeske. il Nat Pet N 44:66+ D 10 '52

Survey measures TBA buying habits. Nat Pet N 45:72 Mr 4 '53

Teamwork at the top sells more TBA. W. J. Matson. il Nat Pet N 44:56+ D 10 '52

TBA display tips. V. H. Jones. il Nat Pet N 44:69-71 O 1 '52

GASOLINE service stations—Automobile accessories—*Continued*

TBA managers want; better station tools, improved warehousing. il Nat Pet N 44:66-8+ N 26 '52

TBA men take a look at future sales problems. F. Breese. Nat Pet N 45:82-3+ Mr 4 '53

TBA sales potential up 30 per cent for 1953; with tabulation. Nat Pet N 45:80-1 Mr 4 '53

What change to 12-volt batteries will mean to oil's TBA marketers. Nat Pet N 44:75+ N 5 '52

Cleanliness

Keeping stations clean. il Nat Pet N 45:30-3 Ap 8 '53

Construction and design

Station design accents visibility. il plan Nat Pet N 45:50-1 My 13 '53

Station facelifting pays off for jobber. R. E. Bjorkback. il Nat Pet N 45:56-9 F 25 '53

Station has three-way pull for motorists; multi-pump service station operated by American oil co., in Washington, D.C. il plan Nat Pet N 44:44 D 24 '52

See also

Gasoline service stations—Multiple pump stations

Employees

40-hour week at service stations brings more problems in manpower. F. Breese. Nat Pet N 44:46 O 1 '52

General Petroleum's classroom aids sales training. il Nat Pet N 45:50 F 4 '53

How to train new dealers for stations. G. Meador. Nat Pet N 45:42 Ja 21 '53

New union contract cuts flexibility of Los Angeles multi-pump operators. F. Breese. Nat Pet N 45:52 My 6 '53

Standard of California signs with station union. Nat Pet N 45:19 Mr 11 '53

Equipment

Air compressor is vital, don't neglect it. C. Boyd, jr. Nat Pet N 45:67-9 Mr 18 '53

Invoice printer attaches to gas dispenser. diag Nat Pet N 45:68 Ja 21 '53

Keeping your car on the road. R. J. Nemmers. il diags Comp Air Mag 58:266-71 O '53

See also

Gasoline pumps

Fires and fire protection

Fill the tanks with safety. W. N. Young. Safety Maint & Prod 104:64+ O '52

Fire extinguishers are important station tool. il Nat Pet N 45:64+ Mr 18 '53

Insurance selling

Insurance policies; new station sales tool. F. Breese. il Nat Pet N 45:52-4 My 13 '53

Leasing

Contempt action looms over Richfield pacts. Nat Pet N 44:29 D 10 '52

Lighting

Oil jobber lights the way; island light fixture for stations developed by the Central west oil corp. L. Castle. il Nat Pet N 44:50-1 O 1 '52

Location

All is not peaceful as Connecticut works for competition on turnpikes. R. E. Bjorkback. Nat Pet N 45:44 Ap 15 '53

Connecticut's highway chief has plan for toll road stations at interchanges. R. E. Bjorkback. Nat Pet N 45:26-7 F 25 '53

How highway planning hits oil marketers. Nat Pet N 45:46-7 Ap 8 '53

Jobbers warned of turnpike pitfalls. G. B. Sowers. Nat Pet N 44:64 O 8 '52

Massachusetts highway station bids sparse. Nat Pet N 45:26-7 Ja 7 '53

Massachusetts wants gold plated deal on highway service station contracts. R. E. Bjorkback. Nat Pet N 44:18 D 24 '52

Ohio jobbers demand free competition for oil marketers on new toll road. J. Barton. Nat Pet N 44:31 S 24 '52

Oil asks competition on Ohio turnpike. Nat Pet N 44:30 D 10 '52

Oil should fight turnpike station dictation. Nat Pet N 44:17 D 24 '52

Toll road problems and some solutions. R. H. Collacott. Nat Pet N 45:65-7 Mr 25 '53

Lubricating service

Follow-up gives public free service contract. H. Ridder. il Nat Pet N 44:53-8 O 8 '52

Lost motor oil sales are serious but they can be greatly reduced. H. Ridder. Nat Pet N 44:40-3 D 24 '52

Motor oil sales for the asking. H. Ridder. map Nat Pet N 45:54-5 F 25 '53

Management

Balanced sales; key to keeping customers. Nat Pet N 44:87+ N 26 '52

First aid for sick stations. Nat Pet N 44:51-2 O 29 '52

How to become dealer of year; award by Brand names foundation to H. H. Eckman. il Nat Pet N 45:35-6 Ap 22 '53

Price and convenience are like twins in operating a station successfully. F. Breese. Nat Pet N 45:27 My 27 '53

Sales boosters for stations. F. Breese. il Nat Pet N 44:60-1 O 8 '52

Tourists spell profits for jobber; Galen E. Wilson petroleum co. il Nat Pet N 45:66-8 Ja 7 '53

Multiple pump stations

Multi-pumps cut down to size, grow in service. F. Breese. il plans Nat Pet N 45:48-54 Ja 28 '53

Northwest multi-pumps today. F. Breese. il Nat Pet N 44:55-7 S 24 '52

Results of multi-island service station study. B. L. Ray. Nat Pet N 45:28-9 My 27 '53

Station has three-way pull for motorists; multi-pump service station operated by American oil co., in Washington, D.C. il plan Nat Pet N 44:44 D 24 '52

To draw trucks and passenger cars; Flattop latest addition to Associated's chain of truck stations. F. Breese. il Nat Pet N 44:30-1+ D 3 '52

20,000 customers in four days; Socony-Vacuum's new Chicago multi-pump. il Nat Pet N 44:53-4 S 24 '52

What multi-pumps need for success. F. Breese. il plan Nat Pet N 45:64-8+ F 4 '53

Remodeling

Station remodeling sparks selling drive. F. Holman. il Nat Pet N 45:93+ Ap 15 '53

Rest rooms

Keeping stations clean. il Nat Pet N 45:30-3 Ap 8 '53

Service

Additives as station sales booster. Nat Pet N 44:61 S 24 '52

Dollars on the dipstick. H. Ridder. il Nat Pet N 45:48-9 My 13 '53

Drain-out-plan; radiator service made profitable. C. A. Weslager. il Nat Pet N 45:88+ My 6 '53

Filter promotion can help lube oil sales; selling the car owner on driving a safe car. J. B. Lightburn. Nat Pet N 45:74+ Ap 1 '53

Service stations offer free conditioned air. il Heating-Piping 25:91 Ag '53

Statistics

Motor oil sales ratios still going down. H. Ridder. map Nat Pet N 44:25-9 D 17 '52

Tire company stations

How unique merger swells tire sales. F. C. Sturtevant. il Nat Pet N 45:68+ My 6 '53

GASOLINE storage

Jobber heads fuel storage terminal. Nat Pet N 45:22 Ap 8 '53

Smog law adopted; oil firms with gasoline storage near Los Angeles must control escaping vapors. D. H. Stormont. Oil & Gas J 52:219 My 18 '53

Swedish underground storage method proves successful. il World Oil 136:240 Mr '53

GASOLINE tanks

Evolution of the oil tank. E. N. Zimmerman. il Pet Eng 24:A43-6+ D '52

GASOLINE tanks—*Continued*

Painting

Paint double-deck, floating-roof tanks white to reduce evaporation during storage. O. Gerbes. il Oil & Gas J 52:286+ Je 22 '53

GASOLINE tanks, Concrete

Biological deterioration of polysulfide polymers employed as linings for gasoline storage tanks. F. H. Allen and D. Fore, jr. il Ind & Eng Chem 45:374-7 F '53

GASPERI, Alcide de, 1881-

Portrait. Bsns W p28 Je 27 '53

GATCHELL, Willard W.

Backed by Dewey and New York republicans for position on the Federal power commission. por Elec World News ed 139:6 Mr 2 '53

GATES

Old boiler tubes become gate frames. il Welding J 32:334 Ap '53

Profits in aluminum gates; Alprodoco, inc. Fortune 47:215 My '53

GATES, Hydraulic

Coating research extends gate life at Safe Harbor dam. P. M. Hess. il Elec World 139:90-3 Ap 6 '53

Dam tooling turns out tough steel rollers and tracks; tractor gates for the Garrison dam. G. W. Hilton and T. Shields. il diags Am Mach 96:130-2 N 24 '52

Operating experience with hydro plant valves. W. G. Weber. il diags Power Eng 56:110+ O '52; 57:84-5 Mr; 99-100 My '53

Rating curves for flow over drum gates. J. N. Bradley. il plan diags Am Soc C E Proc 79 [no 169]:1-18 F '53

Tidal sluice gates for sea-walls and land drainage. E. C. Bowden-Smith. il diags Engineer 195:240-2 F 13 '53

See also

Locks (hydraulic engineering)

Valves, Hydraulic

Manufacture

Manual hidden arc lowers fabricating time; Phillips & Davies mfg. co. J. Quigley. il Steel 132:74-5 F 16 '53

GAULLE, Charles de, 1890-

Third Gaullism? Economist 167:522 My 23 '53

GAVEL award

Winner, 1933-1952. Special Lib 43:374 N '52

GAY, Howard S.

Planner leaves federal service. por Eng N 149:69 D 11 '52

GEAR cutting

Be kind to your hobs. C. R. Staub. il diags Mach 59:163-8 F '53

Emergency setup simplifies cutting worm gear in shop. D. Bennie. diags Am Mach 97:133 Ag 17 '53

Gear shaving. W. A. Sykes. il diags Engineering 175:825-6 Je 26 '53

Gears cut by guided flame. R. E. Orton. il diag Tool Eng 30:37-44 F '53

High-speed hobbing gives remarkable results. J. W. Rapp. il Mach 59:151-4 D '52

Simple method of shaving gear segments. il Mach 59:191 F '53

GEAR cutting machines

Accuracy in a 72-in. gear-hobbing machine. il diag Engineering 174:193-5 Ag 15 '52

Big gears get quick shave. il Steel 132:104 Ap 27 '53

Brown 110 inch gear hobbing machine. il Engineer 196:152 Jl 31 '53; Engineering 176:203-5 Ag 14 '53

Brown vertical pinion hobbing machine. il Engineer 195:780 My 29 '53; Engineering 175:767-8 Je 12 '53

David Brown horizontal gear shaving machine. il Engineer 195:365 Mr 6 '53; Engineering 175:313 Mr 6 '53

Diagonal gear-shaving machine equipped with automatic precision up feed. il Mach 59:207-8 F '53; Am Mach 97:216 F 16 '53; Tool Eng 30:117 Mr '53

English machine shaves gears by radial loading method. il Am Mach 97:186 Jl 20 '53

Film runs non-circular-gear shaper. A. Ashburn. il Am Mach 97:149-50 F 2 '53

Gear shaper cuts production time. il Automotive Ind 108:90 My 1 '53

Gleason automatics for Coniflex production. il Am Mach 97:174-5 S 28 '53; Mach 60:214 O '53

Hobbing accurate gears. S. J. Johnson and P. R. Noling. il Mach 59:184-7 Ja '53

Horizontal gear-shaving machine. il Mach 60:209 S '53

Large gears produced faster, cheaper and more accurately. F. P. Hennessy. il Iron Age 171:140-3 My 21 '53

Michigan automated underpass gear shaver features high production. il Automotive Ind 109:65 S 15 '53

Michigan Tool finishers shave 15-ft gears. il Am Mach 97:180-1 Ap 27 '53; Tool Eng 30:143 My '53; Mach 59:217-19 My '53

Michigan Tool internal gear finisher provides two shaving methods. il Am Mach 97:168 Ja 5 '53

National Broach all-purpose machine represents development in gear shaving. il Tool Eng 31:100 Ag '53

National broach & machine co. giant gear-shaving machine. il Mach 59:231-2 Jl '53; Tool Eng 31:100 Jl '53

National Broach horizontal gear shaver handles 2½- to 15-ft-diameter gears. il Am Mach 97:204 Je 8 '53

1953 American Machinist production preview. il Am Mach 97:188-9 Ja 19 '53

Non-circular gears generated automatically. E. C. Beaudet. il Iron Age 171:122-3 F 19 '53

Red Ring model GCU diagonal shaving machine has conventional crown added. il Automotive Ind 109:81 Jl 1 '53; Mach 59:240-1 Jl '53

Rotary internal gear finisher for spur and helical gears. il Mach 59:220 Ja '53; Automotive Ind 108:77 F 1 '53

Shaping 125 gears per hour; Ford motor co. il Mach 59:160-1 Mr '53

Universal Burr-Master gear-chamfering machines. il Mach 60:205-6 S '53; Tool Eng 31:103 S '53

What's ahead the next ten years in machining; gear making. Am Mach 96:E24-5 Mid-N '52

See also

Gear grinding machines

GEAR grinding machines

Bevel gear cutting. il Automobile Eng 42:542 D '52

Bore-grinding fixture for bevel gears. F. Whiteley. diags Mach 59:203-5 Ja '53

Gear grinding. A. H. Orcutt. Engineering 175:714-15 Je 5 '53

Gear-tooth grinding accuracy depends on correct dressing of abrasive wheel. C. H. Wick. il diags Mach 59:168-73 Ja '53

Maag bevel-gear grinder uses no coolant. il Am Mach 97:192 Je 22 '53

Precision gear grinder. il Automotive Ind 107:56 N 15 '52

Steel tape drives gear grinder. il diag Machine Design 24:133+ N '52

GEAR motors. See Gearmotors

GEAR testing machines

Michigan Tool lead checker inspects 48-in. gears. il Am Mach 97:206 Mr 16 '53; Same. Mach 59:210 Ap '53

Universal gear tester inspects all types of fine-pitch gears. il Am Mach 97:178 S 28 '53

GEARHART, Frederick D.

Businessmen in the news. por Fortune 47:64 Ap '53

GEARING

Controlling inertia; how linkages and irregular gearing achieve improved performance in shaker conveyors. W. W. Sloane. il diag Machine Design 25:154-8 Jl '53

Effect of lubricant on gear performance. V. N. Borsoff and S. S. Sorem. bibliog il diag Iron & Steel Eng 30:83-8 F '53; Same cond. Machine Design 25:304+ Je '53

Electromagnetic couplings and gearbox on M.V. Surrey. il Engineer 194:314-15 S 5 '52; Engineering 174:299-301 S 5 '52

Gear lubrication symposium. bibliog 27pls diags Inst Pet J 38:606-68, 699-782 Ag-S '52; Discussion. 38:668-98, 782-804 Ag-S '52

Gears, common-sense answers to everday questions; report on panel. S A E J 61:48+ F '53

Index of gear orders, 1937-1952; tabulation. Iron Age 171:459 Ja 1 '53

GEARING—*Continued*

Motor and gear train selection for automatic control systems. A. M. Fuchs. il diags Product Eng 24:128-33 Mr '53

Rocker gear drive. diag Machine Design 25:115 Je '53

Sheet metal gears, sprockets, worms, and ratchets; drawings with text. H. Murro. Product Eng 24:208-9 My '53

See also

Chain gear

Power transmission

also subdivision Gearing under special subjects, e.g.

Automobiles

Steam turbines, Marine

Design

Designing instrument gear trains. L. D. Martin. il diags Machine Design 25:120-4 My '53

Dynamic loads on gear teeth. W. A. Tuplin. il diags Machine Design 25:203-11 O '53

Gear design; nomograms simplify solution of preliminary design equations; data sheet. D. W. Botstiber and L. Kingston. Machine Design 24:161-4 D '52

Gear tooth design modified for better service. K. N. Mills. diags Iron Age 170:176-9 N 6 '52

Gear-tooth stresses and rating formulae. H. E. Merritt. bibliog diags Inst Mech Eng Proc (A) 166 no 2:196-205 '52; Same. Engineer 193:341-3, 384-7 Mr 7-14 '52; Discussion. Inst Mech Eng Proc (A) 166 no 2: 205-16 '52; Engineer 193:348-9 Mr 7 '52

High-capacity gearing. D. W. Botstiber and L. Kingston. bibliog il diags Machine Design 24:129-60 D '52

Practical method for designing gear trains; reference book sheet. M. F. Spotts. diags Product Eng 24:211, 213 F '53

Shot peening as a factor in the design of gears. J. C. Straub. Machine Design 23:178-80+ Je '51; Same cond. bibliog il Mech Eng 73:565-9 Jl '51; Same cond. Product Eng Hdbk p E28-30 '53; Discussion. Mech Eng 74:79-80 Ja '52

Shot peening in gear design; abstracts. J. C. Straub. Automotive Ind 109:68-9+ Jl 1 '53; Machine Design 25:294+ S '53

Significance of the Izod test with regard to gear design and performance. J. E. Russell and W. T. Chester. bibliog il diag Engineering 176:166-9 Ag 7 '53

Simplified gear design. W. A. Tuplin. diags Machine Design 24:125-9 N '52; Correction. 25:135 F '53

Failure

New look at the scoring phenomena of gears; abstract. B. W. Kelley. diags Machine Design 25:402+ Ap '53

Manufacture

Aircraft gears; Pratt & Whitney aircraft. E. Tucker. il Am Mach 97:138-40 F 16 '53

Automatic heat-treating speeds gear and pinion production. H. Chase. il Iron Age 170:128-30 N 20 '52

Cast metal gears. diags Am Mach 95:111 Ag 20 '51; Same. Product Eng Hdbk p D6-7 '53

Cold-drawn pinions and small gears. il diags Product Eng Hdbk p D8-9 '53; Same cond. Am Mach 95:113 Ag 20 '51

Extruded gear stock. il Am Mach 95:112 Ag 20 '51; Same. Product Eng Hdbk p D7 '53

Heat treating gears to meet rigid requirements. R. Spagnola. il Materials & Methods 38:102-3 Ag '53

High-capacity gearing; manufacturing methods. D. W. Botstiber and L. Kingston. il diags Machine Design 24:152-60 D '52

High output of quality gears requires tailor-made shop; Fairfield mfg. co. H. J. Bates. il plans Iron Age 171:141-5 Je 4 '53

Induction hardening boron steel gears. G. Van Camp. il Materials & Methods 36:121-2 N '52

Induction heating helps produce better gears; Greenlee bros. & co. L. G. Miller. il Metal Prog 63:109-10+ Je '53

Machining the Wilson epicyclic gearbox. il Engineering 175:363-5, 368 Mr 20 '53

Powder-metal gears. D. W. Lynch and others. il Am Mach 95:104-10 Ag 20 '51; Same cond. Product Eng Hdbk p D2-6 '53

Powerglide governor gears produced by advanced methods. C. R. Moore. il Automotive Ind 109:68-9+ O 1 '53

Production of lubricant test gears. R. D. B. Stone. Inst Pet J 38:728-32 S '52

Skip welding ring gear to flywheel. H. Chase. il Tool Eng 29:63-4 N '52

Steel gears produced in short lots; Cincinnati shaper co. is a good example. il Steel 132:114 Ap 20 '53

Timken-Detroit's new axle and gear plant. J. Geschelin. il Automotive Ind 107:50-3+ N 15 '52

Tolerance charts control production machining; Pratt & Whitney aircraft. C. J. Marks. diags Am Mach 97:114-16 Mr 2 '53

See also

Gear cutting

Gear cutting machines

Gear grinding machines

Measurement

Checking gear tooth thickness with variable center-distance gage. L. D. Martin. il Mach 60:205-6 O '53

Tables, calculations, etc.

Approximately arbitrary ratios with gears. C. A. Piper. diag Mach 60:162-7 S '53

Gear ratio logarithms; data sheet. G. M. Mencke. diags Machine Design 25:177-84 F; 173-7 Mr '53

How to find a gear tangent to three other gears. J. Polonski. diags Tool Eng 31:75-8 Ag '53

Splines and gears; determining allowable involute approximations. J. Silvagi. il diags Tool Eng 30:45-50 Je '53

Testing

How to design and apply master gears. F. Bohle. diags Am Mach 96:125-30 D 8 '52

Hydraulic torque loader facilitates gear testing. il Machine Design 25:175 S '53

GEARING, Bevel

Bevel gear cutting. il Automobile Eng 42:542 D '52

Stress chart for spur and bevel gears; reference book sheet. H. M. Durham. Product Eng 23:203, 205 N '52

GEARING, Epicyclic. See Gearing, Planetary

GEARING, Helical. See Gearing, Spiral

GEARING, Hypoid

Developments in the specification and testing of lubricants for hypoid axles with particular reference to a full-scale British test procedure. A. Towle. 14pls Inst Pet J 38:747-62 S '52

GEARING, Planetary

Simple method of determining ratios in planetary gear trains. S. Rappaport. diags Product Eng 24:182-3 Mr '53

Velocity ratios of epicyclic gears. D. B. Welbourn. diags Engineering 176:198-9 Ag 14 '53

GEARING, Plastic

Molded plastic gears. F. R. Zumstein. il diag Am Mach 95:114-18 Ag 20 '51; Same cond. Product Eng Hdbk p D9-11 '53

Nylon for bearings and gears. R. Lurie. il Gen Elec R 55:34-5+ Jl '52; Same cond. Machine Design 25:270+ Ja '53

GEARING, Spiral

Designing right-angle helical gears. O. Saari. il diag Machine Design 25:145-8 Jl '53

Nomogram for mean radius of curvature of helical tooth flanks. N. J. C. Peres. Engineering 174:235 Ag 22 '52

Using Taylor's series to solve spiral gear problems; reference book sheet. H. M. Durham. diags Product Eng 23:217 D '52; Discussion. 24:283-4+ F '53

GEARING, Spur

Eccentric gear mechanisms for producing varying angular velocity with circular spur gears. P. Grodzinski. il diags Machine Design 25:141-50 My '53

Strength and wear resistance of induction hardened and of carburized spur gears; abstract. H. Glaubitz. Metal Prog 64:280+ O '53

Stress chart for spur and bevel gears; reference book sheet. H. M. Durham. Product Eng 23:203, 205 N '52

GEARING, Worm

David Brown Gears small double reduction worm unit. il Engineer 195:293 F 20 '53; Engineering 175:282 F 27 '53

De Laval giant worm gear reducers. il Blast F & Steel Pl 41:814 Jl '53

Power transmission; speed reducers built for steel mill in king size class. il Iron Age 171:157 Je 25 '53

Proposed standard design for general industrial coarse pitch cylindrical worm gearing. F. G. East. diag Machine Design 25:248-50+ Jl '53

Standards

Standardisation of worm gears. W. A. Tuplin. diags Engineer 194:538-42 O 24 '52

GEARMOTORS

Electropower Gears geared motor with high reduction ratio. il Engineering 175:727 Je 5 '53

Geared electric motors; Coventry gear co. il Engineer 195:59 Ja 9 '53; Engineering 175:126 Ja 23 '53

Motocylinder for reciprocating-motion applications. J. C. Marshall and D. L. Treder. il diags Westinghouse Eng 13:72-3 Mr '53

Newly designed three-piece gear motor. Franklin Inst J 254:441-2 N '52

GEIGER-MÜLLER counters

Construction of external cathode Geiger counters. R. O. Jenkins and R. W. Taylor. R Sci Instr 24:73 Ja '53

Deposited-film G-M counter tubes. Electronics 26:220 F '53

Development of portable Geiger counters. A. H. Lang. bibliog il Can Min J 74:65-7 Ap '53

Ethylene and ethyl alcohol as quenching agents in external-cathode Geiger counters. R. L. Chasson and M. L. MacKnight. R Sci Instr 24:212-13 Mr '53

Geiger counter spots jam in tube system. il Comp Air Mag 58:199 Jl '53

Geiger-Müller counter. G. W. O. Howe. Wireless Eng 30:27-8 F '53

Huge G-M counter monitors background count. R. M. Ball. diags Electronics 25:199-200+ D '52

Logarithmic counting-rate recorder. D. Shaw and R. N. Weltmann. il diag R Sci Instr 23:528-31 O '52

Press safety control uses radioactive wristband. M. E. Simonton and J. Yeiser. il diags Electronics 26:114-15 Ja '53

Some disturbing effects in glass Geiger-Müller counters. L. Carlbom and C. Taylor. diags J Sci Instr 29:296 S '52

Space-charge sheath of the Geiger counter. D. H. Wilkinson. R Sci Instr 23:463-4 S '52

Use of a Geiger counter for the measurement of X-ray intensities from small single crystals. H. T. Evans, jr. il R Sci Instr 24:156-61 F '53

Advertising

How dealers capitalize on your publicity; Detectron co. il Sales Management 69:27 D 1 '52

GELATIN

Gelatine and glue research. Chem Age (Lond) 67:787-8 D 13 '52

Inhibition of the gelation of gelatin by autoclaved gelatin. R. J. Goldberg. bibliog J Chem Phys 20:1816-17 N '52

Polarographic study of the effect of gelatin on the kinetics of irreversible electrode processes. J. E. Strassner and P. Delahay. bibliog Am Chem Soc J 74:6232-5 D 20 '52

Manufacture

Evaporator-dryer load-balance curve ups gelatin output; Atlantic gelatin division, General foods corp. F. Kramer and L. Garono. Food Eng 25:72 Ap '53

GELATION

Inhibition of the gelation of gelatin by autoclaved gelatin. R. J. Goldberg. bibliog J Chem Phys 20:1816-17 N '52

New organic amide gellator. P. N. Cheremisinoff and C. E. Hartwig. Paint Oil & Chem R 116:18 Ap 23 '53

Silica sols; accelerated gelation and particle size. S. Baxter and K. C. Bryant. Chem Soc J p3024-7 Ag '52

GELLERT, Nathan Henry, 1889-

Bringing natural gas into the Northwest; Gellert the gas man. pors Bsns W p 178-80+ O 25 '52

GELS. See Colloids

GELSEMINE

Alkaloids of gelsemium sempervirens. G. Jones and T. S. Stevens. Chem Soc J p2344-50 Ag '53

Gelsemine; the chemistry and rearrangements of spiroöxindoles. B. Witkop and J. B. Patrick. bibliog Am Chem Soc J 75:2572-6 Je 5 '53

GELSEMIUM

Alkaloids of gelsemium sempervirens. G. Jones and T. S. Stevens. Chem Soc J p2344-50 Ag '53

Minor alkaloids of gelsemium sempervirens. H. Schwarz and L. Marion. Am Chem Soc J 75:4372 S 5 '53

GEMS

List of Canadian gems and ornamental minerals. D. S. M. Field. Can Min J 74:82-3 Ap '53

More Canadian gemstones. D. S. M. Field. il Can Min J 73:86-8 N '52

See also

Diamonds

Titania (gem)

GENERAL agents and managers conference. See National association of life underwriters—General agents and managers conference

GENERAL agreement on tariffs and trade. See Commercial treaties and agreements

GENERAL American transportation corporation

Five unusual candidates for stock splits; with comparative balance sheet items. Mag of Wall St 92:90 Ap 18 '53

GENERAL aniline and film corporation

General Aniline accord report denied by OAP. Oil Paint & Drug Rep 164:3+ Ag 24 '53

Goings and comings at General Aniline. Fortune 47:49 My '53

Interhandle given three months to prop General Aniline claim. Oil Paint & Drug Rep 163:4 F 23 '53

Spoils of war; government's World war II seizure. R. M. Bleiberg. Barron's 33:5+ Ap 20 '53

GENERAL contract corporation

Stock offered. Comm & Fin Chr 177:2248 My 25 '53

GENERAL dynamics corporation

Convair control gets shuffled again. Bsns W p94-6+ My 2 '53

Odlum relinquishing control of Convair. Aviation W 58:13 Ap 6 '53

So they named it General Dynamics. il Fortune 47:134-7+ Ap '53

Translating visions and dreams into realities; studies in dynamic management. R. Colston. Mag of Wall St 92:246+ My 16 '53

GENERAL electric company

Are new products worth the trouble? Bsns W p 102-4 F 28 '53

Clarence H. Linder appointed vice president of engineering. Gen Elec R 56:6 S '53

General Electric insurance plan. East Underw 53:4 D 5 '52

G-E seeks conquest of bigness through fanned-out management. L. M. Hughes. Sales Management 69:24-7+ O 1 '52

General Electric's Appliance Park plant will be big, flexible and efficient. R. E. Linton and J. C. Nowell. il Eng N 150:32+ Je 25 '53

How to sell without salesmen. Bsns W p 142-3 Ap 18 '53

75 years of electrical progress; color illustrations. Gen Elec R 56:25-40, cover Mr '53

Telling a man he's promoted. il Bsns W p 186-8+ F 21 '53

Training for hard selling. il Bsns W p66+ Jl 4 '53

Research laboratory

Putting specks back into purity; symposium on impurity phenomena at General Electric research laboratory. il Bsns W p52+ Jl 18 '53

GENERAL electric review (periodical)

50 years of the General electric review; illustrations with text. Gen Elec R 56:42-3 Mr '53

GENERAL fireproofing company
Brisk business in 1953 seen. Barron's 32:19 O 27 '52

GENERAL gas corporation
Public utility securities. O. Ely. Comm & Fin Chr 177:1764 Ap 23 '53

GENERAL investment corporation
Stock offered. Comm & Fin Chr 176:2531 D 29 '52

GENERAL mills, inc.
Bell of General mills. Fortune 47:150-1 Ap '53
Putting directors on a salary. Bsns W p 136+ Mr 28 '53

GENERAL motors acceptance corporation
Big buyers out, and issue goes over. Bsns W p68 Je 20 '53
Debentures offered. Comm & Fin Chr 177:2568-9 Je 15 '53

GENERAL motors corporation
Auto contracts; an eye on the future. Bsns W p25 My 30 '53
Autos; selling cars with fanfare; GM's extravaganza is worthwhile seeing. R. D. Raddant. il Iron Age 171:42 Ja 22 '53
Du Pont and GM as the family saw them. Bsns W p77-8+ Mr 21 '53
GM air giant stirring again? S. Altschul. Aviation W 57:60+ O 27 '52
GM contest seeks road muddle solution; nationwide essay contest. Eng N 149:28 N 20 '52
General Motors' new boss. Bsns W p92-4+ Mr 21 '53
GM 1952 sales hit peak; net below '50 and '49. Automotive Ind 108:35 Ap 1 '53
GM regains its laurels. Bsns W p 132 Mr 21 '53
Industry's worst fire razes $75-million GM automatic transmission plant. il Am Mach 97:130-3 Ag 31 '53
Motorama at the Waldorf. il Bsns W p32-4 Ja 24 '53
Old highway hands win top prizes in contest. Eng N 150:21-2 Je 25 '53
Orientation and development of junior engineers. J. F. Gordon. J Eng Educ 43:316-21 Ja '53
Output by U.S. factories. Comm & Fin Chr 177:140, 1472 Ja 12, Ap 6 '53
Security I like best. A. G. Erpf. Comm & Fin Chr 176:2490 D 25 '52
Steel capacity in Detroit area. Bsns W p27 My 30 '53

GMC truck and coach division

GMC celebrates 30 years of bus building. il Bus Transportation 32:54-5 Jl '53

Overseas operations division

GMOODIE means co-operation; name of new stamping die alloy, developed by GM research for overseas operations. il Steel 132:75 Ap 20 '53

GENERAL motors institute of technology
Orientation and development of junior engineers. J. F. Gordon. J Eng Educ 43:316-21 Ja '53

GENERAL public service corporation
Offering to stockholders. Comm & Fin Chr 177:235-6 Ja 19 '53
Stock offered. Comm & Fin Chr 177:2455-6 Je 8 '53

GENERAL shoe corporation
General Shoe stepping out in aggressive expansion. Barron's 33:19 F 16 '53

GENERAL steel castings corporation
Security I like best. H. A. Boeckeler. Comm & Fin Chr 178:102 Jl 9 '53

GENERAL telephone corporation
Five outstanding investments for the future; with comparative balance sheet items. Mag of Wall St 92:332 Je 13 '53
Stock offered. Comm & Fin Chr 177:1153 Mr 16 '53

GENERATORS, Electric. See Electric generators

GENES
Autosynthesis. C. Hinshelwood. Chem Soc J p 1947-56 Je '53

GENETICS
Amateur scientist; on mouse genetics. A. G. Ingalls. diags Sci Am 187:84-6 D '52
See also
Chromosomes
Mutation (biology)

GENEVA stop
Half-revolution Geneva mechanism. H. Murro. diags Mach 59:193-7 Je '53
Modified Geneva drives and special mechanisms; drawings with text. S. Rappaport. Product Eng 24:174-5 F '53

GENISTIN
Some isoflavones derived from genistein. W. B. Whalley. bibliog Am Chem Soc J 75:1059-65 Mr 5 '52

GENOA

Harbor

Genoa gains stature as transit center. World Oil 136:258 Ja '53

GENTIOBIOSE
Determination of molecular weights of dextrans by means of alkaline copper reagents. H. S. Isbell and others. bibliog J Res Nat Bur Stand 50:81-6 F '53
Preparation of crystalline anhydrous β-gentiobiose. A. Thompson and M. L. Wolfrom. bibliog Am Chem Soc J 75:3605-6 Jl 20 '53

GEOCHEMISTRY
Geochemical prospecting finds widespread application in British Columbia. H. V. Warren and R. E. Delavault. il Min Eng 5:980-1 O '53
Effects of a primeval endowment of U^{236}. D. B. Rosenblatt. bibliog Phys R 91:1474-5 S 15 '53
Nitrous oxide, an interfering factor in geochemistry. R. L. Slobod. flow sheets diag Pet Eng 25:B 129+ My '53
Nonradiogenic isotopes in geology; a review. E. Ingerson. Geol Soc Bul 64:301-73 bibliog(p366-73) Mr '53
Review of physico-chemical data on the state of supercritical fluids. F. G. Smith. diags Econ Geol 48:14-38 bibliog(108 titles, p34-8) Ja '53
See also

Ore deposits	Rocks, Igneous
Rocks—Analysis	Soils

GEODYNAMICS
Dynamic basis of geomorphology. A. N. Strahler. bibliog Geol Soc Bul 63:923-38 S '52

GEOGRAPHY

Bibliography

Selected bibliography of Canadian geography with imprint, 1952. (Bibliog. ser. no. 10) 52 l Dept. of mines and technical surveys, Geographical branch, Ottawa, Canada '53

GEOGRAPHY, Medical. See Medical geography

GEOLOGICAL age. See Geological time

GEOLOGICAL association of Canada
Annual meeting, Toronto, March 8-11. Can Min J 74:79-81 Ap '53

GEOLOGICAL chemistry. See Geochemistry

GEOLOGICAL congress, International. See International geological congress

GEOLOGICAL maps
Method of reconnaissance geological survey. J. V. Harrison. il Am Assn Pet Geologists Bul 36:2040-3 O '52
Percentage of thinning chart; new technique in subsurface geology. A. H. Wadsworth, jr. map Am Assn Pet Geologists Bul 37:158-62 Ja '53; Same. Oil & Gas J 51:72-3 Mr 2 '53
See also
Isopachous maps

GEOLOGICAL research
Caribbean research project. H. H. Hess and J. C. Maxwell. bibliog maps Geol Soc Bul 64:1-6 Ja '53
Geological research and its practical application. J. E. Richey. Engineering 174:702-3, 738 N 28-D 5 '52

GEOLOGICAL society of America
Abstracts of papers at Cordilleran section and West Coast section of Paleontological society meeting, Tucson, April 11-12. Geol Soc Bul 63:1319-48 pt 2 D '52
Abstracts of papers at meeting, Boston, Nov. 13-15. Geol Soc Bul 63:1229-318 pt 2 D '52
Abstracts of papers at Rocky Mountain section meeting, Salt Lake City, May 8-10. Geol Soc Bul 63:1357-76 pt 2 D '52
Proceedings, annual meeting, 65th, Boston, Nov. 13-15. Geol Soc Proc 1952:1-16 Je '53

GEOLOGICAL surveys

See also

Canada—Geological survey

GEOLOGICAL time

Age of a Mid-Atlantic Ridge basalt boulder. D. R. Carr and J. L. Kulp. Geol Soc Bul 64:253-4 F '53

Branching ratio of potassium 40. R. D. Russell and others. bibliog Phys R 91:1223-4 S 1 '53

Dating of pluvial lakes in the Great basin. I. S. Allison. bibliog Am J Sci 250:907-9 D '52

Determination of the age of lepidolites by the method of isotope dilution. G. L. Davis and L. T. Aldrich. bibliog Geol Soc Bul 64:379-80 Mr '53

Effects of a primeval endowment of U^{236}. D. B. Rosenblatt. bibliog Phys R 91:1474-5 S 15 '53

K^{40} radioactive decay; its branching ratio and its use in geological age determinations. A. K. Mousuf. Phys R 88:150-1 O 1 '52

Method for determining the age of igneous rocks using the accessory minerals. E. S. Larsen, jr. and others. bibliog Geol Soc Bul 63:1045-52 O '52

New exploration tool; fossil pollen and spores used in new approach to determining age of rock formations. T. A. Armstrong. il Oil & Gas J 51:64-5 Mr 9 '53

Probable Illinoian age of part of the Missouri river, South Dakota. C. R. Warren. bibliog map diags Geol Soc Bul 63:1143-55 N '52

GEOLOGISTS, Petroleum

Petroleum geologist. M. J. Davis. World Oil 136:74+ Ap '53

Petroleum geologist; his contributions, activities, obligations, future. M. J. Davis. Oil & Gas J 51:165-8 Mr 30 '53

See also

Link, Walter K.

GEOLOGY

Abstracts of papers at Cordilleran section of Geological society of America and West Coast section of Paleontological society meeting, Tucson, April 11-12. Geol Soc Bul 63:1319-48 pt 2 D '52

Abstracts of papers at Geological society of America Section E, AAAS meeting, St Louis, Dec. 29-30. Geol Soc Bul 63:1377-88 pt 2 D '52

Society of economic geologists and the Geological society of America joint meeting, Boston, Nov. 13-15; abstracts of papers. Econ Geol 47:767-79 N '52

See also

Coal—Geology
Continental shelf
Continents
Correlation (geology)
Dikes (geology)
Drift
Faults (geology)
Gas, Natural—Geology
Geochemistry
Geophysics
Geosyncline
Glacial geology
Landslides
Metamorphism
Mines and mineral resources
Ocean
Ore deposits
Paleontology
Petroleum—Geology
Rocks
Rocks, Igneous
Salt domes
Sand
Sedimentation and deposition
Soils
Volcanoes
Water, Underground

Bibliography

Bibliography and index of geology exclusive of North America. M. Siegrist and others. v 17 621p Geological society of America, 419 W. 117th st, New York 27 '53 ($5.75)

Reviews of geologic literature; an innovation; N.R.C. committee on review articles in geology and geography. Geol Soc Bul 64:255-8 Mr '53

Congresses

See also

International geological congress, 19th

Tables, calculations, etc.

Table for computing thickness of strata measured in a traverse or encountered in a bore hole. H. Mandelbaum and J. T. Sanford. diags Geol Soc Bul 63:765-76 Ag '52

Terminology

Chemically pure geologese. D. McConnell. Econ Geol 47:759-60 N '52

Alabama

Reclassification of outcropping Tuscaloosa group in Alabama. C. W. Drennen. bibliog maps Am Assn Pet Geologists Bul 37:522-38 Mr '53

Alaska

Age of the Denbigh flint complex. D. M. Hopkins. bibliog Science 116:513 N 7 '52

Differentiation of a composite aplite from the Pribilof islands, Alaska. T. F. W. Barth. bibliog map Am J Sci Bowen vol p27-36 '52

Aleutian Islands

Geology of Buldir Island, Aleutian Islands, Alaska. R. R. Coats. bibliog maps U S Geol S Bul 989-A:1-26, pl 1-2; pa 25c Supt. of doc. '53

Arctic regions

See also

Geology—Canadian Arctic Archipelago

Arizona

Chlorite-calcite pseudomorphs after orthoclase phenocrysts, Ray, Ariz. G. M. Schwartz. bibliog Econ Geol 47:665-72 S '52

Geology of the Chloride quadrangle, Arizona. B. E. Thomas. bibliog fold map(pl 1) maps diags Geol Soc Bul 64:391-420 Ap '53

Arkansas

Petrography and metamorphism of sediments of Ouachita facies. A. Goldstein, jr. and D. H. Reno. il maps diags Am Assn Pet Geologists Bul 36:2275-90 D '52

Australia

Uranium-copper deposits, Rum Jungle, Australia. C. J. Sullivan and R. S. Matheson. il maps diags Econ Geol 47:751-8 N '52

Brazil

Geology and oil fields of Brazil. E. F. Taylor. bibliog maps diag Am Assn Pet Geologists Bul 36:1613-26 Ag '52

British Columbia

Late quaternary geology and frost phenomena along Alaska highway, northern British Columbia and southeastern Yukon. C. S. Denny. maps diags Geol Soc Bul 63:883-921, pl 1-12 bibliog(p920-1) S '52

California

Continental shelf sediments of southern California. K. O. Emery. bibliog Geol Soc Bul 63:1105-7, pl 1 N '52

Probable large lateral displacement on San Gabriel fault, southern California. J. C. Crowell. bibliog il maps Am Assn Pet Geologists Bul 36:2026-35 O '52

San Andreas, Garlock, and Big Pine faults, California. M. L. Hill and T. W. Dibblee, jr. bibliog maps diags Geol Soc Bul 64:443-58, pl 1-4 Ap '53

Canada

Canadian geological abstracts. Can Min J 74:100+ Mr '53

Canadian Arctic Archipelago

Problem of glaciation in the western islands of Arctic Canada. J. L. Jenness. bibliog maps Geol Soc Bul 63:939-51, pl 1-4 S '52

Caribbean region

Caribbean research project. H. H. Hess and J. C. Maxwell. bibliog maps Geol Soc Bul 64:1-6 Ja '53

Colorado

Geologic guides to prospecting for carnotite deposits on Colorado plateau. D. B. Weir. bibliog maps diag U S Geol S Bul 988-B:15-27; pa 15¢ Supt. of doc. '52

Geology of the Thomasville-Woods Lake area, Eagle and Pitkin counties, Colorado. I. H. Mackay. il maps Colorado School of Mines [Golden] Quarterly v 48 no 4:1-76, pl 1-5 bibliog(p75-6) O '53 (pa $1)

GEOLOGY—Colorado—*Continued*

Geology of the Uravan mineral belt; contributions to the geology of uranium, 1952. R. P. Fischer and L. S. Hilpert. maps U S Geol S Bul 988-A:1-13, pl 1-3[in pocket]; pa 35¢ Supt. of doc. '52

Lower cretaceous in Colorado plateau. W. L. Stokes. bibliog maps diag Am Assn Pet Geologists Bul 36:1766-76 S '52

Stratigraphy in the Permo-Pennsylvanian zeugogeosyncline of Colorado and northern New Mexico. K. G. Brill, jr. maps Geol Soc Bul 63:809-80, pl 1-3 bibliog(p879-80) Ag '52

Structure and origin of northern Sangre de Cristo range, Colorado. J. W. Gabelman. il maps diags Am Assn Pet Geologists Bul 36:1574-612 bibliog(p 1611-12) Ag '52

Egypt

Biostratigraphy of the Maqfi section, Egypt. L. W. LeRoy. (Memoir 54) 73p, 13pls bibliog(p54-8) Geological soc. of America, 419 W. 117th st, New York 27 '53

Florida

Sedimentary volumes in Gulf coastal plain of the United States and Mexico; volume of cenozoic sediments in Florida and Georgia. L. D. Toulmin. bibliog maps Geol Soc Bul 63:1165-75, pl 1 D '52

Sedimentary volumes in Gulf coastal plain of the United States and Mexico; volume of mesozoic sediments in Florida and Georgia. P. L. Applin. maps Geol Soc Bul 63:1159-63 D '52

France

Megabreccia formed by sliding in southern France. O. J. Koop. map diag Am J Sci 250:822-8, pl 1-2 N '52

Georgia

Sedimentary volumes in Gulf coastal plain of the United States and Mexico; volume of cenozoic sediments in Florida and Georgia. L. D. Toulmin. bibliog maps Geol Soc Bul 62:1165-75, pl 1 D '52

Sedimentary volumes in Gulf coastal plain of the United States and Mexico; volume of mesozoic sediments in Florida and Georgia. P. L. Applin. maps Geol Soc Bul 63:1159-63 D '52

Great basin

Revision of stratigraphic units in Great basin. map Am Assn Pet Geologists Bul 37:143-51 bibliog(p 150-1) Ja '53

Gulf Coast region

Geology of the Gulf coast. maps diag Oil & Gas J 52:249-51+ Je 22 '53

Sedimentary volumes in Gulf coastal plain of United States and Mexico. G. E. Murray and others. bibliog 8pls maps diags Geol Soc Bul 63:1157-228 D '52

Iceland

Volcanic geology, hot springs, and geysers of Iceland, by T. F. W. Barth. Review, by M. S. Walton, jr. bibliog Am J Sci 250:910-15 D '52

Idaho

Geology and mineralization of the Volcano district, Elmore county, Idaho. R. M. Allen, jr. bibliog maps Econ Geol 47:815-21 D '52

Illinois

Geology and mineral resources of the Hardin and Brussels quadrangles (in Illinois). W. W. Rubey. bibliog maps diags U S Geol S Professional Pa 218:1-179, pl 1-21; pa $2.25 Supt. of doc. '52

Lithologic character of Chester rocks in Illinois-Kentucky fluorspar district. A. H. Sutton and W. A. Oesterling. map diags Am Assn Pet Geologists Bul 36:1777-801 S '52

See also

Water, Underground
—Illinois

India

Structure and origin of the banded hematite jaspers of Singhbhum, India. E. Spencer and F. G. Percival. bibliog il Econ Geol 47:365-83 Je '52; Discussion. J. A. Dunn. 48:58-62 Ja '53

Labrador

Role of geologists in the development of the Labrador-Quebec iron ore districts. J. K. Gustafson and A. E. Moss. bibliog il maps diag Min Eng 5:Trans 593-602 Je '53; Same. Can Min J 74:61-8 Je '53

Lapland

Granulites of Lapland. P. Eskola. il map Am J Sci Bowen vol p 133-71 bibliog(p 170-1) '52

Mexico

Geology of the quicksilver deposits of Canoas, Zacatecas, Mexico. D. Gallagher. map diag U S Geol S Bul 975-B:47-85, pl 7-11[in pocket]; pa $1.00 Supt. of doc. '52

Sedimentary volumes in Gulf coastal plain of the United States and Mexico; volume of mesozoic and cenozoic sediments in Mexican Gulf coastal plain. E. J. Guzmán. bibliog maps Geol Soc Bul 63:1201-20 D '52

University of Michigan geological field work in Mexico. L. B. Kellum. Science 117:114 Ja 30 '53

See also

Water, Underground
—Mexico

Minnesota

Morton granite gneiss. E. H. Lund. il map Econ Geol 48:46-52 Ja '53

Shorelines of the glacial Great Lakes in Cook county, Minn. R. P. Sharp. bibliog maps diags Am J Sci 251:109-39, pl 1-2 F '53

Missouri

Structural environments of the lead deposits in the southeastern Missouri mining district. J. A. James. maps diag Econ Geol 47:650-60 S '52

Montana

Beaverhead formation, a Laramide deposit in Beaverhead county, Montana. W. R. Lowell and M. R. Klepper. bibliog maps Geol Soc Bul 64:235-43, pl 1-2 F '53

Eastern front of the Bitterroot range, Montana. C. P. Ross. il map diag U S Geol S Bul 974-E:135-75, pl 4[in pocket] bibliog (p 173-4); pa $1.00 Supt. of doc. '52

Fox Hills and Hell Creek strata in the Bearpaw mountains, Mont. Science 117:39-40 Ja 9 '53

Geology of the Canyon Ferry Quadrangle, Mont. J. B. Mertie, jr. and others. bibliog maps U S Geol S Bul 972:1-97, pl 1-2; pa 75c Supt. of doc. '51

Pegmatite layer in the Shonkin Sag laccolith, Montana. J. D. Barksdale. bibliog maps diags Am J Sci 250:705-20, pl 1-4 O '52

Stratigraphic details of lower Mississippian rocks of northeastern Utah and southwestern Montana. F. D. Holland, jr. il maps diags Am Assn Pet Geologists Bul 36:1697-734 bibliog(p 1732-4) S '52

Nevada

Uranium in the East Walker River area, Lyon county, Nevada. M. H. Staatz and H. L. Bauer, jr. map plan U S Geol S Bul 988-C:29-43, pl 4-7[in pocket]; pa 35c Supt. of doc. '53

New Jersey

Critical analysis of cretaceous stratigraphy and paleobotany of Atlantic coastal plain. E. Dorf. bibliog Am Assn Pet Geologists Bul 36:2161-84 N '52

Stratigraphy of coastal plain of New Jersey. M. E. Johnson and H. G. Richards. bibliog Am Assn Pet Geologists Bul 36:2150-60 N '52

New Mexico

Gym limestone, New Mexico. V. C. Kelley and L. E. Bogart. bibliog Am Assn Pet Geologists Bul 36:1644-8 Ag '52

Stratigraphy in the Permo-Pennsylvanian zeugogeosyncline of Colorado and northern New Mexico. K. G. Brill, jr. maps Geol Soc Bul 63:809-80, pl 1-3 bibliog(p879-80) Ag '52

Tertiary geology of the Galisteo-Tonque area, New Mexico. C. E. Stearns. maps diags Geol Soc Bul 64:459-507, pl 1-3 bibliog(p506-7) Ap '53

GEOLOGY—New Mexico—*Continued*

Uranium deposits of the Grants District, New Mexico. C. C. Towle and I. Rapaport. il map Min Eng 4:1037-40 N '52

New York (state)

Drift dispersion in west-central New York. C. D. Holmes. bibliog maps Geol Soc Bul 63:993-1010 O '52

Gravity and magnetic investigation of the structure of the Cortlandt complex, New York. N. C. Steenland and G. P. Woollard. bibliog maps diags Geol Soc Bul 63:1075-104 N '52

New Zealand

Gefügerelief illustrated by schist tor topography in central Otago, New Zealand. F. J. Turner. bibliog map Am J Sci 250:802-7, pl 1-2 N '52

Hydrothermal rock alteration at Wairakei, New Zealand. A. Steiner. bibliog il map diag Econ Geol 48:1-13 Ja '53

Nigeria

Preliminary description of the Nigerian lead-zinc field. J. L. Farrington, bibliog map diag Econ Geol 47:583-608 S '52

North America

Correlation of the Jurassic formations of North America, exclusive of Canada. R. W. Imlay. maps Geol Soc Bul 63:953-92 bibliog(p986-92) S '52

Regional stratigraphic analysis of middle and upper marine Jurassic in northern Rocky mountains-Great Plains. G. T. Schmitt. maps diags Am Assn Pet Geologists Bul 37:355-93 bibliog(p392-3) F '53

North Carolina

Granitic rocks of the western Carolina Piedmont. W. R. Griffitts and W. C. Overstreet. bibliog map Am J Sci 250:777-89 N '52

Oklahoma

Odd geologic structures of southern Oklahoma. C. W. Tomlinson. il maps diags Am Assn Pet Geologists Bul 36:1820-40 S '52; Same. World Oil 135:103-4+ D '52; 136: 90-2+ Ja '53

Pennsylvanian cross sections of central Oklahoma. diags World Oil 136:83-5 F '53

Petrography and metamorphism of sediments of Ouachita facies. A. Goldstein, jr. and D. H. Reno. il maps diags Am Assn Pet Geologists Bul 36:2275-90 D '52

Siliceous sediments of Ouachita facies in Oklahoma. A. Goldstein, jr. and T. A. Hendricks. bibliog map diag Geol Soc Bul 64: 421-41, pl 1-4 Ap '53

Sylvan graptolites in northeastern Oklahoma. C. E. Decker and G. G. Huffman. diag Am Assn Pet Geologists Bul 37:451-2 F '53

Sylvan shale in northeastern Oklahoma. G. G. Huffman. bilbliog il map Am Assn Pet Geologists Bul 37:447-50 F '53

Oregon

Dating of pluvial lakes in the Great basin. I. S. Allison. bibliog Am J Sci 250:907-9 D '52

Geology and coal deposits in part of the Coos Bay coal field, Oregon. D. C. Duncan. bibliog maps diag U S Geol S Bul 982-B:53-73, pl 4-7[in pocket]; pa 60c Supt. of doc. '53

Peru

Mid-Oligocene transgression in southern Peru. R. M. Stainforth and W. Rüegg. Am Assn Pet Geologists Bul 37:568-9 Mr '53

Puerto Rico

Tertiary boulders in the cretaceous of Puerto Rico. R. C. Mitchell. bibliog map Science 116:418-20 O 17 '52

Quebec (province)

Geology of the country bordering the southern section of Quebec north shore and Labrador railway. P. E. Grenier. bibliog il map Can Min J 74:76-81 My '53

Role of geologists in the development of the Labrador-Quebec iron ore districts. J. K. Gustafson and A. E. Moss. bibliog il maps diag Min Eng 5:Trans 593-602 Je '53; Same. Can Min J 74:61-8 Je '53

Rhode Island

Pleistocene clastic dikes in weathered granite-gneiss, Rhode Island. J. H. Birman. bibliog maps diags Am J Sci 250:721-34. pl 1 O '52

Rocky Mountain region

Pleistocene field conference, 1st, Rocky Mountain national park, Oct. 4-5. Science 117: 177-8 F 20 '53

South Carolina

Tertiary stratigraphy of South Carolina. C. W. Cooke and F. S. MacNeil. bibliog U S Geol S Professional Pa 243-B:19-29 pa 15¢ Supt. of doc. '52

South Dakota

Origin of Crow Creek member of Pierre shale in central South Dakota. D. R. Crandell. bibliog il map Am Assn Pet Geologists Bul 36:1754-65 S '52

Probable Illinoian age of part of the Missouri river, South Dakota. C. R. Warren. bibliog map diags Geol Soc Bul 63:1143-55 N '52

Southwestern states

Arroyos. S. Judson. il diags Sci Am 187:71-4+ D '52; Discussion. J. L. Gardner. 188:4 F '53

Texas

Geology of Agua Fria quadrangle, Brewster county, Texas. C. G. Moon. bibliog maps diag Geol Soc Bul 64:151-95, pl 1-4 F '53

Salt-ridge hypothesis on origin of Texas Gulf Coast type of faulting. M. Quarles, jr. diags Am Assn Pet Geologist Bul 37:489-508 Mr '53

Sedimentary volumes in Gulf coastal plain of the United States and Mexico; volume of mesozoic and cenozoic sediments in western Gulf coastal plain of United States. J. Colle and others. maps Geol Soc Bul 63:1193-9, pl 1-3 D '52

Tectonics of central Texas. M. G. Cheney and L. F. Goss. maps Am Assn Pet Geologists Bul 36:2237-65 bibliog(p2263-5) D '52

Twinning frequency in feldspar phenocrysts from a quartz latite sill at Sierra Blanca, Tex. E. Ingerson. il maps Am J Sci Bowen vol p 189-202 '52

Utah

Evidence for variable vertical movement in central Utah. C. T. Hardy. map diag Geol Soc Bul 64:245-7 F '53

Glaciation and drainage changes in the Fish Lake plateau, Utah. C. T. Hardy and S. Muessig. bibliog maps Geol Soc Bul 63: 1109-16, pl 1-3 N '52

Pre-North Horn oregeny in Gunnison plateau, Utah. B. H. Burma and C. T. Hardy. maps Am Assn Pet Geologists Bul 37:549-53 Mr '53

Review of the geology and activities in the Uinta basin. A. M. Current. fold maps[in pocket] Colorado School of Mines [Golden] Quarterly 48 no 3:1-36 '53 (pa 50c)

Stratigraphic details of lower Mississippian rocks of northeastern Utah and southwestern Montana. F. D. Holland, jr. il maps diags Am Assn Pet Geologists Bul 36: 1697-734 bibliog(p 1732-4) S '52

Supergene and hydrothermal dispersion of heavy metals in wall rocks near ore bodies, Tintic district, Utah. H. T. Morris and T. S. Lovering. bibliog maps Econ Geol 47: 685-716 N '52

Venezuela

Case history of Quiriquire field, Venezuela. H. D. Borger. il maps diags Am Assn Pet Geologists Bul 36:2291-330 D '52

Geology of the Caracas region, Venezuela. G. Dengo. maps diag Geol Soc Bul 64:7-39, pl 1 bibliog(p37-9) Ja '53

Geology of the Los Teques-Cua region, Venezuela. R. J. Smith. bibliog maps diag Geol Soc Bul 64:41-64, pl 1-3 Ja '53

GEOLOGY—Venezuela—*Continued*

Sedimentary trends, Colorado member of Oficina formation, San Roque, Anzoategui, Venezuela. R. Passega. map diag Am Assn Pet Geologists Bul 37:331-9 F '53

West Indies

Geology of St Bartholomew, St Martin, and Anguilla, Lesser Antilles. R. A. Christman. bibliog maps Geol Soc Bul 64:65-96, pl 1-4 Ja '53

West Virginia

Lower middle Devonian meta-bentonite in West Virginia. R. R. Flowers. map Am Assn Pet Geologists Bul 36:2036-8 O '52

Western states

Correlation of the cretaceous formations of the western interior of the United States. W. A. Cobban and J. B. Reeside, jr. 2pls maps Geol Soc Bul 63:1011-43 bibliog(372 titles, p 1034-43) O '52

Wisconsin

Petrology of the Cary and Valders tills of northeastern Wisconsin. R. C. Murray. bibliog maps Am J Sci 251:140-55 F '53

Wyoming

Age of the Bear River formation, Wyoming. T. Yen. bibliog Geol Soc Bul 63:757-63 Ag '52

Frontier formation, southwest Powder River basin, Wyo. D. Towse. bibliog maps diags Am Assn Pet Geologists Bul 36:1962-2010 O '52

Frontier formation, Wyoming and adjacent areas. W. A. Cobban and J. B. Reeside, jr. bibliog map diags Am Assn Pet Geologists Bul 36:1913-61 O '52

Yukon

Late quaternary geology and frost phenomena along Alaska highway, northern British Columbia and southeastern Yukon. C. S. Denny. maps diags Geol Soc Bul 63: 883-921, pl 1-12 bibliog(p920-1) S '52

GEOLOGY, Stratigraphic

Percentage of thinning chart; new technique in subsurface geology. A. H. Wadsworth, jr. map Am Assn Pet Geologists Bul 37: 158-62 Ja '53; Same. Oil & Gas J 51:72-3 Mr 2 '53

Regional subsurface geology of the Midland basin. G. F. Warn and others. bibliog diag Oil & Gas J 51:113-14+ O 20 '52

Stratigraphic trap possibilities; Anadarko basin. C. A. Moore. bibliog il maps diags Pet Eng 24:B7-12+ N '52

Use of thermoluminescence of limestones in sub-surface stratigraphy. J. M. Parks, jr. bibliog map diags Am Assn Pet Geologists Bul 37:125-42 Ja '53

Williston basin, new province for oil exploration. T. R. Barnes. maps diags Am Assn Pet Geologists Bul 37:340-54 F '53

See also
Geology—Great basin

Nomenclature

Official report of round table conference on stratigraphic nomenclature at 3d Congress of carboniferous stratigraphy and geology, Heerlen, Netherlands, June 26-28, 1951. Am Assn Pet Geologists Bul 36:2044-8 O '52

Report; nature, usage, and nomenclature of time-stratigraphic and geologic-time units; American commission on stratigraphic nomenclature. Am Assn Pet Geologists Bul 36:1627-38 Ag '52

Terminology

Devonian names and correlation in Williston Basin area. A. D. Baillie. diag Am Assn Pet Geologists Bul 37:444-7 F '53

Terminology for stratification and cross-stratification in sedimentary rocks. E. D. McKee and G. W. Weir. bibliog diags Geol Soc Bul 64:381-9 Ap '53

Carboniferous

Stratigraphy in the Permo-Pennsylvanian zeugogeosyncline of Colorado and northern New Mexico. K. G. Brill, jr. maps Geol Soc Bul 63:809-80, pl 1-3 bibliog(p879-80) Ag '52

Cenozoic

Sedimentary volumes in Gulf coastal plain of the United States and Mexico; volume of cenozoic sediments in Florida and Georgia. L. D. Toulmin. bibliog maps Geol Soc Bul 63:1165-75, pl 1 D '52

Sedimentary volumes in Gulf coastal plain of the United States and Mexico; volume of mesozoic and cenozoic sediments in central Gulf coastal plain of United States. G. E. Murray. maps Geol Soc Bul 63:1177-91, pl 1-4 bibliog(p1190-1) D '52

Sedimentary volumes in Gulf coastal plain of the United States and Mexico; volume of mesozoic and cenozoic sediments in Mexican Gulf coastal plain. E. J. Guzmán. bibliog maps Geol Soc Bul 63:1201-20 D '52

Sedimentary volumes in Gulf coastal plain of the United States and Mexico; volume of mesozoic and cenozoic sediments in western Gulf coastal plain of United States. J. Colle and others. maps Geol Soc Bul 63: 1193-9, pl 1-3 D '52

Cretaceous

Age of the Bear River formation, Wyoming. T. Yen. bibliog Geol Soc Bul 63:757-63 Ag '52

Basal lower cretaceous accumulations in Alberta with special reference to the Campbell pool. P. Klaui. maps Pet Eng 25:B6-10 F '53

Correlation of the cretaceous formations of the western interior of the United States. 2pls maps Geol Soc Bul 63:1011-43 bibliog(372 titles, p 1034-43) O '52

Critical analysis of cretaceous stratigraphy and paleobotany of Atlantic coastal plain. E. Dorf. bibliog Am Assn Pet Geologists Bul 36:2161-84 N '52

Lower cretaceous in Colorado plateau. W. L. Stokes. bibliog maps diag Am Assn Pet Geologists Bul 36:1766-76 S '52

Reclassification of outcropping Tuscaloosa group in Alabama. C. W. Drennen. bibliog maps Am Assn Pet Geologist Bul 37:522-38 Mr '53

Tertiary boulders in the cretaceous of Puerto Rico. R. C. Mitchell. bibliog map Science 116:418-20 O 17 '52

Devonian

Devonian names and correlation in Williston Basin area. A. D. Baillie. diag Am Assn Pet Geologists Bul 37:444-7 F '53

Lower middle Devonian meta-bentonite in West Virginia. R. R. Flowers. map Am Assn Pet Geologists Bul 36:2036-8 O '52

Relationship of natural gas occurrence and production in eastern Kentucky (Big Sandy gas field) to joints and fractures in Devonian bituminous shale. C. D. Hunter and D. M. Young. il maps diags Am Assn Pet Geologists Bul 37:282-99 F '53

Eocene

Eocene foraminifera from Guam, and their implications. P. E. Cloud, jr. and W. S. Cole. bibliog map Science 117:323-4 Mr 27 '53

Jurassic

Correlation of the Jurassic formations of North America, exclusive of Canada. R. W. Imlay. maps Geol Soc Bul 63:953-92 bibliog(p986-92) S '52

Regional stratigraphic analysis of middle and upper marine Jurassic in northern Rocky mountains-Great Plains. G. T. Schmitt. maps diags Am Assn Pet Geologists Bul 37:355-93 bibliog(p392-3) F '53

See also
Preuss sandstone

Mesozoic

Sedimentary volumes in Gulf coastal plain of the United States and Mexico; volume of mesozoic and cenozoic sediments in central Gulf coastal plain of United States. G. E. Murray. maps Geol Soc Bul 63:1177-91, pl 1-4 bibliog(p1190-1) D '52

Sedimentary volumes in Gulf coastal plain of the United States and Mexico; volume of mesozoic and cenozoic sediments in Mexican Gulf coastal plain. E. J. Guzmán. bibliog maps Geol Soc Bul 63:1201-20 D '52

GEOLOGY, Stratigraphic—Mesozoic—*Cont.*

Sedimentary volumes in Gulf coastal plain of the United States and Mexico; volume of mesozoic and cenozoic sediments in western Gulf coastal plain of United States. J. Colle and others. Geol Soc Bul 63:1193-9, pl 1-3 D '52

Sedimentary volumes in Gulf coastal plain of the United States and Mexico; volume of mesozoic sediments in Florida and Georgia. P. L. Applin. maps Geol Soc Bul 63:1159-63 D '52

Mississippian

Stratigraphic details of lower Mississippian rocks of northeastern Utah and southwestern Montana. F. D. Holland, jr. il maps diags Am Assn Pet Geologists Bul 36:1697-734 bibliog(p 1732-4) S '52

Paleozoic

Paleozoic beds south and east of Ouachita folded belt. H. J. Morgan, jr. map diags Am Assn Pet Geologists Bul 36:2266-74 D '52

Permian

Phosphatic rocks in the Deer Creek-Wells Canyon area, Idaho. W. R. Lowell. il map U S Geol S Bul 982-A:1-52, pl 1-3[in pocket] bibliog(p49-51); pa 45¢ Supt. of doc. '52

Pleistocene

Pleistocene clastic dikes in weathered granite-gneiss, Rhode Island. J. H. Birman. bibliog maps diags Am J Sci 250:721-34, pl 1 O '52

Pleistocene corals at Lake Worth, Florida. C. W. Cooke. Science 117:440 Ap 17 '53

Pleistocene field conference, 1st, Rocky Mountain national park, Oct. 4-5. Science 117:177-8 F 20 '53

Pre-Cambrian

Oil production from fractured pre-Cambrian basement rocks in central Kansas. R. F. Walters. bibliog il map diags Am Assn Pet Geologists Bul 37:300-13; Discussion. 314-30 F '53

Quaternary

Late quaternary geology and frost phenomena along Alaska highway, northern British Columbia and southeastern Yukon. C. S. Denny. maps diags Geol Soc Bul 63:883-921, pl 1-12 bibliog(p920-1) S '52

Tertiary

Tertiary geology of the Galisteo-Tonque area, New Mexico. C. E. Stearns. maps diags Geol Soc Bul 64:459-507, pl 1-3 bibliog(p506-7) Ap '53

Tertiary stratigraphy of South Carolina. C. W. Cooke and F. S. MacNeil. bibliog U S Geol S Professional Pa 243-B:19-29 pa 15¢ Supt. of doc. '52

GEOMAGNETISM. See Magnetism, Terrestrial

GEOMETRICAL optics. See Optics, Geometrical

GEOPHYSICAL instruments

Analog computer for rapid computation of potential-field data. S. Kaufman. il diags Instruments 26:120-4 Ja '53; Same. Electronics 26:174-7 Je '53

Instrumentation for geophysical exploration. D. H. Clewell and others. il diags R Sci Instr 24:243-66 Ap '53

Practical application of applied geophysics to utility operations. G. M. MacLeod. il Munic Util 91:17-18 Mr '53

RC memory commutator for signal-to-noise improvement. C. I. Beard and E. N. Skomal. il diags R Sci Instr 24:276-80 Ap '53

Role of electronics in geophysical instrumentation. F. F. Segesman. diag Oil & Gas J 51:152+ O 20 '52

Testing

Seismic proving ground; laboratory put parts through tough service conditions. J. A. Kornfeld. il Oil & Gas J 51:126 N 3 '52

GEOPHYSICAL laboratory. See Carnegie institution of Washington—Geophysical laboratory

GEOPHYSICS

Application of high pressure in geophysics; experimental rock deformation. J. Handin. bibliog il diags A S M E Trans 75:315-24 Ap '53

Examination of the physics of theories of orogenesis. A. E. Scheidegger. diags Geol Soc Bul 64:127-50 bibliog(p 149-50) F '53

Geophysics for the layman. P. C. Ingalls. diags Oil & Gas J 52:285 My 25 '53

Love waves in a homogeneous crust laid upon heterogeneous medium. S. C. Das Gupta. J Ap Phys 23:1276-7 N '52

Sedimentary volumes in Gulf coastal plain of the United States and Mexico; geophysical aspects. L. L. Nettleton. bibliog map diags Geol Soc Bul 63:1221-8 D '52

Seismic refraction measurements in the Atlantic ocean; Bermuda, Bermuda rise, and Nares basin. C. B. Officer and others. maps diags Geol Soc Bul 63:777-808, pl 1-4 bibliog(p807-8) Ag '52

Wavefront charts and raypath plotters. A. W. Musgrave. il diags Colorado School of Mines [Golden] Quarterly 47:1-60 [fold charts in pocket] bibliog(p59-60) O '52 (pa $1)

See also

Auroras
Earth—Internal structures
Earthquakes
Geodynamics
Geophysical instruments
Magnetism, Terrestrial
Petroleum—Prospecting—Geophysical methods
Prospecting—Geophysical methods
Rocks, Igneous
Sedimentation and deposition
Water, Underground
Waves

Bibliography

Geophysical abstracts 148, Jan.-March 1952 (numbers 13284-13547). M. C. Rabbitt and S. T. Vesselowsky. U S Geol S Bul 991-A:1-73; pa 25c Supt. of doc. '52

Geophysical abstracts 149, April-June 1952 (numbers 13548-13802). M. C. Rabbitt and S. T. Vesselowsky. U S Geol S Bul 991-B:75-143; pa 25c Supt. of doc. '52

Geophysical abstracts 150, July-September, 1952 (numbers 13803-14003). M. C. Rabbitt and S. T. Vesselowsky. U S Geol S Bul 991-C:145-94; pa 25c Supt. of doc. '52

Geophysical abstracts 151, Oct.-Dec. 1952 (numbers 14004-14183). M. C. Rabbitt and S. T. Vesselowsky. U S Geol S Bul 991-D:195-287; pa 25c Supt. of doc. '53

GEORGIA

See also

Forests and forestry—Georgia
Poultry industry and trade—Georgia
Roads—Georgia

GEORGIA power company

Bonds and preferred stock offered. Comm & Fin Chr 177:1368 Mr 30 '53

GEORGIA university

University of Georgia's executive development program. il Manuf Rec 122:44-5 Ag '53

GEOSYNCLINE

Stratigraphy in the Permo-Pennsylvanian zeugogeosyncline of Colorado and northern New Mexico. K. G. Brill, jr. maps Geol Soc Bul 63:809-80, pl 1-3 bibliog(p879-80) Ag '52

GERBER products company

Earnings making notable recovery. Barron's 32:21-2 D 8 '52

GERMAN abbreviations. See Abbreviations, German

GERMAN language

See also

Abbreviations, German

Dictionaries

Library terms; Englisch-Deutsch und Deutsch-Englisch. O. Gross. 163p $1.80 Verlag Eberhard Stichnote, Hamburg '52

GERMANE

Tetraalkoxygermanes. O. H. Johnson and H. E. Fritz. Am Chem Soc J 75:718-20 F 5 '53

GERMANIC acid

Heat of oxidation of germanous iodide to germanic acid. W. L. Jolly and W. M. Latimer. bibliog Am Chem Soc J 74:5752-4 N 20 '52

GERMANICOL

Chemistry of the triterpenes; the conversion of lupeol into germanicol (*iso*-lupeol); the structure of lupeol hydrochloride. T. G. Halsall, E. R. H. Jones and G. D. Meakins. Chem Soc J p2862-7 Jl '52

GERMANIDES

Superconducting silicides and germanides. G. F. Hardy and J. K. Hulm. Phys R 89:884 F 15 '53

GERMANIUM

Absorption of infrared light by free carriers in germanium. H. B. Briggs and R. C. Fletcher. bibliog il diag Phys R 91:1342-6 S 15 '53

Acceptors produced in germanium by quenching from high temperatures. C. Goldberg. diag Phys R 88:920-4 N 15 '52

Activation energy of heat treatment introduced lattice defects in germanium. R. M. Baum and C. S. Hung. bibliog Phys R 88:134-5 O 1 '52

Atomic heat of germanium below 4° K. P. H. Keesom and N. Pearlman. bibliog diag Phys R 91:1347-53 S 15 '53

British producing germanium from flue dust. J. A. Gay. Min Eng 5:782 Ag '53

Chemistry of bivalent germanium compounds; the polarographic behaviour of bivalent germanium. D. A. Everest. Chem Soc J p660-2 F '53

Cp-Cv in silicon and germanium. M. E. Fine. bibliog J Chem Phys 21:1427 Ag '53

Developmental germanium *p-n-p* junction transistor. R. R. Law and others. bibliog il Inst Radio Eng Proc 40:1352-7 N '52

Diffusion of lithium into germanium and silicon. C. S. Fuller and J. A. Ditzenberger. bibliog Phys R 91:193 Jl 1 '53

Dislocations in lineage boundaries in germanium. F. L. Vogel and others. il Phys R 90:489-90 My 1 '53

Effect of transit time on Ge rectifier behavior. R. Bray and B. R. Gossick. bibliog Phys R 91:1011-12 Ag 15 '53

Electrical conductivity of mechanically disturbed germanium surfaces. E. N. Clarke and R. L. Hopkins. bibliog Phys R 91:1566-7 S 15 '53

Electron multiplication in silicon and germanium. K. G. McKay and K. B. McAfee. bibliog Phys R 91:1079-84 S 1 '53

Electronic states in crystals under large over-all perturbations. P. Feuer. bibliog diag Phys R 88:92-100 O 1 '52

Electronic structure of the germanium crystal. F. Herman and J. Callaway. Phys R 89:518-19 Ja 15 '53

Equilibrium $Ge(s)+GeO_2(s)=2GeO(g)$; the heat of formation of germanic oxide. W. L. Jolly and W. M. Latimer. bibliog Am Chem Soc J 74:5757-8 N 20 '52

Evaporated point contact rectifiers. E. G. Roka and others. diag J Ap Phys 24:228-9 F '53

Evaporation of copper from germanium. G. Finn. Phys R 91:754-5 Ag 1 '53

Experimental confirmation of relation between pulse drift mobility and charge carrier drift mobility in germanium. M. B. Prince. Phys R 91:271-2 Jl 15 '53

Experimental verification of the relationship between diffusion constant and mobility of electrons and holes. Phys R 88:1368-9 D 15 '52

Fused impurity *p-n-p* junction transistors. J. S. Saby. bibliog il Inst Radio Eng Proc 40:1358-60 N '52

Germanium. L. Sanderson. Can Min J 74:81-2 My '53

Germanium and its inorganic compounds. O. H. Johnson. Chem R 51:431-69 bibliog(p464-9) D '52

Germanium and other elements in coal and the possibility of their recovery. A. J. W. Headlee. bibliog maps Min Eng 5:Trans 1011-14 O '53

Germanium diode as video detector. W. B. Whalley and others. diags Inst Radio Eng Proc 41:638-44 My '53

Germanium for electrical purposes. A. G. Thomson. Elec R (Lond) 152:39-41 Ja 2 '53

Germanium found in coal seams. Manuf Rec 122:31 Ja '53

Germanium melting furnace. il Electronics 26:278+ My '53

Germanium photodiodes read computer tapes. L. Packer and W. J. Wray, jr. il diags Electronics 25:150-1 N '52

Germanium, produced as a byproduct, has become of primary importance. A. P. Thompson and J. R. Musgrave. bibliog flow sheets il J Metals 4:1132-7 N '52; Same cond. Min Eng 5:42-4 Ja '53

Germanium search. Mech Eng 75:401-2 My '53

Germanium transistors. J. S. Saby. il diags Gen Elec R 55:21-4+ S '52; Same cond. Product Eng 23:270+ D '52

Germanium; uses, outlook, availability, price and suppliers, etc. il Iron Age 170:289 O 9 '52

Grain boundary barriers in germanium. W. E. Taylor and others. bibliog diags Phys R 88:867-75 N 15 '52

Hall effect modulators and gyrators employing magnetic field independent orientations in germanium. W. P. Mason and others. il diags J Ap Phys 24:166-75 F '53

High field mobility in germanium with impurity scattering dominant. E. M. Conwell. bibliog Phys R 90:769-72 Je 1 '53

Hunt on for germanium. Steel 132:118 F 9 '53

Infrared absorption characteristics of thermiated germanium. D. H. Rank and D. C. Cronemeyer. Phys R 90:202-3 Ap 15 '53

Infrared absorption in high purity germanium. H. B. Briggs. Opt Soc Am J 42:686-7 S '52

Infrared absorption in *P*-type germanium. W. Kaiser and others. bibliog Phys R 91:1380-1 S 15 '53

Interpretation of the low temperature Hall curve of a degenerate germanium sample. D. M. Finlayson and others. Phys R 87:1141-2 S 15 '52

Lifetime of injected carriers in germanium. D. Navon and others. bibliog diag Inst Radio Eng Proc 40:1342-7 N '52

Measurement of minority carrier lifetime in germanium. L. B. Valdes. bibliog il diags Inst Radio Eng Proc 40:1420-3 N '52

Microwave observation of the collision frequency of electrons in germanium. T. S. Benedict and W. Shockley. bibliog Phys R 89:1152-3 Mr 1 '53

Microwave observation of the collision frequency of holes in germanium. T. S. Benedict. Phys R 91:1565-6 S 15 '53

Mobility of electrons in germanium. P. P. Debye and E. M. Conwell. Phys R 87:1131-2 S 15 '52

Mobility of holes and electrons in high electric fields. E. J. Ryder. diag Phys R 90:766-9 Je 1 '53

Molecular evaporation of group IVB elements. R. E. Honig. J Chem Phys 21:573-4 Mr '53

n-Type surface conductivity on *p*-type germanium. W. L. Brown. bibliog diags Phys R 91:518-27 Ag 1 '53

New infrared absorption bands in *p*-type germanium. H. B. Briggs and R. C. Fletcher. Phys R 87:1130-1 S 15 '52

New photoelectric devices utilizing carrier injection. K. Lehovec. bibliog diags Inst Radio Eng Proc 40:1407-9 N '52

New process cuts cost of germanium. Electronics 26:8 Ap '53

Optical studies of injected carriers; infrared absorption in germanium. R. Newman. Phys R 91:1311-12 S 15 '53

Optical studies of injected carriers; recombination radiation in germanium. R. Newman. Phys R 91:1313-14 S 15 '53

Oxygen-induced surface conductivity on germanium. E. N. Clarke. Phys R 91:756-7 Ag 1 '53

Plastic deformation of germanium and silicon. G. J. Gallagher. il Phys R 88:721-2 N 15 '52

Plastic deformation of silicon and germanium; abstract. R. G. Treuting. J Metals 4:1044 O '52

Plasticity of silicon and germanium. F. Seitz. bibliog Phys R 88:722-4 N 15 '52

Preferential etch for use in optical determination of germanium crystal orientation. R. H. Wynne and C. Goldberg. il J Metals 5:Trans 436 Mr '53

Preparation of germanium single crystals. L. Roth and W. E. Taylor. bibliog il diag Inst Radio Eng Proc 40:1338-41 N '52; Correction. 41:218 F '53

GERMANIUM—*Continued*

Pressure-welded *p-n* junctions in germanium. R. G. Shulman and D. M. Van Winkle. il J Ap Phys 24:224 F '53

Profit in the stacks. il Chem W 72:36+ F 14 '53

Properties of junction transistors. K. D. Smith. bibliog il diag Tele-Tech 12:76-8+ Ja '53

Properties of silicon and germanium. E. M. Conwell. bibliog Inst Radio Eng Proc 40:1327-37 N '52

Properties of the M-1740 *p-n* junction photocell. J. N. Shive. bibliog il diags Inst Radio Eng Proc 40:1410-13 N '52

Properties of thermally treated germanium. L. Esaki. bibliog diags Phys R 89:1026-34 Mr 1 '53

p-n Junctions by impurity introduction through an intermediate metal layer. L. D. Armstrong. diag Inst Radio Eng Proc 40:1341-2 N '52

p—n Junctions produced by growth rate variation. R. N. Hall. Phys R 88:139 O 1 '52

Purification and prevention of segregation in single crystals of germanium. W. G. Pfann and K. M. Olsen. Phys R 89:322-3 Ja 1 '53

Recombination rate in germanium by observation of pulsed reverse characteristic. E. M. Pell. bibliog diags Phys R 90:278-9 Ap 15 '53

Reverse characteristics of high inverse voltage point contact germanium rectifiers. J. H. Simpson and H. L. Armstrong. bibliog diags J Ap Phys 24:25-34 Ja '53

Search for more germanium sources. Can Min J 74:84 Ap '53

Shot noise in germanium filaments. R. H. Mattson and A. van der Ziel. J Ap Phys 24:222 F '53

Solubility of silicon and germanium in gallium and indium. P. H. Keck and J. Broder. Phys R 90:521-2 My 15 '53

Solute distribution in germanium crystals. W. P. Slichter and E. D. Kolb. Phys R 90:987-8 Je 1 '53

Some transients in the pulse response of point-contact germanium diodes. M. C. Waltz. il diags Inst Radio Eng Proc 40:1483-7 N '52

Space-charge limited hole current in germanium. G. C. Dacey. bibliog diags Phys R 90:759-63 Je 1 '53

Specific heat, latent heat of fusion, and melting point of germanium; abstract. E. S. Greiner. J Metals 4:1044 O '52

Specific heat of germanium between 20°K and 200°K. I. Estermann and J. R. Weertman. bibliog diags J Chem Phys 20:972-6 Je '52

Surface properties of germanium. W. H. Brattain and J. Bardeen. diags Bell System Tech J 32:1-41 Ja '53

Surface tension of liquid silicon and germanium. P. H. Keck and W. Van Horn. Phys R 91:512-13 Ag 1 '53

Temperature dependence of drift mobility in germanium. R. Lawrance. Phys R 89:1295 Mr 15 '53

Temporary traps in silicon and germanium. J. R. Haynes and J. A. Hornbeck. Phys R 90:152-3 Ap 1 '53

Tester for germanium diodes. N. Dewolf and N. E. Schick. il diags Electronics 25:150+ D '52

Testing uhf-tv mixer crystals. N. DeWolf. bibliog il diags Electronics 26:156-60 Ap '53

Theory of magnetic effects on the noise in a germanium filament. H. Suhl. il Bell System Tech J 32:647-64 My '53

Thermal acceptors in vacuum heat-treated germanium. S. Mayburg and L. Rotondi. Phys R 91:1015-16 Ag 15 '53

Thermally induced acceptors in single crystal germanium. R. A. Logan. Phys R 91:757-8 Ag 1 '53

Thermoelectric study of the electrical forming of germanium rectifiers. M. Kikuchi and T. Onishi. bibliog diags J Ap Phys 24:162-6 F '53

Transistor electronics; imperfections, unipolar and analog transistors. W. Shockley. bibliog diags Inst Radio Eng Proc 40:1289-313 N '52

Transistors theory and application; transistor action in germanium and silicon. A. Coblenz and H. L. Owens. il diags Electronics 26:166-71 Je '53

Ultrasonic attenuation measurements in germanium. R. Tuell and J. Bronzo. Phys R 90:152 Ap 1 '53

Vapor pressure of germanium. A. W. Searcy. bibliog Am Chem Soc J 74:4789-91 O 5 '52

See also
Oscillators
Transistors

Analysis

Analysts find important uses for X-ray fluorescence spectroscopy; abstract. J. S. Bryson. Chem & Eng N 31:1083 Mr 16 '53

Analytical methods for germanium. H. H. Krause and O. H. Johnson. bibliog(111 ref) Anal Chem 25:134-8 Ja '53

Isotopes

Genetics of the Ge^{78}-As^{78} fission chain. N. Sugarman. bibliog Phys R 89:570-2 F 1 '53

Isotopic constitution of silicon, germanium, and hafnium. J. H. Reynolds. bibliog Phys R 90:1047-9 Je 15 '53

Pharmacological studies of radiogermanium (GE^{71}). H. C. Dudley and E. J. Wallace. bibliog diags A M A Archives Ind Hygiene & Occup Med 6:263-70 S '52

Radiations from arsenic 77 and germanium 71. B. L. Saraf and others. bibliog diags Phys R 91:1216-18 S 1 '53

Some experiments on Ge^{75} and Ge^{75m}. A. B. Smith and others. bibliog Phys R 88:150 O 1 '52

Physiological effect

Pharmacological studies of radiogermanium (GE^{71}). H. C. Dudley and E. J. Wallace. bibliog diags A M A Archives Ind Hygiene & Occup Med 6:263-70 S '52

GERMANIUM alloys

Constitution of germanium rich germanium-gallium alloys; abstract. E. S. Greiner. J Metals 4:1044 O '52

Electrical properties of gold-germanium alloys. W. C. Dunlap, jr. Phys R 91:1282 S 1 '53

GERMANIUM chlorides

Effect of the isomeric transition in Br^{80} on its reactivity with the tetrachlorides of carbon, silicon, germanium, and tin. C. C. Coffin and W. D. Jamieson. J Chem Phys 20:1324-5 Ag '52

Analysis

Separation of germanium tetrachloride from arsenic trichloride by fractional distillation. H. J. Cluley and R. C. Chirnside. Chem Soc J p2275-6 Je '52

GERMANIUM compounds

Bond refractions for compounds of tin, silicon, lead, mercury, and germanium. W. T. Cresswell and others. Chem & Ind p 19 Ja 3 '53

Exchange reactions in volatile isocyanates and isothiocyanates of silicon, germanium and phosphorus. H. H. Anderson. bibliog Am Chem Soc J 75:1576-8 Ap 5 '53

Fragments of chemistry; silicon, germanium, and tin. C. A. Kraus. J Chem Educ 29:488-91 O '52

Germanium and its inorganic compounds. O. H. Johnson. Chem R 51:431-69 bibliog(p464-9) D '52

Isopropylgermanium halides, oxides and hydroxide; Grignard reaction. H. H. Anderson. bibliog Am Chem Soc J 75:814-16 F 20 '53

Analysis

Mass spectra of the tetramethyl compounds of carbon silicon, germanium, tin, and lead. V. H. Dibeler. bibliog J Res Nat Bur Stand 49:235-9 O '52

GERMANIUM fluoride

Calculated thermodynamic properties of GeF_4. F. L. Voelz. J Chem Phys 20:1662 O '52

GERMANIUM halides

Vapor pressure of germanic iodide; the entropies of germanic halides; the disproportionation of germanous iodide. W. L. Jolly and W. M. Latimer. bibliog Am Chem Soc J 74:5754-7 N 20 '52

GERMANIUM iodides

Heat of oxidation of germanous iodide to germanic acid. W. L. Jolly and W. M. Latimer. bibliog Am Chem Soc J 74:5752-4 N 20 '52

Vapor pressure of germanic iodide; the entropies of germanic halides; the disproportionation of germanous iodide. W. L. Jolly and W. M. Latimer. bibliog Am Chem Soc J 74:5754-7 N 20 '52

GERMANIUM oxides

Absorption band systems of SiO and GeO in the Schumann region. H. C. Rowlinson and R. F. Barrow. bibliog J Chem Phys 21:378-9 F '53

Equilibrium $Ge(s)+GeO_2(s)=2GeO(g)$; the heat of formation of germanic oxide. W. L. Jolly and W. M. Latimer. bibliog Am Chem Soc J 74:5757-8 N 20 '52

Solubility of hydrous germanous oxide and the potential of the germanous oxide-germanic oxide couple. W. L. Jolly and W. M. Latimer. Am Chem Soc J 74:5751-2 N 20 '52

GERMANIUM tetramethyl. See Tetramethyl germanium

GERMANY

Repercussions of coming unified Germany. V. L. Horoth. map Mag of Wall St 92:439-41+ Jl 11 '53

See also

Aeronautics—Germany
Airlines—Germany
Airplane industry and trade—Germany
Automobile industry and trade—Germany
Bonds, Government—Germany
Debts, Public—Germany
Machine tool industry—Germany
Metal working industries—Germany
Petroleum industry and trade—Germany
Plastic industries—Germany
Political parties—Germany
Radio broadcasting—Germany
Railroads—Germany
Retail trade—Germany
Russians in Germany
Securities—Germany
Shipbuilding—Germany
Steel industry and trade—Germany
Television broadcasting—Germany
Television industry—Germany
Wool trade—Germany

Allied military government

American zone

Watch on the Rhine; U.S. soldiering invokes German respect. C. Mayer. Barron's 33:7-8 F 9 '53

Commerce

Europe's export difficulties. J. van Galen. Comm & Fin Chr 177:94 Ja 8 '53

Export gains encourage industry in Berlin; western German exports to dollar areas rising. For Comm W 49:4, 6 My 18 '53

Foreign trade and balance of payments. Economist 165:209-10 O 18 '52

German trade and payments easier; some import restrictions relaxed. For Comm W 50:4 Jl 27 '53

Germans and the Middle East; with tables. Economist 165:626-7 N 29 '52

Germans seek more eastern markets. Economist 166:791-2 Mr 21 '53

Italian trade with Germany increases. For Comm W 50:2 Jl 27 '53

Look to the western U.S. Bsns W p 156+ Je 20 '53

Value of west German import rights drops. For Comm W 49:10 F 23 '53

West Germany's trade declines seasonally. For Comm W 49:3 Je 29 '53

Where Germans compete with British exports. Economist 165:671 D 6 '52

Commercial policy

Controls on international trade. For Comm W 48:8 O 20 '52

Germany requires origin statement for U.S. goods granted low duties. For Comm W 50:11 Jl 20 '53

Promotion of imports into Germany urged. For Comm W 50:2 Jl 27 '53

Western Germany simplifies controls on commissions to foreign sales agents. For Comm W 49:6 F 2 '53

Defenses

Shades of Himmler; shall men of the SS take part in the defence of Europe? Economist 165:283-4 N 1 '52

West Germany's army nearer. Economist 166:859 Mr 28 '53

Economic conditions

Economic conditions abroad (cont). For Comm W 48:4 N 10 '52; 49:5+ F 16; 3 My 18 '53

German economy; a survey. map Economist 165:205-12 O 18 '52

Germany cuts its taxes. Economist 166:366-7 F 7 '53

Germany in proportion; with charts. Economist 165:6-7 O 4 '52

New phase of German recovery. Economist 167:95-6 Ap 11 '53

Economic relations

United States

MSA allots funds to west Germany, Austria. For Comm W 50:5 Jl 13 '53

$10 million allotted to western Germany. For Comm W 50:8-9 Jl 20 '53

Foreign relations

Dr Adenauer's mission. Economist 167:139 Ap 18 '53

Old fox comes to call; Konrad Adenauer. Bsns W p 148+ Ap 11 '53

Israel

Germany, Israel sign reparations pact. For Comm W 48:7 N 10 '52

Near East

Germans and the Middle East; with tables. Economist 165:626-7 N 29 '52

Industries and resources

West German businessmen analyze Ruhr commodity market trends. For Comm W 49:10 My 25 '53

Nazi party

Where are the neo-Nazis? Economist 166:213-14 Ja 24 '53

Politics and government

Communist Germany's strategy. Economist 167:584 My 30 '53

Debate in Bonn; parties and judges. Economist 165:760-1 D 13 '52

Dr Adenauer and the EDC. Economist 167:376 My 9 '53

Dr Adenauer's party. Economist 167:313 My 2 '53

East Germans shatter red myth. Bsns W p 118+ Je 27 '53

End of the two-world pattern. il Bsns W p27-30 Je 27 '53

Naumann changes hands. Economist 167:11-12 Ap 4 '53

New German revisionist campaign. Economist 166:788-9 Mr 21 '53

Opportunity for Adenauer. Economist 167:884-5 Je 27 '53

Storm signals in Soviet Germany. Economist 167:730-1 Je 13 '53

West Germany; which way from here? Bsns W p 144-5 D 6 '52

See also

Political parties—Germany

Reparations

Israel sets up reparations corporation to purchase and import German goods. For Comm W 50:7 Jl 20 '53

Treaties

Debate in Bonn; parties and judges. Economist 165:760-1 D 13 '52

GERMICIDAL lamps. See Ultraviolet rays—Lamps

GERMICIDES. See Disinfection and disinfectants

GERMINE

Synthetic hypotensive esters from germine. F. L. Weisenborn and J. W. Bolger. bibliog Chem & Ind p 197-8 F 28 '53

GERSCHENKRON hypothesis

Gerschenkron hypothesis of index number bias. I. O. Scott, jr. R Econ & Stat 34:386-7 N '52

GETTY, Jean Paul, 1892-

Businessmen in the news. por Fortune 47: 49 My '53

GHEZZI, Alfred

Hauling barges from Seattle to St Louis. por Bsns W p 108-10 My 9 '53

GIBBSITE

Thermal decomposition of the alumina trihydrate, gibbsite. J. F. Brown, D. Clark and W. W. Elliott. pl Chem Soc J p84-8 Ja '53

GIEGERICH, Carl R.

From experience comes great advertising copy. S. H. Margolis and M. Silverstein. por Ptr Ink 242:46+ F 13 '53

GIESECKE, Frederick E. 1869-1953

Sketch. por Heating-Piping 25:144-5 Ag '53

GIESEY, Paul O.

Scanning the scene through the eyes of JL. por Inland Ptr 130:70-1 O '52

GIFFELS, Raymond F.

Portrait. Bsns W p94 My 23 '53

GIFFELS and Vallet, incorporated

Wrapping the factory around the process layout. il Bsns W p94-8+ My 23 '53

GIFT packages. See Package goods—Gift packages

GIFT tax

Gift tax on life insurance proceeds. F. L. Morton. Spectator 161:53-5 My '53

Recent developments in estate and gift taxation; major rulings by courts and the Bureau of internal revenue. J. L. Lyons. Trusts & Estates 92:488-90+ Jl '53

Standards for power to invade principal. J. W. Ervin. Trusts & Estates 92:274-5 Ap '53

Valuation of assets for Canadian tax purposes. J. K. Allison. Trusts & Estates 92: 453-6 Je '53

What is charitable? legal and tax limits of trusts and gifts. H. S. Shefelman. bibliog Trusts & Estates 91:654-7 S '52

GIFTS

Gift promotion works; 1,288 belts prove it; News and observer, Raleigh, N.C. Sales Management 70:136 Mr 15 '53

When 34-year-old Ray Hickok shook up the sales plan. il Sales Management 69:102-4+ O 1 '52

GIFTS (in business)

See also

Christmas gifts—Business gifts

GIFTS (law)

Charitable gifts of income. J Account 95: 470-3 Ap '53

Family dollar; making gifts to minors. E. S. MacNeill. Banking 45:79-80 F '53

See also

Gift tax

GILBRETH, Lillian Moller, 1878-

Some problems that challenge engineers today. L. M. Gilbreth. por Midwest Eng 5:5-6+ O '52

GILLESPIE, Edwin B.

Ed Gillespie, dean of advertising typographers. W. K. Schori. por Inland Ptr 130:40-1+ Ja '53

GILMORE, Donald Sherwood

Businessmen in the news. por Fortune 46: 52 N '52

GIMBEL, Bernard Feustman, 1885-

Businessmen in the news. por Fortune 47:50 My '53

GIMBEL brothers, inc.

Cash registers ringing merrily. Barron's 33: 21-2 Je 1 '53

Gimbels joins the trek to the suburbs. Bsns W p 101 Jl 11 '53

GINKGO

Tissue derived from the pollen of ginkgo biloba. W. R. Tulecke. il Science 117:599-600 My 29 '53

GIRBOTOL process. See Gas purification

GIRDERS. See Beams and girders

GLACIAL drift. See Drift

GLACIAL geology

Glaciation and drainage changes in the Fish Lake plateau, Utah. C. T. Hardy and S. Muessig. bibliog maps Geol Soc Bul 63: 1109-16, pl 1-3 N '52

Petrology of the Cary and Valders tills of northeastern Wisconsin. R. C. Murray. bibliog maps Am J Sci 251:140-55 F '53

Pleistocene field conference, 1st, Rocky Mountain national park, Oct. 4-5. Science 117: 177-8 F 20 '53

Probable Illinoian age of part of the Missouri river, South Dakota. C. R. Warren. bibliog map diags Geol Soc Bul 63:1143-55 N '52

See also

Drift

GLACIAL lakes

Shorelines of the glacial Great Lakes in Cook county, Minn. R. P. Sharp. bibliog maps diags Am J Sci 251:109-39, pl 1-2 F '53

GLACIERS

Deformation of bore hole in Malaspina glacier, Alaska. R. P. Sharp. bibliog Geol Soc Bul 64:97-9 Ja '53

Problem of glaciation in the western islands of Arctic Canada. J. L. Jenness. bibliog maps Geol Soc Bul 63:939-51, pl 1-4 S '52

GLADIOLIC acid

Infra-red spectroscopy and structural chemistry; gladiolic acid. J. F. Grove. Chem Soc J p3345-54 S '52

GLARE

Comparative analysis of comfort and glare; abstract. D. E. Spencer. bibliog Illum Eng 48:483-4 S '53

Control and measure of directional flux at the task. G. P. Wakefield. il diags Illum Eng 48:124-9; Discussion. 129-34 Mr '53

Discomfort glare; comparison of mercury, sodium and tungsten light sources. H. M. Ferguson and others. Elec R (Lond) 153: 355-8 Ag 14 '53

Effect of a peripheral glare source upon the apparent brightness of an object. G. A. Fry and M. Alpern. diags Opt Soc Am J 43:189-95 Mr '53

Glare and the normal eye. J. R. Crauath. Illum Eng 48:sup 19A+ S '53

Reducing glare from vision strips; summary of Texas engineering experiment station report. diags Arch Rec 112:208 S '52

See your car as others see it; a shiny menace! L. P. Lyman. Safety Maint & Prod 105:49-50 F '53

GLASGOW, Scotland

Water supply

Water supply at Glasgow. Engineer 196:280 Ag 28 '53; Engineering 176:240 Ag 21 '53

GLASS

Adsorption of carbon dioxide by glass. J. B. Thompson, E. R. Washburn and L. A. Guildner. diag J Phys Chem 56:979-81 N '52

American ceramic society Glass division 55th annual meeting, New York, April 26-30. Glass Ind 34:303-8+ Je '53

American chemical society Industrial and engineering chemistry division, ceramics and glass symposium; abstracts of papers. Glass Ind 34:199-201 Ap '53

Application of rate-process theory to glass; electrical conductivity. D. A. Stuart and O. L. Anderson. bibliog diag Am Cer Soc J 36:27-30 Ja 1 '53

Borosilicate glasses. T. Abe. bibliog diags Am Cer Soc J 35:284-99 N 1 '52

Calculated X-ray mass absorption coefficients of glass components. G. F. Brewster. Am Cer Soc J 35:194-7 Ag 1 '52

CI two minute ideas for the glass plant operator. il Cer Ind 60:67-9 Ap '53 [cont monthly]

Chemist looks at glass, 1902-1952. A. Silverman. Glass Ind 34:428-9+ Ag '53

Composition of low-alkali glass; manufacture of chemical ware. B. Yoshiki and R. Yoshida. Am Cer Soc J 35:166-9 Jl 1 '52

Electron diffraction study of some glasses. G. O. McClurg. bibliog J Chem Phys 20: 1398-400 S '52

Flow of glass at room temperatures. G. W. Morey. Opt Soc Am J 42:856-7 N '52

Glass; new developments, new products. T. J. Thompson. il Am Cer Soc Bul 31:289-93 Ag 15 '52

How to determine the softening point of viscosity. R. K. Day. Cer Ind 60:64-5 Mr '53

Industrial glasses; engineering file facts. Materials & Methods 37:135, 137, 139 My '53

International congress on glass, 3d, Venice, June 28-July 4; program. Am Cer Soc Bul 32:223-4 Je 15 '53

GLASS—*Continued*

International congress on glass, 3d, Venice, June 29-July 4. Glass Ind 43:422-5 Ag '53; Cer Ind 61:68-9+ S '53
Radiant glass heating panels. P. R. Achenbach. il plan diag Heat & Ven 50:88-91 Ja '53; Same cond. Glass Ind 34:267+ My '53; Abstract. Heating-Piping 25:124 My '53
Radiation-absorbing glasses. G. F. Brewster and N. J. Kreidl. bibliog Am Cer Soc J 35:259-64 O 1 '52
Recent translations of Russian papers of interest to the glass industry; abstracts. diag Glass Ind 34:27-8+, 260-2+, 544-6+ Ja, My, O '53
Review of 1952. H. E. Simpson. il Cer Ind 60:62-3+ F; 61-2+ Mr '53
Specifying glass for windows in the future. diags Cer Ind 60:75-6 My '53
Streaming potential measurements and the adhesion of phosphors on cathode ray screens. J. F. Hazel and G. L. Schnable. bibliog diags Electrochem Soc J 100:65-71 F '53
Temperature dependence of the elastic moduli and internal friction of silica and glass. J. W. Marx and J. M. Sivertsen. bibliog diags J Ap Phys 24:81-7 Ja '53
Theory of membrane potential. M. Nagasawa and Y. Kobatake. diags J Phys Chem 56:1017-24 N '52
Use of glass in chemical plant; abstract and discussion. J. C. Window. Chem & Ind p 1218-19 D 13 '52

See also

Ampuls
Glass manufacture
Glassware
Glazes
Insurance, Glass
Plate glass
Stained glass
Windows

Alkali content

Transition layers on glass surfaces and their relation to alkali content. P. P. Sutton and others. J Chem Phys 21:1313-14 Jl '53

Analysis

Analysis of cotton-glass-asbestos yarn. C. L. Hilton. bibliog Textile Res J 23:401-4 Je '53
Precipitation of fluorides in glassy systems; abstract. R. J. Callow. Glass Ind 34:82-3 F '53

Coating

Conducting films on glass. Elec R (Lond) 152:1069-72 My 8 '53
Metallising of glass, ceramic and plastic surfaces. R. J. Heritage and J. R. Balmer. bibliog il Metallurgia 47:171-4 Ap '53; Same. Metal Finishing 51:75-8+ Ag '53

Color

Coloration of glass by radiation. K. Sun and N. J. Kreidl. Glass Ind 33:511-14+, 589-94+, 651-3+ bibliog(227 titles, p652-3+) O-D '52
Glass batches; recipes. Cer Ind 60:141-4 Ja '53
Glass colors, decolorizers discussed at 13th annual Glass conference, Columbus, Dec. 4-5. Cer Ind 60:164-5+ Ja '53
Some aspects of controlling color in glass melting. C. J. Uhrmann and A. C. Ottoson. Cer Ind 61:68-9 Jl '53

See also

Glass—Decolorization

Bibliography

Coloration of glass by radiation. K. Sun and N. J. Kreidl. Glass Ind 33:652-3+ D '52

Decolorization

Are you saving enough selenium? W. H. Manring. Cer Ind 59:84-5 D '52
Glass colors, decolorizers discussed at 13th annual Glass conference, Columbus, Dec. 4-5. Cer Ind 60:164-5+ Ja '53
Kinetics of the bleaching of glasses colored by irradiation in the Chatillon pile; tr. by N. J. Kreidl. G. Mayer and J. Gueron. bibliog Glass Ind 34:127-31+ Mr '53

Decoration

Houze adds decorating to diversified production. il Glass Ind 34:255-7+ My '53
New process reproduces photographs in glass. K. Polking. il Cer Ind 60:106 Je '53

Defects

Cords present knotty problem. Cer Ind 60:66 Mr '53
Defects in Russian sheet glass; abstract. M. P. Savitski. Glass Ind 33:656 D '52

Devitrification

Effect of partial devitrification on the electrical resistivity of sodium-bearing glasses. B. L. Joyner and W. C. Bell. bibliog il diag Am Cer Soc J 36:263-6 Ag 1 '53
Measurement of the devitrification characteristics of glass. A. J. Milne. Glass Ind 34:213+ Ap '53

Durability

Deuterium and hydrogen electrode characteristics of lithia-silica glasses. D. Hubbard and G. W. Cleek. bibliog J Res Nat Bur Stand 49:267-72 O '52
Flame photometric estimation of the durability of glass. D. L. Rothermel and M. E. Nordberg. il Am Cer Soc Bul 31:324-5 S 15 '52
Interferometer procedure applied to the study of the chemical durability of silicates, enamels, and metals. R. G. Pike and D. Hubbard. bibliog J Res Nat Bur Stand 50:87-93 F '53
Some factors affecting the testing of surface durability of flat glass. H. E. Simpson. Am Cer Soc J 36:143-6 Ap 1 '53; Excerpts. Glass Ind 34:320 Je '53

Electric properties

Application of rate-process theory to glass; electrical conductivity. D. A. Stuart and O. L. Anderson. bibliog diag Am Cer Soc J 36:27-30 Ja 1 '53
Dielectric constant and dissipation factor of soda-potassia-silica glasses at frequencies of one to 300 kilocycles at room temperatures. G. F. Stockdale. diags Ill U Eng Exp Sta Bul 411:1-27 '53 (pa 30c)
Effect of partial devitrification on the electrical resistivity of sodium-bearing glasses. B. L. Joyner and W. C. Bell. bibliog il diag Am Cer Soc J 36:263-6 Ag 1 '53
Enamel covered glass resistors. J. K. Davis. il Tele-Tech 11:55+ N '52
Surface conductivity glass; abstract. Metal Prog 63:206 Je '53
Viscosity and electrical resistivity of molten alkali borates. L. Shartsis and others. bibliog diag Am Cer J 36:319-26 O 1 '53

See also

Electrodes, Glass

Expansion and contraction

Thermal expansion coefficients and the structure of glass; abstract. K. Takahashi. Glass Ind 34:435 Ag '53
Thermal expansion of some simple glasses. M. D. Karkhanavala and F. A. Hummel. Am Cer Soc J 35:215-19 S 1 '52

Fluorine content

Influence of Al_2O_3, ZnO, and K_2O on the opacity of fluoride-opacified glasses. R. J. Callow. Am Cer Soc J 35:120-2 My 1 '52; Excerpts. Glass Ind 33:661+ D '52
Influence of founding time and temperature on the fluorine content of an opal glass. R. J. Callow and G. Lawson. Glass Ind 34:149+ Mr '53

Fracture

Internal surface damage to bottle. F. W. Preston. il Glass Ind 33:639-44 D '52
Surface of a glass fracture in the electron microscope; tr. by F. W. Preston. N. Térao and S. Okada. bibliog il Glass Ind 34:71-2 F '53

Gas content

How to rid glass of gases. R. K. Day. Cer Ind 60:129-30+ Ap '53

Heat transmission

Design data for slat-type sun shades for use in load estimating. G. V. Parmelee and D. J. Vild. il diags Heating-Piping 25:130-6 S '53
Shading of sunlit glass; experimental study of slat-type sun shades. G. V. Parmelee and others. bibliog il diags Heating-Piping 25:192-200 Ja '53

GLASS—Heat transmission—*Continued*

Steady flow of heat through hot glass. B. S. Kellett. diag Opt Soc Am J 42:339-43 My '52; Same. Glass Ind 34:73-6 F '53

History

Glass; historical notes, 1900-1950. A. Silverman. J Chem Educ 30:32-4 Ja '53

Primordial glasses. A. J. Sofianopoulos. J Chem Educ 29:503-6 O '52

Joining

Coupling glass tubing to other materials. T. R. Tait and J. T. Mitchell. il diags Ind & Eng Chem 45:239-40 Ja '53

Electric glass welding. M. R. Shaw. bibliog il diags Elec Eng 72:31-4 Ja '53

Electric welding of glass; Quickfit and Quartz, ltd. il Engineering 175:746 Je 12 '53; Elec R (Lond) 152:1359 Je 12 '53

Joining to metal

Fundamentals of glass-to-metal bonding; wettability of some group I and group VIII metals by sodium silicate glass. V. F. Zackey and others. bibliog il diag Am Cer Soc J 36:84-9 Mr 1 '53

Glassed steel. E. A. Sanford and O. J. Britton. il Chem Eng 60:294+ Mr '53

Making and using glassed steel vessels. il Can Chem Process 37:54+ Mr '53

Resistance welding gives better glass-to-metal joints. A. J. Wyzenbeek. il diags Iron Age 171:146-8 Ap 9 '53

Sealing metal to glass; problem of varying rates of expansion. R. H. Warring. diags Elec R (Lond) 151:301-4 Ag 8 '52

Lead content

Ten reasons for lead in glass. J. S. Nordyke. Cer Ind 59:85 O '52

Light transmission

Filtered daylight; glass blocks' gift to building. il Bsns W p 152-4+ Mr 7 '53

Manufacture

See Glass manufacture

Opacity

Influence of Al_2O_3, ZnO, and K_2O on the opacity of fluoride-opacified glasses. R. J. Callow. Am Cer Soc J 35:120-2 My 1 '52; Excerpts. Glass Ind 33:661+ D '52

Patents

See also
Glass manufacture—
Patents

Permeability

Helium diffusion through glass. F. J. Norton. bibliog diags Am Cer Soc J 36:90-6 Mr 1 '53

Polishing

Determination of the rate of polishing; abstract. M. D. Tamarin. Glass Ind 33:672 D '52

Stones

Practical approach to the study of stones in glass. H. R. Swift. bibliog il Glass Ind 34:191-4+ Ap '53

Some common sources and causes of stones in glass from continuous melting furnaces. A. K. Lyle. il Am Cer Soc Bul 31:240-3 Jl 15 '52; Excerpts. Glass Ind 34:34+ Ja '53

Strains and stresses

Relationship of surface structure of glass to residual laminar stresses. W. C. Levengood and E. B. Butler. bibliog il Am Cer Soc J 36:257-62 Ag 1 '53

Stress-optical coefficient of plate glass. R. M. Waxler. diags Glass Ind 34:258-9+ My '53

Strength

Lab safety shields shattered by relatively small explosion. il Chem & Eng N 30:4668 N 3 '52

Strength of glass. G. Slayter. il Am Cer Soc Bul 31:276-8 Ag 15 '52

See also
Glass—Fracture

Surface

Interference films on glass; some observations during acid leaching of X-ray plate glass. S. Anderson and D. D. Kimpton. Am Cer Soc J 36:175-9 Je 1 '53

Relationship of surface structure of glass to residual laminar stresses. W. C. Levengood and E. B. Butler. bibliog il Am Cer Soc J 36:257-62 Ag 1 '53

Some factors affecting the testing of surface durability of flat glass. H. E. Simpson. Am Cer Soc J 36:143-6 Ap 1 '53; Excerpts. Glass Ind 34:320 Je '53

Testing

Some factors affecting the testing of surface durability of flat glass. H. E. Simpson. Am Cer Soc J 36:143-6 Ap 1 '53; Excerpts. Glass Ind 34:320 Je '53

GLASS, Ancient

Ancient Kopia glass. P. Roy and Y. P. Varshney. il Glass Ind 34:366-8+ Jl '53

GLASS, Cellular

Performance of glass foam furnaces; abstract. D. B. Ginsburg and N. I. Fateeva. diags Glass Ind 33:654-7 D '52

Precision controlled heat forms foamglas. il Cer Ind 61:58-9+ Ag '53

GLASS, Colored

Factors influencing control of color in amber glasses. R. W. Hopkins and W. H. Manring. bibliog Glass Ind 34:251-4+ My '53

See also
Stained glass

GLASS, Effect of radiation on

Coloration of glass by radiation. K. Sun and N. J. Kreidl. Glass Ind 33:511-14+, 589-94+, 651-3+ bibliog(227 titles, p652-3+) O-D '52

Kinetics of the bleaching of glasses colored by irradiation in the Chatillon pile; tr. by N. J. Kreidl. G. Mayer and J. Gueron. bibliog Glass Ind 34:127-31+ Mr '53

Bibliography

Coloration of glass by radiation. K. Sun and N. J. Kreidl. Glass Ind 33:652-3+ D '52

GLASS, Optical

History

History of optical glass production in the United States. F. W. Glaze. bibliog(59 ref) il Am Cer Soc Bul 32:242-7, 281-4, 313-17 Jl 15-S 15 '53

Manufacture

Annealing of 517:645 borosilicate optical glass; density. N. J. Kreidl and R. A. Weidel. bibliog Am Cer Soc J 35:198-203 Ag 1 '52

California optical plant one of top four; Hayward scientific glass corp. il Cer Ind 61:84-5+ O '53

Testing

See also
Lenses, Photographic
—Testing

GLASS, Photosensitive

Chemical machining of photosensitive glass. S. D. Stookey. bibliog il Ind & Eng Chem 45:115-18 Ja '53

Machining by photography. Sci Am 188:50+ Mr '53

GLASS, Porous. See Glass, Cellular

GLASS, Safety

Manufacture

Humidity conditioning essential to safety glass manufacture. C. A. Kelley. flow diags il plan Glass Ind 34:22-6+ Ja '53

Smooth as glass; Ford's safety-glass plant; illustrations with text. Mod Ind 25:50-1 Ja '53

GLASS, Stained. See Stained glass

GLASS, Structural

Glass as a material of construction in chemical plant. B. H. Turpin. Chem Age (Lond) 67:559-60 O 25 '52

GLASS as lubricant

American application of the Ugine-Séjournet extrusion process. il diag Engineer 194:680-1+ N 21 '52

Shape of steel to come. Ind & Eng Chem 44:sup 18A+ D '52

GLASS as lubricant—*Continued*
Ugine-Sejournet extrusion process. J. Strauss. il Blast F & Steel Pl 40:1184-9 O '52; Abstract. Iron & Steel Eng 29:119-21 Ag '52

GLASS blocks
Clear glass vs. glass block. O. F. Wenzley; H. E. Kentopp. Eng N 149:10+ N 20 '52
Filtered daylight; glass blocks' gift to building. il Bsns W p 152-4+ Mr 7 '53
Functional top-lighting with glass blocks; abstract. H. F. Kingsbury and others. diag Illum Eng 48:471-2 S '53
Glass block designed structurally and optically for use in skylights. il Eng N 150:124+ Mr 12 '53
Glass insulation, how mills are using it. il Textile World 103:112-13 Jl '53
Toplite system filters solar heat for cool interiors. il Eng N 150:174 Ap 16 '53

GLASS center, Corning, New York
Air conditioning existing building. H. E. Peck and J. Owen. il Heating-Piping 25:98-101 S '53

GLASS cleaning
Modern glass cleaners. M. A. Lesser. bibliog il Soap & San Chem 28:46-9+ S '52

GLASS construction
Clear glass vs. glass block. O. F. Wenzley; H. E. Kentopp. Eng N 149:10+ N 20 '52
Glass tent; a simple program translated into a poetic design; house in Montecito, Calif. il plans diag House & Home 2:114-19 S '52
Heating glass-walled building for the University of Cincinnati's College of applied arts. F. L. Bonem. il Heating-Piping 25:144-6 Ja '53
People who work in glass buildings; Lever Brothers research lab. il Chem & Eng N 30:4954-5 N 24 '52
See also
Glass blocks
Walls, Glass

GLASS container industry
Statistical quality control in the glass container industry; past, present, and future. J. H. Toulouse. Am Cer Soc Bul 32:339-40 O 15 '53

GLASS container manufacturers institute
Annual meeting, 9th, White Sulphur Springs, W.Va. May 18. Glass Ind 34:312-13 Je '53; Cer Ind 61:65+ Jl '53
Fall meeting, Hot Springs, Nov. 10-12. Glass Ind 33:645-6+ D '52; Cer Ind 60:168-9 Ja '53

GLASS containers
Dr West's toothbrush nominated to packaging's Hall of fame. il Mod Packaging 26:88-93+, cover Ag '53
First glass aerosol; Larvex mothproofing spray. il diags Mod Packaging 26:90-3+ Ja '53
Importance of headspace in glass containers; trans. by R. F. Ferguson. L. H. Lehnert. Glass Ind 34:535-8+ O '53
They do things the easy way; Gerber's baby foods. I. C. Miller. il diag Food Eng 25:66-9+ Ag '53
See also
Bottles

Manufacture

Ball Muncie revitalizes production, sales, and service. il Glass Ind 34:481-4+ S '53
Glass making, a highly mechanized industry. diag Can Chem Process 36:68+ O '52
Machines for the fabrication of glass containers. W. R. B. Frank. Glass Ind 34:498-9 S '53
Quality control in the manufacturing of glass containers. J. H. Toulouse. Glass Ind 34:70 F '53

GLASS electrodes. See Electrodes, Glass

GLASS fabrics
Body armor; basic ingredients, glass cloth synthetic resin. Mech Eng 75:238 Mr '53
Extra fine glass fiber cloth now available. il Materials & Methods 38:136 Ag '53
Glass fabric for plastic assemblies. Aviation W 57:26 D 22 '52
Glass nose guards transport's radar equipment. il Chem & Eng N 30:4964-5 N 24 '52
How to select glass fabrics for plastics reinforcement. L. M. Calhoun and others. il Mod Plastics 30:84-7+ F '53
Modern Textiles handbook; fiberglas. L. Mauer and H. Wechsler. il diag Mod Textiles Mag 34:50-1+ Ja '53
Pipe leak seal developed for navy uses glass fiber cloth and plastic. W. M. Freeman. Heat & Ven 50:146+ Je '53
Silicone-treated dust collectors in high temperature dust-control systems. L. C. McCabe. il Ind & Eng Chem 45:sup 104A-6A F '53

GLASS factories
Plant design and layout. R. S. Arrandale. diags Cer Ind 61:65-7+ S; 79+ O; 64-6 N '53 (to be cont)
Yarn from a glass plant. il Am Cer Soc Bul 31:342-3 S 15 '52

Air conditioning

Solving air conditioning problems where heat loads are high; Anderson plant of Owens-Corning fiberglas corp. A. T. Spangler. il Mill & Factory 52:116-19 F '53

Electric equipment

Northwestern melts glass electrically. il Cer Ind 59:106-7+ O '52

Employees

Is there a glass workers cataract? Cer Ind 59:79+ N '52

Equipment

Ball Muncie revitalizes production, sales, and service. il Glass Ind 34:381-4+ S '53
Dust; abstract. R. W. Love. Glass Ind 33:612 N '52
Life increased, maintenance costs cut by spraywelded hard facing alloy surfaces. il Glass Ind 34:88 F '53
Sketches on glass batching plant design and operations. H. E. Walker. il Glass Ind 34:417-20+ Ag '53
See also
Glass tanks

Heating and ventilation

Temperature control in mirror making. il Glass Ind 34:314+ Je '53

Quality control

Application of statistical quality control in glass fabrication; Kimble glass co. T. R. Meyer and others. Glass Ind 34:539-41+ O '53
Quality control in the manufacturing of glass containers. J. H. Toulouse. Glass Ind 34:70 F '53
Quality control increases Ball's production efficiency five percent. il Cer Ind 59:83 D '52
Some aspects of acceptance sampling. K. C. Lyon. bibliog Glass Ind 33:581-5+ N '52
Statistical quality control in the glass container industry; past, present, and future. J. H. Toulouse. Am Cer Soc Bul 32:339-40 O 15 '53

Safety measures

Beam it at the individual; Owens-Illinois glass co. H. V. Gardner. il Nat Safety N 66:66+ D '52
Chemical hazards in glass and ceramics industries. J. A. Houghton. Glass Ind 34:369-71+ Jl '53
Industrial heat exposures; evaluation and control. G. F. Haines, jr. and T. Hatch. il diags Heat & Ven 49:93-104 N '52
National safety council Glass and ceramics section annual meeting, Chicago, Oct. 20; with abstracts of papers. Glass Ind 33:595-6+ N '52

GLASS fibers
Advance of a liquid front along a glass yarn. W. B. Palmer. bibliog Textile Inst J Trans 44:T391-400 Ag-S '53; Correction. 44:T658 D '53
Further evidence against the orientation of structure in glass fibers. R. T. Brannan. diag Am Cer Soc J 36:230-1 Jl 1 '53
Glass-fiber nomenclature. R. C. Scott, comp. Textile World 103:114+ S '53
Glass wool and fibers; patents. diags Glass Ind 34:78-9 F '53
How to bond fibrous glass to other materials. W. J. Clayton. il Glass Ind 34:490-2+ S '53
Insect screen of glass. Bsns W p 116 Je 27 '53
Laminex fiber glass tanks. il Rubber Age 73:794 S '53

GLASS fibers—*Continued*

Manufacture of heat insulating sections for pipes; Fiberglass, ltd. il Engineer 195:512 Ap 3 '53

Measurement of the propagation of sound in fiberglas. Z. Esmail-Begui and T. K. Naylor. diags Acoustical Soc Am J 25:87-9 Ja '53

Modern Textiles handbook; fiberglas. L. Mauer and H. Wechsler. il diag Mod Textiles Mag 34:50-1+ Ja '53

New glass fiber mat has controlled resiliency. K. Rose. il Materials & Methods 37:176+ Ap '53

New uses for fibrous glass. il Bsns W p 114+ Ap 11 '53

No weevils here; glass fiber blanket in car ends. il Ry Age News ed 135:26 S 14 '53

Progress in glass. G. Boyo. il Mod Textiles Mag 34:49 S '53

Proposed test method for determining the effect of sizes on glass fibers for reinforced plastic laminates. J. G. Mohr and H. A. Fox. il diags Glass Ind 34:363-4+ Jl '53

Resin-glass air blenders. il Mod Plastics 30:90 F '53

Rubber coated electrical insulation. il Materials & Methods 38:143 S '53

Vinyl-faced fibrous glass tile. il Mod Plastics 30:183 O '52

Vinyl silicone resin treatment of glass fibers. M. H. Jellinek. Mod Plastics 30:150+ N '52

X ray study of glass fibers. B. K. Banerjee. il Am Cer Soc J 36:294-8 S 1 '53

See also

Glass fabrics

Plastic materials—Glass reinforcement

Plastic materials, Laminated—Glass reinforcement

Manufacture

Solving air conditioning problems where heat loads are high; Anderson plant of Owens-Corning fiberglas corp. A. T. Spangler. il Mill & Factory 52:116-19 F '53

Yarn from a glass plant. il Am Cer Soc Bul 31:342-3 S 15 '52

GLASS furnaces

Design, construction, and operation of oil burners for glass melting. T. Coyle. il Glass Ind 34:309-11+ Je '53

Electrical glass melting; tr. by S. R. Scholes. I. Horowitz. bibliog(39 ref) diags Glass Ind 34:65-9+, 132-7+, 204-8+ F-Ap '53

Northwestern melts glass electrically. il Cer Ind 59:106-7+ O '52

Performance of glass foam furnaces; abstract. D. B. Ginsburg and N. I. Fateeva. diags Glass Ind 33:654-7 D '52

Precision lens produced with precisely controlled temperature program. il Glass Ind 34:138-9 Mr '53

Principles of the construction of burners; abstract. E. Pototskaya and V. Pototskaya. diag Glass Ind 34:261-2+ My '53

Refractory trends in the glass industry. R. G. Abbey. il Am Cer Soc Bul 32:110-13 Ap 15 '53

Selection and operation of gas-fired lehrs. H. C. Weller. diags Glass Ind 34:487-9+ S '53

Some common sources and causes of stones in glass from continuous melting furnaces. A. K. Lyle. il Am Cer Soc Bul 31:240-3 Jl 15 '52; Excerpts. Glass Ind 34:34+ Ja '53

See also

Glass tanks

Firing

How Maryland handles number six oil in glass tank firing. T. P. Coyle. Cer Ind 61:56 Ag '53

Lining

Permeability of firebrick. il diag Glass Ind 34:427+ Ag '53

GLASS industry (periodical)

Providing information for the Glass industry. J. T. Ogden. Glass Ind 34:142-3+ Mr '53

GLASS insurance. See Insurance, Glass

GLASS laboratories

American window glass company opens new research center. il Glass Ind 34:20-1 Ja '53

Integrated research at Armstrong's new center. il Glass Ind 33:647-50 D '52

GLASS lining

Designer's guide to vitreous coatings; glass linings. R. L. Stedfeld. Machine Design 24:172 D '52

Glass-lined stack. il Steel 132:136 Je 22 '53

Glassed steel. E. A. Sanford and O. J. Britton. il Chem Eng 60:294+ Mr '53

Making and using glassed steel vessels. il Can Chem Process 37:54+ Mr '53

These ideas will increase life of your glass-lined vessels. P. P. Jones. diags Chem Eng 60:201+ Ja '53

GLASS machinery

Electronic control for glass grinding machines. il diags Engineer 195:458-9 Mr 27 '53; Engineering 175:574-5 My 1 '53; Elec R (Lond) 152:797-9 Ap 10 '53

Hard surfacing of glass plungers increases wear 54 times. L. V. LaRou. il diag Cer Ind 60:72-3 My '53

Machines for the fabrication of glass containers. W. R. B. Frank. Glass Ind 34:498-9 S '53

Patents

Inventions and inventors. diags Published in monthly numbers of Glass industry

GLASS making materials

Calculated X-ray mass absorption coefficients of glass components. G. F. Brewster. Am Cer Soc J 35:194-7 Ag 1 '52

GLASS manufacture

Alumina-magnesia glass containing potassium; abstract. I. I. Tukh and K. I. Tugusheva. Glass Ind 33:656+ D '52

American ceramic society Glass division conference on annealing, State College, Pa. June 8. Glass Ind 34:365 Jl '53

Annealing as a problem in genetics. F. W. Preston. bibliog Am Cer Soc J 36:232-8 Jl 1 '53

Annual conference on glass problems, 13th, Columbus, Dec. 4-5. Glass Ind 34:17-18+ Ja '53

Glass batch briquetting yields four advantages. il Cer Ind 60:65 F '53

Glass batches; recipes. Cer Ind 60:141-4 Ja '53

Lecture version of paper on annealing as genetics. F. W. Preston. Glass Ind 34:485-6 S '53

Lynch-Overmyer glass clinic. il Glass Ind 34:542-3+ O '53

Manufacture of sheet glass. W. A. Hatch. Inst E E Proc 100 pt 1:12-13 Ja '53

Manufacture of two-layer opaque glasses in Russia; abstract. M. A. Tsaritsyn. diag Glass Ind 34:546 O '53

New raw materials for glass manufacture; abstract. E. M. Kalenov and T. T. Trotsko. Glass Ind 34:260-1 My '53

Old salt has a lot of gall. Cer Ind 61:61 Ag '53

Precision controlled heat forms foamglas. il Cer Ind 61:58-9+ Ag '53

Sheet glass without debiteuse; abstract. F. G. Solinov and I. O. Tomashevich. diag Glass Ind 33:654 D '52

See also

Glass, Optical—Manufacture

Glass, Safety—Manufacture

Glass containers—Manufacture

Glass factories

Glass tanks

Glassware—Manufacture

History

America's oldest industry, glassmaking; plans for restoration and preservation of America's first glasshouse. Glass Ind 34:19+ Ja '53

History of optical glass production in the United States. F. W. Glaze. bibliog(59 ref) il Am Cer Soc Bul 32:242-7, 281-4, 313-17 Jl 15-S 15 '53

Patents

Inventions and inventors. diags Published in monthly numbers of Glass industry

GLASS melting

Design, construction, and operation of oil burners for glass melting. T. Coyle. il Glass Ind 34:309-11+ Je '53

Electrical glass melting; tr. by S. R. Scholes. I. Horowitz. bibliog(39 ref) diags Glass Ind 34:65-9+, 132-7+, 204-8+ F-Ap '53

How to rid glass of gases. R. K. Day. Cer Ind 60:129-30+ Ap '53

GLASS melting—*Continued*

Influence of founding time and temperature on the fluorine content of an opal glass. R. J. Callow and G. Lawson. Glass Ind 34: 149+ Mr '53

Northwestern melts glass electrically. il Cer Ind 59:106-7+ O '52

Some aspects of controlling color in glass melting. C. J. Uhrmann and A. C. Ottoson. Cer Ind 61:68-9 Jl '53

GLASS paper. See Paper, Glass

GLASS reinforcement of plastics. See Plastic materials—Glass reinforcement; Plastic materials, Laminated—Glass reinforcement

GLASS research

Density and expansivity of alkali borates and density characteristics of some other binary glasses. L. Shartsis and others. bibliog Am Cer Soc J 36:35-43 F 1 '53

How research helps production. R. K. Day. Cer Ind 60:59-60 F '53

Radioisotopes solve glass problems. J. V. Fitzgerald. bibliog il Cer Ind 59:72-4+ N '52

Research digest. Published in monthly numbers of Glass industry

Story of glass technology at Sheffield. il Am Cer Soc Bul 32:178-80 My 15 '53

Study of some binary silicate glasses by means of reflection in infrared. I. Šimon and H. O. McMahon. bibliog diags Am Cer Soc J 36:160-4 My 1 '53

Surface tension of molten alkali borates. L. Shartsis and W. Capps. bilbliog Am Cer Soc J 35:169-72 Jl 1 '52

Thermal capacity of vitreous silica. H. T. Smyth and others. Am Cer Soc J 36:327-8 O 1 '53

See also

Glass laboratories

GLASS tanks

Determination of progressive corrosion of glass tank refractories. P. G. Herold and V. P. Maheshwary. il diags Mo U Sch Mines & Met Bul tech ser 82:1-28 '52; Excerpts. Glass Ind 34:551+ O '53

How much cooling does a glass tank require? Cer Ind 61:84 S '53

Some factors in glass tank operation and design. F. L. Bishop. diags Am Cer Soc Bul 32:212-14 Je 15 '53

Study of silica brick from a glass tank crown. E. S. Chrzan and others. il Am Cer Soc J 35:173-81 Jl 1 '52; Abstract. Glass Ind 33:603 N '52

GLASS trade

Providing information for the Glass industry. J. T. Ogden. Glass Ind 34:142-3+ Mr '53

Review of 1952. H. E. Simpson. il Cer Ind 60:62-3+ F; 61-2+ Mr '53

Statistics

Glass and glassware; United States production, imports for consumption, and domestic exports, by kinds, years 1948-1951; tabulation. Glass Ind 34:85 F '53

Glass and glassware; United States production, imports for consumption, and domestic exports, by kinds, years 1949 to 1952, inclusive; tabulation. Glass Ind 34: 553 O '53

Glass products, Nov.-Dec. 1951-Jan.-Nov. 1952. Survey of Cur Bsns 33:S38 Ja '53 [cont monthly]

Canada

Canadian glass industry shows steady growth; financial statistics. Glass Ind 34: 421 Ag '53

Germany

Status of the west German glass industry in 1952. Glass Ind 34:197-8+ Ap '53

Mexico

Glass industry in Mexico. R. L. Garcia. il Am Cer Soc Bul 31:396-9 O 15 '52

GLASS tubing

Coupling glass tubing to other materials. T. R. Tait and J. T. Mitchell. il diags Ind & Eng Chem 45:239-40 Ja '53

GLASS walls. See Walls, Glass

GLASS wool

Glass wool and fibers; patents. diags Glass Ind 34:78-9 F '53

GLASSINE

Greaseproof and glassine. Can Chem Process 37:56 Ja '53

Pinholes in glassine and greaseproof papers. Tappi 36:sup 124A-5A S '53

Poly-lined glassine. il Mod Packaging 26: 133 Ap '53

Manufacture

Canadian glassine company limited opens new plant. il Pulp & Pa of Can 54:93-5 Ap '53; Paper Tr J 136:40-1 Ap 17 '53

GLASSWARE

Glassware for gracious living, theme of '53 jubilee. il Cer Ind 61:73 S '53

See also

Ampuls

Decoration

Gas cuts glassware heating costs in half and doubles production. E. V. K. Schutt. il Am Gas J 179:23 Jl '53

Manufacture

Kemple Glass produces antique glass tableware; illustrations with text. Cer Ind 59: 80-1 D '52

GLASSWARE, Laboratory

Use of hydrofluoric acid in making glass microneedles. S. E. Reaume. Science 116: 641 D 5 '52

See also

Pipets

GLAXO laboratories, limited

Statement by the chairman at 18th annual general meeting. H. Jephcott. Economist 165:795 D 13 '52

GLAZES

Application of the Schweitzer spray machine to the glazing of vitreous ware. P. L. Christensen and E. Schramm. flow chart il Am Cer Soc Bul 31:384-5 O 15 '52

Automatic tank glazing unit sets high production rate; Abingdon potteries. il Cer Ind 59:96-7 D '52

Ball milling of glazes; various grinding media. H. E. Davis. Am Cer Soc Bul 32:209-11 Je 15 '53

Coefficient of expansion study of a lead-zinc glaze. F. K. Pence. Am Cer Soc Bul 31: 483-5 D 15 '52

Colorimetry of glazes. P. F. O'Brien. diag Am Cer Soc J 35:254-9 O 1 '52

Control methods for the consistency of one-fire glazes. H. R. Pinnow and B. W. Merwin. Am Cer Soc Bul 31:332-3 S 15 '52

Effect of residual compressive stress in a hotel-china glaze on some physical durability properties of the glaze. W. J. Koch and others. Am Cer Soc J 35:240-2 S 1 '52

Effects of moderate biaxial stretch-forming on tensile and crazing properties of acrylic plastic glazing. B. M. Axilrod and others. bibliog il diag J Res Nat Bur Stand 49: 331-42 N '52; Same cond. Mod Plastics 30: 117-18+ D '52

Glaze investigations; effect of various silicas in typical glazes; effect of composition variation in glazes containing diatomaceous silica. R. Russell, jr. and R. R. Rowlands. bibliog Am Cer Soc J 36:1-11 Ja 1 '53

How to get maximum spraying results; application of glaze on clay products. il Brick & Clay Rec 121:60-1 O '52

How to make your glazes (cont). F. C. Ball. Cer Ind 59:123+ O '52

How water affects glazes. J. R. Hill. il Brick & Clay Rec 121:63 O '52

Kem-Krete; Sherwin-Williams' new color-glaze block coating. E. G. Hurst. il Concrete 61:42+ Ja '53

Low-temperature glazes; recipes. Cer Ind 60:152-3 Ja '53

Pottery glazes; recipes. Cer Ind 60:148-51 Ja '53

Structural clay products glazing. R. R. Danielson and others. bibliog il diags Brick & Clay Rec 121:52-62 S; 56-7+ O; 70-1+ N '52

Use of volcanic ash in commercial glazes. H. Riegger. il Cer Ind 60:82, 84 Mr '53

See also

Frits

GLEASON, Elmer

Elmer Gleason and the Stratford press. P. K. Thomajan. pors Inland Ptr 130:40-2 F '53

GLENFIELD and Kennedy, ltd.
Kilmarnock firm's centenary. Engineer 194:420 S 26 '52; Engineering 174:401 S 26 '52; Elec R (Lond) 151:679-80 S 26 '52

GLENN, Leonidas Chalmers, 1871-1951
Memorial. W. B. Jewell and C. W. Wilson, jr. por(pl 7) Geol Soc Proc 1952:101-4 bibliog(p 103-4) Je '53

GLIDDEN company
Paint division may spark rise in profits. Barron's 33:31 Mr 16 '53
12 promising specialties. P. Dobbs. Mag of Wall St 92:118+ Ap 18 '53

GLIDERS
French glider tests wings. il Aviation W 58:40 My 11 '53
Possibility of soaring on traveling waves in the jet stream. J. Kuettner. il map Aeronautical Eng R 11:22-8 D '52
Soaring recognition. Aviation W 57:50 D 22 '52

GLIOROSEIN. See Antiobiotic substances

GLIOTOXIN
Gliotoxin; a related antibiotic from penicillium terlikowski; gliotoxin monoacetate. J. R. Johnson, A. R. Kidwai and J. S. Warner. bibliog diag Am Chem Soc J 75:2110-12 My 5 '53
Gliotoxin; dethiogliotoxin and related compounds. J. R. Johnson and J. B. Buchanan. bibliog Am Chem Soc J 75:2103-9 My 5 '53

GLOBULINS
Agglutinin linkage and antibody globulins. G. W. G. Bird. bibliog Science 117:334 Mr 27 '53
Effect of ionic strength on the ultracentrifugal properties of human γ-globulin. J. R. Cann. bibliog il Am Chem Soc J 75:4218-20 S 5 '53
Fighting a polio epidemic; gamma globulin. il Bsns W p29 Jl 11 '53
Free amino groups of γ-globulins of different species. M. L. McFadden and E. L. Smith. bibliog Am Chem Soc J 75:2784-5 Je 5 '53
Gamma globulin plan for distribution given. Oil Paint & Drug Rep 163:5 Ap 20 '53
Gamma globulin study under way. Oil Paint & Drug Rep 164:3+ Ag 3 '53
N-terminal groups of normal human gamma globulin and of myeloma proteins. F. W. Putnam. bibliog Am Chem Soc J 75:2785-6 Je 5 '53
Prevention of poliomyelitis with gamma globulin. W. M. Hammon. Pub Health Rep 68:105-6 Ja '53
Ultracentrifugal properties of human γ-globulins prepared by electrophoresis-convection. J. R. Cann. bibliog Am Chem Soc J 75:4213-17 S 5 '53

GLOCKLER, George, 1890-
Fifth annual Iowa award. pors Chem & Eng N 30:4950-2, cover N 24 '52

GLOSS
Analysis of goniophotometric reflection curves. I. Nimeroff. Opt Soc Am J 42:579-83 Ag '52

GLOSS measurement. See Paper—Gloss measurement

GLOVES

Advertising

How fashionable is glove advertising during the Easter season? K. R. Gillespie. J Retailing 29:67-70+ Summer '53

Manufacture

Outerwear mill cuts pressing costs 25 per cent. J. H. Blore. il Textile World 103:89-90 Ap '53

GLOVES, Plastic coated
Worn plastic-coated gloves can be reclaimed. W. G. Patton. il Iron Age 171:176-7 Mr 5 '53

GLOVES, Rubber

Testing

Rubber gloves checked with hi-voltage tester. W. C. Price. il diag Elec World 139:144+ Ap 20 '53

GLOVES, Safety
Hands you can bet on! il Safety Maint & Prod 106:22-3 O '53
How to use gloves; illustrations with text. Factory Management 111:121 Ap '53

Standards

First line of defense. G. Thompson. il Standardization 24:51 F '53
Lineman's glove standard. Safety Maint & Prod 105:20 F '53

Testing

High-potential lab highlights safety features; Hartford electric light co. il Elec World 138:123-4 D 15 '52

GLUCONIC acid
Gluconic acid and its derivatives. F. J. Prescott and others. bibliog(84 ref) Ind & Eng Chem 45:338-42 F '53
Gluconic acid in cleansers; abstract. H. Beduneau. Soap & San Chem 29:71+ Ja '53

GLUCOSAMINE
Acetylated thioacetals of D-glucosamine. M. L. Wolfrom and K. Anno. Am Chem Soc J 74:6150-1 D 5 '52
Amino acid derivatives of D-glucosamine. D. G. Doherty, E. A. Popenoe and K. P. Link. bibliog Am Chem Soc J 75:3466-8 Jl 20 '53
Interaction of 1,3,4,6-tetraacetyl-β-D-glucosamine with acyl amino acid azides. E. A. Popenoe, D. G. Doherty and K. P. Link. bibliog Am Chem Soc J 75:3469-71 Jl 20 '53

GLUCOSAN
Constitution of a glucosan from the fungus polyporus betulinus. R. B. Duff. Chem Soc J p2592-4 Jl '52
Infra-red absorption spectra of dextran and other polyglucosans. S. A. Barker and others. bibliog Chem & Ind p 196-7 F 28 '53

GLUCOSE
Corn sweeteners help processors in many ways. R. F. Cohee, jr. il Food Eng 25:74-6+ Je '53
Degradation of D-glucose, D-fructose and invert sugar in carbonate-buffered water solutions. L. J. Heidt and C. M. Colman. Am Chem Soc J 74:4711-13 S 20 '52
Diffusion in supersaturated solutions; glucose solutions. J. K. Gladden and M. Dole. bibliog Am Chem Soc J 75:3900-4 Ag 20 '53
Manufacture of algal chemicals; laboratory-scale isolation of D-glucose from laminarin and laboratory-scale isolation of L-fucose from brown marine algae; abstract and discussion. W. A. P. Black and others. Chem & Ind p235 Mr 14 '53
Production of α-ketoglutarate in glucose oxidation by pseudomonas fluorescens. H. J. Koepsell, F. H. Stodola and E. S. Sharpe. bibliog Am Chem Soc J 74:5142-4 O 20 '52
Reaction of amino-compounds with sugars; the action of ammonia on D-glucose. L. Hough, J. K. N. Jones and E. L. Richards. Chem Soc J p3854-7 O '52
See also
Dextran

Analysis

Analysis of a mixture of glucose, maltose, and fermentable oligosaccharides; improved yeast fermentation method. S. C. Pan, L. W. Nicholson and P. Kolachov. bibliog diags Anal Chem 25:231-7 F '53
Isolation of crystalline D-glucose and cellobiose from an enzymatic hydrolyzate of cellulose. R. L. Whistler and C. L. Smart. bibliog Am Chem Soc J 75:1916-18 Ap 20 '53

GLUCOSIDES. See Glycosides

GLUCOSONE
*iso*Propylidene derivatives of glucosone. S. Bayne, G. A. Collie and J. A. Fewster. Chem Soc J p2766-71 Jl '52

GLUCOSYLANILINE
Reactions of carbohydrates with nitrogenous substances; factors affecting the darkening of N-D-glucosylaniline. L. Rosen, K. C. Johnson and W. Pigman. bibliog Am Chem Soc J 75:3460-4 Jl 20 '53
Reactions of carbohydrates with nitrogenous substances; the tetraacetates of N-D-glucosylaniline. W. Pigman and K. C. Johnson. bibliog Am Chem Soc J 75:3464-6 Jl 20 '53

GLUCURONIDASE
β-Glucuronidase and catalysis. R. W. McGilvery. Science 117:115 Ja 30 '53

GLUCURONIDASE—*Continued*

Synthesis of 2-naphthyl β-D-glucopyruronoside and 2-naphthyl β-D-glucofururonolactone and their behavior toward β-D-glucuronidase. K. Tsou and A. M. Seligman. bibliog Am Chem Soc J 74:5605-8 N 20 '52

GLUCURONIDES

Synthesis of some O-glucuronides and O-glucosides of phenolic amino acids. A. Taurog, S. Abraham and I. L. Chaikoff. bibliog Am Chem Soc J 75:3473-7 Jl 20 '53

GLUE

Animal glue. W. Q. Hull and W. G. Bangert. bibliog flow sheet il Ind & Eng Chem 44:2275-84 O '52

Animal glues provide economy and facilitate papermaking. R. Tutt, jr. Paper Ind 34:1115-16 D '52

British Glues' new process. Economist 165:196 O 18 '52

Dielectric heating cuts woodworking costs. R. E. Nelson. bibliog il diags Electronics 26:178-83 Je '53

Finish first, glue last. L. B. Reed. il Elec West 110:90 Mr '53

Gelatine and glue research. Chem Age (Lond) 67:787-8 D 13 '52

H-f gluing turns liability into asset; Inlaid floor co. il Elec West 109:102 O '52

Radio-frequency edge-gluing machine. il Engineer 196:121 Jl 24 '53

Radio-frequency gun sets glue, displaces nails. il Elec West 109:99 O '52

See also
Adhesives

GLUTAMIC acid

Additional evidence on the enzymatic transformation of histidine into glutamic acid. J. P. Fournier and L. P. Bouthillier. Am Chem Soc J 74:5210-11 O 20 '52

Amino-acids and peptides; γ-L-glutamyl-L-alanine, -L-valine, and -L-leucine. D. A. Rowlands and G. T. Young. Chem Soc J p3937-40 O '52

Benzyl esters of glutamic acid. H. Sachs and E. Brand. bibliog Am Chem Soc J 75:4610-11 S 20 '53

Biological activity of mixtures of lycomarasmin and glutamic acid, glutamine glutathione, or cysteine. A. E. Dimond and P. E. Waggoner. bibliog Science 117:42-3 Ja 9 '53

L-Histidine conversion to a urinary glutamic acid derivative in folic-deficient rats. H. Tabor and others. bibliog Am Chem Soc J 75:756-7 F 5 '53

Role of N^{15} glycine, glutamine, aspartate and glutamate in hypoxanthine synthesis. J. C. Sonne, I. Lin and J. M. Buchanan. Am Chem Soc J 75:1516-17 Mr 20 '53

Structure of native poly-D-glutamic acid. J. Kovács and V. Bruckner. Chem Soc J p4255-9 N '52

Structure of native poly-D-glutamic acid. J. Kovács and others. Chem Soc J p 145-50 Ja '53

Structure of native poly-D-glutamic acid; the synthesis of poly-L-glutamine and the Hofmann degradation thereof. V. Bruckner, J. Kovács and K. Kovács. Chem Soc J p 1512-14 My '53

Synthesis of the diethylacetal of glutamic-γ-semialdehyde. N. Good and H. K. Mitchell. Am Chem Soc J 74:4952-3 O 5 '52

GLUTAMINE

Enzymatic synthesis of D-glutamine and related hydroxamic acids. L. Levintow and A. Meister. bibliog Am Chem Soc J 75:3039-40 Je 20 '53

Infra-red absorption of asparagine and glutamine. M. Davies and J. C. Evans. Chem Soc J p480-2 F '53

Role of N^{15} glycine, glutamine, aspartate and glutamate in hypoxanthine synthesis. J. C. Sonne, I. Lin and J. M. Buchanan. Am Chem Soc J 75:1516-17 Mr 20 '53

Structure of native poly-D-glutamic acid; the synthesis of poly-L-glutamine and the Hofman degradation thereof. V. Bruckner, J. Kovács and K. Kovács. Chem Soc J p 1512-14 My '53

GLUTARATES

Incorporation of labeled carbon dioxide into pyruvate and α-ketoglutarate. M. Goldberg and D. R. Sanadi. Am Chem Soc J 74:4972-3 O 5 '52

Production of α-ketoglutarate in glucose oxidation by pseudomonas fluorescens. H. J. Koepsell, F. H. Stodola and E. S. Sharpe. bibliog Am Chem Soc J 74:5142-4 O 20 '52

GLUTARIC acids

Intramolecular acylation; the preparation and ring closure of the α-methoxyphenylglutaric acids. D. H. Hey and K. A. Nagdy. Chem Soc J p 1895-9 Je '53

GLUTATHIONE

Polarography of glutathione. W. Stricks and I. M. Kolthoff. bibliog Am Chem Soc J 74:4646-53 S 20 '52

GLUTEN

Dough as an industrial colloid. J. Cunningham. bibliog Chem & Ind p 163-6 F 21 '53

GLYCALS

Deoxy-sugars; conversion of D-glucal into furan derivatives. F. Shafizadeh and M. Stacey. Chem Soc J p3608-10 S '52

Analysis

Detection of deoxy-sugars, glycals, and methyl pentoses in paper partition chromatography. J. T. Edward and D. M. Waldron. Chem Soc J p3631-4 S '52

GLYCERALDEHYDE

Glyceraldehyde phosphate dehydrogenase of green plants. D. I. Arnon. bibliog Science 116:635-7 D 5 '52

GLYCERIDES

Melting-point diagrams for binary triglyceride systems. R. Kerridge. Chem Soc J p4577-9 D '52

Mono- and diglycerides termed safe as food additives by NRC. Oil Paint & Drug Rep 163:3+ Ja 19 '53

Polymorphism of 1-stearyl- and 1-palmityldiacetin, -dibutyrin, -dicaproin and 1-stearyldipropionin. F. L. Jackson and E. S. Lutton. bibliog Am Chem Soc J 74:4827-9 O 5 '52

Study of *n*-octadecenoic acids; the polymorphism of some elaidyl and petroselaidyl triglycerides. J. E. Minor and E. S. Lutton. bibliog Am Chem Soc J 75:2685-6 Je 5 '53

Synthetic fatty acid triglycerides and natural drying oils; film studies. P. S. Hess and G. A. O'Hare. Ind & Eng Chem 44:2424-8 O '52

X-ray and thermal examination of the glycerides; chaulmoogric and hydnocarpic acids and their mono-, di-, and tri-glycerides. A. Gupta and T. Malkin. Chem Soc J p2405-8 Je '52

GLYCERIN

Dielectric and ultrasonic relaxation in glycerol. T. A. Litovitz and D. Sette. bibliog J Chem Phys 21:17-22 Ja '53

DPN specific glycerol dehydrogenase from aerobacter aerogenes. R. M. Burton and N. O. Kaplan. bibliog Am Chem Soc J 75:1005-6 F 20 '53

Electromotive force studies in aqueous solutions of hydrochloric acid and glycerol from 0 to 40°. S. B. Knight, H. D. Crockford and F. W. James. bibliog J Phys Chem 57:463-6 Ap '53

Gentle nudge for glycerine research. Chem W 72:24 Ja 31 '53

Glycerine in paper production. E. S. Pattison. bibliog Paper Tr J 136:19-20 Mr 13 '53

Glycerine, it has many uses in textiles. E. S. Pattison. bibliog Mod Textiles Mag 34:69-70 S '53

Glycerol. E. C. Weaver. il J Chem Educ 29:524-5 O '52

Preparation of glycerol evenly labeled with C^{14}. S. Abraham. bibliog Am Chem Soc J 74:6098-9 D 5 '52

Separation of phenols from coal-tar hydrocarbons by means of glycerol and aqueous triethylene glycol; development of a process. A. P. C. Cumming. flow diags J Ap Chem 3:98-106 Mr '53

Soap plant observer. J. W. McCutcheon. Soap & San Chem 28:111+ O; 95+ N '52; 29:87+ Ja '53

Surface roughness as related to hysteresis of contact angles; the systems paraffin-3-molar calcium chloride solution-air and paraffin-glycerol-air. F. E. Bartell and J. W. Shepard. diags J Phys Chem 57:455-8 Ap '53

GLYCERIN—*Continued*

Analysis

Spectrophotometric study of dichromate-chromic salt mixtures; application to the determination of glycerol in vinegar. D. T. Englis and L. A. Wollerman. Anal Chem 24:1983-5 D '52

Manufacture

Glycerine recovery. E. T. Webb. Soap & San Chem 28:95+ Ag; 87+ S; 95+ O '52

GLYCEROL. See Glycerin

GLYCEROPHOSPHATIDES

Synthesis of O-(L-α-glycerylphosphoryl)-ethanolamine and some comments on the stereochemical aspects of the biosynthesis of glycerolphosphatides from carbohydrates. E. Baer and H. C. Stancer. bibliog Am Chem Soc J 75:4510-14 S 20 '53

GLYCIDIC acid

Decarboxylation of α-substituted glycidic acids. N. K. Nelson and H. H. Morris. bibliog Am Chem Soc J 75:3337-9 Jl 20 '53

GLYCINE

Glycine peptides; the polymerization of piperazine-2 : 5-dione at 180°. A. B. Meggy. Chem Soc J p851-5 Mr '53

High field conductance of aqueous solutions of glycine at 25°. D. Berg and A. Patterson, jr. bibliog Am Chem Soc J 75:1482-4 Mr 20 '53

In vivo conversion of glycine to serine. G. L. Nardi. bibliog Science 117:160-1 F 13 '53

Role of N^{15} glycine, glutamine, aspartate and glutamate in hypoxanthine synthesis. J. C. Sonne, I. Lin and J. M. Buchanan. Am Chem Soc J 75:1516-17 Mr 20 '53

Syntheses and reactions of acyclic N,N-diacylglycines. J. C. Sheehan and E. J. Corey. bibliog Am Chem Soc J 74:4555-9 S 20 '52

Trace-diffusion in liquids; self-diffusion isoelectric glycine in aqueous glycine solutions. J. H. Wang. Am Chem Soc J 75:2777-8 Je 5 '53

GLYCOCYAMIDINE

Reaction of guanidine with glyoxals in aqueous solution; the preparation of glycocyamidines. I. S. Bengelsdorf. bibliog Am Chem Soc J 75:3138-40 Jl 5 '53

GLYCOGEN

Action of crystalline β-amylase on some glycogens. D. J. Bell and D. J. Manners. bibliog Chem Soc J p3641-5 S '52

Structure of glycogen and enzyme patterns in glycogen storage disease; abstract. G. T. Cori. Science 116:519 N 14 '52

GLYCOL

CCDA official reviews markets for three DPA-goal chemicals. Chem & Eng N 31:1318-20 Mr 30 '53

Ethylene glycol ethers of pentaerythritol. S. Wawzonek and C. Issidorides. bibliog Am Chem Soc J 75:2373-5 My 20 '53

Periodate-glycol reaction; a quantitative study of certain chemical equilibria and their effects upon the rate of reaction. J. E. Taylor. bibliog diags Am Chem Soc J 75:3912-16 Ag 20 '53

Sodium benzoate and sodium nitrite as corrosion-inhibitors in ethylene glycol antifreeze solutions. F. Wormwell, A. D. Mercer and H. C. K. Ison. bibliog il J Ap Chem 3:22-7, 133-44 Ja, Mr '53

Surface roughness as related to hysteresis of contact angles; the systems paraffin-ethylene glycol-air, paraffin-methyl cellosolve-air and paraffin-methanolair. J. W. Shepard and F. E. Bartell. J Phys Chem 57:458-63 Ap '53

Water-soluble pastes for diamond powder. R. S. Young, D. A. Benfield and G. B. Dauncey. Ind & Eng Chem 45:402-4 F '53

Manufacture

Ethylene glycol plant features unique separation method. flow diag il Can Chem Process 36:34-6 N '52

GLYCOLATES

Infrared spectrum and structure of glycolate nitrate esters. W. D. Kumler. Am Chem Soc J 75:4346-7 S 5 '53

GLYCOLIC acid

Dissociation constants of acids in salt solutions; glycolic acid. M. Kilpatrick and R. D. Eanes. Am Chem Soc J 75:587 F 5 '53

GLYCOLONITRILE

Single reagent for cyanomethylation. Chem Eng 59:203 N '52

GLYCOLS

Acetylene studies; preparation and reactions of the acetyldialkylcarbinols. E. D. Bergmann and D. F. Herman. bibliog J Ap Chem 3:42-8 Ja '53

Acetylene studies; the condensation of acetylene with aldehydes and ketones. E. D. Bergmann, M. Sulzbacher and D. F. Herman. bibliog J Ap Chem 3:39-42 Ja '53

Alicyclic glycols. G. A. Haggis and L. N. Owen. Chem Soc J p389-412 F '53

Alicyclic glycols; *cyclo*pentane-1 : 3-diol, anionotropic rearrangement in some reactions of 3 : 5-dibromo*cyclo*pentene. L. N. Owen and P. N. Smith. Chem Soc J p4035-47 O '52

Alicyclic glycols; derivatives of *cyclo*pentane-1 : 2-diol. L. N. Owen and P. N. Smith. Chem Soc J p4026-35 O '52

Alicyclic glycols; stereoisomers of the bishydroxymethyl*cyclo*hexanes, dimethyl*cyclo*hexanes, and methyl*cyclo*hexylmethanols; abstract. G. A. Haggis and L. N. Owen. Chem & Ind p38 Ja 10 '53

Chemistry of reductone; alkenediols related to reductone. W. Cocker, D. S. Jenkinson and P. Schwarz. Chem Soc J p 1628-30 My '53

Fluorinated esters; diesters of carboxylic acids with fluorine-containing alcohols and glycols. R. Filler and others. bibliog Am Chem Soc J 75:2693-5 Je 5 '53

How to mitigate corrosion in a glycol-dehydration plant. N. K. Senatoroff. flow diag il diags Oil & Gas J 51:154+ Ap 27 '53

Organic phosphorus compounds; reactions of methanephosphonyl dichloride with glycols. A. F. McKay, R. O. Braun and G. R. Vavasour. Am Chem Soc J 74:5540-1 N 5 '52

Oxidation of glycols by aryl iodosoacetates; a kinetic study. K. H. Pausacker. Chem Soc J p 107-9 Ja '53

Oxidation of glycols with lead tetra-acetate; a kinetic study. J. P. Cordner and K. H. Pausacker. Chem Soc J p 102-6 Ja '53

Polyalkylene glycols as lubricants and hydraulic lift fluids in tow motors and lift trucks. T. W. Rodes. Ind & Eng Chem 44: sup 137A-8A+ O '52

Researches on acetylenic compounds; further studies on the synthesis of diacetylenic glycols. J. B. Armitage and others. Chem Soc J p 1998-2005 Je '52

Researches on acetylenic compounds; general routes to aliphatic polyacetylenic hydrocarbons and glycols. C. L. Cook, E. R. H. Jones and M. C. Whiting. Chem Soc J p2883-91 Jl '52

Resinous condensation products from humic acids and glycols or diamines. G. H. Thomson. bibliog J Ap Chem 2:603-8 O '52

Sphingolipid field; an improved synthesis of racemic 2-amino-octadecane-1 : 3-diols, and an X-ray examination of its derivatives. M. J. Egerton, G. I. Gregory and T. Malkin. pl Chem Soc J p2272-4 Je '52

Steroids and related compounds; 5β-methyl-19-norcoprost-9(10)-ene-3β : 6β :-diol. B. Ellis and V. Petrow. Chem Soc J p2246-54 Je '52

Substituted aromatic glycols prepared by electrolytic reduction. M. J. Allen, J. E. Fearn and H. A. Levine. Chem Soc J p2220-3 Je '52

See also

Triethylene glycol

GLYCOPROTEINS

Analysis

Isolation and characterization of glycoproteins from human plasma. K. Schmid. Am Chem Soc J 75:2532 My 20 '53

GLYCOSIDES

Alkaloids of veratrum eschscholtzii Gray; the glycosides. M. W. Klohs and others. bibliog Am Chem Soc J 75:2133-5 My 5 '53

GLYCOSIDES—*Continued*

Cardio-active glycosides of strophanthus sarmentosus P.DC. sarmentoside B and its relation to an original sarmentobioside. R. K. Callow and D. A. H. Taylor. Chem Soc J p2299-304 Je '52

Chromatographic separation of anomeric glycosides. I. Augestad and others. bibliog Chem & Ind p376-7 Ap 18 '53

Flavone glycosides of parsley. C. G. Nordström and others. bibliog Chem & Ind p85-6 Ja 24 '53

Flavonoid glycosides of dahlia variabilis; general introduction; cyanidin, apigenin, and luteolin glycosides from the variety dandy. C. G. Nordström and T. Swain. Chem Soc J p2764-73 S '53

Floc in carbonated beverages. F. G. Eis and others. bibliog diag Ind & Eng Chem 44:2844-8 D '52

Glycosides of the seeds of strophanthus amboensis E. and Pax. M. R. Salmon, R. Foppiano and W. G. Bywater. bibliog Am Chem Soc J 74:4536-7 S 20 '52

Glycosides of the seeds of strophanthus schuchardti Pax. R. Foppiano, M. R. Salmon and W. G. Bywater. bibliog Am Chem Soc J 74:4537-8 S 20 '52

Hydrolysis of some flavonoid rhamnoglucosides to flavonoid glucosides. D. W. Fox, W. L. Savage and S. H. Wender. bibliog Am Chem Soc J 75:2504-5 My 20 '53

Isolation and identification of quercetin and some quercetin glycosides from plums (prunus salicina). B. L. Williams and S. H. Wender. Am Chem Soc J 75:4363-4 S 5 '53

Long-chain alkylurea N-glycosides. J. G. Erickson and J. S. Keps. Am Chem Soc J 75:4339 S 5 '53

Preparation and characterization by alkaline methanolysis of 5,5-diethyl-4-(tetraacetyl-β-D-glucosyloxy) -2,6(1,5) - pyrimidinedione. J. A. Snyder and K. P. Link. bibliog Am Chem Soc J 75:1881-3 Ap 20 '53

Synthesis of some O-glucuronides and O-glucosides of phenolic amino acids. A. Taurog, S. Abraham and I. L. Chaikoff. bibliog Am Chem Soc J 75:3473-7 Jl 20 '53

Temperature coefficients of rotation of some *o*- and *p*-nitrophenyl glycosides and their polyacetates. J. A. Snyder and K. P. Link. Am Chem Soc J 75:1758 Ap 5 '53

See also
Kellin

Analysis

Quercetin and its glycosides in leaves of vaccinium myrtillus. C. H. Ice and S. H. Wender. bibliog Am Chem Soc J 75:50-2 Ja 5 '53

GLYCOSIN. See Alkaloids

GLYCOSYLAMINES

N-arylglycosylamines. S. Bayne and W. H. Holms. Chem Soc J p3247-52 Ag '52

N-substituted glycosylamines; acetates, benzoates, and methyl ethers. G. P. Ellis and J. Honeyman. Chem Soc J p2053-7 Je '52

N-substituted glycosylamines; *N*-aryl-D- fructosylamines. C. P. Barry and J. Honeyman. Chem Soc J p4147-50 N '52

N-substituted glycosylamines derived from sulphanilamide and *p*-aminosalicylic acid. R. Bognár and P. Nánási. Chem Soc J p 1703-8 Je '53

GLYOXAL

Photolysis of glyoxal vapor at wave length 3130 Å. J. G. Calvert and G. S. Layne. bibliog Am Chem Soc J 75:856-9 F 20 '53

n-Propyl and *iso*propyl acetals of glyoxal; reaction of commercial aqueous glyoxal solutions with propan-1- and -2-ols. B. Duval, R. H. Hall and B. K. Howe. bibliog J Ap Chem 2:546-50 S '52

Reaction of guanidine with glyoxals in aqueous solution; the preparation of glycocyamidines. I. S. Bengelsdorf. bibliog Am Chem Soc J 75:3138-40 Jl 5 '53

GLYOXALINE. See Imidazole

GLYOXIME

Compounds formed between nickel(II) and dimethylglyoxime by alkaline oxidation. E. Booth and J. D. H. Strickland. bibliog Am Chem Soc J 75:3017-19 Je 20 '53

GLYOXYLIC acid

Some glyoxylic steroids. D. Gould and E. B. Hershberg. bibliog Am Chem Soc J 75:3593-4 Jl 20 '53

GODSOE, J. Gerald, 1905-

SLA convention speakers at the forum on Canadian resources. por Special Lib 44:152-3 Ap '53

GOEBEL, Adolph, inc.

Suspends trading on American stock exchange. Comm & Fin Chr 177:1212 Mr 19 '53

GOGGLES

Eye conservation. bibliog il Nat Safety N 67:83-4+ Mr '53

Optical plastics come of age. il Safety Maint & Prod 104:31-2+ N '52

Relation between welding current and appropriate transmission of filter glasses. T. Rosskopf. Welding J 32:689-91 Ag '53

Sealed, safe and sanitary. il Nat Safety N 67:34 Je '53

GOLD

Alteration of surface properties of gold and silver as indicated by contact angle measurements. F. E. Bartell and J. T. Smith. bibliog diags J Phys Chem 57:165-72 F '53

Bonding of thin films. H. P. Meissner and J. Byrne. bibliog diag J Ap Phys 23:1170-3 O '52

Effect of stress on metal electrode potentials. R. E. Fryxell and N. H. Nachtrieb. bibliog il diags Electrochem Soc J 99:495-503 D '52

Foreign gold and dollar holdings. Comm & Fin Chr 177:695 F 12 '53

Gold, in fact, fiction, and finance. C. R. Hayward. il diag Tech R 55:207-10+ F '53

Gold, 1952. M. A. Kriz. Eng & Min J 154:72-5 F '53

Needling U.S. to raise gold price; foreign counterfeiting of gold coins; free gold markets listed. H. M. Bratter. Comm & Fin Chr 176:1726+ N 6 '52

Quenching-in of lattice vacancies in pure gold. J. W. Kauffman and J. S. Koehler. Phys R 88:149-50 O 1 '52

Radiation damage and recovery in Cu, Ag, Au, Ni, and Ta. J. W. Marx and others. bibliog diags Phys R 88:106-12 O 1 '52

Sterling convertability and recent U.S. gold outflow. P. Einzig. Comm & Fin Chr 177:484 Ja 29 '53

Total fast neutron cross sections of Co, Ga, Se, Cd, Te, Pt, Au, Hg, and Th. M. Walt and others. Phys R 89:1271-2 Mr 15 '53

Total neutron cross sections of gold, chlorine, and phosphorus. S. C. Snowdon and W. D. Whitehead. bibliog Phys R 90:615-18 My 15 '53

See also
Gold ores

Analysis

Analysis of gold and gold alloy solutions. E. A. Parker. bibliog Metal Finishing 51:56-60+ S '53

Isotopes

Angular correlation of the cascade gamma-rays from the decay of Au^{198}. C. D. Schrader and others. bibliog Phys R 90:159 Ap 1 '53

Decay of Au^{197m}. J. W. Mihelich and A. de-Shalit. bibliog il diag Phys R 91:78-81 Jl 1 '53

Measurement and interpretation of the *K* Auger intensities of Sn^{113}, Cs^{137}, and Au^{198}. C. D. Broyles and others. bibliog diag Phys R 89:715-24 F 15 '53

Probability of internal conversion of *K* series radiation of Au arising from the interaction of the *L* subshells. J. W. Mihelich. bibliog Phys R 88:415 O 15 '52

Metallography

Determination of the absolute grain boundary energy of gold at 1300°K. F. H. Buttner and others. bibliog il diags J Metals 5: Trans 313-17 sec 2 F '53

Prices

Bombay bullion crisis. Economist 166:511-12 F 21 '53

Bullion market under pressure. Economist 165:558+ N 22 '52

GOLD—Prices—*Continued*
- Decline of gold price. P. Einzig. Comm & Fin Chr 178:25 Jl 2 '53
- Free gold market can stop inflation. R. W. Taylor. Comm & Fin Chr 176:2499 D 25 '52
- Gold producing equities. H. J. King. Comm & Fin Chr 177:100 Ja 8 '53
- Monetary fund's adamant stand on gold price slows premium market. Eng & Min J 153: 139-40 N '52
- More notes on gold. J. P. deWet. Can Min J 73:60-6 O '52
- Price of gold. Nat City Bank p3-8 Ja '53
- Price of gold. P. Cortney. Comm & Fin Chr 177:2519+ Je 11 '53; Discussion. 177:2751; 178:360 Je 25, Jl 30 '53
- Prospects of the gold price. Economist 165: 705-6 D 6 '52
- Raising gold price not inflationary. H. Hansen. Comm & Fin Chr 178:107+ Jl 9 '53
- Should we re-examine our gold buying policy? H. M. Bratter. Comm & Fin Chr 177: 91+ Ja 8 '53
- Vital aspects of gold price. H. J. King. Comm & Fin Chr 177:469 Ja 29 '53
- What price gold? Nat City Bank p45-7 Ap '53

Statistics
- Gold production outside USSR, 1941-1951; monthly Oct. 1951-1952. Fed Res Bul 39:73 Ja '53 [cont monthly]

GOLD alloys
- Analysis of gold and gold alloy solutions. E. A. Parker. bibliog Metal Finishing 51: 56-60+ S '53
- Diffusionless transformation in Au-Cd single crystals containing 47.5 atomic percent cadmium; characteristics of single-interface transformation. L. Chang. diags J Ap Phys 23:725-8 Jl '52
- Electrical properties of gold-germanium alloys. W. C. Dunlap, jr. Phys R 91:1282 S 1 '53
- High-pressure wire gage using gold-chrome wire. H. E. Darling and D. H. Newhall. il diag A S M E Trans 75:311-14 Ap '53
- Isothermal ordering of Cu_3Au at 200°C. E. K. Halteman and others. Phys R 88:1205 D 1 '52
- Kinetics of the disorder-order transformation in Cu_3Au. N. W. Lord. bibliog diags J Chem Phys 21:692-9 Ap '53
- Resistivity of Cu_3Au during neutron irradiation. H. L. Glick and others. Phys R 87: 1074 S 15 '52
- Thermodynamic properties of solid nickel-gold alloys. L. L. Seigle and others. bibliog diag J Metals 4:Trans 1320-7 D '52; Discussion. 5:Trans 728-9 sec 2 My '53
- Vapor pressure of silver over silver-gold solid solutions. C. L. McCabe and others. bibliog J Metals 5:Trans 709-11 sec 2 My '53

GOLD as money
- Advocates gold convertibility. H. F. Hagemann, jr. Comm & Fin Chr 177:484 Ja 29 '53
- Arguments for gold standard. F. G. Shull. Comm & Fin Chr 177:1964 My 7 '53
- Economists urge return to sound money; statement issued by the Economists' national committee on monetary policy. Comm & Fin Chr 177:810 F 19 '53
- Gold and the gap; comment on Roy Harrod report to the International monetary fund. Economist 167:468 My 16 '53
- Gold coin counterfeiting in Italy. P. Einzig. Comm & Fin Chr 177:694 F 12 '53
- Gold dollar price and sterling convertibility. P. Einzig. Comm & Fin Chr 176:1935 N 20 '52; Discussion. 176:2135; 177:106 D 4 '52, Ja 8 '53
- Gold, fixed and free. Economist 167:43 Ap 4 '53
- Gold. 1952. M. A. Kriz. Eng & Min J 154: 72-5 F '53
- Gold outflow; what it means. A. T. Boanas. Comm & Fin Chr 177:1118 Mr 12 '53
- Growth of foreign currency reserves. Nat City Bank p32-5 Mr '53
- Hard money versus inflation. F. Case. Min Cong J 39:81-3 Ap '53
- Honest dollars and the price of gold. H. Sears. Comm & Fin Chr 177:1120-2 Mr 12 '53; Discussion. 177:1447, 2198+ Ap 2, My 21 '53
- In defense of the full gold standard. J. W. Bell. Comm & Fin Chr 177:1737+ Ap 23 '53
- International flow of gold and dollars, 1952. Fed Res Bul 39:209-16 Mr '53
- Let's bury the gold standard. H. Fleming. Harvard Bsns R 30:59-68 N '52
- More notes on gold. J. P. deWet. Can Min J 73:60-6 O '52; 74:62-4 Jl '53
- New gold standard, 1965. Economist 166: 783-5 Mr 21 '53
- Price of gold. Nat City Bank p3-8 Ja '53
- Price of gold. P. Cortney. Comm & Fin Chr 177:2519+ Je 11 '53; Discussion. 177:2751; 178:360 Je 25, Jl 30 '53
- Raising gold price not inflationary. H. Hansen. Comm & Fin Chr 178:107+ Jl 9 '53
- Sound money or depression. M. E. Shoup. Comm & Fin Chr 177:2750 Je 25 '53
- Sterling area's gold and dollar reserves increase $82 million. For Comm W 48:7 D 1 '52
- Sterling area's gold reserves going up. For Comm W 49:5-6 Mr 30 '53
- Vital aspects of gold price. H. J. King. Comm & Fin Chr 177:469 Ja 29 '53
- What price gold? Nat City Bank p45-7 Ap '53
- Who said gold standard? L. P. Mansfield. Comm & Fin Chr 177:2324 My 28 '53
- Why we can not return to the gold coin standard. F. Pick. Comm & Fin Chr 177: 1964-5 My 7 '53; Discussion. H. J. King. 177:2067 My 14 '53; Reply. 177:2199 My 21 '53

Arabia
- Saudi Arabia makes hard currency move. A. N. Young. Barron's 33:16 My 4 '53

Great Britain
- Gold out of season. Economist 167:680 Je 6 '53
- Importance of Britain's gold reserve. P. Bareau. Burroughs Clearing House 37:10-11 Je '53

United States
- Almighty dollar? U.S. is losing gold to the rest of the world. K. Bloch. Barron's 33:3 Mr 2 '53
- Government checking gold and silver stocks. H Bratter. Bankers Mo 70:46 Ap '53
- Needed: a commission to study money problem. W. L. Hemingway. Comm & Fin Chr 177:192 Ja 15 '53
- New administration can restore gold standard. F. G. Shull. Comm & Fin Chr 177:593 F 5 '53
- Recent political developments and the gold standard. F. G. Shull. Comm & Fin Chr 176: 2337 D 18 '52
- Restore gold standard immediately! W. E. Spahr. Comm & Fin Chr 177:693 F 12 '53
- U.S. can return to gold standard alone. P. M. McKenna. Comm & Fin Chr 176:2338 D 18 '52
- Why shouldn't Americans have gold coinage again? H. M. Bratter. Comm & Fin Chr 178:197+ Jl 16 '53
- Why we should restore the gold standard. S. Bridges. Comm & Fin Chr 178:205+ Jl 16 '53

Uruguay
- How Uruguay's gold-certificate market works. H. M. Bratter. Comm & Fin Chr 177:1523+ Ap 9 '53; Correction. 177:2753 Je 25 '53

GOLD bromides
- Nature of benzyl sulphide-dibromo- and -dichloro-gold. F. H. Brain and others. diags Chem Soc J p3686-94 O '52

GOLD chlorides
- Nature of benzyl sulphide-dibromo- and -dichloro-gold. F. H. Brain and others. diags Chem Soc J p3686-94 O '52

GOLD COAST, Africa
- Giant aluminum plant planned. map Bsns W p 150 D 6 '52
- Towards independence. Economist 167:889-90 Je 27 '53

GOLD dredging
- Dredging for gravel and gold; Cooley gravel co. W. B. Lenhart. flow sheet il Rock Prod 56:94-8 Mr '53

GOLD metallurgy

Gold recovery from cyanide solutions; new CRL ion-exchange method promising. Chem Age (Lond) 67:771 D 6 '52

See also

Cyanide process

GOLD miners

See also

Thurman, Charles Hubbard

South Africa

Labour outlook. Can Min J 74:76 Jl '53

GOLD mines and mining

Gold, 1952. N. O'Donnell. Min Cong J 39:122-3 F '53

See also

Broulan reef mines, ltd.

Finance

Canada raises gold-mining subsidy. For Comm W 48:12 D 15 '52

Finance for gold mining. Economist 167:767-8 Je 13 '53

Gold producing equities. H. J. King. Comm & Fin Chr 177:100 Ja 8 '53

Grootvlei proprietary mines, limited and others; annual reports. Economist 167:633-5 My 30 '53

No money in gold. W. F. Boericke. Barron's 33:25 Mr 30 '53

Insurance aspects

Loss of profits insurance on gold mines. East Underw 54:21 F 13 '53

Securities

Lower Kaffir dividends. Economist 167:841 Je 20 '53

Africa, West

Aerial tramway centralizes plant of West African mine. A. R. Bunce. il plan Can Min J 74:62-3 Ja '53

Canada

Canada raises gold-mining subsidy. For Comm W 48:12 D 15 '52

Gold; enigma metal. Comp Air Mag 57:348 D '52

Kenya

Typical small-scale operation in east Africa; Kitere mine. E. J. Langevad. il maps diag Can Min J 74:62-7 Ag '53

Northwest Territories, Canada

Unwatering Eldorado mine. E. J. Bolger. il map plan diags Can Min J 73:74-9 N '52

Ontario

Progress of the Red Lake safety group. J. R. Smith. Can Min J 74:90-1 S '53

Shrinkage stoping with mechanical loading at Renable. P. S. Cross. plans diags Can Min J 74:55-8 Jl '53

Some features of current mining practices at Kerr-Addison gold mines, ltd. W. S. Row. diags Min Eng 5:Trans 294-303 Mr '53

Underground dust control and ventilation at Kerr-Addison. J. D. Mateer. il plans diags Can Min J 74:81-6 S '53

Orange Free State

Three new producers; Western Holdings, Freddies North and Freddies South. map Can Min J 74:107-8 S '53

Quebec (province)

Effective accident prevention at Canadian Malartic. G. G. Mabee. Can Min J 74:96-8 S '53

Replacement of rock bolts with used hoisting rope cuts cost of holding ground. R. S. Haflidson and others. il plan diags Eng & Min J 154:100-2 Ja '53

South Africa

Electric power supply problems of the South African gold mining industry. E. F. Rendell. il maps Can Min J 74:65-8 Jl '53

South Africa makes progress. Can Min J 74:83 Mr '53

South Africa mining in 1952. Can Min J 74:120-1 F '53

Uranium recovery scheme. Can Min J 74:87-8 My '53

See also

Gold mines and mining—Transvaal

Transvaal

Grootvlei proprietary mines, limited and others; annual reports. Economist 167:633-5 My 30 '53

Sound policies that can help South Africa's new gold mines. il map Eng & Min J 154:81-5 O '53

Vlakfontein sets world record for shaft sinking in May. il diag Eng & Min J 154:130 Ag '53

GOLD ores

Geology and mineralization of the Volcano district, Elmore county, Idaho. R. M. Allen, jr. bibliog maps Econ Geol 47:815-21 D '52

GOLD plating

New plating process expands industrial use of gold. E. C. Rinker. il Iron Age 171:131-3 Je 25 '53

Silver and gold plated parts meet tough specifications. T. C. Du Mond. il Materials & Methods 36:114-15 N '52

GOLDBERG, Arthur Joseph, 1908-

Eisenhower's labor liaison. Fortune 47:77-8+ Mr '53

GOLDENSON, Leonard Harry, 1905-

Businessmen in the news. por Fortune 47:60 Ap '53

GOLF

Where Eisenhower and the masters play golf. il Bsns W p30-2 Ap 18 '53

GOLF balls

Golf balls in contoured plastic; U.S. rubber co. il Mod Packaging 26:120-1 Je '53

Snap-fold display box; Acushnet golf balls. il Mod Packaging 26:118-19+ F '53

GOMBERG reaction

Orienting influence of the methyl group in toluene in the Gomberg reaction. R. H. Wilson. bibliog J Ap Chem 3:37-9 Ja '53

GONIOMETERS

Spiral-scanning X-ray reflection goniometer for the rapid determination of preferred orientations. A. N. Holden. il diags R Sci Instr 24:10-12 Ja '53

Versatile goniometer for projection photometry. T. H. Projector. il Illum Eng 48:192-6 Ap '53

Manufacture

Precision tooling is a must. A. Ashburn. il diags Am Mach 97:97-101 Ag 17 '53

GONIOPHOTOMETERS

Analysis of goniophotometric reflection curves. I. Nimeroff. Opt Soc Am J 42:579-83 Ag '52

GOOD will (in business)

Why purchased goodwill should be amortized on a systematic basis. G. T. Walker. bibliog J Account 95:210-16 F '53

GOODRICH, B. F., company

Goodrich makes up its mind. Bsns W p 140-2+ My 16 '53

Goodrich 1952 sales decline with income at $32,364,008. Rubber Age 72:800 Mr '53

Goodrich organizes two major divisions integrating activities. Rubber Age 73:518-19 Jl '53

Life everlasting; new rubber. Bsns W p32 Ja 31 '53

GOODYEAR tire and rubber company

Goodyear reports record sales of $1,138,403,608 during 1952. Rubber Age 72:798 Mr '53

Life everlasting; new rubber. Bsns W p32 Ja 31 '53

GORDON, Clarence Everitt, 1876-1951

Memorial. R. S. Lull. bibliog por(pl 8) Geol Soc Proc 1952:105-6 Je '53

GORDON research conferences

Conferences, New London, June 15-September 4; program. Science 117:510-16 My 8 '53

Elastomer conference, New London, N. H. June 30-July 4, 1952; summary. Science 117:367-70 Ap 10 '53

Schedule for 1953. Chem & Eng N 31:1562-4+ Ap 13 '53

GOVERNMENT accounting

Industrial fund accounting in the Defense department. M. K. Zucker. N A C A Bul 34:635-43 Ja '53

GOVERNMENT advertising
See also
Municipal advertising
State advertising

GOVERNMENT aid to business
Small firms; suggest special aid. Iron Age 170:119 D 11 '52
Study of federal home financing essential! H. D. Pettibone. Comm & Fin Chr 177:483 Ja 29 '53
See also
Reconstruction finance corporation
Subsidies

GOVERNMENT boards and commissions
Agencies; getting ready to go Republican. Bsns W p31 N 15 '52
Use and misuse of authority by federal agencies. T. W. Christopher. Harvard Bsns R 30:48-58 N '52

GOVERNMENT bonds. See Bonds, Government

GOVERNMENT buildings. See Public buildings

GOVERNMENT competition with business
Government steps out of business. J. T. Russell. Mag of Wall St 91:627-9+ Mr 7 '53
No more government competition in credit or business fields. J. P. Wolcott. Comm & Fin Chr 177:1112-13 Mr 12 '53
Problems involved in getting the federal government out of business enterprises. F. R. Coudert, jr. Pub Util 51:715-16 My 21 '53
Recent government moves that affect insurance business. E. M. Thore. East Underw 54:1+ My 15 '53
See also
Government ownership

GOVERNMENT contracts. See Contracts, Government

GOVERNMENT corporations
Government corporations and credit agencies; selected assets and liabilities; loans, by purpose and agency, 1944-1952. Fed Res Bul 39:36-7 Ja '53 [cont monthly]
Profits, taxes, and dividends; current assets and liabilities of United States corporations, 1939-1950; quarterly 1951-1952. Fed Res Bul 39:46 Ja '53 [cont monthly]
See also
Commodity credit corporation
Iron and steel corporation of Great Britain
Reconstruction finance corporation

GOVERNMENT employees
Are federal employees underpaid? J. Taber. Weekly Underw 168:233 Ja 17 '53
Businessmen duck jobs in Washington. Bsns W p90-1 D 27 '52
Federal white-collar workers; their occupations and salaries, June 1951. C. E. Taylor. U S Bur Labor Stattistics Bul 1117:1-43; pa 15c Supt. of doc. '53; Excerpt. Mo Labor R 75:489-94 N '52
Follow-up survey of fitness for duty examinations among federal employees. T. Levy and others. Ind Med 21:477-81 O '52
Laxity of accident prevention in government. L. Saltonstall. il Safety Maint & Prod 106:19-20+ O '53
Men, management and mobilization. H. H. Fowler. Advanced Management 18:38-42 Ja '53
New government employee security program; statement by Scientists' committee on loyalty and security. Science 117:sup3 Je 5 '53
Wheels within wheels; handing out jobs is a complicated operation. J. C. Perham. Barron's 33:5 F 9 '53
See also
Civil service
Public officials
United States—Army—Civilian employees

Salaries

Executive compensation in the federal government. J. M. Rosow. Personnel 29:390-401 Mr '53

GOVERNMENT expenditures
Are new fluid monetary theories all wet? goods are real wealth. J. S. Draper. Credit & Fin Management 55:14-15 My '53
Business men asked to aid economy. C. L. Allen. East Underw 54:28+ F 27 '53
Defense spending stretch-out; a stabilizing economic force. H. A. Bullis. Comm & Fin Chr 176:1929 N 20 '52
Expenditures in 1952; national security outlays. Fed Res Bul 38:1186-7 N '52
Federal expenditures (in millions) for construction in continental United States, 1942 to 1953; tabulation. Eng N 149:23 O 30 '52
Federal fiscal policy in the near future. P. Studenski. Comm & Fin Chr 176:2502+ D 25 '52
Foreign aid in fiscal year 1952; with tables by program and by country, July 1945 through June 1952. C. E. Shepler. map Survey of Cur Bsns 32:6-11 O '52
Non-productive government spending harmful to Nation. L. J. Kalmbach. Comm & Fin Chr 177:1974 My 7 '53
Senate committe refutes claims of multibillion dollar savings from Hoover commission reorganization of federal government. R. G. Gibbs. Chem & Eng N 30:4704 N 10 '52
State and local government; receipt and expenditure programs. K. O. Nygaard. Survey of Cur Bsns 33:11-16 Ja '53
What will happen when defense spending levels off? L. F. Lee; R. C. Turner. Banking 45:18-20 D '52
See also
Budget—United States
United States—Appropriations and expenditures

GOVERNMENT finance
See also
Municipal finance

GOVERNMENT housing. See Housing projects, Government

GOVERNMENT investigations
Freedom to dissent. Bsns W p 196 Mr 14 '53
Question; what have we learned from the credit hearings? two views of the Patman hearings. H. C. Murphy; A. Upgren. Banking 45:16-17 S '52
Risk of irresponsible investigations. F. G. Dutton. Pub Util 52:146-9 Jl 30 '53
See also
Petroleum industry and trade—Trust investigation

GOVERNMENT laboratories
See also
United States—Army—Laboratories

GOVERNMENT liability
Military secrets held privileged in air force crash case. Weekly Underw 168:1045 Ap 11 '53
Texas City case argued before United States Supreme court. East Underw 54:28 Ap 17 '53
U.S. brief in Texas City case lauds Appeal court. Nat Underw 56:1 O 23 '52
U.S. wins Texas City case. East Underw 54:20 Je 12 '53; Nat Underw 57:2+ Je 11 '53; Weekly Underw 168:1607 Je 13 '53

GOVERNMENT libraries
In-service training for government librarians. E. Woodruff. Special Lib 44:48-52 F '53
Technical library of the Quartermaster research and development laboratories. R. L. Martin. Special Lib 44:96-8 Mr '53

GOVERNMENT loans and grants
Government corporations and credit agencies; selected assets and liabilities; loans, by purpose and agency, 1944-1952. Fed Res Bul 39:36-7 Ja '53 [cont monthly]
See also
Airports—Federal aid
Reconstruction finance corporation
Rural electrification administration

GOVERNMENT officials. See Public officials

GOVERNMENT ownership
Bolivia takes over tin. il Bsns W p 148-50 N 15 '52
Denationalisation on trial. Economist 166:781-2 Mr 21 '53
Does nationalization work? Britain's experience in operating coal industry. W. W. Haynes. Harvard Bsns R 31:103-15 Mr '53

GOVERNMENT ownership—*Continued*

Experience hath shown; plea for a constitutional amendment to get the federal government out of business enterprise. W. E. Stone. Pub Util 51:135-45 Ja 29 '53; Same cond. Manuf Rec 122:30-1+ Mr '53

Failure of nationalization abroad. V. L. Horoth. map Mag of Wall St 91:231-3+ N 29 '52

Government steps out of business. J. T. Russell. Mag of Wall St 91:627-9+ Mr 7 '53

Great mistake of Karl Marx. B. F. Fairless. Comm & Fin Chr 176:1531+ O 23 '52; Excerpts. Automotive Ind 108:37+ My 15 '53

Hearings on Shafer disposal plan begin as Senate introduces different measure. Rubber Age 73:373-5 Je '53

Lightning conductor for nationalisers. Economist 167:79 Ap 11 '53

Nationalization endorsed; oil dealt major blow by U.N. approval of Bolivia-Uruguay resolution. D. M. Duff. Oil & Gas J 51:149 D 22 '52

Party line; liberal press. J. Chamberlain. Barron's 33:5 Je 29 '53

RFC program for disposal to private industry of government-owned rubber-producing facilities; summary of report and conclusions. India Rubber World 128:82-4+ Ap '53

Should industry run government-administered projects? Mill & Factory 52:67-70 F '53

Small business, America's bulwark. H. Barchoff. Dun's R 60:23-4+ D '52

Steel nears the test. Economist 166:823-4 Mr 21 '53

Tin takeover; can Bolivia afford it? Bsns W p 166 N 22 '52

UN resolution upholding nationalization without compensation denounced. G. K. Funston and E. Bunting. Comm & Fin Chr 176:2335 D 18 '52

U.N. validates rights of members to nationalize wealth and resources. R. S. Byfield. Manuf Rec 122:28+ Ja '53

See also

British electricity authority
Electric utilities—Government ownership
Hydroelectric plants—Government ownership
Iron and steel corporation of Great Britain
Railroads and state

GOVERNMENT paper. See Paper, Government

GOVERNMENT publications

How to obtain research and development reports from the government. E. B. Jackson. Special Lib 44:101-8 Mr '53

See also United States—Agriculture, Department of—Bibliography

Bibliography

Popular guide to government publications. W. P. Leidy. 296p $3 Columbia univ. press, 2960 Broadway, New York 27 '53

Publications, maps and charts sold by U.S. government agencies other than the Superintendent of documents. N. M. Bowman. Special Lib 44:53-65 F '53

Supplementary list of publications of the National bureau of standards, July 1, 1947 to June 30, 1952 (with subject and author indexes); is a supplement of National bureau of standards Circular 460, which is a catalog of publications from 1901 to June 30, 1947. 223p U.S. National bur. of standards, Washington; pa 75c Supt. of doc. '53

United States Department of commerce publications. 795p $2.75 Supt. of doc., Washington '52

United States government publications for high school libraries, a selected current list of references. M. J. Kennedy, comp. (Supplement no. 1) rev ed 14 l Florida state univ. library, Tallahassee '53

Canada

Acquisition of Canadian government documents. M. I. Turnbull. il Special Lib 43:341-3 N '52

Great Britain

Government information and the research worker. R. Staveley, ed. 228p Library assn. Chaucer House, Malet place, London '52 (24s)

GOVERNMENT purchasing. See Purchasing, Government

GOVERNMENT regulation of industry

Business and professional freedom. R. G. Storey. Comm & Fin Chr 177:895+ F 26 '53

Case for big business. Bsns W p75-6 F 21 '53

Clear case of financial malnutrition. B. F. Fairless. Comm & Fin Chr 177:1637+ Ap 16 '53

Competitive industry and government regulation. S. Weeks. Edison Elec Inst Bul 21:299-301+ Ag '53

Controls on borrowed time. Bsns W p27-8 D 13 '52

Costs of mistaken decisions. L. L. Colbert. Credit & Fin Management 54:18-19+ S '52

Influence of government regulations on company expansions. C. E. Waring. Chem & Eng N 31:1964-6+ My 11 '53

Legislative and judicial developments in marketing. W. F. Brown, ed. Published in quarterly numbers of Journal of marketing

More stock owners and less business by government. C. E. Wilson. Comm & Fin Chr 176:1534-5 O 23 '52

Over regulation threatens private oil industry. P. C. Spencer. Comm & Fin Chr 176:1540-1 O 23 '52

Recent trends in metal controls. F. E. Wormser. Comm & Fin Chr 176:2497+ D 25 '52

Small business in action; government regulations. Steel 131:57-8 N 17 '52

Troubles that arise when government control agencies try to prescribe accounting procedures. H. F. Taggart. J Account 95:296-304 Mr '53

What are natural resources? G. W. Keith. Pub Util 51:616-25 My 7 '53

See also

Certificates of convenience and necessity
Commercial policy
Electric utilities—Regulation
Federal trade commission
Food laws and legislation
Government ownership
Industry and state
Insurance companies—Regulation
Interstate commerce commission
Labor laws and legislation
Prices—Regulation
Priorities and allocations, Industrial
Public utilities—Regulation
Railroads and state
Trade marks
Trusts, Industrial—Law

GOVERNMENT research

Better use of government research funds urged. L. A. DuBridge. Chem & Eng N 31:1274 Mr 30 '53

Federal research in fiscal year 1952. Mech Eng 75:25-6 Ja '53

Government erects $3,500,000 low temperature laboratory; NBS-AEC cryogenic engineering laboratory. flow diag il Refrig Eng 61:1082-4+ O '53

Government research in colleges. Sci Am 188:53-4 My '53

Government sponsored research; a Canadian view. R. F. Legget. Heating-Piping 25:138-9 S '53

Science and government; government research laboratories. L. A. DuBridge. il Chem & Eng N 31:1384-90 Ap 6 '53

University and government sponsored research. V. L. Parsegian. Chem & Eng N 30:4470-2 O 27 '52

See also

Great Britain—Scientific and industrial research, Department of
National science foundation

Bibliography

Government engineers report on plastics, lubricants, metallurgy and electronic materials. Materials & Methods 37:196+ F '53

How to obtain research and development reports from the government. E. B. Jackson. Special Lib 44:101-8 Mr '53

Directories

Supplement to the 1952-1953 GRA directory of organizations and individuals professionally engaged in governmental research and related activities. 22p Governmental research assn. 30 Rockefeller Plaza, New York 20 '53

GOVERNMENT statistics
Can the Republicans get better figures? Bsns W p 112-14+ Je 13 '53
Figures under fire; rated low by experts, U.S. construction data to face slash in appropriations. Eng N 150:100-2 Je 11 '53

GOVERNORS (machinery)
Diesel-electrics; how to keep 'em rolling; Diesel engine governor. B. L. Judy and others. il diags Ry Loco & Cars 127:98-104 Mr '53
Diesel-engine governors. E. J. Kates. il diags Power 97:71-3+ Mr; 87-9 Ap; 98-100 My; 82-3+ Je; 85-7+ Ag '53
Governor for Diesel engines. il Roads & Eng Constr 90:80 O '52
Hydraulic governor for Diesel engines. il diag Product Eng 24:208-9 Ja '53
Prime mover speed governors and the interconnected system; abstract. P. G. Ipsen and J. R. Norton. Power 97:158 My '53
Use of the centrifugal governor mechanism as a torsional vibration absorber. O. A. Pringle. diags A S M E Trans 75:59-61; Discussion. 61-2 Ja '53
Water turbine governors; abstract and discussion. N. G. Dennis. Engineer 194:660-1 N 14 '52

GOVERNORS, Gas. See Gas governors

GRACE, W. R., and company
Newcomers on the New York stock exchange. J. S. Williams. Mag of Wall St 91:666 Mr 7 '53

GRADE crossing accidents
1952 crossing accidents down. Ry Age 134:16 Je 15 '53
Who gets involved in railroad crossing accidents? Safety Maint & Prod 105:57 Je '53

GRADE crossing elimination
Novel underpass methods speed traffic relief for crossing gate town. il plan Roads & Sts 96:64-8+ S '53
On this new highline, MP trains lifted out of street. il Ry Age 135:90-2+ S 7 '53
Six railroad crossings eliminated; Missouri Pacific lines. il Nat Safety N 68:72+ S '53

Cost

Grade crossing elimination Long Island, N.Y.; unit prices. Eng N 149:100 D 11 '52

GRADE crossings
Electrically operated traffic barrier; Westinghouse brake and signal co. il Engineer 194:875 D 26 '52; Engineering 175:63-4 Ja 9 '53
Level crossing lifting barriers. il Engineer 194:653 N 14 '52; Engineering 174:703 N 28 '53
Sight distances at railroad crossings should be improved. H. E. Snyder. diag Civil Eng 23:180 Mr '53
Zebra crossings reduce accidents in Britain. Pub Works 84:92 My '53

GRADERS, Road. See Road making machinery

GRADUATE work. See Colleges and universities—Graduate work; Engineering colleges—Graduate work

GRAFTING
Grafting of large monocotyledonous plants. T. J. Muzik and C. D. La Rue. bibliog il Science 116:589-91 N 28 '52

GRAHAM, William Franklin, 1918-
Evangelist Billy Graham to write daily column. E. Knoll. por Ed & Pub 85:58 N 15 '52

GRAHAM, North Carolina

Water supply

New water plant rehabilitates a town; Graham, N.C. J. L. Morrison. il Pub Works 83:71-2 D '52

GRAHAM county, Arizona
Students counsel a county. il Bsns W p78-80+ My 16 '53

GRAIN
Cereal agronomy. F. R. Horne. Chem & Ind p46-51 Ja 17 '53
Factors affecting cereals as a food. J. Duckworth. Chem & Ind p 1139-45 bibliog(134 ref, p 1144-5) N 22 '52
Grain drying. E. C. Claydon. il Elec R (Lond) 152:350-2 F 13 '53
Grain drying; large all-electric installation at Fakenham. il Elec R (Lond) 151:1026-8 N 7 '52
Quality of cereals and their industrial uses. H. A. Tempany. Chem & Ind p31-2 Ja 10 '53
Quality of cereals and their industrial uses; viability testing of cereal seeds. A. M. MacLeod. bibliog Chem & Ind p289-91 Mr 28 '53
Recent developments in grain drying; abstract and discussion. H. T. Horsman. Elec R (Lond) 152:429-30 F 20 '53

See also

Barley	Rice
Corn	Teosinte
Flour	Wheat
Oats	

By-products

Quality of cereals and their industrial uses. K. C. Reid. Chem & Ind p 144-6 F 14 '53

Insect infestation

Quality of cereals and their industrial uses; grain protection. G. V. B. Herford. Chem & Ind p75-7 Ja 24 '53

Transportation

Chesapeake & Ohio makes grain cars from automobile box cars. il Ry Age 133:71 N 17 '52

GRAIN elevators
Anderson finds the quick way up in grain elevators; Anderson truck terminal, Maumee, Ohio. il Bsns W p52-4+ Jl 4 '53

GRAIN handling
Simon portable grain handling equipment. il Engineer 196:155-6 Jl 31 '53

GRAIN storage
Aluminium grain silo. il Engineer 195:108 Ja 16 '53; Engineering 175:86 Ja 16 '53
Grain storage a problem in Southwest this year. il Ry Age 134:14-15 Je 29 '53
Mechanical ventilation can prevent grain spoilage. V. Marvin and C. C. Connolly, jr. il Elec World News ed 139:34-5 Mr 2 '53
Quality of cereals and their industrial uses; grain protection. G. V. B. Herford. Chem & Ind p75-7 Ja 24 '53

GRAIN trade
Grain futures again. Economist 167:682 Je 6 '53
More grain; world production of grain. Economist 166:829-30 Mr 21 '53

Great Britain

British grain harvest is higher; imports are still necessary. For Comm W 49:9 Ja 12 '53
Exchange control and grain dealings. Economist 167:932 Je 27 '53; For Comm W 50:11 Jl 20 '53
Freedom for grain. Economist 166:229 Ja 24 '53
Freeing the grain trade. Economist 167:244 Ap 25 '53
Quality of cereals and their industrial uses. H. A. Tempany. Chem & Ind p31-2 Ja 10 '53

Netherlands

Netherlands analyzes grain requirements. For Comm W 50:19 Jl 13 '53

Uruguay

Uruguayan grain output decreases; 1952 exports highest on record. For Comm W 49:14 Mr 2 '53

GRAMINE
Alkylation of gramine and of indole-N-methylgramine. A. P. Gray. bibliog Am Chem Soc J 75:1252-3 Mr 5 '53

GRANARIES
Corn crib costs a dollar a bushel. il plan diag Am Bld 75:134-5 F '53

GRAND RAPIDS, Michigan

Water supply

Effect of fluoridated public water supplies on dental caries prevalence. F. A. Arnold, jr. and others. bibliog Pub Health Rep 68:141-8 F '53

GRANDSTANDS
Prestressed concrete grandstand at baseball stadium, Sherbrooke, Que.; abstract. G. M. Demarque. Roads & Eng Constr 91:128 Ag '53

GRANDVAL, Gilbert
Portrait. Bsns W p 148 D 6 '52

GRANITE
Heavy media separation removes friable granite from dolomite; Kaiser aluminum and chemical corp. W. B. Lenhart. flow sheet il Rock Prod 56:89-93+ F '53
Morton granite gneiss. E. H. Lund. il map Econ Geol 48:46-52 Ja '53
Polluted water from the leaching of igneous rock. R. S. Ingols and A. T. Navarre. Science 116:595-6 N 28 '52

GRANT, W. T., company
U.S. retail store chains expanding in Canada. J. Montagnes. Barron's 32:33 D 8 '52
Zeller's, Grant join in what may be a trend. Bsns W p88 N 29 '52

GRANT, Will C.
Illinois newspaper columnist praises W. C. Grant. por Gas Age 110:86 O 23 '52

GRANTS-in-aid
New program to assist teaching chemistry in colleges and universities announced by DuPont. Paint Oil & Chem R 116:6 Ja 15 '53

GRANTYPE. See Typesetting machines

GRANULAR materials
Acoustic propagation in granular media. R. W. Morse. Acoustical Soc Am J 24:696-700 N '52
Bulk-handling dry ingredients. W. C. Hoskins. il diags Food Eng 25:94-100 My '53
Fluidized-solids conveyor. Can Chem Process 36:64 S '52
Investigate pneumatic conveyors for handling bulk chemicals. G. N. Havens. il diags Pub Works 83:50-1+ N '52
Machine for determining packed density. D. M. Peppard. diag Anal Chem 24:1869-70 N '52
Poidometer for control of granular material. P. Hart and R. C. King. diag Oil & Gas J 51:131 Mr 9 '53
See also
Powders

GRAPE juice
Story of Welch's grape juice. D. Wharton. il Adv Agency 46:56-9+ Mr '53

GRAPEFRUIT juice
Volume higher, costs lower and product better; Squirt co. V. D. Littlefield. flow sheet (p 118-21) il diags Food Eng 25:84-8+ Ag '53

GRAPES

Analysis

Composition of a typical grape brandy fusel oil. A. D. Webb, R. E. Kepner and R. M. Ikeda. bibliog Anal Chem 24:1944-9 D '52

GRAPHECHON
Development of an improved Graphechon storage tube. W. T. Dyall and others. il diags RCA R 13:546-57 D '52

GRAPHIC arts
Developments in the graphic arts, 1952. R. H. Simmons. Tappi 36:sup 160A-9A Je '53
Graphic arts. A. P. Reynolds. 4pls il diags Paper Tr J 135:464-72 N 14 '52

GRAPHIC arts center (proposed)
Columbia plans new graphic arts center to make collections available to industry. Inland Ptr 131:48 Je '53
Columbia university graphic arts center designed to train industry executives. Ed & Pub 86:64 Ap 11 '53

GRAPHIC arts center, Atlanta, Georgia
Achievement at Atlanta. J. L. Frazier. Inland Ptr 131:46-7 My '53

GRAPHIC methods
Analytical methods for deriving cam profiles. Z. Jania. diags Tool Eng 31:81-8 O '53
Applying graphical methods to square footing designs; procedure in design of stack and tower foundations. C. H. Fork. plans diags Pet Refiner 31:145-50 N '52
Bandwidth of quarter-wave sections. E. G. Fubini and F. H. Rockett, jr. Electronics 25:138-9 O '52
Beware these five deceivers. A. A. Merrill. diags Ptr Ink 241:31 O 31 '52
Calculation of sky-wave field strength. K. Rawer. bibliog il diags Wireless Eng 29:287-301 N '52
Cam curvature. A. R. Holowenko and A. S. Hall. diags Machine Design 25:170-7 Ag; 162-9 S '53 (to be cont)
Column allowables. W. L. Vaughan. Aero Digest 65:42+ N '52
Comprehensive numerical method for the analysis of earthquake resistant structures. C. S. Whitney and others. bibliog diags Am Concrete Inst J 23:5-28 S '51; Discussion. 24:28^1-28^3 pt 2 D '52
Correlating ethane pyrolysis data. R. A. Carpenter and F. C. Fowler. bibliog Pet Refiner 32:153-4 Ap '53
Determining the stability of asphalt pavement by graphic means. P. P. Trebuss. Roads & Eng Constr 90:108+ O '52
Effect of radiation on resonant lines. R. A. Chipman. diags Electronics 26:133-5 Ja '53
Evaluating moments of inertia by graphical techniques; data sheet. J. Modrovsky. plan diags Machine Design 25:185-8 Ag '53
Evaluation of radiant heat absorption rates in tubular heaters. L. A. Mekler and R. S. Fairall. bibliog diags Pet Refiner 31:101-7 Je; 128-32 N; 151-5 D '52
Feedback theory; some properties of signal flow graphs. S. J. Mason. diags Inst Radio Eng Proc 41:1144-56 S '53
Finding an empirical equation graphically. R. F. Nielsen. Oil & Gas J 51:135 O 6 '52
Geometry of the unbalanced star. E. Wilkinson. diags Elec R (Lond) 152:1155-7 My 22 '53
Graph your deaerator for flashing mixtures; Heater state triangle. F. R. Alex. diag Power Eng 57:102-4 Ap '53
Graphic illustrations supersede blueprints in production lines. L. W. Mitchell. il diags Mach 59:189-90 F '53
Graphical aid for combined stress problems; reference book sheet. J. P. Hatch. diags Product Eng 24:207 Ja '53
Graphical aids to broadcasting. A. E. Richmond. diag Electronics 25:195+ O '52
Graphical analysis of problems; temperature, humidity and insulation. H. G. Todman. Midwest Eng 5:7-9+ F '53
Graphical analysis of some transistor switching circuits. L. P. Hunter and H. Fleisher. diags Inst Radio Eng Proc 40:1559-62 N '52
Graphical design of tuning elements. B. H. Baldridge. Electronics 26:192+ Je '53
Graphical differentiation. J. M. Ramrath. diag Product Eng Hdbk p F20-1 '53
Graphical estimation of reserves from decline curves. R. F. Nielsen. Oil & Gas J 51:311 S 29 '52
Graphical method of analysis in air conditioning design. N. Rosenberg. diag Heat & Ven 50:105-6 O '53
Graphical methods for determining beam deflections; data sheet. E. L. Richmond and R. H. Feng. bibliog diags Machine Design 25:177-83 S '53
Graphical shear and moment calculations. W. S. Beller. Aero Digest 66:21-4 Je '53
Graphical solution for turbulent boundary layer in compressible fluids. J. J. Martin. J Aeronautical Sci 20:147-8 F '53
Graphical solution of sky-wave problems; reference sheet. R. A. Helliwell. diag Electronics 26:150, 152 F '53
Graphical spectrum analyzer for pulse series. H. P. Raabe. il diags Inst Radio Eng Proc 41:1129-38 S '53
How to compute tank sizes for products terminals. R. B. Rodgers and S. Hallberg. World Oil 135:257-8 N '52
How to design vr tube circuits. R. C. Miles. diag Electronics 25:135-7 O '52
How to determine gas well interference graphically. D. Cornell. World Oil 135:187-8 N '52
How to use system-head curves. M. Mann. diags Chem Eng 60:162-4 F '53
How you can compute gas reserves more accurately. D. Cornell. bibliog World Oil 135:220+ D '52
Method of obtaining shear stress-strain graphs by interpretation of moment-twist data. P. H. Kaar. A S M E Trans 75:521-3 My '53
Methods of making piping flexibility analyses. A. McCutchan and W. P. Gregory. diags Heating-Piping 25:92-7 Mr '53
Microwave response law corrector. L. J. Perenic. diag Tele-Tech 12:67 S '53
Moments of area of irregular plane figures. H. G. Edmunds. diags Engineer 196:213-16 Ag 14 '53

GRAPHIC methods—*Continued*
New method of calculating carrier current attenuation; abstract. J. A. Becker. Elec Eng 71:1020 N '52
Nonlinear analysis of electro-mechanical problems. Y. H. Ku. bibliog diags Franklin Inst J 255:9-31 Ja '53
Projecting data by algebraic and graphical techniques. E. C. Varnum. il Machine Design 25:123-7 Mr '53
Q-section transformers. W. B. Wrigley. diag Q S T 37:32-3+ Mr '53
Rapid parallel-Z calculations. L. Storch. Tele-Tech 12:91-3+ Ag '53
Resistance-capacitance loading of selenium rectifiers. C. E. Hamann. Tele-Tech 11:58-9+ N '52
Resonance characteristics by conformal mapping. P. M. Honnell and R. E. Horn. bibliog diags Inst Radio Eng Proc 40:1211-15 O '52
Set of charts for review of operations. G. R. White. N A C A Bul 34:327-43 N '52
Simple graphical analysis of a two-port waveguide junction. J. E. Storer and others. diag Inst Radio Eng Proc 41:1004-13 Ag '53
Two-component separations by double-solvent extraction; diagrams for determining operating conditions. A. Klinkenberg. diag Ind & Eng Chem 45:653-7 Mr '53
Use of admittance diagrams in oscillator analysis. H. J. Reich. diags Inst Radio Eng Proc 41:522-8 Ap '53
Working curves for delayed exponential calls served in random order. R. I. Wilkinson. Bell System Tech J 32:360-83 Mr '53
See also
Charts (calculating)
Curve plotting
Nomographs

GRAPHIC panels
Case of the graphic panel. R. L. Nichols. il Pet Eng 25:C 11-14 My '53
Complex process yields to robots. W. T. Force and J. H. Elliot. il Food Eng 25:54-5 Je '53
Instrument tests easy on graphic panel. R. L. Patton. il diag Pet Processing 8:97 Ja '53
Revolutionary graphic panel simplifies process control; Corn products refining co. L. E. Slater. il diags Food Eng 24:84-6+ N '52
Use of graphic instrument panels. J. S. Detwiler. Pulp & Pa of Can 53:128-30 O '52

GRAPHIC statics
Analysis of statically-indeterminate structures by the complementary-energy method. T. M. Charlton. Engineering 174:389-91 S 19 '52
Method for reducing the analysis of complex redundant structures to a routine procedure. L. B. Wehle, jr. and W. Lansing. bibliog diags J Aeronautical Sci 19:677-84 O '52

GRAPHITE
Anisotropic susceptibility of polycrystalline graphite. W. P. Eatherly and J. D. McClelland. Phys R 89:661-2 F 1 '53
Carbon and graphite parts; properties, fabricating methods, corrosion resistance, uses; engineering file facts. Materials & Methods 38:137 S '53
Carbon in the engineering and metallurgical industries. V. S. Kingswood. bibliog flow sheet il diags Metallurgia 48:55-62, 133-6 Ag-S '53
Chemical analyses, surface area, and thermal reactions of natural graphite, and refractoriness of the ashes. L. Mackles and others. bibliog(25 titles) diag Am Cer Soc J 36:266-72 Ag 1 '53
Colloidal graphite used in atomic battery. P. E. Ohmart. il Elec Eng 72:569-70 Je '53; Same. Tele-Tech 12:353-4 Je '53
Crucible graphite; domestic graphites for foundry crucibles equal foreign grades. Iron Age 170:208-9 N 6 '52; il Steel 131:148+ N 10 '52; Materials & Methods 36:208+ D '52; Mech Eng 74:1014 D '52
Electrical conductivity of single crystals of graphite. A. K. Dutta. bibliog Phys R 90:187-92 Ap 15 '53
Electrical resistance of graphite at low temperatures. J. M. Reynolds and others. bibliog Phys R 91:1152-5 S 1 '53
Electrical resistivity of artificial graphite. J. Okada and T. Ikegawa. J Ap Phys 23:1282-3 N '52
Formed carbon and graphite in industry. L. C. Werking. bibliog il Am Cer Soc Bul 32:40-4; Discussion. J. J. Hazel. 44 F 15 '53
Graphite blocks trepanned to save $20 each. E. Walker. il diags Am Mach 96:122-3 N 10 '52
Graphite's role as a drilling-mud additive. A. A. Townsend. Oil & Gas J 51:268+ S 29 '52
How X-3 car wheels are made. il diag Ry Age 134:84-7 Ap 6 '53; Same. Ry Loco & Cars 127:61-5 My '53
Lattice vibrations in graphite. R. W. Gurney. Phys R 88:465-6 N 1 '52
Magnetic susceptibility of bromine-graphite. R. Smoluchowski. bibliog diags Rs Mod Phys 25:178-80; Discussion. 180-1 Ja '53
Mechanism for self-diffusion in graphite. G. J. Dienes. bibliog diags J Ap Phys 23:1194-200 N '52
Metal-carbon composites for mechanical and electrical parts. E. P. Eaton, jr. il Product Eng 23:173-5 N '52
Prevention of scuffing. Automobile Eng 42:385 O '52
Production of electronically excited molecules in the oxidation products of graphite. R. H. Busso. bibliog Am Chem Soc J 74:6101-2 D 5 '52
Properties of graphite. J. P. Howe. bibliog il diags Am Cer Soc J 35:275-82; Discussion. S. Mrozowski; H. Z. Schofield. 35:282-3 N 1 '52
Separation of the anhydrous chlorides of iron and aluminium by formation of graphite complexes. R. C. Croft. J Ap Chem 2:557-62 O '52
Standardized graphite molds. Blast F & Steel Pl 41:1094 S '53
Studies of self-diffusion in graphite using C-14 tracer. M. H. Feldman and others. bibliog diag J Ap Phys 23:1200-6 N '52
Thermal conductivity, electrical resistivity, and thermoelectric power of graphite. W. W. Tyler and A. C. Wilson, jr. bibliog diag Phys R 89:870-5 F 15 '53
See also
Cast iron—Graphitization

GRAPHITE compounds
Electric resistivity of interstitial compounds of graphite. S. Mrozowski. bibliog J Chem Phys 21:492-5 Mr '53
Properties of the interstitial compounds of graphite; the electrical properties of the halogen compounds of graphite. G. Hennig. bibliog J Chem Phys 20:1443-7 S '52
Properties of the interstitial compounds of graphite; the structure and stability of graphite residue compounds. G. Hennig. J Chem Phys 20:1438-42 S '52
Structure of graphite oxide. R. J. Beckett and R. C. Croft. bibliog il J Phys Chem 56:929-35 N '52

GRAPHITIZATION of iron. See Cast iron—Graphitization

GRAPTOLITES
Sylvan graptolites in northeastern Oklahoma. C. E. Decker and G. G. Huffman. diag Am Assn Pet Geologists Bul 37:451-2 F '53
Texas graptolites change supposed Devonian zone to Silurian. C. E. Decker. bibliog il Am Assn Pet Geologists Bul 36:1639-41 Ag '52

GRASSES
Zoysia grass ain't hay. Fortune 47:218 Ap '53
See also
Saw grass

Analysis

Hemicelluloses of esparto grass (stipa tenacissima, L.); the arabinose-rich fraction. G. O. Aspinall and others. Chem Soc J p 1631-4 My '53

GRASSHOPPERS
Control of desert locust plagues. Chem & Eng N 30:4494 O 27 '52
Frequency of dicentric bridges in meiosis in the grasshopper gesonia punctifrons, produced by different dosages of X-rays. S. P. Ray-Chaudhuri and I. Sarkar. diags Science 116:479-82 O 31 '52

GRATON and Knight company
Old dogs can learn new tricks. Bsns W p84+ Je 13 '53

GRAVEL
Earth resistivity surveying for sand and gravel deposits; abstract. I. R. Thomas. Rock Prod 56:141-2 Ap '53
Gradation and composition of Indiana gravels. J. B. Patton. il maps Rock Prod 56:92+ My '53
Separating soft and light particles in gravel. il Pub Works 84:114 Je '53
Should gravel supplies be conserved? P. D. Patterson. Roads & Eng Constr 91:202-3 Mr '53
See also
Aggregates

GRAVEL handling
Depletion necessitates long rail haul; Rio Grande city, Texas, plant of Fordyce gravel co. W. B. Lenhart. flow sheet il Rock Prod 55:105-6 O '52
See also
Sand and gravel plants

GRAVEL plants. See Sand and gravel plants

GRAVIMETRIC analysis
Analysis of gold and gold alloy solutions. E. A. Parker. bibliog Metal Finishing 51:56-60+ S '53
Analysis of synthesis gas; rapid and highly accurate method. G. L. Barthauer, A. Haggerty and R. J. Friedrich. bibliog diags Anal Chem 25:256-9 F '53
Coulogravimetric determination of the halides; a new type of indirect analysis. W. M. MacNevin, B. B. Baker and R. D. McIver. Anal Chem 25:274-7 F '53
Determination of small amounts of zinc in aluminum alloys; rapid electrogravimetric method utilizing isotope dilution technique. K. Theurer and T. R. Sweet. bibliog diag Anal Chem 25:119-21 Ja '53
Gravimetric determination of sulphur in basic steelmaking slags. Iron & Steel Inst J 174:28-30 My '53
Gravimetric determination of thorium and rare earth elements in magnesium alloys. G. B. Wengert and others. bibliog Anal Chem 24:1636-8 O '52
Gravimetric estimation of proteins precipitated by trichloroacetic acid. F. L. Hoch and B. L. Vallee. bibliog Anal Chem 25:317-20 F '53
Gravimetric sampling of dust in coal mines. H. H. Watson and T. G. Morris. bibliog il diags Engineering 174:228-9 Ag 22 '52
Microdetermination of carboxy groups in aromatic and aromatic-type heterocyclic acids. M. Beroza. diag Anal Chem 25:177-9 Ja '53
Microdetermination of osmium. W. J. Allan and F. E. Beamish. bibliog diag Anal Chem 24:1608-12 O '52
Microgravimetric methods for platinum; a comparative study. A. P. Blackmore and others. bibliog Anal Chem 24:1815-19 N '52
Monograph on inorganic thermogravimetric analysis. R. H. Müller. Anal Chem 25:sup 21A-2A+ F '53
Recent developments in metallurgical analysis; gravimetric analysis. T. S. West. bibliog(77 ref) Metallurgia 47:97-103+ F '53

GRAVING docks. See Dry docks

GRAVITATION
General relativistic approach to shortrange forces. H. Amar. Phys R 89:1298-9 Mr 15 '53
Gravitation and electrodynamics; modification of Einstein's unified field theory. B. Kurşunoğlu. bibliog Phys R 88:1369-79 D 15 '52
Gravitational motion. A. E. Scheidegger. Rs Mod Phys 25:451-68 Ap '53
Quasi-relativistic theory of gravitation. M. G. Moore. Phys R 89:587-90 F 1 '53

GRAVITOMETERS
Gas gravitometers. J. M. Quirk. il diags Instruments 26:102-4+ Ja '53

GRAVITY
Gravity and magnetic investigation of the structure of the Cortlandt complex, New York. N. C. Steenland and G. P. Woollard. bibliog maps diags Geol Soc Bul 63:1075-104 N '52

GRAY iron founders' society
Annual meeting, 24th, Cleveland. Iron Age 170:54 O 23 '52
Annual meeting, 24th, Cleveland, Oct. 16-17. Foundry 80:130+ D '52
Quarter century of progress. D. H. Workman. Foundry 81:126-7+ O '53

GRAYSON-ROBINSON stores, inc.
Record sales reported by Grayson-Robinson. Barron's 33:28 Ap 13 '53

GRAZING
Nutritional factors limiting increased livestock production from hills. C. F. Mills. bibliog Chem & Ind p330-3 Ap 11 '53

GREASE
Study of soiling and soil retention in textile fibers; grease-carbon black soil-cotton fiber systems. J. Compton and W. J. Hart. Textile Res J 23:158-63 Mr '53

GREASEPROOF paper. See Paper, Greaseproof

GREAT Atlantic and Pacific tea company
Anti-trust policy and the big buyer; further misgivings about the A&P case. D. Dewey. J Marketing 17:280-4 Ja '53

GREAT BRITAIN
See also
Aeronautics, Commercial—Great Britain
Agriculture—Great Britain
Airplane industry and trade—Great Britain
Airplanes, Military—Great Britain
Automobile industry and trade—Great Britain
Barclays bank, limited
Bonds, Government—Great Britain
Brewing industries—Great Britain
Budget—Great Britain
Census—Great Britain
Chemical industries—Great Britain
Cities and towns—Great Britain
Civil service—Great Britain
Coal mines and mining—Great Britain
Coke industry—Great Britain
Debts, Public—Great Britain
Drainage—Great Britain
Education—Great Britain
Electric apparatus industry—Great Britain
Electric industries—Great Britain
Electricity supply—Great Britain
Exhibitions—Great Britain
Finance—Great Britain
Food supply—Great Britain
Foreign exchange—Regulation—Great Britain
Furniture industry and trade—Great Britain
Gas industry—Great Britain
Housing—Great Britain
Hygiene, Industrial—Great Britain
Insurance, Life—Great Britain
Investments, Foreign—Great Britain
Iron mines and mining—Great Britain
Machine tool industry—Great Britain
Moving picture industry—Great Britain
Public health administration—Great Britain
Radio broadcasting—Great Britain
Steel industry and trade—Great Britain
Television broadcasting—Great Britain
Textile industry—Great Britain
Transportation—Great Britain
Unemployment—Great Britain
Wool trade—Great Britain
Zinc industry and trade—Great Britain

Air force

Air-sea crash rescue tender. il Engineer 194:525-6 O 17 '52; Engineering 174:577 O 31 '52
RAF buildup. N. McKitterick. Aviation W 58:21-2 Mr 16 '53

Colonies

Across the Limpopo; southern Rhodesia. map Economist 165:701-2 D 6 '52
Commonwealth accord; Prime Ministers of the Commonwealth countries conference, London. Economist 167:721 Je 13 '53
Monetary policy in the Dominions. Economist 167:868+ Je 20 '53
Policy for Africa. Economist 167:198-200 Ap 25 '53
Racial policy for Africa; the Capricorn declarations. map Economist 165:741 D 13 '52
See also
West Indies, British

GREAT BRITAIN—*Continued*

Commerce

Balance of payments; charts depicting salient features of the White Paper. Economist 165:83-4 O 11 '52
Britain seeks larger nonsterling markets. For Comm W 49:5 F 2 '53
British balance of payments shows surplus for first half of 1952. For Comm W 48:3 N 3 '52
British foreign trade shows decline. For Comm W 49:3 F 16 '53
British token import plan is continued. For Comm W 49:23-4 Ja 5 '53
Commonwealth trade in 1951; with table. Economist 165:194 O 18 '52
Export or starve. H. W. Bosworth. il Elec J 150:1511-13 My 1 '53
Export stocktaking; with tables of selected British exports and imports. Economist 164: 777-8 S 27 '52
Exports from Britain show sharp upturn. For Comm W 48:8 D 8 '52
Exports with less imports. A. Robinson. Economist 166:790 Mr 21 '53
Freer trade and travel. Economist 166:891-2 Mr 28 '53
Increase in imports. Economist 167:247 Ap 25 '53
Losses on export credits. Economist 166:378-9 F 7 '53
More imports from Europe. Economist 165: 641-2 N 29 '52
Preparing for convertibility. Economist 167: 860+ Je 20 '53
Prices and the deficit; with chart of changes in the visible trade gap; first nine months of 1952 and 1951. Economist 165:563 N 22 '52
Re-orientation; British trade with the Chinese. Economist 166:659-60 Mr 7 '53
Smaller volume of imports; with table of volume of Britain's imports and exports, 1951-1952. Economist 165:563 N 22 '52
Sterling area statistics; comment on quarterly supplement to Board of trade journal. Economist 167:549 My 23 '53
Sterling area's gold reserves continue up. For Comm W 49:6 Je 1 '53
Trade in 1952. Economist 166:506+ F 21 '53
Trade with Latin America. Economist 166: 760-1 Mr 14 '53
Trading with Mao and Malenkov. Economist 167:797-8 Je 20 '53
Trends in commonwealth trade; with table of sterling commonwealth trade, 1950-52. Economist 165:646+ N 29 '52
Unexpected surplus; Britain's balance of payments; with tables. Economist 165:113-14 O 11 '52
United Kingdom reexports at peak in '52; U.S. receives 24 percent. For Comm W 49:5 Je 22 '53
U.K.'s dollar exports to U.S., Canada drop. For Comm W 49:3 Ja 12 '53
United Kingdom's trade deficit up despite high dollar sales. For Comm W 50:4 Jl 13 '53
Volume of cargoes; estimated volume and value of British overseas trade, 1951 and 1952. Economist 166:832 Mr 21 '53
Where Germans compete with British exports. Economist 165:671 D 6 '52

Commercial policy

Britain's consumer spending and the trade balance. P. Einzig. Comm & Fin Chr 177: 1452 Ap 2 '53
Commonwealth contradictions. Economist 167:758 Je 13 '53
Living with the dollar; delicate crusade for an Atlantic payments union. Economist 165:580-96 N 22 '52; Discussion. 165:678-9 D 6 '52
Strategy for sterling. Economist 167:677-9 Je 6 '53

Commonwealth conference, London, 1952

See Commonwealth conference, London, 1952

Defenses

Claims of the services. Economist 167:206 Ap 25 '53
Defence and industry. Economist 166:593 F 28 '53
Defence; enough? Economist 165:731-2 D 13 '52
Industry and defence. Economist 165:769-70 D 13 '52
Labour accepts defence. Economist 166:618 Mr 7 '53
No Churchill. Economist 166:708-10 Mr 14 '53
Tory reform for defence. Economist 166:547-9 F 28 '53

Economic conditions

British economy, 1950-52; tables and charts. Economist 166:854-5 Mr 28 '53
British problem linked to productivity; CED report, Britain's economic problem and its meaning for America. Steel 132:75 Mr 9 '53
British retail changes due. il Bsns W p72+ D 13 '52
Economic survey for 1953. Economist 167: 35-9; Review. 3-4 Ap 4 '53
Economic survey, 1953. Engineering 175:434 Ap 3 '53
Forgotten man; Britain's bitter middle class may plague Labor party. F. Morley. Barron's 33:3 Jl 6 '53
From Victoria to Elizabeth; mid-century perspective. Economist 167:sup My 30 '53
Guns and butter in Britain. P. Einzig. Comm & Fin Chr 177:1010-11 Mr 5 '53
Is inflation in Britain curbed? P. Einzig. Comm & Fin Chr 177:1870 Ap 30 '53
Measure of recovery. Economist 167:681-2 Je 6 '53
No peace scare in London. P. Einzig. Comm & Fin Chr 177:2759 Je 25 '53
Payoff for extra effort. Bsns W p 164-5 Ap 25 '53
Profits on the ebb; industrial profits have fallen. Economist 166:226-8 Ja 24 '53
Reflation at work. Economist 167:882-3 Je 27 '53
Sterling area's gold and dollar reserves show $128,000,000 gain. For Comm W 48:4 D 22 '52
Wage inflation in Britain. P. Einzig. Comm & Fin Chr 177:20 Ja 1 '53

Economic history

Britain's economic rise and decline and its implications. G. Baekeland. J Eng Educ 43:71-8 O '52

Economic policy

Britain's move for economic freedom. P. Einzig. Comm & Fin Chr 177:902 F 26 '53
Britain's policy. G. Schwartz. Barron's 33:3 Ap 20 '53
Britain's shaky commonwealth economic plan. P. Einzig. Comm & Fin Chr 177:2084 My 14 '53
Churchill; has he made a change? Bsns W p27-8 Ja 31 '53
Cleavage on the axe. Economist 165:429-30 N 15 '52
Commonwealth by thrift. Economist 165:797-9 D 20 '52
Commonwealth consultation. Economist 165: 602-3 N 29 '52
Commonwealth's task. Economist 165:587-90 N 22 '52
Decision and the dollar; what policy changes will be made at the Commonwealth conference. Economist 165:513-15 N 22 '52
How to start saving. Economist 166:1-3 Ja 3 '53
Medicine for an ailing partner. Bsns W p 126 Mr 7 '53
Tory touchstone. Economist 165:69-70 O 11 '52
Trying hard money on Britain. Bsns W p30-2 Mr 14 '53

Economic relations

Living with the dollar; delicate crusade for an Atlantic payments union. Economist 165: 580-96 N 22 '52; Discussion. 165:678-9 D 6 '52
Meaning of convertibility. Economist 165: 678-9 D 6 '52

Canada

British cash flows west. Bsns W p98+ My 16 '53

France

Release of French sterling. Economist 165: 782 D 13 '52

Greece

Bad example from Greece; compensation due to British-owned Lake Copais co. map Economist 165:632+ N 29 '52

GREAT BRITAIN—Economic relations—*Cont.*

Latin America

Links with Latin America. Economist 167:343-5 My 9 '53

United States

Britain disillusioned by Trade, not aid. P. Einzig. Comm & Fin Chr 177:2206 My 21 '53

Britain wants no more dollar aid. P. Einzig. Comm & Fin Chr 178:216-17 Jl 16 '53

Britain's share in economic efforts of the free world. R. A. Butler. Comm & Fin Chr 177:1323-4 Mr 26 '53

Conclusions on U.S.-British economic talks. Comm & Fin Chr 177:1132 Mr 12 '53

First planks for the bridge; prospects for U.S. overseas investments. Economist 165:584-7 N 22 '52

Important elements of conflict between U.S. and Britain. J. Lyons. Mag of Wall St 92:323-5+ Je 13 '53

Medicine for an ailing partner. Bsns W p 126 Mr 7 '53

Our problems with Britain and France. V. L. Horoth. map Mag of Wall St 91:287-9+ D 13 '52

Prospect for American aid. Economist 167:384+ My 9 '53

Export credits guaranty department

Losses on export credits. Economist 166:378-9 F 7 '53

Food, Ministry of

Coming demise of a ministry? Economist 165:142-3 O 18 '52

Foreign relations

Magnificent, but is it policy? Churchill speech on foreign affairs, May 11. Economist 167:417-19 My 16 '53

Arabia

Boundary trouble in Arabia. map Economist 166:881-2 Mr 28 '53

China

Re-orientation; British trade with the Chinese. Economist 166:659-60 Mr 7 '53

Egypt

London, Cairo and the Sudan. Economist 166:63-4 Ja 10 '53

Neguib's two voices. Economist 166:465-7 F 21 '53

Sudan; it may be the world's next independent nation. il Bsns W p 168-70 F 21 '53

Ethiopia

Ethiopia and Britain. map Economist 165:895-6 D 27 '52

Iran

See also
Petroleum industry and trade—Iran

Italy

Italy's Anglophobes. Economist 167:374-5 My 9 '53

Nigeria

Future of foreign firms in Nigeria. Economist 166:156 Ja 17 '53

Industries and resources

Development areas revisited. Economist 165:183-4, 249-50 O 18-25 '52

Finds some British industries giving U.S. run for money. M. Moskowitz. Ind Marketing 38:62+ O '53

Production outlook. Economist 166:655 Mr 7 '53

Replanning the Black country. Economist 164:734-5 S 27 '52

Thoughts in a time of change. H. Leyburn. Inst E E Proc 100 pt 1:14-15 Ja '53

Iron and steel board

Power and steel; new board appointed. Economist 167:612-13 My 30 '53

National physical laboratory, Teddington

Annual open day. Elec R (Lond) 152:1177-8 My 22 '53

National physical laboratory annual open days. il Engineer 195:742-3 My 22 '53

National physical laboratory open day. Elec J 150:1808-9 My 22 '53

National physical laboratory open day. Metallurgia 47:323+ Je '53

National physical laboratory; report for the year 1952. Engineering 175:681-2 My 29 '53

Units and standards of measurement employed at the National physical laboratory; light; photometry, colorimetry, and radiometry. Opt Soc Am J 42:858-61 N '52 (reprints 15c)

National research development corporation

Annual report, 3d. Engineering 175:183 F 6 '53

Exploitation of inventions; 3d report of the NRDC. Chem Age (Lond) 68:273 F 14 '53

Navy

Royal navy, 1952. il Engineer 195:5-7, pl 4, 45-7, 89-91 Ja 2-16 '53

Royal navy's part in British atomic test. il U S Naval Inst Proc 79:194-200 F '53

Sea power in new forms. Economist 166:829 Mr 21 '53

Parliament

Lords of Parliament. Economist 166:339-40 F 7 '53

Patent office

Centenary of the Patent office. Engineering 174:829 D 26 '52; Elec R (Lond) 151:1387-8 D 26 '52

Patent office centenary. Chem Age (Lond) 68:11-12 Ja 3 '53

Politics and government

Can Bevan force Britain to take the plunge. V. L. Horoth. Mag of Wall St 91:119-21 N 1 '52

Cortisone for politics. Economist 165:663-4 D 6 '52

Five months or thirty? deciding issue of another general election; need of new legislative program. Economist 167:491-2 My 23 '53

Forgotten man; Britain's bitter middle class may plague Labor party. F. Morley. Barron's 33:3 Jl 6 '53

From Victoria to Elizabeth; mid-century perspective. Economist 167:sup My 30 '53

Government without enterprise. Economist 165:358-9 N 8 '52

Labour's new leviathan. Economist 166:119-21 Ja 17 '53

Old despotism. Economist 165:600-1 N 29 '52

Opposition by obstruction; bitterness in the House of Commons. Economist 165:732-3 D 13 '52

Tories tighten their grip. Bsns W p 160+ N 8 '52

See also
Labor party (Great Britain)

Race problems

Citizens of colour from Commonwealth countries. Economist 167:647-8 Je 6 '53

Scientific and industrial research, Department of

DSIR in 1952; work on conservation of scarce materials continued. il Chem Age (Lond) 68:51-4 Ja 10 '53

SOS from DSIR. Economist 166:897 Mr 28 '53

Scientific progress delayed; DSIR report expresses concern over inadequate effort. Chem Age (Lond) 68:479-82 Mr 28 '53

Statistics

British economy, 1950-52; tables and charts. Economist 166:854-5 Mr 28 '53

GREAT LAKES

Statistics can foretell Great Lakes levels. D. M. Pierce and J. E. Vogt. map Eng N 150:30-2 Ja 1 '53

See also
Shipping—Great Lakes

GREAT LAKES states

See also
Mines and mineral resources—Great Lakes states

GREAT northern railway
Railroad securities. Comm & Fin Chr 176:1943; 177:805, 1649 N 20 '52, F 19, Ap 16 '53
Ten potential market leaders for 1953; with comparative balance sheet items. Mag of Wall St 91:642 Mr 7 '53

GREAT Southern railroad
Profit advance is likely for Alabama Great Southern. Barron's 33:25 Ja 26 '53

GREECE
Greece under Papagos. Economist 167:525-6, 608-9 My 23-30 '53
See also
Tariff—Greece
Telegraph—Greece
Telephone—Greece

Defenses

Greece's defence burden. Economist 165:464 N 15 '52

Economic conditions

Economic conditions abroad (cont). For Comm W 50:6 Jl 27 '53
Greece under Papagos; trading nation in a shrunken world. Economist 167:525-6 My 23 '53

Politics and government

Closing the gap in Greece. Economist 166:861-2 Mr 28 '53
Greece under Papagos; Rally and its rivals; government party in Athens. Economist 167:608-9 My 30 '53
Mr Markezinis grasps the nettle. Economist 166:290 Ja 31 '53

GREEN, Charles
Businessmen in the news. por Fortune 47:52 My '53

GREEN, H. L., company, inc.
Five stocks with unusually stable earnings; with comparative balance sheet items. Mag of Wall St 92:172 My 2 '53

GREEN pool. See European agricultural community (proposed)

GREEN river steel corporation
Small business; steel style. il Bsns W p88+ Je 27 '53

GREENBAUM, Marjorie
What's the idea of paying a sick girl so much for a layout? so Marjorie Greenbaum quit. S. H. Margolis and M. Silverstein. Ptr Ink 242:78+ Ja 16 '53

GREENBELT, Maryland
Greenbelt town is sold. Eng N 149:39 O 23 '52

GREENBURG, Leonard
Air pollution control unit set up by New York. Eng N 149:45 D 4 '52

GREENEWALT, Crawford Hallock, 1902-
Chemical industry medal award. pors Chem & Eng N 30:4726+, cover N 10 '52
Man of the month. por Chem Eng 59:298 N '52

GREENHOUSES

Heating and ventilation

Electrical floriculture. T. W. Reynolds. Heat & Ven 50:109-10 S '53
Orchids thrive on warm air heat. il Heat & Ven 49:136 N '52
Packaged gas-fired heating boiler extends Old Sol's growing season. J. Kanda. il Power 97:126-7 F '53
Temperature control in greenhouses. N. J. Janisse. il plan Heat & Ven 50:80-3 S '53

GREENING wire company, limited
Brief histories of some of our original 1903 advertisers or their successors. Pulp & Pa of Can 54:294 My '53

GREENVILLE, Mississippi
Bank moving day; not a bandit in sight. il Bsns W p72-3+ Je 13 '53

GREENWICH royal observatory
Report of the astronomer royal for the year ended April 30, 1953. Engineering 176:125-6 Jl 24 '53
Royal Greenwich observatory. Engineering 174:572-3, 624-5 O 31, N 14 '52

GREER hydraulics, inc.
Riding a hydraulic revolution. il Bsns W p43-4+ N 22 '52

GREETING card industry
Christmas spirit; it spills over with record sales for greeting card makers. N. Willatt. Barron's 32:11 N 24 '52

GREGORY industries, inc.
Prospects are bright. Barron's 32:18-19 D 1 '52

GRIEVANCES. See Employment management—Grievances; Labor disputes

GRIFFIN, Roger Castle, 1883-
1953 TAPPI medal to Roger Griffin; presentation by J. D. Clark; response by R. C. Griffin. por Tappi 36:sup82A+ Mr '53
R. C. Griffin awarded TAPPI medal. Tappi 36:sup71A Ja '53

GRIFFITHS, George Findley, 1906-
Portrait. Sales Management 69:28 N 1 '52

GRIGNARD reaction
Grignard reactions; the synthesis of aliphatic ketones. W. C. Percival, R. B. Wagner and N. C. Cook. bibliog Am Chem Soc J 75:3731-4 Ag 5 '53
Isopropylgermanium halides, oxides and hydroxide; Grignard reaction. H. H. Anderson. bibliog Am Chem Soc J 75:814-16 F 20 '53
Preparation and reactions of α-halo derivatives of certain tetra-substituted hydrocarbon silanes; Grignard syntheses of some silyl compounds. C. R. Hauser and C. R. Hance. bibliog Am Chem Soc J 74:5091-6 O 20 '52

GRIGNARD reagents
Action of Grignard reagents on anhydrosugars of ethylene oxide type; the behaviour of 4 : 6-benzylidene 2 : 3-anhydro-α-methyl-D-alloside towards ethyl- and phenyl-magnesium halides. G. N. Richards and L. F. Wiggins. Chem Soc J p2442-6 Ag '53
Decyanoation by Grignard reagent. E. M. Schultz. Am Chem Soc J 74:5793-4 N 20 '52
Instability of Grignard reagents from γ-bromopropyl ethers. N. Rabjohn and M. S. Cohen. bibliog Am Chem Soc J 74:6290-1 D 20 '52
Isoaromatic product from 2-methyl-3-benzofurylmethylmagnesium chloride. R. Gaertner. Am Chem Soc J 74:5319-21 N 5 '52
Mode of addition of a Grignard reagent to an aryl allyl ether. R. I. Meltzer and J. A. King. bibliog Am Chem Soc J 75:1355-9 Mr 20 '53
New synthesis of *n*-heptafluoropropyl Grignard reagent. O. R. Pierce, A. F. Meiners and E. T. McBee. Am Chem Soc J 75:2516 My 20 '53
Perfluoroalkyl Grignard reagents; reaction of heptafluoropropylmagnesium iodide with carbonyl compounds, and the mechanism of reduction during Grignard reactions. R. N. Haszeldine. Chem Soc J p 1748-57 Je '53
Perfluoroalkyl Grignard reagents; the preparation and some reactions of heptafluoro-*n*-propylmagnesium iodide. R. N. Haszeldine. Chem Soc J p3423-8 S '52
Preparation and some reactions of *n*-heptafluoropropylmagnesium iodide. O. R. Pierce and M. Levine. Am Chem Soc J 75:1254 Mr 5 '53
Preparation of thiazole Grignard reagents and thiazolyllithium compounds. R. P. Kurkjy and E. V. Brown. bibliog Am Chem Soc J 74:6260-2 D 20 '52
Reactions with *p*-quinone imides. A. Mustafa and M. Kamel. Science 117:234-5 F 27 '53
Synthesis of hydroperoxides from Grignard reagents. C. Walling and S. A. Buckler. bibliog Am Chem Soc J 75:4372-3 S 5 '53
Unsymmetrical quaternary carbon compounds; the alkylation of ethyl 2-cyano-3-methyl-2-pentenoate with aliphatic Grignard reagents. F. S. Prout. bibliog Am Chem Soc J 74:5915-17 D 5 '52

GRINDERS, Wood. See Wood grinders

GRINDING
Abrasive belts grind carbide. G. H. DeGroat. il Am Mach 96:102-4 D 8 '52
Abrasive belts speed production. D. Olton. il Am Mach 97:101-3 Mr 2; 136-9 Mr 16; 106-10 Mr 30 '53
Cadillac teams CO_2 with silicon carbides to grind carbide tools better. T. N. Chambers and J. Kwolek. il Am Mach 97:172-5 F 16 '53
Carbide tools ground without a diamond wheel. E. Sperisen. diags Am Mach 97:195 Mr 16 '53

GRINDING—*Continued*

Check sheet for grinding troubles; reference book sheet. K. Mathias. Am Mach 97:143 Ag 17 '53

Cold-heading and grinding valve push-rods for Buick engines. H. Chase. il Mach 59: 186-9 Ag '53

Diamond savers and substitutes. il Mill & Factory 53:128-31 O '53

Effect of grinding and other finishing processes on the fatigue strength of hardened steel. L. P. Tarasov and H. J. Grover. bibliog il diags Am Soc T M Proc 50:668-87; Discussion. 687-98 '50

Form-grinding of worm threads. W. A. Tuplin. diags Mach 59:174-9 D '52

Form tool grinding fixture. H. J. Gerber. diags Tool Eng 30:45 F '53

Generation of high aperture parabolic surfaces of revolution. R. E. Lewis and others. il diags R Sci Instr 23:555-8 O '52

Grinding and cutting tools; abstract. A. Karabinus. Tool Eng 31:129-30 S '53

Grinding and lapping stresses in manganese oil-hardening tool steel. H. R. Letner and H. J. Snyder. bibliog il A S M E Trans 75:873-80; Discussion. 881-2 Jl '53

Grinding fixture aids die manufacture; B. Jahn manufacturing co. R. LeGrand. il diags Am Mach 96:134-5 N 24 '52

Grinding fixture for holding work at any angle. J. Sobkowiak. diags Mach 59:194-5 Mr '53

Grinding + mechanization equals 2 x cleaning output; cleaning castings at the Truck engine works of International harvester co. W. M Fitzsimmons. il Iron Age 171:132-4 My 28 '53

Grinding research at Mellon institute. Mech Eng 75:152 F '53

Grinding shaving tools on an optical grinder. N. Palmer. diag Am Mach 96:160 N 24 '52

Grinding small spline punches. D. Worth. diags Am Mach 97:181 Je 8 '53

Helix angle facing ground on spar mill cutter tips. il Iron Age 171:153 Mr 26 '53

How to grind titanium. L. P. Tarasov. il Am Mach 96:135-46 N 10 '52

Instituting a modern grinding operation achieves big man-hour savings. il Mill & Factory 53:138 S '53

Internal grinding a large bore. B. L. Adamson. diag Am Mach 96:163 N 24 '52

Internal grinding of titanium now possible. E. J. Krabacher. Am Mach 97:201-2 Mr 16 '53

Production cost drops 22 per cent in production of link pins for sealing tools. R. O. Larson and W. A. Meier. il Mill & Factory 53:86 S '53

Report on panel on grinding and cutting tools. S A E J 61:69-71 O '53

Snagging operations. H. W. Wagner. diag Foundry 81:112-13+ Ja '53

Splines and gears; determining allowable involute approximations. J. Silvagi. il diags Tool Eng 30:45-50 Je '53

Tooling and low cost production. E. A. Cyrol. Tool Eng 30:52-5 F '53

What is your tool-grinding cost? E. L. Dangle and J. J. Demchak. il Am Mach 97:132-3 S 14 '53

You can cut costs with portable belt grinding. R. T. Argy. il Iron Age 171:120-3 Je 11 '53

See also

Abrasive belts	Lubrication and lubricants (cutting and grinding)
Grinding machines	

GRINDING, Electrolytic

Electrolytic grinding. L. H. Metzger and G. Keeleric. il diags Am Mach 96:154-6 N 10 '52

Electrolytic grinding of carbides fully tested. N. W. Thibault and B. H. Anderson. il Iron Age 170:162-5 N 13 '52

Electrolytically-assisted diamond wheel grinding of cemented carbide; abstract. N. W. Thibault and B. H. Anderson. Metal Prog 63:198+ My '53

Grinding carbide tools with electrolytic assistance. N. W. Thibault and B. H. Anderson. il Metal Prog 64:161-4+ Ag '53

How to convert carbide tool grinders to electrolytic grinding; illustrated instructions. Am Mach 96:157-8 N 10 '52

How to grind carbides six times as fast with less than one per cent diamond wheel wear. J. A. Mueller. il diag Am Mach 97: 122-5 S 28 '53

GRINDING machines

Brown & Sharpe universal grinders. il Am Mach 97:166 Ja 5 '53

Bullard vertical chucking grinders introduced in sizes to 74 in. Am Mach 97:154 F 2 '53; il Mach 59:211-12 F '53; Tool Eng 30:115 Mr '53

Centerless grinder. Tool Eng 29:106 N '52

Design of precision grinding machines. G. H. Ashbridge. il diags Engineering 175:149-51, 186-7 Ja 30-F 6 '53; Discussion. Engineer 195:177-8 Ja 30 '53

Diversimatic centerless grinder. il Tool Eng 31:113 Ag '53

DoAll precision tool-room surface grinder. il Mach 59:234+ My '53; Tool Eng 30:133 My '53

Double-head vertical grinding machine. il Engineer 196:156 Jl 31 '53

Dual spindles on vertical grinder individually operated, controlled. il Am Mach 96:168 O 27 '52; Same. Automotive Ind 107:75 N 1 '52

Dust suppression on grinding machines. il diag Engineer 195:277 F 20 '53; Engineering 175:218 F 13 '53

Frauenthal precision grinding machine. il Aero Digest 66:109 Ja '53

Gardner double-spindle machines equipped for grinding turbine blades and axle housings. il Mach 59:212-14 Ja '53

Grind OD concentric to bore with Landis automatic grinder. il Am Mach 96:197 N 10 '52; Mach 59:220 D '52; Tool Eng 29:115 D '52

Grinding mounts cylindrical wheel vertically. il Machine Design 25:136-7 F '53

Hoglund universal contour wheel dresser. il Mach 59:240 My '53

How to improve pedestal grinders. N. Palmer. diags Am Mach 97:174 Ap 13 '53

How to run a grinding machine. H. E. Linsley. il diags Am Mach 96:125-40 O 27 '52

Hydraulic cylindrical grinding machine. il Mach 59:223 D '52

Hydraulic knife grinder head tilts from the vertical. il Am Mach 97:218 Je 8 '53

Hydraulic servo; redesigned for accuracy and stability through research and model analysis. W. Ernst. il plan diags Machine Design 25:123-6 F '53

Hydraulic surface grinding machine. il Am Mach 97:194 Je 22 '53

Landis plain grinder for large-dia work. il Am Mach 96:198 N 10 '52; Tool Eng 30: 110 F '53

Landis semi-automatic grinder. Aero Digest 66:82 Ja '53

Large diameters precision ground. il Steel 132:116 Ap 20 '53

Machine grinds large jet parts. il Aviation W 57:24 D 22 '52

New grinder hood design improves dust suppression. il diags Foundry 81:226+ Ag '53

New grinding fixtures increase tank transmission production. J. B. Doll. il Mach 59: 190-2 Ja '53

New tool grinds various shapes; Polygon grinder. il Aviation W 58:52 F 16 '53

1953 American Machinist production preview. il Am Mach 97:178-87 Ja 19 '53

Norton cylindrical grinder made in plain or semi-automatic models. il Am Mach 97:170 Ja 5 '53; Mach 59:222 Ja '53

Norton semiautomatic piston grinder grinds skirt with varying relief. il Am Mach 97: 176 Je 22 '53; Mach 59:236 Jl '53; Tool Eng 31:116 O '53

Planet generating belt grinder forms jet buckets and blades. il Am Mach 97:151-2 Mr 2 '53

Precision sheets ground; development of Curtin-Herbert co. called the Micro-Grinder. il Steel 131:110+ N 17 '52; Automotive Ind 107:60 D 15 '52; Iron Age 170:103 N 13 '52

Scrivener surface grinder. il diags Engineering 175:224 F 13 '53

GRINDING machines—*Continued*

Special machine grinds tapered ellipse on pistons. il Automotive Ind 107:72 O 1 '52

Springfield dual-spindle vertical grinder. il Mach 59:213 N '52

Steel foundry research on grinding machine exhaust systems; major development in dust control. il diags Metallurgia 47:137-8 Mr '53

Stenzel die grinding and polishing machine. il Engineer 195:907 Je 26 '53

Toolroom surface grinder has broader operating scope. il diag Am Mach 97:204 Ap 13 '53

Turbine blades automatically; Ex-Cell-O precision profile miller and grinders. il Aero Digest 66:62+ Ja '53

Unitization for easy manufacture of profile grinder. il diags Product Eng 24:160-2 Ap '53

Van Norman adds centerless grinder to its line. il Am Mach 97:174 My 25 '53

Van Norman cylindrical grinder production-grinds small parts. il Am Mach 97:206 F 16 '53

Vertical chucking grinding machines. il Automotive Ind 108:58 F 15 '53

What's ahead the next ten years in machining; grinding, lapping, honing. Am Mach 96:E 15-18 Mid-N '52

See also

Abrasive belts

Burrs

Gear grinding machines

Grinding wheels

Advertising

Ad manager isolates a problem, sells budget to management. il Ind Marketing 37:146+ S '52

Manufacture

Grinding-machine plant; Norton co. il plan Mech Eng 75:407-8 My '53

Standards

Working ranges of grinders; proposed American standard; reference book sheet. Am Mach 97:285 Ja 19 '53

Vibration

Mounting keeps vibration in its place. W. C. Gallmeyer. il diags Steel 132:90-1 My 18 '53; Same cond. Tool Eng 31:82 Jl '53

GRINDING wheels

Carbide grinding wheel. il Tool Eng 31:113 O '53

CO_2 cools carbide grinders. A. B. Albrecht. il Am Mach 96:97 D 8 '52

Controlling grinding-wheel dust. N. Palmer. diag Am Mach 96:161 N 24 '52

Diamond wheels; a new method for bonding diamonds in the wheels. Bsns W p72+ My 16 '53

Electrolytically-assisted diamond wheel grinding of cemented carbide; abstract. N. W. Thibault and B. H. Anderson. Metal Prog 63:198+ My '53

Flexible grinding wheel. il Metal Finishing 51:81-2 Jl '53

How to run a grinding machine; grinding wheels and disks. H. E. Linsley. il diags Am Mach 96:135-40 O 27 '52

It's worth salvaging your old grinding wheels. il Iron Age 171:143 Ap 23 '53

New three-stage curing oven boosts grinding wheel output. il Iron Age 170:146 N 20 '52

Norton vitrified G-bond releases dull abrasive grains. Am Mach 97:206 Ap 13 '53

Practical carbide tool maintenance. J. W. Ripple. il diags Am Mach 97:126-8 Jl 20 '53

Right wheel cuts diamond consumption; chipbreaker grinding in carbide cutter tips. J. W. Ripple. il diags Steel 132:72-3 F 16 '53

Sharpening carbide tools. il Bsns W p90 D 20 '52

Silicon-carbide wheels for carbide grinding. A. Ashburn. il Am Mach 97:142-4 Ap 27 '53

Slow reciprocation of grinding wheel obtained from high-speed drive. P. Grodzinski. diag Mach 59:204-5 D '52

They'll do better this year than last. Steel 132:42 Je 29 '53

Tunes from grinding wheels; musical instruments, a novelty developed by Norton co. il Comp Air Mag 57:316 N '52

Wheelmakers grind out production. il Steel 131:50 D 1 '52

Why and how; we must conserve diamond bort! A. Ashburn. Am Mach 96:151-3 N 10 '52

Why Boeing wets diamond wheels. K. Lowther and S. L. Hargrove. il Am Mach 97:164-5 Ap 13 '53

Manufacture

Kiln operation; new design speeds loading and unloading of grinding wheels; Electro refractories & abrasives corp. Iron Age 171:118-19 Ap 30 '53; Steel 132:100 Je 15 '53

Tungsten carbide molds used to make grinding wheels. Iron Age 171:154 Mr 19 '53

Prices

Simplifying industrial pricing. Bsns W p54+ Je 13 '53

Safety measures

Grinding wheel safety; illustrations with text. Factory Management 111:104-7 Ap '53

If you use grinding wheels. R. N. S. Merritt. il diags Safety Maint & Prod 106:22-4 S '53

Standards

Everyone profits from grinding wheel standardization. F. W. Vogel. il diags Standardization 24:40-4 F '53

Testing

Economic factors must govern wheel selection for grinding carbides. F. J. Lennon, jr. il diag Am Mach 97:165-70 F 16 '53

Truing

Brushing sharpens worn diamond wheels. il Steel 132:106 Mr 16 '53

Crush truing; abstract. B. D. Hendrickson. Automotive Ind 109:79 O 1 '53

Gear-tooth grinding accuracy depends on correct dressing of abrasive wheel. C. H. Wick. il diags Mach 59:168-73 Ja '53

How to prepare wheels for best results on toolroom grinders. M. A. Bergson. il diags Am Mach 97:159-61 S 14 '53

Look at your diamond wheel dressers. G. Daskel, jr. il Am Mach 96:142-3 O 27 '52

GRINNELL corporation

Three by nine analysis of some unlisted stocks. H. J. King. Comm & Fin Chr 177:1208 Mr 19 '53

GRISEOFULVIN

Griseofulvin. J. F. Grove and others. Chem Soc J p3949-4002 O '52

Griseofulvin; dechlorogriseofulvin. J. MacMillan. Chem Soc J p 1697-702 Je '53

GRISWOLD, Merrill, 1886-

Making friends for a mutual fund. pors Bsns W p 104-6+ My 16 '53

GRIT blasting. See Metal cleaning

GROCERY stores

See also

Chain stores

Market stores

Pierce, S. S., company

GROCERY trade

Grocery inventory hailed as great door opener. E. Battey. Ed & Pub 85:15+ O 25 '52

See also

Canned food

Chain stores

Coffee trade

Food industry and trade

Market stores

also Bohack, H. C., inc.; Consolidated grocers corporation

Advertising

Augusta uses spotlight plan in two dailies. Ed & Pub 85:26 D 6 '52

Best campaigns of 1952; foods. B. Tyler. il Adv Agency 46:60-1 F '53

Declines in advertising effort for grocery products. A. C. Nielsen. Adv Agency 45:144-5 D '52

Grocers' alliance pegs special drive to election. D. R. Grimes. Ed & Pub 85:28 N 1 '52

Newspaper is basic says Kroger adman. W. J. Sanning. Ed & Pub 85:15+ D 20 '52

GROGGINS, Philip Herkimer, 1888-

Man of the month. por Chem Eng 60:266 Ja '53

GROOVING
Cast-in inserts end groove wear troubles; report of round table. diags S A E J 61:34-5 O '53
Dial indicator fixture measures internal grooves. F. Harroy. diag Am Mach 97:149 Je 22 '53
Groove cutting for the shop. R. G. Householder. il diags Welding J 32:232-4 Mr '53
Universal oil grooving machine. il Engineer 195:893 Je 26 '53; Engineering 175:813 Je 26 '53; Automobile Eng 43:301-2 Jl '53

GROSS, Robert Ellsworth, 1897-
Businessmen in the news. por Fortune 47:50 My '53

GROUND control approach. See Radar aids to aviation

GROUND water. See Water, Underground

GROUNDS and faults. See Electric distribution—Grounds and faults

GROUP behavior
Conformity to social norms in stable and temporary groups. E. W. Bovard, jr. Science 117:361-3 Ap 3 '53

GROUP insurance. See Insurance, Group

GROUP life insurance. See Insurance, Group life

GROUP medicine. See Medical service—Group and prepayment plans

GROUP selling. See Salesmanship—Group selling

GROUPS (sociology)
Conformity to social norms in stable and temporary groups. E. W. Bovard, jr. Science 117:361-3 Ap 3 '53

GROUTING
Final foundation treatment at Hoover dam. A. W. Simonds. il plan diags Am Soc C E Proc 77[no 109]:1-22 D '51; Discussion. 78[no D-109]:1-13 O '52
Grouting stops Arizona dam leakage. il Eng N 150:27 Ap 30 '53
Gunite blanket improves foundation grouting for earth dams. J. B. Hays. il diag Civil Eng 23:246-7 Ap '53
Lock number five, Monongahela river, refaced by grout-intrusion method. J. S. Minnotte. il map plan diags Civil Eng 22:872-5 O '52
Method devised for making grout-soil mixed-in-place piles. il Roads & Eng Constr 90:89+ D '52
Rotary mixed-in-place grouting found feasible. il Civil Eng 23:126 F '53

GROWTH
Alternative reaction patterns in autosynthetic systems. C. N. Hinshelwood. Chem Soc J p 1304-10 Ap '53
Some physical investigations of the behavior of bacterial surfaces; the electrophoretic mobility of aerobacter aerogenes. P. J. Barry and A. M. James. Chem Soc J p3340-5 S '52
Some physical investigations of the behavior of bacterial surfaces; the variation of the electrophoretic mobility of aerobacter aerogenes with the age of the culture and the nature of the culture medium. P. J. Barry and A. M. James. Chem Soc J p 1264-7 Ap '53

GROWTH company (term)
Growth company shares; a basis for savings bank investment. M. Moes. Comm & Fin Chr 177:474-5 Ja 29 '53
Investment attitude toward growth companies. W. K. Beckers. Chem & Eng N 31:1961-3 My 11 '53

GROWTH inhibiting substances
Effects on plant growth of some compounds with structural similarities to maleic hydrazide. V. A. Greulach. bibliog Science 117:601-3 My 29 '53
Evaporation of some plant growth regulators and its possible effect on their activity. W. P. Anderson and others. bibliog Science 116:502-3 N 7 '52
Naturally occurring antiauxin. R. H. Roberts. il Science 117:456-7 Ap 24 '53
See also
Trichlorophenoxyacetic acid

GROWTH promoting substances
Antibiotics and endocrine stimulants as promoters of growth in fattening pigs. R. S. Barber and others. Chem & Ind p410 Ap 25 '53
Antibiotics for plants. Sci Am 187:48 O '52
Boosting food output; antibiotics have nutritional effect on animals. Bsns W p96-8+ N 22 '52
Coconut milk factor; the growth-promoting substances in coconut milk. E. M. Shantz and F. C. Steward. Am Chem Soc J 74:6133-5 D 5 '52
Putrescine as a growth requirement for neisseria. W. H. Martin, jr. and others. Science 116:483-4 O 31 '52
Synthesis of plant-growth regulators; dichloro-β-naphthyloxyacetic acids. P. M. James and D. Woodcock. Chem Soc J p2089-93 Jl '53
See also
Dichlorophenoxyacetic acid
Folic acid
Vitamins

GUAIACOL
Butylation of guaiacol. R. H. Rosenwald. bibliog Am Chem Soc J 74:4602-5 S 20 '52

GUANIDINE
Formation of 1,3,5-triazines by the reaction of α-cyanocarbonyl compounds with guanidine. P. B. Russell and others. bibliog Am Chem Soc J 74:5403-5 N 5 '52
Guanidine from urea and ammonia. G. W. Watt and R. G. Post. bibliog Ind & Eng Chem 45:846-9 Ap '53
Ionisation of guanidine and of amino-acids in sulphuric acid. G. Williams and M. L. Hardy. Chem Soc J p2560-3 S '53
Nitration of guanidine in sulphuric acid; kinetics of *N*-nitration of the guanidinium ion and denitration of nitroguanidine. G. Williams and R. J. J. Simkins. Chem Soc J p 1386-92 My '53
Nitration of guanidine in sulphuric acid; the reversible conversion of guanidine nitrate into nitroguanidine. R. J. J. Simkins and G. Williams. diag Chem Soc J p3086-94 Ag '52
Reaction of guanidine with glyoxals in aqueous solution; the preparation of glycocyamidines. I. S. Bengelsdorf. bibliog Am Chem Soc J 75:3138-40 Jl 5 '53
Static prevention; vinyl polymers treated with high alkylsulfates of guanidine; patent. Am Dyestuff Rep 42:17-18 Ja 5 '53
Studies in the pyrazole series; substituted guanidines. F. L. Scott, D. G. O'Donovan and J. Reilly. bibliog Am Chem Soc J 75:4053-4 Ag 20 '53
Thermal decomposition of guanidine perchlorate; reaction products and mechanism. A. Glasner and A. Makovky. Chem Soc J p 182-4 Ja '53

GUANINE
Utilization of guanine by tetrahymena geleii. M. R. Heinrich, V. C. Dewey and G. W. Kidder. bibliog Am Chem Soc J 75:1741-2 Ap 5 '53

GUANYLPYRAZOLE
Studies in the pyrazole series; halogenation of the 1-guanylpyrazoles. F. L. Scott and J. Reilly. bibliog Am Chem Soc J 74:4562-6 S 20 '52

GUAR
Guar mannogalactan studies. A. J. Haug. bibliog Tappi 36:47-64 Ja '53

GUARAN
New crystalline trisaccharide from partial acid hydrolysis of guaran and the structure of guaran. R. L. Whistler and D. F. Durso. bibliog Am Chem Soc J 74:5140-1 O 20 '52

GUARANTY. See Suretyship and guaranty

GUARANTY of earnings. See Wage payment plans—Guaranty of earnings

GUATEMALA
See also
Bonds, Government—Guatemala
Investments, Foreign (in Guatemala)
Lumber trade—Guatemala

Economic conditions

Economic conditions abroad (cont). For Comm W 48:4 O 27 '52; 49:4 My 18 '53

Politics and government

Conflict in Guatemala. Economist 166:816 Mr 21 '53

GUAYULE
Biosynthesis of guayule rubber. India Rubber World 127:640+ F '53
Diffusion phenomena in solvent deresination of guayule rubber. T. F. Banigan, jr. bibliog Ind & Eng Chem 45:577-81 Mr '53
High-quality rubber by acetone deresination of guayule. F. E. Clark and others. bibliog Ind & Eng Chem 45:572-6 Mr '53
Isolation of palmitic, stearic and linoleic acids from guayule resin. T. F. Banigan, jr. and J. W. Meeks. bibliog Am Chem Soc J 75: 3829-30 Ag 5 '53

GUEST houses, Industrial
Company-owned guest house that pays its way. il Factory Management 111:116-17 Ap '53

GUGGENHEIM, Daniel, medal
1952 Guggenheim medalist; Sir Geoffrey de Havilland. Aeronautics Eng R 11:18 O '52

GUGGENHEIM aviation safety center. See Cornell university—Guggenheim aviation center

GUIDED missiles
British guided missiles. il Engineering 174: 137 Ag 1 '52
British guided rockets. D. Sandys. Engineer 196:278 Ag 28 '53; Same. Engineering 176: 274 Ag 28 '53
British missiles near production. Aviation W 57:28 O 13 '52
Calculation method for three-dimensional rotationally symmetrical laminar boundary layers with arbitrary free-stream velocity and arbitrary wall-temperature variation. R. M. Drake, jr. bibliog diag J Aeronautical Sci 20:309-16+ My '53
Castings seen best for missile casings. Aviation W 57:37 N 3 '52
Concept of missile weight. H. Haber. diags Aero Digest 66:86-8 Ap '53
Contribution of configuration asymmetries to the free-flight motion of missiles. J. D. Nicolaides and L. C. MacAllister. bibliog diag J Aeronautical Sci 19:847 D '52
Dynamic stability of a missile in rolling flight. R. E. Bolz. bibliog diags J Aeronautical Sci 19:395-403 Je '52; Discussion. A. E. Bryson, jr. 20:69-71 Ja '53; Reply. 20: 356-7 My '53
First details of Boeing GAPA project; supersonic missile program. il Aviation W 58: 32-3+ F 2 '53
Four planes from two YF-93As; fast jets supplement windtunnels in NACA studies on inlets for missiles and high-speed aircraft. il Aviation W 57:18 N 3 '52
Guided missile development in the past, present, and future; abstract. W. Dornberger. S A E J 61:103 Mr '53
Guided missiles and the weapon system concept; abstract. A. L. Lowell. S A E J 61:44 O '53
Guided missiles need more research. il Bsns W p41-2 F 21 '53
Hawker-Siddeley buys rocket-missile plant. Aviation W 58:34 Mr 16 '53
Heat transfer to bodies traveling at high speed in the upper atmosphere. J. R. Stalder and D. Jukoff. bibliog diag U S Nat Advisory Com for Aeronautics 1949:455-67 '51
How electronics controls guided missiles. J. M. Carroll. bibliog il diags Electronics 26: 130-6 Jl '53
How far have guided missiles come? il Bsns W p 108-10+ O 25 '52
Impact of guided missiles on modern engineering; abstract. J. A. Parchem. S A E J 61:124-5 Je '53
Laboratory simulation of aerodynamic heating for transient temperature measurements. L. H. Wilson and J. B. Falk. diags Aeronautical Eng R 12:39-41 F '53
Magnesium missiles; illustrations with text. Aviation W 58:42 My 11 '53
Military takes wraps off three missiles. il Aviation W 58:15 Ap 6 '53
Missile guidance system outlined. Aviation W 57:60-1 N 24 '52
Missile program still lags dangerously. D. A. Anderton. Aviation W 58:82-3+ Mr 2 '53; Discussion. R. B. Eaves. 58:42-3+ Je 1 '53
NACA's role in guided missile research. J. A. Shortal. il S A E J 60:17-19 N '52
Pilotless aircraft; the establishment of structural design criteria. R. Goldin. il diags Aeronautical Eng R 11:22-8 N '52
Pressure sensing calculations for aircraft and guided missiles. J. D. Humphreys. il diags Tele-Tech 12:82-3+ Ap '53
Pure rolling motion of winged and/or finned missiles in varying supersonic flight. J. D. Nicolaides and R. E. Bolz. bibliog il diags J Aeronautical Sci 20:160-8 Mr '53
Ramjets or rockets for missiles? S. H. Reiniger. il Aviation W 58:25-6 Ja 12 '53
Regulus shoots skyward. il Aviation W 58:9 Ap 6 '53
Reliability analysis of modern weapons. M. M. Munk. il Aero Digest 65:101-2+ N '52
Reliability in guided-missile systems. R. C. Carhart. bibliog il Aeronautical Eng R 12: 22-6 F '53
Stability derivatives for a slender missile with application to a wing-body-vertical-tail configuration. A. E. Bryson, jr. bibliog diags J Aeronautical Sci 20:297-308 My '53

Manufacture

Machining air-tank heads for guided missiles; Rheem mfg. co. il Mach 59:201 Mr '53

Testing

Accuracy limitations on high-speed metric photography. A. E. Griffin and E. E. Green. bibliog Soc Motion Picture & Tv Eng J 59:485-92 D '52
F-m recording in guided missiles. A. A. Gerlach. il diags Electronics 26:108-11 Ja '53

GULF Coast region
See also
Chemical industries—Gulf Coast region
Geology—Gulf Coast region
Petroleum industry and trade—Gulf Coast region

GULF interstate gas company
Notes and stock offered. Comm & Fin Chr 178:51-2 Jl 6 '53

GULF life insurance company
Gulf control sale to syndicate sets a new pattern. Nat Underw (Life ed) 57:1+ Ap 3 '53
Investment bankers buy controlling Gulf Life interest. Nat Underw (Life ed) 57: 1+ Mr 27 '53
Stock offered. Comm & Fin Chr 177:2678 Je 22 '53

GULF, Mobile and Ohio railroad
Gulf Mobile & Ohio in expanding phase. R. Carleson. Mag of Wall St 91:355+ D 27 '52
I. B. Tigrett becomes corporate chairman. il Ry Age 133:96-7 D 1 '52
Railroad securities. Comm & Fin Chr 177: 1118 Mr 12 '53

GULF of Maine. See Maine, Gulf of

GULF of Mexico. See Mexico, Gulf of

GULF oil corporation
Gulf, international oil stream. I. U. Cobleigh. Comm & Fin Chr 177:2306 My 28 '53
Gulf Oil sales have climbed $1 billion since the war. E. R. Lane. Barron's 33:19-21 Ja 26 '53
Investment audit. P. Dobbs. Mag of Wall St 91:178-80+ N 15 '52

GULF power company
Bonds offered. Comm & Fin Chr 177:2569 Je 15 '53

GULF research and development company
Gulf research & development co. G. H. Stillson. Science 117:sup3 Mr 6 '53

GULF states utilities company
Bonds offered. Comm & Fin Chr 176:2063 D 1 '52
Dynamic utility; with table of ten year earnings and dividend record, 1942-52. S. Devlin. Mag of Wall St 91:244-5 N 29 '52
Gulf States Utilities higher earnings and dividends likely. P. Sutor. Barron's 33:15+ F 2 '53
Stock offered. Comm & Fin Chr 177:2784 Je 29 '53

GULF stream
Rapid aerial survey of Gulf stream with camera and radiation thermometer. H. Stommel and others. Science 117:639-40 Je 5 '53

GUM tragacanth
Methoxyl content of gum tragacanth. K. Selby. Chem Soc J p2504 Ag '53

GUMS and resins
Botanical drugs, spices, gums. Published in weekly numbers of Oil, paint and drug reporter
Constitution of sapote gum; methanolysis of sapote gum methyl ether. E. V. White. bibliog Am Chem Soc J 75:257-9 Ja 20 '53
From art to science in envelope manufacturing. P. B. Davidson. Tappi 36:sup56A+ Je '53
Gum type stabilizers perform new vital functions. il Food Eng 25:105+ Je '53
Gums and resins. C. R. Bragdon. Paint Oil & Chem R 116:26-32+ Je 4 '53
Mannangalactan gums; the mechanism of retention by paper fibers. N. S. Gruenhut. bibliog Tappi 36:297-301 Jl '53
New coating process traps full flavor; Sealva process. G. Wellner. il Food Eng 25:94+ Ag '53

See also
Gutta percha
Mesquite gum
Resinous products
Rosin

Prices

Botanical drugs, spices, gums; 1952 market trends. Oil Paint & Drug Rep 163:46-8 sec 2 Ja 26 '53

GUN carriages
First A-gun carriage off the line. il Iron Age 170:201 O 9 '52

GUN metal
Effect of metal/mould reaction on 85 : 5 : 5 : 5 leaded gunmetal sand castings; abstract and discussion. N. B. Rutherford. Engineering 174:462 O 10 '52

GUNITE
Gunite blanket improves foundation grouting for earth dams. J. B. Hays. il diag Civil Eng 23:246-7 Ap '53
Housing project has gunited walls. J. B. Jessup. il Eng N 149:43-4 N 6 '52

GUNNERY
See also
Range finders

GUNS
Gauge for indicating pressure transients in a combustion chamber. H. D. Warshaw. bibliog il diags R Sci Instr 23:493-6 S '52
See also
Revolvers

Manufacture

Process control in gun tube manufacture. H. C. Dill and F. B. Stern, jr. il Metal Prog 63:161-2 Je '53

GUNS (ordnance)
Army's big gun. il Metal Prog 63:94-6 F '53
Atomic artillery; artillery piece capable of firing an atomic missile. il Steel 131:121 O 13 '52
Double recoil takes kicks. Steel 131:120 D 8 '52
See also
Guns, Aircraft

Manufacture

Atomic gun; masterpiece of production. il Tool Eng 29:52-3 D '52; Mech Eng 74:1018-20 D '52; Welding J 32:139-41 F '53
Building carriages for the atomic gun; Dravo corp. D. A. Booth. il Mach 59:157-62 Je '53
How Oldsmobile machines 90-millimeter cannon. J. G. Coleman. il diags Mach 60:152-6 S '53
Plating gun bores gives greater accuracy and longer life. C. E. McDowell. il Mach 60:158-63 O '53
Volume plating method increases gun tube life. il Steel 131:89 N 17 '52

GUNS, Aircraft
Developments in naval aircraft ordnance. W. H. Huff. il Aero Digest 66:68+ Ap '53

GUNS, Anti-aircraft
New eye and brain for AA guns. il Electronics 26:8+ Ap '53
Radar-controlled anti-aircraft gun. diag Electronics 26:196+ My '53

Manufacture

Target fixtures precision-weld new gun pedestal. E. C. Pearson and F. George. il diag Am Mach 97:114-17 Ja 5 '53

GUNS, Industrial
Shoot that slag! diags Power Eng 57:74-5 My '53

GUTEKUNST, Ralph
Traveling man. G. Boyo. pors Mod Textiles Mag 34:35+ Ap '53

GUTTA percha

Bibliography

Rubber division library bibliography; behavior of gutta-percha and balata toward oxygen and oxidation. 3 l Rubber division lib, Univ. of Akron, Akron 4, Ohio '52
Rubber division library bibliography; compounding the gutta-percha and balata resins. 1 l Rubber division lib, Univ. of Akron, Akron 4, Ohio '52

GUTTERS
City adds low-cost curb, gutter. il Eng N 150:57-8 Ap 16 '53

GWATHMEY, Allan Talbott, 1903-
Southern chemist award goes to Virginia's Allan Gwathmey. pors Chem & Eng N 30:4483, cover O 27 '52

GYMNASIUMS
Rio sports center; a progress report; stadium and gymnasium. il plans diags Arch Rec 112:131-9 O '52

GYPSUM
Gypsum and products, Nov.-Dec. 1951-Jan.-Nov. 1952. Survey of Cur Bsns 33:S38 Ja '53 [cont monthly]
Hydration of gypsum plaster. W. A. Cunningham, R. M. Dunham and L. L. Antes. bibliog il Ind & Eng Chem 44:2402-8 O '52
Old salt has a lot of gall. Cer Ind 61:61 Ag '53
Stronger gypsum plaster. Chem Eng 60:380+ Ap '53

GYPSUM mines and mining

Montana

United States gypsum co. mine, Heath, Mont. G. C. Mathis. il map plan diags Min Eng 5:Trans 177-80 F '53

GYPSUM products
Gypsum and products, Nov.-Dec. 1951-Jan.-Nov. 1952. Survey of Cur Bsns 33:S38 Ja '53 [cont monthly]
How to apply new gypsum panels. il Am Bld 75:240-1+ F '53
New tobacco barn is designed to cut high fire losses; use of gypsum sheathing. il plan diags Am Bld 74:164-5 S '52

GYRATOR (electric circuit). See Electric circuits

GYRO skid-control company
Los Angeles investment pool. Fortune 47:139 Ja '53

GYRODYNE company of America, inc.
Stock offered. Comm & Fin Chr 177:2456 Je 8 '53

GYROMAGNETIC effect
New gyromagnetic effect in permalloy and iron. S. J. Barnett and L. A. Giambomi. bibliog diags Phys R 88:28-37 O 1 '52

GYROMAGNETIC ratio. See Magnetic moment; Nuclear spin

GYROSCOPE
Bearings for gyroscope rotors. diags Engineer 194:651 N 14 '52
Lubrication of gyroscopes. J. E. Brophy and J. B. Romans. il A S M E Trans 75:1147-52 Ag '53
Motion due to slow precession of a gyroscope driven and supported by a Hooke's joint. R. N. Arnold and L. Maunder. il diags Inst Mech Eng Proc (B) 1B no 3:77-89; Discussion. 89-90 '52
New gyro simplifies polar navigation. P. Klass. il Aviation W 58:49-52 Ja 19 '53
Pilot is the limit; aircraft performance is exceeding ability of the human pilot to control it; the answer may be the gyroscope. A. V. Sommer. il diag Aero Digest 65:17-25 D '52
Road surveys with gyroscopic equipment. il Engineer 195:368 Mr 6 '53

H

HACKING, Sir John, 1888-
Sketch. por Elec J 150:1978 Je 5 '53

HACKMANITE
Optical properties of natural and synthetic hackmanite. D. B. Medved. bibliog J Chem Phys 21:1309-10 Jl '53

HAFNIUM
Hafnium metal; its properties and future. J. L. Everhart. bibliog il Materials & Methods 36:95-7 N '52
Metallography of hafnium. H. P. Roth. bibliog il Metal Prog 63:84-9 Je '53
Properties, heat treatment, corrosion resistance, etc.; engineering file facts. Materials & Methods 37:125 Je '53
Some properties of superconductors below 1°K; Zr, Hf, Cd, and Ti. T. S. Smith and J. G. Daunt. bibliog Phys R 88:1172-6 D 1 '52
X-ray diffraction study of the hafnium-hydrogen system. S. S. Sidhu and J. C. McGuire. il diag J Ap Phys 23:1257-61 N '52

Analysis

Analysis of zirconium; detection, separation and estimation of hafnium content. T. O. Portcastle. bibliog Chem Age (Lond) 68: 389-92 Mr 7 '53
Determining low concentrations of hafnium in zirconium; a spectrographic method. D. M. Mortimore and L. A. Noble. bibliog diag Anal Chem 25:296-8 F '53
Extraction of zirconium and hafnium with various β-diketones. E. M. Larsen and G. Terry. bibliog Am Chem Soc J 75:1560-2 Ap 5 '53
Separation and detection of zirconium and hafnium on paper strips. N. F. Kember and R. A. Wells. il Chem & Ind p 1129 N 15 '52
X-ray spectroscopy as a control method in the production of zirconium and hafnium. D. M. Mortimore and P. A. Romans. bibliog il diag Opt Soc Am J 42:673-7 S '52

Isotopes

Isotopic constitution of silicon, germanium, and hafnium. J. H. Reynolds. bibliog Phys R 90:1047-9 Je 15 '53

Metallography

Simplified procedure for the metallography of zirconium and hafnium and their alloys; abstract. F. M. Cain, jr. il Metal Prog 63:174+ My '53

HAFNIUM alloys
Zr-Hf system. R. B. Russell. J Ap Phys 24:232-3 F '53

HAFNIUM chlorides
Heat capacities at low temperatures and entropies at 298.16°K. of hafnium dioxide and hafnium tetrachloride. S. S. Todd. bibliog Am Chem Soc J 75:3035-6 Je 20 '53
High temperature heat contents of hafnium dioxide and hafnium tetrachloride. R. L. Orr. bibliog Am Chem Soc J 75:1231-2 Mr 5 '53

HAFNIUM compounds
Hafnium alkoxides. D. C. Bradley, R. C. Mehrotra and W. Wardlaw. Chem Soc J p 1634-6 My '53
Thermal decomposition of $MeCl_4 \cdot 2C_6H_5COOR$ type compounds. F. W. Chapman and others. bibliog Am Chem Soc J 74:5277-9 N 5 '52

HAFNIUM nitride
Heats of formation of hafnium oxide and hafnium nitride. G. L. Humphrey. bibliog Am Chem Soc J 75:2806-7 Je 20 '53

HAFNIUM oxides
Heat capacities at low temperatures and entropies at 298.16°K. of hafnium dioxide and hafnium tetrachloride. S. S. Todd. bibliog Am Chem Soc J 75:3035-6 Je 20 '53
Heats of formation of hafnium oxide and hafnium nitride. G. L. Humphrey. bibliog Am Chem Soc J 75:2806-7 Je 20 '53
High temperature heat contents of hafnium dioxide and hafnium tetrachloride. R. L. Orr. bibliog Am Chem Soc J 75:1231-2 Mr 5 '53
Structural chemistry of the alkoxides; tertiary alkoxides of silicon, titanium, zirconium, and hafnium. D. C. Bradley, R. C. Mehrotra and W. Wardlaw. Chem Soc J p4204-9 N '52

HAFSTAD, Lawrence Randolph, 1904-
Portrait. Bsns W p 120 Mr 14 '53

HAGAN corporation
Registers with SEC. Comm & Fin Chr 176: 2531 D 29 '52
Stock offering oversubscribed. Comm & Fin Chr 177:236 Ja 19 '53

HAGERTY, James C. 1909-
His congressman casts a big vote for Hagerty. L. W. O'Brien. por Ed & Pub 85:14 D 27 '52
Portrait. Bsns W p29 D 6 '52

HAIR
α-β Transformation in stretched hair. A. Elliott. bibliog Textile Res J 22:783-6 D '52
Chemistry of hair. Chem Age (Lond) 67: 830 D 20 '52
Hair; abstract. J. L. Stoves. Chem & Ind p 17 Ja 3 '53
Heterogeneity of the keratin fibers. E. H. Mercer. bibliog(34 ref) il diags Textile Res J 23:388-97 Je '53; Discussion. 23:938-9 D '53
See also
Baldness

HAIR curl clips
What two men did to 350 million curls. il Sales Management 69:76+ D 15 '52

HAIR cutters
Playtex home hair cutter. il Consumers Res Bul 20:29-30 N '52

HAIR preparations
Aerosol hair fixatives; abstract. J. D. Conner. Oil Paint & Drug Rep 162:5+ D 15 '52
Cold wave brings honors to E. G. McDonough. Chem & Eng N 30:5254 D 15 '52
Self-service look; carefully planned redesign of Hudnut's hair preparations. il Mod Packaging 27:130-2 O '53
See also
Shampoos

Advertising

How Antell adapted tv sales pitch to newspapers. C. D. Kasher. Ed & Pub 85:16 O 25 '52

HAITI
See also
Automobile industry
and trade—Haiti

Commerce

Haiti's best supplier and purchaser still U.S.; trade with Europe up. For Comm W 49:6 Je 22 '53

Economic conditions

Economic conditions abroad (cont). For Comm W 48:3+ O 13 '52; 49:4+ Ja 12 '53

Industries and resources

Haiti bids for foreign investment, offers protection against risk. For Comm W 49:27 Ap 20 '53

HALBACH, Ernest K.
Businessmen in the news. por Fortune 47:49 My '53

HALDANE, John Burdon Sanderson, 1892-
Darwin medal award. Chem Age (Lond) 67: 764 D 6 '52

HALES trophy
Duke of Sutherland presents Hales trophy to United States lines. Marine Eng 58: 103-4 Ja '53

HALIDES
Evidence for α- and β-elimination from deutero alkyl halides with potassium amide. D. G. Hill and others. bibliog Am Chem Soc J 74:5599-602 N 20 '52
Exchange reaction of organic halides with iodine monochloride. R. M. Keefer and L. J. Andrews. bibliog Am Chem Soc J 75:543-8 F 5 '53
F bands in some mixed crystals of the alkali halides. R. J. Gnaedinger, jr. bibliog J Chem Phys 21:323-30 F '53
Hydrolysis and halide complexing of indium(III). L. G. Hepler and Z. Z. Hugus, jr. Am Chem Soc J 74:6115-16 D 5 '52
Ionization of organometallic halides. K. Gingold and others. bibliog Am Chem Soc J 74: 6306 D 20 '52

HALIDES—*Continued*

Mechanism of substitution at a saturated carbon atom; kinetic effect of common-ion and of non-common-ion salts on the aqueous solvolysis of diphenylmethyl halides; a demonstration of the unimolecular mechanism of solvolysis. O. T. Benfey, E. D. Hughes and C. K. Ingold. Chem Soc J p2488-93 Jl '52

Microwave absorption and molecular structure in liquids; measurement in organic halides at 10-cm wavelength. F. H. Branin, jr. and C. P. Smyth. bibliog diag J Chem Phys 20:1121-8 Jl '52

Preparation and properties of triphenylsulfonium polyhalides. W. A. Bonner. bibliog Am Chem Soc J 74:5078-82 O 20 '52

Rate of reaction of phenacyl halides with 4-picoline in benzene solution. D. L. Brebner and L. C. King. bibliog Am Chem Soc J 75:2330-4 My 20 '53

Reaction of 6-methoxy-8-aminoquinoline with alkylamino-alkyl halides. R. C. Elderfield and L. E. Rubin. bibliog Am Chem Soc J 75:2963-70 Je 20 '53

Reactions of aliphatic nitro compounds; alkylation by allyl-type halides. R. N. Boyd and R. J. Kelly. Am Chem Soc J 74:4600-2 S 20 '52

Rb^{87} and Ca^{133} magnetic resonance shifts in the solid halides. H. S. Gutowsky and B. R. McGarvey. J Chem Phys 21:1423-4 Ag '53

Some reactions of the stilbenes in the presence of metal halides. D. S. Brackman and P. H. Plesch. diag Chem Soc J p 1289-92 Ap '53

Structure of the diphenacyl halides. H. H. Wasserman, N. E. Aubrey and H. E. Zimmerman. bibliog Am Chem Soc J 75:96-8 Ja 5 '53

Studies on the behaviour of halides of the transition metals with ammonia; the reaction of niobium pentachloride with ammonia. G. W. A. Fowles and F. H. Pollard. Chem Soc J p4938-42 D '52

Studies on the chemistry of heterocyclics; investigations on the mechanism of reactions of 2-thienyl halides with sodium amide and sodium acetylide in liquid ammonia. A. Vaitiekunas and F. F. Nord. bibliog Am Chem Soc J 75:1764-8 Ap 5 '53

Synthesis of long-chain αω-dihalides by means of acetylenic compounds. A. W. Nineham. Chem Soc J p2601-7 S '53

See also

Alkali metal halides
Bromides
Chlorides
Fluorides
Grignard reagents
Methyl halides

Analysis

Coulogravimetric determination of the halides; a new type of indirect analysis. W. M. MacNevin, B. B. Baker and R. D. McIver. Anal Chem 25:274-7 F '53

Potentiometric titration of halides of aluminum, gallium, indium and thallium with potassium in liquid ammonia. G. W. Watt, J. L. Hall and G. R. Choppin. bibliog J Phys Chem 57:567-70 Je '53

HALIFAX, Nova Scotia

Bridges

One-mile-long bridge, with 1447-ft. suspension span. P. L. Pratley. il Roads & Eng Constr 91:113-15+ Ag '53

Water supply

Automatically controlled lime treatment for the water supply. G. L. Renner. map plan diags Munic Util 91:23-8+ S '53

HALL, Edwin Loy, 1902-

Presentation of the Walton Clark medal. por Franklin Inst J 254:463-5 D '52

HALL, L. G.

Named head of NEMA. por Elec World 138:163 D 1 '52

HALL, Vernon

Retires as vice president America Fore companies. East Underw 53:1+ D 19 '52

HALL, William B.

Portrait. Ptr Ink 241:128 N 7 '52

HALL effect

Adiabatic Hall effect in semiconductors. V. A. Johnson and F. M. Shipley. bibliog Phys R 90:523-9 My 15 '53

Brillouin zone investigation of Mg alloys; Hall effect and conductivity. A. I. Schindler and E. I. Salkovitz. bibliog diags Phys R 91:1320-2 S 15 '53

Current carrier lifetimes deduced from Hall coefficient and resistivity measurements. L. P. Hunter and others. Phys R 91:1315-20 S 15 '53

Diffusion currents in the semiconductor Hall effect. H. Landauer and J. Swanson. bibliog diag Phys R 91:555-60 Ag 1 '53

Electronic Hall effect in NaCl. A. G. Redfield. diag Phys R 91:753 Ag 1 '53

Hall coefficient of calcium. V. Frank and O. G. Jeppesen. Phys R 89:1153-4 Mr 1 '53

Hall effect. O. Lindberg. diags Inst Radio Eng Proc 40:1414-19 N '52

Hall effect and conductivity of InSb single crystals. M. Tanenbaum and J. P. Maita. bibliog Phys R 91:1009-10 Ag 15 '53

Hall effect in ferromagnetic materials. E. M. Pugh and N. Rostoker. diag bibliog Rs Mod Phys 25:151-7 Ja '53

Hall effect in nickel ferrite. S. Foner. Phys R 88:955-6 N 15 '52

Hall effect in titanium. G. W. Scovil. J Ap Phys 24:226-7 F '53

Hall effect in yttrium, lanthanum, cerium, praseodymium, neodymium, gadolinium, dysprosium, and erbium. C. J. Kevane and others. bibliog diags Phys R 91:1372-9 S 15 '53

Hall effect in zinc crystals at low temperatures. J. K. Logan and J. A. Marcus. bibliog diags Phys R 88:1234-8 D 15 '52

Hall effect modulators and gyrators employing magnetic field independent orientations in germanium. W. P. Mason and others. il diags J Ap Phys 24:166-75 F '53

Hall effect of copper-nickel alloys. A. I. Schindler and E. M. Pugh. bibliog diags Phys R 89:295-8 Ja 1 '53

Hall effects of the cobalt nickel alloys and of Armco iron. S. Foner and E. M. Pugh. bibliog il diag Phys R 91:20-7 Jl 1 '53

Influence of cold-work on the Hall effect of a metal. B. Wiener and G. Groetzinger. bibliog il diag J Ap Phys 23:441-4 Ap '52

Interpretation of the electron-inertia experiment for metals with positive Hall coefficients. N. Rostoker. bibliog Phys R 88:952-3 N 15 '52

Interpretation of the low temperature Hall curve of a degenerate germanium sample. D. M. Finlayson and others. Phys R 87:1141-2 S 15 '52

Sensitive recording alternating-current Hall effect apparatus. E. M. Pell and R. L. Sproull. bibliog diags R Sci Instr 23:548-52 O '52

Theory of the magnetoresistive effect in semiconductors. V. A. Johnson and W. J. Whitesell. bibliog Phys R 89:941-7 Mr 1 '53

HALL Harding, ltd.

Centenary. Engineer 195:606 Ap 24 '53

HALLAUER, Carl S. 1894-

Portrait. Fortune 47:99 Mr '53

HALLÉN'S integral equation. See Integral equations

HALLOYSITE

Ceramic properties of halloysite. B. F. Hampel and I. B. Cutler. bibliog il diag Am Cer Soc J 36:30-4 Ja 1 '53

HALOGEN compounds

Application of the Arndt-Eistert reaction to halogenated aliphatic acids. F. Brown and W. K. R. Musgrave. Chem Soc J p2087-9 Jl '53

Aryl-2-halogenoalkylamines; the preparation of some derivatives of 1-aryl-3 : 4-dihalogenopyrrolidines and 1 : 4-bisarylamino-2 : 3-dihalogenobutanes. J. J. Roberts and W. C. J. Ross. Chem Soc J p4288-95 N '52

Aryl-2-halogenoalkylamines; the reaction of *NN*-di-2′-chloroethyl-2-naphthylamine with some phosphoric acid derivatives. W. Davis and W. C. J. Ross. Chem Soc J p4296-300 N '52

Assignment of frequencies for the methyl halomethanes and silanes $(CH_3)XY_3$, $(CH_3)_2XY_2$ and $(CH_3)_3XY$. M. C. Tobin. bibliog Am Chem Soc J 75:1788-90 Ap 20 '53

α-Benzylidenepropiophenone and its halogen derivatives. R. D. Abell. Chem Soc J p2834-6 S '53

HALOGEN compounds—*Continued*

Energy difference of rotational isomers of some dihalogenoethanes in the gaseous and liquid states. K. Kuratani and others. bibliog J Chem Phys 21:1411-12 Ag '53

Haloallenes. T. L. Jacobs and W. F. Brill. bibliog Am Chem Soc J 75:1314-17 Mr 20 '53

ω-Halogenomethyl-pyridines, -quinolines, and -*iso*quinolines; the mechanism of halogenation of quinaldines. B. R. Brown and others. Chem Soc J p 1369-72 My '53

Mechanisms of elimination reactions; the spontaneous decomposition of salts of β-halo acids; *trans-m*-nitrocinnamic acid dibromide. S. J. Cristol and W. P. Norris. bibliog Am Chem Soc J 75:632-6 F 5 '53

Molecular structures of *trans*-1,4-dihalogenocyclohexanes. K. Kozima and T. Yoshino. bibliog Am Chem Soc J 75:166-71 Ja 5 '53

N-ethyl(or -methyl or -phenyl)-N-2-halogenoethyl-1′(or -2′)-naphthylmethylamines; structure and pharmacological activity. N. B. Chapman and J. W. James. Chem Soc J p 1865-8 Je '53

Properties and reactions of free alkyl radicals in solution; some reactions with organic halogen compounds. M. C. Ford and W. A. Waters. Chem Soc J p2240-5 Je '52

Properties of the interstitial compounds of graphite; the electrical properties of the halogen compounds of graphite. G. Hennig. bibliog J Chem Phys 20:1443-7 S '52

Quaternary salts of halogenated heterocyclic nitrogen compounds. C. T. Bahner and others. Am Chem Soc J 75:1472-3 Mr 20 '53

Reactions of halotropones and related compounds. W. V. Doering and C. F. Hiskey. bibliog Am Chem Soc J 74:5688-93 N 20 '52

Reactivity of the halogen in some halogenated anilines. A. Rosenthal, R. Melby and R. B. Sandin. bibliog Am Chem Soc J 74:5790-1 N 20 '52

Rearrangement of halotropones; chloride exchange in tribromotropolone. W. V. Doering and L. H. Knox. bibliog Am Chem Soc J 74:5683-7 N 20 '52

Relation between configuration and conjugation in diphenyl derivatives; the dipole moments of the monohalogeno- and mononitrodiphenyls. A. C. Littlejohn and J. W. Smith. Chem Soc J p2456-63 Ag '53

Removal of halogen from aromatic nitrohalo compounds. W. T. Smith, jr. and L. Campanaro. Am Chem Soc J 75:3602-3 Jl 20 '53

SN mechanism in aromatic compounds; halogen substituents. R. L. Heppolette and J. Miller. bibliog Am Chem Soc J 75:4265-8 S 5 '53

Self-condensation of phenacyl bromide; the structure of the halogen diphenacyls. J. A. Berson. bibliog Am Chem Soc J 74:5175-7 O 20 '52

Spectrophotometric study of the phosphorus-interhalogen complexes in carbon tetrachloride and acetonitrile. A. I. Popov and E. H. Schmorr. bibliog Am Chem Soc J 74:4672-4 S 20 '52

Stereochemistry of α-haloketones; the molecular configurations of some monocyclic α-halocyclanones. E. J. Corey. bibliog Am Chem Soc J 75:2301-4 My 20 '53

Structure of the polymers of α-haloacrylates. C. S. Marvel and others. bibliog Am Chem Soc J 75:2326-30 My 20 '53

Studies in co-ordination chemistry; a ditertiary arsine nickel carbonyl and some halogen derivatives. R. S. Nyholm. Chem Soc J p2906-10 Jl '52

Studies in spectroscopy; molecular compound formation with polyhalogeno-iodo-compounds. R. N. Haszeldine. Chem Soc J p2622-6 S '53

Studies in spectroscopy; the ionisation constants and infra-red spectra of some primary and secondary halogen-containing alcohols. R. N. Haszeldine. Chem Soc J p 1757-63 Je '53

Studies in spectroscopy; the ultra-violet absorption spectra of halogen-containing aliphatic iodo-compounds, and the relative stability of free halogen-containing alkyl radicals. R. N. Haszeldine. diag Chem Soc J p 1764-71 Je '53

Studies of *N*-halogeno-compounds; the reaction between ammonia and chlorine in aqueous solution, and the hydrolysis constants of chloroamines. R. E. Corbett, W. S. Metcalf and F. G. Soper. Chem Soc J p 1927-9 Je '53

Thermodynamic properties of the diatomic interhalogens from spectroscopic data. L. G. Cole and G. W. Elverum, jr. bibliog J Chem Phys 20:1543-51 O '52

Vibration frequencies of the halogenated methanes and the substitution product rule. K. S. Pitzer and E. Gelles. bibliog J Chem Phys 21:855-8 My '53

See also

Dehalogenation
Grignard reagents
Halides
Trichloroethylene

Nomenclature

A.C.S. committee on nomenclature, spelling, and pronunciation; halogenated derivatives of hydrocarbons. Chem & Eng N 30:4513-14 O 27 '52

HALOGEN fluorides

Isotope exchange reactions of fluorine with halogen fluorides. R. B. Bernstein and J. J. Katz. bibliog J Phys Chem 56:885-8 O '52

HALOGEN phosphates

Model reactions of phosphorus-containing enzyme inactivators; interaction of imidazole, pyridine and some of their derivatives with dialkyl halogeno-phosphates. T. Wagner-Jauregg and B. E. Hackley, jr. bibliog Am Chem Soc J 75:2125-30 My 5 '53

HALOGENATION

p-Aminodimethylaniline; some cationoid halogenations *meta* to a dimethylamino-group. J. H. Gorvin. Chem Soc J p 1237-41 Ap '53

Direct halogenation of some aromatic amines. G. M. Kosolapoff. Am Chem Soc J 75:3596-7 Jl 20 '53

Halogenation in the liquid phase by chlorine trifluoride; the reaction with benzene derivatives and with carbon tetrachloride. J. F. Ellis and W. K. R. Musgrave. Chem Soc J p 1063-7 Ap '53

Kinetics of aromatic halogen substitution; relative reactivities of monosubstituted benzenes. P. W. Robertson, P. B. D. de la Mare and B. E. Swedlund. Chem Soc J p782-8 Mr '53

Stereochemical course of the addition of halogens to cholesterol. J. B. Ziegler and A. C. Shabica. bibliog Am Chem Soc J 74:4891-4 O 5 '52

Studies in the pyrazole series; halogenation of the 1-guanylpyrazoles. F. L. Scott and J. Reilly. bibliog Am Chem Soc J 74:4562-6 S 20 '52

Vapor phase halogenation of thiophene and 2-methylthiophene. C. D. Hurd and H. J. Anderson. bibliog Am Chem Soc J 75:3517-20 Jl 20 '53

See also

Bromination
Chlorination
Fluorination
Iodination

HALOGENS

Acid strength of halogens. R. L. Scott. bibliog Am Chem Soc J 75:1550-2 Ap 5 '53

Determination of sulfur in the presence of halogens. R. R. Jay. Pet Eng 25:C49 Ja '53

Effect of halogen atoms on the reactivity of other halogen atoms in the same molecule; the SN2 reactivity of ethylene halides. J. Hine and W. H. Brader, jr. bibliog Am Chem Soc J 75:3964-6 Ag 20 '53

Effect of halogens on the production of condensation nuclei by a heated platinum wire. B. Vonnegut. diag Science 117:108-9 Ja 30 '53

Equilibrium constants for the interaction of halogens with alcohols and ethers. R. M. Keefer and L. J. Andrews. bibliog Am Chem Soc J 75:3561-4 Jl 20 '53

Polarographic behavior of organic compounds; carbon-halogen bond fission in system acid-anion-ester; estimation of acid half-wave potentials. I. Rosenthal, C. Tang and P. J. Elving. bibliog Am Chem Soc J 74:6112-13 D 5 '52

Polarographic behavior of organic compounds; chloroacetic acids and their ethyl esters; *p*H-independence of carbon-halogen bond fission; wave splitting due to buffer interaction. P. J. Elving and C. Tang. bibliog Am Chem Soc J 74:6109-12 D 5 '52

HALOGENS—*Continued*

Reactions of metallic salts of acids with halogens; some reactions of salts of fluorohalogenoacetates and of perfluoro-acids. R. N. Haszeldine. Chem Soc J p4259-68 N '52

Solutions of halogens in highly acidic, polar solvents. R. E. Buckles and J. F. Mills. bibliog Am Chem Soc J 75:552-5 F 5 '53

See also

Bromine

Chlorine

Fluorine

Iodine

HALOID company

Haloid's hunch pays off. il Bsns W p 186-8 Mr 28 '53

HALOMETHANES

Photochemical reactions of diazomethane with polyhalomethanes and α-haloesters. W. H. Urry and J. R. Eiszner. bibliog Am Chem Soc J 74:5822-6 D 5 '52

HAM

Pre-combined ham wrap. il Mod Packaging 26:134-5 Ap '53

HAMILTON, Ontario

Water supply

Hamilton's new waterworks pumping plant reflects hundred years of progress. J. P. Smallwood. il Munic Util 90:19-21+ S '52; Same. Comp Air Mag 57:304-6 N '52

HAMMARSKJÖLD, Dag, 1905-

Dark horse from Sweden. Economist 167:7-8 Ap 4 '53

HAMMERS, Steam. See Steam hammers

HAMMETT equation

Benzyl tosylates; the application of the Hammett equation to the rates of their solvolysis. J. K. Kochi and G. S. Hammond. bibliog Am Chem Soc J 75:3445-51 Jl 20 '53

HAMMICK reaction

Investigation of the Hammick reaction. N. H. Cantwell and E. V. Brown. Am Chem Soc J 75:1489-90 Mr 20 '53

HAMMOND, Indiana

Sewerage

Garbage grinding pays its way! W. E. Ross and S. L. Tolman. il Pub Works 84:70-2+ My '53

HANCOCK, John M. 1883-

What it takes to be a good director. pors Bsns W p90+ Ja 17 '53

HAND, Learned, 1872-

Portrait. Fortune 46:143 O '52

HAND

Hand of the worker in the paper industry. W. Schweisheimer. Pulp & Pa of Can 53:176+ Ag '52; Same cond. Paper Ind 35:797 O '53

Mechanical air drying of hands following preoperative scrubbing. P. E. Walker. Pub Health Rep 68:317-19 Mr '53

Psychogenic aspects of diseases of the skin of industrial workers, with discussion of red hands of occupational origin. J. V. Klauder. bibliog il Ind Med 21:413-19 S '52; Excerpts. Nat Safety N 67:86 Ja '53

Protection

Hands and arms. il Nat Safety N 67:135 Mr '53

Keep out of no hands land. il Safety Maint & Prod 105:39-40+ Mr '53

Wounds and injuries

Breakdown of employe injuries show that hands take a beating. il Mill & Factory 52:130 My '53

Primary closure of skin defects. B. C. Kilbourne. il diags Ind Med 21:577-80 D '52

HAND cleaners

Antiseptic skin cleansers. M. M. Maglio and J. M. Hannegan. bibliog il Soap & San Chem 28:38-41+ N '52

Dermatologists on hand cleaners. Soap & San Chem 29:57 Ja '53

New cleanser licks oil. il Safety Maint & Prod 106:71 O '53

Skin cleansers for industry. Can Chem Process 37:70 My '53

HAND made paper. See Paper, Hand made

HANDICAPPED

Abilities, inc., new hope for new help. W. M. Stocker, jr. il Am Mach 97:188-90 Ap 13 '53

APHA conference report; handicapped children. Pub Health Rep 68:256-60 F '53

Cooperative group action by parents of the handicapped. Pub Health Rep 68:127-9 Ja '53

Does industry employ handicapped individuals? Mill & Factory survey. Mill & Factory 52:67-70 Je '53

Employing physically handicapped workers pays off. W. H. Kelly. Am Mach 96:102-3 D 22 '52

Employment of the physically handicapped. Pub Health Rep 67:1148 N '52

Handicapped; it is good business to employ them. R. O. Jaynes. il Steel 132:86-7 My 11 '53

Handicapped workers do full-size job. il Bsns W p 150-2 F 28 '53

Jobs for the disabled. Safety Maint & Prod 104:68 D '52

Machinist; will you hire a cripple? Nick Bell, paraplegic, is skilled machinist; has shop but can't get jobs from industry. T. Metaxas. Iron Age 171:74 My 21 '53

Physical handicap may be best recommendation; John Hostettler's auto laundry. R. L. Holman. Am Bsns 23:38 My '53

Place for the handicapped. Nat Safety N 67:30+ Mr '53

Sunshine school for the cerebral palsied; Fresno, Calif. il plan Arch Rec 112:156-61 S '52

See also

Blind

Heart—Diseases

HANDKERCHIEFS

How little stinkers make a million in sales; gift package for handkerchiefs. S. D. Knudson. il Sales Management 70:104-5 Ja 15 '53

HANDLING, Mechanical. See Mechanical handling

HANDLING of materials. See Material handling

HANDRAILS. See Railings

HANFORD engineering works

Research and engineering progress, 1952; nucleonics. il Gen Elec R 56:8-12 Ja '53

HANGARS

Aluminum trusses carry hangar roof. il Eng N 150:66 Mr 12 '53

Engineering-base building for British European airways. il plans Engineering 174:521-4, 556-8 O 24-31 '52

Expandable hangar features clear floor. G. L. Christian. il Aviation W 58:69 F 9 '53

Hangar sets records for Brazil. il Eng N 149:66 D 18 '52

Long trusses and steel cantilevers provide open work area for Boeing flight hangar. M. A. Wilson. il diags Civil Eng 23:312-14 My '53

New type hangar Diesel-powered for atomic-age getaway. il Diesel Power 31:51 Je '53

Prestressed concrete hangars at London airport. il diags Engineer 194:579-81 O 31 '52

Prestressed roof beams span 150 ft in hangar at London airport. il Eng N 149:61-2 N 13 '52

Refinements in thin-shell concreting. il Constr Methods 34:52-6 D '52

Standardized steel hangars ease plane maintenance. il Eng N 149:38 D 11 '52

Thin-shell rib panels site fabricated in plastic molds. M. R. Montgomery and T. G. Atkinson. il diags Am Concrete Inst J 24:781-94 My '53

200ft span aluminum hangar; de Havilland aircraft co. il diags Engineer 195:127-9 Ja 23 '53; Engineering 175:97-9 Ja 23 '53

Unusual cantilevers, trusses built for concrete hangar for the British overseas airways corp. il Eng N 150:68+ My 28 '53

Fires and fire protection

Airport operators given new National fire protection association recommendations. Weekly Underw 168:1351 My 16 '53

Heating and ventilation

Heating airplane hangars. il Heating-Piping 25:100-1 F '53

HANGERS, Coat, dress, etc.

Infrared drying of black enameled coat hangers; data sheet. R. W. Fiddes. il Elec West 111:109 Jl '53

HANLON, James F.
How to perk up an airport. por Bsns W p80+ N 22 '52

HANNA, M. A., company
Ferro-nickel. Bsns W p 124 Ja 24 '53
Humphrey's Hanna. J. C. Schaie. Barron's 33:5+ Ja 5 '53

HANNELL pottery. See Potteries

HANOVER technical fair. See Machinery—Exhibitions

HANSON, Rhoda
Fought winning battle with TB; successful Montana agent. por East Underw 54:20 Ap 17 '53

HAPTENS
Binding of simple substances to serum proteins and its effect on apparent antibody-hapten combination constants. D. Pressman and M. Siegel. bibliog diags Am Chem Soc J 75:686-93 F 5 '53

HARBORS
Long-period waves or surges in harbors. J. H. Carr. il diags Am Soc C E Proc 78 [no 123]:1-16 Ap '52; Discussion. 79 [no D-123]:1-13 Mr '53
Shore-based radar for harbor surveillance; installations in ports of Long Beach, Liverpool, Boston, and New York. E. J. Isbister and W. R. Griswold. il maps Elec Eng 71:1072-7 D '52
See also
Breakwaters
Charleston, South Carolina—Harbor
Docks
Jetties
New Orleans—Harbor
Portland, Oregon—Harbor
Ports
Savannah—Harbor
Takoradi, Gold Coast—Harbor

HARD board. See Fiber board

HARD facing
Are you hard facing effectively? H. S. Avery. il diags Min Cong J 39:106-11 Ap '53
Automatic hard-facing of tungsten carbide. il Mach 59:196 D '52
Hard facing. H. O. Jones. il Welding J 32:746 Ag '53
Hardfacing gives metals a new lease on life. R. J. Kembel. il diags Mill & Factory 52: 119-21 Je '53
Hard facing pump parts; Spray-weld process. il Welding J 32:529 Je '53
Hard surfacing. S. Elonka. il diags Power 97:107-22 Mr '53; Same cond. Am Mach 97:113-28 Ag 17 '53
Hard surfacing of glass plungers increases wear 54 times. L. V. LaRou. il diag Cer Ind 60:72-3 My '53
Life increased, maintenance costs cut by spraywelded hard facing alloy surfaces. il Glass Ind 34:88 F '53
New life for worn surfaces. D. E. Lytle. il Welding J 31:1054-6 N '52
New maintenance tool for steel mill use. J. J. Barry. il Iron & Steel Eng 30:92-7 Mr '53
Proper surfacing alloy gives maximum wear. Brick & Clay Rec 122:68-72 F '53
Selection and evaluation of methods of hard facing. J. J. Barry. il Welding J 32:119-26 F '53
See also
Alloys, Hard facing
Tungsten carbide coating

HARD woods
Bleached semichemical pulps from mixed eastern hardwoods for use in high-grade bond paper. J. N. McGovern and F. A. Simmonds. Tappi 36:385-90 S '53
Great Northern announces manufacture of newsprint from hardwood. Paper Ind 35:54 Ap '53
Great Northern newsprint using a large percentage of hardwood groundwood pulp. Tappi 36:sup95A-6A Jl '53
Hardwood joins the paper parade. Bsns W p46 My 9 '53
High-yield cold soda pulps and products from several woods. K. J. Brown and J. N. McGovern. Paper Ind 35:66-9 Ap '53
Integration of pulpwood and lumber uses in Northeastern hardwoods; abstract. W. A. Hosmer. Pulp & Pa of Can 54:92+ F '53
Peeling hardwood. diag Tappi 36:sup 100A Ag '53
Poisoning small-diameter hardwoods with the Cornell tool. R. D. Shipman. Paper Tr J 137:78 S 18 '53
Purified hardwood pulps for chemical conversion; aspen sulphite and prehydrolysis-sulphate pulps. F. A. Simmonds and others. bibliog Tappi 36:103-10 Mr '53
Semichemical pulping of hardwoods. H. L. Field. Tappi 36:sup 140A-3A Ag '53
Utilization of hardwoods. L. Rioux. Pulp & Pa of Can 53:115-16+; Discussion. 119+ D '52
Utilization of hardwoods for production of newsprint in foreign countries. J. E. Atchison. Paper Tr J 136:24-5 Mr 20 '53
Va-Purge and the alkaline pulping of mixed hardwoods. W. G. Hartford. Pulp & Pa of Can 54:119-20 Jl '53

HARDBOARD. See Fiber board

HARDENING
Hardening of metals; abstract. J. L. Meijering. Metal Prog 64:182+ S '53
Mechanism of work-hardening of metals. N. F. Mott. bibliog diags Inst Mech Eng Proc (A) 166 no 4:413-18 '52; Same abr. Engineer 194:694-7 N 21 '52
What the ferrous metallurgist should know about titanium. R. I. Jaffee. diags Iron Age 171:162-6 Ap 2 '53
See also
Case hardening
Metals—Aging
Steel, Hardening of

HARDING, Louis Allen, 1876-1953
Sketch. por Heating-Piping 25:145-6 Ag '53

HARDNESS
Typical Brinell hardness numbers of some nonferrous alloys; data sheet. Foundry 81: 203-4 My; 175-6 Je '53

Tables, calculations, etc.

Rapid calculation of microhardness numbers. L. E. Samuels and T. O. Mulhearn. il diag Metal Prog 63:82-3 My '53

Testing

Cabul direct-reading portable hardness tester. il Engineering 175:480 Ap 10 '53
Hardness of rubber-covered rolls (plastometer test). diags Tappi 36:sup 120A-1A S '53
Material laboratory-Admiralty indentometer. J. Z. Lichtman and C. K. Chatten. bibliog il diag India Rubber World 129:61-2 O '53
Report on the Shore type A durometer for hardness testing of vinyl plastics. E. F. Smith. diags India Rubber World 127:515-18 Ja '53
Rockwell C hardness on cylindrical steel specimens. F. W. Hussey. diags Am Soc T M Proc 50:1176-85; Discussion. 1186-7 '50

HARDWARE
See also
Bolts and nuts
Building fittings
Nails
Plumbing supplies industry

HARDWARE industry and trade
Builders hardware. Steel 132:69 Mr 2 '53
Hardware; today's merchandising demands eye-catching packaging. il Mod Packaging 26:99-105+ S '52
How Pheoll eliminated losses on 6,000 chicken feed accounts. R. C. Taylor, jr. il Sales Management 70:30-2 Mr 15 '53
See also
Tool industry

Advertising

Santa leaves potential linage for local dailies; Hardware week. R. B. McIntyre. Ed & Pub 85:20 D 27 '52

HARDWOOD. See Hard woods

HARDY, Fannie
Woman named top Arkansas department aid. Nat Underw 56:8 D 18 '52

HARGROVE, Reginald Henry, 1897-
Businessmen in the news. por Fortune 47: 37 Ja '53

HARLAND and Wolff, limited
Statement by the chairman. F. E. Rebbeck. Economist 167:849 Je 20 '53

HARLOW, England
See also
Electricity supply—Harlow, England

HARMAN. See Methyl pyridindole

HARMONIC analysis
Steady-state forced vibration of continuous frames. C. T. G. Looney. diags Am Soc C E Proc 78 [no 136]:1-21 Je '52; Discussion. 79 [no D-136]:1-14 Ap '53
See also
Fourier's series

HARMONIC analyzers
Fourier analyzer. F. J. McDonal. diags R Sci Instr 24:272-5 Ap '53

HARMONICS (electric waves)
Generation and flow of harmonics in transmission systems. S. Whitehead and W. G. Radley. bibliog diags Inst E E Proc 96 pt 2:29-48 F '49; Discussion. 97 pt 2:541-2; 100 pt 2:42-5 Ag '50, F '53
Harmonic and intermodulation distortion in power law devices; abstract. D. G. Lampard. bibliog Inst E E Proc 100 pt 3:111-12 Mr '53
Harmonic radiation from external nonlinear systems. B. Seybold. diags Q S T 37:11-18+ Ja '53
Harmonic-response-testing equipment for linear systems, D. O. Burns and C. W. Cooper. diags Inst E E Proc 100 pt 2:213-21; Discussion. 221-2 Je '53
Spurious response chart. A. E. Eberhardt. Tele-Tech 11:49-50 D '52

HARRIMAN memorial medals for safety
Harriman awards to be presented; best safety records for 1952. Ry Age News ed 135:9 S 14 '53; Ry Age 135:84-5 O 5 '53

HARRIS, Clyde H.
Businessmen in the news. por Fortune 47:56 Mr '53

HARRIS, Harold Ross, 1895-
Businessmen in the news. por Fortune 46:52 N '52
Changing course for Northwest airlines. por Bsns W p70-2+ Je 20 '53

HARRIS, Irving Brooks, 1910-
Businessmen in the news. por Fortune 47: 53 F '53

HARRISBURG steel corporation
Three by nine analysis of some unlisted stocks. H. J. King. Comm & Fin Chr 177: 1208 Mr 19 '53

HARRODS, limited
Statement by the chairman. R. Burbidge. Economist 166:840 Mr 21 '53

HARSH, Leo
Vet's venture. Fortune 47:180 Mr '53

HARTFORD, Connecticut

Sewerage

What's right with my plant. E. A. Locke. il Sewage & Ind Wastes 24:1410-15 N '52

HARTFORD electric light company
Hartford Electric may up its dividend by year-end. Barron's 33:29-30 Je 29 '53
Public utility securities. O. Ely. Comm & Fin Chr 177:1022 Mr 5 '53

HARTFORD fire insurance company
Elect Hullett Hartford fire president; meeting of the directors. Weekly Underw 168: 633+ Mr 7 '53

HARTLEY, Harold
Melchett medal, 1953. Chem Age (Lond) 67: 869 D 27 '52

HARVALIS, Nicholas J.
Investment primer; review of How to buy stocks, by L. Engel. Bsns W p 101-2+ Ap 18 '53

HARVARD university
Harvard endowment fund shows continued gains. N. Willatt. Barron's 32:23+ N 17 '52

Graduate school of business administration

Business school reports. Bsns W p65-6+ My 9 '53
B-school speeds up course for executives. Bsns W p68 Je 6 '53

HARVESTING machinery
Potato harvesting machinery. il Engineer 194:512-14 O 17 '52
Sugar beet harvesting machinery demonstration. Engineer 194:575 O 31 '52
Wanted, a good sugar cane harvester. A. G. Keller. S A E J 61:86 Ja '53

HARVEY machine company
Second chance at aluminum. Bsns W p 122+ F 7 '53

HASHEMITE JORDAN kingdom
Prospect for Jordan. map Economist 167: 228+ Ap 25 '53

HASTELLOY F. See Nickel alloys

HATFIELD technical college
Hatfield technical college. Engineering 174: 796 D 19 '52; Elec J 149:1949 D 19 '52

HATS
Lid is on; men's felt hat business. Bsns W p 124 Ap 18 '53

Advertising

Drive urged to educate male on milady's hats. Ed & Pub 86:22 Ja 10 '53

HATS, Safety
Anybody seen my hat? safety hat program at American smelting and refining co. R. C. Beckstead. il Safety Maint & Prod 104: 13+ D '52; Same abr. Eng & Min J 154: 98-9 Ja '53
Head protection. il Nat Safety N 67:86 Mr '53
Sealed, safe and sanitary. il Nat Safety N 67:34 Je '53
Turtle club advances. il Safety Maint & Prod 104:44 O '52
Use of safety hats in logging operations. Pulp & Pa of Can 53:165 N '52

HAUGE, Gabriel S.
Ike's friend. H. Woodward. por Sales Management 70:27 Ja 1 '53
Portrait. Bsns W p29 D 6 '52

HAUGH, Jesse Lee, 1887-
I'll take those losing bus lines and make them show a profit. por Bus Transportation 32:40-1 My '53

HAULAGE
See also
Cableways
Conveying machinery
Electric trucks, Industrial
Loading and unloading
Locomotives
Mine haulage
Motor trucks
Tractors
Trucks

HAUSMAN, Louis, 1906-
Man without a desk. pors Bsns W p 182-4+ Mr 14 '53

HAWAII university
University of Hawaii bibliography, 1944-52. C. S. Bouslog, ed. (Bul. 30) 165p Univ. of Hawaii, Honolulu 14 '52

HAWAIIAN electric company, ltd.
Bonds placed privately. Comm & Fin Chr. 176:1768 N 10 '52

HAWAIIAN ISLANDS
Hawaiian statehood; mere legislation will not merge those islands with the mainland. F. Morley. Barron's 33:5 Mr 2 '53
See also
Electricity supply—Hawaiian Islands
Hotels—Hawaiian Islands

HAWLEY, Cameron
Author meets businessman. por Fortune 46: 111+ D '52

HAY
Design of hay drying systems. V. H. Baker and U. F. Earp. il diags Heat & Ven 50:77-81 Mr; 100-2 Ap '53

HAY fever
Pollen counts and the hay fever problem. N. Dingle. Science 117:64-5 Ja 16 '53

HAYES, John Dennis
Fanny Farmer. Fortune 47:240 F '53

HAYWOOD, Allan Shaw
Balance wheel. Bsns W p 147 F 28 '53
Portrait. Bsns W p 156 N 15 '52
Why Reuther? por Fortune 47:66+ Ja '53

HEAD

Protection

Head protection. il Nat Safety N 67:86 Mr '53
See also
Hats, Safety

Wounds and injuries

Malingering, with reference to the eye, ear, nose and throat. S. L. Shapiro. Ind Med 22: 65-8 F '53

HEADACHE
Pills, or not. Safety Maint & Prod 106:53 Ag '53

HEADFRAMES
Luff fall rigging moves bulky headframe; New Jersey zinc co. il plan diags Constr Methods 34:88-90+ D '52; Eng & Min J 153:76-9 D '52

HEADFRAMES—*Continued*

Operation headframe saves weeks at Friedensville. il Min Eng 4:1143 D '52

Tower skids, rolls 67 ft into place. il Eng N 149:45 D 11 '52

HEADLIGHTS, Automobile. See Automobiles—Lighting

HEADLINES. See Advertising copy—Headlines

HEALTH and accident underwriters conference

Accident conference enjoys great year. C. O. Pauley. Weekly Underw 168:78-80 Ja 3 '53

Annual group insurance meeting, Chicago. East Underw 54:37-8+ F 13 '53; Nat Underw 57:29+ F 5 '53; Nat Underw (Life ed) 57:1+ F 6 '53

Annual meeting, 52d, Chicago, May 4-6. East Underw 54:31-4+ My 8 '53; Nat Underw 57:1+, 12 My 7 '53; Nat Underw (Life ed) 57:17-18+ My 8 '53; Weekly Underw 168: 1269, 1297-301 My 9 '53

Seven join H.&A. conference; membership is now 184 companies. East Underw 53:36 O 17 '52

HEALTH and welfare retirement association, National. See National health and welfare retirement association

HEALTH centers

Construction of hospitals, health centers and other health facilities, 1951-52. W. E. Gilbertson and H. A. Kahn. Pub Health Rep 67:1168-75+ D '52

HEALTH education

APHA conference report; field research and appraisal in health education. Pub Health Rep 68:224-7 F '53

Four health education evaluation studies. Pub Health Rep 68:54-5 Ja '53

HEALTH examinations. See Physical examinations

HEALTH information foundation

What drug industry is doing to promote voluntary health care coverage. K. Williamson. Nat Underw (Life ed) 57:4 My 22 '53; Same cond. Nat Underw 57:10+ My 21 '53

HEALTH insurance. See Insurance, Health

HEALTH insurance council

A.&H. industry in cooperative effort to improve hospital-doctor relationship. W. L. Clapp. East Underw 53:91-2+ D 12 '52

Annual meeting, Chicago. Weekly Underw 168:1014 Ap 11 '53

Functions of Health insurance council. G. E. Martel. Weekly Underw 167:1113-14 O 25 '52

Objects of Insurance council. J. R. Williams. Weekly Underw 168:1290 My 9 '53

HEALTH officers, Public. See Public health officers

HEARING

Auxiliary mechanical sound sources for obstacle perception by audition. V. Twersky. il diags Acoustical Soc Am J 25:156-7 Ja '53

Brownian motion and the transmission of energy in the cochlea. H. L. de Vries. diags Acoustical Soc Am J 24:527-33 S '52

Certain temporal factors in audition; abstract. I. J. Hirsh. Science 116:523-4 N 14 '52

In search of the missing six db. W. A. Munson and F. M. Wiener. bibliog Acoustical Soc Am J 24:498-501 S '52

Industrial noise and impaired hearing. Safety Maint & Prod 105:73-4 Ja '53

Industrial noise injuries may bring compensation claims. C. R. Walmer. Weekly Underw 168:1218 My 2 '53

Information of elementary auditory displays. I. Pollack. diag Acoustical Soc Am J 24:745-9 N '52

Loudness of bands of noise. I. Pollack. Acoustical Soc Am J 24:533-8 S '52

Masking of tones by white noise as a function of the interaural phases of both components; 500 cycles. L. A. Jeffress and others. bibliog Acoustical Soc Am J 24: 523-7 S '52

Noise is news; claims for loss of hearing in industrial jobs menace plants financially. il Mod Ind 25:48-52 F '53

Perception of speech sounds by deafened persons. H. Fletcher. Acoustical Soc Am J 24:490-7 S '52

Phase principle for complex-frequency analysis and its implications in auditory theory. W. H. Huggins. il diags Acoustical Soc Am J 24:582-9 N '52

Pitch discrimination. J. D. Harris. bibliog Acoustical Soc Am J 24:750-5 N '52

Progress report; hearing conservation at Allis-Chalmers. M. F. Biancardi and P. J. Whitaker. il Factory Management 110: 110-12 D '52

Space-time pattern of the cochlear microphonics (guinea pig), as recorded by differential electrodes. I. Tasaki and others. il diags Acoustical Soc Am J 24:502-19 S '52

Temporary changes in acuity of the human ear following exposure to intense noise. J. B. Gallagher and J. E. Goodwin. bibliog A M A Archives Ind Hygiene & Occup Med 6:332-8 O '52; Abstract. Nat Safety N 67:64 F '53

See also

Deafness
Ear
Hearing aids, Mechanical
Noise

Testing

Cut the racket! noisy industries should install hearing conservation programs. J. Sataloff. Safety Maint & Prod 105:68-71 Ja '53

Determination of a differential threshold by the so-called *ABX* technique. J. D. Harris. Acoustical Soc Am J 24:417 Jl '52

HEARING aids, Mechanical

Hearing aids. E. L. R. Corliss. il U S Nat Bur Stand Circ 534:1-18; pa 15c Supt. of doc. '53

New hearing aids. Sci Am 188:40 F '53

Overrated? transistor hearing aids. Bsns W p 106+ Ap 25 '53

Transistorized hearing aids. J. D. Fahnestock. il diags Electronics 26:154-5 Ap '53

Transistors enter commercial field. N. B. Krim. Product Eng 24:197 Mr '53

Advertising

Misleading advertising of hearing aids. P. Wilde. Consumers Res Bul 31:18-20 F '53

HEARINGS, Congressional. See Government investigations

HEARST, William Randolph, 1863-1951

Hearst estate value seen as $73,600,000. Ed & Pub 85:11 O 11 '52

HEART

Behaviour of easily hydrolysable P in heart muscle during fluoroacetate poisoning. P. Buffa. bibliog Chem & Ind p 1080 N 1 '52

Technical modifications of radiocardiography. A. A. Luisada and others. Science 117:299-300 Mr 20 '53

Whale cardiogram. il Sci Am 187:68-70 O '52

Diseases

Air conditioning a must for some heart cases. il Heating-Piping 25:103 O '53

Cardiac clinic network feature of Georgia plan. J. G. Barrow. Pub Health Rep 68: 83 Ja '53

Has there been progress? Safety Maint & Prod 104:73 N '52

Heart disease and industrial medicine; the placement, protection and rehabilitation of persons suffering from heart disease. E. M Kline and others. Ind Med 22:76-9 F '53

HEART, Artificial

Blood pump for whole blood without anticoagulants. J. J. Osborn. il Science 117: 537-8 My 15 '53

Heart and lung machine. il Engineer 196: 150-1 Jl 31 '53

Research; robot heart perfected; constructed by GM lab after three years of research. il Iron Age 170:51 O 30 '52

Robot spare heart. Comp Air Mag 57:349 D '52

HEAT

Examination of heat stress indices; usefulness of such indices for predicting responses of African mine laborers. C. H. Wyndham and others. A M A Archives Ind Hygiene & Occup Med 7:221-33 Mr '53; Abstract. Nat Safety N 67:46 Je '53

HEAT—*Continued*

Heat standards; NBS materials permit wider, more accurate heat measurements. Iron Age 171:159-60 F 26 '53

Nature of heat in the welding process. R. T. Howard. il diags Welding J 32:127-31 F '53

Transport of momentum, mass, and heat in turbulent jets. L. G. Alexander and others. il diags Ill U Eng Exp Sta Bul 413:1-88 bibliog(76 titles, p85-8) '53 (pa 75c)

Working efficiency of Africans in heat; effect of various saturated air temperatures, wind velocities, and rates of work. C. H. Wyndham and others. bibliog A M A Archives Ind Hygiene & Occup Med 7:234-40 Mr '53

See also

Boiling points
Calorimeters and calorimetry
Combustion
Entropy
Evaporation
Expansion (heat)
Flames
Heating
Insulation (heat)
Melting points
Pyrometers and pyrometry
Specific heat
Steam
Temperature
Thermochemistry
Thermodynamics
Thermoelectricity
Thermometers and thermometry
Waste heat

Physiological effect

See Temperature—Physiological effect

HEAT capacity. See Specific heat

HEAT conduction

Heat conduction and isotherms of adsorbed helium on silica gel. D. White and others. bibliog J Chem Phys 20:1819-20 N '52

Heat conduction in alloys at low temperatures. I. Estermann and J. E. Zimmerman. bibliog diags J Ap Phys 23:578-88 My '52

Heat conduction of the boundary layer in liquid helium II. D. White and others. diag Phys R 89:593-4 F 1 '53

Mach-Zehnder interferometer applications in study of convection and conduction heat-transfer systems. C. D. Coulbert. bibliog il diag Mech Eng 74:1005-10 D '52

HEAT conductivity

Additional measurements of heat conductivity of nitrogen, carbon dioxide, and mixtures. F. G. Keyes. bibliog A S M E Trans 74:1303-6 N '52

Apparent thermal conductivities of moulding materials at high temperatures. D. V. Atterton. bibliog il diags Iron & Steel Inst J 174:201-11 Jl '53

Further analysis of errors of the guarded hot plate. G. M. Dusinberre. R Sci Instr 23:649-50 N '52

Heat conductivity of Freon; abstract. L. Cherneyeva. Refrig Eng 61:50 Ja '53

Improved design of apparatus for measuring thermal conductivity of refractories and insulation at high temperatures. V. J. Duplin, jr. and E. S. Fitzsimmons. il diags Am Cer Soc J 35:226-9 S 1 '52

Moisture movement in soils due to temperature difference. W. A. Hadley and R. Eisenstadt. il Heating-Piping 25:111-14 Je '53

Simple thermal conductivity analyzer for *ortho-para* hydrogen. E. R. Grilly. diag R Sci Instr 24:72-3 Ja '53

Temperature rise in a heat-producing solid behind a surface defect. W. Karush and G. Young. diag J Ap Phys 23:1191-3 N '52

Thermal conductivity data presented for various metals and alloys up to 900°C. L. Silverman. J Metals 5:631-2 My '53

Thermal conductivity, electrical resistivity, and thermoelectric power of graphite. W. W. Tyler and A. C. Wilson, jr. bibliog diag Phys R 89:870-5 F 15 '53

Thermal conductivity measurements on silica. B. P. Colosky. diag Am Cer Soc Bul 31:465-6 N 15 '52

Thermal conductivity of solids and fluids from studies of aggregate matter. H. S. Strickler. bibliog J Chem Phys 20:1333-4 Ag '52

Transport phenomena in a completely ionized gas. L. Spitzer, jr. and R. Härm. bibliog Phys R 89:977-81 Mr 1 '53

Viscosity, thermal conductivity and specific heat of carbon dioxide at elevated pressures and temperatures. I. Granet and P. Kass. bibliog Pet Refiner 31:137-8 N '52

Viscosity, thermal conductivity and specific heat of dry air at elevated pressures and temperatures. I. Granet and P. Kass. bibliog Pet Refiner 31:113-14 O '52

Viscosity, thermal conductivity and specific heat of nitrogen at elevated pressures and temperatures. I. Granet and P. Kass. bibliog Pet Refiner 32:149-50 Mr '53

Viscosity, thermal conductivity and specific heat of steam at elevated pressures and temperatures. I. Granet and P. Kass. bibliog Pet Refiner 32:179-81 My '53

See also

Heat transmission

HEAT content. See Specific heat

HEAT convection

Comparative performances of a warm-air ceiling panel system and a convection system. R. W. Roose and others. bibliog il plans Ill U Eng Exp Sta Bul 401:1-90 '52 (pa 80c); Summary. Heat & Ven 49:79 D '52

Convective heat-transfer and flow-friction behavior of small cylindrical tubes; circular and rectangular cross sections. W. M. Kays and A. L. London. bibliog A S M E Trans 74:1179-89 O '52

Generalized theory of convective heat transfer in a free-molecule flow. A. K. Oppenheim. bibliog diags J Aeronautical Sci 20:49-58 Ja '53

Laminar-flow forced convection in rectangular tubes. S. H. Clark and W. M. Kays. bibliog il A S M E Trans 75:859-66 Jl '53

Mach-Zehnder interferometer applications in study of convection and conduction heat-transfer systems. C. D. Coulbert. bibliog il diag Mech Eng 74:1005-10 D '52

HEAT engines

High-temperature vapour cycles for heat engines. J. F. Alcock and E. J. Macnair. Engineering 175:325 Mr 13 '53

See also

Gas turbines
Internal combustion engines
Steam engines
Steam turbines

HEAT exchangers

Contamination of condensate by heat-exchanger-tube alloys. J. D. Ristroph and E. B. Powell. bibliog il diag A S M E Trans 75:729-38; Discussion. 738-45 Jl '53

Design and performance of an extended-surface regenerator for a gas-turbine plant. S. Holm and R. L. Lyerly. il diags A S M E Trans 74:1163-6 O '52

Economics of the air-cooled heat exchanger. J. C. Chase and H. E. Degler. flow diag il map Pet Eng 25:C42-4+ Ja '53

Effect of rotary regenerator performance on gas-turbine-plant performance. D. B. Harper and W. M. Rohsenow. bibliog diags A S M E Trans 75:759-65 Jl '53

Extended surfaces for heat exchangers; Sunrod system. il diags Engineering 174:745-7 D 12 '52

Heat exchanger costs today. F. L. Rubin. diags Chem Eng 60:201-6 My '53

Heat transfer. diag Food Eng 25:121-4+ O '53

Know your heat exchanger tube joints. A. Levine. il diags Power Eng 56:86-8 N '52

Liquid-coupled regenerators for turboprops. A. L. London and W. M. Kays. bibliog diags Aeronautical Eng R 11:42-53+ O '52

New type of heat interchanger for large liquefiers. J. Nicol and others. il diags R Sci Instr 24:16-19 Ja '53

Nuclear power plants; design and performance of liquid-metal heat exchangers and steam generators. R. D. Brooks and A. L. Rosenblatt. bibliog Mech Eng 75:363-8 My '53

Ohio experience with sludge heat exchangers; symposium. J. H. Blodgett and others. il Sewage & Ind Wastes 24:1416-24 N '52

Performance of finned tubes in shell-and-tube heat exchangers. R. B. Williams and D. L. Katz. bibliog flow diag il diags A S M E Trans 74:1307-20 N '52

Power Jets' gas turbine patents. diags Engineering 175:773-6 Je 19 '53

Scale costs money; abstract. J. S. Connors. Oil & Gas J 51:65-6 D 1 '52

HEAT exchangers—*Continued*

Welded heat exchangers. il Steel 131:116+ N 3 '52; Mech Eng 74:1015-16 D '52

See also

Condensers (steam)

Cleaning

Good heat-exchanger maintenance pays off. J. S. Connors. Oil & Gas J 51:105-6 Ja 12 '53

In-place tube cleaning pays. il diag Pet Processing 8:228-9 F '53

New jet exchanger cleaning method. A. L. Foster. il diag Pet Eng 24:C32-3+ D '52

New unit really cleans tube bundles. R. T. Effinger and G. T. Holt. il Oil & Gas J 51:111-12+ N 10 '52

Design

Design of tube plates in heat exchangers. K. A. G. Miller. diags Inst Mech Eng Proc (B) 1B no 6:215-27; Discussion. 228-31 '52

Heat-transfer and flow-friction characteristics of some compact heat-exchanger surfaces; design data for five surfaces. A. L. London and others. bibliog il diags A S M E Trans 74:1167-77; Discussion. 1177-8 O '52

Periodic-flow regenerator; a summary of design theory. J. E. Coppage and A. L. London. bibliog diags A S M E Trans 75:779-85; Discussion. 785-7 Jl '53

Shortcut to heat exchanger design. C. H. Gilmour. Chem Eng 59:144-8 O '52; 60: 226-9 Mr; 214-18 Ap; 203-7 O '53

Failure

Heating tube failures, cause and prevention. J. J. B. Rutherford. bibliog il Pet Processing 8:62-9 Ja '53

HEAT insulation. See Insulation (heat)

HEAT measurement. See Pyrometers and pyrometry; Temperature—Measurement; Thermometers and thermometry

HEAT of combustion. See Combustion, Heat of

HEAT of dissociation. See Dissociation, Heat of

HEAT of formation. See Thermochemistry

HEAT of fusion. See Fusion, Heat of

HEAT of ionization. See Ionization, Heat of

HEAT of solution. See Solution, Heat of

HEAT of vaporization. See Vaporization, Heat of

HEAT pump

Air-to-air heat pump installation provides winter heating and summer cooling. il Heating-Piping 25:88-9 Ap '53

Design and performance of a residential earth heat pump. M. Baker. bibliog il diag Heating-Piping 25:119-29 S '53; Abstract. Dom Eng 182:99+ Ag '53

Dual-purpose domestic heat pump. G. O. McLean. il Elec R (Lond) 152:289-91 F 6 '53

Earth heat pump research at the University of Kentucky from October 31, 1950 to May 1, 1951; Preliminary report on the performance of the University of Kentucky heat pump no. 1. E. B. Penrod and others. 2pls diags Ky Acad of Science [Lexington] Trans v14 no 2:59-77 '53

Electrical analogger application to the heat pump process. C. F. Kayan. bibliog diags Heating-Piping 25:123-7 Ag '53

Expanding market for heat pumps. il diags Sheet Metal Worker 45:41-2 O '53

Field trial results of three air to air residential heat pumps. G. L. Biehn. il diags Refrig Eng 61:628-31+ Je '53; Abstract. Heat & Ven 50:109 My '53

Fuel-less home furnace; the heat pump catches on. diags Bsns W p68-9 N 15 '52

Heat pump; G.E. puts it on the assembly line. N. Willatt. Barron's 33:13-14 Ja 5 '53

Heat pump; new load on utility horizon. P. F. O'Neill. il Gen Elec R 56:47-50 Mr '53

Heat pump serves first small all-electric house developed by GE and built in Dallas to be one of a series. Heat & Ven 50:138 O '53

Heat pump test; Utah power & light co. il Elec West 109:89 N '52

Heating and cooling a residence with a three-hp source heat pump. W. F. Stoecker and R. R. Herrick. il plan Refrig Eng 60:1172-6 N '52; Discussion. 61:102-3 Ja '53

Interest in heat pump growing; abstract. P. Sporn and E. R. Ambrose. Heating-Piping 25:86-7 My '53

Miniature pump blows hot or cold. il Elec World News ed 139:16 Mr 16 '53

Moisture movement in soils due to temperature difference. W. A. Hadley and R. Eisenstadt. il Heating-Piping 25:111-14 Je '53

One year with the air source heat pump. D. W. Lynch. map Refrig Eng 61:858-61+ Ag '53

Progress of the heat pump during the past decade. P. Sporn and E. R. Ambrose. flow diag il diags Heat & Ven 50:87-97 S '53

Research results concerning earth as a heat source or sink. Edison Elec Inst Bul 21:355-8 S '53

Residential heat pump experiments in Philadelphia; earth as a heat source; abstract. A. H. Kidder and J. H. Neher. Elec Eng 72:123 F '53

Residential heat pump experiments in Philadelphia; installation and operating experience; abstract. J. H. Harlow and G. E. Klapper. il Elec Eng 72:124 F '53

Residential heat pump experiments in Philadelphia; suggested possibilites for practical applications; abstract. C. Bary. Elec Eng 72:122 F '53

Spreading the word on the heat pump; General Electric's heat pump institute. il Elec World News ed 139:16-17 Ap 27 '53

Survey of heat pump installations. maps Edison Elec Inst Bul 21:210-11 Je '53

Tests of a heat pump for domestic heating and cooling. E. P. Carman. 12pls U S Bur Mines Rep of Invest 4977:1-31 '53

HEAT radiation

Design data for slat-type sun shades for use in load estimating. G. V. Parmelee and D. J. Vild. il diags Heating-Piping 25:130-6 S '53

Emission of radiation from diatomic gases; emissivity calculations for CO and HCl for nonoverlapping rotational lines as a function of temperature and optical density. S. S. Penner. bibliog diag J Ap Phys 23: 825-37 Ag '52

Flame radiation research at Ijmuiden. il Engineer 193:822-4 Je 20 '52; Same abr. Blast F & Steel Pl 40:1465-6+ D '52; Excerpt. Steel 131:94+ S 1 '52

Heat radiating area of butt weld and flanged pipe fittings; tabulations; reference data. Heat & Ven 50:154a-154b Jl '53

Heat radiation suppression; bonding of refractory coatings to metal components. Automobile Eng 43:323-4 Ag '53

Heat relief in industry. B. R. Small. il Iron & Steel Eng 29:71-8 Ap '52; Same. Heating-Piping 24:114-17 O '52; Discussion. Iron & Steel Eng 29:78-83 Ap '52; Heating-Piping 25:90-5 F '53

Heating Arctic buildings; use of reflective interior finishes. M. H. LaJoy and G. R. Whitnah. plan diag Heating-Piping 25:90-3 S '53

Industrial heat exposures; evaluation and control. G. F. Haines, jr. and T. Hatch. il diags Heat & Ven 49:93-104 N '52

Protection against radiant heat. A. M. Wallach. bibliog il Nat Safety N 67:30-1+ Je '53

Radiation heat and comfort; abstract. W. G. Hazard. Heating-Piping 25:92 Ap '53

Unit ventilator performance in heating, cooling classrooms. W. G. Potter and F. G. Baker. il Heating-Piping 25:104-7 Ap '53

See also

Bolometers

HEAT resisting alloys. See Alloys, Heat resisting

HEAT resisting materials

Builds plant, starts production in six weeks; ceramic coating of aircraft components. il Cer Ind 60:64-5+ My '53

Built-up mica plate for high-temperature applications. C. L. Dawes and W. R. Mansfield. bibliog il diags Elec Eng 72: 145-50 F '53

Cerametallic brake linings for aircraft. Automobile Eng 43:157 Ap '53

Ceramic coatings boost alloy steel use. F. D. Shaw. il Steel 132:110+ Ap 13 '53

HEAT resisting materials—*Continued*

Colored silicone finishes. M. A. Glaser and E. Miller. il Product Eng 24:167-74 Mr '53
Designer's guide to vitreous coatings; ceramic coatings. R. L. Stedfeld. Machine Design 24:171-2 D '52
Enamel prolongs tube life. il Steel 132:148 Ap 20 '53
Fiberfrax refractory fiber. il Mech Eng 74:824-5 O '52
Gas turbine progress report; materials. A. A. Hafer. bibliog A S M E Trans 75:127-30 F '53
Heat radiation suppression; bonding of refractory coatings to metal components. Automobile Eng 43:323-4 Ag '53
Heating-tube failures. J. J. B. Rutherford. Oil & Gas J 51:97 Mr 2 '53
High temperature ceramic coatings in industrial applications. D. K. Krosch. il Materials & Methods 37:162+ Ja '53
High temperature metallurgy; jetomic age demands it. B. P. Planner. il Steel 131:98-100+ N 3 '52
High temperature phenolics; abstract. W. E. Braham. Automotive Ind 108:53-4 Ap 1 '53
Hi-temp coatings sparked by nickel shortage; Bulwark co. il Cer Ind 61:60-1+ S '53
Impact strength of newer cermets. Materials & Methods 38:188+ S '53
Incoloy, new alloy for use in high-temperature applications. Engineer 194:617 N 7 '52
Industrial porcelain enamel coatings. E. Mackasek. il Product Eng Hdbk p C 10-11 '53
Investigate ceramics for nuclear reactors. Tool Eng 31:78 Ag '53
Jets; new metals needed for better performance at higher temperatures. Iron Age 171:76 F 12 '53
Metals in the jetomic age. A. G. Gray. bibliog il Steel 131:148-53 O 13 '52
Moly based metal ceramic designed for high temperature use. il Iron Age 170:114 O 16 '52
More about ceramic coatings. bibliog il Product Eng 23:134-41 O '52
More uses for Fiberfrax. il Brick & Clay Rec 121:68 O '52; Cer Ind 59:69 O '52
New demands lead to new directions in engineering materials; materials with high strength at high temperatures. T. C. Du Mond. il Materials & Methods 37:69-72 Je '53
New materials for jet problems. Aviation W 58:158 Mr 2 '53
New materials forms required for high speed planes of the future. T. E. Piper. il diags Automotive Ind 107:42-5+ S 15 '52; Same. Aero Digest 65:64+ N '52
New methods pay off for high temperature ceramic coating. il plan Steel 132:88-90 Je 22 '53
Non-critical materials for high temperature works; abstract. Product Eng 24:278+ F '53
Problems of utilizing ceramics in aircraft power plant construction. R. A. Jones and L. T. Fuszara. il Am Cer Soc Bul 32:107-9 Ap 15 '53
Rocket nozzles; search for high heat resistant materials continues. Iron Age 170:148 N 20 '52
Strong, heat resistant alloys and metallic combinations. A. Michel. il Metal Prog 63:120-4 Ja '53
These are new high-temperature materials. P. Schwarzkopf. il Am Mach 97:147-50 Ap 13 '53

See also

Alloys, Heat resisting
Concrete, Refractory
Insulation (heat)
Refractory materials
Steel, Heat resisting
Teflon

HEAT resisting steel. See Steel, Heat resisting

HEAT storage

Off-peak heating. il Elec R (Lond) 153:404-6 Ag 21 '53
Off-peak space heating; General electric co. il Elec J 150:306 Ja 23 '53; Elec R (Lond) 152:318 F 6 '53; Engineering 175:183 F 6 '53; Metallurgia 47:265 My '53
Office heating. il Elec R (Lond) 152:397-9 F 20 '53

See also

Heat pump

HEAT transmission

Analysis of spanwise temperature distribution in three types of air-cooled turbine blade. J. N. B. Livingood and W. B. Brown. diags U S Nat Advisory Com for Aeronautics 1950:753-70 '51
Analysis of supersonic aerodynamic heating with continuous fluid injection. E. B. Klunker and H. R. Ivey. bibliog U S Nat Advisory Com for Aeronautics 1950:701-10 '51
Asymptotic solutions for the heat transfer at varying wall temperatures in a laminar boundary layer with Hartree's velocity profiles. H. Schuh. bibliog J Aeronautical Sci 20:146-7 F '53
Attempts to explain a discrepancy in observations of the heat transfer between a vertical surface and a fluidized bed of particles. M. Jakob. J Ap Phys 23:1056 S '52
Calculation of the stability of the laminar boundary layer in a compressible fluid on a flat plate with heat transfer. E. R. Van Driest. bibliog J Aeronautical Sci 19:801-12+ D '52
Convective heat-transfer and flow-friction behavior of small cylindrical tubes; circular and rectangular cross sections. W. M. Kays and A. L. London. bibliog A S M E Trans 74:1179-89 O '52
Design and operation of a large heat transfer installation. N. Brearley. diags Inst Mech Eng Proc (A) 166 no 3:350-8; Discussion. 359-60 '52
Design of snow melting systems. W. P. Chapman. bibliog diag Heat & Ven 49:95-102 Ap; 88-91 N '52
Determination of local forced-convection coefficients for spheres. J. R. Cary. bibliog diags A S M E Trans 75:483-7 My '53
Effects of internal roughness on pressure drop and heat transfer of integral finned tubes. V. R. S. Arni and J. E. Myers. bibliog il diag Refrig Eng 61:757-9+ Jl '53; Discussion. 61:874-5 Ag '53
Engines cooled by boiling heat transfer. O. B. Freeman. diags Pet Eng (Ref annual) 25:E22+ Jl 15 '53; Same cond. Oil & Gas J 51:172-4+ F 23 '53
Experimental investigation of convective heat transfer to air from a flat plate with a stepwise discontinuous surface temperature. S. Scesa and F. M. Sauer. bibliog il diag A S M E Trans 74:1251-5 O '52
Forced convection heat transfer from horizontal cylinders in a rarefied gas. F. M. Sauer and R. M. Drake, jr. bibliog J Aeronautical Sci 20:175-80+ Mr '53
Furnace heat absorption in a spreader-stoker-fired steam generator. J. W. Myers and others. bibliog diags A S M E Trans 75:909-40; Discussion. 940-2 Jl '53
Further experiments on the flow and heat transfer in a heated turbulent air jet. S. Corrsin and M. S. Uberoi. bibliog il diag U S Nat Advisory Com for Aeronautics 1950:859-75 '51
Generalized theory of convective heat transfer in a free-molecule flow. A. K. Oppenheim. bibliog diags J Aeronautical Sci 20:49-58 Ja '53
Heat exchanges in a ceiling panel heated room. L. F. Schutrum and others. il plans Heating-Piping 24:123-32 D '52; Abstract. Heat & Ven 50:164+ Ap '53
Heat exchanges in a floor panel heated room. L. F. Schutrum and others. il plan Heating-Piping 25:133-8 Jl '53; Abstract. Heat & Ven 50:83 Jl '53
Heat flow analysis in panel heating or cooling sections; floor slab on earth with uniformly spaced pipes or tubes at the slab-earth interface. H. B. Nottage and others. diags Heating-Piping 25:115-18 My '53
Heat supplied to I=B=R research home from the inside chimney. W. S. Harris and R. J. Martin. il plans diags Ill U Eng Exp Sta Bul 407:1-45 '53 (pa 50c); Excerpts. Heating-Piping 25:131-7 My '53
Heat-transfer and flow-friction characteristics of some compact heat-exchanger surfaces; design data for five surfaces. A. L. London and others. bibliog il diags A S M E Trans 74:1167-77; Discussion. 1177-8 O '52

HEAT transmission—*Continued*

Heat transfer and fouling of fluidized beds. H. L. Olin and O. C. Dean. diags Pet Eng 25:C23-4+ Mr '53

Heat transfer between fluidized beds and vertically inserted tubes. H. A. Vreedenberg. bibliog J Ap Chem 2(sup no 1):S26-33 '52

Heat transfer coefficients evaluated; climbing film evaporator tests described. J. M. Coulson and others. Chem Age (Lond) 68:421-4 Mr 21 '53

Heat transfer film coefficients for refrigerants boiling inside tubes. M. Baker and others. bibliog flow diag diag Refrig Eng 61:986-91; Discussion. 991 S '53

Heat transfer from luminous gas flames in vertical water-cooled tubes; abstract. M. E. Saleh and R. S. Tailby. Chem Age (Lond) 68:281-3 F 14 '53

Heat transfer from spheres to a rarefied gas in supersonic flow. R. M. Drake, jr. and G. H. Backer. bibliog il diags A S M E Trans 74:1241-9 O '52

Heat transfer in a nozzle at supersonic speeds. O. A. Saunders and P. H. Calder. bibliog diags Inst Mech Eng Proc (B) 1B no 6:232-7 '52; Same. Engineering 174:281-4 Ag 29 '52; Discussion. Inst Mech Eng Proc (B) 1B no 6:237-9 '52

Heat transfer in condensation; effect of heat capacity of condensate. L. A. Bromley. bibliog Ind & Eng Chem 44:2966-9 D '52

Heat transfer in condensation; effect of temperature variation around a horizontal condenser tube. L. A. Bromley, R. S. Brodkey and N. Fishman. diag Ind & Eng Chem 44:2962-6 D '52

Heat transfer in subminiature electronic equipment. D. T. Drake. il diag Tele-Tech 12:111-13+ Je '53

Heat transfer over a sweat-cooled surface in laminar compressible flow with a pressure gradient. M. Morduchow. bibliog J Aeronautical Sci 19:705-12 O '52; Correction. 20:294 Ap '53

Heat transfer to bodies traveling at high speed in the upper atmosphere. J. R. Stalder and D. Jukoff. bibliog diag U S Nat Advisory Com for Aeronautics 1949: 455-67 '51

Heat transfer to boiling liquids at low temperatures and elevated pressures. A. G. Monroe, H. A. S. Bristow and J. E. Newell. bibliog diags J Ap Chem 2:613-24 N '52

Heat transfer to low pressure sprays of water in a steam atmosphere. S. Weinberg. bibliog diags Inst Mech Eng Proc (B) 1B no 6:240-53, pl 1-2; Discussion. il 253-8 '52

Heat transfer to molten lead-bismuth eutectic in turbulent pipe flow. H. A. Johnson and others. bibliog diags A S M E Trans 75: 1191-8 Ag '53

How does your power plant paint absorb heat? L. G. Jones. diag Power Eng 57: 64-5 F '53

Influence of unheated starting sections on the heat transfer from a cylinder to gas streams parallel to the axis. W. Tessin and M. Jakob. bibliog il diags A S M E Trans 75:473-81 My '53

Ingot heat conservation; cooling of eight-ton ingots between teeming and stripping. L. H. W. Savage and R. T. Fowler. bibliog diags Iron & Steel Inst J 173:119-28 F '53

Investigation into the condensation of steam. H. Hampson and N. Özisik. bibliog il diags Inst Mech Eng Proc (B) 1B no 7:282-93; Discussion. 293-4 '52

Investigation of heat transfer from an inclined flat plate in free convection. B. R. Rich. bibliog il diags A S M E Trans 75: 489-99 My '53

Laboratory simulation of aerodynamic heating for transient temperature measurements. L. H. Wilson and J. B. Falk. diags Aeronautical Eng R 12:39-41 F '53

Local heat-transfer coefficients on the surface of an elliptical cylinder in a high-speed air stream. R. A. Seban and R. M. Drake. bibliog il A S M E Trans 75:235-9; Discussion. 239-40 F '53

Mineral oil used as a heat transfer medium. B. M. Dunham and H. S. Ostrander. diags Can Chem Process 37:66+ My '53

Nature of heat in the welding process. R. T. Howard. il diags Welding J 32:127-31 F '53

Significance of the thermal number in metal machining. B. T. Chao and K. J. Trigger. bibliog diags A S M E Trans 75:109-15; Discussion. 115-20 Ja '53

Special thermocouple for measuring transient temperatures. D. Bendersky. il diags Mech Eng 75:117-21 F '53

Steady-state heat flow problem for a quarter infinite solid. W. Karush. J Ap Phys 23: 492-4 Ap '52

Temperature distribution along a semi-infinite seat-cooled plate. N. Ness. diags J Aeronautical Sci 19:760-8 N '52

Thermal performance of frame walls. G. O. Handegord and N. B. Hutcheon. diags Heating-Piping 24:113-18; 25:117-22 Mr '52, Ag '53; Discussion. 25:122 Ag '53

Thermal resistivity of superconductors. D. P. Detwiler and H. A. Fairbank. Phys R 88:1049-52 D 1 '52

Transient and steady-state heat transfer in irradiated citrus fruit. H. F. Poppendiek. bibliog diag A S M E Trans 74:421-5 Ap '53

Variation in heat absorption in a natural-gas-fired, water-cooled steam-boiler furnace. A. R. Mumford and R. C. Corey. diags A S M E Trans 74:1191-214; Discussion. 1214-15 O '52

Variation of heat transfer with Mach number in wind tunnels having constant supply conditions. M. Sibulkin and G. R. Eber. J Aeronautical Sci 20:288-9 Ap '53

See also

Drying
Glass—Heat transmission
Heat conduction
Heat conductivity
Heat convection
Heat exchangers
Heat radiation
Insulation (heat)
Plastic materials, Transparent—Heat transmission
Textile fabrics—Heat transmission
Thermal analysis

Electric analogies

Electrical analogger application to the heat pump process. C. F. Kayan. bibliog diags Heating-Piping 25:123-7 Ag '53

Heat loss in slab floors. N. S. Billington. Heat & Ven 50:89-90 Je '53

Solution of transient heat-flow problems by analogous electrical networks. D. I. Lawson and J. H. McGuire. bibliog diags Engineer 196:217-19, 249-52 Ag 14-21 '53; Abstract. Elec R (Lond) 153:151-2 Jl 17 '53

Tables, calculations, etc.

Curves for figuring heat losses from insulated pipelines. Power Eng 57:116 O '53

Curves for figuring heat losses from uninsulated pipelines. Power Eng 57:90 S '53

Estimating the heat loss from slab floors and basements. M. Baker and others. Heating-Piping 24:95-7 N '52

Evaluation of radiant heat absorption rates in tubular heaters. L. A. Mekler and R. S. Fairall. bibliog diags Pet Refiner 31:101-7 Je; 128-32 N; 151-5 D '52

Exchange of heat and mass by cross flow; abstract. M. E. Posin. Refrig Eng 61:522 My '53

Heat loss through plexiglas. Heat & Ven 50:86-7 My '53

Heat transfer. B. E. Lauer. diags Oil & Gas J 51:159 Ag 18; 155 Ag 25; 119 S 1; 131 S 8; 139 S 15; 143 S 22; 317 S 29; 139 O 6; 143 O 27; 132 N 3; 161 N 10; 465 N 17; 143 N 24; 155 D 1; 133 D 8; 148 D 15; 104 D 29 '52; 82 Ja 5; 129 Ja 12; 133 Ja 19; 400 Ja 26; 103 F 2; 139 F 9; 178 F 16; 203 F 23; 100 Mr 2; 128 Mr 9; 153 Mr 16; 198 Mr 30; 149 Ap 13; 164 Ap 20; 296 Ap 27; 52:143 My 4; 143 Je 15; 335 Je 22; 109 Je 29 '53

Local coefficients of mass transfer by evaporation of water into an air jet. M. Spielman and M. Jakob. bibliog il A S M E Trans 75:385-92; Discussion. 392-4 Ap '53

Measurement of turbulent boundary-layer profiles and heat-transfer coefficient at $M=7$. P. P. Wegener and others. bibliog J Aeronautical Sci 20:221-2 Mr '53

More data on heat transfer to fluidized solids. W. E. Schmid and others. bibliog Chem Eng 59:172-3 O '52

Performance of finned tubes in shell-and-tube heat exchangers. R. B. Williams and D. L. Katz. bibliog flow diag il diags A S M E Trans 74:1307-20 N '52

HEAT treatment

Effect of slightly elevated-temperature treatment upon microscopic and submicroscopic residual stresses induced by small inelastic strains in metals. H. T. Corten and T. M. Elsesser. bibliog A S M E Trans 74:1297-302 N '52

Forum on technical progress; heat treating. il Steel 132:298-300+ Ja 5 '53

Heat treating; residual stresses in jet engine parts relaxed at Ryan. il Iron Age 170:86-7 D 25 '52

Heat treatment of dolomite. H. T. S. Britton and others. bibliog J Ap Chem 2:693-703 D '52

Heat treatment of high-strength titanium-base alloys; abstract. W. M. Parris and others. Metal Prog 64:167 O '53

Heat treatment of titanium-rich titanium-iron alloys; abstract. H. W. Worner. Metal Prog 64:128+ S '53

Infrared absorption characteristics of thermiated germanium. D. H. Rank and D. C. Cronemeyer. Phys R 90:202-3 Ap 15 '53

Many common metals successfully treated in steam atmospheres. F. L. Spangler. il Materials & Methods 37:85-6 Ja '53

Microconstituents in chromium-base chromium-iron-molybdenum alloys and their behavior with heat treatment. J. P. Hammond and others. bibliog il J Metals 4:Trans 1329-42 D '52

Properties and heat treatment of diffusion hardening permanent magnet alloys; tabulations; engineering file facts. K. Hoselitz. Materials & Methods 37:135 Ap '53

Properties of thermally treated germanium. L. Esaki. bibliog diags Phys R 89:1026-34 Mr 1 '53

Restoration of ductility in alloy titanium welds. A. J. Rosenberg and others. il Welding J 32:708-14 Ag '53

Stress relief of gray iron. C. O. Burgess. bibliog il Foundry 81:128-31+ S '53

Tool room heat treatment installation. il Metallurgia 46:252 N '52

What's ahead the next ten years in heat-treating. Am Mach 96:G-G3 Mid-N '52

See also

Aluminum alloys, Heat treatment of
Case hardening
Electric furnaces, Heat treating
Furnaces, Heat treating
Quenching
Steel, Heat treatment of

HEAT treatment shops

Heat treating shops, by states; tabulation. Iron Age 171:455 Ja 1 '53

How to maintain heat-treating equipment. T. A. Frischman. il diag Am Mach 96:135-46 O 13 '52

HEATERS

Buzz bomb makes good as heater. il Machine Design 25:244+ My '53

Calibrated draft regulators. E. A. Field. Heat & Ven 49:110 N '52

Direct-fired heaters; warehouse in Ft. Wayne. Heat & Ven 49:128+ N '52

Help for your industrial heating problems; unit heater applications. Dom Eng 182:90-1 S '53

Installation of elevated spot unit heaters. H. E. Smith. Heat & Ven 50:112-13 Mr '53

Oil-fired unit heater. il Engineer 194:667 N 14 '52

Portable heater can serve many uses on rig floor. il World Oil 136:140 Mr '53

Portable heaters play vital role in meeting winter production schedules. il Marine Eng 57:110+ N '52

S. D. Warren solves foggy problem with space heaters. il Paper Ind 35:312 Je '53

Spot heating with unit heaters; reference data. H. E. Smith. Heat & Ven 49:152a-152b N '52

13 is a lucky number for this industrial plant; unit heaters installed in Vahl engineering co. il plan diag Dom Eng 181:100-1+ Ja '53

What a new shipping crate has done for Koven; unit heater boilers. A. R. Hanson. il Sales Management 70:40 Mr 15 '53

See also

Electric heaters
Gas heaters
Internal combustion engines—Heaters
Steam heaters

Rating

Floor furnaces; four gas- and one oil-fired. il Consumers Res Bul 31:12-14 F '53

HEATERS, Orchard. See Orchard heaters

HEATERS, Pebble. See Pebble heaters

HEATING

Basementless buildings pose practical heating problems. S. R. Lewis. Heating-Piping 25:99 Ag '53

Checks and more checks are way to better heating maintenance. il Power 97:118-19 Ja '53

Count Rumford; heating engineer. W. Allphin. Heating-Piping 25:114-15 Jl '53

Experience is my classroom. T. W. Reynolds. Published in monthly numbers of Heating and ventilating

Fuels consumed for residential and commercial space heating, 1935-51. A. T. Coumbe and I. F. Avery. 2pls U S Bur Mines Information Circ 7657:1-10 '53

H-bomb in your basement; fuels, the stored energy of nuclear reactions in the sun. F. W. Hutchinson. Heat & Ven 50:84-5 My '53

Heating and cooling in hot climates. W. R. Woolrich. Refrig Eng 61:376-8+ Ap '53

Heating design temperatures. A. D. Hay. map Heating-Piping 25:104-5 My '53

Heating engineer's view of the coronation. il Heating-Piping 25:84-5 Je '53

Ill-advised changes harm heating plant operation. S. Lewis. Heating-Piping 24:106-7 D '52

Mechanical installations in buildings. P. T. Fletcher. plan Inst Mech Eng Proc (A) 166 no 3:361-6, pl 1-2 '52

Miscellaneous heating and cooling media; reference data. D. G. Lewis. Heat & Ven 50:162a-162b Mr '53

Room thermostats and their applications. W. G. Holzbock. il diags Heat & Ven 50:95-105 My '53

Trends in heating and air conditioning. S. Konzo. diags Arch Rec 113:167-8 Ja '53

See also

Air conditioning
Boilers, Heating
Building—Heating aspects
Electric heating
Fuel
Furnaces, Warm air
Gas heating
Heat pump
Heaters
Heating, Warm air
Heating from central stations
Hot water heating
Insulation (heat)
Oil burners
Oil fuel
Steam heating
Ventilation

also subdivision Heating and ventilation under special subjects, e.g.

Airplane factories
Airplanes
Churches
Factories
Garages
Greenhouses
Hospitals
Lumber camps
Machine shops
Prisons
School buildings

Baseboard heating

Baseboard heating; design and installation techniques; movie. il diags Dom Eng 182:102-3 S '53

Baseboard radiation. il plan diags Consumers Res Bul 31:5-9 Ja '53

Doctors cooperate; erect a building for their offices, waiting rooms, etc. R. A. Hazell. il Heating-Piping 24:88-9 N '52

Heating glass-walled building for the University of Cincinnati's College of applied arts. F. L. Bonem. il Heating-Piping 25:144-6 Ja '53

It was easy, we pushed! baseboard business. il Dom Eng 182:102-3+ Ag '53

Out of the frying pan into the fire! heating predicament and how it was solved; Levine bros. il Dom Eng 181:96-7+ My '53

Warm air baseboard blends with modern decorating. il Sheet Metal Worker 44:70 Ag '53

Bibliography

Abstracts and reviews; books and pamphlets. Published in monthly numbers of Heating and ventilating

Control

Automatic controls; abstract. F. M. H. Taylor. Elec J 150:46 Ja 2 '53

Show it to sell it; zoned-controlled heat. J. Desmond. il Dom Eng 182:92-3+ S '53

What your customers should know about automatic controls. R. L. Farmer. il Dom Eng 182:120+ S '53

HEATING—*Continued*

Panel system

Comparative performances of a warm-air ceiling panel system and a convection system. R. W. Roose and others. bibliog il plans Ill U Eng Exp Sta Bul 401:1-90 '52 (pa 80c); Summary. Heat & Ven 49:79 D '52

Heat exchanges in a ceiling panel heated room. L. F. Schutrum and others. il plans Heating-Piping 24:123-32 D '52; Abstract. Heat & Ven 50:164+ Ap '53

Heat exchanges in a floor panel heated room. L. F. Schutrum and others. il plan Heating-Piping 25:133-8 Jl '53; Abstract. Heat & Ven 50:83 Jl '53

Heat flow analysis in panel heating or cooling sections; floor slab on earth with uniformly spaced pipes or tubes at the slab-earth interface. H. B. Nottage and others. diags Heating-Piping 25:115-18 My '53

Radiant heating in elementary school; illustrations with text. Heat & Ven 49:126+ D '52

See also

Electric heating—Panel system

Hot water heating—Panel system

Study and teaching

I-B-R school of modern heating. Heat & Ven 50:132+ Ag '53

Tables, calculations, etc.

Basic power plant figuring; degree-day method helps you estimate next season's fuel consumption for your building heating system. W. H. Engelman. Power Eng 57:74-5 Jl '53

Degree day system, how it works. R. E. Bjorkback. Nat Pet N 45:48+ Ap 22 '53

Heat loss in slab floors. N. S. Billington. Heat & Ven 50:89-90 Je '53

Mechanical installations in buildings; approximate calculation for heat requirement of a room with low-temperature radiant panels. P. T. Fletcher. Inst Mech Eng Proc (A) 166 no4:466 '52

Ultra-safe heat loss calculations increase costs and halt building. R. L. Stinard. plan Heat & Ven 49:83-4 D '52

HEATING, Industrial

Aluminum heating block. Can Chem Process 37:71 Jl '53

Design and operation of a large heat transfer installation. N. Brearley. diags Inst Mech Eng Proc (A) 166 no 3:350-8; Discussion. 359-60 '52

Direct-fired heaters in natural-gasoline plants. H. J. Born and G. E. Rose. diags Oil & Gas J 51:101-4 Mr 9 '53

Engineering factors in heater-treater selection. Oil & Gas J 51:170 F 23 '53

Heat; how it is applied, contained and controlled in all of the ceramic industries. il Cer Ind 61:53-7 S; 51-5+ O '53; Same. Brick & Clay Rec 123:41-5 S; 51-3+ O '53

Mineral oil used as a heat transfer medium. B. M. Dunham and H. S. Ostrander. diags Can Chem Process 37:66+ My '53

Modernization ups production 200 per cent; Abingdon potteries. F. S. Lappin. il Mill & Factory 51:118-19 D '52

New vistas opened for metals; warm working at temperatures of 300 to 650°F affords control of texture. N. P. Goss. Steel 132:84 Ja 26 '53

Portable heater safely liquefies insulating compounds. W. C. Miller and E. M. Donhauser. il diags Elec World 139:94 Ja 12 '53

Prevent spillgate freezing in New England winter; Cabot station of Western Massachusetts electric co. J. L. Hyland and A. L. Davis. il diag Elec World 138:127-8 O 6 '52

Production clinic; processing heating equipment. E. G. Thomssen. Soap & San Chem 28:87 N '52

Some design considerations for injection molding heating chambers. G. D. Gilmore and G. B. Thayer. diags India Rubber World 128:207-10 My '53

Variable-temperature heating system avoids use of moving parts. J. I. Lacey. diag Chem Eng 60:202-3 Ja '53

See also

Drying
Drying apparatus
Electric heating, Industrial
Foundry practice
Furnaces, Heating
Gas as fuel
Gas heating, Industrial
Heat treatment
Hot water heating, Industrial
Infrared rays—Industrial heating
Metallurgy
Oil fuel
Oil heating
Open hearth process
Oxyacetylene flame
Paint—Drying
Paper drying
Pebble heaters
Steam heating, Industrial
Steel, Heat treatment of
Welding

Cost

Cost of heat loss, insulated vessels; graph; data sheet. Power 97:125 O '53

HEATING, Warm air

Cinder blocks as heat conductors. diags Am Bld 74:205 N '52

Clay pipe for warm air ducts. Brick & Clay Rec 123:83 S '53

Combination heating system; warm air, hot water. A. Stout. il plan Sheet Metal Worker 44:118-19+ Ja '53

Community building heated with perimeter systems. il plan Sheet Metal Worker 45:45-6+ O '53

Comparative performances of a warm-air ceiling panel system and a convection system. R. W. Roose and others. bibliog il plans Ill U Eng Exp Sta Bul 401:1-90 '52 (pa 80c); Summary. Heat & Ven 49:79 D '52

Comparative performances of two warm-air perimeter systems and three convection systems. M. E. Childs and others. bibliog il plans diags Ill U Eng Exp Sta Bul 403:1-53 '52 (pa 60c)

Contractor sells two out of three heating prospects; Aire-Flo furnace co. plan Sheet Metal Worker 44:50-1 S '53

Counter-acting cold air at large doorways. N. Feder. diags Heating-Piping 25:112-13 My '53

Decentralized system clips 67 per cent off heat bill. il Factory Management 111:105 Je '53

Factory offices; warm air heated. A. Holton. il Sheet Metal Worker 44:64-5 N '52

Foundry solves problem of heating and ventilating; Saginaw bearing co. B. Czymbor. il Heating-Piping 24:96-7 D '52

Heat emission characteristics of warm-air perimeter heating ducts. J. R. Jamieson and others. bibliog il diags Ill U Eng Exp Sta Bul 412:1-84 '53 (pa 80c)

Heating and cooling a residence with a three-hp air source heat pump. W. F. Stoecker and R. R. Herrick. il plan Refrig Eng 60:1172-6 N '52; Discussion. 61:102-3 Ja '53

Heating customers not only buy, they sell; Comfort heating co. M. L. Hayes. il Sheet Metal Worker 44:68-9+ Ag '53

Heating store and building entrances. L. R. Fuller. il diags Heat & Ven 50:75-9 S '53

How to develop gravity conversion sales. P. M. Clepper. il Sheet Metal Worker 44:68-9+ Jl '53

Maximum downward travel of heated jets from standard long radius ASME nozzles. L. Helander and others. il diags Heating-Piping 25:123-32 Mr '53

Orchids thrive on warm air heat. il Heat & Ven 49:136 N '52

Performance of warm-air perimeter-loop and perimeter-radial systems in a residence. H. T. Gilkey and others. bibliog il plans diags Heating-Piping 25:113-22; Discussion. 122-3 O '53

Perimeter systems discussed at ASHVE meeting. Sheet Metal Worker 44:76 Jl '53

Plant heating; multi-furnace installation solves unusual problem. il Iron Age 171:190-1 Mr 5 '53

Pressure loss characteristics of small diameter round duct systems. G. R. Whitnah and J. V. Borry. diags Heating-Piping 24:111-16 N '52

Proper ventilation improves foundry working conditions; Saginaw bearing co. il Foundry 80:218+ N '52

HEATING, Warm air—*Continued*

Resin-glass air blenders. il Mod Plastics 30:90 F '53

Warm air baseboard blends with modern decorating. il Sheet Metal Worker 44:70 Ag '53

Warm air curtain shields door opening; Tool steel gear and pinion co. il Heat & Ven 50:85 My '53

Warm air perimeter system heats basementless church. il plan Heating-Piping 25:83 O '53

Way to increase your warm air heating sales. R. W. Lear. Sheet Metal Worker 44:49-50+ F '53

See also

Furnaces, Warm air

Tables, calculations, etc.

How to figure air for plant heating. L. J. Murphy. Mill & Factory 53:78 S '53

HEATING contracts

According to law; review of legal decisions which will help plumbing and heating contractors to avoid law suits (cont). Dom Eng 182:189+ Jl; 141+ Ag; 95+ S; 114+ O '53

How higher courts have ruled. L. T. Parker. Heat & Ven 50:92-4 Ag '53

Law and your profits (cont). W. H. Hillyer. Heating-Piping 24:107-8 N; 110 D '52; 25:171 Ja; 107 F; 122 Mr; 113-14 Ap; 107+ My; 105+ Je; 107 Jl; 103 Ag; 110-11 S; 100 O '53

Legal riddles and their answers. L. T. Parker. Heat & Ven 50:107-10 O '53

HEATING equipment

Answers to 13 questions sought in ICHAM's management workshop. Cer Ind 60:160-2 Ja '53

Cast iron radiation shipments, 1949-1952; tabulation. Iron Age 171:452 Ja 1 '53

Depreciation rates for air conditioning and heating; data sheet. Heating-Piping 25:106 F '53

Draft controls. diags Dom Eng 182:101+ Jl '53

Heat in ripples; pulse-jet heating devices called Swingfire. il Bsns W p 130+ Ap 11 '53

Heating, piping, and air conditioning equipment for industry and large buildings; trade names. Heating-Piping 25:sup 100d-16d Ja '53

It's a different house; different heating. Bsns W p 146+ F 21 '53

New England oil-heat show, Boston, June 2-5; illustrations with text. Dom Eng 182:86-9 Jl; 114+ Ag '53

Trouble-shooting on heating systems. il diag Mill & Factory 52:132-5 Ja '53

What's new that's unusual in heating, ventilating and air conditioning fields. T. W. Reynolds. il diags Heat & Ven 49:83-7 N; 100-4 D '52; 50:96-8 Ja; 111-12 F '53

See also

Boilers, Heating

Furnaces, Warm air

Heat pump

Heaters

Cleaning

Practical ways to get extended surface coils completely clean. il Power 96:134-5 D '52

HEATING from central stations

Big new shopping center; central plant supplies steam for heating, chilled water for air conditioning. J. B. Olivieri. diags Heating-Piping 25:102-6 S '53

Building load, cutting costs; reports at NDHA's annual meeting. Heating-Piping 25:94-7 S '53

Central or separate heating for industrial buildings? S. R. Lewis. Heating-Piping 25:108 F '53

Combined electricity and heat supplies; with cost data. H. S. Prosser and A. W. Pedder. Engineer 195:901-3; 196:25-7 Je 26-Jl 3 '53; Abstracts. Engineering 175:790-1 Je 19 '53; Elec J 150:2108-10 Je 12 '53; Elec R (Lond) 152:1348-9 Je 12 '53; Discussion. Elec J 150:2114 Je 12 '53

Heating plants modernized. E. J. Watts. il diag Heating-Piping 25:80-1 S '53

Joint heat-electricity generation. G. K. Alston. il Elec R (Lond) 153:117-24 Jl 17 '53

Reducing customers' steam demand. C. B. Sprenger. Heat & Ven 50:107 Ag '53

See also

National district heating association

HEATING furnaces. See Furnaces, Heating

HEATING industry

American institute of plumbing and heating supply associations, inc. annual meeting, 1st, Atlantic City, Oct. 19-22. Dom Eng 180:122+ D '52

Central supply association spring meeting, Chicago. Dom Eng 181:97 Je '53

Earnings in selected industries, late 1951 and early 1952; heating apparatus industry. A. N. Jarrell. Mo Labor R 75:417-18 O '52

Extra services beat competition to gas heat market; Zien plumbing & heating co. H. Zien. Sheet Metal Worker 44:57-8+ My '53

He chanced a move, upper gross 50 per cent; James W. Hardy. il Dom Eng 182:125+ S '53

He sells 'em, Texas style; W. H. Kuhn & sons. il Dom Eng 182:84-5+ O '53

Heating business volume. maps Sheet Metal Worker 44:66-7 N '52

Heating customers not only buy, they sell; Comfort heating co. M. L. Hayes. il Sheet Metal Worker 44:68-9+ Ag '53

Heating manpower volume. map Sheet Metal Worker 44:46+ D '52

Here are the facts about what your prospect really wants in his heating system. il Sheet Metal Worker 44:120-1 Ja '53

How to sell more heating in 1953. il Dom Eng 181:96-8 Ja; 108-9 F; 116 Mr '53

Integrated departments end seasonal slumps; Thompson heating corp. V. Schneider. Sheet Metal Worker 45:66+ O '53

Is price cutting on the way out? Dom Eng 182:98-9 O '53

Look ahead into 1953; opinions of executives of various industries. Sheet Metal Worker 44:76-83+ Ja '53

Operation tornado! il Dom Eng 182:120-1+ O '53

Plumbing and heating wholesalers of New England 62d annual meeting, Bretton Woods, N. H. June 14-16. Dom Eng 182:105+ Ag '53

Profit sharing in heating work; Greer Automatic Heating. Sheet Metal Worker 44:54 D '52

Prominent location cuts advertising costs; William A. Fluhr co. A. Stout. il Sheet Metal Worker 44:41+ F '53

Saga of an industrial heating champion; Midtown Plumbers. Dom Eng 181:88-9+ My '53

Sale I never forgot. R. C. Cook. Dom Eng 181:12+ F '53

Sheet metal and warm air heating contractors' association of Indiana 35th annual meeting, Indianapolis, Feb. 5-6. Sheet Metal Worker 44:94-5 Mr '53

Show it to sell it; zoned-controlled heat. J. Desmond. il Dom Eng 182:92-3+ S '53

They sell up to bid low; Neis co. il Dom Eng 182:102-5+ O '53

Timken arms dealers with a manpower kit; manuals on locating, selecting, paying, supervising sales recruits. A. F. Mahan, jr. Sales Management 69:97-8 O 1 '52

Way to increase your warm air heating sales. R. W. Lear. Sheet Metal Worker 44:49-50+ F '53

What's ahead for 1953. il Dom Eng 181:83-92 Ja '53

Your stake in air conditioning. il Dom Eng 181:86+ Je '53

Advertising

Case for multiple listings; they shop by phone! Dom Eng 182:110+ O '53

Valuable sales helps in OHI treasury of advertising. il Sheet Metal Worker 44:17-18 My '53

Directories

Modernization sales aids; directory. il Dom Eng 180:241-8+ N; 118-20+ D '52

HEATING industry—Directories—*Continued*

1953 directory; heating, piping and air conditioning equipment for industrial, commercial, institutional and public buildings; classified by products, trade names, and manufacturers' addresses. Heating-Piping 25:sup 1d-134d Ja '53

Product-tradename directory; manufacturers of products and equipment used in warm air heating, air conditioning, ventilating, sheet metal work. Sheet Metal Worker 44: 183-211 Ja '53

Exhibitions

International heating and ventilating exposition, 11th, Chicago, Jan. 26-30; exhibitors and their exhibits. Sheet Metal Worker 44: 105-12 Ja '53; plans Heating-Piping 25:153-70 Ja '53; Dom Eng 181:78-84 F; 106-8+ Mr; 183+ Ap '53

Finance

Financing; key to modernization sales. il Dom Eng 180:177-88+ N; 102+ D '52

How are you fixed for working capital? Dom Eng 182:100-1+ S '53

Records

Stepped up record processing speeds warehouse distribution; Siskin steel & supply co., inc. G. Siskin and A. M. Siskin. il Sheet Metal Worker 44:54-6 F '53

Remodeling

Bay City story; survey of the plumbing, heating and appliance needs. il Dom Eng 180: 91-121+ N; 80-7+ D '52

Exit summer slump in heating sales! Philadelphia gas heating co. il Dom Eng 181: 104-7+ Je '53

Find heating modernization prospects with combustion testing. il Dom Eng 182:94-6+ Jl '53

How many of these houses are there in your town? C. L. Allen. Dom Eng 180:88-90 D '52

How to develop gravity conversion sales. P. M. Clepper. il Sheet Metal Worker 44:68-9+ Jl '53

It was easy, we pushed! baseboard business. il Dom Eng 182:102-3+ Ag '53

Knock on any door; success story; 30 furnaces sold in 45 days! il Dom Eng 182:82-5+ Ag '53

Let's look into your town; remodeling needs. P. B. B. Andrews. Dom Eng 180:122-4+ N '52

Modernizing gravity flow wet heat systems. diags Dom Eng 180:94-5+ D '52

Movies are better than ever! film based on Domestic engineering's remodeling survey in Bay City, Mich. il Dom Eng 181:82-6 My '53

One in five is a magic number for heating contractors. R. C. Overmyer. il Dom Eng 181:81+ Mr '53

Project; manufacturer goes all-out to help dealers sell remodeling; Minneapolis-Honeywell regulator. il Dom Eng 182:79+ Ag '53

Remodeling in the Southeast. R. H. Emerick. diag Dom Eng 180:100-1+ D '52

Sales tip; try a remodeling sales party. il Dom Eng 181:90-2 Je '53

They deal in ones to make a million! T. D. Gustafson & co. R. Gustafson. il Dom Eng 182:92-5+ Ag; 99+ S '53

Watch the kid population in your town; new and remodeled schools in your future; Lewis plumbing and heating co. il Dom Eng 181:82-5 Je '53

HEATING pipes

Clay pipe for warm air ducts. Brick & Clay Rec 123:83 S '53

Experimental approaches to the study of noise and noise transmission in piping systems. W. L. Rogers. bibliog il diags Heating-Piping 25:139-45 Jl '53; Abstract. Dom Eng 182:202+ Ag '53; Discussion. Heating-Piping 25:130-1 Ag '53

Piping problems simplified with high-temperature hot water distribution. F. L. Moesel. plan diags Arch Rec 113:192-4 F '53

HEATING, piping and air conditioning contractors national association

Annual meeting, Chicago. Dom Eng 181:103+ Je '53

Annual meeting, 64th, Chicago; with abstracts of papers. Heating-Piping 25:92-4 Jl; 89-91 Ag '53

HEATING research

ASHVE plans research program for 1953. I. W. Cotton. Heating-Piping 24:137 D '52

Building conservation report stresses ASHVE research need; Building research advisory board for the Defense production administration. Heating-Piping 24:123 N '52

Comparative performances of a warm-air ceiling panel system and a convection system. R. W. Roose and others. bibliog il plans Ill U Eng Exp Sta Bul 401:1-90 '52 (pa 80c)

Design and performance of a residential earth heat pump. M. Baker. bibliog il diag Heating-Piping 25:119-29 S '53

Earth heat pump research at the University of Kentucky from October 31, 1950 to May 1, 1951; Preliminary report on the performance of the University of Kentucky heat pump no. 1. E. B. Penrod and others. 2pls diags Ky Acad of Science [Lexington] Trans v14 no 2:59-77 '53

Field studies of floor panel control systems. A. B. Algren and others. diags Heating-Piping 25:120-31 F '53

Fuel consumption analysis for multi-family housing projects. R. Skagerberg and J. E. Phifer. Heating-Piping 24:117-22 N '52; Abstract. Heat & Ven 50:164 Ap '53

Further studies of the thermal characteristics of plaster panels. L. F. Schutrum and C. M. Humphreys. il diag Heating-Piping 25:122-5 Je '53

Heat emission characteristics of warm-air perimeter heating ducts. J. R. Jamieson and others. bibliog il diags Ill U Eng Exp Sta Bul 412:1-84 '53 (pa 80c)

Heat exchanges in a ceiling panel heated room. L. F. Schutrum and others. il plans Heating-Piping 24:123-32 D '52; Abstract. Heat & Ven 50:164+ Ap '53

Heat exchanges in a floor panel heated room. L. F. Schutrum and others. il plan Heating-Piping 25:133-8 Jl '53

Heat supplied to I=B=R research home from the inside chimney. W. S. Harris and R. J. Martin. il plans diags Ill U Eng Exp Sta Bul 407:1-45 '53 (pa 50c); Excerpts. Heating-Piping 25:131-7 My '53

Heating Arctic buildings; design data for heating systems. G. R. Whitnah and M. H. LaJoy. map Heating-Piping 25:96-9 O '53

Heating Arctic buildings; use of reflective interior finishes. M. H. LaJoy and G. R. Whitnah. plan diag Heating-Piping 25:90-3 S '53

How warm a ceiling? F. A. Chrenko. Review, by C. Tasker. diag Heating-Piping 25:109-12+ Ap '53

Maximum downward travel of heated jets from standard long radius ASME nozzles. L. Helander and others. il diags Heating-Piping 25:123-32 Mr '53

Moisture movement in soils due to temperature difference. W. A. Hadley and R. Eisenstadt. il Heating-Piping 25:111-14 Je '53

New design data for heating and cooling; compiled from practical research by the American society of heating and ventilating engineers and other groups, and presented at annual meeting, Chicago. Dom Eng 181: 102+ Ap; 94-5+ My '53

1952 annual report, A.S.H.V.E. committee on research. map plan diag Heating-Piping 25:148-56 Mr '53

Performance of warm-air perimeter-loop and perimeter-radial systems in a residence. H. T. Gilkey and others. bibliog il plans diags Heating-Piping 25:113-22; Discussion. 122-3 O '53

Pressure loss characteristics of small diameter round duct systems. G. R. Whitnah and J. V. Borry. diags Heating-Piping 24: 111-16 N '52

Radiant glass heating panels. P. R. Achenbach. il plan diag Heat & Ven 50:88-91 Ja '53; Same cond. Glass Ind 34:267+ My '53

HEATING research—*Continued*

Satisfactory method for heating basementless houses; abstract. H. T. Gilkey and others. Heat & Ven 50:119 Jl '53

Some scientific thoughts on space heating; abstract. R. J. Sarjant. Engineering 176: 61-2 Jl 10 '53

Thermal performance of frame walls. G. O. Handegord and N. B. Hutcheon. diags Heating-Piping 24:113-18 Mr '52; 25:117-22; Discussion. 122 Ag '53

HEAVY ice. See Water—Heavy water

HEAVY media separation. See Sink and float process

HEAVY water. See Water—Heavy water

HECHT company

Stock offering oversubscribed. Comm & Fin Chr 176:1564-5 O 27 '52

HECKER, Guy C. 1888-1952

Sketch. por Bus Transportation 31:70 N '52

HECOGENIN

Conversion of hecogenin to $\Delta^{7,9(11)}$-22-isoallospirostadiene-3β-ol. R. Hirschmann, C. S. Snoddy, jr. and N. L. Wendler. bibliog Am Chem Soc J 75:3252-5 Jl 5 '53

Steroidal sapogenins; experiments in the hecogenin series; degradation of 22a-5α-spirostane-3β,12β-diol-11-one. H. Martinez and others. bibliog Am Chem Soc J 75: 239-40 Ja 5 '53

Transformation of manogenin to hecogenin. N. L. Wendler, H. L. Slates and M. Tishler. bibliog Am Chem Soc J 74:4894-7 O 5 '52

HEDGES, James Dayton

Miracle man from Matanzas. R. E. Ellsworth. por Mod Textiles Mag 34:34+ F '53

HEELS, Rubber

Soles and heels. India Rubber World 128:202 My '53

HEINRICH, H. William

Safety citation to Heinrich. Safety Maint & Prod 104:42 D '52

HEINZ, H. J., company

Heinz steps out in sweeping label redesign. il Mod Packaging 26:106-8+ S '52

HELIANTHRONE

Absorption spectra of $\Delta^{10,10'}$-bianthrone, helianthrone and mesonaphthobianthrone in concentrated sulfuric acid. R. A. Hebert, M. B. Goren and A. A. Vernon. bibliog Am Chem Soc J 74:5779-80 N 20 '52

HELIARC welding. See Electric welding, Arc —Heliarc process

HELICAL gearing. See Gearing, Spiral

HELICOPTERS

Across New York by helicopter; starting new kind of passenger service. il map Bsns W p32-3 Jl 18 '53

Baltimore plans harbor-side heliport. il Eng N 150:51 Ja 22 '53

Bell demonstrates new model 47G. Aviation W 58:18 Ap 27 '53

Big future forecast for intercity copters. diags Aviation W 57:91-2 O 13 '52

Brush spraying cost halved by helicopter. L. M. Donahue. il Elec World 139:126 F 23 '53

Can the airlines use the helicopter? F. N. Piasecki and L. S. Wigdortchik. il diags S A E J 61:51-7 Mr '53

Copter makers head for big year. A. McSurely. il map Aviation W 58:175+ Mr 2 '53

'Copter makers; military cutbacks lower visibility. J. C. Perham. Barron's 33:3 Je 22 '53

'Copters bid for short-hop travel. map Bsns W p 103-4+ My 9 '53

Copters haul cargo between airports. Aviation W 58:79 Ja 26 '53

Design considerations for helicopter gas turbine powerplant; abstract. J. L. Koetting and L. R. Wosika. Automotive Ind 108:48-9 F 15 '53

Doman producing new helicopter. il Aviation W 58:16 My 11 '53

First cutaways of Doman rotor system. diags Aviation W 58:25-6 Mr 9 '53

Flying qualities of tandem-rotor helicopters. J. P. Reeder and F. B. Gustafson. il Aero Digest 66:102+ My '53

Geologists take to helicopters. Comp Air Mag 58:84 Mr '53

Giant helicopters show ingenious design. il Machine Design 25:227-8 Ja '53

Helicopter mail rings bell in Chicago. G. L. Christian. il map Aviation W 58:56+ Ja 5 '53

Helicopter; mechanical flying machine; abstract. M. A. Wachs. S A E J 61:122+ Ja '53

Helicopter power requirements necessitate tight limits on engine power controls. R. Bradham and J. S. Kerr. diag S A E J 61:81-2 Jl '53

Helicopters for exploration? M. A. Matzkin. il Min Eng 5:876-8 S '53

Helicopters; illustrations and drawings with brief descriptions. Aero Digest 66:66+ Mr '53

Introduction to convertible aircraft. N. C. New. il Aero Digest 65:48+ N '52

Introduction to the helicopter. J. D. Sibley. diags Roy Aeronautical Soc J 57:228-34 Ap '53

Introduction to the physical aspects of helicopter stability. A. Gessow and K. B. Amer. diags U S Nat Advisory Com for Aeronautics 1950:739-52 '51

Jet tips make helicopters safer. Aviation W 58:43 Ap 27 '53

Lack of heliports stymies N.Y. airways. Aviation W 58:93 Ap 27 '53

Leading foreign helicopters; tabulation. Aviation W 58:244 Mr 2 '53

New foreign helicopters show lines; illustrations with text. Aviation W 58:9 F 23 '53

New seven-passenger helicopter solves interplant transportation problem. W. F. Rockwell, jr. il Mill & Factory 53:139-40 S '53

New York copter service starts this week; first scheduled helicopter air mail and parcel post service. Aviation W 57:18 O 13 '52

Plastic helicopter research; abstract. K. T. Marshall. diags Automotive Ind 108:52-3 Ap 1 '53

PNYA predicts mass copter-commuting. Aviation W 57:87-8 D 8 '52

Power-off flare-up tests of a model helicopter rotor in vertical autorotation; abstract. S. E. Slaymaker and R. B. Gray. Aviation W 58:33-4 Mr 16 '53

Raydist helps helicopter to land on a dime. il Tele-Tech 12:140-1 Ap '53

Reciprocating engine in the helicopter; abstract. J. J. Sheilds and J. T. Bowling. Automotive Ind 108:46-7 F 15 '53

S-55 proving run a success, LAA says. W. J. Coughlin. il Aviation W 57:49-51+ O 20 '52

Sikorsky S-55. il diags Aero Digest 66:26-32+ F '53

Some thoughts on the operational future of the helicopter; abstract. P. Masefield. Engineering 174:719 D 5 '52

Turbines seek to dethrone piston engines from 'copter realm; based on papers by W. B. Anderson and others. diag S A E J 61:28-31 Je '53

Two-shaft gas turbine in helicopters; abstract. W. B. Anderson. Automotive Ind 108:92 F 15 '53

U.S. tests EKCO on copters. il Aviation W 58:18 Mr 23 '53

Westland S.55 helicopter. il Engineering 175: 125 Ja 23 '53

See also

American helicopter society

Blades

Effect of flapping hinge offset on rotor blade stall. J. P. Chawla. diag J Aeronautical Sci 19:498-9 Jl '52; Discussion. J. R. Meyer, jr. and G. Falabella, jr. 20:136-7 F '53; Reply. 20:365 My '53

Rotors rocked into shape; rotor blades for the new Piasecki XH-16 helicopter. Steel 131:253 O 13 '52

Design

Helicopter rotor hub features unique construction. diags Automotive Ind 109:59+ O 1 '53

Jet propulsion

Can pulsejets simplify army logistics? W. J. Coughlin. il Aviation W 57:21-3+ O 13 '52

Maintenance and repair

Trainers ease HUP copter servicing. D. A. Anderton. il Aviation W 58:30-2+ Je 1 '53

HELICOPTERS—*Continued*

Manufacture

Heat treating gears to meet rigid requirements. R. Spagnola. il Materials & Methods 38:102-3 Ag '53

Instrument makers turn talents to helicopter transmissions. E. Altholz. il Mach 59: 167-72 Mr '53

Military use

Anti-sub copter. Aviation W 57:16-17 D 15 '52

Army aim; more reliable copters. A. McSurely. il Aviation W 58:20 My 25 '53

Army awaits Korea copter report. il Aviation W 58:60+ Mr 2 '53

Army planning new helicopter designs. Aviation W 58:21 Ap 20 '53

Can pulsejets simplify army logistics? W. J. Coughlin. il Aviation W 57:21-3+ O 13 '52

First hand account of Korean helicopter needs; abstract. H. S. Pack. S A E J 61: 113-14 Ap '53

Kaman HOK-1. M. L. Everhart. il diags Aero Digest 66:20 Je '53

Kaman HOK-1; first production copter is delivered to navy. il Aviation W 58:15 My 11 '53

Kaman HTK-1 copters roll out for navy. il Aviation W 57:20-2 D 8 '52

Korean island captured by carrier-copter team; illustrations with text. Aviation W 58:20-1 My 11 '53

MATS tests copter-ambulance shuttle. L. Moore. il Aviation W 57:71-2 D 1 '52

Weight limits upped for army aircraft. Aviation W 57:17 D 8 '52

Specifications

1953 U.S. rotary wing aircraft; tabulation. Automotive Ind 108:248 Mr 15 '53

Operators set up copter specs. Aviation W 58:95 My 25 '53

U.S. civil and military helicopters; tabulation. Aviation W 58:228-9 Mr 2 '53

Testing

Simulation of operating conditions of helicopters in flight tests; abstract. R. Hafner. Engineering 175:43-4 Ja 9 '53

Transmission

Helicopter drive design. R. M. Carlson. il diags Machine Design 25:126-32 Ag '53

Instrument makers turn talents to helicopter transmissions. E. Altholz. il Mach 59:167-72 Mr '53

Tandem helicopter has unique transmission. il Machine Design 25:180-2 Ap '53

HELIOPLANE. See Airplanes, Light—Design

HELIUM

Adsorption at water-helium, -methane and -nitrogen interfaces at pressures to 15,000 p.s.i.a. E. W. Hough, B. B. Wood, jr. and M. J. Rzasa. bibliog il J Phys Chem 56: 996-9 N '52

Broadening and shift of the second doublet of the rubidium absorption series under different pressures of argon and helium. S. Ch'en and D. A. Kohler. bibliog Phys R 90:1019-21 Je 15 '53

Carbon thermometer-heaters for use at low temperatures; effects of particle size and adsorption of hydrogen or helium. T. H. Geballe and others. bibliog R Sci Instr 23:489-92 S '52

Characteristics of the high current tungsten arc in argon, helium, and their mixtures. M. Skolnik and T. B. Jones. bibliog il diags J Ap Phys 23:643-52 Je '52; Same. Welding J 32:sup55-64 Ja '53

Charge states of a helium beam in hydrogen, helium, air, and argon. E. Snitzer. bibliog diags Phys R 89:1237-44 Mr 15 '53

Comparison of shielding mixtures for gas-shielded arc welding. J. W. Cunningham and H. C. Cook. il diags Welding J 32:834-41 S '53

Correlation energy in the ground state of He I. L. C. Green and others. bibliog Phys R 91:35-9 Jl 1 '53

Differential cross section for the scattering of 9.48-Mev protons by helium. T. M. Putnam. bibliog diags Phys R 87:932-40 S 15 '52

Diffusion cloud-chamber study of pion interactions in hydrogen and helium. E. C. Fowler and others. bibliog il diags Phys R 91:135-49 Jl 1 '53

Electric arc in argon and helium; abstract. T. B. Jones and others. Elec Eng 72:429 My '53

Electron ejection from Mo by He^+, He^{++}, and He_2^+. H. D. Hagstrum. bibliog diags Phys R 89:244-55 Ja 1 '53

Excitation cross section for helium atoms. S. Altshuler. Phys R 87:992-4; 89:1093-5 S 15 '52, Mr 1 '53

Heat conduction and isotherms of adsorbed helium on silica gel. D. White and others. bibliog J Chem Phys 20:1819-20 N '52

Helium diffusion through glass. F. J. Norton. bibliog diags Am Cer Soc J 36:90-6 Mr 1 '53

High energy helium ion irradiation of aqueous acetic acid solutions. W. M. Garrison and others. bibliog diag Am Chem Soc J 75: 2459-64 My 20 '53

Interaction of closed shells. H. Margenau and P. Rosen. bibliog J Chem Phys 21:394-8 Mr '53

Iterative procedures and the helium wave equation. J. H. Bartlett. Phys R 88:525-6 N 1 '52

Magnetic moment of the helium atom in the metastable triplet state. V. Hughes and others. bibliog diags Phys R 91:828-41 Ag 15 '53

Mobility of helium molecular ions in helium. S. Geltman. bibliog Phys R 90:808-16 Je 1 '53

Nonadditivity of the repulsive potential of helium. P. Rosen. J Chem Phys 21:1007-12 Je '53

Production of charged photomesons from helium; hydrogen-helium ratios. M. J. Jakobson and others. bibliog Phys R 91:695-8 Ag 1 '53

Range-energy relations of 10- to 250-kev protons and helium ions in various gases. C. J. Cook and others. bibliog diags Phys R 91:1417-22 S 15 '53

Relativistic contribution to the magnetic moment of $^3S_1$ helium. W. Perl and V. Hughes. bibliog Phys R 89:886-7; 91:842-52 F 15, Ag 15 '53

Rydberg constant and the atomic mass of the electron. E. R. Cohen. bibliog diag Phys R 88:353-60 O 15 '52

Shift of the 1^1S state of helium. S. Chandrasekhar and others. bibliog Phys R 91: 1172-3 S 1 '53

Specific primary ionization of H_2, He, Ne, and A by high energy electrons. G. W. McClure. bibliog diags Phys R 90:796-803 Je 1 '53

Thermodynamics of the helium film. O. K. Rice and B. Widom. Phys R 90:987 Je 1 '53

Translational dispersion in monatomic gases. R. A. Boyer. Acoustical Soc Am J 24:716-17 N '52

Isotopes

Absorption of slow π-mesons by He^4 nuclei. A. G. Petschek. bibliog Phys R 90:959-67 Je 1 '53

Angular distribution of the reaction $He^3(d,p)He^4$ between 240 kev and 3.56 Mev. J. L. Yarnell and others. bibliog diags Phys R 90:292-7 Ap 15 '53

Beta-spectrum of He^6. C. S. Wu and others. diag Phys R 87:1140-1 S 15 '52

Binding energy calculation on He^4 with single-particle wave functions. P. G. Wakely. bibliog Phys R 90:724-5 My 15 '53

Cluster theory of the saturated vapor pressure of helium isotope mixtures. W. Band and R. A. Nelson. bibliog Phys R 90:744-7 Je 1 '53

Correlation between electron and recoil nucleus in He^6 decay. B. M. Rustad and S. L. Ruby. bibliog diag Phys R 89:880-1 F 15 '53

Cross section and angular distribution of the $He^3(d, p)He^4$ nuclear reaction. T. W. Bonner and others. bibliog diag Phys R 88: 473-6 N 1 '52

Disintegration of helium by 90-Mev neutrons. P. E. Tannenwald. bibliog il diags Phys R 89:508-17 Ja 15 '53

Effect of nuclear structure on the hyperfine structure of He^3. V. Hughes and G. Weinreich. Phys R 91:196-7 Jl 1 '53

HELIUM—Isotopes—*Continued*

Elastic scattering of protons and neutrons by helium. D. C. Dodder and J. L. Gammel. bibliog Phys R 88:520-5 N 1 '52

Elastic scattering of protons from helium 4. B. Cork. Phys R 89:78-9 Ja 1 '53

Elastic scattering of 10-Mev deuterons by H^3 and He^3. J. C. Allred and others. bibliog diags Phys R 88:425-30 N 1 '52

Formation of He^6 by 14-Mev neutron bombardment of Li and Be. M. E. Battat and F. L. Ribe. bibliog diag Phys R 89:80-3 Ja 1 '53

Hyperfine structure of the metastable triplet state helium-3. G. Weinreich and others. Phys R 91:195-6 Jl 1 '53

Inelastic events induced by 32-Mev protons on helium. J. Benveniste and B. Cork. bibliog diags Phys R 89:422-9 Ja 15 '53

Inverse Oppenheimer-Phillips process in the $Cu^{65}(He^3,\alpha)$ reaction. D. N. Kundu and M. L. Pool. Phys R 91:417 Jl 15 '53

$Li^7(\gamma, p)He^6$ cross section. B. U. Tucker and E. C. Gregg. diag Phys R 91:1579-80 S 15 '53

Macroscopic theory of superfluid He^3-He^4 mixtures. P. J. Price. bibliog Phys R 89:1209-15 Mr 15 '53

Mechanism of the reaction $O^{16}+h\nu\rightarrow He^4$. C. A. Hsiao and V. L. Telegdi. bibliog Phys R 90:494-5 My 1 '53

Nuclear reactions in the stars; proton-proton chain. E. E. Salpeter. Phys R 88:547-53 N 1 '52

Nuclear reactions with 21-Mev He^3 in a cyclotron. D. N. Kundu and others. bibliog Phys R 89:1200-2 Mr 15 '53

Permeability and solubility of He^3 and He^4 in vitreous silica. W. M. Jones. bibliog diag Am Chem Soc J 75:3093-6 Jl 5 '53

Properties of liquid helium 3. B. M. Abraham and others. bibliog diags Science 117:121-6 F 6 '53

Rapid separation of He^3 from He^4 by the heat flush method. T. Soller and others. bibliog diag Phys R 91:1058-60 S 1 '53

Reactions $He^3(He^3,p)Li^5$ and $T(He^3,p)He^5$. E. Almqvist and others. bibliog Phys R 91:1022-3 Ag 15 '53

Reactions $T(p,n)He^3$ and $T(p,\gamma)He^4$. H. B. Willard and others. bibliog Phys R 90:865-7 Je 1 '53

Recovery and purification of tritium and He^3 used in ion accelerators. K. W. Allen and E. Almqvist. bibliog diags R Sci Instr 24:70-1 Ja '53

Study of the $H^3(d, n)$ He^4 reaction. J. P. Conner and others. bibliog diags Phys R 88:468-73 N 1 '52

Vapor pressure of He^3-He^4 mixtures. R. A. Nelson and W. Band. Phys R 88:1431 D 15 '52

HELIUM, Liquid

Atomic theory of liquid helium near absolute zero. R. P. Feynman. bibliog Phys R 91:1301-8 S 15 '53

Atomic theory of the λ transition in helium. R. P. Feynman. bibliog Phys R 91:1291-301 S 15 '53

Big expansion helium liquefier. A. J. Croft. il diag J Sci Instr 29:388-90 D '52

Blocked capillary method for determining melting pressures; the melting curve of helium from 1.5° to 4°K. C. A. Swenson. bibliog il diags Phys R 89:538-44 F 1 '53

Cavitation effect in helium II. B. M. Cwilong and others. diag Phys R 88:138-9 O 1 '52

Entropy of liquid He^3. Tien Chi Chen and F. London. bibliog Phys R 89:1038-40 Mr 1 '53

Fountain effect in helium II below 1°K. G. J. C. Bots and C. J. Gorter. Phys R 90:1117-18 Je 15 '53

Heat conduction of the boundary layer in liquid helium II. D. White and others. diag Phys R 89:593-4 F 1 '53

Heat pulses in He II below 1°K. C. J. Gorter. Phys R 88:681 N 1 '52

Heat pulses in helium II between 0.1°K and 1.0°K. H. C. Kramers and others. bibliog Phys R 90:1117 Je 15 '53

Heat pulses in liquid helium II below 1°K. K. R. Atkins. bibliog Phys R 89:526-7 Ja 15 '53

Helium film transport over copper below 1°K. L. Lesensky and H. A. Boorse. diag Phys R 87:1135-6 S 15 '52

Helium II film transport rates over various surfaces. B. Smith and H. A. Boorse. bibliog Phys R 90:156-7 Ap 1 '53

Irreversible processes with application to helium II and the Knudsen effect in gases. O. K. Rice. bibliog Phys R 89:793-9 F 15 '53

λ-Transition in liquid helium. R. P. Feynman. Phys R 90:1116-17 Je 15 '53

Macroscopic theory of superfluid He^3-He^4 mixtures. P. J. Price. bibliog Phys R 89:1209-15 Mr 15 '53

Neutron diffraction by liquid helium. D. G. Henshaw and D. G. Hurst. Phys R 91:1222 S 1 '53

Normal fluid concentration in liquid helium II below 1°K. D. de Klerk and others. Phys R 89:662-3 F 1 '53

Nuclear alignment and the entropy of liquid He^3. B. Weinstock and others. bibliog Phys R 89:787-9 F 15 '53

Optical cell for use with liquid helium. W. H. Duerig and I. L. Mador. bibliog il R Sci Instr 23:421-4 Ag '52

Properties of liquid helium 3. B. M. Abraham and others. bibliog diags Science 117:121-6 F 6 '53

Second-sound velocity below 1°K as a function of pressure. V. Mayper, jr. and M. A. Herlin. bibliog Phys R 89:523-4 Ja 15 '53

Second sound velocity in He^3-He^4 mixtures below 1°K. J. C. King and H. A. Fairbank. bibliog Phys R 90:989-90 Je 1 '53

Second sound velocity measurements below 1°K. D. de Klerk and others. bibliog Phys R 89:326-7 Ja 1 '53

Solidification curve of helium II. B. M. Cwilong. Phys R 88:135-7 O 1 '52; Correction. 88:1435 D 15 '52

Some points of the theory of liquid helium II. L. Goldstein. bibliog Phys R 89:597-602 F 1 '53

Thermal Rayleigh disk measurements in He^3-He^4 mixtures. B. Weinstock and J. R. Pellam. Phys R 89:521 Ja 15 '53

Thickness of the saturated helium II film. R. Bowers. bibliog Phys R 91:1016-17 Ag 15 '53

Transfer rate of the liquid helium II film near zero level difference. G. S. Picus. Phys R 90:719-20 My 15 '53

Vapor-liquid equilibria in He^3-He^4 solutions. J. C. Morrow. Phys R 89:1034-7 Mr 1 '53

Vapor pressure and entropy of liquid He^3. D. ter Haar. Phys R 91:1018-19 Ag 15 '53

Vapor pressures of He^3-He^4 mixtures below the lambda-point. H. S. Sommers, jr. bibliog diags Phys R 88:113-27 O 1 '52

HELLER report. See Brick industry and trade

HELMHOLTZ coils. See Solenoids

HELMHOLTZ resonators. See Resonators

HELP wanted ads. See Employment systems—Advertising aids

HELSINKI

Sewerage

Sewage treatment of Scandinavia. E. L. Knoedler. Water & Sewage Works 100:125 Mr '53

HEMATITE

Structure and origin of the banded hematite jaspers of Singhbhum, India. E. Spencer and F. G. Percival. bibliog il Econ Geol 47:365-83 Je '52; Discussion. J. A. Dunn. 48:58-62 Ja '53

HEMIACETALS. See Acetals

HEMICELLULOSE

Chemistry of the cellulosic wood fiber. L. E. Wise and M. A. Buchanan. bibliog il Paper Ind 34:1229-32 Ja '53

Chemistry of the wood cell wall; the isolation of beech hemicellulose A. I. R. C. McDonald. Chem Soc J p3183-6 Ag '52

Hemicelluloses of esparto grass (stipa tenacissima, L.); the arabinose-rich fraction. G. O. Aspinall and others. Chem Soc J p 1631-4 My '53

Hemicelluloses present in aspen wood (populus tremuloides). J. K. N. Jones and L. E. Wise. Chem Soc J p2750-6, 3389-93 Jl, S '52

HEMLOCK

Color precursors in spruce- and western hemlockwoods and inner barks. W. Pigman and others. bibliog Tappi 36:4-12 Ja '53

HEMOGLOBIN
Evidence for globulite molecules in horse hemoglobin. D. Wrinch. J Chem Phys 20:1332-3 Ag '52
Human hemoglobin. H. A. Itano. bibliog Science 117:89-94 Ja 30 '53
Immunologic studies of fetal hemoglobin; abstract. A. I. Chernoff. Science 116:518 N 14 '52
Kinetic study of the reversible acid denaturation of ferrihemoglobin. J. Steinhardt and E. M. Zaiser. bibliog Am Chem Soc J 75:1599-605 Ap 5 '53
Lipoproteins as carriers of hormones and vitamins A and E in blood plasma; abstract. S. Granick. Chem & Eng N 31:668 F 16 '53
Vector map of crystalline horsehemoglobin. D. Wrinch. J Chem Phys 20:1051 Je '52

HEMOGLOBINOMETER
Continuously recording radioactive hemoglobinometer. A. C. Guyton and others. bibliog diag R Sci Instr 23:639-41 N '52

HEMORRHAGIC fever
Epidemic hemorrhagic fever studied by army. J. E. Smadel. Pub Health Rep 68:101-2 Ja '53

HEMOTOXYLIN
Determination of fluoride in water by the aluminum-hemotoxylin method. M. J. Price and O. J. Walker. bibliog Anal Chem 24:1593-5 O '52

HENDERSON, Ernest, 1897-
Sage of Sheraton corporation of America. por Barron's 33:5-6 Ap 27 '53

HENDERSON medal
Presentation of the George R. Henderson medal. Franklin Inst J 254:459-60 D '52

HENDRICKS, Sterling Brown, 1902-
Receives Arthur L. Day medal. por Chem & Eng N 30:4953 N 24 '52

HENKE and Pillot, inc.
Weingarten's sparring partner. il Bsns W p94 Jl 11 '53

HEPATITIS. See Jaundice

HEPATITIS, Canine. See Dogs—Diseases

HEPATOLENTICULAR degeneration
Deficiency of ceruloplasmin in patients with hepatolenticular degeneration (Wilson's disease). I. H. Scheinberg and D. Gitlin. bibliog Science 116:484-5 O 31 '52

HEPTADECENE
Radiochemical preparation of heptadecene-8. V. L. Burton and I. A. Breger. bibliog Science 116:477-9 O 31 '52

HEPTANE
Emission spectra on autoignited heptane-air mixtures. W. J. Levedahl and H. P. Broida. bibliog il Anal Chem 24:1776-80 N '52
Industrial viewpoints on separation processes. K. H. Hachmuth. bibliog il diags Chem Eng Prog 48:617-26 D '52
Kinematic viscosity of *n*-heptane at low temperature. J. F. Johnson and R. L. LeTourneau. Am Chem Soc J 75:1743-4 Ap 5 '53
Photochemical studies; liquid acetone-oxygen and liquid acetone-heptane-oxygen. P. E. Frankenburg and W. A. Noyes, jr. bibliog Am Chem Soc J 75:2847-50 Je 20 '53
Proposed method of test for measurement of density of knock test standard normal heptane and *iso*octane by the pycnometer. il diags Am Soc T M Proc 50:289-94 '50

HEPTANEDIONE
Condensation of 1 : 3-dimethylindole with hexane-2 : 5-dione and heptane-2 : 6-dione. R. Robinson and J. E. Saxton. Chem Soc J p2596-600 S '53

HERBICIDES. See Weeds—Control

HERBS
Gift-shop touch; Hoff products. il Mod Packaging 26:101 Ag '53

HERCULES powder company
Hercules Powder's earnings rate higher. Barron's 33:21 F 9 '53

HERCULIN
Amides of vegetable origin; stereoisomeric *N-iso*butylundeca-1 : 7-diene-1-carboxyamides and the structure of herculin. L. Crombie. Chem Soc J p2997-3008 Ag '52

HEREDITY
See also
Mutation (biology)

HEROISM. See Courage

HERRON, G. R., and son (holdings) limited
Statement by the chairman. F. J. Hill. Economist 166:912 Mr 28 '53

HERSHEY, Pennsylvania
Hershey, the chocolate town. il Am Bsns 23:32-4 Jl '53

HERTY medal
Raymond W. McNamee named twenty-first Herty medalist. Chem & Eng N 31:1644 Ap 20 '53

HESPERIDIN
Does phosphorylated hesperidin affect fertility? M. C. Chang and G. Pincus. bibliog Science 117:274-6 Mr 13 '53
Phosphorylated hesperidin. G. J. Martin. Science 117:363 Ap 3 '53
Triple play in drugs. Chem W 71:29-30 O 25 '52

HESS, Seth G.
Waterfront crime means pollution to tristate clean-up agency engineer. por Eng N 150:68-9 Mr 26 '53

HETCH HETCHY water supply project
Construction starts on Cherry Valley dam; newest unit in Hetch Hetchy system. M. L. Dickinson. map plan diag Civil Eng 23:308-10 My '53

HETEROCYCLIC compounds
Catalytic synthesis of heterocycles; dehydrocyclization of anils to acridine and carbazole. C. Hansch, F. Gschwend and J. Barnesberger. bibliog Am Chem Soc J 74:4554-5 S 20 '52
Cleavage of heterocycles with Raney nickel and with lithium. H. Gilman and D. L. Esmay. bibliog Am Chem Soc J 75:2947-9 Je 20 '53
Heterocyclic compounds from ethylanilines. W. S. Emerson, R. A. Heimsch and T. M. Patrick, jr. bibliog Am Chem Soc J 75:2256-7 My 5 '53
Heterocyclic syntheses with malonyl chloride; pyrano-1 : 3-dioxins from ketones. S. J. Davis and J. A. Elvidge. Chem Soc J p4109-14 N '52
Heterocyclic synthesis with malonyl chloride; 2 : 2-disubstituted 6′-amino-2′ : 4-diketopyrano(3′ : 4′-5 : 6)-1 : 3-dioxins and simpler derivatives of 4-keto-1 : 3-dioxin. S. J. Davis and J. A. Elvidge. Chem Soc J p2251-7 Ag '53
meta-Interactions and inductive effects in heterocyclic systems. D. A. Brown and M. J. S. Dewar. Chem Soc J p2406-13 Ag '53
New syntheses of heterocyclic compounds; 2 : 10-diazaphenanthrenes by application of the Stieglitz rearrangement. S. S. Berg and V. Petrow. Chem Soc J p3713-16 O '52
Polynuclear heterocyclic systems; syntheses using the Elbs reaction. G. M. Badger and R. Pettit. Chem Soc J p2774-8 S '53
Studies in molecular rearrangement; oxotropic rearrangements in the five-membered heterocyclic series. E. A. Braude, J. S. Fawcett and D. D. E. Newman. Chem Soc J p4155-8 N '52

HEVEA. See Rubber plants and planting

HEXACHLOROBENZENE
Grain refinement of magnesium castings; use of hexachlorobenzene as a grain refining agent. R. T. Wood. il Foundry 81:98-9+ F '53
Pure quadrupole spectrum of hexachlorobenzene. T. L. Weatherly and others. J Chem Phys 21:761 Ap '53

HEXACHLOROCYCLOHEXANE
Colorimetric estimation of residual benzene hexachloride. W. F. Phillips. bibliog Anal Chem 24:1976-9 D '52
Mechanisms of elimination reactions; deuterium exchange in base-promoted dehydrochlorination of β-benzene hexachloride. S. J. Cristol and D. D. Fix. bibliog Am Chem Soc J 75:2647-8 Je 5 '53

Gamma isomer

See Lindane

HEXACHLOROETHANE
Crystal structure and lattice energy of orthorhombic hexachloroethane. Y. Sasada and M. Atoji. bibliog diags J Chem Phys 21:145-52 Ja '53

HEXAFLUOROBUTADIENE

Fluoro-olefins; the synthesis of hexafluorobuta-1 : 3-diene. R. N. Haszeldine. Chem Soc J p4423-31 N '52

HEXAFLUOROETHANE

Infrared and Raman spectra of fluorinated ethanes; the series CF_3CF_3, CF_3CF_2Cl, CF_3CFCl_2, and CF_3CCl_3. J. R. Nielsen and others. bibliog J Chem Phys 21:383-93 Mr '53

Raman spectrum of gaseous ethforane. J. R. Nielsen and C. W. Gullikson. J Chem Phys 21:1416 Ag '53

HEXAFLUOROPROPENE

Infrared and Raman spectra of fluorinated ethylenes; hexafluoropropene. J. R. Nielsen and others. bibliog J Chem Phys 20:1916-19 D '52

HEXAHYDRODIPHENYLAZAPHOSPHINE

Preparation and properties of hexahydro-1 : 4-diphenyl-1 : 4-azaphosphine. F. G. Mann and I. T. Millar. Chem Soc J p3039-46 Ag '52

HEXAHYDROINDOLOQUINOLIZINE

Hexahydroindolo[2,3-a]quinolizine. W. A. Reckhow and D. S. Tarbell. bibliog Am Chem Soc J 74:4960-2 O 5 '52

HEXAMETHONIUM. See Ammonium compounds

HEXAMETHYLENE adipamide

Specific heat of synthetic high polymers; polyhexamethylene adipamide and sebacamide. R. C. Wilhoit and M. Dole. bibliog J Phys Chem 57:14-21 Ja '53

HEXAMETHYLENE glycol. See Hexanediol

HEXAMETHYLENE tetramine

New synthesis of indole-3-aldehydes; the reaction of hexamethylenetetramine with some Mannich bases. H. R. Snyder, S. Swaminathan and H. J. Sims. bibliog Am Chem Soc J 74:5110-13 O 20 '52

HEXAMMINECOBALT. See Cobaltammines

HEXANE

Adsorption on monolayers; adsorption of the isomeric hexanes on condensed stearic acid monolayers and on clean water surfaces. K. E. Hayes and R. B. Dean. bibliog J Phys Chem 57:80-3 Ja '53

Eliminating fire hazard with hexane; Combined metals reduction co. O. Duke. il Elec West 109:96 O '52

Hexane-plus fractions serve as absorbent in absorption-refrigeration gasoline plant. D. H. Stormont. flow sheet il Oil & Gas J 51:210-12 Ap 27 '53

Inhibitory effects of mercury and of hydrogen in the gas-phase oxidation of *n*-hexane. N. J. H. Small and A. R. Ubbelohde. diag Chem Soc J p4619-28 D '52

Isomate; Standard oil co. (Indiana). flow diag Pet Refiner 31:172-3 S '52

Isomerization of pentanes and hexanes; nature and control of side reactions. B. L. Evering and others. bibliog Ind & Eng Chem 45:582-9 Mr '53

Isomerization of saturated hydrocarbons in presence of hydrogenation-cracking catalysts; normal hexane. F. G. Ciapetta and J. B. Hunter. diag Ind & Eng Chem 45:147-55 Ja '53

Production of nickel carbide by decomposition of *n*-hexane on metallic nickel. A. Cimino and G. Parravano. J Phys Chem 56:706-7 Je '52

Sorption of vapors by monolayers; the differential heats of adsorption of *n*-hexane on stearic acid monolayers. R. B. Dean and K. E. Hayes. bibliog Am Chem Soc J 74:5982-4 D 5 '52

HEXANEDIOL

Conversion of fibrinogen to fibrin; light scattering studies on clotting systems inhibited by hexamethylene glycol. J. D. Ferry and others. bibliog Am Chem Soc J 74:5709-15 N 20 '52

HEXANEDIONE

Condensation of 1 : 3-dimethylindole with hexane-2 : 5-dione and heptane-2 : 6-dione. R. Robinson and J. E. Saxton. Chem Soc J p2596-600 S '53

HEXAPHENYLETHANE, Analogs of

Analogs of hexaphenylethane; hexaaryldisilanes containing phenyl and *p*-tolyl groups. H. Gilman and T. C. Wu. bibliog Am Chem Soc J 75:3762-5 Ag 5 '53

HEXESTROL

Some compounds related to hexœstrol. D. A. Forss, W. Freund and E. R. Stove. Chem Soc J p5038-9 D '52

Substitution reactions of hexœstrol and analogous compounds. N. P. Buu-Hoï, D. Lavit and N. D. Xuong. Chem Soc J p2612-14 S '53

HEYARD, Frank

72-year old worker rescues infant; F. Heyard presented President's medal. por Nat Safety N 66:44 N '52

HEYMSFELD, Ralph Taft, 1908-

Businessmen in the news. por Fortune 46:62 O '52

HIBERNATION

Hibernation and cortical electrical activity in the woodchuck (marmota monax). C. P. Lyman and P. O. Chatfield. bibliog Science 117:533-4 My 15 '53

Histological changes in the tissues of the hibernating marmot following whole body irradiation. K. C. Brace. bibliog Science 116:570-1 N 21 '52

HIDES and skins

Brazilian hide and skin output up, exports down. For Comm W 50:7 Jl 6 '53

Demand for calfskin exports shows rise. For Comm W 50:27 Jl 20 '53

French output, exports up. For Comm W 49:11 Je 29 '53

Hide, skin export demand down. For Comm W 49:23 Je 1 '53

Hide supplies rising; demand may drop in '53. Barron's 32:27-8 D 29 '52

Indian output maintained. For Comm W 49:10 Je 29 '53

More cattle-hide parts but fewer hides, skins licensed for export. For Comm W 49:4 Ap 27 '53

Shoe makers, exporters strengthen hide market. Barron's 33:35-6 My 4 '53

HIDRAW process. See Metal drawing

HIGH altitude research station, White Mountain. See White Mountain high altitude research station

HIGH buildings

Commercial center planned for Denver to have 20-story main building. il Eng N 149:48 D 18 '52

See also

Empire State building

HIGH frequency heating. See Electric heating, Industrial—High frequency heating

HIGH pressure plants. See Steam plants—High pressure

HIGH school students

Basic training for a utility career; Central Hudson Gas & Electric conducts course on company's operations for high school boys. il Elec World News ed 138:22-4 S 29 '52

High school students advised not to become too specialized; 5th annual Chicago area career conference. Chem & Eng N 31:1743-4+ Ap 27 '53

Schoolboys get co-op training; Fansteel metallurgical corp. J. Meade. il Factory Management 111:100-1 Je '53

HIGH speed photography. See Photography—High speed

HIGH speed steel. See Tool steel

HIGH Voltages

Crompton Parkinson mobile high-voltage testing unit. il Engineer 195:907-8 Je 26 '53; Elec R (Lond) 152:1458 Je 26 '53; Engineering 176:62 Jl 10 '53

Electrolytic analogue in the design of high-voltage power transformers. D. McDonald. bibliog il diags Inst E E Proc 100 pt 2:145-66; Discussion. 176-83 Ap '53

Field surge testing of extra-high-voltage lines. P. Sporn and A. C. Monteith. il Elec Eng 72:287-8 Ap '53

High voltage barriers for buss bar connectors. il Nat Safety N 66:62 D '52

High voltage high speed square wave surge generator. D. H. Goodman and others. diag R Sci Instr 23:766-7 D '52

High voltage test laboratory; Brush electrical engineering co. il Engineer 194:191 Ag 8 '52; Engineering 174:172-3 Ag 8 '52; Elec R (Lond) 151:271-4 Ag 8 '52; Electrician 149:409-11 Ag 8 '52

HIGH voltages—*Continued*

India's high-voltage laboratory. G. K. M. Pfestorf and D. J. Badkas. il plans Elec Eng 72:320-4 Ap '53

Insulation impulse strength of high-voltage generators. G. L. Moses. Westinghouse Eng 13:88-90 My '53

New high-voltage outdoor load interrupter switch. H. J. Lingal and J. B. Owens. il diags Elec Eng 72:324-7 Ap '53

New method for the measurement of surge voltages in windings. B. C. Robinson and A. Gray. diags Inst E E Proc 100 pt 2: 38-40 F '53

New rectifier tube for extremely high power and voltage levels. T. H. Rogers. bibliog il diags Elec Eng 72:51-6 Ja '53

Plant power pinch ended by high-voltage setup; John J. Felin & co. il Food Eng 25: 67 Ja '53

Problems of power transmission at voltages above 225 kv. F. Cahen. il Elec R (Lond) 151:494-6 S 5 '52

Some researches on current chopping in high-voltage circuit-breakers. A. F. B. Young. bibliog diags Inst E E Proc 100 pt 2:337-53; Discussion. 354-61 Ag '53

Stacked capacitors for high voltage. R. E. Marbury and W. H. Cuttino. il diag Elec World 139:114-15+ F 23 '53

Tomorrow's transmission voltages. P. L. Bellaschi. maps Elec World 138:84-8 D 1 '52; Discussion. H. P. St Clair. 139:188; Reply. 188+ Ap 20 '53

What's ahead in high-voltage transmission? S. B. Crary. Gen Elec R 55:41-3+ N '52

HIGHLANDS and Lowlands para rubber company, limited

Statement by the chairman. T. B. Barlow. Economist 167:484 My 16 '53

HIGHWAY accidents. See Automobile accidents

HIGHWAY administration

American association of state highway officials annual meeting, Kansas City, Mo. Dec 10. Roads & Sts 96:72-3 Ja '53

Association of highway officials of North Atlantic states annual meeting, Atlantic City, March 4-6. Roads & Sts 96:68 Ap '53

Canadian counterpart of P.A.R. launched by Canadian good roads association. Roads & Eng Constr 91:90+ Jl '53

Highway planning and administration. F. D. Merrill. il Roads & Eng Constr 90:98-100+ D '52

See also

Highway departments	Roads—Contracts
Highway research	Roads—Finance

HIGHWAY associations

See also

Canadian good roads association	National good roads association

HIGHWAY departments

Higher salaries; states paying them will be able to keep engineers. Eng N 150:60 Ap 9 '53

Highway departments planning bigger programs in the year ahead. il Roads & Sts 96:58-9 F; 65-6 Mr '53

State highway departments fall short of engineering personnel needs by 15 per cent. Eng N 150:23-4 Je 25 '53

See also

Radio telephone—Highway department use

Equipment

How equipment helps in essential maintenance; Maintenance department of the Kansas highway commission. L. J. Siler. il Pub Works 84:56-7 Ja '53

How equipment lowers cost of highway maintenance. C. W. Ross. il Pub Works 84:72-4+ Mr '53

Machines do the work faster and cheaper. il Pub Works 84:78-9+ F '53

New power equipment ideas for roadside landscaping and maintenance. W. J. Garmhausen. il Roads & Sts 96:52-5 Je; 84-6 Jl '53

Practical highway maintenance equipment. E. L. Schmidt. il Pub Works 84:80-1 Ap '53

Twelve ways equipment reduces labor and maintenance costs. R. H. Baldock. il Pub Works 84:77 My '53

HIGHWAY engineering

Caracas-la Guaira highway to cost $7 million a mile. il map Eng N 149:60+ N 6 '52

Coordinate design with construction methods. W. W. Wanamaker. il Civil Eng 22:847-51 O '52

Engineer's contribution to traffic safety. Roads & Sts 96:74+ Ja '53

Future development of the art and science of highway engineering. T. H. MacDonald. Civil Eng 22:876-7 O '52; Same abr. Roads & Sts 95:50-1 O '52

Highway research board proceedings of the thirty-first annual meeting, Washington, D.C. Jan. 15-18. Nat Res Council Pub 238: 1-690 '52 ($7.50)

Highway studies from aerial photographs. R. D. Miles. il map Pub Works 84:74-6+ S '53

How a Virginia highway was rebuilt for heavier traffic. H. J. McKeever. il map diags Roads & Sts 96:105-10 Ja '53

Locating super roads among existing utilities; experience on New Jersey turnpike indicates need for public-relations ability. E. H. Harlow. il diag Eng N 150:32-4+ Mr 5 '53

Long-range highway plans. A. N. Carter. il Roads & Eng Constr 90:146+ N '52

Method for making highway soil surveys. K. B. Woods. bibliog il maps Am Soc C E Proc 78[no 152]:1-10 S '52

New Jersey turnpike, U.S.A. il map diags Engineer 194:198-9, 210-12, 242-7 Ag 8-22 '52

New road from Beersheba to Sodom. il map diag Engineering 175:705-6 Je 5 '53

Proceedings of the Ohio highway engineering conference, Columbus, April 1-3. Ohio State U [Columbus] Eng Exp Sta Bul 150:1-124 '52 ($1)

Second try promises success on spectacular mountain highway. il maps Eng N 149:28-30 O 2 '52

Turnpike financing and construction. E. J. Donnelly. Midwest Eng 5:3-4+ Ja '53

Venezuela rushes superhighway. il Constr Methods 34:76-7+ O '52

See also

Bridge design	Pavements
Bridges	Roads
Expressways	Snow removal
Highway research	Streets

Bibliography

Highway and airport digest. diags Published in monthly numbers of Public works

Study and teaching

Pennsylvania contractor group sponsors student training. Roads & Sts 96:63+ Ja '53

Training school combats engineer shortage; Vermont Department of highways. W. B. McAllister. il Pub Works 84:68+ Ja '53

Universities hold key to solution of shortage of road engineers. Roads & Eng Constr 91:84 F '53

Tables, calculations, etc.

Rate of change of grade per station. C. J. Brownell. diags Am Soc C E Proc 78 [no 121]:1-20 Mr '52; Discussion. 79 [no D-121]:1-6 F '53

HIGHWAY engineers

State highway departments fall short of engineering personnel needs by 15 per cent. Eng N 150:23-4 Je 25 '53

HIGHWAY officials

Directories

Municipal road officials; incorporated cities, towns and villages of Canada. Roads & Eng Constr 91:98+ Je '53

Provincial highway officials; organization charts; provincial departments of highways. Roads & Eng Constr 91:70+ Je '53

Township road officials in Ontario. Roads & Eng Constr 91:208+ Je '53

HIGHWAY officials, American association of state. See American association of state highway officials

HIGHWAY postal service. See Postal service, Highway

HIGHWAY research

Effect of highway research on township and municipal road development. N. W. McLeod. diags Roads & Eng Constr 91:145-8+ Mr '53

HIGHWAY research—*Continued*

Highway maintenance problems solved by research. J. Walter. il Roads & Eng Constr 91:142-4+ Mr '53

Highway research in review. R. H. Baldock. Roads & Sts 96:62-4 F '53

Interstate highway accident study. M. S. Raff. map Pub Roads 27:170-86 Je '53; Excerpt. Pub Works 84:79-80 Jl '53

Nailing down the facts in the truck issue. il Bsns W p 106-8 Mr 7 '53

Relation between highway cost and truck transportation to be studied by Research board. Roads & Eng Constr 91:112 Mr '53; Same. Roads & Sts 96:89-90 Mr '53; Same. Safety Maint & Prod 105:31-2 My '53

Report of the Road research board for 1951. Engineering 175:23 Ja 2 '53

Study of waterway areas and retaining walls made at the University of Illinois. Eng N 149:78+ O 9 '52

See also

Roads—Testing

Roads, Experimental

HIGHWAY research board

Annual meeting, 32d, Washington, Jan. 13-16. Eng N 150:23 Ja 22 '53

Annual meeting, Washington, Jan. 13-16; abstracts of papers. Roads & Sts 96:65-6 F '53

HIGHWAY transportation

Better roads for tomorrow's loads. F. B. Lautzenhiser. il Roads & Eng Constr 90:94-6+ D '52

Highway transportation economics. R. M. Zettel. il Pub Roads 27:37-49 Ag '52; Same cond. Roads & Eng Constr 91:102+ Ja '53

Trends in traffic volumes, vehicle types and weights, 1951. T. B. Dimmick. Pub Roads 27:111-24 F '53

See also

Motor bus lines

Motor trucks in freight service

Railroads—Motor vehicle auxiliaries

Road traffic

Roads

Street traffic

Trailers

Germany

Western Germany regulates truck transport for maximum efficiency. For Comm W 50:19 Jl 6 '53

Great Britain

No change of speed. Economist 167:925 Je 27 '53

Turkey

New highways promote Turkey's economy. For Comm W 48:25 D 22 '52

HIGHWAYS. See Roads

HILDRETH, Joseph S.

President of important National business publications, inc. H. Woodward. por Sales Management 69:28 D 1 '52

HILL, Grant L.

Sketch. por(p247) Weekly Underw 168:292 Ja 24 '53

HILL, John Anthony, 1904-

Airco; its new plant breeds other new plants. por(cover) Bsns W p 148-50+ Ap 18 '53

HILLSIDE architecture

Cantilevered deck adds living space. il plans Arch Rec 113:156-8 F '53

Hillside house achieves privacy, view and outdoor living. il plans diag House & Home 2:104-7 S '52

Take advantage of that sloping lot. il plans Am Bld 74:116 N '52

HINDE and Dauch paper company

West Vaco and Hinde & Dauch to merge. map Paper Tr J 137:14-16 Ag 28 '53; Same abr. Paper Ind 35:640 S '53

HINGES

No-scrap hinge die. T. H. Hsu. diags Am Mach 96:124 D 22 '52

HIPPURIC acid

Reactions of antiserum homologous to the *p*-azohippurate ion. M. Siegel and D. Pressman. bibliog Am Chem Soc J 75:3436-9 Jl 20 '53

Spectra of azlactones; azlactones derived from substituted benzaldehydes and hippuric and nitrohippuric acids. D. A. Bassi, V. Deulofeu and F. A. F. Ortega. bibliog Am Chem Soc J 75:171-8 Ja 5 '53

HIRES, Charles E., company

End of price controls to broaden profit margins. Barron's 33:20 Mr 9 '53

HISTAMINE

Radioactive histamine studies; abstract. R. W. Schayer. Chem & Eng N 31:1401-2 Ap 6 '53

Role of anti-histamine compounds in clinical medicine. R. G. Evans. bibliog Chem & Ind p77-9 Ja 24 '53

See also

Antihistamines

HISTIDINE

Additional evidence on the enzymatic transformation of histidine into glutamic acid. J. P. Fournier and L. P. Bouthillier. Am Chem Soc J 74:5210-11 O 20 '52

Intermediate of the enzymatic degradation of histidine. B. A. Borek and H. Waelsch. Am Chem Soc J 75:1772-3 Ap 5 '53

L-Histidine conversion to a urinary glutamic acid derivative in folic-deficient rats. H. Tabor and others. bibliog Am Chem Soc J 75:756-7 F 5 '53

Origin of the carboxyl group of histidine in yeast. J. W. Davis and others. bibliog Am Chem Soc J 75:2252-3 My 5 '53

Some new naturally occurring imidazoles related to the biosynthesis of histidine. B. N. Ames and others. bibliog Am Chem Soc J 75:1015-18 Mr 5 '53

HISTOCHEMISTRY

Histochemical demonstration of aryl sulfatase. A. M. Rutenburg and others. bibliog il Science 116:539-43 N 14 '52

HISTOPLASMIN

Histoplasmin and tuberculin sensitivity in Texas infants and children. G. B. Forbes and C. C. Chang. Pub Health Rep 68:320-2 Mr '53

HISTORIC houses

Nation's oldest government building; Palace of the governors in Santa Fe, N.Mex. A. P. Hurt. il Comp Air Mag 58:186 Jl '53

Saving the houses; Ministry of works bill to authorize grants to maintain historic buildings. Economist 167:586+ My 30 '53

Spare that house; Huff house. Bsns W p59 My 9 '53

HO Chi Minh

Portrait. Bsns W p29 Je 27 '53

HOADLEY, Walter Evans, 1916-

Business economist on the prowl. pors Bsns W p 134-8+ Ja 10 '53

HOBBIES

Do it yourself, a new industry. R. W. Babson. Comm & Fin Chr 177:1012 Mr 5 '53

Employees hold hobby show; New York telephone co. M. L. Briggs. il Am Bsns 23:30-1+ Jl '53

See also

Railroads—Models

HOBBING

Gages cut hobbing $30,000. R. L. Witsche. il diag Am Mach 97:121-4 Je 22 '53

High-speed hobbing gives remarkable results. J. W. Rapp. il Mach 59:151-4 D '52

Hobbing accurate gears. S. J. Johnson and P. R. Noling. il Mach 59:184-7 Ja '53

HOBBING machines

See also

Gear cutting machines

HOBBS, William Herbert, 1864-1953

Sketch. G. D. Hubbard. Science 117:521-2 My 15 '53

HOBBY, Oveta Culp, 1905-

Eisenhower is still naming names. por(p29) Bsns W p30 D 6 '52

FSA chief. por Ed & Pub 85:7-8 N 29 '52

Finding a GOP welfare plan. pors Bsns W p 116+, cover My 16 '53

Madame Secretary; in her new post Mrs Hobby will need more than a title. J. C. Perham. por Barron's 33:3 Mr 23 '53

HOBERG paper mills, inc. See Charmin paper mills, inc.

HOBOKEN, New Jersey

Hoboken turns piers over to Port of New York authority. plan Marine Eng 57:63 N '52

HOBS

Be kind to your hobs. C. R. Staub. il diags Mach 59:163-8 F '53

HOCHSCHILD, Mauricio

Businessmen in the news. por Fortune 46:47 D '52

HOCKLEY, Roscoe Leete

Businessmen in the news. por Fortune 47:38 Ja '53

HODNETTE, John K.
Portrait. Fortune 46:120 D '52

HODOSCOPE
Hodoscope unit with the neon lamps normally off. R. Arce and others. R Sci Instr 23:441-2 Ag '52

HOFFA, James R.
Splitup in Detroit worries AFL; revolt of the locals. Bsns W p 154 Je 6 '53

HOFFMAN, Paul Gray, 1891-
Businessmen in the news. por Fortune 47:58 Mr '53

HOFFMAN, Sam
Building three places at once. pors Bsns W p 106-8+ Jl 25 '53

HOFFMAN radio corporation
Boom in new television stations out West benefits Hoffman Radio. Barron's 33:29-30 My 11 '53
Going east; West Coast tv company's plant in Kansas City. Bsns W p 184+ Je 6 '53

HOFFMANN, Johannes
Portrait. Bsns W p 148 D 6 '52

HOFMANN degradation
Hofmann degradation studies on β-erythroidine; the structure of des-N-methyldihydro-β-erythroidinol. J. Weinstock and V. Boekelheide. bibliog Am Chem Soc J 75:2546-50 Je 5 '53
Structure of apo-β-erythroidine. M. F. Grundon, G. L. Sauvage and V. Boekelheide. bibliog Am Chem Soc J 75:2541-5 Je 5 '53
Structure of β-erythroidine and its derivatives. V. Boekelheide and others. bibliog Am Chem Soc J 75:2550-8 Je 5 '53
Structure of native poly-D-glutamic acid; the synthesis of poly-L-glutamine and the Hofmann degradation thereof. V. Bruckner, J. Kovács and K. Kovács. Chem Soc J p 1512-14 My '53
Study of the Hofmann degradation of apo-β-erythroidine. M. F. Grundon and V. Boekelheide. bibliog Am Chem Soc J 75:2537-41 Je 5 '53

HOFMANN reaction
Alkaloid of dioscorea hispida, Dennstedt; Hofmann degradation. A. R. Pinder. Chem Soc J p 1825-8 Je '53
Hofmann reaction with α- and β-hydroxyamides; reactions of the intermediate *iso*cyanates. C. L. Arcus and D. B. Greenwood. Chem Soc J p 1937-40 Je '53

HOISTING
Los Angeles lift-slab is heaviest yet. il Eng N 149:44 N 20 '52
See also
Airplanes—Hoisting

Safety measures

Chains that won't let you down. J. Hogans. flow chart il Nat Safety N 67:32-5+ Ja '53
How safe are your slings? W. C. Richards. il diags Nat Safety N 68:22-3+ Ag '53; Same, with tables. Oil & Gas J 52:329 Je 22; 107 Jl 6; 146 Jl 13 '53
Load-bearing chain. il Nat Safety N 67:168 Mr '53
Pick it up? J. R. Sears. il Power 97:109-11 My '53
Speeds battery changing; lifting device. il diags Nat Safety N 68:25 S '53
Suggestions for safety in handling chains. il Iron & Steel Eng 30:129-30 My '53; Safety Maint & Prod 105:39 Je '53; Nat Safety N 68:66+ Jl '53

HOISTING machinery
Air hoists take the pain out of painting. il Bus Transportation 32:40-1 Ap '53
Compact compressor-hoists of welded design speed Montreal tunnel job. A. R. Jacobs. il Roads & Eng Constr 91:126+ Ag '53
Compact drive for drilling hoist. il diag Machine Design 25:176 S '53
Elevator aids loading oil drums on trucks. O. O. Henderson. diags Elec World 139:112+ Mr 9 '53
Grip it! grab it! firmly, safely; grabs, grips, tongs or grapples. il diags Mill & Factory 53:108-12 Jl '53
Home-made traveling hoist handles big truck tires. il Constr Methods 35:106 Jl '53
Manual hoisting and winching machine. il diags Engineering 174:359 S 12 '52
Navy uses vacuum lift for precast panels. il Concrete 61:18+ Mr '53
Novel rigging swings pile plumb. il diags Constr Methods 34:52-6 N '52
Portable elevator for building work. Engineer 196:79 Jl 17 '53; Engineering 176:189 Ag 7 '53
Tower gives workmen 100-foot reach. il Eng N 150:180-1 Ap 16 '53
Vet's venture. Fortune 47:180 Mr '53
Your portable elevator. il Factory Management 110:124-5 O '52
See also
Cranes, derricks, etc.
Mine hoisting
Wire rope

Safety measures

Hoists and portable cranes. il Nat Safety N 67:172 Mr '53

Tables, calculations, etc.

Charts simplify hoisting drum design; data sheet. N. Sag and A. C. Briggs. diags Machine Design 25:265-71 Ap '53

HOISTING machinery, Electric
Code interpretations and conductor selection for cranes and hoists. L. Price. Iron & Steel Eng 29:130-6 N '52
How to select a hoist for the job. C. O. Barnes. Iron & Steel Eng 29:111-12 D '52
See also
Mine hoisting, Electric
Winches, Electric

HOLCOMB, Glenn W.
Sketch. por(p961) Civil Eng 22:962 N '52

HOLDING companies
Holding company integration programs. O. Ely. Pub Util 51:40-1 Ja 1 '53
SEC looks the other way. Bsns W p 138 Ap 18 '53
See also
Alleghany corporation
American power and light company
Aviation equipment corporation
Banks and banking—Holding companies
Standard gas and electric company
United gas improvement company

Laws and regulations

Should the SEC continue to study utility system operations? open letter to Donald C. Cook, chairman of SEC. W. A. Paton. Pub Util 50:473-80 O 9 '52

Securities

Holding company integration programs. O. Ely. Pub Util 52:163-4+ Jl 30 '53

Taxation

Justice for utility holding company equities. F. D. Chutter. Pub Util 52:473-9 O 8 '53

HOLDING devices
Grip it! grab it! firmly, safely; grabs, grips, tongs or grapples. il diags Mill & Factory 53:108-12 Jl '53
Simple tool for welding at an angle. diag Mill & Factory 52:139 My '53

HOLDING devices (machine work)
Constant specific pressures for blankholders in drawing dies. F. Strasser. diags Mach 59:200-1 Ja '53
Hydra-curve flexible jaws for stretch-forming machines. il Mach 60:212-13 S '53
Ingenious holder increases life of carbide tools. G. H. DeGroat. il diags Am Mach 97:108-9 Mr 2 '53
Notched plates boost holding power of magnetic chucks. R. Double. il diag Am Mach 97:147 F 16 '53
Tap holder is quickly made. diags Mill & Factory 52:137 Je '53
See also
Machine tools—Fixtures

HOLIDAY (periodical)
Noteworthy in the magazines. J. Hanan. Adv Agency 46:78 Ja '53

HOLIDAYS
Intercity carriers urged to back Monday holiday plan. Bus Transportation 31:56 D '52

HOLLAND. See Netherlands

HOLLAND furnace company
Twenty stocks acting best, poorest; with tables. J. S. Williams. Mag of Wall St 92: 226 My 16 '53

HOLLAR, Philip A. 1903-
Hollar of the A.A.R. por Ry Age 134:50-1 Je 29 '53

HOLLIS, Mark D.
Sanitary engineer takes on new duties. por Eng N 149:70 O 23 '52

HOLLISTER, Solomon Cady, 1891-
Lamme award, 1952. por J Eng Educ 43:47-9 S '52

HOLLOWAY, John Lindesay, 1898-
Businessmen in the news. por Fortune 47:50 My '53

HOLLY
Holly and sand go hand in hand; New Jersey silica sand co. D. G. Fenton. il Rock Prod 55:90 D '52

HOLLYDAY, Guy T. O. 1892-
New FHA chief. por Eng N 150:23 Ap 16 '53

HOLMES safety association
Holmes awards cite safety achievements. Coal Age 58:176+ Je '53

HOLOCELLULOSE
Action of acid chlorite on wheat straw. V. D. Harwood. bibliog(34 ref) Tappi 35:549-55 D '52

HOLTZCLAW, Jack Gilbert, 1886-
Businessmen in the news. por Fortune 47:53 My '53

HOME accidents. See Accidents in the home

HOME appliances. See Domestic appliances

HOME builders, National association of. See National association of home builders

HOME economics
See also
Domestic appliances
Food
Heating
Laundry

Study and teaching

Home setting sells educators; homemaking classrooms. il Am Gas Assn Mo 35:17 Ap '53

HOME furnishing. See Household products industries

HOME insurance company of New York
Hundredth anniversary banquet. East Underw 54:26 Ap 17 '53; il Nat Underw 57: 2+ Ap 16 '53; Weekly Underw 168:1057+ Ap 18 '53
Now century old, kept pace with Nation's expanding economy. C. Axman. East Underw 54:27-8+ Ap 10 '53

HOME labor
Home policy typing industrial work, Illinois department says. Nat Underw 56:10 N 6 '52

HOME mechanics. See Mechanics, Household

HOME office life underwriters association
Annual meeting, White Sulphur Springs. Nat Underw (Life ed) 57:1+ Ap 24 '53

HOME ownership
Home market seen in public tenants. Eng N 149:109 N 20 '52
Rental income and outlay in the United States, 1929-52. H. D. Osborne. Survey of Cur Bsns 33:17-24 Je '53

HOME study. See Correspondence schools and courses

HOME work. See Home labor

HOMES, Institutional
See also
Nursing homes
Old age homes

HOMOGENIZATION
Mass isolation of whole cells from rat liver. N. G. Anderson. bibliog il Science 117:627-8 Je 5 '53
See also
Homogenizers

HOMOGENIZERS
High-speed milling and grease-producing plant. il diag Engineering 176:253 Ag 21 '53

HOMOPHTHALIC acid
Preparation of some substituted homophthalic acids. A. S. Bailey and R. S. Staunton. Chem Soc J p2153-6 Je '52

HOMOPIPERAZINE
Reactions of biradicals in solution; decomposition products obtained from the oxidation of 3,7-dicyano-3,7-dimethylhomopiperidazine. C. G. Overberger, P. Huang and T. B. Gibb, jr. bibliog Am Chem Soc J 75:2082-6 My 5 '53

HOMOVERATRIC aldehyde
Abnormal chichibabin reactions; the condensation of phenylacetaldehyde and homoveratric aldehyde with ammonia. E. L. Eliel, R. T. McBride and S. Kaufmann. bibliog Am Chem Soc J 75:4291-6 S 5 '53

HONDURAS
See also
Coffee trade—Honduras

Economic conditions

Economic conditions abroad (cont). For Comm W 48:3 O 13 '52

HONDURAS, British. See British Honduras

HONEY
Guatemala's honey output steady; exports decline. For Comm W 48:22 D 22 '52
Natural concentration of deuterium in honey. T. C. Helvey. bibliog Science 117:276-7 Mr 13 '53

HONG KONG
See also
Moving picture industry—Hong Kong

HONGKONG and Shanghai banking corporation
Statement by the chairman. A. Morse. Economist 166:668-72 Mr 7 '53

HONING
Honing used for greater, faster stock removal; Pratt & Whitney division of Niles-Bement-Pond co. E. C. Beaudet. il Iron Age 170:170-1 D 11 '52
What's ahead the next ten years in machining; grinding, lapping, honing. Am Mach 96:E 15-18 Mid-N '52

HONING machines
Hones 30-ft bores vertically in three takes; Fulmer vertical honing machines. il Am Mach 97:154-5 Ag 17 '53
Microflat honing machine for precision finishing of flat surfaces. il Mach 59:206 F '53
Micromatic hone model 844 now has independent spindle speeds. il Am Mach 97: 160 Mr 2 '53

HONOLULU

Architecture

Waikiki Beach shops. il plans Arch Rec 112: 153-5 S '52

HOOD, Clifford Firoved, 1894-
Businessmen in the news. por Fortune 47:37 Ja '53
Hood of U.S. Steel. por Fortune 47:146-7 F '53
They're reshuffling Big Steel. por Bsns W p27-8 D 6 '52

HOOD, Harrison Porter, 1896-
Presentation of the John Price Wetherill medals. por Franklin Inst J 254:460-3 D '52

HOOK, Charles Ruffin, 1914-
Portrait. Bsns W p98 Je 27 '53

HOOKER electrochemical company
Offers convertible preferred stock. Comm & Fin Chr 177:624 F 9 '53
U.S. company spreads northward. il Bsns W p82+ N 29 '52

HOOKS
Selfix hooks. Consumers Res Bul 32:19 Ag '53

HOOVER, Herbert Clark, 1874-
Hoover plan; dams but no socialism. por Elec World 139:104-5 Ap 20 '53

HOOVER, limited
Statement by the chairman. C. Colston. Economist 166:773 Mr 14 '53

HOPE, Clifford Ragsdale, 1893-
Portrait. Bsns W p28 N 8 '52

HOPI Acala. See Cotton

HOPKINS, John Jay, 1893-
Portrait. Bsns W p94 My 2 '53
So they named it General Dynamics. por Fortune 47:134-7+ Ap '53

HOPPERS
Automatic sorting, feeding and injecting devices. J. R. Paquin. il diags Tool Eng 30: 73-7 Ap '53

HOPPERS—*Continued*

Design of hoppers for use. C. A. Lee. diags Chem Eng 60:194-5+ My '53

Dust control from hoppers; detail sheet. diags Heat & Ven 50:9-10 Jl '53

Hopper feeds for bottle caps. J. Waitkus and V. Waitkus. diags Mach 58:180-1 Je '52; 59:176-7 Ja; 184-5 F; 200-1 Mr; 192-4 Ap; 186-7 My '53

Hopper feeds needles to bearings. H. Chase. il Steel 132:79+ Ja 26 '53

How we licked sticking coal. M. E. Rule. diags Power Eng 57:73-5 Mr '53

HOPS

British output, exports of hops decline. For Comm W 49:28 Mr 16 '53

Cohumulone, a new hop constituent. F. L. Rigby and J. L. Bethune. Am Chem Soc J 74:6118-19 D 5 '52

Humulinone; its alleged occurrence in hops. M. Verzele and F. Govaert. Chem Soc J p3313-14 Ag '52

See also

Humulone

HORMONES

Experimental production of arthritis in rats by hypophyseal growth hormone. W. O. Reinhardt and Choh Hao Li. bibliog il Science 117:295-7 Mr 20 '53

Experiments on the synthesis of potential cortical hormone substitutes. F. J. Dyer, D. A. A. Kidd and J. Walker. Chem Soc J p4778-83 D '52

Extraction of adrenal cortex hormone activity from placental tissue. R. H. Johnson and W. J. Haines. bibliog Science 116:456-7 O 24 '52

Homologs of some steroid hormones. A. I. Ryer, W. H. Gebert and N. M. Murrill. Am Chem Soc J 75:491-3 Ja 20 '53

Hormonal antimetabolites; derivatives of *meso*-2,2′-dithienylhexane. J. Slicé and M. Mednick. bibliog Am Chem Soc J 75:1628-31 Ap 5 '53

Investigations of posterior pituitary hormones; abstract. V. du Vigneaud. Chem & Eng N 31:1186 Mr 23 '53

See also

ACTH
Adrenal glands—
  Hormones
Cortisone
Estradiol
Estrone
Hydroxycorticosterone
Laurentian hormone conference
Progesterone
Testosterone

HORMONES, Plant

Synthetic plant hormones; some esters of phosphoric acid. M. H. Maguire and G. Shaw. Chem Soc J p 1479-82 My '53

HORSE racing

See also

Betting

HORSEPOWER

Compressor calculations; calculating compressor horsepower. R. W. Brooks. Oil & Gas J 52:133 My 11 '53

How to figure punching horsepower. Mill & Factory 53:100 O '53

HORSERADISH peroxidase. See Peroxidases

HORSES

Old gray-brown mare upsets reporter's life. Ed & Pub 85:48 D 20 '52

HORSES, Fossil

Are Petaluma horse teeth reliable in correlation? R. A. Stirton. bibliog il diags Am Assn Pet Geologists Bul 36:2011-25 O '52

HORTICULTURE

See also

Electrohorticulture

HOSE

Flexible hose survives trial by fire. G. L. Christian. il diags Aviation W 57:54+ D 22 '52

Flexible hoses in Diesel engine installation. il diags Diesel Power 31:73-7 O '53

Hints on care of flexible hose. R. H. McGregor. diags Constr Methods 35:97-8 Ag '53

How to avoid failure in flexible metallic hose. J. J. Phillips. diags Factory Management 110:162+ O '52

How to get more service from industrial hose. J. A. Muller. il Oil & Gas J 51:131 N 3; 169 N 10; 421 N 17 '52; Same. Paper Tr J 135:24-5 N 28 '52; Same. Pub Works 83:80-1 D '52; Same abr. Coal Age 57:117 O '52; Same abr. Constr Methods 35:76-7 F '53

It pays to be gentle with rotary hose. H. Barnard. il Oil & Gas J 51:147 My 4 '53

Packing problem solved with common garden hose. W. H. Higgins. Water & Sewage Works 100:419 O '53

Rotary knife hose cutter. il Machine Design 24:183 D '52

Advertising

Why new advertiser is upping the budget again this spring; Swan garden hose. M. W. Miller. il Ptr Ink 242:33-5 Mr 6 '53

Manufacture

Hose compounding. F. S. Gregory. il India Rubber World 127:223-5 N '52

Jet exhauster cracks rubber hose production problem. diag Rubber Age 72:484 Ja '53

HOSE couplings

Bowden high-pressure hose end fitting. il Engineer 195:576 Ap 17 '53

Twenty-eight year old standard contributes to civilian defense; American standard for fire-hose coupling screw threads. Standardization 24:81 Mr '53

HOSIERY

Cellophane bags call for new packaging techniques. E. D. White. il Textile World 103:88-9 Ap '53

Hosiery and the endless march of new fibers. V. T. Hartquist. Am Dyestuff Rep 41:781-3 N 24 '52

Outlook and trends in the hosiery industry. W. G. Knerr. Am Dyestuff Rep 41:736-8 N 10 '52

Vacuum-packed hosiery; Gotham's new plastic-film pouch. il Mod Packaging 26:82-3 F '53

See also

Dyes and dyeing—
  Hosiery

Manufacture

Design and testing of a gummed nylon yarn for stocking knitting. J. M. Baldwin and W. D. Ewan. il Textile Inst J 44:P579-601; Discussion. P601-2 Ag '53

Dyeing and finishing of hosiery. H. L. De Turck. Am Dyestuff Rep 41:739-43 N 10 '52

Hosiery manufacture; electrical arrangements for Margate industry. il Elec R (Lond) 152:433-5 F 20 '53

How Southern hosiery mill, inc. knits two-sole socks. J. H. Blore. il Textile World 103:139+ O '53

Seven fabrics make up this sock; Climax hosiery mill. E. D. White. il diag Textile World 103:171+ S '53

Seven points to watch when you knit crinkled nylon. J. H. Blore. il diags Textile World 103:110-11 Mr '53

Six tips to improve sock looping. J. H. Blore. il diag Textile World 103:108-9 My '53

Watch these points for successful Dunn-system operation. H. B. LeFeaux. il diag Textile World 103:94-5+ O '53

See also

Hosiery machines

Rating

Newer synthetics versus wool and rayon in hose for men. il Consumers Res Bul 30:21-3 D '52

Testing

Torture test sells merchandise at point of sale; sandpaper-and-scissor test of hosiery. il Ptr Ink 242:80 F 27 '53

HOSIERY dyeing. See Dyes and dyeing—Hosiery

HOSIERY machines

Keller new hosiery machine highlights versatility, quality, production. il Textile World 103:104-5+ O '53

Knitting speed increased 25 per cent on "Reading 100" full-fashioned machines. il Textile World 102:171 N '52

New rib-top anklet machine eliminates hand transfers. il Textile World 102:174 N '52

New threading method improves full-fashioned seams. S. Boyer. il Textile World 103:100-1 Jl '53

You can reduce press-offs with this yarn-oil system. H. B. LeFeaux. il diag Textile World 103:104-5 Ja '53

HOSIERY machine—*Continued*

Cleaning

Six things that help remove caked nylon size. S. Gellers. il Textile World 103:123+ Mr '53

Lubrication

Automatic lubricating system cuts knitting oil stains 75 per cent; Griffin hosiery mills and Spalding knitting mills. E. D. White. il Textile World 103:94+ Jl '53

How to clean and oil seamless nylon machines. B. M. Dunham. il Textile World 103:118+ Ag '53

Maintenance and repair

Here's a maintenance program for variable-speed drives; Vanette hosiery mills. H. B. LeFeaux. il diag Textile World 102:102-3+ D '52

HOSIERY mills

Griffin hosiery mills reduced menders by half. E. D. White. il Textile World 102:122 D '52

Electric equipment

Hosiery manufacture; electrical arrangements for Margate industry. il Elec R (Lond) 152:433-5 F 20 '53

Employees

Wage chronology; full-fashioned hosiery, 1949-1951. Mo Labor R 75:408-10 O '52

Equipment

Full-fashioned mill reduces costs with a special handling system. H. B. LeFeaux. il plan Textile World 103:80-1+ Ap '53

See also

Hosiery machines

Management

How a full fashioned mill cut its boarding costs; National hosiery mills. J. H. Blore. il Textile World 103:118-19 My '53

Power

Gas-fired boiler pays its way at Rome Hosiery. E. D. White. il Textile World 103:124+ Mr '53

HOSIERY trade

Accounting

Standard costs in a hosiery mill. C. R. Pincsak. N A C A Bul 34:76-81 S '52

Advertising

Airmaid hosiery salesmen select their own advertising media. M. M. Donosky. il Sales Management 69:44+ D 1 '52

HOSPITAL librarians

Role of hospital librarians in public health statistics. Pub Health Rep 68:279-80 F '53

HOSPITAL ships

Thanks to yellow fever; floating hospitals. E. A. Fay. il U S Naval Inst Proc 78:1342-7 D '52

HOSPITALIZATION insurance. See Insurance, Hospitalization

HOSPITALS

Hospitals; building types study. flow charts il plans Arch Rec 113:165-88 F '53

Hospitals need better customer relations. R. O. Beckman. Personnel J 31:373-6 Mr '53

Hospitals today. A. J. J. Rourke. Pub Health Rep 67:1157-60 N '52

Liability of schools and hospitals is stirred up again. Nat Underw 57:21 F 5 '53

Radioisotope facilities for the general hospital. S. C. Ingraham. plans Arch Rec 112:181-2+ D '52

Rehabilitation in the hospital. H. A. Rusk. il Pub Health Rep 68:281-5 Mr '53

See also

Children—Hospitals

New York (city)—
Hospitals

Costs

Hospitals need mechanical know-how. C. F. Neergaard. il Power 97:77-9 My '53

Designs and plans

Hospitals; building types study. il plans Arch Rec 112:179-222 O '52

100-bed general hospital on 150-bed chassis; Olympic memorial hospital, Port Angeles, Wash. il plans Arch Rec 112:159-63 N '52

Rosenfield and his hospitals; he approaches his jobs like a city planner. il plans diags Arch Forum 97:128-35 S '52

Electric equipment

Hospital installation; Norfolk and Norwich hospital. il Elec R (Lond) 151:1243-5 D 5 '52

Re-wiring a hospital. il Elec J 151:654 Ag 28 '53

Equipment

Compressed air is used in various ways in Sunbury's modern hospital. C. H. Vivian. il Comp Air Mag 58:40-3 F '53

Hospital goes modern; Bay City's Mercy hospital. il Dom Eng 181:92-5+ F '53

Operation kinks at the Gowanda, N.Y., state hospital sewage plant. W. L. Edwards. il Sewage & Ind Wastes 25:92-5 Ja '53

Finance

Columbus hospital admissions plan. L. A. Orsini. Weekly Underw 168:1422+ My 23 '53

Saskatchewan stabilizes hospital incomes. Pub Health Rep 68:123-4 Ja '53

Fires and fire protection

Hospital fire film. Safety Maint & Prod 105:70 F '53

Heating and ventilation

Hospitals need mechanical know-how. C. F. Neergaard. il Power 97:77-9 My '53

Operating rooms

Electrification; its generation and behavior in hospital operating rooms. R. Beach. diag Elec Eng 72:329-34 Ap '53; Discussion. F. L. Hernach. 72:664-5 Jl '53; Reply. 72:854 S '53

Static electricity in hospital operating suites; direct and related hazards and pertinent remedies. P. G. Guest and others. bibliog il diags U S Bur Mines Bul 520:1-58; pa 40¢ Supt. of doc. '53

Static hazards in hospitals. il Safety Maint & Prod 105:77-9 Mr '53

Power

Operating a state hospital plant; abstract. C. R. Bender. Heating-Piping 25:89 My '53

Poor operation brings on replacements; Baylor hospital's power plant. M. Jones. il Power 97:105-7 Ap '53

Reliability, continuity mark institutional plant; Rochester, Minn. state hospital. L. J. Neubauer. flow diag il diag Power 97:80-3 Jl '53

Safety measures

Electrification; its generation and behavior in hospital operating rooms. R. Beach. diag Elec Eng 72:329-34 Ap '53

Good maintenance stops accidents; preventive maintenance program of large hospital. H. E. D'Arcy. Safety Maint & Prod 105:14-16 F '53

Let's discuss oxygen safety in hospitals. H. A. McKennett. il Safety Maint & Prod 106:57-8 Jl '53

Static electricity in hospital operating suites; direct and related hazards and pertinent remedies. P. G. Guest and others. bibliog il diags U S Bur Mines Bul 520:1-58; pa 40c Supt. of doc. '53

Static hazards in hospitals. il Safety Maint & Prod 105:77-9 Mr '53

Statistics

Beds needed and beds existing, compared with one year's new construction. Pub Health Rep 67:1176-7 D '52

Construction of hospitals, health centers, and other health facilities, 1951-52. W. E. Gilbertson and H. A. Kahn. Pub Health Rep 67:1168-75+ D '52

Hospital care doubles for 65's and over. I. S. Falk and A. W. Brewster. Pub Health Rep 68:122-3 Ja '53

Great Britain

Strings to the hospitals' purses; financing hospitals first place on Guillebaud committee's inquiry. Economist 167:495-7 My 23 '53

HOSPITALS, Industrial

Depot hospitals. J. L. Francoeur. Pulp & Pa of Can 54:144, 146, 151 Ja '53

New layout, better equipment improve plant hospital; Bucyrus-Erie co. il Iron Age 170: 93 O 30 '52

See also

Medical service, Industrial

HOSPITALS, Military

Answer newspaper on benefit payments to patients treated in VA hospitals. Nat Underw 57:27 Ap 16 '53; Same. Nat Underw (Life ed) 57:2 Ap 10 '53

Companies pay for veterans' treatment if provided for in policy. East Underw 54:5 Ap 10 '53; Same. Weekly Underw 168:1029 Ap 11 '53

Seven army projects launch services' new hospital building plan. il plans Arch Rec 112:12-13 '52

See also

Hospitals, Naval and marine

HOSPITALS, Naval and marine

Navy buildings; dispensaries; mobilization type. il plans Arch Rec 112:191 S '52

Pavilion plan favored for hospitals; U.S. naval hospital, St Albans, N.Y. il plans Arch Rec 112:177-80 S '52

See also

Hospital ships

HOSPITALS, Psychiatric

Hospital services for the mentally ill. W. E. Barton. Ann Am Acad 286:107-15 Mr '53

Murderer in the mental institution. B. A. Cruvant and F. N. Waldrop. bibliog Ann Am Acad 284:35-44 N '52

HOT atoms. See Atoms

HOT boxes. See Cars—Bearings

HOT shoppes, inc.

Stock offered. Comm & Fin Chr 177:1257-8 Mr 23 '53

HOT springs

Hot-spring power plant. plan Mech Eng 75: 325 Ap '53

Hydrothermal rock alteration at Wairakei, New Zealand. A. Steiner. bibliog il map diag Econ Geol 48:1-13 Ja '53

Power from hot water. flow diag il diags Engineer 194:719-21 N 28 '52; Engineering 174:660-1, 691-3 N 21-28 '52

Radioactivity of the hot springs at Tiberias. D. B. Rosenblatt and H. Lindeman. Science 116:689-90 D 19 '52

Volcanic geology, hot springs, and geysers of Iceland, by T. F. W. Barth. Review, by M. S. Walton, jr. bibliog Am J Sci 250: 910-15 D '52

HOT water heating

Advanced design featured in the Lincoln electric co.'s new plant. il Heating-Piping 24:90-4 N '52

Check your heating system it may need revamping. il Textile World 103:116-17+ Ja '53

Consider high-temperature water for your process and space-heating jobs. A. Kuli. il diags Power 97:96-8 Ja '53

Corrosion in closed circulating water systems. S. Sussman and J. B. Fullman. il diag Heat & Ven 50:77-82 O '53

Heat transmitted to the I-B-R research home from the inside chimney. W. S. Harris and R. J. Martin. bibliog plans diags Heating-Piping 25:131-7 My '53

Heating glass-walled building for the University of Cincinnati's College of applied arts. F. L. Bonem. il Heating-Piping 25: 144-6 Ja '53

How to convert gravity flow hot water heating to forced flow. H. A. Lockhart. diags Dom Eng 181:94-5+ Ap '53

It's busy now, but what about next winter; heating outdoor theaters. il plans diags Dom Eng 182:86-9+ Ag '53

Modernizing gravity flow wet heat systems. diags Dom Eng 180:94-5+ D '52

Piping problems simplified with high-temperature hot water distribution. F. L. Moesel. plan diags Arch Rec 113:192-4 F '53

Pressurizing high pressure hot water systems with nitrogen and other methods. J. R. Kell. il diags Heating-Piping 25: 84-7 F '53

Ryaland accelerator pump for central-heating systems. il Engineering 176:287 Ag 28 '53

Service hot water piping with hot water as source of heat; detail sheet. diags Heat & Ven 50:9-10 F '53

Tests of the Anthratube. J. F. Barkley and others. 23pls U S Bur Mines Rep of Invest 4936:1-13 '53

When it comes to remodeling they're never too new! il Dom Eng 180:132-3 D '52

Cost

Stress lower costs of hot water heating; research program sponsored at the University of Illinois. diags Am Bld 74:202 N '52

Panel system

Aluminum panels for heating, cooling; Alcoa's Pittsburgh office. J. J. Mann. il Power 96:71-4 N '52

Case for designing radiant heating panels to an assumed panel water temperature. W. P. Chapman. diags Heat & Ven 50:83-6 O '53

Experience is their teacher; installation of radiant heating in school. il diag Dom Eng 181:82-5+ Mr '53

Field studies of floor panel control systems. A. B. Algren and others. diags Heating-Piping 25:120-31 F '53

Further studies of the thermal characteristics of plaster panels. L. F. Schutrum and C. M. Humphreys. il diag Heating-Piping 25:122-5 Je '53

Low boiler water temperatures cause flue condensation. T. W. Reynolds. Heat & Ven 50:104-6 Jl '53

Out of the frying pan into the fire! heating predicament and how it was solved; Levine bros. il Dom Eng 181:96-7+ My '53

Practical pointers on installing radiant heating. T. R. Stevens. Heating-Piping 25: 105 F '53

Radiant heated booths; toll plaza of the Delaware River bridge, Camden, N.J. il Heat & Ven 49:126 N '52

Small homes feature radiant heat. il Am Bld 74:206 N '52

Year-round residential conditioning by reflective radiation. C. A. Mills. il plan diags Refrig Eng 61:862-6; Discussion. 866+ Ag '53

HOT water heating, Industrial

Consider high-temperature water for your process and space-heating jobs. A. Kuli. il diags Power 97:96-8 Ja '53

HOT water supply

Columbus apartment cuts hot water supply costs. il Am Bld 74:176 D '52

Efficient water heating system for ready mix concrete plant. il Concrete 61:34 O '53

Hot-water supply from tankless heaters. Consumers Res Bul 31:21 Mr '53

Immersion-heaters in post-war housing. P. Schiller. Elec J 150:1801-3 My 22 '53

Lick your storage-heater problems by proper application, auxiliaries. F. P. Lankow. il diags Power 97:108-9 Ag '53

Off-peak heating. il Elec R (Lond) 153:404-6 Ag 21 '53

Service hot water piping with hot water as source of heat; detail sheet. diags Heat & Ven 50:9-10 F '53

Tests of the Anthratube. J. F. Barkley and others. 23pls U S Bur Mines Rep of Invest 4936:1-13 '53

Three and one half cents per day; for heating, cooling and domestic hot water in each apartment. il Dom Eng 182:98 Ag '53

See also

Electric water heaters

Gas water heaters

HOT water tanks

Protection

Extending hot water tank life. R. L. Horst. Am Gas Assn Mo 35:10-11+ Je '53

Protecting hot-water tanks against corrosion. Consumers Res Bul 31:29-30 My '53

Tables, calculations, etc.

Compression tank selection for hot water heating systems. H. A. Lockhart and G. F. Carlson. diags Heating-Piping 25:132-9 Ap '53

HOT weather

Hot weather hygiene. Nat Safety N 67:60 Mr '53

How to beat the heat. W. Schweisheimer. Am Bsns 23:16-17+ Je '53

Last chance to test for next summer. il Safety Maint & Prod 106:40 S '53

HOTELS

Hotels wide-eyed; U.S.-run hotels abroad. Bsns W p 153 Ap 11 '53

Sage of Sheraton. E. Henderson. Barron's 33:5-6 Ap 27 '53

Schizophrenic hotel, Columbus, Ohio. Bsns W p58 D 20 '52

Seaside hotel is remodeled; Dune Deck hotel, Westhampton, Long Island. il plans diag Arch Rec 113:128-31 Ja '53

Air conditioning

Atlanta Biltmore hotel air conditions 250 rooms. il Heating-Piping 25:111 Jl '53

Hotel air conditioning planned; Commodore in New York. H. B. Matzen. il Heating-Piping 25:110-12 Mr '53

New control regulates air conditioning; Los Angeles Statler Center hotel. il Heating-Piping 25:91 O '53

Directories

Travel America, hotel directory and guide. 86th ed 192p pa 50c Ahrens pub. co, 71 Vanderbilt av, New York 17 '52

Employees

NYC hotel employees have modern medical center; abstract. F. P. Guidotti. Pub Health Rep 68:272 F '53

Equipment

Bay City report; hotels. E. M. Stephenson. il Dom Eng 180:146-7+ N '52

Smart operation gives hotel new look; Palmer House; illustrations with text. Power 96:103-6 N '52

Statler hotel in Los-Angeles chooses gas for heating, cooking, incineration. il Gas Age 110:25-6 D 4 '52; Same. Am Gas Assn Mo 35:17-18 Ja '53

Heating and ventilation

Put heating-system maintenance on a long-range operating program; Waldorf-Astoria hotel. T. J. Barrett. il diags Power 97:120-1 Jl '53

Too little engineering spoils the broth; ventilation arrangements for hotel's kitchen and laundry. S. R. Lewis. Heating-Piping 25:102-3 O '53

Insurance requirements

Cafe and hotel fire covers. C. T. Hubbard. Rough Notes 96:23+ Je '53

How to write liability on eating and lodging risks. C. Edwards. Rough Notes 96:24+ Je '53

Insuring hotels with the 3-D. J. I. Subers. Rough Notes 95:36+ N '52

Rates for hotels are inadequate. M. Acker. East Underw 54:42 Mr 20 '53; Same. Weekly Underw 168:800 Mr 21 '53; Same cond. Nat Underw 57:4 Mr 19 '53

See also

Insurance, Innkeepers' liability

Lighting

Functional lighting in the Los Angeles Statler; illustrations with text. Illum Eng 48:367-9 Jl '53

Canada

American hotel owners are expanding in Canada. J. Montagnes. Barron's 33:22 Mr 30 '53

Hawaiian Islands

Hawaiian boom sets off a tussle for hotel sites. il Bsns W p 142-4+ Jl 18 '53

Turkey

Tourist hotel for Istanbul, Turkey. il map plans diags Arch Rec 113:103-16 Ja '53

HOUDRIFLOW process. See Gasoline—Manufacture

HOUDRIFORMING. See Gasoline—Manufacture

HOUDRY process

25 years of research on catalysis pays off. il Chem & Eng N 30:4752-3 N 10 '52

HOUDRY process corporation

Houdry sues Socony-Vacuum on cat-cracking patents. Pet Eng 25:C81 Ap '53

Socony-Vacuum sued; Houdry wants damages for alleged patent infringement involved in licensing Air-Lift T.C.C. Oil & Gas J 51:66-7 Mr 9 '53

HOUGH, Frank G., company

Signposts; to become wholly owned subsidiary of International harvester co. Bsns W p33 N 1 '52

HOUGHTON and company

Making new products out of old. il Bsns W p43-4+ N 1 '52

HOURS of business. See Banks and banking—Hours of business; Retail trade—Hours of business

HOURS of labor

40-hour week at service stations brings more problems in manpower. F. Breese. Nat Pet N 44:46 O 1 '52

Shorter hours; retail revolution. Bsns W p41 Je 6 '53

See also

Overtime

Law

Some problems raised by the wage and hour law. H. A. Wecht. N A C A Bul 34:719-28 F '53

Shift schedules

Shift operations and differentials in union contracts, 1952. M. Levine and J. Nix. Mo Labor R 75:495-8 N '52

Shift operations in the metalworking industries, 1951. R. H. Lewis and E. P. Spector. Mo Labor R 75:615-19 D '52

Statistics

Metalworking wages and hours; production workers; employment; tabulations. Steel 132:194 Ja 5 '53

Steel employment, wages, hours and payrolls, 1937-1952; tabulations. Steel 132:195 Ja 5 '53

Union wages and hours; baking industry, July 1, 1952. J. F. Laciskey. U S Bur Labor Statistics Bul 1123:1-43 '53

Union wages and hours; building trades, July 1, 1952. A. Moros. U S Bur Labor Statistics Bul 1124:1-40; pa 25c Supt. of doc. '53

Union wages and hours; local transit operating employees, Oct. 1, 1952. A. Moros. U S Bur Labor Statistics Bul 1133:1-12; pa 15c Supt. of doc. '53

Union wages and hours; printing industry, July 1, 1951. J. F. Laciskey. U S Bur Labor Statistics Bul 1062:1-43; pa 25c Supt. of doc. '52

Union wages and hours; printing industry, July 1, 1952. J. F. Laciskey. U S Bur Labor Statistics Bul 1134:1-35; pa 20c Supt. of doc. '53

Wages and hours in selected industries, 1951-1952; tabulations. Steel 132:196 Ja 5 '53

HOUSE decoration

See also

Color in house decoration

HOUSE lighting

Detroit Edison gets going in home lighting promotion. E. J. Hurley. il Elec World News ed 138:38-9 S 29 '52

How to light the modern home. il Elec West 109:94-5 D '52

Landlord's lighting; installations in large blocks of flats. A. V. Leighton. il diag Elec R (Lond) 152:456-8 F 27 '53

Light conditioning helps builders to sell. il Elec West 111:102 Jl '53

Lighting will sell your living rooms. il Am Bld 75:198 F '53

Magic key to better living; residential lighting promotion. il Elec West 110:89 Ja '53

Recommended practice for residence lighting. bibliog(35 titles) il diags Illum Eng 48:413-45 Ag '53

Structural lighting in a modern home. A. M. Page. il diags Illum Eng 47:553-8 O '52; Discussion. 47:669-71 D '52

Teachers see the light; home lighting workshop. il Elec West 111:90 Jl '53

HOUSE numbers
Street naming, house numbering, plans Pub Works 84:68-9+ My '53

HOUSE organs
House organ; does it tell your story? W. V. Packard. Iron Age 171:79 F 12 '53
How to play the house organ. il Fortune 46:144-7+ O '52
Industrial editors turn spotlight on externals; John Earl Davis. Ind Marketing 38:139 Ag '53
Pick the plan before the editor for your new company publication. J. H. McCormick. Ptr Ink 241:80-1 N 7 '52
Printer's house organ gets customer acceptance. L. H. Allen. il Inland Ptr 130:42-3 D '52
See also
Employees' magazines

Catalogs

Nation's leading house magazines. 181p pa $20 Gebbie press, 19 E. 48th st, New York 17 '52

Editors

See also
American railway magazine editors association

HOUSE-to-house selling. See Door-to-door selling

HOUSE trailers. See Automobile trailers

HOUSEHOLD appliances. See Domestic appliances

HOUSEHOLD budget. See Budget, Household

HOUSEHOLD employees. See Servants

HOUSEHOLD finance corporation
Five stocks with record-breaking profits in 1952; with comparative balance sheet items. Mag of Wall St 91:242 N 29 '52

HOUSEHOLD products
See also
Domestic appliances

HOUSEHOLD products industries
How to sell more housewares. il Bsns W p48-9 Ja 24 '53
It's a different house. il diags Bsns W p 136+ F 21 '53
Martex towel started it all; cooperative promotion, towels, cotton rugs, blankets and shower curtains. il Sales Management 70:108 Mr 1 '53
Pick your line-leaders when you have a sale! Ekco kitchen tools. J. G. Brooks and M. B. Cossman. il Sales Management 70:88+ F 15 '53
Why super markets use rack jobbers. M. M. Zimmerman. il Sales Management 69:108+ O 15 '52
See also
Furniture industry and trade

Advertising

Now manufacturers rep gets into co-op ads. Sales Management 70:114+ Ja 15 '53

Statistics

Comeback in household goods. Fortune 46:30 N '52

HOUSEHOLD products industry

Statistics

1953 survey of consumer finances; purchases of durable goods in 1952 and buying plans for 1953. J. Frechtling and T. Smith. Fed Res Bul 39:701-3 Jl '53

HOUSES
Advanced design features for your 1953 houses. il plans diags Am Bld 74:96-106, cover N '52
Assisting build-your-owners can be profitable. il plan Am Bld 75:118-19 F '53
Builder know how + owner labor = low cost package. il plan Am Bld 75:86-7 F '53
Building three places at once. il Bsns W p 106-8+ Jl 25 '53
Cantilevered deck adds living space. il plans Arch Rec 113:156-8 F '53
Engineers inactive in home building. J. C. Taylor, jr. Midwest Eng 5:24+ D '52
Examples of National home week houses, they showed them and sold them. il plans Am Bld 74:76-9 D '52
Homebuilders' use of architects growing stronger in many areas. il House & Home 2:49-51 S '52
Home building holds fast pace; do-it-yourself market grows. J. M. Lange and others. Ind Marketing 38:40+ Mr '53
Low-cost house sells to a large special market. il plan diag House & Home 2:101 S '52
Most house for the money; Levitt & sons. il plan Fortune 46:150-6+ O '52
New house construction methods from England. il plans Am Bld 74:160-2 D '52
New method of construction combines steel and Cemesto board. il plan diag Am Bld 75:132-3 F '53
Practical houses for contemporary living. J. Graf and D. Graf. 174p $6.95 F. W. Dodge corp, 119 W. 40th st, New York 18 '53
Tested features turn lookers to buyers for South Bend, Indiana builder. il plan Am Bld 74:114-15 N '52
Variable house; five different houses from the same plan. il plans House & Home 2:100 S '52
Walls roll where they are wanted in flexible house. il plans Eng N 150:27 Ja 1 '53
What kind of houses does FHA insure? new survey provides some answers. Arch Rec 113:15 Ja '53
Who says there are no low priced houses? here are four of them; with cost data. il plans diag Am Bld 74:89-93 O '52
Why people buy the houses they do; University of Michigan study. Am Bld 75:16+ F '53
Wide variety and packaged financing are selling these houses. il plans diags Am Bld 75:88-91 F '53
Wood siding left to weather naturally. F. L. Browne. il Arch Rec 112:197-9 N '52
See also
Apartment houses
Architecture, Domestic
Basementless construction
Beach houses
Cabins
Concrete houses
Country houses
Farmhouses
Historic houses
Home ownership
House lighting
Housing
National association of home builders
Steel houses
Stone houses
Tourist camps, hostels, etc.
Week-end houses

HOUSES, Aluminum. See Aluminum, Structural

HOUSES, Concrete. See Concrete houses

HOUSES, Model
Advantages of gas clearly demonstrated by House of enchantment; Ohio fuel gas co. il Gas Age 111:40+ Ap 9 '53
All-gas in four-way promotion of high-cost Philadelphia homes. il Am Gas J 178:45-6 Ap '53; Am Gas Assn Mo 35:12-13 My '53
Brockbank's guinea pig house. il plan House & Home 2:129-30 S '52
Builder shows house at state fair. il Am Bld 75:202-3 F '53
Cutaway idea, what to do to make it produce sales. il plan Am Bld 74:88-92 D '52
Demonstration houses show value of modular coordination. il plan Am Bld 74:135 N '52
House for moderns creates home show interest. il plan Am Bld 74:94-5 S '52
How merchandising on local and national level builds volume; National homes corp. il plan Am Bld 75:137-8 F '53
Nation-wide buyer survey reflected in Trend home in Wichita, Kansas. il plans diags Am Bld 74:80-5 D '52
One house establishes National home week in Dubuque. il plan Am Bld 74:106-7 D '52
$30,000 sample home to boost residential air conditioning. R. Latimer. Sheet Metal Worker 44:60 Ap '53
See also Electric industries—Electric homes exhibitions

HOUSES, Portable
Complete home for four rolls up to the gas pump; Vita Home-Cruiser; illustrations with text. Bsns W p50 N 1 '52
New movable house is assembled in room units; Unishelter. il plans Am Bld 74:265+ O '52

HOUSES, Prefabricated
Bought in a package. il plan Am Bld 75:248-9 F '53

HOUSES, Prefabricated—*Continued*

Build it on a ledge; Stony Brook reservation. il Bsns W p 130-2 D 20 '52

Mobilhome develops a factory-built house in two parts. il plan diags Am Bld 74:142 O '52

New construction technique; finished walls in one operation; panel of lightweight concrete aggregates with center core of fiberglas. il diags Am Bld 75:230-2+ Ja '53

New house model; how it is prefabricated and erected; 1953 Gunnison home. il Eng N 150:33-4 F 12 '53

Precast panel walls for small houses. il diags Eng N 150:46-7 Ap 23 '53

Prefabricators eye high-cost market. Eng N 149:110-11 N 20 '52

Prefabs; aim for ten percent of starts. Iron Age 171:84 Mr 26 '53

Prefabs for export. il Economist 167:381-3 My 9 '53

Pre-fabs; Gunnison debuts new model. Iron Age 171:58-9 Ja 29 '53

Putting over the prefab house; National homes corp. il Bsns W p54-7 N 15 '52

Tilt-up wood frame walls cut labor costs. il diag Eng N 149:30-1 N 27 '52

HOUSES, Remodeled

Houseful of ideas with one aim; sell the fixup market, Lancaster, Pa. il Bsns W p66-8 F 14 '53

It's a first for Grand Rapids; modernization was the National home week feature; awards. il plans Am Bld 75:160+ Ja '53

Remodeling gets lion's share of incomes. Am Bld 74:207 N '52

HOUSES, Row

New row type housing planned to eliminate monotony. il Eng N 150:45 Mr 19 '53

HOUSES, Steel. See Steel houses

HOUSES, Stone. See Stone houses

HOUSING

Dissent on housing; supply of shelter may be outrunning demand. L. Grebler. Barron's 33:11+ Ja 12 '53

Housing and health facilities for our senior citizens. Pub Health Rep 67:1196-202 D '52

You can still sell the old homestead. Bsns W p32 F 7 '53

See also

Architecture, Domestic
Automobile trailers
Building
City planning
Company towns
Federal housing administration
Housing projects
Rent
Slums
Veterans—Housing

Cost

Tilt-up wood frame walls cut labor costs. il diag Eng N 149:30-1 N 27 '52

Finance

See Housing finance

Standards

Establishing housing standards for the aged. J. Masur. Pub Health Rep 67:1192-5 D '52

Housing standards and housing research. R. U. Ratcliff. Land Econ 28:328-32 N '52

Statistics

Household characteristics, 57 metropolitan areas. Sales Management 69:142+ N 10 '52

New housing in metropolitan areas, 1949-51. M. F. Carney. U S Bur Labor Statistics Bul 1115:1-64; pa 35c Supt. of doc. '52

Permanent nonfarm dwelling units started, 1939-1952. Fed Res Bul 39:56 Ja '53 [cont monthly]

Baltimore

Baltimore plan; is this the way to beat slums? il Eng N 150:49-50+ My 28 '53

Boston

Build it on a ledge; Stony Brook reservation. il Bsns W p 130-2 D 20 '52

Cincinnati

Housing squabble. Bsns W p 127-8 N 1 '52

Dallas, Texas

$35-million housing project under way in Texas. il Eng N 150:38-40 Ja 1 '53

Germany

Western German construction of houses continues high. For Comm W 49:5 Je 1 '53

Great Britain

Houses in between. diags Economist 167:237-9 Ap 25 '53

New cities. Economist 166:470-2 F 21 '53

New values for houses. Economist 167:429-30 My 16 '53

350,000 houses. Economist 167:348-9 My 9 '53

Tory reform for housing. Economist 166: 395-7 F 14 '53

Houston, Texas

Gracious spacious living; complete in one package. il Bsns W p96-8 D 6 '52

Kansas City, Kansas

Builders erecting 1,300 floodie houses for river victims; $7,000 each, no cash. il House & Home 2:56 S '52

Miami, Florida

Builders offer saving to public housing agency. Eng N 149:70+ O 9 '52

New York (city)

Construction breeds construction as urban development gets rolling; Throggs Neck houses. il Eng N 150:36-7 Je 4 '53

Largest housing project okayed for New York city. Eng N 150:49 Ja 29 '53

Smith Houses II open in New York city. il Eng N 149:44-5 N 27 '52

Ohio

Ohio slum clearance approved. il Eng N 150: 55 Mr 12 '53

Philadelphia

New row type housing planned to eliminate monotony. il Eng N 150:45 Mr 19 '53

Portland, Oregon

Housing plans delayed in Portland, Ore. for study. Eng N 150:44+ Ap 2 '53

Housing-redevelopment plan revived for Portland's Vaughn street area. Eng N 150:45 F 12 '53

San Diego, California

1,000-unit Coast project delayed by FHA details. Eng N 150:52 Ja 15 '53

Seattle

Seattle; exhibit A of architect-builder collaboration. il plans diags House & Home 2:85-107 S '52

Southern states

Construction labor on public housing in the South. A. L. Stucke and H. F. Haase. Mo Labor R 75:388-94 O '52

Toledo

Only itself to blame. Bsns W p58-9 My 9 '53

United States

Great rehousing market. Fortune 47:117-18 Ap '53

Home builders see banner year ahead. J. R. Carr. Eng N 150:79-81 Ja 29 '53

Home building picture across the Nation; quarterly survey (cont). maps Am Bld 74: 22+ O '52; 75:18+ Ja; 16+ Ap; 6+ Jl; 6+ O '53

Homes or pyramids. Barron's 33:1 Jl 20 '53

Housing goal; one million starts in 1953. Steel 132:66 My 25 '53

Housing; no signs of weakening yet. Bsns W p32 Je 20 '53

Housing problem. R. W. Babson. Comm & Fin Chr 177:2203 My 21 '53

Implications of rent control; experience in the United States. L. Grebler. bibliog Int Labour R 65:462-85 Ap '52; Abstract. Arch Forum 97:176-7+ S '52

Investors diversified services, inc. reports on Nation's first comprehensive housing survey; preferences of elderly men and women looking forward to retirement. E. E. Crabb. Comm & Fin Chr 176:2247 D 11 '52

National home week at a glance; tabulated data. Am Bld 74:74-5 D '52

1953 prospect; no record, but a lot of houses. Bsns W p29-30 Jl 25 '53

HOUSING—United States—*Continued*
No drop in housing next year. W. W. Schneider. Eng N 149:26 O 30 '52
Real estate outlook. C. B. Shattuck. Comm & Fin Chr 178:350-1 Jl 30 '53
See also
Federal housing administration

HOUSING and climate
Climate and housing; M.I.T. research project. il Tech R 55:196-7 F '53

HOUSING and home finance agency
New housing administrator outlines plans. A. M. Cole. Comm & Fin Chr 177:1538 Ap 9 '53
Razing the slums; federal aid gives U.S. cities a chance to clear up slums. Bsns W p76+ Ap 11 '53

HOUSING authorities

Securities

Housing bonds face new market troubles. Eng N 149:101 O 23 '52

HOUSING finance
Drafts program to aid home owners; National association of home builders will submit recommendations to Congress. E. M. Spiegel. Comm & Fin Chr 177:1018-19 Mr 5 '53
Easier FHA terms. Bsns W p64 Je 27 '53
Home loans still difficult. Bsns W p 114+ My 30 '53
1953 prospect; no record, but a lot of houses. Bsns W p29-30 Jl 25 '53
Old houses for new? NAHB offers a trade-in plan to ease the buyer's down payment. Eng N 150:151-2 My 14 '53
Relaxation on government-supported housing credit. Fed Res Bul 38:1002-3 S '52
Slums threaten building funds. Eng N 150:81 Ja 22 '53
Study of federal home financing essential! H. D. Pettibone. Comm & Fin Chr 177:483 Ja 29 '53
Washington's housing dilemma. Bsns W p32 F 21 '53
See also
Federal housing administration
Federal national mortgage association

HOUSING officials, National association of. See National association of housing officials

HOUSING projects
Big builder Albert Balch and his architects show 17 years of design progress. il plans House & Home 2:94-5 S '52
Fuel consumption analysis for multi-family housing projects. R. Skagerberg and J. E. Phifer. Heating-Piping 24:117-22 N '52; Abstract. Heat & Ven 50:164 Ap '53
Housing project avoids freight-yard look; state aided veteran's housing, Chelsea, Mass. il plans Arch Rec 113:124-5 Ja '53
Housing project has gunited walls. J. B. Jessup. il Eng N 149:43-4 N 6 '52
How a builder makes custom changes in a project development; Newlin and Johnson's, Terre Haute. il plans Am Bld 74:110-12 O '52
How a Kansas builder won success by using modular materials; Wadsworth homes, Olpe, Kan. il plans Am Bld 74:172-4 O '52
Levittown, Pa., a city from scratch. A. J. Fox, jr. il Eng N 149:34-6+ D 4 '52
Norwood village in the Seattle area. il plan House & Home 2:88-93 S '52
$100-million housing job proposed for Greenhills. Eng N 149:54+ N 6 '52
Secrets of a project plumber; John E. Higgins. il Dom Eng 182:104-7 S '53
Selling houses today at 1948 prices; Lucky Homes of Monte, Calif. il plans Am Bld 74:123-5 O '52
There's always a better plan; Norgate homes, Brookville, L.I. il plans Am Bld 74:132-3 S '52
Two Levittowns; one grew like Topsy; the other takes a leaf from history. J. C. Perham. Barron's 32:9 O 27 '52
See also
Levittown, Pennsylvania
Suburban development

HOUSING projects, Company
Collective bargaining on company-owned house rents. N. C. Rockwood. Rock Prod 56:61 F '53
U.S. Court of appeals upholds N.L.R.B.'s ruling on company-owned house rentals. N. C. Rockwood. Rock Prod 56:55+ S '53

HOUSING projects, Cooperative
Cooperative housing in the United States, 1949 and 1950. il map plans U S Bur Labor Statistics Bul 1093:1-133; pa 65c Supt. of doc. '52

HOUSING projects, Government
Construction labor on public housing in the South. A. L. Stucke and H. F. Haase. Mo Labor R 75:388-94 O '52

HOUSING projects, Municipal
Construction breeds construction as urban development gets rolling; Throggs Neck houses, New York city. il Eng N 150:36-7 Je 4 '53
Smith Houses II open in New York city. il Eng N 149:44-5 N 27 '52
$35-million housing project under way in Texas. il Eng N 150:38-40 Ja 1 '53

HOUSING projects, Trade union
New projects for the oldsters; retirement homes. Bsns W p 125-7 Jl 11 '53

HOUSING research
Housing standards and housing research. R. U. Ratcliff. Land Econ 28:328-32 N '52
Uniquely designed houses being built for research. Eng N 149:78 N 20 '52

HOUSING surveys
What do Mr and Mrs America want in the way of a new home? Am Bld 74:86 D '52

HOUSTON, Texas
Two heads. Bsns W p 110 Jl 4 '53
What it's like to be new. il Bsns W p74-8+ Ja 24 '53
See also
Floods—Houston, Texas

Art

$25-million worth of art blankets Houston. il Bsns W p32-3 D 6 '52

Housing

See Housing—Houston, Texas

Industries

Houston; Gulf Coast petro-chemical hub. W. V. Packard. il Iron Age 170:65-7 N 20 '52

HOUSTON university
Executive courses spread. il Bsns W p76-80 Ap 4 '53
Teaching by television. il Bsns W p30-2 My 2 '53

HOUZE, L. J., convex glass company
Houze adds decorating to diversified production. il Glass Ind 34:255-7+ My '53

HOWARD, Howdy
Gracious spacious living; complete in one package. pors Bsns W p96-8 D 6 '52

HOWARD, Jack Rohe, 1910-
Businessmen in the news. por Fortune 46:50 N '52

HOWARD, Roy Wilson, 1883-
Portrait. J. Walker. Ed & Pub 85:11 D 27 '52

HOWARD, Tom
Tom Howard tells story of death chair picture. G. A. Brandenburg. por Ed & Pub 85:16 D 27 '52

HOWDEN, James, and company, limited
Statement by the chairman. C. W. Hume. Economist 165:135-6 O 11 '52

HOWELL, Charles M. 1906-
Sketch. por (p187) Weekly Underw 168:216 Ja 17 '53

HOWLAND, Fred A. d 1953
Sketch. por Weekly Underw 168:1033-4 Ap 11 '53

HOWREY, Edward F.
Will FTC change its ideas? por Bsns W p29-30 Ap 4 '53

HUBBARD, Elbert
Is the old-time copy as good as the graybeards claim? Elbert Hubbard ads. C. J. Swan. Ptr Ink 241:55-7 O 17 '52

HUBBARD, Ralph Burnett, 1891-
Hubbard elected head of IAEL. por(cover) Elec World News ed 138:29 O 27 '52

HUBBELL, John W.
They're in the news. H. Woodward. por Sales Management 70:26 Mr 1 '53

HUBER, Walter L.
New ASCE leader, in first address, sees continued push for free enterprise. por Eng N 149:27 O 23 '52

HUDSON River bridges

New Tappan Zee bridge design attracts two bidders, both under cost estimate. map diags Eng N 150:25 Ap 23 '53

No bids cause change in New York bridge. Eng N 149:27 D 25 '52

HUDSON'S Bay company

Statement by governor. W. J. Keswick. Economist 167:630 My 30 '53

HUEBNER, S. S., foundation for insurance education

Permanent plan for Huebner foundation. East Underw 53:5 D 19 '52; Nat Underw (Life ed) 56:2 D 19 '52; Weekly Underw 168:110 Ja 3 '53

HUEBNER, Solomon Stephen, 1882-

AMA pays tribute to Dr S. S. Huebner at Chicago meeting. G. L. Hill. East Underw 53:1+ N 21 '52; Abstract. Nat Underw (Life ed) 56:22 N 21 '52

HUFF house. See Historic houses

HUGHES, Charles Evans, 1862-1948

Portrait. Fortune 46:143 O '52

HUGHES, Emmet John

Portrait. Bsns W p29 D 6 '52

HUGHES aircraft company

Hughes aircraft co.; plum for sale? Bsns W p85-6+ My 23 '53

Hughes takes wraps off avionics giant. P. Klass. il Aviation W 58:14-16 My 25 '53

HUGOTON production company

Recent developments. Comm & Fin Chr 177: 141 Ja 12 '53

HULL, Burt E. 1884-

Meet Mr Pipeliner. E. G. Schroeder. pors World Oil 135:284+ N '52

HULLETT, James C.

Hullett symbolic of new leadership. L. Cartwright. Nat Underw 57:5+ Mr 12 '53

HUMAN engineering (term)

Human engineering, what it is and what it can do for you. J. W. Dunlap. Factory Management 111:96-9 Ja '53

Psychology and the instrument panel. A. Chapanis. il diags Sci Am 188:74-6+ Ap '53

HUMIC acids

Resinous condensation products from humic acids and glycols or diamines. G. H. Thomson. bibliog J Ap Chem 2:603-8 O '52

HUMIDIFICATION

Chemical engineering unit operations; absorption and humidification. R. L. Pigford. bibliog diag Ind & Eng Chem 45:19-23 Ja '53

Controlled humidification is a must. H. Miedendorp. Mod Textiles Mag 34:92-3 Je '53

Mechanism of mass transfer on bubble plates; plate efficiencies. F. B. West, W. D. Gilbert and T. Shimizu. bibliog flow sheet il diags Ind & Eng Chem 44:2470-8 O '52

Simplified humidification calculations; systems other than air and water. J. G. Lewis and R. R. White. Ind & Eng Chem 45:486-8 F '53

HUMIDIFIERS

How to sell humidifiers. il Sheet Metal Worker 44:58-9 Mr '53

HUMIDITY

Air washer performance analyzed on the psychrometric chart. H. M. Hendrickson. bibliog diags Heat & Ven 50:91-103 Jl '53

Antibiotics filling requires chemical dehumidification. il Can Chem Process 37:82-3 F '53

Better V-belt is made with humidity control; B. F. Goodrich co. W. G. Davidson. il Refrig Eng 60:1186-7+ N '52

Can reheating be used to control humidity? Sheet Metal Worker 44:sup32 Jl '52

Combating heat and humidity. W. Schweisheimer. Paper Ind 35:671 S '53

Effect of humidity upon the insulation resistance of alkyd molding compounds. M. H. Bigelow and P. E. Nowicki. il Electrochem Soc J 100:60-2 F '53

Effect of relative humidity on heat loss of men exposed to environments of 80, 76, and 72 F. T. Inouye and others. bibliog Heating-Piping 25:109-15 Ag '53

Graphical analysis of problems; temperature, humidity and insulation. H. G. Todman. Midwest Eng 5:7-9+ F '53

Humidity conditioning essential to safety glass manufacture. G. A. Kelley. flow diags il plan Glass Ind 34:22-6+ Ja '53

Humidity control for an air conditioned office building; Toledo Blade. F. M. Johnson. il Dom Eng 182:104 Ag '53

Humidity indicators. il Consumers Res Bul 31:5-7 F '53

Method for determining the need of comfort air conditioning. W. T. Smith. il Refrig Eng 61:974-6+; Discussion. 1016+ S '53

New developments in systems for measurement and control of humidity and temperature in ceramic driers. J. R. Green. il diags Am Cer Soc Bul 32:18-22 Ja 15 '53

Safe storage r.h. and warmup; nomograph. R. R. Haugh. Food Eng 25:74 Ap '53

Simple technique for investigating the effect of humidity on the fading and degradation of dyed fabrics by sunlight, and some observations on dyed cotton. D. Ashton and M. E. Probert. bibliog diags Textile Inst J Trans 44:T 1-11 Ja '53

Sleeping comfort in humid atmospheres; Panama Canal zone. J. A. McKinley. bibliog Refrig Eng 61:168-70+ F '53

Temperature and humidity control equipment; Tem-Con system. diag Engineer 196: 15 Jl 3 '53; il Engineering 176:171 Ag 7 '53

Temperature and humidity control; Humicon system. il diag Elec R (Lond) 152: 1313-15 Je 5 '53

See also

Dampness in buildings

Dehumidifiers

Hygrometers

HUMMINGBIRDS

Metabolism of hummingbirds. O. P. Pearson. il Sci Am 188:69-72 Ja '53

HUMPHREY, George Magoffin, 1890-

Eisenhower's Cabinet; a gamble. por Bsns W p29 N 29 '52

George Humphrey? of course! por Fortune 47:79+ Ja '53

Humphrey's Hanna. J. C. Schaie. Barron's 33:5+ Ja 5 '53

Strong man in the Treasury. pors Bsns W p77-8+, cover F 28 '53

Treasury's new team. por Bsns W p70+ D 20 '52

HUMPHREYS, Herbert, 1907-

Businessmen in the news. por Fortune 46:57 O '52

HUMULENE

Chemistry of humulene. J. O. Harris. Chem Soc J p 184-6 Ja '53

Synthesis in the humulene series. R. W. Fawcett and J. O. Harris. Chem & Ind p 18 Ja 3 '53

HUMULINONE

Humulinone; its alleged occurrence in hops. M. Verzele and F. Govaert. Chem Soc J p3313-14 Ag '52

HUMULONE

Alkaline isomerization of humulone. J. F. Carson. bibliog Am Chem Soc J 74:4615-20 S 20 '52

HUNGARY

See also

Machine tool industry—Hungary

Petroleum industry and trade—Hungary

Commercial policy

Hungarian gift parcel controls modified; regulations permit receipt of shipments. For Comm W 49:10 Ap 27 '53

Economic conditions

Stocktaking in Budapest. Economist 165:742 D 13 '52

Politics and government

Rakosi shortens rein. Economist 165:552 N 22 '52

HUNGRY Horse dam. See Dams, Concrete

HURLIHY, Jack

Portrait. Fortune 47:248 Ap '53

HURON, Lake

Method for predicting Michigan-Huron Lake level fluctuations. D. M. Pierce and J. E. Vogt. Am Water Works Assn J 45:502-20 My '53; Abstract. Water & Sewage Works 100:348 S '53

HURRICANES

Gulf hurricane net set up; Central power & light co. joins with other coastal industries to disseminate weather information by radio. Elec World News ed 138:9 S 29 '52

HURRICANES—*Continued*
When the big winds blow; Weather Bureau hurricane service. A. Reese and R. E. Spann. il map diag Pet Refiner 32:72-4+ Je; 211-12+ Jl '53; World Oil 136:48-52 Je; 137:68-70 Jl '53

HUSBAND and wife
Spouse's election and marital deduction; report of ABA committee on trust and probate decisions. Trusts & Estates 91:768-9 O '52
See also
Income tax—Joint returns

HUSSMAN refrigerator company
Sharp rise in net likely. Barron's 33:13-14 Jl 13 '53

HUTCHISON, Pauline M.
Portrait. Special Lib 44:152 Ap '53

HÜTTIG, Gustav France, 1890-
Sketch. R. E. Oesper. por J Chem Educ 29:622-3 D '52

HYALURONIC acid
Structure of hyaluronic acid; the glucuronidic linkage. B. Weissmann and K. Meyer. bibliog Am Chem Soc J 74:4729 S 20 '52

HYATT, John I.
Turning an idea into a tv station. por Bsns W p 152+ F 14 '53

HYBRIDIZATION
Respiration of the parts of the hybrid gastrula rana pipiens x rana sylvatica. L. C. Sze. bibliog diag Science 117:479-80 My 1 '53

HYDANTOINS
Chromatography of thiohydantoins on paper; determination of the C-terminal amino-acid of bovine plasma albumin. J. T. Edward and S. Nielsen. bibliog Chem & Ind p 197 F 28 '53
Hydantoins as anticonvulsants; 5-R-5-(2-thienyl)-hydantoins. J. J. Spurlock. bibliog Am Chem Soc J 75:1115-17 Mr 5 '53
Paper chromatography of the 3-phenyl-2-thiohydantoin derivatives of amino acids with application to end group and sequence studies. W. A. Landmann, M. P. Drake and J. Dillaha. bibliog Am Chem Soc J 75:3638-40 Ag 5 '53
Peptides; selective removal of the *C*-terminal residue as a thiohydantoin; the use of diphenyl phosphor*iso*thiocyanatidate. G. W. Kenner, H. G. Khorana and R. J. Stedman. Chem Soc J p673-8 F '53
Some pyridylhydantoins. P. C. Teague, A. R. Ballentine and G. L. Rushton. bibliog Am Chem Soc J 75:3429-30 Jl 20 '53

HYDE, Anthony, 1907-
Paging Mr Hyde. B. Tyler. por Adv Agency 46:68+ Ja '53

HYDE, Merritt
Personalities in engineering. por Westinghouse Eng 13:170 S '53

HYDNOCARPIC acid
X-ray and thermal examination of the glycerides; chaulmoogric and hydnocarpic acids and their mono-, di-, and tri-glycerides. A. Gupta and T. Malkin. Chem Soc J p2405-8 Je '52

HYDRA (zoology)
Cultivation of hydra under controlled conditions. W. F. Loomis. bibliog Science 117:565-6 My 22 '53

HYDRAFRAC process. See Petroleum—Production methods

HYDRANTS

Freezing

Cold-weather protection for hydrants. Am Water Works Assn J 45:72 Ja '53

Standards

Specifications for uniform marking of fire hydrants. Am Water Works Assn J 45:550 My '53
Standard specifications for fire hydrants for ordinary water works service. Am Water Works Assn J 45:539-49 My '53 (reprint 25¢)

HYDRATES
D-Fructose dihydrate. F. E. Young, F. T. Jones and H. J. Lewis. bibliog il diag J Phys Chem 56:738-9 Ja '52
Hydrates of naphthalene-β-sulphonic acid. J. S. F. Gill and M. J. Thornton. diags Chem Soc J p914-21 Mr '53
Infrared spectrum of the H_3O^+ ion in acid hydrates. D. E. Bethell and N. Sheppard. bibliog J Chem Phys 21:1421 Ag '53

Analysis

Rapid spectroscopic determination of total water content. H. J. Morowitz and H. P. Broida. Anal Chem 24:1657-8 O '52

HYDRATION
Dependence of the rate of hydration of isobutene on the acidity function, H_0, and the mechanism for olefin hydration in aqueous acids. R. W. Taft, jr. bibliog Am Chem Soc J 74:5372-6 N 5 '52
Extent of hydration of some crystalline phases of sodium 1-alkanesulfonates. E. C. Lingafelter, L. H. Jensen and A. E. Markham. bibliog J Phys Chem 57:428-9 Ap '53
Extraction studies on the extent of hydration of salts in non-aqueous solvents. P. C. Yates and others. bibliog Am Chem Soc J 75:2212-15 My 5 '53
Hydration of gypsum plaster. W. A. Cunningham, R. M. Dunham and L. L. Antes. bibliog il Ind & Eng Chem 44:2402-8 O '52
Ionic hydration; an isotopic fractionation technique. H. M. Feder and H. Taube. J Chem Phys 20:1335-6 Ag '52
Ionic hydration and Stokes' law. A. L. Levy. bibliog J Chem Phys 21:566-7 Mr '53
Mechanism of the acid-catalyzed hydration of olefins. J. B. Levy, R. W. Taft, jr. and L. P. Hammett. bibliog Am Chem Soc J 75:1253-4 Mr 5 '53
Rates and temperature coefficients in the hydration of two gaseous pentenes by dilute aqueous nitric acid. J. B. Levy and others. bibliog Am Chem Soc J 75:3955-7 Ag 20 '53
Rates, equilibrium and temperature coefficients in the reversible hydration of gaseous 1-methylcyclopentene-1 by dilute nitric acid. R. W. Taft, jr. and others. bibliog Am Chem Soc J 74:4735-7 O 5 '52

HYDRATION, Heat of
Long-time study of cement performance in concrete; the heats of hydration of the cements. G. J. Verbeck and C. W. Foster. bibliog diag Am Soc T M Proc 50:1235-62 '50

HYDRAULIC accumulators
Eight basic hydraulic accumulator circuit applications. E. M. Greer. diags Product Eng Hdbk p J28-9 '53
Improve circuit performance with hydraulic accumulators. H. L. Stewart. diags Product Eng 23:192-6 O '52
Utilizing accumulators in hydraulic systems. H. K. Palmer. il diag Machine Design 24:147-51 N '52

HYDRAULIC control
Contributions to hydraulic control. S. Lee and J. F. Blackburn. diags A S M E Trans 74:1005-9, 1013-16; 75:1163-80 Ag '52, Ag '53; Discussion. 74:1009-11 Ag '52
Design and testing of an electronic simulator for a hydraulic remote-position-control servo mechanism. F. J. U. Ritson and P. H. Hammond. diags Inst E E Proc 99 pt 2:533-48; Discussion. 549-52 D '52
Design and testing of hydraulic controls for aircraft. il diags Engineering 175:117-19 Ja 23 '53
Diesel-engine governors; how hydraulic governors give better control for modern Diesel engines. E. J. Kates. diags Power 97:98-100 My '53
Diesel-engine governors; isochronous hydraulic governors for exact engine speed control. E. J. Kates. diags Power 97:82-3+ Je '53
Forge with all-hydraulic control. F. H. Towler and J. M. Towler. il diags Am Mach 97:154-5 Jl 6 '53
Fundamental aspects of a hydraulic-type-powered flight-control system. H. M. DeGroff and others. bibliog il diags Aeronautical Eng R 11:42-55 N '52
Hydraulic arc furnace electrode control. il Metallurgia 47:291+ Je '53
Hydraulic control systems. R. Hadekel. bibliog il diags Machine Design 25:185-232 Ap; 163-8 My; 168-75 Je; 159-71 Jl; 165-9 Ag '53
Hydraulic copying attachment for lathes. il Engineering 174:183-4 Ag 8 '52
Hydraulic governor for Diesel engines. il diag Product Eng 24:208-9 Ja '53
Pros and cons of hydraulically actuated clutches. E. B. Falk. il Machine Design 25:183-4 Ag '53

HYDRAULIC control—*Continued*

Remote hydraulic positioning control. il Product Eng 23:230 N '52

Total control with power hydraulics; abstract. R. H. Fritzges. Machine Design 25:428+ Ap '53

Twin-action piston in hydraulic control actuator. il diags Product Eng 23:148-9 D '52

See also

Electrohydraulic control

Hydropneumatic control

HYDRAULIC conveying

Coal by pipeline. Elec R (Lond) 151:1070 N 14 '52

Hydraulic transportation of solids in Florida phosphate fields. I. S. Tillotson. il Min Cong J 39:41-4 Ja '53

Water can carry your coal and ash. W. G. Hudson. diags Power Eng 57:92-3+ Jl '53

HYDRAULIC engineering

Design of side walls in chutes and spillways. D. B. Gumensky. il diags Am Soc C E Proc 79 [no 175]:1-7 F '53

Relief well systems for dams and levees. W. J. Turnbull and C. I. Mansur. il diags Am Soc C E Proc 79 [no 192]:1-20 My '53

See also

Aqueducts
Breakwaters
Bridges—Foundations and piers
Caissons
Canals
Cofferdams
Dams
Dikes (engineering)
Drainage
Flood control
Gates, Hydraulic
Harbors
Hydraulic machinery
Hydraulic models
Hydraulics
Hydrodynamics
Hydroelectric plants
Irrigation
Jetties
Levees
Locks (hydraulic engineering)
Penstocks
Piers
Pumping
Pumping machinery
Pumping stations
Pumps
Reservoirs
Rivers—Regulation
Siphons
Spillways
Water flow
Water supply engineering
Waterworks
Wells

Study and teaching

Instruction and research in hydraulic laboratories; Fouad I university, Giza, Egypt. H. Addison. bibliog plans diags Engineer 194:769-72 D 5 '52

Tables, calculations, etc.

Direct step method for computing water-surface profiles. A. A. Ezra. diag Am Soc C E Proc 79 [no 180]:1-10 Mr '53

Ground-water movement controlled through spreading. P. Baumann. il diags Am Soc C E Proc 77[no 86]:1-38 Ag '51; Discussion. 78[no D-86]:1-14 Jl '52

HYDRAULIC fracturing. See Petroleum—Production methods

HYDRAULIC gates. See Gates, Hydraulic

HYDRAULIC jacks

Hydraulic jacks expand the versatility of slip-form concreting. il diag Constr Methods 35:64-6+ My '53

Lift-slab technique lowers bridge. il diags Constr Methods 35:112-14+ Ja '53

Tangyes hydraulic positioning jacks. il Engineering 176:128 Jl 24 '53

Trusses being lowered with threaded rods. J. Ward. il diags Roads & Sts 96:48-9+ Ja '53

Testing

Light alloy jack tests. R. G. Hoare. il diags Roy Aeronautical Soc J 57:592-3 S '53

HYDRAULIC laboratories

British hydromechanics research association. Engineering 174:477-8 O 10 '52

Cavitation laboratory for hydraulic turbines. H. Ulmann and R. S. Sproule. flow diag il diag Mech Eng 75:194-8 Mr '53

Hydraulic research laboratory. il Engineer 196:120-1 Jl 24 '53; Engineering 176:138 Jl 31 '53

Hydraulics laboratory equipment demonstrates fundamental principles of flow. D. E. Metzler. il diag Civil Eng 23:315-17 My '53

Instruction and research in hydraulic laboratories; Fouad I university, Giza, Egypt. H. Addison. bibliog plans diags Engineer 194:769-72 D 5 '52

HYDRAULIC machinery

Annual handbook of product design for 1953; hydraulic and pneumatic equipment. diags Product Eng Hdbk p J 1-31+ '53

Complete characteristic circle diagrams for turbomachinery. W. M. Swanson. bibliog il diags A S M E Trans 75:819-26 Jl '53

Hydraulic clamping accelerates spar milling. il diags Mach 59:180-1 Ja '53

Hydraulic knife grinder head tilts from the vertical. il Am Mach 97:218 Je 8 '53

Hydraulic lathe cuts roll-machining time. B. A. Wilson. diag Iron Age 171:128-9 Ap 16 '53

Hydraulic motor; British Messier, ltd. il diags Engineer 195:114-15 Ja 16 '53

Hydraulic rod bender works fast. H. M. Shuff. il Eng N 149:64 D 11 '52

Hydraulic roll lathe saves time in rough machining. il Steel 132:142+ Ap 6 '53

Hydraulic surface grinding machine. il Am Mach 97:194 Je 22 '53

Hydraulic torque generator; Airatork engineering co. il diags Engineer 195:258 F 13 '53; Engineering 175:169 F 6 '53

Hydraulics give machining the modern touch; hydraulic lathe for Fairless. il Bsns W p64 N 29 '52

Riding a hydraulic revolution; Greer hydraulics, inc. il Bsns W p43-4+ N 22 '52

Sequential operation of hydraulic cylinders; drawings with text. H. L. Stewart. Product Eng Hdbk p J22-3 '53

What's ahead the next ten years in materials and components; hydraulics and pneumatics. Am Mach 96:A 19-20 Mid-N '52

See also

Airplanes—Hydraulic equipment
Hydraulic motors
Hydraulic presses
Hydraulic transmission
Pumps
Turbines
Valves, Hydraulic

Cavitation

Cavitation. E. Crewdson. diag Engineer 195:122-3 Ja 23 '53

Cavitation laboratory for hydraulic turbines. H. Ulmann and R. S. Sproule. flow diag il diag Mech Eng 75:194-8 Mr '53

Cavitation mechanics and its relation to the design of hydraulic equipment. R. T. Knapp. bibliog diags Inst Mech Eng Proc (A) 166 no 2:150-63, pl 1-10 '52; Same. Engineering 173:533-6, 566-9, 597-600 Ap 25-My 9 '52; Same abr. Engineer 193:571-4, 592-6, 627-8 Ap 25-My 9 '52

Design

Design and development of aircraft hydraulic components for increased reliability. J. W. Kelly. Machine Design 25:266-8+ S '53

Standards

Hydraulic packing; 1953 revisions to the hydraulic standards of the Joint industry conferences; reference sheets. diags Tool Eng 31:79-84 Ag '53

JIC hydraulic diagrams; reference sheets. Tool Eng 31:79-84 S '53

HYDRAULIC models

Applications of scale models in engineering. R. Hammond. il maps plans diags Engineer 194:181-4, 212-15 Ag 8-15 '52

Dam modifications checked by hydraulic models. E. S. Harrison and C. E. Kindsvater. il maps plan diags Am Soc C E Proc 79 [no 184]:1-17 Ap '53

Ground-water movement controlled through spreading. P. Baumann. il diags Am Soc C E Proc 77[no 86]:1-38 Ag '51; Discussion. 78[no D-86]:1-14 Jl '52

Hydraulic model study of Manicouagan River holding boom. G. R. Lord. il maps Pulp & Pa of Can 53:150+ O '52

Measurement of wave heights in the model of Table Bay harbour. B. W. Wilson. il plan diags Engineering 176:245-7, 267 Ag 21-28 '53

Pneumatic tide generator. diags Comp Air Mag 58:24 Ja '53

Rid vertical-pump intake design of guess with model tests. A. Brkich. il diags Power 97:90-1+ F '53

HYDRAULIC motors

Balanced vane type hydraulic motors. il Product Eng 24:230 Ap '53

HYDRAULIC oils. See Hydraulic transmission

HYDRAULIC press manufacturing company

Hydraulic Press broadening its product lines. Barron's 33:31+ Mr 16 '53

HYDRAULIC presses

Accumulators; giant forging press powered by hydro-pneumatic system. il Iron Age 170:176 D 11 '52

Armor plate quenched rapidly, uniformly in hydraulic press. G. A. Leytze. il Iron Age 170:97-9 O 16 '52

Blind broaching method increases production. diag Tool Eng 29:68 N '52

Build first press for new drawing method. il diag Machine Design 25:264+ Je '53

Cold-forming of channels on a vertical hydraulic press. R. Wagner. il diags Mach 59:195-8 N '52

Colossal press spearheads Lockheed's skin program. R. B. Scott and R. L. Vaughn. il diags Mach 59:166-71 Jl '53

Control valves for direct-hydraulic presses; discussion. Engineer 195:141-3 Ja 23 '53

Conveyor boosts press operations; North American aviation, inc. L. Boarts and E. Searcy. il Steel 132:100-1 F 2 '53

Factors in choosing and using hydraulic press oils. H. P. Laussucq. diags Mach 59:179-84 My '53

500-ton hydraulic press. il diag Engineering 175:823 Je 26 '53

Heavy press assignment; Mesta builds its own equipment. il Steel 132:110+ Mr 30 '53

Heavy presses challenge industry. A. Zietlin. il Steel 131:76-9 D 1 '52

Horizontal double-end hydraulic press. il Am Mach 97:152-3 F 2 '53

Hydraulic press and drawbench installation in America; Barberton works of the Babcock and Wilcox co. il diags Engineer 195: 147-9 Ja 23 '53; Same cond. Mech Eng 74: 818-20 O '52

Hydraulic pressing helps specialty department pay higher profits. il diags Brick & Clay Rec 122:63 My '53

Machine tools in aviation. T. Berna. il Aero Digest 66:17-19 Ja '53

New horizontal presses eliminate lost motion in the production of cartridge cases; Rheem manufacturing co. il Mach 59:164-6 Mr '53; Steel 132:122+ F 2 '53

Novel press increases production and facilitates feeding; designed by the Clearing machine corp. il Tool Eng 30:61-2 Mr '53

Presses; giant program moving fast. W. V. Packard. il Iron Age 170:101-2 D 11 '52

Presses; two hydraulic units halve operations in drawing small tube. il Iron Age 170:186-7 D 11 '52

Pressing business; heavy presses for defense aircraft plants. F. Hamlin. il Aero Digest 66:20-5 Ja '53

75,000-ton throatless forging press being planned for future planes. R. LeGrand. il diags Am Mach 97:122-4 Ja 5 '53

Specially tooled press saves time in assembling filters. il Automotive Ind 108:70 F 1 '53

Try out; test run costs cut through use of plastic dies on big press. il Iron Age 170: 188 D 11 '52

12,000-ton forging press; Redditch works. il diag Engineer 195:347-9 Mr 6 '53; Engineering 175:301, 304 Mr 6 '53

Unusual hydraulic press designed to make ramjet parts. il Iron Age 171:148-9+ Mr 19 '53

HYDRAULIC rams

Hydraulic rams for lining track. il Ry Age News ed 135:23 S 14 '53

Hydraulic rams save time, money and tempers. A. R. Kaplan. il Mill & Factory 52:90-1 Je '53

Hydraulic rams straighten saddles. il Product Eng 23:169 N '52

Maintenance problem on ram of hydraulic shear solved. il Iron Age 171:159 Mr 26 '53

HYDRAULIC research

Effect of entrance conditions on diffuser flow. J. M. Robertson and D. Ross. il Am Soc C E Proc 78 [no 141]:1-24 Jl '52; Discussion. 79 [no D-141]:1-6 Je '53

Hydraulic research in the United States. H. K. Middleton and S. W. Matchett, eds. U S Nat Bur Stand Misc Pub 208:1-203; pa $1.25 Supt. of doc. '53

Instruction and research in hydraulic laboratories; Fouad I university, Giza, Egypt. H. Addison. bibliog plans diags Engineer 194:769-72 D 5 '52

Report of the Hydraulics research board, with the report of the director of hydraulics research for the year 1952. Engineering 176:18 Jl 3 '53

HYDRAULIC transmission

Analogies for hydraulic and electric drives in servomechanisms. Yaohan Chu and L. A. Gould. bibliog diags A S M E Trans 75:851-7 Jl '53

Central hydraulic supply applied to battery-type machine tools. il diags Steel 132:98+ Je 15 '53

Control of fluid-driven fans. J. F. Tobin. il diag Power Eng 56:64-5 N '52

Design characteristics of fully automatic transmission for fork-lift industrial truck. diags Automotive Ind 109:62-3+ S 1 '53

Electric analogies for hydraulic analysis. S. D. Millstone. bibliog il diags Machine Design 24:185-9 D '52; 25:166-70 Ja; 131-5 F '53

Factors in choosing and using hydraulic press oils. H. P. Laussucq. diags Mach 59: 179-84 My '53

How to select fluid couplings. diags Product Eng Hdbk p E 12-17 '53

How to trouble-shoot your hydraulic systems. il diags Constr Methods 35:170-1+ Jl '53

Hydraulic lifts in tractors; abstract. H. E. Ashfield. Engineer 195:490 Ap 3 '53

Hydraulic servo-mechanisms; Institution of mechanical engineers conference; discussion of papers. Engineer 195:275-7 F 20 '53

Hydraulic servo; redesigned for accuracy and stability through research and model analysis. W. Ernst. il plan diags Machine Design 25:123-6 F '53

Hydraulic transmission fluid produced by B-A for Canadian conditions. il diag Can Chem Process 37:68 Ja '53

Hydraulic units in the oil field. E. L. Phillips. diags Oil & Gas J 51:95-6 Mr 9 '53

Improve circuit performance with hydraulic accumulators. H. L. Stewart. diags Product Eng 23:192-6 O '52

Institution of engineers and shipbuilders in Scotland; presidential address. W. Wallace. Engineering 174:711 N 28 '52

Introduction to hydraulic servo-mechanism theory. H. G. Conway and E. G. Collinson. diags Engineer 195:294-6, 330-2 F 20-27 '53

Non-inflammable hydraulic fluid; Aroclor 1248. Engineering 175:438 Ap 3 '53

Polyalkylene glycols as lubricants and hydraulic lift fluids in tow motors and lift trucks. T. W. Rodes. Ind & Eng Chem 44: sup 137A-8A+ O '52

Putting on the pressure; non-flammable hydraulic fluids. il Chem W 72:68-9 Mr 7 '53

Some problems of fluids for hydraulic power transmission. A. E. Bingham. Inst Mech Eng Proc 165 (W.E.P. no 69):254-61 '51; Same. Engineering 173:213-15, 254-5 F 15-22 '52; Discussion. Inst Mech Eng Proc 165 (W.E.P. no 69):266-77 '51; Engineer 192: 799-801 D 21 '52

Supply and use of hydraulic power at Appleby-Frodingham. L. N. Lloyd. il diags Iron & Steel Inst J 170:271-87 Mr '52; Discussion. 172:87-93 S '52

Twin disc offers wide selection of industrial drives. il Eng & Min J 154:109+ Je '53

Utilizing accumulators in hydraulic systems. H. K. Palmer. il diag Machine Design 24: 147-51 N '52

See also

Airplanes—Hydraulic equipment

Hydraulic motors

Torque converters

HYDRAULIC valves. See Valves, Hydraulic

HYDRAULICS

Hydraulic geometry of stream channels and some physiographic implications. L. B. Leopold and T. Maddock, jr. bibliog diags U S Geol S Professional Pa 252:1-57; pa 35c Supt of doc. '53

Hydraulic problems encountered in intake structures of vertical wet-pit pumps and methods leading to their solution. W. H. Fraser. plans diags A S M E Trans 75: 643-8; Discussion. 648-52 My '53

Hydraulic resistance effect upon the dambreak functions. R. F. Dressler. bibliog diag J Res Nat Bur Stand 49:217-25 S '52

HYDRAULICS—*Continued*

River channel roughness. H. A. Einstein and N. L. Barbarossa. il diag Am Soc C E Proc 77[no 78]:1-12 Jl '51; Discussion. 78[no D-78]:1-14 Jl '52

See also

Cavitation
Floods
Flow meters
Fluids
Hydraulic engineering
Hydrodynamics
Hydrostatics
Liquids
Nozzles
Silt
Siphons
Stream flow
Water flow
Wells

Electric analogies

Analog circuit solves open channel problem. K. O. Vartia. Eng N 149:44-5 D 4 '52

Analogies for hydraulic and electric drives in servomechanisms. Yaohan Chu and L. A. Gould. bibliog diags A S M E Trans 75:851-7 Jl '53

Application of electronic flow routing analog. M. A. Kohler. il diags Am Soc C E Proc 78 [no 135]:1-11 Je '52; Discussion. 79 [no D-135]:1-7 Ap '53

Contributions to hydraulic control; hydraulic Wheatstone bridge. J. F. Blackburn. diags A S M E Trans 75:1171-3 Ag '53

Electric analogies for hydraulic analysis. S. D. Millstone. bibliog il diags Machine Design 24:185-9 D '52; 25:166-70 Ja; 131-5 F '53

Electrical analogies and electronic computers; surge and water hammer problems. H. M. Paynter. bibliog il diags Am Soc C E Proc 78[no 146]:1-28 Ag '52

Hydrodynamic problems in three dimensions. P. G. Hubbard and S. C. Ling. il diags Am Soc C E Proc 78[no 143]:1-9 Ag '52

Solution of an hydraulic problem by analog computer. R. E. Glover and others. il diags Am Soc C E Proc 78 [no 134]:1-7 Je '52; Discussion. 79 [no D-134]:1-11 Je '53

Tables, calculations, etc.

Gradually varied flow in uniform channels on mild slopes. M. Lee and others. bibliog il plan diags Ill U Eng Exp Sta Bul 404:1-90 '52 (pa $1)

How to use system-head curves. M. Mann. diags Chem Eng 60:162-4 F '53

Hydraulic characteristics of packed towers operating under counter-current flow conditions. H. E. Rose and P. H. Young. bibliog il diags Inst Mech Eng Proc (B) 1B no 4:114-26; Discussion. 127-8 '52

Hydraulic conversion factors. Power Eng 57:95 Ap '53

See also

Pumping—Tables, calculations, etc.
Stream flow

HYDRAZIDES

Chemical reactions of complexes; action of hydrazides on nickel disalicylaldehyde. L. Sacconi. bibliog Am Chem Soc J 74:4503-5 S 20 '52

Chemotherapy of experimental tuberculosis; the synthesis of acid hydrazides, their derivatives and related compounds. H. L. Yale and others. bibliog Am Chem Soc J 75:1933-42 Ap 20 '53

Effects on plant growth of some compounds with structural similarities to maleic hydrazide. V. A. Greulach. bibliog Science 117:601-3 My 29 '53

Tuberculostatic hydrazides and their derivatives. N. P. Buu-Hoï and others. Chem Soc J p 1358-64 My '53

HYDRAZINE

Absorption spectra of free NH and NH_2 radicals produced by the flash photolysis of hydrazine. D. A. Ramsay. bibliog il J Phys Chem 57:415-17 Ap '53

Chlorostannates of hydrazine and 3:5:5-trimethylpyrazoline. W. Pugh and A. M. Stephen. Chem Soc J p4138-41 N '52

Effects on plant growth of some compounds with structural similarities to maleic hydrazide. V. A. Greulach. bibliog Science 117:601-3 My 29 '53

Fairmount plans 40 percent slash in price of hydrazine. flow sheet. Chem & Eng N 31:880-2 Mr 2 '53

Hydrazine and its derivatives bear promise in many fields. Can Chem Process 37:92+ S '53

Hydrazine; complex halides of aluminium and hydrazine. W. Pugh and M. C. B. Hotz. Chem Soc J p2493-5 Ag '53

Hydrazine; the bromostannates and bromostannites of hydrazine, dimethyl ketazine, and pentan-3-one hydrazone. W. Pugh. Chem Soc J p2491-3 Ag '53

Hydrazine; the hydrazinium salts of complex fluoro-acids of tin, antimony, and bismuth. W. Pugh. Chem Soc J p 1934-6 Je '53

Hydrazinolysis of nitroguanidine in alcoholic systems; preparation and reactions of 1,6-dinitrobiguanidine. R. A. Henry, S. Skolnik and G. B. L. Smith. bibliog Am Chem Soc J 75:955-62 F 20 '53

Infrared absorption of crystalline and liquid hydrazine monochloride and monobromide. J. C. Decius and D. P. Pearson. bibliog Am Chem Soc J 75:2436-9 My 20 '53

Kinetics of the iodide-catalysed reaction between hydrogen peroxide and hydrazine in acid, aqueous solution. P. Davis and W. C E. Higginson. Chem Soc J p 1902-6 Je '53

Oxidation of hydrazine in aqueous solution; the nature of 1- and 2-electron-transfer reactions, with particular reference to the oxidation of hydrazine. W. C. E. Higginson, D. Sutton and P. Wright. Chem Soc J p 1380-6 My '53

Oxidation of hydrazine in aqueous solution; the use of ^{15}N as a tracer in the oxidation of hydrazine. W. C. E. Higginson and D. Sutton. Chem Soc J p 1402-6 My '53

Polarographic study of the hydrazine complexes of zinc. R. L. Rebertus, H. A. Laitinen and J. C. Bailar, jr. bibliog Am Chem Soc J 75:3051-3 Jl 5 '53

Reaction between *NN'*-dithiocarbamylhydrazine and hydrazine. E. Hoggarth. Chem Soc J p4817-20 D '52

Reaction mechanisms; hydrazine from ammonia and acetylene from methane; abstract. M. Burton. Chem & Eng N 31:1405-6 Ap 6 '53

Reaction of hydrazine and symmetrical dimethylhydrazine with diborane. M. J. Steindler and H. I. Schlesinger. Am Chem Soc J 75:756 F 5 '53

Reductions with hydrazine hydrate catalyzed by Raney nickel; aromatic nitro compounds to amines. D. Balcom and A. Furst. bibliog Am Chem Soc J 75:4334 S 5 '53

Theory of flame propagation. J. O. Hirschfelder, C. F. Curtiss and D. E. Campbell. bibliog J Phys Chem 57:403-14 Ap '53

Thermal analysis of the systems hydrazine-methanol and hydrazine-ethanol. J. M. Corcoran, H. W. Kruse and S. Skolnik. bibliog J Phys Chem 57:435-7 Ap '53

Viscosities of several liquids. D. M. Mason, O. W. Wilcox and B. H. Sage. bibliog diag J Phys Chem 56:1008-10 N '52

Analysis

Spectrophotometric method for the determination of hydrazine. G. W. Watt and J. D. Chrisp. bibliog Anal Chem 24:2006-8 D '52

HYDRAZOBENZENE

Absorption spectrum of an equimolecular mixture of azoxybenzene and hydrazobenzene. R. J. W. Le Fèvre and J. Northcott. Chem Soc J p4082-3 O '52

Benzidine rearrangement; kinetics and temperature coefficients of the rearrangements of hydrazobenzene and certain substituted hydrazobenzenes. L. J. Croce and J. D. Gettler. bibliog Am Chem Soc J 75:874-9 F 20 '53

Thermal decomposition of hydrazobenzene, studied by the use of nitrogen isotopes. P. F. Holt and B. P. Hughes. diag Chem Soc J p 1666-9 Je '53

HYDRAZOIC acid

Interaction of triphenylmethanol, fluoren-9-ol, and diphenylmethanol with hydrazoic acid in the presence of sulphuric acid. C. L. Arcus and R. J. Mesley. Chem Soc J p 178-81 Ja '53

Quinone imides; addition of hydrazoic acid and phenols to *p*-quinonedibenzenesulfonimide and its derivatives. R. Adams and D. C. Blomstrom. bibliog Am Chem Soc J 75:3405-8 Jl 20 '53

HYDRAZONES

Chlorostannates of dimethyl ketazine and certain hydrazones. W. Pugh and A. M. Stephen. Chem Soc J p354-5 Ja '53

Decomposition of toluene-*p*-sulphonylhydrazones by alkali. W. R. Bamford and T. S. Stevens. Chem Soc J p4735-40 D '52

D-Glucuronolactone isonicotinyl hydrazone. P. P. T. Sah. Am Chem Soc J 75:2512-13 My 20 '53

Mechanism of oxidation; oxidation and autoxidation of hydrazones. B. Witkop and H. M. Kissman. bibliog Am Chem Soc J 75:1975-80 Ap 20 '53

Molecular rearrangement of the phenylhydrazones of thio-oxindole-3-aldehyde and of 3-acetyl(thio-oxindole). R. H. Glauert and F. G. Mann. Chem Soc J p2401-4 Je '52

HYDRAZYL compounds

Paramagnetic resonance absorption; hyperfine structure in dilute solutions of hydrazyl compounds. H. S. Jarrett. J Chem Phys 21:761-2 Ap '53

HYDRIODIC acid

Potentiometric study of the reaction between nitrous acid and hydriodic acid. H. T. S. Britton and H. G. Britton. Chem Soc J p3892-5 O '52

HYDROBROMIC acid

Cleavage of sulfonamides with aqueous hydrobromic acid and phenol. H. R. Snyder and H. C. Geller. bibliog Am Chem Soc J 74:4864-6 O 5 '52

Existence of multiply charged molecular ions of HBr, HCl, and DCl. W. H. Johnston and J. R. Arnold. bibliog J Chem Phys 21:1499-502 S '53

Flame emission spectrum of HBr. B. W. Bullock and others. J Chem Phys 20:1808-9 N '52

Infrared intensity measurements of nitric oxide, hydrogen chloride, and hydrogen bromide. S. S. Penner and D. Weber. bibliog J Chem Phys 21:649-54 Ap '53

Infrared spectra of HCl, DCl, HBr, and NH_3 in the region from 40 to 140 microns. R. L. Hansler and R. A. Oetjen. bibliog J Chem Phys 21:1340-3 Ag '53

Reaction of *cis*-1,4 epoxycyclohexane with hydrochloric acid and with hydrobromic acid. E. L. Bennett and C. Niemann. bibliog Am Chem Soc J 74:5076-8 O 20 '52

Reaction of hydrogen bromide with cycloöctatetraene. C. G. Overberger, M. A. Klotz and H. Mark. bibliog Am Chem Soc J 75:3186-8 Jl 5 '53

Reaction of tantalum with hydrogen chloride, hydrogen bromide and tantalum pentachloride; action of hydrogen on tantalum pentachloride. R. C. Young and C. H. Brubaker, jr. Am Chem Soc J 74:4967 O 5 '52

Rotational line-width measurements on NO, HCl, and HBr. D. Weber and S. S. Penner. bibliog J Chem Phys 21:1503-6 S '53

System benzene-hydrogen bromide-aluminium bromide. D. D. Eley and P. J. King. diags Chem Soc J p2517-22, 4972-6 Jl, D '52

Vapor phase heats of hydrobromination of the isomeric butenes. J. R. Lacher and others. Am Chem Soc J 74:5291-2 N 5 '52

HYDROCARBONS

Basicity of hydrocarbons; a theoretical treatment of conjugated hydrocarbons. V. Gold and F. L. Tye. Chem Soc J p2184-8 Je '52

Basicity of hydrocarbons; cryoscopy of conjugated hydrocarbon and carbinol solutes in sulphuric acid. V. Gold, B. W. V. Hawes and F. L. Tye. diag Chem Soc J p2167-72 Je '52

Basicity of hydrocarbons; the distribution of some conjugated hydrocarbons between acidic and inert solvents. V. Gold and F. L. Tye. Chem Soc J p2181-3 Je '52

Basicity of hydrocarbons; ultra-violet absorption spectra of conjugated hydrocarbons in sulphuric acid solution. V. Gold and F. L. Tye. Chem Soc J p2172-80 Je '52

Behavior of liquid hydrocarbons with white fuming nitric acid. C. H. Trent and M. J. Zucrow. bibliog diag Ind & Eng Chem 44:2668-73 N '52

Bond energies and bond distances of hydrocarbons. G. Glockler. bibliog J Chem Phys 21:1242-8 Jl '53

Catalytic dehydrogenation; Universal oil products co. flow diag Pet Refiner 31:176-7 S '52

Comparison of the effects of several solubilized C_6-hydrocarbons on the viscosity of a polysoap solution. U. P. Strauss and L. H. Layton. bibliog J Phys Chem 57:352-4 Mr '53

Compressor calculations; specific heat data for hydrocarbons. R. W. Brooks. Oil & Gas J 51:287 Ap 27 '53

Configuration of flexible C_6 hydrocarbons in the vapour phase. G. A. M. Cummings, J. C. McCoubrey and A. R. Ubbelohde. Chem Soc J p2725-30 Jl '52

Dehydration of natural gas and light hydrocarbon liquids. J. M. Campbell and others. bibliog(240 ref) flow sheets il diags Pet Refiner 31:65-70 Ag; 106-12 O; 109-16 N '52; 32:138-42 Ja; 131-4 F; 151-6 Mr '53

Design and operation of dehydrators for volatile hydrocarbons. L. Boyd. flow plan Oil & Gas J 51:106-7 D 8 '52

Diffusion of hydrocarbon vapors into polyisobutylene. S. Prager, E. Bagley and F. A. Long. bibliog Am Chem Soc J 75:1255-6 Mr 5 '53

Dipole moments of hydrocarbons. A. P. Altschuller. bibliog J Phys Chem 57:538-40 My '53

Equilibrium sorption data for polyisobutylene-hydrocarbon systems. S. Prager, E. Bagley and F. A. Long. bibliog Am Chem Soc J 75:2742-5 Je 5 '53

Exalted distortion polarizations of some colored hydrocarbons. E. D. Bergmann, E. Fischer and J. H. Jaffe. bibliog Am Chem Soc J 75:3230-3 Jl 5 '53

Flame velocities of liquid hydrocarbons. R. E. Albright, D. P. Heath and R. H. Thena. bibliog il diags Ind & Eng Chem 44:2490-6 O '52

Free-electron model for discussing reactivity in unsaturated hydrocarbons. K. Fukui and others. diag J Chem Phys 21:174-6 Ja '53

Free-electron network model for conjugated systems; a demonstration model showing bond order and free valence in conjugated hydrocarbons. J. R. Platt. il J Chem Phys 21:1597-600 S '53

Freezing points of hydrocarbons vary widely. W. L. Nelson. Oil & Gas J 52:141 My 11 '53

Gasification of hydrocarbons for production of gases to supplement natural gas in city supplies (cont). J. J. Morgan. bibliog flow diags il map diags Gas Age 110:37-40 N 6; 59-65 N 20; 41-5 D 4; 38-45 D 18 '52; 111:26-32 Ja 29; 57-64 F 12; 42-4 F 26; 51-9 Mr 12; 40-52 Mr 26; 54-60 Ap 9 '53

Generalized free-electron model of conjugated polycyclic hydrocarbons. J. S. Griffiths. J Chem Phys 21:174 Ja '53

Houdriforming reactions; studies with pure hydrocarbons; catalytic mechanism. H. Heinemann and others. bibliog Ind & Eng Chem 45:130-7 Ja '53

Hyperconjugation in $C_6H_7^+$ and other hydrocarbon ions. L. W. Pickett and others. bibliog diag J Chem Phys 21:1400-1 Ag '53

Inhibition of acetaldehyde oxidation by hydrocarbons of various molecular structures. N. J. H. Small and A. R. Ubbelohde. diags Chem Soc J p637-42 F '53

Inter- and intramolecular transfer processes; nitro-compounds and hydrocarbons. C. Reid. J Chem Phys 20:1212-13 Ag '52

Isomerization of saturated hydrocarbons; catalytic isomerization of cycloheptane. H. Pines, F. J. Pavlik and V. N. Ipatieff. Am Chem Soc J 74:5544-5 N 5 '52

Isomerization of saturated hydrocarbons in presence of hydrogenation-cracking catalysts. F. G. Ciapetta and J. B. Hunter. bibliog diag Ind & Eng Chem 45:147-65 Ja '53

It pays to know your petroleum; explanation of the peculiar way oil and gas act under changing conditions. N. J. Clark. bibliog diags World Oil 136:165-6+ Mr; 208-10+ Ap '53

Molecular orbital theory of alternant hydrocarbons. R. B. Potts. J Chem Phys 21:758-9 Ap '53

HYDROCARBONS—*Continued*

Net heat of combustion of petroleum hydrocarbons. R. S. Fein, H. I. Wilson and J. Sherman. bibliog Ind & Eng Chem 45:610-14 Mr '53

Occurrence of hydrocarbons in recent sediments from the Gulf of Mexico. P. V. Smith, jr. bibliog Science 116:437-9 O 24 '52

Physical properties of important petrochemical materials; tabulation. Oil & Gas J 51:173 O 20 '52

Polyhedral flames with hydrogen and hydrocarbons. H. Broida and W. Kane. il J Chem Phys 20:1042-3 Je '52

Prediction of hydrocarbon burning velocities by the modified Semenov equation. P. L. Walker, jr. and C. C. Wright. Am Chem Soc J 75:750-1 F 5 '53

Process design and operation of multicomponent hydrocarbon stripping. R. H. Parekh. flow diag Pet Refiner 31:99-103 N '52

Proposed method of test for measurement of refractive index and refractive dispersion of hydrocarbon liquids. Am Soc T M Proc 50:284-8 '50

Reactions of hydrocarbons over cracking catalysts. E. M. Gladrow, R. W. Krebs and C. N. Kimberlin, jr. bibliog diags Ind & Eng Chem 45:142-7 Ja '53

Recent developments in the catalytic reforming of hydrocarbons. F. Morton. bibliog flow diags Chem Age (Lond) 68:71-8 Ja 10 '53

Researches on acetylenic compounds; general routes to aliphatic polyacetylenic hydrocarbons and glycols. C. L. Cook, E. R. H. Jones and M. C. Whiting. Chem Soc J p2883-91 Jl '52

Sectioning of hydrocarbon gels for the electron microscope. R. F. Baker and others. il R Sci Instr 24:79 Ja '53

Solutions of fluorocarbons and hydrocarbons; the energy of mixing. R. Dunlap. bibliog J Chem Phys 21:1293-4 Jl '53

Structure of the liquid state and viscosity of hydrocarbons. R. J. Moore, P. Gibbs and H. Eyring. bibliog diags J Phys Chem 57:172-8 F '53

Thermodynamic properties of hydrocarbons and related compounds. K. S. Pitzer and R. R. Brattain. bibliog Oil & Gas J 51:352-6 N 17 '52; Same. Am Pet Inst Proc 32(1):176-80 '52

Use of partial specific volumes. R. F. Nielsen. Oil & Gas J 52:137 My 11 '53

Vapor-liquid equilibria for binary hydrocarbon-water systems. R. Kobayashi and D. L. Katz. bibliog(35 ref) flow sheet diags Ind & Eng Chem 45:440-51 F '53

Where petrochemicals come from; list of some obtainable by direct extraction from petroleum. Oil & Gas J 51:174-5 O 20 '52

Wulff process for acetylene from hydrocarbons. M. J. P. Bogart and others. flow diag il diag Pet Processing 8:377-82 Mr '53

See also

Acetylene
Benzene
Butadiene
Butane
Coal tar products
Ethane
Fischer-Tropsch process
Heptane
Hexane
Isoprene
Methane
Naphthalene
Octane
Olefins
Paraffins
Petroleum
Propane
Styrene (and polymers)
Terpenes
Toluene

Analysis

Determination of small amounts of hydrocarbons in the atmosphere. P. P. Mader and others. bibliog il diags Anal Chem 24:1899-902 D '52

Products of the hydrogenation of carbon monoxide over an iron catalyst; aliphatic and alicyclic hydrocarbons. A. W. Weitkamp and others. bibliog Ind & Eng Chem 45:343-9 F '53

Resolving normal and isomeric paraffins in complex hydrocarbon mixtures; a mass spectrometric method. H. Sobcov. bibliog Anal Chem 24:1908-11 D '52

Selective adsorption of hydrocarbons. G. Spengler and K. Krenkler. diag Pet Refiner 31:133-6 O '52

See also
Gasoline—Analysis

Combustion research

See Combustion research

Nomenclature

A.C.S. committee on nomenclature, spelling, and pronunciation; halogenated derivatives of hydrocarbons. Chem & Eng N 30:4513-14 O 27 '52

Separation processes

Arosorb process; Sun oil co. flow diag Pet Refiner 31:238-9 S '52

Force balance pressure transmitters used to detect column flooding. G. W. Swinney. diags Oil & Gas J 51:108-10 O 27 '52; Same. Pet Processing 7:1469-71 O '52

How Warren Petroleum applies hydrocarbon stripping in its operations. R. L. Lane and B. J. Thompson. flow diag il diags Oil & Gas J 50:174-5+ My 5 '52; Same. Pet Refiner 31:120-3 Je '52; Same. Pet Eng 24:C37-9 N '52

Hypersorption; Union oil company of California. flow diag Pet Refiner 31:250-1 S '52

Light hydrocarbon recovery processes; adsorption, condensate fractionation, gas fractionation. flow diags Pet Refiner 31:152-3 S '52

Processing and recovery of light hydrocarbons in the field; with cost data. J. M. Campbell and R. N. Maddox. flow sheets diags Oil & Gas J 51:122-5 D 1 '52

Raw-liquids gathering system, largest superfractionation plant; Phillips' natural-gasoline operations. J. C. Reidel. flow diags il map Oil & Gas J 51:168-70+ Ap 27 '53

Selective adsorption of hydrocarbons. G. Spengler and K. Krenkler. bibliog diag Pet Refiner 31:111-14 Jl; 133-6 O '52

Separating aromatics by the Arosorb process. F. R. Shuman and D. G. Brace. flow sheet Oil & Gas J 51:109-13 Ap 6 '53; Same. Pet Eng 25:C9-12+ Ap '53

Separation of phenols from coal-tar hydrocarbons by means of glycerol and aqueous triethylene glycol; development of a process. A. P. C. Cumming. flow diags J Ap Chem 3:98-106 Mr '53

Silica gel removes aromatics. diag Chem Eng 60:374 F '53

SO_2 extraction; Stone & Webster-Badger. flow diag Pet Refiner 31:202-3 S '52

Udex extraction; Universal oil products co. flow diag Pet Refiner 31:246-7 S '52

Synthesis

Products from hydrocarbon synthesis. C. E. Morrell and others. flow sheet bibliog Ind & Eng Chem 44:2839-43 D '52

Products of the hydrogenation of carbon monoxide over an iron catalyst. A. W. Weitkamp and others. bibliog Ind & Eng Chem 45:343-67 F '53

HYDROCARBONS, Aromatic

Action of benzoyl peroxide on polycyclic aromatic hydrocarbons. I. M. Roitt and W. A. Waters. Chem Soc J p2695-705 Jl '52

Alkylation of aromatic hydrocarbons by optically active secondary butyl methyl ether in the presence of boron trifluoride. R. L. Burwell, jr., L. M. Elkin and A. D. Shields. bibliog Am Chem Soc J 74:4570-2 S 20 '52

Aromatic hydrocarbons; 2 : 3-6 : 7-dibenzofluoranthene. E. Clar and D. G. Stewart. Chem Soc J p4783-5 D '52

Aromatic hydrocarbons; resonance restriction and the absorption spectra of aromatic hydrocarbons. E. Clar and D. G. Stewart. bibliog Am Chem Soc J 74:6235-8 D 20 '52

Aromatic hydrocarbons; triangulene derivatives. E. Clar and D. G. Stewart. bibliog Am Chem Soc J 75:2667-72 Je 5 '53

Aromaticity of conjugated monocyclic hydrocarbons. K. Mislow. bibliog diags J Chem Phys 20:1489-90 S '52

Base strengths of aromatic hydrocarbons relative to hydrofluoric acid in anhydrous hydrofluoric acid as the solvent. M. Kilpatrick and F. E. Luborsky. bibliog diags Am Chem Soc J 75:577-84 F 5 '53

Colour and constitution; aromatic hydrocarbons. M. J. S. Dewar. Chem Soc J p3532-44 S '52

Correlations of infrared spectra with structure. J. Bomstein. bibliog Anal Chem 25:512-14 Mr '53

HYDROCARBONS, Aromatic—*Continued*

Cosden produces nitration-grade aromatics. il Oil & Gas J 51:81-2 F 2 '53

Effect of solvent on the ultra-violet absorption spectra of aromatic hydrocarbons with special reference to the mechanism of salting-out. E. F. G. Herington and W. Kynaston. Chem Soc J p3137-49 Ag '52

Extractive distillation for aromatics recovery; Shell development co. flow diag Pet Refiner 31:242-3 S '52

First Platreater on stream at Roosevelt Oil. il Pet Eng 25:C20-1 My '53; Pet Refiner 32:142 My '53

Inter- and intramolecular energy transfer processes; hydrocarbon-hydrocarbon systems. M. M. Moodie and C. Reid. bibliog J Chem Phys 20:1510-15 O '52

Lowest triplet levels of aromatic hydrocarbons. C. Reid. il J Chem Phys 20:1214-15 Ag '52

Modified SO_2 extraction for aromatics recovery; Stone & Webster-Badger. flow diag Pet Refiner 31:242-3 S '52

Polycyclic aromatic hydrocarbons as starting materials for the synthesis of dyestuffs. T. Holbro. J Ap Chem 3:1-9 Ja '53

Preparation of polycyclic aromatic hydrocarbons as potential carcinogens. G. Wolf. bibliog Am Chem Soc J 75:2673-8 Je 5 '53

Products of hydrogenation of carbon monoxide over an iron catalyst; aromatic hydrocarbons. W. E. Cady, P. J. Launer and A. W. Weitkamp. bibliog Ind & Eng Chem 45:350-3 F '53

Salting-out of non-electrolytes; the effect of variation in non-electrolyte. T. J. Morrison and F. Billett. diags Chem Soc J p3819-22 O '52

Synthesis of polynuclear aromatic hydrocarbons; methylbenzo(c)phenanthrenes. M. S. Newman, H. V. Anderson and K. H. Takemura. bibliog Am Chem Soc J 75:347-9 Ja 20 '53

See also

Anthracene
Benzene
Naphthalene

Analysis

Determination of aromatic and naphthene rings in aromatics from petroleum fractions. C. C. Martin and A. Sankin. bibliog Anal Chem 25:206-14 F '53

Determination of individual alkyl aromatic hydrocarbons from benzene through the C_{10} aromatics by infrared spectrometry. R. B. Williams, S. H. Hastings and J. A. Anderson, jr. bibliog Anal Chem 24:1911-18 D '52

Ultraviolet absorption determination of C_9 and C_{10} aromatics. M. S. Norris and N. D. Coggeshall. Anal Chem 25:183-7 Ja '53

HYDROCHLORIC acid

Action of acidic reagents on ethylene oxide anhydro-sugars; the action of hydrochloric acid on methyl 2 : 3-anhydro-4 : 6-*O*-benzylidene-α-D-mannoside. F. H. Newth and R. F. Homer. Chem Soc J p989-92 Mr '53

Anion exchange studies; adsorption of hydrochloric acid by a strong base anion exchanger. K. A. Kraus and G. E. Moore. bibliog Am Chem Soc J 75:1457-60 Mr 20 '53

Anion exchange studies; the divalent transition elements manganese to zinc in hydrochloric acid. K. A. Kraus and G. E. Moore. bibliog Am Chem Soc J 75:1460-2 Mr 20 '53

Chemistry of the triterpenes; some aspects of the chemistry of tetracyclic triterpenes. M. C. Dawson, T. G. Halsall and R. E. H. Swayne. Chem Soc J p590-4 F '53

Chemistry of the triterpenes; the action of hydrogen chloride on butyrospermol. M. C. Dawson and others. Chem Soc J p586-9 F '53

Disproportionation equilibria and rates in perchloric and hydrochloric acid solutions of plutonium; influence of α-particles. R. E. Connick and W. H. McVey. bibliog Am Chem Soc J 75:474-9 Ja 20 '53

Dissolution of metals over the temperature range of 25 to -60°; the dissolution of zinc in hydrochloric acid-methyl alcohol-water solutions. J. Y. Welsh and A. B. Garrett. bibliog J Phys Chem 56:727-30 Je '52

Electrolytic reduction of perrhenate; studies in perchloric, ethanesulfonic, trifluoroacetic and hydrochloric acids. J. C. Hindman and P. Wehner. bibliog Am Chem Soc J 75:2869-72 Je 20 '53

Electromotive force studies in aqueous solutions of hydrochloric acid and glycerol from 0 to 40°. S. B. Knight, H. D. Crockford and F. W. James. bibliog J Phys Chem 57:463-6 Ap '53

Embrittlement of zirconium and tantalum in hydrochloric acid. L. B. Golden, I. R. Lane, jr. and W. L. Acherman. bibliog il Ind & Eng Chem 45:782-6 Ap '53

Emission of radiation from diatomic gases; emissivity calculations for CO and HCl for nonoverlapping rotational lines as a function of temperature and optical density. S. S. Penner. bibliog diag J Ap Phys 23:825-37 Ag '52

Exchange reaction between hydrogen chloride and aluminum chloride. M. Blau, W. T. Carnall and J. E. Willard. bibliog Am Chem Soc J 74:5762-3 N 20 '52

Exchange reaction between the two oxidation states of iron in acid solution. J. Silverman and R. W. Dodson. bibliog J Phys Chem 56:846-52 O '52

Existence of multiply charged molecular ions of HBr, HCl, and DCl. W. H. Johnston and J. R. Arnold. bibliog J Chem Phys 21:1499-502 S '53

Free energies and entropies of hydrogen, chlorine and hydrogen chloride from spectroscopic data. R. H. Sherman and W. F. Giauque. bibliog Am Chem Soc J 75:2007-8 Ap 20 '53

High field conductance of acetic acid from 5 to 55° relative to hydrochloric acid. F. E. Bailey, jr. and A. Patterson, jr. bibliog Am Chem Soc J 74:4756-9 O 5 '52

Hydrogen chloride cleavage of some trimethylarylsilanes. R. A. Benkeser and H. R. Krysiak. bibliog Am Chem Soc J 75:4528-31 S 20 '53

Infrared intensity measurements on nitric oxide, hydrogen chloride, and hydrogen bromide. S. S. Penner and D. Weber. bibliog J Chem Phys 21:649-54 Ap '53

Infrared spectra of HCl, DCl, HBr, and NH_3 in the region from 40 to 140 microns. R. L. Hansler and R. A. Oetjen. bibliog J Chem Phys 21:1340-3 Ag '53

Inorganic corrosion inhibitors in acid solution. C. V. King and others. bibliog Electrochem Soc J 99:423-6 O '52

Ionization constants of taurine and its activity coefficient in hydrochloric acid solutions from electromotive force measurements. E. J. King. bibliog Am Chem Soc J 75:2204-9 My 5 '53

Kinetics of hydrochlorination of lauryl alcohol. H. A. Kingsley, jr. and H. Bliss. diags Ind & Eng Chem 44:2479-87 O '52

Kinetics of the catalytic vapor-phase addition of hydrogen chloride to propylene. L. E. Swabb, jr. and H. E. Hoelscher. bibliog plan Chem Eng Prog 48:564-9 N '52

New pattern for chlor-alkali. J. Gordon. Chem W 72:28-36+ Ap 4 '53

Passivity of titanium in hydrochloric acid solutions. D. Schlain and J. S. Smatko. bibliog il Electrochem Soc J 99:417-22 O '52

Polarography of tungsten(VI) in hydrochloric acid; mechanism of the tungsten(V)-tungsten(III) wave. H. A. Laitinen, K. B. Oldham and W. A. Ziegler. bibliog Am Chem Soc J 75:3048-50 Jl 5 '53

Potentiometric study of the reduction by potassium iodide of potassium bromate in sulphuric and hydrochloric acid solutions. H. T. S. Britton and H. G. Britton. Chem Soc J p3887-92 O '52

Potentiometric titration of iodic acid with potassium iodide in sulphuric and hydrochloric acid solutions. H. T. S. Britton, R. E. Cockaday and J. K. Foreman. Chem Soc J p3877-9 O '52

Reaction of *cis*-1,4-epoxycyclohexane with hydrochloric acid and with hydrobromic acid. E. L. Bennett and C. Niemann. bibliog Am Chem Soc J 74:5076-8 O 20 '52

HYDROCHLORIC acid—*Continued*

Reaction of tantalum with hydrogen chloride, hydrogen bromide and tantalum pentachloride; action of hydrogen on tantalum pentachloride. R. C. Young and C. H. Brubaker, jr. Am Chem Soc J 74:4967 O 5 '52

Rotational line-width measurements on NO, HCl, and HBr. D. Weber and S. S. Penner. bibliog J Chem Phys 21:1503-6 S '53

Sorption of hydrogen chloride by wool. P. Larose. bibliog Textile Res J 23:91-8 F '53

System water-dioxane-hydrogen chloride. R. A. Robinson. Am Chem Soc J 74:6125 D 5 '52

Ternary system; isopropyl ether-HCl-H_2O. D. E. Campbell, A. H. Laurene and H. M. Clark. bibliog Am Chem Soc J 74:6193-6 D 20 '52

Ternary systems ferrous chloride-hydrogen chloride-water, ferric chloride-ferrous chloride-water. F. A. Schimmel. bibliog Am Chem Soc J 74:4689-91 S 20 '52

Manufacture

We still smell a little. H. C. Hosford. diag Chem Eng 59:328+ N '52

HYDROCHLORINATION. See Hydrochloric acid

HYDROCINNAMIC acid

Solvent effects in the α-chymotrypsin-hydrocinnamic ester system. M. L. Barnard and K. J. Laidler. Am Chem Soc J 74:6099-101 D 5 '52

HYDRO coal transportation company

Coal pipeline. Bsns W p50+ N 22 '52

HYDROCYANIC acid

Catalytic hydrolysis of hydrogen cyanide to ammonia. J. D. F. Marsh, W. B. S. Newling and J. Rich. J Ap Chem 2:681-4 D '52

Quinone imides; addition of hydrogen cyanide to 1,4-naphthoquinonedibenzenesulfonamide. R. Adams and W. Moje. Am Chem Soc J 74:5562-3 N 20 '52

Rotation-vibration spectra of diatomic and simple polyatomic molecules with long absorbing paths; the spectra of the HCN and DCN molecules from 2.5µ to 0.5µ. A. E. Douglas and D. Sharma. bibliog diag J Chem Phys 21:448-58 Mr '53

Some molecular constants of $HC^{13}N$. R. E. Kagarise and others. J Chem Phys 20:1437-8 S '52

Studies on hydrogen cyanide; the reaction of the sesquichloride of hydrogen cyanide with mesitylene in the presence of aluminium chloride. L. E. Hinkel and G. H. R. Summers. Chem Soc J p2813-16 Jl '52

Manufacture

Italian manufacture of hydrocyanic acid; Montecatini methods in use. diag Chem Age (Lond) 67:541-2 O 18 '52

HYDRODYNAMICS

Calculator solves fluid flow problem. il Chem Eng 59:224 N '52

Characteristics of flow in falling liquid films. A. E. Dukler and O. P. Bergelin. bibliog flow diag il diags Chem Eng Prog 48:557-63 N '52

Consideration of the hydrodynamic properties of proteins. H. A. Scheraga and L. Mandelkern. bibliog Am Chem Soc J 75:179-84 Ja 5 '53

Dilute solution hydrodynamic behavior of flexible chain molecules; polymethyl methacrylate. T. G. Fox and L. Mandelkern. J Chem Phys 21:187-8 Ja '53

Effect of entrance conditions on diffuser flow. J. M. Robertson and D. Ross. il Am Soc C E Proc 78 [no 141]:1-24 Jl '52; Discussion. 79 [no D-141]:1-6 Je '53

Experimental verification of the theory of jet formation by charges with lined conical cavities. R. J. Eichelberger and E. M. Pugh. il diags J Ap Phys 23:537-42 My '52

Hydrodynamic effects of gales on Lake Erie. G. H. Keulegan. bibliog map diags J Res Nat Bur Stand 50:99-109 F '53

Hydrodynamic forces on hydraulic piston valves. T. E. Beacham. diags Engineering 174:588-91 N 7 '52

Hydrodynamic problems in three dimensions. P. G. Hubbard and S. C. Ling. il diags Am Soc C E Proc 78[no 143]:1-9 Ag '52

Hydrodynamic relationships in particulate fluidization. R. J. Young. bibliog J Ap Chem 2(sup no 1):S55-61 '52

Hydrodynamic resistance of particles. N. Shoumatoff. bibliog Tappi 36:184-9 Ap '53

Hydrodynamic stability of flame fronts. H. Einbinder. bibliog J Chem Phys 21:480-9 Mr '53

Macroscopic equations of transport. J. G. Kirkwood and B. Crawford, jr. bibliog J Phys Chem 56:1048-51 D '52

Mass transfer between solid wall and fluid streams. C. S. Lin, R. W. Moulton and G. L. Putnam. bibliog il diags Ind & Eng Chem 45:636-46 Mr '53

Mechanics of drops. R. R. Hughes and E. R. Gilliland. bibliog diag Chem Eng Prog 48:497-504 O '52

Motion of a sphere moving parallel to a plane boundary. F. C. Karal. diags J Ap Phys 24:147-51 F '53

Penetration and deflection of jets oblique to a general stream. F. F. Ehrich. diags J Aeronautical Sci 20:99-104 F '53

Periodic fluid flow through circular tubes. G. B. Thurston. bibliog diag Acoustical Soc Am J 24:653-6 N '52

Spectrum of energy in turbulent shear flow. C. M. Tchen. bibliog J Res Nat Bur Stand 50:51-62 Ja '53

Stability of the laminar parabolic flow of a viscous fluid between parallel fixed walls. C. L. Pekeris. bibliog Phys R 74:191-9 Jl 15 '48; Discussion. T. Tatsumi. 87:1127-8 S 15 '52

Studies on the motion of gas bubbles in liquids. F. N. Peebles and H. J. Garber. bibliog diag Chem Eng Prog 49:88-97 F '53

Theory of jet formation by charges with lined conical cavities. E. M. Pugh and others. diags J Ap Phys 23:532-6 My '52

Vertical entry of missiles into water. A. May. il J Ap Phys 23:1362-72 D '52

Water forces on submerged bodies in motion; abstract and discussion. W. C. S. Wigley. Engineering 175:677-8 My 29 '53

Wave forces on breakwaters. R. Y. Hudson. bibliog diags Am Soc C E Proc 78 [no 113]: 1-22 Ja '52; Discussion. il 78 [no D-113]: 1-11 N '52

See also

Aerodynamics
Bubbles
Cavitation
Drops
Fluidization
Hydrostatics
Ship resistance
Turbulence
Viscosity
Vortex motion
Waves

HYDROELECTRIC plants

Court cuts FPC's licensing powers. Elec World 139:58-9 Ja 12 '53

Dreams the taxpayer didn't have to pay for. J. L. Donnelly. Pub Util 51:465-75, 547-55 Ap 9-23 '53

Licensing rights of federal and state agencies near showdown. Elec World News ed 139: 24 Mr 2 '53

Power regained by cleaning Santeetlah tunnels. B. J. Fletcher. Edison Elec Inst Bul 20:431-3 D '52

Construction

Aerial tramway serves Kemano tunnels; Aluminum company of Canada's powerhouse construction. il Eng N 149:42-3 N 20 '52

Alcan, British Columbia power project under construction. W. G. Huber. il maps diag Civil Eng 22:938-43; 23:102-7 N '52, F '53

Alcan in British Columbia; methods spur underground powerhouse, tunnels. L. L. Wise. il plans diags Constr Methods 34:72-3+ D '52

Concrete-placing cableway installation on Quebec power development. L. Zarifi. il diags Roads & Eng Constr 91:132-6+ Ap '53

Concrete requirements for Niagara Power development total 1,750,000 cu. yd. il Roads & Eng Constr 91:89-91+ Ja '53

Even hydro power starts with Diesels; Aluminum co. of Canada. il Diesel Power 30:38-9 D '52

HYDROELECTRIC plants—Construction—*Continued*

Glen Affric scheme of the North of Scotland hydro-electric board. il plan diags Engineering 174:451-60, pl 37, 489-93, pl 42, 553-5, pl 47 O 10-17, 31 '52

Hard rock mining job at Kitimat power site. il Min Eng 4:1044-5 N '52

Hydro-electric power developments at Niagara falls. il map Engineering 174:687-8 N 28 '52

Microwave remote control for Yale plant; Pacific power & light co. E. R. de Luccia. il Elec West 109:80-2 N '52

More Canadian kilowatts at Niagara. H. R. Rice. il map diags Comp Air Mag 58:210-17, 244-50 Ag-S '53

Nechako-Kemano hydro-electric scheme in British Columbia. il maps Engineer 195: 777-9 My 29 '53

Ontario hydro project at Niagara falls. H. R. Rice. il map diags Can Min J 74:63-8 My; 77-83 Je '53

Progress on the Aluminum company's half-billion dollar project in British Columbia. il maps diag Roads & Eng Constr 91:94-9+ Ja '53

Second stage of Niagara River development to bring cost to $299,000,000. il map diag Roads & Eng Constr 90:103-6+ O '52

350-mw hydroelectric generating station at Harsprånget, Sweden. il plans diags Engineering 174:585-7, 617-19, pl 49 N 7-14 '52

Tunnelers make record at Niagara falls. H. R. Rice. il Comp Air Mag 58:169-70 Je '53

Water power in the Italian Alps. il map plans diags Engineer 195:266-9, 302-4, 338-40, 374-6, 482-5 F 20-Mr 13, Ap 3 '53

World's largest underground power plant in northern British Columbia. L. L. Wise. il plans diags Eng N 149:31-2+ N 13 '52

Wringing out the last kw; hydro subsidiary of Alcoa; Nantahala Power and Light. il map Eng N 150:51+ My 14 '53

Control

This 33,750 kw hydro plant has no operators. H. E. Rhoades. il Elec World News ed 139: 28-30+ Ja 5 '53

Cost

Irrigation and hydro-power construction cost indexes; tabulation. Eng N 150:64 F 26 '53

Water power in Rhodesia. map Elec R (Lond) 152:303-5 F 6 '53

Design

Design features of three Canadian hydroelectric projects analyzed. A. E. Aeberli and G. F. Simson. il diags Power 97:86-9+ F '53

Guayabo will be an outstanding plant. C. E. Bauman. il diags Elec World News ed 139: 22-3 Ap 27 '53

Kitimat power development; abstract. F. L. Lawton. Elec J 150:1155-6 Ap 3 '53

Nechako-Kemano hydro-electric scheme in British Columbia. il maps Engineer 195: 777-9 My 29 '53

Underground hydro plant boosts Rio power. E. A. Johanson. map plans diags Elec World 139:130-3 Mr 23 '53

Unique outdoor hydroelectric plant. H. E. Rhoades. il plan diag Elec Eng 72:803-7 S '53

Equipment

Ancient and modern in North Africa. D. Anley. il Elec R (Lond) 152:1102-4 My 15 '53

Control of hydro-electric plant. A. C. H. Frost and W. Brittlebank. bibliog diags Inst E E Proc 98 pt 1:129-43 My '51; Discussion. 98 pt 1:144-54; 100 pt 1:121-5 My '51, My '53

Design of high-speed salient-pole a.c. generators for water-power plants. E. M. Johnson and C. P. Holder. bibliog il diags Inst E E Proc 99 pt 2:479-90; Discussion. 490-4 O '52

Electricity supply developments in Italy. il diags Engineering 176:268-9 Ag 28 '53

Electricity supply of the city of Zürich. il map diags Engineering 176:129-34, pl 10-11 Jl 31 '53

4·75mw turbo-alternator set; Lower White River hydro-electric power station, Jamaica. Engineer 194:661-2 N 14 '52; Elec R (Lond) 151:1063-6 N 14 '52

Glen Affric; large Scottish hydro-electric scheme inaugurated. il map diag Elec R (Lond) 151:821-9 O 17 '52

Microwave links hydroelectric plants in Pacific Northwest. L. A. Carter. il map diag Elec World 139:84-6 Ja 12 '53

Power from Glen Affric. il diag Electrician 149:1076-80 O 10 '52

Prevent spillgate freezing in New England winter; Cabot station of Western Massachusetts electric co. J. L. Hyland and A. L. Davis. il diag Elec World 138:127-8 O 6 '52

Record-size pump-turbine to be installed at TVA's Hiwassee project. R. A. Elliot and D. H. Mattern. il map diag Civil Eng 23: 172-5 Mr '53

Return to Tummel. il map Elec J 149:1321-3 O 31 '52

Shipshaw power development. il Elec J 149: 1409-13 N 7 '52

Squeeze out a few more kilowatt-hours; modernization of Station B plant of Portland general electric co. J. Bankus. il diag Elec West 109:79-81 D '52

Supervisory control of hydro; new Michigamme station. il map Elec World 139:80-1 My 4 '53

TVA pump-turbine started; Allis-Chalmers to build Hiwassee dam power system. Steel 131:125 N 24 '52

Unusual features add 12,000 kw to 57-year old hydro station. H. Arnett. il plans diag Elec World News ed 139:32-4 Ja 19 '53

See also
Penstocks

Fish problem

Attack Pelton dam; Oregon fish interests launch assault on Portland GE's hydro project. Elec World News ed 139:15 Mr 2 '53

Electrical control of fish movements; abstracts. N. G. Lethlean. Engineering 175: 203 F 13 '53; Elec R (Lond) 152:365 F 13 '53

Electrical control of salmon and trout. il Engineering 175:240 F 20 '53

Government ownership

Are present federal practices sound national power policy? E. R. de Luccia. il Elec West 110:106-9 Je '53

Are tax dollars to develop Hells canyon? R. F. Ball. map Elec West 110:63-6 Ja '53; Same. Edison Elec Inst Bul 21:71-4 Mr '53

Army engineers' 308 report. T. H. Lipscomb. map Elec West 110:73-5 Ja '53

Balance of power; Mr McKay moves to restore it in the Columbia basin. R. M. Bleiberg. Barron's 33:3 Je 29 '53

California backs Trinity plan. Elec World News ed 139:24 My 11 '53

Case closed; Supreme court blocks public power subterfuge; Roanoke Rapids case. H. Murphy. Barron's 33:11-12 Ap 6 '53

Changing federal attitude toward business-managed power companies. Manuf Rec 122: 31 S '53

Changing the guard; Eisenhower names Cabinet officers. Pub Util 50:917-19 D 18 '52

Co-op plan for Clark Hill power. Elec World 139:75 Mr 9 '53

Court ponders power feud. Eng N 149:28 N 6 '52

Current and future development of USBR power projects; tabulation. Elec West 110: 95 F '53

Dangers of the authority mechanism. B. L. England. bibliog Pub Util 51:729-33 Je 4 '53

Democrats 20 years in electric power. il Elec World News ed 139:16-18+ Ja 19 '53

Do we need more federal power authorities. L. Jordan. Pub Util 50:817-25 D 4 '52

Encroachment; the drive toward federal control of power. A. A. Smith. Edison Elec Inst Bul 20:337-42 O '52; Excerpts. Elec West 109:98-9 Jl '52

Evaluation of project benefits. Elec World 138:54 D 29 '52

Federal electric power; an evil force of creeping socialism. H. Hoover. Comm & Fin Chr 177:1641+ Ap 16 '53; Abstract. Pub Util 51:643-4; Discussion. 644-6 My 7 '53

Flood-control plan at Bagnell dam meets opposition from FPC. Eng N 150:27 F 5 '53

HYDROELECTRIC plants—Government ownership—*Continued*

Forecast of new U.S. policy in power. Elec World 139:120-1 Ja 26 '53
Government-agency hydroelectric plants; tabulation. Power 97:58 Mid-S '53
GOP applies knife to its power budget. Elec World News ed 139:6-7 Ap 27 '53
Great white coal myth. A. M. Cooper. Pub Util 51:217-24 F 12 '53
Hell's Canyon decision brings varied reaction. Pub Util 51:800-1 Je 4 '53
Hoover plan; dams but no socialism. Elec World 139:104-5 Ap 20 '53
How are the costs figured; dual system of accounting used on federal projects; with table of annual power charges. Elec World News ed 138:8-9 D 22 '52
Hydropower; government backs out. Bsns W p34 Jl 18 '53
Interior's new contract between the Bonneville administration and private power companies in the Pacific Northwest. Pub Util 52:440-1 S 24 '53
Interior's public power policy. Pub Util 52:384-91 S 10 '53
McKay takes issue with Hoover. Elec World News ed 139:7 Ap 27 '53
McKay takes middle road on power. il Elec World News ed 139:6-7 My 11 '53
Missouri; no waltz for Ike. map Elec World News ed 139:15-17 Ja 5 '53
Niagara should be a business company project. R. C. Woodbury. Pub Util 51:687-97 My 21 '53
No preference law change will be made this session by Congress. Elec World 139:110-11 Mr 23 '53
Opposing GOP views on power aired. F. G. Aandahl and F. R. Coudert, jr. Elec World 139:60 My 4 '53
Outlook for hydro redevelopment at Niagara. W. E. Miller. map Pub Util 51:531-8 Ap 23 '53
Pay scale at Gavins Point dam criticized. Elec World News ed 139:41 Mr 16 '53
Place of hydro power today. J. P. Callahan. Pub Util 51:294-9 F 26 '53
Power bloc senators blast giveaway. Pub Util 52:323-6 Ag 27 '53
Power projects. F. G. Aandahl. Pub Util 51:702 My 21 '53
Power up to sixth on best issue list; issue in the presidential campaign. il Elec World News ed 138:7+ O 13 '52
Proposed BPA contract protested in Northwest. Elec West 111:128 Jl '53
Public power is here to stay. D. McKay. Comm & Fin Chr 177:2201+ My 21 '53; Abstract. Elec World News ed 139:15 My 25 '53
Public power policy. F. G. Aandahl. Pub Util 51:714-15 My 21 '53
Reaction to power policy. Pub Util 52:369-70 S 10 '53
Republicans hit a GOP wall; waterway projects in the Pacific Northwest. Elec World News ed 139:8 Mr 16 '53
Some measurements of size of the federal power empire. H. B. Sargent. maps Elec West 109:75-9 N '52
Trend toward multipurpose developments. J. S. Bowman. il Civil Eng 22:736-9 S '52
Uncle Sam's light and power company. R. Moley. Elec West 110:95-100 Je '53
Use of economic leverage to eclipse private power. J. D. Garwood. Pub Util 50:481-5 O 9 '52
Vepco dam upheld for Roanoke rapids. il map Elec World 139:108-9+ Mr 23 '53
Views on McKay stand divided on Snake River development. il Elec World 139:129 My 18 '53
Western public power rules. Pub Util 52:494-6 O 8 '53
Wheeling contracts face test. Elec World News ed 139:9 My 11 '53
Where will the GOP take it? map Bsns W p 112-16+ My 9 '53
Who are the real friends of free enterprise? views on Niagara power and federal regulation of natural gas. R. S. Byfield. Manuf Rec 122:54 Je '53
Why Interior dropped Hell's Canyon project. D. McKay. Pub Util 51:734-9 Je 4 '53

See also
Bonneville power administration
Ontario—Hydroelectric power commission
Tennessee Valley authority

Heating and ventilation

Electricity heats, ventilates Hungry Horse power plant. L. L. DeLong. il diag Heating-Piping 25:73-6 Ag '53
Modernizing a mountain! il map Dom Eng 180:138-40+ D '52
Roof ventilators jack TVA hydro-plant output. il Power 96:94 N '52

Ice protection

Air bubbler system maintains open channel in ice sheet. P. M. Hess. il diag Elec World 139:106+ Mr 9 '53
Combatting frazil ice in hydro-electric stations; abstract. K. J. Granbois. Power 97:150+ Mr '53
Degree-day tab warns of ice ahead. P. M. Hess. Elec World 139:129 Mr 23 '53

Maintenance and repair

Electrical test program holds down hydro-plant outages; Ardnacrusha hydro station. P. Byrne. il diags Power 97:80-3 Mr '53

Storage type

Hiwassee 102,000-hp motor, and pump-turbine. il Power Eng 57:59 F '53
Little rivers plus pumped storage and high head make big peak-load power; Glockner-Kaprun project. B. J. Tufty. il plan diags Power 97:101-4+ My '53
Pumped storage capacity improves big power system's operation; Etzel power project. il map plan diags Power 97:84-6 Ap '53
Pumped storage; Schluchsee scheme. K. A. Scholz. Elec R (Lond) 153:442 Ag 28 '53
Record-size pump-turbine to be installed at TVA's Hiwassee project. R. A. Elliot and D. H. Mattern. il map diag Civil Eng 23:172-5 Mr '53

Algeria

Ancient and modern in North Africa. D. Anley. il Elec R (Lond) 152:1102-4 My 15 '53
Electricity in Algeria. D. Anley. il Elec R (Lond) 151:1099-104 N 21 '52

Australia

Snowy Mountains project. A. S. Park. il maps Comp Air Mag 58:180-5 Jl '53
Vast hydro scheme beckons U.S. contractors; Australia's Snowy Mountains hydroelectric authority. W. A. Dexheimer. map Eng N 150:58+ F 5 '53

Austria

Austrian Parliament passes power-loan law. For Comm W 49:8 Je 8 '53
Little rivers plus pumped storage and high head make big peak-load power; Glockner-Kaprun project. B. J. Tufty. il plan diags Power 97:101-4+ My '53

Brazil

Underground hydro plant boosts Rio power. E. A. Johanson. map plans diags Elec World 139:130-3 Mr 23 '53

British Columbia

Aerial tramway serves Kemano tunnels; Aluminum company of Canada's powerhouse construction. il Eng N 149:42-3 N 20 '52
Alcan, British Columbia power project under construction. W. G. Huber. il maps diag Civil Eng 22:938-43; 23:102-7 N '52, F '53
Alcan in British Columbia. L. L. Wise. il maps plans diags Constr Methods 34:42-8 N; 72-3+ D '52
Alcan tunnelers better record again. il Comp Air Mag 58:172 Je '53
Even hydro power starts with Diesels; Aluminum co. of Canada. il Diesel Power 30:38-9 D '52
Four million units per day is consumption of Canadian smelting concern. il Elec J 150:1727-8 My 15 '53

HYDROELECTRIC plants—British Columbia —*Continued*

Hard rock mining job at Kitimat power site. il Min Eng 4:1044-5 N '52

Kitimat hydro-electric scheme. Elec R (Lond) 152:753 Ap 3 '53

Kitimat power development; abstract. F. L. Lawton. Elec J 150:1155-6 Ap 3 '53

Modernizing a mountain! il map Dom Eng 180:138-40+ D '52

Nechako-Kemano hydro-electric scheme in British Columbia. il maps Engineer 195: 777-9, 811-12 My 29-Je 5 '53

Power generating and transmission project is under construction in British Columbia. il diag Elec Eng 71:1153-4 D '52

Progress on the Aluminum company's half-billion dollar project in British Columbia. il maps diag Roads & Eng Constr 91:94-9+ Ja '53

Sub-arctic tunnel; problems in piping and ventilation; Aluminum company of Canada's hydroelectric power project. il Heat & Ven 49:122+ N '52

Waneta power plant progresses. Can Min J 73:68 N '52

World tunnel record claimed. H. R. Rice. Can Min J 73:58-9 D '52

California

Aerial pictures of snow markers aid forecasts of stream runoff. T. Henderson. il map Elec World News ed 139:22-3 Ap 13 '53

California backs Trinity plan. Elec World News ed 139:24 My 11 '53

California makes report on Trinity River project. A. D. Edmonston. Elec West 110: 138 My '53

See also
Central Valley project, California

Canada

Canadian hydro progress. Mech Eng 75:237 Mr '53

Canadian systems meet a challenge. maps Elec World News ed 138:16-18 D 22 '52

Cheapest power in the world. Economist 166: 527-9 F 21 '53

Construction in the hydro-electric field reaches new peak of activity. il Roads & Eng Constr 91:124-5+ My '53

Design features of three Canadian hydroelectric projects analyzed. A. E. Aeberli and G. F. Simson. il diags Power 97:86-9+ F '53

Hydro; Canada's word for power. il Elec World News ed 139:16-18 My 25 '53

Hydroelectric construction in Canada at record high. Civil Eng 23:338 My '53

New Northwest developments; power galore and new mining fields. A. F. G. Cadenhead. map Can Chem Process 37:18+ Ap '53

1953 design survey; typical hydroelectric plants in the United States and Canada; tabulation. Power 97:54-7 Mid-S '53

Progress in Canada. R. H. Winters. Elec J 150:273 Ja 23 '53

Record Canadian development. Elec R (Lond) 152:317-18 F 6 '53

Water-power resources of Canada. Pulp & Pa of Can 54:196+ Ap '53

Europe

Hydro potential in Europe. Elec J 150:2269 Je 26 '53

Finland

Finland establishes new power company. For Comm W 49:5 Mr 2 '53

Finland plans expansion. Elec World 138:63 D 29 '52

France

Andre Blondel power station on the river Rhone. il Engineer 194:547 O 24 '52

France finishes Rhone power plant. il Eng N 149:62+ N 20 '52

Genissiat dam; French coal saver. il Elec World News ed 139:21 F 2 '53

Rhone power project develops. il Elec J 149: 1244 O 24 '52; Elec R (Lond) 151:902-4 O 24 '52

Some foreign civil engineering schemes of 1952. il Engineer 195:196-8 F 6 '53

Georgia

Co-op plan for Clark Hill power. Elec World 139:75 Mr 9 '53

Germany

Pumped storage; Schluchsee scheme. K. A. Scholz. Elec R (Lond) 153:442 Ag 28 '53

Gold Coast

Volta River aluminium scheme. map Engineer 194:811-12 D 12 '52; Elec J 149:1761-2 D 5 '52; Elec R (Lond) 151:1209-10 D 5 '52

Idaho

Are tax dollars to develop Hell's canyon? R. F. Ball. map Elec West 110:63-6 Ja '53; Same. Edison Elec Inst Bul 21:71-4 Mr '53

Three dams instead of five; Idaho power co. files revision of plan for Hell's Canyon site. map Elec World News ed 138:8 D 8 '52

Why Interior dropped Hell's Canyon project. D. McKay. Pub Util 51:734-9 Je 4 '53

India

India's river valley schemes. il Elec J 151: 181-3 Jl 17 '53

Tungabhadra irrigation and power scheme. R. D. Rajan. il map diags Engineering 175:161-3 F 6 '53

Ireland

Electrical test program holds down hydro-plant outages; Ardnacrusha hydro station. P. Byrne. il diags Power 97:80-3 Mr '53

Electricity supply developments in southern Ireland. il Engineer 194:293-4 Ag 29 '52

Italy

Electricity supply developments in Italy. il diags Engineering 176:268-9 Ag 28 '53

Water power in the Italian Alps. il maps plans diags Engineer 195:230-2, 266-9, 302-4, 338-40, 374-6, 410-14, 446-8, 482-5, 518-21 F 13-Ap 10 '53

Jamaica

Lower White River plant. il Elec R (Lond) 151:1063-6 N 14 '52; Engineer 194:661-2 N 14 '52

Japan

Plan hydro, irrigation jobs for Japanese island. Eng N 150:91 My 14 '53

Mexico

Mexico opens Obregon hydro project. Eng N 149:60 D 4 '52

Minnesota

Lack of hydro sites ups power costs in Minnesota. E. R. Abrams. Barron's 33:36 Je 15 '53

Unique outdoor hydroelectric plant. H. E. Rhoades. il plan diag Elec Eng 72:803-7 S '53

Montana

Hungry Horse dam. Comp Air Mag 57:318 N '52; Eng N 149:24 O 2 '52

Hungry Horse dam adds downstream benefits. il Elec West 109:69-71 D '52

Nebraska

Pay scale at Gavins Point dam criticized. Elec World News ed 139:41 Mr 16 '53

New England

Power in the Northeast. L. Smith. Pub Util 51:476-84 Ap 9 '53

Private hydro's recreational advantages. W. J. Cadigan. Pub Util 52:354-8 S 10 '53

Reservoirs for recreation. T. J. Rouner. Edison Elec Inst Bul 21:18+ Ja '53

New Hampshire

Littleton will complete 15-Mile Falls development. il Power Eng 57:71 S '53

New York (state)

Congress hears five-company proposal for Niagara development. Pub Util 51:798-800 Je 4 '53

License to N.Y. seems assured. Elec World 139:76 Mr 9 '53

Niagara should be a business company project. R. C. Woodbury. Pub Util 51:687-97 My 21 '53

HYDROELECTRIC plants—New York (State) —*Continued*

Outlook for hydro redevelopment at Niagara. W. E. Miller. map Pub Util 51:531-8 Ap 23 '53

New Zealand

New Zealand hydro-electricity. Electrician 149:602 Ag 29 '52

New Zealand hydro power. il Elec J 150: 601-3 F 20 '53

New Zealand power development. il Elec J 150:1525-6 My 1 '53

North Carolina

Decision on Roanoke Rapids project boosts private hydroelectric plans. Eng N 150:28 Mr 26 '53

Impact of the Roanoke case. Pub Util 51: 502-3 Ap 9 '53

Pump-turbine unit at Hiwassee aids TVA. H. Wiersema. il Elec World News ed 139: 36-7 My 11 '53

Short rounds lick mica schist on fast tunnel job. H. T. Perez. il diag Constr Methods 35:58-61 My '53

Vepco dam upheld for Roanoke Rapids. il map Elec World 139:108-9+ Mr 23 '53

Wringing out the last kw; hydro subsidiary of Alcoa; Nantahala Power and Light. il map Eng N 150:51+ My 14 '53

North Dakota

Garrison Dam scheme; big Ferranti contract for plant. diags Electrician 149:397-8 Ag 8 '52

Northwestern states

Calendar of new generation, U.S. Columbia River power system; tabulation. Elec West 110:111 F '53

Development of the Columbia River basin. map Engineer 195:760-1 My 29 '53

Power development plans must square with the public interest. J. Dierdorff. Elec West 110:91-2 Je '53

Power in the Pacific Northwest. P. B. McKee. Pub Util 52:291-7 Ag 27 '53

Republicans hit a GOP wall; waterway projects. Elec World News ed 139:8 Mr 16 '53

Ontario

Electricity, key to Ontario's growth. R. L. Hearn. Comm & Fin Chr 177:6+ sec 2 Je 25 '53

Giant tunnels feed Niagara power station. il Power 97:170+ O '53

Hydro-electric power developments at Niagara falls. il map Engineering 174:687-8 N 28 '52

More Canadian kilowatts at Niagara. H. R. Rice. il map diags Comp Air Mag 58:210-17, 244-50 Ag-S '53

New tunneling achievements reached in driving big Ontario hydro tubes. H. W. Richardson. il plans diag Constr Methods 35: 64-6+ Mr '53

Ontario hydro project at Niagara falls. H. R. Rice. il map diags Can Min J 74:63-8 My; 77-83 Je '53

Second stage of Niagara River development to bring cost to $299,000,000. il map diag Roads & Eng Constr 90:103-6+ O '52

Tunnelers make record at Niagara falls. H. R. Rice. il Comp Air Mag 58:169-70 Je '53

Twin bores show achievements in modern tunneling; illustrations with text. Eng & Min J 154:77-9 My '53

See also
Ontario—Hydroelectric power commission

Oregon

Army engineers' 308 report. T. H. Lipscomb. map Elec West 110:73-5 Ja '53

Attack Pelton dam; Oregon fish interests launch assault on Portland GE's hydro project. Elec World News ed 139:15 Mr 2 '53

McNary turbines set record for size. H. A. Doell. il Elec West 110:98-9 Ap '53

Microwave remote control for Yale plant; Pacific power & light co. E. R. de Luccia. il Elec West 109:80-2 N '52

PGE renews bid for permission to build Pelton dam. Elec World News ed 139:9 F 16 '53

Pakistan

Pakistan hydro project to bolster land's economy. Eng N 150:59 Je 18 '53

Pennsylvania

Degree-day tab warns of ice ahead. P. M. Hess. Elec World 139:129 Mr 23 '53

Philippine Islands

Philippines push their hydro program. il maps plans diags Eng N 150:43-4+ Ap 16 '53

Quebec (province)

Concrete-placing cableway installation on Quebec power development. L. Zarifi. il diags Roads & Eng Constr 91:132-6+ Ap '53

Manicouagan dam provides new power source for North shore. il Pulp & Pa of Can 54: 182+ S '53

New paper mill dam brings progress to frontier Quebec; McCormick dam. il map Paper Ind 35:760-2 O '53

Power to make pulp and load ore; Marguerite River dam. il Pulp & Pa of Can 54:184 Jl '53

Quebec plans $100-million program. map Eng N 149:62 N 20 '52

Shipshaw power development. il Elec J 149: 1409-13 N 7 '52

Rhodesia

Kafue River hydro-electric scheme. Engineer 195:257-8 F 13 '53

North Rhodesia approves Kafue River hydro-project. Eng N 150:78 Mr 26 '53

Power in Rhodesia. Elec J 150:453-4 F 6 '53

Water power in Rhodesia. map Elec R (Lond) 152:303-5 F 6 '53

Russia

Power developments in the Soviet Union. Elec World News ed 139:24 Mr 2 '53

Soviet plan; triple capacity by 1955. H. E. Salisbury. map Elec World News ed 138: 15 S 29 '52

Salvador

Guayabo will be an outstanding plant. C. E. Bauman. il diags Elec World News ed 139: 22-3 Ap 27 '53

Scotland

Annual report of the North of Scotland hydro-electric board, year ended Dec. 31, 1952. Engineering 175:402 Mr 27 '53

Glen Affric; large Scottish hydro-electric scheme inaugurated. il map diag Elec R (Lond) 151:821-9 O 17 '52

Glen Affric scheme of the North of Scotland hydro-electric board. il plan diags Engineering 174:457-60, pl 37, 489-93, pl 42, 553-5, pl 47 O 10-17, 31 '52

Highland water power; North of Scotland Board's report. il Elec R (Lond) 152:653-5 Mr 20 '53

Hydro-electric developments in Scotland. il (p 176) Engineering 174:173; 175:182, 819 Ag 8 '52, F 6, Je 26 '53

Hydro-electric power from the Conon basin. il map Elec J 149:1657-9 N 28 '52

Hydro project to increase Scotland's power capacity. For Comm W 49:5 Mr 9 '53

North of Scotland hydro-electric board. Electrician 149:623 Ag 29 '52

North of Scotland hydro-electric board's annual report for 1952. Engineer 195:425 Mr 20 '53

Opening of the Glen Affric hydroelectric scheme. il Engineer 194:518-19 O 17 '52

Perthshire power scheme. Elec R (Lond) 152: 380 F 13 '53

Power from Glen Affric. il diag Electrician 149:1076-80 O 10 '52

Return to Tummel. il map Elec J 149:1321-3 O 31 '52

Scottish hydro-electric station; Gaur scheme. il Elec R (Lond) 152:1493-4 Je 26 '53

Underground power stations in Scotland. map Engineer 194:329 S 5 '52

Sweden

Big underground powerplant put in service in Sweden. il Eng N 150:77 Mr 26 '53

350-mw hydroelectric generating station at Harsprånget, Sweden. il plans diags Engineering 174:585-7, 617-19, pl 49 N 7-14 '52

HYDROELECTRIC plants—*Continued*

Switzerland

Electricity supply of the city of Zürich. il map diags Engineering 176:129-34, pl 10-11 Jl 31 '53

Pumped storage capacity improves big power system's operation; Etzel power project. il map plan diags Power 97:84-6 Ap '53

Turkey

American engineer abroad. G. C. Becker. il Comp Air Mag 57:344-5 D '52

Hydro expansion in Turkey. map Elec World News ed 139:22 F 2 '53

Turkey pushes hydro development. map Eng N 149:50 D 25 '52

United States

Conditions for private company hydros. Pub Util 52:157-8 Jl 30 '53

1953 design survey; typical hydroelectric plants in the United States and Canada; tabulation. Power 97:54-7 Mid-S '53

Utah

USBR, Utah P&L vie for plant at Dear Creek dam. Elec World 138:55 D 29 '52

Virginia

Court ponders power feud. Eng N 149:28 N 6 '52

Dam harnesses the Roanoke. il Eng N 149:28 O 9 '52

Washington (state)

Army engineers' 308 report. T. H. Lipscomb. map Elec West 110:73-5 Ja '53

Western states

Columbia River project. J. Grindrod. il Electrician 149:833-6 S 19 '52

Command post routes mountain power over huge USBR network. il map Elec World News ed 139:14-15+ My 11 '53

Winnipeg

Winnipeg change; private company taken over by Manitoba hydroelectric board. Elec World 139:111-12 Mr 23 '53

Wisconsin

Free flood control by utilities on Wisconsin rivers. A. T. Lenz. Pub Util 50:843-9 D 4 '52

HYDROELECTRIC power

Canada feels its strength; power not for export. Economist 167:227-8 Ap 25 '53

Electric transmission of water power adopted at Niagara Falls in 1891. C. A. Pohl. Civil Eng 22:885-6 O '52

Hydro power diminishing. Mech Eng 74:917 N '52

Place of hydro power today. J. P. Callahan. Pub Util 51:294-9 F 26 '53

See also

Hydroelectric plants
Ontario—Hydroelectric power commission
St Lawrence waterway and power project

HYDROELECTRIC power commission. See Ontario—Hydroelectric power commission

HYDROEXTRACTORS. See Centrifuges

HYDROFLUORIC acid

Absorption of hydrogen fluoride in a limestone-packed tower. N. Gilbert and others. il diags Chem Eng Prog 49:120-7 Mr '53

Base strengths of aromatic hydrocarbons relative to hydrofluoric acid in anhydrous hydrofluoric acid as the solvent. M. Kilpatrick and F. E. Luborsky. bibliog diags Am Chem Soc J 75:577-84 F 5 '53

Electrode potentials in liquid hydrogen fluoride. G. G. Koerber and T. De Vries. bibliog diags Am Chem Soc J 74:5008-11 O 20 '52

Freezing point diagram and liquid-liquid solubilities of the system uranium hexafluoride-hydrogen fluoride. G. P. Rutledge, R. L. Jarry and W. Davis, jr. bibliog diag J Phys Chem 57:541-4 My '53

Heat and entropy of ionization of hydrofluoric acid; the entropy of bifluoride ion. L. G. Hepler, W. L. Jolly and W. M. Latimer. Am Chem Soc J 75:2809-10 Je 20 '53

Heat capacity, heat of fusion and heat of vaporization of hydrogen fluoride. J. Hu, D. White and H. L. Johnston. bibliog diag Am Chem Soc J 75:1232-6 Mr 5 '53

Polymerization of silicic acid; catalytic effect of fluoride. R. K. Iler. bibliog J Phys Chem 56:680-3 Je '52

Solubility of fluorides of metals in liquid hydrogen fluoride. A. W. Jache and G. H. Cady. bibliog J Phys Chem 56:1106-9 D '52

Use of hydrofluoric acid in making glass microneedles. S. E. Reaume. Science 116:641 D 5 '52

Vapor pressure, association, and heat of vaporization of hydrogen fluoride. R. L. Jarry and W. Davis, jr. bibliog diag J Phys Chem 57:600-4 Je '53

HYDROFOILS

Hydrofoil design. il Tech R 55:86-7 D '52

HYDROFORMING process. See Gasoline—Manufacture

HYDROGEN

Adsorption of hydrogen and carbon monoxide and their mixtures by cobalt Fischer-Tropsch catalysts. J. C. Ghosh, M. V. C. Sastri and K. A. Kini. bibliog diag Ind & Eng Chem 44:2463-70 O '52

Adsorption of hydrogen and carbon monoxide on iron surfaces. H. H. Podgurski and P. H. Emmett. bibliog J Phys Chem 57:159-64 F '53

Angular distribution of pions scattered by hydrogen. H. L. Anderson and others. bibliog diags Phys R 91:155-68 Jl 1 '53

Associating effect of the hydrogen atom; the S-H-N bond; esters of thion- and dithiocarbamic acids. A. A. Burrows and L. Hunter. Chem Soc J p4118-22 N '52

Carbon thermometer-heaters for use at low temperatures; effects of particle size and adsorption of hydrogen or helium. T. H. Geballe and others. bibliog R Sci Instr 23:489-92 S '52

Charge-exchange scattering of 34-Mev π-mesons in hydrogen and deuterium. A. Roberts and J. Tinlot. bibliog diags Phys R 90:951-9 Je 1 '53

Charge on combining hydrogen atoms. R. T. Sanderson. J Chem Phys 21:1112-13 Je '53

Charge states of a helium beam in hydrogen, helium, air, and argon. E. Snitzer. bibliog diags Phys R 89:1237-44 Mr 15 '53

Conditions for the formation of hydrogen bonds. W. S. Fyfe. bibliog diag J Chem Phys 21:2-4 Ja '53

Conversion of ortho-parahydrogen by cuprous acetate in quinoline. W. K. Wilmarth and M. K. Barsh. bibliog Am Chem Soc J 75:2237-42 My 5 '53

Detection of the HO_2 radical by mass spectrometry. S. N. Foner and R. L. Hudson. diag J Chem Phys 21:1608-9 S '53

Deuterium effect on hydrogen bond distances in crystals. R. E. Rundle. J Chem Phys 21:937-8 My '53

Differential cross sections for the scattering of 58-Mev π^+ mesons in hydrogen. D. Bodansky and others. bibliog diag Phys R 90:996-7 Je 1 '53

Diffusion cloud-chamber study of pion interactions in hydrogen and helium. E. C. Fowler and others. bibliog il diags Phys R 91:135-49 Jl 1 '53

Dipole moments and near ultraviolet absorption of some monosubstituted benzenes; the effect of solvents and hydrogen bonding. S. Nagakura and H. Baba. bibliog Am Chem Soc J 74:5693-8 N 20 '52

Dissociation of H_2 and N_2 on tungsten filaments. M. Farber and A. J. Darnell. bibliog J Chem Phys 21:172-3 Ja '53

Double scattering of high-energy protons by hydrogen and carbon. C. L. Oxley and others. diag Phys R 91:419-20 Jl 15 '53

Effect of 1470A irradiation of nitrogen-hydrogen mixtures and of ammonia. M. H. J. Wijnen and H. A. Taylor. bibliog diag J Chem Phys 21:233-6 F '53

Effect of hydrogen bonding on the hindered rotation of the hydroxyl group in alcohols. A. V. Stuart and G. B. B. M. Sutherland. J Chem Phys 20:1977 D '52

Elastic scattering and neutralization of low velocity hydrogen ions in ethane and propane. J. H. Simons and S. A. McAllister. bibliog J Chem Phys 20:1431-6 S '52

HYDROGEN—*Continued*

Elastic scattering and neutralization of low velocity hydrogen ions in methforane and ethforane. J. H. Simons and C. S. Garber. bibliog J Chem Phys 21:689-92 Ap '53

Elastic scattering of 9.7-Mev protons by deuterium and by hydrogen. J. C. Allred and others. bibliog Phys R 88:433-8 N 1 '52

Electron capture by protons passing through hydrogen. J. D. Jackson and H. Schiff. bibliog diag Phys R 89:359-65 Ja 15 '53

Equilibrium in the exchange of deuterium between ammonia and hydrogen. M. Perlman and others. bibliog diag J Chem Phys 21:70-2 Ja '53

Equilibrium in the exchange of hydrogen between phosphine and water. R. E. Weston, jr. and J. Bigeleisen. bibliog J Chem Phys 20:1400-2 S '52

Equilibrium studies of the silver-sodium-hydrogen system on Dowex 50. O. D. Bonner and V. Rhett. J Phys Chem 57:254-6 F '53

Example of multiple meson production observed with a high pressure hydrogen-filled cloud chamber. O. Kusumoto and others. diags Phys R 90:998-9 Je 1 '53

Excitation function for charged π-meson production in hydrogen and carbon by 345- to 380-Mev protons. S. Passman and others. diag Phys R 88:1247-53 D 15 '52

Fine structure of the hydrogen atom. S. Triebwasser and others. bibliog diags Phys R 89:98-115 Ja 1 '53

Forces between hydrogen molecules. A. A. Evett and H. Margenau. Phys R 90:1021-3 Je 15 '53; Abstract. J Chem Phys 21:958-9 My '53

Formation and excitation of atomic sodium in hydrogen diffusion flames. L. Lindner and others. J Chem Phys 21:161-2 Ja '53

Free energies and entropies of hydrogen, chlorine and hydrogen chloride from spectroscopic data. R. H. Sherman and W. F. Giauque. bibliog Am Chem Soc J 75:2007-8 Ap 20 '53

Homogeneous catalytic hydrogenation; activation of molecular hydrogen by solutions of cuprous acetate. S. Weller and G. A. Mills. bibliog diags Am Chem Soc J 75:769-77 F 20 '53

Hydrogen bond energies in carboxylic acids. M. M. Jones and others. bibliog J Chem Phys 20:1048 Je '52

Hydrogen bonding and structural problems in the aminoacridines and -quinolines; infra-red studies. L. N. Short. Chem Soc J p4584-9 D '52

Hydrogen-bonding in maleic and phthalic acids. W. H. T. Davison. Chem & Ind p408 Ap 25 '53

Hydrogen-bonding of esters and lactones; site of bonding and effect of ring size. S. Searles, M. Tamres and G. M. Barrow. bibliog Am Chem Soc J 75:71-3 Ja 5 '53

Hydrogen explosions from water decomposition in fires are rare. Safety Maint & Prod 104:48 O '52

Hydrogen overvoltage and atomic hydrogen electrodes. P. Van Rysselberghe. bibliog J Chem Phys 20:1522-3 O '52

Hydrogen transfer reactions accompanying the cobalt-catalyzed addition of carbon monoxide to olefinic compounds. G. Natta, P. Pino and R. Ercoli. bibliog Am Chem Soc J 74:4496-8 S 20 '52

Hyperfine structure of hydrogen and deuterium. A. G. Prodell and P. Kusch. bibliog diags Phys R 88:184-90 O 15 '52

Induced infrared absorption in hydrogen and hydrogen foreign gas mixtures at pressures up to 1500 atmospheres. D. A. Chisholm and others. Phys R 88:957-8 N 15 '52

Infrared spectrum of pyrrole and the hydrogen bond. P. Tuomikoski. bibliog J Chem Phys 20:1054-5 Je '52

Inhibitory effects of mercury and of hydrogen in the gas-phase oxidation of *n*-hexane. N. J. H. Small and A. R. Ubbelohde. diag Chem Soc J p4619-28 D '52

Intramolecular hydrogen bonds in 2-aminoalkanols and N-alkylidene-2-aminoalkanols. E. D. Bergmann, E. Gil-Av and S. Pinchas. bibliog Am Chem Soc J 75:68-71 Ja 5 '53

Kinetics of hot hydrogen atoms in the photolysis of the hydrogen halides. H. A. Schwarz, R. R. Williams, jr. and W. H. Hamill. bibliog diags Am Chem Soc J 74:6007-12 D 5 '52

Lamb shift for hydrogen and deuterium. E. E. Salpeter. bibliog Phys R 89:92-7 Ja 1 '53

Mechanism of exchange of hydrogen gas and aqueous alkali. W. K. Wilmarth, J. C. Dayton and J. M. Flournoy. bibliog Am Chem Soc J 75:4549-53 S 20 '53

Mechanism of the exchange of hydrogen gas with solutions of potassium amide in liquid ammonia. W. K. Wilmarth and J. C. Dayton. Am Chem Soc J 75:4553-6 S 20 '53

Mechanisms of surface-catalyzed reactions; the parahydrogen conversion on tungsten. K. J. Laidler. bibliog J Phys Chem 57:320-1 Mr '53

Metal-catalysed reaction between acetylene and hydrogen; the reaction over rhodium and iridium. J. Sheridan and W. D. Reid. Chem Soc J p2962-6 Ag '52

Metal-hydrogen systems; the uranium-hydrogen system. T. R. P. Gibb, jr., J. J. McSharry and H. W. Kruschwitz, jr. bibliog Am Chem Soc J 74:6203-7 D 20 '52

Nature of the hydrogen bridge. R. T. Sanderson. bibliog diags J Chem Phys 21:571-2 Mr '53

Nature of the internal hydrogen bond; tautomerism of 1-arylazo-2-naphthols. A. Burawoy, A. G. Salem and A. R. Thompson. Chem Soc J p4793-8 D '52

Nuclear radiofrequency spectra of D_2 and H_2 in intermediate and strong magnetic fields. N. J. Harrick and others. bibliog Phys R 90:260-6 Ap 15 '53

Phase behavior of the hydrogen-propane system. W. L. Burriss and others. bibliog Ind & Eng Chem 45:210-13 Ja '53

Photoproduction of neutral mesons in hydrogen. Y. Goldschmidt-Clermont and others. Phys R 89:329-30 Ja 1 '53

Photoproduction of neutral mesons in hydrogen at high energies. R. L. Walker and others. diag Phys R 89:1301-2 Mr 15 '53

Photoproduction of π^0 mesons in hydrogen and deuterium. N. C. Francis. bibliog Phys R 89:766-74 F 15 '53

π^0 Production cross section for 430-Mev protons on H and Be. J. Marshall and others. bibliog diags Phys R 88:632-41 N 1 '52

Polarographic reduction of some natural and artificial hydrogen-carriers in bacterial enzyme systems. R. C. Kaye and H. I. Stonehill. Chem Soc J p3244-7 Ag '52

Polyhedral flames with hydrogen and hydrocarbons. H. Broida and W. Kane. il J Chem Phys 20:1042-3 Je '52

Positive photomesons from hydrogen at 0°. N. Jarmie and others. bibliog diag Phys R 91:1023-4 Ag 15 '53

Production of charged photomesons from deuterium and hydrogen. R. S. White and others. bibliog diags Phys R 88:836-50 N 15 '52

Production of charged photomesons from helium; hydrogen-helium ratios. M. J. Jakobson and others. bibliog Phys R 91:695-8 Ag 1 '53

Production of charged π-mesons in H, D, C, Cu, and Pb by 381-Mev protons. M. M. Block and others. bibliog diags Phys R 88:1239-47 D 15 '52

Production of π° mesons by γ-rays on hydrogen. A. Silverman and M. Stearns. bibliog diag Phys R 88:1225-30 D 15 '52

Production of π° mesons in hydrogen and deuterium by high energy γ-rays. G. Cocconi and A. Silverman. bibliog diag Phys R 88:1230-3 D 15 '52

Production of V_1^0 particles by negative pions in hydrogen. W. B. Fowler and others. il Phys R 91:1287 S 1 '53

Proton and deuteron transfer over hydrogen bridges as cause of conductivity effects. A. Gierer and K. Wirtz. bibliog J Phys Chem 56:914-17 O '52

Rate of ion exchange. E. R. Gilliland and R. F. Baddour. bibliog il diag Ind & Eng Chem 45:330-7 F '53

Reaction of alkanes with hydrogen and deuterium; racemization and exchange. R. L. Burwell, jr. and W. S. Briggs. bibliog Am Chem Soc J 74:5096-102 O 20 '52

HYDROGEN—*Continued*

Replacement of the primary aromatic amino group by hydrogen using diazonium fluoborates. A. Roe and J. R. Graham. bibliog Am Chem Soc J 74:6297-8 D 20 '52

Resonance in the hydrogen molecule. L. Pauling. J Chem Phys 20:1041 Je '52

Rotational magnetic moment, magnetic susceptibilities, and electron distribution in the hydrogen molecule. N. J. Harrick and N. F. Ramsey. bibliog Phys R 88:228-32 O 15 '52

Rydberg constant and the atomic mass of the electron. E. R. Cohen. bibliog diag Phys R 88:353-60 O 15 '52

Scattering of 40-Mev positive pions by hydrogen. J. P. Perry and C. E. Angell. diags Phys R 91:1289 S 1 '53

Scattering of slow neutrons by *ortho-* and *para-*hydrogen. A. T. Stewart and G. L. Squires. bibliog Phys R 90:1125 Je 15 '53

Search for penetrating showers from hydrogen at sea level using a cloud chamber. A. B. Weaver. bibliog il diags Phys R 90:86-94 Ap 1 '53

Sensitive pressure controller for high-pressure service. P. L. Golden and A. F. Headrick. diag A S M E Trans 75:329 Ap '53

Shape and thickness of shock fronts in argon, hydrogen, nitrogen, and oxygen. E. F. Greene and D. F. Hornig. bibliog J Chem Phys 21:617-24 Ap '53

Simple method of purifying hydrogen, nitrogen and the inert gases; sodium-potassium alloy trap. E. R. Harrison. bibliog diag J Sci Instr 29:295 S '52

Sodium borohydride, its hydrolysis and its use as a reducing agent and in the generation of hydrogen. H. I. Schlesinger and others. bibliog diag Am Chem Soc J 75:215-19 Ja 5 '53

Solubility of hydrogen in certain liquid metals. Y. L. Yao. J Chem Phys 21:1303-9 Jl '53

Specific primary ionization of H_2, He, Ne, and A by high energy electrons. G. W. McClure. bibliog diags Phys R 90:796-803 Je 1 '53

Strong hydrogen bonds in crystals. R. C. Lord and R. E. Merrifield. J Chem Phys 21:166-7 Ja '53

Studies in hydrogen-bond formation; detection of the interaction of phenols with amido- and azo-groups, etc., by dielectric-constant measurement. C. H. Giles, T. J. Rose and D. G. M. Vallance. diag Chem Soc J p3799-805 O '52

Study of elastic pion-hydrogen scattering in photographic emulsions. G. Goldhaber. bibliog il Phys R 89:1187-9 Mr 15 '53

Study of gases in porcelain enameling. P. K. Chu and others. bibliog il diag Am Cer Soc J 36:48-59 F 1 '53

System pyridine-pyrrole and hydrogen bonding. R. H. Linnell. bibliog J Chem Phys 21:179-80 Ja '53

Thermal neutron capture cross section of hydrogen. B. Hammermesh and others. bibliog diag Phys R 90:603-6 My 15 '53

Total cross sections of carbon and hydrogen for high energy neutrons. G. R. Mott and others. bibliog diag Phys R 88:9-14 O 1 '52

Total cross sections of 408-Mev protons for hydrogen and light elements. J. Marshall and others. Phys R 91:767-8 Ag 1 '53

Total cross sections of 37-Mev pions in hydrogen. C. E. Angell and J. P. Perry. Phys R 90:724 My 15 '53

Transmission of hydrogen through palladium by electrolysis. H. B. Wahlin and V. O. Naumann. J Ap Phys 24:42-4 Ja '53

United atom treatment of H_2^+. F. A. Matsen. J Chem Phys 21:928-9 My '53

X-ray diffraction study of the hafnium-hydrogen system. S. S. Sidhu and J. C. McGuire. il diag J Ap Phys 23:1257-61 N '52

See also

Hydrogenation
Iron—Hydrogen attack
Iron—Hydrogen content
Steel—Hydrogen content
Steel—Hydrogen effect

Analysis

Determination of free acid in the presence of hydrolyzable ions. L. P. Pepkowitz, W. W. Sabol and D. Dutina. bibliog diags Anal Chem 24:1956-9 D '52

Determination of hydrogen in magnesium, lithium, and magnesium-lithium alloys. M. W. Mallett, A. F. Gerds and C. B. Griffith. il diags Anal Chem 25:116-19 Ja '53

Method of storage of solid steel samples for hydrogen analysis. Y. L. Yao and K. S. Milliken. Anal Chem 25:363-4 F '53

Recent developments in quantitative organic microanalysis. W. Kirsten. bibliog (62 ref) il diags Anal Chem 25:74-86 Ja '53

Simple thermal conductivity analyzer for ortho-para hydrogen. E. R. Grilly. diag R Sci Instr 24:72-3 Ja '53

Thermal conductivity method for analysis of hydrogen in steel. B. M. Shields and others. bibliog diags J Metals 5:Trans 180-4 F '53; Discussion. 5:Trans 1551 sec 2 N '53

Use of magnesium oxide in determination of carbon and hydrogen in fluoro-organic compounds. W. H. Throckmorton and G. H. Hutton. bibliog Anal Chem 24:2003-4 D '52

Atomic hydrogen

Calculation of the concentration of atomic hydrogen at a cathode. J. O. Bockris and R. Parsons. J Chem Phys 21:569 Mr '53

Calculation of the concentration of atomic hydrogen at a cathode. H. W. Salzberg and S. Schuldiner. J Chem Phys 20:1495 S '52

Exchange scattering of an electron by the hydrogen atom. S. Altshuler. Phys R 91:1167-71 S 1 '53

Sixth series in the spectrum of atomic hydrogen. C. J. Humphreys. bibliog il diag J Res Nat Bur Stand 50:1-6 Ja '53

Industrial applications

Hydrogen cooling for turbine generators. J. W. Batchelor. il Westinghouse Eng 13:74-6 Mr '53

Isotopes

Equilibrium between protium, deuterium and tritium in the system; hydrogen-acetic acid; isotopic fractionation factors in a catalytic hydrogenation. M. L. Eidinoff and others. bibliog Am Chem Soc J 74:5280-4 N 5 '52

Fractionation of hydrogen isotopes in biological systems. M. L. Eidinoff and others. bibliog Am Chem Soc J 75:248-9 Ja 5 '53

Hydrogen isotope effect in the hydrolysis of triphenylsilane. L. Kaplan and K. E. Wilzbach. Am Chem Soc J 74:6152-3 D 5 '52

Hydrogen isotope exchange between anthracene and sulfuric acid. V. Gold and F. A. Long. bibliog Am Chem Soc J 75:4543-7 S 20 '53

Interaction between nuclear spins in HD gas. H. Y. Carr and E. M. Purcell. il Phys R 88:415-16 O 15 '52

Introduction of isotopic hydrogen into purine ring systems by catalytic exchange. M. L. Eidinoff and J. E. Knoll. Am Chem Soc J 75:1992-3 Ap 20 '53

Reactions of methyl radicals with the hydrogen isotopes. E. Whittle and E. W. R. Steacie. bibliog J Chem Phys 21:993-9 Je '53

Spin-spin interaction in HD nuclear resonance. B. Smaller and others. Phys R 88:414-15 O 15 '52

See also

Deuterium
Tritium

HYDROGEN, Liquid

Government erects $3,500,000 low temperature laboratory; NBS-AEC cryogenic engineering laboratory. flow diag il Refrig Eng 61:1082-4 O '53

Liquefaction and storage of partially converted liquid hydrogen. E. R. Grilly. bibliog flow diag R Sci Instr 24:1-4 Ja '53

HYDROGEN, Solid

Nuclear magnetic resonance in solid hydrogen. F. Reif and E. M. Purcell. bibliog il diags Phys R 91:631-41 Ag 1 '53

HYDROGEN azide

Formation of azides in the reaction of hydrogen azide with diarylethylenes. S. N. Ege and K. W. Sherk. bibliog Am Chem Soc J 75:354-7 Ja 20 '53

HYDROGEN bomb

H-bomb explosion effects on buildings studied by Stanford researchers. il Eng N 150:84 F 5 '53

HYDROGEN bomb—*Continued*

Hydrogen bomb? probably, but. Bsns W p69 N 15 '52

Thermonuclear experiment. Sci Am 188:30-1 Ja '53

Testing

H-bomb tested? Chem & Eng N 30:4962+ N 24 '52

HYDROGEN bromide. See Hydrobromic acid

HYDROGEN chloride. See Hydrochloric acid

HYDROGEN cyanide. See Hydrocyanic acid

HYDROGEN deuteride. See Hydrogen—Isotopes

HYDROGEN electrodes. See Electrodes

HYDROGEN fluoride. See Hydrofluoric acid

HYDROGEN halides

Kinetics of hot hydrogen atoms in the photolysis of the hydrogen halides. H. A. Schwarz, R. R. Williams, jr. and W. H. Hamill. bibliog diags Am Chem Soc J 74:6007-12 D 5 '52

Reactions of *cis-* and *trans-*1,2-dibenzoylpropenes with hydrogen halides, bromine and phenylmagnesium bromide. P. S. Bailey and S. H. Pomerantz. bibliog Am Chem Soc J 75:281-4 Ja 20 '53

See also

Hydrobromic acid
Hydrochloric acid
Hydrofluoric acid

HYDROGEN ion concentration

Accurate pH control aids in better water treatment. il Pub Works 83:105 N '52

Acid dissociation of the aquoscandium ions. M. Kilpatrick and L. Pokras. bibliog Electrochem Soc J 100:85-92 F '53

Application of volume characteristics of sulfonated polystyrene resins as a tool in analytical chemistry; determination of pH and dissociation constants of acids. C. Calmon. bibliog Anal Chem 25:490-2 Mr '53

Chemical interactions of amino compounds and sugars; *p*H dependency. M. L. Wolfrom, D. K. Kolb and A. W. Langer, jr. bibliog Am Chem Soc J 75:3471-3 Jl 20 '53

Continuous industrial pH recording. il Chem Age (Lond) 67:543-4 O 18 '52; Metallurgia 46:203 O '52; Engineering 174:451 O 3 '52

Deuterium and hydrogen electrode characteristics of lithia-silica glasses. D. Hubbard and G. W. Cleek. bibliog J Res Nat Bur Stand 49:267-72 O '52

Distribution of 8-quinolinol between water and chloroform as a function of *p*H. T. Moeller and F. L. Pundsack. Am Chem Soc J 75:2258-9 My 5 '53

Evaluation of the pH and conductivity methods of slag control. P. D. S. St Pierre. bibliog il J Metals 5:Trans 41-3 Ja '53

How to make field tests for condensate pH. J. B. Davis. il Power Eng 57:83-4 Ja '53

pH approximations. A. J. McBay. J Chem Educ 29:526-9 O '52

pH control ups quality, boosts process yields; Asme brewing co. il diag Food Eng 25:66-7+ Mr '53

pH measurement and control in water treatment plants. R. H. Babcock. il diags Water & Sewage Works 100:272-8 Jl '53

pH paper in plating practice; abstract. W. Zarncke. Metal Finishing 51:79-80 F '53

pH zones of import in water supply and sewage treatment practice; charts. Water & Sewage Works 100:R 182 My '53

Measurement of pH. diags Can Chem Process 37:108 S '53

Portable pH meter and millivoltmeter. il Engineer 195:218 F 6 '53

Self-cleaning antimony pH electrode. P. Hart and R. C. King. diag Oil & Gas J 52:113 Je 1 '53

Tight-lock of cotton, associated fungi and pH values in South Carolina in 1952. C. H. Arndt. bibliog Textile Res J 23:533-5 Ag '53

Use of the Spekker photoelectric absorptiometer for the determination of *pH*. T. B. Smith and others. Chem Soc J p3848-54 O '52

See also

Buffer solutions

HYDROGEN peroxide

Glow-discharge electrolysis; the anodic formation of hydrogen peroxide in inert electrolytes. R. A. Davies and A. Hickling. diag Chem Soc J p3595-602 S '52

History of the hydrogen peroxide industry. M. E. Bretschger and E. Shanley. il Electrochem Soc J 99:sup311C-13C N '52

Hydrogen peroxide bleaching of textile materials. H. C. Smolens. Am Dyestuff Rep 41:575-7+ S 15 '52

Hydrogen peroxide formation by cobalt gamma-radiation. T. J. Sworski. bibliog J Chem Phys 21:375-6 F '53

Hydrogen peroxide; how to use it, how to figure it. H. G. Smolens. il Textile World 103:156+ S '53

Isotopic composition of oxygen in the catalytic decomposition of hydrogen peroxide. M. Dole and others. bibliog J Chem Phys 20:961-8 Je '52

Kinetics and thermodynamics of the steady state system of catalase with hydrogen peroxide. R. F. Beers, jr. and I. W. Sizer. bibliog J Phys Chem 57:290-3 Mr '53

Kinetics of the iodide-catalysed reaction between hydrogen peroxide and hydrazine in acid, aqueous solution. P. Davis and W. C. E. Higginson. Chem Soc J p 1902-6 Je '53

Mechanisms of hydrogen peroxide reactions; the conversion of benzonitrile to benzamide. K. B. Wiberg. Am Chem Soc J 75:3961-4 Ag 20 '53

New plasticizers made by hydrogen peroxide process. Chem Eng 60:134+ My '53

Non-electrolytic smoothing treatment for steel. W. A. Marshall. il diag Metal Finishing 50:78-83+ N; 67-9 D '52

Organic peroxides; the preparation of alkyl hydroperoxides from hydrogen peroxide. A. G. Davies, R. V. Foster and A. M. White. Chem Soc J p 1541-7 My '53

Oxidation of aryl trityl sulfides with hydrogen peroxide. D. C. Gregg, C. A. Blood, jr. and D. E. Weiman. Am Chem Soc J 75:4344 S 5 '53

Oxygen induced electroreduction of hydrogen peroxide and reduction of oxygen at the rotated gold wire electrode. I. M. Kolthoff and J. Jordan. bibliog Am Chem Soc J 74:4801-5 O 5 '52

Photochemical decomposition of hydrogen peroxide; quantum yields, tracer and fractionation effects. J. P. Hunt and H. Taube. bibliog Am Chem Soc J 74:5999-6002 D 5 '52

Photochemical synthesis of hydrogen peroxide at zinc oxide surfaces. T. R. Rubin and others. bibliog Am Chem Soc J 75:2850-3 Je 20 '53

Processing of wool with hydrogen peroxide; abstract. Am Dyestuff Rep 41:788 N 24 '52

Rate constant of the reaction between hydrogen peroxide and ferrous ions. W. Taylor and J. Weiss. J Chem Phys 21:1419-20 Ag '53

Recent developments in bleaching with hydrogen peroxide. W. S. Wood and K. W. Richmond. bibliog diags Soc Dyers & Col J 68:337-44 S '52

Seed treatment with peroxygen chemicals. bibliog Can Chem Process 36:84+ S '52

Thermal and photochemical decomposition of H_2O_2 vapor in the presence of foreign gases. F. S. Stone and H. S. Taylor. bibliog diag J Chem Phys 20:1339-41 Ag '52

Manufacture

Manufacture of hydrogen peroxide. W. S. Wood. Chem & Ind p2-6 Ja 3 '53

HYDROGEN sulfide

Absorption spectra of SH and SD produced by flash photolysis of H_2S and D_2S. D. A. Ramsay. bibliog il diags J Chem Phys 20:1920-7 D '52

Action of hydrogen sulphide on certain methyleneimines. E. R. Braithwaite and J. Graymore. Chem Soc J p 143-5 Ja '53

Air pollution by hydrogen sulfide in Poza Rica, Mex. L. C. McCabe and G. D. Clayton. bibliog flow chart il maps A M A Archives Ind Hygiene & Occup Med 6:199-213 S '52

HYDROGEN sulfide—*Continued*

Asymmetric rotor; hydrogen sulfide absorption in the regions 8700 cm^{-1} and 11 000 cm^{-1}. K. K. Innes and others. bibliog J Chem Phys 21:545-7 Mr '53

Asymmetric rotor; the hydrogen sulfide spectrum in the 5150 cm^{-1} region. H. C. Allen, jr. and others. J Chem Phys 20:1709-10 N '52

Catalytic hydrolysis of hydrogen cyanide to ammonia. J. D. F. Marsh, W. B. S. Newling and J. Rich. J Ap Chem 2:681-4 D '52

Determining the hydrogen sulfide content of crude oils. W. L. Nelson. Oil & Gas J 51:145 O 27 '52

Handling liquid hydrogen sulfide. W. O. Bice, F. Prange and R. E. Weis. flow diag il Ind & Eng Chem 44:2497-500 O '52

High-sulfur crude oils; potential hydrogen sulfide liberation. W. L. Nelson. Oil & Gas J 51:309 S 29 '52

High-temperature corrosion rates of several metals with hydrogen sulfide and sulfur dioxide. M. Farber and D. M. Ehrenberg. bibliog flow diag il diag Electrochem Soc J 99:427-34 O '52

Liquid-vapor equilibrium relations in binary systems; propane-hydrogen sulfide system. W. B. Kay and G. M. Rambosek. bibliog diags Ind & Eng Chem 45:221-6 Ja '53

Liquid-vapor equilibrium relations in ethane-hydrogen sulfide system. W. B. Kay and D. B. Brice. bibliog Ind & Eng Chem 45:615-18 Mr '53

Miscellaneous microchemical devices; simple low-pressure hydrogen sulphide generator. J. T. Stock and P. Heath. diag Metallurgia 47:51 Ja '53

Phase-equilibrium properties of system carbon dioxide-hydrogen sulfide. J. A. Bierlein and W. B. Kay. bibliog Ind & Eng Chem 45:618-24 Mr '53

Relative effect of traces of hydrogen sulfide and sulphur dioxide on the corrosion of copper. J. Byrne and others. Blast F & Steel Pl 41:780-1 Jl '53

Removal of hydrogen sulfide and carbon dioxide from synthesis gas using di- and triethanolamine. H. W. Wainwright and others. bibliog 6pls U S Bur Mines Rep of Invest 4891:1-19 '52

Selective absorption of hydrogen sulfide. F. E. Miller and A. L. Kohl. flow diag Oil & Gas J 51:175-6+ Ap 27 '53

Sulphur from H_2S; pictured flow sheet. Chem Eng 59:210-13 O '52

Thermodynamics of some simple sulfur-containing molecules. W. H. Evans and D. D. Wagman. bibliog(56 ref) J Res Nat Bur Stand 49:141-8 S '52

Tracer studies on the formation of sulfur from hydrogen sulfide and sulfur dioxide in aqueous solutions. H. B. van der Heijde and A. H. W. Aten, jr. bibliog Am Chem Soc J 75:754-5 F 5 '53

Analysis

Determination of hydrogen sulphide, methyl mercaptan, dimethyl sulphide and disulphide in kraft pulp mill process streams. V. F. Felicetta and others. bibliog diags Tappi 36:425-32 S '53

Microgram H_2S analysis developed for brewing industry. Chem & Eng N 31:2189 My 25 '53

HYDROGENATION

Alicyclic diamines; preparation of bis-(4-aminocyclohexyl)-methane. A. E. Barkdoll and others. bibliog Am Chem Soc J 75:1156-9 Mr 5 '53

Catalytic hydrogenation of the benzene nucleus; the hydrogenation of benzilic acid. H. A. Smith, C. D. Shacklett and C. M. Welch. bibliog Am Chem Soc J 74:4534-6 S 20 '52

Debut of a new industry; West Virginia plant produces chemicals from raw coal through hydrogenation, Carbide and carbon chemicals co. flow chart il Manuf Rec 121:38-9+ D '52

Effects of hydrogenation upon the microbiological activities of N^{10}-methylpteroylglutamic acid, aminopterin and A-methopterin. G. P. Wheeler and others. Am Chem Soc J 74:4725-6 S 20 '52

Equilibrium between protium, deuterium and tritium in the system; hydrogen-acetic acid; isotopic fractionation factors in a catalytic hydrogenation. M. L. Eidinoff and others. bibliog Am Chem Soc J 74:5280-4 N 5 '52

Germany's hydrogenation industry today. P. W. Sherwood. bibliog flow sheet il Pet Refiner 31:93-8 N '52

Homogeneous catalytic hydrogenation; activation of molecular hydrogen by solutions of cuprous acetate. S. Weller and G. A. Mills. bibliog diags Am Chem Soc J 75:769-77 F 20 '53

Hydrogenation of $\Delta^{5,7}$-sterol derivatives. W. V. Ruyle and others. bibliog Am Chem Soc J 74:5929-33 D 5 '52

Isomerization of saturated hydrocarbons in presence of hydrogenation-cracking catalysts. F. G. Ciapetta and J. B. Hunter. bibliog diag Ind & Eng Chem 45:147-65 Ja '53

Isotope effects during catalytic hydrogenations. W. A. Bonner and C. J. Collins. bibliog Am Chem Soc J 75:4516-18 S 20 '53

Kinetics of the catalytic hydrogenation of certain Schiff bases. A. Roe and J. A. Montgomery. bibliog Am Chem Soc J 75:910-12 F 20 '53

Kinetics of the Raney nickel catalyzed hydrogenation of crotonic acid. F. L. Morritz, E. Lieber and R. B. Bernstein. bibliog diags Am Chem Soc J 75:3116-21 Jl 5 '53

Low pressure catalytic hydrogenation of nitroparaffins. D. C. Iffland and F. A. Cassis, jr. bibliog Am Chem Soc J 74:6284-5 D 20 '52

Low pressure hydrogenation and several properties of methyl and *n*-butylketene dimers. C. M. Hill and M. E. Hill. bibliog Am Chem Soc J 75:4591 S 20 '53

Mechanisms of exchange and hydrogenation reactions of olefins. M. C. Markham and others. bibliog J Chem Phys 20:1331-2 Ag '52

Molecular kinetics of hydrogenation and exchange reactions of ethylene at surfaces. K. J. Laidler and others. bibliog J Chem Phys 21:949-50 My '53

Nickel-catalyzed hydrogenation of commercial aldol. C. K. Hancock and D. D. Henson. bibliog Ind & Eng Chem 45:629-32 Mr '53

Palladium catalysis; change in the behavior of palladium-on-charcoal in hydrogenation reactions. W. H. Hartung and Y. Chang. Am Chem Soc J 74:5927-9 D 5 '52

Palladium catalysis; the hydrogenation of α-oximino ketones. Y. Chang and W. H. Hartung. bibliog Am Chem Soc J 75:89-91 Ja 5 '53

Polyene acids; catalytic semi-hydrogenation of the three isomeric muconic acids and confirmation of their configurations. J. A. Elvidge, R. P. Linstead and J. F. Smith. Chem Soc J p708-11 F '53

Products of the hydrogenation of carbon monoxide over an iron catalyst. A. W. Weitkamp and others. bibliog Ind & Eng Chem 45:343-67 F '53

Selective reduction of the unsaturated compounds; deuterization of the Raney nickel catalysts. N. A. Khan. bibliog diag Science 117:130 F 6 '53

Sensitive pressure controller for high-pressure service. P. L. Golden and A. F. Headrick. diag A S M E Trans 75:329 Ap '53

Stepwise hydrogenation of dimethyl docosa-10 : 12-diynedioate. J. P. Riley. Chem Soc J p2193-8 Ag '53

Studies of coal tar bases; hydrogenation of 2-methylpyridine. J. I. Jones and A. S. Lindsey. Chem Soc J p3261-4 Ag '52

Study of the hydrogenation of desmethoxy-β-erythroidine. V. Boekelheide, A. E. Anderson, jr. and G. L. Sauvage. bibliog Am Chem Soc J 75:2558-63 Je 5 '53

Synthesis of alcohols by hydrogenation of carbon monoxide. R. B. Anderson, J. Feldman and H. H. Storch. bibliog Ind & Eng Chem 44:2418-24 O '52

Synthesis of methane by hydrogenation of carbon monoxide in a tubular reactor. M. M. Gilkeson, R. R. White and C. M. Sliepcevich. bibliog flow diag il diag Ind & Eng Chem 45:460-7 F '53

HYDROGENATION—*Continued*

Synthesis, properties and catalytic hydrogenation of several aryloxy substituted ketene monomers and dimers. C. M. Hill and others. bibliog Am Chem Soc J 75:1084-6 Mr 5 '53

See also

Fischer-Tropsch process

Gasoline—Manufacture—Hydrogenation process

Hydrocarbons—Synthesis

Bibliography

Bibliography of pressure hydrogenation. J. L. Wiley and H. C. Anderson. 3 pts U S Bur Mines Bul 485:1-306 pa $1.25; 307-592 pa $1; 593-646 pa 25c Supt. of doc. '50-52

Patents

Bibliography

Bibliography of pressure hydrogenation; patents. J. L. Wiley and H. C. Anderson. 2 pts U S Bur Mines Bul 485:307-592 pa $1; 593-646 pa 25c Supt. of doc. '51-52

HYDROGENATION of coal. See Coal liquefaction

HYDROGENOLYSIS

Catalyst-pressure relationship in hydrogenolysis of coal. M. G. Pelipetz and others. Ind & Eng Chem 45:806-9 Ap '53

Studies in the terpene series; hydrogenolysis of pinane in a flow type apparatus in the presence of hydrogenation catalysts. V. N. Ipatieff, F. J. Pavlik and H. Pines. diag Am Chem Soc J 75:3179-81 Jl 5 '53

HYDROGRAPHIC surveying

Simplified method for preliminary hydrographic surveys of calm waters. R. D. Schacherl. diags Civil Eng 23:316-17 My '53

See also

Sounding

HYDROLYSIS

Acid-catalysed hydrolysis of benzoyl fluoride. C. W. L. Bevan and R. F. Hudson. Chem Soc J p2187-9 Jl '53

Action of formaldehyde on proteins; the hydrolysis of formaldehyde-hardened proteins by enzymes. R. D. Haworth, R. MacGillivray and D. H. Peacock. Chem Soc J p2981-7 Ag '52

Alkaline hydrolysis of ethyl *p*-alkylbenzoates. E. Berliner and others. bibliog Am Chem Soc J 74:4940-4 O 5 '52

Alkaline hydrolysis of monoethyl malonate ion in isodielectric media. W. J. Svirbely and B. W. Lewis. bibliog J Phys Chem 56:1006-8 N '52

6-Aminosalicylic acid; the hydrolysis of 2-carboxytrinitrodiphenyl ethers. A. A. Goldberg and H. A. Walker. Chem Soc J p2049-52 Jl '53

Arrhenius parameters for acid hydrolysis of γ-butyrolactone; search for a reaction with water. F. D. Coffin and F. A. Long. bibliog Am Chem Soc J 74:5767-8 N 20 '52

Carbon isotope effect in the acid hydrolysis of urea. J. A. Schmitt and F. Daniels. bibliog Am Chem Soc J 75:3564-6 Jl 20 '53

Catalytic hydrolysis of hydrogen cyanide to ammonia. J. D. F. Marsh, W. B. S. Newling and J. Rich. bibliog J Ap Chem 2:681-4 D '52

Cyclic intermediates in substitution reactions; the alkaline hydrolysis of ε-bromocaproic and ζ-bromoenanthic acids. H. W. Heine, E. Becker and J. F. Lane. bibliog Am Chem Soc J 75:4514-16 S 20 '53

Dealkylation and hydrolysis of alkyl phosphites, phosphates, and phosphonates. W. Gerrard, W. J. Green and R. A. Nutkins. Chem Soc J p4076-8 O '52

Effect of a wetting agent on the hydrolysis of highly methylated cotton cellulose. R. E. Reeves and B. J. Barrett. Textile Res J 23:510-12 Jl '53

Effect of structure on reactivity; catalysis in the ammonolysis and hydrolysis of methyl acetate. T. A. Koch, J. G. Miller and A. R. Day. Am Chem Soc J 75:953-5 F 20 '53

Heat of hydrolysis of phosphorus oxychloride and phosphorus trichloride. E. Neale and L. T. D. Williams. Chem Soc J p4535-6 N '52

Heterogeneous hydrolysis of highly methylated cotton cellulose. R. E. Reeves, B. J. Barrett and L. W. Mazzeno, jr. bibliog Am Chem Soc J 74:4491-4 S 20 '52

Hydrogen isotope effect in the hydrolysis of triphenylsilane. L. Kaplan and K. E. Wilzbach. Am Chem Soc J 74:6152-3 D 5 '52

Hydrolysis and halide complexing of indium(III). L. G. Hepler and Z. Z. Hugus, jr. Am Chem Soc J 74:6115-16 D 5 '52

Hydrolysis and separation of unsaturated chlorosilanes. K. C. Frisch, P. A. Goodwin and R. E. Scott. bibliog Am Chem Soc J 74:4584-5 S 20 '52

Hydrolysis of acetic anhydride; catalysis by pyridine. S. L. Bafna and V. Gold. Chem Soc J p 1406-9 My '53

Hydrolysis of acetic anhydride; the catalytic efficiency of a series of tertiary amines. V. Gold and E. G. Jefferson. Chem Soc J p 1409-15 My '53

Hydrolysis of amides and dibasic acids; the acid hydrolysis of malonamide and malonamic acid. H. G. Ivory and others. Chem Soc J p3264-8 Ag '52

Hydrolysis of amides of dibasic acids; the acid hydrolysis of oxamide and oxamic acid. J. Packer, A. L. Thomson and J. Vaughan. Chem Soc J p4516-18 N '52

Hydrolysis of aspirin in guinea-pig plasma. L. J. Edwards. Chem Soc J p4114-18 N '52

Hydrolysis of condensed phosphates. J. R. Van Wazer, E. J. Griffith and J. F. McCullough. bibliog Am Chem Soc J 74:4977-8 O 5 '52

Hydrolysis of methoxysilanes; dimethylsilanediol. S. W. Kantor. bibliog Am Chem Soc J 75:2712-14 Je 5 '53

Hydrolysis of proteins by ion exchange resin catalysis. J. C. Paulson, F. E. Deatherage and E. F. Almy. bibliog Am Chem Soc J 75:2039-41 My 5 '53

Hydrolysis of some cyanocinnamic acids. H. Rapoport and others. bibliog Am Chem Soc J 75:1125-8 Mr 5 '53

Hydrolysis of substituted ethyl *p*-biphenylcarboxylates. E. Berliner and Liang Huang Liu. bibliog Am Chem Soc J 75:2417-20 My 20 '53

Hydrolysis of substituted *o*-chlorobenzoic acids; the mechanism of the reaction between *o*-halogenobenzoic acids and nucleophilic reagents. A. A. Goldberg. Chem Soc J p4368-73 N '52

Hydrolytic action of acylase I on N-acylamino acids. S. J. Fu and S. M. Birnbaum. bibliog Am Chem Soc J 75:918-20 F 20 '53

Influence of acidity function and water concentration on the rate of hydrolysis of *p*-nitrobenzophenone diethylketal in aqueous ethanol. W. W. Kaeding and L. J. Andrews. bibliog Am Chem Soc J 74:6189-93 D 20 '52

Inhibition of the α-chymotrypsin-catalyzed hydrolysis of nicotinyl-L-tryptophanamide and of methyl hippurate by indole. H. T. Huang and C. Niemann. bibliog Am Chem Soc J 75:1395-401 Mr 20 '53

Ionization constant and rate of hydrolysis of succinimide. H. F. Walton and A. A. Schilt. bibliog Am Chem Soc J 74:4995-6 O 20 '52

Kinetics of the α-chymotrypsin catalyzed hydrolysis of acetyl-L-tyrosinhydroxamide in aqueous solutions at 25° and *p*H 7.6. D. S. Hogness and C. Niemann. bibliog Am Chem Soc J 75:884-90 F 20 '53

Kinetics of the α-chymotrypsin catalyzed hydrolysis of methyl hippurate in aqueous solutions at 25° and *p*H 7.9. H. T. Huang and C. Niemann. bibliog Am Chem Soc J 74:4634-8 S 20 '52

Kinetics of the hydrolysis of *p*-nitrosodimethylaniline. F. M. Miller and M. L. Adams. bibliog Am Chem Soc J 75:4599-600 S 20 '53

Kinetics of urea hydrolysis by urease. G. B. Kistiakowsky and A. J. Rosenberg. bibliog Am Chem Soc J 74:5020-5 O 20 '52

Malonyl-α-aminopyridine; hydrolysis of its diazonium coupling products and related compounds. H. R. Snyder and M. M. Robison. Am Chem Soc J 74:5945-9 D 5 '52

HYDROLYSIS—*Continued*

Mechanism of hydrolysis of acid chlorides; salt effects. B. L. Archer, R. F. Hudson and J. E. Wardill. diag Chem Soc J p889-93 Mr '53

Mechanism of hydrolysis of acid chlorides; the effect of *p*-substituents in 95 per cent aqueous acetone. D. A. Brown and R. F. Hudson. Chem Soc J p883-7 Mr '53

Mechanism of the hydrolysis of diborane in the vapor phase. H. G. Weiss and I. Shapiro. bibliog Am Chem Soc J 75:1221-4 Mr 5 '53

Mechanism of the hydrolysis of organic phosphates; *o*-carboxynaphthyl phosphates. J. D. Chanley and E. M. Gindler. bibliog Am Chem Soc J 75:4035-40 Ag 20 '53

Metal ion catalysis in the hydrolysis of Schiff bases. G. L. Eichhorn and J. C. Bailar, jr. bibliog Am Chem Soc J 75:2905-7 Je 20 '53

Ortho esters, imidic esters and amidines; the acid-catalyzed hydrolysis of N,N′-diphenylformamidine in aqueous dioxane solutions. R. H. DeWolfe and R. M. Roberts. bibliog Am Chem Soc J 75:2942-7 Je 20 '53

Partial hydrolysis of chlorosilanes. R. West. bibliog Am Chem Soc J 75:1002-3 F 20 '53

Partial hydrolysis of hexachlorodisilane. W. C. Schumb and R. A. Lefever. Am Chem Soc J 75:1513 Mr 20 '53

Polarographic studies on the oxidation and hydrolysis of sodium borohydride. R. L. Pecsok. bibliog Am Chem Soc J 75:2862-4 Je 20 '53

Potassium metaphosphate; molecular weight, viscosity behavior and rate of hydrolysis of non-cross-linked polymer. R. Pfanstiel and R. K. Iler. bibliog Am Chem Soc J 74:6059-64 D 5 '52

Properties of thiolesters; kinetics of hydrolysis in dilute aqueous media. L. H. Noda, S. A. Kuby and H. A. Lardy. bibliog Am Chem Soc J 75:913-17 F 20 '53

Pteridine studies; the solubility and the stability to hydrolysis of pteridines. A. Albert, D. J. Brown and G. Cheeseman. Chem Soc J p4219-32 N '52

Quantitative studies of the reactivities of mixed carboxylic anhydrides; the hydrolysis and decomposition of acetic formic anhydride. V. Gold and E. G. Jefferson. Chem Soc J p 1416-18 My '53

Quinone imides; adducts of *p*-quinonebis-(dimethylaminosulfonimides) and their hydrolysis products. R. Adams and P. R. Shafer. bibliog Am Chem Soc J 75:667-70 F 5 '53

Rates and energetics of activation of the acid-catalyzed hydrolysis of adenosine triphosphate. S. L. Friess. bibliog Am Chem Soc J 75:323-6 Ja 20 '53

Rates of hydrolysis of fructose-6-phosphoric acid. S. L. Friess. Am Chem Soc J 74:5521-2 N 5 '52

Rates of hydrolysis of some acridine antimalarials. D. L. Hammick, S. F. Mason and G. W. Meacock. Chem Soc J p4745-7 D '52

Relative rates of hydrolysis of urea containing C^{14}, C^{13}, and C^{12}. J. A. Schmitt, A. L. Myerson and F. Daniels. bibliog J Phys Chem 56:917-20 O '52

Sodium borohydride, its hydrolysis and its use as a reducing agent and in the generation of hydrogen. H. I. Schlesinger and others. bibliog diag Am Chem Soc J 75:215-19 Ja 5 '53

Studies on model compounds for coenzyme A; a kinetic study of aminolysis and hydrolysis of ethyl thioacetate and β-acetaminoethyl thioacetate in aqueous solution. P. J. Hawkins and D. S. Tarbell. bibliog Am Chem Soc J 75:2982-5 Je 20 '53

Tracer studies in the aquation and hydrolysis of cobalt complexes. C. A. Bunton and D. R. Llewellyn. Chem Soc J p 1692-6 Je '53

Vapor phase hydrolysis of the rare earth halides; heat and free energy of the reactions; $SmCl_3(s)+H_2O(g)=SmOCl(s)+2HCl(g)$ and $GdCl_3(s)+H_2O(g)=GdOCl(s)+2HCl(g)$. C. W. Koch and B. B. Cunningham. Am Chem Soc J 75:796-7 F 20 '53

HYDROLYSIS, Heat of

Heats of hydrolysis of amide and peptide bonds. J. M. Sturtevant. Am Chem Soc J 75:2016-17 Ap 20 '53

Heats of hydrolysis of some halides and oxyhalides of phosphorus. T. Charnley and H. A. Skinner. Chem Soc J p450-2 F '53

HYDROMECHANICS

Hydromechanics research. Chem Age (Lond) 68:246 F 7 '53

Electric analogies

Hydrofoil design. il Tech R 55:86-7 D '52

HYDROMECHANICS research association, British. See British hydromechanics research association

HYDROMETALLURGY

Ion exchange; another tool for hydrometallurgy. Min Eng 5:494 My '53

HYDROMUCONIC acids

Cyclization and decarboxylation of α-hydromuconic acids. H. E. Baumgarten. bibliog Am Chem Soc J 75:979-82 F 20 '53

HYDROPEROXIDES

Hydroperoxides as initiators for the polymerisation of styrene. W. Cooper. Chem Soc J p 1267-71 Ap '53

Organic peroxides; the preparation of alkyl hydroperoxides from hydrogen peroxide. A. G. Davies, R. V. Foster and A. M. White. Chem Soc J p 1541-7 My '53

Peroxides from turpentine; pinane hydroperoxide. G. S. Fisher, J. S. Stinson and L. A. Goldblatt. bibliog Am Chem Soc J 75:3675-8 Ag 5 '53

Reaction between organic hydroperoxides and iodide in the presence of iron salts. W. S. Wise and G. H. Twigg. Chem Soc J p2168-71 Jl '53

Synthesis of hydroperoxides from Grignard reagents. C. Walling and S. A. Buckler. bibliog Am Chem Soc J 75:4372-3 S 5 '53

HYDROPHOBIA. See Rabies

HYDROPNEUMATIC control

Circuit-breaker operation by means of a pneumo-hydraulic stored energy device. il diags Elec J 149:1575-7 N 21 '52; Elec R (Lond) 151:1111-13 N 21 '52; Engineer 194:684-5 N 21 '52; Engineering 174:769-70 D 12 '52

Design of an air-powered hydraulic drilling unit. C. Johnson and P. Butzin. flow diag il Mach 59:202-6 Ag '53

Multiple fluid circuits. H. L. Stewart. diags Product Eng 24:162-7 Ja '53

Pneumo-hydraulic operator closes breakers. E. R. Perry and N. W. Morelli. il diags Elec World 139:180+ Ja 26 '53

HYDROQUINONE

Dealkylation of dialkylhydroquinone diacetates with aluminum chloride. J. L. R. Williams. Am Chem Soc J 74:6132-3 D 5 '52

Electron exchange-polymers; polymers and copolymers of vinylhydroquinone. M. Ezrin, I. H. Updegraff and H. G. Cassidy. Am Chem Soc J 75:1610-14 Ap 5 '53

Quinone-hydroquinone exchange reactions; duroquinone and durohydroquinone exchange in buffered methanol solution. A. A. Bothner-By. bibliog diag Am Chem Soc J 75:728-30 F 5 '53

Short-term intraperitoneal toxicity tests. D. W. Fassett and R. L. Roudabush. A M A Archives Ind Hygiene & Occup Med 6:525-9 D '52

HYDRO-SKI gear. See Airplanes—Landing gear

HYDROSTATICS

Anderson Ranch Dam penstock test fracture repaired by welding. P. J. Bier. il plan diags Welding J 32:313-19 Ap '53

Hydrostatic pressures under a canal measured accurately. P. H. S. Follett. il diag Civil Eng 23:248-9 Ap '53

Look at hydrostatic thrust bearings. F. R. Archibald. diags Machine Design 25:170 S '53

HYDROXAMIC acids

Enzymatic synthesis of D-glutamine and related hydroxamic acids. L. Levintow and A. Meister. bibliog Am Chem Soc J 75:3039-40 Je 20 '53

HYDROXIDES

Mechanical properties of cotton fibers; effect of alkali hydroxide on fibers under tension. E. L. Nimer and others. bibliog Textile Res J 23:629-39 S '53

HYDROXIDES—*Continued*

Mechanism of substitution at a saturated carbon atom; kinetic effects of hydroxide and alkoxide ions on the rate-controlling and product-forming stages of unimolecular solvolysis of *tert.*-butyl and diphenylmethyl halides. O. T. Benfey, E. D. Hughes and C. K. Ingold. Chem Soc J p2494-8 Jl '52

HYDROXYACETALDEHYDE

Reaction of acetoin and hydroxyacetaldehyde with cyclohexylamine. J. F. Carson. Am Chem Soc J 75:4337-8 S 5 '53

HYDROXY acids

Anodic syntheses; unsaturated and hydroxy-acids; a direct stereochemical connection of oleic and elaidic with erucic and brassidic acids. D. G. Bounds, R. P. Linstead and B. C. L. Weedon. Chem Soc J p2393-400 Ag '53

Constitution of the hydroxyacids of wool wax. D. H. S. Horn and others. bibliog Chem & Ind p 106 Ja 31 '53

Elimination reactions of esters; derivatives of dibasic polyhydroxy-acids. R. P. Linstead, L. N. Owen and R. F. Webb. Chem Soc J p 1225-31 Ap '53

Elimination reactions of esters; the formation of α-keto-acids from derivatives of αβ-dihydroxy-acids, and related reactions. R. P. Linstead, L. N. Owen and R. F. Webb. Chem Soc J p 1218-24 Ap '53

HYDROXYBENZALDEHYDE

Base-catalyzed condensation reactions of *p*-hydroxybenzaldehyde and higher keto acids. G. M. Picha. Am Chem Soc J 75:3155-9 Jl 5 '53

HYDROXYBENZAMIDE. See Salicylamide

HYDROXYBENZOIC acid

Reactions of vanillin and its derived compounds; amides of vanillic and 3-ethoxy-4-hydroxybenzoic acids. I. A. Pearl and D. L. Beyer. bibliog Am Chem Soc J 75:2627-30 Je 5 '53

Reversal of *p*-aminobenzoic acid inhibition of growth of rickettsiae by *p*-hydroxybenzoic acid in agar-slant tissue culture. N. Takemori and M. Kitaoka. bibliog Science 116:710-11 D 26 '52

HYDROXYBENZOPYRANOL

Pigments of dragon's blood resin; the oxidation of some anhydro-7-hydroxybenzopyranols. P. Broadbent, A. Robertson and W. B. Whalley. Chem Soc J p4957-9 D '52

HYDROXYBUTANONE

Reaction of acetoin and hydroxyacetaldehyde with cyclohexylamine. J. F. Carson. Am Chem Soc J 75:4337-8 S 5 '53

HYDROXYBUTYRALDEHYDE. See Aldol

HYDROXYBUTYRIC acid

Enzymatic oxidation of *d*- and *l*-β-hydroxybutyrate. A. L. Lehninger and G. D. Greville. bibliog Am Chem Soc J 75:1515-16 Mr 20 '53

HYDROXYCHOLESTEROL

Constitution of cerebrosterol, a hydroxycholesterol isolated from horse brain. A. Ercoli and P. de Ruggieri. Am Chem Soc J 75:3284 Jl 5 '53

HYDROXYCINNAMIC acid

Preparation of reactions of *o*-hydroxycinnamic acids and esters. R. Adams and T. E. Bockstahler. bibliog Am Chem Soc J 74:5346-8 N 5 '52

HYDROXYCINNOLINE

Cinnolines; 8-hydroxycinnoline and some of its derivatives. E. J. Alford and others. Chem Soc J p3009-17 Ag '52

Cinnolines; the nature of the $C_{(3)}$-position; the Neber-Bossel synthesis of 3-hydroxycinnoline. E. J. Alford and K. Schofield. Chem Soc J p2102-8 Je '52

HYDROXY compounds

Reactions of vinyl acetate with aliphatic hydroxy compounds; a new synthesis of vinyl ethers. R. L. Adelman. bibliog Am Chem Soc J 75:2678-82 Je 5 '53

Ring-chain tautomerism of hydroxy aldehydes. C. D. Hurd and W. H. Saunders. jr. bibliog diag Am Chem Soc J 74:5324-9 N 5 '52

Trimethylgallium; reactions with hydroxy- and similar compounds. G. E. Coates and R. G. Hayter. Chem Soc J p2519-24 S '53

Analysis

Spectrophotometric determination of the hydroxyl contents of aliphatic and alicyclic alcohols. J. P. Riley. Chem Soc J p2108-10 Je '52

HYDROXYCORTICOSTERONE

Chemical studies with 11-oxygenated steroids; 17α-hydroxycorticosterone. R. H. Levin and others. bibliog Am Chem Soc J 75:502-3 Ja 20 '53

Microbiological transformations of steroids; the 11-epimer of Compound F and other new oxygenated derivatives of Reichstein's Compound S; a new route to cortisone. D. H. Peterson and others. bibliog Am Chem Soc J 75:412-15 Ja 20 '53

Steroids; synthesis of 11α,17α-dihydroxyprogesterone and of 11α,17α,21-trihydroxyprogesterone, the 11-epimer of Kendall's Compound F. J. Romo and others. bibliog Am Chem Soc J 75:1277-82 Mr 20 '53

Synthesis of 17α-hydroxycorticosterone and its 9α-halo derivatives from 11-epi-17α-hydroxycorticosterone. J. Fried and E. F. Sabo. bibliog Am Chem Soc J 75:2273-4 My 5 '53

Upjohn synthesizes Compound F in fermentation process. Chem & Eng N 31:780+ F 23 '53

HYDROXYCOUMARIN

Studies on 4-hydroxycoumarins; 3-substituted-aminomethyl-4-hydroxycoumarin derivatives by the Mannich reaction. D. N. Robertson and K. P. Link. bibliog Am Chem Soc J 75:1883-5 Ap 20 '53

Studies on 4-hydroxycoumarins; the mechanism for the reaction of 4-hydroxycoumarin with aliphatic acid chlorides. H. R. Eisenhauer and K. P. Link. bibliog Am Chem Soc J 75:2044-5 My 5 '53

Studies on 4-hydroxycoumarins; the reaction of 4-hydroxycoumarin with aromatic acid chlorides. H. R. Eisenhauer and K. P. Link. bibliog Am Chem Soc J 75:2046-9 My 5 '53

HYDROXYCYCLOHEXENE

Synthesis and reactions of 1-methyl-2-vinyl-4-hydroxycyclohexene. G. Stork, S. S. Wagle and P. C. Mukharji. bibliog Am Chem Soc J 75:3197-204 Jl 5 '53

HYDROXYETHYL cellulose

Preparation and properties of some ether and ester derivatives of hydroxyethylcellulose. S. G. Cohen and others. bibliog Ind & Eng Chem 45:200-3 Ja '53

HYDROXYINDOLE

Melanin and its precursors; synthesis of 5- and 7-hydroxyindole from dihydroxyphenylalanines. R. I. T. Cromartie and J. Harley-Mason. Chem Soc J p2525-7 Jl '52

Some extensions of the synthesis of hydroxyindoles from *p*-benzoquinones. R. J. S. Beer, H. F. Davenport and A. Robertson. Chem Soc J 1262-4 Ap '53

HYDROXYMALEIC acid

Preparation and stability of hydroxymaleic acid (oxaloacetic acid). J. C. Roberts. Chem Soc J p3315-16 Ag '52

HYDROXYMETHOXYCHRYSENE

1-Hydroxy-11-methoxychrysene. R. A. Barnes and M. A. Manganelli. bibliog Am Chem Soc J 74:5826-8 D 5 '52

HYDROXYMETHYL cyclohexane

Alicyclic glycols. G. A. Haggis and L. N. Owen. Chem Soc J p389-407 F '53

HYDROXYMETHYL pentanone

Kinetic salt effects on the decomposition of diacetone alcohol in solutions of tetra-alkylammonium hydroxides. E. S. Halberstadt and J. E. Prue. Chem Soc J p2234-6 Je '52

Some physical properties of diacetone alcohol, mesityl oxide and methyl isobutyl ketone. E. T. J. Fuge, S. T. Bowden and W. J. Jones. bibliog J Phys Chem 56:1013-16 N '52

HYDROXYMETHYL peroxide

Thermochemistry and pyrolysis of bishydroxymethyl peroxide. A. D. Jenkins and D. W. G. Style. Chem Soc J p2337-40 Ag '53

HYDROXYMETHYL pyridine

Synthetical experiments in the B group of vitamins; synthesis of the pyridoxine analogue, 2-benzyl-3-hydroxy-4 : 5-bishydroxymethylpyridine. A. Cohen and J. A. Silk. Chem Soc J p4386-90 N '52

HYDROXYNAPHTHOIC acid
Hydroxynaphthoate series; a synthesis of 4-hydroxynaphthoic acid and its simple esters. G. W. K. Cavill and J. R. Tetaz. Chem Soc J p3634-6 S '52

HYDROXYNITROBIPHENYL. See Nitrophenyl phenol

HYDROXYPHENYLBENZIMIDAZOLE
2-(o-Hydroxyphenyl)-benzimidazole as a reagent for the determination of mercury. J. L. Walter and H. Freiser. bibliog diag Anal Chem 25:127-30 Ja '53

HYDROXYPHENYLBENZOXAZOLE
2-(o-Hydroxyphenyl)benzoxazole as a volumetric reagent for cadmium. J. L. Walter and H. Freiser. Anal Chem 24:1985-6 D '52

HYDROXYPHENYLSERINE
β-*m*-Hydroxyphenylserine and β-*p*-hydroxyphenylserine. W. A. Bolhofer. bibliog Am Chem Soc J 75:4469-73 S 20 '53

HYDROXYPHTHALIDES
Infra-red spectroscopy and structural chemistry; hydroxyphthalides. L. A. Duncanson, J. F. Grove and J. Zealley. Chem Soc J p 1331-3 My '53

HYDROXYPREGNANE
11-Oxygenated steroids; the preparation of 11α-hydroxypregnanes. E. P. Oliveto, H. L. Herzog and E. B. Hershberg. bibliog Am Chem Soc J 75:1505-7 Mr 20 '53
11-Oxygenated steroids; the preparation of 11β-hydroxy pregnanes. E. P. Oliveto, T. Clayton and E. B. Hershberg. bibliog Am Chem Soc J 75:486-8 Ja 20 '53

HYDROXYPREGNANEDIONE
Microbiological transformations of steroids; preparation of 11α-hydroxypregnane-3,20-dione and 11α-hydroxyallopregnane-3,20-dione. S. H. Eppstein and others. Am Chem Soc J 75:421-2 Ja 20 '53

HYDROXYPROGESTERONE
Chemical studies with 11-oxygenated steroids; 11β-hydroxyprogesterone. B. J. Magerlein and R. H. Levin. bibliog Am Chem Soc J 75:3654-5 Ag 5 '53
Microbiological transformations of steroids; preparation of 11α-hydroxy-6-dehydroprogesterone. D. H. Peterson and others. bibliog Am Chem Soc J 75:419-21 Ja 20 '53
Microbiological transformations of steroids; the oxygenation of 17α-hydroxyprogesterone to 6β,17α-dihydroxyprogesterone and 11α, 17α-dihydroxyprogesterone. P. D. Meister and others. bibliog Am Chem Soc J 75:416-18 Ja 20 '53
Microbiological transformations of steroids; the preparation of 11α-hydroxy-17α-progesterone. P. D. Meister and others. bibliog Am Chem Soc J 75:55-7 Ja 5 '53

HYDROXYPTERIDINE
Studies on pteridines; synthesis of 6- and 7-hydroxypteridines. S. Matsuura and others. bibliog Am Chem Soc J 75:4446-9 S 20 '53

HYDROXYPYRIMIDINE
Simple pyrimidines; spectroscopic studies. D. J. Brown and L. N. Short. Chem Soc J p331-7 Ja '53
Use of nitro- and halogeno-ketones in the synthesis of pteridines, including pteroic acid, from 2 : 4 : 5-triamino-6-hydroxypyrimidine. F. E. King and P. C. Spensley. Chem Soc J p2144-52 Je '52

HYDROXYQUINOLINE
Structure and behavior of organic analytical reagents; stability of chelates of 8-hydroxyquinoline and analogous reagents. W. D. Johnston and H. Freiser. bibliog Am Chem Soc J 74:5239-42 N 5 '52
Thieno[3,2-b] pyridine; the preparation and properties of an S-isosteric 8-hydroxyquinoline. J. T. Sheehan and G. J. Leitner. bibliog Am Chem Soc J 74:5501-3 N 5 '52

HYDROXYQUINOLINE, Analogs of
Analogues of 8-hydroxyquinoline having additional cyclic nitrogen atoms; preparative. A. Albert and A. Hampton. Chem Soc J p4985-93 D '52

HYDROXYSTEROIDS. See Steroids

HYDROXYSUCCINIC acid
Reactions of hindered α-bromo- and hydroxysuccinic acids. W. R. Vaughan and K. M. Milton. bibliog Am Chem Soc J 74:5623-30 N 20 '52

HYDROXYTETRAZOLE
Crystallographic data. K. Hattori, J. P. Horwitz and E. Lieber. il diags Anal Chem 25:353-4 F '53

HYDROXYTRYPTOPHAN
5-Hydroxytryptophan decarboxylase; a new route of metabolism of tryptophan. S. Udenfriend, C. T. Clark and E. Titus. Am Chem Soc J 75:501-2 Ja 20 '53
Synthesis and biochemistry of 5- and 7-hydroxytryptophan and derivatives. A. Ek and B. Witkop. bibliog Am Chem Soc J 75:500-1 Ja 20 '53

HYDROXYL group
Adiabatic correlation rules for reactions involving polyatomic intermediate complexes and their application to the formation of $OH(^2\Sigma^+)$ in the H_2-O_2 flame. K. E. Shuler. bibliog diags J Chem Phys 21:624-32 Ap '53
Calculated approximate values of the free energy function for the OD molecule. G. McDonald. Am Chem Soc J 74:5539-40 N 5 '52
Crystal structure of diethylsilanediol and its hydroxyl groups. M. Kakudo and T. Watase. diag J Chem Phys 21:167-8 Ja '53
Effect of hydrogen bonding on the hindered rotation of the hydroxyl group in alcohols. A. V. Stuart and G. B. B. M. Sutherland. J Chem Phys 20:1977 D '52
Effect of spectral line shape on apparent rotational temperatures of OH. S. S. Penner. bibliog J Chem Phys 21:686-8 Ap '53
Effects of self-absorption on rotational temperatures of OH in flames. H. P. Broida. bibliog J Chem Phys 21:1165-9 Jl '53
Effects of vibrational state on rotational intensity distributions in OH. A. M. Bass and H. P. Broida. J Chem Phys 21:173 Ja '53
Emission spectrum of OH from 1.4 to 1.7 μ. W. S. Benedict and others. bibliog J Chem Phys 21:398-402 Mr '53
Experimental evidence for anomalous population temperatures of OH in flames. S. S. Penner. bibliog J Chem Phys 20:1334-5 Ag '52
Infrared emission spectra of OH, CO, and CO_2 from 3μ to 5.5μ. E. K. Plyler and J. J. Ball. J Chem Phys 20:1178-9 Jl '52
Infra-red spectrum of nitric and of deuteronitric acid vapour; completion of identification of the fundamental frequencies; entropy of nitric acid; barrier resisting rotation of the hydroxyl group. H. Cohn, C. K. Ingold and H. G. Poole. diag Chem Soc J p4272-82 N '52
Kinetics of OH radicals from flame emission spectra; a study of the acetylene-oxygen flame. K. E. Shuler and H. P. Broida. bibliog il J Chem Phys 20:1383-8 S '52
Microwave spectrum of the free OH radical. T. M. Sanders, jr. and others. bibliog Phys R 89:1158-9 Mr 1 '53
OH in the airglow at high latitudes. J. W. Chamberlain and N. J. Oliver. bibliog Phys R 90:1118-19 Je 15 '53
Organic derivatives of montmorillonite. W. F. Spencer and J. E. Gieseking. bibliog J Phys Chem 56:751-3 Je '52
Polarography of nitroprusside; equilibrium constant of the reaction between nitroprusside and hydroxyl ions. I. M. Kolthoff and P. E. Toren. Am Chem Soc J 75:1197-201 Mr 5 '53
Quantitative studies of apparent rotational temperatures of OH in emission and absorption (spectral lines with Doppler contour). S. S. Penner. bibliog J Chem Phys 21:31-41 Ja '53
Relative rates of acetylation of the hydroxyl groups in cellulose acetate. C. J. Malm and others. bibliog Am Chem Soc J 75:80-4 Ja 5 '53
Roles of the amino and hydroxyl groups of collagen in its reactions with formaldehyde, tannic acid and quinone. R. W. Green. bibliog Am Chem Soc J 75:2729-32 Je 5 '53
Rotational intensity distributions of OH and OD in an electrodeless discharge through water vapor. H. P. Broida and W. R. Kane. bibliog Phys R 89:1053-9 Mr 1 '53
Rotational temperatures of OH in diluted flames. W. R. Kane and H. P. Broida. bibliog il J Chem Phys 21:347-54 F '53

HYDROXYL group—*Continued*

Rotational temperatures of OH in several flames. H. P. Broida and G. T. Lalos. bibliog il J Chem Phys 20:1466-71 S '52

σ-Constants of the carbethoxyl and hydroxyl groups. J. D. Roberts and W. T. Moreland, jr. Am Chem Soc J 75:2267-8 My 5 '53

Spectrophotometric atlas of the $^2\Sigma^+ - {}^2\pi$ transition of OH. A. M. Bass and H. P. Broida. U S Nat Bur Stand Circ 541:1-22; pa 20c Supt. of doc. '53

Steroids; introduction of the 11-keto and 11α-hydroxy groups into ring C unsubstituted steroids; performic acid oxidation of 7,9(11)-dienes. C. Djerassi and others. bibliog diags Am Chem Soc J 75:3505-10 Jl 20 '53

Unsaturation energies of aroxyl radicals. N. S. Hush. Chem Soc J p2375-80 Ag '53

HYDROXYL number

Determination of phenolic hydroxyl values (semi-micro method). H. Brunner and H. R. Thomas. bibliog J Ap Chem 3:49-54 F '53

HYDROXYLAMINE

Addition of hydroxylamine to ω-nitrostyrene, furylnitroethylene and nitroölefins. C. D. Hurd and J. Patterson. bibliog Am Chem Soc J 75:285-8 Ja 20 '53

Iron catalyzed reaction between nitrosyl disulfonate and hydroxylamine monosulfonate ions. W. J. Ramsey and D. M. Yost. J Chem Phys 21:957-8 My '53

Preparation of free hydroxylamine and deutero-hydroxylamine. R. E. Nightingale and E. L. Wagner. Am Chem Soc J 75:4092-3 Ag 20 '53

HYDROXYLATION

ortho-Hydroxylation of phenols. J. D. Loudon and J. A. Scott. Chem Soc J p265-73 Ja '53

HYGIENE

How to beat the heat. W. Schweisheimer. Am Bsns 23:16-17+ Je '53

Pace that kills. W. Schweisheimer. Am Bsns 23:16-17 S '53

Whoa! can't live forever! E. W. Fair. Credit & Fin Management 55:16-17 Je '53

See also

Air pollution
Children—Care and hygiene
Diet
Disinfection and disinfectants
Fatigue
Food
Mental hygiene
Nutrition
Physical examinations
Public health
Sanitation
Sickness
Soap—Physiological effect
Temperature—Physiological effect
Ventilation
Water pollution
Water purification
Water supply

HYGIENE, Industrial

American congress of labor medicine petroleum industry session, 2d, Rio de Janeiro, Sept. 20-28, 1952. Ind Med 22:24-8 Ja '53

APHA conference report; industrial hygiene. Pub Health Rep 68:209-12 F '53

Controlling heat exposure. il diag Nat Safety N 67:34-5+ My '53

Diary of an industrial physician. H. P. Dastur. Nat Safety N 67:26+ Ap; 42+ My '53

Effective control of lead dust in the manufacture of vinyl plastics. A. E. Goss and A. M. Ross, jr. diags India Rubber World 127:652-6 F '53

Fatigue cures for industry. L. Brouha. Safety Maint & Prod 106:48 S '53; Same abr. Mill & Factory 53:234+ Ag '53

Fatigue; how to measure it and reduce it. L. Brouha. Am Mach 97:130-1 My 25 '53

Government, industry, labor in industrial hygiene; APHA conference report. Pub Health Rep 68:115-18 Ja '53

Group weight control. Safety Maint & Prod 104:70 D '52

Health and ventilation in an air conditioned shop; Humble oil and refining co. J. W. Hammond and R. J. Davis. il Heat & Ven 50:93-5 Ja '53

Health detectives stalk invisible enemies; Westinghouse electric corp. il Nat Safety N 67:24-5 My '53

Health; more care is needed. G. G. Carr. il Iron Age 170:21-2 D 25 '52

Hot weather hygiene. Nat Safety N 67:60 Mr '53

Human relations; importance in occupational health. Safety Maint & Prod 104:110 O '52

Industrial health; abstracts of current literature on industrial hygiene, medicine, and nursing. F. A. Van Atta. Published in monthly numbers of National safety news

Industrial health experiences in Pennsylvania. C. Long and others. A M A Archives Ind Hygiene & Occup Med 6:469-86 D '52

Industrial health problems discussed at National safety congress. Safety Maint & Prod 104:62 D '52

Industrial hygiene and government. Safety Maint & Prod 104:68 D '52

Maintenance of health in the elderly work force. C. T. Olson. Ind Med 21:581-2 D '52

M.I.T. enterprise in occupational health. H. L. Hardy. il Tech R 55:315-18+ Ap '53

Medicine; how much does it cost? Industrial health congress. K. W. Bennett. il Iron Age 171:52 Ja 29 '53

No substitute for cleanliness. il Nat Safety N 68:26-7 Ag '53

Occupational health activities and objectives of the World health organization. M. I. Roemer and O. L. Da Costa. A M A Archives Ind Hygiene & Occup Med 7:111-17 F '53

Practical aspects of dust suppression. W. B. Lawrie. il Nat Safety N 67:26-7+ F; 28-9+ My '53

Safety for women in industry. J. Michael. il Safety Maint & Prod 106:11-12+ Ag '53

Sleuthing for health hazards; Westinghouse electric corp. il Safety Maint & Prod 106:64-6 O '53

Stop dermatitis before it starts! il Safety Maint & Prod 106:47-8+ Ag '53

Warren A. Cook wins award in industrial hygiene. Nat Safety N 67:59 Ja '53

See also

Absenteeism (labor)
Air purification
Beryllium poisoning
Diseases, Industrial
Dust
Dust removal
Eye—Examination
Factories—Cleanliness
Factory sanitation
Fatigue
Lavatories
Lead poisoning
Lunches, Employees'
Lunchrooms and cafeterias, Employees'
Lungs—Dust diseases
Medical service, Industrial
Miners—Diseases and hygiene
Noise
Nurses and nursing, Industrial
Physical examinations
Poisons, Industrial
Safety devices and measures
Skin—Diseases
Temperature—Physiological effect

also Industrial hygiene foundation of America

Standards

A.S.A. hygiene standards for industry. H. G. Lamb. il Safety Maint & Prod 105:41-3 F '53

Great Britain

Industrial hygiene in Britain. B. H. Harvey. A M A Archives Ind Hygiene & Occup Med 7:187-92 Mr '53

HYGRADE foods company

Security I like best. B. K. Thurlow. Comm & Fin Chr 177:282+ Ja 22 '53

HYGROMETERS

Package hygrometers measure moisture inside small, low-cost packages. K. C. Coon. il Mod Packaging 26:119-20+ Mr '53

Rating

Humidity indicators. il Consumers Res Bul 31:5-7 F '53

HYGROSCOPICITY

Deuterium and hydrogen electrode characteristics of lithia-silica glasses. D. Hubbard and G. W. Cleek. bibliog J Res Nat Bur Stand 49:267-72 O '52

HYOSCINE. See Scopolamine

HYPALON

Report on Hypalon. Can Chem Process 37:84 Mr '53

HYPERCONJUGATION. See Conjugation (chemistry)

HYPERFORMING process. See Gasoline—Manufacture

HYPERKERATOSIS of cattle. See Cattle—Diseases and pests

HYPERSORBERS

Hypersorption; Union oil company of California. flow diag Pet Refiner 31:250-1 S '52

HYPHEN
Monstrosity with hyphen. H. D. Bump. Inland Ptr 130:44 Ja '53

HYPNOTICS
See also
Barbiturates

HYPOCHLORITES
Tentative standard specifications for hypochlorites. Am Water Works Assn J 45: 1117-22 O '53 (reprints 20c)

HYPOCHLOROUS acid
Kinetics of chlorohydrin formation; the reaction between hypochlorous acid and ethyl crotonate in the presence of sodium acetate-acetic acid buffers of constant pH. K. D. Reeve and G. C. Israel. Chem Soc J p2327-31 Je '52

HYPOGLYCEMIA. See Blood—Sugar

HYPOPHOSPHATES
Preparation of radiohypophosphate ion. T. Moeller and G. H. Quinty. bibliog Am Chem Soc J 74:6122-3 D 5 '52
Radiometric determination of the solubilities of thorium and certain rare earth metal hypophosphates. T. Moeller and G. H. Quinty. bibliog Am Chem Soc J 74:6123 D 5 '52

HYPOPROTHROMBINEMIA
Effect of salicylic acid on the hypoprothrombinemia induced by dicumarol in the dog and the rat. J. B. Field. bibliog Science 117:499-501 My 8 '53

HYPOTENSION. See Blood pressure

HYPOXANTHINE
Role of N^{15} glycine, glutamine, aspartate and glutamate in hypoxanthine synthesis. J. C. Sonne, I. Lin and J. M. Buchanan. Am Chem Soc J 75:1516-17 Mr 20 '53

HYPSOCHROMIC effect
Natural hypsochromic shifts on phenyl substitution. B. Pullman and others. bibliog J Chem Phys 21:188-9 Ja '53

HYPSOMETRIC curve. See Altitude—Measurement

HYSTERESIS
Behavior of rectangular hysteresis loop magnetic materials under current pulse conditions. E. A. Sands. diags Inst Radio Eng Proc 40:1246-50 O '52
Double hysteresis loop of $BaTiO_3$ at the Curie point. W. J. Merz. bibliog il Phys R 91:513-17 Ag 1 '53
Hysteresis motor for synchronous power. S. Davis. il diags Product Eng 23:167-71 D '52
Surface roughness as related to hysteresis of contact angles; the systems paraffin-ethylene glycol-air, paraffin-methyl cellosolve-air and paraffin-methanol-air. J. W. Shepard and F. E. Bartell. J Phys Chem 57:458-63 Ap '53
Surface roughness as related to hysteresis of contact angles; the systems paraffin-3-molar calcium chloride solution-air and paraffin-glycerol-air. F. E. Bartell and J. W. Shepard. diags J Phys Chem 57: 455-8 Ap '53
Surface roughness as related to hysteresis of contact angles; the system paraffin-water-air. F. E. Bartell and J. W. Shepard. bibliog diags J Phys Chem 57:211-15 F '53
Thermodynamic derivation of Wenzel's modification of Young's equation for contact angles; together with a theory of hysteresis. R. J. Good. bibliog diag Am Chem Soc J 74:5041-2 O 20 '52

I

I.U.E. See International union of electrical, radio and machine workers

IANNARONE, Joseph J. 1925-
Second ADA award presented to Lyle, Iannarone and Thomas. por Am Dyestuff Rep 41:865 D 22 '52

ICARUS (asteroid). See Asteroids

ICE
Calculation of the static dielectric constant of ice. J. G. Powles. diags J Chem Phys 20:1302-9 Ag '52
Dielectric properties of ice and snow at 3.2 centimeters. W. A. Cumming. bibliog il diags J Ap Phys 23:768-73 Jl '52
Dielectric properties of ice and solid D_2O. R. P. Auty and R. H. Cole. bibliog diags J Chem Phys 20:1309-14 Ag '52
Hydrogen bonding and the interactions of water molecules. E. S. Campbell. bibliog J Chem Phys 20:1411-20 S '52
Ice storage air conditioning. J. A. Wilkerson. diag Heating-Piping 25:90-2 Je '53; Discussion. 25:70 O '53
Luminescence of ice and tritiated ice. L. I. Grossweiner and M. S. Matheson. J Chem Phys 20:1654-5 O '52
Reflection and diffraction from ice crystals in the sky. C. F. Squire. il Opt Soc Am J 42:782 O '52
Structure and residual entropy of ice. R. E. Rundle. bibliog diag J Chem Phys 21:1311 Jl '53
Study of the factors affecting the friction of tread compounds on ice. C. S. Wilkinson, jr. bibliog il diags India Rubber World 128:475-81 Jl '53
Thermoluminescence of ice. E. C. Avery and L. I. Grossweiner. J Chem Phys 21:372-3 F '53

See also
Airplanes—Ice protection
Dams—Ice pressure
Glacial geology
Glaciers
Hydroelectric plants—Ice protection
Roads—Ice control

Heavy ice

See Water—Heavy water

Manufacture

Producing transparent ice; abstract. P. Konopleff. Refrig Eng 60:1181 N '52

See also
Ice machines
Refrigeration and refrigerating machinery

ICE cream
Foil-wrapped ice cream; Central ice cream co. il Mod Packaging 27:138 S '53
Ice cream in plastics; Golden state co. il Mod Packaging 26:89 F '53
Vegetable oils freeze up. Chem W 71:54+ N 1 '52
War of the ices. Bsns W p50-2 Ja 31 '53
Windows for ice cream; Richman's new pint carton. il Mod Packaging 26:126-8 Ap '53

Transportation

New snap in their deliveries; using low-bed truck with six-compartment body; Foremost dairies. il diag Food Eng 25:135-7 My '53
Walk-in truck speeds deliveries; Pioneer ice cream division of the Borden co. il diag Food Eng 25:129-31 Ja '53

ICE cream factories

Equipment

Ice cream plant; Rieck-McJunkin dairy co. il Heat & Ven 50:138+ F '53
New ice cream plant uses 1500 refrigeration hp for freezing and hardening. il Refrig Eng 60:1298+ D '52
Packaged before it's filled; pre-packaged wafer sandwich. il Mod Packaging 26:80-2 Mr '53
Strategic plant expansion wins advanced-unit advantages; Pioneer ice cream division of the Borden co. A. V. Gemmill. il Food Eng 25:64-5+ Mr '53
They get top efficiency with one-floor straight-line operation; Rieck-McJunkin dairy co. ice cream plant. A. V. Gemmill. il plan diag Food Eng 25:51-5+ F '53

Layout

They get top efficiency with one-floor straight-line operation; Rieck-McJunkin dairy co. ice cream plant. A. V. Gemmill. il plan diag Food Eng 25:51-5+ F '53

ICE cream freezers

Rating

Electric ice-cream freezers. il Consumers Res Bul 32:25-6 Jl '53

ICE cream industry

Now a soda fountain in every home! ice cream manufacturer in New Orleans. il Sales Management 70:86+ Mr 1 '53

Now they're selling ice cream in theaters. N. Wood and E. Wood. il Sales Management 69:60-1 N 20 '52

ICE industry

Israel

Israel increases use of ice and refrigeration. For Comm W 50:19 Jl 13 '53

ICE machines

Self-contained automatic ice cube makers; with specifications. E. MacLeod. il Refrig Eng 61:280-1+ Mr '53

ICE on rivers, lakes, etc.

Compressed air keeps pond clear of ice in very cold weather. plan diag Pub Works 84:86 Ap '53

Employ planes to scout ice packs in Atlantic; coast guard international ice observation and ice patrol services. Weekly Underw 168:657 Mr 7 '53

ICE plants

Tennessee ice plant converted to quick freezing for higher profits. il Refrig Eng 61:296 Mr '53

See also

Cold storage warehouses

Equipment

Refrigeration trouble shooting. C. T. Baker. il Power 97:112-13 Ag '53

See also

Ice machines

Safety measures

Western ice plant cools off accidents; Crystal ice and cold storage co. Nat Safety N 68:166 O '53

ICELAND

Economic relations

United States

Defense support aid ended. For Comm W 49:2 Je 1 '53

IDAHO

See also

Geology—Idaho

Hydroelectric plants—Idaho

Mines and mineral resources—Idaho

Silver mines and mining—Idaho

IDAHO power company

FPC's carrier clause upheld; can impose conditions on lines of private company crossing public lands; Idaho power co. vs Federal power commission. Elec World 138:107 N 17 '52

Private power, better by a dam-site at Hell's canyon. Comm & Fin Chr 178:104 Jl 9 '53

IDEAS

Protection

See Intellectual property—Protection

IDEAS in business

Insulated from ideas? G. T. Trundle, jr. Dun's R 60:30-1+ N '52

Is it a good idea or just a fad? Bsns W p 120 F 28 '53

Making yourself understood. C. McPherson. Am Bsns 23:26+ F '53

Sale I never forgot; my product was an idea. E. J. Goulston. Ptr Ink 242:96 Ja 16 '53

Selling your ideas to the board of directors. C. McPherson. Am Bsns 22:18-19+ N '52

See also

Advertising copy

Suggestion systems

IDITOL

*iso*Propylidene derivatives of hexahydric alcohols; *iso*propylidene derivatives of L-iditol. E. J. Bourne, G. P. McSweeney and L. F. Wiggins. Chem Soc J p2542-6 Jl '52

IDOHEPTULOSE

Synthesis of sugars from simpler substances; enzymic synthesis of D-idoheptulose. P. A. J. Gorin and J. K. N. Jones. Chem Soc J p 1537-8 My '53

IGNEOUS rocks. See Rocks, Igneous

IGNITION

Ignition temperatures for vapors and gases chart; data sheet. J. D. Constance. Power 97:105 My '53

Thermite ignition assured. C. P. Brockett. J Chem Educ 29:525 O '52

See also

Airplane engines—Ignition devices

Automobile engines—Ignition devices

Detonation

Diesel engines—Ignition

Flash points

Inflammable mixtures

Internal combustion engines—Ignition

IGNITION, Electric. See Electric ignition

IGNITRON

Mercury-arc rectifiers for medium-voltage applications; review of progress since 1940. J. C. Read. diags Inst E E Proc 99 pt 1:259-61 N '52

Testing

Load-dropping tests on a large ignitron rectifier; abstract. S. J. Pope and others. Power 97:226+ My '53

ILLINOIS

See also

Coal mines and mining—Illinois

Mines and mineral resources—Illinois

Retail trade—Illinois

Water, Underground—Illinois

ILLINOIS central railroad

Railroad securities. Comm & Fin Chr 176:1751; 177:2763 N 6 '52, Je 25 '53

ILLINOIS institute of technology

Putting the heat on education. il Bsns W p 128-9 Je 6 '53

ILLINOIS power company

Preferred and common stocks offered. Comm & Fin Chr 177:625 F 9 '53

ILLINOIS terminal railroad

Security I like best. L. Levy. Comm & Fin Chr 177:462 Ja 29 '53

Sharp earnings recovery seen. Barron's 33:21 F 2 '53

ILLINOIS university

Ceramics and ceramic engineering. il Am Cer Soc Bul 32:37-9 F 15 '53

ILLUMINATING engineering society

Annual report of the general secretary, 1951-1952. C. C. Keller. Illum Eng 47:673-91 D '52

Committees, 1952-1953; official representatives. Illum Eng 47:sup20A+ D '52

National technical conference, Chicago, Sept. 8-12. Illum Eng 47:sup5A-9A+ O '52

Officers and council, section and chapter chairmen, 1952-1953; portraits. Illum Eng 47:sup27A-9A O '52

Officers and council, section and chapter chairmen, 1953-1954. Illum Eng 48:sup 19A-22A+ O '53

Pacific Northwest regional conference, Portland, April 2-3. Elec West 110:95-8 My '53

President's address. E. M. Strong. Illum Eng 48:447-9 S '53

Progress and growth, I.E.S. goals. A. H. Manwaring. Illum Eng 48:450-2 S '53

ILMENITE

Allard Lake ilmenite deposits. P. Hammond. bibliog il maps plan diag Econ Geol 47:634-49 S '52

Du Pont building ilmenite facility in Florida. Manuf Rec 122:52 O '53

Investigation of the collecting effects of fatty acids in tall oil on oxide minerals, particularly on ilmenite. R. T. Hukki and O. Vartiainen. bibliog il Min Eng 5:Trans 818-20 Ag '53

Mining, and concentration of ilmenite and associated minerals at Trail Ridge, Fla. J. H. Carpenter and others. flow sheet il Min Eng 5:Trans 789-95 Ag '53

Titanium; rutile and ilmenite deposits along Australia's eastern coastline. J. Loughlin. diag Light Metal Age 11:16-17+ F '53

ILTIS, Hugo, 1882-1952

Sketch. L. C. Dunn. Science 117:3-4 Ja 2 '53

IMAGE orthicon. See Television cameras

IMBIBITION. See Petroleum—Production methods

IMESATINS

N-acetylimesatins and related compounds. F. Parisi. bibliog Am Chem Soc J 75:3848 Ag 5 '53

IMIDAZOLE

Acetic acid-ammonium acetate reactions; 2-isoimidazoles as intermediates in imidazole formation. M. Weiss. bibliog Am Chem Soc J 74:5193-5 O 20 '52

IMIDAZOLE—*Continued*
Acetylation of imidazole. J. H. Boyer. Am Chem Soc J 74:6274-5 D 20 '52
Azidocarbonyl compounds; a new synthesis for certain substituted imidazoles from phenacyl azides. J. H. Boyer and D. Straw. bibliog Am Chem Soc J 74:4506-8 S 20 '52
Consecutive constants for the association of cadmium with imidazole. C. Tanford and M. L. Wagner. Am Chem Soc J 75:434-5 Ja 20 '53
Glyoxalinopyrimidines; the cyclisation of some 4-2′-chloroethylaminopyrimidines. G. R. Ramage and G. Trappe. Chem Soc J p4410-16 N '52
2-Mercaptoglyoxalines; the preparation of di-*C*-substituted 2-mercaptoglyoxalines from aspartic acid. A. Lawson. Chem Soc J p 1046-52 Ap '53
Metabolic fate of imidazoleacetic $(C^{14}OOH)$ acid in the rat. L. P. Bouthillier and G. Léveillé. Am Chem Soc J 75:4075-7 Ag 20 '53
Model reactions of phosphorus-containing enzyme inactivators; interaction of imidazole, pyridine and some of their derivatives with dialkyl halogeno-phosphates. T. Wagner-Jauregg and B. E. Hackley, jr. bibliog Am Chem Soc J 75:2125-30 My 5 '53
Some new naturally occurring imidazoles related to the biosynthesis of histidine. B. N. Ames and others. bibliog Am Chem Soc J 75:1015-18 Mr 5 '53
2-Thymyloxymethylglyoxalines and related compounds as potential antihistamines. H. Bader and J. D. Downer. Chem Soc J p 1636-40 My '53
2-Vinylimidazole and 1-methyl-2-vinylimidazole. J. K. Lawson, jr. bibliog Am Chem Soc J 75:3398-400 Jl 20 '53

IMIDAZOLONE
Derivatives of 4(5H)-imidazolone. H. Lehr, S. Karlan and M. W. Goldberg. Am Chem Soc J 75:3640-5 Ag 5 '53

IMIDES
Experiments with derivatives of quinone imides. A. Mustafa and M. Kamel. bibliog Am Chem Soc J 75:2939-41 Je 20 '53
Peptides; selective degradation from the carboxyl end; the use of carbodi-imides. H. G. Khorana. Chem Soc J p2081-8 Je '52
Quinone imides; addition of active methylene compounds to 1,4-naphthoquinonedibenzenesulfonimide. R. Adams and W. Moje. bibliog Am Chem Soc J 74:5557-60 N 20 '52
Quinone imides; addition of active methylene compounds to *p*-quinonedibenzenesulfonimide and its derivatives. R. Adams and D. C. Blomstrom. bibliog Am Chem Soc J 75:3405-8 Jl 20 '53
Quinone imides; addition of hydrazoic acid and phenols to *p*-quinonedibenzenesulfonimide and its derivatives. R. Adams and D. C. Blomstrom. bibliog Am Chem Soc J 75:3403-5 Jl 20 '53
Quinone imides; addition of hydrogen cyanide to 1,4-naphthoquinonedibenzenesulfonamide. R. Adams and W. Moje. Am Chem Soc J 74:5562-3 N 20 '52
Quinone imides; addition of mercaptans to *p*-quinonedibenzenesulfonimide. R. Adams, E. F. Elslager and T. E. Young. bibliog Am Chem Soc J 75:663-6 F 5 '53
Quinone imides; addition reactions of *p*-quinonedibenzimide and related compounds. R. Adams and D. S. Acker. bibliog Am Chem Soc J 74:5872-6 D 5 '52
Quinone imides; addition reactions of substituted *p*-quinonedibenzenesulfonimides. R. Adams and T. E. Young. bibliog Am Chem Soc J 75:3235-9 Jl 5 '53
Quinone imides; additions to 1,4-naphthoquinonedibenzenesulfonimide. R. Adams and W. Moje. bibliog Am Chem Soc J 74:5560-2 N 20 '52
Quinone imides; adducts of *p*-quinonebis-(dimethylaminosulfonimides) and their hydrolysis products. R. Adams and P. R. Shafer. bibliog Am Chem Soc J 75:667-70 F 5 '53
Quinone imides; *o*-quinonemonoimides. R. Adams and J. M. Stewart. bibliog Am Chem Soc J 74:5876-80 D 5 '52
Quinone imides; the reaction of primary aromatic amines with 2,3,5,6-tetrachloro-*p*-quinonedibenzenesulfonimide. R. Adams and B. H. Braun. bibliog Am Chem Soc J 74:5869-71 D 5 '52
Reactions with *p*-quinone imides. A. Mustafa and M. Kamel. Science 117:234-5 F 27 '53
Studies on phosphorylation; the reaction between carbodi-imides and acid esters of phosphoric acid; a new method for the preparation of pyrophosphates. H. G. Khorana and A. R. Todd. Chem Soc J p2257-60 Ag '53

IMINES
Formation of the imine radical in the electrical discharge. F. O. Rice and M. Freamo. Am Chem Soc J 75:548-9 F 5 '53
Heterocyclic imines; imino-derivatives of *iso*-indoline and their reaction with primary bases. J. A. Elvidge and R. P. Linstead. Chem Soc J p5000-7 D '52
Ketimines; alkyl 1,1-diphenylethyl ketimines. P. L. Pickard and E. F. Engles. Am Chem Soc J 75:2148-9 My 5 '53
Ketimines; from fencholonitrile. P. L. Pickard and E. F. Engles. Am Chem Soc J 74:4607-8 S 20 '52
Reactions of acrolein and related compounds; reactions with ketimines. C. W. Smith, D. G. Norton and S. A. Ballard. bibliog Am Chem Soc J 75:3316-18 Jl 20 '53
Studies on the coördinate bond; ferrous complexes of α-diimines. P. Krumholz. bibliog Am Chem Soc J 75:2163-6 My 5 '53
See also
Ethylenimine

IMINO compounds
Stability of metal chelates; β-hydroxyethyliminodiacetic acid. S. Chaberek, jr., R. C. Courtney and A. E. Martell. bibliog Am Chem Soc J 74:5057-60 O 20 '52
Stability of metal chelates; iminodiacetic and iminodipropionic acids. S. Chaberek, jr. and A. E. Martell. Am Chem Soc J 74:5052-6 O 20 '52

IMINOPROPIONIC acid
Stability of metal chelates; iminopropionic-acetic and aspartic acids. S. Chaberek, jr. and A. E. Martell. bibliog Am Chem Soc J 74:6021-5 D 5 '52

IMMIGRATION and emigration
International migration and European population trends. J. Isaac. Int Labour R 66:185-206 S '52

Great Britain

Citizens of colour from Commonwealth countries. Economist 167:647-8 Je 6 '53

Israel

Israel's immigration policy. C. Yahil. Int Labour R 66:444-60 N-D '52

Puerto Rico

Migration and Puerto Rico's population problem. C. Senior. Ann Am Acad 285:130-6 Ja '53

United States

Integration of displaced persons into U.S. economic life. G. Minton. Mo Labor R 75:611-14 D '52

IMMIGRATION law
Much ado; the McCarran act is important, but misunderstood. J. C. Perham. Barron's 33:3 Ja 12 '53
New immigration law. W. A. W. Krebs, jr. and C. P. Ebb. Science 117:287-9 Mr 20 '53
Visas and meetings. Sci Am 188:46+ Mr '53

IMMUNITY
Nature of genetic resistance to infection in mice. J. A. Weir and others. bibliog Science 117:328-30 Mr 27 '53
Steric configuration of β-benzoylpropionate ion in aqueous solution as determined by immunochemical means. D. Pressman and M. Siegel. bibliog Am Chem Soc J 75:1376-9 Mr 20 '53

IMMUNITY (law)
Sovereign immunity of state agencies. O. R. Houston. bibliog Weekly Underw 168:1418-19 My 23 '53

IMPACT
Effect of specimen geometry on impact transition temperature. R. S. Zeno and J. L. Dolby. bibliog diags Welding J 32:sup 190-7 Ap '53

IMPACT—*Continued*

Experimental study of residual plastic strains produced by spherical impact. A. K. Mohamed and A. G. H. Coombs. bibliog il diags Iron & Steel Inst J 175:5-9 S '53

Impact resistance of concrete. il Concrete 61:22+ My '53

Impulse-momentum method for calculating landing-gear impact conditions in unsymmetrical landings. R. T. Yntema. bibliog J Aeronautical Sci 19:743-50 N '52

Influence of specimen dimension and shape on the results in tension impact testing. D. S. Clark and D. S. Wood. bibliog diags Am Soc T M Proc 50:577-86 '50

Phase-plane construction in problems of elastic impact. R. E. D. Bishop. diags Engineer 196:168-70 Ag 7 '53

Radial impact on an elastically supported ring. E. Wenk, jr. il diags Am Soc C E Proc 78 [no 157]:1-25 N '52

Significance of the Izod test with regard to gear design and performance. J. E. Russell and W. T. Chesters. bibliog il diag Engineering 176:166-9 Ag 7 '53

Strain patterns in Charpy impact specimens of 0.20 per cent C mild steel. E. S. Bumps. bibliog il J Metals 4:Trans 1067-70 O '52

Tensile and impact properties of high-purity iron-carbon and iron-carbon-manganese alloys of low carbon content. N. P. Allen and others. bibliog il 6pls Iron & Steel Inst J 174:108-20 Je '53

IMPEDANCE

Audio impedance and phase-angle meter. J. E. Hansen. diags Electronics 26:172-3 Je '53

Automatic Smith chart plotter aids study of transmission lines and vhf circuits. K. S. Packard. il diag Tele-Tech 12:65-7+ Ap '53

Cathode-follower as high-impedance input stage. D. A. Bell and H. O. Berktay. diags Wireless Eng 29:313-16 D '52

Concept and measurement of impedance in periodically loaded wave guides. E. T. Jaynes. diags J Ap Phys 23:1077-84 O '52

Crystal impedance meters replace test sets. A. C. Prichard and M. Bernstein. il diags Electronics 26:176-80 My '53

Determination of impedance with a double-slug transformer. R. C. Ellenwood and E. H. Hurlburt. diag Inst Radio Eng Proc 40:1690-3 D '52; Discussion. G. W. O. Howe. Wireless Eng 30:131-2 Je '53

Effective cathode impedance. W. Chater and N. Golden. diag Electronics 25:184+ D '52; Discussion. D. L. Clay. 26:416-18 My '53

Equipment for impedance matching and measurement at very high frequencies. A. Bloch and others. il diags Inst E E Proc 100 pt 3:93-9 Mr '53

Equivalences for the analysis of circuits with small nonlinearities. W. J. Cunningham. diags J Ap Phys 23:653-7 Je '52

High impedance artificial delay lines. W. S. Carley and E. F. Seymour. bibliog il diags Electronics 26:188-92+ Ap '53

Impedance matching with transformer sections. R. W. Klopfenstein. diags RCA R 14:64-71 Mr '53

Impedance-measuring apparatus for use with v.h.f. aerials. M. P. Beddoes. bibliog il diags Wireless Eng 30:69-72 Mr '53

Impedance measuring device; patent. diags Electronics 26:258+ Ag '53

Impedance-measuring equipment for the 50-500 mc/s range. J. E. Houldin. diags Inst E E Proc 99 pt 3:389-99 N '52

Impedance of the human mastoid. E. K. Franke. Acoustical Soc Am J 24:410-11 Jl '52

Induced conductivity in luminescent powders; ac impedance measurements. H. Kallman and others. bibliog Phys R 89:700-7 F 15 '53

Mathematical theory of the faradaic admittance; pseudocapacity and polarization resistance. D. C. Grahame. bibliog diags Electrochem Soc J 99:sup370C-85C D '52

Modified wide-range shunted-T circuit for the measurement of impedance in the a.f., r.f. and v.h.f. ranges. D. Karo. diags Inst E E Proc 100 pt 3:25-8 Ja '53

Rapid parallel-Z calculations. L. Storch. Tele-Tech 12:91-3+ Ag '53

Theory of the faradaic admittance; analysis of the current-interrupter method. D. C. Grahame. J Phys Chem 57:257-61 Mr '53

Three-probe method of impedance measurement at microwave frequencies. W. J. Duffin. diags Wireless Eng 29:317-20 D '52

Transistor negative-impedance converters. J. G. Linvill. il diags Inst Radio Eng Proc 41:725-9 Je '53

IMPERIAL chemical industries, ltd.

Imperial chemical industries operates network of chemical process plants in northern England. il diag Chem & Eng N 30:5070-1 D 1 '52

ICI's profits. Economist 167:324-5 My 2 '53

Statement by the chairman. J. Rogers. Economist 167:941-2 Je 27 '53

U.S. court decree restricts DuPont and ICI relationship. Rubber Age 72:80 O '52

IMPERIAL institute, London

Site of the Imperial institute; House of Lords discusses the Tweedsmuir report. Chem Age (Lond) 67:843-4 D 20 '52

IMPERIAL oil, limited

Five stocks with record-breaking profits in 1952; with comparative balance sheet items. Mag of Wall St 91:242 N 29 '52

Imperial oil. E. N. Morse. Barron's 33:21+ Je 15 '53

IMPERIAL tobacco company (of Great Britain and Ireland), limited

Statement by the chairman. R. Sinclair. Economist 166:516-17 F 21 '53

IMPORTING

Directories

Directory of New York importers and related services, 1952. 94p $5 Commerce and industry assn. of New York, 233 Broadway, Woolworth bldg, New York 7 '52

IMPORTS

Foreign control regulations applying to imports from the United States; tabular summary revised as of Sept. 5, 1952. For Comm W 48:9-11 O 13 '52

IC-DV system revised; Japan included. For Comm W 49:20 My 25 '53

Imports at United States ports; list by ports of chemical products with amounts and consignors. Published in weekly numbers of Oil, paint and drug reporter

Is importing goods bad for the United States? H. V. Prochnow. Burroughs Clearing House 37:8-9 Mr '53

OIT announces IC-DV procedure revisions. For Comm W 49:22 Mr 9 '53

Strategic imports; where we stand. Materials & Methods 38:152+ Jl '53

Summary of foreign control regulations applying to imports from the United States. For Comm W 49:13-15 Ap 27 '53

See also

Free trade and protection

Statistics

Principal United States imports, chemicals and related products; first six months, 1952. Chem W 71:62 O 25 '52

IMPROVED products. See Products, Improved

INAUGURATION of presidents. See Presidents (United States)—Inauguration

INCENTIVE pay. See Wage payment plans

INCENTIVES in industry

Executive compensation plans. J. A. Keller. Paper Ind 35:793 O '53

How to revise an incentive plan, and live through it; Auburn spark plug co. Factory Management 111:138-40 Ja '53

Incentive in American business. J. F. Lincoln. Pet Eng 25:D31 Mr '53

Incentive plans; human relations, profit, and efficiency stressed. T. G. Lutz. Iron Age 171:246 My 7 '53

Incentive standards reduce costs in metal-finishing operations. A. F. Cuoco and A. S. Hylicke. Tool Eng 31:68-74 Ag '53

Incentives for janitors make them more efficient and happier. E. A. Cyrol and W. K. Conway. il Mill & Factory 53:83-8 Jl '53

Incentives for supervisors; case studies. R. S. Rice and others. Factory Management 111:96-105 Jl '53

Incentives in the warehouse. K. Boaz. Factory Management 111:113-15 S '53

INCENTIVES in industry—*Continued*

Incentives; supervisors get them too; Westinghouse electric corp. J. B. Delaney. Iron Age 171:65 F 26 '53

Is sharing profits the answer? W. H. Conant. il Am Bsns 23:12-13+ Mr '53; Discussion. W. H. Wheeler, jr. 23:2-3 Ap '53

Pros and cons of both financial and nonfinancial incentives. W. von Pechmann. Ind & Eng Chem 44:sup 109A-10A+ O; sup 109A-10A+ N '52

See also

Employees' contests

Wage payment plans

INCINERATORS

Salvage copper scrap without making smoke; Los Angeles Department of water and power incinerator. Elec World 138:134+ O 6 '52

See also

Refuse incinerators

INCODEL. See Interstate commission on the Delaware River basin

INCOLOY. See Nickel alloys

INCOME

Buying power; geographic gains and losses; map. Fortune 47:30 F '53

Mass market; where to from here? Bsns W p46 My 16 '53

See also

Consumption (economics)

Dividends

Farm income

Profit

Salaries

Wages

Accounting

Inventory adjustments in interim statements; accounting lessons in the Kaiser-Frazer v. Otis case. J Account 94:727-8+ D '52

LIFO inventories and national income accounting. J. P. Daly. Survey of Cur Bsns 33:16-22 My '53

Statistics

Disposition of income, 1936-1952; tabulation. Iron Age 171:444 Ja 1 '53

Family income, expenditures, and savings in 1950; preliminary report (revised). U S Bur Labor Statistics Bul 1097:1-66; pa 35c Supt. of doc. '53

Family income, expenditures, and savings in ten cities. U S Bur Labor Statistics Bul 1065:1-110; pa 50c Supt. of doc. '52

Gross national product, national income, and personal income; annual totals for selected years, 1929-1951; adjusted annual rates by quarters, 1951-1952. Fed Res Bul 39:62-3 Ja '53 [cont monthly]

National income and product of the United States, 1952; with detailed tables, 1929-1952. Survey of Cur Bsns 33:6-32 Jl '53

1952 survey of consumer finances; income, selected investments, and short-term debt of consumers; with technical note and supplementary tables. Fed Res Bul 38:974-1001 S '52

Regional report. map Bsns W p96-9 Ja 3 '53 [cont monthly]

Review of national income and product in the first quarter. Survey of Cur Bsns 33:2-7 My '53

Review of national income and product in the second quarter. Survey of Cur Bsns 33:3-6+ Ag '53

Review of national income and product in the third quarter. Survey of Cur Bsns 32:3-6+ N '52

State income payments in 1952; with tables, 1929-1952. R. E. Graham, jr. map Survey of Cur Bsns 33:7-15 Ag '53

Survey of consumer expenditures in 1950; spending patterns in 91 cities and relation of expenditures to disposable income. M. C. Ruark and A. Hurwitz. Mo Labor R 75:125-33 Ag '52; Correction. 75:262 S '52

Canada

Canadians spent more of income in 1952. For Comm W 49:8 Mr 16 '53

Great Britain

Corpse in the capital market. Economist 166:375-8 F 7 '53

Families in need; incomes. Economist 167:142 Ap 18 '53

Patches in Britain's purse; estimates of national income in 1952. Economist 167:101-3 Ap 11 '53

Southern states

Southern income gains vary. C. R. Walker. Manuf Rec 122:29 Jl '53

Switzerland

Survey of family income and expenditure in Switzerland, 1951. Int Labour R Stat Sup 66:108-9 N-D '52

United States

Expenditures in 1952; personal income, consumption expenditures, and saving. Fed Res Bul 38:1189-92 N '52

Incomes hold on a high plateau. map Bsns W p 180 Jl 25 '53

Incomes stick at high level. Bsns W p78+ My 2 '53

Incomes tilt upward again. map Bsns W p 152-4+ My 30 '53

Money illusion; value of personal income in dollars. Burroughs Clearing House 37:4+ My '53

National income and product in 1952; with tables, 1950-1952. Survey of Cur Bsns 33:4-10 F '53

Per capita income payments to individuals, 1951; chart. Automotive Ind 108:324 Mr 15 '53

Personal income and spending in the United States, 1939-51; charts and graphs. Economist 165:540 N 22 '52

Revolution in incomes in America. S. Edmunds. Factory Management 111:109-12 Ja '53

Survey of consumer expenditures in the United States, 1950. Int Labour R Stat Sup 66:107-8 N-D '52

Top five per cent; their share of U.S. income has shrunk. Bsns W p56-8 My 16 '53

INCOME tax

Income of decedents; report of ABA committee on state and federal taxation. bibliog Trusts & Estates 91:745-50 O '52

March is near; so's that frustrating trip to tax wringer with all its unequal loads. A. J. Giese. Credit & Fin Management 55:18-19 F '53

Progressive tax changes in 1952. V. R. Wolder. Comm & Fin Chr 176:2331+ D 18 '52

Valuation and depreciation related to income tax. M. R. Scharg. Am Soc C E Proc 77[[no 69]:1-7 My '51; Discussion. 78[no D-69]:1-3 D '52

Why joint ownership? estate tax saving may incur income tax penalty. R. Wallace. Trusts & Estates 92:88-90 F '53

See also

Corporations—Taxation

Excess profits tax

Accounting

Accounting principles and taxable income supplementary statement number four; committee on concepts and standards underlying corporate financial statements, American accounting association; complete text. J Account 95:241-2+ F '53

AIA federal tax committee makes 58 proposals to improve federal taxation. J Account 94:719-20+ D '52

Can completed contract basis be used for all jobs extending into two taxable years? J. S. H. Weiner. J Account 94:708-12 D '52

Emergency facilities; accounting for depreciation and taxes under certificates of necessity. J Account 95:48-50 Ja '53

How to arrange foreign sales so title will pass outside the U.S. for tax purposes. S. T. Dean and J. B. Leake. J Account 94:457-9 O '52

No stampede for faster tax writeoffs. Bsns W p30-1 Mr 28 '53

Printer and his income tax. B. L. Gough. Inland Ptr 130:44-5+ N '52

Procedures to organize preparation of individual tax returns in the CPA's office. S. J. Lasser. J Account 95:190-7 F '53

Some cases where attempts to use receivables as a tax-saving device have failed. R. Deutsch. J Account 94:576-9 N '52

INCOME tax—Accounting—*Continued*

Stock dividends and split-ups; accounting treatment by stockholders and corporation. J Account 95:44-7 Ja '53; Discussion. R. V. Hunter. 95:543-4+ My '53

Two proposals for averaging income for federal income-tax purposes. J. S. Cowing. J Account 94:586-93 N '52

See also

Depreciation

Income tax—Deductions

Capital gains tax

Capital gains and losses of estates and trusts. A. A. Armstrong. Trusts & Estates 92:135-6 F '53

Capital gains tax, most damaging to the investor. G. K. Funston. Comm & Fin Chr 178:356-7 Jl 30 '53

Capital gains; to hold or sell and pay tax is investor's problem. J. M. Templeton. Barron's 32:9 N 17 '52

Capital-gains treatment of livestock under 1951 amendment to internal revenue code. R. R. Romer. J Account 95:478-81 Ap '53

Federal taxation committee of IBA foresees federal deficits, with only moderate tax cuts. Comm & Fin Chr 176:2354+ D 18 '52

How to apply livestock capital gains law. S. H. Hart. Banking 46:69 Jl '53

How to minimize your taxes on your 1952 investment income. A. C. Strasburger. Mag of Wall St 91:62-3+ O 18 '52

Problems in capital gains tax. C. W. Tye. Nat Underw 56:11 N 27 '52

Sale of a franchise to a partner is capital gain. J Account 95:470 Ap '53

Deductions

Can you deduct retroactive wage increases? Bsns W p 152 F 28 '53

Capital gains and losses of estates and trusts. A. A. Armstrong. Trusts & Estates 92:135-6 F '53

Charitable gifts of income. J Account 95:470-3 Ap '53

Drafting allocation clauses; locating tax incidence of receipts and expenses between principal and income. A. Mannheimer and H. L. Wheeler, jr. Trusts & Estates 92:400-1 Je '53

Flexible five per cent. B. Ruml. il Dun's R 60:1, 21-2+ S '52

Income tax encourages oil payments. E. E. Tomlins. World Oil 136:55-7 Mr '53

Personal business; executives use of home as adjunct office; tax-deductible business expense. Bsns W p 175 O 25 '52

Profit-sharing plans and trusts offer corporation way to cut down tax bill. V. R. Wolder. Credit & Fin Management 55:30-1 Mr '53

Revision of equipment depreciation rates studied by Treasury experts. Eng N 150:26 Mr 19 '53

Tax aid for advertising. Bsns W p48+ Jl 4 '53

Tax-favored pensions in sight for the self-employed. E. S. MacNeill and G. T. Wallis. Trusts & Estates 91:808-11 N '52

Taxpayer's guide to business entertainment. J. K. Lasser. Fortune 47:92+ Mr '53

Your tax I.Q. in three minutes. Bankers Mo 70:32, 52 F '53; Same. Banking 45:32, 106 F '53; Same. Spectator 161:25 F '53

Family taxation

Should we change our method of taxing the family? R. S. Bock. J Account 94:425-33 O '52

Joint returns

Should we change our method of taxing the family? R. S. Bock. J Account 94:425-33 O '52

Law

Interesting tax rulings. V. R. Wolder. Comm & Fin Chr 177:2525+ Je 11 '53

Great Britain

American's tax liability in Britain reaffirmed. For Comm W 49:26 My 18 '53

Egalitarian anomalies. Economist 167:808-9 Je 20 '53

India

Persons leaving India to produce tax certificates. For Comm W 49:31 Je 22 '53

Ireland

Ireland acts to clear up income tax delinquencies. For Comm W 48:6 N 10 '52

Liberia

Liberia establishes new income tax. For Comm W 49:16 My 4 '53

Nicaragua

New Nicaraguan tax law now in effect. For Comm W 49:8 F 23 '53

Panama

Panama ups income taxes in higher brackets. For Comm W 49:7 F 23 '53

United States

American industry is being taxed into obsolescence. T. Berna. il Mill & Factory 53:77-82 O '53

Attractive tax features of discount bonds should make them useful as tax-planning instruments. A. Morris. J Account 95:305-9 Mr '53

Chicken or egg? GOP tax dispute. F. Morley. Barron's 33:3 Mr 30 '53

Hopes for balanced budget and income tax reduction by July. C. L. Allen. East Underw 54:41 Ap 10 '53; Same. Weekly Underw 168:924+ Ap 4 '53

Improvements in laws for taxing income on annuities backed by A.L.C., L.I.A. Nat Underw (Life ed) 57:2 Je 12 '53

Income-tax position of the family partnership since the 1951 Revenue act; some unsettled issues. M. E. H. Ross. J Account 95:425-35 Ap '53

Needed, a constitutional limit on taxation. C. R. Sheaffer. Comm & Fin Chr 176:2037 N 27 '52

Suggest changes in internal revenue taxation. East Underw 54:3-4 F 6 '53

Tax men eye wage fringes. Bsns W p 120-1 Jl 18 '53

Tax outlook. Nat City Bank p28-30 Mr '53

Taxation of the foreign businessman visiting the United States. E. Mayer. J Account 95:56-9 Ja '53

Taxes and compensation of employees. M. M. Goldstein. Comm & Fin Chr 177:2083 My 14 '53

Untangling the tax laws. Bsns W p 164+ D 13 '52

Watch out for the tax experts! E. W. Fair. Refrig Eng 61:171+ F '53

We're going to get a lot of changes in our tax laws. J. K. Lasser. Comm & Fin Chr 176:2489+ D 25 '52

See also

Excess profits tax

Decisions

Bonus paid to widow held non-taxable gift. A. W. Gray. Ed & Pub 85:52 N 29 '52

How income-tax sanctions have been applied in wage and price control violations. J. P. Goedert. J Account 95:352-4 Mr '53

Issue clarification of court decision on sick leave pay. Nat Underw 57:8 Ap 9 '53; Same. Nat Underw (Life ed) 57:7 Ap 10 '53

Revenue bureau refuses to endorse Hobart-Oates rule. Nat Underw (Life ed) 56:1 O 17 '52

U.S. Supreme court denies ordinary-loss deduction to post-liquidation transferee. S. A. Gutkin and D. Beck. J Account 95:314-19 Mr '53

INCOME tax, State

Florida finds that advertising pays well! tax income from tourists. R. J. Flood. il Ptr Ink 242:45 F 20 '53

INCONEL. See Nickel alloys

INCUBATORS, Electric

Radiant heat-type incubator. T. R. Reid and N. Coffey. diag R Sci Instr 24:327-8 Ap '53

INDAN

Reaction of indane and tetralin with excess of acetylating agent. G. Baddeley, E. Wrench and R. Williamson. Chem Soc J p2110-15 Jl '53

Role of neighboring groups in replacement reactions; some conversions of cyclopentane and indan derivatives. S. Winstein and R. M. Roberts. bibliog Am Chem Soc J 75:2297-300 My 20 '53

INDAN—*Continued*

Synthesis of 4,5,6-trimethoxyindene- and 4,5,6-trimethoxyindanecarboxylic acids and esters. J. Koo. bibliog Am Chem Soc J 75:1889-91 Ap 20 '53

INDANONE

1 : 2-Dihydro-2-thianaphthalene derivatives; further examples of the conversion of 1 : 2-dihydro-1-keto-2-thianaphthalenes into indanones. J. J. Brown and G. T. Newbold. Chem Soc J p4397-403 N '52

Synthesis of 3′,4′-dimethoxyphenylindanones and tetralones. G. N. Walker. Am Chem Soc J 75:3387-90 Jl 20 '53

Terramycin; the synthesis of indanone degradation products of terramycin. L. H. Conover. bibliog Am Chem Soc J 75:4017-20 Ag 20 '53

INDANTHRENE

Chemistry of indanthrone; 3 : 3′-dimethyl derivatives of indanthrone and flavanthrone. W. Bradley and H. E. Nursten. Chem Soc J p924-7 Mr '53

Chemistry of indanthrone; the action of piperidine on 3 : 3′-dihalogenoindanthrones and the *N*-methyl derivatives of 3 : 3′-dibromoindanthrone. W. Bradley and H. E. Nursten. Chem Soc J p3027-33 Ag '52

INDANTHRONE. See Indanthrene

INDENE

Syntheses in the indene series. J. Koo. Am Chem Soc J 75:2000-1 Ap 20 '53

Synthesis of 4,5,6-trimethoxyindene- and 4,5,6-trimethoxyindanecarboxylic acids and esters. J. Koo. bibliog Am Chem Soc J 75:1889-91 Ap 20 '53

INDEPENDENT bankers' association

Annual meeting, Atlanta. Banking 45:102+ My '53

INDEPENDENT insurers, National association. See National association of independent insurers

INDEPENDENT natural gas association of America

Annual meeting, Omaha. Gas Age 110:43-4 N 6 '52

Annual meeting, Omaha, Oct. 6. Am Gas Assn Mo 34:22 N '52

Annual meeting, Omaha, Oct. 6. Oil & Gas J 51:166-8 O 13 '52

INDEPENDENT petroleum association of America

Annual meeting, Oklahoma City, Oct. 23-24. Oil & Gas J 51:73-4 O 27; 70-1 N 3 '52; Nat Pet N 44:21 O 29 '52

Midyear meeting, St Louis, April 27-28. Oil & Gas J 51:69-70 My 4 '53

INDEX numbers (economics)

American Machinist index of metalworking production. Published in American machinist

Battle of the index; escalator clauses will be a source of labor unrest. Fortune 47:80+ Mr '53

BLS' new C-of-L index. Bsns W p 132-3 Mr 7 '53

Business indexes. Steel 132:193 Ja 5 '53

Cost indexes for water works property. H. H. Fick. Am Water Works Assn J 45:779-89 Ag '53

Gerschenkron hypothesis of index number bias. I. O. Scott, jr. R Econ & Stat 34:386-7 N '52

Menace of the index number standard. P. Einzig. Comm & Fin Chr 177:208 Ja 15 '53

New consumer price index. R. G. Gibbs. Chem & Eng N 31:1162-3 Mr 23 '53

New daily index of spot market prices. P. A. Don Vito. Mo Labor R 75:301-3 S '52

New index shakes escalator. Bsns W p74+ D 27 '52

New prop for the escalator. Bsns W p 144 Ja 24 '53

Old C-of-L index gets a new lease. Bsns W p 108-9 F 7 '53

Retail prices of food, 1950; including historical tables of item indexes, 1939-50. F. H. Martin. U S Bur Labor Statistics Bul 1055: 1-37; pa 25c Supt. of doc. '52

Revised consumers' price index. Mill & Factory 52:103-4 F '53

Trending public utility construction cost indices. E. B. Whitman and E. C. North. Pub Util 52:285-90 Ag 27 '53

Updated index; FRB revamping its index of industrial production. Bsns W p34 N 1 '52

Wholesale prices, 1950; including index numbers of various commodities. J. F. Bird and B. M. Frye. U S Bur Labor Statistics Bul 1083:1-65; pa 35c Supt. of doc. '52

See also

Stocks—Price indexes and averages

INDEXES

Granger's index to poetry. R. J. Dixon, ed. 4th ed rev & enl 1832p Columbia univ. press, 2960 Broadway, New York 27 '53 ($35)

INDEXING

Chemical-biological coordination center; an experiment in documentation. R. L. Beard and K. F. Heumann. Science 116:553-4 N 21 '52; Discussion. 117:611-12 My 29 '53

Indexes and indexing. R. L. Collison. 155p $2.50 John de Graff, 64 W. 23d st, New York 10 '53

INDEXING (machine work)

Air-powered electrically controlled rotary index work-feed table. il diag Mach 59:200-1 N '52

Automatic indexing and drilling fixture. A. Clarke. diags Am Mach 97:177 Ap 13 '53

Avey drilling and tapping machine features electrical indexing table. il Am Mach 97: 172 Jl 20 '53

Bellows air powered, rotary index, positioning table. il diag Product Eng 24:216 F '53

Colonial horizontal broach indexes for jet engine segments. il Am Mach 97:150 Mr 30 '53

Drill jig with novel indexing feature. R. Mawson. diags Mach 59:197-8 F '53

Electropneumatic index table. il diag Machine Design 24:181-2 D '52

Indexing machine automatically welds tubular assembly. B. Weight. il diag Mach 59: 162-3 Mr '53

Self-indexing drill jig. J. Magis-Farnkart. diags Am Mach 97:156 Ap 27 '53

Three-inch horizontal indexing attachment. il Engineering 174:255 Ag 22 '52

Toggle-locked pawl operates index table. il diags Machine Design 25:136 My '53

W. H. Marley and co. indexing and dividing attachment. il Engineer 195:332 F 27 '53

INDIA

What it's like to live and work in India's clime. H. W. Van Ness. Chem Eng 59: 156+ N '52

See also

Chemical industries—India
Civil service—India
Electric plants (central stations)—India
Electricity supply—India
Electrochemical industries—India
Engineering—India
Hydroelectric plants—India
Investments, Foreign (in India)
Irrigation—India
Kashmir
Land tenure—India
Paper industry and trade—India
Petroleum industry and trade—India
Railroads—India
Steel industry and trade—India
Tobacco industry and trade—India

Central board of irrigation and power

India's Central board of irrigation and power. Engineer 194:848 D 19 '52

Commerce

India's trade deficit shows down trend. For Comm W 49:7 My 4 '53

Commercial policy

Changes made in Indian dollar import licensing. For Comm W 49:9 F 23 '53

Controls on international trade. For Comm W 48:6 D 22 '52

India announces licensing policy; few changes effected in OGL. For Comm W 49: 8 F 2 '53

Economic policy

India's first five-year plan. Engineer 195:151-2 Ja 23 '53

India's national plan. map Economist 165:801-2 D 20 '52

Plan and budget in India. Economist 166:811-12 Mr 21 '53

INDIA—*Continued*

Economic relations

United States

India, U.S. sign agreements to undertake technical program. For Comm W 50:16 Jl 20 '53

Foreign relations

India's neutrality. Economist 166:186-8 Ja 24 '53

Storm along the Indus; Hindu and Moslem fight over life-giving water. J. C. Perham. map Barron's 32:7-8 D 22 '52

Egypt

India takes a hand in Cairo. Economist 167: 890+ Je 27 '53

Industries and resources

Building up Indian industry. Economist 165: 390+ N 8 '52

How much Indian industry? Economist 166: 792 Mr 21 '53

India asks U.S. capital for rock-wool industry. For Comm W 49:7 Ap 6 '53

India builds for self-support. C. H. Vivian. il Comp Air Mag 58:122-7 My '53

India's central advisory council of industries 3d meeting, New Delhi, May 30. For Comm W 50:5-6 Jl 27 '53

Yearbooks

Nalanda year-book and who's who in India and Pakistan, 1951-53. T. Das Gupta, ed. rev & enl ed 747p Rs 10; $3.50 R. N. Mitra, Nalanda Press, 159-60 Cornwallis st, Calcutta 6 '53

INDIAN iron and steel company, limited

Statement by the chairman. T. L. Martin. Economist 165:654 N 29 '52

INDIAN ocean

Possible deep-sea turbidity-current channels in the Indian ocean. R. S. Dietz. map Geol Soc Bul 64:375-7, pl 1 Mr '53

INDIANA

See also

Roads—Indiana

INDIANAPOLIS

Sanitary affairs

Indianapolis clears the air. R. H. Herrmann. il Foundry 81:212+ My '53

INDIANAPOLIS power and light company

Bonds offered. Comm & Fin Chr 177:1049 Mr 9 '53

INDIANS of North America

Indians make longhouse of concrete masonry. il Concrete 61:26 Je '53

See also

Iroquois Indians

Navaho Indians

INDICATORS (for internal combustion engines)

Engine cylinder pressure measurements. J. D. McCullough. il diags S A E J 61:72-7 Jl '53

INDICATORS and test papers

Anomalous adjustment of indicator concentration in moving boundary measurements of transference numbers. A. R. Gordon and R. L. Kay. bibliog diags J Chem Phys 21:131-5 Ja '53

Condensations by sodium; the effect of sodium reagents on indicators. A. A. Morton and F. H. Bolton. bibliog Am Chem Soc J 75:1146-8 Mr 5 '53

Stable indicator solutions for complexometric determination of total hardness in water. E. M. Diskant. bibliog Anal Chem 24:1856-7 N '52

INDIUM

Electrical resistivity of indium-thallium solid solutions. J. W. Stout and L. Guttman. Phys R 88:713-14 N 15 '52

Hyperfine structures of the resonance lines of indium (In^{115}). G. V. Deverall and others. bibliog il diags Phys R 91:297-9 Jl 15 '53

More indium metal, can you use it? il diag Steel 131:98-9 D 8 '52

New electrochemical process for indium. J. R. Mills and others. bibliog flow sheet diag Electrochem Soc J 100:136-40 Mr '53

No longer rare. Chem W 71:52 N 15 '52

P-n junctions by impurity introduction through an intermediate metal layer. L. D. Armstrong. diag Inst Radio Eng Proc 40: 1341-2 N '52

Resonance scattering in indium. L. B. Borst. bibliog diags Phys R 90:859-62 Je 1 '53

Solubility of indium in mercury. W. M. Spicer and C. J. Banick. bibliog Am Chem Soc J 75:2268-9 My 5 '53

Solubility of silicon and germanium in gallium and indium. P. H. Keck and J. Broder. Phys R 90:521-2 My 15 '53

Superconductivity of indium-thallium solid solutions. J. W. Stout and L. Guttman. bibliog Phys R 88:703-12 N 15 '52

Isotopes

High energy gamma-gamma cross section of In^{115}. J. Goldemberg and L. Katz. bibliog Phys R 90:308-14 Ap 15 '53

Isomerism of In^{110} and In^{112}. E. Bleuler and others. bibliog diags Phys R 90:464-8 My 1 '53

Radioactive decay of indium 114. M. W. Johns and others. bibliog diag Phys R 87: 1134-5 S 15 '52

INDIUM alloys

Ferromagnetic alloys in the system copper-manganese-indium. R. R. Grinstead and D. M. Yost. bibliog il diags Am Chem Soc J 75:1803-9 Ap 20 '53

Indium-arsenic system; abstract. T. S. Liu and E. A. Peretti. Metal Prog 62:170 N '52

System InAs-InSb. C. Shih and E. A. Peretti. Am Chem Soc J 75:608-9 F 5 '53

Thermodynamic study of the zinc-indium system. W. J. Svirbely and S. M. Selis. bibliog Am Chem Soc J 75:1532-5 Ap 5 '53

INDIUM antimonide

Hall effect and conductivity of InSb single crystals. M. Tanenbaum and J. P. Maita. bibliog Phys R 91:1009-10 Ag 15 '53

Magnetoresistance effect in InSb. G. L. Pearson and M. Tanenbaum. bibliog Phys R 90: 153 Ap 1 '53

Optical properties of indium antimonide. M. Tanenbaum and H. B. Briggs. bibliog Phys R 91:1561-2 S 15 '53

INDIUM compounds

Hydrolysis and halide complexing of indium(III). L. G. Hepler and Z. Z. Hugus, jr. Am Chem Soc J 74:6115-16 D 5 '52

INDIUM oxide

Thermodynamic properties of indium(III) oxide. M. F. Stubbs, J. A. Schufle and A. J. Thompson. bibliog diag Am Chem Soc J 74:6201-3 D 20 '52

INDO-CHINA, French

Battle of Laos. Economist 167:347 My 9 '53

Flight from Cambodia. Economist 167:808 Je 20 '53

New stage for Vietnam. Economist 166:717 Mr 14 '53

Peking's hand in Indo-China. Economist 166: 271 Ja 31 '53

Vietminh strikes West. map Economist 167: 233 Ap 25 '53

Western stake in Indo-China. map Economist 166:59-60 Ja 10 '53

Economic conditions

Economic conditions abroad. For Comm W 48:9 D 8 '52; 49:6+ Mr 23; 7-8 Je 1 '53

INDOLE

Action of acyl cyanides on 2- and 1 : 2-substituted indoles. A. K. Kiang and F. G. Mann. Chem Soc J p594-602 F '53

Carcinogenic nitrogen compounds; indeno(3′ : 2′-2 : 3)indoles, benzindeno(3′ : 2′-2 : 3)indoles, and related compounds. N. P. Buu-Hoï and N. D. Xuong. Chem Soc J p2225-8 Je '52

Complexity of the N-H stretching vibration band in pyrrole and indole. N. Fuson and M.-L. Josien. J Chem Phys 20:1043 Je '52

Cyanomethylation of indole with diethylaminoacetonitrile. E. L. Eliel and N. J. Murphy. bibliog Am Chem Soc J 75:3589-90 Jl 20 '53

Indoles; the action of ozone, and osmium tetroxide on some indole derivatives. D. W. Ockenden and K. Schofield. Chem Soc J p612-18 F '53

INDOLE—*Continued*

Inhibition of the α-chymotrypsin-catalyzed hydrolysis of nicotinyl-L-tryptophanamide and of methyl hippurate by indole. H. T. Huang and C. Niemann. bibliog Am Chem Soc J 75:1395-401 Mr 20 '53

Metalation of indole, N-methylindole and N-phenylindole with *n*-butyllithium. D. A. Shirley and P. A. Roussel. bibliog Am Chem Soc J 75:375-8 Ja 20 '53

New syntheses of DL-tryptophan; a synthesis from indole and 2-thio-5-thiazolidone. D. O. Holland and J. H. C. Nayler. Chem Soc J p285-7 Ja '53

New synthesis of indole-3-aldehydes; the reaction of hexamethylenetetramine with some Mannich bases. H. R. Snyder, S. Swaminathan and H. J. Sims. bibliog Am Chem Soc J 74:5110-13 O 20 '52

Reaction between indole and acetic anhydride. J. E. Saxton. Chem Soc J p3592-4 S '52

Reaction of propiolactone with indoles and pyrrole. J. Harley-Mason. Chem Soc J p2433 Je '52

Synthesis of nitro- and amonoindoles analogous to serotonin. E. Shaw and D. W. Woolley. bibliog Am Chem Soc J 75:1877-81 Ap 20 '53

INDOLEACETALDEHYDE

3-Indolylacetaldehyde and 3-indolylacetone. J. B. Brown, H. B. Henbest and E. R. H. Jones. Chem Soc J p3172-6 Ag '52

INDOLEACETIC acid

Effect of indoleacetic acid and amount of solar radiation on heterosis in the snapdragon (antirrhinum majus L.). J. B. Gartner and others. Science 117:593-5 My 29 '53

INDOLEACETONE

3-Indolylacetaldehyde and 3-indolylacetone. J. B. Brown, H. B. Henbest and E. R. H. Jones. Chem Soc J p3172-6 Ag '52

INDOLOCARBAZOLE

Experiments on the preparation of indolocarbazoles; compounds from two of the amino-1-phenylbenzotriazoles. A. R. Katritzky and S. G. P. Plant. Chem Soc J p412-16 F '53

Experiments on the preparation of indolocarbazoles; the synthesis of indolo(3′ : 2′-1 : 2) carbazole and its 3-methyl derivative. J. A. Hall and S. G. P. Plant. Chem Soc J p 116-19 Ja '53

INDONESIA

Congo, Indonesia, Venezuela loom as new world markets; with maps. Ind Marketing 38:47-50 Mr '53

Indonesia's deceptive stability. Economist 165:173 O 18 '52

See also

Petroleum industry and trade—Indonesia

Political parties—Indonesia

Socialism—Indonesia

Commercial policy

Indonesia revises its import categories. For Comm W 49:10 F 9 '53

Economic conditions

Economic conditions abroad (cont). For Comm W 49:7-8 Je 1; 50:6 Jl 13 '53

Foreign relations

Indonesia without allies. Economist 165:399 N 8 '52

Politics and government

Indonesian jigsaw. map Economist 167:166 Ap 18 '53

Intrigue in Jakarta. Economist 167:673-4 Je 6 '53

INDOPHENOL

Indophenols of 8-quinolinols. J. P. Phillips, J. F. Emery and Q. Fernando. bibliog Am Chem Soc J 74:5542-4 N 5 '52

INDUCTANCE

Effect of inductance on fine transfer between platinum contacts. J. Warham. bibliog il diags Inst E E Proc 100 pt 1:163-8 Jl '53

INDUCTION coils

Ferrite core inductors. H. A. Stone, jr. bibliog il diags Bell System Tech J 32:265-91 Mr '53

Microminiature variable inductors for transistorization. J. W. Eng. bibliog il Tele-Tech 12:74-5+ Ag '53

INDUCTION hardening. See Case hardening—Electric hardening

INDUCTION motors. See Electric motors, Induction

INDUSTRIAL accounting. See Factories—Accounting

INDUSTRIAL advertisers association, National. See National industrial advertisers association

INDUSTRIAL advertising. See Advertising, Industrial

INDUSTRIAL allocations. See Priorities and allocations, Industrial

INDUSTRIAL and commercial finance corporation, ltd.

ICFC and the capital market. Economist 167:462 My 16 '53

INDUSTRIAL arbitration. See Arbitration, Industrial

INDUSTRIAL arts

Product Engineering annual handbook of product design for 1953. Published by McGraw-Hill pub. co., 330 W. 42d st, New York 36

Bibliography

Bibliography of the mechanic arts. W. G. Ogden, jr. Am Mach 96:C104+ Mid-N '52

INDUSTRIAL bridges. See Bridges, Industrial

INDUSTRIAL brushes. See Brushes, Industrial

INDUSTRIAL buildings

Functionalism; keynote of today's industrial architecture. R. L. Geddes. il Gen Elec R 56:18-21 Jl '53

Industrial building awards climb; 1952 will be second highest year. Eng N 149:116 N 6 '52

19th annual plant building issue. il plans diags Factory Management 111:B 1-25+ pt 2 My '53

When's industrial building exempt from building code? W. H. Hillyer. Heating-Piping 24:107-8 N '52

Wrapping the factory around the process layout. il Bsns W p94-8+ My 23 '53

See also

Chemical plants

Factories

Foundries

Guest houses, Industrial

Machine shops

Metallurgical plants

Office buildings, Industrial

Petroleum refineries

Printing offices

Warehouses

Heating and ventilation

Central or separate heating for industrial buildings? Heating-Piping 25:108 F '53

Plant heating; multi-furnace installation solves unusual problem. il Iron Age 171:190-1 Mr 5 '53

INDUSTRIAL college of the armed forces

Military; industry aids top training. R. M. Stroupe. Iron Age 171:69 F 26 '53

INDUSTRIAL cooling. See Cooling, Industrial

INDUSTRIAL cooperation

Instants band together to keep up. il Bsns W p 142-4 Mr 21 '53

Reading between the lines; W. R. Grace co. and Davison Chemical. il Chem W 71:57 N 29 '52

Sulphuric triple play; Shell's alcohol plant helps make alumina and ammonium sulphate in Filtrol's new plant. il Chem Eng 59:226+ O '52

Thousands of housewives jam sewing clinics; cooperative promotion; how to make draperies and slip covers. il Sales Management 69:56+ O 15 '52

Vertical integration in the oil industry. J. S. Cross. Harvard Bsns R 31:69-81 Jl '53

See also

Business management

Trade associations

INDUSTRIAL design. See Design

INDUSTRIAL development corporations. See Industrial foundations

INDUSTRIAL diamonds. See Diamonds, Industrial

INDUSTRIAL districts

Dallas' industrial district grows on former flood lands. il Eng N 149:47-8+ O 23 '52

INDUSTRIAL education

Isn't this the crying need? W. W. Rogers. J Eng Educ 43:387-8 Mr '53

Universities and industries conference, Leamington Spa. Chem Age (Lond) 68:307-8 F 21 '53

See also

Apprentices
Employees, Training of
Engineering education
Foremen—Training
Foundry educational foundation
Paper making—Study and teaching
Supervisory workers—Training
Technical education
Textile education
Trade schools
Trade unions—Educational work
Vocational education

Cooperative plan

Does industry help train students for chemistry? P. K. Frolich. Chem & Eng N 31:1078-80 Mr 16 '53

Operators set up training course at Public service co. of New Mexico. D. F. Duncan. il Elec World News ed 139:18 Mr 30 '53

Schoolboys get co-op training; Fansteel metallurgical corp. J. Meade. il Factory Management 111:100-1 Je '53

INDUSTRIAL efficiency. See Efficiency, Industrial

INDUSTRIAL engineering

Can present curricula in industrial, administrative, management engineering, etc. be unified under one title? W. Platt. J Eng Educ 43:115-20 O '52

Developing industrial engineering curricula. M. E. Mundel. Advanced Management 17:13-15 D '52

Dynamic behavior of linear production systems. D. P. Campbell. flow diags Mech Eng 75:279-83 Ap '53

Engineering contractor and how he functions in building the oil and gas processing industry. J. C. Reidel. il Oil & Gas J 51:278-9+ Mr 23 '53

Human aspects of industrial engineering. R. Presgrave. Advanced Management 17:5-8 N '52; Excerpts. Midwest Eng 5:15 O '52

Human engineering; what it is and what it can do for you. J. W. Dunlap. Factory Management 111:96-9 Ja '53

Production and industrial engineering; D.S.I.R. report on conditions in U.S.A. and Canada. Elec J 150:109 Ja 9 '53

See also

Engineering departments
Industrial management
Motion study
Operations research
Time study

INDUSTRIAL engineers

See also

Engineering departments

INDUSTRIAL expansion

Capital investment and the economy in 1953. N. M. Koffsky. Comm & Fin Chr 176:1620 O 30 '52

Capital outlays gain steadily. Steel 132:53 Je 15 '53

Chemical expansion tax awards sufficient to meet 41 of 57 goals. Oil Paint & Drug Rep 163:3+ Ja 12 '53

Confident capital; boom in plant and equipment rolls on. R. M. Bleiberg. Barron's 32:5 D 15 '52

Excess industrial capacity now, what of the future! J. T. Roberts. Mag of Wall St 92:428-30+ Jl 11 '53

Expansion; $20 billion yearly to 1960. Steel 131:50-1 O 6 '52

Fairless works fosters regional boom; Delaware Valley expansion. W. V. Packard. il map Iron Age 170:75-7 D 18 '52

Financing Canada's industrial expansion. J. R. Meggeson. Comm & Fin Chr 178:206+ Jl 16 '53

Gage makers; whose money will finance mobilization expansion? Steel 132:41 Ja 12 '53

Industry is building a dynamic South. M. Smith. il Mag of Wall St 91:519-21+ F 7 '53

Industry plans spending $81 billion on new plant and equipment during 1953-1956. Comm & Fin Chr 177:1542-3 Ap 9 '53

Industry's plans for capital spending; still on a big scale. Bsns W p 112-14+ Ap 4 '53

MAPI study of changes in the total stock of business capital goods, 1910-1953. Am Mach 97:194-5 S 14 '53

Markets after defense expansion; results of survey indicate that 1953 is likely to be another good year. C. Sawyer. Comm & Fin Chr 177:110-11 Ja 8 '53

Metalworking's muscles get stronger. Iron Age 171:226-7 Ja 1 '53

ODM expansion study aimed at program halt. Oil Paint & Drug Rep 164:3+ S 7 '53

Power progress; multi-billion dollar expansion pays off for utilities. E. R. Abrams. Barron's 33:9-10 Ap 6 '53

Tax incentives tapering off for defense-plant expansion. Eng N 150:142 Ja 15 '53

Trends in industrial output. Survey of Cur Bsns 33:7-8+ My '53

Which industries plan new productive capacity in 1953, and why? W. Gates. il Mag of Wall St 92:11-13+ Ap 4 '53

See also Business management—Expansion problems

Statistics

Capital goods demand higher in third quarter. Survey of Cur Bsns 33:2-3 Je '53

Domestic business investment in 1952. Survey of Cur Bsns 33:18-19 F '53

Growth trends in the economy; with tabulated production trends of selected industries and products in the period 1940 to 1951. L. J. Paradiso and F. L. Hirt. Survey of Cur Bsns 33:5-10 Ja '53

Industrial expansion still on upswing; McGraw-Hill survey. Elec World News ed 139:12-14 Ap 13 '53

Investment programs and sales expectations in 1953; new plant and equipment expenditures. L. Bridge and V. Natrella. Survey of Cur Bsns 33:7-11 Ap '53

Making 1953 look good; McGraw-Hill preliminary survey of industry's plans. Bsns W p27-8 N 1 '52

New plants are tapering off. Chem Eng 60:182-3 Mr '53

1953 investment programs. Survey of Cur Bsns 33:3-4 Ja; 6+ Mr '53

Plant and equipment investment in 1952; with table. Survey of Cur Bsns 32:3-4 S '52

INDUSTRIAL films. See Moving pictures in industry

INDUSTRIAL foundations

Industrial foundations and community progress. P. H. Ragan. Harvard Bsns R 30:69-83 N '52

INDUSTRIAL guns. See Guns, Industrial

INDUSTRIAL health. See Hygiene, Industrial

INDUSTRIAL heating. See Electric heating, Industrial; Gas heating, Industrial; Heating, Industrial; Hot water heating, Industrial; Infrared rays—Industrial heating; Steam heating, Industrial

INDUSTRIAL hospitals. See Hospitals, Industrial

INDUSTRIAL hygiene. See Hygiene, Industrial

INDUSTRIAL hygiene foundation of America

Air pollution conference annual meeting, Pittsburgh, Nov. 19. Mech Eng 75:97-8 Ja '53

Annual meeting, 17th, Pittsburgh, Nov. 19-20. Chem & Eng N 30:5054 D 1 '52

Annual meeting, 17th, Pittsburgh, Nov. 19-20. Heat & Ven 50:140+ Ja '53; Safety Maint & Prod 105:40+ F '53

INDUSTRIAL insurance. See Insurance, Industrial

INDUSTRIAL libraries. See Technical libraries

INDUSTRIAL lighting. See Lighting, Industrial

INDUSTRIAL locomotives. See Locomotives, Industrial

INDUSTRIAL management

Can engineers man a company? E. G. Bailey. Midwest Eng 5:5+ D '52; Same. Mech Eng 75:21-2 Ja '53; Same. J Eng Educ 43:322-4 Ja '53

Case study; Michigan crane & conveyor co. small and relatively new, has had a spectacular growth. Steel 131:67 N 17 '52

Case study; reorganization for profits; Congoleum-Nairn. il Mod Ind 25:56-8+ Ja '53

INDUSTRIAL management—*Continued*

Developing future managers. T. M. Linville. Elec West 110:120-2 Je '53

Development and influence of scientific management; reprinted from Oct. 1940 issue. H. S. Person. Advanced Management 17:2-5 O '52

Economic facts for executives; what today's management does and thinks about reports. Mod Ind 24:48-51 D '52

Future aspects of the manufacturing executive's job; abstract. J. M. Juran. Paper Tr J 136:44 Ap 17 '53

Growth; case study of healthy management of Fischer & Porter co. il Mod Ind 24:40-4 N '52

Industry gets ready for a hot war or a cold peace. Bsns W p72-4+ Ap 25 '53

Management development. L. A. Russ. Elec Eng 72:379-82 My '53

Management's debt to engineers. L. Urwick. Advanced Management 17:5-12 D '52

Managerial evolution. E. McSweeney. Tech R 55:101-2+ D '52

New organization problems of the job; abstract. E. Dale. Paper Tr J 136:45 Ap 17 '53

Product-line management; many multiproduct firms find this concept of marketing helps. Mod Ind 24:63-4+ D '52

Program for cost reduction. B. Payne. Harvard Bsns R 31:71-82 S '53

Putting your problems through college. il Mod Ind 26:52-5 Jl '53

Raising the level of management; a refresher course on supervisory and management duties; Leeds & Northrup co. C. R. Cary and H. H. Carey. Personnel 29:355-60 Ja '53

Small business gains from consultant's broad experience. G. T. Trundle, jr. Iron Age 171:164-5 Je 18 '53

Ten years' progress in management. L. M. Gilbreth and others. bibliog A S M E Trans 75:653-710 My '53

Translating visions and dreams into realities; studies in dynamic management. R. Colston. Mag of Wall St 92:210-11+ My 16 '53

Voice of industry; pointers on policies, materials, methods; from talks by industrial leaders. Mod Ind 25:66+ Ja '53 [cont monthly]

Working in harmony at the top level. G. H. Treslar. Manuf Rec 122:36+ Ap '53

See also

Business management
Coal mines and mining—Management
Company towns
Controllers
Efficiency, Industrial
Employees' representation in management
Employment management
Employment systems
Engineering departments
Factory management
Foremen
Foundry management
Hygiene, Industrial
Industrial engineering
Industrial relations
Inspection
Insurance, Business
Inventories
Job analysis
Machine tools
Machinery, Replacement of
Mine management
Office management
Operations research
Organization in industry
Planning
Public relations
Purchasing
Railroads—Management
Standardization
Suggestion systems
Time study
Wage payment plans

Terminology

Glossary of terms used in methods, time study, and wage incentives. Iron Age 171:156-8+ Je 4; 142-7 Je 11 '53 (reprints $1)

SAM publishes glossary of terms used in methods, time study, and wage incentives. Advanced Management 18:18-19 Mr '53

INDUSTRIAL market

Congo, Indonesia, Venezuela loom as new world markets; with maps. Ind Marketing 38:47-60 Mr '53

Factory schools, field clinics, ads sharpen today's distribution systems. Ind Marketing 37:54-5+ O '52

Finds some British industries giving U.S. run for money. M. Moskowitz. Ind Marketing 38:62+ O '53

Mapping industrial markets and planning of sales territories; with list of 80 major ones. E. J. Heimer. Dun's R 61:39-41+ My '53

Marketing position of industrial distributors. S. W. McFarland. J Marketing 17:394-403 Ap '53

Penn Power sells creatively, and industry buys kw's by the billions. J. M. Stedman and S. F. Diffenderfer. il map Sales Management 69:48-50+ N 10 '52

Reaching the industrial market. J. H. Jewell. Edison Elec Inst Bul 21:158-60+ My '53

Sears opens industrial store, dips toe in light tool market. B. Enos. il Ind Marketing 38:59 O '53

Selling to southeast Asia? diplomacy with dealers is key. Ind Marketing 38:51 Mr '53

Six sales functions for industrial publicity. L. Cox. Sales Management 69:66+ N 10 '52

Watch your competitors, but let needs and problems decide sales methods; opinions of executives in a wide variety of industries. Ind Marketing 37:46-8+ D '52

Where to get facts on your industrial market. A. H. Dix. Ptr Ink 242:35-9 Mr 13 '53

You are now entering the industrial merchandising era! G. D. Crain, jr. il Ind Marketing 38:52-5 My '53

See also

Equipment industries

INDUSTRIAL medicine. See Medical service, Industrial

INDUSTRIAL mobilization

All planned up and the mobilizers don't know where to go. Barron's 32:1 O 13 '52

Basis for standby controls. B. M. Baruch. Comm & Fin Chr 177:1318+ Mr 26 '53

Business after the defense boom. Fortune 46:112-17+ D '52

Changing arms strategy? Bsns W p28-9 Ap 18 '53

Impact of wasteful military procurement. R. M. Kyes. Comm & Fin Chr 178:112-13 Jl 9 '53

Industrial mobilization realigned on broader base. K. Rannells. Automotive Ind 109:68+ Ag 1 '53

Industry gets ready for a hot war or a cold peace. Bsns W p72-4+ Ap 25 '53

Men, management and mobilization. H. H. Fowler. Advanced Management 18:38-42 Ja '53

Mobilization. Steel 132:45 Ja 12 '53

Mobilization blueprint drawn in 1952. Oil Paint & Drug Rep 163:5+ sec 2 Ja 26 '53

No more help from government. Bsns W p30 Jl 11 '53

Planning for permanent defense. il Bsns W p 121-2+ My 9 '53

Plants, not stockpiles; the Vance committee's interim report brings shadow plants closer to reality. Steel 131:49 D 1 '52

PAIP sets the stage for defense expansion. Steel 132:43 Ja 12 '53

Shadow plants; empty factories to mitigate dislocations of all-out war. Steel 131:73 N 24 '52

Small business in action; it's part in defense. Steel 131:59 N 17 '52

Tapering off defense expansion. Bsns W p27-8 Jl 18 '53

Tools; stockpile plants, not arms; Vance committee suggests construction of standby production facilities. Iron Age 171:48 Ja 15 '53

US policy on industrial mobilization revealed. Oil Paint & Drug Rep 164:4+ Jl 13 '53

Used machinery and industrial mobilization. A. M. Johnson. Tool Eng 31:132-4 O '53

With short range mobilization program well under way ODM outlines policy for long range planning. R. G. Gibbs. Chem & Eng N 30:5228 D 15 '52

See also

Automobile industry and trade—Munitions manufacture
Certificates of convenience and necessity
Contracts, Government
Priorities and allocations, Industrial
Stockpiling

INDUSTRIAL motor trucks. See Motor trucks, Industrial

INDUSTRIAL museums
Company collections. il Fortune 47:94-9 Ja '53
See also
Museum of science and industry, Birmingham, England
Museum of science and industry, Chicago

INDUSTRIAL office buildings. See Office buildings, Industrial

INDUSTRIAL pensions. See Pensions, Industrial

INDUSTRIAL photography. See Photography—Industrial applications

INDUSTRIAL plants. See Factories

INDUSTRIAL poisons. See Poisons, Industrial

INDUSTRIAL psychiatry. See Psychiatry, Industrial

INDUSTRIAL psychology. See Psychology, Industrial

INDUSTRIAL relations
Across the table; simple device for improving conference discussion. R. A. Rogers. Personnel 29:510-11 My '53
Casuistry in human relations. D. M. Munro. Personnel 29:369-71 Ja '53
Effect of bigness on labor relations. H. O. Golightly. Advanced Management 18:13-17 F '53
Employee relations. Mod Ind 25:79-80+ Ja '53 [cont monthly]
Employment-relations functions and budgets. D. Yoder and L. N. Wilson. Personnel 29:218-26 N '52
Evangelist of human relations; Ken Yost. Mod Ind 25:41-3 Ap '53
Faith in men. W. Verity. Personnel J 31:167-72 O '52
How one company publicized its employee relations program; National container corp. C. E. Wright. Paper Tr J 137:29-30+ Ag 14 '53
How to rate your company and yourself. W. W. Eaton. Factory Management 110:148-51 N '52
Human relations and communications are twins. R. D. Breth. Personnel J 31:259-61 D '52
Human relations; engineers have boosted efficiency, but what about human equation? E. W. Lane. Credit & Fin Management 55:18+ Mr '53
Human relations specialist and good citizen. W. E. Shurtleff. Personnel J 31:296-8 Ja '53
Industrial relations research at universities; a supplementary report. Personnel 29:372-6 Ja '53
Industrial relations round-table. Am Gas Assn Mo 35:20+ My; 12+ Je; 18+ Jl-Ag; 14+ S; 24+ O '53
Industrial relations; small businessmen need a formalized industrial relations program. Steel 131:68-9 N 17 '52
Joint consultation; supply industry experience and possibilities. W. Walsh. Elec R (Lond) 151:1384-6 D 26 '52
Labor-management problems in the construction industry. L. C. Rogers. Civil Eng 22:633-6 S '52
Laborgrams. L. Stessin. Published in monthly numbers of Mill and factory
Lapointe cited as high standard in industrial labor peace. Am Mach 96:139 D 22 '52
On-the-job contractor-labor relations (cont). L. B. Kromer, jr. Constr Methods 34:102+ N; 110-12+ D '52; 35:142+ Ja; 124+ F; 164+ Mr; 142+ Ap; 154-5 My; 174+ Je '53
Preserving industrial peace, our most pressing problem. B. F. Fairless. Comm & Fin Chr 177:2315+ My 28 '53
Put your own know-how to work in employee relations. F. A. Cook. Textile World 103:139+ Jl '53
Security rules can snag union-management relations. Bsns W p 180 My 9 '53
Significant developments in practical labor relations. P. A. King. Published in monthly numbers of Factory management and maintenance
Steppingstones to good industrial relations. J. S. Gracy. Elec Eng 72:204-6 Mr '53
Ten steps to better employee relations. E. W. Fair. Paper Ind 34:1120 D '52
Ten years' progress in management; labor relations. G. M. Varga. A S M E Trans 75:695-700 My '53
These $2 bills were lucky; cash pay day. J. R. McNulty. Personnel J 31:294-5 Ja '53
Tips to good human relations for factory executives. M. J. Murphy. Published in monthly numbers of Factory management and maintenance
Trends in labor relations are mapped at meeting; National industrial relations conference, Cleveland. Eng N 150:29+ Ja 22 '53
Union-management conference, no panacea of labor peace. C. E. Bonnett. Comm & Fin Chr 178:352 Jl 30 '53
What's ahead in labor relations. L. Stessin. Mill & Factory 51:75-9 D '52
See also
Arbitration, Industrial
Atomic energy labor relations panel
Building trades—Labor conditions
Collective bargaining
Company towns
Employees
Employees—Opinion polls
Employees, Reports to
Employees' benefit plans
Employees' representation in management
Employment management
Labor and laboring classes
Labor disputes
Medical service, Industrial
National labor relations board
Open and closed shop
Profit sharing
Psychology, Industrial
Safety devices and measures
Strikes
Suggestion systems
Trade unions
Trade unions—Co-operation with management
Unemployment
Wage payment plans

Bibliography

Management and the worker. (Labor-management relations v. 5, no. 4) 11 l pa 10c Institute of labor and industrial relations, 704 South 6th st, Champaign, Ill. '53

INDUSTRIAL relations consultants
Labor wise man, James J. Bambrick, jr. W. E. Shurtleff. Personnel J 31:145-9 S '52

INDUSTRIAL research
Cheaper materials; technology must increase supplies at reasonable costs. map Mod Ind 24:50-3 N '52
Developing industrial researchers is greatest scientific problem; symposium on the future of fundamental research in the United States. Chem & Eng N 31:1868 My 4 '53
Doorway to your future; Procter & Gamble co. Miami Valley laboratories. il Mod Ind 25:40-1 Ja '53
Equipment policy; National center of education and research in dynamic equipment policy, Illinois institute of technology. Bsns W p66 Jl 25 '53
Exploitation of science by industry; sixth annual report of the Advisory council on scientific policy. Engineer 196:78-9 Jl 17 '53
How to develop the development engineer. I. F. Kinnard. Gen Elec R 56:10-11 Mr '53
How to upgrade a research program. il Bsns W p90+ My 9 '53
How's industrial research? Chem Eng 60:116 Ap '53
Increasing the efficiency and economy of experimentation. E. C. Harrington, jr. bibliog Tappi 36:sup137A-40A My '53
Industrial development depends on cooperative research. W. E. Mahin. bibliog il Tool Eng 29:49-54 N '52
Industrial research. Sci Am 188:44 Ap '53
Industrial research as a tool of industry. S. L. Hoyt. il Metal Prog 64:75-8 Jl '53
Industrial research; G.K.N. group research laboratory. il Elec R (Lond) 152:1228-9 My 29 '53
Industrial research in Canada. Can Chem Process 36:61-2 D '52
Industrial research in the control of environment. W. H. Kliever. Heating-Piping 25:139-40 S '53
Industry spurs research programs. Steel 132:62 F 9 '53
Is your scientific research program properly balanced? W. W. Eaton. Management R 41:670-4 O '52

INDUSTRIAL research—*Continued*

Low cost research to assure customer satisfaction; American wheelabrator & equipment corp. E. F. Anderson. il Product Eng 24:160-1 My '53

Making research the key to profits; quick project pays off fast; investing two years to revamp a product; pure research; long shot bet. il Bsns W p 150+ Ja 17 '53

Mighty mites of product research; microchemistry. il Mod Ind 25:44-5 Mr '53

New product development, a study of company procedures. Management R 41:736-7 N '52

Operations diagnosis in research planning. C. Williams. Science 116:sup3 D 26 '52

Partnership for progress; steady advancement of creative enterprises requires teamwork of industry, government, and the universities. J. R. Killian, jr. il Tech R 55:23-6 N '52

Physicists in industry. D. Alpert. Westinghouse Eng 13:103-6 My '53

Product research and development. R. Spilman. Advanced Management 18:73-5 Ja '53

Profile of the man in industrial research. E. W. Engstrom and E. H. Alexander. Inst Radio Eng Proc 40:1637-44 D '52

Recipe for profit; organized research. il Steel 132:55-62 Ap 27 '53

Records of research. J. G. Jackson. Franklin Inst J 254:355-68 N '52

Research, an industrial tool. H. A. Leedy. il Dun's R 61:27-8+ Mr '53

Research expenditures show fourfold increase. Chem & Eng N 31:566+ F 9 '53

Research money. Bsns W p62 Ja 17 '53

Research wrap up. Chem W 72:38 F 14 '53

Scientific research in Australia; third annual report of the Commonwealth scientific and industrial research organization. Engineering 174:764-5, 784-5, 827-8 D 12-26 '52

Should you invest in foreign research? Chem W 71:35-6+ N 8 '52

Stimulating research and product development. W. F. Rockwell, jr. Tool Eng 31:136-7 O '53

Technical and scientific publications in the British Isles. J. T. Kemp. Special Lib 43:344-7 N '52

Technical research and development in the small firm; abstract and discussion. S. W. Butterworth. Chem & Ind p349-50 Ap 11 '53

Technical service, sales insurance; Tennessee Eastman corp. il Chem W 71:56-8 O 18 '52

Thoughts in a time of change. H. Leyburn. Inst E E Proc 100 pt 1:14-15 Ja '53

Tightrope management builds profits in physics lab; Consolidated engineering corp. il Bsns W p 170-2 N 15 '52

Using university facilities for industrial research. H. K. Work. il Product Eng 23:185-9 O '52

See also

Cement research
Ceramic research
Chemical research
Coal research
Concrete research
Corrosion research
Cotton research
Dye research
Engineering research
Foundry research
Gas research
Glass research
Great Britain—Scientific and industrial research, Department of
Information service
Laboratories
Little, Arthur D., inc.
Lubrication research
Market research
Metallurgical research
Operations research
Paint research
Paper research
Petroleum research
Purchasing research
Railroad research
Research workers
Rubber research
Scientific research
Steel research
Textile research
Wood research
Wool research

also Armour research foundation; General electric company—Research laboratory; Southern research institute

Accounting

Cost accounting in a research organization. A. L. Spurr. N A C A Bul 34:344-8 N '52

Finance

Expenditure on industrial research. Engineering 174:137 Ag 1 '52

1953 research budgets. Chem W 72:27-8 Ja 3 '53

$2 billion tab; annual research outlays mount in hunt for new products. J. V. Sherman. Barron's 33:9+ Jl 20 '53

INDUSTRIAL statistics

Automotive industries 1953 statistical issue. Automotive Ind 108:71-166 Mr 15 '53

Capital goods demand high for early 1953; expenditures on new plant and equipment by U.S. business, 1951-53; with table. Survey of Cur Bsns 32:3-4 D '52

Congress, management, public must be sold industry census. S. E. Cohen. Ind Marketing 38:112+ Je '53

Employment, prices, and monopolistic competition. H. Brems. diags R Econ & Stat 34:314-25 N '52

Industrial sales growth varies widely. Steel 132:49 F 23 '53

Measurement of industrial concentration. M. A. Adelman. bibliog R Econ & Stat 33:269-96 N '51; Discussion. 34:156-78, 343-67 My, N '52

Role of industry statistics in modern business life. G. S. Rose. Special Lib 43:401-6 D '52

See also

Employment—Statistics
Manufactures—Statistics
Market statistics
Production—Statistics
Wages—Statistics

also subdivision Statistics under names of industries, e.g. Petroleum industry and trade—Statistics

INDUSTRIAL traffic league, National. See National industrial traffic league

INDUSTRIAL trailers. See Trailers, Industrial

INDUSTRIAL trusts. See Trusts, Industrial

INDUSTRIAL unions. See Trade unions

INDUSTRIAL waste. See Trade waste

INDUSTRIES, Location of. See Factories—Location; Location in industry

INDUSTRY

Citizen looks at industry. N. A. M. Mackenzie. Pulp & Pa of Can 54:111-12 Je '53

Which industries offer best prospects for 1953? G. W. Mathis. Mag of Wall St 91:386-9+, 456-9+ Ja 10-24 '53

See also

Business
Color in industry
Corporations
Diversification in industry
Education and industry
Efficiency, Industrial
Engineering education—Industry co-operation
Factories
Government regulation of industry
Industrial market and other headings beginning Industrial
Labor and laboring classes
Location in industry
Manufactures
Moving pictures in industry
Music in industry
National association of manufacturers
Photography in industry
Planning
Production
Production standards
Standardization
Trade associations

also names of industries, e.g. Petroleum industry and trade

Decentralization

Central area of Chicago; a re-examination of the process of decentralization. L. Reeder. Land Econ 28:369-73 N '52

Meeting the problems of decentralization; Prudential's regional home office setup. Nat Underw (Life ed) 57:2+ Ap 17 '53

New study shows industrial dispersion. Eng N 150:271+ F 19 '53

INDUSTRY and education. See Education and industry

INDUSTRY and science. See Science and industry

INDUSTRY and state

Let's do our part in this business of government. il Steel 132:53-60 Mr 30 '53

Louisiana's industrial promotion program moves into high gear. Manuf Rec 122:30-1 Ja '53

Maritime industry needs a constructive federal policy. L. Saltonstall. Marine Eng 58:68-70 My '53

See also

Business—Reports to government
Commercial policy
Economic planning
Economic policy

INDUSTRY and state—See also—*Continued*
Government aid to business
Government ownership
Government regulation of industry
Industrial mobilization
Labor laws and legislation
Public utilities
Railroads and state
Tariff
Taxation

United States

Business and professional freedom. R. G. Storey. Comm & Fin Chr 177:895+ F 26 '53

Industry cooperates with Capitol; steelmen seek better government relationship. G. H. Baker. Iron Age 171:93 Je 18 '53

It's up to you; the new business-government accord can thrive if industry makes it work. E. C. Kreutzberg. Steel 132:125-6+ Ja 5 '53

New road ahead. E. G. Grace. Dun's R 61:1+ Ja '53

Republicans' unhappy legacy; inflation, taxes, interventionism. W. H. Peterson. Comm & Fin Chr 178:202+ Jl 16 '53

What will Washington decide? il Chem Eng 60:176-81 Mr '53

INEQUALITIES, Linear

Approximate solutions of systems of linear inequalities. A. J. Hoffman. J Res Nat Bur Stand 49:263-5 O '52

INERT gases. See Gases, Rare

INERTIA (mechanics)

Controlling inertia; how linkages and irregular gearing achieve improved performance in shaker conveyors. W. W. Sloane. il diag Machine Design 25:154-8 Jl '53

INERTIA, Moments of. See Moments of inertia

INFANT mortality

See also
Fetus, Death of

INFANT welfare. See Maternal and infant welfare

INFANTILE paralysis

Antibody patterns higher in Egypt than Miami. S. J. Liao and others. Pub Health Rep 68:101 Ja '53

Commercial availability of polio vaccine awaits further testing; abstract. H. R. Cox. Chem & Eng N 30:4478 O 27 '52

Fighting a polio epidemic; gamma globulin. il Bsns W p29 Jl 11 '53

Gamma globulin plan for distribution given. Oil Paint & Drug Rep 163:5 Ap 20 '53

Health department and poliomyelitis. E. E. Kleinschmidt and others. Pub Health Rep 67:1109-14 N '52

Medical research aids polio coverage. S. Miller and R. D. Brown. Spectator 161:24-5+ Ap '53

New era in polio research. J. L. Melnick. il Sci Am 187:26-9 N '52

Polio follow-up program revised in New York. H. M. Wallace. Pub Health Rep 68:107-8 Ja '53

Polio progress report. Sci Am 187:28-9 D '52

Poliomyelitis in the United States; 1952. Pub Health Rep 67:954 O '52

Prevention of poliomyelitis with gamma globulin. W. M. Hammon. Pub Health Rep 68:105-6 Ja '53

Sewage treatment and the virus of poliomyelitis. V. W. Langworthy. bibliog Sewage & Ind Wastes 25:290-2 Mr '53

Six children respond to polio vaccine. Howe. Pub Health Rep 68:106-7 Ja '53

Two steps toward polio prevention; vaccine and a blood fraction. Bsns W p33 N 1 '52

INFANTILE paralysis insurance. See Insurance, Infantile paralysis

INFANTS

Histoplasmin and tuberculin sensitivity in Texas infants and children. G. B. Forbes and C. C. Chang. Pub Health Rep 68:320-2 Mr '53

INFANTS' food

Gerber's divisible case. E. N. Burnett. il Mod Packaging 26:148-51+ Ap '53

Resourceful engineers make process sing; Gerber products co. il Food Eng 25:60-2+ F '53

See also
Gerber products company

INFANTS' supplies

Indexing self-selection; Kleinert's uses tabs on carded baby pants. il Mod Packaging 26:83 Ag '53

INFANTS' supplies industry

Throw in a free case of baby food; Staffin-Johns opens 1,000 new accounts; baby mattress business. J. H. Haas. il Sales Management 69:44-5 O 1 '52

INFECTIOUS diseases

Food and water borne disease outbreaks; incidence of infectious hepatitis by state. C. C. Dauer. Pub Health Rep 67:1089-95 N '52

Nature of genetic resistance to infection in mice. J. A. Weir and others. bibliog Science 117:328-30 Mr 27 '53

Studies of spread patterns of infectious hepatitis. Pub Health Rep 68:130-1 Ja '53

See also
Anthrax
Epidemics
Infantile paralysis
Influenza
Leptospirosis
Plague
Quarantine
Toxoplasmosis
Tuberculosis
Typhus fever
Viruses

Statistics

Seasonal occurrence of communicable diseases; 1951 and 1952 summary. Pub Health Rep 68:194-5 F '53

Usefulness of communicable disease reports. I. L. Sherman and A. D. Langmuir. maps Pub Health Rep 67:1249-57 D '52

INFECTIOUS hepatitis. See Jaundice

INFINITE

Is there an infinity? H. Hahn. diags Sci Am 187:76-80+ N '52

INFLAMMABILITY of textiles. See Textile fabrics—Inflammability

INFLAMMABLE liquids

Amyl acetate; hazards and precautions; data sheet. il Nat Safety N 68:30-1+ Ag '53

Flammable liquids. Nat Safety N 67:216+ Mr '53

How safe are safety solvents? M. Z. Poliakoff. bibliog il Nat Safety N 67:28-9+ F '53

How to control propane leaks. il Safety Maint & Prod 105:67-70 F '53

How to transfer flammable liquids. il Safety Maint & Prod 105:27-8+ Ja '53

Insecticidal fogging hazards; explosions and fires originating in thermal insecticidal fogging operations. Safety Maint & Prod 104:52-4 D '52

Safe handling of fuels, hazardous gases and liquids. F. R. Pullen. Iron & Steel Eng 30:113-16; Discussion. 116-17 S '53

See also
Flash points

INFLAMMABLE materials

See also
Magnesium—Fire hazards
Plastic materials—Fire hazards
Textile fabrics—Inflammability

INFLAMMABLE mixtures

Detectors end flame hazards; soybean extraction plant, Swift & co. il plan Food Eng 25:96-7 Ja '53

Effect of water on the burning velocities of cyanogen-oxygen-argon mixtures. R. S. Brokaw and R. N. Pease. bibliog Am Chem Soc J 75:1454-7 Mr 20 '53

Electrical installations; explosive limits. B. Z. Segall. Oil & Gas J 51:139 O 27 '52

Explosion-proof devices; install them right. J. W. St Andre. il diag Factory Management 111:106-7 Je '53

Explosive limits of mixtures of natural gas and air. R. F. Nielsen. Oil & Gas J 51:167 N 10 '52

Gaseous detonations. G. B. Kistiakowsky and others. bibliog il J Chem Phys 20:876-87 994-1000 My-Je '52

Ignition limits of 1-3 mixtures of carbon disulfide and oxygen. A. L. Myerson and F. R. Taylor. Am Chem Soc J 75:4348-50 S 5 '53

Spark ignition; effect of molecular structure. H. F. Calcote and others. bibliog diags Ind & Eng Chem 44:2656-62 N '52

Test cell protection at Westinghouse jet engine plant; vapor analyzing and alarm instruments. il Automotive Ind 107:33+ O 15 '52

INFLAMMABLE mixtures—*Continued*

Upper limits of inflammability of hydrogen-air and hydrogen-nitrous oxide mixtures. S. Smith and J. W. Linnett. Chem Soc J p37-43 Ja '53

See also

Explosions

Flame propagation

INFLATION (finance)

Advocates conference on inflation. H. Bruere. Comm & Fin Chr 176:1834 N 13 '52

At some point the boom will become tired. A. H. Temple. Comm & Fin Chr 177:2064 My 14 '53

Australia; price of growth; background to inflation. map Economist 166:686+ Mr 7 '53

Engineer's view of the dollar. S. Steele. Chem Eng 60:157-61 F '53

European and American inflation. P. Einzig. Comm & Fin Chr 176:1538 O 23 '52

Free gold market can stop inflation. R. W. Taylor. Comm & Fin Chr 176:2499 D 25 '52

From tight-rope to halter; acquiescence of business in inflationary folly hurts freedom. J. C. Thomson. Credit & Fin Management 55:29 F '53

Government has provided for some relief, but alert reading of balance sheet is essential. W. E. Vollmer; H. W. Scott. Credit & Fin Management 55:9-10 F '53

Hard money versus inflation. F. Case. Min Cong J 39:81-3 Ap '53

How has inflation affected advertising? Adv Agency 46:51 Mr '53

Inflation and regulation. J. P. Randolph. Pub Util 50:860-1 D 4 '52

Inflation control still main problem. H. C. Alexander. Comm & Fin Chr 177:200 Ja 15 '53

Inflation in Britain. P. Einzig. Comm & Fin Chr 177:2651 Je 18 '53

Inflation in Korea. P. F. Douglass. Barron's 32:3 D 8 '52

Inflation or deflation ahead now? A. W. May. Comm & Fin Chr 177:1313+ Mr 26 '53

Investor and inflation now; with table by countries of comparative changes in cost-of-living, bond and stock prices, 1938-1952. Comm & Fin Chr 176:2117+ D 4 '52

Is inflation in Britain curbed? P. Einzig. Comm & Fin Chr 177:1870 Ap 30 '53

Lessons of price and wage controls. A. M. Ross. Comm & Fin Chr 177:14+ Ja 1 '53

Loss of confidence in buying power of dollar called primary concern. P. P. Butler. Credit & Fin Management 54:25 S '52

Managing earnings one way to win tug-o'-war of inflation v. deflation. Credit & Fin Management 54:27 D '52

Powerful forces leading us toward ruinous inflation! H. Buffett. Comm & Fin Chr 177:1742+ Ap 23 '53

Pressure groups, inept government policies cause of inflation and instability. C. M. Shanks. Nat Underw (Life ed) 56:7 D 12 '52

Prices should not be forced down to prewar level! W. R. Burgess. Comm & Fin Chr 177:2636 Je 18 '53

Prosperity by inflation. L. A. Hahn. Comm & Fin Chr 177:778-9+ F 19 '53

Protecting the dollar. Nat City Bank p 135-8 D '52

Putting hobbles on the boom. Bsns W p29-30 Mr 21 '53

Recent inflation developments in western Europe. V. Lutz. Comm & Fin Chr 176:2332+ D 18 '52

Sumner Slichter bets Americans will choose inflation. Bsns W p 100-2+ O 25 '52

Turn in the inflationary tide. D. H. Bellemore. Comm & Fin Chr 177:1858-9 Ap 30 '53

Two years of fighting inflation. O. S. Powell. Comm & Fin Chr 176:2128+ D 4 '52

Wage inflation in Britain. P. Einzig. Comm & Fin Chr 177:20 Ja 1 '53

See also

Accounting—Inflation problems

INFLUENCE lines

Influence lines for support moments in continuous beams. R. C. Coates. diags Engineering 174:230-1 Ag 22 '52

INFLUENZA

Chronic disease mortality in influenza epidemics. Pub Health Rep 68:173 F '53

Influenza prevalence trends in the United States, 1952-53; maps. Pub Health Rep 68:358-9 Mr '53

Influenza study program in the United States. D. J. Davis. map Pub Health Rep 67:1185-90 D '52

Influenza virus. M. Burnet. il Sci Am 188:27-31 Ap '53

INFORMATION

See also

Communication

Reports

INFORMATION service

Commercial intelligence service; chemical and chemical process industries. R. Soukup. Special Lib 43:389-95 D '52

Engineering and aeronautical information services; Association of special libraries and information bureaux 27th annual conference; discussion. Engineering 174:403 S 26 '52

Improving the internal information services in scientific research organizations. S. Herner. bibliog Special Lib 44:15-19 Ja '53

Information center established by rayon producing industry. Mod Textiles Mag 34:73+ My '53

Information services of the Festival of Britain. J. W. Triggs. Aslib Proc 4:225-31; Discussion. 231-2 N '52

Significance of information in present-day industrial society. T. U. Matthew. Aslib Proc 4:195-203; Discussion. 203-11 N '52

See also

Employment management—Information sharing

Libraries—Reference work

Libraries, Special

Library service

Snell's chemical market report (periodical)

INFORMATION theory. See Communication, Theory of

INFRARED photography. See Photography, Infrared

INFRARED rays

Absorption of infrared light by free carriers in germanium. H. B. Briggs and R. C. Fletcher. bibliog il diag Phys R 91:1342-6 S 15 '53

Bridges across the infrared-radio gap. M. J. E. Golay. bibliog diags Inst Radio Eng Proc 40:1161-5 O '52

Electro-optical instrument analyzes chemical streams with infrared. il diag Product Eng 24:174-5 My '53

Induced infrared absorption in hydrogen and hydrogen foreign gas mixtures at pressures up to 1500 atmospheres. D. A. Chisholm and others. Phys R 88:957-8 N 15 '52

Infrared photoconductivity due to neutral impurities in silicon. E. Burstein and others. Phys R 89:331-2 Ja 1 '53

Infrared transmission of atmospheric windows. T. Elder and J. Strong. Franklin Inst J 255:189-208 bibliog(p205-8) Mr '53

Optical and infrared reflectivity of metals at low temperatures. T. Holstein. Phys R 88:1427-8 D 15 '52

Reflectance of thin cellulose nitrate films. L. Harris and J. K. Beasley. Opt Soc Am J 42:634-6 S '52

Two new process analyzers use infrared. diags Pet Processing 8:602 Ap '53

See also

Spectrum, Infrared

Apparatus

Dispersive type infrared product stream analyzers. R. H. Munch. diags Ind & Eng Chem 44:sup93A-4A+ O '52

Industrial heating

Drying of core wash speeded by infrared heating unit; Atlas foundry co. il Foundry 81:248 Je '53

Duplicator reproduces with heat; Thermo-Fax duplicator. il diags Product Eng 23:162-4 N '52

Industrial application of infrared. I. J. Barber. il Elec Eng 72:764-9 S '53

Infra-red curing of p.v.c. il Elec J 149:1919 D 19 '52

Infra-red drying. il Elec J 150:699-700 F 27 '53; Elec R (Lond) 152:595-9 Mr 13 '53

Infrared drying of black enameled coat hangers; data sheet. R. W. Fiddes. il Elec West 111:109 Jl '53

INFRARED rays—Industrial heating—*Cont.*
Infra-red drying of paper board; Treforest mills of the British coated board and paper mills. il Engineer 194:773 D 5 '52
Infrared heat cuts rejects 15 per cent; drying plaster molds for aluminum castings. W. R. Hale. il Elec World 138:138 D 1 '52
Infrared oven solves drying problem for silk screen printed designs. P. J. Britt. il Elec World 138:136 D 1 '52
Infrared oven ups production 300 per cent of tubular steel school furniture. P. Schubnel. Elec World 139:199 My 18 '53
Infrared soldering of transformer headers. il Electronics 26:262+ Jl '53
Mobile electric oven goes to work at Aberdeen proving grounds. il Elec World 138:104 D 29 '52
Put the infrared units in the spray booth; Baron industries of Los Angeles. il Elec West 109:104 O '52
Radiant heat; efficient method of drying paint. il Automobile Eng 42:546 D '52
Systematic investigation of infrared baking; abstract. W. Bruegel and A. Vlachos. Paint Oil & Chem R 116:26 F 26 '53

Lamps

Infrared brooder reduces mortality of chicks. W. R. Kollmayr. il Elec World News ed 139:43 Ja 5 '53
Infra-red heating units for farm stock. il Engineer 196:284 Ag 28 '53
Infrared roasting attracts customers, increases profits; turkeys and hams roasted under infrared lamps. T. R. Warren. il Elec World 138:138+ O 6 '52
Infrared top heating units introduced in electric ranges. il Elec Eng 72:661 Jl '53

Measurement

Properties of thermistor infrared detectors. E. M. Wormser. il diags Opt Soc Am J 43:15-21 Ja '53

INFRARED spectrum. See Spectrum, Infrared

INFUSIBLE white precipitate. See Mercury compounds

INGERSOLL, Roy Claire, 1884-
All under one tent. por(cover) Bsns W p 152-4 Jl 18 '53

INGERSOLL-RAND company
Five outstanding candidates for stock-splits; with comparative balance sheet items. Mag of Wall St 91:296 D 13 '52

INGLE, David, 1875-
Half-century club; careers epitomizing contributions to coal-mining progress. por(p 101) Coal Age 58:102 Ja '53

INGOLD, Christopher Kelk, 1893-
Royal society awards. Chem Age (Lond) 67:763 D 6 '52

INHERITANCE and succession
See also
Perpetuities

INHERITANCE tax
Edith steps out; Estates duties investment trust company, ltd. Economist 166:892-3 Mr 28 '53
Estate planning for investors. A. C. Strasburger. Mag of Wall St 92:494-5+ Jl 25 '53
Family dollar; factors in estate planning; taxation. E. S. MacNeill. Banking 45:78-9 F '53
Fundamentals of state death taxes. East Underw 54:4 Je 12 '53
Important tax aspects of estate planning: apportionment and joint ownership. S. L. Zeigen. Weekly Underw 168:610 F 28 '53
Important tax aspects of estate planning; facts regarding marital deduction. S. L. Zeigen. Weekly Underw 168:538 F 21 '53
Insurance proceeds excludible from gross estate. F. L. Morton. Spectator 161:67-9 Je '53
Marital deduction. R. W. Osler. Rough Notes 96:62-3 F '53
Recent developments in estate and gift taxation; major rulings by courts and the Bureau of internal revenue. J. L. Lyons. Trusts & Estates 92:488-90+ Jl '53
Spouse's election and marital deduction; report of ABA committee on trust and probate decisions. Trusts & Estates 91:768-9 O '52
Standards for power to invade principal. J. W. Ervin. Trusts & Estates 92:274-5 Ap '53
Stock redemption and taxability of premiums. M. D. Wilson. Trusts & Estates 92:48-9 Ja '53
Tax changes needed; 15 suggestions on estate and trust taxation. C. A. Bethel. Trusts & Estates 92:91 F '53
Tax hint-of-the-month. E. S. MacNeill. Banking 45:66 Ja; 80+ F; 46:61 Jl; 66 Ag; 60 S; 58 O; 65-6 N '53
Transfers of insurance for consideration. A. Manella. Trusts & Estates 91:820-1 N '52
Valuation of assets for Canadian tax purposes. J. K. Allison. Trusts & Estates 92:453-6 Je '53
What is indirect payment of premiums? R. H. Forster. Trusts & Estates 91:923-4 D '52

INHIBITORS
Inhibitors for metal finishing. R. O. Bailey. il Metal Finishing 51:65-8 S '53

INJUNCTIONS
T-H injunction upheld. Bsns W p 127 Ja 10 '53

INJURIES. See Accidents; Hand—Wounds and injuries; Jaw—Wounds and injuries

INJURIES (law). See Personal injuries

INJURIES from electricity. See Electricity, Injuries from

INK
Furnace black inks are helping to lessen second impression offset. J. G. Curado. il Ed & Pub 85:66+ D 13 '52
Hints on mixing inks. J. Kovec. Inland Ptr 130:65 O '52
Printing ink-paper relationships; numerical evaluation of letterpress print and printing quality. A. C. Zettlemoyer and others. bibliog(71 ref) Tappi 36:sup 161A-9A F '53
Printing inks removed from price regulation. Oil Paint & Drug Rep 162:3 D 1 '52
Proper care and storage of printing ink supply. Inland Ptr 130:45 F '53

Rating

Laundry marking pens. il Consumers Res Bul 32:28-9 Ag '53

INK, Fluorescent
Day-Glo color used in letterpress printing. il Inland Ptr 131:49 My '53
New flaw-detecting ink; Lumor. il Chem Age (Lond) 67:637 N 8 '52; Engineering 174:648 N 14 '52; Metallurgia 46:255-6 N '52

INK blot test. See Personality tests

INK bottles
Color-identity dropper stoppers of translucent polyethylene for Higgins ink. il Mod Packaging 26:92-4+ O '52

INLAND daily press association
Annual meeting, Chicago. Ed & Pub 85:9+ O 18 '52

INLAND marine insurance. See Insurance, Inland marine

INLAND marine underwriters association
Annual meeting, Shawnee-on-Delaware, Pa. East Underw 54:27+ My 29 '53; Nat Underw 57:1+ My 28 '53

INLAND steel company
Inland leases orebody at Steep Rock. il Steel 132:61 Mr 2 '53
Inland Steel acquires ore by lease. P. D. Block, jr. and M. S. Fatheringham. map Blast F & Steel Pl 41:436 Ap '53

INLAND waterways. See Waterways

INLAND waterways corporation
Government finds a buyer. map Bsns W p30-1 Jl 11 '53
Inland Waterways is sold. Ry Age News ed 135:9-10 Ag 3 '53
See deficit for fiscal '53. Ry Age 134:18 Ja 19 '53
Wolverton disturbed by I.W.C. salary level. Ry Age 134:17 My 18 '53

INOSAMINE
Stereochemical studies in the aminodesoxyinositol series; D,L-*myo*-inosamine-4, D,L-*epi*-inosamine-2 and streptamine. H. Straube-Rieke, H. A. Lardy and L. Anderson. bibliog il Am Chem Soc J 75:694-7 F 5 '53

INOSITOL

Debromination of inositol bromohydrins; synthesis of conduritol-*B*, scylloquercitol, and D,L-*vibo*quercitol. G. E. McCasland and E. C. Horswill. bibliog Am Chem Soc J 75:4020-6 Ag 20 '53

Isolation and identification of O-α-D-galactopyranosyl-*myo*-inositol and of *myo*-inositol from juice of the sugar beet (beta vulgaris). R. J. Brown and R. F. Serro. bibliog Am Chem Soc J 75:1040-2 Mr 5 '53

Pentamethyl and triacetyl derivatives of *myo*-inositol. G. E. McCasland and S. Boutsicaris. Am Chem Soc J 75:3845 Ag 5 '53

Structure of galactinol. E. A. Kabat and others. bibliog Am Chem Soc J 75:4507-9 S 20 '53

Analysis

Cyclitols present in sugar pine (pinus lambertiana Dougl.) C. E. Ballou and A. B. Anderson. bibliog Am Chem Soc J 75:648-50 F 5 '53

INPUT-output data

Finding new tools to study business; input-output. il Bsns W p 141-5 Ja 10 '53

Input-output; a new manufacturer's tool. Brick & Clay Rec 121:74+ O '52; Same. Cer Ind 59:92 N '52

INQUIRIES

See also

Advertising, Industrial—Inquiries

Follow-up systems

INSANE, Hospitals for. See Hospitals, Psychiatric

INSECT cages

Cage for rearing predator-prey populations of mites. T. Burnett. diags Science 117:554-5 My 22 '53

INSECT infestation. See Freight cars—Insect infestation; Grain—Insect infestation

INSECT repellents

Australian oils examined. Soap & San Chem 28:97+ D '52

Bids for comfort. il Chem W 71:42+ D 6 '52

See also

Fly sprays and repellents

INSECT traps

Lights out for insects; black light lamps used. il Elec World 138:140 O 6 '52

INSECTICIDES

Allaying public fears; abstract. G. P. Larrick. Oil Paint & Drug Rep 164:74 S 14 '53

Bug bomb aerosol; nominated for packaging's Hall of fame. il Mod Packaging 26:94-9, cover My '53

Buscopan in treatment of experimental poisoning by parathion, methyl parathion, and systox. W. B. Deichmann and R. Rakoczy. A M A Archives Ind Hygiene & Occup Med 7:152-6 F '53

But the bugs are eating it up. Bsns W p54+ F 14 '53

Constituents of pyrethrum flowers; synthetic *dl-cis*-cinerolone and other cyclopentenolones. M. S. Schechter, N. Green and F. B. LaForge. bibliog Am Chem Soc J 74:4902-6 O 5 '52

Export rules easing granted by Office of international trade. Oil Paint & Drug Rep 162:3 D 1 '52

Food flavor rarely impaired by proper use of pesticides. Chem & Eng N 30:5446-7 D 29 '52

Household insecticides, their role in public health. J. M. Andrews. bibliog Soap & San Chem 28:135-8+ S '52

How Feinberg brought Freewax to big city; insect-killing floor wax. il Bsns W p62-4+ N 1 '52

Insect control by chemicals; abstract. A. W. A. Brown. Nat Safety N 68:101-3 Jl '53

Insecticidal activity and chemical constitution; a new synthetic route to methyl analogues of DDT. E. J. Skerrett and D. Woodcock. Chem Soc J p2804-6 Jl '52

Insecticidal activity and chemical constitution; synthesis of 2 : 2-di-*p*-chlorophenyl-3-methylbutane. E. J. Skerrett and D. Woodcock. Chem Soc J p2806-10 Jl '52

Insecticidal activity and chemical constitution; synthesis of some di-*p*-chlorophenylalkanes. E. J. Skerrett and D. Woodcock. Chem Soc J p3308-12 Ag '52

Insecticidal effect of inert solid diluents. T. C. Helvey. bibliog il Science 116:631-2 D 5 '52

Insecticidal fogging hazards; explosions and fires originating in thermal insecticidal fogging operations. Safety Maint & Prod 104:53-4 D '52

Insecticide vaporizers; they should not be used in homes. Consumers Res Bul 31:29 Mr '53

Insecticides in public health; repercussions on food production. F. P. Coyne. bibliog Chem & Ind p965-8 O 4 '52

Insecticides pile up. Chem W 72:57-8+ Ja 24 '53

Insects v. insecticides. R. L. Metcalf. il Sci Am 187:21-5 O '52

Isolation of the toxic principles of mamey. M. P. Morris and C. Pagán. bibliog Am Chem Soc J 75:1489 Mr 20 '53

New systemic insecticide NC.7 introduced to hop growers. W. E. Ripper. Chem Age (Lond) 68:204 Ja 31 '53

Pesticide horizons. G. E. Flemming. il Can Chem Process 37:58+ My '53

Pesticides; C&EN annual review. L. S. Hitchner. Chem & Eng N 31:31-2 Ja 5 '53

Physical factors in relation to biological activity of insecticides; abstracts of three papers. C. T. Lewis and others. Chem & Ind p401-2 Ap 25 '53

Reaction of certain octamethylpyrophosphoramide derivatives with chymotrypsin. J. E. Casida, T. C. Allen and M. A. Stahmann. bibliog Am Chem Soc J 74:5548 N 5 '52

Recommendations on insecticide use to prevent development of resistance. Pub Works 84:98 Je '53

Selling insecticides to food plants. R. T. Orr. Soap & San Chem 28:147-8 O '52

Structure of an insecticidal *iso*butylamide from pellitory root. L. Crombie. bibliog Chem & Ind p 1034-5 O 18 '52

Tips on curbing insects in plants. T. L. Huge and E. L. Holmes. il Food Eng 25:58-9+ S '53

Toxaphene blending grows fast. il Chem Eng 60:132+ Ja '53

Toxicity of some organic insecticides to fish. P. Doudoroff and others. bibliog Sewage & Ind Wastes 25:840-4 Jl '53

What next for mosquito control? il Pub Works 84:71-2 Je '53

See also

Allethrin

Chlordane

DDT (dichlorodiphenyltrichloroethane)

Fly sprays and repellents

Hexachlorocyclohexane

Insect repellents

Lindane

Methyl bromide

Mosquitoes—Extermination

Mothproofing preparations

Nicotine

Parathion

Pyrethrins

Pyrethrum

Analysis

Review of analytical chemistry; pesticides, 1950-1952. J. L. St John. Anal Chem 25:42-7 bibliog(129 ref, p46-7) Ja '53

Separation and detection of the pyrethrin-type insecticides and their derivatives by reversed phase paper chromatography. F. P. W. Winteringham. Science 116:452-3 O 24 '52

Application

Lindane converters for insect control. G. S. Hensill and S. J. Leland. il Soap & San Chem 28:119-21+ N '52

Law

Poisons rules changes take effect Jan. 19. Oil Paint & Drug Rep 162:4 D 22 '52

Physiological effect

Crop protection as a health hazard; abstracts and discussion. J. M. Barnes. Chem & Ind p 1172 N 29 '52; Chem Age (Lond) 67:733-4 N 29 '52

Don't die like a fly! G. L. Seth. il Safety Maint & Prod 105:50-2 Ap '53

Health problems of vaporizing and fumigating devices for insecticides; abstract. Nat Safety N 68:136+ O '53

Lindane converters for insect control. G. S. Hensill and S. J. Leland. il Soap & San Chem 28:119-21+ N '52

INSECTICIDES—Physiological effect—*Cont.*

Newer organic insecticides pose no health problem; Cotton insect control conference, Memphis, Dec. 10-12. Chem & Eng N 30: 5363-4 D 22 '52

Parathion exposure and cholinesterase response of Quebec apple growers. K. Kay and others. bibliog A M A Archives Ind Hygiene & Occup Med 6:252-62 S '52

See also
Chlordane—Physiological effect

Terminology

Fungicidal chemicals. C. C. McDonnell. Soap & San Chem 29:127+ Ja '53

Testing

Industry awards discoverers of standard insecticide test. Chem & Eng N 30:5369-70 D 22 '52

INSECTS

Color lighting controls colorblind night insects. Safety Maint & Prod 106:66 Jl '53

See also
Cockroaches
Grain—Insect infestation

Respiration

Insect breathing. C. M. Williams. il diags Sci Am 188:28-32 F '53

INSECTS, injurious and beneficial

Beware! butterflies; tankers at Maturin bar. il Ind Med 21:449-50 S '52

Department of agriculture report forecasts insect damage. Paper Tr J 136:25 My 8 '53; Paper Ind 35:542 Ag '53

Insect and rodent control in epidemics and disasters. J. S. Wiley and P. A. Stephens. il Pub Health Rep 68:334-7 Mr '53

See also
Airplanes in insect control
Cockroaches
Galls (botany)
Insecticides
Insects as carriers of infection
Spruce budworms
Termites

Resistance to control

Household insecticides, their role in public health. J. M. Andrews. bibliog Soap & San Chem 28:135-8+ S '52

INSECTS as carriers of infection

Entomological survey methods. R. E. Serfling. bibliog Pub Health Rep 67:1020-5 O '52

See also
Mosquitoes

INSERTS (advertisements). See Advertisements—Inserts

INSPECTION

Advanced inspection equipment insures close tolerances; De Soto division of Chrysler corp. C. H. Wick. il Mach 59:151-6 Ap '53

Applied principles solve inspection problem; Industrial aids, inc. R. B. Hatfield. il Illum Eng 48:355-6 Jl '53

Apply the preventive ounce; meter reader inspection plan. K. Wood. Am Gas Assn Mo 35:7-8+ Mr '53

Automatic machine assembles, inspects small parts; carburetor assembly lines at the Rochester products division plant of General motors corp. J. J. Obrzut. il Iron Age 171:236-8 My 7 '53

Blow out the empty inspection device. il Mod Packaging 26:126 Ja '53

Central inspection set-up aids ordnance contractors; Pilot lot laboratory, Ordnance ammunition center. E. J. Cottrell. il Mach 59:162-8 D '52

Dip and etch simplify aluminum forging inspection. A. H. Pope. il Iron Age 170:102-3 O 2 '52

Discovery sampling cuts costs in quality control. J. R. Crawford. Iron Age 171:114-17 Ja 29 '53

Forum on technical progress; inspecting and testing. il Steel 132:316-18+ Ja 5 '53

Inspection and measurement by ultrasonics. R. H. Frank. il diags Instruments 25:1720-1+ D '52

Inspection methods keep output of flying boxcars on target; Fairchild engine and airplane co. A. H. Allen. il Metal Prog 64:97-104 S '53

Multiple-ram assembly press automatically inspects work. il Am Mach 96:202 N 10 '52

1953 American Machinist production preview. il Am Mach 97:241-52 Ja 19 '53

Optical gaging comes out of the toolroom. G. H. DeGroat. il diags Am Mach 97:125-40 Ja 5 '53

Optical gaging speeds inspection. R. W. Brown. il Tool Eng 30:44-6 Mr '53

Six steps to inspection management. J. M. Juran. Factory Management 110:114-17 N '52

Testing and inspection review and forecast. Iron Age 171:305 Ja 1 '53

Ultrasonics; inspection applications grow. R. H. Frank. il diags Steel 130:99-102 Je 16 '52; Same abr. Product Eng 23:256+ O '52

What's ahead the next ten years in inspection and testing. Am Mach 96:I 1-9 Mid-N '52

See also
Gages
Magnetic testing
Safety inspection

INSPECTION cars. See Cars, Inspection

INSTALLATION floater insurance. See Insurance, Installation floater

INSTALMENT plan

Automobile credit problems. T. C. Dye. Comm & Fin Chr 176:2032 N 27 '52

Buying-on-time boom. Burroughs Clearing House 37:3 Mr '53

Cars on credit. Automotive Ind 109:52-3+ Jl 1 '53

More consumer credit forecast as marketing activity increases. R. Y. Giles. Ptr Ink 242:46 F 20 '53

Role of instalment credit in the economy. A. O. Dietz. Comm & Fin Chr 177:1859 Ap 30 '53

Sales; credit buying on the increase. Iron Age 171:78-9 Mr 12 '53; Steel 132:79 Mr 16 '53

To market! on credit. P. M. Millians. Comm & Fin Chr 177:682+ F 12 '53

What leeway in installment credit? J. C. Cresswill. Mag of Wall St 91:571-3 F 21 '53

Why manufacturers must promote more consumer credit. W. J. Cheney. Ptr Ink 241: 56+ N 21 '52

See also
Finance companies
Insurance, Deferred payment merchandize
Loans, Bank—Instalment payment

Accounting

EPT liability resulting from installment sales under current law, contrasted with 1942 law; abstract. J. E. Brown. J Account 95: 65-6 Ja '53

Finance

News for instalment credit men. Banking 45: 91-2 Ja '53 [cont monthly]

Regulation

Instalment credit; Regulation W left several questions. A. A. Friedrich. Banking 45: 42-3 S '52

Statistics

Consumer credit statistics; total consumer credit, by major parts; consumer instalment loans, 1939-1951 and monthly, Oct. 1951-Nov. 1952. Fed Res Bul 39:64 Ja '53 [cont monthly]

Consumer instalment sale credit; consumer instalment credits of commercial and industrial banks, by type of credit and of industrial loan companies, by type of credit; furniture store statistics and ratio of collections to accounts receivable; tables for selected periods. Fed Res Bul 39:65-6 Ja '53 [cont monthly]

Revision of consumer credit statistics; with tables of revised monthly estimates, Dec. 1939-Feb. 1953. Fed Res Bul 39:336-54 Ap '53

INSTANT coffee. See Coffee, Soluble

INSTITUTE for the crippled and disabled

Rehabilitation plan for disabled endorsed. East Underw 54:41 Mr 20 '53

INSTITUTE of boiler and radiator manufacturers
Annual meeting, 38th, Absecon, N.J. Dom Eng 182:126 Jl '53
Semi-annual meeting, Absecon, N.J. Nov. 10-12. Dom Eng 180:182 D '52

INSTITUTE of British foundrymen
Annual meeting, 50th, Blackpool; with abstracts of papers. Metallurgia 48:27-32+ Jl '53; Foundry 81:176-7+ Ag; 194+ S '53

INSTITUTE of ceramic engineers
Annual meeting, Pittsburgh, April 27. Am Cer Soc Bul 31:467 N 15 '52
1953-54 committees. Am Cer Soc Bul 32:365 O 15 '53
Report of the president for 1952-53. Am Cer Soc Bul 32:221-2 Je 15 '53
Roster. Am Cer Soc Bul 31:sup33+ O 15 '52
Roster. Am Cer Soc Bul 32:sup75-9 O 15 '53

INSTITUTE of cooking and heating appliance manufacturers
Annual meeting, 21st, Cincinnati. Cer Ind 61:84-6 Jl '53

INSTITUTE of fuel
Annual luncheon, London, April 23. Metallurgia 47:244-5 My '53; Elec R (Lond) 152:1007-8 My 1 '53

INSTITUTE of gas technology
IGT announces home study course plan. Pet Eng 24:D66 D '52
Institute of gas technology focuses research on natural gas problems. E. S. Pettyjohn. il Gas Age 111:38-9+ Ja 15 '53
Training men for the gas industry. J. D. Parent. Pub Util 50:696-704 N 6 '52

INSTITUTE of life insurance
Annual meeting, New York. Nat Underw (Life ed) 56:2+ D 12 '52
Dr Dublin affiliates with Life institute. East Underw 54:4 Ja 23 '53
Greater attention to new Washington scene; activities of the Institute. H. J. Johnson. East Underw 53:36 D 12 '52
Institute establishes Washington office; R. G. Taylor in charge. Nat Underw (Life ed) 56:1 D 26 '52
Taking another look. H. Johnson. Spectator 161:10-13 Ja '53

INSTITUTE of metal finishing
Metal finishing institute; new group formed. Chem Age (Lond) 67:664 N 15 '52

INSTITUTE of metals
Annual general meeting, 45th, London, March 23-26; with abstracts of papers. Engineering 175:406-7, 437-9, 471-2, 501-3, 534-5 Mr 27-Ap 24 '53; Engineer 195:502-3, 522-4, 553 Ap 3-17 '53
Annual general meeting, London, March 23-26. Metallurgia 47:201-2 Ap '53
Autumn meeting, Oxford; with abstracts of papers. Engineering 174:414, 461-2, 528-9 S 26, O 10, 24 '52

INSTITUTE of newspaper controllers and finance officers
Meeting, Tulsa. Ed & Pub 85:7+ N 1 '52

INSTITUTE of paper chemistry. See Lawrence college—Institute of paper chemistry

INSTITUTE of radio engineers
Annual meeting, New York, March 23-26; program. Tele-Tech 12:76-7+ Mr '53; Electronics 26:454+ Mr '53
Annual meeting, New York, March 23-26; with program and summaries of technical papers. Inst Radio Eng Proc 41:401-27 Mr '53
Annual professional group broadcast symposium, 2d, Oct. 27. Inst Radio Eng Proc 41:170-1 Ja '53
Awards, 1953, new fellows. Inst Radio Eng Proc 41:674-81 My '53
Convention, New York. Bsns W p27-8 Ap 4 '53
Development of professional groups and chapters. L. C. Van Atta. Inst Radio Eng Proc 41:1092-6 S '53
Engineering societies of America. E. K. Gannett. il Gen Elec R 56:53-5 Mr '53
Evaluation of the Professional group plan. W. R. Hewlett. Inst Radio Eng Proc 41:964-5 Ag '53
Exhibitors at convention; list. Tele-Tech 12:100 Ap '53
Institute committees, 1952; representatives in colleges and other bodies. Inst Radio Eng Proc 40:1261-6 O '52
IRE announces 1953 fellow awards. Electronics 25:406+ N '52; Tele-Tech 11:84+ N '52
Organization for engineering unity; report to the membership published at the direction of the IRE board of directors. Inst Radio Eng Proc 41:1067 Ag '53
Report of the secretary, 1952. Inst Radio Eng Proc 41:808-11 Je '53

Professional group on vehicular communication

Annual meeting, 3d, Washington, Dec. 3-5. Commun Eng 13:14+ Ja '53

INSTITUTE of scrap iron and steel
Annual meeting, New York. Steel 132:50-1 Ja 19 '53
Annual meeting, 25th, New York. Iron Age 171:45 Ja 15 '53
Observing silver anniversary. Steel 132:44e Ja 12 '53

INSTITUTE of silicate research
Eitel; independence is the key to research. Bsns W p 120-2+ Je 13 '53

INSTITUTE of the aeronautical sciences
Annual business meeting, 21st, New York, Jan. 28. Aeronautical Eng R 12:17-21 Mr '53
Annual meeting, 21st, New York, June 26-29; abstracts of papers. Aeronautical Eng R 12:28-44 Ap '53
Honors night dinner sponsored by the Institute of the aeronautical sciences, fellowships and annual awards. Aviation W 58:17 Ja 26 '53
I.A.S. San Diego building reopened. il Aeronautical Eng R 12:33 My '53
Officers for 1953, fellowships, awards and honors, new council members. Aeronautical Eng R 12:20-4 Ap '53

INSTITUTION of civil engineers
Conversazione, June 18. Engineering 175:821-2 Je 26 '53

INSTITUTION of electrical engineers
Biographies of the new chairmen. Elec R (Lond) 151:789-91 O 10 '52
Chairmen for the 1952-53 session. Elec R (Lond) 151:729-31 O 3 '52
E. O. Lawrence, Faraday medalist. J. Hacking. Elec Eng 71:970-1 N '52
Electricity and current affairs; abstract. B. H. Leeson. Elec J 149:1157-8 O 17 '52
New president, council and section officers for 1953-54. Elec J 151:194-5 Jl 17 '53; Elec R (Lond) 153:129-30 Jl 17 '53
Report of the Council for the year 1952-53. Inst E E Proc 100 pt 1:189-207 Jl '53; Abstracts. Engineer 195:699-700 My 15 '53; Elec J 150:1724-5 My 15 '53; Elec R (Lond) 152:1114 My 15 '53
Section chairmen; biographical notes of the officers for 1952-53. Elec R (Lond) 151:608-9 S 19 '52
Summer meeting, Newcastle, June 29-July 2. Engineer 196:51-2 Jl 10 '53; Engineering 176:93-5 Jl 17 '53; Elec J 151:106-9 Jl 10 '53; Elec R (Lond) 153:31-8 Jl 3 '53

INSTITUTION of mechanical engineers
Annual report of the Council for the year 1952. Inst Mech Eng Proc (A) 167 no 1:1-12 '53; Excerpts. Engineer 195:494-5 Ap 3 '53
Summer meeting, Sheffield, July 1-3. Engineer 196:44 Jl 10 '53

INSTITUTION of naval architects
Annual spring meeting, London, March 25-27; with abstracts of papers. Engineer 195:491-3, 535-7, 558-60, 607-8, 625-7, 662-3 Ap 3-My 8 '53; Engineering 175:405-6, 469-70, 503-4, 519-21, 551-3, 581-3, 628-9, 648-9, 677-8, 731-2, 776-8, 806-7 Mr 27, Ap 10-Je 5, 19-26 '53
Autumn meeting, Genoa, Sept. 26; with abstracts of papers. Engineer 194:479-81, 522-4, 557-9, 588-90 O 10-31 '52; Engineering 174:465-6, 498, 604-5, 637-8, 658-9, 690-1, 733-5, 754-5, 798, 819 O 10-17, N 7-D 26 '52

INSTITUTION of radio engineers
Radio engineers; need for sectionalization of institution. Elec R (Lond) 151:901 O 24 '52

INSTITUTION of water engineers
Presidential address. W. C. Knill. Engineering 175:632 My 15 '53

INSTITUTIONAL advertising. See Advertising, Institutional

INSTITUTIONAL investors mutual fund, inc.
Mutual investment company organized by the Savings banks association of the state of New York. A. C. Middlebrook. Comm & Fin Chr 177:2076+ My 14 '53

INSTRUCTION cars. See Cars, Instruction

INSTRUCTION in use of product
Post-sale demonstrations pay off in good will and leads for G-E. il Sales Management 69:28-30 N 20 '52
Selling through the pilot plant; Continental sulfonation plant. il Chem W 72:76-8 F 28 '53

INSTRUCTION manuals
Manual 11 ties cooling estimate to warm air heating. Sheet Metal Worker 44:74+ Jl '53
Registered distribution gets costly literature to right man; Kold-Hold mfg. co. L. S. Worthington. Ind Marketing 37:106+ S '52
What's best way to prepare a simple instruction booklet? B. Aitchison. Ind Marketing 38:16+ My '53

Bibliography

Inventory of manufacturers' manuals on the operation, maintenance and repair of construction equipment. il Constr Methods 35: 65-96 Jl '53

INSTRUCTIONS
Even unskilled operators set up their own machines; rubber stamps on setup sheet, pictures proper tool arrangement; sheet lists operations, proper feeds, speeds, etc., Temco aircraft corp. P. F. Young. il diags Am Mach 97:109-13 Ja 5 '53
Knack of giving instructions. Am Bsns 23:11 My '53
Three-column instruction form. H. H. Bliss. Chem & Eng N 31:991-3 Mr 9 '53

See also
Audio-visual instruction
Safety instructions and training

INSTRUMENT departments
Steel plant instrument department problems; personnel training and maintenance facilities. J. H. Cuthbert. il Instruments 25:1722-3+ D '52
Well trained and organized instrument department; Union bag & paper corp. J. R. Upson. il Paper Ind 35:785-7 O '53

INSTRUMENT dials. See Dials, Instrument

INSTRUMENTS
Application of instrumentation thinking to design and operation of process equipment. J. N. Franklin. diags Pulp & Pa of Can (Convention no) 54:181-6 [F] '53
Art and science of industrial instrumentation. R. Tobi. il diags Instruments 25:1262+ S '52
Basic concepts of instrumentation. Can Chem Process 37:84+ Ap '53
Centenary of instrument making; W. F. Stanley and co., ltd. Engineering 175:487 Ap 17 '53
Cooperation between user and maker pays dividends. J. G. Dobson. Ind & Eng Chem 45:sup85A-6A+ Mr '53
Designing instrument gear trains. L. D. Martin. il diags Machine Design 25:120-4 My '53
Functional aspects of sewage plant instrumentation. J. M. Betz. bibliog diags Sewage & Ind Wastes 24:1325-38 N '52
Instrument applications in pulp and paper mills. E. F. Thode. il diags Paper Tr J 135:355+ N 14 '52
Instrument forecast. R. Rimbach. Oil & Gas J 51:80 S 22 '52
Instrument manufacturer's problems in meeting the demands of the papermaking and converting industries. H. O. Ehrisman. Tappi 36:sup 138A-41A S '53
Instrumentation. R. H. Müller. Published in monthly numbers of Analytical chemistry
Instrumentation as applied to tunnel kilns. L. D. Culp. il diags Am Cer Soc Bul 32: 341-6 O 15 '53
Instrumentation engineers ponder value of complete automation. Chem & Eng N 31: 556+ F 9 '53
Instrumentation for axial-flow-compressor research. C. A. Meyer and R. P. Benedict. bibliog il diags A S M E Trans 74:1327-36 N '52
Instrumentation from management's viewpoint. S. C. Lloyd, jr. Tappi 36:sup 136A-8A S '53
Instrumentation handbook. flow diag diags Pet Refiner 31:97-130 D '52
Instrumentation handbook; what is good instrumentation worth? G. W. Wilson. flow diag il diags Pet Refiner 31:126-9 D '52
Instrumentation in chromium waste treatment. W. N. Greer. flow diag il Sewage & Ind Wastes 25:930-4 Ag '53
Instrumentation in scrubbing, regulating, mixing and metering of natural gas. R. P. Saxton. il Gas Age 110:23-4 N 6 '52
Instrumentation in the laboratory. J. H. Wyatt. bibliog diags Am Water Works Assn J 45:129-44 F '53
Instrumentation of packaged gasoline plants. T. D. Tabbert. diags Oil & Gas J 51:100+ Mr 16 '53
Instrumentation of recovery furnaces. J. R. Upson and T. C. Johnson. il diags Tappi 36:378-83 Ag '53
Instrumentation of the Bathurst BCM process. T. P. Wall. il diag Pulp & Pa of Can 54:64-6 F '53
Instrumentation used in other industries which might be applied to paper manufacturing. J. R. Green. il diags Tappi 36:sup 141A-7A S '53
Instrumentation vital to processing; panel discussion on Frontiers of instrumentation. bibliog Pet Processing 7:1433-4 O '52
Instruments; radiation field grows. A. K. Rannells. Iron Age 171:55 Ja 29 '53
Instruments; sales down, trends up; first quarter total. K. W. Bennett. Iron Age 171:63 Je 11 '53
Methods for estimating construction costs; cost of recording, controlling, and indicating instruments; tabulation. Tappi 36: sup24A+ Jl '53
Power station instrumentation. il Elec R (Lond) 151:885-6 O 24 '52
Proportional sampling device for metered liquids. P. Hart and R. C. King. diag Oil & Gas J 51:93 Mr 2 '53
Putting the instrument to work. H. A. Hulsberg. diag Instruments 25:1737-40 D '52
Quality control; instruments, ingredients. Food Eng 25:88-90+ O '53
Radio progress during 1952; instrumentation. bibliog il Inst Radio Eng Proc 41:487-92 Ap '53
Recent developments in instruments and machines used in British paper industry. il Paper Tr J 135:20+ N 7 '52
Research instruments aid engine maintenance; based on papers by J. L. Broughten and others. il diags S A E J 61:44-52 Jl '53
Sampling facilities, restandardization, and stability are important design factors in process instrumentation. B. W. Thomas. Ind & Eng Chem 45:sup87A-9A Ap '53
Some aspects of instrumentation in the distilling industry. I. Lefkowitz. diags Tappi 36:sup 147A-50A S '53
Textile instrumentation. il Mod Textiles Mag 34:32-3+ F '53
Tooling for atomic age research. il Chem W 72:34+ Ja 17 '53
Use small-diameter tubing for good linkage. il diag Iron Age 171:146 Mr 19 '53

See also
Aeronautic instruments
Balances
Consistometers
Control equipment
Dynamometers
Electric instruments
Geophysical instruments
Magnetic instruments
Measuring instruments
Medical instruments and apparatus
Meteorological instruments
Optical instruments
Psychological apparatus
Radio instruments
Recording instruments
Scientific apparatus and instruments
Surgical instruments and apparatus

Design

Industrial engineering instruments of design. J. L. Schwab. Advanced Management 18: 75-7 Ja '53

INSTRUMENTS—*Continued*

Exhibitions

British instrument industries exhibition, London, June 30-July 11. il Engineer 196: 20-1, 53-4, 71-3 Jl 3-17 '53

British instrument industries exhibition, London, June 30-July 11. il Engineering 175: 807-9, 816 Je 26 '53

Instrument society of America 7th annual exhibit, Cleveland, Sept. 8-12; photographs. Instruments 25:1365-76 O '52

Recent exhibit of instruments and apparatus in Stockholm. R. H. Müller. Anal Chem 24:sup25A-6A+ N '52

See also

Electric instruments—Exhibitions

Study and teaching

How Enka trains for instrumentation. W. G. Baker, jr. il Mod Textiles Mag 34:44-5 Ag '53

How to train an instrument man. J. A. Parker. il Oil & Gas J 51:129-31 S 22 '52; Same abr. Instruments 25:1258-9+ S '52

School offers instrument training to industry; Foxboro company training school. M. B. Hall. Am Bsns 22:34-5 D '52

Testing

Instrument tests easy on graphic panel. R. L. Patton. il diag Pet Processing 8:97 Ja '53

INSTRUMENTS (periodical)

Twenty-fifth anniversary issue of Instruments; guest editorials in the form of review-and-forecast statements by forty-six distinguished readers. Instruments 26: 33-42 Ja '53

INSTRUMENTS publishing company

Brief history. il Instruments 26:43-8 Ja '53

INSULATING board. See Fiber board

INSULATING bushings. See Bushings, Insulating

INSULATING materials

Alternatives to mica. E. R. Haines. il Elec R (Lond) 153:437-41 Ag 28 '53

Developments in coils and insulating materials. D. E. Stafford. Iron & Steel Eng 29:97-100 O '52

Developments in electrical insulating materials; symposium. Engineering 175:375-6, 436-7, 468-9, 511, 541-2 Mr 20, Ap 3-24 '53; Elec J 150:977-83, 1073-7 Mr 20-27 '53; Elec R (Lond) 152:633, 684-8 Mr 20-27 '53

High-temperature silicones. J. D. Hayden. Elec R (Lond) 153:330-2 Ag 14 '53

How silicones are licking some tough electrical problems; Dow chemical co. W. Ruprecht and E. A. Crosby. il Factory Management 111:113-16 F '53

Impulse strength characteristics of liquid-impregnated pressboard; abstract. T. W. Dakin and C. N. Works. Elec Eng 72:156 F '53

New demands lead to new directions in engineering materials; materials with better electrical properties. T. C. Du Mond. il Materials & Methods 37:72-4 Je '53

Paste for string bands and calking; Silastic paste. Ry Loco & Cars 127:94 Je '53

Portable heater safely liquefies insulating compounds. W. C. Miller and E. M. Donhauser. il diags Elec World 139:94 Ja 12 '53

Properties of electrical insulating materials; tabulation; engineering file facts. Materials & Methods 38:107, 109 Jl '53

Properties of synthetic rubbers and thermoplastics as insulation for electric cables. E. W. Davis. Tappi 36:78-82 F '53

Silicones for the electrical industry. Engineer 195:434 Mr 20 '53

Three new silicone insulating materials announced. Materials & Methods 37:140 Ap '53

Trends in rubber insulation. I. C. Eaton. il Gen Elec R 56:11-12 My '53

Vinyl insulation for wire and cable. il Can Chem Process 37:56 My '53

See also

Barium titanate
Electric machinery—Protection
Glass—Electric properties
Insulating oil
Mica
Paper, Insulating
Resinous products—Insulating materials
Steatite
Varnish, Insulating
Wollastonite

Testing

Effect of moisture and fungus on plastic insulating materials. R. K. Witt and others. diags Mod Plastics 30:119-20+ S '52

INSULATING oil

Life expectancy of oil-immersed insulation structures; abstract. W. A. Sumner and others. Elec Eng 72:632 Jl '53

New installation reduces clay handling costs; Carolina power & light co. insulating oil purifying equipment. A. M. McCabe. il Elec World 138:130+ D 15 '52

Preserving transformer oil; which system? E. V. De Blieux. il diags Gen Elec R 56: 56-9 My '53

Transformer oils for modern industry. A. S. Morrow. il Iron & Steel Eng 30:86-92; Discussion. 92-3 My '53

INSULATING paper. See Paper, Insulating

INSULATING varnish. See Varnish, Insulating

INSULATION (electric)

Built-up mica plate for high-temperature applications. C. L. Dawes and W. R. Mansfield. bibliog il diags Elec Eng 72:145-50 F '53

Developments in high-voltage insulators; abstract. J. H. Pirie. Inst E E Proc 100 pt 1:76 Mr '53

Effects of transients on plant; gaps and insulators. R. W. Flux. Elec J 150:354-7 Ja 30 '53

End to blinkers? points for the I.E.E. earthing committee to consider. T. C. Gilbert. Elec R (Lond) 153:382-5 Ag 21 '53

How to maintain insulation in air circuit breakers. Textile World 103:202+ Ag '53

Initiation of electrical breakdown in vacuum. L. Cranberg. bibliog J Ap Phys 23:518-22 My '52

Insulated installation accessories; Insuloid manufacturing co. il Elec R (Lond) 152: 1089 My 8 '53

Insulation co-ordination. C. F. Wagner and others. Elec Eng 72:497-503 Je '53

Insulation of electrical equipment; discussion. Electrician 149:939-40 S 26 '52

New applications for Thermalastic insulation. G. L. Moses and others. il Westinghouse Eng 13:167-9 S '53

New idea for protecting large motors; Thermalastic insulation. M. R. Lory and G. L. Moses. il Factory Management 111: 93 S '53

Recommended electrical insulation. C. J. Photiadis. il Coal Age 58:117-18 Mr '53

Rubber coated electrical insulation. il Materials & Methods 38:143 S '53

Temperature classes for dry-type transformers as determined by functional tests; abstract. P. Narbut. Elec Eng 72:639 Jl '53

275-kv post insulators. il Engineering 175: 326 Mr 13 '53; Elec J 150:862 Mr 13 '53; Elec R (Lond) 152:565-6 Mr 13 '53; Engineer 195:842-3 Je 12 '53

Will class H insulation pay off on motor rewinds? J. G. Noest. il Power 97:123 Ag '53

See also

Dielectrics
Insulating materials
Insulating oil
Varnish, Insulating

Standards

Re-examination of temperature standards for electrical insulation. G. L. Moses. bibliog Elec Eng 71:1021-3 N '52

Testing

Aging evaluation of dry-type transformer insulating systems; abstract. H. C. Stewart and others. Elec Eng 72:490 Je '53

Automatic line insulation test equipment for local crossbar systems. R. W. Burns and J. W. Dehn. il diags Bell System Tech J 32: 627-46 My '53

D-c overpotential testing experience on high-voltage generators; abstract. R. J. Alke. Elec Eng 71:1131 D '52

Functional evaluation of motor insulation systems; abstract. G. A. Cypher and R. Harrington. il Elec Eng 71:1019 N '52

Generator insulation inspection; progress report. J. S. Johnson. il Westinghouse Eng 13:126-7 Jl '53

INSULATION (electric)—Testing—*Continued*

Insulation impulse strength of high-voltage generators. G. L. Moses. Westinghouse Eng 13:88-90 My '53

Insulation measurement; abstract. J. S. Forrest. Elec R (Lond) 152:71-2 Ja 9 '53

Interlaminar insulation test for synchronous machine stators; abstract. H. R. Tomlinson. diags Elec Eng 71:1024 N '52

Method of evaluating insulation systems in motors; abstract. C. B. Leape and others. Elec Eng 72:704 Ag '53

Nondestructive testing of insulation; abstract. E. L. Brancato. Elec Eng 72:425 My '53

Results of a questionnaire covering current practices in electrical tests on dielectrics in the field, AIEE subcommittee report. Elec Eng 71:1132-5 D '52

Testing of magneto insulation for arc resistance and resistance to spark atmospheres. A. L. Coats and C. Pomeroy. il Electrochem Soc J 100:63-4 F '53

INSULATION (heat)

Acoustical insulation doubles as thermal insulation. il Safety Maint & Prod 106:48 O '53

All-glass insulating window. il Eng N 150:120 My 21 '53

Benning expansion calls for second look at insulation. J. H. Hanna, jr. il Power Eng 57:86+ F '53

Compressible laminar boundary layer on a heat-insulated body. N. Rott. J Aeronautical Sci 20:67-8 Ja '53

Corrugated fibrous webs as insulation fillers. E. R. Frederick. il Textile Res J 23:45-53 Ja '53

Cost of heat loss, insulated vessels; graph; data sheet. Power 97:125 O '53

Duct expansion joint and damper insulated together. il diag Sheet Metal Worker 44:19+ S '53

Engineered for outdoor lines; new, low-cost aluminum jacketing now used in 567 processing plants; illustrations with text. Food Eng 25:106 My '53

Expansion joint insulating technique cuts duct maintenance headaches. diag Mill & Factory 52:136 F '53

For tough jobs, foil-covered pipe insulation; foamglas wrapped in aluminum. il Power Eng 57:67 S '53

Glass insulates warehouse. il Heat & Ven 50:130 My '53

Glass insulation, how mills are using it. il Textile World 103:112-13 Jl '53

Graphical analysis of problems; temperature, humidity and insulation. H. G. Todman. Midwest Eng 5:7-9+ F '53

Heat insulation and plant efficiency. A. G. Shore. Can Chem Process 37:82+ S '53

Here's a method of supporting insulated piping. M. F. Allen. il diag Heating-Piping 24:109 N '52; Discussion. 24:108 D '52

Hot food for fighters; army food container, insulated with shredded urea foam. il Mod Plastics 30:87-8 S '52

How a modern sewage treatment plant was insulated. A. F. McCormack. il diag Water & Sewage Works 100:38-9 Ja '53

How to bond fibrous glass to other materials. W. J. Clayton. il Glass Ind 34:490-2+ S '53

How to use cold-setting insulation products; illustrated instructions. Power 97:142 F '53

Improved design of apparatus for measuring thermal conductivity of refractories and insulation at high temperatures. V. J. Duplin, jr. and E. S. Fitzsimmons. il diags Am Cer Soc J 35:226-9 S 1 '52

Insulating a plant for top efficiency; Ford engine plant. H. F. Klie. il Mill & Factory 53:102-3 Ag '53

Insulating flat and curved surfaces. il Power Eng 57:100 Je '53

Insulating for food quality and savings. M. F. Allen. il Food Eng 25:62-3+ S '53

Insulation engineered for the chemical process industries. il Can Chem Process 36:46+ O '52

Insulation for home freezers. L. E. Cover. Refrig Eng 61:970-1 S '53

Insulation of a refrigerated cargo liner; abstracts. K. C. Hales and J. D. Farmer. Engineer 195:625 My 1 '53; Engineering 175:776 Je 19 '53; Discussion. Engineer 195:625-7 My 1 '53; Engineering 175:776-8 Je 19 '53

Insulation takes lead, bricks trail in brewery wall. R. H. Langer. il Constr Methods 35:83+ Ja '53

Low cost insulation covers parallel pipes. il diag Power Eng 57:80 Jl '53

Low-temperature insulation for refinery service. W. L. Martin. bibliog A S M E Trans 75:459-64 Ap '53; Same cond. Oil & Gas J 51:99-103 N 3 '52; Discussion. A S M E Trans 75:464-6 Ap '53

Manufacture of heat insulating sections for pipes; Fibreglass, ltd. il Engineer 195:512 Ap 3 '53

Mineral wool blocks spaced on ducts for efficient, dependable service. il diags Pet Eng 25:C48-9 F '53; Same. Sheet Metal Worker 44:45-6 F '53

New procedures in industrial thermal-insulation application. C. J. Kuhasz and E. C. Shuman. diags Oil & Gas J 51:90-8 N 3 '52

Pipe insulation poured without forms. il Heat & Ven 49:134 N '52

School piping insulated with Ultralite. il Eng N 150:72 Ja 1 '53

Self-retaining mineral wool boards. il Pet Eng 24:C35-6 O '52

Smart insulation methods cut cost in modern station; Consumers power co. il Power 97:73-8 Jl '53

Tank insulation pays off in 19 months. il Oil & Gas J 51:140 D 1 '52

Thermal insulation for industrial requirements. R. Thomas. diags Pet Refiner 31:87-90 Ja; 117-21 F; 143-8 Mr; 113-16 Je; 145-9 Jl; 113-16 Ag; 115-21 O; 151-5 N '52; 32:107-10 Ja; 97-8 F '53

Thermal insulation of paper honeycomb cores and sound absorption of sandwich panels. D. J. Fahey and others. bibliog il diags Paper Ind 35:658-62 S '53

Ultralite insulation easily and quickly installed. il Marine Eng 58:124+ Je '53

What type of thermal insulation is best? E. H. Thring. il Can Chem Process 37:60-2 Ja '53

See also

Building—Heating aspects
Fire brick
Glass fibers
Mineral wool
Refractory materials
Textile fabrics—Heat transmission

Testing

Reflective insulation; its performance in fruit storage warehouse. G. F. Sainsbury. bibliog il diags Refrig Eng 61:383-7 Ap '53

Roof insulating methods; fruit cold storage buildings. G. F. Sainsbury. Refrig Eng 61:286-91+ Mr '53

INSULIN

Insulin acts mainly by promoting transfer of glucose into cells; abstract. A. N. Wick. Chem & Eng N 31:1285 Mr 30 '53

Molecules of the insulin structure. D. Wrinch. bibliog il Science 116:562-4 N 21 '52

Sedimentation constant of insulin in acid solution; a re-examination. F. Tietze and H. Neurath. bibliog Am Chem Soc J 75:1758-60 Ap 5 '53

Studies of the nucleation and growth reactions of selected types of insulin fibrils. D. F. Waugh and others. bibliog Am Chem Soc J 75:2592-600 Je 5 '53

Analysis

Electrophoresis-convection applied to the complexed insulin-protamine system. S. N. Timasheff and J. G. Kirkwood. bibliog Am Chem Soc J 75:3124-6 Jl 5 '53

Fractionation of insulin by electrophoresis-convection. S. N. Timashieff, R. A. Brown and J. G. Kirkwood. bibliog Am Chem Soc J 75:3121-4 Jl 5 '53

INSURABLE interest

Insurance interest and the interest of the insured. R. E. Hall and H. A. Tilghman. Weekly Underw 167:1160-2+ N 1 '52

INSURANCE

After a century of service we look to the future. F. A. Christensen. East Underw 54:24+ Je 19 '53; Same. Weekly Underw 168:1666+ Je 20 '53

Better business bureaus handled 90,000 insurance queries, 9,000 complaints in '52. Nat Underw 57:15 F 12 '53

INSURANCE—*Continued*

Business basically local but phases need nationalizing. B. C. Vitt. Nat Underw 57:23 Je 11 '53

Converging trend in component fields of insurance arena. E. H. Carson. East Underw 53:1+ D 12 '52

Direct premiums and incurred losses in 1952 in New York. Nat Underw 57:31-2 Ap 2 '53

Federal insurance problems didn't evaporate on Nov. 4. M. Herndon. Nat Underw 56:17 D 11 '52

How to find prospects and sell more insurance. W. E. Sharpe. Rough Notes 95:22+ D '52

Inquiries to BBBs increase, notably in fire-casualty. J. W. Rowland. Nat Underw 57:6 Ap 30 '53

Local agents optimistic regarding future. W. M. Sheldon. Weekly Underw 168:18+ Ja 3 '53

Outlines insurance program. East Underw 54:25 Je 5 '53

Prescribes more optimism; creeping paralysis of pessimism clamps hopes of industry. B. C. Vitt. Weekly Underw 167:1069+ O 25 '52; Excerpts. East Underw 53:20+ O 24 '52

Problems confronting insurance industry today, with recommendations for solution; abstracts. D. C. Bowersock. Weekly Underw 168:1661+ Je 20 '53; East Underw 54:1+ Je 19 '53; Nat Underw 57:4+ Je 18 '53

Reviews insurance activities for Ike's inauguration. Nat Underw 57:11 Ja 29 '53

See also

Benefit societies

Commodity credit corporation—Insurance problems

Contracts, Government—Insurance aspects

Insurance companies and other headings beginning Insurance

Pension trusts

Petroleum—Well drilling—Insurance aspects

Vending machines—Insurance company use

also subdivision Insurance requirements under various subjects, e.g.

Banks and banking

Camps

Contractors

Department stores

Farmers

Hotels

Schools

also American management association—Insurance division; New York state bar association—Insurance section

Adjustment of claims

Adjustment of property losses by Prentiss B. Reed; review. East Underw 54:19 Je 5 '53

Character of adjustments that is needed to promote PR of the business. W. R. Cunningham. Nat Underw 56:7-8 D 18 '52

Claims men are important to industry. A. D. McNeill. Weekly Underw 168:422 F 7 '53

For adjudication, not arbitration. S. A. Epton. Weekly Underw 167:1672 D 20 '52

Fundamentals of successful loss adjusting. R. G. Bachman. Weekly Underw 168:908, 974-5 Mr 28-Ap 4 '53

Pennsylvania court construes water damage coverage in two cases. Weekly Underw 168:831 Mr 21 '53

Subsequent water damage is insured's hard luck. Nat Underw 57:7 F 19 '53

Time producers spend on claims pays dividends. E. C. Bonniwell, jr. Weekly Underw 168:1451 My 23 '53

Verdict; analysis of recent decisions. L. A. Burke. Spectator 161:52-3 Ja '53 [cont monthly]

See also

Insurance adjusters

International claim association

National association of claimants' compensation attorneys

also subdivision Adjustment of claims under special forms of insurance, e.g. Insurance, Fire—Adjustment of claims

Arbitration

America Fore group acts for claim settlements to alleviate the over-crowded Supreme court jury calendars. Weekly Underw 168:1294 My 9 '53

Arbitration agreement keeps litigation down; pact has 191 casualty and fire company participants in major cities. East Underw 54:29+ My 8 '53

Advertising

See also

Insurance, Accident—Advertising

Insurance, Automobile—Advertising

Insurance, Life—Advertising

Insurance agents—Advertising

Insurance companies—Advertising

also Insurance advertising conference

All-risk policies

Better dwelling policy first step in multiple line. R. E. Battles. Nat Underw 56:6 N 13 '52

California agency leaders give Empiro form verbal lacing. Nat Underw 56:2 N 6 '52

Calls for new multi-peril form. A. M. O'Connell. East Underw 54:20 My 8 '53

Chubb & son new broad dwelling form replaces combined additional coverage. Nat Underw 56:3 D 11 '52

Complete coverage for homeowners. W. D. Winter. East Underw 54:1+ Ja 23 '53; Abstract. Nat Underw 57:9+ Ja 29 '53

Form advisory group to study multiple perils. East Underw 54:35+ Mr 13 '53

Multiple line policies in dwelling house field. L. H. Larson. Weekly Underw 168:936-7 Ap 4 '53

Multiple peril cover for dwellings reviewed for San Francisco forum. Nat Underw 56:12-13 N 6 '52

Multiple peril insurance rating organizations new multiple line homeowners policy. J. E. Larson. Rough Notes 96:22+ Ja '53

Need one good multiple peril package, New York agents told; confusion is scored. K. O. Force. Nat Underw 57:15+ My 14 '53

Package deal; Multiple peril insurance rating organization's homeowners' policies; coverage and limitations. Spectator 160:65 O '52

Successful multiple-peril workshop held at University of Kansas City. Nat Underw 57:15 Mr 5 '53

Young insurer tries multiple peril packaging from outset. Nat Underw 57:7-8 F 12 '53

See also

Insurance, Fire—All-risk policies

Binders

Oral binder verdicts. C. W. Tye. Rough Notes 96:60 F '53

Biography

Who's who in insurance, 1953; a section of the Insurance almanac. M. J. Smith, ed. 592p Underwriter printing and pub. co, 116 John st, New York 38 '53 ($5)

Cancellation

See also

Insurance, Automobile—Cancellation

Catastrophe coverage

Catastrophe cover concepts. G. L. Hodson. East Underw 53:69+ D 12 '52

Catastrophe fund bills offered in California. East Underw 54:34 F 20 '53

Handling catastrophe losses. C. B. Tarter. il Rough Notes 95:34+ D '52

Views market for catastrophe covers. H. Shadwell. Nat Underw 56:11-12 O 23 '52

See also

Insurance, Fire—Catastrophe coverage

Coinsurance

See also

Insurance, Fire—Coinsurance

Coverage

Ideal coverage Rx recommended by I.E.A. on company-supported bureaus. Nat Underw 57:24 My 7 '53

INSURANCE—*Continued*

Credit aspects

Cites sound insurance program; business solvency in event of disaster requires adequate coverage. R. S. Bass. Weekly Underw 168:1747+ Je 27 '53

Fire insurance and allied coverages aid in maintaining corporation credit. N. H. Wentworth. Weekly Underw 168:1754+; 169:16 Je 27-Jl 4 '53

Insurance; a key to open credit. R. S. Whitmore. Credit & Fin Management 54:8-9 O '52

Insurance protects suppliers and buyers; treasury and credit executives appraise customers' coverage. Credit & Fin Management 54:10-13 O '52

Sound insurance program seen as vital to protect credit standing. East Underw 54:29+ My 29 '53

Tell credit men how to check better on customers' cover. E. H. Carson and others. Nat Underw 57:11+ My 28 '53

See also

Insurance, Accident—Credit aspects

Insurance, Deferred payment merchandize

Insurance, Life—Credit aspects

Deductible clauses

See Insurance, Fire—Policies—Deductible clauses

Employees' insurance

See also

Insurance, Accident—Employees' insurance

Insurance, Group—Employees' insurance

Pension trusts

Pensions, Industrial

Farmers as prospects

Farm insurance. A. R. Johnson and others. Rough Notes 96:23-8+ Ap '53

Foreign business

How to sell foreign insurance. G. W. Lutton. Weekly Underw 168:1283 My 9 '53

You can sell overseas; abstracts. L. H. Collier. Rough Notes 96:36+ Ja '53; Weekly Underw 168:1228-9 My 2 '53

Fraudulent claims

Recognize fake claims. C. W. Tye. Rough Notes 96:44+ Ja '53

See also

Insurance, Fire—Fraudulent claims

Fraudulent statements

See also

Insurance, Life—Fraudulent statements

History

Company film depicts insurance history; America fore insurance group's color movie, Peace of mind. F. J. Malley. il Spectator 161:30-1 Ap '53

International aspects

See also

Insurance companies—Foreign business

Interstate aspects

Virginia puts retaliatory blocks to Rhode Island insurers. Nat Underw 56:16 N 13 '52

Losses

Insurance loss in Aiken explosion set at $350,000. Nat Underw 57:8 F 26 '53

Loss ratios mapped by states and regions; maps and tables cover principal property lines for 1951. Spectator 161:18 Mr; 117-19 Ap; 25+ Je '53

Loss record of 1952 analyzed by Western Adjustment. Nat Underw 57:1+ F 5 '53

Way to cut loss adjustment cost. G. L. Scott. Rough Notes 96:40+ F '53

Who pays the loss when coverages overlap? J. B. Donovan. Rough Notes 96:19+ Ap '53

See also

Insurance, Fire—Losses

Mail order selling

Mail campaign nets over $5,000. Rough Notes 96:28 Mr '53

Multiple peril policies

See Insurance—All-risk policies

Periodicals

Editors and ad men compare notes on news. East Underw 54:26 Ap 3 '53

Policies

What the CPA should know about deductible property or liability insurance (it's cheaper, it prevents losses); abstract. S. L. Hall. J Account 95:70 Ja '53

Political aspects

Congress committee revamping holds insurance interest. Nat Underw 56:1+ N 13 '52; Same. Nat Underw (Life ed) 56:1+ N 14 '52

Favorable omens for insurance in Tuesday results. Nat Underw 56:1 N 6 '52

Insurance leaders optimistic over election. Weekly Underw 167:1281+ N 15 '52

Outlook for Washington changes; shifts will lag despite replacement of key men in government. R. L. Hogg. Nat Underw (Life ed) 56:6+ N 21 '52

Premium financing

First bancredit quits premium financing; only local plans left. Nat Underw 57:2 F 19 '53

Premiums, Payment of

Brokers get another go at eliminating installment plan in Massachusetts. Nat Underw 57:35 Mr 5 '53

Debate values of payment plans at Southern agents conference. Nat Underw 57:10+ My 7 '53

Improved collection results. Rough Notes 96:30 Je '53

North Carolina attorney general issues opinion on premium notes. Weekly Underw 168:1398 My 23 '53

Offensive collection plans. B. Glazer. Rough Notes 96:88 F '53

Suggests way to meet problems agent has on term pay plans. Nat Underw 57:6 F 12 '53

See also

Insurance—Premium financing

Prospects

Charts prospects for time element covers. H. C. Klein. Nat Underw 57:2 Ap 30 '53

Eating and drinking risks provide lots of prospects. H. D. Toner. Rough Notes 96:25 Je '53

How to find prospects and sell more insurance. W. E. Sharpe. Rough Notes 95:22+ D '52

Successful system for prospecting and selling. H. Gassmann. Rough Notes 96:36 Je '53

See also subdivision Prospects under various insurance headings, e.g.

Insurance, Life—Prospects

Purchasing

Business insurance. Sheet Metal Worker 44:55-8 Ap; 70-2 My; 74-5 S '53 (to be cont)

Buyers conference, Rockford. Nat Underw 57:12 Ap 2 '53

Complete survey. U. M. Lelli. Credit & Fin Management 54:28-9 O '52

How to avoid insurance penalties in inventory losses. T. Belt. Am Bsns 23:26+ Ja '53

Insurance and the professional man. A. Silverman. Spectator (Endorsement no 1952-1953) 160:10+ D '52

Insurance buyer; a monthly department for corporate insurance managers. Weekly Underw 168:338-9+ Ja 31 '53 [cont monthly]

Is inventory insured against loss? T. Belt. Am Bsns 22:28+ N '52

Playing loosely with insurance means losing customer's business, or yours. R. B. Gallagher. Credit & Fin Management 55:18-19 Ap '53

Producer-carrier cooperation gives company's executive best coverage. H. H. Hook. Credit & Fin Management 54:16-17 O '52

INSURANCE—Purchasing—*Continued*

What has inflation done to insurance? T. Belt. Am Bsns 23:28+ Mr '53

What will it cost to replace your personal property? adjust your policies to insure values adequately (cont). Rough Notes 95: 108 N '52

See also
Insurance departments (in business)
also subdivision Purchasing under various insurance headings, e.g. Insurance, Life—Purchasing
also National insurance buyers association

Rates

Rate making process. T. O. Carlson. Weekly Underw 168:1550 Je 6 '53

Rating problems. S. Southall. Weekly Underw 167:1435+ N 29 '52

Rating bureaus

See also
Insurance, Fire—Rating bureaus

Reinsurance

Lloyds reinsurance big topic at N.A.I.C. meeting. Nat Underw 57:1+ Je 11 '53

Merger of keen interest; Excess reinsurance co. (Phila.) to be absorbed by new Transatlantic reinsurance co. of N.Y. East Underw 53:33 O 24 '52

N.A.I.C. blanks committee okays call for reporting excess by line of coverage. Nat Underw 56:10 D 11 '52

NAIC on reinsurance commissions. East Underw 53:19 D 26 '52

New reinsurance agreement required in New York; supersedes Regulation 17. Nat Underw 56:24 O 30 '52

New York department rules on reinsurance; relates to agreements where credit is to be given to ceding insurer; with text of Regulation no. 17. Weekly Underw 167:1146-7 N 1 '52

1952 reinsurance picture and need for expanding markets. East Underw 54:33 Ja 16 '53

$147,200,000 in 1951 to foreign reinsurers; their loss ratio rises. East Underw 54:27 Ja 9 '53

Ponder effect of blanks committee report on excess of loss reinsurance. Nat Underw 56:4 D 11 '52

Pro rata treaty; its place in reinsurance. S. H. Carpen. Nat Underw 56:27-8+ D 25 '52

Reinsurance and underwriting in the multiple line field. G. G. Gibson. Rough Notes 96:24+ F '53

16 French companies establish fund here; protects reinsurance risks. East Underw 53: 25 N 28 '52; Same abr. Nat Underw 56:2 N 27 '52

Where and how to buy excess reinsurance; AMA panel discussion; abstracts. G. E. Rogers and others. East Underw 53:36-7 N 14 '52; Weekly Underw 167:1292-6 N 15 '52

Terminology

Reinsurance terms need changing, sharper definition. Nat Underw 56:31 D 25 '52

Renewal notices

Personal calls best way to cut down on not takens. Nat Underw 56:32 D 18 '52

Risks

Risk analysis; its relation to agency management. J. W. Barr, jr. Weekly Underw 168:934-5+ Ap 4 '53

Social aspects

Insurance, its place in America. L. A. Vincent. Weekly Underw 168:43-4+ Ja 3 '53

State policies

Bulk of Tennessee coverage cancelled with dummy agency. Weekly Underw 168:1003 Ap 11 '53

Study and teaching

Chicago insurance educational work is consolidated. Nat Underw 57:9 Je 25 '53

Composite answers to CPCU examination questions; with introduction by Dean Harry J. Loman. Weekly Underw 168:1344-7+, 1495-7+, 1627-30, 1760-3; 169:79-82, 229-31, 327-9, 421-3, 558-60, 674-5+ My 16, 30, Je 13, 27, Jl 11, 25, Ag 8, 22, S 5, 19 '53

Education; keystone of insurance progress. E. Ewing. Weekly Underw 168:1224-5 My 2 '53

Ohio teachers' attitude on insurance courses surveyed. Nat Underw (Life ed) 56:24 N 14 '52; Same abr. Nat Underw 56:14 N 13 '52

Pace insurance courses. East Underw 54:29 Ja 23 '53; Same. Weekly Underw 168:259 Ja 24 '53

San Francisco panel sees need for insurance education. Nat Underw 57:34 My 14 '53

See also
Insurance, Life—Agents—Training
also subdivision Study and teaching under various insurance headings, e.g.
Insurance, Life—Study and teaching
also American association of university teachers of insurance; American institute for property and liability underwriters; Huebner, S. S., foundation for insurance education; Insurance institute of America; Insurance society of New York

Surplus line problems

Insurance nebulae still cause surplus line problems in New York; will-o'-the-wisp concerns. Nat Underw 56:6-7 N 6 '52

Ruling issued in Washington on surplus line brokers. Weekly Underw 168:1722-3 Je 27 '53

Taxation

Allstate replies to queries relative to federal premium tax. East Underw 54:1+ Je 5 '53

See also
Insurance, Life—Taxation
Insurance companies—Taxation

Terminology

Washington commissioner issues regulation defining encumbrance. W. A. Sullivan. Weekly Underw 168:1398 My 23 '53

See also
Insurance—Reinsurance—Terminology

Travel risks

See also
Insurance, Accident—Travel risks

Valuation of property

Appraisal techniques for determining insurable values. J. F. Boehner. Weekly Underw 167:1568+ D 13 '52

Insurable values can be determined best by property owner or appraiser. J. B. Quisenberry. East Underw 54:28-9 My 22 '53

See also
Insurance, Fire—Valuation of property

Yearbooks

'53 Who writes what contains wealth of new information. Nat Underw (Life ed) 57:4 Mr 6 '53

Arizona

Hot hearing on plan to probe Arizona benefit companies. Nat Underw 57:21 Mr 5 '53

Asia, Southeastern

South East Asia stable. R. C. Van Name. Weekly Underw 168:393 F 7 '53

Australia

Insurance in Australia has shown consistent progress; with tables. Weekly Underw 167: 1164+ N 1 '52

Canada

Gains recorded in Canada for property, health insurance, 1951-1952. Spectator 161:87 Je '53

INSURANCE—Canada—*Continued*

Results of 1952 from Canada. Spectator 161: 123 My '53; Same cond. Weekly Underw 168:1232 My 2 '53

Shows stability of Canadian insurance. R. L. Foster. East Underw 54:4+ My 29 '53

Colombia

Operations of Colombia insurance carriers supervised by government requirements. Weekly Underw 167:1298+ N 15 '52

Costa Rica

Insurance industry in Costa Rica monopoly of government. Weekly Underw 167:1639+ D 20 '52

Cuba

Insurance requirements of Cuba are same as those for domestic companies. Weekly Underw 168:1150+ Ap 25 '53

Great Britain

Contrasts in insurance procedures. B. D. Cooke. East Underw 53:38 N 14 '52

Stresses need for unity in meeting problems of insurance; British insurance association assumed responsibility for problems of common interest. E. B. Ferguson. East Underw 54:27-8 My 15 '53; Same abr. Weekly Underw 168:1334-5+ My 16 '53

Hawaii

Growth of insurance in Hawaii. H. W. Brower. Weekly Underw 168:547 F 21 '53

Israel

Find foreign investors are welcomed in Israel. S. Adlerstein. Weekly Underw 168: 584 F 28 '53

Japan

Japanese companies regaining their prewar prestige. J. P. Royston. East Underw 53: 102+ D 12 '52

Korea

American international underwriters agent continues doing business in Korea. Weekly Underw 168:1074 Ap 18 '53

Mozambique

Portuguese government exercises control over Mozambique insurance operations. Weekly Underw 168:580+ F 28 '53

INSURANCE, Accident

A.&H. association group business a desirable line if properly written. P. S. Fisher. East Underw 53:42 N 7 '52

Accident and health; changing times. J. E. Powell. Life Ins Courant 58:54-8+ Ap '53

Accident and health insurance and the public; abstracts. J. F. Follmann, jr. East Underw 53:33 N 28 '52; Nat Underw (Life ed) 56:15 N 28 '52; Weekly Underw 167: 1457 N 29 '52

Accident and health insurance and the public attitude. J. F. Follman, jr. East Underw 54:40+ Mr 13 '53

A.&H. leaders pay tribute to C. O. Pauley, retiring conference leader. Nat Underw 57: 12 My 7 '53

A.&H. men can't be complacent about gains. E. J. Faulkner. Nat Underw 56:27 O 16 '52; Same. Nat Underw (Life ed) 56:9 O 17 '52

A.&H. problems. J. E. Powell. Nat Underw (Life ed) 56:8 O 24 '52

Accident insurance industry told to come out of ivory tower and provide cover. D. Hayne. Weekly Underw 168:1180 Ap 25 '53

Accident underwriting goes modern; Aetna companies. P. H. Rogers. Life Ins Courant 58:50-2 Je '53

Bureau of accident and health underwriters educational seminar, New York; with abstracts of papers. East Underw 54:34-8+ My 22 '53

Bureau of accident and health underwriters seminar, New York, May 12-14. Weekly Underw 168:1369 My 16 '53

Commissioners receive report on sickness provisions law. J. F. Follmann, jr. Weekly Underw 168:1663 Je 20 '53

Few cents a day guarantees mortgage payments. Life Ins Courant 58:54 My '53

Franchise trends show danger ahead; beware of high limits and overlapping coverage; abstracts. G. I. McDowell. East Underw 54:38+ My 22 '53; Nat Underw (Life ed) 57:9 My 22 '53

Life insurance agency management association 4th annual spring meeting on A.&H., Chicago, April 20-22. East Underw 54:17+ Ap 24; 40 My 1 '53; Nat Underw (Life ed) 57:2-3+ Ap 24 '53; Weekly Underw 168: 1248-50 My 2 '53

LIAMA health and accident committee report. East Underw 53:42 N 14 '52

NAIC accepts report of its committee on accident and health. East Underw 54:38 Je 19 '53

New franchise A.&H. plan; Continental Casualty will sell income protection indemnities on weekly instead of monthly basis. East Underw 54:30 Ap 24 '53

1952 accident and health volume increased. J. F. Follmann, jr. Weekly Underw 168:71-3 Ja 3 '53

Pressing problems of growth in A.&H. insurance. J. E. Powell. Weekly Underw 167: 1610-12 D 13 '52

Provident Mutual Life begins A.&S. program. East Underw 54:49 F 13 '53

Record attendance participates in seminar sponsored by accident underwriters. Weekly Underw 168:353 Ja 31 '53

Responsibilities of insurance companies in the accident and health field. J. F. Follmann, jr. East Underw 54:44 F 27 '53; Same. Weekly Underw 168:592-3 F 28 '53

Royal-Liverpool group revises A.&H. program. East Underw 54:48 Ap 10 '53

St Paul Hospital and Casualty enters group franchise field. East Underw 54:38 My 1 '53

Sees high rate of competition in A.&H.; abstracts. J. F. Murphy. East Underw 53: 36-7 N 7 '52; Nat Underw 56:21 N 6 '52

Underwriting accident and health means broader consideration of applicant. C. B. Ahlefeld. Weekly Underw 168:1694 Je 20 '53

Uniform minimum A.&H. benefits are weighed by Virginia legislature. Nat Underw 57:30 My 7 '53

Warns on termination of broker's account; problem of accident and health lines. J. S. Miller. Weekly Underw 168:1403 My 23 '53

West Virginia Commissioner rules on A.&H. policies. H. N. Mills. Weekly Underw 168: 922 Ap 4 '53

See also

Insurance, Disability
Insurance, Liability
Insurance, Life—Disability provisions
Insurance, Workmen's compensation

also Bureau of accident and health underwriters; Health and accident underwriters conference; International association of accident and health underwriters; Life and accident management organization

Adjustment of claims

A.&H. claims administration well handled in New York panel discussion. East Underw 54:39-40 My 1 '53

Accidental means discussed in Oregon Supreme court case. Weekly Underw 168:424 F 7 '53

Appeals court hears test case in grandstand crash. Nat Underw 57:9 F 26 '53

Claim man's role is strikingly outlined. C. O. Pauley. Nat Underw 57:6+ My 21 '53; Same. Nat Underw (Life ed) 57:7+ My 22 '53

Dangers of large jury verdicts. R. Murphy. Weekly Underw 168:1096 Ap 18 '53

Judges compare notes on log jam in courts. East Underw 54:32-3 F 6 '53

Outlines claim philosophy. L. L. Graham. Nat Underw (Life ed) 57:27-8 My 8 '53

Advertising

What California views as false advertising in A.&H. field. S. L. Weinstock. Nat Underw 56:26-7 N 6 '52

Agents

Sales idea on income protection. W. Dawson. Life Ins Courant 58:50 My '53

Three-fold attack on accident and health problems. J. A. Cairns. Weekly Underw 168:1094-5 Ap 18 '53

INSURANCE, Accident—Agents—*Continued*

Welfare Island; Prudential agent sells doctor accident and health insurance. A. Gurman. Life Ins Courant 58:53-4 Je '53

Commissions

Panel on level and non-level bases. East Underw 54:32 My 8 '53; Nat Underw (Life ed) 57:17+ My 8 '53

Sales conventions

California association of A.&H. insurance clubs annual meeting, San Francisco. Nat Underw 56:22+ N 6 '52; Nat Underw (Life ed) 56:2+ N 7 '52

500 attend Texas A.&H. congresses. Nat Underw 56:22 D 11 '52

Kansas A.&H. association annual sales congress, Wichita, April 3. East Underw 54:44 Ap 17 '53; Nat Underw (Life ed) 57:13 Ap 10 '53

Ohio association of accident and health underwriters 15th annual meeting, Cleveland, April 24; Bickelhaupt named president. East Underw 54:40 My 1 '53

Aviation risks

AAU makes changes in accident coverage. East Underw 54:40 My 15 '53; Same. Weekly Underw 168:1420 My 23 '53

Claim complaints

Radium case is held to be caused by accident. Nat Underw 57:30 F 5 '53

Claim forms

Simpler A.&H. forms should ease many difficulties. J. Altman and C. D. Jones. Nat Underw (Life ed) 56:27-8 D 12 '52

Stresses need for uniform A.&H. claim forms. F T. Bernhard. Nat Underw 56:10 N 13 '52; Same. Nat Underw (Life ed) 56:6 N 14 '52

Credit aspects

A.&H. on installment sales; deferred payment disability. H. O. Moliter. Rough Notes 96:66-7 My '53

Can't require life, A.&H. insurance to cover loans in Colorado. Nat Underw 56:24 N 6 '52

Consumer credit insurance; cushion of security. H. L. Rhodus. Weekly Underw 167:1265+ N 8 '52

Credit life, A.&H. practices, theories sharply challenged. Nat Underw 56:19+ D 11 '52

New rules in Texas for credit insurance. Nat Underw 56:24 D 11 '52

Employees' insurance

Key to accident production; keyman accident insurance. Life Ins Courant 58:56-7 My '53

Finance

A.&H. earned premiums and incurred losses of 80 companies shown for 1952. East Underw 54:39-40+ F 27 '53

Accident and health, hospital and surgical insurance by states, 1951; table. Spectator 160:54 N '52

New York A.&H. hospitalization writings given; tabulation. Nat Underw (Life ed) 57:5 Ap 10 '53

Life company selling

Accident income assurance. R. E. Carpenter. Life Ins Courant 58:59-60 Ap '53

Atlantic Life enters A.&S. production. East Underw 54:40+ Je 19 '53; Same. Nat Underw (Life ed) 57:13 Je 19 '53; Same. Weekly Underw 168:1770 Je 27 '53

Discusses A.&S. trends; lauds agents. H. L. Rietz. Nat Underw 56:22 N 6 '52; Same. Nat Underw (Life ed) 56:4 N 7 '52

Entrance of life insurance companies into accident field held to help specialists. A. T. Everett. Weekly Underw 168:1158 Ap 25 '53

Life executive looks at accident and sickness business; abstracts. T. A. Sick. East Underw 54:34 My 8 '53; Nat Underw (Life ed) 57:26 My 8 '53

Tells how A.&H. helps life agents to make sales in estate-planning cases. R. B. Thompson. Nat Underw (Life ed) 56:12 D 5 '52

Noncancellable policies

Non-can A.&H. writers doing good job in risk selection and markets. East Underw 54:35+ My 22 '53

Non-cancellable A.&H. attracting producer attention as salable line. L. Atkinson. East Underw 53:30 D 5 '52

Policies

Peerless Casualty offers new accident and sickness policies. East Underw 54:53 My 8 '53

Skim close to permissible loss ratio shoals. Nat Underw 57:5 Je 18 '53; Same. Nat Underw (Life ed) 57:2+ Je 19 '53

See also

Insurance, Accident —Aviation risks

Insurance, Accident —Noncancellable policies

Insurance, Accident —Travel risks

Policy holders

Persistency report shows life insurance, A.&H. affinity. Nat Underw (Life ed) 57:24 Ap 24 '53; Same. Weekly Underw 168:1189 Ap 25 '53

Preventive work

Broker takes a look at safety. F. A. Heath. East Underw 53:100+ D 12 '52

Prospects

Answering accident and health objections. W. Saunders. Life Ins Courant 58:55-6 Je '53

What shall I sell? H. W. Wheeler. Rough Notes 96:72-3 Mr '53

Public attitude

Public attitude towards A.&H. insurance. J. F. Follmann, jr. Weekly Underw 168:1092-3 Ap 18 '53

Rates

Continental Casualty announces greatly simplified manual. Weekly Underw 168:959 Ap 4 '53

Risks

A.&H. Bureau treats medical underwriting at seminar. East Underw 54:44-5 My 15 '53

Bureau of accident and health seminar, New York. Nat Underw 57:1, 29 My 14 '53; Same abr. Nat Underw (Life ed) 57:3+ My 15 '53

Modern philosophy in underwriting A.&H. business. A. B. Hvale. East Underw 54:32 My 29 '53

Risk selection; residence factors in accident and health and hospitalization insurance. J. M. Ryan. East Underw 54:37 My 22 '53

This business of underwriting; underwriter's check list of moral, general and physical hazards. D. M. Carll. Life Ins Courant 58:52-3+ My '53

See also

Insurance, Accident —Aviation risks

Insurance, Accident —Travel risks

Statistics

Leading producers of group A.&H. premiums, 1951; table. Spectator 160:38-9 N '52

1952 A.&H. results of over 50 companies show volume up 16 per cent for ten months. East Underw 53:104-5 D 12 '52

Premiums, losses, 1951; maps and tables. Spectator 161:18 Mr '53

Travel risks

Continental writes travel accident on campaigning units. Nat Underw 56:24 O 23 '52

See also

Insurance, Accident —Aviation risks

INSURANCE, Accounts receivable

Accounts receivable and destruction of records insurance. U. M. Lelli. Weekly Underw 167:1444-6 N 29 '52

Handling of valuable papers and accounts receivable cover requires unusual care. Weekly Underw 167:1574+ D 13 '52; Nat Underw 56:9 D 4 '52

INSURANCE, Additional living expense

Applications and sale of time element insurance covers. H. C. Klein. East Underw 53:21+ O 24 '52

INSURANCE, Additional living expense—*Cont.*

Rent, rental value, extra expense and leasehold forms. H. C. Klein. East Underw 54:23 My 1 '53

INSURANCE, Agricultural

Bill extends crop insurance. M. R. Young. Weekly Underw 168:846 Mr 28 '53

Federal crop insurance corporation has 95 per cent loss ratio in 1952. Nat Underw 57:4 F 19 '53

Government agricultural insurance programs in some foreign countries. L. H. Doman. East Underw 53:20 O 17 '52

Kentucky tobacco crop insurance is completed. East Underw 54:37 Mr 6 '53

Selling crop hail protection. G. F. Rutledge. il Spectator 161:15+ Mr '53

Tobacco crop insurance keeps brokers busy. Weekly Underw 167:1696 D 27 '52

See also

Federal crop insurance corporation
Insurance, Cotton
Insurance, Hail
Insurance, Livestock

INSURANCE, Agricultural machinery

Farm equipment floater. Rough Notes 96:109-10 Ap '53

Rustlers steal machinery; agricultural machinery policy. A. H. Seffing. Rough Notes 96:75-6 My '53

INSURANCE, Art

Adjustment of claims

Adjustment of fine arts claims requires high degree of technical knowledge. H. W. Blackmore. Weekly Underw 168:1647 Je 13 '53

INSURANCE, Automobile

Action on auto accidents. Bsns W p62 Ja 31 '53

Agents still fear fund, politics in auto ratemaking; Mutual agents association of New York convention, Syracuse. Nat Underw 57:1+ Ap 30 '53

America Fore offers to arbitrate pending B.I. cases in N.Y.C. Nat Underw 56:25 D 11 '52

Asset and auto rate increases don't mix. Nat Underw 57:21 Mr 5 '53

Auto club head in Michigan takes exception to story. R. J. Stanslow. Nat Underw 57:16 F 19 '53

Auto insurance situation. R. I. Catlin. East Underw 54:38+ Mr 20 '53

Auto writing problems. W. Leslie. Weekly Underw 168:5+ Ja 3 '53

Automobile insurance, trends and prospects; abstract. C. M. Kellogg. Management R 41:761-3 N '52

Automobile insurance's influence on accident frequency. R. H. Oppenheimer. Weekly Underw 167:1714-16 D 27 '52

Automobile problems aired at NAIC meeting. East Underw 54:30-1 Je 12 '53

Automobile underwriting developments of past year reviewed. F. E. Sammons. Weekly Underw 168:1529-30 Je 6 '53

Automobile underwriting situation. W. O. Martin. Weekly Underw 167:1562+ D 13 '52; Same abr. East Underw 53:89 D 12 '52

Change in auto premium volume rapid. J. R. Moore. Weekly Underw 168:21-2 Ja 3 '53

Classifying drivers instead of cars for B.I. cover rejected. Nat Underw 57:9 Je 11 '53

Competitive auto insurance setup on coast is watched. Nat Underw 57:2 Mr 5 '53

Connecticut association of insurance agents midyear meeting, Groton. Nat Underw 57:15+ Je 18 '53

Face up to auto competition, agents demand. K. O. Force. Nat Underw 57:1+ Ap 23 '53

Improvement in auto experience raises hopes of casualty insurance leaders. W. L. Clapp. East Underw 54:27-8 Ja 30 '53

Insured to kill. R. H. Oppenheimer. il Spectator 161:22-3+ Mr '53

Insurers must take lead in solving auto problems. J. R. Maloney. Nat Underw 57:4+ Ap 16 '53

Irresponsible car operators chiefly to blame for bad writing experience. R. I. Catlin. Weekly Underw 168:798 Mr 21 '53

Leslie refutes charges as misstatement of fact. East Underw 54:40 F 20 '53; Same. Nat Underw 57:36 F 19 '53; Same. Weekly Underw 168:523 F 21 '53

Mail campaign nets over $5,000. Rough Notes 96:28 Mr '53

Mutual men take a close look at auto problems at Chicago underwriting parley. Nat Underw 57:5+ Mr 26 '53

National Bureau makes broad revisions in automobile casualty manual rules. East Underw 54:31+ Je 5 '53; Same cond. Nat Underw 57:6+ Je 4 '53; Same cond. Weekly Underw 168:1525+ Je 6 '53

N.Y.C. bar group opposes compulsory and compensation auto. Nat Underw 56:21 D 4 '52

1952 casualty trends reviewed by J. F. Murphy. East Underw 54:28+ Ap 24 '53

No joy ahead; auto may be out of red in '53; problems will go on. Nat Underw 56:14 N 13 '52

Outlook for auto in 1953; statements by leaders in the industry. Rough Notes 96:17-18 Mr '53

Planning for an improved automobile market. H. A. Sloan. Rough Notes 96:26+ Mr '53

Problems confronting agents writing automobile insurance. W. H. Stewart. East Underw 54:39 Mr 20 '53

Producers aroused by loss of risks to nonagency insurers. E. N. Eager. East Underw 54:1+ Ap 24 '53

Producers concerned over government unit actions. Weekly Underw 167:1703 D 27 '52

Property insurance in review. Spectator 161:30-1 Ja '53

Proposals for reducing auto accidents and company losses. J. A. Neumann. East Underw 53:32 N 7 '52

Realistic on auto liability picture. J. M. Cahill. East Underw 53:39+ N 21 '52; Nat Underw 56:30 N 20 '52

Remarkable development of automobile physical damage insurance in 50 years. T. Watters, jr. East Underw 53:87+ D 12 '52

Revolutionary auto insurance proposals. R. H. Oppenheimer. Nat Underw 56:30 D 18 '52

Rules auto club engages in insurance business. Weekly Underw 168:472 F 14 '53; Same abr. Nat Underw 57:9 F 5 '53

Sale of damaged vehicle approved by courts. L. A. Burke. Spectator 161:30 F '53

Sees turn in auto liability market. A. J. Bohlinger. East Underw 54:28+ Ja 9 '53

Solutions to auto problem suggested at annual dinner of General insurance brokers association of New York. Nat Underw 56:1+ N 6 '52

Special policy may be insurance answer to auto problem. W. M. Sheldon. East Underw 54:21 Ap 24 '53

Survey of automobile insurance shows national picture somewhat brighter. W. O. Martin, jr. East Underw 54:35 Je 19 '53; Same. Weekly Underw 168:1613+ Je 13 '53

We can do with less when we have the volume; Eastern agents conference 5th annual meeting, Philadelphia. Spectator 161:36 Je '53

Weigh compulsory auto problem and auto dealer competition at Eastern agents conference. Nat Underw 57:24 Ap 23 '53

What to do about the automobile situation. R. H. Kenady. Rough Notes 96:19+ Mr '53

Wisconsin court overrules auto omnibus employe exclusion. Nat Underw 57:8 Ap 30 '53

See also

Gasoline service stations—Insurance selling
Insurance, Motor truck
Insurance, Taxicab
National automobile underwriters association

Adjustment of claims

Agents can help with problem of small PDL claim. R. G. Miller. Nat Underw 57:19 Ja 29 '53

Automobile physical damage loss adjusting course popular. M. I. Kramer. Weekly Underw 168:296 Ja 24 '53

Charges auto companies delay claim handling. C. W. Gardner. East Underw 54:30 Je 26 '53; Same abr. Nat Underw 57:31 Je 18 '53

Conflict of interests between clients causes reversal of insurance case. Weekly Underw 167:1729 D 27 '52

INSURANCE, Automobile—Adjustment of claims—*Continued*

Exclusion clause construed in involved New York case; Standard surety & casualty co. of N.Y. v. Maryland casualty co. Weekly Underw 168:1383 My 16 '53

Fight for big verdicts. S. C. Morris. Rough Notes 95:19+ D '52

How far does auto liability go? meaning of the term "loading and unloading." T. Belt. Am Bsns 22:24+ O '52

How the loss department can save on auto claims. J. D. Farnsworth. Nat Underw 56:18 N 27 '52

Liberal rule of construing omnibus clause in automobile policy rejected by federal courts in Tennessee. Weekly Underw 167:1472 N 29 '52

NACCA, other loss problems studied by auto claim committee of Conference of Mutual casualty companies at Chicago. Nat Underw 56:15-16 N 27 '52

Owner held not negligent where trespassing child started parked car. Weekly Underw 168:1256 My 2 '53

Refusal to settle in policy limits not negligence. Nat Underw 57:35 Mr 19 '53

Shift of auto from parent to teen-ager held to void cover. Nat Underw 57:23 My 14 '53

Suggests fewer adjusters on auto PH.D.-P.D.L. claims. P. J. Goode. Nat Underw 57:15 F 5 '53

Supervision of loading of truck is use. L. A. Burke. Spectator 161:61-3 Je '53

Undeclared encumbrance in auto policy held not prejudicial to insurer. Weekly Underw 168:236 Ja 17 '53

See also

Insurance, Automobile—Claim costs

Advertising

Insurance ad stirs up PI rehearing in Tennessee. Nat Underw 57:25 Ap 2 '53

Agents

Agency service depends on the company you represent. H. M. Finch. Rough Notes 96:25-6 Mr '53

Agents have the best chance to improve auto safety. A. C. Leslie. Rough Notes 96:42+ F '53

Giant regionals; New York agents do something about automobile problems. Nat Underw 56:12-13 N 27 '52

How a large agency handles auto insurance. C. L. Erickson. Rough Notes 96:24-5 Mr '53

How Oklahoma City agents promote safe driving. S. D. Whitehurst. Rough Notes 96:44 F '53

How one agent wrote $5,130 in new auto premiums. P. M. Welch. Rough Notes 96:34+ Ja '53

How to keep your auto loss ratio down. H. A. Lansman. il Rough Notes 96:38+ F '53

Make your selling ideas pay. L. E. Woodbury, jr. Rough Notes 95:17+ D '52

Motors insurance company dies hard on Ohio case; asks rehearing. Nat Underw 56:1 N 20 '52

Offers fighting advice to agents with auto troubles. A. L. Schwab. Nat Underw 56:2 N 13 '52

Ohio agents-GM fight on agents licensing. N. Lancione. Rough Notes 96:17-18+ Ja '53

Ohio authorities refute arguments of Motors insurance co. Nat Underw 56:1 N 27 '52

Ohio licensing law decision excites legislative fancies; Supreme court action may breed efforts to copy Buckeye statute. Nat Underw 56:2 O 23 '52

Supreme court dismisses appeal of Motors against Ohio license ruling. East Underw 53:22 O 17 '52

Commissions

Clarify story of auto commission cut in Canada. G. B. Kenney. Nat Underw 57:23 Mr 12 '53

Keep eyes on Canadian commission fight. Nat Underw 57:1+ My 7 '53

Warning on auto commissions. H. Stewart. Nat Underw 57:1+ Mr 19 '53

Assigned risks

Assigned risk loss ratios reported for 42 states. Spectator 161:111 Ap '53

Auto assigned risk plan held threat to producer. P. Richenburg. Weekly Underw 168:208 Ja 17 '53

Big spurt in N.Y. in assigned auto risks in 1952. Nat Underw 57:16 Ap 2 '53

California commissioner issues assigned risk plan changes. Weekly Underw 167:1351 N 22 '52

Massachusetts motorists jam offices to get in assigned risk plan. Nat Underw 57:1 Ja 15 '53

Non-resident G.I.s in Georgia may now be insured under assigned risk plan there. Nat Underw 57:20 Je 25 '53

Paper work curbs appetite for Wisconsin young driver plan; opposition arises to making assigned risk change elsewhere. Nat Underw 56:25 O 30 '52

Too many auto assigned risks. S. Southall. East Underw 53:43 N 21 '52

Underwriting results given by Bureau on automobile assigned risk plans; tabulation. East Underw 54:46 F 27 '53

Binders

See Insurance—Binders

Cancellation

Court holds Virginia assured cancelled coverage too soon. Weekly Underw 168:469 F 14 '53

Pitfalls of incorrect policy cancellation. T. H. Bivin. Rough Notes 96:22+ Mr '53

Claim costs

Cut those claim costs! analysis of independent appraisal plan. R. J. Haupt. Spectator 161:36+ F '53

Compulsory liability

Agents continue to meet competition in auto insurance with words; to ask insurers for positive plan to meet compulsory threat. K. Force. Nat Underw 57:1+ My 7 '53

American mutual alliance for Dewey compulsory bill. Nat Underw 57:1+ Mr 5 '53

Asks companies to help more in meeting compulsory auto threat. A. C. Deisseroth. East Underw 54:20+ My 8 '53

Auto liability may be compulsory in New York. Bsns W p 114+ Ja 17 '53

Bar committee asks hearings on compulsory bill. Nat Underw 57:1 Mr 5 '53

Big battle looms on N.Y. compulsory bills. East Underw 54:35+ F 20 '53

Bohlinger and Murphy release views on pros and cons of compulsory bill. East Underw 54:36+ F 27 '53; Same. Nat Underw 57:1+ F 26 '53

C.&S. association opposes Governor Dewey's auto plan. M. W. Heard. East Underw 54:37 Ja 16 '53; Same. Weekly Underw 168:208+ Ja 17 '53

Coast insurance group questions Brown's stand. Weekly Underw 168:954+ Ap 4 '53

Compulsory auto cover and cash sickness measures introduced in Pennsylvania. Weekly Underw 168:507 F 21 '53

Compulsory auto fails, Governor Dewey denounces insurers. Nat Underw 57:1+ Mr 26 '53

Compulsory auto insurance endorsed by Bohlinger. Weekly Underw 168:566 F 28 '53

Compulsory bill foes in New York take some heart. Nat Underw 57:1 Mr 12 '53

Compulsory insurance on New York cars? Bsns W p67-8 F 21 '53

Defends dual interest of public and industry. M. W. Heard. East Underw 54:28, 52 My 8 '53; Same. Weekly Underw 168:1231+ My 2 '53

Dewey comes out for compulsory auto; careful driver plan. Nat Underw 57:19-20 Ja 8 '53

Dewey compulsory bill in New York has novel feature. Nat Underw 57:38 F 12 '53

Dewey goes all out for compulsory bill; dismisses argument against. Nat Underw 57:1+ F 19 '53

Dewey holds key to outcome of compulsory bill. Nat Underw 57:31 F 5 '53

Dewey loses fight for compulsory auto law. East Underw 54:43 Mr 27 '53

INSURANCE, Automobile—Compulsory liability—*Continued*

Effects of compulsory coverage. C. F. J. Harrington. Weekly Underw 168:726 Mr 14 '53

Encouragement for opponents of compulsory in New York. Nat Underw 57:23+ Ja 29 '53

Fight on compulsory auto now shaping up in New York. Nat Underw 57:23+ Ja 15 '53

How Norwegian compulsory auto liability insurance plan operates. L. O. Os. Nat Underw 57:4 Mr 5 '53

Massachusetts compulsory act black. T. A. White. Nat Underw 57:34 Mr 5 '53

Must we be forced to buy insurance? J. Robinson. Spectator 161:35+ Mr '53

N.Y. agents call for positive program to stop compulsory insurance. East Underw 54:1+ My 8 '53

N.Y. agents gird for compulsory auto issue showdown. Nat Underw 57:2, 6 My 7 '53

New York auto bill would follow European system. Nat Underw 57:9 F 19 '53

New York city bar association acts in compulsory tussle; Mutual agents association opposes Dewey's bills; Mutual group in favor of mandatory auto bill. East Underw 54:38-9 Mr 6 '53

New York compulsory bill is introduced. Weekly Underw 168:505+ F 21 '53

New York dilemma; editorial. Nat Underw 57:16 Ja 8 '53

Plan to offset compulsory bill. A. C. Stevens. East Underw 54:29 Ja 30 '53

Predict rough sledding for Dewey auto program. East Underw 54:31+ Ja 16 '53

Producers in opposition to compulsory measure. East Underw 54:36 Mr 13 '53

Producers strongly oppose compulsory auto coverage. Weekly Underw 168:151 Ja 10 '53

Reaction to Chronicle article quick and sharp. Nat Underw 57:16 Ap 2 '53

Scouts agents' fears on compulsory cover. J. F. Murphy. Nat Underw 57:2+ Ap 23 '53

Statement on compulsory auto bill. J. S. Miller. East Underw 54:28+ Mr 6 '53

Stock, mutual companies battle over auto measure. Weekly Underw 168:634 Mr 7 '53

Suggests program as an alternate to compulsory. Nat Underw 57:14 F 5 '53

War against New York compulsory cover seems to be won. K. O. Force. Nat Underw 57:1+ Mr 19 '53

Coverage

Automatic coverage for newly acquired auto. Spectator 161:67 Ap '53

Do you understand the auto liability policy. W. H. Brewster. Rough Notes 96:20-1+ Mr '53

Losses not covered by auto comprehensive material damage. H. A. Kochendorfer. il Rough Notes 96:19-20+ F '53

Dealers' policies

Bad auto titles. Bsns W p 147 Ap 25 '53

Kansas City reciprocal quits Ohio auto dealers connections. Nat Underw 56:1 D 4 '52; Discussion. 56:25 D 18 '52

New auto exclusion clause interpreted. Nat Underw 56:8 D 11 '52

Study of automobile dealer's open policy exclusion (d). H. A. Kochendorfer. East Underw 53:23 D 26 '52

Driver insurance proposal

N.A.I.C. hearing at Boston; insurers to study idea of covering driver, not auto. Nat Underw 56:21+ O 23 '52

Excess limits

Decision on excess auto policy holds for Excess insurer on late notice. Nat Underw 56:21 D 4 '52

N.Y. excess line brokers still are throwing curves. W. E. Brooks. Nat Underw 56:24 D 4 '52

Finance

1952 automobile and ocean marine net premiums written, losses paid, New York state; tabulation. East Underw 54:34+ Mr 13 '53

State Farm Mutual auto has big premium gains. East Underw 54:40 Mr 6 '53

Financed automobiles

Bohlinger regulation to give added protection; purchasers of automobiles or other personal property will benefit. Weekly Underw 167:1418 N 29 '52; Nat Underw 56:2 N 27 '52; Discussion. 56:13 D 18 '52

Can't require drive-other-car cover on financed cars in Washington. Nat Underw 57:10 Je 25 '53

Finance company insured is problem under financial responsibility law in Connecticut. Nat Underw 56:22 O 23 '52

New regulation 27 promulgated; applies to installment purchases. East Underw 53:26 N 28 '52

No slip-ups in this insurance program; master policy for auto loans. C. R. Waldron. Bankers Mo 69:62-4+ S '52

Financial responsibility laws

Chart of Canadian automobile security laws; tabulated by states. Rough Notes 96:102 Mr '53

Finance company insured is problem under financial responsibility law in Connecticut. Nat Underw 56:22 O 23 '52

New Jersey auto security law explained. G. Eichler. East Underw 54:38 Mr 13 '53

See also

Automobile laws and regulations—Financial responsibility laws

Fleet coverage

See also

Insurance, Automobile—Rates—Fleet rates

Fraudulent claims

Fraud ring operators expertly run down by Association claims bureau. Weekly Underw 168:1776 Je 27 '53

Fraudulent statements

How to rescind policy procured by misrepresentation. C. MacGregor. Nat Underw 57:11 Je 11 '53

Losses

How to keep your auto loss ratio down. H. A. Lansman. il Rough Notes 96:38+ F '53

Policies

Auto comprehensive liability builds goodwill for this agency. J. C. Morgan. Rough Notes 96:27+ Mr '53

Best auto liability cover. P. H. Midyette. Rough Notes 96:21+ My '53

Reduction in operating costs is accomplished through policy design. Nat Underw 56:5 D 4 '52

Six-month auto policy is winning converts today. Nat Underw 56:27 D 18 '52

Stamping auto policy to show absence of BI cover is causing problems. Nat Underw 57:4 Mr 12 '53

Deductible clauses

Holds wording of deductible clause for auto risks develops inequities. B. G. Werbel. East Underw 54:26 Ja 16 '53; Same. Weekly Underw 168:196 Ja 17 '53

Preventive work

Aetna C.&S. Drivotrainer. il East Underw 54:21 F 27 '53; Same abr. Weekly Underw 168:586+ F 28 '53

Aetna Drivotrainer. P. B. Cullen. East Underw 53:34 D 5 '52

Agents have the best chance to improve auto safety. A. C. Leslie. Rough Notes 96:42+ F '53

Agents promoting highway safety from coast to coast. Nat Underw 57:13 Je 11 '53

Agents' stake in traffic safety. East Underw 54:45 Mr 27 '53

Drivotrainer. P. B. Cullen. East Underw 54:27 Je 26 '53; Same. Weekly Underw 168:1764 Je 27 '53

How Oklahoma City agents promote safe driving. S. D. Whitehurst. Rough Notes 96:44 F '53

In Brooklyn, pupils drive in school, safely; Aetna loans Drivotrainers for use in schools. J. Robinson. il Spectator 161:34 Ap '53

INSURANCE, Automobile—Preventive work—*Continued*

Michigan agents' group plans accident prevention drive. Nat Underw 56:28 O 23 '52

New York agents launch traffic safety drive. East Underw 53:30 O 17 '52

New York highway safety plan outlined. Weekly Underw 168:249+ Ja 24 '53; Excerpts. Nat Underw 57:27 Ja 29 '53

Seven New York cities ask highway safety aid; industry committee on motor vehicle accidents will analyze community needs. East Underw 54:41 My 15 '53

Use of motor cars creates huge problem. J. D. Dorsett. Weekly Underw 168:64+ Ja 3 '53

Prospects

Agency service depends on the company you represent. H. M. Finch. Rough Notes 96:25-6 Mr '53

How we find new customers. W. E. McDowell. il Rough Notes 96:23-4+ Mr '53

Rates

Agency insurers eye finer auto BI, PDL classes. Nat Underw 57:1+ Ap 9 '53

Application to reduce New Jersey auto rates denied. East Underw 53:28+ D 5 '52; Same. Nat Underw 56:17 D 4 '52; Same abr. Weekly Underw 167:1511 D 6 '52

Auto insurance situation. W. Leslie. East Underw 54:21+ Ja 2 '53

Blames rate laws for auto market stench. W. C. Searl. Nat Underw 56:11 N 20 '52

Can't cut Wisconsin auto rates, agents told. Nat Underw 57:4+ My 21 '53

Cincinnati agents ask auto rate relief. Nat Underw 57:13 My 14 '53

Insurers get half what they say they need in Bay state. Nat Underw 56:21+ D 4 '52

Judge after agent on ad linking verdicts to rates. Nat Underw 57:15 Ja 1 '53

Massachusetts auto rates to be 18.5 per cent higher in '53. East Underw 53:28+ D 5; 37 D 19 '52

Mutuals revise more rates. East Underw 54:53 My 8 '53

National Bureau back on Dec. 15 auto liability schedule. Nat Underw 57:27 F 5 '53

National Bureau reinstates Oklahoma automobile rates. Weekly Underw 168:405 F 7 '53

New Massachusetts auto property damage rates announced. Nat Underw 56:21 D 18 '52

1952 auto rates reinstated in Okla. East Underw 54:50 F 13 '53

North Carolina auto rate increases go into effect. Nat Underw 56:17 N 27 '52

Ohio auto rates revised. East Underw 54:38 Ja 23 '53; Nat Underw 57:26 Ja 22 '53

Oklahoma auto rate increase is nullified. Nat Underw 57:25 Ja 22 '53

Pennsylvania auto rate revisions effective. Nat Underw 56:10 N 20 '52

Stevens point makes deep cut for prime auto risks. Nat Underw 57:24 Ja 15 '53

Tennessee auto rates revised. East Underw 54:27 Ja 9 '53

Where are automobile rates going? J. H. Cahill. Spectator 161:32-3+ Ap '53

See also

Insurance, Automobile—Rating plans

Fleet rates

Day wins appeal holding fleet rates must be given to common management. Nat Underw 56:7-8 N 20 '52

North Carolina court reverses fleet ruling. Weekly Underw 168:874 Mr 28 '53

Rating plans

American Mutual Alliance members no longer are staying put. Nat Underw 57:28 Ja 22 '53

Auto rating, classification gets what-for at Midwestern statistical meeting, Chicago. Nat Underw 57:7+ My 28 '53

Driver classification plan fails of approval by joint industry committee. J. M. Muir. Weekly Underw 168:1614-15, 1617 Je 13 '53

Driver demerit plan proposed in Bay state. East Underw 54:38 Ja 23 '53

Inequities in auto rating outlined; solution suggested. Nat Underw 57:12, 24 F 26 '53

Insurers back Herter's demerit plan in Massachusetts. Nat Underw 57:3 F 26 '53

Liberty Mutual's merit rating plan for accident-free California risks. East Underw 53:36 D 19 '52; Nat Underw 56:31 D 18 '52

Merit system for insurance in Massachusetts. Bsns W p 124+ Jl 25 '53

Meritplan authorized in California. East Underw 54:41 My 1 '53; Weekly Underw 168:1292 My 9 '53

Mutual rating bureau announces rule changes. Weekly Underw 168:1553+ Je 6 '53

Mutuals adopt Allstate's auto rating distinctions. Nat Underw 57:1+ Ap 16 '53

Mutuals to lower auto rates in 11 states. East Underw 54:40+ Ap 17 '53; Same abr. Weekly Underw 168:1097 Ap 18 '53

NAUA Oklahoma filing calls for 2.6 per cent less on new rate formula. Nat Underw 57:14 Je 11 '53

New approach to auto rating urged. R. L. Braddock. Nat Underw 57:23+ Ja 29 '53

What you need to know to use retrospective rating plan D. R. H. Butler. Rough Notes 96:46+ F '53

Reinsurance

Large losses in auto liability field. W. W. Greene. East Underw 54:32 Ap 24 '53

Risks

House trailer risk demands new attention. Nat Underw 57:8 Ja 1 '53

See also

Insurance, Automobile—Assigned risks

Statistics

Motor vehicle registrations and insurance records by states and regions in 1951; table. Spectator 160:41 N '52

Unsatisfied judgment funds

Motor vehicle officer probes judgment fund. V. F. Veness. East Underw 53:29 O 31 '52

Unsatisfied judgment fund favored; answer to clamor for compulsory laws. R. L. Inglis. East Underw 54:46 My 15 '53

UJF issue is hotly debated at N.A.I.I. rally. Nat Underw 56:23+ N 27 '52

Canada

Allstate's program in Canada is creating stir. Nat Underw 57:23 Mr 19 '53

Chart of Canadian automobile security laws; tabulated by states. Rough Notes 96:102 Mr '53

Keep eyes on Canadian commission fight. Nat Underw 57:1+ My 7 '53

Safe driver plan is decided upon for Canada. Nat Underw 56:19 D 11 '52

France

France has government fund for victims of motor vehicle accidents. M. Picard. Nat Underw 57:11+ Je 18 '53

Illinois

Auto panel features Chicago Insurance day. East Underw 54:41 My 1 '53

Massachusetts

Auto situation becomes tense in Massachusetts. East Underw 53:37 O 17 '52

Critical situation on auto dominates Massachusetts agents Boston convention. Nat Underw 56:1+ O 23; 2+ O 30 '52

Insurers get half what they say they need in Bay state. Nat Underw 56:21+ D 4 '52

Insurers tell their plight to public; news release cites four-year loss of $25 million on compulsory. Nat Underw 56:23+ O 30 '52

Massachusetts auto rates to be 18.5 per cent higher '53. East Underw 53:28+ D 5; 37 D 19 '52

Massachusetts compulsory act black. T. A. White. Nat Underw 57:34 Mr 5 '53

New Massachusetts auto property damage rates announced. Nat Underw 56:21 D 18 '52

Plan for voluntary renewal of Massachusetts auto lines gets OK. Nat Underw 56:35 D 18 '52

New Jersey

Application to reduce New Jersey auto rates denied. East Underw 53:28+ D 5 '52; Same. Nat Underw 56:17 D 4 '52; Same abr. Weekly Underw 167:1511 D 6 '52

INSURANCE, Automobile—New Jersey—*Cont.*

Auto competition. T. O. Carlson. Nat Underw 57:9 Ap 2 '53

Jersey agents support new motor vehicle laws. Weekly Underw 168:1015 Ap 11 '53

New Jersey commissioner ouster asked in auto rate fight. Nat Underw 56:1 O 30 '52; Same. Nat Underw (Life ed) 56:1 O 31 '52

New York (state)

Big battle looms on N.Y. compulsory bills. East Underw 54:35+ F 20 '53

Governor Dewey meets with 13 insurance leaders. East Underw 54:28+ Ja 9 '53

New auto liability program for '53 urged in Dewey's legislative message. East Underw 54:29 Ja 9 '53

Views on proposed auto legislation for New York. W. S. Hults, jr. East Underw 54:36 F 20 '53

North Carolina

Trend factor, split in under-25 class, debated in North Carolina. Nat Underw 56:26+ N 13 '52

Norway

How Norwegian compulsory auto liability insurance plan operates. L. O. Os. Nat Underw 57:4 Mr 5 '53

Ohio

Lausche puts his finger on auto business in Ohio. Nat Underw 57:9 Je 18 '53

Texas

Put kibosh on slick Texas scheme of auto dealers to escape licensing as agents. Nat Underw 57:27 My 14 '53

Virginia

Age group classification plan strongly urged in Virginia. Nat Underw 56:25 O 16 '52

Auto classification plan at last gets OK in Virginia. Nat Underw 56:30 N 13 '52

Wisconsin

Paper work curbs appetite for Wisconsin young driver plan; opposition arises to making assigned risk change elsewhere. Nat Underw 56:25 O 30 '52

INSURANCE, Aviation

Aircraft casualty statistics for second half of 1952 held to be favorable. C. Christensen. Weekly Underw 168:326+ Ja 31 '53

Airline ticket policy competition becomes intense. Nat Underw 56:20 D 11 '52

Aviation now established on firm basis. W. H. Rodda. Weekly Underw 168:40-1 Ja 3 '53

CAB declines to make insurance regulations. East Underw 54:42 Je 19 '53

Lloyds loses contest over air loss in Florida. Nat Underw 57:11 Ap 16 '53

National association of insurance buyers meeting, New York; insuring aircraft. J. Cozzie. East Underw 54:37 My 1 '53; Same abr. Nat Underw 57:23 My 7 '53

Suggestions to aid aviation risks. A. G. Lamplugh. East Underw 54:44+ Ap 10 '53

See also

Insurance, Accident
—Aviation risks

Adjustment of claims

Compliments jury on small verdict in favor of Jane Froman singer, and of Gypsy Markos, dancer, against Pan American airways. Nat Underw 57:10 Ap 2 '53

Finance

Good risks; report by New York department indicates aviation insurance profitable; with table by lines, 1946-1950. Aviation W 57:85+ O 13 '52

Financial responsibility laws

New CAB proposal also draws fire. Nat Underw 57:5 Ja 29 '53

Losses

Hold Eastern liable in big air crash. Nat Underw 57:2 Mr 19 '53

Holds government is jointly liable in big Eastern air crash. Nat Underw 57:21 My 14 '53

Policies

See also

Insurance, Accident
—Aviation risks

Prospects

Have you ever tried to sell aviation insurance? C. G. Smith. Rough Notes 96:36 Mr '53

INSURANCE, Bailees' customers

Bailment contract and premium dollars. S. O. McLean. Weekly Underw 167:1054 O 18 '52

See also

Insurance, Furriers' customers

INSURANCE, Boiler

Boiler and machinery experience is better. L. B. Brainerd. Weekly Underw 168:70+ Ja 3 '53

Boiler and machinery policy analysis. Rough Notes 96:103-4 My '53

INSURANCE, Builders' risk

Many rule book changes introduced in Indiana; business interruption and builders' risk forms are revised. Nat Underw 56:1+ O 23 '52

INSURANCE, Burglary

Sell open stock burglary with a good loss ratio. W. J. Seiler. Rough Notes 95:20-1+ D '52

Adjustment of claims

Burglary policy held unambiguous in Colorado Supreme court case. Weekly Underw 168:1119 Ap 18 '53

What constitutes forcible entry evidence? H. S. Daynard. Weekly Underw 168:1350-2 My 16 '53; Excerpt. East Underw 54:34 My 1 '53

INSURANCE, Burial

BBB funeral cover treatment has direct mail use for agents. Nat Underw (Life ed) 57:9 F 20 '53

INSURANCE, Business

Business cases not so tough; accountant transformed from feared ogre to valued ally. D. Marks, jr. Nat Underw (Life ed) 57:13 My 15 '53

Business life insurance. R. W. Osler. Rough Notes 96:70-1 Mr '53

Business life insurance and the law. D. J. Reidy. Credit & Fin Management 54:22-3+ O '52

Cites sound insurance program; business solvency in event of disaster requires adequate coverage. R. S. Bass. Weekly Underw 168:1747+ Je 27 '53

Continuation plans. R. A. Brown. Life Ins Courant 58:18-19 Mr '53

Firms too small for group seen as best field for $5,000 tax-free death benefit. D. B. Maduro. Nat Underw (Life ed) 57:20 Je 19 '53

Hidden treasures in business life insurance. S. L. Zeigen. Nat Underw (Life ed) 56:12 N 28 '52

Insurance phases of buy-sell agreements. A. R. Kimbrough. Trusts & Estates 91:672-3 S '52

Key man insurance. R. W. Osler. Rough Notes 96:76-8 Ap '53

Keyman insurance and a funded pension plan. Life Ins Courant 58:21-2 F '53

Keyman insurance sales. J. O. Todd. East Underw 54:5+ Mr 20 '53

Not all business insurance cases are complicated by $500,000 directors. A. C. Pearson, jr. Weekly Underw 168:45+ sec 2 My 9 '53

Sole proprietor. R. W. Osler. Rough Notes 96:62+ My; 72-3 Je '53

Sole proprietorship in action. Life Ins Courant 58:27-8 My '53

Urgent need to keep business insurance boom going. H. P. Gravengaard. Nat Underw (Life ed) 57:6 Ap 3 '53

Views of business insurance. R. M. Kruh. East Underw 54:4 Mr 27 '53

Advertising

Which ad pulled best? il Ptr Ink 242:31+ Ja 30 '53

Partnership interest

Business insurance for professional people. R. T. Wright. Life Ins Courant 57:31-2 N '52

INSURANCE, Business—Partnership interest—*Continued*

How much do you know about partnership insurance? tabular summary. Life Ins Courant 57:34-6 D '52

Tax ruling sharpens rule on business insurance deductions. Nat Underw (Life ed) 57:27 Je 19 '53

Stock liquidation agreements

Buy and sell agreements. C. W. Tye. Rough Notes 96:52+ Mr '53

Stock redemption and taxability of premiums. M. D. Wilson. Trusts & Estates 92:48-9 Ja '53

Stockholder's agreements. C. W. Tye. Rough Notes 95:58+ N '52

Tax problems

Are you suffering from a case of Emeloiditis? F. L. Morton. Spectator 160:112+ N '52

Business-estate planning; plans given impetus by tax laws. E. J. Mintz. Trusts & Estates 92:112+ Ja '53

Government giveth; amended Section 115(g). T. S. Morse. Life Ins Courant 57:38-9 D '52

Insurance proceeds excludible from gross estate. F. L. Morton. Spectator 161:67-9 Je '53

Taxation

Concerning the taxation of business insurance; Desks, inc. v. Commissioner. F. L. Morton. Spectator 160:72+ O '52

Tax ruling sharpens rule on business insurance deductions. Nat Underw (Life ed) 57: 27 Je 19 '53

INSURANCE, Business interruption. See Insurance, Use and occupancy

INSURANCE, Casualty

Casualty actuarial society mid-year meeting, Chicago; abstracts of talks. Nat Underw 57:4+ My 28 '53

Casualty executives are keen for results. E. A. Larner. Weekly Underw 168:59-60 Ja 3 '53

Casualty insurers, new in fire field, having problems. Nat Underw 57:26 F 12 '53

Eastern agents conference casualty and surety forum, Philadelphia. East Underw 54:23+ Ap 24 '53

Gives hope that turning point in casualty market is near; abstracts. A. J. Bohlinger. East Underw 53:22 N 28 '52; Nat Underw 56:21 N 27 '52

How to give your casualty customer his money's worth. J. N. Sewell. Rough Notes 96;17-18+ Ap '53

Insurance trends. J. S. Kemper. East Underw 54:35+ Ja 16 '53

Mutual men talk over casualty underwriting woes; conference of Mutual casualty companies. Nat Underw 57:15 Mr 26 '53

New technical and advisory services of Casualty and surety association. M. J. Pitre. East Underw 54:30 My 29 '53

1952 revealed many changes, some progress and a few mistakes. C. G. Hale. Spectator 161:14-21 Ja '53

Settle $6 million suit against 66 casualty insurers. Nat Underw 57:13 Je 4 '53

Trends in the property-casualty insurance field. R. L. Braddock. East Underw 54:26+ Ja 30 '53

Warning on wide open type comparative negligence law. W. J. Palmer. Nat Underw 57: 26-7+ Mr 19 '53

See also

Insurance, Accident
Insurance, Automobile
Insurance, Aviation
Insurance, Boiler
Insurance, Burglary
Insurance, Glass
Insurance, Hail
Insurance, Liability
Insurance, Machinery
Insurance, Motor truck
Insurance, Surety and fidelity
Insurance, Tornado
Insurance, Valuable papers
Insurance, Workmen's compensation

also Association of casualty and surety companies; Casualty actuarial society; National bureau of casualty underwriters

Accounting

Casualty actuaries hear talk on rate-making practices; statistical plan development. T. O. Carlson. East Underw 54:28 My 29 '53

Casualty profit and cost report is received. Nat Underw 56:23+ D 18 '52

Reaffirms position on casualty profit factor; NAIC subcommittee reports. East Underw 53:89 D 12 '52

Adjustment of claims

Economic and social dangers in high claims, awards analyzed. C. M. Smith. Weekly Underw 168:1487+ My 30 '53

New York commerce committee reports on court congestion. Nat Underw 57:21 Mr 12 '53

Suggests major change in injury cases; abstracts. D. W. Peck. East Underw 54:35+ F 13 '53; Nat Underw 57:24 F 12 '53

Finance

Annual report for Fidelity & Deposit. East Underw 54:35 F 20 '53

Casualty companies made over-all profit in '52. East Underw 54:33 Je 12 '53; Same. Spectator 161:21+ Je '53; Same. Weekly Underw 168:1622+ Je 13 '53

Casualty companies on comeback trail. Nat Underw 57:31 My 7 '53

Casualty direct premiums and incurred losses in 1952 in Illinois; tabulation. Nat Underw 57:23-5 Ap 9 '53

Casualty insurance; earnings recovery is expected to continue into 1954. R. Chaut. Barron's 33:15-16 Ja 26 '53

Casualty premiums pass $7 billion, Argus chart shows, 1952. Nat Underw 57:2+ Je 11 '53

Early returns from financial statements of stock fire and casualty companies for 1952; tabulation. Spectator 161:106, 108 My '53

Insurers are again studying need for new capital. S. C. Davis. Nat Underw 57:2 Mr 12 '53

Market for added casualty capital is much improved. Nat Underw 57:2 Je 4 '53

New highs are recorded by Continental Casualty. Weekly Underw 168:461 F 14 '53

1951 underwriting and investment profits and losses for 150 stock and 25 mutual casualty companies; with table. Spectator 160:31-2, 34-5 N '52

Returns from financial statements of mutual fire and casualty companies for 1952; table. Spectator 161:74-6 Mr '53

Underwriting and investment profits and losses of 100 stock casualty companies in decade, 1942-1951; table. Spectator (Endorsement no 1952-1953) 160:15-16 D '52

Underwriting profit up for U.S. guarantee. East Underw 54:38 Mr 20 '53

Fraudulent claims

Former professional claimant reveals tricks of trade to Dallas group. Nat Underw 57: 18-19 Je 11 '53

Investments

Dilemma of fire and casualty companies. S. C. Davis. Comm & Fin Chr 176:1727+ N 6 '52

Stock fire and casualty companies' security holdings; with tables and charts. W. M. Montgomery. Spectator 160:46-9 N '52

Preventive work

American-Associated group campaigns for Mr Safety in each community. East Underw 53:38 N 7 '52

Industry group offers traffic aid to New York cities. Nat Underw 57:23 F 12 '53

Loss prevention as a factor in insurance costs. W. K. Ousley. Weekly Underw 167: 1446-7 N 29 '52

Publicity

New service office is opened in California; Western insurance information service formed by casualty companies. East Underw 53:30 O 31 '52

Rates

Appeals for fair casualty rates; abstracts. J. D. Dorsett. Weekly Underw 167:1001+ O 18 '52; East Underw 53:31 O 17 '52; Nat Underw 56:25+ O 16 '52

Profit dilemma. Spectator 160:122 N '52

Reinsurance

Casualty reinsurers cautiously optimistic. Nat Underw 56:32 D 25 '52

INSURANCE, Casualty—Reinsurance—*Cont.*

Nature and uses of excess of loss treaties in fire and casualty. J. A. Diemand, jr. Nat Underw 56:26+ D 25 '52

Opinion divided on swing plan but use of it is increasing. Nat Underw 56:29 D 25 '52

Statistics

Mutual casualty volume achieves record high. L. A. Fitzgerald. East Underw 54:26 Ja 2 '53

See also

Insurance, Casualty —Finance

INSURANCE, Commissions. See Insurance, Selling agents' commissions

INSURANCE, Contractors' liability

Exclusion clause construed in involved New York case; Standard surety & casualty co. of N.Y. v. Maryland casualty co. Weekly Underw 168:1383 My 16 '53

Necessity of specifying detached employes in liability policy weighed. Nat Underw 57:23 F 5 '53

Unfinished roof leakage termed as accident. Nat Underw 57:36 Ja 22 '53

INSURANCE, Contractual liability

Contractual and assumed liability; panel discussion; abstracts. C. B. Conklin and others. East Underw 53:40+ N 21 '52; Nat Underw 56:27+ N 20 '52; Weekly Underw 167:1441-2+ N 29 '52

Several phases of contractual liability and relations to agreements. D. L. Wentz. Weekly Underw 168:886-7, 955-6 Mr 28-Ap 4 '53

INSURANCE, Cotton

War insurance may bolster cotton exports. Nat Underw 57:18 My 7 '53

INSURANCE, Credit

Credit A.&H. benefits borrowers, not lenders. A. J. Cade. Nat Underw 57:15 F 19 '53; Same. Nat Underw (Life ed) 57:10 F 20 '53

Group creditor insurance. A. J. Cade. East Underw 54:48+ F 13 '53

Growth of credit insurance. Economist 167:379-80 My 9 '53

See also

Insurance, Accident —Credit aspects

Insurance, Life—Credit aspects

INSURANCE, Crop. See Insurance, Agricultural

INSURANCE, Deferred payment merchandize

Hearing held on New York revision of regulation 27. Nat Underw 56:1 O 30 '52

New amendment to New York's regulation 27; with full text. East Underw 53:29+ O 17 '52

New regulation 27 promulgated; applies to installment purchases. East Underw 53:26 N 28 '52; Weekly Underw 167:1418 N 29 '52

Revise installment sales insurance proposal in New York. Nat Underw 56:28 O 16 '52; Same. Nat Underw (Life ed) 56:11 O 17 '52

INSURANCE, Disability

Cash sickness insurance bill due in Pennsylvania. Weekly Underw 168:438-9 F 14 '53

Compulsory auto cover and cash sickness measures introduced in Pennsylvania. Weekly Underw 168:507 F 21 '53

Disability benefits law tax ruling reversed; payments by employers for employees' share of cost. Weekly Underw 168:1432 My 23 '53

Disability benefits legislation making little headway. Nat Underw 57:2 Mr 19 '53

Draft cash sickness bill for Connecticut. Nat Underw (Life ed) 57:9 F 13 '53; Weekly Underw 168:378-9 F 7 '53

Propose three-way compulsory disability plan in Michigan. Nat Underw 57:8 F 5 '53

Royal-Liverpool offers six new disability forms. Weekly Underw 168:1010 Ap 11 '53

Seeks joint program in disability field; two letters to W. C. North. J. G. Galloway. East Underw 53:36 O 24 '52

State disability bills find tough going in '53 legislatures. Nat Underw 57:13 My 21 '53; Same. Nat Underw (Life ed) 57:4 My 22 '53

State legislatures were cautious on cash sickness proposals. East Underw 54:34-5 Je 5 '53

See also

Insurance, Accident

Insurance, Health

Insurance, Life—Disability provisions

Adjustment of claims

Insured hit by propeller. L. A. Burke. Spectator 161:30+ F '53

Excess limits

Plan for A.&H. excess limits. C. T. Esterby. East Underw 54:30 Ja 30 '53

Policies

A.&H. on installment sales; deferred payment disability. H. O. Moliter. Rough Notes 96:66-7 My '53

Rates

Reduction in DBL rates not expected to hurt market. Nat Underw 57:17 My 14 '53; Same. Nat Underw (Life ed) 57:9 My 15 '53

Study and teaching

Huebner foundation sponsors lectures on disability cover. Weekly Underw 168:282 Ja 24 '53

Taxation

Self-insured disability payments not tax exempt. Nat Underw 57:28 Ja 22 '53; Same. Nat Underw (Life ed) 57:20 Ja 23 '53

When is self-insured plan not an insurance plan. Nat Underw (Life ed) 56:6 N 28 '52

New Jersey

Companies must furnish data under Jersey regulation. Weekly Underw 168:1241 My 2 '53

Decision reserved in test of private insurance part in New Jersey TDB law; suit brought by New Jersey state federation of labor. Nat Underw 56:18 O 23 '52; Same. Nat Underw (Life ed) 56:6 O 24 '52

Existing plans about gone in New Jersey; private plans grow. Nat Underw (Life ed) 56:10-11 D 5 '52

New York (state)

Lauds N.Y. disability benefits law. M. Donlon. East Underw 53:39 N 7 '52

INSURANCE, Employers' liability

See also

Insurance, Workmen's compensation

Adjustment of claims

Radium exposure claim not excluded by products clause. Nat Underw 57:35 F 12 '53

INSURANCE, Explosion

See also

Insurance, Boiler

INSURANCE, Export credit

Losses on export credits. Economist 166:378-9 F 7 '53

INSURANCE, Extra expense

Does your agency have extra expense insurance? E. Cameron. Rough Notes 96:35-6 F '53

How to write extra expense insurance. W. C. Howe, jr. Rough Notes 95:27+ N '52

INSURANCE, Farm equipment. See Insurance, Agricultural machinery

INSURANCE, Fidelity. See Insurance, Surety and fidelity

INSURANCE, Fire

Cafe and hotel fire covers. C. T. Hubbard. Rough Notes 96:23+ Je '53

Casualty insurers, new in fire field, having problems. Nat Underw 57:26 F 12 '53

Fire and failure. B. McCall. Am Mach 97:136 My 25 '53

Fire business in 1953 will be about like last year. Nat Underw 57:1+ F 5 '53

Fire insurance and allied coverages aid in maintaining corporation credit. N. H. Wentworth. Weekly Underw 168:1754+; 169:16 Je 27-Jl 4 '53

Fire insurance trends; address before Western underwriters association. M. E. Peterson. Weekly Underw 167:1016+ O 18 '52

Fire policy feature of Hudson county, N.J. insurance day. East Underw 54:25-6 F 20 '53

INSURANCE, Fire—*Continued*

Insurance is ready to meet challenges; believes costs reasonable; abstracts. J. R. Cooney. East Underw 54:1+ My 15 '53; Weekly Underw 168:1329+ My 16 '53

Protection of atom smashers from fire loss now big problem. Nat Underw 57:14 F 19 '53; Same. East Underw 54:33 Mr 13 '53

Sees 1952 yielding best underwriting results since 1949. E. H. Ripple, 3d. East Underw 53:1+ D 26 '52; Same. Weekly Underw 168:12+ Ja 3 '53

Special precautions set up by assured to meet drought hazard. Nat Underw 57:10 Ja 8 '53

Term discounts, rate wars go back many decades. J. R. Maloney. East Underw 54:28 F 13 '53

Union Reinsurance will write fire lines in U.S.A. Weekly Underw 168:149 Ja 10 '53

See also

Firemarks

Insurance, Builders' risk

Insurance, Cotton

Insurance, Use and occupancy

also Factory insurance association; Fire underwriters association of the Pacific; National board of fire underwriters

Accounting

NAIC accounting and rates groups to meet. East Underw 54:34 Ap 3 '53

Adjustment of claims

Award of special damages held unwarranted in Michigan fire case. Weekly Underw 168:976 Ap 4 '53

Court upholds service on non-admitted companies; fire loss at Bretton Woods hotel. East Underw 54:27 My 8 '53

Economical employment of adjusters. G. L. Scott. Weekly Underw 167:1471, 1539-40, 1613 N 29-D 13 '52; Same cond. East Underw 53:36-7 N 21 '52; Abstract. Nat Underw 56:14 N 27 '52

Fire apportionments, non-concurrencies in adjusting. W. T. Murphy. East Underw 54:26 F 20 '53

How much will your customer collect? limiting clauses in your customer's policies. A. C. Guy. Rough Notes 96:40+ My '53

Increase of hazard; Goldman v. Piedmont fire insurance co., et al. L. A. Burke. Spectator 160:118 N '52

Insurance companies win on directed verdict against action brought by Wearever upholstery and furniture corp. Weekly Underw 168:1732 Je 27 '53

Mortgage claim survives; Western National must pay on restaurant loss. Nat Underw 57:38 My 7 '53

National Board loss office in Philadelphia. East Underw 54:22 Ja 23 '53; Same. Nat Underw 57:6 Ja 22 '53; Same. Weekly Underw 168:249+ Ja 24 '53

Novel fire case in Connecticut arouses interest among insurers; Pavano v. Western national insurance co. Weekly Underw 168:1317 My 9 '53

Ohio Supreme court construes appraisal clause against four insurers; Saba v. Homeland insurance co. of America. Weekly Underw 168:1777 Je 27 '53

Period of coverage held not extended by delayed countersignatures. Weekly Underw 168:1512 My 30 '53

Processing fire losses. E. T. Kyllo. Nat Underw 56:4 N 6 '52

Questionable fires increasing; adjusters warned to be on the alert. E. C. Niver. Nat Underw 56:5 D 11 '52

Statute of limitations held extended by 60-day period after ascertainment of loss. Weekly Underw 168:909 Mr 28 '53

U.S. Supreme court hears appeal on liability for nitrate explosion. East Underw 54:18 Ja 2 '53

Agency management

Risk analysis approach avenue to useful future in agency business. East Underw 54:32 Mr 20 '53

Window displays can bring more income to agents. D. P. Ely. East Underw 54:31 F 13 '53

Agents

Some selling ideas that add to premium income. L. E. Woodbury. East Underw 54:18 Ja 9 '53

Whitehill agency, inc., celebrating its thirtieth anniversary year. East Underw 54:20 Ja 9 '53

Commissions

Condems legal control of commissions. W. H. Bennett. East Underw 54:20+ Mr 27 '53; Abstract. Nat Underw 57:2+ Ap 2 '53

Lower commissions, more take-home pay. J. F. Crafts. Nat Underw 57:3+ Mr 12 '53

Company relations

What the company expects of its agents. M. E. Bleakley. Rough Notes 96:38+ My '53

All-risk policies

American-Associated's new homeowners dwelling cover. H. G. Kates. Rough Notes 96:68-9 F '53

Field force has vital role in promoting homeowners' policies. H. A. Miller. East Underw 53:22 D 26 '52

How homeowners' policies benefit producers as well as policyholders. T. E. Walton, jr. East Underw 53:73+ D 12 '52

New homeowners policies A and B. R. C. McCullough. East Underw 53:72+ D 12 '52

Sales appeal of all-risk dwelling hides many exclusion deficiencies. P. P. Lynch. Nat Underw 56:2+ D 4 '52

Savings banks' problems with A and B homeowners' forms discussed. Nat Underw 57:4+ F 12 '53

What do agents think of the new comprehensive homeowners policy? L. J. Parker, jr.; D. B. Kinnamon. Rough Notes 96:22-3+ My '53

Catastrophe coverage

Catastrophe loss plan explained in Minnesota. Weekly Underw 168:262 Ja 24 '53

Nature and uses of excess of loss treaties in fire and casualty. J. A. Diemand, jr. Nat Underw 56:26+ D 25 '52

Coinsurance

New waiver clause in Cook county clears arguments. Nat Underw 57:8 Ja 15 '53

Tells bank buyers of coinsurance at Savings banks insurance forum in New York. L. C. Gordon. Nat Underw 56:3 O 23 '52

Continuous policies

See Insurance, Fire—Perpetual policies

Coverage

Coverage on home furnishings usually less than required. Weekly Underw 168:364 Ja 31 '53

Do your customers want depreciation coverage? W. C. Moore. Rough Notes 96:36+ Ap '53

See also

Insurance, Fire—Policies—Extended coverage endorsements

Examiners

Fire insurance examiner. Nat Underw 57:26 F 5: 20 F 12; 20 F 19; 18 F 26; 20 Mr 5; 24 Mr 12; 20 Mr 26; 28 Ap 16; 19-20 My 7 '53

Excess of loss coverage

See Insurance, Fire—Catastrophe coverage

Extended coverage

See Insurance, Fire—Policies—Extended coverage endorsements

Farm policies

Application is the key to good agency service. J. A. McCampbell. Rough Notes 96:26+ Ap '53

Sell your farm customer adequate fire coverage; appraising farm buildings. A. Quast. Rough Notes 96:44+ Je '53

Three new farm covers for personal property. D. C. Smith. Rough Notes 96:27+ Ap '53

Finance

Better writing results shown. Weekly Underw 168:1057+ Ap 18 '53

Early returns from financial statements of stock fire and casualty companies for 1952; tabulation. Spectator 161:106, 108 My '53

INSURANCE, Fire—Finance—*Continued*

Equities tested by fire. I. U. Cobleigh. Comm & Fin Chr 176:1724 N 6 '52

Fire companies reverse trend; statistics compiled from 1952 statements of 377 stock companies. Spectator 161:33+ My '53

Fire company premiums, losses in Illinois; tabulation. Nat Underw 57:28 Ap 9 '53

Fire insurance; declining claim costs may offset lower premium rates. R. Chaut. Barron's 33:15-16 Je 15 '53

Grand premium total up nine per cent Argus chart shows. Nat Underw 57:4+ Ap 16 '53

Hartford Fire had good gains in 1952. East Underw 54:21 Mr 13 '53

London Assurance had good results in 1952. East Underw 54:26 Mr 20 '53

New Jersey 1952 fire insurance net premiums and net losses paid. East Underw 54:22 Mr 27 '53

New York fire premiums and losses and federal income tax. Nat Underw 57:34-5 Ap 2 '53

1951 underwriting and investment profits and losses for 200 stock fire and 47 mutual insurance companies; with table. Spectator 160:30-3 N '52

1952 nationwide fire insurance net premiums written, losses paid; tabulation. East Underw 54:20+ Mr 13 '53

1952 New York state fire insurance net premiums written, losses paid; table. East Underw 54:32 Mr 13 '53

Pacific fire group reports good results. East Underw 54:25 Mr 6 '53

Pearl-American group premiums at new high. East Underw 54:24 F 20 '53

Pearl assurance group makes substantial gains. Weekly Underw 168:704 Mr 14 '53

Phoenix had fine year. Weekly Underw 168: 786 Mr 21 '53

Phoenix of Hartford 1952 premiums up 15 per cent. East Underw 54:22+ F 27 '53

Returns from financial statements of mutual fire and casualty companies for 1952; table. Spectator 161:74-6 Mr '53

Royal-Liverpool insurance group underwriting experience for 1952. East Underw 54:31 F 20 '53

Travelers fire assets rise to $88,433,355. East Underw 54:25 Mr 6 '53

Underwriting and investment profits and losses of 100 stock fire companies in decade, 1942-1951; table. Spectator (Endorsement no 1952-1953) 160:14-15 D '52

Underwriting profits rise. East Underw 54: 32 Ap 3 '53

Underwriting profits were higher in 1952. East Underw 54:33 My 1 '53

Fraudulent claims

Companies win suit on N.Y. resort hotel loss. Nat Underw 57:4 F 5 '53

N.Y. court holds for insurers in action to collect $139,000 loss. East Underw 54:26 F 6 '53

Homeowner's policies

See Insurance, Fire—All-risk policies

Improvements and betterments policies

Believes new improvements and betterments form ambiguous, contradictory and inadequate. G. D. Vail, jr. Nat Underw 57: 11+ Ap 30 '53

Best way to insurance improvements and betterments. S. Spore. Rough Notes 95:32+ D '52

New England agents are cool to new rules on betterments. Nat Underw 57:20 Ja 22 '53

Instalment premiums

Payment plans ruling; Tennessee commissioner sets regulation covering producers changing companies. A. E. Northington. Weekly Underw 168:1526 Je 6 '53

Investments

Dilemma of fire and casualty companies. S. C. Davis. Comm & Fin Chr 176:1727+ N 6 '52

Stock fire and casualty companies' security holdings; with tables and charts. W. M. Montgomery. Spectator 160:46-9 N '52

Liability property damage policies

Sorry, you're not covered. W. W. McCall. Am Mach 96:158-9 N 24 '52

Losses

Another bad fire year! with table of fire losses, 1940-1952. il Spectator 161:30 Mr '53

Extended coverage net premiums written and losses paid in 1952; tabulation. East Underw 54:21 Mr 13 '53

Insured loss at Paterson $300,000. Nat Underw 57:4 F 19 '53

1952 nationwide fire insurance net premiums written, losses paid; tabulation. East Underw 54:20+ Mr 13 '53

1952 New York state fire insurance net premiums written, losses paid; table. East Underw 54:32 Mr 13 '53

$1½ million loss to insurers in box plant fire, Philadelphia. Nat Underw 57:13 Ja 29 '53

Maps

You're on the map; courtesy of Sanborn. il Bsns W p96-8+ N 15 '52

Multiple location policies

Activities in handling multiple location risks. T. D. McCarl. East Underw 54:27-8 F 6 '53

How to sell reporting forms; with review of coverage. J. W. Boutaugh and others. Rough Notes 96:25-30+ My '53

Multiple location rating plans

Expect fight on Kentucky order outlawing multiple location rating plans. Nat Underw 57:3 Ap 30 '53

Get writ against Kentucky death knell on multilocation plans. Nat Underw 57:2 My 28 '53

Kentucky hearing on multiple locations. Weekly Underw 167:1002 O 18 '52; Nat Underw 56:4 O 16 '52

Paint exclusion clause

See Insurance, Fire—Policies—Paint exclusion clause

Perpetual policies

Eyes continuous form of fire policy. W. M. Sheldon. East Underw 53:26 N 14 '52; Same abr. Nat Underw 56:5 N 13 '52

Perpetual policy looms as latest installment step; Ohio agents voice opposition. Nat Underw 56:2 N 6 '52

Policies

Effect of statutory fire form on multiple line only one phase of problem. J. R. Berry. Nat Underw 57:36 Je 11 '53

How to avoid Audit bureau criticisms. K. H. Stein. Rough Notes 96:32 Ap '53

New England adopts improvements clause. East Underw 54:29 My 1 '53

New waiver clause in Cook county clears arguments. Nat Underw 57:8 Ja 15 '53

Proposed changes in Minnesota standard fire policy sought by Commissioner Nelson. East Underw 54:17+ Ja 30 '53; Same. Weekly Underw 168:190-1 Ja 17 '53; Abstract. Nat Underw 57:8 Ja 22 '53

Right of examination under oath; refusal of policyholder to answer questions by defendant insurers constitutes breach of policy. S. A. Berger. East Underw 53:66+ D 12; 21 D 19 '52

Steps to simplify and clarify writing of fire policies. S. G. Lewis. East Underw 54:25+ F 20 '53

See also

Insurance, Fire—All-risk policies
Insurance, Fire—Farm policies
Insurance, Fire—Improvements and betterments policies
Insurance, Fire—Liability property damage policies
Insurance, Fire—Multiple location policies
Insurance, Fire—Perpetual policies
Insurance, Fire—Reporting policies
Insurance, Fire—Unearned premium policies

Deductible clauses

Are windstorm deductibles necessary? C. P. Jervey and L. S. Harvey. Spectator 161:28-9+ My '53

Wind deductible introduced in Maryland. Nat Underw 57:5 Ja 8 '53

INSURANCE, Fire—Policies—Deductible clauses —*Continued*
Withdraw proposal for $50 mandatory deductible in Arkansas. Nat Underw 57:2+ Je 25 '53

Extended coverage endorsements

Additional extended coverage. M. V. V. White. East Underw 54:22+ Ap 24 '53; Abstract. Nat Underw 57:6+ Ap 23 '53
Extended coverage net premiums written and losses paid in 1952; tabulation. East Underw 54:21 Mr 13 '53
Ice storm in New England eyed closely by insurers, loss men. Nat Underw 57:3 Ja 22 '53
National Board gets out explanation of Florida paint exclusion, deductible. Nat Underw 56:1 O 16 '52
Revisions in additional extended coverage. F. A. Meisel. East Underw 54:24 My 1 '53
Stock companies' extended coverage and windstorm loss experience, 1951 and comparisons; table. Spectator 160:40 N '52
Withdraw proposal for $50 mandatory deductible in Arkansas. Nat Underw 57:2+ Je 25 '53

Increased hazards clause

Law with relation to increased hazards under fire policy. H. Feuerstein. East Underw 54: 26+ F 20; 34 F 27 '53; Same. Weekly Underw 168:620, 686 F 28-Mr 7 '53

Paint exclusion clause

National Board gets out explanation of Florida paint exclusion, deductible. Nat Underw 56:1 O 16 '52

Policy forms

Form A for single location risks, now about universal, has serious drawbacks. Nat Underw 57:23 Je 18 '53
New Jersey's new dwelling form explained by Burke of Automobile. E. C. Burke. East Underw 54:25+ F 20 '53
Security sees more prospects for insurance on fluctuating values. East Underw 54:28 Ja 16 '53

Premium financing

New Stevens plan at installment rate. Nat Underw 57:10 Je 4 '53; East Underw 54:28 Je 5 '53; Weekly Underw 168:1474 My 30 '53

Preventive work

Nominations registered for gold medal awards; sixty-eight newspapers, radio and television stations will be weighed by judges. Weekly Underw 168:780 Mr 21 '53
Spring clean-up activities help to remove dangerous fire risks. East Underw 54:33 Mr 13 '53
Stock insurance representatives praised for town inspection work. Weekly Underw 168:856 Mr 28 '53
See also
Factory insurance association

Publicity

Key public relations activities successfully expanded during year by National board of fire underwriters. East Underw 54:28 My 15 '53

Purchasing

Personal business; check the fire insurance policy on your home. Bsns W p 127-8 N 29 '52

Rates

Briefs filed in Louisiana fracas over highly protected risk competition. Nat Underw 57:9+ Mr 26 '53
California gets broad form dwelling policy. Nat Underw 56:1+ D 4 '52
Connecticut agents protest manner in which rate changes are released. East Underw 54:24 Mr 13 '53
Connecticut reduces fire insurance rates. East Underw 54:26 Mr 6 '53
Fire rate reductions ordered in Virginia. Weekly Underw 168:516 F 21 '53
First rate changes in Maryland. East Underw 54:16 Ja 9 '53
Illinois rate reductions effective Jan. 5 to cost million. Nat Underw 56:5 D 25 '52; East Underw 54:18 Ja 9 '53
New rating system in New Hampshire. East Underw 54:21 Ja 30 '53; Nat Underw 57:7 Ja 15 '53
North Carolina rate revision, AEC adoption under advisement. Nat Underw 57:10 F 5 '53
Oppose Mutual proposal for cut in Virginia fire rates. East Underw 54:42 Mr 27 '53
Rate analysis offer helps hold present customers, gets new lines. D. W. Wilson. East Underw 54:22 Ja 9 '53
Rate reductions in California. East Underw 53:26 D 5 '52
South Carolina rates down. East Underw 54: 18 Ja 2 '53
Texas commissioners order report on deviated rate business. Weekly Underw 167: 1486 D 6 '52
Virtual standoff in Texas rate revision; more classes decreased but with less effect on premiums. Nat Underw 56:7 N 13 '52
Zone five commissioners hear plans not geared to rating systems. Nat Underw 57: 1+ Ap 9 '53
See also
Insurance, Fire—
Multiple location rating plans

Rating bureaus

Grading of municipal fire protection and its effect on fire insurance. J. A. Neale. Weekly Underw 168:45-6 Ja 3 '53
Liberalization clause extended in changes made by New York fire insurance rating organization. Nat Underw 57:10 Ja 29 '53
New Jersey rating organization changes department heads; reorganize departments. Weekly Underw 168:1272 My 9 '53
State has a hand in rate making; opinion issued following hearing brought by Arkansas Inspection and rating bureau over adjustment of fire insurance rates. J. H. Graves. Nat Underw 57:14 Ja 15 '53
See also
Pacific fire rating bureau

Reinsurance

Fire reinsurers do well in 1952; competition up. Nat Underw 56:1+ D 25 '52
Nature and uses of excess of loss treaties in fire and casualty. J. A. Diemand, jr. Nat Underw 56:26+ D 25 '52
Reinsurance problems of installment and annual renewal plans. S. H. Gamble. Nat Underw 56:11 N 13 '52

Renewal and extension plans

Miseries of annual renewal plan grow more obvious. Nat Underw 56:3+ N 13 '52
Query on obligation of agent to provide cover at renewal is surveyed. Nat Underw 57:4 Ja 15 '53; Discussion. J. E. Futerman. 57:11 F 5 '53; Reply. Nat Underw 57:19 F 19 '53

Reporting policies

Adjustments under reporting form policies. D. T. Hawkins. Weekly Underw 167:1129, 1197-8, 1268 O 25-N 8 '52
How to sell reporting forms; with review of coverage. J. W. Boutaugh and others. Rough Notes 96:25-30+ My '53

Risks

House trailer risk demands new attention. Nat Underw 57:8 Ja 1 '53
Risks of city conflagration not yet eliminated. J. A. Neale. East Underw 53:1+ D 5 '52
What plastics mean to fire underwriter. M. M. Braidech. Nat Underw 56:14 D 4 '52

Self insurance

Survey by local agents association discloses weakness of state and city funds. Weekly Underw 168:1216-17 My 2 '53

Tax problems

Some curious effects of present tax law on the need for insurance coverage. J. P. Murtagh. J Account 95:357-8 Mr '53

Underinsurance problem

Banks strongly back insurance to value. T. F. Glavey. East Underw 53:32-3 N 14 '52

INSURANCE, Fire—*Continued*

Unearned premium policies

Unearned premium insurance; coverages and forms. Spectator 161:41-2 Je '53

Valuation of property

Determination of insurable values of plant properties in insurance manager's function. A. L. Benjamin and others. Weekly Underw 168:1489+ My 30 '53

Determining actual cash values. R. P. Evans. East Underw 54:28 F 20 '53

Experts tell buyers how to appraise insurable values. A. L. Benjamin. Nat Underw 57:7 My 21 '53; Same abr. East Underw 54:28 My 22 '53

Fieldmen's appraisals can cause trouble. J. R. Hale. Rough Notes 96:44 Mr '53

Means to ascertain proper valuations for insurance. W. P. Hatch. East Underw 54:28 Je 5 '53

Sell your farm customer adequate fire coverage; appraising farm buildings. A. Quast. Rough Notes 96:44+ Je '53

War risks

Seeks congressional declaration of policy on war damage responsibility. East Underw 54:30 Mr 13 '53

California

California gets broad form dwelling policy. Nat Underw 56:1+ D 4 '52

Illinois

Illinois department fines agents and companies; violations of rating law in sale of fire insurance to university of Illinois. Nat Underw 56:7 O 23 '52

Report on Illinois insurer writing weekly premium fire and extended coverage for Negroes; Independent Mutual Fire of east St Louis. Nat Underw 56:10 O 30 '52

Louisiana

Factory insurance association, factory mutuals' activities hit by Louisiana agents. Nat Underw 57:2 Mr 5 '53

Factory insurance association, factory mutuals answer Louisiana agents' charges. Nat Underw 57:7 Mr 12 '53

New Hampshire

Break ice on term rule change in New Hampshire; three year credit ten per cent. Nat Underw 56:1 N 20 '52; East Underw 53:1+ N 21 '52

Tennessee

Bulk of Tennessee coverage cancelled with dummy agency. Weekly Underw 168:1003 Ap 11 '53

Texas

Texas fire premiums at new high figure. East Underw 54:23 F 6 '53

Wisconsin

$750,000 premiums vanish in Wisconsin fire rate revision. Nat Underw 56:8 S 13 '52

INSURANCE, Fur

Importance of bill of sale in fur, jewelry underwriting is stressed at forum. Nat Underw 57:30+ Ap 16 '53

INSURANCE, Furriers' customers

Fur storage time. W. H. Rodda. Rough Notes 96:76 My '53

Proposed amendment on furrier liability. East Underw 54:27 Ap 24 '53

INSURANCE, Glass

New angles given on plate glass coverage, hazards. Nat Underw 57:11 Ap 9 '53

There are plenty of glass insurance prospects. C. M. Boycott. Rough Notes 96:24+ My '53

INSURANCE, Group

A.&H. association group business a desirable line if properly written. P. S. Fisher. East Underw 53:42 N 7 '52

Agree on Indiana group life measure, A.&H. bill debated. Nat Underw (Life ed) 57:19 Ja 16 '53

Are insurers losing control of group. W. L. Miller. Nat Underw 57:22 F 19 '53; Same. Nat Underw (Life ed) 57:6 F 13 '53

Franchise trends show danger ahead; beware of high limits and overlapping coverage; abstracts. G. I. McDowell. East Underw 54:38+ My 22 '53; Nat Underw (Life ed) 57:9 My 22 '53

Googins, Willson outline group plan features at New York. Nat Underw (Life ed) 57:4 Ja 30 '53

Greatest factor in group's growth is inclusion demanded in union collective bargaining. W. Milliman. East Underw 54:6 My 8 '53

Group insurance developments. East Underw 54:10 Ap 17 '53

Group insurance in era of change; abstracts. R. C. Knoblock. East Underw 54:49 My 8 '53; Nat Underw (Life ed) 57:20+ My 8 '53; Nat Underw 57:5+ My 28 '53

Health and accident underwriters conference annual group insurance meeting, Chicago. East Underw 54:37-8+ F 13 '53; Nat Underw 57:29+ F 5 '53; Nat Underw (Life ed) 57:1+ F 6 '53; Weekly Underw 168:534, 607 F 21-28 '53

Health and accident underwriters conference annual group insurance meeting, Chicago; discussion of special risks. East Underw 54:42 F 20 '53

Industry pushing for prompt action on model group bill. Nat Underw (Life ed) 57:1+ F 13 '53

New group filing rules promulgated by New York department. Nat Underw 57:16 Mr 19 '53; Same. Nat Underw (Life ed) 57:3 Mr 6 '53

New rules for filing of group; text of New York state insurance department's regulations respecting group life and group A. and H. forms, rates and commissions. East Underw 54:14 Mr 13 '53

Report on group cover rise impresses midyear meeting of N.A.I.A. unit. R. E. Battles. Nat Underw 57:11 My 7 '53

See also

Insurance, Hospitalization

Agents

Commissions

Outlines bill aimed at curbing group A.&H. commissions. J. F. Murphy. Nat Underw 57:25+ Ja 22 '53; Same. Nat Underw (Life ed) 57:3+ Ja 23 '53; Excerpt. East Underw 54:37 Ja 23 '53

Employees' insurance

Collective bargaining plans' effect on group insurance explained. A. R. Willson. Weekly Underw 168:338-9+ Ja 31 '53

Continuing group cover after retirement. E. R. Seese. Weekly Underw 168:100+ Ja 3 '53; Abstracts. Nat Underw (Life ed) 56:24 N 14; 8 N 21 '52; Nat Underw 56:28 N 20 '52

Deferred profit sharing plans. F. R. Griffin, jr. Life Ins Courant 58:30-1 F '53

General Electric insurance plan. East Underw 53:4 D 5 '52

Group annuity policy without stated term held not to be perpetual contract by Louisiana federal court. Weekly Underw 167:1541 D 6 '52

Group insurance; limit on employee term policies. Bsns W p60+ Ja 24 '53

Home Life's benefit and retirement plan for all employes. East Underw 54:7 My 1 '53; Same abr. Weekly Underw 168:1440 My 23 '53

Insurers reassured by wage-hour ruling on group dividends; U.S. Labor department ruling. Nat Underw (Life ed) 57:5-6 Je 19 '53

Military offices adopt group plan. Spectator 161:37 My '53

Oregon union appeals wage deduction case. East Underw 53:8 D 5 '52; Same abr. Nat Underw (Life ed) 56:14 N 21 '52

Planning better coverage for prolonged-illness; with tables. G. Hirschfeld. Spectator 161:10-14+ F '53

Providing group cover for retired workers; abstract. Management R 41:636-7 S '52

Regulation of group accident and health insurance. J. F. Murphy. Weekly Underw 168:602-5 F 28 '53

St Paul Hospital and Casualty enters group franchise field. East Underw 54:38 My 1 '53

INSURANCE, Group—Employees' insurance—*Continued*

Seek to stop switch of giant A.H. group; employes of Firestone tire & rubber co. Nat Underw 57:34 Ja 22 '53; Same. Nat Underw (Life ed) 57:12 Ja 23 '53

Three talks on insuring trusted groups feature first day's session; Bureau of accident & health underwriters seminar on group A.&H. insurance. East Underw 54:33-4 Ja 30 '53

Treasury A.&H. ruling has disturbing implications for group insurers. Nat Underw (Life ed) 57:4+ F 6 '53; Same cond. Nat Underw 57:19 F 5 '53

What do you do with your group insurance now that you have bought it! A. R. Willson. Weekly Underw 168:36-7+ Ja 3 '53

Rates

No discrimination in premium rates because of color. East Underw 54:1 Je 5 '53

Statistics

Group insurance had big gains. East Underw 54:11 Je 26 '53

Growth of group coverages shown in tabulation covering three years, 1950-1952. Nat Underw (Life ed) 57:8 Je 19 '53; Same abr. Nat Underw 57:34 Je 18 '53

Tax problems

Treasury A.&H. ruling has disturbing implications for group insurers. Nat Underw (Life ed) 57:4+ F 6 '53; Same cond. Nat Underw 57:19 F 5 '53

Great Britain

Growth of scheme assurances; with table. Economist 165:417 N 8 '52

INSURANCE, Group life

Bare group term formula. Nat Underw (Life ed) 56:1+ D 12 '52

Canadian agents reported concerned over group trends. J. Derome. Nat Underw (Life ed) 56:12 N 21 '52

Conversion privileges under group. East Underw 54:17 Je 12 '53

Group conversion rights discussed by department; New York state law provisions. A. J. Bohlinger. Weekly Underw 168:1594 Je 13 '53

Group life insurance making great strides. Weekly Underw 168:828 Mr 21 '53

Growth of group life insurance and employee's benefits. N. E. Horelick. Weekly Underw 167:1097+ O 25 '52

John Hancock holds group seminar. East Underw 54:3 Je 26 '53

NALU, LIAA, ALC reach agreement on group limiting plan. Nat Underw (Life ed) 56:1 D 5 '52

Ownership of group life no deterrent to more purchases; summary of Life insurance agency management association Baton Rouge study. East Underw 53:1+ O 17 '52; Same. Nat Underw (Life ed) 56:8 O 17 '52; Same. Weekly Underw 167:1039-40 O 18 '52

Retired employes' group conversion rights clarified. Nat Underw (Life ed) 57:28 Je 5 '53

Rules on group life; Connecticut commissioner promulgates new order. E. W. Allyn. Weekly Underw 168:1331 My 16 '53

Suggests life industry review problem of per-life limits on group. Martin. Nat Underw (Life ed) 56:11 D 12 '52

United front now on new statutory formula on group. East Underw 54:4 Ja 9 '53

Unsound extremes seen in piling of group on group. R. B. Mitchell. Nat Underw (Life ed) 57:1+ Je 26 '53

Creditors' policies

Mutual fund ruling; credit group life OK when estate is obligated for balance. Nat Underw (Life ed) 57:1 My 1 '53

Prudential group-creditor coverage tops $2 billion in less than 25 years. Nat Underw (Life ed) 56:4 N 28 '52

Finance

29 million new life policies bought in '52; group shows big gain. Nat Underw (Life ed) 57:27 Je 19 '53

Prospects

Wide range in group prospecting. P. H. Troth, jr. East Underw 53:39+ D 12 '52

Great Britain

Growth of scheme assurances; with table. Economist 165:417 N 8 '52

INSURANCE, Hail

Broader hail cover OK'd in five states. Nat Underw 57:12 My 28 '53

Crop-hail premiums at new peak of $43 million. Nat Underw 56:1+ D 18 '52

Hail cover for growing crops. H. Gray. il Rough Notes 96:40+ Mr '53

Seek clarification of North Carolina hail premium note situation. Nat Underw 57:21 Mr 12 '53

Selling crop hail protection. G. F. Rutledge. il Spectator 161:15+ Mr '53

INSURANCE, Health

Accident and health; changing times. J. E. Powell. Life Ins Courant 58:54-8+ Ap '53

A.&H. Council protests social security data on health insurance. East Underw 54:31+ Ja 9 '53

Accident and health insurance and the public attitude. J. F. Follmann, jr. East Underw 54:40 Mr 13 '53

Accident and health underwriting; panel discussion. East Underw 54:43+ Mr 20 '53

Altmeyer reports private insurance met 13 per cent of sickness costs in 1951. Weekly Underw 168:158 Ja 10 '53

Criticisms answered on health insurance. R. T. Heller and M. D. Miller. Spectator 161:35-6 Ap '53

Disagree with views of Altmeyer. R. T. Heller. Weekly Underw 168:137+ Ja 10 '53

87 per cent of personal sickness not insured, new SS study shows; reviews costs. Nat Underw (Life ed) 57:4 Ja 2 '53

Health insurers blast Altmeyer's statement. Nat Underw 57:19+ Ja 8 '53; Same. Nat Underw (Life ed) 57:3 Ja 9 '53

Health needs report submitted to Truman. East Underw 53:35 D 19 '52

Highlights given of Magnuson report on financing of personal health services. Nat Underw 56:19+ D 25 '52

Insurance for everybody in Nation proposed in report of President Truman's commission. Weekly Underw 168:85 Ja 3 '53

Magnuson report urges wide federal entry in A.&H. field. Nat Underw 56:23+ D 18 '52; Same. Nat Underw (Life ed) 56:5+ D 19 '52

Making more medicine cheaper for more people. Bsns W p 194-6+ N 22 '52

My favorite sales talk. Rough Notes 96:64-5 F '53

New franchise A.&H. plan; Continental Casualty will sell income protection indemnities on weekly instead of monthly basis. East Underw 54:30 Ap 24 '53

1952 accident and health volume increased. J. F. Follmann, jr. Weekly Underw 168:71-3 Ja 3 '53

President's commission on the health needs of the Nation holds final panel. East Underw 53:31 O 17 '52; Nat Underw 56:26 O 16 '52; Nat Underw (Life ed) 56:6 O 17 '52

Pressing problems of growth in A.&H. insurance. J. E. Powell. Weekly Underw 167:1610-12 D 13 '52

Provident Mutual Life begins A.&S. program. East Underw 54:49 F 13 '53

Responsibilities of insurance companies in the accident and health field. J. F. Follmann, jr. East Underw 54:44 F 27 '53; Same. Weekly Underw 168:592-3 F 28 '53

Royal-Liverpool group revises A.&H. program. East Underw 54:48 Ap 10 '53

Voluntary health plans. M. D. Miller. East Underw 54:34 Ja 16 '53; Same cond. Weekly Underw 168:222 Ja 17 '53

See also

Insurance, Accident	Insurance, Medical expense
Insurance, Disability	Medical service—Group and prepayment plans
Insurance, Hospitalization	
Insurance, Infantile paralysis	

also Bureau of accident and health underwriters; Health and accident underwriters conference; Health insurance council; International association of accident and health underwriters

INSURANCE, Health—*Continued*

Advertising

Some A.&H. ads destroy public confidence. J. F. Follmann, jr. Nat Underw 57:3 Mr 12 '53; Same. Nat Underw (Life ed) 57:4 Mr 13 '53

Finance

A.&H. earned premiums and incurred losses of 80 companies shown for 1952. East Underw 54:39-40+ F 27 '53

Highlights given of Magnuson's report on financing of personal health services. Nat Underw (Life ed) 56:4+ D 26 '52

New York A.&H. hospitalization writings given; tabulation. Nat Underw (Life ed) 57:5 Ap 10 '53

Prospects

What shall I sell? H. W. Wheeler. Rough Notes 96:72-3 Mr '53

Public attitude

Public attitude towards A & H insurance. J. F. Follmann, jr. Weekly Underw 168: 1092-3 Ap 18 '53

Statistics

1952 A.&H. results of over 50 companies show volume up 16 per cent for ten months. East Underw 53:104-5 D 12 '52

Premiums, losses, 1951; maps and tables. Spectator 161:18 Mr '53

Women as prospects

Sell the woman. il Life Ins Courant 58:50-1 Mr '53

Canada

Joint committee on health insurance in Canada. East Underw 54:28 Ap 24 '53

Sweden

Compulsory health insurance becomes law in Sweden. Weekly Underw 168:1741 Je 27 '53

INSURANCE, Hospitalization

Accident and health, hospital and surgical insurance by states, 1951; table. Spectator 160:54 N '52

A.&H. industry in cooperative effort to improve hospital-doctor relationship. W. L. Clapp. East Underw 53:91-2+ D 12 '52

A.&H. industry striving to keep pace with rising hospital loss ratios and inflation. East Underw 53:95-6 D 12 '52

Agents like Prudential non-can A.&H. line. Nat Underw (Life ed) 57:2 My 15 '53

Answer newspaper on benefit payments to patients treated in VA hospitals. Nat Under 57:27 Ap 16 '53; Same. Nat Underw (Life ed) 57:2 Ap 10 '53

Aspects of group hospital insurance; annual group meeting of health and accident conference; panel discussion. East Underw 54: 46 F 13 '53

Aspects of health care treated at N.A.I.C. meeting. Nat Underw 56:19+ D 11 '52; Same. Nat Underw (Life ed) 56:5+ D 12 '52

Buyers discuss cover at older ages, retro Blue cross, major medical. Nat Underw 57:6+ My 28 '53

Columbus hospital admissions plan; evaluation of hospital expense insurance. L. A. Orsini. Weekly Underw 168:1422+ My 23 '53

Companies pay for veterans' treatment if provided for in policy. East Underw 54:5 Ap 10 '53; Same. Weekly Underw 168:1029 Ap 11 '53

Guardian Life to issue two hospital policies. East Underw 54:52 F 13 '53

Health & accident conference holds sessions on hospital-medical trends. East Underw 54:35+ F 6 '53

Health and accident underwriters conference annual group insurance meeting, Chicago. Nat Underw 57:29, 35 F 5 '53; Nat Underw (Life ed) 57:1+ F 6 '53

High hospitalization costs and multiple coverages discussed at Health and accident underwriters conference meeting. Weekly Underw 168:472-3 F 14 '53

Hospital expense insurance trends discussed at Bureau of accident and health underwriters seminar. East Underw 54:34+ My 22 '53

Improvements in hospitalization insurance reviewed by experts on AMA panel. Weekly Underw 168:1490-1+ My 30 '53

In hospital expense field; Hartford Accident prepared to give family protection. East Underw 54:32 My 29 '53

Iowa attorney general bars Blue Cross contracts in city, county hospitals. Nat Underw 56:30 O 16 '52; Same. Nat Underw (Life ed) 56:14 O 17 '52

Keen interest in doctor-hospital panel talks; Bureau of accident & health underwriters group seminar session. East Underw 54:32 Ja 30 '53

Little hope for profit on hospital expense business; the problem of attaining a proper balance between loss of time and hospital insurance. A. P. Dowlen. East Underw 54: 48-9 My 8 '53; Same abr. Nat Underw 57: 15+ Je 11 '53; Same cond. Nat Underw (Life ed) 57:18+ My 8 '53

Major medical is big thing of decade; deductible and coinsurance provisions may provide answer to spiraling costs of hospitalization. P. E. Britt and F. Wilson. Nat Underw 57:11+ My 21 '53; Same. Nat Underw (Life ed) 57:3+ My 22 '53

N.A.I.C. urged to require minimum Blue Cross reserves. C. C. Dubuar. Nat Underw 57:4+ Je 11 '53; Same. Nat Underw (Life ed) 57:7 Je 12 '53

Panel on hospitalization elicits keen interest at Management association meeting. Nat Underw (Life ed) 57:8 Je 5 '53

Pressing problems of growth in A.&H. insurance. J. E. Powell. Weekly Underw 167: 1610-12 D 13 '52

Prudential's hospital insurance setup. A. M. Thaler. East Underw 54:38 My 22 '53

What companies do about rising medical costs problem. R. W. Carey. East Underw 54:37 F 6 '53

Adjustment of claims

Is a rest home a hospital. Spectator 161:63 Je '53

Advertising

Association protests ads for Blue cross, Blue shield. Nat Underw (Life ed) 57:15-16 F 20 '53

Indiana accident and health writers protest Blue Cross ads. Weekly Underw 168:740 Mr 14 '53

Claim forms

Simpler A.&H. forms should ease many difficulties. J. Altman and C. D. Jones. Nat Underw (Life ed) 56:27-8 D 12 '52

Finance

New York A.&H. hospitalization writings given; tabulation. Nat Underw (Life ed) 57:5 Ap 10 '53

Rates

Hike Wisconsin Blue Cross rates. Nat Underw 56:21 N 6 '52

Labor groups protest Blue Cross rate increase at Cleveland. Nat Underw (Life ed) 57:13 My 8 '53

INSURANCE, Improvements and betterments. See Insurance, Fire—Improvements and betterments policies

INSURANCE, Industrial

Condon committee to study further Section 213-A; applies to acquisition costs for industrial life insurance. Weekly Underw 168:1270 My 9 '53

Agents

Training

No schools for debit men; Prudential program; train managers to train agents. W. P. Lynch. Nat Underw (Life ed) 56:9 N 21 '52

INSURANCE, Infantile paralysis

Medical research aids polio coverage. S. Miller and R. D. Brown. Spectator 161:24-5+ Ap '53

Rates

Continental Casualty hikes its polio rates. Nat Underw 57:21 F 5 '53; Same. Nat Underw (Life ed) 57:17 F 6 '53; Same. Weekly Underw 168:377+ F 7 '53; Same abr. East Underw 54:50 F 13 '53

INSURANCE, Infantile paralysis—Rates—*Continued*

Polio rate increases are made by the Lumbermens. East Underw 54:45 Mr 6 '53; Same. Weekly Underw 168:664 Mr 7 '53; Same. Spectator 161:96 Ap '53

INSURANCE, Inland marine

Advantages of inland marine field for young men entering insurance business. H. Caulkett. Weekly Underw 168:864+ Mr 28 '53

Details of definition parley go into fundamentals of inland marine business. Nat Underw 57:17-19 Ap 16 '53

Inland marine premiums increased in '52. J. E. Crilly, jr. Weekly Underw 168:26-8 Ja 3 '53

Insurance commissioners approve revised inland marine definition. East Underw 54:33 Je 19 '53

National board eyes proposed change in inland marine definition. Nat Underw 57:10 My 14 '53

New vacationist policy; North America issues personal effects form. East Underw 54:37 My 15 '53; Weekly Underw 168:1286 My 9 '53

North America release kindles Inland marine insurance bureau ire. Nat Underw 57:17 My 14 '53

Revised marine definition suggests new sales vistas. Nat Underw 57:10 Je 25 '53

Strong plea for unity in inland functioning. H. L. Wayne. Weekly Underw 168:1478+ My 30 '53; Excerpts. East Underw 54:27+ My 29 '53; Abstract. Nat Underw 57:1+ My 28 '53

See also

Insurance, Bailees' customers
Insurance, Contractors' equipment floater
Insurance, Fur
Insurance, Furriers' customers
Insurance, Installation
Insurance, Jewelers' block
Insurance, Jewelry
Insurance, Motor truck contents
Insurance, Parcel post

also Inland marine underwriters association

Adjustment of claims

Guiding principles agreement. C. J. Bauer. Weekly Underw 168:794 Mr 21 '53

Important 1952 inland marine decisions. H. S. Daynard. Weekly Underw 168:50-1+ Ja 3 '53

Recent court decisions of interest to inland marine men. H. S. Daynard. Weekly Underw 167:1366-7 N 22 '52

Agents

Inland claims association and society to award $100 best marine essay. East Underw 54:34 F 20 '53

Coverage

Multiple peril indivisible premium property insurance new inland marine label. J. E. Crilly, jr. Nat Underw 56:13 N 6 '52

Finance

How the company groups stand on inland marine income in 1952; tabulation. East Underw 54:35-6+ Mr 27 '53

Inland marine premium writings for 1952 and comparisons for 1949-1951; tabulation. East Underw 54:31-4 Mr 27 '53

Inland marine premiums; losses, 1952. East Underw 54:40-1 Mr 27 '53

Policies

Business likes new personal articles floater; details given. Nat Underw 57:4 Ap 9 '53

Mutual implement dealers form is being approved. Nat Underw 57:23 My 28 '53

New personal articles floater has rate reduction on three classes. East Underw 54:29 Ap 17 '53

Personal articles floater; Inland marine insurance bureau form permits several risks under one policy. East Underw 54:35 Ap 3 '53

Contractors' equipment floater

Equipment walked away. R. K. Wetzel. Rough Notes 96:62 Mr '53

Garment contractors' floater

Basic features of new garment contractor's floater. F. J. Rogers. East Underw 54:37+ Mr 27 '53

Personal property floater

How I sell the PPF policy. L. R. Englander. il Rough Notes 96:29+ F '53

How to write the PPF. F. X. O'Leary. Rough Notes 96:25-6+ F '53

Inventory is the first step in writing the PPF right. S. Ward. Rough Notes 96:27+ F '53

Popularity peak of PPF may now have been seen. Nat Underw 57:7 Je 4 '53

Problems of PPF. W. Penn. Nat Underw 57:5+ Ap 23 '53

Top inland marine line requires careful selling. J. B. Crosson. Rough Notes 96:28 F '53

Prospects

Try selling these prospects inland marine coverages. U. Lelli. il Rough Notes 96:21+ F '53

INSURANCE, Innkeepers' liability

Innkeepers' liability policy; analysis, underwriting. Rough Notes 96:105-6 Je '53

INSURANCE, Installation

Installation floaters. U. Lelli. Rough Notes 95:54+ N '52

INSURANCE, Jewelers' block

Policies

Deductible clauses

Deductible in jewelers block for first time, for retailers only. Nat Underw 57:22 Je 11 '53

INSURANCE, Jewelry

Importance of bill of sale in fur, jewelry underwriting is stressed at forum. Nat Underw 57:30+ Ap 16 '53

Theft losses

Operation Jumbo. Spectator 160:34-8 O '52

INSURANCE, Key man. See Insurance, Business

INSURANCE, Leasehold

Applications and sale of time element insurance covers. H. C. Klein. East Underw 53:21+ O 24 '52

Rent, rental value, extra expense and leasehold forms. H. C. Klein. East Underw 54:23 My 1 '53

INSURANCE, Liability

Changes made in liability coverage on fiduciary banks. Nat Underw 57:35 Ap 9 '53; Same. Weekly Underw 168:1090 Ap 18 '53

Ever-broadening field seen for comprehensive liability coverage. W. P. Walker. Nat Underw 57:36 F 12 '53

Excess public liability insurance and the gas business. H. P. Stellwagen. Am Gas Assn Proc 1952:149-54; Same. Weekly Underw 167:1705+ D 27 '52; Same cond. Am Gas Assn Mo 35:23-4+ Ap '53

General liability and property damage. R. L. Inglis. East Underw 54:42 My 1 '53

General liability policy covers product case. Nat Underw 57:24 F 5 '53

How to write liability on eating and lodging risks. C. Edwards. Rough Notes 96:24+ Je '53

Ideal coverage Rx recommended by I.E.A. on company-supported bureaus. Nat Underw 57:24 My 7 '53

Important changes in public liability manuals. H. P. Carmichael. Weekly Underw 168:809-12 Mr 21 '53

Liability for personal injury. C. M. George. Weekly Underw 168:235 Ja 17 '53

Liability manual changes. Rough Notes 96:66-7 Ja '53

My selling plan for merchants' liability. J. V. Corrigan. Rough Notes 96:19+ Ja '53

National Bureau amends manual liability rules. East Underw 53:31 D 19 '52; Same cond. Nat Underw 56:23+ D 18 '52

See also

Insurance, Automobile
Insurance, Contractors' liability
Insurance, Contractual liability
Insurance, Employers' liability
Insurance, Fire—Liability property damage policies
Insurance, Liquor law liability
Insurance, Malpractice liability
Insurance, Manufacturers' liability
Insurance, Motor truck
Insurance, Owners', landlords' and tenants' liability
Insurance, Products liability
Insurance, Workmen's compensation

INSURANCE, Liability—*Continued*

Adjustment of claims

Company refuses to defend assault case. L. A. Burke. Spectator 161:25 Mr '53

Fears judicial system disintegration; terrifying tort liability trend. R. Murphy. Nat Underw 56:25+ N 13 '52; Excerpt. East Underw 53:41 N 21 '52

Fight for big verdicts. S. C. Morris. Rough Notes 95:19+ D '52

Liability of schools and hospitals is stirred up again. Nat Underw 57:21 F 5 '53

Product liability exclusion construed in unique Washington case. Weekly Underw 168:1452 My 23 '53

Public liability insurance policies in the light of recent court decisions; with citation of cases. A. W. Fitzgerald. Weekly Underw 167:1315-18, 1377-9 N 15-22 '52

Urges higher factor for bodily injury and P.D.L. claim defense. R. L. Inglis. Nat Underw 57:4+ Ap 16 '53

Whether violation of statute is proximate cause of accident held jury question. Weekly Underw 167:1673 D 20 '52

Agents

How I help my agents sell comprehensive liability. C. Focht. Rough Notes 95:38+ N '52

Coverage

Occurrence basis; how much more coverage is intended? C. M. George. Weekly Underw 168:218-21 Ja 17 '53

Farm policies

Exclusion clause construed to be an activity clause in Iowa case involving custom farming. Weekly Underw 167:1404 N 22 '52

Farm liability cover possesses interesting angles. I. Swinehart. Weekly Underw 167:1034-6 O 18 '52; Same. Rough Notes 95:19+ N '52; Excerpt. East Underw 53:30 O 10 '52

Municipal policies

Look askance at municipal business. Nat Underw 56:26 D 18 '52

Policies

Broadest liability policy written; comprehensive general liability. K. M. Hough. Rough Notes 95:20-1+ N '52

Purchasing

Buyers find no evidence of "give" by excess insurers; stiff attitude is revealed at A.M.A. gathering. Nat Underw 56:27+ N 20 '52

Rates

Mutual rate revision; changes now effective in 43 states and District of Columbia. Weekly Underw 167:1649 D 20 '52

Rates for hotels are inadequate. M. Acker. East Underw 54:42 Mr 20 '53; Same. Weekly Underw 168:800 Mr 21 '53; Same cond. Nat Underw 57:4 Mr 19 '53

INSURANCE, Life

All companies can't reach every insurable; should find natural markets. R. E. Pille. East Underw 54:4+ My 29 '53

Better merchandising and distribution methods needed; why agency management has become more difficult. H. C. Chaney. East Underw 54:3+ My 15 '53

Building for the future blueprint for small companies. T. A. Sick. Weekly Underw 168:1040-1+ Ap 11 '53

Calls security act greatest threat to life business. E. M. Thore. Nat Underw (Life ed) 57:4+ Ap 17 '53; Same cond. East Underw 54:16 Ap 17 '53

Current trends. B. Shepherd. Nat Underw (Life ed) 57:1+ Je 26 '53

Endorsement of life insurance; presidents, statesmen, television stars, executives, etc. Spectator (Endorsement no 1952-1953) 160:26-36+ D '52

Farmers of Los Angeles makes move to enter life insurance field. Nat Underw 57:1+ Mr 12 '53

Function of life insurance trade associations in relation to government. H. R. Glenn. Nat Underw (Life ed) 56:5+ D 5 '52

Life insurance made big strides in 1952. C. J. Zimmerman. Weekly Underw 168:90+ Ja 3 '53

Life reports; general all around attractiveness. J. Robinson. Spectator 161:24-5+ My '53

Must offer all forms of personal insurance. C. J. Zimmerman. East Underw 53:47 D 12 '52

New records reported. B. E. Shepherd. East Underw 53:38 D 12 '52; Excerpt. Weekly Underw 167:1553+ D 13 '52

1952 gains biggest ever; new year seen even better. H. J. Johnson. Nat Underw (Life ed) 57:1+ Ja 2 '53; Same. Weekly Underw 168:97+ Ja 3 '53

Old American co. studies success of Postal Life. Weekly Underw 167:1667 D 20 '52

Problems facing life insurance industry. R. L. Hogg. Weekly Underw 168:760-3 Mr 14 '53

South leads increase; 704 life companies in U.S.; total is up 50 per cent since war; Institute report. Nat Underw (Life ed) 56:12 N 14 '52

This year of re-examination; life insurance business and the new administration. E. M. Thore. Life Ins Courant 58:30-1+ Je '53

See also

Annuities
Benefit societies
Insurance, Accident—Life company selling
Insurance, Business
Insurance, Group life
Insurance, Industrial
Insurance, Military and naval service
Insurance trusts
Military service—Insurance aspects
Savings banks—Insurance selling

also American life convention; Franklin life insurance company; Institute of life insurance; John Hancock mutual life insurance company; Life insurance agency management association; Life insurance association of America; Life insurers conference; Metropolitan life insurance company; New England mutual life insurance company; Northwestern mutual life insurance company; Postal life insurance company; Prudential insurance company of America; Union labor life insurance company

Accounting

Expense allocation study part one sent out by N.Y. superintendent. East Underw 54:6 My 1 '53; Same. Weekly Underw 168:1210 My 2 '53

Lack of uniformity found the rule in allocating expenses; reported to superintendent of New York department. Nat Underw (Life ed) 57:1+ My 1 '53

Uniform accounting for life companies becomes N.Y. law. East Underw 54:1 Ap 17 '53

Adjustment of claims

Urges claims paying basis. J. G. Kelly. Nat Underw (Life ed) 56:7 N 28 '52

See also

Insurance, Life—First year claims
Insurance, Life—War death claims

Advertising

Ad agency techniques in new Postal program. East Underw 54:7 Ja 30 '53

Advertising beamed at buyers enhances agency's prestige, makes recruiting easy. P. Duling. Nat Underw (Life ed) 57:9 Ja 9 '53

Hancock tests first use of dailies. Ed & Pub 85:24 O 18 '52; Same. Nat Underw (Life ed) 56:2 O 17 '52

Hancock tries out hard hitting newspaper copy. Nat Underw (Life ed) 56:2 N 7 '52

He makes every copy writer a little taller; Redmond's John Hancock ads. S. H. Margolis and M. Silverstein. il Ptr Ink 241:29-30+ D 19 '52

John Hancock Mutual Life takes advertising awards. Weekly Underw 168:753 Mr 14 '53

Life companies national advertising is listed. Nat Underw (Life ed) 56:3 D 26 '52

Magazines, dates for life companies' national advertising (cont). Nat Underw (Life ed) 56:15 N 21 '52

Mutual Life to spur agents' advertising. East Underw 54:5 F 13 '53

Names Margaret Divver advertising woman of year. East Underw 54:8 Je 19 '53

INSURANCE, Life—Advertising—*Continued*

Newspaper ad scope; for merchandising insurance. D. F. Barnes. East Underw 54:21 Mr 20 '53; Same abr. Nat Underw (Life ed) 57:7 Mr 20 '53

North Central round table fare in bag; Life insurance advertisers association meeting, Chicago. Nat Underw (Life ed) 57:3, 8 My 1 '53

North Western Mutual issuing copy manual based on successful local advertising campaign. Nat Underw (Life ed) 57:19-20 Mr 13 '53

Postal Life elated over newspaper ad series; won LAA excellence award. East Underw 53:11 N 14 '52; Nat Underw (Life ed) 56:10 N 14 '52

Prudential agents report television advertising has made selling easier. Nat Underw (Life ed) 57:2 Ap 3 '53

Story of Metropolitan's health advertising. il Adv Agency 45:76-7+ N '52

See also

Life insurance advertisers association

Agency management

Agents shouldn't have to go multiple-line to boost earnings; other topics discussed at LIAMA panel discussion at Chicago. Nat Underw (Life ed) 56:18 N 21 '52; Same abr. East Underw 53:11 N 21 '52

All at home office are vital to field morale. B. T. Holmes. Nat Underw (Life ed) 56: 2+ N 21 '52

Bird in the hand; importance of proper development of older men. A. H. Moffat. Life Ins Courant 58:35-7 My '53

California general agents and managers agency building conference, Berkeley, Calif. Nat Underw (Life ed) 56:10 N 7 '52

Earl M. Schwemm's Chicago agency records 100th consecutive $1 million month. Nat Underw (Life ed) 56:5 O 24 '52

High turnover of business and agents needs greater attention. C. J. Zimmerman. Nat Underw (Life ed) 56:11 N 21 '52

L.I.A.M.A. Atlantic alumni association management conference, Rye, N.Y. Nat Underw (Life ed) 56:9+ O 31 '52; Weekly Underw 167:1145+ N 1 '52

LIAMA combination companies put glass on assistant manager. Nat Underw (Life ed) 57:4+ Ap 24 '53; East Underw 54:16 My 1 '53

Lincoln National's index rates value of agencies' production. Nat Underw (Life ed) 56:2 N 28 '52

Mutual Trust Life general agents' association meeting, Chicago. East Underw 53:12 N 14 '52

My job, general agent. H. S. Bell. Life Ins Courant 58:12-14+ Ja '53

New England management conference, Swampscott, May 7-8. East Underw 54:3+ My 15 '53

Speakers analyze ills of general agent; Midwest management conference, French Lick, Ind. Nat Underw (Life ed) 56:2+ O 31 '52

Takes ingenuity to get established agent off his production plateau. W. T. Earls. Nat Underw (Life ed) 56:10 N 21 '52

Agency managers

LIAMA combination companies put glass on assistant manager. Nat Underw (Life ed) 57:4+ Ap 24 '53

See also National association of life underwriters—General agents and managers conference

Agency system

Mass coverage seen encroaching on sales of individual agent; too much term insurance. C. L. Benner. East Underw 53:1+ N 7 '52

Agents

Agent does not have confidential status; is not barred as beneficiary. East Underw 53:11 D 26 '52; Same. Nat Underw (Life ed) 56:8 D 19 '52

A.L.C., L.I.A.A., hold states should regulate life soliciting at military camps. Nat Underw (Life ed) 57:2 F 20 '53

Ample market for individual policies. T. A. Sick. Nat Underw (Life ed) 57:4 Mr 20 '53

Better supervision can do more than anything to make selling more attractive. K. L. Anderson. Nat Underw (Life ed) 57:3 F 27 '53

Bigger and better. A. D. Panet. Life Ins Courant 57:28-30 D '52

Career still magic word to spur on older agents. A. H. Moffat. Weekly Underw 168: 1042-3 Ap 11 '53

Defense department chill thaws on insurance selling problem on military bases. Nat Underw (Life ed) 56:1 O 31 '52

Defense department issues military sales directive. Nat Underw (Life ed) 57:1+ Je 5 '53

Defense department to ask commissioners aid on agent activity; military post soliciting. East Underw 53:14 N 7 '52

Don't take hair shirts too seriously. V. B. Coffin. Nat Underw (Life ed) 57:9 F 27 '53

Eubank plans to urge agent-broker unity plan on NALU. Nat Underw (Life ed) 57:2 Mr 20 '53

Final MDRT list brings '53 membership to record 1240; with list. Nat Underw (Life ed) 57:1+ My 15 '53

Free enterprise, fact or fiction? D. B. Fluegelman. Life Ins Courant 58:18-24 Ja '53

Getting the new agent into production. B. H. Groves. East Underw 54:23 Ap 17 '53

Good supervision big aid in agent's success. East Underw 54:3 F 27 '53

How can life insurance business recruit from colleges new agents it needs. R. G. Engelsman. Nat Underw (Life ed) 57:1+ F 27 '53

Humility, company loyalty, business ethics needed in rise to top. W. E. Fox. Nat Underw (Life ed) 56:15-16 O 31 '52

LIAMA A.&H. panel discussion of new horizons for agents. Nat Underw (Life ed) 57:3 Ap 24 '53

L.I.A.M.A. survey analyzes manpower and production over four-year period. Nat Underw (Life ed) 57:3+ Ja 30 '53

Life insurance and sales methods. P. T. Carter. East Underw 54:9 Je 26 '53

Los Angeles agent asks $1 million damages in bank loan case. Nat Underw (Life ed) 57:16 Ja 9 '53

McCann plays down death hazard to get prospects off term-insurance track. Nat Underw (Life ed) 56:25 D 12 '52

Management association issues research report. Weekly Underw 168:409 F 7 '53

More realistic agent attitude toward estate planning. R. G. Engelsman. Nat Underw (Life ed) 56:10 D 12 '52

My most interesting sale; State Mutual representatives' sales, 1952. H. R. Saeks and others. Life Ins Courant 58:17-18 Je '53

New England general agents, managers consider area association. East Underw 54:11 Mr 13 '53

Orderly habits for salesmen. E. R. Erickson. East Underw 53:3 O 31 '52

Panel says life companies fail in effort to sell agent's career to college students. Nat Underw (Life ed) 57:10 F 13 '53

Part of education in developing career concept. D. W. Gregg. Weekly Underw 168: 1222-3+ My 2 '53

Personal progress record and recommendations for its completion. Life Ins Courant 58:33-6 F '53

Proselyting at record high, reports indicate. Nat Underw (Life ed) 57:1 F 27 '53

Public acceptance of the career life underwriter. B. N. Woodson. East Underw 54:3+ F 27 '53

Public's view of career agent. B. N. Woodson. Nat Underw (Life ed) 57:5-6 Mr 6 '53

Qualities for success in production. A. G. Nairn. East Underw 54:3-4 Mr 20 '53

Require licenses in military post states. East Underw 54:6 F 20 '53

Sales briefings. Spectator 161:47 Ja '53 [cont monthly]

Sales ideas from top life men. Weekly Underw 168:42-56+ sec 2 My 9 '53

Second MDRT qualifying list carries 424 names. Nat Underw (Life ed) 57:1+ Mr 20 '53

Small companies in LIAMA discuss agents, package sales, monthly premiums. R. J. Haupt. Spectator 161:31+ My '53

INSURANCE, Life—Agents—*Continued*

Solomon Huber agency celebrates 10th year. Weekly Underw 167:1665+ D 20 '52; Same. East Underw 53:6 D 19 '52
Stay on course! C. Frisbie. Life Ins Courant 58:38-9 Je '53
Study formation of New England manager group. Nat Underw (Life ed) 57:3 Mr 13 '53
Sun Life concentrates less on new recruits; upgrades existing field. J. A. McAllister. East Underw 54:16-17 Je 5 '53
Take a day off. L. P. Ogden. Life Ins Courant 58:27-8 Je '53
Taking objections in stride. L. W. Wagenheim and others. Life Ins Courant 58:45-6 F '53
Tells how A.&H. helps life agents to make sales in estate-planning cases. R. B. Thompson. Nat Underw (Life ed) 56:12 D 5 '52
Turnover among agents; importance of correct supervision of new men. D. B. Slattery. Weekly Underw 168:1500 My 30 '53; Same. East Underw 54:5 Je 26 '53
20-question formula for self-appraisal. H. F. White, jr. Nat Underw (Life ed) 57:17-18 F 27 '53
What is the secret weapon? B. Rhodes. Life Ins Courant 58:21-2 Ap '53
Young agency is leader for State Mutual Life. Weekly Underw 168:290 Ja 24 '53

See also
Insurance, Life—
Prospects
also Life underwriters association of the city of New York; National association of life underwriters

Approach

For your son, and mine, too. N. P. Langford. Life Ins Courant 58:17+ Ap '53
Fulfill his dreams. W. G. Dougan. il Life Ins Courant 58:18-19 F '53
He's doing it for some doll; how to develop the power to motivate. A. R. Gremel. Life Ins Courant 57:18-21+ D '52
How to overcome prospect's can't afford it objection. J. Gorey. Nat Underw (Life ed) 57:18-19 F 13 '53
Off-beat approaches. E. S. Reeve; H. Butler. Life Ins Courant 58:19-20 My '53
On the firing line. Spectator 161:44 Mr '53
Right approach. W. B. Olds. Life Ins Courant 58:42-3 My '53
Sales approach with appeal to wide range of prospects. F. Abruzeri and W. F. Lee. Nat Underw (Life ed) 57:8 My 22 '53
See it through the prospect's eyes. J. M. Wilson. Life Ins Courant 58:28 F '53
Selling young men. J. W. Galloway. Rough Notes 95:86-7 N '52
Stress guaranteed loan power; deferred benefit; power of inertia. B. N. Woodson. Nat Underw (Life ed) 56:18-19 O 24 '52
Vital 30 seconds. W. G. Turquand. Life Ins Courant 57:25-7 N '52

Associations

Chicago protests opening association doors to companies; decision of New York state association of life underwriters. Nat Underw (Life ed) 57:1 My 29 '53
Here's how N.Y. state association made decision on company member plan. R. B. Mitchell. Nat Underw (Life ed) 57:4+ Je 12 '53
N.Y. company member plan barred until study. Nat Underw (Life ed) 57:1+ Je 5 '53
Plan for companies as members of New York body questioned. Nat Underw (Life ed) 57: 1+, 10 My 1 '53

Closures

Ten ideas for closing that sale; from Production news of Sun Life of Maryland. Nat Underw (Life ed) 56:19 O 17 '52

Commissions

Berkshire Life pays higher commissions. East Underw 54:4 Ap 24 '53
Bohlinger sympathetic with 213 problems of small companies and agents. East Underw 54:8 Ja 9 '53; Nat Underw (Life ed) 57:1+ Ja 9 '53
Companies and New York state agree on urgent revision of S-213. East Underw 54: 1+ Ja 16 '53
Compromise hope for 213 bill rests with N.Y. Governor. Nat Underw (Life ed) 57:1 F 13 '53
CIO asks appeal, reargument in expense limit suit. Nat Underw (Life ed) 56:1 D 12 '52
Effect of Section 213 revision. J. Sackman. East Underw 54:9+ Mr 27 '53
Higher commission provided in new bill on Section 213. East Underw 54:1+ F 20 '53
Insurance teachers get basic course in ramifications of Section 213. Nat Underw (Life ed) 57:5+ Ja 2 '53
Life bills passed by New York state legislature. Weekly Underw 168:702 Mr 14 '53
LIAMA compensation forum stresses 213 problems. Nat Underw (Life ed) 56:4 N 21 '52
New York bill amending Section 213 approved. Weekly Underw 168:1210 My 2 '53
N.Y. state agents are irked by 213 aims of department. Nat Underw (Life ed) 57:1+ Ja 30 '53
New York state agents seek stop-gap tag for all 213 moves. R. B. Mitchell. Nat Underw (Life ed) 57:1+ F 6 '53
Reach compromise on New York bill revising Section 213. Nat Underw (Life ed) 57:1+ F 20 '53
Relief for agents still possible under Section 213. Nat Underw (Life ed) 56:6 D 5 '52
Revenue bureau refuses to endorse Hobart-Oates rule. Nat Underw (Life ed) 56:1 O 17 '52
Section 213 amendment is only temporary stop-gap measure. J. A. McLain. East Underw 54:12+ Ap 3 '53; Same. Nat Underw (Life ed) 57:1+ Ap 3 '53; Same. Spectator 161:32+ My '53
Section 213 bill gets over last legislative hurdle. Nat Underw (Life ed) 57:1 Mr 13 '53
Section 213 developments reviewed. B. E. Shepherd. Nat Underw (Life ed) 57:2+ Ja 16 '53
Stalemate looms on proposal for revision of 213. Nat Underw (Life ed) 57:1+ F 6 '53
State association supports New York bill to ease Section 213. Nat Underw (Life ed) 57:1+ Mr 6 '53
Treasury gunning for deferred compensation plans; Hobart and Oates decision. Nat Underw (Life ed) 56:1 O 24 '52
Why a special OPA for the life business? Nat Underw (Life ed) 57:12 F 13 '53

See also
Insurance, Life—
Agents—Salaries

Company relations

Agency officers discuss home office letters telling agents that they are good. East Underw 54:15 Ap 24 '53
Blasts agents' treatment; abstracts. D. B. Fluegelman. East Underw 53:8 N 21 '52; Nat Underw (Life ed) 56:2+ N 21 '52
Case for the lone wolf. G. R. Letterman. Life Ins Courant 57:9-12 D '52
Close attention needed to make agent financing pay off. S. R. Wallace, jr. Nat Underw (Life ed) 57:5 Mr 20 '53
Closer agent-company ties needed. D. B. Fluegelman. East Underw 53:40 D 12 '52; Excerpts. Nat Underw (Life ed) 56:1 D 12 '52; Weekly Underw 167:1597 D 13 '52
Company differences diminishing with industry-wide approach to problems. R. Rosenquist. Nat Underw (Life ed) 57:6 F 20 '53
Connecticut Mutual Life announces agents' financing plan. Weekly Underw 168:489 F 14 '53

Contracts

Mutual Life makes changes in agents contract forms. East Underw 54:1+ F 6 '52; Same. Weekly Underw 168:490 F 14 '53

Conventions

Atlantic Life convention, Hollywood, Fla. Weekly Underw 168:486 F 14 '53
Berkshire Life holds 38th general agents meeting, Pittsfield, Mass. Jan. 20-23. East Underw 54:10 F 6 '53

INSURANCE, Life—Agents—Conventions— *Continued*

Chicago association of life underwriters annual meeting. Nat Underw (Life ed) 57:4 Je 19 '53

General agents association of New England Mutual Life annual meeting, Hot Springs. Nat Underw (Life ed) 57:7 Mr 27 '53

Illinois association of life underwriters annual meeting, Chicago. Nat Underw (Life ed) 57:2 Mr 27 '53

Indiana association of life underwriters annual meeting, Indianapolis. Nat Underw (Life ed) 57:2 My 22 '53

Mutual Benefit sets up executive unit to speed progress; general agents two-day session. Nat Underw (Life ed) 57:1+ Mr 6 '53; Weekly Underw 168:674 Mr 7 '53

New England Mutual Life general agents association 45th annual meeting, Boston. Weekly Underw 168:898 Mr 28 '53

New York state association of life underwriters annual conference, Saratoga Springs. Nat Underw (Life ed) 57:1+ F 27 '53

New York state association of life underwriters annual meeting, Syracuse, May 15. East Underw 54:10 My 22 '53; Nat Underw (Life ed) 57:1+ My 22 '53

Ohio association of life underwriters annual meeting, Canton. Nat Underw (Life ed) 57:19 My 22 '53

Postal Life's General agents association conference, Atlantic City, March 20-22. Weekly Underw 168:1028 Ap 11 '53; East Underw 54:14 Ap 10 '53

State Mutual general agents conference, St Petersburg, March 23-26. East Underw 54:3-4+ Ap 10 '53

State Mutual officers talk at agency meet. East Underw 54:15 Mr 6 '53

Wisconsin association of life underwriters annual meeting, Milwaukee. Nat Underw (Life ed) 57:4 My 29 '53

Examinations

Connecticut examinations. W. E. Allyn. Weekly Underw 168:1030 Ap 11 '53

Fraudulent practice

Jury absolves Los Angeles agents of fraud in bank-loan case. Nat Underw (Life ed) 57:2 Mr 6 '53

Insurance for agents

Higher benefits granted by Great Southern Life. Weekly Underw 168:1570 Je 6 '53

New group plan operating for New York Life agents has comprehensive benefits. Nat Underw (Life ed) 56:21 N 21 '52; Weekly Underw 167:1395 N 22 '52

Letters to prospects

Consecutive weekly production. M. H. Weis. Life Ins Courant 57:16-17 N '52

Direct mail found a potent cure and preventive for production slumps. R. J. Walker. Nat Underw (Life ed) 57:17 Mr 13 '53

For bigger and better direct mail; editorial. Nat Underw (Life ed) 56:10 S 12 '52; Discussion. B. A. Hedges. 56:8 O 31 '52

Rating

Aptitude tests can bring agent out of slump as well as help select new men. J. Klein. Nat Underw (Life ed) 57:27 Je 5 '53

Best informed agent does best sales job, LIAMA study shows; survey is based on LUTC course students' answers on information index. Nat Underw (Life ed) 56:3 O 17 '52

Good attitude found linked with agent's success in selling; LIAMA research indicates satisfied producers also last longer, lapse less. J. Weitz. Nat Underw (Life ed) 56:5 N 21 '52

"No sale" reasons of 500 agents are listed by L.I.A.M.A. Nat Underw (Life ed) 56:2 O 24 '52

Recruiting

See Insurance, Life—Agents—Selection

Salaries

Training allowance integration problem under 213 change. Nat Underw (Life ed) 57:2 My 22 '53

Sales conventions

Business men's assurance 44th anniversary all-star meeting, Kansas City, Mo. Nat Underw (Life ed) 57:6+ Je 12 '53

Chicago association annual regionals in three sections. Nat Underw (Life ed) 56:4+ O 31 '52

Connecticut association's sales congress, New Haven. East Underw 54:9 Ap 10 '53

Connecticut sales congress, New Haven. Nat Underw (Life ed) 57:8 Ap 10 '53

Fidelity Mutual convention, Hot Springs. East Underw 53:3 N 21 '52

500 attend Texas A.&H. congresses. Nat Underw (Life ed) 56:18 D 12 '52

Great-West Life's eastern meeting, Bretton Woods. East Underw 54:14 Je 26 '53

Guardian Life's leaders club conference, Savannah. East Underw 54:3-4 Mr 27 '53

Jamison & Phelps mark record year at sales congress. Nat Underw (Life ed) 57:20 Ja 23 '53

Life underwriters association of the city of New York Brooklyn branch 4th annual sales congress. East Underw 54:3+ Ja 30 '53

New Jersey agents told how to beat recession fear, lure of stocks and mutual fund shares. Nat Underw (Life ed) 57:19-20 Je 5 '53

Northwestern Mutual soars to new heights; '52 a record breaker. Nat Underw (Life ed) 57:1+ Ja 9 '53

Prudential announces new expansion plans at leaders meeting. East Underw 54:1+ Mr 6 '53; Weekly Underw 168:671 Mr 7 '53

St Louisans hear how their M.D.R.T. men made the grade. Nat Underw (Life ed) 57:7 Ja 30 '53

Sales congress in Indiana. Weekly Underw 168:1100 Ap 18 '53

Sessions at Peoria are notably well attended. Nat Underw (Life ed) 56:4+ N 14 '52

Selection

Close home office supervision needed in recruiting. W. P. Lynch. East Underw 53:14 N 21 '52

Fighting spirit more essential than college degree for agent recruits. H. S. Bell. Nat Underw (Life ed) 56:13 N 21 '52; Same. Weekly Underw 167:1391+ N 22 '52

How to recruit men for life insurance selling. H. S. Bell. Weekly Underw 168:171-3 Ja 10 '53

New York Life optimistic on long-range program for recruiting agents for colleges. Nat Underw (Life ed) 57:4+ Ap 17 '53

Training the American salesman. L. S. Roscoe. Life Ins Courant 58:34-7+ Ap '53

Urges care in selection. A. C. Hansch. Nat Underw (Life ed) 56:4 N 14 '52

Vocational guidance as a way to better agent recruiting. Nat Underw (Life ed) 57:10+ Ap 17 '53

What am I? test is uncannily sharp in selecting agents. Nat Underw (Life ed) 57:2+ Mr 6 '53

Service

Selling through service. A. Bonadies. Life Ins Courant 57:29-30 N '52

Training Community Chest workers proves success. Nat Underw (Life ed) 57:3+ Ja 2 '53

Telephone calls

Six hours a day on phone pave way to million-plus production for young agent. Nat Underw (Life ed) 57:16 Ja 9 '53

We made phone calls pay. Life Ins Courant 58:30-1 My '53

Training

Companies use movies to help agents. East Underw 53:8+ N 7 '52

Education of agents and managers. S. S. Huebner. East Underw 54:6 My 15 '53

Home Life planners' program matures campus recruits into skilled producers. Nat Underw (Life ed) 57:2 Mr 6 '53

LUTC enrollment at record high. East Underw 54:14 Ja 30 '53

New training program reduces lapse ratio substantially. R. J. Taylor. Weekly Underw 168:1186 Ap 25 '53

INSURANCE, Life—Agents—Training—*Cont.*

New York Life's sales training program. East Underw 54:3 Ja 30 '53; Same. Weekly Underw 168:309+ Ja 31 '53

Training the American salesman. L. S. Roscoe. Life Ins Courant 58:34-7+ Ap '53

Women agents

Fought winning battle with tb; Rhoda Hanson, successful Montana agent. East Underw 54:20 Ap 17 '53

Canada

Canada; licensing problem. Spectator 160:128 N '52

Annuities

See Annuities

Brokers

Asks action on brokers' status. G. A. Eubank. East Underw 54:14 Ap 17 '53; Same cond. Weekly Underw 168:1098 Ap 18 '53

Eubank plans to urge agent-broker unity plan on NALU. Nat Underw (Life ed) 57:2 Mr 20 '53

Eubank to fight for brokers status issue. East Underw 54:5 F 13 '53

Eubank wants NALU to make clear its stand on brokers; open letter to D. B. Fluegelman; reply. East Underw 54:1+ Ja 23 '53; Nat Underw (Life ed) 57:2 Ja 23 '53; Weekly Underw 168:288-9 Ja 24 '53

Eubank will appear before meeting of N.A.L.U. trustees to discuss broker issue; letter by Fluegelman. Nat Underw (Life ed) 57:21 F 13 '53

Fluegelman clarifies position about brokers; Eubank inquires about Fluegelman real attitude. Weekly Underw 168:815+ Mr 21 '53

Fluegelman reaffirms NALU stand on brokers. East Underw 54:21 F 20 '53

Statement concerning brokerage business. D. B. Fluegelman. East Underw 54:4 Mr 20 '53; Same. Nat Underw (Life ed) 57:1+ Mr 13 '53

Will demand clear broker policy. G. A. Eubank. East Underw 54:12 Mr 20 '53

Business beneficiaries

See Insurance, Business

Children's policies

Don't overlook carriage trade market; babies mean business! Weekly Underw 168:56+ sec 2 My 9 '53

Juvenile has appeal; Mutual of New York underwriters tell how. Life Ins Courant 58:23-4+ Je '53

New life cover announced by Aetna life co. Juvenile 21 special. Weekly Underw 167:1528 D 6 '52

N.Y. department hints it may stop jumping juvenile. Nat Underw (Life ed) 57:1+ My 15 '53

Selling juvenile; Provident Mutual agents symposium. Life Ins Courant 57:18, 20-4 N '52

Stressing juvenile sales benefits no one. D. E. Kilgour. Nat Underw (Life ed) 57:10 Je 19 '53

Claims

See Insurance, Life—Adjustment of claims; Insurance, Life—First year claims; Insurance, Life—War death claims

Cost

Current scales; tables of average cost based on present dividend scales. Life Ins Courant 58:58-65 Je '53

Influence of interest rate on net cost, 1947-1951; table. Spectator 160:90 N '52

Credit aspects

Big future seen for credit insurance. L. T. Kizer. Nat Underw (Life ed) 57:10 Je 12 '53

Can't require life, A.&H. insurance to cover loans in Colorado. Nat Underw 56:24 N 6 '52

Consumer credit insurance; cushion of security. H. L. Rhodus. Weekly Underw 167:1265+ N 8 '52

Credit life, A.&H. practices, theories sharply challenged. Nat Underw 56:19+ D 11 '52

Household finance introduces group life; again scores extra insurance charge. Nat Underw 57:29 Mr 19 '53; Same. Nat Underw (Life ed) 57:8 Mr 20 '53

New rules in Texas for credit insurance. Nat Underw 56:24 D 11 '52

Short-cut slashes work done for banks on assignments of policies for loans. Nat Underw (Life ed) 57:2+ Je 26 '53

Warns credit insurers of threatened dual regulation by states. V. H. Nyborg. Nat Underw (Life ed) 57:8 Je 12 '53

Creditors' group policies

See Insurance, Group life—Creditors' policies

Disability provisions

Life insurers must offer all personal coverages. C. J. Zimmerman. Nat Underw (Life ed) 56:8 D 12 '52; Weekly Underw 167:1591 D 13 '52

U.S. Life announces new disability income rider. East Underw 53:7 D 19 '52

Economic aspects

Economic conditions, life sales are linked. H. J. Johnson. Nat Underw (Life ed) 57:5 Je 26 '53

Employees' insurance

Big sales, bigger potential in $5,000 tax-free payment. L. G. Simon. Nat Underw (Life ed) 56:21 N 7 '52

Day issues order on Bankers Life & Casualty employe policies. Nat Underw (Life ed) 57:11 Ja 16 '53

Deferred compensation benefits. S. J. Foosaner. Life Ins Courant 58:24-7 Ap '53

Estate protection

Banker praises results of cooperation with agents, lawyers and accountants. T. Mills. Nat Underw (Life ed) 57:23 My 15 '53

Converting an agency to estate planning basis is well worth effort. S. L. Zeigen. Nat Underw (Life ed) 57:2 My 15 '53

Estate planner's day; sponsored by the New York chapter of Chartered life underwriters. Life Ins Courant 58:27-8 Mr '53

Family dollar; factors in estate planning. E. S. MacNeill. Banking 45:65-6 My '53

Gordon's book on estates and heirs; review of You, your heirs and your estate, by G. B. Gordon. East Underw 54:3 Mr 13 '53

Great care needed to hold estate taxes to a minimum. F. L. Morton. Spectator 161:33+ Mr '53

Important tax aspects of estate planning. S. L. Zeigen. Weekly Underw 168:672 Mr 7 '53

Marital deduction. R. W. Osler. Rough Notes 96:62-3 F '53

New York chapter of Chartered life underwriters 5th annual estate planners day; panel discussion on tax aspects of estate planning. Trusts & Estates 92:94-6 F '53

New York chapter of CLU halts fifth estate planners day. East Underw 54:8+ F 6 '53

Practical estate conservation plan. D. M. Schuyler. Nat Underw (Life ed) 57:16-17+ Mr 6 '53

Valuable estate planning ideas are offered at New York C.L.U. sessions. Nat Underw (Life ed) 57:5 F 6 '53

See also
Estate planning
Insurance trusts

Family income policies

When the key men walked out, the widow lost the business. J. G. Baenziger. Life Ins Courant 58:30-3 Ja '53

Farmers as prospects

Choose the proper season to boost sales to farmers. R. J. Mlinar. Nat Underw (Life ed) 57:16 F 20 '53

Finance

Aetna Life ordinary business $355 million; assets pass $2,168 billion. East Underw 54:17 F 6 '53

Aetna Life results are handsome. Nat Underw 57:31 F 5 '53

Annual report, 88th. East Underw 54:14 F 13 '53

INSURANCE, Life—Finance—*Continued*

California 1952 totals for new business and in force shown; tabulation. Nat Underw (Life ed) 57:9+ Je 12 '53

Canada Life's record volume for last year. East Underw 54:6 F 13 '53

Canada reports increased premium writings in 1952. Weekly Underw 168:1232 My 2 '53

Cavanaugh reports on favorable 1952 results. East Underw 54:17 F 13 '53

Confederation Life has good increases. East Underw 54:13 Ja 30 '53

Connecticut Mutual has its best year. East Underw 54:6 Ja 30 '53

Denies charges in suit against officers of American Life of Alabama. Nat Underw (Life ed) 57:5 My 8 '53

Early company production results confirm reports that '52 will go down as best ever. Nat Underw (Life ed) 57:1+ Ja 16; 2+ Ja 30; 2+ F 6; 2+ F 13 '53

$11,400,000 paid in '52 by life insurance; with comparative figures for 1951. Life Ins Courant 58:71 My '53

Equitable Life society enjoyed greatest year. Weekly Underw 168:285, 608+ Ja 24, F 28 '53

Figures from life companies' year-end statements shown; tabulation. Nat Underw (Life ed) 57:7 F 6; 23 F 20; 11 F 27; 13 Mr 6; 4 Mr 13; 13 Mr 20; 11 Mr 27 '53

Great-West Life issued $327,000,000 in 1952. East Underw 54:18 F 13 '53

Home life of New York had nine per cent new business gain. East Underw 54:23 Mr 20 '53

Illinois new business and in force, 1952; table. Nat Underw (Life ed) 57:5+ My 15 '53

In-force rankings of life companies shown; tabulation. Nat Underw (Life ed) 57:6+ Ap 24 '53

Indiana 1952 totals for new business and in force; table. Nat Underw (Life ed) 57:5+ My 22 '53

Life companies report year's statistics in annual statements; excerpts and tabulations. Spectator 161:116-22 My '53

Life insurance companies; business of 1952 and condition, December 31, 1952; tabulation. Weekly Underw 168:90-5 sec 2 My 9 '53

Life of Georgia gained $105,620,052 life insurance in force during 1952. Nat Underw (Life ed) 57:4 F 20 '53

Life payments show big increase. Weekly Underw 168:505+ F 21 '53

Life premiums this year may exceed nine billion. Nat Underw (Life ed) 57:2 Je 12 '53; Same. Weekly Underw 168:1593+ Je 13 '53

Many companies near or exceed expense limit under Section 213; with table showing 1952 experience of New York companies on disability, double indemnity, annuities, etc. R. B. Mitchell. Nat Underw (Life ed) 57:3+ Mr 27; 6 My 15 '53

Massachusetts Mutual sets production mark. East Underw 54:10 F 13 '53

Metropolitan had in force Dec. 31 more than $51.854 billion. East Underw 54:1+ F 27 '53; Weekly Underw 168:608 F 28 '53

Michigan new business, in force totals for 1952; tables. Nat Underw (Life ed) 57:21-2 My 15 '53

More companies chalked up giant strides in past year. Nat Underw (Life ed) 57:5 Ja 23 '53

Mutual Benefit had its best year in '52. East Underw 54:9 F 13 '53

Mutual Life had 4.15 per cent new investment yield; annual report. East Underw 54:20 F 20 '53

Mutual of New York has increase of 12.5 per cent. East Underw 54:11 Ja 30 '53

National Life gains set new high marks. East Underw 54:11 F 13 '53

Net rate earned on mean ledger assets; 1935, 1938-51; table by company. Life Ins Courant 57:56-7 N '52

New all-time highs by Continental companies. East Underw 54:13 F 13 '53

New business for past three years; tabulation. East Underw 54:16-21 Ap 3 '53

New York Life's sales close to highs in '52. East Underw 54:20 Mr 20 '53; Same. Weekly Underw 168:777+ Mr 21 '53

Over 29 million new life policies bought in year. East Underw 54:10 Je 12 '53; Same. Weekly Underw 168:1771 Je 27 '53

Phoenix Mutual had 23 per cent production gain. East Underw 54:10 F 27 '53

Provident Mutual had record gains in 1952. East Underw 54:15 F 27 '53

Prudential enjoyed excellent achievements during 1952. C. M. Shanks. Weekly Underw 168:748 Mr 14 '53

Republic National has over $122 million new business. East Underw 54:21 Mr 20 '53

Results of 1952; life companies report year's statistics in annual statements. Spectator 161:100+ Ap '53

Show Ohio 1952 new business, in-force totals; tabulation. Nat Underw (Life ed) 57:5+ Ap 24 '53

Show Rhode Island new business and in force for 1952; tables. Nat Underw (Life ed) 57:23 Je 19 '53

Six months operating results, 1951 and 1952 compared; table by company. Spectator 160:19-21 O '52

State Mutual passes billion and half mark. East Underw 53:16 N 21 '52

29 million new life policies bought in '52; group shows big gain. Nat Underw (Life ed) 57:27 Je 19 '53

See also
Insurance, Life—Investments

First year claims

$111,300,000 paid on first-year deaths by life insurance companies in 1952; with case histories. Weekly Underw 168:3-4+ sec 2 My 9 '53

Fraudulent statements

Good faith of applicant for life policy held not a jury question where misrepresentations were material; Croll v. John Hancock mutual life insurance co. Weekly Underw 167:1131 O 25 '52

Health conservation service

Search that never ends; widespread response is greeting radio program. Nat Underw (Life ed) 57:2 My 1 '53

Seek aid for medical education; goal for life insurance companies. Weekly Underw 168:1465+ My 30 '53

Story of Metropolitan's health advertising. il Adv Agency 45:76-7+ N '52

Income policies

See Insurance, Life—Family income policies

Investment trust cooperation

Mutual funds and adequate insurance; editorial. Nat Underw (Life ed) 56:12 O 17 '52

Mutual funds and life insurance. C. F. Gay. Life Ins Courant 57:40-3+ D '52

Investments

Company investments serve whole people. P. F. Clark. East Underw 54:1+ My 8 '53; Same. Weekly Underw 168:1304 My 9 '53

Corporate bond experience re-examined; life insurance holdings. J. J. O'Leary. Banking 45:48-50 D '52

Defends direct placement. S. C. Badger. Nat Underw (Life ed) 56:6 N 14 '52

Do small companies get their share of direct placements? W. S. Rothschild; R. B. Patrick. Spectator 161:18-20+ Je '53

$4 billion put into mortgages in 1952. Nat Underw (Life ed) 57:8 Ja 9 '53

Glance at the financial situation. J. D. Anthony. Comm & Fin Chr 176:1525 O 23 '52; Excerpts. Nat Underw (Life ed) 56:1+ O 17 '52

Gross rate of interest earned on mean invested funds by leading life insurance companies from 1932 to 1951, inclusive; tabulation. Spectator 161:108-9 Ap '53

Higher life earnings; partly illusion. Bsns W p 132+ Ap 18 '53

Inequality of interest rate, overall demand blamed for dip in VA home loans; decline of life insurance company investment activity. Nat Underw (Life ed) 57:15 Je 26 '53

INSURANCE, Life—Investments—*Continued*

Insurance companies urged to back commercial building. Eng N 149:104 D 18 '52

Invest $4 billion in mortgages in 1952; purchases by life insurance companies. Comm & Fin Chr 177:24 Ja 1 '53

Investment risk. E. S. Bagley. Comm & Fin Chr 177:95+ Ja 8 '53

Investment trends and problems of life insurance companies; abstracts. J. J. O'Leary. East Underw 53:3-4 N 7 '52; Nat Underw (Life ed) 56:1+ N 7 '52

Investments, by classes, 1949-1952; all United States legal reserve life insurance companies; tabulation. Spectator 161:49 Mr '53

Life companies hold farm loans. Spectator 161:11 Ap '53

Life companies invest in Guatemala bank bonds. M. Bannell. Barron's 33:10 My 11 '53

Life companies show higher investment yield. Comm & Fin Chr 177:1553 Ap 9 '53; Weekly Underw 168:1114 Ap 18 '53

Life insurance companies and securities markets. G. T. Conklin, jr. Comm & Fin Chr 177:1738+ Ap 23 '53

Life insurance investment in public utilities. H. J. Johnson. Pub Util 52:341-5 S 10 '53

Life insurance portfolio shows higher yield trend; John Hancock life insurance co. P. A. Johnston. Barron's 33:23+ F 16 '53

Mortgages as life insurance investments. L. D. Meredith. Comm & Fin Chr 177:690-1 F 12 '53

Mutual Benefit investments. East Underw 54:14 F 13 '53

Net investment earnings of 95 property insurance companies, 1949-51; table. Spectator 160:28-9 N '52

New investment outlets administrative problem. H. W. Manning. Weekly Underw 167:1050 O 18 '52

Reaching for higher yields; life insurance companies. Bsns W p53-4 D 27 '52

Realization test best for investments; opinion of Metropolitan Life. East Underw 53:20 D 12 '52

Record of insurance investments. J. J. O'Leary. Weekly Underw 167:1592+ D 13 '52; Excerpts. East Underw 53:50 D 12 '52

Role of life insurance companies in paper industry financing, 1949-51. H. Baumgarten. Tappi 35:sup22A+ N '52

Sound dollar, rise in earning bring joy to insurers. Nat Underw (Life ed) 57:1+ Je 5 '53

Southwest, West attract investments. Nat Underw (Life ed) 57:4 Ja 16 '53

Stock purchases by life companies off in 1952. Comm & Fin Chr 177:205 Ja 15 '53

Toll road bonds good if scrutinized. R. B. Patrick. Nat Underw (Life ed) 56:13 O 17 '52

Treasury's 30-year bonds significant for life insurance. Nat Underw (Life ed) 57:1 Ap 17 '53

Trends and problems of life insurance investments. C. M. Shanks. Comm & Fin Chr 176:2344+ D 18 '52

Value of investment spread shown in study by Institute of life insurance. Nat Underw (Life ed) 57:27 Je 19 '53

Wisconsin insurers seek easing of investment restrictions. Nat Underw (Life ed) 56:10 O 31 '52; Weekly Underw 167:1146 N 1 '52

See also
Insurance, Life—Real estate operations

Legal departments

Equitable reorganizes its Counsel-insurance division. Nat Underw (Life ed) 57:9 Ja 23 '53

Functions and responsibilities of Home office counsel. P. E. Smith. Nat Underw (Life ed) 56:9+ D 19 '52

Mathematics

Society of actuaries publishes official mathematical text; Life contingencies, by C. W. Jordan. East Underw 54:1+ Ap 3 '53

Medical departments

Obtaining of accurate and adequate information is all important to the medical directors of life insurance companies. D. S. Garner. East Underw 54:3+ Je 26 '53

See also
Association of life insurance medical directors of America

Medical examinations

Modernized medical examination form pays good dividends. Nat Underw (Life ed) 57:7 Ap 24 '53

Progress of medical selection; contrast with pioneer days. H. Frost. East Underw 54:22 Mr 20 '53

Medical research

Canadian life insurance officers association public health grants. East Underw 54:12 My 22 '53; Same. Weekly Underw 168:1443 My 23 '53

Mortality statistics

See Mortality—Statistics

Mortgage redemption policies

Mortgage protection. W. H. Elden. Life Ins Courant 58:16-17 Mr '53

Negroes as policy holders

Rejection of life application because of race; State life fund of the state of Wisconsin. L. A. Burke. Spectator 161:81-3 My '53

Wisconsin ruling opens state life fund to Negro risks. Nat Underw (Life ed) 57:6 Ja 9 '53; Weekly Underw 168:621 F 28 '53

Policies

Americans are buying larger policies. Life Ins Courant 58:47-8 Je '53

Can't over-simplify policy contracts. K. Rolland. East Underw 54:8 Ja 2 '53

Colonial Life makes many policy changes. East Underw 54:6 F 6 '53

General American Life has new policy contract. East Underw 54:5 F 6 '53; Same. Weekly Underw 168:412 F 7 '53

Guaranteed renewable coverage. A. W. Perkins. Life Ins Courant 58:53-5+ Mr '53

Life contracts of various companies. Spectator 161:40 F '53

97 out of 100 life applications accepted. Nat Underw (Life ed) 57:6+ Je 19 '53

Ohio State Life policy conversion rules given. Nat Underw (Life ed) 57:15 Ja 9 '53

Policy size sold keeps ahead of living cost rise. Nat Underw (Life ed) 57:6 F 20 '53

Proposes husband-wife insurance. M. C. McIntosh. East Underw 53:38 D 12 '52

Smaller companies on a par with largest in variety of contracts they offer. R. Rosenquist. Nat Underw (Life ed) 57:3 Ja 2 '53

$10,000 minimums for special policies not uncommon. Nat Underw (Life ed) 56:11 O 31 '52

United States Life adds three new policy plans. East Underw 54:13 F 20 '53

See also
Insurance, Life—Children's policies
Insurance, Life—Disability provisions
Insurance, Life—Family income policies
Insurance, Life—Mortgage redemption policies
Insurance, Life—Retirement income policies
Insurance, Life—War risks

Non-forfeiture benefits

Current non-forfeiture provisions; table. P. A. Reddy. Spectator 160:40-1 O '52

Term policies

New England Mutual's new seven-year term policy. East Underw 54:6 Mr 27 '53

Term insurance myth. W. B. Hawkins. Rough Notes 96:56-7 Ja '53

Policy beneficiaries

Agent does not have confidential status; is not barred as beneficiary. East Underw 53:11 D 26 '52; Same. Nat Underw (Life ed) 56:8 D 19 '52

INSURANCE, Life—Policy beneficiaries—*Cont.*
Insured murdered by beneficiary; Neff v. Massachusetts Mutual. L. A. Burke. Spectator 160:118+ N '52

Policy dividends

Application of policyholders' dividends during 1951; table. Spectator 160:26 N '52
Company action on '53 dividends. Nat Underw (Life ed) 56:4 N 7 '52
Connecticut Mutual announces increase in dividends. East Underw 53:21 N 7 '52
Dividend actions since issue of 1952 compend; tabulation by company. Life Ins Courant 58:4 Ja '53
1953 dividend action; table by company. Nat Underw (Life ed) 56:3 N 28 '52
Northwestern Mutual boosts 1953 dividend scale. Nat Underw (Life ed) 56:2 N 28 '52
Prudential dividend scale revised for 1953. Nat Underw (Life ed) 57:9 Ja 9 '53

Policy holders

Annual policyholders number. Weekly Underw 168:1-96 sec 2 My 9 '53
Background of Policyholders protective association. Nat Underw (Life ed) 56:11 O 17 '52
Good will won by deeds; how home office, agency managers and field men can improve public relations. D. W. Tibbott. East Underw 54:3 My 29 '53
LAA runs workshop on relations with policyholders. Nat Underw (Life ed) 56:5 N 28 '52
LAA's policyholder relations workshop. East Underw 53:7 O 17 '52; Same. Nat Underw (Life ed) 56:2 O 17 '52
Life policyholder '52 death rate near record low point. Nat Underw (Life ed) 57:20 Ap 10 '53
New workshop has full week's study of policyholders; public attitude sessions at Rye, N.Y., under auspices of Life advertisers association. East Underw 53:1+ N 14 '52
Payments to policyholders for 20 years; tabulation. Spectator 161:40 Ja '53
Persistency report shows life insurance, A.&H. affinity. Nat Underw (Life ed) 57:24 Ap 24 '53; Same. Weekly Underw 168:1189 Ap 25 '53

See also
Insurance, Life—
First year claims

Policy settlement

Designations of options since Jan. 1, 1950; tabulation by companies. Life Ins Courant 58:47-8 F '53
Flexibility in settlement agreements. W. T. Blease. Life Ins Courant 57:22-3+ D '52
How insurance proceeds should be paid. E. S. MacNeill. Banking 45:53-4 Ap '53
Life policyholders receive more than $4 billion in one year. Spectator 161:99 Ap '53
Optional modes of settlement trends in 1940, 1950 and 1951; table. Spectator 160:90 N '52
Use of options for 81 companies; table. Life Ins Courant 57:54-5 N '52

Unclaimed policies

Lost policyholders are located by State Mutual. Weekly Underw 167:1194 N 1 '52

Political aspects

Background of Policyholders protective association. Nat Underw (Life ed) 56:11 O 17 '52

Premium financing

Increased sales on bank-loan approach alarm foes of plan. Nat Underw (Life ed) 56:7 O 17 '52
Interest rate rise found putting chill on bank-loan plans. Nat Underw (Life ed) 57:1 My 8 '53

Premiums, Payment of

Get your insurance free. R. W. Osler. Rough Notes 95:62-3+ D '52
What is indirect payment of premiums? R. H. Forster. Trusts & Estates 91:923-4 D '52

Prospects

Agency accounts, a new source for premiums. A. C. F. Finkbiner, jr. East Underw 53:18 D 12 '52
Amenable client still needs sharp motivation to be an assured. B. C. Anderson. Nat Underw (Life ed) 57:18 Ja 16 '53
Broken-down tv opens door to partnership case. Nat Underw (Life ed) 57:16-17 F 20 '53
Deflation ahead, now is time to buy life insurance with cheap dollars. D. B. Fluegelman. Nat Underw (Life ed) 57:6 Mr 20 '53
Must meet changing market. P. F. Clark. East Underw 54:16 Mr 27 '53
Off Main street. F. Dixon. Life Ins Courant 58:19-20 Je '53
Ordinary agent finds blue collar market elusive, Cincinnati panel says. Nat Underw (Life ed) 56:2 N 7 '52
Persistency determined when sale is effected. Weekly Underw 168:970 Ap 4 '53
Prospecting pointers. C. J. Amstutz. Life Ins Courant 58:37-8+ F '53
Prospects galore. R. F. Sharpe. il Life Ins Courant 58:29-30 Ap '53
Sell the young professional man. Life Ins Courant 58:27 F '53
Thrift begins at 45. M. J. Josephs. Life Ins Courant 58:16-17 My '53

See also
Insurance, Life—
Farmers as prospects
Insurance, Life—
Women as prospects

Publicity

Life insurance advertisers association eastern meeting; Publicity round table. Spectator 161:26+ Je '53

Purchasing

Life insurance ownership analyzed by area, income; Institute report. Weekly Underw 167:1332 N 15 '52
Life insurance potential is challenge. A. H. Johnson. Weekly Underw 167:1266-7 N 8 '52
More funds available for buying life insurance. E. Stone. Nat Underw (Life ed) 56:10 O 17 '52
Ownership of group life no deterrent to more purchases; summary of Life insurance agency management association Baton Rouge study. East Underw 53:1+ O 17 '52; Same. Nat Underw (Life ed) 56:8 O 17 '52; Same. Weekly Underw 167:1039-40 O 18 '52
Personal business; big shift in type of insurance policies people buy to provide cash for their older years. Bsns W p 155 N 1 '52

Rates

Eastern Life, New York, makes premium rate reductions. East Underw 54:4 Ja 9 '53

Real estate operations

Building WDTV outlet in Equitable Pittsburgh development; Gateway project also will house numerous industrial concerns. East Underw 53:18 N 14 '52
Metropolitan found to give tenants more for their rent than New York city's projects. J. R. Gaver. Nat Underw (Life ed) 56:20 O 31 '52

Retirement income policies

Thrift begins at 45. M. J. Josephs. Life Ins Courant 58:16-17 My '53

Risks

Recession talk adds to concern over jumbo writing. Nat Underw (Life ed) 57:1+ Je 19 '53

See also
Insurance, Life—
Substandard risks
Insurance, Life—
War risks
also Home office life underwriters association

Social aspects

Contributions of life insurance to the Nation. W. J. Cameron. East Underw 54:9 Ap 17 '53
Need public service program. R. E. Henley. East Underw 53:24 D 12 '52
New family types add to insurance importance. H. J. Johnson. Nat Underw (Life ed) 56:4 D 12 '52

Statistics

Average ordinary policy written, 1942-51; table by company. Spectator 160:37 N '52

INSURANCE, Life—Statistics—*Continued*

Detail life insurance growth since World War II. Weekly Underw 168:1028 Ap 11 '53

Family protection across the country; graph. Weekly Underw 168:5 sec 2 My 9 '53

Life companies' rankings for 1952 shown by insurance paid for, insurance gained, assets and ordinary in force; table. Nat Underw (Life ed) 57:8+ Je 5 '53

Life companies' rankings for 1952 shown under five classifications. Nat Underw (Life ed) 57:7+ Je 19 '53

Life insurance, assets admitted; insurance written, payments and premiums, Nov.-Dec. 1951-Jan.-Nov. 1952. Survey of Cur Bsns 33:S 17 Ja '53 [cont monthly]

Life insurance benefit payments in the United States; by type, 1951 and 1952; table. Weekly Underw 168:26 sec 2 My 9 '53

Life insurance betters world position. Weekly Underw 168:189+ Ja 17 '53

Life insurance ownership by American families. Spectator 161:51-2 F '53

Life purchases in 1952 set an all-time record. East Underw 54:6 F 6 '53

Men still buy nearly three-fourths of U.S. life insurance. Nat Underw (Life ed) 57:19 Ap 10 '53

1952 life insurance death benefits by states; ordinary, group, industrial and totals; tabulation. Weekly Underw 168:28 sec 2 My 9 '53; Same. Life Ins Courant 58:60 My '53

Rank of leading life insurance companies on January 1, 1953 by insurance in force, new business paid for, premium income, payments to policyholders, admitted assets and surplus funds. Weekly Underw 168:81-4 sec 2 My 9 '53

Rankings, Dec. 31, 1952; ordinary, industrial and group; tabulations by company. Life Ins Courant 58:64-6 Ap '53

Record gains made in insurance sales during past year. East Underw 54:1+ Ja 2 '53

Total ordinary sales by states, Dec. 1952 and 12 months, 1952; table. Life Ins Courant 58:67 Mr '53

Would extend SS to all working, retired persons. Nat Underw (Life ed) 57:1 Ja 30 '53

See also
Insurance, Group life—Statistics
Insurance, Life—Finance
Insurance, Life—First year claims

Study and teaching

C.L.U. answers to questions used in 1951 examinations. Life Ins Courant 57:41-2+ Ap; 44-8 My; 45-8 Je; 25-9 Jl; 22-5+ Ag; 29-30+ S; 45-8+ O; 40-3+ N; 45-50 D '52; 58:25+ Ja '53

C.L.U. designation awarded to 366; list. Life Ins Courant 57:37-9+ N '52

Composite answers to CLU examination questions, 1952. Weekly Underw 168:1312-15, 1447-50, 1573-6, 1705-8; 169:46-9, 184-7, 288-90, 394-6, 495-6, 640-2, 755-7, 836-8 My 9, 23, Je 6, 20, Jl 4, 18, Ag 1, 15, 29, S 12, 26-O 3 '53; Same. Life Ins Courant 58:29-30+ Mr; 44-51 Ap; 44-5+ My; 32-7+ Je; 25-30 Jl; 21-3+ Ag; 32-7+ S; 32-7 O; 32-7 N; 33-4+ D '53

Part of education in developing career concept. D. W. Gregg. Weekly Underw 168:1222-3+ My 2 '53

See also
Insurance, Life—Agents—Training
also American college of life underwriters; Life office management association

Substandard risks

Agent as vital link in underwriting, placing substandard cases. A. H. McAulay. Nat Underw (Life ed) 57:13+ Ap 17 '53

More companies nibbling at substandard; agency pressure seen as main factor. R. Rosenquist. Nat Underw (Life ed) 56:4 O 24 '52

Purchases of extra-risk coverages grow in 1952. Nat Underw (Life ed) 57:23 Je 19 '53

Suicide death claims

Suicide and insanity. L. A. Burke. Spectator 161:53 Ja '53

Tax problems

Big sales, bigger potential in $5,000 tax-free payment. L. G. Simon. Nat Underw (Life ed) 56:21 N 7 '52

$5,000 gross income exemption proposal by tax unit smacks of discrimination. Nat Underw (Life ed) 56:6 D 26 '52

Gift idea appeals to older clients; using gifts to reduce taxes. H. Petter. Life Ins Courant 57:16-17 D '52

Gift tax on life insurance proceeds. F. L. Morton. Spectator 161:53-5 My '53

Great care needed to hold estate taxes to a minimum. F. L. Morton. Spectator 161:33+ Mr '53

How to minimize tax collector's bite on renewal account of general agent. J. Barker, jr. Nat Underw (Life ed) 57:11+ Ap 17 '53

Indirect payment of premiums? F. L. Morton. Spectator 161:42+ F '53

New York chapter of Chartered life underwriters 5th annual estate planners day; panel discussion on tax aspects of estate planning. Trusts & Estates 92:94-6 F '53

Transfers of insurance for consideration. A. Manella. Trusts & Estates 91:820-1 N '52

Taxation

Government trends affecting insurance; expanding tax problems. R. L. Hogg. East Underw 53:16 N 7 '52

Life insurance and annuity combinations. F. L. Morton. Spectator 161:55-6+ Ap '53

Missouri Supreme court upholds two per cent premium tax. East Underw 54:9 Mr 20 '53

Recent decisions on the taxability of life insurance. F. L. Morton. Spectator 161:48-9 Ja '53

Suggest changes in internal revenue taxation. East Underw 54:3-4 F 6 '53

Suggestions for improving our present tax laws. F. L. Morton. Spectator (Endorsement no 1952-1953) 160:98-100 D '52

Tax hint-of-the-month; a fallacy exposed. E. S. MacNeill. Banking 45:68 Je '53

Unclaimed policies

See Insurance, Life—Policy settlement—Unclaimed policies

War death claims

Supreme court asked to pass on Korean war. Weekly Underw 168:1441 My 23 '53

When is a war a war? answered by Pennsylvania Supreme court. Weekly Underw 168:1197 Ap 25 '53

War risks

Caution remains keynote in writing of military lives. J. M. Huebner. East Underw 53:1+ D 12 '52

Suggests financial moratorium in event of atom bombing. R D. Murphy. Nat Underw (Life ed) 56:5 N 14 '52

Women agents

See Insurance, Life—Agents—Women agents

Women as policy holders

Women holders of life insurance protection. East Underw 54:20 F 13 '53

Women in the United States now own more than $49 billion of life insurance. Weekly Underw 168:37 sec 2 My 9 '53

Women as prospects

Companies much more liberal in writing women. R. Rosenquist. Nat Underw (Life ed) 56:6 O 31 '52

Arizona

May combine code study with benefit probe in Arizona. Nat Underw (Life ed) 57:7 Mr 13 '53

Canada

Canada, land of the future. A. A. Tousaw. East Underw 53:14 D 12 '52

Canadian life insurance companies. Weekly Underw 168:95 sec 2 My 9 '53

Protests misleading and inaccurate information about Canadian life insurance shares in letter to investment dealers in U.S. R. L. Foster. Comm & Fin Chr 177:1783 Ap 23 '53

INSURANCE, Life—Canada—*Continued*

$2,250 million new business in Canada. East Underw 54:6 Ja 2 '53

See also

Canadian life insurance officers' association

Connecticut

Connecticut examinations. W. E. Allyn. Weekly Underw 168:1030 Ap 11 '53

Great Britain

Cheaper life assurance; with table by companies showing cost of life assurance and annuities, May 1950 and October 1952. Economist 165:319-21 N 1 '52

Life assurance business; Standard life assurance co. announced record new life assurance business for 1951-52. Economist 165:782 D 13 '52

New life business in 1952. Economist 166:100+ Ja 10 '53

Recovery in industrial life assurance? Economist 165:646 N 29 '52

New England

Jay R. Benton author of article on New England business record. East Underw 54:11 Ja 30 '53

New York (city)

300 years of growth. Spectator 161:16 Mr '53

New York (state)

Importance of Armstrong committee, Hughes laws. J. S. Myrick. East Underw 54:14 Ja 23 '53

Retrospect view of the Armstrong investigation. B. M. Anderson. East Underw 53: 3+ D 19 '52

Ohio

Show Ohio 1952 new business, in-force totals; tabulation. Nat Underw (Life ed) 57:5+ Ap 24 '53

Texas

Fear tax effect of rush to form new Texas companies; oil money seeking sheltered investment. Nat Underw (Life ed) 57:1+ My 15 '53

Insurance bonanza; life companies are striking it rich in Texas. D. C. Morrill. Barron's 33:7+ Mr 30 '53

Terms Texas insurance laws a national disgrace. G. B. Butler. Nat Underw (Life ed) 57:1+ My 8 '53

Texas insurance is big, too. Bsns W p 144-6 Mr 28 '53

United States

Insurance not kept up with U.S. growth. J. A. McLain. East Underw 54:12+ My 22 '53

Washington, D.C.

Navy aid association offers $7,500 cover to officers. Nat Underw (Life ed) 57:9 My 8 '53

Wisconsin

1952 figures for Wisconsin; tabulation. Nat Underw (Life ed) 57:7 Ap 3 '53

INSURANCE, Liquor law liability

Chicago reciprocal only writer of liability cover for Michigan liquor licensees. Nat Underw 57:20 Ja 1 '53

Counterfeit policies

Counterfeit policies for sale in Chicago. Nat Underw 57:3 F 26 '53

INSURANCE, Livestock

How to sell livestock insurance to farmers. L. T. Wright. Rough Notes 96:24-5+ Ap '53

Money on the hoof. J. D. Fort. Rough Notes 95:75-6 D '52

INSURANCE, Machinery

Boiler and machinery experience is better. L. B. Brainerd. Weekly Underw 168:70+ Ja 3 '53

INSURANCE, Malpractice liability

Three new professional liability coverages. H. F. Gee. Rough Notes 96:30+ Ap '53

Adjustment of claims

High damage award and rare disease features of federal malpractice case; Canon v. United States. Weekly Underw 168:1579 Je 6 '53

INSURANCE, Manufacturers' liability

Necessity of specifying detached employes in liability policy weighed. Nat Underw 51:23 F 5 '53

INSURANCE, Manufacturers' output

Blanket insurance; manufacturer's output policy. Bsns W p68 D 6 '52

Development and present status of manufacturers' output policy. E. V. Silver, jr. East Underw 54:30+ Ja 16 '53

Main feature of manufacturers' output. Nat Underw 56:5 N 27 '52

Manufacturer's output policy now used in 33 states. R. C. McCullough. East Underw 54: 26 My 29 '53

Philosophy and practice of output policy. Nat Underw 57:28 My 21 '53

INSURANCE, Marine

Coastwise and inland transportation insurance. H. L. deRham. Weekly Underw 167: 1451-2 N 29 '52

Competition of American marine market cause for comment by British underwriters. D. King-Page. Weekly Underw 167: 1700-2 D 27 '52

Decline in Hull values. East Underw 54:22 Mr 6 '53

Detailed recommendations for changes in marine definition are given. Nat Underw 57:1+ Ap 2 '53

Developments in ocean marine insurance. E. R. King. Weekly Underw 168:48+ Ja 3 '53

Fundamental concepts of marine policies for all risks. W. D. Winter. East Underw 54:25 Ja 30 '53

Liverpool marine chairman gives views on underwriting problems. C. H. Johnson. East Underw 54:28 My 8 '53

Liverpool Underwriters annual report. Weekly Underw 168:792+ Mr 21 '53

Marine definition views reconciled at Chicago parley. Nat Underw 57:1+ Mr 26 '53

Marine insurance developments. O. C. Torrey. Weekly Underw 167:1428+ N 29 '52; Same abr. East Underw 53:27 N 28 '52

NAIC approves move to reaffirm the nationwide marine definition. East Underw 53: 25+ D 19 '52

Ocean marine hull underwriters hope for better in 1953. Nat Underw 57:1 Ja 29 '53

Ocean marine premiums down, losses up. H. C. Thorn. East Underw 53:65+ D 12 '52

Ocean marine underwriters must be expert in many lines to pass risks. E. C. Holden, jr. East Underw 54:39+ Ap 3 '53

Public relations theme; marine policies must be better explained. R. D. Eckhouse. Weekly Underw 168:455 F 14 '53

Retrospective view of marine insurance. East Underw 54:39 Ap 17 '53

Revised hull clauses. Spectator 161:44-5 Ja '53

Work of marine cargo surveyor embraces every commodity moved in ships. F. A. Hanley. Weekly Underw 168:654-5+ Mr 7 '53

See also

Insurance, Motor boat

also International marine insurance union

Adjustment of claims

British opinion on Supreme court decision holding Lloyd's liable; destruction during the war of the S.S. Portmar. East Underw 54:25 Je 26 '53

Portmar case decision subject of comment. Weekly Underw 168:1414 My 23 '53

Supreme court holds Lloyd's liable for marine loss in war; Portmar sunk by Japanese planes. East Underw 54:1+ My 1 '53; Weekly Underw 168:1226+ My 2 '53

Unexplained sinking of vessel in good weather and on calm water held not covered by marine policy; Watson v. Providence Washington insurance co. Weekly Underw 167:1055 O 18 '52

Agents

What ocean marine agent should know about foreign sale details. G. A. W. Ingram. East Underw 53:38 N 21 '52

INSURANCE, Marine—*Continued*

Binders

See Insurance—Binders

Finance

1952 automobile and ocean marine net premiums written, losses paid, New York state; tabulation. East Underw 54:34+ Mr 13 '53
Ocean marine business (including war risk) by underwriting groups and agencies, 1949-1951; table. Spectator 160:40-5 N '52
Universal companies made 1952 profit on marine. East Underw 54:37 Mr 20 '53

International aspects

Industry gratified by results achieved by J. T. Byrne's plea against discrimination. Weekly Underw 168:518-19+ F 21 '53

Losses

Lower California fishing fleet losses running high. East Underw 53:23 D 26 '52

Policies

North America's new personal articles coverage is detailed. Nat Underw 57:15 Ap 9 '53
Uniformity of marine policy forms and conditions. T. F. Glavey. Weekly Underw 167:1453-4 N 29 '52

Preventive work

Loss prevention measures in field of marine insurance; actions of underwriters. R. B. Miller. Weekly Underw 167:1084-6+ O 25 '52

Rates

Blunt comments on marine insurance rates. A. Rogers. East Underw 54:17 My 8 '53

War risks

American cargo war risk writers announce rate reductions. Weekly Underw 168:396 F 7 '53
American war risks agency issues close to 500 hull, P.&I. binders. East Underw 54:24 Ja 30 '53
Billions in war risk; huge volume of coverage on hulls, P.&I. and seamen's war risk placed with government agency. East Underw 54:31 Mr 13 '53
British underwriters still discussing high U.S. court decision in Portmar case. Weekly Underw 168:1736 Je 27 '53
Congress passes bill for marine war risk covers. East Underw 54:37 My 15 '53
Export-import bank given insurance power abroad. Nat Underw 57:33 My 14 '53
Marine people oppose Maybank war risk bill. Nat Underw 57:12+ Ap 16 '53
Maybank-Capehart bill wins committee approval. Weekly Underw 168:1079 Ap 18 '53
Stand-by war risk cover totals $2,424,217,974. Weekly Underw 168:720 Mr 14 '53
Supreme court holds Lloyd's liable for marine loss in war; Portmar sunk by Japanese planes. East Underw 54:1+ My 1 '53; Weekly Underw 168:1226+ My 2 '53
Underwriters question wisdom of bill to cover war risks abroad. East Underw 54:27 Ap 24 '53
War insurance may bolster cotton exports Nat Underw 57:18 My 7 '53
War risk cover for private shipbuilders is on tapis. Nat Underw 56:2 N 6 '52

Great Britain

January termed one of blackest months on record by British underwriters. Weekly Underw 168:652-3 Mr 7 '53

INSURANCE, Medical expense

Catastrophe coverage. E. B. Whittaker. East Underw 54:12 Ap 24 '53; Same abr. Nat Underw 57:7 Ap 30 '53
Claim experience under group major medical expense. M. D. Miller. il East Underw 54:46 Ap 3 '53
Doctor, the medical director, and accident and health insurance. W. H. Scoins. East Underw 54:46+ My 8 '53
Equitable society's major medical expense policy completes first year. M. D. Miller. East Underw 54:34 Ja 23 '53
Major medical expense policy of New York Life. East Underw 54:10 Je 12 '53; Same. Weekly Underw 168:1633+ Je 13 '53; Same cond. Nat Underw (Life ed) 57:12 Je 12 '53
Medical expense insurance really fulfilling function. W. H. Scoins. Nat Underw (Life ed) 57:23+ My 8 '53
Medical-surgical at low cost; Federal L.&C.'s new policy. East Underw 54:44 Mr 6 '53
N.A.I.C. urged to require minimum Blue Cross reserves. C. C. Dubuar. Nat Underw 57:4+ Je 11 '53; Same. Nat Underw (Life ed) 57:7 Je 12 '53
Need of medical catastrophe; abstracts. E. B. Whittaker. East Underw 53:16 N 28 '52; Nat Underw (Life ed) 56:14 N 28 '52
Reverse coinsurance in major medical. Nat Underw (Life ed) 57:3 Ap 24 '53
What companies do about rising medical costs problem. R. W. Carey. East Underw 54:37 F 6 '53

See also

Insurance, Surgical expense

INSURANCE, Mercantile open stock burglary. See Insurance, Burglary

INSURANCE, Military and naval service

Oppose doubling up veterans' benefits. East Underw 54:14 My 29 '53; Same. Weekly Underw 168:1510 My 30 '53; Same cond. Nat Underw (Life ed) 57:9 My 29 '53
Study shows cost of administering VA insurance. Nat Underw (Life ed) 57:27 Je 5 '53
Truman estimates SS, welfare and health costs for fiscal year 1954 as $2.6 billion. East Underw 54:3 Ja 16 '53
VA reorganization planned by experts. East Underw 53:11 D 5 '52

Lapses and surrenders

NSLI record; $10 billion lapse affects 1,200,000. Nat Underw (Life ed) 56:8 N 7 '52

INSURANCE, Mortgage

Few cents a day guarantees mortgage payments. Life Ins Courant 58:54 My '53

See also

Insurance, Life—Mortgage redemption policies

INSURANCE, Mortgage interest

Savings banks insurance buyers told of mortgage protection. G. T. Cowan. Weekly Underw 168:1165+ Ap 25 '53

INSURANCE, Motor boat

Founders yacht policy innovations are noted. Nat Underw 57:11 F 5 '53; Discussion. 57:21 My 7 '53
Take exception to yacht rate claims of Lloyds. Nat Underw 57:16 My 7 '53; Discussion. 57:27 My 14 '53

INSURANCE, Motor truck

Analysis of liability policy. Rough Notes 96:77 Ja '53
How to make money insuring motor truck fleets. F. V. Griffith, jr. Rough Notes 96:40+ Ap '53
Other insurance decision is given by U.S. court. Nat Underw 57:13 Ja 22 '53

Adjustment of claims

Flood damage discussed in Kansas City automobile case. Weekly Underw 168:297 Ja 24 '53
Loading and unloading clause construed to include customer's supervisory employee. Weekly Underw 168:365 Ja 31 '53
Res ipsa loquitur held only theory applicable in dynamite explosion case; Pope v. Edward M. Rude carrier corp. Weekly Underw 168:1648 Je 13 '53
Violation of one policy provision doesn't void cover for other losses; Baldwin vs. Tri-State Casualty. Nat Underw 56:5 O 16 '52

INSURANCE, Motor truck contents

Four inland underwriters present views on truck cargo insurance. East Underw 54:37 Ap 17 '53; Same. Weekly Underw 168:1004 Ap 11 '53
Truck cargo insurance economic barometer. J. Seide. East Underw 53:84-5 D 12 '52; Weekly Underw 168:52-3+ Ja 3 '53

Adjustment of claims

City judge reverses holding on in transit provisions of policy. East Underw 54:20 Ja 2 '53

INSURANCE, Motor truck contents—Adjustment of claims—*Continued*

Court holds cargo on truck parked on street not actually in transit. M. J. Gwertzman. East Underw 53:26 O 31 '52

Transfer of coverage; Joseph Schultz co. v. Camden fire insurance association. L. A. Burke. Spectator 160:80+ O '52

Preventive work

How crime wave hit truck cargoes. East Underw 54:27 Ja 9 '53

INSURANCE, Multiple location. See Insurance, Fire—Multiple location policies

INSURANCE, Municipal

California cities find trouble getting cover. Weekly Underw 168:1739+ Je 27 '53

N.A.I.A. study of self and no insurance on towns and states. Nat Underw 57:2+ Ap 30 '53

See also

Insurance, Liability—Municipal policies

INSURANCE, Mutual

Answers Illinois complaint; following local lead, American Farmers contends. Nat Underw 56:28 O 23 '52; Same. Nat Underw (Life ed) 56:7 O 24 '52

Austin Flett and Chase Smith tangle in debate on stock vs. mutual insurance. Nat Underw 57:2+ Ja 22 '53

Bitter fight in Wisconsin on mutual tax scheme. Nat Underw 57:15 My 7 '53

Experience of mutual carriers bettered. J. S. Kemper. Weekly Underw 168:38-9 Ja 3 '53

Mutual agents association of New York 12th annual meeting, Syracuse, April 20-21. Weekly Underw 168:1212+ My 2 '53

Mutual taxation situation. J. S. Kemper. Weekly Underw 168:1429 My 23 '53

Non-assessable policy in Mississippi retains that status. Nat Underw 56:6 O 16 '52

Philadelphia mutual conference climaxes bicentennial celebration. East Underw 53:26-7 O 24 '52; Nat Underw 56:1+ O 16; 4+ O 23 '52; Weekly Underw 167:1008-12, 1015 O 18 '52

Summons farm mutuals to raise sights much higher. R. R. Botts. Nat Underw 56:4+ O 23 '52

See also

National association of mutual insurance companies

Statistics

Early returns from financial statements of mutual fire and casualty companies for 1952. Spectator 161:110, 112 My '53

INSURANCE, Owner's, landlords' and tenants' liability

Adjustment of claims

New York court construes OL&T policy in case involving assault by partner. Weekly Underw 168:1710 Je 20 '53

INSURANCE, Parcel post

Good lead line. H. F. Gibson. Rough Notes 96:77-8 F '53

INSURANCE, Partnership. See Insurance, Business—Partnership interest

INSURANCE, Personal property floater. See Insurance, Inland marine—Policies—Personal property floater

INSURANCE, Physicians' and surgeons' liability. See Insurance, Malpractice liability

INSURANCE, Plate glass. See Insurance, Glass

INSURANCE, Products liability

Dangers of new products. J. V. Grimaldi. Weekly Underw 167:1659 D 20 '52

General liability policy covers product case. Nat Underw 57:24 F 5 '53

More products liability cover being bought than is sold. L. Milstead. Weekly Underw 168:878+ Mr 28 '53

Product liability exclusion construed in unique Washington case. Weekly Underw 168:1452 My 23 '53

Products liability included; Defense department accedes to request of aircraft manufacturers to accept cost as reimbursable expense. East Underw 54:34 Ja 9 '53

INSURANCE, Professional liability. See Insurance, Malpractice liability

INSURANCE, Profits and commissions

Loss of profits insurance on gold mines. East Underw 54:21 F 13 '53

INSURANCE, Public liability. See Insurance, Liability

INSURANCE, Reciprocal

Industrial indemnity exchange suit goes back to lower court. Nat Underw 57:24 My 14 '53

INSURANCE, Rent

Applications and sale of time element insurance covers. H. C. Klein. East Underw 53:21+ O 24 '52

Rent, rental value, extra expense and leasehold forms. H. C. Klein. East Underw 54:23 My 1 '53

INSURANCE, Replacement

Insurance plan for defective fixture replacement; interview with P. J. Brown and G. Rapp. Dom Eng 182:80-3 O '53

INSURANCE, Robbery. See Insurance, Burglary

INSURANCE, Selling agents' commissions

Commissions of selling agents. Rough Notes 95:107 N '52

INSURANCE, Social

Blasts social security plan. H. B. Palmer. East Underw 54:15 My 1 '53

Calls security act greatest threat to life business. E. M. Thore. Nat Underw (Life ed) 57:4+ Ap 17 '53; Same cond. East Underw 54:16 Ap 17 '53

Chamber proposal to extend SS viewed as inflationary. H. Hallam. Nat Underw (Life ed) 57:2 F 6 '53

Companies weigh social security changes U.S. Chamber wants. E. M. Thore. East Underw 54:12 My 29 '53

Expanded social security program supported in United States chamber referendum. Weekly Underw 168:346 Ja 31 '53

Federal social security plans strayed from purpose. R. L. Hogg. Weekly Underw 167:1330 N 15 '52

Fund sponsor outlines social security values. P. A. Johnston. Barron's 33:23 My 25 '53

I.L.O.'s minimum SS standards. East Underw 54:18 F 20 '53

Legislators discuss federal insurance plan. Spectator 161:9 Mr '53

Need for basic appraisal of SS programs. L. A. Lincoln. Nat Underw (Life ed) 57:5 F 20 '53

Quickening pace of events in social benefits field. E. J. Faulkner. East Underw 54:30+ Ap 24 '53

Social security ills get treatment at U.S. Chamber meet. Nat Underw 57:16 Ap 2 '53

Truman estimates SS, welfare and health costs for fiscal year 1954 as $2.6 billion. East Underw 54:3 Ja 16 '53

U.S. Chamber calls parley for Chicago on OASI overhaul. Nat Underw (Life ed) 57:2+ F 13 '53

U.S. Chamber-Chicago association meet weighs problem of social security, proposes cures. Nat Underw (Life ed) 57:3 Ap 3 '53

Would extend SS to all working, retired persons. Nat Underw (Life ed) 57:1 Ja 30 '53

See also

Insurance, Health
Insurance, State
Insurance, Unemployment

Cost

Actuaries have duty to warn of social security costliness. B. T. Holmes. Nat Underw (Life ed) 56:2+ N 14 '52

Finance

Social security financing, and demography. Int Labour R 66:461-76 N-D '52

Germany

Social security developments in the Federal Republic of Germany since 1949. Int Labour R 66:485-501 N-D '52

Great Britain

Burden of pensions. Economist 167:889 Je 27 '53

INSURANCE, Soldiers' and sailors'. See Insurance, Military and naval service

INSURANCE, Sprinkler leakage

Aircraft damage sprinkler leakage covered free. Nat Underw 56:6 N 6 '52

INSURANCE, State

N.A.I.A. study of self and no insurance on towns and states. Nat Underw 57:2+ Ap 30 '53

Survey by local agents association discloses weakness of state and city funds. Weekly Underw 168:1216-17 My 2 '53

U. S. encroachment cited. H. M. Starling. Nat Underw 56:28 N 13 '52; Same. East Underw 53:34 N 28 '52

See also

Insurance, Military and naval service

Insurance, Social

Insurance, Unemployment

INSURANCE, Storekeepers' burglary. See Insurance, Burglary

INSURANCE, Student

New York city school children being insured. Weekly Underw 168:777 Mr 21 '53

Student accident coverage. Nat Underw (Life ed) 57:9 F 6 '53

INSURANCE, Surety and fidelity

A,B,C classing for blanket bonds is criticized, defended. Nat Underw 57:29+ F 5 '53

Best way to write fidelity. D. B. Kinnamon. Rough Notes 96:32+ F '53

Bill insures loss of funds. Weekly Underw 168:634 Mr 7 '53

CCC calls on surety people for assistance. Nat Underw 56:28 O 16 '52

Comparing the fidelity bonds. J. H. Kerr. Rough Notes 96:23-4+ Ja '53

Corporate suretyship in probate courts. H. W. Nichols. Weekly Underw 167:1654-7 D 20 '52; Excerpts. East Underw 53:33 D 19 '52

Eastern agents conference casualty and surety forum, Philadelphia. East Underw 54:23+ Ap 24 '53

Indemnity of North America issues new form: blanket honesty bond. W. J. Schiff. East Underw 54:37 F 20 '53; Same. Weekly Underw 168:732-3 Mr 14 '53

Interesting developments in bonding field. A. F. Lafrentz. Weekly Underw 168:61-2+ Ja 3 '53

New fidelity coverage; Blanket honesty bond. Rough Notes 96:92-4 Mr '53

1952 not a good year for fidelity lines. S. M. Williams, jr. East Underw 53:93 D 12 '52

North America inserts aggregate limit in blanket position bond. Nat Underw 57:21 F 19 '53

Patterns in defalcations and fidelity losses in savings and loan associations. R. T. Wood. Weekly Underw 168:1175-6+ Ap 25 '53; Same. Nat Underw 57:11-13 Je 25 '53; Same cond. East Underw 54:48-9 Mr 27 '53

Sound insurance program seen as vital to protect credit standing. E. H. Carson. East Underw 54:29+ My 29 '53

Surety services in Washington. H. M. Starling. East Underw 54:45-6 Ap 17 '53; Same. Weekly Underw 168:1080 Ap 18 '53; Same abr. Nat Underw 57:25 Ap 16 '53

Treasury department issues list of acceptable surety companies. East Underw 54:36 Je 19 '53

Treasury issues new list of surety qualifying powers; table by company. Nat Underw 57:2+ Je 18 '53

United States currency held not to be negotiable instrument in Tennessee bank theft case. Weekly Underw 167:1615 D 13 '52

See also

Bankers' blanket bond

Insurance companies blanket bond

also Association of casualty and surety companies; Surety association of America

Agents

We've made money selling fidelity coverage. M. A. Peterson. Rough Notes 96:46 Mr '53

What you need to know to sell fidelity bonds. C. T. Smelzer. Rough Notes 96:20+ Je '53

Contract bonds

Better year ahead for contract bond business. S. Warner. East Underw 53:94+ D 12 '52

Bond underwriter needs to keep eye on contractors insurance. W. M. Whitesell, jr. Nat Underw 57:29 Ap 16 '53

Contract bond business. J. M. Henderson. East Underw 54:23 Ap 24 '53

Contract bond panels; National association of surety bond producers annual meeting, New York. East Underw 54:29+ Ap 24 '53

Contractor and surety relationships. J. M. Henderson. Weekly Underw 168:278-9+ Ja 24 '53

Extra services the surety agent must perform. H. P. Smith. Rough Notes 95:40+ N '52

I specialize in surety bonds. M. J. Schuetz. Rough Notes 95:28+ D '52

Munitions board suggests surety bond omission. Nat Underw 56:28 N 6 '52

New York city falls into line, requires contract bonds. Eng N 150:220-1 F 19 '53

New York city resumes bonds on city building. East Underw 54:31 F 6 '53

Potential liability of contractor and its relation to contract bond underwriting. W. M. Whitesell, jr. Weekly Underw 168:1177-8 Ap 25 '53

Sureties saved from bad section in uniform code. D. Q. Cohen. East Underw 54:35 Mr 13 '53

Surety bond producers adhere to tradition; uphold right of contractor to secure coverage from company or agent of own choosing. Weekly Underw 167:1174 N 1 '52

Value of bond coverage; surety bond three dimensional in character. E. H. Carson. Weekly Underw 168:1397+ My 23 '53

Views expressed by fidelity and surety committee of National association of insurance agents of general interest. Weekly Underw 167:1107-8 O 25 '52

Finance

Fidelity, surety losses carry lines into the red; 1952 experience shows trends continue unabated. Nat Underw 56:25+ O 16 '52

Fire service bonds

Chicago fire service bond for suburbs awkward problem. Nat Underw 56:27 D 4 '52

Policies

Insuring hotels with the 3-D. J. I. Subers. Rough Notes 95:36+ N '52

Prospects

Best prospects have more than ten employees. B. L. Williams. Rough Notes 96:26+ Ja '53

How we find prospects and sell fidelity bonds. P. C. Yankey, jr. Rough Notes 96:24-5+ Ja '53

Purchasing

Time to urge blanket fidelity bonding. C. S. Cooper. Credit & Fin Management 54:24-5 O '52

Rates

Raise surety rates. H. G. Sheehy. Nat Underw 57:16-17 Ja 1 '53

INSURANCE, Surgical expense

Accident and health, hospital and surgical insurance by states, 1951; table. Spectator 160:54 N '52

INSURANCE, Taxicab

Rates

New taxicab insurance rates in New York state. Weekly Underw 168:215 Ja 17 '53

INSURANCE, Theft

See also

Insurance, Burglary

INSURANCE, Tobacco. See Insurance, Agricultural

INSURANCE, Tornado

Are windstorm deductibles necessary? C. P. Jervey and L. S. Harvey. Spectator 161:28-9+ My '53

Consequential cover arguments follow Nashville storm. Nat Underw 57:13 Je 18 '53

Hebron tornado is catastrophe no. 36. Nat Underw 57:16 My 14 '53

Impossible tornado number two hits Michigan; is catastrophe 39. Nat Underw 57:1 My 28 '53

National Board gets out explanation of Florida paint exclusion, deductible. Nat Underw 56:1 O 16 '52

New storms add $2 million more to claims in South. Nat Underw 57:9 My 7 '53

Stock companies' extended coverage and windstorm loss experience, 1951 and comparisons; table. Spectator 160:40 N '52

INSURANCE, Tornado—*Continued*

Adjustment of claims

Must prove damage was caused by insured peril, New York court holds. East Underw 53:20 O 31 '52

Advertising

Cooperative ads in Michigan stress tornado cover need. Nat Underw 57:26 Je 25 '53

Losses

Gives slants on Waco tornado. F. Cosgrove. Nat Underw 57:23 Je 4 '53
Hail, rain, wind hit Wichita to the tune of $8 million. Nat Underw 57:1 Je 25 '53
Losses of agency and factory mutuals in Worcester tornado may run $10 million. Nat Underw 57:1 Je 25 '53
Massachusetts tornado loss may be $25 million. Nat Underw 57:1, 12 Je 18 '53
Michigan, Ohio and Massachusetts hard hit by tornados, insurance loss in the millions. Nat Underw 57:1 Je 11 '53
Waco loss estimates run as high as $15 million. Nat Underw 57:1+ My 14 '53; Weekly Underw 168:1332 My 16 '53
Waco suffers badly from underinsurance. Nat Underw 57:1+ My 21 '53

INSURANCE, Transportation

Coastwise and inland transportation insurance. H. L. deRham. Weekly Underw 167:1451-2 N 29 '52
Cutting cargo headaches with transportation insurance; abstract. G. F. Wagoner. Management R 41:759-60 N '52
Don't forget transportation. Rough Notes 95:74-5 D '52
Law transportation problems are treated in three interesting court decisions. H. S. Daynard. Weekly Underw 168:456+ F 14 '53
Recent decisions involving the law of transportation. East Underw 54:32 F 13 '53
Transportation coverage urged. D. W. Valentine. Weekly Underw 167:1496-7 D 6 '52
Transportation exposure. E. Humphrey. il Rough Notes 95:30+ N '52

INSURANCE, Unemployment

Is the unemployment insurance system replete with chiselers? abstract. E. J. Bofferding. Management R 41:703-4 O '52
State unemployment insurance laws, Sept. 1, 1952; table. Mo Labor R 75:623-5 D '52

Accounting

Keeping unemployment insurance taxes down. M. H. Fegel. N A C A Bul 34:738-46 F '53

INSURANCE, Use and occupancy

Accountants can help you sell business interruption. W. Lindecker. Rough Notes 96:17+ Je '53
Agents should aim for more U.&O. business. N. Dekker. Nat Underw 56:6+ N 20 '52
American States offers use and occupancy form beamed at mass market. Nat Underw 57:7 My 14 '53
American Universal issues new package policy; businessmen's protector form. Weekly Underw 168:1229 My 2 '53
Applications and sale of time element insurance covers. H. C. Klein. East Underw 53:21+ O 24; 24-5 O 31 '52
Business interruption coverage. F. G. Gedelman. Credit & Fin Management 54:30-1+ O '52
Business interruption forms and adjustment of losses. G. S. Jones. East Underw 53:21+ O 24; 23+ O 31 '52
Business interruption insurance discussed at Jaffe agency forum. J. S. Miller. Weekly Underw 168:1212 My 2 '53
Business interruption selling; a plan for a small town. J. S. Woodworth. Rough Notes 96:20-1+ Ap '53
How to sell time element coverages. H. C. Klein and others. Rough Notes 95:23-8+ N '52
How we find and sell business interruption prospects. J. R. Cartmill. Rough Notes 96:48 F '53
Interprets actual use and occupancy loss sustained for AMA buyers. A. T. Persson. Nat Underw 57:10 My 28 '53
Many rule book changes introduced in Indiana; business interruption and builders' risk forms are revised. Nat Underw 56:1+ O 23 '52
New business interruption filed in Indiana, Illinois and Pennsylvania by American States of Indiana. Rough Notes 96:96 Je '53
New New York business interruption form is brought out. Nat Underw 57:2+ My 28 '53
Practical talk on bodily injury covers. J. S. Miller. East Underw 54:24 My 8 '53
Time element forum at Newark attracts capacity attendance; sponsored by New Jersey special agents association. East Underw 53:1+ O 24; 23+ O 31 '52; Nat Underw 56:19-20 O 23; 6 O 30 '52

Adjustment of claims

Business interruption adjustments make good public relations. A. C. Guy. Weekly Underw 168:1254, 1316, 1382 My 2-16 '53
Procedures for handling business interruption insurance loss. J. F. Boehner. Weekly Underw 167:1439+ N 29 '52
Settlement of business interruption loss requires cooperation. A. T. Persson. Weekly Underw 168:1492-3 My 30 '53; Same. East Underw 54:22 Je 5 '53

INSURANCE, Valuable papers

Accounts receivable and destruction of records insurance. U. M. Lelli. Weekly Underw 167:1444-6 N 29 '52
Handling of valuable papers and accounts receivable cover requires unusual care. Weekly Underw 167:1574+ D 13 '52; Nat Underw 56:9 D 4 '52
Microfilm not substitute for cover on papers. U. M. Lelli. Nat Underw 56:9 N 20 '52
Replacing records is a costly job. W. F. Monk. East Underw 54:22 Mr 6 '53

INSURANCE, War risk

See also
Insurance, Fire—War risks
Insurance, Life—War risks
Insurance, Marine—War risks
Insurance, Military and naval service

INSURANCE, Water damage

Adjustment of claims

Points of interest to claims men; what are rising or surface waters? H. S. Daynard. Weekly Underw 168:1350-2 My 16 '53

INSURANCE, Windstorm. See Insurance, Tornado

INSURANCE, Workmen's compensation

Failure to invoke federal statute justifies use of state workmen's compensation board rules. Nat Underw 57:13 F 5 '53
Fourth year for compensation group; Employers association of roofing and sheet metal workers of Greater New York annual meeting, New York, Jan. 6. Sheet Metal Worker 44:82+ F '53
Industrial noise injuries may bring compensation claims. C. R. Walmer. Weekly Underw 168:1218 My 2 '53
NAIC compensation committee scans problem of small policy economies; also probes valuation of law amendment. East Underw 54:35+ Je 19 '53
National council report optimistic on 1953 outlook. Nat Underw 57:8 Mr 2 '53
Rising cost of workmen's compensation and new methods of control reviewed. S. L. Hanson. Weekly Underw 168:341-2 Ja 31 '53; Abstract. Nat Underw 57:25+ Ja 29 '53
Topics of interest to the self-insurers. J. J. Regan. Nat Underw 57:34 F 12 '53
What the agent should know about workmen's compensation. D. T. Ratcliffe. Rough Notes 96:22+ Ap '53
When is self-insured plan not an insurance plan. Nat Underw 56:17 D 4 '52

See also
National council on compensation insurance

Adjustment of claims

Court holds lawyer's fee based on full workmen's compensation award. Nat Underw 56:20 D 11 '52
Fatal injuries received during stopover held not compensable. Weekly Underw 168:688 Mr 7 '53

INSURANCE, Workmen's compensation—*Cont.*

Assigned risks

Growth in assigned workmen's compensation risks concerns New Jersey rating bureau. Nat Underw 57:17 Je 4 '53

Policies

New workmen's compensation policy form filed by National Council. H. F. Richardson. Nat Underw 57:21 Je 11 '53

Preventive work

How Liberty Mutual is helping to reduce industrial accidents. il Sales Management 70:56+ Mr 1 '53

Rates

Accident table being revised, its minor importance in workmen's compensation rates assessed. Nat Underw 57:36 Ap 16 '53
Actuarial view dim on Massachusetts workmen's compensation plans. Nat Underw 57:8 My 28 '53
Compensation laws under fire; drilling contractors fight higher insurance rates in Texas. A. Reese. World Oil 136:55-7+ F '53; Same cond. Pet Refiner 32:75-6+ F '53
Compensation rate increase in Rhode Island. East Underw 54:30 Ja 9 '53; Same. Weekly Underw 168:156 Ja 10 '53
Extensive New Jersey revision of experience rating plan. East Underw 54:32 My 22 '53
Insurance companies not responsible for workmen's compensation rate levels. W. Leslie, jr. Nat Underw 57:12+ Ap 9 '53; Same abr. East Underw 54:43 Ap 3 '53; Same abr. Weekly Underw 168:921+ Ap 4 '53
Texas compensation writers join to ask early rate raise. Nat Underw 56:23 O 30 '52
Texas workmen's compensation rates increased on the average 17.9 per cent. Nat Underw 56:13 N 13 '52
What does it cost? how much does it save? summary of accident and safety program costs. J. A. De Luca. Nat Safety N 67:30-1 Ja '53

Reinsurance

Reinsurance regulation raised in North Carolina hearing. East Underw 53:37 N 7 '52; Nat Underw 56:21 N 6 '52
Reinsurers limit liability on workmen's compensation, write it as accommodation only. Nat Underw 56:25+ D 25 '52

California

California agents fighting group compensation, unfair dividend allocation. Nat Underw 56:25+ N 13 '52
No increase in California for employers liability cover in compensation policies. Nat Underw 57:20 Ja 1 '53

Minnesota

Minnesota legislative results satisfying to employers. Weekly Underw 168:1595 Je 13

New York (state)

Dewey directs study of compensation insurance. East Underw 54:45 Mr 27 '53
1952 annual report, New York workmen's compensation board; abstracts. M. Donlon. East Underw 54:45 F 27 '53; Nat Underw 57:6 F 26 '53; Weekly Underw 168:588 F 28 '53
200 home office executives attend meeting on compensation claims administration, New York, Oct. 16. East Underw 53:34 O 24 '52
Workmen's compensation experience plan reviewed for New York bank buyers. E. Hey. Nat Underw 57:18 Mr 19 '53

North Carolina

Workmen's compensation rate hike in North Carolina OK; extra loading denied. Nat Underw 56:32 N 13 '52

Ohio

Ohio employers fight to retain workmen's compensation expense subsidy; self insurers block committee approval of free enterprise move. Nat Underw 56:23+ O 30 '52
Testifies in support of Ohio competitive state fund-House bill 803. F. Lang. East Underw 54:39+ My 22 '53; Abstract. Nat Underw 57:23 My 21 '53

Texas

Compensation laws under fire; drilling contractors fight higher insurance rates. A. Reese. World Oil 136:55-7+ F '53; Same cond. Pet Refiner 32:75-6+ F '53
Texas compensation insurance bill survives early attacks. World Oil 136:60 Ap '53

INSURANCE, Yacht. See Insurance, Motor boat

INSURANCE accountants association
Fall conference, Skytop, Pa. Nat Underw 56:2+ O 30 '52

INSURANCE accounting and statistical association
Annual meeting, Chicago. Nat Underw 57:1+ Je 4 '53; Nat Underw (Life ed) 57:2 Je 5 '53; East Underw 54:30-1 Je 12 '53

INSURANCE actuaries
See also
Casualty actuarial society
Society of actuaries

INSURANCE adjusters
Adjusting refinements. G. M. Blum. Nat Underw 57:29 Jl 11 '53
Adjustment of fine arts claims requires high degree of technical knowledge. H. W. Blackmore. Weekly Underw 168:1647 Je 13 '53
Claims men are important to industry. A. D. McNeill. Weekly Underw 168:422 F 7 '53
Economical employment of adjusters. G. L. Scott. Weekly Underw 167:1471, 1539-40, 1613 N 29-D 13 '52; Same cond. East Underw 53:36-7 N 21 '52; Abstract. Nat Underw 56:14 N 27 '52
Fundamentals of successful loss adjustment. R. G. Bachman. Weekly Underw 168:908, 974-5 Mr 28-Ap 4 '53
Public adjusters and insurance company relations. W. Goodman. Nat Underw 57:21 Je 25 '53
Service of the adjuster. K. E. Ure. Weekly Underw 168:550 F 21 '53
Staff adjusters shine in unusual claims reported by Fireman's fund group. Weekly Underw 168:1577-8 Je 6 '53
Topeka lawyers try to hobble adjusting firms. Nat Underw 57:7 F 19 '53
See also
Insurance—Adjustment of claims
also National association of public insurance adjusters

INSURANCE advertisers, Association of. See Association of insurance advertisers

INSURANCE advertising conference
IAC to award advertising Oscar. il Spectator 160:51-5 O '52
Spring meeting, New York, March 26. East Underw 54:41-2+ Ap 3 '53; Nat Underw 57:1+ Ap 2 '53; Weekly Underw 168:924+ Ap 4 '53

INSURANCE agents
Agency promotion ideas boost summer sales. E. Anderson. Rough Notes 96:64 Je '53
American international underwriters agent continues doing business in Korea. Weekly Underw 168:1074 Ap 18 '53
Answers to future risk problems; producing agent should make certain assureds have broadest possible protection. J. H. Kroll. Weekly Underw 167:1110 O 25 '52
Audits for building good will. J. D. Hall. East Underw 54:43 Ap 17 '53
Basic principles, agents' profits, package policies. W. M. Sheldon. East Underw 54:32 F 27 '53
Capital stock agents need not fear decision of National labor relations board in holding that agents of the State Farm Mutual were employees. Weekly Underw 168:462 F 14 '53; Same abr. East Underw 54:30 F 20 '53
Company field meetings are being shaped into more effective mold. J. C. O'Connor. Nat Underw 57:15 Je 4 '53
Creative vs. routine selling. P. Glanzer. Life Ins Courant 58:21+ Mr '53
Door to door canvass. W. J. Smith. Rough Notes 96:70-1 Ap '53

INSURANCE agents—*Continued*

Economic outlook for insurance agents. W. H. Bennett. Weekly Underw 168:1085-6 Ap 18 '53

First presentation of advertising awards to agents features I.A.C. meet. Nat Underw 57:15 Ap 2 '53

Formula for sales success in property field. L. E. Woodbury, jr. Weekly Underw 167:1501-2+ D 6 '52

Here are some promotion ideas for the Xmas season. E. Anderson. Rough Notes 95:50 D '52

How to start a new man; potential agency partners. D. McNeal. Rough Notes 96:19-20+ My '53

Line a day. Spectator 161:36 Mr '53

Mississippi agents score with speakers card. Nat Underw 56:15 D 18 '52

Slogan, Expose yourself to sales, builds thriving Connecticut agency; F. North Clark insurance agency, inc. East Underw 53:24 D 5 '52

Successful selling ideas. C. B. Roth. il Life Ins Courant 58:22-3 Mr '53

Successful system for prospecting and selling. H. Gassmann. Rough Notes 96:36 Je '53

20-question formula for self-appraisal. H. F. White, jr. Nat Underw (Life ed) 57:17-18 F 27 '53

Wherein local agent Ed Dunn of Milwaukee lets off a whale of a lot of steam. Nat Underw 57:26 Ap 2 '53

See also

Insurance brokers

also subdivision Agents under various forms of insurance, e.g. Insurance, Life—Agents

also National association of insurance agents

Accounting

Combining account current and policy register records with billing. R. J. Layton. Rough Notes 96:30-1+ Ja '53

Advertising

Advertising has become part of American way of life; insurance profits from it. W. J. Traynor. Weekly Underw 167:1286+ N 15 '52

Advertising to families of service personnel. E. A. Anderson. Rough Notes 96:42 Mr '53

Advertising was the key to my agency's success. J. Safley. Rough Notes 96:18-19+ Je '53

Agents shouldn't rely on company advertising. E. R. Hurd, jr. Nat Underw 56:2 O 16 '52

Here's how to plan your agency advertising. J. D. Hamilton. Rough Notes 96:23+ F '53

IAC to award advertising Oscar. il Spectator 160:51-5 O '52

Insurance women hear four points essential to successful agency advertising. R. Hurd, jr. East Underw 54:41 Je 19 '53; Same abr. Weekly Underw 168:1684 Je 20 '53

Judge after agent on ad linking verdicts to rates. Nat Underw 57:15 Ja 1 '53

What price advertising, or lack of it? abstracts. J. A. Neumann. Weekly Underw 168:928-9 Ap 4 '53; Eastern Underw 54:44 Mr 27 '53

Agency management

Agency collections, billing systems and partnerships; abstracts. W. S. Chandler. East Underw 54:26 My 8 '53; Nat Underw 57:36 Je 11 '53

Agency service depends on the company you represent. H. M. Finch. Rough Notes 96:25-6 Mr '53

Agency time savers. E. J. Hiss. Rough Notes 95:32 N '52

Agent's compensation can be decreased by adoption of forms, rules and rates which will reduce expense. R. Maxwell. Weekly Underw 168:1593+ Je 13 '53; Same abr. East Underw 54:1+ Je 12 '53

Application is the key to good agency service. J. A. McCampbell. Rough Notes 96:26+ Ap '53

Can't reduce agent commission unless handling costs cut. R. Maxwell. Nat Underw 57:2+ Je 11 '53

Complete agency system. S. Joseph. Rough Notes 95:27+ D '52

Do you run an agency? or manage it? D. M. Temple. Weekly Underw 168:280-1 Ja 24 '53

How a large agency handles auto insurance. C. L. Erickson. Rough Notes 96:24-5 Mr '53

How I started my agency during the depression. H. D. McCandless. Rough Notes 96:21-2 Je '53

How multi-purpose application can increase insurance agency sales. R. Burns. East Underw 54:28 Je 26 '53

How we pick good employees. A. D. Loken. Rough Notes 96:34 My '53

Improving an established system. G. Story. Rough Notes 95:23-4 D '52

Insurance day at San Antonio boosts agency efficiency. Nat Underw 56:3-4 N 13 '52

Our agency has seven good solicitors. R. Maxwell. Rough Notes 96:32+ Mr '53

Profitable management. H. Ainsworth. Rough Notes 96:30 Mr '53

Real backbone of an agency is not its system. J. J. Sinagub. Rough Notes 95:24-5 D '52

Risk analysis; its relation to agency management. J. W. Barr, jr. Weekly Underw 168:934-5+ Ap 4 '53

We built our agency insuring summer resorts. B. L. Boutin. Rough Notes 96:25+ Je '53

We keep improving our system. H. Johnston. Rough Notes 95:33-4 N '52

What the fieldman should know about office systems. W. N. Collins. Rough Notes 96:42+ My; 93+ Je '53

Costs

Cost of handling daily report is $4.21, Texas insurer finds. Nat Underw 57:7 Ja 22 '53

N.A.I.A. agency cost study progressing. Nat Underw 57:4 My 7 '53

Agency system

Agency system future depends upon strong leadership. East Underw 54:34 Ap 17 '53

American agency system. J. F. Crafts. Weekly Underw 168:701+ Mr 14 '53

Agents' wives

Could your wife operate your insurance agency? C. E. Reed, jr. Rough Notes 96:34+ Je '53

Approach

How one agent surveyed an entire town. C. L. Shepherd. Rough Notes 96:22-3 F '53

Professor checks sales problems of local agents. E. W. Muehl. Nat Underw 56:7 N 27 '52

Silence is golden. F. J. Cantwell. Rough Notes 95:84-5 N '52

Collecting of premiums

See Insurance—Premiums, Payment of

Commissions

Agency leader shocked by idea of inviting law on commission control. C. P. Daniel. Nat Underw 56:1 N 13 '52

Arkansas wars on illegal division of commissions. Nat Underw 57:15 Ap 2 '53

Carson report on commissions holds interest of entire membership of N.A.I.A. Weekly Underw 167:1076+ O 25 '52; Nat Underw 56:6 O 23 '52

Commission reduction hit. T. A. Harman. Weekly Underw 168:1682+ Je 20 '53

Deplores war in commissions. P. C. Cothran. East Underw 53:20 O 24 '52

Eastern underwriters association scans Mississippi and Louisiana commission control statutes. Nat Underw 56:1 O 30 '52

Louisiana commission rule allows for classifying agents. Nat Underw 56:12 N 13 '52; Discussion. T. H. Schneidau. 56:6 D 4 '52

Queries in commission proposal; editorial. Nat Underw 56:22 N 13 '52

Some court actions that affected producers in New Jersey. W. H. Bennett. Weekly Underw 168:893 Mr 28 '53

Spotlight turned on commission laws of Louisiana, Mississippi and New Jersey. Nat Underw 56:16 N 6 '52

Urges agents to maintain vigilance; cites commission troubles. W. H. Bennett. East Underw 53:26 N 14 '52

INSURANCE agents—Commissions—*Continued*
Warning on auto commissions. H. Stewart. Nat Underw 57:1+ Mr 19 '53
See also
Insurance, Accident—Agents—Commissions
Insurance, Automobile—Agents—Commissions
Insurance, Fire—Agents—Commissions
Insurance, Group—Agents—Commissions
Insurance, Life—Agents—Commissions

Company relations

Expirations ownership; general agent angle in talk before Virginia local. J. F. Neville. Weekly Underw 168:1726 Je 27 '53
Pennsylvania case seems not to disturb agents' expiration control. J. F. Neville. Nat Underw 57:3+ Je 25 '53; Discussion. 57:22 Jl 9 '53
Statement, something to live up to; editorial. Nat Underw 56:16 D 11 '52; Discussion. 57:6 Ja 15 '53
Stock insurers must meet competition in cost. J. F. Crafts. East Underw 54:1+ Mr 13 '53
Values in agent, company relation. A. O. Robinson. Nat Underw 57:7 Ap 9 '53
What an agent should expect from his companies. J. H. Carton. Rough Notes 95:17-18+ N '52

Conventions

American association of managing general agents annual meeting, Nippersink Manor, Wis. Nat Underw 57:1+ Je 18 '53
Arizona association of insurance agents annual meeting, Phoenix. Nat Underw 56:3 N 6 '52
Arkansas association of insurance agents 52d annual meeting, Hot Springs, May 21-22. Nat Underw 57:2+ My 28 '53; Weekly Underw 168:1469-70 My 30 '53
Arkansas association of insurance agents midyear meeting, Little Rock. Nat Underw 56:7 D 11 '52
Association of local agents of the city of New York annual meeting, Jan. 15. East Underw 54:31+ Ja 16 '53
Colorado insurors association annual meeting, Colorado Springs. Nat Underw 56:21+ O 23 '52
Georgia association of insurance agents annual meeting, Savannah. Nat Underw 57:9 My 28 '53
Illinois fire underwriters association, Illinois Blue Goose, Illinois fire prevention association, and Illinois public relations committee meeting, Nippersink Manor, Wis. Nat Underw 57:7+ Je 25 '53
Indiana association of insurance agents annual meeting, Indianapolis. Nat Underw 56:22+ N 20 '52
Iowa association of insurance agents annual meeting, Des Moines. Nat Underw 57:1+ My 21 '53
Kansas association of insurance agents annual meeting, Topeka. Nat Underw 56:16 O 23 '52
Kansas association of mutual insurance agents annual meeting. Topeka. Nat Underw 56:7 O 30 '52
Kentucky association of insurance agents annual meeting, Louisville. Nat Underw 56:1+ N 13 '52
Louisiana association of insurance agents annual convention, Edgewater Park, Miss. Nat Underw 57:2, 35 My 14 '53
Maryland association of insurance agents annual convention, Baltimore. Nat Underw 56:27+ N 20 '52
Massachusetts association of insurance agents annual convention, Boston. Nat Underw 56:1+ O 23; 2+ O 30 '52
Minnesota local agents midyear meeting, St Paul. Weekly Underw 168:1156-7 Ap 25 '53
Mississippi association of insurance agents annual meeting, Biloxi, June 11-13. Nat Underw 57:4+ Je 18 '53; Weekly Underw 168:1670 Je 20 '53
Missouri association of insurance agents annual meeting, St Louis. Nat Underw 56:5 O 30 '52; Weekly Underw 167:1222-3+ N 8 '52
Nebraska association of insurance agents annual meeting, Lincoln. Nat Underw 56:2+ O 16 '52
New York state association of insurance agents 71st annual convention, Syracuse, May 3-5. East Underw 54:1+, 19-22 My 8 '53; Nat Underw 57:15+ My 14 '53; Weekly Underw 168:1269+ My 9 '53
Oklahoma association of insurance agents annual meeting, Oklahoma City. Nat Underw 57:4 My 28 '53
South Carolina association of insurance agents annual meeting, Pinehurst. Nat Underw 56:21+ O 23 '52
Southern agents conference and National association of insurance agents meeting, Hollywood Beach, Fla. April 29-May 2. East Underw 54:18+ My 8 '53
Texas association of insurance agents annual meeting, Houston. Nat Underw 57:1+ My 28 '53
Wisconsin association of insurance agents annual convention, Milwaukee. Nat Underw 56:14+ N 20 '52
See also
Insurance, Life—Agents—Conventions

Fieldmen relations

Fidelity Mutual offers new career contract for field men. Weekly Underw 167:1533 D 6 '52
Field man, key to success of insurance distribution. K. Force. Nat Underw 57:17-19+ Ap 2 '53
Fundamentals by the fieldman. E. H. Waterhouse. East Underw 54:39 Mr 20 '53
How a good fieldman does his job. J. V. Down. Rough Notes 96:44+ Ap '53
How the agent can help the fieldman. R. Cushman. Rough Notes 95:48+ D '52

Law

Alaska attorney-general issues opinion on non-resident agents. Weekly Underw 167:1282 N 15 '52
Canada; licensing problem. Spectator 160:128 N '52
Commissioner aroused by looseness in life lines. A. C. Leslie. Weekly Underw 168:1330 My 16 '53
Fiduciary rule issue involves California general agents. Nat Underw 56:11 D 4 '52
Finance people hold huddle on uniform licensing problem. Nat Underw 57:1+ Ja 22 '53
Florida agents to push for anti-coercion, favored agents bills this year. Nat Underw 57:22 F 26 '53
Florida governor signs stiff agent qualification law. Nat Underw 57:23 Je 25 '53
Georgia court directs not guilty verdict in Georgia bootleg case. Nat Underw 57:17 Mr 5 '53; Same. Nat Underw (Life ed) 57:11 Mr 6 '53
Jackson warns carriers; cites representatives assisting in placing insurance contracts. Weekly Underw 168:191 Ja 17 '53
Legal obligations of the agent to his company and client and dangers therein. S. A. Gennet. Nat Underw 57:25+ Je 11 '53
Licenses required; Kentucky commissioner advises reciprocals and mutuals of law. Weekly Underw 168:1134 Ap 25 '53
Maloney holds to his charges against Brown & sons. Nat Underw 57:3 Ja 8 '53
Mortgage Bankers plan fight on agents' bill. Weekly Underw 168:846 Mr 28 '53
Ohio agents-GM fight on agents licensing. N. Lancione. Rough Notes 96:17-18+ Ja '53
Ohio licensing law decision excites legislative fancies; Supreme court action may breed efforts to copy Buckeye statute. Nat Underw 56:2 O 23 '52
Ownership of expirations issue goes to high court. Nat Underw 57:22 Ja 8 '53
Ownership of premiums. C. W. Tye. Rough Notes 96:60 Ap '53
Pennsylvania agents fight for bill to curb licenses on controlled business. East Underw 54:27 Je 12 '53
Proposed revision of Florida qualification law reviewed. Nat Underw 56:32 O 16 '52
Rigid examination system reduces Washington licenses. Nat Underw 56:32 O 23 '52

INSURANCE agents—Law—*Continued*

Rules on agents' licenses; Washington commissioner to require disability examination of life producers. W. A. Sullivan. Weekly Underw 168:1526 Je 6 '53

South Carolina issues licensing regulations. Weekly Underw 167:1214+ N 8 '52

Washington agents may sponsor Ohio type licensing law. Nat Underw 56:5 N 20 '52

Why customers sue their agents. R. D. Williams. Rough Notes 95:22+ N '52

Licensing

See Insurance agents—Law

Multiple line selling

How to find prospects and sell more insurance. W. E. Sharpe. Rough Notes 95:22+ D '52

Ohio agents not to fight multiple line legislation there. Nat Underw 57:1 Ja 29 '53

Ohio multiple line bill backed by domestic insurers. Nat Underw 57:1 Mr 12 '53

Public relations

Building prestige of agents. E. R. Hodgkins. Weekly Underw 168:1185 Ap 25 '53

Foresees further expansion of public relations. J. R. Robinson. East Underw 54:1+ Je 26 '53

Practical public relations steps; agents' performances gain. J. N. Cosgrove. East Underw 53:24 N 14 '52

Sounds public relations tocsin. H. C. Johnson. Nat Underw 57:1+ F 26 '53

What price advertising, or lack of it? abstracts. J. A. Neumann. Weekly Underw 168:928-9 Ap 4 '53; Eastern Underw 54:44 Mr 27 '53

Records

Changing over an entire agency record system. H. W. Chalmers. Rough Notes 95:25-6 D '52

Good filing saves money, aids agent's sales plans. O. Beling. Nat Underw 56:8-9 O 16 '52

Sales conventions

Agent's place in today's competitive climate surveyed at Kansas City rally of Casualty and surety underwriters. Nat Underw 57:11 My 14 '53

Lively forum at Kentucky meeting covers many lines. Nat Underw 56:8+ N 20 '52

New Jersey association of insurance agents midyear convention, Asbury Park. Nat Underw 57:9+ Ap 9 '53

Service

American-Associated group campaigns for Mr Safety in each community. East Underw 53:38 N 7 '52

How I kept from losing a good customer. L. J. Parker, jr. Rough Notes 95:46 D '52

How to sell the big buyer. H. E. Towner. Rough Notes 96:15-16+ Je '53

How we reduced our cost per survey from $35 to $5.60. D. W. Merrill. Rough Notes 96:20-1+ Ja '53

We established a new agency with survey selling. T. H. Bagnall, jr. Rough Notes 96:24+ Mr '53

What the buyer expects of the insurance agent. K. A. Bong. Rough Notes 96:38+ Mr '53

Solicitors

Check list for agency solicitor's agreement. Rough Notes 95:50+ N '52

We were losing money on our solicitor. J. F. Murphy. Rough Notes 95:26+ D '52

Taxation

Revenue bureau refuses to endorse Hobart-Oates rule. Nat Underw (Life ed) 56:1 O 17 '52

Treasury gunning for deferred compensation plans; Hobart and Oates decision. Nat Underw (Life ed) 56:1 O 24 '52

Telephone calls

See also
Insurance, Life—Agents—Telephone calls

Training

Don't take hair shirts too seriously. V. B. Coffin. Nat Underw (Life ed) 57:9 F 27 '53

See also
Insurance—Study and teaching
Insurance, Life—Agents—Training

Unions

American service bureau loses NLRB decision. Nat Underw (Life ed) 57:12 Je 19 '53

CIO asks appeal, reargument in expense limit suit. Nat Underw (Life ed) 56:1 D 12 '52

CIO drafts bill to let collective bargaining oust 213. Nat Underw (Life ed) 57:1+ Ja 16 '53

CIO sees verdict on New York expense law as partial victory. Nat Underw (Life ed) 56:1+ N 28 '52

Extraterritoriality seen as weakness of 213 in CIO suit. Nat Underw (Life ed) 56:1+ N 7 '52

High points of opposing briefs in CIO 213 suit. Nat Underw (Life ed) 56:6+ N 7 '52

Insurance workers of America form under CIO banner. Nat Underw (Life ed) 57:12 Je 19 '53

John Hancock sees union hurrying bargaining by suit; reasons for section 213 attack. East Underw 53:10 O 24 '52

NLRB arguments holding California agents of State farm companies employes. East Underw 54:21 Ja 16 '53

NLRB calls off State Farm election in California. Nat Underw 57:3 F 12 '53

NLRB reverses self; State Farm agents called employes. Nat Underw 57:1+ Ja 8 '53; Same. Nat Underw (Life ed) 57:2+ Ja 9 '53

New York court tosses out CIO suit involving 213; really testing Hancock good faith, hence complaint is defective. Nat Underw (Life ed) 56:1 N 21 '52

New York department answers CIO plea for 213 injunction; no basis for action or inclusion of superintendent, affidavit declares. Nat Underw (Life ed) 56:1+ O 17 '52

No collective bargaining negotiator, New York department says in CIO case; suit for injunction against enforcement of section 213. East Underw 53:10 O 24 '52

Nola Patterson's group bows out; shifts job to CIO. Nat Underw (Life ed) 56:4 O 24 '52

Alaska

Alaska attorney-general issues opinion on non-resident agents. Weekly Underw 167:1282 N 15 '52

Missouri

Agency cost surveyors not wanted in Missouri. Weekly Underw 168:1468 My 30 '53

INSURANCE as a profession

Advantages of inland marine field for young men entering insurance business. H. Caulkett. Weekly Underw 168:864+ Mr 28 '53

Career still magic word to spur on older agents. A. H. Moffat. Weekly Underw 168:1042-3 Ap 11 '53

Future leadership problem of industry. M. E. Peterson. Weekly Underw 168:989+ Ap 11 '53

Panel says life companies fail in effort to sell agent's career to college students. Nat Underw (Life ed) 57:10 F 13 '52

Part of education in developing career concept. D. W. Gregg. Weekly Underw 168:1222-3+ My 2 '53; Excerpts. East Underw 54:16 F 27 '53

Public's view of career agent. B. N. Woodson. Nat Underw (Life ed) 57:5-6 Mr 6 '53

INSURANCE associations

Chicago protests opening association doors to companies; decision of New York state association of life underwriters. Nat Underw (Life ed) 57:1 My 29 '53

Europe Federation idea. E. B. Ferguson. Weekly Underw 168:1348-9 My 16 '53

Functions of trade associations. H. R. Glenn. East Underw 53:3 D 5 '52; Abstract. Nat Underw (Life ed) 56:5+ D 5 '52

Here's how N.Y. state association made decision on company member plan. R. B. Mitchell. Nat Underw (Life ed) 57:4+ Je 12 '53

INSURANCE associations—*Continued*

Lines being drawn on national organization issue. Nat Underw 57:1+ Ja 1 '53

Plan for companies as members of New York body questioned. Nat Underw (Life ed) 57:1+, 10 My 1 '53

Stresses need for unity in meeting problems of insurance; expression of collective views, and self-discipline minimize need for government regulations. E. B. Ferguson. East Underw 54:27-8 My 15 '53; Same abr. Weekly Underw 168:1334-5+ My 16 '53; Abstract. Nat Underw 57:2+ My 14 '53

See also

Factory insurance association

Institute of life insurance

National association of insurance agents

National association of insurance commissioners

National insurance service and advisory organization

INSURANCE awards

IAC to award advertising Oscar. il Spectator 160:51-5 O '52

Joseph A. Neumann receives Pohs institute plaque for his outstanding service. il East Underw 54:30 My 15 '53

INSURANCE brokers

General insurance brokers association of New York annual dinner, 27th, New York. East Underw 53:22 O 31 '52; Nat Underw 56:1+ N 6 '52

Greater New York brokers' group installs officers. Weekly Underw 168:638 Mr 7 '53

N.Y. excess line brokers still are throwing curves. W. E. Brooks. Nat Underw 56:24 D 4 '52

Urges solution of excess lines abuses. S. Gaines. East Underw 53:37 N 7 '52

See also

Insurance, Life—Brokers

also National association of insurance brokers

Commissions

Cases illustrate problems attending broker changes. T. B. Wood. Nat Underw 57:5 My 7 '53

Law

Argentine rules risks must go through brokers. East Underw 53:32 O 24 '52; Same abr. Nat Underw 56:7 O 16 '52

Klotz presents 1953 legislative program of Brooklyn brokers association. East Underw 53:22 D 19 '52; Same. Weekly Underw 167:1554 D 13 '52

INSURANCE brokers association of New York

Annual dinner, 54th, New York, Nov. 19. East Underw 53:22 N 28 '52

INSURANCE commissioners

Commissioner ranks are affected by Tuesday results. Nat Underw (Life ed) 56:1+ N 7 '52

Possible changes in commissioner ranks are scanned. Nat Underw 56:9 N 13 '52; Same. Nat Underw (Life ed) 56:7 N 14 '52

Washington state interests demand continuance of elective office. Weekly Underw 168:310 Ja 31 '53

Zone four insurance commissioners meeting, Chicago. Nat Underw 57:1+ Ap 23 '53

See also

National association of insurance commissioners

INSURANCE companies

Companies organized, licensed, merged, reinsured; changes in capital, name. Weekly Underw 168:114-22 Ja 3 '53

Competitive picture. H. P. Stellwagen. Nat Underw 57:1, 27 Je 25 '53

Constitution-bankers L.&C. merger gets stockholder's O.K. Nat Underw 57:22 Ja 1 '53

Factors determining acceptability of insurance companies. W. F. Owens. Weekly Underw 168:1168+ Ap 25 '53

Key to insurer's future in age of rising inflation. B. D. Cooke. Nat Underw 56:25+ D 25 '52

Long pull essential in building life company. W. H. Cox. Weekly Underw 168:962 Ap 4 '53

St Paul Fire and Marine 100 years old. East Underw 54:21 My 1 '53

Urges companies to form industry-wide body. H. C. Conick. Nat Underw 56:2 O 16 '52

See also

Lloyd's, London

London and Lancashire insurance company

Travelers insurance company

Accounting

Accounting changes in multiple lines; abstracts. R. C. McCullough. East Underw 53:1+ O 31 '52; Nat Underw 56:13-14 O 30 '52

Actuaries flay plan for uniform expense allocation. Nat Underw (Life ed) 56:1+ N 14 '52

Again mull over how to account for excess of loss; session is held at Chicago by N.A.I.C. group. Nat Underw 56:1+ O 30 '52

Caution is tempo, but most insurers eye electronic brains. Nat Underw (Life ed) 57:3 My 29 '53

Excess of loss reins; proposal turned down; adopts subcommittee report that it is not feasible to treat coverage separately in annual statements. East Underw 53:88-9 D 12 '52

Expense allocation bill in New York will meet no opposition. Nat Underw (Life ed) 57:1+ F 20 '53

New York department seeks expense, tax data of companies; questionnaire covers distribution between insurance and investment operations. East Underw 53:1 O 31 '52; Nat Underw (Life ed) 56:1+ O 31 '52

Stresses benefits of calculators to find return premiums. M. B. Garbutt. Nat Underw 56:4 N 13 '52

Uniform accounting and rate making subject is discussed in circles. Nat Underw 57:6 My 14 '53

Uniform accounting desirable but need degree of latitude in methods. J. W. Dillon. East Underw 54:24 My 22 '53

Uniform accounting, rating report issued. East Underw 54:22 My 29 '53

Uniform accounting session elicits the usual exchanges; National Bureau submits proposed new definition of acquisition expense. Nat Underw 56:23 O 30 '52

Advertising

Ads reported for April by companies. Nat Underw 57:14 Ap 2 '53

Advertising panel by LAA members. East Underw 53:19 N 21 '52

America Fore's insurance film; Peace of mind. East Underw 54:26 Mr 6 '53; il Nat Underw 57:12 Mr 5 '53

California hearing on World's ads is enjoined. Nat Underw 57:25 Ja 22 '53; Same. Nat Underw (Life ed) 57:1+ Ja 23 '53

Company film depicts insurance history; America fore insurance group's color movie, Peace of mind. F. J. Malley. il Spectator 161:30-1 Ap '53

Employers group to continue striking series at ads. Weekly Underw 168:466 F 14 '53

Enchanting historical documentary color film produced by America Fore group. E. M. Ackerman. il Weekly Underw 168:636+ Mr 7 '53

Law firm sues companies because of advertising. Weekly Underw 168:1233 My 2 '53

March national advertising listed. Nat Underw 57:19 Mr 12 '53

North America ad extolls free enterprise. Nat Underw 56:4 O 30 '52

United gets set for its hearing on California advertising. Nat Underw 57:9+ Mr 5 '53; Same. Nat Underw (Life ed) 57:7-8 Mr 6 '53

Why insurance companies advertise in newspapers. il Adv Agency 45:75+ O '52

See also

Insurance advertising conference

Biography

We have with us today; some interesting personalities in life insurance. East Underw 53:6-8+ D 12 '52

Claim departments

Continental Casualty claims workshop held in New York. East Underw 53:33 O 24 '52

INSURANCE companies—*Continued*

Consolidation

Bankers Life and Casualty, Constitution Life to be merged. Nat Underw 56:20 D 25 '52; Same. Nat Underw (Life ed) 56:1 D 26 '52
Call off merger of Constitution Life with Bankers L.&C. Nat Underw (Life ed) 57:1 Ja 9 '53
Commissioners report on Mutual of Omaha; to purchase United's stock. East Underw 54:39 Je 19 '53
Constitution-Bankers Life & Casualty merger gets stockholders' O.K. Nat Underw (Life ed) 57:2 Ja 2 '53
Federal and United States guarantee merger proposed by Hendon Chubb. East Underw 54:38 My 15 '53; Same abr. Weekly Underw 168:1353 My 16 '53
Federal, US guarantee merger to produce $120 million insurer. Nat Underw 57:1 My 14 '53
Globe Life absorbs Interstate Reserve. Nat Underw (Life ed) 57:2 Je 5 '53
Merge agency forces of Lincoln National, Reliance Life. Nat Underw (Life ed) 56:1+ O 31 '52
Merger of keen interest; Excess reinsurance co. (Phila.) to be absorbed by new Transatlantic reinsurance co. of N.Y. East Underw 53:33 O 24 '52
Reliance Life merged with Lincoln National. East Underw 54:6 Ja 2 '53; Nat Underw (Life ed) 57:12 Ja 2 '53
Report developments in United Benefit program; Mutual Benefit H.&A. acquiring ownership of United Benefit Life. Nat Underw (Life ed) 57:11 Je 19 '53
Yorkshire to establish multiple line company; United States branch and indemnity company will be consolidated. Weekly Underw 168:192+ Ja 17 '53

Costs

Reduction in operating costs is accomplished through policy design. Nat Underw 56:5 D 4 '52

Directors

Responsibility of directors. East Underw 54:22 Mr 6 '53

Employees

BLS reports on insurance wages. Nat Underw 56:2 N 6 '52
Company field meetings are being shaped into more effective mold. J. C. O'Connor. Nat Underw 57:15 Je 4 '53
Continuing education of supervisors best way to combat clerical help dearth. G. Fergason. Nat Underw (Life ed) 57:6 Mr 13 '53; Same. Nat Underw 57:11 Ap 2 '53
Earnings in selected industries, late 1951 and early 1952; insurance-carrier industry. L. E. Lewis. Mo Labor R 75:420-1 O '52
Future leadership problem of industry. M. E. Peterson. Weekly Underw 168:989+ Ap 11 '53; East Underw 54:32 My 1 '53
Gives facts on home office personnel study. F. L. Rowland. East Underw 54:40-1+ My 8 '53
Hancock develops skill file on employes' aptitudes. Nat Underw (Life ed) 57:24 My 15 '53
Home policy typing industrial work, Illinois department says. Nat Underw 56:10 N 6 '52
How to develop future manpower in insurance. Nat Underw 57:31-2+ F 12 '53
Life office work code. H. W. Flitcraft. Life Ins Courant 57:44 N '52
Manpower needs in Western underwriters association address. M. E. Peterson. Nat Underw 57:2+ Ap 9 '53
Mutual of New York announces improved underwriter benefits. Weekly Underw 168:357 Ja 31 '53
N.Y. state managers discuss manpower problems. J. Jenkins. East Underw 54:3+ F 27 '53
Old Line Life upheld on striking employes. East Underw 53:28 D 12 '52
Prudential clerks are unionization target of AFL. Nat Underw (Life ed) 56:8 N 14 '52
Why employes quit, and what can be done about it. E. F. O'Toole. Nat Underw (Life ed) 57:5+ Je 5 '53

Training

Education; keystone of insurance progress. E. Ewing. Weekly Underw 168:1224-5 My 2 '53

Employees' pensions

Equitable benefits on retirement increased. East Underw 54:15 Ja 16 '53; Same. Weekly Underw 168:228 Ja 17 '53
Home Life's benefit and retirement plan for all employes. East Underw 54:7 My 1 '53
Need for basic appraisal of SS programs. L. A. Lincoln. Nat Underw (Life ed) 57:5 F 20 '53

Equipment and supplies

Audograph saves time, money for industry. Weekly Underw 168:764 Mr 14 '53
Business has chance to plan best use of electronic devices. R. B. Mitchell. Nat Underw 57:24+ Ap 16 '53
Electronic brains ready to handle insurance jobs at $100 an hour. Nat Underw (Life ed) 57:14 My 1 '53
Electronic devices should be useful in business based on information. Nat Underw 57:8 Mr 5 '53
Electronics for insurer uses a practical reality. J. W. Braisie. Nat Underw 56:12 N 13 '52
Facsimile telegraph developments and uses; Intrafax system. Nat Underw (Life ed) 56:4 O 31 '52
Insurance enters its electronic age. T. O. Carlson. il Spectator 161:26-7+ My '53
IBM machine is applied to insurance in force file. Nat Underw (Life ed) 56:12 N 7 '52
New bookkeeping machine designed for local agencies. Weekly Underw 168:1002 Ap 11 '53
New tempos in techniques; abstracts. T. O. Carlson. East Underw 53:29+ N 28 '52; Nat Underw 56:23+ N 27 '52
Re-thinking needed to make fullest use of electronic computers' potentials. R. B. Mitchell. Nat Underw (Life ed) 56:3-4 D 5 '52

Examination

Illinois department completes Family Protection exam. Nat Underw (Life ed) 56:25 N 21 '52
State examination of New York Life launched as news. East Underw 54:1+ Ja 9 '53
Two views on audit of statement. E. J. Reilly; E. R. Miller. Nat Underw 56:8 O 30 '52

Exhibits

America goes to the polls exhibit at Travelers viewed by thousands. East Underw 53:28 O 31 '52; Nat Underw 56:2 O 23 '52
Insurors add to boating pleasure; exhibits at National motor boat show. F. J. Malley. il Spectator 161:26-7+ Mr '53

Finance

Aetna group premiums $123,519,283 in 1952. East Underw 54:22 F 13 '53
Aetna Life affiliated shows strength. Weekly Underw 168:377+ F 7 '53
America fore group reports excellent progress in 1952. East Underw 54:1+ Ja 30 '53
American Casualty makes gains. Nat Underw 57:37 F 12 '53
Central Surety reports 1952 figures. East Underw 54:38 F 27 '53
Don't shrink from raising new capital, insurers advised. S. C. Davis. Nat Underw 56:1+ N 6 '52
Federal reports nine per cent rise in premiums; assets at new high. East Underw 54:1+ Mr 20 '53
Fireman's fund reports handsome gains in 1952. Nat Underw 57:17 Mr 12 '53
Great American companies show substantial gain in net income. East Underw 54:1+ F 20 '53
Home assets in 1952 were $396,933,148, new record figure. East Underw 54:1 F 13 '53
How a Texas union runs its own insurance business. il Bsns W p 138-40 F 14 '53
Insurance capital need. S. C. Davis. Weekly Underw 168:736+ Mr 14 '53
John Hancock had $13,383 billion in force end of 1952. East Underw 54:1+ F 13 '53
Larger underwriting profits and investment income gain. J. A. Diemand. East Underw 53:19 D 5 '52

INSURANCE companies—Finance—*Continued*

List insurance groups according to total premiums written in 1952; tabulation. Nat Underw 57:26 Ap 9 '53

Measuring finances of insurance companies. A. M. Best. Comm & Fin Chr 176:1934 N 20 '52; Same. Weekly Underw 167:1440+ N 29 '52

National Life and Accident individual policies exceed seven million. East Underw 54:1 Mr 13 '53

1952 company reports tabulated. Nat Underw 57:31-4 F 19; 28-34 F 26; 22-7 Mr 5; 30-8 Mr 12; 30-3 Mr 19 '53

North America group income and profits increased last year. East Underw 54:1+ Ja 9 '53; Same. Weekly Underw 168:137+ Ja 10 '53

North America group shows higher profits. East Underw 54:24 F 20 '53

Patterns of growth, 1900-1951; with tables. T. J. V. Cullen. Spectator 160:16-17, 19-24 N '52

Reports on America Fore results. F. A. Christenson. Weekly Underw 168:384 F 7 '53

Results of 1952; property companies report year's statistics annual statements. Spectator 161:110-14 Ap; 107+ My '53

Royal-Liverpool group premiums at $210 million. Nat Underw 57:4 F 19 '53; Weekly Underw 168:570 F 28 '53

State Farm's premiums hit record $141 million. Nat Underw 57:6 F 26 '53

Travelers' results on major casualty lines; substantial premium increases. East Underw 54:39 Mr 6 '53

Foreign branches

Pearl U.S. branch 25 years old. C. Axman. East Underw 53:19-20 O 31 '52

Foreign business

American efforts to establish insurance in foreign trade. E. A. G. Manton. Weekly Underw 167:1430+ N 29 '52; Same. East Underw 53:22-3 D 5 '52; Abstract. Nat Underw 56:4 D 4 '52

A.I.U. provides covers abroad; legal quirks and claims are sometimes novel. Nat Underw 57:6 Ja 1 '53

Outlines tremendous overseas business. L. H. Collier. Weekly Underw 167:1485+ D 6 '52; Same cond. East Underw 53:18 D 26 '52

Premiums on reinsurance placed abroad in 1951 totaled $147.2 million. Nat Underw 57:13 Ja 15 '53

Forms, blanks, etc.

Occidental's group billing form. East Underw 53:59 D 12 '52

Stresses need for uniform A.&H. claim forms. F. T. Bernhard. Nat Underw 56:10 N 13 '52; Same. Nat Underw (Life ed) 56:6 N 14 '52

See also

Insurance, Fire—
Policy forms

Fraudulent promotion

Fourth insurer cited by Maloney on sales conduct. Nat Underw 57:16 Je 25 '53

Sterling goes to court over Virginia license revocation. Nat Underw 57:22 Ja 1 '53

Insurance requirements

See also

Insurance companies
blanket bond

Investments

Dilemma of fire and casualty companies. S. C. Davis. Comm & Fin Chr 176:1727+ N 6 '52

Five favorite fields feature property insurance investment; with table. Trusts & Estates 91:644 S '52

Insurance companies make loans to shipping lines. Marine Eng 58:85-6 S '53

Investments. E. L. Hall. Spectator 161:50 Ja '53 [cont monthly]

Shares an insurance company picked. Bsns W p 136 My 2 '53

See also

Insurance, Casualty—Investments
Insurance, Fire—Investments
Insurance, Life—Investments
Insurance, Life—Real estate operations

Valuation

New report makes more bonds eligible for amortization. Nat Underw 57:1+ My 28 '53

Security valuation tests adopted for use Dec. 1953. East Underw 54:1+ My 29 '53; Nat Underw (Life ed) 57:1+ My 29 '53

Legal departments

Home office law department functions. J. Barker, jr. East Underw 54:22-3 Mr 20 '53

Management

Business has done itself disservice by creating impression that it is scientific. R. H. Blanchard. Weekly Underw 167:1368+ N 22 '52

Current trends in insurance; problems of top management. R. R. Lounsbury. Nat Underw (Life ed) 56:9 N 7 '52

John Hancock hitches its inter-office phones to central dictation recorders. R. B. Mitchell. Nat Underw (Life ed) 57:2+ Ja 9 '53

Meeting the problems of decentralization; Prudential's regional home office setup. Nat Underw (Life ed) 57:2+ Ap 17 '53

Multiple atmosphere develops. B. C. Vitt. Weekly Underw 168:1661+ Je 20 '53

Mutual cites fat dividends from better letters program. E. M. Kelley. Sales Management 70:46-9+ Ja 1 '53

Need to decentralize business. C. M. Shanks. East Underw 53:4+ O 24 '52

What's behind the fantastic upsurge in sales at Franklin Life. A. R. Hahn. Sales Management 70:24-7+ F 15 '53

See also

Life office management association

Multiple line writing

Accounting changes in multiple lines; abstracts. R. C. McCullough. East Underw 53:1+ O 31 '52; Nat Underw 56:13-14 O 30 '52

Bunker Hill Mutual to give multiple line services. Weekly Underw 168:668 Mr 7 '53

Leaders discuss effect of multiple line writing at third workshop on cost reduction and control, New York city, Oct. 16. Weekly Underw 167:1090+ O 25 '52; Nat Underw 56:3 O 23 '52

Multiple development. D. C. Bowersock. Weekly Underw 167:1553+ D 13 '52

Multiple line concept. W. D. Winter. Weekly Underw 168:348-51, 389-92, 452-4, 531-3 Ja 31-F 21 '53

Ohio multiple line bill again is put to rest. Nat Underw 57:1 Ap 30 '53

Reinsurance and underwriting in the multiple line field. G. G. Gibson. Rough Notes 96:24+ F '53

See also

Insurance, Accident—Life company selling

Negro companies

Report on Illinois insurer writing weekly premium fire and extended coverage for Negroes; Independent Mutual Fire of East St Louis. Nat Underw 56:10 O 30 '52

Officials

A. C. Campbell of Metropolitan Life to retire after 50 years of service. L. J. Philip. East Underw 54:5+ My 29 '53

America Fore group promotions announced. East Underw 54:21+ My 29 '53

Career of Frederic W. Ecker. C. Axman. East Underw 54:3-4+ My 1 '53

Equitable society names three vice presidents; other changes. East Underw 53:3+ O 24 '52

Executive personnel of American Life convention. D. F. Barrett. East Underw 54:3-4+ Je 5 '53

Frederic W. Ecker is new president of Metropolitan Life. East Underw 54:1+ My 1 '53; Nat Underw (Life ed) 57:1+ My 1 '53; Weekly Underw 168:1209+ My 2 '53

Gulf Life names S. K. Guernsey as new president. Nat Underw (Life ed) 57:4 Je 5 '53

H. J. Burridge, National Underwriter chief, is being saluted on his 40th anniversary. Nat Underw 57:2+ Je 18 '53; Same. Nat Underw (Life ed) 57:2+ Je 19 '53

INSURANCE companies—Officials—*Continued*

J. Doyle DeWitt to be next president of the Travelers co. East Underw 53:1+ N 28 '52; Nat Underw (Life ed) 56:1+ N 28 '52
Langler retires, W. L. Cobb new head of Northeastern. Nat Underw 57:8 My 14 '53; Weekly Underw 168:1338-9 My 16 '53
Leslie Miller new president of Louisville fire & marine insurance co. Weekly Underw 168:1338 My 16 '53
Mervyn Davis retires from Equitable of New York; A. A. Windecker manager of underwriting department. East Underw 54:5 My 1 '53
New officers of New York city association. East Underw 54:14+ Je 19 '53
New York Life top executive changes at end of the year. East Underw 54:1+ Je 26 '53
Promoted by the Travelers; Tarbell and Wood are vice presidents. East Underw 54:35 My 1 '53; Weekly Underw 168:1209+ My 2 '53
R. H. Belknap president of United States Life. C. Axman. East Underw 53:3 O 17 '52
Ray D. Murphy, new president of Equitable society. C. Axman. East Underw 54:3-4+ My 22 '53
Sir Frank Morgan well known in U.S.; new chairman of Prudential of Great Britain. C. Axman. East Underw 54:22 Je 5 '53

Public relations

Advocates industry program of public relations. K. J. Bidwell. East Underw 54:1+ My 29 '53
Network of trained professional public relations workers advocated. Nat Underw 57:3+ F 12 '53
New England Mutual, Prudential, Mutual Life win public relations awards. Nat Underw (Life ed) 56:6 O 24 '52
Pennsylvania plan is succeeding. S. Cowman. East Underw 53:74+ D 12 '52
Program for public relations. W. Meiss. East Underw 54:26+ Ap 3 '53
Public relations needs full time promotion. K. J. Bidwell. East Underw 54:27 F 13 '53; Same. Weekly Underw 168:578 F 28 '53
Public relations problem of property industry. H. C. Johnson. Weekly Underw 168:888-91+ Mr 28 '53; Same abr. East Underw 54:24+ Mr 6 '53
Public relations progress told at Western underwriters association parley. Nat Underw 57:17 Ap 9 '53
Public relations theme; marine policies must be better explained. R. D. Eckhouse. Weekly Underw 168:455 F 14 '53

Real estate operations

See also
Insurance, Life—Real estate operations

Receiverships

Add Wert, Hobbs to American of Alabama receivership suit. Nat Underw (Life ed) 57:2 My 1 '53
Leslie Lowry Texas firms all go to graveyard. Nat Underw 57:7 My 7 '53

Records

Processing fire losses. E. T. Kyllo. Nat Underw 56:4 N 6 '52

Regulation

Better chance now to reduce government intrusion in insurance. W. M. Sheldon. East Underw 53:27 N 21 '52
Congress committee revamping holds insurance interest; new chairmen loom for units dealing with insurance questions. Nat Underw 56:1+ N 13 '52; Same. Nat Underw (Life ed) 56:1+ N 14 '52
Explains main dilemma in field of regulation. J. E. Day. Nat Underw (Life ed) 56:5 N 28 '52
How and why should insurance be regulated? J. F. Murphy and N. B. Taft. Spectator 161:23-4+ Je '53
New federal attitude. W. O. Martin, jr. Weekly Underw 167:1417+ N 29 '52
Note changed attitude by federal government; status of state supervision. W. O. Martin, jr. Weekly Underw 168:1663 Je 20 '53
Rate filings serious problem confronting independents. V. Lemmon. Weekly Underw 167:1582 D 13 '52
Recent government moves that affect insurance business. E. M. Thore. East Underw 54:1+ My 15 '53

Reports

Company annual reports. East Underw 54:3 My 29 '53
Life reports; general all around attractiveness. J. Robinson. Spectator 161:24-5+ My '53
Looking ahead through 1952 statements. T. J. V. Cullen. Spectator 161:20-1 My '53
Property reports; seven rated excellent. F. J. Malley. Spectator 161:22-3+ My '53

Securities

Bank and insurance stocks. H. E. Johnson. Published in weekly Thursday numbers of Commercial and financial chronicle
Bank and insurance stocks; review and outlook. G. Geyer. Trusts & Estates 92:32-4 Ja '53
California insurance investment plan continues to gain momentum; Insurance securities, inc. Nat Underw 56:11 N 6 '52
Equities tested by fire. I. U. Cobleigh. Comm & Fin Chr 176:1724 N 6 '52
Gulf control sale to syndicate sets a new pattern. Nat Underw (Life ed) 57:1+ Ap 3 '53
Insurance resists market slumps. Bsns W p 128-30+ N 15 '52
Insurance stocks as investments today. G. L. Merton. Mag of Wall St 91:592-3+ F 21 '53
Interstate L.&A. pays stock dividend. East Underw 54:26 Ja 2 '53
Maryland Casualty makes ready for $10 million common stock issue. Nat Underw 57:1 Ja 15 '53
N.A.I.C. directions on securities valuation sent to 30 companies. Nat Underw (Life ed) 57:1 Ja 23 '53
New bond tests in securities valuation are considered. Nat Underw 56:6 D 11 '52; Same. Nat Underw (Life ed) 56:4+ D 12 '52
New mandatory security valuation reserve computation of commissioners. East Underw 54:18 Je 19 '53
Outlook is good for valuation solution next year. Nat Underw (Life ed) 56:1 D 5 '52
Protests misleading and inaccurate information about Canadian life insurance shares in letter to investment dealers in U.S. R. L. Foster. Comm & Fin Chr 177:1783 Ap 23 '53
Union Central stockholders lose U.S. high court move. Nat Underw (Life ed) 57:11 Je 19 '53

Statistics

Spectator statistical issue. Spectator 160:16-96 N '52

Taxation

Allstate cites questions most frequently encountered on its revised tax proposal. Nat Underw 57:5 Je 4 '53
Allstate takes lead in drive for income tax reformation. Nat Underw 57:1+ Ja 15; 38 F 12 '53; Weekly Underw 168:464 F 14 '53
Bitter fight in Wisconsin on mutual tax scheme. Nat Underw 57:15 My 7 '53
Cut Connecticut tax that insurers pay on interest, dividends. Nat Underw 57:2 Je 4 '53; Same. Nat Underw (Life ed) 57:10 Je 5 '53
Dewey's budget message estimates premium tax revenue. Weekly Underw 168:567 F 28 '53
Fear tax effect of rush to form new Texas companies; oil money seeking sheltered investment. Nat Underw (Life ed) 57:1+ My 15 '53
Massachusetts Mutual wins retaliatory tax issue in Illinois. Nat Underw (Life ed) 57:4 Ja 30 '53
Mutual taxation situation. J. S. Kemper. Weekly Underw 168:1429 My 23 '53
Pennsylvania governor signs insurance tax bill; premium tax on out-of-state companies. Weekly Underw 168;1271 My 9 '53
Pennsylvania tax yields excess of $3,500,000 for 1951-53 fiscal biennium. Weekly Underw 168:1595 Je 13 '53

INSURANCE companies—Taxation—*Continued*

Personal insurance market endangered; life company taxation; abstracts. R. L. Hogg. Nat Underw (Life ed) 56:7-8 N 7 '52; Weekly Underw 167:1331-2 N 15 '52

Tax license cases in Philadelphia. East Underw 54:4 Ap 17 '53

Tax problems and developments in recent years. C. W. Tye. East Underw 54:36 Ap 10 '53; Same cond. Nat Underw 57:14 Ap 16 '53

Belgium

Insurance controls are considered in Belgium. W. de Winter. Weekly Underw 167:1228 N 8 '52

France

French group establishes million dollar trust fund. Weekly Underw 167:1506 D 6 '52

Great Britain

Royal exchange assurance; Royal insurance company, limited and others; annual general meetings. Economist 167:401-7, 477-80 My 9-16 '53

See also

Prudential assurance company

Illinois

Answer Illinois complaint; following local lead, American Farmers contends. Nat Underw 56:28 O 23 '52; Same. Nat Underw (Life ed) 56:7 O 24 '52

New York (state)

Insurance nebulae still cause surplus line problems in New York; will-o'-the-wisp concerns. Nat Underw 56:6-7 N 6 '52

Philadelphia

Tax license cases in Philadelphia. East Underw 54:4 Ap 17 '53

Philippine Islands

Philippines insurance development starts new carriers. Weekly Underw 167:1573 D 13 '52

Texas

Another Texas blowup; grim reaper hits Bedell insurers of San Antonio. Nat Underw 57:4 My 14 '53

Insurance and banking network in Texas falls apart. Nat Underw 57:2+ Mr 26 '53

Virginia

Sterling goes to court over Virginia license revocation. Nat Underw 57:22 Ja 1 '53

INSURANCE companies, Trade union

See also

Insurance company of Texas

Union labor life insurance company

INSURANCE companies blanket bond

Talk on special life company blanket bond arouses interest of home offices. H. O. Molitor. Nat Underw 56:4 N 27 '52; Same. Nat Underw (Life ed) 56:3 O 24 '52

INSURANCE company buildings

America Fore building modernization plans. East Underw 54:32 Ap 3 '53

American Bridge gets contract for fabrication and erection of steel framework of Prudential insurance company's mid-America home office in Chicago. Midwest Eng 5:28 Ja '53

AIU to build modern office in Far East. il Weekly Underw 168:1227 My 2 '53

Bankers National plans new home office building in Montclair, N.J. East Underw 53:3 N 14 '52

Designed to be functional in plan, quiet in expression; home office building for Phoenix insurance co., Hartford, Conn. il plans Arch Rec 112:126-35 D '52

42-story building straddles railroad tracks on 250 concrete caissons 110 ft in depth; Prudential building. J. P. Draney, jr. il diag Constr Methods 35:141-2+ Je '53

Let contracts for Prudential Chicago home office. East Underw 54:13 Ja 9 '53

Lumbermen's Mutual now in new home. il Nat Underw 57:12 Je 4 '53

New building makes selling easier; Prudential insurance company of America. E. Whitmore. il Am Bsns 23:18-19+ Je '53

Presenting Prudential's mid-America home office in Chicago. il Spectator 160:39 O '52

Prudential South-Central home office. il East Underw 54:8 Je 5 '53

Prudential's North Central home office building attractive in every way. il Weekly Underw 168:476 F 14 '53

Springfield group open house. East Underw 53:21 O 17 '52

Lighting

Group vs spot lamp replacement saves 100 per cent; John Hancock mutual life insurance co. building, Boston, Mass. il Elec World 138:174+ N 17 '52

INSURANCE company of North America

North America seeks to strip mail order insurer of its name. Nat Underw 57:24 Mr 19 '53; Same. Nat Underw (Life ed) 57:10 Mr 20 '53

Security I like best. C. F. O'Reilly. Comm & Fin Chr 177:1877 Ap 30 '53

INSURANCE company of Texas

How a Texas union runs its own insurance business. il Bsns W p 138-40 F 14 '53

INSURANCE conventions

Chicago insurance day again is highly successful. Nat Underw 57:1+ Ap 30 '53

Insurance convention dates ahead. Weekly Underw 168:639-40 Mr 7 '53

Pittsburgh I-day is big success; record attendance. B. P. McMackin, jr. Nat Underw 57:3+ Mr 12 '53

See also

Insurance, Life—Agents—Conventions

Insurance agents—Conventions

INSURANCE departments

Departments getting too bureaucratic. C. R. Fischer. Nat Underw 56:3 N 27 '52

Illinois governor stands up for Barrett in face of attacks. Nat Underw 57:1 Ja 29 '53; Nat Underw (Life ed) 57:2+ Ja 30 '53

Insurance department. H. P. Liversidge. Pub Util 51:858-9 Je 18 '53

Michigan insurance department; burned out in fire, it found quarters in army Quonset squad huts; Department's innovations. il East Underw 53:3-4 D 12 '52

State examination of New York Life launched as news. East Underw 54:1+ Ja 9 '53

Training course for department examiners is launched by New York. East Underw 53:6 O 17 '52

INSURANCE departments (in business)

Adequate statistical records will assist insurance manager to determine coverages. C. H. Austin. Weekly Underw 168:1492 My 30 '53; Same. East Underw 54:26 Je 12 '53

Insurance department of industrial firm should be at management level. H. P. Liversidge. East Underw 54:29 My 22 '53

INSURANCE federation of New York

Annual meeting, 38th, New York, Dec. 31. East Underw 53:28-9 D 5 '52

INSURANCE institute of America

Annual meeting, New York, Nov. 13. East Underw 53:39 N 21 '52

Insurance institute move completed. Nat Underw 57:14 My 7 '53

New courses under revised educational program. East Underw 54:28 Ja 23 '53; Same. Weekly Underw 168:309+ Ja 31 '53

INSURANCE law

Claimants' association called insurance threat. V. Lemmon. Weekly Underw 167:1511+ D 6 '52

Closing legislative days see final determination of insurance issues in many states. Nat Underw 57:1+ Je 4 '53

Committee on laws on legislative trends at federal and state levels. East Underw 54:23 My 22 '53

Danger to jurisprudence system. R. Murphy. East Underw 54:28+ Ap 24 '53

Functions of trade associations. H. R. Glenn. East Underw 53:3 D 5 '52

Industry pushing for prompt action on model group bill. Nat Underw (Life ed) 57:1+ F 13 '53

Insurance teachers get basic course in ramifications of Section 213. Nat Underw (Life ed) 57:5+ Ja 2 '53

Insurance will still have problems in the new Congress. M. G. Herndon. East Underw 53: 20 D 5 '52

INSURANCE law—*Continued*

Other insurance decision is given by U.S. court. Nat Underw 57:13 Ja 22 '53

Security-type laws of U.S.; tabulated by states. Rough Notes 96:101 Mr '53

Third party has no rights under personal property insurance; digest of two cases. H. S. Daynard. East Underw 53:32 O 24 '52

To try again for acceptable license, qualification bill. Nat Underw 56:9 D 11 '52

Uniform deposit law draft wins N.A.I.C. nod. Nat Underw 56:4 D 18 '52

See also

Insurance, Automobile—Financial responsibility laws

Insurance agents—Law

Insurance brokers—Law

Insurance companies—Regulation

Argentina

Argentine rules risks must go through brokers. East Underw 53:32 O 24 '52; Same abr. Nat Underw 56:7 O 16 '52

Arizona

May combine code study with benefit probe in Arizona. Nat Underw (Life ed) 57:7 Mr 13 '53

California

What California views as false advertising in A.&H. field. S. L. Weinstock. Nat Underw 56:26-7 N 6 '52

Colorado

Colorado sets pace passing uniform deposit measure. Weekly Underw 168:778 Mr 21 '53; Abstract. Nat Underw 57:13 Mr 19 '53

District of Columbia

Uniform policy provisions law supported by conference for District of Columbia. R. H. Rydman. Weekly Underw 168:1162 Ap 25 '53

Ireland

New Irish insurance plan aims at promoting dollar exports. For Comm W 50:11 Jl 13 '53

Kentucky

Expect fight on Kentucky order outlawing multiple location rating plans. Nat Underw 57:3 Ap 30 '53

Licenses required; Kentucky commissioner advises reciprocals and mutals of law. Weekly Underw 168:1134 Ap 25 '53

Mississippi

Non-assessable policy in Mississippi retains that status. Nat Underw 56:6 O 16 '52

New Jersey

Section 339 of the restatement of torts held substitution in New Jersey for attractive nuisance doctrine. Weekly Underw 168:765 Mr 14 '53

Some court actions that affected producers in New Jersey. W. H. Bennett. Weekly Underw 168:893 Mr 28 '53

New York (state)

Appeal New York decision; insurers seek reversal of Supreme Court ruling involving process serving on non-authorized companies. East Underw 53:32 N 7 '52

Bohlinger sympathetic with 213 problems of small companies and agents. East Underw 54:8 Ja 9 '53; Nat Underw (Life ed) 57:1+ Ja 9 '53

Companies and New York state agree on urgent revision of S-213. East Underw 54:1+ Ja 16 '53

CIO drafts bill to let collective bargaining oust 213. Nat Underw (Life ed) 57:1+ Ja 16 '53

CIO sees verdict on New York expense law as partial victory. Nat Underw (Life ed) 56:1+ N 28 '52

Court upholds service on non-admitted companies; fire loss at Bretton Woods hotel. East Underw 54:27 My 8 '53

Dewey approves 213 changes, accounting procedures measure. Nat Underw (Life ed) 57:1+ Ap 17 '53

Extraterritoriality seen as weakness of 213 in CIO suit. Nat Underw (Life ed) 56:1+ N 7 '52

High points of opposing briefs in CIO 213 suit. Nat Underw (Life ed) 56:6+ N 7 '52

How should Section 213 be revamped? Nat Underw (Life ed) 57:10 Mr 27 '53

LIAMA compensation forum stresses 213 problems. Nat Underw (Life ed) 56:4 N 21 '52

New group filing rules promulgated by New York department. Nat Underw 57:16 Mr 19 '53; Same. Nat Underw (Life ed) 57:3 Mr 6 '53

New York court tosses out CIO suit involving 213; really testing Hancock good faith, hence complaint is defective. Nat Underw (Life ed) 56:1 N 21 '52

New York court upholds statute allowing service of process on unauthorized insurance companies. Weekly Underw 167:1335 N 15 '52

New York department answers CIO plea for 213 injunction; no basis for action or inclusion of superintendent, affidavit declares. Nat Underw (Life ed) 56:1+ O 17 '52

N.Y. state agents are irked by 213 aims of department. Nat Underw (Life ed) 57:1+ Ja 30 '53

No collective bargaining negotiator, New York department says in CIO case; suit for injunction against enforcement of section 213. East Underw 53:10 O 24 '52

No discrimination in premium rates because of color. East Underw 54:1 Je 5 '53

Push for all-out 213 revision seen as N.A.L.U. project. Nat Underw (Life ed) 57:1+ Ap 10 '53

Section 213 amendment is only temporary stop-gap measure. J. A. McLain. East Underw 54:12+ Ap 3 '53; Same. Nat Underw (Life ed) 57:1+ Ap 3 '53; Same. Spectator 161:32+ My '53

Section 213 developments reviewed. B. E. Shepherd. Nat Underw (Life ed) 57:2+ Ja 16 '53

Uniform accounting for life companies becomes N.Y. law. East Underw 54:1 Ap 17 '53

North Carolina

Accuse Cheek of alerting A.&H. insurers to oppose cancellation bill. Nat Underw 57:29 Mr 5 '53; Same. Nat Underw (Life ed) 57:15 Mr 6 '53

Ohio

Ohio agents not to fight multiple line legislation there. Nat Underw 57:1 Ja 29 '53

Panama

Panama insurance operations come under Ministry of finance and treasury. Weekly Underw 168:202+ Ja 17 '53

Pennsylvania

Pennsylvania agents fight for bill to curb licenses on controlled business. East Underw 54:27 Je 12 '53

Rhode Island

Agents' anti-coercion bill fails in Rhode Island; several bills related to insurance business passed. Weekly Underw 168:1270 My 9 '53

Texas

Terms Texas insurance laws a national disgrace. G. B. Butler. Nat Underw (Life ed) 57:1+ My 8 '53

Virginia

Hearing held on Virginia retaliatory law. Nat Underw 57:12 Ja 22 '53

Virginia puts retaliatory blocks to Rhode Island insurers. Nat Underw 56:16 N 13 '52

INSURANCE lawyers

Good defense lawyers are dying off; new crop slim. Nat Underw 57:31 Mr 5 '53

See also

Insurance, Life—Legal departments

also National association of claimants' compensation attorneys

INSURANCE schools

50th anniversary of Travelers schools. C. Axman. East Underw 54:3+ Ja 23 '53

INSURANCE securities, inc.

California insurance investment plan continues to gain momentum. Nat Underw 56:11 N 6 '52

INSURANCE society of New York
Annual faculty dinner of the insurance school. Nat Underw 57:6 Ja 29 '53; Same. Nat Underw (Life ed) 57:6 Ja 30 '53
Annual meeting, 5th, Jan. 25. East Underw 54:26 Ja 30 '53
1,800 students enrolled in school of insurance. Weekly Underw 167:1631 D 20 '52; Same. East Underw 53:19 D 26 '52
N.Y. insurance society acquires fine new atlases and gazetteer. East Underw 53:17 D 26 '52
School of insurance has closing exercises. East Underw 54:28 Je 19 '53
School of insurance offers various prizes to students. Weekly Underw 167:1646 D 20 '52
School of insurance semester will start on Feb. 2. Weekly Underw 168:214 Ja 17 '53

INSURANCE surveys
We established a new agency with survey selling. T. H. Bagnall, jr. Rough Notes 96:24+ Mr '53

INSURANCE trusts
Agency accounts, a new source for premiums. A. C. F. Finkbiner, jr. East Underw 53:18 D 12 '52
Contingent insurance trust in estate planning. E. W. Nippert. Trusts & Estates 92:535 Jl '53
Gift tax on life insurance proceeds. F. L. Morton. Spectator 161:53-5 My '53

INSURANCE women
Directs Penn Mutual public information; Evelyn Shuler. East Underw 54:8 Ja 16 '53
Dorothy C. de Noyelles sole woman officer of American Fire & Casualty. East Underw 54:34 Ap 24 '53
Elsie Hepp president Women's A.&H. club. East Underw 53:26 D 26 '52
Federation of New York women's clubs 10th annual convention, Utica, April 17-19. East Underw 54:28+ My 1 '53
Fields opening up for women. M. H. Blackburn. East Underw 54:29 Ja 30 '53
Picture of an insurance woman. Spectator 161:54+ Ja '53
Syracuse women mark tenth anniversary. East Underw 54:20 Ja 30 '53; Same. Weekly Underw 168:320 Ja 31 '53
Why I became director of a life company. M. C. McIntosh. East Underw 53:56 D 12 '52
Woman named top Arkansas department aid. Nat Underw 56:8 D 18 '52

See also
Insurance, Life—
Agents—Women agents

INTAKES
Bringing fish out alive is easy at Contra Costa plant. il diag Elec World News ed 139:28-9 My 25 '53
Hydraulic problems encountered in intake structures of vertical wet-pit pumps and methods leading to their solution. W. H. Fraser. plans diags A S M E Trans 75:643-8; Discussion. 648-52 My '53
Intakes on variable streams. V. C. Lischer and H. O. Hartung. il diags Am Water Works Assn J 44:873-92 O '52
New boom intake, will it cut screening costs? G. Rodemeyer. diags Power Eng 57:62-3+ F '53; Discussion. 57:57+ My; 69 Je '53
Rid vertical-pump intake design of guess with model tests. A. Brkich. il diags Power 97:90-1+ F '53

INTEGRAL equations
Alternative method of solving Hallén's integral equation and its application to antennas near resonance. R. King. J Ap Phys 24:140-7 F '53
Approximate solution of Heitler's integral equation. S. N. Biswas. Phys R 91:1026-7 Ag 15 '53
Cylindrical aerials; new solution of Hallén's integral equation for current. B. Storm. bibliog Wireless Eng 29:174-6 Jl '52; Discussion. R. W. P. King. 30:24 Ja '53

INTEGRALS, Elliptic. See Functions, Elliptic

INTEGRATORS
Betatron monitor and integrator. R. D. England and W. E. Ogle. diags R Sci Instr 24:267-8 Ap '53
Combined current integrator and sensitive microammeter. H. A. Enge. diag R Sci Instr 23:599-600 N '52
Direct current microampere integrator. R. N. Schweiger. diags R Sci Instr 23:735-8 D '52
High speed product integrator. A. B. Macnee. bibliog il diags R Sci Instr 24:207-11 Mr '53

INTELLECTUAL property

Protection

Several factors needed to protect an idea. A. W. Gray. Ed & Pub 86:40 F 7 '53

INTELLECTUALS
Future of business-baiting. P. Viereck. Fortune 47:109-10+ F '53

INTER-AMERICAN convention of civil engineers
Convention, San Juan, Nov. 12-16. Civil Eng 22:1040-1 D '52

INTER-AMERICAN press association
Annual meeting, 8th, Chicago. Ed & Pub 85:7+ O 18 '52

INTER-AMERICAN sanitary engineering congress
Congress, 3d, Buenos Aires. Eng N 150:43 Ja 1 '53

INTERBUREAU insurance advisory group
Advisory group on combination coverages formed. Nat Underw 57:1+ Mr 12 '53; Weekly Underw 168:704+ Mr 14 '53

INTERCHANGE of freight cars. See Freight cars—Interchange

INTERCHANGEABLE mechanism
Principles and practice governing interchangeability and the specification of manufacturing limits of size, as influenced by statistical considerations. G. C. Adams. diags Inst Mech Eng Proc (A) 167 no 2:154-63; Discussion. 164-74 '53

INTERCOMMUNICATING systems
Carrier-current intercom. I. Gottlieb. il diag Radio & Tv N 48:45+ D '52
Communications systems; Femco Audiophone. il Blast F & Steel Pl 41:116+ Ja '53
Electronic butler and babysitter. S. Lipman. il diags Radio & Tv N 50:43-5 Ag '53
How seven companies use inside telephones. Am Bsns 23:28 Jl '53
Inter-office teletypewriting system. il Ry Age 134:36 Je 29 '53
Mechanical messenger at Cudahy cuts delivery time. Am Bsns 22:34 O '52
Multi-station intercom. R. J. Sandretto. il diags Radio & Tv N 48:66-7+ N '52
On the Atlantic Coast Line, lots of uses for talk-back loudspeakers. il plan Ry Age 133:41-3 O 20 '52
T/C leads serve as an intercom. U. J. Krue and R. C. Patton. Pet Processing 7:1473+ O '52

Noise

Noise reduction in intercom systems. R. J. Stahl and G. A. Walters. diags Electronics 26:214+ Je '53

INTERCONNECTION of power systems. See Electric plants—Interconnection

INTERCONTINENTAL hotels corporation
Hotel chain with wings. il Bsns W p 167-9 Mr 28 '53

INTEREST
Bank rates on business loans; average of rates charged on short-term loans to business by banks in selected cities; annual averages, 1944-1952; quarterly, 1952. Fed Res Bul 39:39 Ja '53 [cont monthly]
Cost of money. Bsns W p64+ Ja 10 '53
Economic stability; Administration's interest rate policy. P. Bush. Banking 46:42 Jl '53
Factors affecting interest rates. A. G. Lanston. Comm & Fin Chr 177:2066-7+ My 14 '53
Factors back of rising interest rates. W. Witherspoon. Comm & Fin Chr 178:255+ Jl 23 '53
56 economists fear further debt monetization in absence of redeemable dollar; members of Economists' national committee on monetary policy. Comm & Fin Chr 178:363 Jl 30 '53
Future of interest rates. R. Rodgers. Comm & Fin Chr 177:1631+ Ap 16 '53
Good outlook for credit; results of a national survey by the Credit policy commission; with comments divided according to Federal reserve districts. Banking 45:41-9 Ja '53
Higher interest rates in offing. R. W. Babson. Comm & Fin Chr 177:1748 Ap 23 '53

INTEREST—*Continued*

Holds interest rate rise a manifestation of free market. Comm & Fin Chr 177:2422 Je 4 '53

Look for higher interest rates. H. F. Atwater. Comm & Fin Chr 177:472 Ja 29 '53

Lower interest rates ahead. H. S. Cherry. Comm & Fin Chr 176:2018+ N 27 '52

Money gets still tighter. Bsns W p 132+ My 2 '53

Need for higher interest on GI loans. T. E. Lovejoy, jr. East Underw 54:8 Mr 27 '53

No immediate rise in interest rates in offing. M. Nadler. Comm & Fin Chr 177:472 Ja 29 '53

Open-market money rates in New York city, 1950-1952 average; monthly Dec. 1951-Dec. 1952; weekly Dec. 1952. Fed Res Bul 39:39 Ja '53 [cont monthly]

Open-market rates, Canada, United Kingdom, France, Netherlands, Sweden, Switzerland; yearly, Oct. 1942-Oct. 1951; monthly, Nov. 1951-Oct. 1952. Fed Res Bul 39:81-2 Ja '53 [cont monthly]

Outlook for interest rates. M. Nadler. Comm & Fin Chr 176:1520-1 O 23 '52

Outlook for interest rates. R. Rodgers. Comm & Fin Chr 177:2736 Je 25 '53

Short interest ratio declines to 1.36. Barron's 33:34 Je 29 '53

Tighter money; rediscount rates. Bsns W p28-9 Ja 24 '53

Trend of interest rates in 1953. M. Nadler. Comm & Fin Chr 177:679+ F 12 '53; Same. Trusts & Estates 92:107-9 F '53

Why interest rates have been rising. E. S. Adams. Banking 46:49-52 Jl '53

World comparison of interest rates. Burroughs Clearing House 37:3 Ap '53

See also

Savings deposits—Interest

INTERFACES

Adsorption at water-helium, -methane and -nitrogen interfaces at pressures to 15,000 p.s.i.a. E. W. Hough, B. B. Wood, jr. and M. J. Rzasa. bibliog il J Phys Chem 56:996-9 N '52

Application of the cathode-ray oscilloscope to polarographic phenomena; adsorption-desorption relationships exhibited by alcohols at aqueous saline solution-mercury interfaces. J. W. Loveland and P. J. Elving. bibliog J Phys Chem 56:935-48 N '52

Boundaries between some aqueous fatty sols and water. L. Saunders. Chem Soc J p 1310-13 Ap '53

Diffusionless transformation in Au-Cd single crystals containing 47.5 atomic percent cadmium; characteristics of single-interface transformation. L. Chang. diags J Ap Phys 23:725-8 Jl '52

Interfaces between aqueous liquids. L. Saunders. 2pls diags Chem Soc J p519-25 F '53

Mechanism by which aluminum ions alter the electrokinetics of the zinc sulfide-water interface. M. Bender. bibliog J Phys Chem 57:466-8 Ap '53

Metal transfer and wear. I. Feng. il diags J Ap Phys 23:1011-19 S '52

Radioactive tracers to mark interfaces and measure intermixing in pipelines. D. E. Hull and J. W. Kent. Ind & Eng Chem 44:2745-50 N '52

Radioisotope tracer successful in products-pipe-line application. G. Weber. il Oil & Gas J 51:115-16+ N 10 '52

Surface reactions of chromium in dilute $Cr^{51}O_4^{=}$ solutions. N. Hackerman and R. A. Powers. bibliog J Phys Chem 57:139-42 F '53

Surface roughness as related to hysteresis of contact angles; the system paraffin-water-air. F. E. Bartell and J. W. Shepard. bibliog diags J Phys Chem 57:211-15 F '53

Surface roughness as related to hysteresis of contact angles; the systems paraffin-ethylene glycol-air, paraffin-methyl cellosolve-air and paraffin-methanol-air. J. W. Shepard and F. E. Bartell. J Phys Chem 57:458-63 Ap '53

Surface roughness as related to hysteresis of contact angles; the systems paraffin-3-molar calcium chloride solution-air and paraffin-glycerol-air. F. E. Bartell and J. W. Shepard. diags J Phys Chem 57:455-8 Ap '53

Well completions; how to find the oil-water and gas-oil contacts in a reservoir. J. A. Kornfeld. diags Oil & Gas J 51:111-12+ O 27 '52

INTERFACIAL tension

See also

Contact angle

INTERFERENCE (light)

Contrast and color in interference fringes. E. W. Price and H. W. Wedaa. il diags R Sci Instr 24:332-4 Ap '53

General theory for the Gouy diffusion method. L. J. Gosting and L. Onsager. bibliog diags Am Chem Soc J 74:6066-74 D 5 '52

INTERFERENCE, Radio. See Radio communication—Interference

INTERFEROMETERS

Corrosion resistance of metals studied with interferometer. il Chem & Eng N 31:2096+ My 18 '53

Determination of complex dielectric constants of absorptive liquids by microwave interferometry. F. H. Branin, jr. bibliog diag J Ap Phys 23:990-7 S '52

Electromechanical pick-up calibration by the interferometer method. C. A. Ziegler. diags Acoustical Soc Am J 25:135-7 Ja '53

Electron-beam interferometer. il diag Tele-Tech 12:84+ Ag '53

Electron beam interferometer. L. Marton and others. il Phys R 90:490-1 My 1 '53

Experimental verification of source size theory for the Mach-Zehnder interferometer. G. D. Kahl and F. D. Bennett. il diags J Ap Phys 23:763-7 Jl '52

Generalized vector theory of the Mach-Zehnder interferometer. F. D. Bennett and G. D. Kahl. bibliog diags Opt Soc Am J 43:71-8 F '53

Interferometer action of a parallel pair of wire gratings. J. P. Casey, jr. and E. A. Lewis. Opt Soc Am J 42:971-7 D '52

Interferometer procedure applied to the study of the chemical durability of silicates, enamels, and metals. R. G. Pike and D. Hubbard. bibliog J Res Nat Bur Stand 50:87-93 F '53

Interferometer-Schlieren instrument for aerodynamic investigations. R. E. Blue and J. L. Pollack. il diags R Sci Instr 23:754-5 D '52

Interferometric analysis of airflow about projectiles in free flight. F. D. Bennett and others. bibliog il diags J Ap Phys 23:453-69 Ap '52

Interferometric examination of polished diamond surfaces. E. M. Wilks. il Opt Soc Am J 43:84-7 F '53

Interferometric measurements of concentration profiles in turbulent and streamline flow. C. S. Lin, R. W. Moulton and G. L. Putnam. bibliog il diags Ind & Eng Chem 45:640-6 Mr '53

Investigation with an interferometer of the turbulent mixing of a free supersonic jet. P. B. Gooderum and others. bibliog il diags U S Nat Advisory Com for Aeronautics 1950:289-305 '51

Location of white light fringes in the Michelson interferometer. P. G. Guest and W. M. Simmons. J Sci Instr 30:99-100 Mr '53

Mach-Zehnder interferometer applications in study of convection and conduction heat-transfer systems. C. D. Coulbert. bibliog il diag Mech Eng 74:1005-10 D '52

Microwave interferometer; employs Doppler radar technique to provide continuous record for ballistic measurements. H. C. Hanks, jr. il diags Tele-Tech 12:86-8+ F '53

Transient pressure recording with a high-speed interferometer camera. W. E. Buck. il diags Soc Motion Picture & Tv Eng J 59:369-77; Discussion. 377-8 N '52

Two methods of measuring the degree of straightness of a microscope stage. R. M. Tennent. diag J Sci Instr 30:89-90 Mr '53

Use interferometer for sensitive corrosion measurements. il Cer Ind 61:62 Jl '53; Same, without il. Iron Age 171:156-7 My 21 '53; Same abr. Mach 60:185 S '53; Excerpt. Machine Design 25:196+ Ag '53

Very accurate measurement of fringe shifts in an optical interferometer study of gas flow. F. D. Werner and B. M. Leadon. il diags R Sci Instr 24:121-4 F '53

INTERFEROMETERS, Sonic

Eleven megacycle interferometer for low pressure gases. M. Greenspan and M. C. Thompson, jr. il diags Acoustical Soc Am J 25:92-6 Ja '53

Fixed path ultrasonic interferometer for absorption measurements on gases. J. F. W. Bell. bibliog diag Acoustical Soc Am J 25:96-100 Ja '53

Natural vibrations of rectangular quartz plates and determination of the dispersion of sound in ethyl ether. B. Özdoğan. diag Acoustical Soc Am J 24:541-2 S '52

INTERHALOGENS. See Halogen compounds

INTERIOR, Department of. See United States—Interior, Department of

INTERIOR decoration

See also

Color in house decoration

Color in school decoration

Rambusch decorating company

INTERIOR decoration textile fabrics. See Textile fabrics, Interior decoration

INTERIOR decorators

Directories

National register of interior designers, 1951 edition. H. V. Anderson, ed. 164p National register pub. co, 40 E. 49th st, New York 17 '51 ($10)

INTERLAKE steamship company

Economic weather fair. Barron's 33:17-18 Ap 27 '53

INTERLOCKING devices

Electrical control of dangerous machinery and processes; electrically interlocked guards on machines. W. F. Cooper. il diags Inst E E Proc 98 pt 2:349-57 Je '51; Discussion. 98 pt 2:358-61; 100 pt 2:183-7 Je '51, Ap '53

INTERLOCKING signals. See Railroads—Signals

INTERMETALLIC compounds

Mechanical properties of intermetallic compounds at elevated temperatures. R. Lowrie. bibliog il diags J Metals 4:Trans 1093-100 O '52

Semiconducting intermetallic compounds. R. G. Breckenridge. Phys R 90:488-9 My 1 '53

INTERMITTENT mechanism. See Mechanical movements

INTERMOLECULAR potential. See Molecules

INTERNAL combustion engines

Small Continental engines feature more power and improved ignition. il Automotive Ind 107:76 O 15 '52

Which engine should power your equipment? A. F. Milbrath. il diags Product Eng 24:119-24 F '53

See also

Airplane engines

Automobile engines

Cylinders (engines, etc.)

Diesel engines

Gas engines

Gas turbines

Indicators (for internal combustion engines)

Locomotives, Diesel

Motor boat engines, Outboard

Motor bus engines

Motor cars (railroad)

Motor truck engines

Air supply

Maintenance of internal combustion engines; filtration of air and oil. P. H. Moore. il diags Pet Eng 24:C21+ N '52

Measurement of air flow. J. G. Withers. Engineer 196:227-8 Ag 21 '53

Bearings

Effect of solid inclusions in sleeve-bearing oil supply. H. G. Rylander. il diags Mech Eng 74:963-6 D '52; Excerpts. Machine Design 24:265-6+ N '52

Cold weather operation

Gasifier enables gasoline engines to start in less than 30 seconds in temperatures as low as -65 F. Mech Eng 74:823 O '52

Combustion research

Analytical and experimental studies with idealized gas turbine combustors. F. W. Ruegg and H. J. Klug. bibliog il diags J Res Nat Bur Stand 49:279-98 N '52

Chemistry of engine knock. il Can Chem Process 37:73-4 Ag '53

Chromium hexacarbonyl. W. M. Cumming, J. A. Horn and P. D. Ritchie. bibliog J Ap Chem 2:624-32 N '52

Determination of combustion products. J. H. Potter. Automotive Ind 107:50-1+ O 15 '52

Emission spectra on autoignited heptane-air mixtures. W. J. Levedahl and H. P. Broida. bibliog il Anal Chem 24:1776-80 N '52

Flame velocities of liquid hydrocarbons. R. E. Albright, D. P. Heath and R. H. Thena. bibliog il diags Ind & Eng Chem 44:2490-6 O '52

Motion photography for combustion research. F. W. Bowditch. bibliog il diags Soc Motion Picture & Tv Eng J 59:472-84 D '52

New data on combustion in automotive engines. il Automotive Ind 109:34-5+ S 15 '53

Recent developments in knock research. D. Downs and R. W. Wheeler. bibliog il diags Inst Mech Eng Proc (Auto div pt 3):89-99; Discussion. 121-40 '51-52

Stroboscopic apparatus for investigating pressure rise in spark-ignition engines. J. G. Lavender. il diag Engineering 176:135-6 Jl 31 '53

Control

Controls for pipe-line engines. C. B. Lester. il diags Oil & Gas J 51:212+ O 13 '52

Cooling

Cooling intake air; new packaged unit; abstract. R. C. Coblentz. Oil & Gas J 51:176 O 13 '52

Direct air cooling of engine jacket water by automatic variable-speed hydraulically driven fans. M. M. Shilling. il diag Oil & Gas J 51:250-2 O 13 '52

Engines cooled by boiling heat transfer. O. B. Freeman. diags Pet Eng (Ref annual) 25:E22+ Jl 15 '53; Same cond. Oil & Gas J 51:172-4+ F 23 '53

What price do you pay for air? automatic cooling-fan cut-out maintains optimum engine temperatures to cut fuel and repair costs. Eng N 150:120+ Je 11 '53

Design

Small two-stroke engines of simplified design; produced by Power products corp. il Automotive Ind 107:60+ O 1 '52

Detonation

Fast camera speeds engine-knock study. Aviation W 57:80 N 3 '52

Exhaust

Successful applications of catalyst include oxidation of exhaust fumes from internal combustion engines. L. C. McCabe. diag Ind & Eng Chem 45:sup 115A-17A Ap '53

Fuel

Engine research on fuels and lubricants. C. G. Williams. il Engineering 176:37-42 Jl 10 '53

Fuel switch to LP (liquefied petroleum) gas saves $300 per fork truck per year. il Factory Management 111:140-1 F '53

Fuel feeding

Fuel injection nozzles; investigation into causes of corrosion. W. P. Mansfield. il Automobile Eng 43:215-17 My '53; Same cond. Engineering 175:564-6 My 1 '53; Discussion. Automobile Eng 43:331 Ag '53

Mixing and distribution of liquids in high-velocity air streams. J. P. Longwell and M. A. Weiss. bibliog il diags Ind & Eng Chem 45:667-77 Mr '53

Heaters

Engine preheater. diag Machine Design 24:151 N '52

History

Otto and the Otto engine. Goldbeck. bibliog Engineer 194:677-9 N 21 '52

Ignition devices

New pulse generator in ignition system. il Product Eng 24:220 Mr '53

Lubrication

Engine lubricating oil filter. il diag Engineer 194:360 S 12 '52

Engine research on fuels and lubricants. C. G. Williams. il Engineering 176:37-42 Jl 10 '53

INTERNAL combustion engines—Lubrication— *Continued*

Maintenance of internal combustion engines; filtration of air and oil. P. H. Moore. il diags Pet Eng 24:C21+ N '52

Small two-cycle combustion and lubrication problems; abstract. F. Davison. S A E J 61:103-4 O '53

Maintenance and repair

GM 71 cylinder liner and piston fits. il diags Diesel Power 31:66-7 Mr '53

Manufacture

Expansion of the internal-combustion engine industry. Engineering 174:233-4 Ag 22 '52

Production is heavy on lightweight engines; McCulloch motors corp. N. Lynn. il Steel 132:102+ Mr 9 '53

Streamlining production of internal combustion engines. Engineer 194:231-2 Ag 15 '52; Same cond. Electrician 149:483-4 Ag 15 '52

Noise

Suppression of air-borne pulsations from compressor engine intakes. W. N. Lindblad. il diags Gas Age 112:30-2+ Jl 16 '53

Radiators

Save that radiator. A. S. Wukman. il World Oil 135:136+ O '52

Specifications

1953 automotive gasoline engines; tabulation. Automotive Ind 108:274-85 Mr 15 '53

1953 small gasoline engines; tabulations. Automotive Ind 108:292-3 Mr 15 '53

Starting

Instantaneous starting torque. il diags Machine Design 25:200 O '53

See also

Internal combustion engines—Heaters

Statistics

Internal combustion engine production; tabulations. Automotive Ind 108:284 Mr 15 '53

1951 engine production by hp ratings; tabulations. Automotive Ind 108:285 Mr 15 '53; Correction. 108:97 Je 1 '53

Superchargers

See also

Diesel engines—Superchargers

Temperature

How to maintain correct engine temperatures. A. J. Boyer. il diag World Oil 136:114+ Mr '53

Testing

Measurements in tractor design and development. R. P. Wehrle. il Instruments 25:1582-6 N '52

Valves

Screw-in valve inserts can be practical; interview with B. D. Foley. il diags Diesel Power 31:53-5 My '53

Special device tests for leakage in valve seating; Whittington vacuum testing machine. il Automotive Ind 108:61 My 1 '53

INTERNAL combustion engines, Marine

Marine engines at the motor show, London, Oct. 22-Nov. 1. il Engineer 194:622-3 N 7 '52

See also

Diesel engines, Marine

Motor boat engines, Outboard

Motor ships

INTERNAL conversion. See Gamma rays

INTERNAL friction. See Friction, Internal

INTERNAL revenue

Changes needed in Internal revenue code. D. Reed. Min Cong J 39:89 Ap '53

See also

Corporations—Taxation

Excise tax

Income tax

Inheritance tax

INTERNAL revenue, Bureau of. See United States—Internal revenue, Bureau of

INTERNATIONAL air line pilots association. See Air line pilots association, International

INTERNATIONAL air transport association

Charter snafu; IATA agreements strand many GIs in Europe. Aviation W 57:68-9 D 22 '52

World aircoach; IATA conference plans global service by 1954. Aviation W 57:18 D 8 '52

INTERNATIONAL alliance of theatrical and stage employees and moving picture machine operators of the United States and Canada

Limelight on Roy. Fortune 47:76+ My '53

INTERNATIONAL association for bridge and structural engineering

Congress, 4th, Cambridge. Engineering 174:297-8, 427-8, 493-5 S 5, O 3, 17 '52

INTERNATIONAL association of accident and health underwriters

Accident producers association active. J. G. Galloway. Weekly Underw 168:84+ Ja 3 '53

Expansion program gets underway. East Underw 53:40 N 7 '52

President Galloway makes appointments. East Underw 53:44 N 21 '52

INTERNATIONAL association of electrical inspectors

All quiet on code front as IAEI meets. Elec West 110:108-12 My '53

INTERNATIONAL association of machinists

Airlines pool bargaining. Bsns W p 172+ Ap 25 '53

Garage drive. Bsns W p79-80 D 27 '52

Meeting, 23d, Kansas City, Mo. Sept. 8-18. Mo Labor R 75:639-41 D '52

Union settles with Lockheed. Bsns W p 160 N 15 '52

United front; AFL's machinists and CIO's auto workers. Bsns W p 169 Je 20 '53

INTERNATIONAL association of printing house craftsmen

Annual convention, 33d, St Louis, Aug. 10-13. Inland Ptr 129:72-3 S '52

INTERNATIONAL astronautical federation

International astronautical congress, 3d, Stuttgart, Sept. 1-6. Engineer 194:347 S 12 '52

International astronautical congress, 4th, Zurich, Aug. 2-8. Engineer 196:203 Ag 14 '53

International congress on astronautics, 3d, Stuttgart, Germany. Aviation W 57:39-40+ N 10 '52

INTERNATIONAL astronomical union

Astronomers in Rome. Sci Am 187:46+ N '52

International astronomical union. O. Struve. Science 117:315-18 Mr 27 '53

INTERNATIONAL bank for reconstruction and development

Assisted power schemes; some activities of the International bank. J. C. Hancock. Elec R (Lond) 151:783-4 O 10 '52

Extends industry loan to Finland. For Comm W 48:2 N 24 '52

International bank, financial conditions, September 1951 and March, June, September 1952. Fed Res Bul 39:76 Ja '53 [cont monthly]

IBRD grants loan for projects in India. For Comm W 49:8 F 9 '53

IBRD loan to assist Rhodesia railways. For Comm W 49:3 Mr 23 '53

IBRD loan to benefit Yugoslav industry. For Comm W 49:4 Mr 2 '53

Net income $7.6 million in six months. For Comm W 49:6 F 16 '53

Nine-month period nets World bank $12,947,735. For Comm W 49:7 My 11 '53

Progress in 1952 third quarter. For Comm W 48:23 N 10 '52

World bank. Nat City Bank p 116 O '52

INTERNATIONAL banks. See Bank for international settlements; International bank for reconstruction and development

INTERNATIONAL brotherhood of teamsters, chauffeurs, warehousemen and helpers of America

Changeover for the Teamsters; Dave Beck top man. Bsns W p 167-8 O 25 '52

Truckers tired of little brother role. Bsns W p26 F 21 '53

Union and management team up for charity; Seattle's Orthopedic hospital. il Bsns W p 168-9 Ap 25 '53

INTERNATIONAL bureau of weights and measures

Genesis of the metric system and the work of the International bureau of weights and measures, tr. by R. E. Oesper. H. Moreau. il maps J Chem Educ 30:3-20 Ja '53

INTERNATIONAL business machines corporation
Five companies paying dividends in stock and cash; with comparative balance sheet items. Mag of Wall St 92:223 My 16 '53

INTERNATIONAL chamber of commerce
Strange straws in the East-West trade winds. Fortune 46:111 O '52

INTERNATIONAL claim association
Claim association attaining objective. F. T. Bernhard. Weekly Underw 168:105-7 Ja 3 '53

INTERNATIONAL commission on glass
Annual meeting, London and Sheffield, June 30-July 5. Am Cer Soc Bul 31:306-7 Ag 15 '52

INTERNATIONAL competition. See Competition, International

INTERNATIONAL confederation of free trade unions
Will their talks abroad speed unity? il Bsns W p 106 Jl 4 '53

INTERNATIONAL conference on large high tension electric systems
Meetings, May 4-9. Elec J 150:1711-12 My 15 '53; Elec R (Lond) 152:1127 My 15 '53

INTERNATIONAL conferences
Seventh session of the contracting parties to the General agreement on tariffs and trade, Geneva, Oct. 2-Nov. 10. For Comm W 48:7 O 20; 12+ N 24 '52
See also
Bermuda conference, 1953 (proposed)

INTERNATIONAL congress of dermatology
Congress, 10th, London, July 21-26. Ind Med 21:502-4 O '52

INTERNATIONAL congress of phytopharmacy
Congress, 3d, Paris, Sept. 15-21; abstracts of papers. Anal Chem 24:2014-15 D '52

INTERNATIONAL congress on glass
Congress, 3d, Venice, June 29-July 4. Glass Ind 43:422-5 Ag '53; Cer Ind 61:68-9+ S '53; Am Cer Soc Bul 32:324-5+, 347-8 S 15-O 15 '53 (to be cont)
Congress, 3d, Venice; program. Am Cer Soc Bul 32:223-4 Je 15 '53

INTERNATIONAL congress on theoretical and applied mechanics
International congress, 8th, Istanbul, Aug. 20-28. Aeronautical Eng R 12:48-50+ F '53
International congress, 8th, Istanbul, Turkey, Aug. 20-28. Mech Eng 74:946 N '52

INTERNATIONAL cooperation
Big Europe and little Europe; proposals for establishment of a continental political community. Economist 166:86-7 Ja 10 '53
Competition between difference and uniformity. W. L. Thorp. Standardization 23:314-18 S '52
European union? common government wins wider support than six-nation army. Barron's 33:5 Mr 9 '53
Fresh formulas at Strasbourg. Economist 166: 193-4 Ja 24 '53
Little Europe; legislators of Schuman powers draft its constitution. B. deJouvenel. Barron's 33:7 Ja 5 '53
Nordic council 1st meeting, Copenhagen. Economist 166:744 Mr 14 '53
Task of ending European disunity. J. F. Dulles. Comm & Fin Chr 177:790 F 19 '53
Ten years' progress in management; international co-operation. H. B. Maynard. A S M E Trans 75:708-10 My '53
Welfare commonwealth. Economist 166:718+ Mr 14 '53
See also
Aeronautics, Commercial—International aspects
Science—International aspects
United nations educational, scientific and cultural organization
World health organization

INTERNATIONAL electrotechnical commission
Decisions announced at Scheveningen. Elec R (Lond) 151:697-701 S 26 '52
International electrotechnical commission; actions taken at the recent meetings in Holland. H. S. Osborne. Elec Eng 72:101-4 F '53; Same. Standardization 23:408-11+ F '52
Meeting, Opatija, Yugoslavia, June 22-July 1. Engineer 196:179 Ag 7 '53; Elec R (Lond) 153:311-14 Ag 7 '53

INTERNATIONAL geological congress, 19th
Congress, 19th, Algiers. World Oil 135:344 O; 326-7 N '52

INTERNATIONAL harvester company
Harvester steps closer to its long-term goal. Bsns W p26 My 30 '53

INTERNATIONAL labor conference
Conference, 35th, Geneva. Mo Labor R 75: 279-81 S '52
Conference, 35th, Geneva, June 4-28, 1952. Int Labour R 66:281-317 O '52

INTERNATIONAL labor organization
International labour organisation and technical assistance. Int Labour R 66:391-418 N-D '52
I.L.O.'s minimum SS standards. East Underw 54:18 F 20 '53
Problems existing in the International labor organization. W. L. McGrath. Advanced Management 18:9-12+ F '53

INTERNATIONAL labor press of America
Kent Cooper speaks to labor press. Ed & Pub 85:53 S 20 '52

INTERNATIONAL law
International law for the Rose Mary. Economist 166:134 Ja 17 '53
See also
Comity of nations

Yearbooks

Inter-American juridical yearbook, 1950-1951. 406p $3 Pan American Union, Washington 6, D.C. '53

INTERNATIONAL longshoremen's and warehousemen's union
ILWU; softer or cagier? Bsns W p 167-8 Je 13 '53

INTERNATIONAL longshoremen's association
Docks; blowup may bring reform at last. il Bsns W p 132-3 My 30 '53
They put no limits on Philadelphia's dock priest. il Bsns W p 158-61 Je 6 '53
Waterfront mess. Fortune 47:94+ Ap '53

INTERNATIONAL marine insurance union
Annual meeting, Knocke, Belgium, Sept. 1-6. Nat Underw 56:5 S 26 '52; Spectator 160: 42-3 O '52

INTERNATIONAL materials conference
IMC committees announce proposals for fourth-quarter materials distribution. For Comm W 48:18 O 13 '52
IMC wool committee ends activities; pulp-paper committee dissolved. For Comm W 48:19 O 6 '52

INTERNATIONAL migration. See Immigration and emigration

INTERNATIONAL minerals and chemical corporation
Debentures offered. Comm & Fin Chr 176: 1864 N 17 '52

INTERNATIONAL monetary fund
International fund, finance conditions, Oct. 1951, April, July, October 1952; Nov. 1951, Sept., Oct., Nov. 1952. Fed Res Bul 39:76 Ja '53 [cont monthly]
International monetary fund. Nat City Bank p 112-15 O '52
Monetary fund's role in restoring convertibility. I. Rooth. Comm & Fin Chr 177: 2321 My 28 '53
Widening IMF's facilities. Economist 167:177 Ap 18 '53
World fund and convertible currencies. I. Rooth. Comm & Fin Chr 177:1966-7 My 7 '53
World fund's position on currency convertibility. P. Einzig. Comm & Fin Chr 177: 2426 Je 4 '53

INTERNATIONAL news service
Assignment; Africa. M. Johnson. Ed & Pub 86:12 F 14 '53

INTERNATIONAL organization for standardization
Technical committee meetings, New York, June 9-26. Standardization 23:276-94 S '52
Triennial meeting of the general assembly, 2d, June 20-21, New York. Standardization 23:268-324 S '52
What the ISO council accomplished. Standardization 23:295-7, 323-4 S '52

INTERNATIONAL payments. See Balance of payments

INTERNATIONAL railroad, Mexico
Security I like best. M. Winkler. Comm & Fin Chr 177:90 Ja 8 '53

INTERNATIONAL relations

End of the two-world pattern. il Bsns W p27-30 Je 27 '53

From containment to compromise. M. Palyi. Comm & Fin Chr 177:2733+ Je 25 '53

How long will the cold war last? J. Burnham. Banking 45:34-5+ S '52

International scene, a challenge to management. A. M. Lederer. Advanced Management 18:36-8 Ja '53

Meaning of Bermuda; proposed meeting of Big Three in June; problems to be discussed. Economist 167:578-9 My 30 '53

Must we go it alone after all? V. L. Horoth. il Mag of Wall St 92:499-501+ Jl 25 '53

Retrospect and prospect. E. R. Durgin. il U S Naval Inst Proc 78:1180-7 N '52

Round up of world political set-ups. H. Dubois. maps Mag of Wall St 91:19, 21+ O 4 '52

Threat to western world unity. P. Einzig. Comm & Fin Chr 177:1975 My 7 '53

See also

Aeronautics, Commercial—International aspects

Bermuda conference, 1953 (proposed)

Colonies

Commercial treaties and agreements

North Atlantic treaty organization

Peace

Petroleum industry and trade—International aspects

United States—Economic relations

also subdivision Foreign relations under names of countries, e.g. Great Britain—Foreign relations; Russia—Foreign relations; United States—Foreign relations

Societies

Institutes of international affairs. 131p pa $1.25 Carnegie endowment for international peace; for sale by Columbia univ. press, 2960 Broadway, New York 27 '53

INTERNATIONAL road federation

Annual board meeting, Washington, May 12. Roads & Sts 96:67+ Jl '53

INTERNATIONAL standards. See Standards, International

INTERNATIONAL telephone and telegraph corporation

Low-priced stocks headed for higher levels. J. S. Williams. Mag of Wall St 91:238-9 N 29 '52

Radical change in the set-up. R. Colston. Mag of Wall St 92:395+ Je 27 '53

INTERNATIONAL trade, Office of. See United States—International trade, Office of

INTERNATIONAL typographic composition association

Midwest conference, Milwaukee, May 8-9. Inland Ptr 131:71+ Je '53

INTERNATIONAL typographical union

Exaction or negotiation? issue in bogus test case. Ed & Pub 85:7 N 22 '52

ITU; tradition and skill make strength. il Bsns W p 146-50 Ja 24 '53

INTERNATIONAL union of electrical, radio and machine workers

Carey vs. Boulware; G. E.'s bargaining bogs down. Fortune 46:92-3 O '52

If you arbitrate, win. il Bsns W p46-8 Jl 25 '53

IUE settles on GE's terms. Bsns W p 148 N 8 '52

INTERNATIONAL union of mine, mill and smelter workers

So Mine, Mill won't talk; hearings before Senate internal security subcommittee. J. Goodman. Eng & Min J 153:124+ N '52

INTERNATIONAL union of operating engineers

Defiant union head fined and ousted. Eng N 149:32 N 6 '52

Operating engineers' feuds are aired. Eng N 150:31 My 21 '53

Union fights own members in court as Paducah labor troubles continue. Eng N 149:30 D 11 '52

Union in contempt of Kentucky court. Eng N 149:32 D 18 '52

INTERNATIONAL union of physiological scientists

Meeting, 19th, Montreal, Aug. 30-Sept. 4; abstracts of papers. Can Chem Process 37:114-15 S '53

INTERNATIONAL union of pure and applied chemistry

Chemistry union list of delegates released. Oil Paint & Drug Rep 164:7 Jl 27 '53

INTERNATIONAL wheat council

New wheat agreement? Economist 166:161-2 Ja 17 '53

INTERPLANETARY flight

Atom fusion engine seen for spaceships. J. H. Fremlin. Aviation W 58:36-7 Mr 9 '53

Down-to-earth view of space flight. M. W. Rosen. Machine Design 25:284+ My '53

International congress on astronautics, 3d, Stuttgart, Germany. Aviation W 57:39-40+ N 10 '52

Physical, psychological problems to face space travel. H. Habor. Midwest Eng 5:27-8 D '52

Saucer shape seen best for spaceship. W. F. Hilton. Aviation W 57:34+ N 3 '52

Space ship the easy problem. M. W. Rosen and R. B. Snodgrass. Midwest Eng 5:30-1 N '52

Space travel. Mech Eng 74:816-17 O '52

Spacemen study universe remodeling; abstracts of two papers. R. A. Smith; E. Hope-Jones. il Aviation W 58:28 F 23 '53

INTERPROVINCIAL pipe line company

Stock offered. Comm & Fin Chr 177:1049 Mr 9 '53

INTERSTATE advertising managers association

Fall meeting, Greenburg, Pa. Sept. 19-20. Ed & Pub 85:15+ S 27 '52

Meeting, Lancaster, Pa. Jan. 9-10. Ed & Pub 86:15 Ja 17 '53

INTERSTATE bakeries corporation

Lower commodity prices brighten outlook. Barron's 33:23+ My 11 '53

INTERSTATE commerce

See also

Carriers

INTERSTATE commerce commission

Don't expect the impossible. O. Clarke. Ry Age News ed 135:12 Jl 20 '53

Economist marks paternal bureaus for early oblivion. J. W. Beck. Comm & Fin Chr 177:2759 Je 25 '53

Extinction via regulation; an indictment of the SEC and ICC. O. G. Saxon. Comm & Fin Chr 177:1849+ Ap 30 '53

Freas approved by Senate group. Ry Age News ed 135:9-10 Jl 20 '53

I.C.C. gets a managing director; E. F. Hamm, jr. Ry Age 135:11 Ag 24 '53

I.C.C. gets two new members; Howard G. Freas, Owen F. Clarke. Ry Age 135:11-12 Jl 27 '53

I.C.C. sees no undue delay in its general rate decisions; 66th annual report. Ry Age 134:86-8 F 9 '53

Patterson leaves I.C.C. after 39-year career. Ry Age News ed 135:13 Jl 20 '53

Reforms for I.C.C. A. F. Arpaia. Ry Age 134:63+ Je 1 '53

Regulatory lag in the ICC. A. P. Matthew. Pub Util 50:638-50 O 23 '52

Senate group gets more time for study of I.C.C. Ry Age 134:16-17 F 9 '53

Should government regulation manage the carriers? J. S. Burchmore. Comm & Fin Chr 176:1830+ N 13 '52

You can help the Commission! H. W. Cross. Ry Age 134:12-13 Je 29 '53

Bureau of locomotive inspection

Annual report. Ry Loco & Cars 127:76-8 Mr '53; Same abr. Ry Age 134:55-6 F 23 '53

Bureau of safety

Fiscal 1952 reviewed by Bureau of safety. Ry Age 134:11-12 F 16 '53

INTERSTATE commission on the Delaware River basin

Pennsylvania committee's rejection of Incodel stirs demand for probe. Eng N 150:26 F 26 '53

Pennsylvania undecided on Incodel. Eng N 150:28 Ja 15 '53

Report seen final block to Incodel. Eng N 150:21 F 12 '53

INTERSTATE compacts

Governors approve Missouri compact. Eng N 149:26-7 D 11 '52

INTERSTATE cooperation

See also

Interstate compacts

INTERSTATE oil compact commission

Spring meeting, New Orleans, April 24-25. Oil & Gas J 51:70-3 My 4 '53

INTERSTATE oil compact commission—*Cont.*

Winter meeting, Wichita, Dec. 5-6. Oil & Gas J 51:79-81 D 15 '52

INTERSTATE power company

Interstate Power revenues, earnings to rise this year. Barron's 33:27 Ap 6 '53

INTERVIEWING

California highway planning survey aided by Census Bureau interviews. il Eng N 150: 43 Mr 26 '53

Taking a candid look at your customer. il Mod Ind 25:50-2 My '53

See also

Employment management—Interviewing

Employment systems—Interviews

INTER VIVOS (term)

Definitions; inter vivos. E. S. MacNeill. Banking 46:60-1 Jl '53

INTESTINES

Microorganisms

Evaluation of enteric parasitology performed in state laboratories. M. M. Brooke and R. B. Hogan. Pub Health Rep 67:1237-48 D '52

INTRAFAX. See Phototelegraphy

INULIN

Studies on inulin; the preparation and properties of inulobiose. J. H. Pazur and A. L. Gordon. bibliog diag Am Chem Soc J 75: 3458-60 Jl 20 '53

Analysis

Structural studies on inulin from inula helenium and on levans from dactylis glomerata and lolium italicum. D. J. Bell and A. Palmer. Chem Soc J p3763-70 O '52

INVENTIONS

Deliberate creativeness in science and engineering. M. Nelles. Chem & Eng N 31: 1520-3 Ap 13 '53

Inventors get to strut their stuff on tv; DuMont television show called the Big idea. il Bsns W p94-5 D 27 '52

Organized for altruism. Chem W 71:37-8+ N 22 '52

Prediction of technical change. S. C. Gilfillan. R Econ & Stat 34:368-85 N '52

See also

Patent laws and legislation

Patents

INVENTIONS, Employees'

Company patent policies surveyed. Electronics 26:18+ Mr '53

INVENTORIES

Business inventories; recent trends and position. L. J. Paradiso and G. B. Wimsatt. Survey of Cur Bsns 33:9-15 My '53

But sales are better, too. Bsns W p31 Mr 7 '53

Domestic business investment in 1952; inventory developments. Survey of Cur Bsns 33:20-1 F '53

Good outlook for credit; results of a national survey by the Credit policy commission; with comments divided according to Federal reserve districts. Banking 45:41-9 Ja '53

Inventories are up, but sales are up even more; graphs. Fortune 47:28 My '53

Missing $5 billion. Fortune 47:30+ F '53

No dangerous rise in inventories. W. Witherspoon. Comm & Fin Chr 177:1862 Ap 30 '53

Piece-goods control system; let your control records prove out your inventory. W. Brouillard. Textile World 103:95+ Jl '53

Planned physical inventory. R. W. Hardy. N A C A Bul 34:276-85 O '52

Profitable inventory levels. F. B. Todd and I. Scharf. Harvard Bsns R 31:101-8 S '53

Revision of business sales, orders, and inventories; with detailed tables; orders, 1946-51; manufacturers' sales and inventories, 1949-51; wholesale sales, selected periods, 1948-52; wholesale inventories, 1948-52. Survey of Cur Bsns 32:12-18 O '52

Six steps to better inventory management. H. F. Dickie. Factory Management 111: 96-100 Ag '53

See also

Stores systems

Accounting

Base stock and LIFO inventory methods. E. G. Carson. N A C A Bul 34:349-57 N '52

Control of inventory through quantity standards. J. H. Hildreth. N A C A Bul 34:755-63 F '53

Economic lot-size and inventory control. W. V. Clark, jr. and W. E. Ritchie. N A C A Bul 34:772-82 F '53

Electronic tally provides pushbutton inventory control. il Factory Management 111: 138-9 O '53

Inventory adjustments in interim statements; accounting lessons in the Kaiser-Frazer v. Otis case. J Account 94:727-8+ D '52

LIFO and practical inventory management. F. Weil. N A C A Bul 34:765 F '53

LIFO dollar method, an application. J. W. Kercher. N A C A Bul 34:366-75 N '52

LIFO inventories and national income accounting. J. P. Daly. Survey of Cur Bsns 33:16-22 My '53

LIFO techniques; discussion. N A C A Bul 34:172-86 sec 3 S '52

Operating viewpoint on inventory control. J. L. Wilson. N A C A Bul 34:766-71 F '53

Simplified method for tank content conversion to help accountants verify liquid inventory. R. H. Browse. diag J Account 95:60-3 Ja '53

Will your LIFO plan stick? story of a cotton textile mill. H. J. Giard. N A C A Bul 34:358-63 N '52

Statistics

Business inventories and sales; monthly tables, Dec. 1950-Sept. 1952. Survey of Cur Bsns 32:18-19 N '52

New series on retail store inventories; with tables of inventories by kind of business, 1948-52. Survey of Cur Bsns 32:14-16 N '52

INVENTORIES, Retail. See Retail trade—Stock

INVENTORS

Open door policy for inventors. B. Melnitsky. il Product Eng 23:129-33 D '52

Pay-off in good will; Sinclair's inventors plan. Chem W 72:34 F 14 '53

So, you want to be an inventor. C. D. Tuska. il diags Franklin Inst J 255:177-88 Mr '53

See also

Edison, Thomas Alva

Lovell, Stanley Platt

INVERT sugar. See Sugar, Invert

INVERTASE

Invertase in palamnaeus bengalensis. M. B. Lal and M. S. Kanungo. bibliog Science 117:57-8 Ja 16 '53

New trisaccharide produced from sucrose by mould invertase. J. S. D. Bacon and D. J. Bell. Chem Soc J p2528-30 S '53

INVERTERS, Electric. See Electric inverters

INVESTMENT bankers association of America

Annual convention, 41st, Hollywood Beach. Barron's 32:11+ D 15 '52

Annual convention, 41st, Hollywood, Fla. Nov. 30-Dec. 5. Comm & Fin Chr 176: 2325+, 2347-57+ D 18 '52

Annual meeting, Hollywood, Fla. Burroughs Clearing House 37:3-4 Ja '53

Nominees for 1953. Comm & Fin Chr 176: 1629 O 30 '52

Officers, 1952-1953, governors, convention pictures. Comm & Fin Chr 176:2371-86 D 18 '52

INVESTMENT banking

Competition in investment banking; Department of justice's anti-trust suit. P. L. Howell. Comm & Fin Chr 177:3+ Ja 1 '53; Abstract. Pub Util 51:307+ F 26 '53

Competition in the capital markets. P. L. Howell. Harvard Bsns R 31:83-93 My '53

Fair profits for investment bankers. M. Griswold. Comm & Fin Chr 177:1862+ Ap 30 '53

Favorable outlook for investment banking. R. Owen. Comm & Fin Chr 177:299 Ja 22 '53

Investment bankers' role in finance companies. J. J. Minot. Comm & Fin Chr 176: 1819+ N 13 '52

New sales approach to investment banking. Burroughs Clearing House 37:3 Jl '53

INVESTMENT banking—*Continued*

Year of careful planning and doing ahead! E. T. Boles. Comm & Fin Chr 176:2341+ D 18 '52

See also

Investment bankers association of America

INVESTMENT casting. See Lost wax process

INVESTMENT companies

Funds accelerate buying of oils. H. A. Long. Comm & Fin Chr 177:673+ F 12 '53

Mending a company's public fences; American investment co. of Illinois. il Bsns W p41-3 Je 13 '53

Prudent Boston gamble; American research and development corporation. F. Bello. il Fortune 46:124-5+ N '52

Special situations; Arthur Wiesenberger. B. Lefferts. Barron's 33:5-6 My 25 '53

What a bonus-for-quality pay plan is doing for Investors diversified services. G. Clark. Sales Management 69:52-4+ D 15 '52

See also

Institutional investors mutual fund, inc.

Investment trusts

National association of investment companies

INVESTMENT company of America

Security I like best. B. S. Lichtenstein. Comm & Fin Chr 177:1730 Ap 23 '53

INVESTMENT dealers' association of Canada

Annual convention, 37th, Lake-of-Bays, Ontario, June 9-12. Comm & Fin Chr 177:1-31 sec 2 Je 25 '53

INVESTMENT trusts

Appeal of Canadian mutual funds. A. Chippindale. Comm & Fin Chr 177:9+ sec 2 Je 25 '53

Edith steps out; Estates duties investment trust company, ltd. Economist 166:892-3 Mr 28 '53

Favorites of investment trusts; common stocks. Bsns W p 134 Mr 14 '53; Excerpt. Trusts & Estates 92:199 Mr '53

Fund classification is industry's job; panel at Mutual fund conference, New York. Barron's 32:23+ O 6 '52

Funds' deflationary policies reaffirmed by elections; analysis of third quarter portfolio changes; with tables. H. A. Long. Comm & Fin Chr 176:1913+ N 20 '52; Abstract. Trusts & Estates 91:835 N '52

Investment companies; a re-appraisal. R. L. Weissman. Comm & Fin Chr 176:2132-3 D 4 '52

Investment companies think better of railroad stocks. H. A. Long. Ry Age 133:98-9 D 1 '52

Investment trusts on the rein. Economist 167:115-16 Ap 11 '53

Mutual fund; the modern investment. S. M. Gordon. Comm & Fin Chr 177:476 Ja 29 '53

Mutual funds. R. R. Rich. Published in weekly Thursday numbers of Commercial and financial chronicle

Mutual funds, America's fastest growing business. W. G. Potts. Comm & Fin Chr 178:359+ Jl 30 '53

Mutuals' size worries S.E.C.; observations from Mutual fund conference. H. A. Long. Trusts & Estates 91:718-19 O '52

Open-end funds get hit, too. Bsns W p 136+ My 9 '53

Pennsylvania governor signs bill allowing trustee investment in funds. C. G. Burke. Comm & Fin Chr 177:2766-7 Je 25 '53

Portfolio prospecting unearths fund differences; Canadian investment fund and Canada general fund. P. A. Johnston. Barron's 32:29-30 D 8 '52

Pro investors lag behind the indexes. Bsns W p 174 Je 20 '53

Reshuffle of trust portfolios. Economist 167:116 Ap 11 '53

Samp's law is now law in 19 states; complete text of National association of securities administrators regulations. Comm & Fin Chr 177:815 F 19 '53

Trusts show big shift to aircraft. S. Altschul. Aviation W 58:79 F 16 '53

Utilities favored as funds increase liquidity; quarterly survey. H. A. Long. Comm & Fin Chr 177:1953+ My 7 '53

Widening markets for mutual funds. N. Belfer. Comm & Fin Chr 177:595 F 5 '53

With the investor's investor. P. A. Johnston. Barron's 33:33-4 Ja 5 '53 [cont weekly]

See also

Insurance, Life—Investment trust cooperation

Finance

Closed-end companies lag in 12-month record; performance of leading companies, year ended March 31. Barron's 33:23 Ap 27 '53

Fund sales trend held in past market declines. P. A. Johnston. Barron's 33:33-4 Je 15 '53

Index of mutual funds. H. A. Long. Trusts & Estates 92:36-7 Ja '53 [cont monthly]

Mutual fund record for quarters ended Sept. 30th, 1951 and 1952; table. Barron's 32:27-30 N 10 '52

Mutual fund record for quarter ended Dec. 31, 1952; with detailed tables, 1942-52. Barron's 33:27-30 F 2 '53

Mutual fund record for quarter ended March 31, 1953 and comparisons, 1943-1952; tables. Barron's 33:27-30 My 4 '53

Mutual funds and investment counsel appraise 1953 business prospects. Trusts & Estates 92:39-46 Ja '53

Canada

Canadian mutual fund offers unusual policy. P. A. Johnston. Barron's 33:33-4 My 11 '53

Japan

Japanese trusts show large short-term gains. P. A. Johnston. Barron's 32:23 D 22 '52

INVESTMENTS

Adlai the investor; Mr Stevenson is no barefoot boy in Wall Street. R. M. Bleiberg. Barron's 32:5 O 13 '52

Best investment values in 1953 and 1954. F. W. E. Farr. Comm & Fin Chr 177:1634+ Ap 16 '53

Capital gains through convertibles. J. S. Williams. Mag of Wall St 91:348+ D 27 '52

Capital gains; to hold or sell and pay tax is investor's problem. J. M. Templeton. Barron's 32:9 N 17 '52

Common stock values and yields. W. J. Eiteman and F. P. Smith. (Mich. business studies v. 11, no. 3) 35p pa $2.25 Univ. of Michigan press, 311 Maynard st, Ann Arbor '53

Department store securities as investments. B. E. Puckett. Comm & Fin Chr 177:681+ F 12 '53

Electric utility commons and the institutional investor. W. T. Hyde, jr. Trusts & Estates 91:904-7 D '52

Elements of bond and stock investing. R. A. Holton. Comm & Fin Chr 177:1025 Mr 5 '53

Equity investment and retirement goals. N. Belfer. Comm & Fin Chr 177:1109 Mr 12 '53

Estate planning for investors. A. C. Strasburger. Mag of Wall St 92:494-5+ Jl 25 '53

Fear tax effect of rush to form new Texas companies; oil money seeking sheltered investment. Nat Underw (Life ed) 57:1+ My 15 '53

Financial analysts view investment scene; National federation of financial analysts societies 6th annual convention, Philadelphia, April 12-15. Trusts & Estates 92:345-6 My '53

For profit and income. Mag of Wall St 91:410-11+ Ja 10 '53 [cont bi-weekly]

Formula plan investing. R. A. Warren. Harvard Bsns R 31:57-69 Ja '53

Growing institutional holdings of equities. G. K. Funston. Comm & Fin Chr 177:795 F 19 '53

How to build a retirement fund. D. L. Babson. Comm & Fin Chr 177:2542 Je 11 '53

How to minimize your taxes on your 1952 investment income. A. C. Strasburger. Mag of Wall St 91:62-3+ O 18 '52

Institutional investors and the auction market for equities. R. F. Murray. Comm & Fin Chr 177:1634+ Ap 16 '53

Institutional market for equities. J. I. Bogen. Comm & Fin Chr 176:2327+ D 18 '52

INVESTMENTS—*Continued*

Insurance stocks as investments today. G. L. Merton. Mag of Wall St 91:592-3+ F 21 '53

Investing for pension and profit sharing trusts. J. H. Weedon. Comm & Fin Chr 176:2333+ D 18 '52

Investing in 1953-54. P. J. FitzGerald. Comm & Fin Chr 177:1629+ Ap 16 '53

Investment attitude toward growth companies. W. K. Beckers. Chem & Eng N 31:1961-3 My 11 '53

Investment dicta. C. O. Fisher. Comm & Fin Chr 177:477+ Ja 29 '53

Investment in the Dominions. Economist 166:824 Mr 21 '53

Investment opportunities in special situations. Mag of Wall St 91:537-8+ F 7 '53

Investment primer; review of How to buy stocks, by L. Engel. Bsns W p 101-2+ Ap 18 '53

Investment risk. E. S. Bagley. Comm & Fin Chr 177:95+ Ja 8 '53

Investment risks; abstract. E. B. Daniel. Burroughs Clearing House 37:7-8 F '53

Investment schizophrenia; lack of unanimity of opinion, particularly on individual stock issues. J. A. Close. Comm & Fin Chr 177:996+ Mr 5 '53

Investment wrinkle; lease-backs promise new financing opportunities. T. F. Willmore. Barron's 32:13 D 22 '52

Investments in oil industry; five types analyzed for trust suitability. R. M. Huff and T. H. Hammett. il Trusts & Estates 91:908-12 D '52

Investor and inflation now; with table by countries of comparative changes in cost-of-living, bond and stock prices, 1938-1952. A. W. May. Comm & Fin Chr 176:2117+ D 4 '52

Investor looks at 1953. S. B. Lurie. Comm & Fin Chr 177:470 Ja 29 '53

Investor looks at today's world. W. W. Cumberland. Comm & Fin Chr 176:1730 N 6 '52

Longer term forecast. D. R. Porter. Comm & Fin Chr 176:1931 N 20 '52

New Haven for investors. I. U. Cobleigh. Comm & Fin Chr 177:1210-11 Mr 19 '53

New influences in the stock market. I. Friend. Fortune 47:108-9+ Mr '53

New type of institutional buying; where a support, where a threat to securities. L. A. Lukens. Mag of Wall St 91:168-9+ N 15 '52

1952 survey of consumer finances; income, selected investments, and short-term debt of consumers; with technical note and supplementary tables. Fed Res Bul 38:974-1001 S '52

Outlook for business and investments. H. S. Cherry. Comm & Fin Chr 177:1849+ Ap 30 '53

Pension funds; fastest grower of all. Bsns W p 128+ Mr 21 '53

Personal side of investing. L. O. Hooper. Comm & Fin Chr 176:2026+ N 27 '52

Portfolio plan for the young. M. S. Benjamin. Comm & Fin Chr 177:1423+ Ap 2 '53

Portfolio planning; an investment program for the business man. L. R. Kahn. Comm & Fin Chr 177:1207+ Mr 19 '53

Prospective supply of institutional investments. D. B. Woodward. Comm & Fin Chr 176:1825+ N 13 '52

Reducing your investing risks. G. M. Loeb. Comm & Fin Chr 176:2021+ N 27 '52

Relating the news to your investments. D. I. Rogers. Comm & Fin Chr 176:1830+ N 13 '52

Reliable plan for dollar averaging. W. Gates. Mag of Wall St 91:338-9+ D 27 '52

Roads to roam; income from highway-slanted enterprises. I. U. Cobleigh. Comm & Fin Chr 176:1820 N 13 '52

Security I like best; selections of experts in the investment and advisory field. Published in weekly Thursday numbers of Commercial and financial chronicle

Selection of growth stocks. R. W. Johnson. Comm & Fin Chr 177:783+ F 19 '53

Should you invest in foreign research? Chem W 71:35-6+ N 8 '52

Sidelights on institutional investment. Trusts & Estates 92:20 Ja '53 [cont monthly]

Sound investment programming for you. G. F. Shaskan, jr. Comm & Fin Chr 176:1624-5 O 30 '52

South paces Nation in capital investment. C. R. Walker. Manuf Rec 122:32 Ja '53

Specific investment programs to secure regular monthly income. W. Beecher. Mag of Wall St 91:22-3 O 4 '52

Strategic factors and investment analysis. H. C. Bailey. Comm & Fin Chr 177:482 Ja 29 '53

Taxing the source of welfare and security. D. B. Woodward. Comm & Fin Chr 177:2082-3 My 14 '53; Excerpts. East Underw 54:3+ Ap 24 '53

Timber investments. A. Z. Nelson. il Banking 45:66 O '52

To hold, or not to hold. W. Maynard. Comm & Fin Chr 176:1923+ N 20 '52

To invest abroad we must make it easy to invest at home; domestic investment curbs. G. K. Funston. Comm & Fin Chr 176:1529 O 23 '52

To sell securities; educate a market. il Bsns W p64-5 F 21 '53

U.S. plant investment gains 40 per cent in three years; with table by industries. C. R. Walker. Manuf Rec 121:37+ D '52

What the investor looks for in utility securities. C. O. Fisher. Pub Util 51:603-10 My 7 '53

What will happen to investments this year? G. L. Spencer and others. Spectator 161:26-9 Ap '53

Which industries and common stocks today? W. Maynard. Comm & Fin Chr 177:2625+ Je 18 '53

Wisest investment policy now. A. T. Miller. Mag of Wall St 91:566-7+ F 21 '53

Woolworth, world's largest retailer; an investment audit. H. F. Travis. Mag of Wall St 91:710-12+ Mr 21 '53

See also

Banks and banking—Investments
Bonds
Building and loan associations
Colleges and universities—Investments
Insurance, Life—Investments
Insurance companies—Investments
Interest
Investment banking
Investment trusts
Mortgages
Municipal bonds
Public utilities—Securities
Railroads—Securities
Saving
Savings banks—Investments
Securities
Stock exchange
Stockholders
Stocks
Taxation of securities
Trade unions—Investments
Trusts and trustees—Investments
Women as investors

Advertising

Which ad pulled best? il Ptr Ink 242:44 F 20 '53

Bibliography

Dealer-broker investment recommendations and literature. Published in weekly Thursday numbers of Commercial and financial chronicle

New England

Financial resources and resourcefulness. W. W. Wolbach. Ind & Eng Chem 44:2531-2 N '52

INVESTMENTS, Foreign

Debt repudiation by Russia and red-dominated countries. M. Winkler. Comm & Fin Chr 176:1926 N 20 '52

Foreign investment is job for private capital. J. T. Johnson. Comm & Fin Chr 176:2342+ D 18 '52

Foreign investment; with table of U.S. direct investments abroad, 1950. R. M. Bleiberg. Barron's 32:3 D 29 '52

Problems of international investment. G. K. Funston. Comm & Fin Chr 177:1739+ Ap 23 '53

Valuing estates in foreign currency; tax savings possible through informed approach. F. Pick. Trust & Estates 92:392-4+ Je '53

World-wide credit situation and our foreign investments. R. M. Binney. Comm & Fin Chr 177:896 F 26 '53

INVESTMENTS, Foreign—*Continued*

Europe

Europe's capital; it is pouring into investments all over the world. E. Kaskeline. Barron's 33:7+ Ap 6 '53

Great Britain

Britain steps up Canadian investments. Burroughs Clearing House 37:8-9 Jl '53
British cash flows west to Canada. Bsns W p98+ My 16 '53
British investment abroad. P. Einzig. Comm & Fin Chr 177:1335 Mr 26 '53
British investment flow to Canada on increase. J. Montagnes. Barron's 33:27 Je 29 '53
English investments in Mexico; a story of bonanzas and heartbreaks. J. F. Rippy. J Bsns 25:242-8 O '52
No room for foreign investment? Economist 166:656+ Mr 7 '53

United States

American foreign investments in 1951 and 1952; with tables. Survey of Cur Bsns 32:7-9+ S '52
Computation of U.S. foreign aid. M. Winkler. Comm & Fin Chr 177:1222 Mr 19 '53
Dollars into materials; private investment abroad key to expanding industrial supplies at favorable prices. Mod Ind 25:52-4 Ja '53
First planks for the bridge; prospects for U.S. overseas investments. Economist 165:584-7 N 22 '52
Overseas insurance. Mod Ind 24:85-6+ O '52
Political hurdles and economic needs in international investments. V. L. Horoth. Mag of Wall St 91:579-81 F 21 '53
Secretary Sawyer's survey of Europe. C. Sawyer and others. For Comm W 48:15-20 D 22 '52
Speeding flow of private funds abroad; Maffry report. Bsns W p 136-7 Ja 17 '53
To invest abroad we must make it easy to invest at home. G. K. Funston. Comm & Fin Chr 176:1529 O 23 '52
United States direct investments in foreign countries; with charts and tables. J. A. Zettler and F. Cutler. Survey of Cur Bsns 32:7-11+ D '52
U.S. holdings in Canada climb to $8 billion. J. Montagnes. Barron's 33:12 Jl 27 '53
U.S. investments abroad increased 50 per cent between 1943 and 1950 to record $11.8 billion. R. G. Gibbs. Chem & Eng N 31:218+ Ja 19 '53
Where are we in international trade and investment? S. W. Anderson. For Comm W 49:16+ Je 22 '53
Why American companies made investments abroad. J. L. Camp. Comm & Fin Chr 176:2018-19 N 27 '52

INVESTMENTS, Foreign (in Argentina)
Peron beckons U.S. capital. Bsns W p 151-2 Ap 11 '53

INVESTMENTS, Foreign (in Burma)
Burmese government invites U.S. investment in new paper mill. For Comm W 49:14 Je 29 '53

INVESTMENTS, Foreign (in Canada)
Britain steps up Canadian investments. Burroughs Clearing House 37:8-9 Jl '53
British investment flow to Canada on increase. J. Montagnes. Barron's 33:27 Je 29 '53
Canada's mineral resources; an American view. R. B. McEntire. Comm & Fin Chr 177:1439+ Ap 2 '53
Capital, not men. Economist 166:537-8+ F 21 '53
Foreign investors are betting nine billions on Canada. Can Chem Process 36:10+ O '52
Portfolio prospecting unearths fund differences; Canadian investment fund and Canada general fund. P. A. Johnston. Barron's 32:29-30 D 8 '52
Uncurbed Canadian investment. I. U. Cobleigh. Comm & Fin Chr 177:1524 Ap 9 '53
U.S. holdings in Canada climb to $8 billion. J. Montagnes. Barron's 33:12 Jl 27 '53

INVESTMENTS, Foreign (in Costa Rica)
Costa Rican congress eyes defaulted debt plan. L. Tanzer. Barron's 32:8 N 24 '52

INVESTMENTS, Foreign (in Europe)
Western Europe opens arms to private U.S. investments. World Oil 136:242 F '53

INVESTMENTS, Foreign (in Guatemala)
Life companies invest in Guatemala bank bonds. M. Bannell. Barron's 33:10 My 11 '53
New threat to investors shaping up in Guatemala. M. Bannell. Barron's 32:16 D 15 '52

INVESTMENTS, Foreign (in Haiti)
Haiti bids for foreign investment, offers protection against risk. For Comm W 49:27 Ap 20 '53

INVESTMENTS, Foreign (in India)
Foreign investment in India; with tables of production of various items in 1951. Economist 165:628+ N 29 '52
New trends condition investment in India and Pakistan. D. A. Kearns-Preston. For Comm W 48:13+ N 3 '52

INVESTMENTS, Foreign (in Indonesia)
Indonesia completes draft on investment. For Comm W 49:11 Je 1 '53

INVESTMENTS, Foreign (in Japan)
Bull market. J. B. Cohen. Barron's 33:19-21 Je 29 '53
Investments in Japan at about $75 million. For Comm W 49:7 Ap 20 '53
Private Point four in Japan. J. B. Cohen. il Fortune 47:148-9+ Ap '53

INVESTMENTS, Foreign (in Latin America)
United States postwar investment in Latin America. Fed Res Bul 39:445-50 My '53

INVESTMENTS, Foreign (in Mexico)
English investments in Mexico; a story of bonanzas and heartbreaks. J. F. Rippy. J Bsns 25:242-8 O '52
Investment return in Mexico. A. W. May. Comm & Fin Chr 176:1521 O 23 '52
Mexican tourist business attracts U.S. investors. D. Grahame. Barron's 32:25 D 1 '52

INVESTMENTS, Foreign (in Netherlands)
Firms given guaranties on foreign investments. For Comm W 50:12 Jl 13 '53
Netherlands takes lead in attracting U.S. industry. Ind Marketing 38:97+ Mr '53

INVESTMENTS, Foreign (in Pakistan)
New trends condition investment in India and Pakistan. D. A. Kearns-Preston. For Comm W 48:13 N 3 '52

INVESTMENTS, Foreign (in Spain)
Barcelona; Spanish lesson for investors. H. Bratter. Pub Util 51:556-68 Ap 23 '53
Foreign investment in Spain. H. Bratter. Banking 45:96 S '52

INVESTMENTS, Foreign (in Turkey)
Turkey attracts many private investors. G. C. McGhee. For Comm W 48:16-17 O 20 '52

INVESTMENTS, Foreign (in United States)
International capital transactions of the United States; net capital movement to United States since Jan. 2, 1935, by types and by countries. Fed Res Bul 39:68-73 Ja '53 [cont monthly]

IODIC acid
Manganese(II), -(III), -(IV) equilibrium in iodic acid. G. R. Waterbury and D. S. Martin, jr. bibliog Am Chem Soc J 75:4162-7 S 5 '53
Potentiometric titration of iodic acid with potassium iodide in sulphuric and hydrochloric acid solutions. H. T. S. Britton, R. E. Cockaday and J. K. Foreman. Chem Soc J p3877-9 O '52

IODIDES
Condensations of cinchoninaldehyde; with the quaternary alkiodides of some heterocyclic active methyl compounds. A. P. Phillips. Am Chem Soc J 75:383-4 Ja 20 '53
Electrometric study of the reaction between bromine and iodide ions in the absence and in the presence of acid; bromate and bromide ions in acid solution. H. T. S. Britton and H. G. Britton. Chem Soc J p3879-87 O '52
Kinetics of the iodide-catalysed reaction between hydrogen peroxide and hydrazine in acid aqueous solution. P. Davis and W. C. E. Higginson. Chem Soc J p 1902-6 Je '53

IODIDES—*Continued*

Kinetics of the simultaneous reduction of oxygen and pervanadyl by iodide ion in acid solution. M. H. Boyer and J. B. Ramsey. bibliog Am Chem Soc J 75:3802-8 Ag 5 '53

Mechanisms of exchange reactions between elementary iodine and organic iodides. R. M. Noyes and D. J. Sibbett. bibliog Am Chem Soc J 75:767-9 F 20 '53

Photochemistry of iodide ions in aqueous solution. T. Rigg and J. Weiss. Chem Soc J p4198-204 N '52

Photoelectric emission associated with β-band absorption in alkali iodides. E. Taft and L. Apker. bibliog J Chem Phys 20:1648 O '52

Pure quadrupole spectra; alkyl bromides and iodides. H. Zeldes and R. Livingston. J Chem Phys 21:1418-19 Ag '53

Rate law for the reaction of selenious acid and iodide ion. J. A. Neptune and E. L. King. bibliog Am Chem Soc J 75:3069-72 Jl 5 '53

Reaction between organic hydroperoxides and iodide in the presence of iron salts. W. S. Wise and G. H. Twigg. Chem Soc J p2168-71 Jl '53

Study of iodide-iodine solutions with the emf centrifuge. D. A. MacInnes and M. O. Dayhoff. bibliog diags J Chem Phys 20:1034-8 Je '52

Transformations of organic nitrogen base iodide and bromide salts to chlorides. A. P. Phillips and R. Baltzly. Am Chem Soc J 74:5231-2 O 20 '52

Voltammetry of iodine and iodide at rotated platinum wire electrodes. I. M. Kolthoff and J. Jordan. Am Chem Soc J 75:1571-5 Ap 5 '53

IODINATION

Binary and ternary mechanisms in the iodination of acetone. R. P. Bell and P. Jones. Chem Soc J p88-92 Ja '53

Bromination, iodination and phenylation of thianaphthenes. R. Gaertner. Am Chem Soc J 74:4950-1 O 5 '52

IODINE

Absorption spectrum of iodine in oxygenated solvents and the dissociation of iodine water. L. I. Katzin. bibliog J Chem Phys 21:490-1 Mr '53

Addition of iodine to tetramethylammonium iodide. H. W. Foote and M. Fleischer. bibliog J Phys Chem 57:122-5 Ja '53

Behavior of iodine species in pyridine and quinoline. J. Kleinberg and others. bibliog Am Chem Soc J 75:442-5 Ja 20 '53

Chemical behavior of iodine at low concentrations. M. Kahn and A. C. Wahl. bibliog J Chem Phys 21:1185-9 Jl '53

Complexes of iodine with an ether and an alcohol. J. S. Ham. bibliog J Chem Phys 20:1170 Jl '52

Components of podophyllin; absorption spectra and reaction with iodine of the dihydro-β-naphthoic acids. A. W. Schrecker, G. Y. Greenberg and J. L. Hartwell. bibliog Am Chem Soc J 74:5669-71 N 20 '52

Diffusion of iodine in carbon tetrachloride under pressure. E. W. Haycock and others. bibliog diag J Chem Phys 21:1601-4 S '53

Effect of disaggregation of amylose on the properties of the iodine complex. J. F. Foster and E. F. Paschall. bibliog Am Chem Soc J 75:1181-3 Mr 5 '53

Identification of the products of thermal exchange between alkyl iodides and molecular iodine by the wash out carrier technique. R. G. Badger, C. T. Chmiel and R. H. Schuler. bibliog Am Chem Soc J 75:2498-9 My 20 '53

Infrared spectra of solutions of iodine. D. L. Glusker and others. J Chem Phys 21:1407-8 Ag '53

Infrared spectra of solutions of iodine in mesitylene. N. S. Ham and others. bibliog J Chem Phys 20:1336-7 Ag '52

Iodine as a bactericide. C. W. Chambers and others. bibliog Soap & San Chem 28:149-51+ O '52

Iodine-catalyzed benzoylations. I. A. Kaye, H. C. Klein and W. J. Burlant. bibliog Am Chem Soc J 75:745-6 F 5 '53

Iodine inhibition in the flash photolysis of methyl iodide. N. Davidson and T. Carrington. bibliog Am Chem Soc J 74:6277-9 D 20 '52

Kinetics of iodine-catalyzed aromatic bromination; a new rate expression. T. Tsuruta, K. Sasaki and J. Furukawa. bibliog Am Chem Soc J 74:5995-8 D '52

Kinetics of ionic polymerisations; the side-chain effect in the vinyl ethers. D. D. Eley and J. Saunders. Chem Soc J p4167-73 N '52

Kinetics of the photochemical exchange between iodine and allyl iodide. D. J. Sibbett and R. M. Noyes. bibliog Am Chem Soc J 75:763-7 F 20 '53

Kinetics of the thermal exchange between iodine and allyl iodide. D. J. Sibbett and R. M. Noyes. Am Chem Soc J 75:761-3 F 20 '53

Mechanisms of exchange reactions between elementary iodine and organic iodides. R. M. Noyes and D. J. Sibbett. bibliog Am Chem Soc J 75:767-9 F 20 '53

Molecular complexes involving iodine. S. H. Hastings and others. bibliog Am Chem Soc J 75:2900-5 Je 20 '53

Photoelectric observation of the rate of recombination of iodine atoms. R. Marshall and N. Davidson. bibliog il diags J Chem Phys 21:659-64 Ap '53

Production of iodine from solutions of potassium iodide irradiated with hard X-rays. E. R. Johnson. J Chem Phys 21:1417-18 Ag '53

Reactions of iodine-amine complexes with unsaturated compounds; an investigation of the scope of the reaction with the iodine-morpholine complex. P. L. Southwick and D. R. Christman. bibliog Am Chem Soc J 75:629-32 F 5 '53

Reactions of phenyl esters of phosphorous acid with iodine. J. P. Forsman and D. Lipkin. bibliog Am Chem Soc J 75:3145-8 Jl 5 '53

Solubility and absorption spectrum of iodine in sulfuric acid solutions. J. G. Bower and R. L. Scott. bibliog Am Chem Soc J 75:3583-5 Jl 20 '53

Some factors which influence the iodine affinity of amylose as shown by potentiometric titration. E. F. Paschall and J. F. Foster. bibliog Am Chem Soc J 75:1177-80 Mr 5 '53

Spectrophotometric determination of aliphatic sulfides. S. H. Hastings. Anal Chem 25:420-2 Mr '53

Standardizing iodine solution by means of sodium thiosulphate standard solution. R. Rands. Chem & Ind p 1001 O 11 '52

Study of iodide-iodine solutions with the emf centrifuge. D. A. MacInnes and M. O. Dayhoff. bibliog diags J Chem Phys 20:1034-8 Je '52

Use of iodine and potassium acetate in the dehydrogenation of tetrahydro*iso*quinoline; the syntheses of 7-nitro*iso*quinoline. M. D. Potter and E. P. Taylor. Chem Soc J p 1320-1 Ap '53

Analysis

Determination of microquantities of iodine in water solution by amperometric titrations. H. P. Kramer, W. A. Moore and D. G. Ballinger. bibliog Anal Chem 24:1892-4 D '52

Modified procedure for determination of protein-bound iodine in serum. H. Sobel and S. Sapsin. bibliog diag Anal Chem 24:1829-31 N '52

Voltammetry of iodine and iodide at rotated platinum wire electrodes. I. M. Kolthoff and J. Jordan. Am Chem Soc J 75:1571-5 Ap 5 '53

Isotopes

4-Chloro-2-iodophenoxyacetic acid labelled with ^{131}I. R. L. Jones. diag Chem Soc J p4080-2 O '52

Disintegration of I^{131}. J. R. Haskins and J. D. Kurbatov. bibliog Phys R 88:884-6 N 15 '52

Effect of pressure on diffusion in the system CCl_4-SnI_4. E. P. Doane and H. G. Drickamer. bibliog J Chem Phys 21:1359-61 Ag '53

Gamma radiation following decay of I^{131}. H. C. Hoyt and J. W. M. DuMond. Phys R 91:1027 Ag 15 '53

IODINE—Isotopes—*Continued*
- Half-life of I^{131}. H. H. Seliger and others. Phys R 90:443 My 1 '53
- Influence of structure, phase and added iodine on the organic yields of the I^{127} (n,γ)I^{128} reaction in alkyl iodides. G. Levey and J. E. Willard. bibliog Am Chem Soc J 74:6161-7 D 20 '52
- (*n*,γ) and (*n*, 2*n*) reactions in iodine. H. C. Martin and R. F. Taschek. Phys R 89:1302-3 Mr 15 '53
- Reactions of methane with iodine activated by radiative neutron capture. J. F. Hornig and others. bibliog J Chem Phys 20:1556-60 O '52
- Removal of radioactive iodine by laboratory trickling filters. M. W. Carter. bibliog il Sewage & Ind Wastes 25:560-5 My '53
- State of chemical combination of $iodine^{131}$ formed by neutron irradiation of tellurium in organic liquids. F. J. Keneshea, jr. and M. Kahn. bibliog Am Chem Soc J 74:5254-5 N 5 '52
- Szilard-Chalmers reaction with inorganic compounds of iodine. R. E. Cleary, W. H. Hamill and R. R. Williams, jr. bibliog Am Chem Soc J 74:4675-9 S 20 '52

Spectra
- Quadrupole moment ratio of I^{129} and I^{127} from pure quadrupole spectra. R. Livingston and H. Zeldes. Phys R 90:609-10 My 15 '53

IODINE chloride
- Acid strength of iodine monochloride, antimony trichloride and picric acid with reference to the bases pyridine and aniline in nitrobenzene. I. M. Kolthoff, D. Stŏcesocá and T. S. Lee. bibliog Am Chem Soc J 75:1834-9 Ap 20 '53
- Application of the Fermi-Thomas model in computing the dipole moment of iodine chloride. H. Glazer and H. Reiss. bibliog diag J Chem Phys 21:903-7 My '53
- Chloramines as a source of iodine chloride; the preparation of iodo-phenols, -naphthols, and -aromatic ethers by means of a chloramine and an iodide. B. Jones and E. N. Richardson. Chem Soc J p713-15 F '53
- Exchange reaction of organic halides with iodine monochloride. R. M. Keefer and L. J. Andrews. bibliog Am Chem Soc J 75:543-8 F 5 '53
- Simultaneous vicinal dichlorination. E. Campaigne, W. Thompson and J. R. Leal. bibliog Am Chem Soc J 72:629-30; 75:230-1 Ja '50, Ja 5 '53

IODINE compounds
- Complexes of iodine with an ether and an alcohol. J. S. Ham. bibliog J Chem Phys 20:1170 Jl '52
- Iodine complexes of polyalkylbenzenes. M. Tamres, D. R. Virzi and S. Searles. bibliog Am Chem Soc J 75:4358-60 S 5 '53
- α-Iodoketones; reaction of enol acetates with N-iodosuccinimide. C. Djerassi and C. T. Lenk. bibliog Am Chem Soc J 75:3493-5 Jl 20 '53
- Polymethylbenzene complexes of iodine and iodine monochloride. L. J. Andrews and R. M. Keefer. bibliog Am Chem Soc J 74:4500-3 S 20 '52
- Starch-iodine complex. S. Ono, S. Tsuchihashi and T. Kuge. bibliog Am Chem Soc J 75:3601-2 Jl 20 '53
- Studies in spectroscopy; molecular compound formation with polyhalogeno-iodo-compounds. R. N. Haszeldine. Chem Soc J p2622-6 S '53
- Studies in spectroscopy; the ultra-violet absorption spectra of halogen-containing aliphatic iodo-compounds, and the relative stability of free halogen-containing alkyl radicals. R. N. Haszeldine. diag Chem Soc J p 1764-71 Je '53
- Szilard-Chalmers reaction with inorganic compounds of iodine. R. E. Cleary, W. H. Hamill and R. R. Williams, jr. bibliog Am Chem Soc J 74:4675-9 S 20 '52

IODINE fluoride
- Reactions of iodine pentafluoride with inorganic substances; iodine oxytrifluoride and iodyl fluoride. E. E. Aynsley, R. Nichols and P. L. Robinson. Chem Soc J p623-6 F '53

IODINE in the body
- Radioactive iodine as an indicator of the uptake of iodine by the liver, gastrocnemius, and thyroid of rana pipiens. W. O. Bradley. Science 117:483-4 My 1 '53

IODOACETALDEHYDE
- New synthesis of iodoacetaldehyde diethyl acetal. S. Akiyoshi and K. Okuno. Am Chem Soc J 74:5759 N 20 '52

IODOMETHANE
- Electron impact studies in CH_4, CH_3Cl, CH_3Br and CH_3I. H. Branson and C. Smith. bibliog Am Chem Soc J 75:4133-8 S 5 '53

IODOMETRY
- Iodometric determination of copper. L. Meites. Anal Chem 24:1618-20 O '52
- Volumetric determination of persulfate in the presence of organic substances. I. M. Kolthoff and E. M. Carr. bibliog Anal Chem 25:298-301 F '53

IODONITROSTYRENE
- Preparation of 4-bromo- and 4-iodo-ω-nitrostyrene. X. A. Dominguez, J. Slim S. and A. Elizondo. bibliog Am Chem Soc J 75:4581-2 S 20 '53

IODONIUM compounds
- Diaryliodonium salts; synthesis. F. M. Beringer and others. bibliog Am Chem Soc J 75:2705-8 Je 5 '53
- Diaryliodonium salts; the phenylation of organic and inorganic bases. F. M. Beringer and others. bibliog Am Chem Soc J 75:2708-12 Je 5 '53

IODOSOBENZENE diacetate
- Oxidations with phenyl iodosoacetate; the oxidation of primary aromatic amines. K. H. Pausacker. Chem Soc J p 1989-90 Jl '53

IODOTOLUENE
- Exchange reaction between substituted benzyl iodides and potassium iodide; benzyl iodide. P. Stillson and M. Kahn. bibliog Am Chem Soc J 75:3579-81 Jl 20 '53

ION exchange resins. See Resinous products—Ion exchanging

ION exchangers
- Anion exchange of niobium in 7.0 molar hydrochloric acid. E. H. Huffman and G. M. Iddings. Am Chem Soc J 74:4714-15 S 20 '52
- Anion exchange studies; adsorption of hydrochloric acid by a strong base anion exchanger. K. A. Kraus and G. E. Moore. bibliog Am Chem Soc J 75:1457-60 Mr 20 '53
- Anion exchange studies; separation of iron and aluminum in sulfate solutions. K. A. Kraus and F. Nelson. Am Chem Soc J 75:3273-4 Jl 5 '53
- Anion-exchange studies; separation of sulfuric acid from metal sulfates by anion exchange. K. A. Kraus, F. Nelson and J. F. Baxter. Am Chem Soc J 75:2768-70 Je 5 '53
- Anion exchange studies; the divalent transition elements manganese to zinc in hydrochloric acid. K. A. Kraus and G. E. Moore. bibliog Am Chem Soc J 75:1460-2 Mr 20 '53
- Application of ion exchange chromatography to the enzymatic resolution of amino acids. C. G. Baker and H. A. Sober. bibliog Am Chem Soc J 75:4058-60 Ag 20 '53
- Application of volume characteristics of sulfonated polystyrene resins as a tool in analytical chemistry; determination of pH and dissociation constants of acids. C. Calmon. bibliog Anal Chem 25:490-2 Mr '53
- Chemical engineering unit operations; ion exchange. R. Kunin and F. X. McGarvey. Ind & Eng Chem 45:83-8 bibliog(413 ref, p85-8) Ja '53
- Chromic acid recovery by ion exchange at Grumman Aircraft. D. T. Armstrong. Sewage & Ind Wastes 25:934-6 Ag '53
- Complexes involving tervalent iron and orthophosphoric acid; ion-exchange studies of solutions containing phosphate and chloride. J. E. Salmon. Chem Soc J p2644-9 S '53
- Control of phosphating solutions; ion exchanger a new method for rapid analysis. G. Gabrielson. bibliog Metal Finishing 51:76-8 Ap '53
- Dealkalization, without acid; chloride anion exchanger. diags Power Eng 57:68+ Mr '53

ION exchangers—*Continued*

Demineralization advantageous for boiler make-up water. J. D. Yoder. diags Elec World 139:80-1 Ap 6 '53

Electrolytic properties of aqueous solutions of polyacrylic acid and sodium hydroxide; the rate of sodium ion exchange between polyacrylate and free sodium ions. F. T. Wall and others. J Chem Phys 20:1206-11 Ag '52

Exchange coupling between three iron ions in two organic molecules. J. Yvon and others. Rs Mod Phys 25:165 Ja '53

Exchange interactions. K. W. H. Stevens. Rs Mod Phys 25:166 Ja '53

Exchange interactions. C. Zener and R. R. Heikes. diags Rs Mod Phys 25:191-8 Ja '53

Exchange reaction between the two oxidation states of iron in acid solution. J. Silverman and R. W. Dodson. bibliog J Phys Chem 56:846-52 O '52

Ion exchange and its applications in the fine chemical industry; abstract. E. L. Streatfield. Chem & Ind p35-6 Ja 10 '53

Ion-exchange and spectrophotometric investigation of iron(III) sulfate complex ions. R. A. Whiteker and N. Davidson. bibliog Am Chem Soc J 75:3081-5 Jl 5 '53

Ion exchange; another tool for hydrometallurgy. Min Eng 5:494 My '53

Ion exchange behavior of some neutral amino acids. M. E. Carsten and R. K. Cannan. bibliog Am Chem Soc J 74:5950-4 D 5 '52

Ion exchange, does it have a role in the mineral industry? N. Arbiter. il diag Eng & Min J 153:80-5 N '52

Ion-exchange in crystals of analcite and leucite. R. M. Barrer and L. Hinds. pl Chem Soc J p 1879-88 Je '53

Ion exchange; new hope for waste recovery. A. G. Gray. flow sheet il plan Steel 131:96-100 O 20 '52

Ion exchanger electrodes. G. Scatchard. bibliog Am Chem Soc J 75:2883-7 Je 20 '53

Isotope effect in some reactions of carbon-14-labeled carbonatotetrammine cobaltic complex ion. D. R. Stranks and G. M. Harris. bibliog diag J Phys Chem 56:906-10 O '52

Isotopic exchange between the valence states of mercury. R. L. Wolfgang and R. W. Dodson. bibliog J Phys Chem 56:872-6 O '52

Kinetics of the europium(II)-europium(III) exchange reaction. D. J. Meier and C. S. Garner. bibliog J Phys Chem 56:853-7 O '52

Mathematics of adsorption in beds; the effect of longitudinal diffusion in ion exchange and chromatographic columns. L. Lapidus and N. R. Amundson. J Phys Chem 56:984-8 N '52

Mechanism of cation and anion exchange capacity. M. A. Cook and others. bibliog J Phys Chem 57:1-6 Ja '53

Pituitary hormones; the purification of corticotropin-B by ion-exchange techniques. J. W. Richter and others. bibliog Am Chem Soc J 75:1952-5 Ap 20 '53

Precipitate-ion exchange reactions using nickel-63. G. K. Schweitzer and P. B. Baum. Am Chem Soc J 74:6131-2 D 5 '52

Preparation of very dilute standard base by ion exchange. B. W. Grunbaum, W. Schöniger and P. L. Kirk. diag Anal Chem 24:1857-8 N '52

Procedure for the ion exchange chromatography of the amino acids of urine. M. E. Carsten. bibliog Am Chem Soc J 74:5954-9 D 5 '52

Rate of ion exchange. E. R. Gilliland and R. F. Baddour. bibliog il diag Ind & Eng Chem 45:330-7 F '53

Salt and acid effects on the thallous-thallic exchange reaction. R. W. Dodson. bibliog Am Chem Soc J 75:1795-7 Ap 20 '53

Saturation performance of ion-exchange and adsorption columns. N. K. Hiester and T. Vermeulen. bibliog Chem Eng Prog 48:505-16 O '52

Separation of high specific activity sodium^{22} from large quantities of magnesium. V. J. Linnenbom. J Chem Phys 20:1657-8 O '52

Separation of sugar phosphates by ion exchange with the use of the borate complex. J. X. Khym and W. E. Cohn. bibliog Am Chem Soc J 75:1153-6 Mr 5 '53

Separation of the lanthanons by ion exchange; a comparison of eluants. R. C. Vickery. diags Chem Soc J p4357-63 N '52

Studies on bond type in certain cobalt complexes; exchange reactions. B. West. Chem Soc J p3115-22 Ag '52

Symposium on exchange phenomena in soils. (Special tech. pub. no. 142) 74p pa $1.75 Am. soc. for testing materials, 1916 Race st, Philadelphia 3 '53

Theory of ion exchange for polyelectrolytes undergoing electrolytic transference. F. T. Wall and P. F. Grieger. bibliog J Chem Phys 20:1200-6 Ag '52

See also

Resinous products—
Ion exchanging

IONIUM

Gamma-ray spectrum of ionium (Th^{230}). F. Rasetti and E. C. Booth. bibliog Phys R 91:315-18 Jl 15 '53

Thorium-230 recovered from uranium ore wastes; abstract. il Chem & Eng N 31:1405 Ap 6 '53

IONIZATION, Electrolytic

Absorption spectrum of iodine in oxygenated solvents and the dissociation of iodine water. L. I. Katzin. bibliog J Chem Phys 21:490-1 Mr '53

Acid dissociation of the aquoscandium ions. M. Kilpatrick and L. Pokras. bibliog Electrochem Soc J 100:85-92 F '53

Anomalous adjustment of indicator concentration in moving boundary measurements of transference numbers. A. R. Gordon and R. L. Kay. bibliog diags J Chem Phys 21:131-5 Ja '53

Application of volume characteristics of sulfonated polystyrene resins as a tool in analytical chemistry; determination of pH and dissociation constants of acids. C. Calmon. bibliog Anal Chem 25:490-2 Mr '53

Chemical actions of ionising radiations in solutions; the action of X-rays on ammonia in aqueous solution. T. Rigg, G. Scholes and J. Weiss. Chem Soc J p3034-8 Ag '52

Chemical effects due to the ionization of impurities in semiconductors. H. Reiss. bibliog J Chem Phys 21:1209-17 Jl '53

Copolymerization behavior of ionizable monomers. T. Alfrey, jr., C. G. Overberger and S. H. Pinner. bibliog Am Chem Soc J 75:4221-3 S 5 '53

Dielectric polarization and self-ionization in carboxylic acids. F. E. Harris and B. J. Alder. bibliog J Chem Phys 21:1306-7 Jl '53

Electrolytic dissociation of dimethyltin dichloride. E. G. Rochow and D. Seyferth. bibliog Am Chem Soc J 75:2877-8 Je 20 '53

Entropy of ionization of protonic solvents. W. L. Jolly. bibliog Am Chem Soc J 74:6199-201 D 20 '52

Influence of conjugation on the ionization of aromatic amines. N. S. Hush. Chem Soc J p684-91 F '53

Influence of the solvent on rates of ionization, entropies, and heats of activation. R. G. Pearson. bibliog J Chem Phys 20:1478-80 S '52

Ionization and dissociation of certain weakly acidic substances in pyridine. E. J. Corey. bibliog Am Chem Soc J 75:1172-4 Mr 5 '53

Ionization constant and rate of hydrolysis of succinimide. H. F. Walton and A. A. Schilt. bibliog Am Chem Soc J 74:4995-6 O 20 '52

Ionization constants of osmic(VIII) acid. R. D. Sauerbrunn and E. B. Sandell. Am Chem Soc J 75:4170-2 S 5 '53

Ionization constants of taurine and its activity coefficient in hydrochloric acid solutions from electromotive force measurements. E. J. King. bibliog Am Chem Soc J 75:2204-9 My 5 '53

Ionisation of guanidine and of amino-acids in sulphuric acid. G. Williams and M. L. Hardy. Chem Soc J p2560-3 S '53

Ionization of organometallic halides. K. Gingold and others. bibliog Am Chem Soc J 74:6306 D 20 '52

Ionization of saturated *n*-aliphatic dicarboxylic acids in sulphuric acid. L. A. Wiles. Chem Soc J p996-7 Mr '53

Ionisation of tri-*p*-tolylmethyl chloride in nitroalkanes. A. Bentley and A. G. Evans. Chem Soc J p3468-73 S '52

IONIZATION, Electrolytic—*Continued*

Isotope effects in the ionization of alkyl chlorosulfites. E. S. Lewis and C. E. Boozer. Am Chem Soc J 74:6306-7 D 20 '52

Mercurial diuretics; ionization of organic mercurials. R. L. Rowland. bibliog Am Chem Soc J 74:5482-4 N 5 '52

Molar polarizations of isomeric propyl and butyl mercaptans. S. Mathias. bibliog J Phys Chem 57:344-6 Mr '53

Molecular orbital treatment of the ionization equilibria of triarylchloromethanes. A. Streitwieser, jr. bibliog Am Chem Soc J 74:5288-90 N 5 '52

Rates of ionization of pseudo acids; relation between rates and equilibria. R. G. Pearson and R. L. Dillon. bibliog Am Chem Soc J 75:2439-43 My 20 '53

Rates of ionization of pseudo acids; steric effects in the base-catalyzed ionization of nitroethane. R. G. Pearson and F. V. Williams. bibliog Am Chem Soc J 75:3073-5 Jl 5 '53

Solubility product of ferrous hydroxide and the ionization of the aquo-ferrous ion. D. L. Leussing and I. M. Kolthoff. bibliog Am Chem Soc J 75:2476-9 My 20 '53

Solutions in sulphuric acid; the electrical conductivity of solutions of hydrogen disulphates and the self-dissociation of sulphuric acid. R. J. Gillespie and S. Wasif. Chem Soc J p964-70 Mr '53

Studies in spectroscopy; the ionisation constants and infra-red spectra of some primary and secondary halogen-containing alcohols. R. N. Haszeldine. Chem Soc J p 1757-63 Je '53

Thermodynamics of ionized water in strontium chloride solutions from electromotive force measurements. H. S. Harned and T. R. Paxton. bibliog J Phys Chem 57:531-5 My '53

IONIZATION, Gaseous

Active nitrogen. S. K. Mitra. bibliog Phys R 90:516-21 My 15 '53

Alpha-particle ionization in mixtures of the noble gases. W. P. Jesse and J. Sadauskis. Phys R 88:417-18 O 15 '52

Alpha-particle ionization in pure gases and the average energy to make an ion pair. W. P. Jesse and J. Sadauskis. bibliog Phys R 90:1120-1 Je 15 '53

Atomic excitation and ionization accompanying orbital electron capture by nuclei. H. Primakoff and F. T. Porter. bibliog Phys R 89:930-7 Mr 1 '53

Charge states of a helium beam in hydrogen, helium, air, and argon. E. Snitzer. bibliog diags Phys R 89:1237-44 Mr 15 '53

Climate control through ionization. T. L. Martin, jr. bibliog diag Franklin Inst J 254:267-80 O '52

Continuous layer formation in the atmosphere under the influence of solar radiation. H. K. Kallmann. bibliog Phys R 90:153-4 Ap 1 '53

Decomposition of nitrate crystals by ionizing radiations. G. Hennig and others. bibliog J Chem Phys 21:664-8 Ap '53

Density effect for the ionization loss in various materials. R. M. Sternheimer. bibliog Phys R 88:851-9 N 15 '52

Diffusion, de-excitation, and ionization cross sections for metastable atoms. M. A. Biondi. bibliog diag Phys R 88:660-5 N 1 '52

Energy per ion pair for 5-Mev alpha-particles in helium. T. E. Bortner and G. S. Hurst. Phys R 90:160 Ap 1 '53

Formation of the *D* layer. K. Watanabe and others. bibliog Phys R 90:155-6 Ap 1 '53

Ionization and dissociation of methyl siloxanes by electron impact. V. H. Dibeler and others. J Chem Phys 21:180-1 Ja '53

Ionization energy losses of relativistic μ mesons in gases. J. E. Kupperian, jr. and E. D. Palmatier. bibliog diags Phys R 91:1186-91 S 1 '53

Ionization of fluorocarbon gases by U-234 α-particles. M. E. Steidlitz and others. diag J Phys Chem 56:1010-12 N '52

Ionization probability curves for krypton and xenon near threshold. R. E. Fox and others. bibliog Phys R 89:555-8 F 1 '53

Measurements of the physical properties of active nitrogen. J. M. Benson. bibliog il diags J Ap Phys 23:757-63 Jl '52

Methods of measuring the properties of ionized gases at high frequencies; measurement of discharge admittance and electron density. D. J. Rose and S. C. Brown. diags J Ap Phys 23:1028-32 S '52

Methods of measuring the properties of ionized gases at high frequencies; measurement of electric field. D. J. Rose and S. C. Brown. diags J Ap Phys 23:719-22 Jl '52

Methods of measuring the properties of ionized gases at high frequencies; measurements of *Q*. S. C. Brown and D. J. Rose. diags J Ap Phys 23:711-18 Jl '52

Neutralization of ions and ionization of atoms near metal surfaces. L. J. Varnerin, jr. diag Phys R 91:859-63 Ag 15 '53

Photoionization as an important secondary process in a low frequency electrodeless discharge. A. P. Saxena and others. diag J Chem Phys 21:365 F '53

Photoionization cross section of nitric oxide. K. Watanabe and others. bibliog diag Phys R 91:1155-8 S 1 '53

Photoionization of molecules in the vacuum ultraviolet. E. C. Y. Inn. bibliog Phys R 91:1194-5 S 1 '53

Production of the *E*-layer in the oxygen dissociation region in the upper atmosphere. D. C. Choudhury. bibliog Phys R 88:405-8 O 15 '52

Review of vhf ionospheric propagation. M. G. Morgan. bibliog Inst Radio Eng Proc 41:582-7 My '53

Rocket determination of the ionization spectrum of charged cosmic rays at λ=41°N. G. J. Perlow and others. bibliog diags Phys R 88:321-5 O 15 '52

Simultaneous measurement of ionization and attachment coefficients. M. A. Harrison and R. Geballe. bibliog Phys R 91:1-7 Jl 1 '53

Specific primary ionization of H_2, He, Ne, and A by high energy electrons. G. W. McClure. bibliog diags Phys R 90:796-803 Je 1 '53

Specific probable ionization of electrons observed with a Wilson cloud chamber. R. H. Frost and C. E. Nielsen. bibliog diags Phys R 91:864-70 Ag 15 '53

Statistical fluctuations in ionization by 31.5-Mev protons. G. J. Igo and others. bibliog Phys R 89:879-80 F 15 '53

Studies of ionization efficiency; the ionization potentials of some organic molecules. J. D. Morrison and A. J. C. Nicholson. bibliog J Chem Phys 20:1021-3 Je '52

Threshold law for single ionization of atoms or ions by electrons. G. H. Wannier. bibliog Phys R 90:817-25 Je 1 '53

Transport phenomena in a completely ionized gas. L. Spitzer, jr. and R. Härm. bibliog Phys R 89:977-81 Mr 1 '53

Use of ionization probability curves for the analysis of CO and N_2 mixtures. W. M. Hickam and R. E. Fox. J Chem Phys 20:1055 Je '52

See also

Atmospheric nucleation

IONIZATION, Heat of

Heat and entropy of ionization of hydrofluoric acid; the entropy of bifluoride ion. L. G. Hepler, W. L. Jolly and W. M. Latimer. Am Chem Soc J 75:2809-10 Je 20 '53

IONIZATION chambers

Automatic ionization chamber. H. V. Neher. il diags R Sci Instr 24:99-102 F '53

Average neutron total cross sections in the 3- to 12-Mev region. N. Nereson and S. Darden. bibliog il diags Phys R 89:775-85 F 15 '53

Condenser type ion chamber for the measurement of gamma-radiation in the presence of thermal neutrons. E. B. Darden, jr. and others. diags R Sci Instr 23:568-9 O '52

Ionization chamber measurements of the absorption of the *N*-component of cosmic rays in lead. H. S. Bridge and R. H. Rediker. bibliog diags Phys R 88:206-24 O 15 '52

IONIZATION chambers—*Continued*

Liquid argon ionization chamber measurement of the shape of the beta-ray spectrum of K^{40}. J. H. Marshall. bibliog diags Phys R 91:905-9 Ag 15 '53

Neutron detectors for reactor instrumentation. T. A. J. Jaques and others. bibliog diags Inst E E Proc 100 pt 1:110-16 My '53; Abstract. Elec R (Lond) 152:87 Ja 9 '53; Discussion. Inst E E Proc 100 pt 1:116-20 My '53

New method of using ionization chambers. W. D. Parkinson and V. F. Hess. diags R Sci Instr 23:565-6 O '52

IONOPHORESIS. See Electrophoresis

IONOSPHERE. See Atmosphere, Upper

IONS

Acidity and basicity scale in the system ethanol-water; the evaluation of degenerate activity coefficients for single ions. B. Gutbezahl and E. Grunwald. bibliog Am Chem Soc J 75:565-74 F 5 '53

Adsorption of ions from buffer solutions by silica, alumina and silica-alumina gels. C. J. Plank. bibliog diag J Phys Chem 57:284-90 Mr '53

Analysis of the general mathematical formulations for the calculation of association constants of complex ion systems. J. C. Sullivan and J. C. Hindman. bibliog Am Chem Soc J 74:6091-6 D 5 '52

Binding of metal ions by ACTH; a property correlated with biological activity. J. E. Carr and others. bibliog Science 116:566-8 N 21 '52

Catalysis of the cerous-ceric electron exchange reaction by fluoride. H. C. Hornig and W. F. Libby. bibliog J Phys Chem 56:869-71 O '52

Complex-ion formation; a general discussion of factors influencing the stability of metal amines and complex ions. W. S. Fyfe. Chem Soc J p2018-23 Je '52

Complex-ion formation; the entropies of formation of some metal ammines. W. S. Fyfe. Chem Soc J p2023-7 Je '52

Determination of free acid in the presence of hydrolyzable ions. L. P. Pepkowitz, W. W. Sabol and D. Dutina. bibliog diags Anal Chem 24:1956-9 D '52

Effect of dipolar ions upon the activity coefficients of neutral molecules. A. P. Altshuller. bibliog J Phys Chem 57:375-6 Mr '53

Effects of crystal fields on the properties of transition-metal ions. L. E. Orgel. Chem Soc J p4756-61 D '52

Electric polarizability of polar ions. K. J. Mysels. bibliog diags J Chem Phys 21:201-5 F '53

Empirical considerations of entropy; a structural approach to the entropies of aqueous organic solutes and complex ions. J. W. Cobble. bibliog J Chem Phys 21:1451-6 S '53

Empirical considerations of entropy; the entropies of inorganic complex ions. J. W. Cobble. bibliog J Chem Phys 21:1446-50 S '53

Energy loss of hydrogen, helium, nitrogen, and neon ions in gases. P. K. Weyl. bibliog diags Phys R 91:289-96 Jl 15 '53

Estimate of the energies of the positive ions in a negative point-to-plane corona. G. L. Weissler and M. Schindler. bibliog diags J Ap Phys 23:844-6 Ag '52

Formation of negative ions of sulfur hexafluoride. A. J. Ahearn and N. B. Hannay. bibliog J Chem Phys 21:119-24 Ja '53

Hyperconjugation in $C_6H_7^+$ and other hydrocarbon ions. L. W. Pickett and others. bibliog diag J Chem Phys 21:1400-1 Ag '53

Hyperfine structure in the paramagnetic resonance of the ion $(SO_3)_2NO^{--}$. J. Townsend and others. Phys R 89:606 F 1 '53

Interactions of closed shell ions. G. L. Montet and others. bibliog J Chem Phys 20:1057-63 Jl '52

Ion association of 2-1 salts in methanol. F. M. Sacks and R. M. Fuoss. bibliog Electrochem Soc J 99:483-7 D '52

Ion optics in long, high voltage accelerator tubes. M. M. Elkind. bibliog diags R Sci Instr 24:129-37 F '53

Ionic hydration; an isotopic fractionation technique. H. M. Feder and H. Taube. J Chem Phys 20:1335-6 Ag '52

Ionic polymerization; copolymerization of styrene, p-chlorostyrene and α-methylstyrene with meta and para substituted styrenes catalyzed by stannic chloride. C. G. Overberger and others. bibliog Am Chem Soc J 74:4848-53 O 5 '52

Magnetic resonance spectrum of a linear three-spin system; the configuration of the bifluoride ion. J. S. Waugh, F. B. Humphrey and D. M. Yost. bibliog J Phys Chem 57:486-90 My '53

Motion of gaseous ions in strong electric fields. G. H. Wannier. Bell System Tech J 32:170-254 Ja '53

Neutralization of ions and ionization of atoms near metal surfaces. L. J. Varnerin, jr. diag Phys R 91:859-63 Ag 15 '53

Neutron scattering by coupled paramagnetic ions. P. J. Bendt. bibliog diags Phys R 89:561-9 F 1 '53

Overlap integrals and the linkage in complex ions. W. S. Fyfe. bibliog J Chem Phys 20:1039-40 Je '52

Photochemistry of ferrous ions in aqueous solution. T. Rigg and J. Weiss. bibliog J Chem Phys 20:1194-9 Ag '52

Probability factor in bimolecular reactions; uncomplicated ion-dipole systems. H. Kacser. bibliog J Phys Chem 56:1101-6 D '52

Processes involving ions and metastable atoms in mercury afterglows. M. A. Biondi. bibliog diag Phys R 90:730-7 Je 1 '53

Production of negative ions and noise in negative ion beams. W. L. Fite. bibliog diag Phys R 89:411-15 Ja 15 '53

Propagation in electron-ion streams. R. Q. Twiss. diags Phys R 88:1392-407 D 15 '52

Proposed method for producing short intense monoenergetic ion pulses. R. C. Mobley. diag Phys R 88:360-1 O 15 '52

Proton relaxation phenomena in complex ion formation. J. R. Zimmerman. J Chem Phys 21:1605 S '53

Radiofrequency ion source for Bartol Van de Graaff generators. C. P. Swann and J. F. Swingle, jr. diag R Sci Instr 23:636-8 N '52

Resonance energies of certain organic free radicals and ions. J. L. Franklin and F. H. Field. bibliog Am Chem Soc J 75:2819-21 Je 20 '53

Salting-out of non-electrolytes; the effect of ionic size, ionic charge, and temperature. T. J. Morrison. Chem Soc J p3814-18 O '52

Spectrum of discrete eigenvalues in a negative atomic ion. T. Wu. Phys R 89:629-30 F 1 '53

Stability of the complexes of the group IIA metal ions. R. J. P. Williams. Chem Soc J p3770-8 O '52

Stopping of heavy ions in gases. G. E. Evans and others. bibliog il diags Phys R 90:825-32 Je 1 '53

Surface properties of rosin size precipitate; effect of foreign ions on the electrophoretic mobility of rosin-aluminum sulphate complex. J. F. Gorham and E. F. Thode. bibliog Tappi 36:315-19 Jl '53

Theory of electrolysis at constant current with partial or total control by diffusion; application to the study of complex ions. P. Delahay and T. Berzins. bibliog diag Am Chem Soc J 75:2486-93 My 20 '53

Theory of electron exchange reactions in aqueous solution. W. F. Libby. bibliog diag J Phys Chem 56:863-8 O '52

Theory of the paramagnetism of uranyl-like ions. R. J. Elliott. bibliog Phys R 89:659-60 F 1 '53

Ultraviolet absorption spectra of uninegative ions. H. L. Friedman. bibliog J Chem Phys 21:319-22 F '53

See also
Activity coefficients
Anions
Cations

Mobility

Charge transfer and the mobility of rare gas ions. J. A. Hornbeck. bibliog J Phys Chem 56:829-31 O '52

Drift velocities of ions in krypton and xenon. R. N. Varney. bibliog Phys R 88:362-4 O 15 '52

Drift velocity of ions in oxygen, nitrogen, and carbon monoxide. R. N. Varney. Phys R 89:708-11 F 15 '53

IONS—Mobility—*Continued*

Ionic mobility at grain boundaries. P. E. Goddard and F. Urbach. il J Chem Phys 20:1975 D '52

Mobilities of positive ions in their parent gases. T. Holstein. bibliog diags J Phys Chem 56:832-6 O '52

Mobility of helium molecular ions in helium. S. Geltman. bibliog Phys R 90:808-16 Je 1 '53

Proton and deuteron transfer over hydrogen bridges as cause of conductivity effects. A. Gierer and K. Wirtz. bibliog J Phys Chem 56:914-17 O '52

Recombination

Ion concentrations and recombination in expanding low pressure sparks. R. G. Fowler and others. il diags Phys R 87:966-70 S 15 '52

Recombination rate in germanium by observation of pulsed reverse characteristic. E. M. Pell. bibliog diags Phys R 90:278-9 Ap 15 '53

Scattering

Elastic scattering and neutralization of low velocity hydrogen ions in ethane and propane. J. H. Simons and S. A. McAllister. bibliog J Chem Phys 20:1431-6 S '52

IOWA

Sanitary affairs

Industrial waste treatment in Iowa. P. Bolton. Am Soc C E Proc 78[no 149]:1-15 S '52

IOWA-ILLINOIS gas and electric company

Bonds sold. Comm & Fin Chr 177:529 F 2 '53

Dividend now considered secure. Barron's 33:14 Jl 6 '53

Public utility securities. O. Ely. Comm & Fin Chr 176:1742 N 6 '52

IOWA public service company

Bonds offered. Comm & Fin Chr 177:2457 Je 8 '53

IOWA southern utilities company of Delaware

Bonds offered. Comm & Fin Chr 177:834 F 23 '53

IPATIEFF, Vladimir Nikolaevich, 1867-1952

Professorship at Northwestern will honor Ipatieff. Chem & Eng N 30:5276 D 15 '52

IRAN

See also
Petroleum industry
and trade—Iran

Commerce

Iranian foreign trade in favorable balance. For Comm W 49:4 Ap 6 '53

Commercial policy

Iran to offer export incentives, grant import rights to foreigners. For Comm W 49:9 F 9 '53

Economic conditions

Economic conditions abroad. For Comm W 48:4 N 17 '52

Foreign relations

See also
Petroleum industry
and trade—Iran

Russia

Caviare from the Caspian. map Economist 166:367 F 7 '53

IRAQ

Iraq keeps rice for home use; restricts exports. For Comm W 48:16 N 10 '52

See also
Petroleum industry
and trade—Iraq

Antiquities

From cave to village; birth of agriculture and animal husbandry. R. L. Braidwood. il map Sci Am 187:62-6 O '52

Economic conditions

Economic conditions abroad. For Comm W 48:5 D 8 '52

Politics and government

New reign in Iraq. map Economist 167:282-3 My 2 '53

See also
Elections—Iraq

IRELAND

See also
Electricity supply—
Ireland

Commerce

Irish unfavorable trade balance drops; volume of goods shifts. For Comm W 49:7 Ap 27 '53

Commercial policy

New Irish insurance plan aims at promoting dollar exports. For Comm W 50:11 Jl 13 '53

Description and travel

U.S. Sullivans take over Ireland. il Bsns W p 126-8+ Ap 25 '53

Economic conditions

Economic conditions abroad (cont). For Comm W 48:5 O 13; 5 N 10 '52; 49:5 My 25 '53

Ireland faces the future. A. M. Sullivan. il Dun's R 61:23-4+ Jl '53

Politics and government

Old tunes in Ireland. Economist 166:347 F 7 '53

Social history

Social influence of the potato. R. N. Salaman. il Sci Am 187:50-2+ D '52

IRETON, Mary

Adventure in an airliner. M. Ireton. Special Lib 44:158-9 Ap '53

IRGALANS. See Dyes and dyeing—Nylon

IRIDIUM

Metal-catalysed reaction between acetylene and hydrogen; the reaction over rhodium and iridium. J. Sheridan and W. D. Reid. Chem Soc J p2962-6 Ag '52

Isotopes

Decay scheme of Ir^{192}. K. I. Roulston and R. W. Pringle. diag Phys R 87:930-1 S 15 '52

Hyperfine structure in the spectra of iridium and osmium. K. Murakawa and S. Suwa. Phys R 87:1048-9 S 15 '52

Reactor blisters pictured using radioactive iridium. F. L. Resen. il Oil & Gas J 52:65 Je 1 '53

Prices

Nonferrous prices; tabulation. Steel 132:173 Ja 5 '53

IRIDIUM compounds

Bis-cyclopentadienyl compounds of rhodium (III) and iridium(III). F. A. Cotton, R. O. Whipple and G. Wilkinson. bibliog Am Chem Soc J 75:3586-7 Jl 20 '53

Preparation of tris-acetylacetone-rhodium (III) and -iridium(III). F. P. Dwyer and A. M. Sargeson. Am Chem Soc J 75:984-5 F 20 '53

IRIS

Mannose-containing polysaccharides; the polysaccharides in the seeds of iris ochroleuca and I. sibirica. P. Andrews, L. Hough and J. K. N. Jones. Chem Soc J p 1186-92 Ap '53

IRON

Adsorption of hydrogen and carbon monoxide on iron surfaces. H. H. Podgurski and P. H. Emmett. bibliog J Phys Chem 57:159-64 F '53

Anion exchange studies; separation of iron and aluminum in sulfate solutions. K. A. Kraus and F. Nelson. Am Chem Soc J 75:3273-4 Jl 5 '53

Annual engineering materials review and forecast; irons and steels. T. C. Du Mond. Materials & Methods 37:103 Ja '53

Anodic behavior of iron in H_2SO_4. J. H. Bartlett and L. Stephenson. bibliog diag Electrochem Soc J 99:504-12 D '52

Configuration interaction between the odd terms in the iron group. N. Rosenzweig. bibliog Phys R 88:580-6 N 1 '52

Deflection of high-energy electrons in magnetized iron. S. Berko and F. L. Hereford. bibliog diag Phys R 91:1127-30 S 1 '53

Diffusion of silicon in iron. W. Batz and others. bibliog J Metals 4:Trans 1070 O '52

Effect of climate and atmospheric pollution on corrosion. J. C. Hudson and J. F. Stanners. il J Ap Chem 3:86-96 F '53

IRON—*Continued*

Effect of pre-polarization of a platinum anode on the current obtained in the controlled potential oxidation of iron and of arsenic. B. B. Baker and W. M. MacNevin. Am Chem Soc J 75:1476-7 Mr 20 '53

Effect of quench ageing on strain ageing in iron. A. H. Cottrell and G. M. Leak. bibliog Iron & Steel Inst J 172:301-6 N '52; Discussion. 174:344-7 Ag '53

Exchange coupling between three iron ions in two organic molecules. J. Yvon and others. Rs Mod Phys 25:165 Ja '53

Gamma-radiation from interaction of 14-Mev neutrons with iron. V. E. Scherrer and others. diags Phys R 89:1268-70 Mr 15 '53

Hall effects of the cobalt nickel alloys and of Armco iron. S. Foner and E. M. Pugh. bibliog il diag Phys R 91:20-7 Jl 1 '53

Influence of ferrous iron on bacterial corrosion. M. E. Adams and T. W. Farrer. bibliog J Ap Chem 3:117-20 Mr '53

Initial yield in iron. H. W. Paxton. J Ap Phys 24:104-5 Ja '53

Inorganic corrosion inhibitors in acid solution. C. V. King and others. bibliog Electrochem Soc J 99:423-6 O '52

Iron atoms in the service of the electrical engineer. C. Goodeve. bibliog il diags Inst E E Proc 99 pt 1:225-32 N '52; Same cond. Engineer 193:599-600 My 2 '52; Abstracts. Engineering 173:551 My 2 '52; Elec R (Lond) 150:971-2 My 2 '52; Electrician 148:1435-6 My 2 '52

Kinetics of the exchange reactions between iron(II) ion and the fluoride complexes of iron(III). J. Hudis and A. C. Wahl. bibliog Am Chem Soc J 75:4153-8 S 5 '53

Kinetics of the oxidation of iron(II) by bromine. P. R. Carter and N. Davidson. bibliog J Phys Chem 56:877-81 O '52

Mean life of negative μ mesons stopped in iron. A. H. Benade. bibliog diag Phys R 91:971-2 Ag 15 '53

Molecular interaction between *n*-propyl alcohol and iron or iron oxides. E. H. Loeser, W. D. Harkins and S. B. Twiss. bibliog J Phys Chem 57:591-7 Je '53

New demands lead to new directions in engineering materials; irons and steels. T. C. Du Mond. Materials & Methods 37:79-82 Je '53

New gyromagnetic effect in permalloy and iron. S. J. Barnett and L. A. Giambomi. bibliog diags Phys R 88:28-37 O 1 '52

New pickling processes for iron and steel; abstract. E. Brauns. Metal Finishing 51:79 Ag '53

Oxidation of 4-methylcatechol in aqueous solution by ferric ion. H. Burton and H. B. Hopkins. Chem Soc J p2445-7 Je '52

Photochemistry of ferrous ions in aqueous solution. T. Rigg and J. Weiss. bibliog J Chem Phys 20:1194-9 Ag '52

Polarographic study of the influence of temperature on the rate of oxygen consumption by iron, lead, and zinc. P. Delahay and others. bibliog Electrochem Soc J 99:414-16 O '52

Preparation and reactions of carbonitrides on iron. W. K. Hall and others. bibliog Am Chem Soc J 75:1442-7 Mr 20 '53

Products of the hydrogenation of carbon monoxide over an iron catalyst. A. W. Weitkamp and others. bibliog Ind & Eng Chem 45:343-67 F '53

Rate constant of the reaction between hydrogen peroxide and ferrous ions. W. Taylor and J. Weiss. J Chem Phys 21:1419-20 Ag '53

Rate of the reaction between thallium(III) and iron(II) in perchloric acid solution. O. L. Forchheimer and R. P. Epple. bibliog Am Chem Soc J 74:5772-4 N 20 '52

Reaction between ferrous iron and dissolved oxygen in brine. D. C. Bond and G. G. Bernard. bibliog diag Ind & Eng Chem 44:2435-8 O '52

Role of tannates and phosphates in the preservation of ancient buried iron objects. T. W. Farrer, L. Biek and F. Wormwell. il J Ap Chem 3:80-4 F '53

Some magnetization studies of Cr^{+++}, Fe^{+++}, Gd^{+++}, and Cu^{++} at low temperatures and in strong magnetic fields. W. E. Henry. bibliog Rs Mod Phys 25:163-4 Ja '53

Spin paramagnetism of Cr^{+++}, Fe^{+++}, and Gd^{+++} at liquid helium temperatures and in strong magnetic fields. W. E. Henry. bibliog diag Phys R 88:559-62 N 1 '52

Standard electrode potential of the iron-ferrous ion couple at 25°. W. A. Patrick and W. E. Thompson. bibliog diag Am Chem Soc J 75:1184-7 Mr 5 '53

Steel and iron required for modern-day products; tabulation. Steel 132:169 Ja 5 '53

Strain aging of iron single crystals. A. N. Holden and F. W. Kunz. J Ap Phys 23:799 Jl '52

Structural and energy relationships in the formation of iron and aluminum oxides, hydroxides, and silicates. T. Tamura and M. L. Jackson. bibliog Science 117:381-3 Ap 10 '53

Study of some phenomena associated with the adherence of sheet iron ground coats. H. F. Patrick and others. bibliog il Am Cer Soc J 36:305-13 S 1 '53

Surface hardening of steels and irons. J. L. Everhart. il Materials & Methods 38:137-52 O '53 (reprints 25¢)

Surface tension at elevated temperatures; furnace and method for use of the sessile drop method; surface tension of silicon, iron and nickel. W. D. Kingery and M. Humenik, jr. bibliog diags J Phys Chem 57:359-63 Mr '53

Use of the ferric-ferrous system as a cathode potential regulator in the electrolytic separation of silver from baser elements. G. Norwitz. Metallurgia 48:47 Jl '53

See also

Blast furnaces
Cast iron
Corrosion and anti-corrosives
Foundry practice
Iron, Powdered
Iron, Sponge
Iron alloys
Iron founding
Iron metallurgy
Iron ores
Pig iron
Plants—Iron content
Steel
Water purification—Iron removal
Wrought iron

Analysis

Application of absorption spectrum of ferric acetate complex to determination of iron. W. Reiss, J. F. Hazel and W. M. McNabb. diag Anal Chem 24:1646-8 O '52

Complexes involving tervalent iron and orthophosphoric acid; experiments with ion-exchange resins. J. E. Salmon. Chem Soc J p2316-23 Je '52

Determination of calcium, magnesium, and iron in limestone by titration with Versenate. Kuang Lu Cheng, T. Kurtz and R. H. Bray. bibliog Anal Chem 24:1640-1 O '52

Determination of combined carbon in graphitic iron. bibliog diags Iron & Steel Inst J 172:79-86 S '52

Determination of copper in iron and steel. Iron & Steel Inst J 174:335-8 Ag '53

Determination of iron in used lubricating oils; spectrochemical analysis by the buffered direct current arc. J. E. Barney, 2d and W. A. Kimball. bibliog il Anal Chem 24:1548-50 O '52

Determination of oxygen in iron in the presence of sulphur by the vacuum-fusion method. H. L. Hamner and R. M. Fowler. il diags J Metals 4:Trans 1313-15 D '52

Determination of total iron in soils by disodium dihydrogen ethylenediamine tetraacetate titration. Kuang Lu Cheng, R. H. Bray and T. Kurtz. bibliog Anal Chem 25:347-8 F '53

Determination of trace metals in crudes and other petroleum oils; analysis for iron, nickel, vanadium, and copper. O. I. Milner and others. bibliog diags Anal Chem 24:1728-32 N '52

Iron-thioglycolate complexes. D. L. Leussing and I. M. Kolthoff. bibliog Am Chem Soc J 75:3904-11 Ag 20 '53

New colorimetric reagent specific for copper; determination of copper in iron; 2,9-dimethyl-4,7-diphenyl-1,10-phenanthroline. G. F. Smith and D. H. Wilkins. bibliog Anal Chem 25:510-11 Mr '53

Reduction by aluminum powder in aqueous solution; volumetric determination of iron. E. R. Riegel and R. D. Schwartz. bibliog Anal Chem 24:1803-6 N '52

IRON—Analysis—*Continued*

Review of analytical chemistry; ferrous metallurgy. H. F. Beeghly. Anal Chem 25: 30-6 bibliog(161 ref, p35-6) Ja '53

Separation of radioactive iron from biological materials. R. E. Peterson. bibliog Anal Chem 24:1850-2 N '52

Simplified field test for iron in water. M. Lieber. Water & Sewage Works 100:229 Je '53

Spectrophotometric determination of iron as ferric sulfate complex; ultraviolet study. R. Bastian, R. Weberling and F. Palilla. bibliog Anal Chem 25:284-8 F '53

Spectrophotometric titrations with ethylenediaminetetraacetic acid; determination of iron, copper, and nickel. P. B. Sweetser and C. E. Bricker. bibliog diags Anal Chem 25:253-5 F '53

Titanic chloride as an intermediate in coulometric analyses. P. Arthur and J. F. Donahue. Anal Chem 24:1612-14 O '52

Bibliography

Review of iron and steel literature for 1952. V. S. Polansky. Blast F & Steel Pl 41:651-5, 782-4+ Je-Jl '53 [reprinted by Carnegie library of Pittsburgh]

Brittleness

Intergranular brittleness in iron-oxygen alloys. W. P. Rees and B. E. Hopkins. 2pls Iron & Steel Inst J 172:403-9 D '52

Temper-brittleness in high-purity iron-base alloys. A. Preece and R. D. Carter. bibliog 2pls Iron & Steel Inst J 173:387-98 Ap '53; Discussion. 174:358-72 Ag '53

Deoxidation

Studies in the deoxidation of iron; deoxidation by silicon. E. L. Evans and H. A. Sloman. bibliog pl Iron & Steel Inst J 172: 296-300 N '52

Studies in the deoxidation of iron; deoxidation by titanium. E. L. Evans and H. A. Sloman. bibliog pl Iron & Steel Inst J 174:318-24 Ag '53

Hydrogen content

Diffusion of hydrogen in iron and iron alloys at elevated temperatures. P. L. Chang and W. D. G. Bennett. bibliog diags Iron & Steel Inst J 170:205-13 Mr '52; Abstract. Metal Prog 62:180+ D '52; Discussion. Iron & Steel Inst J 172:46-51 S '52

Study of fishscaling produced by induction of hydrogen into enameled iron. E. E. Bryant and others. bibliog il Am Cer Soc Bul 32:248-52 Jl 15 '53

Hydrogen effect

Attack of metals by free radicals and atoms. F. W. Thompson and A. R. Ubbelohde. bibliog J Ap Chem 3:27-36 Ja '53

Inclusions

Microscopical examination of samples of iron containing aluminous inclusions. R. E. Lismer and F. B. Pickering. 2pls Iron & Steel Inst J 172:381-3 D '52

Isotopes

Disintegration scheme of Fe^{59}. F. R. Metzger. bibliog diags Phys R 88:1360-7 D 15 '52

Neutron capture γ-rays from titanium, chromium, iron, nickel, and zinc. B. B. Kinsey and G. A. Bartholomew. bibliog diags Phys R 89:375-85 Ja 15 '53

Production of Fe^{59} by the $Co^{59}(n,p)$ reaction in the Brookhaven reactor. A. C. Wahl. J Chem Phys 21:182 Ja '53

Upper limit for atomic orbital electron ejection accompanying *K*-capture in Fe^{55}. F. T. Porter and H. P. Hotz. bibliog Phys R 89: 938-40 Mr 1 '53

Metallography

Cottrell-Bilby theory of yielding of iron. T. Yokobori. Phys R 88:1423 D 15 '52

Deformation twinning in Charpy V-notch specimens of ingot iron. G. W. Geil and N. L. Carwile. bibliog il Welding J 32: sup273-82 Je '53

Determination of the texture of rolled sheet from X-ray diffraction photographs. A. E. De Barr and B. Roberts. il diags Iron & Steel Inst J 164:285-7 Mr '50; Abstract. Metal Prog 63:210-11 Ap '53

Effect of tensile strain at low temperatures on deformation twinning in ingot iron. G. W. Geil and N. L. Carwile. bibliog il J Metals 5:Trans 213-17 sec 2 F '53

Equilibrium structures in Fe-Cr-Mo alloys; abstract. J. G. McMullin and others. Metal Prog 64:258 O '53

Fracture of alpha iron. C. F. Tipper and E. O. Hall. bibliog 2pls diags Iron & Steel Inst J 175:9-15 S '53

Gamma loop studies in the iron-vanadium and the iron-vanadium-titanium systems; abstract. W. R. Lucas and W. P. Fishel. Metal Prog 64:208+ O '53

Iron atoms in the service of the electrical engineer. C. Goodeve. bibliog il diags Inst E E Proc 99 pt 1:225-32 N '52; Same cond. Engineer 193:599-600 My 2 '52; Abstracts. Engineering 173:551 My 2 '52; Elec R (Lond) 150:971-2 My 2 '52; Electrician 148: 1435-6 My 2 '52

Mechanism of second-stage malleablization. F. Brown. diags Foundry 81:108-9+ O '53

Microstructural changes on tempering iron-carbon alloys; abstract. B. S. Lement and others. Metal Prog 64:254+ O '53

Microstructures in iron ore pellets. S. R. B. Cooke and T. E. Ban. il diags Min Eng 4: Trans 1053-8 N '52

Pearlitic malleable castings. H. E. Steinhoff and L. Jenkins. il Foundry 81:84-7 Jl '53

Quench ageing of iron. A. L. Tsou and others. bibliog 2pls Iron & Steel Inst J 172:163-71 O '52; Excerpts. Metal Prog 63:198+ Je '53; Discussion. Iron & Steel Inst J 174:344-7 Ag '53

Sigma formation and its effect on the impact properties of iron-nickel-chromium alloys; abstract. A. M. Talbot and D. E. Furman. Metal Prog 62:196+ N '52

Tensile and impact properties of high-purity iron-carbon and iron-carbon-manganese alloys of low carbon content. N. P. Allen and others. bibliog il 6pls Iron & Steel Inst J 174:108-20 Je '53

Thermodynamics of metallurgical carbides and of carbon in iron. F. D. Richardson. Iron & Steel Inst J 175:33-51 bibliog(94 ref, p50-1) S '53

Torsion texture of 70-30 brass and Armco iron. W. A. Backofen and B. B. Hundy. J Metals 5:Trans 61-2 Ja '53

See also

Cast iron—Graphitization

Nitrogen content

Effect of alloying elements on the behavior of nitrogen in alpha iron. L. J. Dijkstra and R. J. Sladek. bibliog diag J Metals 5:Trans 69-72 Ja '53

Thermodynamics of metal nitrides and of nitrogen in iron and steel. J. Pearson and U. J. C. Ende. bibliog Iron & Steel Inst J 175:52-8 S '53

Oxygen content

Solubility of oxygen in gamma iron; abstract. J. A. Kitchener and others. Metal Prog 64: 176+ S '53

Phosphorus content

Machinability of high-phosphorus irons improved by ladle additions. E. A. Loria. bibliog il Am Mach 97:92-5 Ag 31 '53

Protection

Chromium diffusion for corrosion and abrasion resistance. F. M. Burt. il Metal Finishing 51:72-5+ Ap '53

Scaling

Scaling of iron. W. J. Wrazej. il J Metals 5: Trans 265-6 sec 2 F '53; Discussion. 5: Trans 1570-3 sec 2 N '53

Sulfur content

Chemical behavior of sulphur in iron and steelmaking. J. Chipman. bibliog plan diags Metal Prog 62:97-107 D '52

Determination of oxygen in iron in the presence of sulphur by the vacuum-fusion method. H. L. Hamner and R. M. Fowler. il diags J Metals 4:Trans 1313-15 D '52

IRON—*Continued*

Temperature effect

High temperature oxidation of some iron-chromium alloys. D. Caplan and M. Cohen. bibliog il diag J Metals 4:Trans 1057-65 O '52

Testing

Determination of strains between enamel and iron by means of split rings. J. D. Walton, jr. and B. J. Sweo. bibliog il diags Am Cer Soc J 36:335-41 O 1 '53

IRON, Galvanized

Treatment of galvanized iron with vinyl resin coating. Rubber Age 72:777 Mr '53

IRON, Molten

Aluminum-oxygen equilibrium in liquid iron. N. A. Gokcen and J. Chipman. bibliog J Metals 5:Trans 173-8 F '53

Physically hot iron preferred for open hearths. D. M. Morrison. bibliog il J Metals 5:522-4 Ap '53

Silicon content of blast furnace iron lowered by oxygen injection in ladle. P. S. Leroy. bibliog diags J Metals 5:396-400 Mr '53

What the fluidity test reveals about gray cast iron. L. F. Porter and P. C. Rosenthal. il diags Foundry 81:94-9+ Ag '53

IRON, Powdered

Ferrite in austenitic steels estimated accurately; Aminco-Brenner Magne-Gage calibrated by means of iron powder-bakelite compacts. T. V. Simpkinson. il Iron Age 170:166-9 D 11 '52

Five powder parts for power steering. C. Emerson. il diags Am Mach 97:130-2 S 28 '53

High strength precision iron powder parts. W. J. Doelker and H. T. Harrison. il Materials & Methods 38:67-71 Jl '53

Iron powder as base material for weldments; abstract. H. Hauttmann. Metal Prog 62:202 N '52

Iron powder, average monthly prices, imports, shipments; tabulations. Iron Age 171:454 Ja 1 '53

Iron powder magnets. il Engineer 195:740-1 My 22 '53; Engineering 175:682-4 My 29 '53; Metal Prog 64:190+ S '53

Iron powder; trace steady climb. R. M. Lorz. Iron Age 171:45 Ap 30 '53

Magnets of pressed powdered iron; abstract. J. Lamberton. Metal Prog 62:183 N '52

Micropowder magnets. il Elec J 150:1645-6 My 8 '53

No cracks at high stress; development of an iron powder metal. il Steel 132:112+ Mr 30 '53

Powdered iron; Republic Steel plans big-scale output. Bsns W p31 Jl 4 '53

Powdered magnetic cores. W. J. Polydoroff. bibliog il Tele-Tech 12:69-71+ F '53

Production of powdered iron; Republic steel corp. Mill & Factory 53:320 O '53

Sintering of ultrafine ferromagnetic powders. N. I. Ananthanarayanan and J. F. Libsch. bibliog J Metals 5:Trans 79-80 Ja '53

Sulphur-impregnated sintered iron. G. Maassen. Engineer 195:317 F 27 '53

IRON, Sponge

Sponge iron. P. E. Cavanagh. il Metal Prog 63:67-9 Mr '53

Sponge iron at Anaconda. F. F. Frick. diag Min Eng 5:Trans 83-4 Ja '53; Same cond. J Metals 5:395 Mr '53

IRON acetate

Application of absorption spectrum of ferric acetate complex to determination of iron. W. Reiss, J. F. Hazel and W. M. McNabb. diag Anal Chem 24:1646-8 O '52

IRON alloys

Chemical engineering materials of construction; stainless steels and other ferrous alloys. W. A. Luce. il Ind & Eng Chem 44:2346-59 bibliog(287 ref, p2357-9) O '52

Diffusion of hydrogen in iron and iron alloys at elevated temperatures. P. L. Chang and W. D. G. Bennett. bibliog diags Iron & Steel Inst J 170:205-13 Mr '52; Abstract. Metal Prog 62:180+ D '52; Discussion. Iron & Steel Inst J 172:46-51 S '52

Effect of alloying elements on the behavior of nitrogen in alpha iron. L. J. Dijkstra and R. J. Sladek. bibliog diag J Metals 5:Trans 69-72 Ja '53

Influence of chemical composition on rupture test properties at 1500°F. of forged chromium-cobalt-nickel-iron base alloys; abstract. J. W. Freeman and others. Metal Prog 63:164+ Ap '53

Intergranular brittleness in iron-oxygen alloys. W. P. Rees and B. E. Hopkins. 2pls Iron & Steel Inst J 172:403-9 D '52

Physical and magnetic structure of the Mishima alloys. E. A. Nesbitt and R. D. Heidenreich. bibliog il Rs Mod Phys 25:322-3 Ja '53

Temper-brittleness in high-purity iron-base alloys. A. Preece and R. D. Carter. bibliog 2pls Iron & Steel Inst J 173:387-98 Ap '53; Discussion. 174:358-72 Ag '53

See also

Meehanite

Steel

Steel alloys

Analysis

Intensity calculation for determining weight percentage in a binary alloy by X-ray fluorescent analysis. P. K. Koh and others. J Ap Phys 23:698 Je '52

Metallurgical applications of X-ray fluorescent analysis. P. K. Koh and B. Caugherty. bibliog J Ap Phys 23:427-33 Ap '52

Photometric determination of silicon in ferrous, ferromagnetic, nickel, and copper alloys; a molybdenum blue method. C. L. Luke. bibliog Anal Chem 25:148-51 Ja '53

Carbon alloys

Effect of various elements on hot-working characteristics and physical properties of Fe-C alloys. C. T. Anderson and others. il J Metals 5:Trans 525-9 Ap '53

Microstructural changes on tempering iron-carbon alloys; abstract. B. S. Lement and others. Metal Prog 64:254+ O '53

Tensile and impact properties of high-purity iron-carbon and iron-carbon-manganese alloys of low carbon content. N. P. Allen and others. bibliog il 6pls Iron & Steel Inst J 174:108-20 Je '53

Chromium alloys

Anodic polarization of passive and non-passive chromium-iron alloys. H. H. Uhlig and G. E. Woodside. bibliog diag J Phys Chem 57:280-3 Mr '53

475° C. hardening characteristics of some high-alloy steels and chromium irons. B. Cina and J. D. Lavender. bibliog 4pls Iron & Steel Inst J 174:97-107 Je '53

Hard-facing alloys of the chromium carbide type. H. S. Avery and H. J. Chapin. bibliog il Welding J 31:917-30 O '52; Abstract. Metal Prog 63:136+ Mr '53

High temperature oxidation of some iron-chromium alloys. D. Caplan and M. Cohen. bibliog il diag J Metals 4:Trans 1057-65 O '52

Chromium molybdenum alloys

Equilibrium structures in Fe-Cr-Mo alloys; abstract. J. G. McMullin and others. Metal Prog 64:258 O '53

Chromium nickel alloys

Resistance of cast Fe-Cr-Ni alloys to corrosion in oxidizing and reducing flue-gas atmospheres. J. H. Jackson and others. bibliog flow chart il A S M E Trans 75:1021-35 Ag '53

Cobalt alloys

Liquidus⇄solidus relations in the system iron-cobalt in the range 0-30 atomic per cent cobalt. G. B. Harris and W. Hume-Rothery. bibliog diag Iron & Steel Inst J 174:212-18 Jl '53

Manganese alloys

Tensile and impact properties of high-purity iron-carbon and iron-carbon-manganese alloys of low carbon content. N. P. Allen and others. bibliog il 6pls Iron & Steel Inst J 174:108-20 Je '53

Nickel alloys

Chart shows corrosion of copper bearing Ni-resist by H_2SO_4 as function of temperature and concentration. M. G. Fontana. Ind & Eng Chem 45:sup91A-2A+ Mr '53

IRON alloys—Nickel alloys—*Continued*

Experimental study of Barkhausen noise in nickel-iron alloys. D. I. Gordon. diag Rs Mod Phys 25:56-7 Ja '53

Magnetic crystal anisotropy and magnetostriction of iron-nickel alloys. R. M. Bozorth and J. G. Walker. bibliog Phys R 89:624-8 F 1 '53

See also
Permalloy

Nickel chromium alloys

Constitution of iron-nickel-chromium alloys at 550-800°C. A. J. Cook and B. R. Brown. bibliog 3pls Iron & Steel Inst J 171:345-53 Ag '52; Abstract. Metal Prog 63:190+ Je '53

Sigma formation and its effect on the impact properties of iron-nickel-chromium alloys; abstract. A. M. Talbot and D. E. Furman. Metal Prog 62:196+ N '52

Nickel manganese alloys

Rate of formation of isothermal martensite in Fe-Ni-Mn alloy. R. E. Cech and J. H. Hollomon. bibliog il J Metals 5:Trans 685-9 sec 2 My '53

Silicon alloys

Complicated domain patterns on iron-silicon single crystals. C. F. Ying and others. il J Ap Phys 23:1339-45 D '52

Domain pattern in silicon-iron under stress. L. J. Dijkstra and U. M. Martius. il diags Rs Mod Phys 25:146-50 Ja '53

Heat effects in the magnetization of silicon iron. L. F. Bates and G. Marshall. bibliog Rs Mod Phys 25:17-33 Ja '53

Identification of certain iron-silicon carbides. W. S. Owen and B. G. Street. bibliog 2pls Iron & Steel Inst J 172:15-18 S '52; Discussion. W. I. Pumphrey. il 174:31-2 My '53

Permeability of silicon-iron at very low flux densities; abstract. E. Both. Elec Eng 72:797 S '53

Preparation in sheet form of large single crystals of silicon-iron of predetermined orientation for magnetic purposes. R. G. Martindale and D. A. Langford. bibliog il diags Inst E E Proc 100 pt 2:417-26 Ag '53

Testing

Corrosion of low-alloy irons and steels in soils. I. A. Denison and M. Romanoff. bibliog il J Res Nat Bur Stand 49:315-24 N '52

Effect of various treatments on the fatigue strength of notched S-816 and Timken 16-25-6 alloys at elevated temperatures. W. E. Jones, jr. and G. B. Wilkes, jr. il diags Am Soc T M Proc 50:744-60; Discussion. 761-2 '50

How low-alloy irons and steels resist corrosion in various soils. il Gas Age 112:47+ S 10 '53

Titanium alloys

Heat treatment of titanium-rich titanium-iron alloys; abstract. H. W. Worner. Metal Prog 64:128+ S '53

Vanadium alloys

Gamma loop studies in the iron-vanadium and the iron-vanadium-titanium systems; abstract. W. R. Lucas and W. P. Fishel. Metal Prog 64:208+ O '53

IRON ammonium sulfates

Oxidation of aqueous ferrous ammonium sulfate solutions by betatron radiation. R. W. Hummel and J. W. T. Spinks. bibliog J Chem Phys 20:1056 Je '52

IRON and steel corporation of Great Britain

Annual report, 1st, 1951. Engineer 194:257-8 Ag 22 '52

Iron and steel corporation's report. Engineer 195:871 Je 19 '53

IRON and steel engineers, Association of. See Association of iron and steel engineers

IRON and steel institute

Annual general meeting, 84th, London, April 30-May 1; with abstracts of papers. Engineer 195:665, 692-4, 727-30, 757-9 My 8-29 '53; Engineering 175:597, 617-18, 650-1, 692-4, 734-5 My 8-Je 5 '53

Autumn meeting, London, Nov. 26-27. Engineer 194:765-7, 785-7, 823-5 D 5-19 '52; Engineering 174:721-2, 765-6, 786, 818 D 5-26 '52

Report of Council for 1952. Iron & Steel Inst J 173:329-42 Ap '53

Summer meeting, Swansea, Oct. 7-9. Engineering 174:510 O 17 '52; Iron & Steel Inst J 173:129-30 F '53

IRON and steel research association, British. See British iron and steel research association

IRON bacteria

Aerobic and anaerobic iron corrosion in water mains. C. A. H. V. Kühr and L. S. Van der Vlugt. bibliog(28 titles) il Am Water Works Assn J 45:33-46 Ja '53

Bacteria help make iron ore. Blast F & Steel Pl 41:sup56 Ap '53

IRON carbides

Hexagonal iron carbide as an intermediate in the carbiding of iron Fischer-Tropsch catalysts. M. Manes and others. bibliog Am Chem Soc J 74:6207-9 D 20 '52

Some thermal reactions of the higher iron carbides. E. M. Cohn and L. J. E. Hofer. bibliog J Chem Phys 21:354-9 F '53

Study of the formation of iron percarbide. J. J. Mitchell. bibliog diags J Chem Phys 21:1153-9 Jl '53

IRON carbonyls

Powdered magnetic cores. W. J. Polydoroff. bibliog il Tele-Tech 12:69-71+ F '53

IRON chlorides

Continuous recovery process for acid and metal from pickling solutions. R. H. McCormack. diag Metal Prog 64:134+ O '53

Effects of ferric chloride and bile on plasma cholesterol and atherosclerosis in the cholesterol-fed bird. M. D. Siperstein and others. Science 117:386-9 Ap 10 '53

Separation of the anhydrous chlorides of iron and aluminium by formation of graphite complexes. R. C. Croft. J Ap Chem 2:557-62 O '52

Spectrophotometric study of the iron(III) chloro-complexes. G. A. Gamlen and D. O. Jordan. Chem Soc J p 1435-43 My '53

Ternary systems ferrous chloride-hydrogen chloride-water, ferric chloride-ferrous chloride-water. F. A. Schimmel. bibliog Am Chem Soc J 74:4689-91 S 20 '52

IRON compounds

Complexes involving tervalent iron and orthophosphoric acid; ion-exchange studies of solutions containing phosphate and chloride. J. E. Salmon. Chem Soc J p2644-9 S '53

Electronic structure of ferrocene. H. H. Jaffé. J Chem Phys 21:156-7 Ja '53

Exchange reaction between the two oxidation states of iron in acid solution. J. Silverman and R. W. Dodson. bibliog J Phys Chem 56:846-52 O '52

Heat of formation of ferrocene. F. A. Cotton and G. Wilkinson. bibliog Am Chem Soc J 74:5764-6 N 20 '52

Polarographic chemistry of ferrocene, ruthenocene and the metal hydrocarbon ions. J. A. Page and G. Wilkinson. Am Chem Soc J 74:6149-50 D 5 '52

Preparation of the optical forms of tris-2,2′-dipyridyl iron(III) and tris-1,10-phenanthroline osmium(III) perchlorates. F. P. Dwyer and E. C. Gyarfas. bibliog Am Chem Soc J 74:4699-700 S 20 '52

Reaction between αα-dimethylbenzyl hydroperoxide and ferrous salts. W. S. Wise and G. H. Twigg. Chem Soc J p2172-7 Jl '53

Reaction between organic hydroperoxides and iodide in the presence of iron salts. W. S. Wise and G. H. Twigg. Chem Soc J p2168-71 Jl '53

Resolution of a bis-tridentate iron(II) complex. F. P. Dwyer and others. Am Chem Soc J 75:3834-5 Ag 5 '53

Some properties of iron biscyclopentadienyl. L. Kaplan, W. L. Kester and J. L. Katz. Am Chem Soc J 74:5531-2 N 5 '52

Spectrophotometric studies of empirical formulas of complex ions. A. E. Harvey, jr. and D. L. Manning. bibliog Am Chem Soc J 74:4744-6 O 5 '52

IRON compounds—*Continued*

Studies of the Fischer-Tropsch synthesis; structural changes of a reduced iron catalyst on reoxidation and on formation of interstitial phases. W. K. Hall, W. H. Tarn and R. B. Anderson. bibliog J Phys Chem 56:688-91 Je '52

Vibrational spectra and structure of ferrocene and ruthenocene. E. R. Lippincott and R. D. Nelson. bibliog J Chem Phys 21: 1307-8 Jl '53

X-ray *K* absorption edges of covalently bonded Cr, Mn, Fe, and Ni. G. Mitchell and W. W. Beeman. bibliog J Chem Phys 20:1298-301 Ag '52

IRON fireman manufacturing company

Security I like best. M. Globus. Comm & Fin Chr 178:102+ Jl 9 '53

IRON founding

Calcium carbide injection is new tool in gray iron metallurgy. H. E. Henderson and P. M. Hulme. il diags Foundry 81:86-91+ Ap '53

Chemical and physical changes in magnesium-treated irons. M. Okamoto and R. Yoda. il Foundry 80:126-7 O '52

Coke quality and carbon pickup. C. R. Austin. il Foundry 81:116-21+ O '53

Ductile iron; watch copper buildup. J. C. Neemes. Iron Age 171:162-4 F 5 '53

Effect of oxidation rates on graphitization of cupola melted malleable. M. Tilley. il Foundry 80:108-9+ N '52

Ford's Cleveland foundry. il plans diags Foundry 81:139-89 Mr '53

Gray iron; American foundrymen's society annual meeting, Chicago; abstracts of papers. Foundry 81:140+ Jl '53

Gray iron castings. C. O. Burgess. il diag Foundry 81:118-23 My '53

Gray iron shop course; American foundrymen's society annual meeting, Chicago; abstracts of papers. Foundry 81:170 Je '53

Hot-metal receivers for iron foundries. il diag Engineering 176:27 Jl 3 '53

Improvements in iron-founding; Joint iron council annual convention, London, Oct. 9. Engineering 174:546 O 24 '52; Foundry 81: 168 Ja '53

Influence of ramming and of sintering on the penetration of molten metals into compacted silica-sand mixes. T. P. Hoar and others. bibliog 2pls diags Iron & Steel Inst J 175:19-29 S '53

Internal porosity and inverse segregation in white cast iron. W. B. Sobers. bibliog il diags Foundry 81:128-31+ Je '53

Malleable founders' society market development conference, 4th, Chicago, April 9-10. Foundry 81:178+ Je '53

Malleable iron; American foundrymen's society annual meeting, Chicago; abstracts of papers. Foundry 81:164+ Je '53

Modern facilities incorporated in new Alabama pipe foundry. W. G. Gude. il Foundry 80:110-13+ O '52

New pressure pipe foundry serves West Coast area. il map Foundry 81:98-101 Ja '53

New roll foundry completed in Great Britain. V. Delport. il plan Foundry 81:108-11+ F '53

Outstanding opportunities for the foundry industry. J. H. Smith. il Foundry 81:100-7 Ag '53

Some tools for quality control in the mechanized jobbing foundry. T. W. Curry. il Foundry 81:110-13+ O '53

Split chill is easy to remove from cold gray iron wheel. F. J. McCulloch. il Foundry 81:170 Jl '53

Swarf injector for cupolas; abstract. A. R. Parkes. Metal Prog 62:180+ N '52

What the fluidity test reveals about gray cast iron. L. F. Porter and P. C. Rosenthal. il diags Foundry 81:94-9+ Ag '53

See also

Cast iron
Cupola furnaces
Gray iron founders' society
Malleable founders' society
Molds (for casting)
Pig iron

IRON halides

Heats of solution and formation of some iron halides. J. C. M. Li and N. W. Gregory. bibliog Am Chem Soc J 74:4670-2 S 20 '52

IRON hydroxides

Oxidation of ferrous hydroxide. J. E. O. Mayne. Chem Soc J p 129-32 Ja '53

Solubility product of ferrous hydroxide and the ionization of the aquo-ferrous ion. D. L. Leussing and I. M. Kolthoff. bibliog Am Chem Soc J 75:2476-9 My 20 '53

IRON in the body

Visible intra-epithelial iron in the mammary glands of various species. H. E. Rawlinson and G. B. Pierce. bibliog il Science 117: 33-4 Ja 9 '53

See also

Viruses—Iron content

IRON industry and trade

Developments in the iron and steel industry during 1952. I. E. Madsen. il diags Iron & Steel Eng 30:123-61 Ja '53

See also

Iron founding
Iron mines and mining
Iron ores
Iron works
Steel industry and trade

History

Iron and steel production, 1851-1951, and the coke industry. W. Mathesius. Blast F & Steel Pl 40:1305-10+ N '52

Great Britain

British iron and steel industry in 1952. il Engineer 195:29-31, pl 8, 65-8 Ja 2-9 '53

Iron and steel bill. Engineer 194:649 N 14 '52

Iron and steel industry; government's proposals for the reorganization of the industry under free enterprise. Engineer 194: 158-9 Ag 1 '52

Ironfounders and the steel bill. Economist 165:642 N 29 '52

See also

Iron and steel corporation of Great Britain

India

Expansion of iron and steel industry. Engineer 194:701 N 21 '52

Some raw material problems of the Indian iron and steel industry. P. Kutar. diag Blast F & Steel Pl 41:755-60 Jl '53

United States

American iron and steelmaking practices compared with British; productivity report. Metal Prog 63:170+ Mr; 138+ Ap '53

Pig iron capacity is growing. Bsns W p72-3 My 23 '53

IRON metallurgy

After two centuries of mining Cornwall keeps its methods up-to-date. S. J. Shale. flow sheet. il plans Min Eng 5:670-5 Jl '53

Beneficiation of east Texas iron ores, basis of Lone Star Steel operations. W. R. Bond. flow sheets J Metals 5:515-19 Ap '53

British iron and steel research association North-east coast laboratories. Metallurgia 48:67-9 Ag '53

Calcium carbide injection is new tool in gray iron metallurgy. H. E. Henderson and P. M. Hulme. il diags Foundry 81:86-91+ Ap '53

Chemical constitution of sinters. R. Wild. bibliog pl Iron & Steel Inst J 174:131-5 Je '53

Cleveland-Cliffs starts second jasper program at Republic. il Blast F & Steel Pl 41:331 Mr '53

Development of active mixer practice at Appleby-Frodingham. A. Jackson. diags Iron & Steel Inst J 172:184-202 O '52

Effect of heat treatment and certain additives on the strength of fired magnetite pellets. S. R. B. Cooke and W. F. Stowasser, jr. il Min Eng 4:Trans 1223-30 D '52

Heat hardening of pellets made from taconite concentrates. G. V. Woody. diags Blast F & Steel Pl 41:314-17 Mr '53

How new leach-float plant handles Greater Butte's ore. J. B. Huttl. flow sheets il Eng & Min J 154:90-3 Je '53

Humboldt iron will be recovered by flotation. D. K. Campbell and L. J. Erck. flow sheet il plans diags Eng & Min J 154:128-31 F '53

IRON metallurgy—*Continued*

Important tasks of technical progress in ferrous metallurgy. I. P. Bardin. Metal Prog 64:125-6+ Ag '53

Iron; direct reduction boosts purity. J. B. Delaney. Iron Age 170:43 N 27 '52

Iron from taconites. J. C. Pierce. il map Comp Air Mag 57:300-3 N '52

Iron ore recovered from blast furnace gas. W. A. Walton. il Iron & Steel Eng 30:121-2 Ap '53

Lone star steel co. operations. W. R. Bond. flow sheet il diag Blast F & Steel Pl 41: 508-13 My '53

Magnetic roasting of lean ores. F. D. DeVaney. diags Min Eng 4:Trans 1219-23 D '52; Discussion. W. O. Philbrook. 5:Trans 1119-21 N '53

More iron from Minnesota's lean ores. A. W. Mathews. il Eng & Min J 154:88-90 O '53

New devices, new flowsheets liven iron ore processing. L. J. Bechaud, jr. Eng & Min J 154:124-7 F '53

Permeability of sinter beds. E. W. Voice and others. diags Iron & Steel Inst J 174:136-9 Je '53

Pilot cyclone plant paves way for two full-scale operations; Cleveland-Cliffs iron co. W. R. Van Slyke and R. A. Derby. flow sheet il Eng & Min J 154:88-94 Ap '53

Progress with heat-hardening of taconite pellets on traveling grate. Eng & Min J 154:184-5 F '53

Recent developments and trends in iron and steel technology. R. Durrer. Engineer 194: 294-5 Ag 29 '52; Excerpts. il Steel 131:172+ S 22 '52

Refining iron by pure oxygen; report of paper by H. Trenkler, prepared by J. R. Miller. Iron & Steel Eng 30:116 Ag '53

Reserve mining company building large plant to process taconite. C. Longenecker. il Blast F & Steel Pl 41:189-91 F '53

Review of analytical chemistry; ferrous metallurgy. H. F. Beeghly. Anal Chem 25: 30-6 bibliog(161 ref, p35-6) Ja '53

Review of European operating and technical practices. W. C. Bell. diag Iron & Steel Eng 30:97-104 Ag '53

Sampling and testing of sinter. R. L. Stephenson and D. J. Carney. il Min Eng 5:Trans 309-11 Mr '53; Discussion. 5:Trans 1124-5 N '53

Seventy-one years of blast furnacing at South works. H. E. Kaufman. bibliog il diags Blast F & Steel Pl 40:1457-64 D '52

Simple formula for evaluating iron ores. F. H. Crockard. Blast F & Steel Pl 41:295-301 Mr '53

Soda sinter process for treating low-grade titaniferous ores. R. T. MacMillan and others. 10pls U S Bur Mines Rep of Invest 4912:1-62 bibliog(p61-2) '52

Softening of iron ores at high temperatures. A. Grieve. diags Iron & Steel Inst J 175: 1-4 S '53

Sponge iron. P. E. Cavanagh. il Metal Prog 63:67-9 Mr '53

Taconite: Mesabi's answer to the iron ore shortage. flow charts il map Iron Age 171: 127-34 Mr 12 '53

Testing of prospective iron ores. H. U. Ross. il Can Min J 73:47-51 D '52

Treatment of titaniferous magnetite ore from Iron mountain, Wyo. A. E. Back and others. bibliog 5pls U S Bur Mines Rep of Invest 4902:1-15 '52

See also

Blast furnaces
Cast iron
Foundry practice
Iron, Sponge
Iron alloys
Iron founding
Iron works
Pig iron
Sintering
Slag
Steel metallurgy

Electrometallurgy

Electrolytic process with promise; pure malleable iron from waste pyrrhotite; with cost data. E. Konrad. il diag Chem Eng 60:189-92 Ap '53

History

Early use of mineral coal in the chafery of the English forge. H. R. Schubert. Iron & Steel Inst J 172:313-14 N '52

18th century bloomery at Garstang, Lancs. H. R. Schubert. diags Iron & Steel Inst J 173:30 Ja '53

King's ironworks in the Forest of Dean, 1612-1674. H. R. Schubert. bibliog il diags Iron & Steel Inst J 173:153-62 F '53

IRON miners

Iron mining wages, employment, 1947-1952; tabulation. Iron Age 171:430 Ja 1 '53

IRON mines and mining

Exploration and development of a new ore mine. R. P. Bremner. Iron & Steel Eng 30:80-5 My '53

Highlights in domestic iron ore program. Eng & Min J 154:182+ Jl '53

Iron ore production, 1952. F. Brown, jr. il Min Cong J 39:44-6 F '53

Steel demand sets goal; ore supply must meet it; with tabulation. il diag Eng & Min J 154:100-9+ Jl '53

Alabama

Roof bolting in the red ore mines of the Birmingham district. L. S. Chabot, jr. il Min Cong J 38:33-6 N '52

Brazil

Downhill belt conveyor system lowers iron ore 400 ft. from open-cut workings. R. U. Jackson. diag Eng & Min J 154:106-7 Ja '53

California

Eagle Mountain helps Kaiser meet growing western steel needs. K. B. Powell. il diags Min Eng 5:478-83 My '53

Kaiser stepping up production at Eagle Mountain iron mine. G. W. Huseman. il map diag Eng & Min J 154:80-6 My '53

Goa (Portuguese India)

Goan mining companies solving problem of ore transportation. For Comm W 49:23 My 18 '53

Great Britain

World's largest walking dragline. J. Grinrod. il diag Can Min J 74:58-60 Ja '53

Labrador

Development of Quebec-Labrador iron ore. W. H. Durrell. Iron & Steel Eng 29:87-9 N '52

Iron ore; Canadian Mesabi on last lap. T. Campbell. map Iron Age 171:35-7 Ja 8 '53

Iron ore project in Canada. il map diags Engineer 195:399-401 Mr 13 '53

Laying steel to bring out Labrador's ore. il maps Bsns W p82-6+ Jl 18 '53

Liberia

Three-way payoff in Liberia. H. Solow. il Fortune 47:130-3+ Ap '53

Mexico

Mexico places new controls on development of iron ore. For Comm W 48:10 O 20 '52

Michigan

Cleveland-Cliffs conveyor system uses twisted belt. D. K. Campbell and others. Min Eng 5:676-8 Jl '53

Humboldt iron will be recovered by flotation. D. K. Campbell and L. J. Erck. flow sheet il plans diags Eng & Min J 154:128-31 F '53

New mine for Michigan's Gogebic range, the Peterson. il map Eng & Min J 154:76-9 S '53

Ore; expands Jasper development. R. M. Lorz. Iron Age 171:83 F 12 '53

Minnesota

Committee studies iron ore taxation in Minnesota. Eng & Min J 154:127-8 Je '53

Five steel companies push taconite plans. il map Eng N 149:40-2 D 11; 39-40+ D 18 '52; 150:28-9 Ja 1 '53

Iron from taconites. J. C. Pierce. il map Comp Air Mag 57:300-3 N '52

Power for processing taconite. il Eng & Min J 153:103+ D '52

Reserve mining co. starts taconite plant at Babbitt. il Eng & Min J 153:72-9 N '52

Semi-trailer truck has place in modern open-pit haulage; Jones & Laughlin steel corp. J. F. Linden. il Eng & Min J 154:72-6 Je '53

IRON mines and mining—Minnesota—*Cont.*

Taconite brings the modern mining town. il maps Eng N 149:34-6+ O 23 '52

Taconite; Mesabi's answer to the iron ore shortage. flow charts il map Iron Age 171: 127-34 Mr 12 '53

Truck haulage and maintenance; in the Minnesota iron country. C. A. Lindberg. il Min Cong J 39:31-3 Mr '53

Who will supply power for processing taconite? il map Elec World News ed 138: 32-3 N 24 '52

Missouri

Trackless equipment facilitates change from open pit to underground; Ozark ore co.'s Iron Mountain mine. W. F. Shinners. il plan diag Min Eng 5:370-4 Ap '53

Norway

Underground receiver at Rödsand provides steady mine air supply. C. C. Austin. il diag Eng & Min J 154:92-3 Ag '53

Ontario

Bethlehem's Marmora mine. H. R. Rice. il Can Min J 73:69-72 N '52

Enlarging circle. Comp Air Mag 58:111 Ap '53

Inland rents Steep Rock field. map Iron Age 171:117 Mr 5 '53; il Steel 132:61 Mr 2 '53; Min Eng 5:359 Ap '53; Iron & Steel Eng 30:152+ Mr '53

Inland Steel acquires ore by lease. P. D. Block, jr. and M. S. Fotheringham. map Blast F & Steel Pl 41:436 Ap '53

Steep Rock's A and B zones to yield 3½-million tons per year. K. L. McRorie. il map diags Eng & Min J 154:82-5 Ap '53

Underwater ore; Steep Rock lake. Bsns W p30-1 F 28 '53

Pennsylvania

After two centuries of mining Cornwall keeps its methods up-to-date. S. J. Shale. flow sheet il plans Min Eng 5:670-5 Jl '53

Bethlehem Steel's new Grace mine. A. W. Knoerr. il plan Eng & Min J 154:88-90+ Ja '5?

Quebec (province)

Bristol magnetite deposit. W. K. Buck. bibliog il Can Min J 74:55-7 Ja '53

Development of Quebec-Labrador iron ore. W. H. Durrell. Iron & Steel Eng 29:87-9 N '52

Fenimore may pan out. Iron Age 171:94-5 Je 4 '53

Fenimore plans mine operation in northern reaches. Min Eng 5:484 My '53

Iron ore; Canadian Mesabi on last lap. T. Campbell. map Iron Age 171:35-7 Ja 8 '53

Iron ore project in Canada. il map diags Engineer 195:399-401 Mr 13 '53

Laying steel to bring out Labrador's ore. il maps Bsns W p82-6+ Jl 18 '53

Sweden

Sweden's iron ore; illustrations with text. diag Iron Age 170:28 D 25 '52

Venezuela

Barges that turn into piers; iron-ore shipping station of the Orinoco mining co. J. Hirt. il diag Comp Air Mag 57:312-13 N '52

IRON ores

Bacteria help make iron ore. Blast F & Steel Pl 41:sup56 Ap '53

Iron ore supply; a new appraisal of the outlook. H. S. Harrison. Eng & Min J 154:80-3 Je '53

Laboratory procedures for determining pelletizing characteristics of iron ore concentrates. T. E. Ban and L. J. Erck. bibliog il diag Min Eng 5:Trans 803-11 Ag '53

New detector locates tramp metal in iron ore. W. H. Schwedes and C. W. Clapp. il diag Iron Age 171:140-1 F 26 '53

Review and forecast. Iron Age 171:278 Ja 1 '53

Simple formula for evaluating iron ores. F. H. Crockard. Blast F & Steel Pl 41:295-301 Mr '53

Softening of iron ores at high temperatures. A. Grieve. diags Iron & Steel Inst J 175: 1-4 S '53

Where is the iron ore coming from? H. S. Harrison. Blast F & Steel Pl 41:751-4+ Jl '53

See also

Chromite
Hematite
Ilmenite
Iron metallurgy
Iron mines and mining
Magnetite
Pyrites
Pyrrhotite
Railroads—Rates—Iron ore
Taconite

Prices

Computation of iron ore prices. H. U. Ross. il Can Min J 74:73-9 Mr '53

Statistics

World iron ore production by countries, U.S. production of iron ore; tabulations. Iron Age 171:430 Ja 1 '53

Testing

Testing of prospective iron ores. H. U. Ross. il Can Min J 73:47-51 D '52

Transportation

Cleveland belt conveyor plan may solve river jam. il plan Min Eng 5:257 Mr '53

Concentrate stocking a help in shipping Lake iron ores. J. J. Foucault. il diag Eng & Min J 154:79-80 Mr '53

Goan mining companies solving problem of ore transportation. For Comm W 49:23 My 18 '53

How radio helps record ore move on Great Northern iron range lines. il map Ry Age 135:100-2+ S 7 '53

Iron ore; steam's up for Lake shipping. R. M. Lorz. il Iron Age 171:93 Ap 2 '53

Ore problem. Bsns W p 114+ D 13 '52

Rubber conveyer beltroad to transport iron ore and limestone to Cuyahoga valley. il map Mech Eng 75:232-3 Mr '53

Alabama

Investigation of red iron ore, Woodstock and Bucksville areas, Alabama. A. H. Reed, jr. 20pls U S Bur Mines Rep of Invest 4981:1-34 '53

Asia

Coal and iron ore resources of Asia and the Far East. maps 155p pa $1.50 Columbia univ. press, 2960 Broadway, New York 27 '52

Far East

Coal and iron ore resources of Asia and the Far East. maps 155p pa $1.50 Columbia univ. press, 2960 Broadway, New York 27 '52

Labrador

Prospecting in Quebec-Labrador iron fields. J. M. Harrison. bibliog il map Can Min J 73:78-82 O '52

Role of geologists in the development of the Labrador-Quebec iron ore districts. J. K. Gustafson and A. E. Moss. bibliog il maps diag Min Eng 5:Trans 593-602 Je '53; Same. Can Min J 74:61-8 Je '53

Lake Superior region

Prices, average analyses and grades of Lake Superior iron ores; tabulations. Iron Age 171:429 Ja 1 '53

Minnesota

Investigation of iron sulfide deposits in south-central Aitkin county and Carlton county, Minn. J. Pennington and V. C. Davis. 7pls U S Bur Mines Rep of Invest 4937:1-33 '53

Investigation of Scallon-Todd lease, Aitkin county, Minn. W. A. Grosh and others. 2pls U S Bur Mines Rep of Invest 4979: 1-24 '53

Iron sulfide ores; Minnesota ores may yield new sulfur, manganese sources. Iron Age 171:141 F 19 '53; Mech Eng 75:326 Ap '53

Minnesota's iron sulphide ores have promise. P. T. Allsman. Eng & Min J 154:80 Mr '53

More iron from Minnesota's lean ores. A. W. Mathews. il Eng & Min J 154:88-90 O '53

Oliver makes initial taconite shipment. il Min Cong J 39:60 Jl '53

IRON ores—*Continued*

Quebec (province)

Allard Lake ilmenite deposits. P. Hammond. bibliog il maps plan diag Econ Geol 47: 634-49 S '52

Canada studies new Quebec ores. Blast F & Steel Pl 41:794 Jl '53

Extensive iron ore operations projected by Canadian Javelin. Barron's 33:14-15 Jl 13 '53

Prospecting in Quebec-Labrador iron fields. J. M. Harrison. bibliog il map Can Min J 73:78-82 O '52

Role of geologists in the development of the Labrador-Quebec iron ore districts. J. K. Gustafson and A. E. Moss. bibliog il maps diag Min Eng 5:Trans 593-602 Je '53; Same. Can Min J 74:61-8 Je '53

Rhodesia

Deformation of banded ironstones in southern Rhodesia. G. Bond. Econ Geol 47:823-4 D '52

Texas

Beneficiation of east Texas iron ores, basis of Lone Star Steel operations. W. R. Bond. flow sheets J Metals 5:515-19 Ap '53

Utah

Bull Valley iron-ore deposits Washington county, Utah. S. W. Zoldok and S. R. Wilson. 8pls U S Bur Mines Rep of Invest 4948:1-17 '53

Wyoming

Treatment of titaniferous magnetite ore from Iron mountain, Wyo. A. E. Back and others. bibliog 5pls U S Bur Mines Rep of Invest 4902:1-15 '52

IRON oxides

Activities of constituents of iron and steelmaking slags. E. T. Turkdogan and J. Pearson. bibliog Iron & Steel Inst J 173: 217-23 Mr '53

Activity of an iron oxide-chromium oxide water-gas shift catalyst; effect of added constituents. K. Atwood and M. R. Arnold. bibliog diag Ind & Eng Chem 45:424-6 F '53

Adsorption of cobalt and barium ions by hydrous ferric oxide at equilibrium. J. E. Duval and M. H. Kurbatov. J Phys Chem 56:982-4 N '52

Calcined cold-precipitated hydrated iron oxide. W. A. Mitchell. Min Eng 5:Trans 904 S '53

Collisional excitation of F_2O. H. Aroeste. bibliog diags J Chem Phys 21:870-5 My '53

Elementary mechanisms of magnetization in mixed oxides of iron and cobalt. C. Guillaud. bibliog diags Rs Mod Phys 25:64-74 Ja '53

Exchange frequency electron spin resonance in ferrites. J. Kaplan and C. Kittel. J Chem Phys 21:760-1 Ap '53

Molecular interaction between *n*-propyl alcohol and iron or iron oxides. E. H. Loeser, W. D. Harkins and S. B. Twiss. bibliog J Phys Chem 57:591-7 Je '53

Nature of conduction in liquid iron oxide and iron silicates. M. T. Simnad and G. Derge. bibliog J Chem Phys 21:933-4 My '53

Passivity of metals; the anodic behaviour of iron oxide films. U. R. Evans and I. D. G. Berwick. diag Chem Soc J p3432-7 S '52

Rate of adsorption of cobalt ions on hydrous ferric oxide. M. H. Kurbatov and G. B. Wood. J Phys Chem 56:698-701 Je '52

Reaction between ferric oxide and anhydrous aluminium chloride. R. C. Croft. bibliog J Ap Chem 2:562-5 O '52

Saturation and magnetization of hexagonal iron oxide compounds. G. W. Rathenau. bibliog diags Rs Mod Phys 25:297-301 Ja '53

Some new results on antiferromagnetism and ferromagnetism. L. Néel. bibliog diag Rs Mod Phys 25:58-63 Ja '53

See also
Ferrates
Hematite
Magnetite

IRON powder. See Iron, Powdered

IRON pyrite. See Pyrite

IRON research

British cast iron research association activities. J. G. Pearce. il Metallurgia 46:193-4 O '52

British iron and steel research association North-east coast laboratories. Metallurgia 48:67-9 Ag '53; Excerpts. Engineering 176: 116-17 Jl 24 '53

Density and hydrogen occlusion of some ferrous metals. J. H. Keeler and H. M. Davis. bibliog J Metals 5:Trans 44-8 Ja '53

Research on cast iron. Engineering 174:643 N 14 '52

IRON silicates

High temperature heat contents of magnesium orthosilicate and ferrous orthosilicate. R. L. Orr. bibliog Am Chem Soc J 75:528-9 F 5 '53

Nature of conduction in liquid iron oxide and iron silicates. M. T. Simnad and G. Derge. bibliog J Chem Phys 21:933-4 My '53

Reconnaissance of liquidus relations in the system $K_2O \cdot 2SiO_2$—FeO—SiO_2. E. Roedder. diags Am J Sci Bowen vol p435-56 '52

System FeO—Al_2O_3—SiO_2. J. F. Schairer and K. Yagi. diags Am J Sci Bowen vol p471-512 bibliog(p510-12) '52

IRON sulfates

Ion-exchange and spectrophotometric investigation of iron(III) sulfate complex ions. R. A. Whiteker and N. Davidson. bibliog Am Chem Soc J 75:3081-5 Jl 5 '53

Reaction between ferric sulfate and calcium chloride in the solid state. J. F. Hazel, W. M. McNabb and W. D. Cooke. bibliog Am Chem Soc J 75:1552-6 Ap 5 '53

Solubility of ferrous sulphate in aqueous solutions of sulphuric acid. W. Bullough, T. A. Canning and M. I. Strawbridge. J Ap Chem 2:703-7 D '52

Volumetric determination of persulfate in the presence of organic substances. I. M. Kolthoff and E. M. Carr. bibliog Anal Chem 25:298-301 F '53

Analysis

Spectrophotometric determination of iron as ferric sulfate complex; ultraviolet study. R. Bastian, R. Weberling and F. Palilla. bibliog Anal Chem 25:284-8 F '53

IRON sulfides

Investigation of iron sulfide deposits in south-central Aitkin county and Carlton county, Minn. J. Pennington and V. C. Davis. 7pls U S Bur Mines Rep of Invest 4937:1-33 '53

Iron sulfide ores; Minnesota ores may yield new sulfur, manganese sources. Iron Age 171:141 F 19 '53; Mech Eng 75:326 Ap '53

See also
Pyrite
Pyrrhotite

IRON titanate

Heat capacities at low temperatures and entropies at 298.16°K. of titanomagnetite and ferric titanate. S. S. Todd and E. G. King. bibliog Am Chem Soc J 75:4547-9 S 20 '53

IRON workers

See also
Foundries—Employees

IRON works

King's ironworks in the Forest of Dean, 1612-1674. H. R. Schubert. bibliog il diags Iron & Steel Inst J 173:153-62 F '53

Costs

Simple formula for evaluating iron ores. F. H. Crockard. Blast F & Steel Pl 41:295-301 Mr '53

Electric equipment

Electric distribution in iron and steel works. T. B. Rolls and E. C. Slater. diags Iron & Steel Inst J 173:163-76 F '53; Discussion. 174:260-4 Jl '53

Utilization of electricity in iron and steel works. W. F. Cartwright. plan Inst E E Proc 100 pt 1:126-31 My '53

Equipment

Some aspects of merchant iron furnacing. A. J. Macdonald. il Blast F & Steel Pl 41: 646-50+ Je '53

IRON works—*Continued*

Maintenance and repair

Maintenance in iron and steel works; conference on aspect of productivity; abstracts of papers. Metallurgia 47:55-8 F '53

Safety measures

Accident prevention in the iron and steel works of the U.S.A. A. Elson and P. Wright. Metallurgia 46:241-3 N '52

IRONING

Ironing temperatures for rayon and acetate. il diags Mod Textiles Mag 34:36+ O '53

IRONS, Electric. See Electric irons

IROQUOIS Indians

Conference on Iroquois research, 8th, Red House, N.Y. Oct. 10-12, 1952. Science 117:147-8 F 13 '53

IRRADIATION

Absorption bands and lines in irradiated LiF. C. J. Delbecq and P. Pringsheim. bibliog J Chem Phys 21:794-800 My '53

Effect of high-energy cathode rays on cellulose. J. F. Saeman, M. A. Millett and E. J. Lawton. bibliog il Ind & Eng Chem 44:2848-52 D '52

Effect of 1470A irradiation of nitrogen-hydrogen mixtures and of ammonia. M. H. J. Wijnen and H. A. Taylor. bibliog diag J Chem Phys 21:233-6 F '53

Fluorescence, phosphorescence, and photostimulation of NaCl(AgCl) with high-energy irradiation. M. Furst and H. Kallmann. bibliog il diags Phys R 91:1356-67 S 15 '53

High energy helium ion irradiation of aqueous acetic acid solutions. W. M. Garrison and others. bibliog diag Am Chem Soc J 75:2459-64 My 20 '53

Induced thermoelectric potential from radiation damage. A. Andrew and C. R. Davidson. diag Phys R 89:876-7 F 15 '53

Influence of irradiation on discharge current in an ozonizer. S. Deb and others. bibliog il diag J Chem Phys 21:1486-92 S '53

Irradiation of liquid ammonia. R. Roberts and A. O. Allen. bibliog Am Chem Soc J 75:1256-7 Mr 5 '53

Isothermal annealing effects in irradiated copper. A. W. Overhauser. bibliog diag Phys R 90:393-400 My 1 '53

Isotope enrichment by the photoexcitation of specific isotopes. C. C. McDonald and H. E. Gunning. bibliog J Chem Phys 20:1817 N '52

Multiple reversible color changes initiated by irradiation at low temperature. Y. Hirshberg and E. Fischer. J Chem Phys 21:1619-20 S '53

Oxidation of aqueous ferrous ammonium sulfate solutions by betatron radiation. R. W. Hummel and J. W. T. Spinks. bibliog J Chem Phys 20:1056 Je '52

R-f irradiation of seeds. H. Jonas. bibliog il diags Electronics 26:161-3 Ap '53

Reversible appearance and disappearance of coloured modifications of some compounds as a result of irradiation at low temperatures. Y. Hirshberg, E. H. Frei and E. Fischer. Chem Soc J p2184-5 Jl '53

Speculation on the formation of *F*-centers during irradiation. J. J. Markham. bibliog diag Phys R 88:500-9 N 1 '52

IRREVERSIBLE processes

Brownian motion in the theory of irreversible processes. R. T. Cox. bibliog Rs Mod Phys 24:312-20 O '52

Some applications of the thermodynamic theory of irreversible processes to physical metallurgy. E. S. Machlin. bibliog J Metals 5:Trans 437-45 Mr '53

Variational principles for irreversible processes. P. Rosen. J Chem Phys 21:1220-1 Jl '53

IRRIGATION

Aluminum pipe. il Bsns W p 132+ My 9 '53

Construction economy is basic in reclamation design. L. N. McClellan. il Civil Eng 22:854-7 O '52

Disposal of food processing wastes by spray irrigation. N. H. Sanborn. il Sewage & Ind Wastes 25:1034-43 S '53

Fewer requests filed for licenses to export irrigation systems. For Comm W 48:10-11 N 24 '52

Irrigation for cannery waste disposal. il Pub Works 84:90 Ja '53

Progress in irrigation engineering. L. N. McClellan. il Civil Eng 22:691-5 S '52

Social and economic implications of irrigation development. J. W. Dixon. Civil Eng 22:689-90+ S '52

Soil science and plant nutrition. J. Tinsley. bibliog il Chem Age (Lond) 68:63-9 Ja 10 '53

Spray irrigation of food processing wastes. J. M. Dennis. il Sewage & Ind Wastes 25:591-5 My '53

Sprinkler irrigation, do you want it? C. C. Warren. il Elec West 109:116-17 O '52

Trend toward multipurpose developments. J. S. Bowman. il Civil Eng 22:736-9 S '52

See also
Irrigation canals
Sewage irrigation

Cost

Irrigation and hydro-power construction cost indexes; tabulation. Eng N 150:64 F 26 '53

Arizona

Salt River project, a reclamation first. H. F. Unger. Pub Util 52:434-9 S 24 '53

Australia

Vast hydro scheme beckons U.S. contractors; Australia's Snowy Mountains hydroelectric authority. W. A. Dexheimer. map Eng N 150:58+ F 5 '53

California

Broader irrigation financing asked. Eng N 150:24 Ap 9 '53

Colorado

See also
Colorado-Big Thompson project

Idaho

Are tax dollars to develop Hells canyon? R. F. Ball. map Elec West 110:63-6 Ja '53; Same. Edison Elec Inst Bul 21:71-4 Mr '53

Sloan drafts Idaho irrigation scheme as alternative to Reclamation plans. map Eng N 150:25 Ap 16 '53

India

Delhi and the drought. map Economist 167:164-5 Ap 18 '53

Indus River system. Engineer 196:220 Ag 14 '53

Lower Bhavani dam, Madras. R. D. Rajan. il map diags Engineering 174:777-80 D 19 '52

Mayurakshi irrigation project. diag Engineer 194:563 O 24 '52

Tungabhadra irrigation and power scheme. R. D. Rajan. il map diags Engineering 175:161-3 F 6 '53

See also
India—Central board of irrigation and power

Israel

Dilemma over the Jordan; Jordan and Yarmuk rivers. map Economist 167:822-3 Je 20 '53

Israel plans long-range irrigation program to expand food production. For Comm W 49:3+ Mr 23 '53

Japan

Plan hydro, irrigation jobs for Japanese island. Eng N 150:91 My 14 '53

Jordan valley

Dilemma over the Jordan; Jordan and Yarmuk rivers. map Economist 167:822-3 Je 20 '53

Louisiana

Rice irrigation in Louisiana. E. E. Shutts. maps Am Soc C E Proc 78 [no 156]:1-14 O '52

Nebraska

Nebraskans gird for new battle over Platte River diversion scheme. map Eng N 150:22 Ja 29 '53

IRRIGATION—*Continued*

Pakistan

Land of the five rivers. Economist 166:562 F 28 '53

Punjab powder keg. map Economist 166:578 F 28 '53

Peru

Peru pushes major river diversion. Eng N 149:46 O 30 '52

Puerto Rico

Puerto Rico constructs new irrigation project. A. Lucchetti. il maps Civil Eng 22: 868-71 O '52

South Dakota

Oahe is target for flanking attack. il Eng N 150:27 Ja 8 '53

Texas

Plastic pipe solves irrigation problems for rice farmers in south Texas. W. C. Grant. il Gas Age 112:17-18 Jl 2 '53

United States

Sediment problems on irrigation projects in the United States. E. W. Lane. il Engineering 176:1-4 Jl 3 '53

Western states

New nerve center in foothills of Rockies dispatches power and water from remote dams. il map Eng N 150:38-9 Je 4 '53

IRRIGATION canals

Irrigation canal, Harlingen, Tex. Bsns W p 128 N 1 '52

Use of canal linings in American irrigation schemes. il diags Engineer 195:199-202 F 6 '53

IRRIGATION water

Bacteriological study of irrigated vegetables. N. N. Norman and P. W. Kabler. bibliog Sewage & Ind Wastes 25:605-9 My '53

Effect of irrigation runoff on surface water supplies; panel discussion. M. B. Cunningham and others. Water & Sewage Works 100:307-9 Ag '53

Integrating reclamation and disposal of waste water. A. M. Rawn and others. bibliog il Am Water Works Assn J 45:483-90 My '53

Irrigation water rights in the humid areas. H. T. Critchlow. Am Soc C E Proc 78[no 140]:1-6 Jl '52

New nerve center in foothills of Rockies dispatches power and water from remote dams. il map Eng N 150:38-9 Je 4 '53

Six pumps deliver 2,100,000 gallons per minute; Tracy pumping plant of the Central Valley project. C. J. Tullo. il Pub Works 83:62-3+ N '52

IRVINE, Sir James Colquhoun, 1877-1952

Sketch. E. L. Hirst. por(front) Am Chem Soc J 75:253-6 Ja 20 '53

ISATIN

Colorimetric determination of thiophen in pure benzoles by the alloxan and isatin reagents. K. H. V. French. J Ap Chem 2:664-6 N '52

ISHAM, Howard Edwin

They're reshuffling Big Steel. por Bsns W p27-8 D 6 '52

ISOALLOSPIROSTADIENEOL

Conversion of hecogenin to $\Delta^{7,9(11)}$-22-isoallospirostadiene-3β-ol. R. Hirschmann, C. S. Snoddy, jr. and N. L. Wendler. bibliog Am Chem Soc J 75:3252-5 Jl '53

ISOAMIDONE

Structure of isoamidone. N. R. Easton, S. J. Nelson and V. B. Fish. Am Chem Soc J 74: 5772 N 20 '52

ISOANDROSTERONE

Direct introduction of oxygen into the steriod nucleus; chromic anhydride oxidation of isoandrosterone acetate and androstanediol diacetate. H. B. MacPhillamy and C. R. Scholz. bibliog Am Chem Soc J 74:5512-14 N 5 '52

ISOASPARAGINE

Preparation of isoasparagine by the phthaloyl method. S. W. Tanenbaum. bibliog Am Chem Soc J 75:1754-6 Ap 5 '53

ISOBARS

Nonexistence of stable isobars with odd mass number. S. Sengupta. Phys R 89:1296-7 Mr 15 '53

ISOBUTANE

Boiling point and composition of methanethiol-isobutane azeotrope. F. R. Brooks and A. C. Nixon. Am Chem Soc J 75:480 Ja 20 '53

Butane vapor phase isomerization; Shell development co. flow diag Pet Refiner 31: 168-9 S '52

Inhibition of side reactions during aluminum chloride-catalyzed pentane isomerization. E. E. Sensel and A. R. Goldsby. bibliog Ind & Eng Chem 44:2716-21 N '52

Isomerization; Universal oil products co. flow diag Pet Refiner 31:176-7 S '52

Mechanism of the alkylation of paraffins; the reaction of isobutane with 2-chloro-4,4-dimethylpentane, 3-chloro-5,5-dimethylhexane and 2- and 3-chloro-3,4,4-trimethylpentane. L. Schmerling and J. P. West. Am Chem Soc J 75:4275-7 S 5 '53

Pentane and butane isomerization; Standard oil co. (Indiana). flow diag Pet Refiner 31:172-3 S '52

ISOBUTENE

Dependence of the rate of hydration of isobutene on the acidity function, H_0, and mechanism for olefin hydration in aqueous acids. R. W. Taft, jr. bibliog Am Chem Soc J 74:5372-6 N 5 '52

Low-temperature polymerisation of *iso*butene; the end-group problem. M. S. Flett and P. H. Plesch. Chem Soc J p3355-8 S '52

ISOBUTYLAMIDE

Structure of an insecticidal *iso*butylamide from pellitory root. L. Crombie. bibliog Chem & Ind p 1034-5 O 18 '52

ISOBUTYL chloride

Studies on unimolecular chlorohydrocarbon decompositions. K. E. Howlett. Chem Soc J p4487-91 N '52

ISOBUTYLDECADIENAMIDE

Pellitorine isomers; the synthesis of N-isobutyl-*trans*-2,*trans*-4-decadienamide. M. Jacobson. bibliog Am Chem Soc J 75:2584-6 Je 5 '53

ISOBUTYLENE

Diffusion of hydrocarbon vapors into polyisobutylene. S. Prager, E. Bagley and F. A. Long. bibliog Am Chem Soc J 75:1255-6 Mr 5 '53

Equilibrium sorption data for polyisobutylene-hydrocarbon systems. S. Prager, E. Bagley and F. A. Long. bibliog Am Chem Soc J 75:2742-5 Je 5 '53

Impregnation of leather with butyl rubber. Rubber Age 72:624 F '53; Same. Franklin Inst J 255:337-8 Ap '53

Measurement of dynamic shear viscosity and stiffness of viscous liquids by means of traveling torsional waves. H. J. McSkimin. bibliog il diags Acoustical Soc Am J 24: 355-65 Jl '52

Mechanism of the low temperature chlorination of isobutylene. W. Reeve, D. H. Chambers and C. S. Prickett. bibliog Am Chem Soc J 74:5369-71 N 5 '52

Sedimentation behavior of flexible chain molecules; polyisobutylene. L. Mandelkern and others. bibliog J Chem Phys 20:1392-7 S '52

ISOBUTYRYL chloride

Reaction of methyl radicals with isobutyryl and α-deuteroisobutyryl chlorides. C. C. Price and H. Morita. bibliog Am Chem Soc J 75:3686-8 Ag 5 '53

ISOCAMPHENILANOL

Configuration of isocamphenilanol. W. R. Vaughan and R. Perry, jr. bibliog Am Chem Soc J 74:5355-6 N 5 '52

ISOCYANATES

Exchange reactions in volatile isocyanates and isothiocyanates of silicon, germanium and phosphorus. H. H. Anderson. bibliog Am Chem Soc J 75:1576-8 Ap 5 '53

Hofmann reaction with α- and β-hydroxyamides; reactions of the intermediate *iso*cyanates. C. L. Arcus and D. B. Greenwood. Chem Soc J p 1937-40 Je '53

Preparation of alkyl isocyanates using alkyl phosphates. T. I. Bieber. bibliog Am Chem Soc J 74:4700-1 S 20 '52

ISOCYANATES—*Continued*

Preparation of isocyanates by the thermal decomposition of substituted ureas. W. B. Bennett, J. H. Saunders and E. E. Hardy. bibliog Am Chem Soc J 75:2101-3 My 5 '53

Reaction of thyroxine with aromatic isocyanates. A. Rodgman and W. R. Franks. bibliog Am Chem Soc J 74:6296-7 D 20 '52

Studies in the azole series; the interaction of α-amino-nitriles and alkyl or aryl *iso*cyanates. A. H. Cook and G. D. Hunter. Chem Soc J p3789-96 O '52

Tracer study of the reaction of isocyanates with carboxylic acids. A. Fry. bibliog Am Chem Soc J 75:2686-8 Je 5 '53

ISOCYANIC acid

Action of sulfuric acid on isocyanic esters. T. I. Bieber. bibliog Am Chem Soc J 75:1405-8 Mr 20 '53

ISOCYANIDES

Methylisocyanosilanes. J. J. McBride, jr. and H. C. Beachell. bibliog Am Chem Soc J 74:5247-50 N 5 '52

ISOCYANURATES

Anticonvulsant drugs; some monosubstituted isocyanurates. W. J. Close. bibliog Am Chem Soc J 75:3617-18 Ag 5 '53

Molecular compound formation between substituted biurets and isocyanurates. W. J. Close. bibliog Am Chem Soc J 75:3619-20 Ag 5 '53

ISODEHYDROACETIC acid. See Dimethyl coumalic acid

ISODURENE

Substitution in polymethylbenzenes; a new route to isodurene derivatives. G. Illuminati and G. Marino. bibliog Am Chem Soc J 75:4593-4 S 20 '53

ISODURYLIC acid

Synthesis, acidity and decarboxylation of substituted mesitoic acids. F. M. Beringer and S. Sands. bibliog Am Chem Soc J 75:3319-22 Jl 20 '53

ISOFLAVONE

Chemistry of subterranean clover; synthesis and reduction of *iso*flavones related to genistein and formononetin. R. B. Bradbury and D. E. White. Chem Soc J p871-6 Mr '53

Isomerisation of *iso*flavones. W. B. Whalley. bibliog Chem & Ind p277-8 Mr 21 '53

New synthesis of *ios*flavones. W. Baker and others. Chem Soc J p 1852-64 Je '53

Orientation in the isoflavone series. W. Baker and others. bibliog Chem & Ind p277 Mr 21 '53

Some isoflavones derived from genistein. W. B. Whalley. bibliog Am Chem Soc J 75:1059-65 Mr 5 '53

ISOGLADIOLIC acid

Phthalaldehydes and related compounds; synthesis of *iso*gladiolic acid. J. J. Brown and G. T. Newbold. Chem Soc J p 1285-9 Ap '53

ISOIMIDAZOLE

Acetic acid-ammonium acetate reactions; 2-isoimidazoles as intermediates in imidazole formation. M. Weiss. bibliog Am Chem Soc J 74:5193-5 O 20 '52

ISOINDOLINE

Heterocyclic imines; imino-derivatives of *iso*indoline and their reaction with primary bases. J. A. Elvidge and R. P. Linstead. Chem Soc J p5000-7 D '52

ISOLYSINE

Streptolin; the structure and synthesis of isolysine. E. E. van Tamelen and E. E. Smissman. bibliog Am Chem Soc J 75:2031-5 My 5 '53

ISOMALTOSE

Acid reversion in relation to isomaltose as a starch hydrolytic product. A. Thompson, M. L. Wolfrom and E. J. Quinn. bibliog Am Chem Soc J 75:3003-4 Je 20 '53

Determination of molecular weights of dextrans by means of alkaline copper reagents. H. S. Isbell and others. bibliog J Res Nat Bur Stand 50:81-6 F '53

ISOMATE process. See Gasoline—Manufacture

ISOMERISM

Average electric charge of daughter atoms from β-decay and isomeric transition. S. Wexler and T. H. Davies. bibliog diags Phys R 88:1203-4 D 1 '52

Core isomerism; remarks on Mo^{93m}. M. Goldhaber. bibliog Phys R 89:1146-7 Mr 1 '53

Effects of substituents and solvents on the *cis→trans* change of azobenzene. R. J. W. Le Fèvre and J. Northcott. diag Chem Soc J p867-70 Mr '53

Geometrical isomerism of azo-compounds. N. Campbell, A. W. Henderson and D. Taylor. Chem Soc J p 1281-5 Ap '53

Identification of the seven-hour Mo^{93} isomer. D. E. Alburger and S. Thulin. bibliog Phys R 89:1146 Mr 1 '53

Investigation of polymorphism and isomerism in cytidine phosphate. R. J. C. Harris and others. Chem Soc J p489-94 F '53

Isomeric transitions in Tc^{93} and Tc^{96}. H. T. Easterday and H. A. Medicus. bibliog diag Phys R 89:752-4 F 15 '53

Isomerism in the Diels-Alder reaction; the bromination of Diels-Alder adducts. H. Kwart and L. Kaplan. bibliog diags Am Chem Soc J 75:3356-9 Jl 20 '53

Isomerism of In^{110} and In^{112}. E. Bleuler and others. bibliog diags Phys R 90:464-8 My 1 '53

New infrared-investigations in the *cis-trans* isomerism of *ortho*-halogenphenols. G. Rossmy and others. bibliog J Chem Phys 21:1606-7 S '53

Nuclear isomerism and shell structure. M. Goldhaber and R. D. Hill. diags Rs Mod Phys 24:179-239 bibliog(p235-9) Jl '52

Pairing effect in nuclei and isomerism. R. Katz. bibliog Phys R 91:1487 S 15 '53

Possible occurrence of geometrical isomerism among the diazosulphones. H. C. Freeman and others. Chem Soc J p3381-4 S '52

Relation between the absorption spectra and the chemical constitution of dyes; phototropism and *cis-trans* isomerism in aromatic azo compounds. W. R. Brode, J. H. Gould and G. M. Wyman. bibliog Am Chem Soc J 74:4641-6 S 20 '52

Rotational isomerism as a general property of alkyl nitrites. P. Tarte. bibliog J Chem Phys 20:1570-5 O '52

Rotational isomerism in chloroacetone. S. Mizushima and others. bibliog J Chem Phys 21:815-18 My '53

Search for short-lived nuclear isomers. T. C. Engelder. bibliog Phys R 90:259-60 Ap 15 '53

Stereochemistry and reaction mechanisms of hexacovalent inorganic complexes. F. Basolo. diags Chem R 52:459-527 bibliog(p521-7) Je '53

Stereoisomeric quaternary ammonium derivatives of tropine having a pseudoasymmetric nitrogen atom. S. P. Findlay. bibliog Am Chem Soc J 75:3204-8 Jl 5 '53

Stereoisomerism of complex inorganic compounds; the stereoisomers of dichlorobis(ethylenediamine)-platinum(IV) salts. L. F. Heneghan and J. C. Bailar, jr. Am Chem Soc J 75:1840-1 Ap 20 '53

Stereoisomerism of isopulegol hydrates and some analogous 1,3-diols. H. E. Zimmerman and J. English, jr. bibliog Am Chem Soc J 75:2367-70 My 20 '53

Supposed rotational isomerism in the succinic acid series. G. D. Buckley. Chem Soc J p 1325-8 My '53

Synthesis of *cis*- and *trans*-3-methylcyclohexanol; reassignment of configuration of the 3-methylcyclohexanols. H. L. Goering and C. Serres, jr. bibliog Am Chem Soc J 74:5908-12 D 5 '52

ISOMERIZATION

Alkaline isomerization of humulone. J. F. Carson. bibliog Am Chem Soc J 74:4615-20 S 20 '52

Butane vapor phase isomerization; Shell development co. flow diag Pet Refiner 31:168-9 S '52

Catalysis of *cis-trans* isomerization by paramagnetic substances. H. McConnell. bibliog J Chem Phys 20:1043-4 Je '52

Complex ions of chromium; *trans-cis* isomerization of potassium dioxalatodiaquochromate(III). R. E. Hamm. bibliog Am Chem Soc J 75:609-11 F 5 '53

Inhibitions of side reactions during aluminum chloride-catalyzed pentane isomerization. E. E. Sensel and A. R. Goldsby. bibliog Ind & Eng Chem 44:2716-21 N '52

ISOMERIZATION—*Continued*

Isomerization accompanying alkylation; the reaction of benzene with *n*- and isopropylcyclopropane; the synthesis of *n*- and isopropylcyclopropane. H. Pines, W. D. Huntsman and V. N. Ipatieff. bibliog Am Chem Soc J 75:2311-15 My 20 '53

Isomerisation of deca-2 : 4-dienoic acid in presence of alkali at 180°. A. Crossley and T. P. Hilditch. Chem Soc J p4613-15 D '52

Isomerisation of *iso*flavones. W. B. Whalley. bibliog Chem & Ind p277-8 Mr 21 '53

Isomerization of *n*-pentane in presence of molybdena-alumina catalysts at low hydrogen-hydrocarbon ratios. A. Clark and others. bibliog Ind & Eng Chem 45:803-6 Ap '53

Isomerization of olefins. L. Berg and others. bibliog diag Pet Eng 25:C32-4 Ja '53

Isomerization of pentanes and hexanes; nature and control of side reactions. B. L. Evering and others. bibliog Ind & Eng Chem 45:582-9 Mr '53

Isomerization of saturated hydrocarbons; catalytic isomerization of cycloheptane. H. Pines, F. J. Pavlik and V. N. Ipatieff. Am Chem Soc J 74:5544-5 N 5 '52

Isomerization of saturated hydrocarbons in presence of hydrogenation-cracking catalysts. F. G. Ciapetta and J. B. Hunter. bibliog diag Ind & Eng Chem 45:147-65 Ja '53

Isomerization of saturated hydrocarbons; the isomerization of alkylcyclopropanes and alkylcyclobutanes in the presence of aluminum halide catalysts. H. Pines, W. D. Huntsman and V. N. Ipatieff. bibliog Am Chem Soc J 75:2315-17 My 20 '53

Isomerisation of sulphilimines. A. S. F. Ash and F. Challenger. Chem Soc J p2792-6 Jl '52

Isomerization of the methylbenzenes. D. A. McCaulay and A. P. Lien. bibliog Am Chem Soc J 74:6246-50 D 20 '52

Isomerization; Universal oil products. flow diag Pet Refiner 31:176-7 S '52

Liquid phase isomerization; Shell development co. flow diag Pet Refiner 31:168-9 S '52

2-Mercaptobenzothiazole derivatives; the thermal decomposition and isomerisation of 2-alkyl- and 2-alkenyl-thiobenzothiazoles and 3-alkyl- and 3-alkenyl-2-thiobenzothiazolines. C. G. Moore and E. S. Waight. diag Chem Soc J p4237-51 N '52

Nature of the co-ordinate link; a comparison of equilibria between *cis*- and *trans*-$(MEt_3)_2PtCl_2$, where M = P, As, and Sb. J. Chatt and R. G. Wilkins. Chem Soc J p4300-6 N '52

Nature of the co-ordinate link; geometrical isomerism and simple reactions of ethylthio-bridged complexes of platinum(II) and of palladium(II). J. Chatt and F. A. Hart. Chem Soc J p2363-71 Ag '53

Nature of the co-ordinate link; palladous complexes of stable *cis*-configuration. J. Chatt and R. G. Wilkins. Chem Soc J p70-4 Ja '53

Pentane and butane isomerization; Standard oil co. (Indiana). flow diag Pet Refiner 31:172-3 S '52

Preparation and isomerisation of aromatic ketones and keto-acids. G. Baddeley and R. Williamson. Chem Soc J p2120-5 Jl '53

Preparation and isomerisation of β-aroylacrylic acids. G. Baddeley, G. Holt and S. M. Makar. Chem Soc J p3289-92 Ag '52

Relation between the absorption spectra and the chemical constitution of dyes; effect of solvent and of temperature on the *cis-trans* isomerization of azo dyes. W. R. Brode, J. H. Gould and G. M. Wyman. bibliog Am Chem Soc J 75:1856-9 Ap 20 '53

Review of olefin isomerization. H. N. Dunning. bibliog(89 ref) Ind & Eng Chem 45:551-64 Mr '53

Selenium as catalyst in *cis-trans*-isomerisation of unsaturated fatty acids. J. H. Skellon and J. W. Spence. Chem & Ind p302 Mr 28 '53

Sodium photosensitized isomerization of *cis*-butene-2. W. M. Smith. J Chem Phys 20:1808 N '52

Steroids and Walden inversion; epimerisation at $C_{(17)}$. J. Elks and C. W. Shoppee. Chem Soc J p241-5 Ja '53

Studies in the terpene series; skeletal isomerization and hydrogen transfer of cyclic olefins in the presence of alumina-hydrogen chloride and silica-alumina catalysts. H. Pines, R. C. Olberg and V. N. Ipatieff. bibliog Am Chem Soc J 74:4872-6 O 5 '52

Sulfuric acid isomerization of methylalkanes, dimethylalkanes and dimethylcyclohexanes. A. K. Roebuck and B. L. Evering. bibliog Am Chem Soc J 75:1631-5 Ap 5 '53

Surface isomerisation; the surface-catalysed racemisation of 2-phenylbutane. A. G. Davies and G. A. H. Elton. Chem Soc J p3298-300 Ag '52

Thermal *trans-cis* isomerization of dideuteroethylene. B. S. Rabinovitch and others. bibliog J Chem Phys 20:1807-8 N '52

Tropolones by isomerization; 3,7-dibenzyltropolone. N. J. Leonard and G. C. Robinson. bibliog Am Chem Soc J 75:2143-7 My 5 '53

Ultraviolet-induced isomerization of tiglic acid to angelic acid. S. W. Pelletier and W. L. McLeish. bibliog Am Chem Soc J 74:6292-3 D 20 '52

ISOMERS

Aromatic sulphonation; isomeric ratios in the sulphonation of trimethyl-phenyl- and -*p*-tolyl-ammonium methyl sulphates. J. C. D. Brand and A. Rutherford. Chem Soc J p3927-31 O '52

Configurations of rotational isomers and their normal frequencies. S. Mizushima and others. bibliog J Chem Phys 21:215-19 F '53

Interpretation of isomeric transitions of electric quadrupole type. A. Bohr and B. R. Mottelson. Phys R 89:316-17 Ja 1 '53

Investigation of rotational isomers with ultrasound. J. Karpovich. J Chem Phys 21:1120-1 Je '53

Lifetimes of nuclear isomers. S. A. Moszkowski. bibliog Phys R 89:474-82 Ja 15 '53

Optical enantiomorphs of α-aminoadipic acid. J. P. Greenstein, S. M. Birnbaum and M. C. Otey. bibliog Am Chem Soc J 75:1994-5 Ap 20 '53

Possible isomers for coördination compounds with terdentate ligands and ligands of higher function. W. C. Fernelius and B. E. Bryant. Am Chem Soc 75:1735-6 Ap 5 '53

Probable existence of an $E3+M4$ mixture in an isomeric transition. R. D. Hill and J. W. Mihelich. bibliog Phys R 89:323-4 Ja 1 '53

Rotational isomers of chloroacetyl chloride, bromoacetyl chloride, and bromoacetyl bromide. I. Nakagawa and others. bibliog J Chem Phys 20:1720-4 N '52

ISOMETHADONE

Synthesis of isomethadone. M. Sletzinger, E. M. Chamberlin and M. Tishler. bibliog Am Chem Soc J 74:5619-20 N 20 '52

ISONIAZID. See Isonicotinic acid

ISONICOTINIC acid

Competitive action of isonicotinic acid hydrazide and pyridoxal in the amino acid decarboxylation of escherichia coli. M. Yoneda and N. Asano. bibliog Science 117:277-9 Mr 13 '53

Formation of the isonicotinic acid hydrazide analog of DPN. L. J. Zatman and others. Am Chem Soc J 75:3293-4 Jl 5 '53

New antituberculosis drug? R. J. Anderson. Pub Health Rep 67:848-50 S '52

Preparation of isonicotinic and picolinic acids. D. J. Cook and R. S. Yunghans. Am Chem Soc J 74:5515-16 N 5 '52

Streptohydrazid. F. C. Pennington, P. A. Guercio and I. A. Solomons. Am Chem Soc J 75:2261 My 5 '53

Synthesis of isonicotinic acid by halogen-metal exchange and its application to the preparation of isonicotinic-C^{14} acid hydrazide. A. Murray, 3d and W. H. Langham. bibliog Am Chem Soc J 74:6289-90 D 20 '52

ISOOCTANE

Permeation of water and isoöctane through plugs of microscopic particles of crushed quartz. R. T. Johansen and others. bibliog diag J Phys Chem 57:40-5 Ja '53

Proposed method of test for measurement of density of knock test standard normal heptane and *iso*octane by the pycnometer. il diags Am Soc T M Proc 50:289-94 '50

ISOOXAZOLIDONE

*iso*Oxazolones; some reactions of arylaminomethylene*iso*oxazolidones with bases. G. Shaw. Chem Soc J p3428-32 S '52

ISOOXAZOLONE

*iso*Oxazolones; some reactions of arylaminomethylene*iso*oxazolidones with bases. G. Shaw. Chem Soc J p3428-32 S '52

Syntheses in the penicillin field; 4-formyl*iso*oxazolones and derived thiazolidines. A. H. Cook and G. Shaw. Chem Soc J p4466-9 N '52

ISOPACHOUS maps

Computation of sand volumes from isopach maps. R. K. Guthrie and others. Oil & Gas J 51:65+ F 2 '53

ISOPENTANE

Isomerization; Universal oil products co. flow diag Pet Refiner 31:176-7 S '52

Pentane and butane isomerization; Standard oil co. (Indiana). flow diag Pet Refiner 31:172-3 S '52

ISOPHORONE

Cyanoethylation of isophorone. H. A. Bruson and T. W. Riener. Am Chem Soc J 75:3585-6 Jl 20 '53

ISOPHTHALIC acid

Separation of *iso*- and terephthalic acids by means of the thallous salts. D. Bryce-Smith. Chem & Ind p244 Mr 15 '53

ISOPRENE

Allylic chlorides; the hydrochlorination products of 2,3-dimethyl-1,3-butadiene. L. F. Hatch and G. E. Journeay. bibliog Am Chem Soc J 75:3712-14 Ag 5 '53

Anodic syntheses; chain extension of fatty acids by an isoprene unit. R. P. Linstead and others. Chem Soc J p3621-4 S '52

Measurement of dynamic shear viscosity and stiffness of viscous liquids by means of traveling torsional waves. H. J. McSkimin. bibliog il diags Acoustical Soc Am J 24:355-65 Jl '52

ISOPROPENYL compounds

Infra-red absorptions of vinyl and *iso*propenyl groups in polar compounds. W. H. T. Davison and G. R. Bates. Chem Soc J p2607-11 S '53

ISOPROPYL alcohol

Rates of chromic acid oxidation of some cyclanols. H. G. Kuivila and W. J. Becker, 3d. bibliog Am Chem Soc J 74:5329-30 N 5 '52

Relative acidity of water, methanol and other weak acids in isopropyl alcohol solution. J. Hine and M. Hine. bibliog Am Chem Soc J 74:5266-71 N 5 '52

ISOPROPYLAMINE

Viscosities of several liquids. D. M. Mason, O. W. Wilcox and B. H. Sage. bibliog diag J Phys Chem 56:1008-10 N '52

ISOPROPYL benzene. See Cumene

ISOPROPYL bromide

Kinetics of the decompositions of ethyl, isopropyl and *n*-propyl bromides. A. T. Blades and G. W. Murphy. bibliog Am Chem Soc J 74:6219-21 D 20 '52

Substitution and elimination rate studies on some deutero-isopropyl bromides. V. J. Shiner, jr. bibliog Am Chem Soc J 74:5285-8 N 5 '52

ISOPROPYL chloride

Kinetics of the catalytic vapor-phase addition of hydrogen cholride to propylene. L. E. Swabb, jr. and H. E. Hoelscher. bibliog plan Chem Eng Prog 48:564-9 N '52

Studies of unimolecular chlorohydrocarbon decompositions. K. E. Howlett. Chem Soc J p3695-701 O '52

ISOPROPYL chlorophenyl carbamate

New weed killer; cotton-field weed remover; Spencer chemical co.'s HO-NO-MO. Oil & Gas J 51:97 F 16 '53

ISOPROPYLCYCLOPROPANE

Isomerization accompanying alkylation; the reaction of benzene with *n*- and isopropylcyclopropane; the synthesis of *n*- and isopropylcyclopropane. H. Pines, W. D. Huntsman and V. N. Ipatieff. bibliog Am Chem Soc J 75:2311-15 My 20 '53

ISOPROPYL ether

Ternary system; isopropyl ether-HCl-H_2O. D. E. Campbell, A. H. Laurene and H. M. Clark. bibliog Am Chem Soc J 74:6193-6 D 20 '52

ISOPROPYLIDENE

2 : 3-4 : 5-Di*iso*propylidene derivatives of aldehydo-L-xylose and L-xylitol. E. J. Bourne, G. P. McSweeney and L. F. Wiggins. Chem Soc J p3113-14 Ag '52

Formation of 3-methyl 1 : 2-*iso*propylidene xylofuranose. R. A. Laidlaw. Chem Soc J p2941-3 Jl '52

*iso*Propylidene derivatives of glucosone. S. Bayne, G. A. Collie and J. A. Fewster. Chem Soc J p2766-71 Jl '52

*iso*Propylidene derivatives of hexahydric alcohols; *iso*propylidene derivatives of L-iditol. E. J. Bourne, G. P. McSweeney and L. F. Wiggins. Chem Soc J p2542-6 Jl '52

ISOPROPYLLITHIUM

Reaction of isopropyllithium and *t*-butyllithium with simple olefins. P. D. Bartlett, S. Friedman and M. Stiles. bibliog Am Chem Soc J 75:1771-2 Ap 5 '53

ISOPSEUDOCUMENOL

Aromatization and rearrangement of cyclic ketones; 2,3,5- and 3,4,5-trimethylphenol from isophorone. F. M. Beringer and E. J. Geering. bibliog Am Chem Soc J 75:2633-5 Je 5 '53

ISOPULEGOL

Stereoisomerism of isopulegol hydrates and some analogous 1,3-diols. H. E. Zimmerman and J. English, jr. bibliog Am Chem Soc J 75:2367-70 My 20 '53

ISOQUERCITRIN

Isolation and identification of quercetin and isoquercitrin from black currants (ribes nigrum). B. L. Williams, C. H. Ice and S. H. Wender. Am Chem Soc J 74:4566-7 S 20 '52

Synthesis of isoquercitrin. C. H. Ice and S. H. Wender. bibliog Am Chem Soc J 74:4606 S 20 '52

ISOQUINOLINE

Chloromethylation of eugenol and the preparation of some new *iso*quinoline bases. G. R. Clemo and R. W. Temple. Chem Soc J p678-83 F '53

*iso*Quinoline alkaloids; the oxidation of tetrahydropapaveroline. J. Harley-Mason. Chem Soc J p 1465-6 My '53

8-Nitro-7-methoxyisoquinoline. M. Kulka. Am Chem Soc J 75:3597 Jl 20 '53

Synthesis of 1-alkyl-1 : 2 : 3 : 4-tetrahydro-2-3′ - indolylmethyl-6 : 7-dimethoxy*iso*quinolines and the ready cleavage of their methiodides. J. M. Osbond. Chem Soc J p 1648-50 My '53

Synthesis of isoquinolines by the use of acetamidomalonic ester. A. Galat. bibliog Am Chem Soc J 75:1738-9 Ap 5 '53

Synthesis of N-methylmorphinane. C. F. Koelsch and N. F. Albertson. bibliog Am Chem Soc J 75:2095-7 My 5 '53

Use of iodine and potassium acetate in the dehydrogenation of tetrahydro*iso*quinoline; the synthesis of 7-nitro*iso*quinoline. M. D. Potter and E. P. Taylor. Chem Soc J p 1320-1 Ap '53

ISORUBIJERVINE

Skeleton of *iso*rubijervine. D. Burn and W. Rigby. Chem Soc J p963-4 Mr '53

Structure of isorubijervine; conversion to solanidane and solanidane-3β-ol. F. L. Weisenborn and D. Burn. bibliog Am Chem Soc J 75:259-62 Ja 20 '53

Veratrine alkaloids; the structure of isorubijervine; conversion to solanidine. S. W. Pelletier and W. A. Jacobs. bibliog Am Chem Soc J 75:4442-6 S 20 '53

ISOTHIOCYANATES

Exchange reactions in volatile isocyanates and isothiocyanates of silicon, germanium and phosphorus. H. H. Anderson. bibliog Am Chem Soc J 75:1576-8 Ap 5 '53

ISOTOPES

Activation cross sections measured with antimony-beryllium photoneutrons. C. Kimball and B. Hamermesh. Phys R 89:1306 Mr 15 '53

α-Energy systematics and proton shells for heavier nuclei. S. Sengupta. bibliog Phys R 87:1136-7 S 15 '52

Applicability of isotopes for specific uses. Elec Eng 72:67 Ja '53

Comparison of the magnitudes of the isotope intermolecular effects in the decarboxylations of malonic-1-C^{14} acid and malonic-2-C^{14} acid at 154°. G. A. Ropp and V. F. Raaen. bibliog Am Chem Soc J 74:4992-4 O 20 '52

Conservation of isotopic spin in nuclear reactions. R. K. Adair. bibliog Phys R 87:1041-3 S 15 '52

Determination of the age of lepidolites by the method of isotope dilution. G. L. Davis and L. T. Aldrich. bibliog Geol Soc Bul 64:379-80 Mr '53

Effect of isotopic substitution on the entropy, enthalpy, and heat capacity of ideal gases; systems in thermal equilibrium; chemically reacting systems. J. Bigeleisen. J Chem Phys 21:1333-9 Ag '53

Effects of isotopic substitution on the rates of chemical reactions. J. Bigeleisen. bibliog J Phys Chem 56:823-8 O '52

Electromagnetic separation of isotopes. il Engineering 175:475 Ap 10 '53

Enrichment of isotopes by difference in rates for irreversible isotopic reactions. R. B. Bernstein. bibliog diag J Phys Chem 56:893-6 O '52

Formulation of isotopic splitting in terms of the reciprocal kinetic energy matrix. W. J. Taylor. J Chem Phys 21:763-4 Ap '53

Handling long-lived isotopes a serious atomic-age problem. Chem & Eng N 30:4615-16 N 3 '52

Hot atom chemistry of the alkyl bromides; absence of effects due to high radiation density: isotope separation in solids. F. S. Rowland and W. F. Libby. bibliog J Chem Phys 21:1495-9 S '53

Ionic hydration; an isotopic fractionation technique. H. M. Feder and H. Taube. J Chem Phys 20:1335-6 Ag '52

Isotope effect in the oxidation of a secondary carbinol. W. A. Bonner and C. J. Collins. bibliog Am Chem Soc J 75:2308-11 My 20 '53

Isotope effects during catalytic hydrogenations. W. A. Bonner and C. J. Collins. bibliog Am Chem Soc J 75:4516-18 S 20 '53

Isotope shift anomalies and nuclear structure. L. Wilets and others. bibliog diags Phys R 91:1488-500 S 15 '53

Isotope shift in neutral oxygen. L. W. Parker and J. R. Holmes. bibliog Opt Soc Am J 43:103-9 F '53

Isotopic exchange reactions in acetic acid and acetic anhydride. E. A. Evans, J. L. Huston and T. H. Norris. bibliog diags Am Chem Soc J 74:4985-91 O 20 '52

Magnetic scanning method for investigating hyperfine structure and isotope shift. F. Bitter and others. Phys R 91:421 Jl 15 '53

Method of time-free solutions for radioactive decay and radionuclide production. L. Gold. J Ap Phys 24:88-90 Ja '53

Modified isotopic exchange rate expression. R. E. Johnson. J Chem Phys 21:1405-6 Ag '53

Nonradiogenic isotopes in geology; a review. E. Ingerson. Geol Soc Bul 64:301-73 bibliog(p366-73) Mr '53

Nuclear magnetic resonance of aligned radioactive nuclei. N. Bloembergen and G. M. Temmer. bibliog Phys R 89:883 F 15 '53

Primer on radioisotopes. G. D. Calkins and R. L. Belcher. il diags Product Eng 23:177-84 O '52

Production of fissionable isotopes in a thermal reactor. L. B. Robinson. bibliog Phys R 90:1054-7 Je 15 '53

Safe, low-cost radioisotopes now available to all laboratories. Can Chem Process 37:75 Ag '53

Significance of isotopic reactions in rate theory. H. Eyring and F. W. Cagle, jr. bibliog J Phys Chem 56:889-92 O '52

Two-fluid models of superconductivity with application to isotope effects. P. M. Marcus and E. Maxwell. bibliog Phys R 91:1035-42 S 1 '53

Vibrational intensities; the use of isotopes. B. Crawford, jr. bibliog J Chem Phys 20:977-81; Discussion. J. C. Decius. 1039 Je '52

See also
Deuterium
Radioactivity
also subdivision Isotopes under names of elements, e.g.
Beryllium
Carbon
Cobalt
Helium
Lead
Oxygen
Potassium
Rare earth metals
Sulfur
Uranium

Industrial applications

Check these uses for radioisotopes. J. Kohl. bibliog il diags Pet Refiner 31:117-19 N '52

Hot ideas for better metal processing. il Mod Ind 24:135-6 O '52

How you, too, can use radioisotopes. N. Weissman. il Factory Management 111:84-95 Ap '53

Industrial radioactivity, a new tool for the engineer. D. C. Brunton. il diag Can Chem Process 37:42+ Ap '53

Industrial use of radioactive isotopes; report of symposium. Metal Prog 64:105-6 S '53

Isotopes aid sanitation. il Nat Safety N 67:76 Ap '53

Locating lost dipper teeth by radioactivity. il Min Cong J 39:79 Ag '53

On the firing line; atomic isotope trade, a going concern. J. Chamberlain. Barron's 33:3+ My 18 '53

Putting the atom to work in industry; radioactive isotopes. Bsns W p68+ O 25 '52

Radioactive spot makes tachometer for high temperature use. R. L. Belcher. diag Chem Eng 59:204 D '52

Radioisotope; new tool for industry. T. Metaxas. Iron Age 170:50-1 O 23 '52

Radioisotope projects. Automotive Ind 107:53+ O 15 '52

Radioisotopes in process instrumentation. J. Kohl. bibliog il diags Chem Eng Prog 48:611-16 D '52

Radioisotopes solve glass problems. J. V Fitzgerald. bibliog il Cer Ind 59:72-4+ N '52

Some possible applications of radioisotopes in the pulp and paper industry. E. E. Dickey. Tappi 36:sup 108A-11A Ja '53

Symposium on the use of radioisotopes in soil mechanics. (Special tech. pub. no. 134) il diags Am. soc. for testing materials, 1916 Race st, Philadelphia 3 '53

Use of radioactive isotopes by industry. il diags Mill & Factory 53:75-9 Ag '53

Use of radioisotopes in pulp and paper mills. L. Walter. Paper Ind 35:75-6. Ap '53

You can get better case depth measurements with radioactive isotopes. A. D. Kirshenbaum and H. C. Boynton. bibliog il diag Iron Age 171:138-40 My 14 '53

Tables

Table of isotopes. J. M. Hollander and others. Rs Mod Phys 25:469-651 bibliog(p613-51) Ap '53

ISOVALINE

Optical enantiomorphs of isovaline. C. G. Baker and others. bibliog Am Chem Soc J 74:4701-2 S 20 '52

ISRAEL

Contemporary design in Israel. S. R. Mozes. il map plans Arch Rec 112:151-8+ N '52

See also
Education—Israel
Immigration and emigration—Israel
Petroleum—Israel
Petroleum laws and regulations—Israel
Telephone—Israel

Biography

Who's who in Israel, 1952. 4th ed 952p $25 Who's who in the state of Israel pub. house, Tel Aviv, Israel '52

ISRAEL—*Continued*

Commerce

Israel plagued with continuing balance-of-payment problems. For Comm W 48:6+ O 6 '52

Israel sets up reparations corporation to purchase and import German goods. For Comm W 50:7 Jl 20 '53

Economic conditions

Neither milk nor honey. map Economist 167:202-3 Ap 25 '53

Economic policy

Israel; the problem of productivity. Economist 167:605-6 My 30 '53

Foreign relations

Czechoslovakia

Jerusalem answers Prague. Economist 165:701 D 6 '52

Russia

Israel and the Russians. Economist 166:645 Mr 7 '53

Industries and resources

Oil prospects of Israel. M. W. Ball and D. Ball. maps diags Am Assn Pet Geologists Bul 37:1-113 bibliog(p 109-11) Ja '53

Politics and government

Jerusalem answers Prague. Economist 165:701 D 6 '52

ITACONIC acid

Coupling of aconitic acid and itaconic acid with certain diazonium chlorides. K. B. L. Mathur, M. Krishnamurti and U. K. Pandit. bibliog Am Chem Soc J 75:3240-1 Jl 5 '53

Itaconic acid by fermentation with aspergillus terreus. V. F. Pfeifer, C. Vojnovich and E. N. Heger. bibliog flow sheet Ind & Eng Chem 44:2975-80 D '52

Itaconic acid derivatives of sulfanilamide. P. L. Paytash, M. J. Thompson and M. E. Fykes. Am Chem Soc J 74:4549-52 S 20 '52

ITALY

See also

Aeronautics—Military—Italy

Electric plants (central stations)—Italy

Gas, Natural—Italy

Hydroelectric plants—Italy

Petroleum—Italy

Political parties—Italy

Commerce

Italian foreign trade deficit large. For Comm W 49:3+ F 9 '53

Italian trade with Germany increases. For Comm W 50:2 Jl 27 '53

Italy's foreign trade deficit runs high. For Comm W 48:4 O 6 '52

Economic conditions

Decision in Italy. L. J. Wollemborg. Barron's 33:3 Je 1 '53

Economic conditions abroad. For Comm W 48:7+ D 8 '52; 49:3+ F 9; 5 My 25 '53

European competition strengthens as Korean boom fades. il Steel 131:76-7 D 8 '52

Italian balance sheet. Economist 165:307-8 N 1 '52

Economic relations

United States

$22 million from MSA allotted. For Comm W 49:5 Je 8 '53

Foreign relations

Italian eyes on Tito. Economist 166:882-3 Mr 28 '53

Politics and government

De Gasperi's dilemma. Economist 166:66-7 Ja 10 '53

Fascism in Italy. Economist 166:426-7 F 14 '53

Italy votes its bill. Economist 167:11 Ap 4 '53

Passing of a generation. Economist 165:831-2 D 20 '52

Roman question. Economist 165:699-701 D 6 '52

Signor de Gasperi holds his own. Economist 165:37-8 O 4 '52

See also

Elections—Italy

IVES, Frederic, medal

Ira S. Bowen, Frederic Ives medalist for 1952. Opt Soc Am J 42:789-94 N '52

IVES, Irving McNeil, 1896-

To stop job bias, amend Taft-Hartley. Bsns W p 177 My 9 '53

IZARD, Emmette F. 1904-

High polymer research earns Schoellkopf medal for Izard. por (cover) Chem & Eng N 31:1754 Ap 27 '53

J

JACKS

Air jacks push pipe through embankment; illustrations with text. Constr Methods 35:78-9 Ja '53

Built-in jacks position new barge. il Oil & Gas J 52:176-7 Je 22 '53

Dock that jack built. il Manuf Rec 122:32-3+ My '53

Trolley jack for underfloor vehicle engines; Guy motors, limited. il Engineering 175:717 Je 5 '53

JACKS, Hydraulic. See Hydraulic jacks

JACKSON, Roscoe B., memorial laboratory, Bar Harbor, Maine

Training at Bar Harbor. C. C. Little. Science 117:sup3 Ja 9 '53

JACKSONVILLE, Florida

Bridges

John E. Mathews bridge is completed. Eng N 150:50 Ja 22 '53

Water supply

Water from inside-city wells. C. E. Wright. il Pub Works 84:70-1 Mr '53

JACOBIANS

Jacobian method for the rapid evaluation of thermodynamic derivatives, without the use of tables. R. C. Pinkerton. bibliog J Phys Chem 56:799-800 Je '52

JACOBS, F. L., company

F. L. Jacobs slugs it out? Bsns W p32 Ap 18 '53

JAGUAR cars, ltd.

Making the Jaguar Britain's hot export. il Bsns W p 140-2 N 1 '52

JAILS. See Prisons

JAM. See Jelly, jam, etc.

JAMAICA

Economic conditions

Economic conditions abroad. For Comm W 48:6+ D 15 '52

JAPAN

See also

Aeronautics, Commercial—Japan

Aeronautics, Military—Japan

Airlines—Japan

Bonds, Government—Japan

Ceramic industries—Japan

Chemical industries—Japan

Debts, Public—Japan

Electricity supply—Japan

Insurance—Japan

Investment trusts—Japan

Investments, Foreign (in Japan)

Machine tool industry—Japan

Mines and mineral resources—Japan

Paper industry and trade—Japan

Petroleum industry and trade—Japan

Securities—Japan

Steel industry and trade—Japan

Tea industry and trade—Japan

Trade unions—Japan

Wages—Japan

Commerce

Japan and sterling markets. Economist 167:113 Ap 11 '53

Japan bucks at trade barriers; businessmen lobby for more China trade. Bsns W p 112-13 N 29 '52

Japan sets six-month import budget; tightens controls over imports. For Comm W 49:7 My 25 '53

JAPAN—Commerce—*Continued*

Japanese sail into West Coast markets. il Bsns W p 142-4+ Je 6 '53

Japanese trade deficit declines; export advance fairly general. For Comm W 49:6 Ap 27 '53

Japanese trade deficit up despite upswing in exports to dollar area. For Comm W 49:4 Je 29 '53

Japanese trade shows $756 million deficit. For Comm W 49:7 Ap 13 '53

More trouble ahead for Japan. il Bsns W p 160-1 Ap 25 '53

Tokyo prospects for markets in Latin America. Bsns W p 144 My 2 '53

Commercial policy

Control on international trade. For Comm W 48:7 N 10 '52

Defenses

Behind Japan's vote; rearmament question. Economist 167:373-4 My 9 '53

USAF tightens Japanese air defenses. R. P. Martin. il Aviation W 58:13-16 F 16 '53

Economic conditions

Economic conditions abroad (cont). For Comm W 49:4 Ja 19; 3+ F 23; 4 Mr 16; 8 Ap 20; 6 Je 1; 3+ Je 29; 50:3 Jl 20 '53

Many problems still beset Japanese economy. G. R. Collins and M. Nadler. Comm & Fin Chr 177:1122 Mr 12 '53

Private Point four in Japan. J. B. Cohen. il Fortune 47:148-9+ Ap '53

Trends in Japan. Nat City Bank p 127-31 N '52

Economic policy

Japan's economic prospects. Economist 167: 669-70 Je 6 '53

Economic relations

United States

Credit of $40 million arranged. For Comm W 49:27 My 18 '53

Japan, Spain granted credit to buy cotton. For Comm W 49:4 Ap 27 '53

Japan's economic prospects. Economist 167: 669-70 Je 6 '53

United States and Japan sign treaty of friendship, commerce, and navigation. For Comm W 49:5 Ap 20 '53

Industries and resources

Comeback for combines; mergers in Japan. Bsns W p 164-5 Mr 14 '53

Japan, a tough competitor; British survey, Overseas economic survey of Japan. Bsns W p 112 Jl 18 '53

Japanese cameras bid for the quality market. il Bsns W p 128-30 Mr 7 '53

Made in Japan; fast freighter; a U.S. designed fighting flivver; illustrations with text. Bsns W p 163 O 25 '52

Private Point four in Japan. J. B. Cohen. il Fortune 47:148-9+ Ap '53

Politics and government

Japanese election results. Economist 167:213 Ap 25 '53

More trouble ahead for Japan. il Bsns W p 160-1 Ap 25 '53

Political troubles in Japan. Economist 166: 348 F 7 '53

Restless Japan. Economist 166:785-6 Mr 21 '53

Rivals to Mr Yoshida. Economist 167:80 Ap 11 '53

Socialist gains in Japanese elections. Economist 165:109-10 O 11 '52

Stormy days for Mr Yoshida. Economist 165: 461 N 15 '52

JAPANESE

Rh and ABO blood group distributions in Japanese and Ethiopians. G. J. Stein and others. biblog Science 117:100-2 Ja 30 '53

JASPER

Cleveland-Cliffs starts second jasper program at Republic. il Blast F & Steel Pl 41:331 Mr '53

JASPER, Indiana

Sewerage

Community effects of household garbage grinding. flow diag il Pub Works 84:52-3+ Ja '53

JAUNDICE

Studies of spread patterns of infectious hepatitis. Pub Health Rep 68:130-1 Ja '53

JAW

Wounds and injuries

Compensation laws in relation to dental and jaw injuries. L. S. Morvay. Ind Med 21: 473-6 O '52

JEFFERSON electric company

Stock offered. Comm & Fin Chr 176:1674 N 3 '52

JELLY, jam, etc.

Physical chemistry of pectin jelly formation. D. W. Grover. Chem & Ind p 1216-17 D 13 '52

JENKINS, John J., jr.

Turnpike advisor co-ordinates 16 firms. por Eng N 149:79-80 N 6 '52

JENKINS, Rhys, 1859-1953

Sketch. Engineer 195:213 F 6 '53; por Engineering 175:181-2 F 6 '53

JENNESS, Leslie George

Businessmen in the news. por Fortune 46:52 D '52

JENNESS, Robert

Borden award in the chemistry of milk. por(cover) Chem & Eng N 31:429 F 2 '53

JERSEY central power and light company

Bonds offered. Comm & Fin Chr 177:1680-1 Ap 20 '53

JERSEY cloth

Quality changes affect ratios in jersey tricot fabrics. J. H. Blore. diag Textile World 103:101+ Mr '53

Synthetics, boon to knitted jersey fabrics. M. Thal. Mod Textiles Mag 34:63 Jl '53

JET fuel. See Gas turbines, Aircraft—Fuel

JET piercing. See Drilling and boring (earth and rocks)

JET propulsion of aircraft. See Airplanes, Jet propelled; Helicopters—Jet propulsion

JET pulverizer. See Pulverizers

JET stream. See Winds

JETS

Fast jets from collapsing cylinders. W. S. Koski and others. il diags J Ap Phys 23: 1300-5 D '52

Penetration and deflection of jets oblique to a general stream. F. F. Ehrich. diags J Aeronautical Sci 20:99-104 F '53

Transport of momentum, mass, and heat in turbulent jets. L. G. Alexander and others. il diags Ill U Eng Exp Sta Bul 413:1-88 bibliog(76 titles, p85-8) '53 (pa 75c)

JETTIES

Engineering developments in the port of Dublin. il plans diags Engineering 174:814-17 D 26 '52

Jetty for Shell Haven oil refinery. il Engineering 174:705 N 28 '52

Shore protection, New York; unit prices. Eng N 149:99 O 23 '52

Tetrapod; science develops a jetty block. il Eng N 150:32+ Ja 8 '53

JEWEL tea company

Stock offered. Comm & Fin Chr 177:1580-1 Ap 13 '53

JEWELRY trade

Early showing of spring lines. Bsns W p50 D 20 '52

Gold, silver and jewellery industries; report on research progress, 1951-52. Metallurgia 47:311-12 Je '53

Advertising

See also

Watches—Advertising

JEWISH morning journal, New York

Cost factors spelled 30 for Jewish daily. Ed & Pub 86:14 F 7 '53

JEWS in Russia

Fate of the Soviet Jews. map Economist 166:218-19, 289-90 Ja 24-31 '53

Medicine, treason and plot; doctors accused of murder by medical treatment. Economist 166:155 Ja 17 '53

What do the Russian purges mean? J. Cordelli. Mag of Wall St 91:565+ F 21 '53

JIGS

Air bearing smooths drill jig positioning. diag Aviation W 58:40 Je 1 '53

Air-cushion for heavy jigs. C. T. Bower. diags Am Mach 96:162 N 24 '52

JIGS—*Continued*

Angular drill jig. F. E. Riley. diags Tool Eng 31:47-8 O '53

Center-drilling jig for brake cylinders. F. E. Riley. diags Tool Eng 30:46 F '53

Designing jigs for multiple-spindle drilling. F. G. Zagar. il diags Mach 59:179-83 N '52

Drill jig provides universal centering. T. Gray. il Am Mach 97:124 Mr 30 '53

Drill jig with novel indexing feature. R. Mawson. diags Mach 59:197-8 F '53

Jig bores two holes at once. H. Dahl. diags Am Mach 96:142 D 8 '52

Jigs and fixtures; costs for temporary tooling go down with building blocks. il Iron Age 171:171 Je 18 '53

Lever type clamps for jigs and fixtures. W. H. Litten. diags Mach 59:196-7 My '53

Piloted boring tool guided by drill jig. S. E. Wadsworth. diags Am Mach 97:130 F 2 '53

Plate jigs locate drilling operations from hole in work. W. M. Halliday. diags Mach 59: 202-3 Ap '53

Pressure device prevents wobble of workpiece in drill jig. R. A. Petersen. diags Am Mach 97:170 S 14 '53

Self-indexing drill jig. J. Magis-Farnkart. diags Am Mach 97:156 Ap 27 '53

Self-positioning jig cuts drill breakage. R. Double. il diag Am Mach 97:178 Mr 16 '53

Special jig with standard base. R. Mawson. diags Mach 59:195-6 Mr '53

Universal jig fixture system. il Aero Digest 66:56 Ja '53

Versatility in a jig. F. E. Riley. plan diags Steel 131:74-5 D 29 '52

What's ahead the next ten years in tools and tooling: jigs and fixtures. Am Mach 96:C6-7 Mid-N '52

JOB analysis

Analysis and description of high-level jobs. E. N. Hay and D. Purves. Personnel 29: 344-54 Ja '53

Collective-bargaining in the field of job classification. J. D. Schneider. Personnel 30: 49-53 Jl '53

Job analysis and evaluation in the classification of jobs. J. J. Wolf. Sewage & Ind Wastes 25:88-92 Ja '53

Job description; device to eliminate conflicts, gaps, duplicated function. T. A. Langlie. Credit & Fin Management 54:16 D '52

Job evaluation. J. J. Butler and others. Paper Ind 34:1228, 1351, 1459; 35:72, 343-4, 460, 670 Ja-Ap, Je-Jl, S '53

Job evaluation. R. D. Stevens. Manuf Rec 122:33+ Jl '53

Job evaluation in automobile and automotive parts industries. W. R. Spriegel and E. Lanham. (Personnel study no. 5) 188p bibliog(p 185-8) pa $1 College of business administration, Bur. of business research, Univ. of Texas, Austin 12 '53

Job evaluation in automobile and parts plants. E. Lanham. Automotive Ind 108: 50-3+ F 15 '53

Job evaluation procedure. R. A. Smith. N A C A Bul 34:220-9 O '52

Job measurement aids costing. R. F. Ogborn. Am Gas Assn Mo 35:21-2 Ap '53

Policies and practices in job evaluation; survey of 17 aircraft manufacturing companies. E. Lanham. Personnel 29:492-9 My '53

Raising the level of management; a refresher course on supervisory and management duties; Leeds & Northrup co. C. R. Cary and H. H. Carey. Personnel 29:355-60 Ja '53

Salary grade for each point value. D. C. Childs. Personnel J 31:173-5 O '52

Winning acceptance for the job evaluation plan. H. W. Daniels. Personnel 30:30-3 Jl '53

JOB satisfaction

Employee morale depends on job satisfaction. D. Williams. Textile World 103:117+ O '53

Some causes of executive job dissatisfaction. A. M. Fisher. Advanced Management 17:9-12 S '52

JOB work

Materials control plan for a job shop; Specialty assembling & packing co. S. Eisenberger. Factory Management 111:99-101 O '53

See also

Printing, Practical—Job work

Accounting

Handling occasional custom work free of fixed burden. R. W. Sauber. N A C A Bul 34: 401-6 N '52

JOBBER helps

Pointers for manufacturers on a distributor's open house. L. H. Brendel. Sales Management 69:81-2+ D 15 '52

JOBBER relations

Jobber associations start ball rolling for Consult your supplier month. Nat Pet N 45:27-8 Ja 21 '53

Pan-Am listens when jobbers speak; Distributor council program. J. Barton. Nat Pet N 45:46-50 Mr 4 '53

Productive teamwork between manufacturer and distributor; Polyken. G. C. Stineback. il Sales Management 69:40+ O 15 '52

Solicit your distributors' views of yourself! L. H. Brendel. Sales Management 70:44+ F 1 '53

See also

Advertising—Jobbers, Appeal to

JOBBERS

Distributor shows retailers how to become better merchants; Bass merchandising and equipment fair. E. J. Dever, jr. il Ptr Ink 241:68-70 N 7 '52

New in the distribution scheme; the ethical drug jobber. E. Gidlow. il Sales Management 69:82-3+ D 1 '52

Why super markets use rack jobbers. M. M. Zimmerman. il Sales Management 69:108+ O 15 '52

See also

Advertising—Jobber cooperation

Jobber relations

Market research, Jobbers'

Salesmen, Jobbers'

JOBBERS, Wagon

Wagon jobbers grow big; they're now doing a billion a year. D. J. Atchison. il Sales Management 69:40-5 D 15 '52

JOBBERS' exhibitions. See Exhibitions, Jobbers'

JOBBERS' market research. See Market research, Jobbers'

JOHN, Alphons J.

Winner of the Industrial press award. por Mach 59:266+ Jl '53

JOHN HANCOCK mutual life insurance company

Promotions at Hancock home office. East Underw 54:3 F 13 '53

JOHNS HOPKINS university

Applied physics laboratory

Improving the internal information services in scientific research organizations. S. Herner. bibliog Special Lib 44:15-19 Ja '53

JOHNS-MANVILLE corporation

Five stocks with better-than-average prospects; with comparative balance sheet items. Mag of Wall St 91:126 N 1 '52

Record sales reported. Comm & Fin Chr 177: 625 F 9 '53

Sound stocks with above-average yield; with comparative balance sheet items. Mag of Wall St 91:709 Mr 21 '53

JOHNSON, Harold M.

H. Johnson named vice president Naftone, inc. por Paint Oil & Chem R 115:34 N 6 '52

JOHNSON, Wilfrid Estill, 1905-

Sketch. Mech Eng 75:262 Mr '53

JOHNSON wire works, limited

Brief histories of some of our original 1903 advertisers or their successors. Pulp & Pa of Can 54:294 My '53

JOHNSTON oil and gas company

Stock sold. Comm & Fin Chr 177:2784-5 Je 29 '53

JOINT construction agency. See United States—Armed services—Joint construction agency

JOINT tenancy

Why joint ownership? estate tax saving may incur income tax penalty. R. Wallace. Trusts & Estates 92:88-90 F '53

JOINTS

Annual handbook of product design for 1953; fastening and joining. il diags Product Eng Hdbk p G 1-25+ '53

Bonded joints in the construction of metal aircraft; abstract. Product Eng 23:276+ O '52

Connections for welded continuous portal frames. A. A. Topractsoglou and others. bibliog il diags Welding J 30:sup359-84, 397-405; 31:sup543-60 Jl-Ag '51, N '52

Design of glued joints. S. Gunthorp. il diags Machine Design 25:193-7 O '53

Estimating the weight of joints in cylindrical vessels; reference book sheet. V. Tatarinov. diags Product Eng 23:213, 215 D '52

Expansion joints in base flashings. il Sheet Metal Worker 44:63-4 Ap '53

Gasket materials and joint design; drawings with text. E. C. Frazier. Product Eng Hdbk p F 16-17 '53

Here's a better way to design splices; relative gage method. F. W. Schutz, jr. il diags Eng N 150:41-2 Ja 8 '53

Hf brazes high-vacuum joints; Western Electric. H. W. Garbe. il diags Am Mach 97:131-5 Mr 16 '53

High-strength bolts, a new concept in structural connections. T. R. Higgins and E. J. Ruble. il Civil Eng 22:760-3+ S '52

Improving fatigue resistance of bolted joints; drawings with text. J. P. Vidosic. Product Eng 24:190-1 Ap '53

Joint design for brazing. W. J. Van Natten. diags Welding J 31:1023-8 N '52; Abstract. Iron Age 171:95-8 Ja 15 '53

Watch expansion and contraction during welding. B. H. Higgs. diags Welding J 32:230-1 Mr '53

What's ahead the next ten years in joining and assembly. Am Mach 96:F-F9 Mid-N '52

See also

Aluminum—Joining to steel, etc.
Brazing
Electric cables—Joints
Gaskets
Glass—Joining to metal
Glue
Packing
Pavements, Concrete—Joints
Pipe joints
Plastic materials—Joining
Rail joints
Riveted joints
Solder and soldering
Welding

Testing

Welded joints between dissimilar metals in high-temperature service. R. W. Emerson and W. R. Hutchinson. il diag Welding J 31: sup 126-41 Mr '52; Same cond. Metal Prog 63:194-6+ Ja '53

JOINTS, Universal

Universal joint drives. A. H. Rzeppa. il diags Machine Design 25:162-70 Ap '53

JONAS, Carl, 1913-

Author meets businessman. por Fortune 46:111+ D '52

JONES, Duane, company

Defendants argue Duane Jones decision in appellate court. B. Tolk. Ptr Ink 242:33+ Mr 13 '53

Defendants in Duane Jones case will ask dismissal of verdict for lack of evidence. B. Tolk. Ptr Ink 241:35 N 7 '52

Did they conspire to destroy the Duane Jones agency? verbatim testimony. B. Tolk and R. Webster. Ptr Ink 241:32-32D, 33+ O 24; 36-7+ O 31 '52

Jury gets Duane Jones case. B. Tolk. Ptr Ink 241:34-34B, 35 O 31 '52

Justice Cohalan upholds $300,000 verdict favoring agency head Duane Jones. B. Tolk. Ptr Ink 241:39 N 21 '52

Justices emphasize three points in hearing $300,000 appeal. B. Tolk. Ptr Ink 242:32 Mr 27 '53

JONES, Duane Dodge

Businessmen in the news. por Fortune 46:48 D '52

JONES, Paul

William Jewell college honors Paul Jones. pors Nat Safety N 67:42+ Ja '53

JONES, Welton Paul, 1901-

How one president relaxes. W. Norris. pors Am Bsns 23:14-15+ S '53

JONES, William Alton, 1891-

Businessmen in the news. por Fortune 46:57 O '52

JORDAN, Harvey Bryant, 1895-

They're reshuffling Big Steel. por Bsns W p27-8 D 6 '52

JORDAN. See **Hashemite Jordan kingdom**

JOSHI effect

Dependence of Joshi effect on electronic part of the discharge current. N. A. Ramaiah and others. bibliog diags J Chem Phys 21:1160-5 Jl '53

Influence of light on the secondary emission in a low frequency electrodeless discharge; Joshi effect. A. P. Saxena and N. A. Ramaiah. bibliog diags J Chem Phys 20:1342 Ag '52

Seat of Joshi effect in a/c silent discharges. S. R. Khastgir. J Chem Phys 20:1052-3 Je '52

JOULE, James Prescott, 1818-1889

Examination of Joule's work on the metallurgy of amalgams. H. J. Axon. Metallurgia 47:27-8 Ja '53

JOULE-THOMSON effect

Isobaric heat capacity; analytical determination from Joule-Thomson coefficients. K. Yang. Ind & Eng Chem 45:786-8 Ap '53

Use of the Joule-Thomson effect to measure the work equivalent of heat; thermodynamic theory. J. R. Roebuck. bibliog J Ap Phys 23:1119-21 O '52

JOURNAL of agricultural and food chemistry (periodical)

Why the Journal of agricultural and food chemistry. W. J. Murphy. Chem & Eng N 31:1271 Mr 30 '53

JOURNAL of industrial economics (periodical)

Announcement. J Bsns 25:267 O '52

Journal of industrial economics. P. W. S. Andrews. J Marketing 17:183-4 O '52

JOURNALISM

See also

Freedom of the press
House organs
Libel and slander
Newspapers
Periodicals
Photography, Journalistic
Reporting

Study and teaching

History course needed; must be taught better. D. Bentel. Ed & Pub 85:52 D 13 '52

Providence journal uses 60 dailies in schools. T. S. Irvin. il Ed & Pub 85:50 N 1 '52

See also

Journalism education
Journalism schools
Journalism teachers
Photography, Journalistic—Study and teaching

JOURNALISM awards

Five journalists get Maria Cabot medals. Ed & Pub 85:14 O 11 '52

SDX award winners announced for '52. Ed & Pub 86:50 Ap 11 '53

JOURNALISM education

Boston University panels discuss mutual responsibilities. Ed & Pub 85:42 N 29 '52

Demand for starting skill poses problem. D. Bentel. Ed & Pub 85:46 D 6 '52

Syracuse gives course for writer-missionary. D. Bentel. Ed & Pub 85:52 O 18 '52

Cooperative plan

Students, publishers like internship plan. D. Bentel. Ed & Pub 85:48-9 N 1; 64-5 N 8; 46+ N 15 '52

JOURNALISM ethics

See also

Newspaper ethics

JOURNALISM schools

Accrediting commission to work with ASJA. D. Bentel. Ed & Pub 86:12+ F 21 '53

ACEJ announces new refresher program. D. Bentel. Ed & Pub 86:30 Ja 3 '53

ACEJ halts accrediting, gives new plan trial. D. Bentel. Ed & Pub 85:48 N 22 '52

ASJSA opposes ACEJ accrediting proviso. D. Bentel. Ed & Pub 85:36 D 27 '52

Editor's memo to schools helps young journalists. T. S. Irvin. Ed & Pub 85:49 D 20 '52

JOURNALISM schools—*Continued*
More students, but journalism enrollments drop. D. Bentel. Ed & Pub 86:57 Ja 10 '53
Pinkham tells reasons for accrediting switch. D. Bentel. Ed & Pub 86:31 F 14 '53

JOURNALISM teachers
They found teachers all right; 1,500 of 'em. D. Bentel. Ed & Pub 86:58 Ap 11 '53

JOURNALISTS
See also
Sigma delta chi

JOURNALISTS, World congress of. See World congress of journalists

JOY manufacturing company
12 promising specialties. P. Dobbs. Mag of Wall St 92:120 Ap 18 '53

JOYCE, Adrian D. 1872-
Glidden's president passes 80th pylon going strong. por Paint Oil & Chem R 115:50 D 4 '52

JUDGES
Salaries
Privilege for judges. Economist 166:792+ Mr 21 '53

JUDIS, Bernice
WNEW New York; radio's Little David doesn't fear tv. por Fortune 46:132-3+ O '52

JULOLIDINE
Preparation of bis-2-cyanoethyl derivatives of aromatic primary amines, and their conversion into 1 : 6-diketojulolidines. J. T. Braunholtz and F. G. Mann. Chem Soc J p3046-51 Ag '52; p 1817-24 Je '53

JUNCTION transistor. See Transistors

JUNIOR achievement movement
Cite Junior banks, firms. il Burroughs Clearing House 37:21+ Jl '53
How Cincinnati Gas builds good will by Junior Achievement program. E. C. Hanford. il Gas Age 111:23-4+ Mr 26 '53
How juniors are learning about business, U.S.A. style. il Ry Age 133:64-6 N 17 '52
Junior Achievement winds up another year. G. K. Rose, jr. il Bankers Mo 70:10+ My '53
Junior banks set goals. Burroughs Clearing House 37:11-12 F '53
Modern industry and Junior Achievement; Teenster magazine. Mod Ind 25:5-6 Ap '53
New ideas for new generations. G. K. Rose. il Dun's R 60:25+ O '52

JUNIOR board of directors. See Corporations—Directors, Junior

JUNIPER
Podophyllotoxin from juniperus species; savinin. J. L. Hartwell and others. bibliog Am Chem Soc J 75:235-6 Ja 5 '53
Structure of silicicolin. J. L. Hartwell, A. W. Schrecker and J. M. Johnson. Am Chem Soc J 75:2138-40 My 5 '53

JUPITER (planet)
Amateur scientist; observation of Jupiter. A. G. Ingalls. il Sci Am 188:107-8+ My '53

JURKOSKI, Frank
This was Jurkoski's biggest assignment; with Eisenhower to Korea. J. L. Collings. por Ed & Pub 85:58 D 20 '52

JUST, F. Ward
Rockford dailies bought by E. K. Todd and Justs. por Ed & Pub 85:11+ N 1 '52

JUSTICE, Administration of
Death penalty and the administration of justice. H. B. Ehrmann. bibliog Ann Am Acad 284:73-84 N '52
Errors of justice. O. Pollak. bibliog Ann Am Acad 284:115-23 N '52
Legal aid and democracy. il Fortune 46:142-3+ O '52

JUTE
Air flow method of measuring the specific surface of jute; study of chemically treated fibres. M. M. Roy. bibliog Textile Inst J Trans 44:T90-4 Mr '53
British jute mills now active following 1952 drop in trade. For Comm W 49:23 Ap 13 '53
Composition of tamarind seed kernel powder. P. B. Sarkar and A. K. Mazumdar. bibliog Textile Inst J Trans 43:T453-4 Ag '52; Discussion. il 44:T401-3 Ag-S '53
Effect of filament length on the spinning performance of jute fibre. S. B. Bandopadhyay and S. S. Paul. Textile Inst J Trans 44:T386-90 Ag-S '53; Correction. 44:T481 O '53
Electricity in the jute industry. il Elec R (Lond) 152:1205-9 My 29 '53
Jute industries; manufacture of carpet and twine. il Elec R (Lond) 153:273-6 Ag 7 '53
Jute sacks and bags. H. L. Parsons. bibliog diags Textile Inst J 44:P347-84; Discussion. P384-7 Ag '53
Jute weaving. il Elec R (Lond) 153:89-91 Jl 10 '53
Pakistan and jute; sharp tightening of import controls. Economist 165:721 D 6 '52
Retention of organic liquids by jute. W. A. Bell. bibliog Textile Inst J Trans 43:T595-7 D '52
Testing
Mechanical properties of jute. M. M. Roy and R. R. Mukherjee. bibliog Textile Inst J Trans 44:T36-52 Ja '53

JUTE industries, limited
Statement by the chairman. W. G. N. Walker. Economist 166:770-1 Mr 14 '53

JUVENILE detention homes
Dependent unit, Riverside County juvenile hall; Arlington, Calif. il plans Arch Rec 112:162-4 S '52

K

KACHKAROFF sulfuric acid process. See Sulfuric acid—Manufacture

KAEMPFEROL
Analysis
Isolation and identification of kaempferol and quercetin from strawberries (fragaria chiloensis). B. L. Williams and S. H. Wender. bibliog Am Chem Soc J 74:5919-20 D 5 '52

KAISER, Edgar Fosburg, 1908-
Businessmen in the news. por Fortune 47:61 Ap '53

KAISER, Henry J. 1882-
Air force cancels Kaiser's C-119 and C-123 contracts as result of Senate investigation. Am Mach 97:176 Jl 6 '53

KAISER aluminum and chemical corporation
Kaiser Aluminum; big expansion program strengthening its competitive position; with tables of financial data. G. P. Edgar. Barron's 32:13-15 D 29 '52

KAISER-FRAZER corporation
Big three; will it be big four? K-F-Willys merger creates new automotive giant. Iron Age 171:159 My 7 '53
In the red again. Bsns W p 126 My 2 '53
Inventory adjustments in interim statements; accounting lessons in the Kaiser-Frazer v. Otis case. J Account 94:727-8+ D '52
Merger; K-F, Willys take vows. Iron Age 171:109 Ap 2 '53
Two contracts. Bsns W p33 Je 20 '53
U.S. Supreme court upholds Otis & co. in Kaiser-Frazer suit. Comm & Fin Chr 176:1522 O 23 '52
Why Kaiser bought Willys. Bsns W p32 Mr 28 '53

KAISER motor corporation
Kaiser deposed. Bsns W p33-4 Jl 4 '53

KAMYR, inc.
Kamyr sets up U.S. subsidiary. Paper Tr J 137:47 Jl 24 '53

KANAMITE. See Aggregates

KANIGEN process. See Nickel plating

KANSAS
See also
Gas, Natural—Kansas
Petroleum industry and trade—Kansas

KANSAS CITY, Kansas
Kansas City; factories can't conceal a cowtown. il map Bsns W p 110-14+ F 21 '53
See also
Housing—Kansas City, Kansas

KANSAS CITY, Missouri
Kansas City; factories can't conceal a cowtown. il map Bsns W p 110-14+ F 21 '53
See also
Wages—Kansas City, Missouri

Bridges
Kansas City gets bridge fast. il Eng N 150:35-7 Ap 16 '53

KANSAS CITY power and light company
Bonds offered. Comm & Fin Chr 177:413 Ja 26 '53
Planning picture for Kansas City power & light co. C. M. Little and J. S. Palmer. maps Edison Elec Inst Bul 21:83-7+ Mr '53

KANSAS CITY southern railway
Kansas City Southern; one of the country's most prosperous railroads; with selected financial data, 1939-1951. A. Jansen. Barron's 32:15-17 N 24 '52

KANSAS power and light company
Securities offered. Comm & Fin Chr 177:2679 Je 22 '53

KANSAS river
Army engineers finding many flaws in Kansas River flow-way plan. Eng N 150:26 Ap 23 '53
Flood protection in the Kansas River basin. N. T. Veatch and others. map Am Water Works Assn J 45:685-93 Jl '53; Abstract. Water & Sewage Works 100:348 S '53
Kansas River flow-way plan. N. T. Veatch. Eng N 150:23 My 21 '53
Policy fight brewing over Kansas Basin survey report. map Eng N 150:21-2 Mr 5 '53

KAPLAN, Nathan O. 1917-
Eli Lilly award in biological chemistry. por(cover) Chem & Eng N 31:429 F 2 '53

KAPLAN turbines. See Turbines

KARAYA gum
Structure of karaya gum (cochlospermum gossypium). E. L. Hirst and S. Dunstan. Chem Soc J p2332-7 Ag '53

KARL Fischer reagent. See Fischer reagent

KASHMIR
Kashmir seen from Delhi. Economist 165:32 O 4 '52
Kashmir seen from Karachi. map Economist 164:759 S 27 '52

KAVANAUGH, Earle L. d. 1953
Sketch. por Edison Elec Inst Bul 21:120 Ap '53

KEEFER, Chester Scott, 1897-
HEW key policy post is assumed by Keefer. Oil Paint & Drug Rep 164:4 Ag 17 '53

KEL-F. See Chlorotrifluoroethylene

KELLIN
Furochromones and coumarins; demethylation of xanthotoxin, khellin and khellol with aniline hydrochloride and magnesium iodide. A. Schönberg and G. Aziz. bibliog Am Chem Soc J 75:3265-6 Jl 5 '53

KELLIN, Analogs of
Furano-compounds; some analogues of kellin and visnagin. G. H. Phillips, A. Robertson and W. B. Whalley. Chem Soc J p4951-7 D '52

KELLOL
Furochromones and coumarins; demethylation of xanthotoxin, khellin and khellol with aniline hydrochloride and magnesium iodide. A. Schönberg and G. Aziz. bibliog Am Chem Soc J 75:3265-6 Jl 5 '53

KELVIN, William Thomson, 1824-1907
Dilemma of Lord Kelvin; abstracts. P. I. Dee. Engineering 175:567 My 1 '53; Elec J 150:1547-8 My 1 '53; Elec R (Lond) 152:1013-14 My 1 '53

KEMPER, James S. 1886-
Nominated as ambassador to Brazil. por East Underw 54:34 Je 19 '53

KEMSLEY newspapers, limited
Statement by the chairman. Viscount Kemsley. Economist 167:482-3 My 15 '53

KENDALL company
Higher margins on textiles spark profit rise. Barron's 33:21 Je 1 '53

KENNAMETAL, inc.
Kennametal alloys win acceptance in growing number of industries. Barron's 33:21+ F 2 '53

KENNECOTT copper corporation
Kennecott Copper; low-cost production keeps earnings levels high. C. A. Clark, jr. Barron's 33:23+ Mr 16 '53

KENNEDY, William E.
Sketch. por Am Mach 97:161 Ag 3 '53

KENTUCKY
Topographic mapping in Kentucky. P. M. Miles. Am Soc C E Proc 78[no 151]:1-9 S '52
See also
Coal—Kentucky
Gas, Natural—Kentucky
Oil shales—Kentucky
Petroleum industry and trade—Kentucky

KENTUCKY oil and gas corporation
Stock offered. Comm & Fin Chr 176:2164 D 8 '52

KENTUCKY utilities company
Low earnings pay-out indicates hike in dividend. Barron's 33:31-2 Je 29 '53

KENYA
Climax in Kenya. Economist 167:74+ Ap 11 '53
Emergency in Kenya. map Economist 165:220 O 25 '52
Failing confidence in Kenya. Economist 166:266 Ja 31 '53
Fight against Mau Mau. Economist 166:66 Ja 10 '53
Home rule for Kenya? Economist 166:131-2 Ja 17 '53
Kenya command; forces fighting Mau Mau. Economist 167:140 Ap 18 '53
Kenya takes the strain. Economist 166:409 F 14 '53
Kenya's land. Economist 165:736-7 D 13 '52
Kilawara, Kikuyu and Kenya. Economist 165:599-600 N 29 '52
Life in Kenya. Economist 166:815-16 Mr 21 '53
Mau Mau at war. Economist 167:6 Ap 4 '53
More murders in Kenya. Economist 166:8 Ja 3 '53
New appointments for Kenya. Economist 167:651-2 Je 6 '53
No progress in Kenya. Economist 165:807-8 D 20 '52
Progress report on Kenya. Economist 167:804+ Je 20 '53
Proscribing a party. Economist 167:725-6 Je 13 '53
Roots of Mau Mau. Economist 166:790 Mr 21 '53

KERATIN
Heterogeneity of the keratin fibers. E. H. Mercer. bibliog(34 ref) il diags Textile Res J 23:388-97 Je '53; Discussion. 23:938-9 D '53
Stress relaxation of fibrous materials; kinetics of the reduction of wool keratin by cysteine. E. T. Kubu and D. J. Montgomery. bibliog Textile Res J 22:778-82 D '52
Supercontraction of modified keratin fibers. L. G. Beauregard and others. bibliog Textile Res J 23:642-3 S '53

KEROGEN
Alkaline permanganate oxidation of oil-shale kerogen. W. E. Robinson, H. H. Heady and A. B. Hubbard. bibliog Ind & Eng Chem 45:788-91 Ap '53
Effect of solvent properties in thermal decomposition of oil shale kerogen. W. D. Schnackenberg and C. H. Prien. bibliog Ind & Eng Chem 45:313-22 F '53

KEROSENE
HF extraction; Standard oil co. (Indiana). flow diag Pet Refiner 31:188-9 S '52
Utilization of kerosene stocks for jet fuels by treatment with urea. H. J. Hepp, E. O. Box, jr. and G. C. Ray. bibliog Ind & Eng Chem 45:112-15 Ja '53

KERR, Samuel Logan, 1899-
Sketch. Mech Eng 75:262 Mr '53

KERR-ADDISON gold mines, limited
Security I like best. H. P. Newell. Comm & Fin Chr 176:1914+ N 20 '52

KERR effect
Sound-on-film recording using electrooptic crystal techniques. R. Dressler and A. A. Chesnes. bibliog il diags Soc Motion Picture & Tv Eng J 60:205-16 Mr '53

KERR-MCGEE oil industries, inc.
Convertible debentures offered. Comm & Fin Chr 177:1473-4 Ap 6 '53

KESTNAMINE process. See Carbon dioxide, Liquid—Manufacture

KESTNBAUM, Meyer, 1896-
Businessmen in the news. por Fortune 47:56 Mr '53
CED in new era of influence. pors Bsns W p 104+, cover Ja 24 '53

KESTOSE
Kestose; a trisaccharide formed from sucrose by yeast invertase. N. Albon and others. Chem Soc J p24-7 Ja '53

KETALS. See Acetals

KETENE
Cyclobutanediones and the lower alkylketene dimers. E. B. Reid and S. J. Groszos. bibliog diag Am Chem Soc J 75:1655-60 Ap 5 '53
Electron diffraction investigation of the molecular structures of ketene, carbonyl fluoride and tetrafluoroethylene. T. T. Broun and R. L. Livingston. bibliog Am Chem Soc J 74:6084-91 D 5 '52
Ketene acetals; alkylation of dimethylketene dimethylacetal. S. M. McElvain and C. L. Aldridge. bibliog Am Chem Soc J 75:3987-93 Ag 20 '53
Ketene acetals; dimethylketene ethyleneacetal. S. M. McElvain and C. L. Aldridge. bibliog Am Chem Soc J 75:3993-6 Ag 20 '53
Low pressure hydrogenation and several properties of methyl and *n*-butylketene dimers. C. M. Hill and M. E. Hill. bibliog Am Chem Soc J 75:4591 S 20 '53
Mass spectra and appearance potentials of ketene monomer and dimer; relation to structure of dimer. F. A. Long and L. Friedman. bibliog Am Chem Soc J 75:2837-40 Je 20 '53
Preparation and properties of pentamethyleneketene monomer and dimer. C. M. Hill and M. E. Hill. Am Chem Soc J 75:2765-6 Je 5 '53
Reaction of diketene with ketones. M. F. Carroll and A. R. Bader. Am Chem Soc J 74:6305 D 20 '52
Reactions of ketene diethylacetal with 1,1,1-trichloro-2-methyl-2-propene. D. G. Kundiger and K. H. Froman. Am Chem Soc J 75:1744-5 Ap 5 '53
Structure of ketene dimer. J. R. Johnson and V. J. Shiner, jr. bibliog Am Chem Soc J 75:1350-5 Mr 20 '53
Synthesis, properties and catalytic hydrogenation of several aryloxy substituted ketene monomers and dimers. C. M. Hill and others. bibliog Am Chem Soc J 75:1084-6 Mr 5 '53

KETENE, Analogs of
Nitrogen analogs of ketenes; a new method of preparation. C. L. Stevens and J. C. French. bibliog Am Chem Soc J 75:657-60 F 5 '53

KETIMINES. See Imines

KETO acids. See Acids, Organic

KETONES
Absorption spectra of some α- and β-diketones. R. P. Barnes and G. E. Pinkney. bibliog Am Chem Soc J 75:479-80 Ja 20 '53
β-Acylethylation with ketonic Mannich bases; the synthesis of some diketones, ketonic sulfides, nitroketones and pyridines. N. S. Gill and others. bibliog Am Chem Soc J 74:4923-8 O 5 '52
Aldol type condensation of ketones and esters in the presence of diethylaminomagnesium bromide and related compounds. K. Sisido, H. Nozaki and O. Kurihara. bibliog Am Chem Soc J 74:6254-6 D 20 '52
4-Alkyldiphenylketimine hydrochlorides and related ketones. I. R. Kaplan, H. N. Parton and J. Vaughan. Am Chem Soc J 75:4341 S 5 '53
Aromatization and rearrangement of cyclic ketones; substituted acetanilides from cyclohexenone oximes. F. M. Beringer and I. Ugelow. bibliog Am Chem Soc J 75:2635-9 Je 5 '53
Aromatization and rearrangement of cyclic ketones; 2,3,5- and 3,4,5-trimethylphenol from isophorone. F. M. Beringer and E. J. Geering. bibliog Am Chem Soc J 75:2633-5 Je 5 '53
Basic character of some aromatic ketones and of their methyl ethers. L. A. Wiles and E. C. Baughan. Chem Soc J p933-40 Mr '53
Behavior of 1,2-diketones at the dropping mercury electrode. N. J. Leonard, H. A. Laitinen and E. H. Mottus. bibliog Am Chem Soc J 75:3300-3 Jl 20 '53
C-14 tracer studies in the rearrangements of unsymmetrical α-diketones; ethyl α,β-diketobutyrate to methyltartronic acid. H. W. Davis, E. Grovenstein, jr. and O. K. Neville. bibliog Am Chem Soc J 75:3304-5 Jl 20 '53
Chemistry of ants. G. W. K. Cavill and D. L. Ford. Chem & Ind p351 Ap 11 '53
Cholesterol and companions; cholestanol, lathosterol and ketone 104. L. F. Fieser. bibliog Am Chem Soc J 75:4395-403 S 20 '53
Cholesterol and companions; lathosterol, cholestanetriol and ketone 104 from a variety of sources. L. F. Fieser and B. K. Bhattacharyya. bibliog Am Chem Soc J 75:4418-23 S 20 '53
Condensation products of phenols and ketones; dimerides of 4-chloro- and 4-bromo-2-*iso*propenylphenol. W. Baker and others. Chem Soc J p3796-8 O '52
Configuration of steroid bromoketones. L. F. Fieser, R. Ettorre and X. A. Dominguez. bibliog Am Chem Soc J 75:1700-7 Ap 5 '53; Correction. 75:4837-8 O 5 '53
Confirmation of the structure of 2 : 6-dimethyl - 4 - pyrimidyl - methyl - lithium and some observations on the condensation of 1 : 3-diketones with acetamidine. J. C. Roberts. Chem Soc J p3065-8 Ag '52
Convenient deamination of β-dialkylamino ketones. E. M. Schultz and J. B. Bicking. bibliog Am Chem Soc J 75:1128-9 Mr 5 '53
Conversion of arylacetic acids into ketones. G. L. Buchanan and J. McArdle. Chem Soc J p2944-5 Jl '52
Copper-catalyzed decomposition of diazoketones. P. Yates. bibliog Am Chem Soc J 74:5376-81 N 5 '52
Cyclic polyolefins; conversion of cycloöctatetraenyl phenyl ketone to an acyclic tetraene. A. C. Cope and D. J. Marshall. bibliog Am Chem Soc J 75:3208-11 Jl 5 '53
Degradation of carbohydrates by alkali; α-alkoxy-ketones. J. Kenner and G. N. Richards. Chem Soc J p2240-4 Ag '53
Differential reduction of steroid ketones. A. H. Soloway, A. S. Deutsch and T. F. Gallagher. bibliog Am Chem Soc J 75:2356-8 My 20 '53
Electric moments of some methyl ketones. G. K. Estok and J. H. Sikes. bibliog Am Chem Soc J 75:2745-7 Je 5 '53
Electrolytic reduction of bicyclic α-aminoketones; a method for the synthesis of medium rings containing nitrogen. N. J. Leonard, S. Swann, jr. and E. H. Mottus. bibliog Am Chem Soc J 74:6251-3 D 20 '52
Electrolytic reduction of bicyclic α-aminoketones; a new method for the synthesis of medium rings containing nitrogen. N. J. Leonard, S. Swann, jr. and J. Figueras, jr. bibliog Am Chem Soc J 74:4620-4 S 20 '52
11-Oxygenated steroids; the selective reduction of steroidal 11,20-diketones with sodium borohydride. E. P. Oliveto and E. B. Hershberg. bibliog Am Chem Soc J 75:488-90 Ja 20 '53
Experiments on the synthesis of carbonyl compounds; a new general synthesis of ketones and β-keto-esters. R. E. Bowman and W. D. Fordham. Chem Soc J p3945-9 O '52
Extraction of zirconium and hafnium with various β-diketones. E. M. Larsen and G. Terry. bibliog Am Chem Soc J 75:1560-2 Ap 5 '53
Fatty acid ketones. Chem Eng 60:266+ Mr '53
Formation of 1-phenylcyclohexanecarboxylic acid from α-halocyclohexyl phenyl ketones. C. L. Stevens and E. Farkas. bibliog Am Chem Soc J 74:5352-5 N 5 '52
Grignard reactions; the synthesis of aliphatic ketones. W. C. Percival, R. B. Wagner and N. C. Cook. bibliog Am Chem Soc J 75:3731-4 Ag 5 '53
Halogen derivatives of phenyl styryl ketone; bromo- and chloro-derivatives. R. D. Abell and W. Siddall. Chem Soc J p2804-7 S '53

KETONES—*Continued*

Halogen derivatives of phenyl styryl ketones; bromo-chloro-derivatives; two cases of extra isomers. R. D. Abell. Chem Soc J p2807-9 S '53

Heterocyclic syntheses with malonyl chloride; pyrano-1 : 3-dioxins from ketones. S. J. Davis and J. A. Elvidge. Chem Soc J p4109-14 N '52

Hydroxymethylene ketones; the preparation of β-ketodimethylacetals and methoxymethylene ketones. E. E. Royals and K. C. Brannock. bibliog Am Chem Soc J 75:2050-3 My 5 '53

Interaction of aromatic ketones with aluminium chloride. G. Baddeley, G. Holt and W. Pickles. Chem Soc J p4162-6 N '52

Interaction of quinolines with aldehydes and ketones. F. Bell. Chem Soc J p348-9 Ja '53

α-Iodoketones; reaction of enol acetates with N-iodosuccinimide. C. Djerassi and C. T. Lenk. bibliog Am Chem Soc J 75:3493-5 Jl 20 '53

Lanosterol; further experiments on the reduction of ketones in the lanosterol series. J. F. McGhie, M. K. Pradhan and J. F. Cavalla. Chem Soc J p3176-9 Ag '52

Mechanism of the reaction of α-haloketones with weakly basic nucleophilic reagents. R. G. Pearson and others. bibliog Am Chem Soc J 74:5130-2 O 20 '52

Mixed condensation of ketones in the presence of methylanilinomagnesium bromide. W. D. Garden and F. D. Gunstone. Chem Soc J p2650-4 Jl '52

Monocyanoethylation of certain ketones. H. E. Baumgarten and R. L. Eifert. bibliog Am Chem Soc J 75:3015-16 Je 20 '53

n-Butyl 4-dibenzothienyl ketone; a carbonation by-product from the metalation of dibenzothiophene with *n*-butyllithium. H. Gilman and D. L. Esmay. bibliog Am Chem Soc J 75:233-4 Ja 5 '53

Palladium catalysis; the hydrogenation of α-oximino ketones. Y. Chang and W. H. Hartung. bibliog Am Chem Soc J 75:89-91 Ja 5 '53

Phenyl propargyl ketone. H. B. Henbest. Chem Soc J p4536-8 N '52

Photolysis of di-*n*-propyl ketone. C. R. Masson. bibliog Am Chem Soc J 74:4731-5 O 5 '52

Preparation and isomerisation of aromatic ketones and keto-acids. G. Baddeley and R. Williamson. Chem Soc J p2120-5 Jl '53

Preparation of δ-ketoacids and δ-ketonitriles from monocyanoethylated β-ketoesters. C. W. Yoho and R. Levine. bibliog Am Chem Soc J 74:5597-9 N 20 '52

Preparation of ketones and their enol esters by the base-catalyzed condensation of acids and acid derivatives with anhydrides. G. G. Smith. bibliog Am Chem Soc J 75:1134-7 Mr 5 '53

Pyridylethylation of active nitrogen compounds; further studies of the reactions of 2-vinylpyridine with ketones. M. H. Wilt and R. Levine. bibliog Am Chem Soc J 75:1368-72 Mr 20 '53

Pyrogenetic formation of ketones. R. I. Reed. bibliog J Chem Phys 21:377-8 F '53

Reaction between aromatic compounds and derivatives of tertiary acids; the production of *p-tert.*-butylphenyl and *iso*but-1-enyl *tert.*-butyl ketones from pivaloyl chloride. M. E. Grundy, W. Hsü and E. Rothstein. Chem Soc J p4136-8 N '52

Reaction of diketene with ketones. M. F. Carroll and A. R. Bader. Am Chem Soc J 74:6305 D 20 '52

Reaction of ethylmagnesium bromide with alkyl aryl ketones. B. F. Landrum and C. T. Lester. bibliog Am Chem Soc J 74:4954-5 O 5 '52

Reaction rates by distillation; the effect of changes in structure on the basicity of selected ketones, esters, ethers and alcohols. E. F. Pratt and K. Matsuda. bibliog Am Chem Soc J 75:3739-44 Ag 5 '53

Reactions of αβ-unsaturated cyclic aldehydes and ketones; (±)-*cis*- and (±)-*trans*-piperitol. A. K. Macbeth, B. Milligan and J. S. Shannon. Chem Soc J p901-2 Mr '53

Reactions of αβ-unsaturated cyclic aldehydes and ketones; (—)-*cis*- and (+)-*trans*-piperitol from (—)-piperitone. A. K. Macbeth and J. S. Shannon. Chem Soc J p2852-6 Jl '52

Reactions of αβ-unsaturated cyclic aldehydes and ketones; (+)-*trans*-pulegol and a (—)-pulegol from (+)-pulegone. A. K. Macbeth and J. S. Shannon. Chem Soc J p4748-51 D '52

Rearrangement of α-aminoketones during Clemmensen reduction; influence of phenyl substitution. N. J. Leonard, G. Fuller and H. L. Dryden, jr. bibliog Am Chem Soc J 75:3727-30 Ag 5 '53

Rearrangement of α-aminoketones during Clemmensen reduction; the fate of asymmetry at the α-carbon. N. J. Leonard, R. C. Sentz and W. J. Middleton. Am Chem Soc J 75:1674-5 Ap 5 '53

Rearrangement of *NN*-diacylanilines and the nuclear benzoylation of anilines. J. F. J. Dippy and V. Moss. Chem Soc J p2205-10 Je '52

Reduction of ketones by lithium aluminium hydride. N. L. Paddock. Chem & Ind p63-4 Ja 17 '53

Reduction of some enolizable β-dicarbonyl compounds to unsaturated alcohols by lithium aluminum hydride; β-diketones. A. S. Dreiding and J. A. Hartman. bibliog Am Chem Soc J 75:3723-6 Ag 5 '53

Reductions with aluminium alkoxides; the kinetics of the racemization of optically active alkoxides by their corresponding ketones. L. M. Jackman and A. K. Macbeth. diag Chem Soc J p3252-60 Ag '52

Reductive methylation of steroid ketones. J. C. Babcock and L. F. Fieser. bibliog Am Chem Soc J 74:5472-4 N 5 '52

Schmidt reaction with unsymmetrical ketones. G. M. Badger, R. T. Howard and A. Simons. Chem Soc J p2849-52 Jl '52

Stereochemistry of α-haloketones; the molecular configurations of some monocyclic α-halocyclanones. E. J. Corey. bibliog Am Chem Soc J 75:2301-4 My 20 '53

Stereochemistry of α-haloketones; the three α-dibrominated cyclohexanones. E. J. Corey. bibliog Am Chem Soc J 75:3297-9 Jl 20 '53

Structure of the enol acetate derivatives of steroid 7- and 11-ketones. R. Hirschmann and N. L. Wendler. bibliog Am Chem Soc J 75:2361-4 My 20 '53

Studies in organic sulfur compounds; cyclic ethylene and trimethylene hemithioketals. C. Djerassi and M. Gorman. bibliog Am Chem Soc J 75:3704-8 Ag 5 '53

Studies in the mechanism of the Willgerodt reaction; direction of migration of the functional group in aliphatic ketones. E. Cerwonka, R. C. Anderson and E. V. Brown. bibliog Am Chem Soc J 75:28-30 Ja 5 '53

Studies in the mechanism of the Willgerodt reaction; nature of the labile intermediate. E. Cerwonka, R. C. Anderson and E. V. Brown. bibliog Am Chem Soc J 75:30-3 Ja 5 '53

Studies in the polyene series; C_{23}, C_{25} and C_{43} ketones derived from retinene. J. C. Hamlet, H. B. Henbest and V. Thaller. Chem Soc J p658-60 F '53

Studies on coördination compounds; a comparison of the chelating tendencies of β-diketones toward divalent metals. L. G. Van Uitert, W. C. Fernelius and B. E. Douglas. Am Chem Soc J 75:2736-8 Je 5 '53

Studies on coördination compounds; some factors concerning the effect of the terminal groups on the chelating abilities of β-diketones. L. G. Van Uitert and W. C. Fernelius. Am Chem Soc J 75:3862-4 Ag 5 '53

Studies on coördination compounds; the chelating tendencies of β-diketones with chlorides of copper(II), nickel and barium in water-dioxane solutions. L. G. Van Uitert, W. C. Fernelius and B. E. Douglas. Am Chem Soc J 75:457-60 Ja 20 '53

Studies on coördination compounds; the dissociation constants of β-diketones in water-dioxane solutions. L. G. Van Uitert and others. bibliog Am Chem Soc J 75:455-7 Ja 20 '53

KETONES—*Continued*
Studies on coördination compounds; the effects of salt anion and of solvent upon the chelation of β-diketones. L. G. Van Uitert, W. C. Fernelius and B. E. Douglas. Am Chem Soc J 75:2739-41 Je 5 '53
Study of acid catalysis in ketone acylations. B. M. Perfetti and R. Levine. bibliog Am Chem Soc J 75:626-8 F 5 '53
Synthesis of βγ-unsaturated α-keto-acids from 1 : 1-diarylethylenes. F. Bergmann and A. Kalmus. Chem Soc J p4521-2 N '52
Synthesis of certain ketones and α-substituted β-diketones containing perfluoroalkyl groups. L. B. Barkley and R. Levine. bibliog Am Chem Soc J 75:2059-63 My 5 '53
Synthesis of nitrogen-containing ketones; ketones derived from 2-picoline, quinaldine and 2,6-lutidine. N. N. Goldberg and R. Levine. bibliog Am Chem Soc J 74:5217-19 O 20 '52
Synthesis of N,N-dialkyl-β-hydroxyamides from N,N-dialkylamides and ketones using lithium reagents. W. H. Puterbaugh and C. R. Hauser. bibliog Am Chem Soc J 75: 2415-17 My 20 '53
Ultraviolet absorption spectra of hindered ketones. G. D. Hedden and W. G. Brown. bibliog diag Am Chem Soc J 75:3744-8 Ag 5 '53

KETOSES
Direct reduction of aldoses and ketoses by Raney nickel. J. V. Karabinos and A. T. Ballun. bibliog Am Chem Soc J 75:4501-2 S 20 '53

KETTERING, Charles Franklin, 1876-
Portrait. Bsns W p82 Mr 21 '53

KETTLES, Steam jacketed
Wrong piping, operation add to implosion hazards. Heating-Piping 25:116-17 Jl '53

KEWLEY, Robert C.
Businessmen in the news. por Fortune 46:58 O '52

KEYS and keyways (machinery)
Gaging involute splines. L. N. DeVos. diags Tool Eng 30:43-9 My '53
Grinding small spline punches. D. Worth. diags Am Mach 97:181 Je 8 '53
Milling accurate keyways. F. E. Riley. diags Tool Eng 30:42 Mr '53
Oil injection shrink fitting. J. A. Abrahams. diags Iron & Steel Inst J 173:118 F '53
Splines and gears; determining allowable involute approximations. J. Silvagi. il diags Tool Eng 30:45-50 Je '53
Splines on precision instrument parts easily lapped. diags Iron Age 171:156-7 F 26 '53; Mach 59:203 Mr '53; Tool Eng 31:63 Ag '53

KHELLIN. See Kellin

KHELLOL. See Kellol

KIDDE, Walter, and company, inc.
Growing aircraft business spurs Walter Kidde profits. Barron's 32:19 D 22 '52

KIDNEYS
Kidney. H. W. Smith. il diags Sci Am 188: 40-8 Ja '53

KIDRIC, Boris
Boris Kidric; Jugoslavia's empirical planner. Economist 167:233-4 Ap 25 '53

KIEB, Ormonde A.
Portrait. Bsns W p98 Je 27 '53

KIESELGUHR. See Diatomaceous earth

KIEWIT, Peter
Businessmen in the news. por Fortune 46:58 O '52
Kiewit and Palmer win Moles' awards. por Eng N 149:76-7 N 6 '52; Explosives Eng 30: 190+ N '52; Comp Air Mag 57:350 D '52
Moles honor Peter Kiewit, Edward P. Palmer. por Eng N 150:25 F 12 '53

KILBY, Merrill E.
Attitudes come first. por Fortune 47:139 My '53

KILLEN, James S.
Portrait. Bsns W p 150 N 15 '52

KILN drying. See Lumber drying

KILNS
Automatic continuous curing kiln; Builders co. cures block. L. D. Minsk. il plan diag Rock Prod 56:213-15+ Ap '53
Continuous kiln features block production. flow sheet il Concrete 61:25-6+ Ja '53
Curved bag walls give smooth heat flow; Buffalo brick corp. il diag Brick & Clay Rec 121:42 O '52
Decorating kiln holds spread to ten degrees. il Cer Ind 59:56 D '52
Instrumentation as applied to tunnel kilns. L. D. Culp. il diags Am Cer Soc Bul 32: 341-6 O 15 '53
Kiln operation; new design speeds loading and unloading of grinding wheels; Electro refractories & abrasives corp. Iron Age 171:118-19 Ap 30 '53; Steel 132:100 Je 15 '53
Maybe you don't need a tunnel kiln. J. Sparks. il Brick & Clay Rec 123:46-7 O '53
New use for tunnel kilns, steel production. il Brick & Clay Rec 122:74-5+ Ap '53; Same. Cer Ind 60:112-13+ Je '53
Refractories and the pusher-type kiln. M. H. Berns and C. E. Milligan. il Am Cer Soc Bul 31:317-19 S 15 '52
Refractory concrete for tunnel kiln car tops. N. M. Thompson. il Am Cer Soc Bul 32:1-4 Ja 15 '53
72-ft. tunnel kiln anyone can build. B. I. Day. il diags Cer Ind 60:78-9+ My '53; Same. Brick & Clay Rec 123:34-5+ Ag '53
Use strain gauges to accurately align kilns. J. Sale. il diags Rock Prod 56:122 Je '53
What causes kiln rings? W. G. Davis. Rock Prod 56:67+ Jl '53
See also
Cement kilns
Lime kilns

Cleaning

Heat purging solves kiln cleaning problem. J. R. Hill. Brick & Clay Rec 122:80 Je '53

Electric heating

High-temperature laboratory catenary kilns. G. Economos and F. E. Vinal. il diags Am Cer Soc J 36:204-6 Je 1 '53
Pottery decorating kiln. il Elec R (Lond) 153:247-8 Jl 31 '53

Firing

Cooling in tunnel kilns. C. W. Isenhour, jr. diags Am Cer Soc Bul 31:274-5 Ag 15 '52
Fan replaces stack for faster burning. il Brick & Clay Rec 121:46 N '52
Flame directors aid heat circulation. diags Brick & Clay Rec 122:72 Je '53
Gas firing in the pottery industry. Engineering 175:533 Ap 24 '53
Impulse system yields even heat distribution. Brick & Clay Rec 122:74 Je '53
Methods of increasing efficiency of firing sewer pipe in a tunnel kiln. C. Sutherland. il Am Cer Soc Bul 31:486-8 D 15 '52
Natural gas improves product and cost in the brick industry. C. G. Hobson. Am Gas J 179:27+ Ag '53

KIMBALL, Dexter S. 1865-1952
Sketch. por Mech Eng 74:960-2 D '52

KIMBERLY, John Robbins, 1903-
Businessmen in the news. por Fortune 46:52 D '52

KIMBERLY-CLARK corporation
Kimberly-Clark; early planning responsible for its pre-eminent position. M. M. Gray. Barron's 33:19-21 Ap 6 '53
Realigns executive staff. Paper Tr J 137: 28 Ag 28 '53

KINEMATICS of machinery. See Machinery, Kinematics of

KINETIC theory of gases. See Gases, Kinetic theory of

KING, Ernest Joseph, 1878-
Admiral King and the naval high command. E. J. King and W. M. Whitehill. pors U S Naval Inst Proc 78:1072-9 O '52

KING, Walter G. 1860-1952
Sketch. por Nat Safety N 67:62 F '53

KING-SEELEY corporation
Non-automotive products important to King-Seeley. Barron's 33:21 Mr 9 '53

KINNARD, Isaac Fern, 1891-
Lamme medalist. por Elec World 139:75 Ap 6 '53
Lamme medalist for 1952; presentation addresses by L. L. Bosch and E. S. Lee; response by I. F. Kinnard. por Elec Eng 72:578-83 Jl '53
1952 Lamme medalist. por Gen Elec R 56:8 Jl '53

KINORAMA. See Airports—Lighting

KINSOLVING, William Carey, 1901-
Pipe line portrait. por World Oil 136:224+ F 1 '53

KINTNER, Robert Edmonds, 1909-
Businessmen in the news. por Fortune 47:60 Ap '53

KINZEL, Augustus Braun, 1900-
Sketch. M. Weiss. por Metal Prog 64:90-2 Ag '53

KIRKENDALL effect
Kirkendall effect in alloy systems. H. N. Hersh. J Ap Phys 23:1055-6 S '52

KITCHEN cabinets
How to arrange wall and base cabinets. diag Am Bld 74:195 N '52

KITCHEN utensils
See also
Enameled ware

KITCHENS
A.G.A. establishes kitchen studio for tv and films. il Am Gas Assn Mo 35:11 Mr '53
Building a breakfast nook. plan diag Am Bld 74:212 N '52
Contest stimulates kitchen modernization interest. R. A. Shank. il Elec World 138:142 O 20 '52
Convenience stressed in kitchen units. il Am Bld 74:157-9 D '52
Details for tiled barbecue with vent hood. il diags Am Bld 74:104 N '52
He lets customers sell themselves, well almost! L. M. Hamm's. il plan Dom Eng 182:96-8+ S '53
Home setting sells educators; homemaking classrooms. il Am Gas Assn Mo 35:17 Ap '53
Homey theme for a modern kitchen. il diag Am Bld 75:170 Ja '53
How to sell kitchen remodeling; Ritenour kitchens, of Los Angeles. il plans Am Bld 74:130-2 O '52
Kitchen for an open plan. il plan diag Am Bld 74:90-1 S '52
Minneapolis promotion accents gas appliances; 1953 kitchen cavalcade. il Am Gas Assn Mo 35:6-8 Ap '53
New ideas in bathroom, kitchen and utility room designs; Crane co. il plans diags Dom Eng 181:92-4 Mr; 112+ Ap '53
New Orleans fetes Louisiana Purchase with modern kitchen-laundry; Public service company exhibit. W. C. Grant. il Gas Age 111:31+ Mr 26 '53
Republic woos the ladies; steel firm markets own line of stainless steel kitchens. R. M. Lorz. il Iron Age 171:74 Mr 19 '53
Selling kitchens isn't so tough. M. Chafetz. il Dom Eng 181:98-9 My '53

Electric equipment

All-electric kitchen planning. il diag Elec R (Lond) 152:485-7 F 27 '53

Equipment

From water heater king to remodeling champ; Morlan plumbing and appliance co. il Dom Eng 180:168-72+ N '52
How to construct a desk in the kitchen. il Am Bld 74:200 D '52
Republic takes exception; producing line of steel kitchens under its own name, as well as on a contract basis. il Bsns W p41-2 Ja 17 '53
She'll buy this dream! il Dom Eng 181:106-7, 110+ F '53

Ventilation

Combined supply and return air kitchen hoods. W. L. Broemel. il diags Sheet Metal Worker 44:45-6 Je '53
Design of kitchen range hoods. J. M. Dalla-Valle. il diags Heat & Ven 50:95-100 Ag '53

KITIMAT, British Columbia
Building a new city in the Canadian Northwest. Pub Works 84:134-5 My '53

KJORLIEN, C. J.
Displaced American. H. Woodward. por Sales Management 70:27 Ja 1 '53

KLINE, Allan Blair, 1895-
Thanks Mr Kline; here's one farm spokesman who won't kill the goose. por Barron's 32:5+ N 10 '52

KLYSTRON
Coupled resonator reflex klystron. E. D. Reed. bibliog il diags Bell System Tech J 32:715-66 My '53
Debunching of electron beams constrained by strong magnetic fields. M. Chodorow and others. diag Inst Radio Eng Proc 41:999-1003 Ag '53
Floating-drift-tube klystron. M. Chodorow and S. P. Fan. bibliog il diags Inst Radio Eng Proc 41:25-31 Ja '53
Fm distortion in reflex klystrons. R. L. Jepsen and T. Moreno. diags Inst Radio Eng Proc 41:32-6 Ja '53
Frequency stabilization of apparatus for the measurement of paramagnetic resonance absorption. J. M. Hirshon and others. bibliog R Sci Instr 23:772 D '52
High-power klystron amplifier. J. Jasberg. il diag Electronics 26:244+ Jl '53
High-power klystrons at uhf. D. H. Preist and others. bibliog il diag Inst Radio Eng Proc 41:20-5 Ja '53
High-power uhf klystron. il diags Tele-Tech 11:60-1 O '52
High-power uhf water load for accurate power measurements. B. E. Nelson. il diag Tele-Tech 12:72-3+ Ag '53
On the frontier. il Fortune 47:88-9 Mr '53
S-band sweep generator and test set. R. E. Larson. il diags Tele-Tech 12:116-18+ Je '53
Unusual klystron; patent. diags Electronics 26:264+ Ag '53

KNAPP, Lloyd D.
Sketch. por Civil Eng 22:960-1 N '52

KNAPP-MONARCH company
Today, the name's the thing. il Bsns W p50-2+ Je 6 '53

KNIFE handles, Plastic
Specialization pays off; knife handles molded of impact phenolics. il Mod Plastics 30:80-1 Mr '53

KNISS, Vic
Portrait. Sales Management 69:27 N 20 '52

KNIT goods
Cutters and mill men discuss tricot quality. Textile World 103:133 F '53
Fundamental aspects of the design of knitted fabrics. P. J. Doyle. bibliog il Textile Inst J 44:P561-73; Discussion. P573-8 Ag '53
How to analyze a tricot fabric by deknitting. R. W. Nelson. il Mod Textiles Mag 34:89-90 Je '53
Knitting and the new fibers. R. C. Shook. Mod Textiles Mag 34:32+ Ap '53
No extra dye run needed for knit-goods samples; Spalding knitting mills. E. D. White. il Textile World 102:119 D '52
See also
Hosiery
Jersey cloth
Nylon—Knit goods

Shrinkage

Distortion in knit fabrics and its relation to shrinkage in laundering. H. M. Fletcher and S. H. Roberts. Textile Res J 23:37-42 Ja '53
Questions and answers on Quartermaster's device for reducing shrinkage. L. I. Weiner. diags Textile World 103:118+ Jl '53

KNITTING
At E-Z mills standard workloads further high-quality knitting. E. D. White. il Textile World 102:126+ D '52
Causes and remedies for streaky tricot fabrics. W. O. Allen. il Textile World 103:108-9+ Jl '53
Here's a quiz on Kharafleece. il Mod Textiles Mag 34:45+ Ap '53
High quality underwear demands up to date methods; Russell mfg. co. E. D. White. il Textile World 103:126-7 Ag '53
Interlock novelties can be made into knitted outerwear. J. H. Blore. il Textile World 103:102-3 Je '53
Loop formation. J. MacDonald, jr. diags Mod Textiles Mag 34:36+ Ja '53
Nylon tricot; care and waste. J. MacDonald, jr. Mod Textiles Mag 34:33+ Ap '53
Seven rules for successful tricot designs. J. H. Blore. diags Textile World 103:108-11 O '53
Training manual will help to reduce circular-knitting costs. J. H. Blore. il diags Textile World 103:86-7+ Ap '53

KNITTING—*Continued*

Tricot costs can be reduced with mesh fabrics. J. H. Blore. il Textile World 103:82-3 Ap '53

Using the man-made fibers in interlock fabrics. D. Singer. il diags Mod Textiles Mag 34:41-2+ O '53

See also

Hosiery—Manufacture

Knit goods

KNITTING arts exhibition

Knitting arts exhibition, 41st, Atlantic City, April 27-May 1. Mod Textiles Mag 34:44-5+ Je '53; Textile World 103:109-24 Je '53

Knitting arts exhibition, 41st, Atlantic City, April 27-May 1; list of exhibitors. il plan Mod Textiles Mag 34:54+ Ap '53; Textile World 103:151-6+ Ap '53

KNITTING machines

Adjusting spring-needle knitters. J. MacDonald, jr. il Mod Textiles Mag 34:61-3 My; 68 Je '53

Cost-cutting equipment offered for knitting. il Textile World 102:119-20+ N '52

Cut pressers can increase your range of tricot designs. J. B. Lancashire. il diag Textile World 103:102-3+ Ag '53

How to knit plush fabrics of man-made fibers. D. Singer. il diags Mod Textiles Mag 34:54-5+ Je '53

How Wildman's springneedle machine works. J. MacDonald, jr. diags Mod Textiles Mag 34:45-6+ F '53

Improved tricot knitter produces at 600 to 750 courses per minute. il Textile World 103:157 Je '53

Pile fabrics can be knit on most knitting machines; abstract. J. H. Blore. Textile World 102:109-10 D '52

Questions and answers on Quartermaster's device for reducing shrinkage. L. I. Weiner. diags Textile World 103:118+ Jl '53

Study of the Tompkins springneedle machine. J. MacDonald, jr. il dags Mod Textiles Mag 34:85-6+ Mr '53

Tricot machine knits faster, weighs less. il Textile World 103:143 Jl '53

Two new ideas that reduce tricot downtime; Guilford mills. J. H. Blore. il Textile World 103:175 S '53

See also

Hosiery machines

Cleaning

Freedom from lint is the key to good knitting; Piedmont fabrics, inc. J. H. Blore. il Textile World 103:179 S '53

Exhibitions

Knitting arts exhibition, 41st, Atlantic City, April 27-May 1. Mod Textiles Mag 34:44-5+ Je '53; Textile World 103:109-24 Je '53

Knitting arts exhibition, 41st, Atlantic City, April 27-May 1; list of exhibitors. il plan Mod Textiles Mag 34:54+ Ap '53; Textile World 103:151-6+ Ap '53

Lubrication

Automatic lubricating system cuts knitting oil stains 75 per cent; Griffin hosiery mills and Spalding knitting mills. E. D. White. il Textile World 103:94+ Jl '53

Maintenance and repair

Are your circular knitting machines giving their best performance? J. H. Blore. il Textile World 103:116-17 Mr '53

Guard knitting machines against PM-90 size damage. J. H. Quinn. il Textile World 103:164-5+ S '53

Needles

Reduce tuck stitches in your underwear fabrics. J. H. Blore. il Textile World 103:78-9 Ap '53

KNITTING mills

See also

Hosiery mills

Accounting

To show a profit, you must figure knitting costs. J. H. Blore. Textile World 103:108-9+ F '53

Employees

Flexible lunch room serves tricot knitting mill; Julius Kayser & co. T. B. Winston. il Textile World 103:135 Ag '53

Training manual will help to reduce circular-knitting costs. J. H. Blore. il diags Textile World 103:86-7+ Ap '53

Equipment

Standard knitting stays ahead with progressive improvements; illustrations with text. E. D. White. Textile World 103:118-19 Ja '53

Today's knitting mill must be versatile; Sheble & Wood yarn corp. J. R. Sanderson. Mod Textiles Mag 34:72+ Ap '53

Management

At E-Z mills standard workloads further high-quality knitting. E. D. White. il Textile World 102:126+ D '52

Simple quality control works at E-Z mills. E. D. White. il Textile World 103:124-5 Ja '53

KNITTING needles

See also

Knitting machines—Needles

KNIVES

Manufacture

Cold-forge stainless handles in mid-air; International silver co.; illustrations with text. Am Mach 96:126-7 N 10 '52

KNIVES, Chipper

Chipper based on new principle. diags Paper Tr J 136:34 My 8 '53

First operating report on the Norman chipper. il Paper Tr J 137:32+ Ag 21 '53

Norman design patented chipper. diags Pulp & Pa of Can 54:214 Jl '53

Wood chipper and chipper motor selection. J. E. Irvine and E. W. Henderson. Pulp & Pa of Can (Convention no) 54:247-52 [F] '53

KNOEVENAGEL reaction

Kinetic evidence for a Schiff base intermediate in the Knoevenagel condensation. T. I. Crowell and D. W. Peck. bibliog Am Chem Soc J 75:1075-7 Mr 5 '53

Reactions catalyzed by anion exchange resins; Knoevenagel condensation; aldol condensation. M. J. Astle and J. A. Zaslowsky. Ind & Eng Chem 44:2867-71 D '52

Scope of the Knoevenagel synthesis of aromatic secondary amines. N. P. Buu-Hoï. Chem Soc J p4346-9 N '52

KNOTS and splices

Pick it up? J. R. Sears. il Power 97:109-11 My '53

KNOTT, Laurence T.

NAEA's Knott is busy enough to be twins. G. A. Brandenburg. por Ed & Pub 86:20 Ja 31 '53

Portrait. Sales Management 70:28 F 15 '53

KNOTT hotels corporation

Higher room rates, new units likely to benefit Knott Hotels. Barron's 33:34 Mr 30 '53

KNOWLAND, William Fife, 1908-

New guard; represents a different G.O.P. J. Chamberlain. por Barron's 33:5-6 Jl 6 '53

KNUDSEN award

History of the Knudsen award. il Ind Med 21:454-5 S '52

KNURLING

Knurling; proposed American standard; reference book sheet. diags Am Mach 96:127, 129, 131 D 22 '52; 97:151, 153, 155 Ja 5 '53

KOBACKER stores, inc.

Fiscal '53 earnings upturn likely. Barron's 32:17 N 17 '52

KOJIC acid

Condensation of kojic acid with crotonic acid and with β-bromopropionic acid. L. L. Woods. Am Chem Soc J 75:1510 Mr 20 '53

Reaction of kojic acid with ethyl levulinate. L. L. Woods. Am Chem Soc J 75:2009 Ap 20 '53

KOLDWELD process. See Welding—Cold welding

KON, George Armand Robert, 1892-1951

Sketch. R. P. Linstead. Chem Soc J p4550-60 N '52

KOPALD, S. L.
Businessmen in the news. por Fortune 46:57 O '52

KOPPERS company
Koppers Hall of fame honors rep, editors. il Ind Marketing 38:69 Je '53

KOPSIA
Studies on the degradation of kopsine, the alkaloid of kopsia fruticosa. A. Bhattacharya. Am Chem Soc J 75:381-3 Ja 20 '53

KOREA
Korea for the South Koreans? Economist 167:649-50 Je 6 '53

Economic conditions

Inflation in Korea. P. F. Douglass. Barron's 32:3 D 8 '52

Foreign relations

Problem of Rhee. Economist 167:886-7 Je 27 '53

Navy

ROK navy. D. C. Holly. il U S Naval Inst Proc 78:1218-25 N '52

Reconstruction

$70-million reconstruction program undertaken in Korea by UN agency. il Eng N 150:23 My 7 '53
South Korea; $1.5-billion to rebuild. Bsns W p 150-2 Je 20 '53

KOREAN war
Chiang off the leash. map Economist 166:335-7 F 7 '53
Engineers tackle tough assignment supporting stabilized front in Korea. il Eng N 149:23-4 N 27 '52
Foreign forces for Korea. Economist 166:369 F 7 '53
Four straws in a strong wind. Fortune 47:23-4 Mr '53
Hook; beyond the election loom the ridges of Korea. Barron's 32:1 N 3 '52
How important is Korea? Economist 165:360-1 N 8 '52
Korea and the aftermath. R. W. Babson. Comm & Fin Chr 177:776, 893 F 19-26 '53
Korea at first hand; Eisenhower's visit. Economist 165:751-2 D 13 '52
Pentagon and the Korean shell shortage. C. J. V. Murphy. il Fortune 47:93-4+ Mr '53
Reporters fight war of tedium in Korea. R. Schakne. Ed & Pub 86:11 Ja 24 '53
Shall we blow them up? G. H. Miller. il U S Naval Inst Proc 79:150-5 F '53
Waiting for Eisenhower. Economist 165:597-8 N 29 '52
Why are they short of shells? il Bsns W p 152-4 Mr 21 '53
See also
War correspondents

Aerial operations

AF switches tactics in Korea. R. P. Martin. il Aviation W 57:14-17 N 17 '52
Air lessons of Korea. W. J. Coughlin. il Aviation W 58:23-4+ My 25 '53
F3Ds outfly red night fighters in Korea. R. Hotz. il Aviation W 58:13-14 F 9 '53
Korea air fight; red air targets becoming scarce. H. S. Vandenberg. Aviation W 57:16 D 15 '52
MiG alley scoreboard to April 1. il Aviation W 58:15 Ap 20 '53
Red air buildup; Finletter sees signs of new Korean offensive. Aviation W 57:14-15 O 27 '52
Red air reserves for Korea worry U.S. il Aviation W 58:66+ Mr 2 '53
Reds fly captured Sabres in combat. W. J. Coughlin. il Aviation W 58:13-15 My 18 '53
Sabres still rule skies over MiG alley. R. P. Martin. il Aviation W 57:13-15 N 3 '52

Peace and mediation

Armistice? Economist 167:713-14 Je 13 '53
Bitter truce. Barron's 33:1 Je 15 '53
Cat and mouse truce. Economist 167:284-5 My 2 '53
End of the two-world pattern. il Bsns W p27-30 Je 27 '53
Is peace or a truce in sight? Bsns W p30-1 My 23 '53
Korea and your job; chances of peace would be greatly enhanced by a Korean armistice. R. W. Babson. Comm & Fin Chr 177:1644 Ap 16 '53
Korean armistice, a queer document. J. W. Beck. Comm & Fin Chr 178:353 Jl 30 '53
Korean negotiators bring hopes of peace; easing Eisenhower's problems. il Bsns W p28-9 Ap 11 '53
Korean truce talks; are they a start toward shaping a new kind of world? il Bsns W p27-8 Ap 25 '53
Other side of the truce; must peace in Asia finally lose China to communism? J. Chamberlain. Barron's 33:5+ Ap 6 '53
Peace in Korea will not open door to depression. N. Strunk. Comm & Fin Chr 177:1647 Ap 16 '53
Strategy for a cold peace. Bsns W p25-7 Je 13 '53
Truce in Korea. Bsns W p 196 Je 13 '53
Truce through Chinese eyes. Economist 167:744-5 Je 13 '53

KORTÜM, Gustav, 1904-
Gustav Kortüm. R. E. Oesper. por(front) J Chem Educ 30:2 Ja '53

KOSIN
Anthelmintics; kousso; the structures of protokosin, α-kosin, and β-kosin. A. J. Birch and A. R. Todd. Chem Soc J p3102-8 Ag '52

KOUSSO
Anthelmintics; kousso; the structures of protokosin, α-kosin, and β-kosin. A. J. Birch and A. R. Todd. Chem Soc J p3102-8 Ag '52

KRAFT pulp. See Paper making—Sulfate process

KRAMER, Andrew
How an editor played a vital role in period when research worked to prove atomic power just around the corner. R. H. Morris. por Power Eng 57:sup 1 Je '53

KRAMERS, Hendrik Anthony, 1894-1952
Sketch. F. J. Belinfante and D. ter Haar. Science 116:555-6 N 21 '52

KREML, Franklin Martin, 1907-
Beecroft award is presented to F. M. Kreml. por S A E J 60:91 N '52

KRESGE, S. S., company
Five stocks with unusually stable earnings; with comparative balance sheet items. Mag of Wall St 92:172 My 2 '53

KRILIUM
Krilium now on sale in Britain; to be marketed in one pound containers. il Chem Age (Lond) 68:173-4 Ja 24 '53
Report on Krilium. Chem & Ind p 109 Ja 31 '53
Soil conditioners for improvement of soil structure; abstract and discussion. A. J. Lloyd. Chem & Ind p235 Mr 14 '53
Soil conditioners; the fight goes on; with editorial comment. il Bsns W p43-6 Ja 31 '53

KROEHLER manufacturing company
Trying out prefab methods on furniture. il Bsns W p 132-4+ Je 13 '53

KROGER company
Kroger co.; policy of weeding out smaller stores pays off. C. A. Clark, jr. Barron's 33:13-14 Je 22 '53

KRUPP VON BOHLEN UND HALBACH, Alfred, 1907-
Businessmen in the news. por Fortune 46:58 O '52

KRYPTOGENIN
Transformation of kryptogenin to solasodine. F. C. Uhle. Am Chem Soc J 75:2280-1 My 5 '53

KRYPTON
Compressibility of gaseous krypton; the virial coefficients and potential parameters of krypton. J. A. Beattie and others. bibliog J Chem Phys 20:1615-18 O '52
Compressibility of krypton; an equation of state for krypton and the weight of a liter of krypton. J. A. Beattie and others. J Chem Phys 20:1613-15 O '52
Drift velocities of ions in krypton and xenon. R. N. Varney. bibliog Phys R 88:362-4 O 15 '52
Electron removal in krypton afterglows. J. M. Richardson. bibliog il diag Phys R 88:895-900 N 15 '52

KRYPTON—*Continued*
Ionization probability curves for krypton and xenon near threshold. R. E. Fox and others. bibliog Phys R 89:555-8 F 1 '53

KURTENACKER, Albin, 1886-
A. Kurtenacker. R. E. Oesper. por(front) J Chem Educ 29:487 O '52

KUWAIT
See also
Petroleum industry and trade—Kuwait
Water supply—Kuwait

KUYKENDALL, Jerome K. 1907-
Empire builders; new member, Federal power commission. J. C. Perham and J. C. W. Schaie. por Barron's 33:5-6 My 18 '53
Kuykendall appointed to FPC. Elec World 139:105 Ap 20 '53
Senate confirms Kuykendall. por Elec World 139:61 My 4 '53

KUZNETS, Simon Smith, 1901-
Top five per cent; their share of U.S. income has shrunk. Bsns W. p56-8 My 16 '53

KYES, Roger Martin, 1906-
Who'll get the contracts? por Bsns W p27 My 2 '53

KYMOGRAPH
Device for transporting kymograph papers. A. Horita and T. C. West. plan diag Science 117:18-19 Ja 2 '53

L

L.C.L. freight. See Freight car service—Car load

LABELING
Evaluation of heat-seal adhesives; laboratory procedures for applying test coatings and test apparatus. H. Wittcoff and D. Peerman. il Mod Packaging 26:135-40 N '52
Eyecatching packaging; low-cost, colorful; Fuld brothers color affect-lithography. il Chem W 71:42+ N 8 '52
Labeling-cartoning teamwork; Wyeth, inc. il Mod Packaging 26:108-9 Je '53

LABELING machines
Decals automatically applied. il Mod Packaging 26:101-3+ D '52
It pays to improvise; standard labeler converted. il Mod Packaging 26:172-5+ Ap '53
Precision labeling; Sofskin hand cream. il Mod Packaging 26:92-5 Mr '53
Safer drug labeling; Sharp & Dohme. il Mod Packaging 26:107 Mr '53

LABELS
Ann Page; fourth generation; latest label design stresses spot identification with high-fidelity products illustration. il Mod Packaging 26:110-13 O '52
Cellulose-band label. il Mod Packaging 26:182+ Jl '53
Heinz steps out in sweeping label redesign. il Mod Packaging 26:106-8+ S '52
Proud label; Masury backs its Swedish-formula enamel with Svensk label festooned with actual gold coin. il Mod Packaging 26:140-1 S '52
Report of ISO committee; marks indicate conformity with standards. Standardization 23:293-4 S '52
Soft drink maker changes the label and gets more than it bargained for. il Ptr Ink 242:53 Mr 6 '53
Taylor's wines; art of wine maker projected into sales through art of packaging. il Mod Packaging 26:94-8 N '52
Testing consumer acceptance of new label design; abstract. F. C. Majorack. Mod Packaging 26:144 Je '53

Law

House committee holds hearings on synthetic labeling proposal. Rubber Age 73:676-7 Ag '53

LABELS, Plastic
Power plant labels that last. il Power Eng 57:70 My '53

LABOR, Department of. See United States—Labor, Department of

LABOR and laboring classes
Labor trends. C. Ching. Advanced Management 18:56-61 Ja '53
Some human problems of industrial development. R. W. Cox. Int Labour R 66:246-67 S '52
See also
Absenteeism (labor)
Accidents, Industrial
Apprentices
Arbitration, Industrial
Bonus system
Building trades—Labor conditions
Chemical workers
Coal miners
Cotton mills—Employees
Disabled—Rehabilitation
Diseases, Industrial
Employees
Employees' representation in management
Employment management
Employment systems
Farm labor
Foundries—Employees
Gas companies—Employees
Government employees
Hours of labor
Housing
Hygiene, Industrial
Industrial education
Industrial management
Industrial relations
Insurance, Health
Insurance, Industrial
Insurance, Unemployment
Insurance, Workmen's compensation
International labor organization
Labor disputes
Labor laws and legislation
Labor supply
Lumber workers
Machinery in industry
Metal workers
Miners
Motor bus drivers
Occupations
Office workers
Old age pensions
Open and closed shop
Pensions, Industrial
Petroleum workers
Printers
Professional workers
Profit sharing
Radio workers
Railroads—Employees
Research workers
Safety devices and measures
Seamen
Servants
Standard of living
Steel workers
Strikes
Textile workers
Time study
Trade agreements
Trade unions
Unemployment
Wages
Woman—Employment
Working women
Workmen's compensation

Bibliography

Subject index of volumes 52-71, Monthly labor review, Jan. 1941 to Dec. 1950. U S Bur Labor Statistics Bul 1080:1-219; pa $1 Supt. of doc. '53
Supplemental list, publications of the Department of labor, January 1, 1948; revised March 1953. U S Dept. of labor, Division of procurement, Washington, D.C. '53

International aspects

See also
International labor conference

Newspapers

See Newspapers, Trade union

Statistics

Quick glance at the labor market. Bsns W p 164 My 16 '53
Source list of selected labor statistics. rev ed 113p pa $2 Special lib. assn, 31 E. 10th st, New York 3 '53

Canada

Labor relations in Canada. P. Conroy. Comm & Fin Chr 177:1445 Ap 2 '53
Third of working force in Canadian labor unions. J. Montagnes. Barron's 33:21 My 11 '53

Great Britain

Engineering outlook; the man-power situation. Engineering 175:136-9 Ja 30 '53
Labour in engineering. Economist 167:759 Je 13 '53
Labour in 1952. G. Williams. Engineer 195:8-10, 47-9 Ja 2-9 '53

India

Foreign firms in India employ more Indians. For Comm W 49:7 Je 29 '53
Indianisation for foreign firms. Economist 167:450-1 My 16 '53

LABOR and laboring classes—*Continued*

Middle Atlantic states

Resources for the chemical industry in the United States; manpower. B. B. Watson. Ind & Eng Chem 45:510-12 Mr '53

New England

Manpower resources. A. C. Gernes. Ind & Eng Chem 44:2533-5 N '52

Puerto Rico

Labor's role in industrialization. S. Rottenberg. Ann Am Acad 285:85-90 Ja '53
Problems in inter-spatial comparisons of worker efficiency; illustrations from Puerto Rico. S. Rottenberg. Am Stat Assn J 47:647-52 D '52

Russia

Collective agreements in the U.S.S.R. Int Labour R 66:477-84 N-D '52

Somaliland, Italian

Economic and social conditions in Somaliland under Italian trusteeship. R. Gavin. map Int Labour R 66:221-45 S '52

United States

Employment and wages in the United States. W. S. Woytinsky and others. 777p $7.50 Twentieth century fund, 330 W. 42d st, New York 36 '53
Labor. Published in monthly numbers of Fortune
Labor in midpassage. J. B. S. Hardman. Harvard Bsns R 31:39-48 Ja '53
Labor's interest in free enterprise. D. W. Tracy. Edison Elec Inst Bul 21:235-6 Jl '53
Meeting of minds, to correct uneconomic labor demands. T. L. Godey. Mag of Wall St 91:452-5 Ja 24 '53
Quick appraisal of the labor market (cont). Bsns W p 176 N 22 '52; p 136-7 Mr 7 '53
Significant developments in practical labor relations. P. A. King. Published in monthly numbers of Factory management and maintenance
What's ahead in labor relations. L. Stessin. Mill & Factory 51:75-9 D '52

LABOR contracts

Can you stop restraining contracts? Bsns W p 133-5 Mr 28 '53
Contracts of employment. Elec J 150:279-80 Ja 23 '53
Employment agreements; contracts between employers and employees offer protection of trade secrets and processes. A. W. Gray. bibliog Machine Design 24:114-16 N '52

LABOR cost

Employment costs of important companies compared; relation between wages, sales and profits. Mag of Wall St 92:315 Je 13 '53
Estimating data for piping labor costs. L. L. Mrachek. diags Tappi 35:sup34A+ O '52
Hidden payroll. W. T. Simons and M. C. Brown. il Eng & Min J 154:100-1 S '53
How hidden wages affect corporate profits. T. L. Godey. Mag of Wall St 91:59-61 O 18 '52
Program for cost reduction. B. Payne. Harvard Bsns R 31:71-82 S '53
Survey shows hidden pay costs average $644 per employee. Am Bsns 22:38-9 O '52

See also
Employment management—Costs

Accounting

How to apply statistical cost control to labor costs. J. Evanko, jr. Advanced Management 17:23-7 Ag '52

See also
Time keeping

LABOR disputes

Bigger state role is likely. Bsns W p53-4 Jl 25 '53
Decisions that just won't wait. Bsns W p 140+ N 8 '52
Free of charge; handling grievances. Bsns W p 149 My 2 '53
Republican policy; good but untested. Bsns W p44 Jl 25 '53
White House and labor disputes. J. R. Steelman. Comm & Fin Chr 177:1642+ Ap 16 '53

See also
Arbitration, Industrial
Strikes

LABOR laws and legislation

Do state laws hurt unions? Bsns W p 174 My 9 '53
Exaction or negotiation? issue in bogus test case. Ed & Pub 85:7 N 22 '52
High court upholds right-to-work law. Eng N 150:30 Mr 26 '53
Labor adds up this year's state law changes. Bsns W p56+ Jl 25 '53
Labor control; Congress seeks to return power to the states. Eng N 150:31 My 14 '53
Summary of state labor laws for women, 1953. 7 l U.S. Women's bur. Washington 25 '53

See also
Discrimination in employment
Employers' liability
Hours of labor
Insurance, Unemployment
Insurance, Workmen's compensation
Labor contracts
Strikes—Law
Trade unions—Law
Wages—Law
Workmen's compensation

Bibliography

Bibliography of labour law. S. Nicolas, comp. (Bibliog contribution no. 8) 83p International labour office library, Geneva, Switzerland '53

Illinois

Illinois labor legislation. R. G. Soderstrom. (Lecture ser. no. 9) 12 l Univ. of Illinois, Institute of labor and industrial relations, 704 S. 6th st, Champaign, Ill. '53

Nevada

Right-to-work law passes in Nevada. Eng N 149:29 N 13 '52

United States

CWA blasts labor law proposal that local utilities be exempted from provisions of the federal labor-management law. J. A. Beirne. Pub Util 51:703-4 My 21 '53
Sound labor relations program; abstract. W. H. Lucas. Min Cong J 38:100-1 O '52
State labor legislation in 1952. B. McConnell. Mo Labor R 75:502-5 N '52
Two vital U.S. Supreme court decisions; Allstate construction co. and Hempt brothers cases. N. C. Rockwood. Rock Prod 56:83+ Ap '53
What of new labor relations legislation? H. J. King. Comm & Fin Chr 176:2026 N 27 '52

See also
Strikes—Law
Wages—Law

Taft-Hartley law

ALC and LIAA statement on Taft-Hartley change. East Underw 54:8 My 8 '53; Same. Weekly Underw 168:1271 My 9 '53
Changes in T-H. Bsns W p 178 N 22 '52
Collective bargaining for professional employees. P. M. Weinworth. Civil Eng 23:115-16 F '53
Congress moves to give T-H a new look. Bsns W p 138+ Ja 17 '53
Congress tackles Taft-Hartley. Bsns W p 174-5 F 21 '53
Current labor trends and labor problems. S. H. Slichter. Am Gas Assn Proc 1952:15-24; Same. Comm & Fin Chr 176:1619+ O 30 '52
Featherbedding upheld by Supreme court. Bsns W p 175-6 Mr 14 '53
High court test for featherbedding. il Bsns W p 169-70 O 25 '52
How can you rid unions of reds? Bsns W p41-2 Jl 25 '53
How to operate today under the Taft-Hartley law; chart. Mill & Factory 52:sec 2 F '53 (reprints 50c)
Industry speaks up. Bsns W p 174-6 Ap 18 '53
Industry spokesmen differ on Taft-Hartley changes. Eng N 150:28 Ap 23 '53

LABOR law and legislation—United States—Taft-Hartley law—*Continued*
Labor disagrees at hearings. Eng N 150:28 Ap 2 '53
Labor legislation, as it affects the engineer. Min Eng 5:880 S '53
Mr Taft proposes; his T-H amendments. Fortune 47:63-4+ Ja '53
New advisers find waters rough. Bsns W p 146 F 28 '53
Nothing cooking. Bsns W p 134+ My 30 '53
On the rocks; Labor dept's advisory committee. Bsns W p 171-3 Mr 14 '53
Possible results of Republican victory. N. C. Rockwood. Rock Prod 55:71+ D '52
Probable changes in the Taft-Hartley act. N. C. Rockwood. Rock Prod 56:59+ Mr '53
Recommended revision of Taft-Hartley act. C. R. Kuzell and D. Kitchel. il Min Cong J 39:24-9+ My '53
Senate feels its way on Taft-Hartley. Bsns W p 138-9 Ap 4 '53
Should Taft-Hartley act outlaw polecat strikes? C. E. Bonnett. Comm & Fin Chr 177:1210 Mr 19 '53
Sound labor relations program; why amendments to existing labor statutes are needed. W. H. Lucas. il Min Cong J 39:26-8+ Mr '53
Stop-strike move called violation; NLRB decision labeled Austin company's firing of three guards to prevent a strike a T-H violation. Eng N 150:32 Ja 22 '53
Strikes for same-union subcontractors does not violate Taft-Hartley. Eng N 149:32 D 4 '52
Supreme court hears Ledbetter case. Eng N 149:31 N 20 '52
Taft-Hartley act; it fosters the constitutional principle of equality under law. R. A. Taft. Barron's 32:23-6 O 20 '52
Taft-Hartley and national emergency strikes. L. W. Cozan. Personnel J 31:180-1 O '52
T-H injunction challenge. Bsns W p 121 D 20 '52
T-H problems. Bsns W p 134 Je 27 '53
Taft maps labor law changes. Eng N 149:27 N 27 '52
Tension with the G.O.P. Fortune 47:74+ My '53
Tightening up on Communists. Bsns W p 165-6 My 16 '53
To stop job bias, amend Taft-Hartley. Bsns W p 177 My 9 '53
Union shop can be revoked by election. Eng N 149:29 O 30 '52; Bsns W p 148 N 8 '52
Urge new status for supervisors as transit takes fight to Congress. Bus Transportation 32:50 My '53
Voice of labor on Taft-Hartley act. F. C. Jones. Rock Prod 55:53+ N '52
What about picketing? letters on the subject of whether or not the Taft-Hartley act should be amended to outlaw picketing. Comm & Fin Chr 177:2303+, 2405+, 2511+, 2627+, 2738+; 178:6-7+, 104+ My 28, Je 4, 11, 18, 25, Jl 2, 9 '53
What will happen to the Taft-Hartley act? A. N. Wecksler. Mill & Factory 52:75-7 F '53
Wrangling over Taft-Hartley changes. Bsns W p 154-5 My 2 '53

Venezuela

Revised Venezuelan labor law submitted. For Comm W 49:7 F 23 '53

Virginia

Labor laws; a matter of precedence. Bsns W p 174-5 Mr 28 '53

LABOR leaders. See Trade unions—Officials

LABOR medicine, American congress of. See American congress of labor medicine

LABOR news. See Newspapers—Labor news

LABOR officials. See Trade unions—Officials

LABOR party (Great Britain)
Bevanites on the defensive. Economist 166:555 F 28 '53
Forgotten man; Britain's bitter middle class may plague Labor party. F. Morley. Barron's 33:3 Jl 6 '53
Forming labour policy. Economist 167:6 Ap 4 '53
Labour accepts defence. Economist 166:618 Mr 7 '53
Labour after battle. Economist 165:281-2 N 1 '52
Labour and the schools. Economist 167:807 Je 20 '53
Labour policy decided. Economist 167:499-500 My 23 '53
Labour with a policy. Economist 167:887 Je 27 '53
Labour's new leviathan. Economist 166:119-21 Ja 17 '53
Meaning of Morecambe. Economist 165:1-2 O 4 '52
Socialism in dilution; statement of policy. Economist 167:793-5 Je 20 '53
Stalin and the labour party. Economist 166:714-15 Mr 14 '53

LABOR press of America, International. See International labor press of America

LABOR productivity
How fatigue affects productivity. L. E. Davis and P. D. Josselyn. bibliog Personnel 30:54-9 Jl '53
Incentive to production; deferred profit sharing. R. P. Ettinger. Personnel J 31:284-7 Ja '53
NAM can't see productivity pay. Bsns W p 176 F 21 '53
Productivity as a factor in wage determination; abstracts. A. M. Fisher and F. Rudge. Brick & Clay Rec 121:78 O '52; Elec World News ed 138:41 O 13 '52
Services of capital. Nat City Bank p22-3 F '53
Statistical work measurement control. R. N. Lehrer. Advanced Management 17:10-11 Ag '52
What are present industrial productivity trends? Mill and Factory survey. Mill & Factory 52:67-70 My '53
See also
Efficiency, Industrial
Labor standards

Statistics

Problems in inter-spatial comparisons of worker efficiency; illustrations from Puerto Rico. S. Rottenberg. Am Stat Assn J 47:647-52 D '52

LABOR recruiting
Industry wants Joe College. G. G. Carr. Iron Age 171:87 Je 4 '53
Is business doing a good job of college recruiting? J. B. Grant; W. Norris. il Am Bsns 22:14-15+ D '52
Placement head offers program for college recruiting. F. S. Endicott. Am Bsns 23:20+ Ja '53
Useful pointers on finding girl power. J. H. Collins. Pub Util 52:26-33 Jl 2 '53

LABOR relations board, National. See National labor relations board

LABOR requirements for production
Construction labor on public housing in the South. A. L. Stucke and H. F. Haase. Mo Labor R 75:388-94 O '52
Labor requirements for building air force housing. K. R. Murphy and E. M. Gordon. Mo Labor R 75:263-8 S '52

LABOR saving devices
See also
Calculating machines
Machinery, Automatic
Mechanical handling

LABOR standards
Arbitrating industrial efficiency. A. H. Myers. Harvard Bsns R 31:60-8 Jl '53
Using work measurement to cut housekeeping costs. R. M. Shea and D. Granato. Factory Management 111:118-20 Ag '53

LABOR supply
See also
Employment
Labor recruiting
Woman—Employment

Canada

Manpower situation in Canada. A. MacNamara. Roads & Eng Constr 91:144+ My '53

Great Britain

Mining manpower. Economist 166:756+ Mr 14 '53

Southern states

Labor market. C. R. Walker. Manuf Rec 122:30 S '53

LABOR supply—*Continued*

United States

Companies balk at pirating. Bsns W p30 F 21 '53
Have we a labor surplus? Bsns W p 162-3 Ap 25 '53
Labor market developments. Fed Res Bul 39: 581-7 Je '53
Manpower pools are drying up. map Bsns W p 124-5 Ja 10 '53
What faces you and your business. Brick & Clay Rec 122:42-3 Ap '53
What's ahead in the labor force. L. F. Johnson. Advanced Management 18:14 Mr '53
Where's the manpower coming from? Tool Eng 30:52 Ja '53

See also
Military service—Labor problems

LABOR turnover
Approach to labour turnover. J. M. M. Hill. Engineer 194:306-9 S 5 '52
Auto companies will spend $500,000 trying to cut down high labor turnover. F. G. Lawrence. Steel 132:61-2 Je 29 '53
Labor turnover and what to do about it. J. Perry. Factory Management 111:233-4+ Ja '53
Labor turn-over, 1951-1952; tabulation. Steel 132:196 Ja 5 '53
Labor turn-over rates in manufacturing industries, 1946-1952; tabulation. Iron Age 171:484 Ja 1 '53
Method for reducing employee turnover. C. E. Scholl, jr. and R. M. Bellows. Personnel 29:234-6 N '52
Problem of employee turnover. G. T. Bowden. Harvard Bsns R 30:72-82 S '52
Study of woods labour turnover. M. S. M. Hamilton. Pulp & Pa of Can 54:156+; Discussion. W. C. Harrison. 160+ Ap '53
What the supervisor can do about labor turnover. M. J. Wise, jr. Textile World 103:143+ O '53
What you can do about turnover; abstract. Management R 42:20-1 Ja '53
Why employes quit, and what can be done about it. E. F. O'Toole. Nat Underw (Life ed) 57:5+ Je 5 '53
Worker turnover bites into profits. B. Blai, jr. Personnel J 31:367-72 Mr '53

LABOR unions. See Trade unions

LABORATORIES
Complete laboratory dedicated to enameling research; United States steel corp. Research and development laboratory. H. L. Conaway. il plan Cer Ind 60:69 My '53
Doorway to your future; Procter & Gamble co. Miami Valley laboratories. il Mod Ind 25:40-1 Ja '53
From Procter & Gamble's newest lab, ten new-plant ideas. il Factory Management 111:132-3 S '53
Group research laboratory; Guest Keen and Nettlefords group. il Engineer 195:744 My 22 '53
Hot lab; atomic age tool. il Safety Maint & Prod 105:56-7 F '53; Same. Nat Safety N 67:22-3 Je '53
Laboratory arrangement suits blast resistant building; Armed forces Institute of pathology building, Washington. il plan diag Arch Rec 112:200-1 N '52
New laboratories at Welsh factory. il Elec J 150:371-2 Ja 30 '53
Open day at Fulmer research institute; completion of first five years' work on sponsored research. il Metallurgia 46:195-8 O '52
Precast concrete in laboratory design for handling radioactive materials. il diags Concrete 60:16+ O '52
Safety provisions mark R. J. Reynolds research lab. il Chem & Eng N 31:768 F 23 '53
Swedish forest products research laboratory. Tappi 36:sup 102A+ Je '53
Wyandotte expands research facilities at Michigan plant. il Paper Ind 35:439-40 Jl '53

See also
Aeronautic laboratories
Automobile laboratories
Cement laboratories
Chemical laboratories
Concrete laboratories
Cryogenic laboratories
Electric laboratories
Engineering laboratories
Foundry laboratories
Glass laboratories
Medical laboratories
Metallurgical laboratories
Paint laboratories
Paper laboratories
Petroleum laboratories
Pharmaceutical laboratories
Rubber laboratories
Sewage disposal plants—Laboratories
Testing laboratories
Textile laboratories
United States—Army—Laboratories
United States—Navy—Laboratories
Waterworks—Laboratories

also American gas association—Appliance testing laboratory; Cabot, Godfrey L., inc; Edison, Thomas A., inc.—Central research laboratory; Great Britain—National physical laboratory, Teddington; Massachusetts institute of technology—Metals processing laboratory; Underwriters' laboratories

Air conditioning

Control instruments at Argonne laboratory. R. W. Van Valzah. Heating-Piping 25:113-15 Mr '53
Helio-laboratory; Johnson wax research and development laboratory. il Heat & Ven 50: 132+ Mr '53

Electric equipment

Industrial research; G.K.N. group research laboratory. il Elec R (Lond) 152:1228-9 My 29 '53

Equipment

Dilts coating laboratory. il Tappi 35:sup 100A-2A O '52
Making labs customers. il Bsns W p80-2+ F 21 '53
Piping radiological labs. W. W. McIntosh. il Heating-Piping 25:73-9 O '53
Preparation of dross-free sodium and other low melting metals and alloys by the under-pour method. L. Silverman. diags R Sci Instr 24:80-1 Ja '53

LABORATORIES, Traveling
Mobile engineering laboratory. C. W. Newberry and R. S. Jerrett. il plans Engineering 175:669-71 My 22 '53
Mobile lab aids defense contractors. Product Eng 24:296+ Ap '53
Mobile lab expedites gage checking. il Tool Eng 29:62 N '52

LABORATORY furnaces. See Furnaces, Laboratory

LABORATORY glassware. See Glassware, Laboratory

LABORATORY workers
Lab boys. R. P. Lister. Metal Prog 64:93-5 Ag '53
Personnel practices in industrial laboratories. L. W. Steele. Personnel 29:469-76 My '53

LABRADOR
See also
Iron mines and mining—Labrador

LACCOLITHS
Pegmatite layer in the Shonkin Sag laccolith, Montana. J. D. Barksdale. bibliog maps diags Am J Sci 205:705-20, pl 1-4 O '52

LACE
Lace manufacture; electricity supply arrangements at a Tiverton factory. il Elec R (Lond) 152:237-40 Ja 30 '53

LACKAWANNA railroad. See Delaware, Lackawanna and western railroad

LACQUER and lacquering
Adhesion of lacquers to nonferrous metals. L. R. Brantley, A. Woodward and G. Carpenter. bibliog il Ind & Eng Chem 44: 2386-9 O '52
Aerosol lacquer problems; abstract. F. S. Palmer. Paint Oil & Chem R 116:45 Je 4 '53
Eastman Chemicals new cellulose polymer. il Paint Oil & Chem R 116:42B Mr 26 '53
Industrial session takes another look at lacquer coatings. Paint Oil & Chem R 115: 115-20 D 4 '52
Plasticizers for nitrocellulose lacquers; abstract. A. Kraus. Paint Oil & Chem R 116: 54 Mr 12 '53

LACQUER and lacquering—*Continued*

Testing

Testing amino resins for stoving finishes, by the Birmingham club. Paint Oil & Chem R 115:64+ D 4 '52

LA CROSSE, Emmart

Sketch. Mech Eng 75:262-3 Mr '53

LACTALBUMIN. See Albumin

LACTAMIDES

Ester-amides of lactic acid. M. L. Fein and E. M. Filachione. bibliog Am Chem Soc J 75:2099-101 My 5 '53

N-substituted lactamides. M. L. Fein and E. M. Filachione. bibliog Am Chem Soc J 75:2097-9 My 5 '53

LACTAMS

Polymerization of 6-hexanolactam. A. B. Meggy. Chem Soc J p796-8 Mr '53

LACTIC acid

Characterization and degradation of isotopic acetic and lactic acids. S. Roseman. bibliog Am Chem Soc J 75:3854-6 Ag 5 '53

Chemical production of lactic acid could save time and space. Chem & Eng N 31:1990 My 11 '53

Stereochemistry of complex inorganic compounds; a partial resolution of racemic mixtures of organic acids by means of preferential coördination. A. D. Gott and J. C. Bailar, jr. Am Chem Soc J 74:4820-2 O 5 '52

Analysis

Determination of lactic acid in heavy corn steep liquor. R. J. Smith. bibliog Anal Chem 25:505-7 Mr '53

LACTIC acid bacteria

Chemical nature of the lactobacillus bulgaricus factor. G. M. Brown and E. E. Snell. bibliog Am Chem Soc J 75:1691-3 Ap 5 '53

Ionic inhibition of growth in lactobacillus leichmannii 313 and its reversal with vitamin B_{12}. T. J. Bardos and H. L. Gordon. bibliog Am Chem Soc J 75:2019-20 Ap 20 '53

Isolation of the lactobacillus bulgaricus factor from natural sources. V. J. Peters and others. bibliog Am Chem Soc J 75:1688-91 Ap 5 '53

Production of folinic acid from folic acid by lactobacillus casei. T. J. Bond. bibliog Science 117:563-4 My 22 '53

Symposium on the lactic acid bacteria. R. P. Tittsler and others. Food Eng 25:166 My '53

LACTONES

Alkaloid of dioscorea hispida, Dennstedt; the lactone ring. A. R. Pinder. Chem Soc J p2236-40 Je '52

Condensations of α-carbethoxy-α-methyl-γ-butyrolactone. G. S. Skinner and R. E. Herbener. bibliog Am Chem Soc J 75:3031-3 Je 20 '53

Depsidones; hydroxy and methoxy analogs. D. S. Noyce and J. W. Weldon. bibliog Am Chem Soc J 74:5144-6 O 20 '52

Ester and lactone linkages in acidic polysaccharides. M. A. G. Kaye and P. W. Kent. Chem Soc J p79-83 Ja '53

Hydrogen-bonding of esters and lactones; site of bonding and effect of ring size. S. Searles, M. Tamres and G. M. Barrow. bibliog Am Chem Soc J 75:71-3 Ja 5 '53

Mass spectra of six lactones. L. Friedman and F. A. Long. bibliog Am Chem Soc J 75:2832-6 Je 20 '53

Podophyllotoxin studies; reductive methods in the synthesis of tetralin lactones from α-tetralone derivatives. G. N. Walker. Am Chem Soc J 75:3393-7 Jl 20 '53

Polyene acids; a new (*cis-trans-*)isomer of sorbic acid and its relation to hexenolactones. U. Eisner, J. A. Elvidge and R. P. Linstead. Chem Soc J p 1372-9 My '53

Possible significance of lactones as intermediates in oxidation of carbonaceous materials. J. Entel, C. H. Ruof and H. C. Howard. bibliog Am Chem Soc J 75:3038-9 Je 20 '53

Reduction of lactones to hydroxyaldehydes with lithium aluminum hydride. G. E. Arth. bibliog Am Chem Soc J 75:2413-15 My 20 '53

Synthesis of 2-naphthyl β-D-glucopyruronoside and 2-naphthyl β-D-glucofururonolactone and their behavior toward β-D-glucuronidase. K. Tsou and A. M. Seligman. bibliog Am Chem Soc J 74:5605-8 N 20 '52

Unsaturated lactones; absorption spectra in a group of α-benzal-γ-substituted crotonolactones. C. Hanna and F. W. Schueler. bibliog Am Chem Soc J 75:741-3 F 5 '53

LACTOPRENE EV. See Rubber, Artificial—Manufacture

LACTOSE

Degradation of carbohydrates by alkali; lactose. W. M. Corbett and J. Kenner. Chem Soc J p2245-7 Ag '53

Enzymatic conversion of lactose into galactosyl oligosaccharides. J. H. Pazur. bibliog il Science 117:355-6 Ap 3 '53

Analysis

Determination of lactose in dairy wastes. E. Hindin. bibliog Sewage & Ind Wastes 25:188-90 F '53

LADDERS

Railway roof inspection ladder; Merryweather and sons. il Engineer 196:60 Jl 10 '53; Engineering 176:118 Jl 24 '53

Swimming pool ladder step. il Mod Plastics 30:179 Ap '53

Safety measures

It pays to be careful. L. J. Markwardt and A. J. Freas. il diag Standardization 24:37-9 F '53

Ladder safety hints. Sewage & Ind Wastes 25:863-4 Jl '53

Ladder safety starts on the ground. il diags Safety Maint & Prod 105:14-16+ Je '53

New ladder code approved by ASA. Nat Safety N 67:54-5 Ja '53

Portable ladders. bibliog il Nat Safety N 67:39-40+ Mr '53

Slip-proof ladder tread. il Mod Plastics 30:177 Ap '53

LAFER, Horacio, 1900-

Brazil and U. S. bury the hatchet. Bsns W p 124-5 Mr 7 '53

LAGOONS

Lagoons are simple devices for processing industrial wastes. H. R. Murdock. Ind & Eng Chem 45:sup 105A-6A+ Ap '53

LAGRANGE, Georgia

Callaway helps build a better school. M. B. Andrews. il Textile World 103:155+ Je '53

LAINE, David

Annual Doehler award goes to David Laine. Foundry 80:169 O '52

LAKE Erie. See Erie, Lake

LAKE Superior district power company

Public utility securities. O. Ely. Comm & Fin Chr 177:345 Ja 22 '53

Stock offering. Comm & Fin Chr 177:1153 Mr 16 '53

LAKES

Dating of pluvial lakes in the Great basin. I. S. Allison. bibliog Am J Sci 250:907-9 D '52

Polarograms of oxygen in lake water. K. G. Wood. Science 117:560-1 My 22 '53

Study determines lake evaporation and tests new measurement methods. il Eng N 150:71 Mr 19 '53

LAKES, Glacial. See Glacial lakes

LAKESIDE, Minnesota

Taconite brings the modern mining town. il maps Eng N 149:34-6+ O 23 '52

LAMB, Arthur Becket, 1880-1952

Sketch. G. S. Forbes. Chem Soc J p 1322-4 Ap '53

LAMB shift. See Spectrum

LAMINAC resins. See Resinous products

LAMINARIN

Manufacture of algal chemicals; laboratory-scale isolation of L-glucose from laminarin and laboratory-scale isolation of L-fucose from brown marine algae; abstract and discussion. W. A. P. Black and others. Chem & Ind p235 Mr 14 '53

LAMINATED construction

Aluminum honeycomb sandwich. P. O'Keefe. il Materials & Methods 36:96-8 D '52

Aluminum honeycomb sandwich structures. il diags Product Eng 24:184-91 F '53

LAMINATED construction—*Continued*

Elastic and plastic buckling of simply supported solid-core sandwich plates in compression. P. Seide and E. Z. Stowell. bibliog diags U S Nat Advisory Com for Aeronautics 1950:357-66 '51

Honeycomb construction used for dive brake door on North American F-86 Sabrejets. il Machine Design 25:192-3 Ag '53

Metal-faced panels for curtain wall construction; Seaporclad, Vitrock and Armorply. il diags Arch Rec 112:207+ S '52

Paper-honeycomb cores for structural sandwich panels. R. J. Seidel. il Paper Ind 34:1112-15 D '52

Properties, processing and uses of metal-bonding adhesives. O. W. Loudenslager. bibliog il diags Rubber Age 73:641-7 Ag '53; Same abr. Tool Eng 30:78-84 Ap '53

Small bending and stretching of sandwich-type shells. E. Reissner. bibliog diags U S Nat Advisory Com for Aeronautics 1950:483-508 '51

Thermal insulation of paper honeycomb cores and sound absorption of sandwich panels. D. J. Fahey and others. bibliog il diags Paper Ind 35:658-62 S '53

LAMINATED paper. See Paper, Laminated

LAMINATED plastics. See Plastic materials, Laminated

LAMINATED products

Honeycomb material offers new possibilities; Aircomb. il Materials & Methods 38:133 Ag '53

New paperboard-veneer container produced by Weyerhaeuser. il Paper Tr J 136:26 My 8 '53

New vinyl-metal sheet resists corrosion and abrasion and can be formed. P. O'Keefe. il Materials & Methods 38:94-5 S '53

LAMINATED wood. See Wood, Laminated

LAMME, Benjamin G., medals

I. F. Kinnard Lamme medalist. Elec World 139:75 Ap 6 '53

Isaac Fern Kinnard, 1952 Lamme medalist. Gen Elec R 56:8 Jl '53

Lamme award. J Eng Educ 43:151 N '52

Lamme medalist for 1952; presentation addresses by L. L. Bosch and E. S. Lee; response by I. F. Kinnard. il Elec Eng 72:578-83 Jl '53

LAMPS

Bubble lamps fashioned of hard-drawn steel wire and translucent white vinyl. il Mod Plastics 30:190 N '52

LANCASHIRE steel corporation, limited

Statement by the chairman. J. James. Economist 166:606 F 28 '53

LAND

See also

Agriculture
Drainage
Eminent domain
Irrigation
Land tenure
Oil lands
Real estate business
Reclamation of land
Rent

Classification

See Land utilization

Subdivision

Financing of subdivision utilities; guided discussion. Munic Util 90:30-3+ N '52

Outline of regulations for subdivision standards. Pub Works 84:109-10+ S '53

Problems of subdivisions, zoning and private streets; Princeton, New Jersey. I. R. Riker. il Pub Works 84:61-2+ Mr '53

Florida

Another Florida land boom! R. W. Babson. Comm & Fin Chr 177:587 F 5 '53

India

Land reclamation in northern India and Pakistan. Engineering 176:233-4 Ag 21 '53

Pakistan

Land reclamation in northern India and Pakistan. Engineering 176:233-4 Ag 21 '53

LAND drainage. See Drainage

LAND reclamation. See Reclamation of land

LAND subsidence. See Subsidences (earth movements)

LAND tenure

Bibliography

Land ownership, a bibliography of selected references. A. M. Hannay, D. W. Gooch and M. L. Gould, comps. U S Agric Bibliog Bul 22:1-293; pa 70c Supt. of doc. '53

China

Revolution in Chinese villages; land reform. Economist 165:762+ D 13 '52

Egypt

New Egyptian law limits land holdings. For Comm W 48:12 O 6 '52

India

Land reforms in India. M. L. Dantwala. Int Labour R 66:419-43 N-D '52

Washington (state)

Aliens welcome. Bsns W p 170-1 F 21 '53

LAND utilization

Land utilization in Taiwan. T. Chang. Land Econ 28:362-8 N '52

Resources unit picks two more committees. Oil Paint & Drug Rep 164:5+ S 21 '53

Site classification. W. G. E. Brown. Pulp & Pa of Can 54:146-7 Je '53

Site classification. A. Linteau. bibliog Pulp & Pa of Can 54:147-8+ Je '53

Site classification; site climax as an indicator of site conditions. H. D. Long. Pulp & Pa of Can 54:155+ Je '53

See also

City planning
Reclamation of land

LANDEGGER, Karl F.

Paper on a global scale. por Bsns W p 142-4 F 28 '53

LANDFILLS. See Refuse disposal

LANDING gear. See Airplanes—Landing gear

LANDING operations, Military

Mechanized landing force and the blitz beachhead. A. J. Stuart. il U S Naval Inst Proc 78:1208-17 N '52

LANDLORD and tenant

Leasehold reform. Economist 167:353-4 My 9 '53

See also

Leases

LANDSCAPE gardening

Planting the site. M. Sargent. il Arch Rec 112:197-203 S '52

LANDSLIDES

Analysis of corrective actions for highway landslides. R. F. Baker. il diags Am Soc C E Proc 79 [no 190]:1-25 My '53

Landslides menace Grand Coulee area. Eng N 150:27 My 14 '53

Soil failures in a railway cutting. il diags Engineer 195:384-5, 414-15 Mr 13-20 '53; Engineering 175:456-7, 487-90 Ap 10-17 '53

LANE, Alfred Church, 1863-1948

Memorial. R. L. Nichols. por(pl 9) Geol Soc Proc 1952:107-18 bibliog(p 115-18) Je '53

LANGMUIR, Irving, 1881-

Tomorrow's weather. por Fortune 47:144-9+ My '53

LANGMUIR probe. See Electric discharges

LANGUAGE

Control tower language. F. C. Frick and W. H. Sumby. diag Acoustical Soc Am J 24:595-6 N '52

Manual of foreign languages, for the use of librarians, bibliographers, research workers, editors, translators, and printers. G. F. von Ostermann. 4th ed rev & enl 414p $12.50 Central book co, 261 Broadway, New York 7 '52

Operational phonemics in reference to linguistic relativity. K. L. Pike. bibliog diags Acoustical Soc Am J 24:618-25 N '52

See also

English language
Speech

LANGUAGE, Modern

Study and teaching

It pays to speak the language. il Bsns W p 130+ F 28 '53

LANOLIN. See Wool fat

LANOSTADIENE
Lanosterol; some reactions of hydrocarbons of the lanosterol series. J. F. McGhie, M. K. Pradhan and W. A. Ross. Chem Soc J p305-8 Ja '53

LANOSTADIENOL
Pyridinium sulphates derived from cholesterol and lanostadienol. M. J. Birchenough and H. Burton. Chem Soc J p2443-4 Je '52
Triterpenoids; some further observations on the constitution of lanostadienol (lanosterol). C. S. Barnes and others. Chem Soc J p2339-47 Je '52

LANOSTENE
Lanosterol; some reactions of hydrocarbons of the lanosterol series. J. F. McGhie, M. K. Pradhan and W. A. Ross. Chem Soc J p305-8 Ja '53

LANOSTENYL iodoacetate
Triterpenoids; the crystal structure of lanostenyl iodoacetate. J. Fridrichsons and A. M. Mathieson. diags Chem Soc J p2159-67 Jl '53

LANOSTEROL
Lanosterol; further experiments on the reduction of ketones in the lanosterol series. J. F. McGhie, M. K. Pradhan and J. F. Cavalla. Chem Soc J p3176-9 Ag '52
Lanosterol; some reactions of hydrocarbons of the lanosterol series. J. F. McGhie, M. K. Pradhan and W. A. Ross. Chem Soc J p305-8 Ja '53
Triterpenoids; some stereospecific reactions in the lanostadienol (lanosterol) series. C. S. Barnes and D. H. R. Barton. Chem Soc J p 1419-22 My '53
Triterpenoids; the constitution of lanostadienol (lanosterol). C. S. Barnes and others. Chem Soc J p571-6 F '53
Triterpenoids; the lanosterol analogue of provitamin D_3. D. H. R. Barton and B. R. Thomas. Chem Soc J p 1842-7 Je '53
Triterpenoids; the stereochemistry of lanostadienol (lanosterol). C. S. Barnes and others. Chem Soc J p576-9 F '53

LANTERN slides
Line and letter size for lantern slides; engineering reference sheet. J. C. Parker. diag Elec World 139:96 My 4 '53

LANTHANUM
Crystal structure and superconductivity of lanthanum. W. T. Ziegler, R. A. Young and A. L. Floyd, jr. bibliog Am Chem Soc J 75:1215-21 Mr 5 '53
Heat of combustion of lanthanum. E. J. Huber, jr. and C. E. Holley, jr. bibliog Am Chem Soc J 75:3594-5 Jl 20 '53
Rare earths in stainless brought up to date. C. B. Post. Iron Age 171:148-9 Je 4 '53
Resistivity of lanthanum, cerium, praseodymium, and neodymium at low temperatures. N. R. James and others. bibliog Phys R 88:1092-8 D 1 '52

LANTHANUM chloride
Relative toxicity of lanthanum, tantalum, and thorium compounds in the developing chick embryo. L. J. Machlin and others. bibliog A M A Archives Ind Hygiene & Occup Med 6:441-4 N '52

LANTHANUM ferricyanide
High field conductance of lanthanum ferricyanide at 25°. D. Berg and A. Patterson, jr. bibliog Am Chem Soc J 75:1484-6 Mr 20 '53

LANTHANUM manganite
Catalytic activity of lanthanum and strontium manganite. G. Parravano. bibliog Am Chem Soc J 75:1497-8 Mr 20 '53

LANTHANUM nitride
Crystal structure of lanthanum nitride. R. A. Young and W. T. Ziegler. bibliog Am Chem Soc J 74:5251-3 N 5 '52

LANTHIONINE. See Thiodialanine

LAPLACE transformation
Analysis of sampled-data systems; Laplace and Fourier transform methods; abstract. J. R. Ragazzini and L. A. Zadeh. diag Elec Eng 71:1102 D '52
Calculation of energy flow using the Laplace transformation; abstract. A. C. Sim. bibliog diag Inst E E Proc 99 pt 2:624 D '52

LAPPING
Grinding and lapping stresses in manganese oil-hardening tool steel. H. R. Letner and H. J. Snyder. bibliog il A S M E Trans 75:873-80; Discussion. 881-2 Jl '53
Splines on precision instrument parts easily lapped. diags Iron Age 171:156-7 F 26 '53; Mach 59:203 Mr '53; Tool Eng 31:63 Ag '53
What's ahead the next ten years in machining; grinding, lapping, honing. Am Mach 96:E 15-18 Mid-N '52

LAPPING machines
Churchill super-finish centreless lapping machine. il Engineering 175:377 Mr 20 '53
Norton flat lapping machine for large-size parts. il Mach 59:210 N '52

LARCH
Larch ε-galactan; the isolation of 3-β-L-arabopyranosyl L-arabinose. J. K. N. Jones. Chem Soc J p 1672-5 Je '53

LARD
Hog slaughter decline could boost lard price. Barron's 33:35-6 Ja 5 '53
Lard scores again. L. E. Slater. flow sheet(p 102-5) il Food Eng 25:72-3+ S '53

LARKIN, Russell E.
Three decades in insurance field. por East Underw 54:13 Ja 23 '53

LARSON, Gustus Ludwig, 1881-1953
Sketch. por Heating-Piping 25:137 O '53

LARVEX. See Mothproofing preparations

LATAVIA manufacturing company
Furniture in the cotton field; Latvian workers on Mississippi plantations use old world skills. il Bsns W p 118+ N 8 '52

LATEX. See Rubber latex; Rubber, Artificial—Latex

LATHES
Accelerating contour work for guided missile parts at Rheem mfg. co. il Steel 132:111 Mr 2 '53
Automatic contour lathe. il Mech Eng 75:402-3 My '53
Automatic lathe stops at fixed position. il diags Machine Design 25:160 Ag '53
Automatic loaders for crankshaft lathes. N. D. Cooper. il Tool Eng 30:145-6 Je '53
Automatic loaders for LeBlond crankshaft lathes; abstract. N. D. Cooper. il Automotive Ind 108:48+ My 15 '53
Automatic turbine wheel lathe. il Aero Digest 66:96-7 Ja '53
Ball-bearing tube center. H. Woerle. diags Am Mach 96:145 O 27 '52
Bar-Mor lathe tool-post for multiple tools. il Engineering 175:470 Ap 10 '53
Carbide insert makes simple work-driver. il Am Mach 97:141 F 16 '53
Colchester all-geared-head engine lathe ideal for training use. il Am Mach 97:160 Ag 17 '53
Contour attachment has air pressure cross-feed. R. C. Conklin. diag Am Mach 97:118 Ag 31 '53
Dow taper attachment. il Tool Eng 31:109 Jl '53
Dual functioning aligning fixture. N. S. Bradford. diag Am Mach 97:119 Ag 31 '53
Effect of axial slip on facing with a lathe. P. M. Gilet. il diags Engineering 175:229 F 20 '53
Flash lathe. il Tool Eng 29:120 N '52
French automatic copying lathe features hydraulic carriage feed. il Am Mach 97:168 Ag 3 '53; Mach 59:215-16 Ag '53; Tool Eng 31:120 S '53
Grind long shear blades on this lathe setup. R. G. Hawkins. il Am Mach 97:159 Jl 6 '53
H.E.B. copying lathe. Aero Digest 66:82 Ja '53
High-pressure, completely-automatic spinning lathe developed in Sweden. il Am Mach 97:168 Jl 20 '53
How to check the alignment of your lathe; illustrated instructions. H. A. Roy. diags Mill & Factory 51:94-6 N '52
Hydraulic copying attachment for lathes. il Engineering 174:183-4 Ag 8 '52
Hydraulic copying attachment for most standard lathes. il Am Mach 96:204 N 10 '52
Hydraulic lathe cuts machining time. il Iron Age 170:73 N 20 '52
Hydraulic lathe cuts roll-machining time. B. A. Wilson. diag Iron Age 171:128-9 Ap 16 '53
Hydraulic roll lathe saves time in rough machining. il Steel 132:142+ Ap 6 '53
Hydraulics give machining the modern touch; hydraulic lathe for Fairless. il Bsns W p64 N 29 '52

LATHES—*Continued*

Kerry's 5½in. precision lathe. il Engineer 195:293-4 F 20 '53; Engineering 175:269 F 27 '53

Laminated shims for toolbits. C. T. Bower. diags Am Mach 97:128 Mr 2 '53

Lathe chuck useful in holding non-cylindrical round work. W. M. Halliday. diags Mach 59:193-4 Mr '53

Lathe doubles as boring mill. L. Cranston. il Am Mach 96:156 N 24 '52

Lathe for training students. il Engineer 195:842 Je 12 '53

Lathe machines both jet cone ends in one setup; Ryan aeronautical co. il Steel 131:100 O 20 '52

Lathe tips for the power plant machinist. F. E. Riley. il Power Eng 57:104-5 Je '53

Lathe turns rolls automatically. il Iron Age 171:73 F 12 '53; Steel 132:107 Mr 9 '53

LeBlond 40-in. roll contouring lathe demonstrated at plant Jan. 26-30. il Am Mach 97:167 Ja 5 '53

Lehigh profile-tracing attachment for 9-through 13-in. lathes. il Am Mach 97:220 Je 8 '53

Length stop speeds engine lathe output. I. J. Peacock. diags Am Mach 97:186 F 16 '53

Lewis hydraulic lathe reduces manual work. il Am Mach 96:166 D 8 '52

Mackintosh-Hemphill 60-inch lathe turns rolls with electronic duplicator. il Am Mach 97:154 Mr 2 '53

Mammoth lathe gives automatic duplication. il Tool Eng 30:108 Je '53

Modern construction uses old idea; expanded metal lath. il Steel 132:140-1 Ap 27 '53

Modified tap shank eases lathe threading. C. T. Bower. diags Am Mach 97:185 F 16 '52

Murad one-inch capstan lathe. il Engineering 175:43 Ja 9 '53

Myford 3½-in. high-speed centre lathe. il Engineering 175:538 Ap 24 '53

New contour turning lathe. il Blast F & Steel Pl 41:503-4 My '53

1953 American Machinist production preview; turning. il Am Mach 97:146-54 Ja 19 '53

Profile-cutting wheel lathe. J. H. Heron. il Ry Loco & Cars 127:100 S '53

Reel and cable used to generate tapers on a lathe. J. Sobkowiak. diags Mach 59:206-7 D '52

Revolving bar-stop for turret lathes. E. K. Henriksen. diags Am Mach 97:144 Ja 5 '53

Roll lathe has three hydraulic movements. il Blast F & Steel Pl 40:1500-1 D '52; Iron & Steel Eng 29:136 D '52

Schiess vertical turret lathe drives without bevel gears. il Am Mach 97:158 F 2 '53; Mach 59:215-16 F '53

Simmons heavy lathe. il Tool Eng 30:120 Ja '53; Mach 59:214 Ja '53

Smoother, better finish possible on follower-equipped lathe. il Iron Age 171:156-7 F 12 '53

Tailstock mounted contour fixture saves space on lathe. L. R. Elliott. diag Am Mach 97:136 Ag 17 '53

Telescoping guard protects lathe bedways. C. T. Bower. il diags Mach 59:210-11 Je '53

Three-point lathe mounting. C. T. Bower. diags Am Mach 97:182 Mr 16 '53

Turchan vertical slide hydraulic duplicating attachment. il Mach 59:221 D '52

Turret lathe flute-milling attachment. C. T. Bower. diags Mach 60:198-200 S '53

Turret tooling cuts taper on pump wheel. A. Ashburn. il Am Mach 97:172-3 Je 8 '53

Twin tools scalp an ingot. il Am Mach 97:191 Ap 13 '53

Upside-down bed on copying lathe. il diags Machine Design 25:135 Je '53

Use your lathe to cut large gaskets and trim washers. F. E. Riley. il Power Eng 57:110 O '53

Welded-base lathe with shock absorbers. il diag Machine Design 25:138 F '53

What's ahead the next ten years in machining; turning and boring. Am Mach 96:E7-10 Mid-N '52

See also

Turning

History

Great grandpa did contour turning. A. V. Reed and N. Tweddle. il Am Mach 96:119-21 N 10 '52

Manufacture

Flame hardening of bed ways having nonuniform sections. il Tool Eng 29:47 D '52; Iron Age 170:217-18 N 6 '52

Monarch completes large expansion and modernization program. il Mach 59:260 D '52

Standards

American standard for accuracy of engine and tool-room lathes; data sheet. diags Mach 59:271 O; 251 N; 251 D '52

Tailstocks

Lathe tailstocks can be improved. I. J. Peacock. diags Am Mach 97:182 F 16 '53

LATHOSTEROL. See Cholestenol

LATHS

Metal lath membrane fireproofing; with timesaver standards. diags Arch Rec 112:211+ N; 187+ D '52; 113:199 F '53

Self-furring metal lath simplifies plaster application. il diags Am Bld 74:234+ S '52

LATIN AMERICA

See also

Caribbean region
Central America
Chemical industries—Latin America
Coffee trade—Latin America

Commerce

Makes fair play plea for Latin-America: tariff would be harmful. East Underw 54:31 My 22 '53

New time limit license simplifies export of goods to Latin America. For Comm W 50:24 Jl 27 '53

Our money, media, markets in modern Latin America. Sales Management 70:130+ Ja 15 '53

Trade with Latin America. Economist 166:760-1 Mr 14 '53

U.N.'s advice. Bsns W p 172 F 21 '53

U.S. exports to Latin American republics decline in 1952. For Comm W 49:14-17 Ap 13 '53

U.S. import surplus with Latin America at record level. For Comm W 49:12 Je 29 '53

Value of South American trade. J. P. Grace, jr. Weekly Underw 168:1416-17 My 23 '53

Volume of United States trade with Latin America high; with graphs and tables. For Comm W 48:14-16+ O 27 '52

Economic relations

United States

Cooperative spirit in Latin America contributes to success of Point four program. C. O. Rowe. For Comm W 49:15+ My 4 '53

Latin American boom; it brings no stability. map Bsns W p 162-5 Ap 18 '53

Quotas frighten Latin Americans. Bsns W p 157 My 16 '53

Foreign relations

United States

Neglecting the good neighbors. Bsns W p 188 Je 6 '53

Storm warnings in Latin America. Bsns W p 164 Mr 21 '53

LAUNDRIES

Cooling a hotel basement laundry. R. Latimer. il Sheet Metal Worker 44:129+ Ja '53

Air conditioning

Biggest air conditioned laundry; Grace-New Haven (Conn.) community hospital. il Dom Eng 182:85 Jl '53

Sanitation

Laundry recontamination hazards emphasized. Pub Health Rep 68:91-2 Ja '53

LAUNDRY

Cleaning efficiency of detergents and washing methods in laundering wool. M. S. Furry and E. M. O'Brien. Am Dyestuff Rep 41:861-2 D 22 '52

Distortion in knit fabrics and its relation to shrinkage in laundering. H. M. Fletcher and S. H. Roberts. Textile Res J 23:37-42 Ja '53

LAUNDRY—*Continued*

Felting in laundering of wool blends. H. Bogaty and others. bibliog Textile Res J 23: 114-18 F '53

Laboratory investigation of methods for the determination of shrinkage on washing of woven rayon and synthetic fibre fabrics. bibliog Textile Inst J 44:S5-41 Jl '53

Laundering of wool; effect of detergents and washing methods on fabric properties. M. S. Furry and E. M. O'Brien. bibliog Am Dyestuff Rep 41:763-9 N 24 '52

Proteins, high polymers prevent soil redeposition in laundering. Chem & Eng N 31:1291 Mr 30 '53

Shrinkage of cotton fabrics; behavior of certain cotton fabrics in laundering. H. T. Stevens and others. Mod Textiles Mag 34: 78+ Ag '53

Soiling and soil retention in textile fibers; suspending power of surfactants. J. Compton and W. J. Hart. Ind & Eng Chem 45: 597-602 Mr '53

See also

Laundries

LAUNDRY equipment

Bendix introduces market's first all-in-one home laundry. il diag Am Bld 75:180 F '53

Laundry equipment national market sum of widely varying city habits. Sales Management 70:98+ F 15 '53

See also

Clothes dryers

Rating

New laundry appliances; Bendix Duomatic and the Frigidaire Filtra-Matic. il Consumers Res Bul 31:19-22 My '53

Two convenient devices for the home laundry. il Consumers Res Bul 31:27-8 Ja '53

LAUNDRY marking

Laundry marking pens. il Consumers Res Bul 32:28-9 Ag '53

LAUNDRY workers

Earnings in power laundries in June 1952. O. Hollberg. Mo Labor R 75:518-19 N '52

LAURENTIAN hormone conference

Annual meeting, Mont Tremblant, Quebec, Sept. 6-11; program. Science 117:464 Ap 24 '53

LAUROYL peroxide

Vinyl chloride polymerization procedure. S. G. Bankoff and R. N. Shreve. bibliog il Ind & Eng Chem 45:270-6 F '53

LAURYL adipamides

New organic amide gellator. P. N. Cheremisinoff and C. E. Hartwig. Paint Oil & Chem R 116:18 Ap 23 '53

LAURYL alcohol. See Dodecyl alcohol

LAURYL tryptose

Lauryl tryptose broth for coli determinations in chlorinated sewage. C. T. Mudgett. Sewage & Ind Wastes 25:557-9 My '53

LAVA

Chemistry of the Keweenawan lavas. P. Niggli. diags Am J Sci Bowen vol p381-412 '52

Leucite, potash nepheline, and clinopyroxene from volcanic lavas from southwestern Uganda and adjoining Belgian Congo. T. G. Sahama. Am J Sci Bowen vol p457-70 bibliog(p469-70) '52

LAVATORIES

Change rooms can make a difference. il Safety Maint & Prod 106:30-4 Jl '53

Clean washrooms, on schedule! J. M. Pomranz. il Safety Maint & Prod 105:46-8+ My '53

Lavatory connections; detail sheet. diags Heat & Ven 50:9-10 Ag '53

Plumbing fixtures for industrial plants. W. C. Knight. il diags Heat & Ven 50:99-109 F '53

Washrooms and lockers. il Nat Safety N 67: 59+ Mr '53

LAW

See also

Advertising—Laws and regulations
Banking law
Building laws and regulations
Commercial law
Corporation law
Damages
Debtor and creditor
Estates (law)
Expert evidence
Food laws and legislation
Gifts (law)
Government regulation of industry
Immunity (law)
Income tax
Insecticides—Law
Insurance law
Labor laws and legislation
Legislation
Liability
Libel and slander
Limitation of actions
Mechanics' liens
Mortgages
Motor bus lines—Laws and regulations
Partnership
Patent laws and legislation
Petroleum laws and regulations
Probate law
Public health laws
Public utilities—Law
Railroad law
Sales
Securities—Law
State laws
Taxation
Trusts, Industrial—Law
Trusts and trustees
United States—Supreme court
Wages—Law
Wills
Workmen's compensation

Classification

Bibliography

Selected bibliography on the classification of law. H. S. Martin. 9p pa 25c Ohio state univ, College of law library, Columbus 10 '52

Germany

West German legislative news; recent developments in the Federal Republic of interest to traders and potential investors summarized. For Comm W 49:12 My 11 '53 [published irregularly]

LAW, Sumerian

Oldest laws; code of Ur-Nammu. S. N. Kramer. il Sci Am 188:26-8 Ja '53

LAW students

Good-will project for trust departments; Cincinnati life underwriters and corporate trustees sponsor legal instrument drafting contest among students of law schools. E. V. Clark. Burroughs Clearing House 37:38-9+ F '53

LAWN mowers

Lawn mower rolls on copolymer. il Mod Plastics 30:102-3 Ap '53

Outdoor power tools; coming up fast. il Bsns W p58-9+ Ap 4 '53

Robot lawn mower operates unattended. il Comp Air Mag 58:143 My '53

LAWNS

How to reduce lawn costs to less than half. il Am Bld 74:137-9 S '52

LAWRENCE, Ernest Orlando, 1901-

E. O. Lawrence, Faraday medalist. J. Hacking. por Elec Eng 71:970-1 N '52

LAWRENCE college

Institute of paper chemistry

Annual executives conference, 17th, Appleton, Wis. June 4-5. Paper Tr J 136:22-4 Je 12 '53

LAWYERS

See also

American bar association
Insurance lawyers

LAYOUT. See Chemical laboratories—Layout; Factories—Layout; Foundries—Layout; Ice cream factories—Layout; Locomotive shops—Layout; Machine works—Layout

LAYOUT models. See Models, Layout

LEA, Frederick Charles, 1871-1952

Sketch. por Engineer 194:490-1 O 10 '52

LEACH, J. Sayles

Businessmen in the news. por Fortune 47:58 Mr '53

LEACHING

Ammonia; ammonium carbonate leaching of low grade zinc ores. W. J. Wendt. bibliog flow sheet Eng & Min J 154:84-90 S '53

New acid-leaching section raises Cyprus copper recovery by ten per cent. A. W. Schlechten and J. L. Bruce. il maps Eng & Min J 153:88-91 D '52

Sherritt Gordon uses ammonia leach for Lynn Lake Ni-Cu-Co sulphides. flow sheet il Min Eng 5:576-81 Je '53

Upgrading domestic manganese ores by leaching with caustic soda. R. V. Lundquist. Min Eng 5:Trans 413-17 Ap '53

LEAD

Bremsstrahlung cross section of 60-Mev electrons in lead. C. D. Curtis. bibliog diag Phys R 89:123-30 Ja 1 '53

Electric melting pot saves lead. R. H. Harrod. il Elec World 138:148 O 20 '52

LEAD—*Continued*

Fraser continuous lead-casting machine. il Engineering 175:524 Ap 24 '53; Engineer 195:646 My 1 '53; Metallurgia 47:310 Je '53

Gamma-rays from negative μ-meson capture in lead. G. G. Harris and T. J. B. Shanley. bibliog il Phys R 89:983-90 Mr 1 '53

High energy nuclear interactions in lead and light elements. M. F. Kaplon and others. bibliog Phys R 90:716-17 My 15 '53

Inelastic scattering of thermal neutrons in lead. A. W. McReynolds. bibliog Phys R 91:1368-71 S 15 '53

Ionization chamber measurements of the absorption of the *N*-component of cosmic rays in lead. H. S. Bridge and R. H. Rediker. bibliog diags Phys R 88:206-24 O 15 '52

Large angle scattering of negative pions in aluminum, copper, and lead. H. H. Heckman and L. E. Bailey. bibliog diags Phys R 91:1237-42 S 1 '53

Lead and lead alloys. K. H. Roll. bibliog il Chem Eng 60:264+ F '53

μ-Meson capture and nuclear shell structure. J. M. Kennedy. diags Phys R 87:953-8 S 15 '52

Multiplicity of neutrons from the interaction of μ^- mesons at rest in Pb, Bi, Sn, and Al. M. Widgoff. bibliog diag Phys R 90:891-9 Je 1 '53

Neutron diffraction and atomic distribution in liquid lead and liquid bismuth at two temperatures. P. C. Sharrah and G. P. Smith. bibliog J Chem Phys 21:228-32 F '53

Neutron energy distributions from Be, C, and Pb bombarded by 245-Mev protons. B. K. Nelson and others. bibliog diags Phys R 88:1-8 O 1 '52

Nuclear cross section for 37-Mev positive pions in Pb. K. J. Button. bibliog diag Phys R 88:956-7 N 15 '52

Plastic flow in a lead extrusion. C. T. Yang and E. G. Thomsen. bibliog il diags A S M E Trans 75:575-9 My '53

Polarographic study of the influence of temperature on the rate of oxygen consumption by iron, lead, and zinc. P. Delahay and others. bibliog Electrochem Soc J 99:414-16 O '52

Production of charged π-mesons in H, D, C, Cu, and Pb by 381-Mev protons. M. M. Block and others. bibliog diags Phys R 88:1239-47 D 15 '52

Relation of the anodic corrosion of lead and lead-antimony alloys to microstructure. J. B. Burbank and A. C. Simon. bibliog il diag Electrochem Soc J 100:11-14 Ja '53

Some acoustical properties of lead and other substances at liquid nitrogen temperature. P. J. Ernst and P. Zayon. Acoustical Soc Am J 25:152-3 Ja '53

Specific heat of lead in the temperature range 1°K to 75°K. M. Horowitz and others. bibliog Phys R 88:1182-6 D 1 '52

Thermodynamic study of liquid metallic solutions; approximate thermodynamic data from the phase diagram for the systems copper-bismuth, copper-lead and copper-thallium. O. J. Kleppa. Am Chem Soc J 74:6047-51 D 5 '52

Thermodynamic study of liquid metallic solutions; the systems zinc-bismuth and zinc-lead. O. J. Kleppa. bibliog Am Chem Soc J 74:6052-6 D 5 '52

Velocity of sound in superconducting lead and tin. H. Bömmel and J. L. Olsen. Phys R 91:1017-18 Ag 15 '53

See also

Lead metallurgy

Analysis

Absorption characteristics of the dithizone mixed color system. R. G. Milkey. Anal Chem 24:1675-6 O '52

Precipitation in homogeneous solution; separation and determination of lead. P. J. Elving and W. C. Zook. Anal Chem 25:502-4 Mr '53

Significance of anodic current density in the electrolytic separation of lead dioxide from manganese. G. Norwitz. Metallurgia 48:52+ Jl '53

Use of perchloric acid in removing interferences prior to the electrolytic determination of lead as lead dioxide. G. Norwitz and I. Norwitz. Metallurgia 46:318 D '52

Isotopes

Isomeric levels in Pb^{201} and Pb^{203}. N. J. Hopkins. Phys R 88:680-1 N 1 '52

Variations in the relative abundances of the isotopes of common lead. C. B. Collins and others. bibliog Phys R 88:1275-6 D 15 '52

Prices

Lead and zinc; true price relationship runs counter to OPS ceilings. W. F. Boericke. Barron's 33:13 Ja 12 '53

Lead price, common grade, 1938-1952; tabulation. Iron Age 171:421 Ja 1 '53

Lead, zinc; seek sliding scale duty. Iron Age 171:80-1 Mr 26 '53

Nonferrous prices; tabulation. Steel 132:173 Ja 5 '53

LEAD, Powdered

Shipments of lead powder, 1945-1952; tabulation. Iron Age 171:454 Ja 1 '53

LEAD alloys

Effect of corrosion and growth on the life of positive grids in the lead-acid cell. J. J. Lander. Electrochem Soc J 99:467-73 N '52

Heat transfer to molten lead-bismuth eutectic in turbulent pipe flow. H. A. Johnson and others. bibliog diags A S M E Trans 75:1191-8 Ag '53

Lead and lead alloys. K. H. Roll. bibliog il Chem Eng 60:264+ F '53

Microsegregation in the lead-antimony alloys. A. C. Simon and E. L. Jones. bibliog il diags Electrochem Soc J 100:1-10 Ja '53

Relation of the anodic corrosion of lead and lead-antimony alloys to microstructure. J. B. Burbank and A. C. Simon. bibliog il diag Electrochem Soc J 100:11-14 Ja '53

Replica method for study of the structure of lead-antimony alloys. J. Burbank. il J Metals 5:Trans 55-6 Ja '53

LEAD burning

How to use a carbon arc burner in battery repair. il Power Eng 57:95-6 Ap '53; Same. Min Cong J 39:55 My '53; Same. Ry Loco & Cars 127:85 My '53; Same. Paper Tr J 137:23-4 Jl 3 '53

LEAD chloride

Solubility of lead chloride in sodium chloride, perchloric acid and hydrochloric acid solutions. S. Z. Lewin, J. E. Vance and L. B. Nelson. Am Chem Soc J 75:2768 Je 5 '53

LEAD citrate

Lead citrates, complexes and salts, their composition, structure and behavior. M. Bobtelsky and B. Graus. bibliog Am Chem Soc J 75:4172-5 S 5 '53

LEAD clad steel. See Steel, Lead clad

LEAD compounds

Phase study of the $PbO-PbBr_2$ system by X-ray diffraction. F. W. Lamb and L. M. Niebylski. bibliog diags Am Chem Soc J 75:511-18 F 5 '53

Preparation of organolead compounds containing water-solubilizing groups. H. Gilman and L. Summers. bibliog Am Chem Soc J 74:5924-7 D 5 '52

See also

Tetramethyl lead

LEAD cyanamide

Lead-cyanamide paints. il Engineering 175:314-15 Mr 6 '53

LEAD dust

Effective control of lead dust in the manufacture of vinyl plastics. A. E. Goss and A. M. Ross, jr. diags India Rubber World 127:652-6 F '53

LEAD foil

Foil strain gauge. Engineer 194:348-9 S 12 '52

LEAD industry and trade

Juice in batteries; lower lead prices widen industry's profit margins. M. J. Saada. Barron's 33:9-10 Jl 6 '53

Large and small lead and zinc miners reach unanimity on sliding scale import tax. Min Eng 5:268-9 Mr '53

Lead and zinc. il Eng & Min J 154:136-7 Jl '53

Lead, 1952. F. E. Wormser. il Min Cong J 39:101-2 F '53

Lead survey for the ceramic industry. R. L. Ziegfeld. Am Cer Soc Bul 31:244-5 Jl 15 '52

LEAD industry and trade—*Continued*

London price prop hurts New York lead market. Barron's 32:27-8 O 13 '52

Mine shutdowns brighten lead price prospects. Barron's 33:41+ Mr 16 '53

Outlook in lead. B. C. Netschert. Min Cong J 39:54-6+ Mr '53

Output dip, good demand, help push lead price up. Barron's 33:27-8 My 25 '53

Statistics

Lead, 1952, R. L. Ziegfeld. Eng & Min J 154: 80-2 F '53

Lead recovery from scrap over mine production in '51. Oil Paint & Drug Rep 163:47 Ja 12 '53

U.S. lead; refiners' stocks, production, shipments, mine production, consumption; tabulation. Steel 132:175 Ja 5 '53

Great Britain

Freeing non-ferrous metals; with tables of production and consumption, 1948-1952. Economist 165:638-40 N 29 '52

LEAD metallurgy

Beneficiation of Sherman pyromorphite lead ore. P. H. Floyd and others. 2pls U S Bur Mines Rep of Invest 4908:1-14 '52

Continous updraft sintering recovers more SO_2 for smelter. W. R. Burrow. il diags Eng & Min J 153:90-4 N '52

Developments in milling practice in southeast Missouri; St Joseph lead co. N. A. Stockett. il Min Cong J 39:84-8 Ap '53

Effects of alkalinity on the flotation of lead minerals. M. G. Fleming. bibliog Min Eng 4:Trans 1231-6 D '52; Discussion. 5: Trans 1121 N '53

Lead blast furnace gas handling and dust collection. R. Bainbridge. flow sheet diags J Metals 4:Trans 1302-6 D '52

New oxide lead unit for Darwin. J. B. Huttl. flow sheet il Eng & Min J 154:81-3 Mr '53

Processes for beneficiating Great Gossan lead ores, Carroll county, Va. J. S. Browning and C. B. Clevenger. pl U S Bur Mines Rep of Invest 4945:1-14 '53

Production of high purity lead; Italian trials of sulphamate method. R. Piontelli and L. Fagnani. bibliog Chem Age (Lond) 68:251-2 F 7 '53

LEAD mines and mining

Plight of lead-zinc mines causes government concern; abstract. F. E. Wormser. Eng & Min J 154:131 Ag '53

British Columbia

Costs cut by change to sublevel long-hole benching; Reeves MacDonald. J. B. Huttl. diag Eng & Min J 154:100-1 Ap '53

Colorado

Resurrection cuts mining costs, makes lower grade ore economic. C. N. Stout and J. S. Wright. il plans diags Min Eng 5:45-8 Ja '53

Liberia

Preliminary description of the Nigerian lead-zinc field. J. L. Farrington. bibliog map diag Econ Geol 47:583-608 S '52

Missouri

Geophysical case history, Fredericktown lead district, Missouri. H. Powers and others. maps diag Min Eng 5:Trans 317-20 Mr '53

Haulage system in St Joseph lead co. mines of southeast Missouri. E. A. Jones. flow diag il map Min Eng 5:Trans 387-94 Ap '53

St Joseph Lead's Indian Creek development. C. K. Bain. flow sheet il plans diag Min Eng 5:Trans 899-904 S '53

New York (state)

Guymard lead-zinc deposit, Orange county, N.Y. G. L. Neumann. 2pls U S Bur Mines Rep of Invest 4909:1-10 '52

Lead-zinc deposits of southwestern St Lawrence county, N.Y. G. L. Neumann. 5pls U S Bur Mines Rep of Invest 4907:1-25 '52

North America

North American zinc-lead mines react to depressed market by shutting down, curtailing production. Eng & Min J 153:147-50+ D '52

Peru

Chilete mine, mill go into high gear; Northern Peru mining and smelting co. il Eng & Min J 154:129-30 Ja '53

Utah

Investigation of lead-zinc deposits at the Harrington-Hickory mine, Beaver county, Utah. J. W. Townsend. 8pls U S Bur Mines Rep of Invest 4953:1-20 '53

Virginia

Processes for beneficiating Great Gossan lead ores, Carroll county, Va. J. S. Browning and C. B. Clevenger. pl U S Bur Mines Rep of Invest 4945:1-14 '53

Washington (state)

American smelting & refining co.'s Van Stone mine. J. B. Huttl. flow sheet il Eng & Min J 154:72-6 Ap '53

LEAD niobate

Ferroelectricity in oxides of fluorite structure. W. R. Cook, jr. and H. Jaffe. Phys R 88:1426 D 15 '52

LEAD nitrates

Polarographic, potentiometric and spectrophotometric study of lead nitrate complexes. H. M. Hershenson, M. E. Smith and D. N. Hume. bibliog Am Chem Soc J 75:507-11 F 5 '53

LEAD ores

Structural environments of the lead deposits in the southeastern Missouri mining district. J. A. James. maps diag Econ Geol 47:650-60 S '52

See also

Galena

LEAD oxides

Aids in vulcanization of lignin-natural rubber coprecipitates; lead, copper, and bismuth oxides. T. R. Griffith and D. W. MacGregor. bibliog Ind & Eng Chem 45:380-6 F '53

Phase transitions in antiferroelectric $PbHfO_3$. G. Shirane and R. Pepinsky. bibliog Phys R 91:812-15 Ag 15 '53

Significance of anodic current density in the electrolytic separation of lead dioxide from manganese. G. Norwitz. Metallurgia 48:52+ Jl '53

Use of perchloric acid in removing interferences prior to the electrolytic determination of lead as lead dioxide. G. Norwitz and I. Norwitz. Metallurgia 46:318 D '52

LEAD plating

Electrodeposition of lead; European practice and opinion. E. T. Richards. bibliog Metal Finishing 51:59-64 F '53

LEAD poisoning

Agents diminishing skeletal accumulation of lead. N. S. MacDonald and others. A M A Archives Ind Hygiene & Occup Med 7:217-20 Mr '53

Coproporphyrinuria; study of its usefulness in evaluating lead exposure. S. S. Pinto and others. bibliog A M A Archives Ind Hygiene & Occup Med 6:496-507 D '52

Improvements in the rapid screening method for lead in urine. W. W. Woessner and J. Cholak. A M A Archives Ind Hygiene & Occup Med 7:249-54 Mr '53

Use of calcium ethylenediaminetetraacetate in cases of lead intoxication. H. Foreman and others. A M A Archives Ind Hygiene & Occup Med 7:148-51 F '53

Use of calcium ethylenediaminetetraacetate in treating heavy-metal poisoning. A M A Archives Ind Hygiene & Occup Med 7:137-47 F '53

LEAD selenide

Oxygen-free single crystals of lead telluride, selenide, and sulfide. W. D. Lawson. diag J Ap Phys 23:495-6 Ap '52

LEAD sulfide

Oxygen-free single crystals of lead telluride, selenide, and sulfide. W. D. Lawson. diag J Ap Phys 23:495-6 Ap '52

Study of lead sulfide solubility and its relation to ore deposition. J. J. Hemley. bibliog diag Econ Geol 48:113-38 Mr '53

See also

Galena

LEAD telluride

Oxygen-free single crystals of lead telluride, selenide, and sulfide. W. D. Lawson. diag J Ap Phys 23:495-6 Ap '52

LEAD tetraacetate

Decomposition of organic acids in the presence of lead tetraacetate. W. A. Mosher and C. L. Kehr. bibliog Am Chem Soc J 75:3172-6 Jl 5 '53

Oxidation of glycols with lead tetra-acetate; a kinetic study. J. P. Cordner and K. H. Pausacker. Chem Soc J p 102-6 Ja '53

LEAD tetramethyl. See Tetramethyl lead

LEADERS (merchandizing)

Pick your line-leaders when you have a sale! Ekco kitchen tools. J. G. Brooks and M. B. Cossman. il Sales Management 70:88+ F 15 '53

LEADERSHIP

Business leadership and a creative society. A. T. Collier. Harvard Bsns R 31:29-38 Ja '53

Business leadership in a democracy. A. H. Williams. Mech Eng 75:284-6+ Ap '53

Leadership and the electric industry. H. Hildreth. Edison Elec Inst Bul 21:247-9 Jl '53

Leadership; its place in planning for the future. G. C. Neff. Edison Elec Inst Bul 21:244-6 Jl '53

Responsibilities of effective leaders. R. S. Damon. il Dun's R 60:1+ D '52

Some leadership fallacies; abstract. Management R 41:781 D '52

Some new qualifications for leadership. R. S. Byfield. Comm & Fin Chr 176:2126-7+ D 4 '52

To be a group leader, learn the various approaches. A. Uris. Textile World 103:126-7 Mr '53

LEAK detectors

Finding condenser air leaks by easy method. P. H. Renfore. Power 97:149 O '53

How Public Service traces leaks in northern Illinois. il Gas Age 112:32-3 S 24 '53

How to find leak with test tube. W. J. Steinert. diag Power 97:134 My '53

Refrigeration chemical helps electronic nose find leaks, Du Pont Freon-12 fluorinated hydrocarbon. Elec Eng 72:471 My '53; Excerpts. Eng N 150:122 Mr 12 '53; Iron Age 171:207-8 Mr 5 '53; Heating-Piping 25:115 Mr '53

Testing film bags for leaks. K. H. Hu and A. I. Nelson. bibliog il diag Mod Packaging 26:124-5+ Ag '53

Tracer diffusion in the ground in radioactive leak location. A. Gemant. bibliog J Ap Phys 24:93-5 Ja '53

LEARNING, Psychology of

Effective learning in college. O. Tead. J Chem Educ 29:565-70 N '52

Electronic sleep-teaching. H. Stockman. diags Inst Radio Eng Proc 41:160 Ja '53

Mechanics of the learning curve. W. A. Raborg, jr. il Aero Digest 65:17-21 N '52

Serial position curves in verbal learning. J. W. McCrary, jr. and W. S. Hunter. bibliog Science 117:131-4 F 6 '53

LEASES

Investment wrinkle; lease-backs promise new financing opportunities. T. F. Willmore. Barron's 32:13 D 22 '52

Thar's gold in them hulls; lease backs for tankers. Fortune 46:79 Ag '52; Excerpts. J Account 94:751 D '52

LEASING of machinery. See Machinery—Leasing

LEATHER

Effect of moisture on compressibility of natural high polymers. C. E. Weir. bibliog J Res Nat Bur Stand 49:135-9 S '52

Effects of tannage on the properties of leather. Franklin Inst J 255:143-4 F '53

How to make your loom leathers last longer. R. B. Pressley. diags Textile World 102:104-5+ D '52

Protection

Impregnation of leather with butyl rubber. Rubber Age 72:624 F '53; Same. Franklin Inst J 255:337-8 Ap '53

New elastomer-impregnated leather; Conpor. A. S. Berens. Materials & Methods 38:127 O '53

Nylon-coated leather. F. Leonard and others. il Ind & Eng Chem 45:773-5 Ap '53

LEATHER industry and trade

Tanners warned that resistance to change means loss of markets. Chem & Eng N 30:4620+ N 3 '52

See also

Hides and skins

Statistics

Leather and products; Nov.-Dec. 1951-Jan.-Nov. 1952. Survey of Cur Bsns 33:S30-1 Ja '53 [cont monthly]

Germany

West German leather and shoe industries make new progress. For Comm W 50:10 Jl 27 '53

LEBA, Theodore

National concrete masonry association names Leba to head Washington office. por Concrete 60:13 N '52

LEBANON

Tourist travel being promoted in Lebanon. For Comm W 49:6 F 16 '53

Industries and resources

Industrial institute planned. For Comm W 49:6 Mr 30 '53

Politics and government

Lebanon follows the fashion. Economist 165:38 O 4 '52

LECITHIN

Crystallization, structure and infrared spectra of saturated L-α-lecithins. E. Baer. bibliog Am Chem Soc J 75:621-3 F 5 '53

Lecithin in paints. bibliog Paint Oil & Chem R 116:27-8+ Je 18 '53

Synthesis of lecithin in isolated mitochondria. E. P. Kennedy. bibliog Am Chem Soc J 75:249-50 Ja 5 '53

LEDBETTER, Allison W.

Businessmen in the news. por Fortune 47:53 My '53

LEE, James A.

Deep in the heart of Texas; Jim Lee keeps tabs on process industries of Southwest. por Chem Eng 59:141+ N '52

LEE rubber and tire corporation

Operations accelerating after recent dip. Barron's 33:25-6 Je 15 '53

LEEDS, Winthrop Moorhead, 1905-

Personalities in engineering. por Westinghouse Eng 13:91 My '53

LEES, James, and sons company

James Lees' net may approach postwar average of $5-$6 per share. Barron's 33:26-7 F 9 '53

On tv; an 18,000-man conference. il Bsns W p56-8+ D 13 '52

LEFTWICH, James Thomas

Businessmen in the news. por Fortune 47:58 F '53

LEG

Wounds and injuries

Plastic surgical closure of chronic open wounds of the leg. P. W. Greeley. Ind Med 22:22-3 Ja '53

LEGAL aid

Finance of the dog-fight. Economist 167:4-5 Ap 4 '53

Legal aid and democracy. il Fortune 46:142-3+ O '52

Legal aid and divorce. Economist 167:894 Je 27 '53

LEGAL chemistry. See Chemistry, Legal

LEGAL service

See also

Tax consultants

LEGENDRE'S functions

Calculation of peaked angular distributions from Legendre polynomial expansions and an application to the multiple scattering of charged particles. L. V. Spencer. Phys R 90:146-50 Ap 1 '53

LEGISLATION

Eleven-point legislative program. R. G. Gibbs. Chem & Eng N 31:738+ F 23 '53

New York state legislative annual, 1952. 462p $7.50 New York legislative service, 299 Broadway, New York 7 '52

Shape of new laws. Chem W 72:10-12 Ja 31 '53

See also

American law institute

LEHMAN corporation
Stock offering. Comm & Fin Chr 177:940 Mr 2 '53

LEHRS. See Glass furnaces

LEISURE
See also
Retirement

LEMON juice, Frozen
Centralized lubrication; Exchange lemon products co. il Food Eng 24:76-7+ D '52

LEMON juice, Powdered
One-minute test for package O_2. C. C. Taylor and S. C. Danforth. il diags Food Eng 24:75+ N '52

LEMONS
Film-wrapped lemons. il Mod Packaging 26:98-101 Mr '53
Rooting lemon cuttings with fruits attached. L. C. Erickson and P. DeBach. bibliog il Science 117:102-3 Ja 30 '53

LENGTH, Standards of. See Standards of length

LENGTH of life. See Longevity

LENHART, Robert F.
Zoysia grass ain't hay. Fortune 47:218 Ap '53

LENNARD-JONES and Devonshire equation
Equation of state computations. J. E. Mayer and G. Careri. J Chem Phys 20:1001-14 Je '52
Gaussian approximation for the probability density of a molecule in a cell. G. Careri. diag J Chem Phys 20:1114-16 Jl '52
Tables of the Lennard-Jones and Devonshire equation of state at high temperatures and densities. W. Fickett and W. W. Wood. J Chem Phys 20:1624-6 O '52

LENNARD-JONES equation
Radial distribution functions and the equation of state of fluids composed of molecules interacting according to the Lennard-Jones potential. J. G. Kirkwood and others. bibliog J Chem Phys 20:929-38 Je '52
Radial distribution functions and the equation of state of monatomic fluids. R. W. Zwanzig and others. bibliog J Chem Phys 21:1268-71 Jl '53

LENO weaving. See Weaving

LENSES
Algebra of possibilities relating regions in object and image space for a system of thin lenses. R. A. Satten. diags Opt Soc Am J 42:955-9 D '52
Clear image lens may offer hope to many of the partially blind. W. Feinbloom. Mech Eng 75:231-2 Mr '53
Precision lens produced with precisely controlled temperature program. il Glass Ind 34:138-9 Mr '53

Testing

Lens testing bench. K. Leistner and others. bibliog il diags Opt Soc Am J 43:44-8 Ja '53

LENSES, Electron. See Electron optics

LENSES, Photographic
Flare of lenses. G. Kuwabara. il diags Opt Soc Am J 43:53-7 Ja '53
Japanese cameras bid for the quality market. il Bsns W p 128-30 Mr 7 '53
Long-focus lens for television cameras. il Engineer 196:60 Jl 10 '53
Optical aids for high-speed photography. D. C. Gilkeson and A. E. Turula. bibliog Soc Motion Picture & Tv Eng J 59:498-502 D '52
Precalculation of optical systems. M. Herzberger. Opt Soc Am J 42:637-40 S '52
X-ray motion picture techniques employed in medical diagnosis and research; new Kodak f/0.75 Fluro Ektar lens. W. E. Schade. diag Soc Motion Picture & Tv Eng J 59:307-8 O '52

Standards

Method of determining resolving power of 16mm motion-picture projector lenses; American standard. diags Soc Motion Picture & Tv Eng J 60:631-2 My '53 (reprints 25c)
Proposed American Standard PH22.90 aperture calibration of motion picture lenses. bibliog diag Soc Motion Picture & Tv Eng J 59:338-48 O '52

Testing

Method for determining the resolving power of photographic lenses. F. E. Washer and I. C. Gardner. bibliog il diags U S Nat Bur Stand Circ 533:1-27; pa $1 Supt. of doc. '53

LENSES, Plastic
Effectiveness of plastic focusing lenses with high intensity ultrasonic radiation. J. A. Bronzo and J. M. Anderson. il Acoustical Soc Am J 24:718-20 N '52
Optical plastics come of age. il Safety Maint & Prod 104:31-2+ N '52

LEONARDO da Vinci, 1452-1519
Da Vinci's science. il Tech R 55:20-2 N '52
Leonardo da Vinci's experiments on combustion. L. Reti. bibliog il J Chem Educ 29:590-6 D '52

LEONTIEF, Wassily W. 1905-
Have we a labor surplus? Bsns W p 162-3 Ap 25 '53

LEPIDOLITE
Determination of the age of lepidolites by the method of isotope dilution. G. L. Davis and L. T. Aldrich. bibliog Geol Soc Bul 64:379-80 Mr '53

LE PLA, Margaret, 1885-1953
Sketch. A. E. Cummins. Chem & Ind p 130-1 F 7 '53

LEPTOSPIROSIS
Leptospirosis in farm animals; abstract. W. E. LaGrange and others. Pub Health Rep 67:977-8 O '52
North American leptospirae; abstract. W. S. Gochenour, jr. and R. H. Yager. Pub Health Rep 67:978-9 O '52
Techniques for confirming leptospirosis diagnosis; advances in leptospiroses depend on laboratory aid. W. S. Gochenour, jr. and others. Pub Health Rep 68:264-5 F '53

LESLIE, Donald S. 1895-
Businessmen in the news. por Fortune 47:40 Ja '53

LESS than carload freight. See Freight car service—Car load

LESSELLS, John Moyes, 1888-
Sketch. Mech Eng 75:263 Mr '53

LE TOURNEAU, R. G. inc.
Westinghouse Air Brake buys R. G. LeTourneau inc. Roads & Eng Constr 91:76 My '53; Eng N 150:101 My 7 '53
Westinghouse air brake co. acquisition of earth-moving and related business of R. G. LeTourneau, inc. Comm & Fin Chr 177:2136-7 My 18 '53
Westinghouse Air Brake reaches out. Bsns W p 182 My 16 '53

LETTERHEADS
How to design a letterhead; an interview with Lester Beall by Leslie H. Allen. il Inland Ptr 129:42-3 S '52
How to get the right letterhead for your business. Inland Ptr 129:45 S '52

LETTERS, Business. See Commercial correspondence

LETTERS of credit
Banking policies in foreign trade credit. A. M. Strong. Comm & Fin Chr 178:264+ Jl 23 '53

LETTUCE
Foil liner for lettuce; crate liner of aluminum foil backed by wet-strength kraft delivers a premium crop. il Mod Packaging 26:130-2 D '52

Transportation

Trend to fibre for produce. il(p 138) Mod Packaging 27:141+ O '53

LEUCINE
Amino-acids and peptides; γ-L-glutamyl-L-alanine, -L-valine, and -L-leucine. D. A. Rowlands and G. T. Young. Chem Soc J p3937-40 O '52

LEUCITE
Hydrothermal chemistry of silicates; reactions of analcite and leucite. R. M. Barrer, L. Hinds and E. A. White. Chem Soc J p 1466-75, pl 1-7 My '53
Ion-exchange in crystals of analcite and leucite. R. M. Barrer and L. Hinds. pl Chem Soc J p 1879-88 Je '53
Leucite, potash nepheline, and clinopyroxene from volcanic lavas from southwestern Uganda and adjoining Belgian Congo. T. G. Sahama. Am J Sci Bowen vol p457-70 bibliog(p469-70) '52

LEUCKART reaction
Extension of the Leuckart synthesis of tertiary amines, including its application to α,β-unsaturated carbonyl compounds. J. F. Bunnett, J. L. Marks and H. Moe. bibliog Am Chem Soc J 75:985-7 F 20 '53
Leuckart alkylation of 2-piperazinones. P. Ruby and P. L. deBenneville. Am Chem Soc J 75:3027-8 Je 20 '53
Preparation of primary amines by reduction of oximes with lithium aluminum hydride and by the Leuckart reaction. C. R. Walter, jr. bibliog Am Chem Soc J 74:5185-7 O 20 '52
Stereochemistry of the Leuckart reaction. D. S. Noyce and F. W. Bachelor. bibliog diag Am Chem Soc J 74:4577-9 S 20 '52

LEUCOANTHOCYANINS
Color precursors in spruce- and western hemlockwoods and inner barks. W. Pigman and others. bibliog Tappi 36:4-12 Ja '53
Identification of leuco-anthocyanins as tannins in foods. E. C. Bate-Smith and T. Swain. bibliog Chem & Ind p377-8 Ap 18 '53

LEUCOCYTES
Nature of genetic resistance to infection in mice. J. A. Weir and others. bibliog Science 117:328-30 Mr 27 '53

LEUCOPTERIN
Pteridine synthesis; leucopterin and xanthopterin. A. Albert and H. C. S. Wood. bibliog J Ap Chem 2:591-2 O '52

LEVANS

Analysis

Structural studies on inulin from inula helenium and on levans from dactylis glomerata and lolium italicum. D. J. Bell and A. Palmer. Chem Soc J p3763-70 O '52

LEVEES
Diesel power in the Delta country; silt levee constructed to hold fresh water for mining operations. il Diesel Power 31:39 Ja '53
Lay asphalt pavement to protect steep levee slope. E. D. White. il Constr Methods 34: 88-9+ O '52
Levee construction through Florida's Everglades. C. R. Sparf. il Explosives Eng 30: 175-9 N '52
Relief well systems for dams and levees. W. J. Turnbull and C. I. Mansur. il diags Am Soc C E Proc 79 [no 192]:1-20 My '53

LEVEL control, Liquid. See Liquid level control

LEVEL indicators, Liquid. See Liquid level indicators

LEVELS
How to use new leveling device. il Am Bld 75:181+ F '53
Levelling by U-tube. Engineering 176:205 Ag 14 '53
Transit-levels styled for builders. il Eng N 149:152 O 9 '52

LEVER brothers and Unilever, limited
Statement by the chairman. G. Heyworth. Economist 167:772-5 Je 13 '53

LEVITT and sons
Most house for the money. il plan Fortune 46:150-6+ O '52

LEVITTOWN, Pennsylvania
Levittown, Pa., a city from scratch. A. J. Fox, jr. il Eng N 149:34-6+ D 4 '52

Water supply

16,000 meter settings in a hurry; Levittown, now building in Bucks county, Pa. R. L. Hubbard. il diag Pub Works 84:61-3 My '53

LEW, Edward A.
Now Metropolitan Life statistician. C. Axman. por East Underw 54:3 Ja 2 '53

LEWIS, John Llewellyn, 1880-
After Lewis, what? pors Coal Age 58:70-7, cover Je '53
Coal hearing ends in warning. por Bsns W p 173-4 N 22 '52
Fringe with tassels; John L. Lewis defies the WSB on tonnage royalty assessments. F. Morley. Barron's 32:3 O 13 '52
Hints of a McDonald-Lewis tie. por Bsns W p 105-6 Jl 4 '53
Stabilizers' last stand? Fortune 46:109-10 D '52
Wrangling over Taft-Hartley changes. pors Bsns W p 154-5 My 2 '53

LEWIS, Orme
Assistant Interior secretaries named. Eng N 150:23 F 12 '53

LEWIS acids. See Acids

LEWIS'S investment trust, limited
Statement by the chairman. S. H. Leake. Economist 167:58-9 Ap 4 '53

LEYLAND motors, limited
Statement by the chairman. C. B. Nixon. Economist 167:55-6 Ap 4 '53

LIABILITY
Are you protected against loss of customers' patterns? Foundry 81:152+ F '53
Contractual and assumed liability; panel discussion; abstracts. C. B. Conklin and others. East Underw 53:40+ N 21 '52; Nat Underw 56:27+ N 20 '52; Weekly Underw 167:1441-2+ N 29 '52
Dangerous installations; liability of occupier and supply authority. C. F. Mayson. Elec R (Lond) 153:453-4 Ag 28 '53
Explosion liabilities suggest precautions for utilities. L. T. Parker. Am Gas J 177:18-19 O '52
Gas company liability shown in unusual legal tangles. L. T. Parker. Am Gas J 178:21-2 Ap '53
How liability is created in property field. C. E. Moul. Weekly Underw 167:1402 N 22 '52
Legal liability of utilities for service. H. Raines. bibliog Am Water Works Assn J 45:241-8 Mr '53
Legal problems confronting water works management. J. H. Murdoch, jr. Am Water Works Assn J 44:1085-91 D '52; Same. Water & Sewage Works 100:R 18-20 My '53
Liability for electrical accidents. Elec J 151: 491-2 Ag 14 '53
Potential liability of contractor and its relation to contract bond underwriting. W. M. Whitesell, jr. Weekly Underw 168:1177-8 Ap 25 '53
Six pointed legal Q's and A's of food processors. L. T. Parker. Food Eng 25:65-6+ F '53
U.S. disagrees on air damage liability. Aviation W 58:17 Ja 26 '53
Watch out for lurking liabilities. W. H. Hillyer. Heating-Piping 25:107 F '53
When are you liable? L. T. Parker. Bus Transportation 32:56-7+ F '53

See also

Bailment
Damages
Employers' liability
Government liability
Insurance, Liability
Negligence
Personal injuries
Workmen's compensation

Bibliography

Selected bibliography on the law of vicarious liability. C. F. O'Brien. 9p pa 25c Ohio state univ, College of law library, Columbus 10 '52

LIABILITY insurance. See Insurance, Liability

LIBBEY-OWENS-FORD glass company
Five stocks with better-than-average prospects; with comparative balance sheet items. Mag of Wall St 91:127 N 1 '52
Growth pattern and prospects. J. C. Mueller. Barron's 33:17-18 Ap 20 '53

LIBEL and slander
Comment and defamation; Defamation act, 1952. Economist 165:284-5 N 1 '52
Communist libels more than pro-Nazi label. A. W. Gray. Ed & Pub 85:40 S 27 '52
Libel words measured by contemporary gravity. A. W. Gray. Ed & Pub 86:36 Ja 3 '53
Previous publication sufficient in mitigation. A. W. Gray. Ed & Pub 86:46 Ja 17 '53
Racket warning after ad is held libelous. A. W. Gray. Ed & Pub 85:56 D 13 '52
Words that annoy officials not libelous. A. W. Gray. Ed & Pub 86:34 Ja 10 '53

LIBERAL education
Should a business man be educated? Fortune 47:113-14 Ap '53

LIBERAL party (Great Britain)
Liberals' future. Economist 167:583 My 30 '53

LIBERALISM
Liberals of Europe. Economist 166:27-8 Ja 3 '53

LIBERIA

See also

Iron mines and mining—Liberia

Lead mines and mining—Liberia

Commercial policy

Liberia withdraws from GATT. For Comm W 49:9 Je 22 '53

LIBERIAN institute

Liberian institute to become international center for study of tropical diseases. Chem & Eng N 31:792 F 23 '53

LIBERTY

Blueprint for freedom. C. Manion. Paint Oil & Chem R 115:32-4+ D 4 '52

How much freedom, or how little. C. H. Greenewalt. Manuf Rec 121:44-5+ D '52

See also

Academic freedom

Freedom of information

Freedom of the press

LIBRARIANS

What price vocational guidance? K. B. Stebbins. Special Lib 43:419 D '52

LIBRARIANS, Special

Selling your library to management. M. H. Bigelow. Special Lib 44:20-2 Ja '53

Training

In-service training for government librarians. E. Woodruff. Special Lib 44:48-52 F '53

LIBRARIES

See also Library buildings and other headings beginning Library

Branches

Supermarkets get into book-lending. il Bsns W p46+ Mr 21 '53

Directories

Canadian library directory, 1952-53 supplement. 21 l Canadian lib. assn, 46 Elgin st, Ottawa '53

Printing

What price bulletins? C. M. Lewis. Special Lib 44:111-12 Mr '53

Reference work

In-service training for government librarians. E. Woodruff. Special Lib 44:48-52 F '53

Information services in public libraries. R. L. Collison. Aslib Proc 4:213-21; Discussion. 221-4 N '52

Canada

Canada's national library. Special Lib 44:151 Ap '53

England

See also

British museum

LIBRARIES, Bank. See Bank libraries

LIBRARIES, Government. See Government libraries

LIBRARIES, National

National central library; extracts from the 36th annual report. Aslib Proc 5:61-5 F '53

See also

Canada—National library

LIBRARIES, Special

Case library conference. M. R. Hyslop. Special Lib 44:27-9 Ja '53

Library trends; a review of special libraries. A. C. Mitchell. Special Lib 44:70 F '53

See also

Advertising agencies—Libraries

Bank libraries

Financial libraries

Printing libraries

Technical libraries

Bibliography

Signposts; some selections from the 1952 special library literature. J. Bird and E. M. R. Ditmas. Aslib Proc 5:27-39 bibliog(p33-9) F '53

Directories

Directory of Special libraries. I. L. Towner, comp. 297p Special libraries assn, 31 E. 10th st, New York 3 '53 ($10)

Special libraries directory of Greater New York. 6th ed Special libraries assn, New York chapter, 31 E. Tenth st, New York 3 '53 (pa $4)

Public relations

Progress report; Public relations clinic. E Ferguson. Special Lib 44:74 F '53

Public relations clinic. E. Ferguson. Special Lib 43:366 N '52

Service

Library service for industry. K. J. Rider. bibliog Engineer 195:252-4 F 13 '53; Discussion. 195:320, 355, 392, 464, 534, 565, 599-600, 704 F 27-Mr 13, 27, Ap 10-24, My 15 '53

Reporting literature in an experiment station library. R. J. Poulin. Special Lib 44:99-100 Mr '53

Ontario

Special libraries in Ontario. A. Leonard. il Special Lib 44:137-41 Ap '53

LIBRARIES and publishers

If I had my way with publishers. B. A. Evans. Aslib Proc 5:16-20; Discussion. 20-6 F '53

LIBRARY buildings

Here is an effective community library; views and plans. Am Bld 75:120-1 F '53

Public libraries; building types. C. M. Mohrhardt and R. A. Ulveling. il plans diags Arch Rec 112:149-72 D '52

Lighting

Compact shelving; lighting problem; Archives building of the Illinois state library. F. Babiak, jr. and J. W. Marquardt. il plan Illum Eng 48:393-4 Ag '53

See also

British museum—Lighting

LIBRARY schools and training

Directories

Directory of the Association of American library schools, 1952. R. H. Shove, comp. 3d ed 45 l Univ. of Minnesota, Division of library instruction, Minneapolis '53

LIBRARY science

Library organization and management of technical reports literature. B. M. Fry. (Studies in lib. sci. no. 1) 140p pa $2.25 Catholic univ. of America press, Washington 17, D.C. '53

Dictionaries

Library terms; Englisch-Deutsch und Deutsch-Englisch. O. Gross. 163p $1.80 Verlag Eberhard Stichnote, Hamburg '52

Yearbooks

Year's work in librarianship, 1949 W. A. Munford, ed. v 16 230p Library assn, Chaucer House, Malet place, London '52 (40s)

LIBRARY service

Industry and the public library in Kingston-upon-Hull. J. Binns. Aslib Proc 5:9-15 F '53

Library efficiency today. L. M. Gilbreth. Special Lib 44:26 Ja '53

Library service for industry. K. J. Rider. bibliog Engineer 195:252-4 F 13 '53; Discussion. 195:320, 355, 392, 464, 534, 565, 599-600, 704 F 27-Mr 13, 27, Ap 10-24, My 15 '53

LIBRARY trends (periodical)

Library trends. A. C. Mitchill. Special Lib 44:70 F '53

LICENSING

Economic appraisal of convenience and advantage licensing by small-loan statutes. M. Upton. J Bsns 25:249-63 O '52

LICORICE

Versatile licorice. il Food Eng 25:82-3+ Ag '53

LIE detector

Lie detector; instrument measures change in skin resistance. E. Bohr. il diag Radio & Tv N 49:56-7+ Je '53

LIEBEL-FLARSHEIM company

How to teach your wife business. Fortune 47:142 Ja '53

LIEBES, Dorothy Wright, 1899-

Businessmen in the news. por Fortune 46:52 N '52

LIENS
See also
Mechanics' liens

LIFE
See also
Conduct of life

LIFE (periodical)
Two La Prensa exiles on Life's Spanish staff. Ed & Pub 85:47 D 20 '52

LIFE advertisers association. See Life insurance advertisers association

LIFE and accident management organization
New organization to assist life companies in A.&H. development. East Underw 53:5 N 7 '52

LIFE expectancy. See Longevity

LIFE insurance. See Insurance, Life

LIFE insurance advertisers association
Eastern round table meeting, New York, April 9-10. East Underw 54:3+ Ap 17 '53; Nat Underw (Life ed) 57:8+ Ap 17 '53; Weekly Underw 168:1106 Ap 18 '53
Southern round table meeting, Miami Beach, April 26-28. East Underw 54:20 My 15 '53; Weekly Underw 168:1372 My 16 '53

LIFE insurance agency management association
Agency management course developed. Weekly Underw 167:1044 O 18 '52; Same abr. Nat Underw (Life ed) 56:2 O 17 '52
Annual A.&H. spring meeting, 4th, Chicago, April 20-22. East Underw 54:17+ Ap 24; 40 My 1 '53; Nat Underw (Life ed) 57:2-3+ Ap 24 '53; Weekly Underw 168:1248-50 My 2 '53
Annual meeting, Chicago, Nov. 17-21. East Underw 53:4, 8+ N 21 '52; Nat Underw (Life ed) 56:1+, 24 N 21 '52; Weekly Underw 167:1388+ N 22 '52
Atlantic alumni association management conference, Rye, N.Y. Nat Underw (Life ed) 56:9+ O 31 '52; Weekly Underw 167:1145+ N 1 '52
Management association issues research report. Weekly Underw 168:409 F 7 '53
New committee chairmen of LIAMA for 1953 named by President Hill. East Underw 54:3+ Ja 16 '53; Nat Underw (Life ed) 57:3 Ja 16 '53
Small companies' conference, Chicago. Nat Underw (Life ed) 57:1+ Mr 20 '53; Weekly Underw 168:824 Mr 21 '53

LIFE insurance association of America
Annual meeting, 46th, New York. Spectator 161:23-4 Ja '53
Annual meeting, New York. Nat Underw (Life ed) 56:2+ D 12 '52

LIFE insurance company of America
North America seeks to strip mail order insurer of its name. Nat Underw 57:24 Mr 19 '53; Same. Nat Underw (Life ed) 57:10 Mr 20 '53

LIFE insurance medical directors, Association of. See Association of life insurance medical directors

LIFE insurers conference
Annual meeting, 44th, Atlantic City, May 20-22. East Underw 54:12 My 29 '53; Nat Underw (Life ed) 57:1+ My 29 '53; Weekly Underw 168:1505+ My 30 '53

LIFE office management association
LOMA institute exams to be given to 5,881. East Underw 54:14 Ap 24 '53
Spring conference, Swampscott, Mass. Nat Underw (Life ed) 57:3 My 29 '53; Weekly Underw 168:1508+ My 30 '53

LIFE saving
72-year old worker rescues infant; Frank Heyard presented President's medal. Nat Safety N 66:44 N '52

LIFE underwriters association of Canada
Annual meeting, Toronto, Jan. 23-24. East Underw 54:1+ Ja 30 '53

LIFE underwriters association of the city of New York
Annual sales congress, 33d, New York. East Underw 54:3-8+ Mr 20 '53

LIFEBOATS
New insulated lifeboat developed by Goodrich for U.S. navy. il Rubber Age 72:93 O '52; Marine Eng 58:144 Mr '53
Venner lifeboat S.O.S. transmitter. il Engineer 195:526-7 Ap 10 '53; Engineering 175:479 Ap 10 '53

LIFT trucks. See Motor trucks, Industrial

LIFTING
Back strains in brickmaking. F. S. Crawford and others. U S Bur Mines Information Circ 7655:1-14 '53
Learn to lift. il World Oil 135:146-7 N '52
Samson the safety demonstrator. il Comp Air Mag 58:23 Ja '53

LIGHT
Automatic process control by light measurement. il Product Eng 23:218 N '52
Experimental study of atmospheric transmission. J. A. Curcio and others. diag Opt Soc Am J 43:97-102 F '53
Light, vision and accidents. H. L. Logan. il Nat Safety N 66:112-13+ O '52
Measurement of particle sizes in polydispersed systems by means of light transmission measurements combined with differential setting. R. O. Gumprecht and C. M. Sliepcevich. bibliog J Phys Chem 57:95-7 Ja '53
Radioisotope used in constant light source. Materials & Methods 36:11+ N '52
See also
Brightness
Color
Daylight
Diffraction
Dyes, Fastness of
Electric spark
Eye
Fluorescence
Glare
Interference (light)
Light signals
Lighting
Luminescence
Luminosity
Optics
Photochemistry
Photoelasticity
Photoelectric cells
Photoelectric effect
Photography
Photometry
Plants, Effect of light on
Polarization (light)
Radiation
Radioactivity
Reflection (optics)
Refractive index
Spectrum
Ultraviolet rays
X rays

Velocity

Precision determination of the velocity of light derived from a band spectrum method. D. H. Rank and others. bibliog il Opt Soc Am J 42:693-8 O '52

LIGHT, Colored
Color lighting controls colorblind night insects. Safety Maint & Prod 106:66 Jl '53

LIGHT, Polarized. See Polarization (light)

LIGHT, Scattering of
Additional light scattering functions for spherical particles of refractive index of 2. M. Kerker and H. E. Perlee. Opt Soc Am J 43:49-50 Ja '53
Angular distribution of the light scattered by random coils. H. Benoit and M. Goldstein. J Chem Phys 21:947 My '53
Conversion of fibrinogen to fibrin; light scattering studies of bovine fibrinogen. S. Katz and others. bibliog Am Chem Soc J 74:5706-9 N 20 '52
Conversion of fibrinogen to fibrin; light scattering studies on clotting systems inhibited by hexamethylene glycol. J. D. Ferry and others. bibliog Am Chem Soc J 74:5709-15 N 20 '52
Correction for absorption and fluorescence in the determination of molecular weights by light scattering. B. A. Brice, G. C. Nutting and M. Halwer. bibliog Am Chem Soc J 75:824-8 F 20 '53
Flare of lenses. G. Kuwabara. il diags Opt Soc Am J 43:53-7 Ja '53
Light scattered by particles. V. K. La Mer and M. Kerker. il diag Sci Am 188:69-70+ F '53
Light scattering by pure polystyrene. F. Bueche. J Ap Phys 23:1280-1 N '52
Light scattering investigation of the polymolybdates. M. Kestigian and others. bibliog J Chem Phys 21:952-3 My '53
Light scattering of multicomponent macromolecular systems. J. J. Blum and M. F. Morales. J Chem Phys 20:1822 N '52
Light scattering study of a mixture of CCl_4 and CS_2. J. Powers and R. S. Stein. J Chem Phys 21:1611-12 S '53
Molecular weight of potato amylopectin as determined by light scattering. L. P. Witnauer and others. J Chem Phys 20:1978-9 D '52
Rayleigh's ratio for benzene and the problem of absolute light scattering determinations. M. Halwer and others. bibliog J Chem Phys 21:1425-6 Ag '53

LIGHT, Scattering of—*Continued*
Recording radially symmetric scattering. K. L. Yudowitch. diags Opt Soc Am J 43:50-2 Ja '53
Scattering of light by large spherical particles. R. O. Gumprecht and C. M. Sliepcevich. bibliog diags J Phys Chem 57: 90-5 Ja '53
Scattering of light from small drops. R. L. Lander and C. E. Nielsen. bibliog diag R Sci Instr 24:20-2 Ja '53
Use of unfiltered light in determining molecular weights by light scattering. M. Kerker. J Chem Phys 20:1653-4 O '52

LIGHT filters
Design of optical filters. L. I. Epstein. bibliog Opt Soc Am J 42:806-10 N '52
Multifilament vapor source and spherical holder for interference filters. L. Holland and N. J. Newman. diags R Sci Instr 23: 642-3 N '52
Spectral energy distribution of the International commission on illumination light sources A, B, and C. R. Davis and others. bibliog J Res Nat Bur Stand 50:31-7 Ja '53; Same abr. Opt Soc Am J 43:172-6 Mr '53

LIGHT measurement. See Photometry

LIGHT projection
Festival floodlighting. J. G. Holmes. il Elec R (Lond) 152:121-3 Ja 16 '53
Floodlighting permits 24-hr utilization of outdoor area; plant of North American aviation, inc. il Elec World 138:142 N 3 '52
Floodlighting Table mountain. H. D. Einhorn. il map diag Illum Eng 47:529-33 O '52
Fluorescent floodlights solve airport apron lighting problem; Logan international airport, Boston. H. N. McIntyre. il Elec World 138:144+ D 15 '52
How to floodlight. E. B. Sawyer. il Elec R (Lond) 152:124-6 Ja 16 '53
Lighting a hillside letter; data sheet. W. R. Owings. il diag Illum Eng 48:319-20 Je '53
Positioning of directionally adjustable luminaires. M. E. Keck. diags Illum Eng 48: 175-81; Discussion. 181 Ap '53
Powerful marine navigation light. Engineer 195:799 Je 5 '53
Technique for explosion-proof lighting; Fritzsche brothers. J. M. Adams. il Illum Eng 48:506-8 O '53
Used car lot relighting starts chain reaction. R. E. Dahlin. il Elec West 110:90 My '53

LIGHT ships. See Lightships

LIGHT signals
Flashing lights help traffic safely through contractor jobs. il Roads & Sts 96:86-7 Ja '53

LIGHTHOUSES
See also
Lightships

LIGHTING
Approaches to lighting; abstract. W. J. W. Ferguson. Elec R (Lond) 151:843 O 17 '52
Calculating sound-absorbing effect of acoustical baffles in lighting systems. E. H. Church. bibliog il diags Illum Eng 48:489-94 S '53
Contribution of research to progress in the lighting art. J. W. T. Walsh. diag Inst E E Proc 100 pt 2:9-12 F '53; Same. Engineer 194:663-4 N 14 '52; Abstracts. Elec J 149: 1347-8 O 31 '52; Elec R (Lond) 151:964 O 31 '52
Have you a design for lighting? il Elec J 150:1632-5 My 8 '53
Inter-region lighting contest, My most interesting job. Illum Eng 47:579-88 N '52
Lamps and lighting; vision of the future. J. N. Aldington. il Illum Eng 48:82-8; Discussion. 88-90 F '53
Light and colour. il Elec J 150:772-5 Mr 6 '53
Lighting and colour; abstract. D. Medd. Elec R (Lond) 152:406 F 20 '53
Lighting for machine sewing. G. T. Anderson, jr. il Illum Eng 47:545-6 O '52
Lighting progress in 1951-1952. bibliog il Illum Eng 48:105-19 F '53
Lighting task analysis. R. O. Ackerley. il Elec R (Lond) 151:667-9 S 26 '52
Orientation reflex; abstract. H. L. Logan. Illum Eng 48:482-3 S '53
Planned lighting permeates Pittsburgh; illustrations with text. Illum Eng 48:182-3 Ap '53
Pointers in entering lighting competitions. J. O. Kraehenbuehl. Illum Eng 48:92-4 F '53
Silhouette lighting of small diameter wires. W. Allphin. il Illum Eng 47:567-70 O '52; Discussion. diags 48:58-60 Ja '53
Six steps to a luminous ceiling. il Elec West 109:90-1 N '52
Suspended ceiling lighting. il Electrician 149: 334 Ag 1 '52
Time versus luminous ceilings. D. E. Spencer and L. F. Martin. bibliog il Illum Eng 48: 268-74; Discussion. 275-6 My '53
Tomorrow's lighting is here today; luminous ceilings. F. B. Graham. il Eng N 149:37-9 O 30 '52
UN lighting high in safe maintenance. il Safety Maint & Prod 104:17 D '52
Use of lightmeters. Elec R (Lond) 151:664 S 26 '52
Winners announced for electrical contractors lighting contest. Illum Eng 48:sup 14A+ S '53
See also
Brightness
Christmas lighting
Daylight
Electric lamps
Electric lighting
Glare
House lighting
Light projection
Lighting fixtures
Mine lighting
Office lighting
Reflectors
Stage lighting
Street lighting
Tunnel lighting
Windows

also subdivision Lighting under special subjects, e.g.
Airplanes
Airports
Art galleries and museums
Bank buildings
Dentists' offices
Doorways
Dormitories
Drafting rooms
Electric plants (central stations)
Factories
Mortuary chapels
Moving picture photography
Moving picture studios
Nylon mills
Power plants
Printing offices
Public buildings
Roads
School buildings
Showrooms
Society buildings
Stadiums
Steel works
Television studios
Textile mills

Cost

New lighting for old, by rental; Parker appliance co. E. C. Hartley. il Factory Management 111:136-8 Jl '53

Heating aspects

Artificial lighting and its relation to air conditioning. W. Sturrock. bibliog diags Heat & Ven 50:101-12 Ja '53

Standards

Light intensity; the primary standard and the new international unit. A. G. Thomson. il Elec R (Lond) 151:657-60 S 26 '52
See also
Street lighting—Standards

Tables, calculations, etc.

Appraisal of illumination calculations for luminous indirect luminaires. R. D. Burnham. il Illum Eng 48:197-200 Ap '53
Approximate direct illumination at a point from a circular fluorescent luminaire. W. A. Hedrich. bibliog il diags Illum Eng 47: 612-15 N '52
Brightness difference; basic factor in suprathreshold seeing. S. K. Guth and others. il Illum Eng 48:233-7; Discussion. 237-9 My '53
Brightness discrimination data for the specification of quantity of illumination. H. R. Blackwell. Illum Eng 47:602-8; Discussion. 608-9 N '52
Comparison of measured and calculated coefficients of utilization; abstract. J. R. Jones and J. J. Neidhart. Illum Eng 48: 461-2 S '53
Interflection tables from conventional photometric data; abstract. L. E. Innis. Illum Eng 48:484-5 S '53
Measured utilization factors; abstract. W. M. Potter and A. H. Russell. Illum Eng 48:459-60 S '53
New formula for room index. C. L. Crouch and E. Freyer. bibliog Illum Eng 48:203-6 Ap '53

LIGHTING—Tables, calculations, etc.—*Cont.*

Numerical room ratios. W. Allphin. Illum Eng 48:206-8 Ap '53

Positioning of directionally adjustable luminaires. M. E. Keck. diags Illum Eng 48: 175-81; Discussion. 181 Ap '53

Simplified illumination calculations for large area perfectly diffused luminaires. R. D. Burnham. il Illum Eng 48:257-8 My '53

Specification of color-rendering properties of fluorescent lamps. C. W. Jerome and D. B. Judd. bibliog Illum Eng 48:259-67 My '53

Theory and some applications of the photic field. P. Moon and D. E. Spencer. bibliog diags Franklin Inst J 255:33-50, 113-26 Ja-F '53

Use of zonal constants in the calculation of beam flux. T. H. Projector. bibliog diags Illum Eng 48:189-91 Ap '53

Zonal method of computing coefficients of utilization and illumination on room surfaces. J. R. Jones and J. J. Neidhart. Illum Eng 48:140-64; Discussion. 164-8 Mr '53

Terminology

Proposed usage of the words luminance and helios. G. A. Fry. diags Illum Eng 48:406-8; Discussion. 408-10 Ag '53

Testing

Tests aimed at realistic maintenance factors. R. L. Oetting and J. W. Tuttle. il diags Illum Eng 48:242-52 My '53

LIGHTING, Architectural

Coordination of lighting with architectural design; Lancaster (New York) branch of Manufacturers and traders trust co. of Buffalo. N. Jacobus. il Illum Eng 47:539 O '52

Modern lighting for Renaissance architecture; Manufacturers trust co. J. F. Gunther and S. D. Snook. il Illum Eng 48:513-14 O '53

LIGHTING, Decorative

Background to the coronation. il Elec J 150: 2009-10 Je 5 '53

Contractor's opportunity. W. T. Trace. Elec R (Lond) 152:117-18 Ja 16 '53

Coronation floodlighting and illuminated displays. il Elec J 150:710 F 27 '53

Coronation lighting equipment. il Electrician 149:998-9 O 3 '52; [cont as] Elec J 149: 1266-8, 1750-2; 150:110-14 O 24, D 5 '52, Ja 9 '53; Elec R (Lond) 152:131-44 Ja 16 '53

Designs for coronation displays. il diags Elec J 150:206-8 Ja 16 '53

Electricity and the coronation celebrations. P. Dunsheath. il Elec R (Lond) 152:119-20 Ja 16 '53

Festival floodlighting. J. G. Holmes. il Elec R (Lond) 152:121-3 Ja 16 '53

Garden lighting after sunset. il Elec West 110:118 My '53

How to floodlight. E. B. Sawyer. il Elec R (Lond) 152:124-6 Ja 16 '53

Illuminations and outdoor decorative lighting. Electrician 149:915-16 S 26 '52

Lighting the way. B. H. Leeson. Elec R (Lond) 152:115-16 Ja 16 '53

Roses in Regent street. il Elec J 149:1526 N 14 '52

Safe installations. S. L. M. Barlow. il Elec R (Lond) 152:127-30 Ja 16 '53

See also

Christmas lighting

LIGHTING, Industrial

Applied principles solve inspection problem; Industrial aids, inc. R. B. Hatfield. il Illum Eng 48:355-6 Jl '53

Cost and comfort appraisal of industrial lighting systems. G. J. Taylor and R. D. Bradley. bibliog(31 titles) il Illum Eng 48: 213-20 Ap '53; Same cond. Arch Rec 113: 189-91+ F '53; Discussion. Illum Eng 48: 220-30 Ap '53

Is light on your payroll? il Elec J 150:1138-42 Ap 3 '53

Maintenance of industrial lighting; abstract. C. E. Egeler and R. F. VandenBoom. Illum Eng 48:462-3 S '53

Recommended practice for supplementary lighting; subcommittee on supplementary lighting. il diags Illum Eng 47:623-35 N '52

Tomorrow's lighting is here today; luminous ceilings. F. B. Graham. il Eng N 149:37-9 O 30 '52

Ventilation; key to self-maintenance. F. W. Sell. il diags Illum Eng 48:500-2 S '53

What lamp is best for that industrial lighting job? J. R. Jones. Elec World 138:111-14 O 20 '52

See also

Drafting rooms—Lighting
Factories—Lighting
Foundries—Lighting
Mine lighting
Office lighting
Textile mills—Lighting

Portable equipment

Handy trouble lights for maintenance men. F. E. Riley. il Power Eng 57:89 Ja '53

LIGHTING, Natural. See Daylight

LIGHTING engineering

Basic quantities and concepts used in illuminating engineering. D. M. Finch. diags Illum Eng 48:375-82 Jl '53

Lumen method of daylighting design. R. L. Biesele, jr. and others. bibliog diag Illum Eng 48:39-45 Ja '53; Abstract. Eng N 150: 41-2 Ja 29 '53; Discussion. Illum Eng 48: 45-8, 91 Ja-F '53

LIGHTING engineers

Illuminating engineers, orphans of the industry. G. M. Kammerer. Illum Eng 48:1-2 Ja '53

Some answers to the future of illuminating engineers. J. O. Kraehenbuehl. bibliog Illum Eng 48:495-9 S '53

See also

Illuminating engineering society

LIGHTING fixtures

Accessible mounting for ceiling lights. il Engineering 174:288 Ag 29 '52

Control room lighting. il Elec R (Lond) 151: 242 Ag 1 '52

Electric lighting fittings; export trade in this field reviewed. A. E. Iliffe. il Elec J 150: 1530-1 My 1 '53

How to extend a beachhead in the home-building market; Pressteel recessed lighting fixtures. P. A. Jones and others. Sales Management 69:56+ O 1 '52

Industrial translucent lighting units. il Engineer 194:331 S 5 '52

Lamplighters, modern style. R. G. Edsall. il Safety Maint & Prod 106:31-2+ O '53

Lighting maintenance; case for disconnecting hangers. T. B. Farrington and W. Harrison. il Illum Eng 48:370-2 Jl '53

Pin-hole lighting serves conference during movies. W. S. Greenwood. il Elec World 138:138 O 6 '52

Cleaning

Better lighting maintenance; illustrations with text. Safety Maint & Prod 105:30-1 Ja '53

Clean lamps save you money. il Mill & Factory 52:98-100 F '53

Manufacture

Characteristics of 300 degree white baked enamel finishes. F. E. Guth. il Illum Eng 48:77-81 F '53

How Sylvania fashions fluorescent fixtures; presswork, painting, assembly; illustrations with text. E. J. Tangerman and C. Emerson. diags Am Mach 97:127-46 Ap 13 '53

Rating

Comparative rating guide for fluorescent lighting fixtures. L. V. James. Illum Eng 48:539-55 O '53

Testing

UL and the lighting industry. F. K. Hanlin. il Illum Eng 48:357-60 Jl '53

LIGHTING research

Contribution of research to progress in the lighting art. J. W. T. Walsh. diag Inst E E Proc 100 pt 2:9-12 F '53; Same. Engineer 194:663-4 N 14 '52; Abstracts. Elec J 149: 1347-8 O 31 '52; Elec R (Lond) 151:964 O 31 '52

Industrial lighting; Benjamin electric, ltd. il Elec J 149:1501-3 N 14 '52; Elec R (Lond) 151:1083-4 N 14 '52

Lighting research, here and abroad. S. K. Guth. Gen Elec R 56:26-8 Jl '53

New lighting research block; Benjamin Electric. il Chem Age (Lond) 67:671 N 15 '52

LIGHTING research—*Continued*

Relation of critical fusion frequency to fatigue in reading. T. A. Ryan and others. bibliog Illum Eng 48:385-91 Jl '53

LIGHTNING

Fading menaces in the oil industry. G. F. Prussing. il Nat Safety N 68:20-2+ S '53

New fire hazard? abstract. G. F. Prussing. Oil & Gas J 51:41-2 F 2 '53

Power system transients; lightning surges. R. H. Golde. bibliog diags Elec J 149:1922-6 D 19 '52

See also

Lightning protection

LIGHTNING, Artificial

Surge generator; portable, low-cost unit makes lightning stand still. J. M. Clayton. Iron Age 171:150 F 12 '53

LIGHTNING arresters

Don't let lightning strike twice; induced voltages can be dissipated without damage to the electrified pumping well. J. N. Poore. il diags World Oil 135:206+ D '52

Insulation co-ordination. C. F. Wagner and others. Elec Eng 72:497-503 Je '53

LIGHTNING conductors

How to keep from blowing your stack. Westinghouse Eng 13:78 Mr '53

LIGHTNING protection

Code for protection against lightning. 2pls map diags U S Nat Bur Stand Handbook 46:1-88 bibliog(p73-88); pa 40c Supt. of doc. '52

Danger from the sky. J. A. Dickinson. il Nat Safety N 67:20-1+ My '53

Design, specification and performance of high-voltage surge diverters. H. F. Jones and C. J. O. Garrard. il diags Inst E E Proc 97 pt 2:365-79 Je '50; Discussion. 97 pt 2:379-88; 98 pt 2:261-70; 100 pt 2:100-2 Je '50, Ap '51, Ap '53

Lightning is expected to cause 30,000 farm fires during 1953. East Underw 54:25 Mr 27 '53; Same cond. Safety Maint & Prod 105:42-3 Je '53

This is the way to protect against lightning; Avondale mills. J. W. Ward. il diag Textile World 103:98-9+ Jl '53

See also

Electric lines—Protection
Lightning arresters
Lightning conductors

LIGHTSHIPS

Navigation light for Ambrose lightship. il Engineering 176:234 Ag 21 '53

Powerful marine navigation light. Engineer 195:799 Je 5 '53

LIGNIN

Acid-insoluble lignin in wood pulp; corrected TAPPI tentative standard T 222 m-50. diag Tappi 35:sup 128A-9A D '52

Aids in vulcanization of lignin-natural rubber coprecipitates; lead, copper, and bismuth oxides. T. R. Griffith and D. W. MacGregor. bibliog Ind & Eng Chem 45:380-6 F '53

Another bend to a new twist; desugared lignin sulfite. il Chem & Eng N 30:5196 D 8 '52

Challenge of lignin. H. B. Marshall. Pulp & Pa of Can 54:112-15 Ap '53

Chemistry of the wood cell wall; the delignification of beech and spruce woods by sodium chlorite in buffered aqueous solution. W. G. Campbell and I. R. C. McDonald. Chem Soc J p2644-50 Jl '52

Chemistry of the wood cell wall; the isolation of beech and spruce acid-soluble and modified lignins. W. G. Campbell and I. R. C. McDonald. Chem Soc J p3180-3 Ag '52

Color reactions of lignin in solution compared to similar reactions in the solid state. J. C. Pew. Am Chem Soc J 74:5784-5 N 20 '52

Effect of alkali and strong acid on the ultraviolet absorption spectrum of lignin and related compounds. O. Goldschmid. bibliog Am Chem Soc J 75:3780-3 Ag 5 '53

From pollution to profit; Marathon's lignin derivatives. il diag Chem Eng 60:122+ Ap '53

Infrared spectra of lignin and related compounds; characteristic carbonyl and hydroxyl frequencies of some flavanones, flavones, chalcones and acteophenones. H. L. Hergert and E. F. Kurth. bibliog Am Chem Soc J 75:1622-5 Ap 5 '53

Investigations on lignin and lignification; electrophoresis of native and enzymatically liberated lignins. W. J. Schubert and others. bibliog Am Chem Soc J 75:1869-73 Ap 20 '53

Investigations on lignin and lignification; structural studies on bagasse native lignin. G. de Stevens and F. F. Nord. bibliog Am Chem Soc J 75:305-9 Ja 20 '53

Lignin-carbohydrate bond in wood. E. E. Harris. bibliog(35 ref) Tappi 36:402-5 S '53

Lignin studies; use of high pressure autoclaves; abstract. R. Monnberg. diags Paper Ind 35:479-80 Jl '53

Natural and artificial lignin; abstract. K. Freudenberg. Tappi 35:sup 128A-9A N '52

Products from the destructive distillation of Douglas-fir lignin. T. L. Fletcher and E. E. Harris. bibliog flow diag diag Tappi 35:536-9 D '52

Russell formula for gymnosperm lignin. M. A. Smith and others. bibliog Tappi 36:342-5 Ag '53

Solvent properties of liquids and their relation to the solubility, swelling, isolation and fractionation of lignin. C. Schuerch. bibliog Am Chem Soc J 74:5061-7 O 20 '52

Structure of lignin; abstract. E. Adler and B. O. Lindgren. Paper Ind 34:1151 D '52

Analysis

Determination of lignin in semichemical pulps; abstract. K. J. Björkqvist and others. Paper Ind 35:479 Jl '53

Low molecular substances of lignin origin in black liquors from sulphate and soda pulping of spruce wood. T. Enkvist and B. Alfredsson. bibliog Tappi 36:211-16 My '53

Preliminary separations of maple hydrol lignin. M. Granath and C. Schuerch. bibliog Am Chem Soc J 75:707-9 F 5 '53

Question of acid-soluble lignin; abstract. H. Richtzenhain and E. Dryselius. Paper Ind 35:581-2 Ag '53

Routine determination of lignin in semichemical pulps by a modified tingle procedure. P. E. Trout and others. Tappi 36:123-6 Mr '53

Bibliography

Rubber division library bibliography; use of lignin in rubber and synthetic rubbers, 1945-May 1952. 7 l Rubber division lib, Univ. of Akron, Akron 4, Ohio '52

LIGNITE

Cashing in on cheap power. Bsns W p94+ D 13 '52

Co-op plant produces low-cost power from lignite; William J. Neal station of Central power cooperative. A. C. Soderholm and F. D. Troxel. il diags Elec World 138:58-61 D 29 '52

Drying and carbonization of fine coal in the entrained and fluidized state. V. F. Parry and others. Heat & Ven 50:136+ Ag '53

Gasification of lignite in a commercial-scale pilot plant; progress report for 1947-48. A. C. Burr and others. 15pls U S Bur Mines Rep of Invest 4940:1-28 '53

Neal station burns pulverized lignite. D. W. DeLaurier and R. L. Hein. il diag Power 97:71-4+ Ja '53

Pulverized lignite. Elec R (Lond) 152:512 Mr 6 '53

Slit bunker for brown coal. diags Engineer 195:402 Mr 13 '53

Thermal requirements for the gasification of lignite in an externally heated retort. W. H. Chetrick. bibliog 3pls U S Bur Mines Rep of Invest 4957:1-7 '53

Thickness of bituminous-coal and lignite seams at all mines, and thickness of overburden at strip mines in the United States in 1950. W. H. Young and R. L. Anderson. 15pls U S Bur Mines Information Circ 7642:1-18 '52

LIGNOSOL

Soil stabilization with lignosol. J. E. Hurtubise. il Can Chem Process 37:58+ F '53; Same. Roads & Eng Constr 90:190-2 N '52

LIGNOSULFONATES

Marathon's expanded chemical production. Paper Tr J 136:12 Ja 30 '53

Silk purses from sow's ears; Marathon's Chemical division. il Chem W 72:42-4 F 7 '53; Same. Tappi 36:sup 107A-8A Ap '53

Utilization of sulfite pulp mill wastes and their markets. S. R. P. Annett and W. E. Stobo. il Paper Ind 34:1109-11 D '52

LILIENTHAL, David E.
Portrait. Bsns W p75 F 21 '53

LILIES
Japan plans to revive lily bulb industry. For Comm W 49:24 My 4 '53

LILLIE, Ralph Stayner, 1875-1952
R. S. Lillie. R. W. Gerard. Science 116:496-7 N 7 '52

LILY-TULIP cup corporation
Pouring profits from paper cups. I. U. Cobleigh. Comm & Fin Chr 177:1632 Ap 16 '53

LIME
American water works association tentative standard specifications for quicklime and hydrated lime. Am Water Works Assn J 45:89-102 Ja '53
Effect of alumina and lime upon the solubility of lithium silicates. R. M. Williams and H. E. Simpson. bibliog Cer Ind 60:137-8+ Ap '53
Heat treatment of dolomite; the activity of dolime in relation to its temperature of preparation from dolomite. H. T. S. Britton and others. J Ap Chem 2:698-700 D '52
Heat treatment of dolomite; the activitiy of lime and of magnesia in relation to their temperature of preparation. H. T. S. Britton, S. J. Gregg and G. W. Winsor. bibliog J Ap Chem 2:693-7 D '52
Liming a digester. B. F. Rockecharlie. Sewage & Ind Wastes 25:613-14 My '53
Liquid dinitrogen tetroxide solvent system; reactions of sodium, calcium, and zinc oxides with dinitrogen tetroxide and its thermal dissociation products. C. C. Addison and J. Lewis. Chem Soc J p 1874-9 Je '53
Miami in the limelight and at a profit! Miami lime reclamation plant. C. F. Wertz. il Water & Sewage Works 100:98-103 Mr '53
Nomograph for calculations of pounds on lime per barrel. Oil & Gas J 51:409 Ja 26 '53
Our first year with a hot lime and zeolite feedwater treatment plant. M. R. Rivers and K. J. Linehan. Tappi 36:sup 130A-2A F '53
Removal of phosphorus from sewage plant effluent with lime. R. Owen. Sewage & Ind Wastes 25:548-56 My '53
Texas stabilizes roads with quicklime. il Eng N 150:38-9+ F 5 '53
Viscosity studies of system CaO-MgO-Al_2O_3-SiO_2; 35, 45, and 50 per cent SiO_2. J. S. Machin and others. Am Cer Soc J 35:322-5 D 1 '52
See also
Water purification—
Lime treatment

Manufacture

Effect of time and temperature of burning on the properties of quicklime prepared from calcite. J. A. Murray and others. bibliog il diags Am Soc T M Proc 50:1263-77; Discussion. 1278-82 '50
Heavy-media separation; abstract. D. M. Kerr. il Rock Prod 55:82-4 N '52
Improve hydraulic lime quality; Riverton lime and stone co. C. R. Atherton. flow sheet il Rock Prod 56:99-100 Mr '53
Nichols Herreshoff furnace for the calcination of dolomitic fines; abstract. G. E. Connolly. il Rock Prod 55:86-7 N '52
Theory and practice of lime manufacture. V. J. Azbe. il diags Rock Prod 56:100-3 F; 102-4 Mr; 138-9+ Ap; 84-7 My; 80-2+ Jl; 100-4+ S '53 (to be cont)
See also
Lime kilns

Testing

Effect of time and temperature of burning on the properties of quicklime prepared from calcite. J. A. Murray and others. bibliog il diags Am Soc T M Proc 50:1263-77; Discussion. 1278-82 '50

LIME as fertilizer
Agricultural limestone; necessity for economical production. E. R. Collins. il Rock Prod 56:100 Je '53
Agricultural liming; survey of liming materials use. R. S. Boynton. Rock Prod 55:90-2+ O '52
Agronomists' ideas on selling the farmer. il Rock Prod 56:124-7 Ap '53
Agstone industry has big selling job ahead. B. Nordberg. il Rock Prod 56:116-23+ Ap '53
By-product of zinc and lead processing; recovering dolomitic agricultural limestone from tailings in processing ore. L. D. Minsk. il Rock Prod 56:188+ Ag '53
Fine grinding capacity increased; Liberty limestone co. L. D. Minsk. flow diag il Rock Prod 56:115 Je '53
How to promote use of agstone. J. B. Peterson. Rock Prod 56:201-3 Ap '53
Iowa agstone producers to promote more direct sales. Rock Prod 56:136-7 Ap '53
Limestone pays when properly used. O. T. Coleman. Rock Prod 55:104+ My '53
Liming pays farmer big dividends. G. W. Volk. Rock Prod 56:108+ My '53
Missouri limestone producers association annual meeting, 8th, Jefferson City, Dec. 9-10; with abstracts of papers. Rock Prod 56:158-60+ Ja '53
Must continue federal program of helping farmers to lime their acid soils. C. J. Chapman. il Rock Prod 56:127-8 Ap '53
Our best paying soil amendment. S. C. Jones. Rock Prod 56:130+ Ap '53
Our soils need more lime. R. L. Cook. il Rock Prod 56:129-30 Ap '53
Pennsylvania stone producers association Agricultural limestone division annual meeting, Harrisburg, March 27. Rock Prod 56:126+ Je '53
Selling agstone as an investment. F. G. Merkle. Rock Prod 56:114 Je '53
Selling limestone on it's merits. E. E. Barnes. Rock Prod 56:128-9 Ap '53
Sound business practices build profitable agstone sales; Riddle quarries. T. Brown. il Rock Prod 55:70-1+ N '52
Truckers promote agstone sales; Maymead lime co. L. D. Minsk. flow sheet il Rock Prod 56:78-9 My '53
Will farmers buy agricultural lime? R. W. Stout. Rock Prod 56:131+ Ap '53
See also
National agricultural
limestone institute

LIME industry and trade
Better times for lime? Chem W 72:48-50 Ja 31 '53
Lime industry. O. Bowles. pl U S Bur Mines Information Circ 7651:1-43 bibliog(63 titles, p41-3) '52

LIME kilns
Instrumentation and control of rotary lime kilns; abstract. I. Warner. diag Rock Prod 55:84-6 N '52
Nomograph determines lime kiln performance. Rock Prod 55:115 D '52
Rotary kiln loading. I. Warner. diag Rock Prod 56:72-3 My; 128-9+ Ag '53
Rotary replaces shaft kilns; illustrations with text. I. Warner. plan diag Rock Prod 56:150-3 Ja '53
Theory and practice of lime manufacture. V. J. Azbe. il diags Rock Prod 56:100-3 F; 102-4 Mr; 84-7 My; 80-2+ Jl; 100-4+ S '53 (to be cont)

LIME plants

Employees

Employe relations; National lime association panel discussion. il Rock Prod 55:100-1 N '52

Equipment

Improve hydraulic lime quality; Riverton lime and stone co. C. R. Atherton. flow sheet il Rock Prod 56:99-100 Mr '53
Truckers promote agstone sales; Maymead lime co. L. D. Minsk. flow sheet il Rock Prod 56:78-9 My '53

Safety measures

National lime association safety session. Rock Prod 55:88+ N '52

LIMESTONE
Absorption of hydrogen fluoride in a limestone-packed tower. N. Gilbert and others. il diags Chem Eng Prog 49:120-7 Mr '53
Acid action rate equalized in limestone and dolomite. P. L. Menaul. il World Oil 135:200+ D '52

LIMESTONE—*Continued*

Crushed limestone aggregates for concrete. K. Mather. bibliog il diags Min Eng 5:Trans 1022-8 O '53

Flow through cavities in porous media. A. E. Scheidegger. bibliog Pet Eng 25: B 121-2+ My '53

Limestone handling at Oxford paper co. D. S. Adams. diags Pulp & Pa of Can 54:127-8 Ag '53

Limestone; unsung but vital rock. R. D. Raddant. il Iron Age 171:78-9 My 21 '53

Miniature current meter fits inside of diamond drill hole to measure flow in limestone cavities. G. F. Sowers. il Civil Eng 23:176 Mr '53

Missouri limestone producers association annual meeting, 8th, Jefferson City, Dec. 9-10; with abstracts of papers. Rock Prod 56:158-60+ Ja '53

Sink deep holes at low cost with rotary drill; Virginian limestone corp. D. O. Duncan. il Rock Prod 56:87-8+ F '53

Some trends of basaltic magma in limestone syntexis. C. E. Tilley. bibliog diags Am J Sci Bowen vol p529-45 '52

Structural localization of ground water in limestones; Big Bend district, Texas-Mexico. G. A. Kiersch and P. W. Hughes. bibliog maps diags Econ Geol 47:794-806 D '52

Studies of organic limestones and limestone-building organisms. J. H. Johnson, comp. bibliog il fold map diag Colorado School of Mines (Golden) Quarterly 47 no 2:1-94 '52 (pa $1.50)

Thermoluminescence and surface correlation of limestones. D. F. Saunders. bibliog diags Am Assn Pet Geologists Bul 37:114-24 Ja '53

Underground mining of cement rock; Coplay cement manufacturing co. A. F. Rambosek. diag Rock Prod 55:100-1 O '52

Use of thermoluminescence of limestones in sub-surface stratigraphy. J. M. Parks, jr. bibliog map diags Am Assn Pet Geologists Bul 37:125-42 Ja '53

Water soluble salts in limestones and dolomites. J. E. Lamar and R. S. Shrode. bibliog il Econ Geol 48:97-112 Mr '53

See also
Dolomite
Marble

Analysis

Determination of calcium, magnesium, and iron in limestone by titration with Versenate. Kuang Lu Cheng, T. Kurtz and R. H. Bray. bibliog Anal Chem 24:1640-1 O '52

LIMITATION of actions

Date of "act or omission" held not to include date of "injury" in Connecticut limitation statute; Dincher v. Marlin firearms co. Weekly Underw 167:1199 N 1 '52

Statute of limitations held extended by 60-day period after ascertainment of loss. Weekly Underw 168:909 Mr 28 '53

LIMONENE

Studies in the terpene series; skeletal isomerization and hydrogen transfer of cyclic olefins in the presence of alumina-hydrogen chloride and silica-alumina catalysts. H. Pines, R. C. Olberg and V. N. Ipatieff. bibliog Am Chem Soc J 74:4872-6 O 5 '52

LINCOLN, Abraham, 1809-1865

Mr Lincoln goes to Gettysburg; enactment by Western Maryland. Ry Age 133:12-13 O 27 '52

LINCOLN national life insurance company

Enderle, Lamar, O'Connor are appointed general agents by Lincoln National Life. Weekly Underw 168:164-5 Ja 10 '53

LINDANE

Interconversion of hexachlorocyclohexane isomers. R. R. Whetstone, F. C. Davis and S. A. Ballard. Am Chem Soc J 75:1768-9 Ap 5 '53

Lindane converters for insect control. G. S. Hensill and S. J. Leland. il Soap and San Chem 28:119-21+ N '52

Analysis

Determination of lindane in air. I. Hornstein and W. N. Sullivan. bibliog Anal Chem 25: 496-8 Mr '53

LINDBERG, John E. jr.

American engineers win trophy; Musick memorial trophy awarded to Lindberg and Wheeler for developing Sperry engine analyzer. por Aeronautical Eng R 11:17-18 D '52

LINDER, Clarence H.

Appointed vice president of engineering. por Gen Elec R 56:6 S '53

LINE material company

Rehearsing for a recession. Bsns W p73 Jl 4 '53

LINEAR inequalities. See Inequalities, Linear

LINEMEN

Comparative studies of new push-pull methods for pole-top resuscitation. A. S. Gordon and others. bibliog il Elec Eng 72:132-7; Discussion. E. W. Oesterreich. 137-40 F '53

I am a utility high lineman. H. F. Unger. Pub Util 52:95-101 Jl 16 '53

Improved methods of pole-top resuscitation. J. E. Appel. bibliog il Nat Safety N 67: 22-5+ Ap '53

Telephone men against the snow. H. F. Unger. Pub Util 51:159-65 Ja 29 '53

LINEMEN'S equipment

Cable spiking. il Elec R (Lond) 152:639-40 Mr 20 '53

Lineman's glove standard. Safety Maint & Prod 105:20 F '53

Sharpen gaffs right for safety; illustrations with text. C. H. Weiser. Elec World 139: 70-1 My 4 '53

LINING fabrics

Corrugated fibrous webs as insulation fillers. E. R. Frederick. il Textile Res J 23:45-53 J[illegible] '53

What can we do about linings? J. Campbell. Mod Textiles Mag 34:31+ Ja '53

LINK, Walter K.

Expert on the world's geology. por Oil & Gas J 52:60 Je 29 '53

LINK-BELT company

12 promising specialties. P. Dobbs. Mag of Wall St 92:120 Ap 18 '53

LINKS and link motion

Balanced hydraulic design for linkage steering booster. il Machine Design 25:228 O '53

Controlling inertia; how linkages and irregular gearing achieve improved performance in shaker conveyors. W. W. Sloane. il diag Machine Design 25:154-8 Jl '53

Designing four-bar linkages to substitute for gears. A. S. Hall and A. C. Dunk. diags Machine Design 25:232-6 Ap '53

Exact computing linkage; mechanism which generates the ancient cissoid of Diocles. L. S. Packer. bibliog diags Machine Design 25:171-5 S '53

Graphical linkage analysis. R. A. Kraus and K. S. Rangasami. diags Machine Design 25:177-82 Je '53

Linkage design. P. T. Nickson. il diags Machine Design 25:137-44 Jl '53

Use small-diameter tubing for good linkage. il diag Iron Age 171:146 Mr 19 '53

LINN, Mildred Topeka

Mildred Topeka Linn. por(p699) Weekly Underw 168:706 Mr 14 '53

LINOLEIC acid

Solubilities of oleic and linoleic acids in common organic solvents. C. W. Hoerr and H. J. Harwood. bibliog J Phys Chem 56: 1068-73 D '52

Analysis

Isolation of palmitic, stearic and linoleic acids from guayule resin. T. F. Banigan, jr. and J. W. Meeks. bibliog Am Chem Soc J 75:3829-30 Ag 5 '53

LINOLEUM

Advertising

Sales meeting features color telecast. C. Day. il Ptr Ink 241:28+ D 19 '52

LINSEED oil

Argentine linseed oil export surplus. C. A. Boonstra. Oil Paint & Drug Rep 162:5 N 3 '52

Factors affecting heat thickening of linseed oil. A. J. Seavell and J. J. Sleightholme. diag Paint Oil & Chem R 115:92-5 D 4 '52

New extraction process for vegetable oils at Toronto elevators. il Can Chem Process 37:28-9 Ja '53

Swedish linseed oil; abstract. K. Magnusson. Paint Oil & Chem R 116:26 F 26 '53

LION oil company
Security I like best. C. J. Collins. Comm & Fin Chr 177:1310 Mr 26 '53

LIPIDES
Adsorption of serum lipids by montmorillonite. E. Nikkilä and N. Oker-Blom. bibliog Science 116:685-6 D 19 '52
Countercurrent distribution of methyl esters of higher fat acids. J. A. Cannon, K. T. Zilch and H. J. Dutton. bibliog Anal Chem 24:1530-2 O '52
Lipid detection in paper electrophoresis. E. L. Durrum and others. bibliog il Science 116: 428-30 O 17 '52
Test utilizing the *in vitro* clearing of milk to determine the presence of lipid clearing factor in plasma. L. Schwartz and others. bibliog Science 117:482-3 My 1 '53

LIPOIC acid
Interrelationships of lipoic acids. L. J. Reed and others. bibliog diag Am Chem Soc J 75:1271-3 Mr 20 '53
Isolation, characterization and structure of α-lipoic acid. L. J. Reed and others. bibliog Am Chem Soc J 75:1267-70 Mr 20 '53
Lipoic acid and thiamine; abstract. L. J. Reed. Chem & Eng N 31:1630 Ap 20 '53
Lipoic acid conjugase. L. J. Reed and B. G. DeBusk. Am Chem Soc J 74:4727-8 S 20 '52
Synthesis of DL-α-lipoic acid. C. S. Hornberger, jr. and others. bibliog Am Chem Soc J 75:1273-7 Mr 20 '53

LIPOPROTEINS
Immunochemical heterogeneity of human plasma β-lipoprotein. D. Gitlin. bibliog Science 117:591-3 My 29 '53
Quantitative studies on proteolipide as incitant of disseminated encephalomyelitis in mice. C. Tal and P. K. Olitsky. bibliog Science 116:420-1 O 17 '52
Stability of serum lipoproteins and evidence of a stabilizing factor. B. R. Ray, E. O. Davidson and H. L. Crespi. bibliog Am Chem Soc J 74:5807-8 N 20 '52

LIQUEFACTION of coal. See Coal liquefaction

LIQUEFACTION of gases. See Gases—Liquefaction

LIQUEFIED petroleum gas
Burn new fuel; fork-lift trucks. Mill & Factory 53:246+ Ag '53
Carnation ok's LPG; with cost data. W. J. Thompson. il Food Eng 25:56-7 Je '53
Comparison of liquefied petroleum gas, gasoline, and Diesel fuel in city-bus operation. F. C. Burk and others. Pet Refiner 32: 119-21 Je '53
Fuel switch to LP gas saves $300 per fork truck per year. il Factory Management 111: 140-1 F '53
Gasification of hydrocarbons for production of gases to supplement natural gas in city supplies; liquefied petroleum gases. J. J. Morgan. bibliog flow chart diag Gas Age 111:26-32 Ja 29; 57-64 F 12; 42-4 F 26 '53
How South Jersey gas co. broke through the electric iron curtain. V. F. Stanton. il Gas Age 110:72 O 23 '52
How to keep LP-gas plants ready for use. D. S. Seifried. Gas Age 112:33-5+ Jl 16 '53
Liquefied petroleum gas as chemical raw material. B. R. Carney and R. E. Meyer. bibliog Oil & Gas J 51:117-18+ D 15 '52
LPG as construction machinery fuel. M. H. Coons. il Constr Methods 35:68+ Ag '53
LP-gas continues climb. F. N. Mabee. Steel 132:80 My 11 '53
L.P.G. industry making long strides in European countries. V. Stark. il Oil & Gas J 51:65-6 D 29 '52
New horizons for LP-gas highlighted as distributors study potential market. Nat Pet N 45:27 My 13 '53
Petrochemical industry looks to liquefied petroleum gas. B. R. Carney and R. E. Meyer. Pet Refiner 32:123-7 Ap '53
Portable pipe lines. I. U. Cobleigh. Comm & Fin Chr 177:192 Ja 15 '53
Sell yourselves to public, learn how to raise capital, LP-gas men urged. L. T. White. Nat Pet N 45:97 Ap 15 '53
Survey of cycling-plant operations. Oil & Gas J 51:225 Ap 27 '53
Training of personnel for operations of Lp-gas plants. S. C. Symnoski. Am Gas Assn Proc 1952:621-5; Same cond. Am Gas J 177:14-15 Ag '52
Why LP-gas has two important values to the gas utility co. D. J. Reimers. Gas Age 112:48-9 S 10 '53
See also
Butane
Propane

Analysis

How to obtain free sulfur in LPG. J. H. Shively and H. Levin. Pet Processing 8:913 Je '53
L.P.G. test method. C. D. Gard. Oil & Gas J 51:76-7 My 4 '53

Bibliography

Liquefied petroleum gas (1945-1952). (Petroleum bibliog. no. 33) 12 l Tulsa pub. lib, Technical dept, Tulsa 3, Okla. '53

Odorizing

Warning signal or booby trap? J. B. Calva. Safety Maint & Prod 106:101-2 O '53

Safety measures

How Hartford assured safe operation of LP-gas storage tanks. A. B. Hamilton. il Gas Age 110:34-5 D 18 '52
How to store and use liquefied petroleum gas safely. E. O. Mattocks. il Safety Maint & Prod 104:28-30+ S; 27-8+ O '52
Sound engineering spells safety in LP-gas plants. W. H. Kramer, jr. bibliog il map diags Am Gas Assn Proc 1952:730-52; Same cond. Am Gas J 177:14-15+ O; 18-19+ N '52

Statistics

LP-gas sales gained six per cent in 1952; tabulation. A. T. Coumbe and I. F. Avery. Gas Age 112:41-4 Ag 13 '53
L.P.G. sales show modest gain in 1952. G. R. Benz and P. W. Tucker. il Oil & Gas J 51:58-60 D 29 '52; Same. Gas Age 111: 34-6+ Ja 15 '53; Same. World Oil 136:212+ F 15 '53; Same cond. Nat Pet N 45:33-6 Ja 14 '53; Same cond. Pet Refiner 32:66+ Ja '53; Excerpts. Am Gas Assn Mo 35:20 Ja '53

Storage

California Standard successfully stores L.P.G. in water-filled sandstone. J. A. Kornfeld. il Oil & Gas J 51:109 Mr 9 '53
Dual injection of butane and propane in partially depleted gas sands. J. A. Kornfeld. il Oil & Gas J 51:185-6+ Ap 27 '53
How Hartford assured safe operation of LP-gas storage tanks. A. B. Hamilton. il Gas Age 110:34-5 D 18 '52
How to select sites for underground storage. R. L. Loofbourow. Pet Eng 24:A59 D '52
L.P.G. problems; more underground storage required. H. R. Thomas. Oil & Gas J 51: 75-6 My 4 '53
NGAA prepares standards for underground LP-gas storage. Pet Eng 24:E 11 D '52
N.G.A.A. tentative standards. Oil & Gas J 51:191 Ap 27 '53
Phillips prepares Illinois cavern for propane storage. il Pet Eng 24:E5 D '52
San Diego will store 10,000,000 cu. ft. in underground pipe holder. W. C. Grant. il Gas Age 110:30-1 D 18 '52
Sound engineering spells safety in LP-gas plants. W. H. Kramer, jr. bibliog il map diags Am Gas Assn Proc 1952:730-52; Same cond. Am Gas J 177:14-15+ O; 18-19+ N '52
Subsurface storage of liquid hydrocarbons. N. E. Van Fossan. plan diag Pet Eng 25: A53-4+ Ja '53; Oil & Gas J 51:192+ Ap 27 '53
Underground LPG storage. B. F. Newman. il diag Pet Eng 24:B 12+ D '52
Underground storage. H. R. Thomas. map Oil & Gas J 52:95-7 Je 1 '53
Underground storage of hydrocarbons. G. H. Billue. Pet Eng 24:A73 D '52
Underground storage of hydrocarbons today. G. H. Billue. il Pet Refiner 32:136-8 Ap '53

Transportation

L.P.G.'s biggest problem. J. C. Casper. Oil & Gas J 51:78-9 N 10 '52

LIQUEFIED petroleum gas association
Annual meeting, Chicago. Dom Eng 181:98-9+ Je; 182:114 Jl '53
Annual meeting, Chicago, May 3-6. Am Gas Assn Mo 35:21 Je '53

LIQUEFIERS. See Gases—Liquefaction

LIQUID air
Laboratory plant for making liquid air from liquid oxygen. A. J. Croft. flow diag il diag J Sci Instr 30:74-6 Mr '53

LIQUID crystals
Proton magnetic resonance line in liquid crystals. R. D. Spence and others. il J Chem Phys 21:380 F '53

LIQUID fuel
Behavior of liquid hydrocarbons with white fuming nitric acid. C. H. Trent and M. J. Zucrow. bibliog diag Ind & Eng Chem 44:2668-73 N '52
Fuels from shale may soon be economically feasible. R. H. Taylor. World Oil 135:84 N '52
House committee slashes synthetic liquid fuel budget. R. G. Gibbs. Chem & Eng N 31:1846 My 4 '53
Interior department gets funds for oil shale work; two projects rejected. Oil Paint & Drug Rep 163:3+ My 4 '53
Liquid fuel from coal; progress report on hydrogenation demonstration plant. C. C. Chaffee and L. L. Hirst. bibliog il diags Ind & Eng Chem 45:822-38 Ap '53
NSRB backs idea of financial aid to synthetic fuels producers. Nat Pet N 44:16 D 24 '52
Prototype plants for synthetic liquid fuels. W. C. Schroeder. Am Gas Assn Proc 1952:267-79
Spark ignition; effect of molecular structure. H. F. Calcote and others. bibliog diags Ind & Eng Chem 44:2656-62 N '52
Synthetic fuel ideas of Mines bureau hit by National petroleum council. W. S. S. Rodgers. Oil Paint & Drug Rep 163:3+ Mr 2 '53
Synthetic fuel output seen keyed to US aid. Oil Paint & Drug Rep 163:3+ Ja 26 '53
Synthetic fuels plant shutdown plan opposed by coal interests. Oil Paint & Drug Rep 163:3+ Ap 27 '53
Synthetic-fuels research. Mech Eng 74:827-8 O '52
Synthetic-fuels technology. Mech Eng 75:317-19 Ap '53
Synthetic liquid fuels; annual report of the Secretary of the interior for 1952. 75 pls U S Bur Mines Rep of Invest 4942:1-85 bibliog(77 titles, p81-5); 4943:1-70 bibliog(22 titles, p70) '53
Synthetic liquid fuels not ready to compete with oil, NPC says. Nat Pet N 45:37-8 Mr 4 '53
Synthetics still costly. B. F. Linz. Oil & Gas J 51:42-3 Mr 2 '53
U.S. oil outlook; how coal fits in. E. Ayres. Coal Age 58:70-3 Ag '53

See also
Airplane engines—Fuel
Automobile engines—Fuel
Automotive fuel
Benzol (commercial benzene)
Coal liquefaction
Diesel engines—Fuel
Fischer-Tropsch process
Gas turbines, Aircraft—Fuel
Gasoline
Internal combustion engines—Fuel
Kerosene
Liquefied petroleum gas
Oil fuel

Bibliography

Bibliography of pressure hydrogenation. J. L. Wiley and H. C. Anderson. 3 pts U S Bur Mines Bul 485:1-306 pa $1.25; 307-592 pa $1; 593-646 pa 25c Supt. of doc. '50-52

LIQUID helium. See Helium, Liquid

LIQUID level control
Constant-level device; U.S. leveller for electroplating baths. diag Chem Age (Lond) 67:602 N 1 '52
Instrumentation handbook; liquid level measurement and control. E. D. Mattix. diags Pet Refiner 31:111-15 D '52
Warrick liquid level controls. il Pulp & Pa of Can 54:156 Ja '53

LIQUID level indicators
Cadmium sulfide crystal acts as high-speed level checker. Elec Eng 72:377 Ap '53; Factory Management 111:87 Je '53
Constant-force spring meters level-measuring cable. il diags Machine Design 25:184 Ap '53
High speed level checker inspects 900 cans per minute. il Mill & Factory 53:140 S '53
Instrumentation handbook; liquid level measurement and control. E. D. Mattix. diags Pet Refiner 31:111-15 D '52
Liquid nitrogen level indicators. M. G. Davies and H. Kronberger. diags J Sci Instr 29:335 O '52
Measurement of liquid levels. Can Chem Process 37:42+ Jl '53
Remote liquid level gaging system uses sweep mechanism to transmit impulses. diag Chem & Eng N 31:2128 My 18 '53
Thermostats show level of asphalt. diag Eng N 150:64 Ja 8 '53; Nat Safety N 67:48+ Ja '53; Pet Processing 7:1842 D '52; Safety Maint & Prod 105:54 F '53
Transmit tank gages over telephone wire. il diag Pet Processing 8:948-9 Je '53

LIQUID metals. See Metals, Liquid; Metals, Molten

LIQUID meters
Liquid displacement meters. P. Renfrew. il Instruments 25:1260-1+ S '52

LIQUID oxygen. See Oxygen, Liquid

LIQUID sugar. See Sugar, Liquid

LIQUID sulfur. See Sulfur, Liquid

LIQUIDITY (economics)
See also
Assets, Liquid

LIQUIDS
Analysis of the pressure dependence of the dielectric constant of polar liquids. I. S. Jacobs and A. W. Lawson. bibliog J Chem Phys 20:1161-4 Jl '52
Angular correlations from liquid sources. R. V. Pound and A. Abragam. Phys R 90:993-4 Je 1 '53
Application of the cell method to r-mer liquids. I. Prigogine and others. J Chem Phys 21:559-60 Mr '53
Characteristics of flow in falling liquid films. A. E. Dukler and O. P. Bergelin. bibliog flow diag il diags Chem Eng Prog 48:557-63 N '52
Critical point and the distributed rotation of molecules in the liquid state. J. van Dranen. bibliog J Chem Phys 21:1404-5 Ag '53
Dependence of intensity of sound at source on its absorption coefficient in liquids. S. Parthasarathy and others. J Chem Phys 21:185 Ja '53
Determination of complex dielectric constants of absorptive liquids by microwave interferometry. F. H. Branin, jr. bibliog diag J Ap Phys 23:990-7 S '52
Dielectric constant theory for polar liquids. W. F. Brown, jr. bibliog diag J Chem Phys 21:1327-32 Ag '53
Effect of a liquid phase velocity on the growth and collapse of gas bubbles. V. J. Berry. J Chem Phys 20:1045 Je '52
Fractional liquid extraction approach to steady state conditions. E. G. Scheibel. diag Ind & Eng Chem 44:2942-4 D '52
Free volume theory of multicomponent fluid mixtures. Z. W. Salsburg and J. G. Kirkwood. bibliog J Chem Phys 20:1538-43 O '52
Mixing of liquids in chemical processing. J. H. Rushton. bibliog il diags Ind & Eng Chem 44:2931-6 D '52
Nuclear magnetic relaxation in viscous liquids. R. L. Conger. J Chem Phys 21:937 My '53
Nuclear magnetic resonance multiplets in liquids. H. S. Gutowsky and others. bibliog il diag J Chem Phys 21:279-92 F '53
Paramagnetic resonance in liquids. M. A. Garstens and S. H. Liebson. J Chem Phys 20:1647-8 O '52
Physical properties of liquid fluorine. G. W. Elverum, jr. and R. N. Doescher. diag J Chem Phys 20:1834-6 D '52
Properties of capillary-held liquids. P. C. Carman. bibliog diags J Phys Chem 57:56-64 Ja '53

LIQUIDS—*Continued*

Reaction field and dielectric constant of polar liquids. D. G. Frood and A. J. Dekker. bibliog diag J Chem Phys 20:1030-3 Je '52

Review of physico-chemical data on the state of supercritical fluids. F. G. Smith. diags Econ Geol 48:14-38 bibliog(108 titles, p34-8) Ja '53

Simple variable thickness cell for liquids. A. V. Stuart. il diag Opt Soc Am J 43:212-13 Mr '53

Structure of the liquid state and viscosity of hydrocarbons. R. J. Moore, P. Gibbs and H. Eyring. bibliog diags J Phys Chem 57:172-8 F '53

Studies in Newtonian flow; viscosity *vs* molecular weight in liquids; viscosity *vs* concentration in polymer solutions. A. K. Doolittle. J Ap Phys 23:418-26 Ap '52

Study of the supercooling of drops of some molecular liquids. D. G. Thomas and L. A. K. Staveley. diags Chem Soc J p4569-77 D '52

Velocity of sound in liquids and molecular weight. S. Parthasarathy and N. N. Bakhshi. J Phys Chem 57:453-4 Ap '53

See also

Atomizers
Boiling points
Brownian movements
Cavitation
Dew points
Drops
Emulsions
Equation of state
Evaporation
Films
Fluids
Helium, Liquid
Hydraulics
Hydrodynamics
Inflammable liquids
Liquid fuel
Nitrogen, Liquid
Solution (chemistry)
Solvents
Surface tension
Viscosity
Water
Wetting

LIQUOR law liability insurance. See Insurance, Liquor law liability

LIQUOR problem

How hard do Americans drink? G. Burck. maps Fortune 47:121-5+ Mr '53

See also

Alcoholism

LIQUOR traffic

Report on bootleggers' current sales problems. J. Shoenfeld. Sales Management 69:42+ N 10 '52

Teaching liquor retailers how to sell; Hiram Walker's merchandising festival. il Bsns W p54-6+ N 29 '52

See also

Beer
Distilling industries
Whisky
Wine

Advertising

Advises drys to broaden their appeal; upholds Gannett refusal of liquor advertising. D. U. Bridge. Ed & Pub 85:14 S 27 '52

More newspapers ban liquor ads. Ed & Pub 86:26 Ap 11 '53

Wrong word; no-sugar beer. Bsns W p48 Jl 4 '53

Statistics

Foodstuffs and tobacco; Nov.-Dec. 1951-Jan.-Nov. 1952. Survey of Cur Bsns 33:S27 Ja '53 [cont monthly]

United States

Pearson's liquor store, Washington, D.C. Fortune 47:184 F '53

LIQUORS

Lifting the sales curve; Calvert's two-product summer home bar. il Mod Packaging 26:122+ Jl '53

Some like it hot, some like it cold. Bsns W p64 O 25 '52

See also

Beer
Bitters
Whisky
Wine

LISTERINE

Listerine; nominated to packaging's Hall of fame. il Mod Packaging 26:100-5, cover N '52

LITCHFIELD, Edward Harold, 1914-

Businessmen in the news. por Fortune 47:53 My '53

LITERARY digest (periodical)

Decline and fall of the Literary digest. D. B. Arnold. Adv Agency 45:108-9 N '52

LITERATURE

Dictionaries

Dictionary of world literature; criticism, forms, technique. J. T. Shipley, ed. rev ed 453p $7.50 Philosophical library, 15 E. 40th st, New York '53

LITHIUM

Cleavage of heterocycles with Raney nickel and with lithium. H. Gilman and D. L. Esmay. bibliog Am Chem Soc J 75:2947-9 Je 20 '53

Diffusion of lithium into germanium and silicon. C. S. Fuller and J. A. Ditzenberger. bibliog Phys R 91:193 Jl 1 '53

Heat of fusion of lithium. S. B. Kilner. Am Chem Soc J 74:5221-2 O 20 '52

Lifetimes of the μ^--mesons stopped in Li, Be, and C. W. E. Bell and E. P. Hincks. Phys R 88:1424-5 D 15 '52

Lithium. diag Fortune 46:206 O '52

Lithium greases. H. C. Meyer, jr. il Pet Eng 25:C 15-16+ My '53

Lithium; uses, outlook, availability, price and suppliers, etc. map Iron Age 170:290 O 9 '52

Lithium vapor inhibits scale formation, cuts cleaning cost. il Iron Age 171:185+ Mr 12 '53; Steel 132:112 Mr 9 '53

Mining and milling of lithium pegmatites at Kings Mountain, N.C. E. R. Goter and others. flow sheet il Min Eng 5:Trans 890-3 S '53

Neutron energy distribution from the proton bombardment of Li, Be, and C at 375 Mev. W. F. Goodell, jr. and others. bibliog diags Phys R 89:724-7 F 15 '53

Radiochemical studies on the fission of Th^{232} with Li+D neutrons. A. Turkevich and others. bibliog Phys R 89:552-5 F 1 '53

Reaction of cyclopropyl chloride with lithium; isolation of dicyclopropyl. V. A. Slabey. Am Chem Soc J 74:4928-30 O 5 '52

True identity of the solvated free radical triphenylsilicyl ethylammine; the multiple addition of lithium to an aromatic system in ethylamine. R. A. Benkeser, R. E. Robinson and H. Landesman. Am Chem Soc J 74:5699-701 N 20 '52

War baby becomes a growth industry. Bsns W p64-6 N 15 '52

Analysis

Determination of hydrogen in magnesium, lithium, and magnesium-lithium alloys. M. W. Mallett, A. F. Gerds and C. B. Griffith. il diags Anal Chem 25:116-19 Ja '53

Isotopes

Angular correlation in the decay of Li^8. C. M. Class and S. S. Hanna. Phys R 89:877-8 F 15 '53

Angular distribution of $Li^6(n,\alpha)H^3$ for neutrons of 200, 270, 400, and 600 kev. L. E. Darlington and others. diags Phys R 90:1049-53 Je 15 '53

β-decay of Li^8. D. S. Bunbury. bibliog Phys R 90:1121-2 Je 15 '53

Elastic scattering of protons by lithium. W. D. Warters and others. bibliog Phys R 91:917-21 Ag 15 '53

Energy levels in Be^8 from the reaction $Li^6(He^3, p)Be^8$. W. E. Kunz and others. diag Phys R 91:676 Ag 1 '53

Formation of He^6 by 14-Mev neutron bombardment of Li and Be. M. E. Battat and F. L. Ribe. bibliog diag Phys R 89:80-3 Ja 1 '53

$Li^7(\gamma,p)He^6$ cross section. B. L. Tucker and E. C. Gregg. diag Phys R 91:1579-80 S 15 '53

Li^9 disintegration in a photographic emulsion. W. F. Fry. diags Phys R 89:325-6 Ja 1 '53

Preparation of Li^6 targets. F. Ajzenberg. R Sci Instr 23:648 N '52

Quadrupole moment of Li^7. E. G. Harris and M. A. Melkanoff. bibliog Phys R 90:585-7 My 15 '53

Radiofrequency spectra of Li^6F^{19} by the molecular beam electric resonance method. J. C. Swartz and J. W. Trischka. bibliog diags Phys R 88:1085-92 D 1 '52

Reaction $Li^6(\alpha,\gamma)B^{10}$. D. H. Wilkinson and G. A. Jones. bibliog Phys R 91:1575-6 S 15 '53

LITHIUM—Isotopes—*Continued*

Reaction $Li^7(\alpha,\gamma)B^{11}$ and states of B^{11}. G. A. Jones and D. H. Wilkinson. bibliog diag Phys R 88:423-4 O 15 '52

Reaction $Li^6(\gamma,d)He^4$ at 2.76 Mev. H. B. Glenn. il Phys R 88:418 O 15 '52

Spins of Li^6 and B^{10} in the shell model. N. Zeldes. Phys R 90:416-19 My 1 '53

LITHIUM alloys

Analysis

Determination of hydrogen in magnesium, lithium, and magnesium-lithium alloys. M. W. Mallett, A. F. Gerds and C. B. Griffith. il diags Anal Chem 25:116-19 Ja '53

LITHIUM aluminum hydride

Action of lithium aluminum hydride on nitrate and nitrite esters. L. M. Soffer, E. W. Parrotta and J. Di Domenico. bibliog Am Chem Soc J 74:5301-3 N 5 '52

Action of lithium aluminium hydride on *NN'*-diarylsulphonyl derivatives of dianthranilide, and photo-peroxides of 9 : 10-diarylanthracene. A. Mustafa. Chem Soc J p2435-7 Je '52

Chemistry of polymerised oils; reduction of some organic peroxides with lithium aluminium hydride. M. Matic and D. A. Sutton. Chem Soc J p2679-82 Jl '52

Concentration effects in the lithium aluminum hydride reduction of 3,4-epoxy-1-butene. R. Fuchs and C. A. VanderWerf. bibliog Am Chem Soc J 74:5917-18 D 5 '52

Crystalline tetrabenzoyl-β-D-fructopyranosyl bromide and its reduction by lithium aluminum hydride to 1,5-anhydro-D-mannitol and 1,5-anhydro-L-gulitol. R. K. Ness and H. G. Fletcher, jr. bibliog Am Chem Soc J 75:2619-23 Je 5 '53

Mechanism of the reduction of steroidal enol acetates by lithium aluminum hydride. W. G. Dauben and J. F. Eastham. bibliog Am Chem Soc J 75:1718-21 Ap 5 '53

Preparation of primary amines by reduction of oximes with lithium aluminum hydride and by the Leuckart reaction. C. R. Walter, jr. bibliog Am Chem Soc J 74:5185-7 O 20 '52

Reactions of lithium aluminum hydride with representative elements of the main groups of the periodic system. T. Wartik and H. I. Schlesinger. bibliog diag Am Chem Soc J 75:835-9 F 20 '53

Reduction of acyl cyanides with lithium aluminum hydride. A. Burger and E. D. Hornbaker. bibliog Am Chem Soc J 74:5514 N 5 '52

Reduction of ketones by lithium aluminium hydride. N. L. Paddock. Chem & Ind p63-4 Ja 17 '53

Reduction of lactones to hydroxyaldehydes with lithium aluminum hydride. G. E. Arth. bibliog Am Chem Soc J 75:2413-15 My 20 '53

Reduction of organic peroxides; abstract. M. Matic and D. A. Sutton. Paint Oil & Chem R 115:38 O 9 '52

Reduction of some enolizable β-dicarbonyl compounds to unsaturated alcohols by lithium aluminum hydride; β-diketones. A. S. Dreiding and J. A. Hartman. bibliog Am Chem Soc J 75:3723-6 Ag 5 '53

Reduction of some enolizable β-dicarbonyl compounds to unsaturated alcohols by lithium aluminum hydride; monocyclic β-ketoesters and α-hydroxymethylene ketones. A. S. Dreiding and J. A. Hartman. bibliog Am Chem Soc J 75:939-43 F 20 '53

LITHIUM amide

Aldol condensation of esters with ketones or aldehydes to form β-hydroxy esters by lithium amide; comparison with the Reformatsky reaction. C. R. Hauser and W. H. Puterbaugh. bibliog Am Chem Soc J 75:1068-72 Mr 5 '53

LITHIUM borohydride

Low temperature heat capacities of inorganic solids; heat capacity of lithium borohydride. N. C. Hallett and H. L. Johnston. Am Chem Soc J 75:1496-7 Mr 20 '53

LITHIUM chloride

Conductance at 25° of lithium chloride, sodium and potassium bromides and potassium iodide in methanol, and of lithium chloride, sodium bromide and potassium iodide in water. R. E. Jervis and others. bibliog Am Chem Soc J 75:2855-8 Je 20 '53

Effect of solvent on the ultra-violet absorption spectra of aromatic hydrocarbons with special reference to the mechanism of salting-out; alcoholic lithium chloride solutions. E. F. G. Herington and W. Kynaston. Chem Soc J p3137-42 Ag '52

Effect of solvent on the ultra-violet absorption spectra of aromatic hydrocarbons with special reference to the mechanism of salting-out; aqueous salt solutions. E. F. G. Herrington and W. Kynaston. Chem Soc J p3143-9 Ag '52

LITHIUM compounds

Confirmation of the structure of 2 : 6-dimethyl-4-pyrimidyl-methyl-lithium and some observations on the condensation of 1 : 3-diketones with acetamidine. J. C. Roberts. Chem Soc J p3065-8 Ag '52

Coupling of lithium alkyls and alkyl halides; metal-halogen exchange reactions. H. D. Zook and R. N. Goldey. bibliog Am Chem Soc J 75:3975-6 Ag 20 '53

Light and fast. Chem W 71:57-8 N 8 '52

Metalation of indole, N-methylindole and N-phenylindole with *n*-butyllithium. D. A. Shirley and P. A. Roussel. bibliog Am Chem Soc J 75:375-8 Ja 20 '53

n-Butyl 4-dibenzothienyl ketone; a carbonation by-product from the metalation of dibenzothiophene with *n*-butyllithium. H. Gilman and D. L. Exmay. bibliog Am Chem Soc J 75:233-4 Ja 5 '53

Preparation of some trialkyltin-lithium compounds. H. Gilman and S. D. Rosenberg. Am Chem Soc J 75:2507-9 My 20 '53

Preparation of thiazole Grignard reagents and thiazolyllithium compounds. R. P. Kurkjy and E. V. Brown. bibliog Am Chem Soc J 74:6260-2 D 20 '52

Reaction of *n*-butyllithium with dibenzothiophene-5-dioxide and with diphenyl sulfone. H. Gilman and D. L. Esmay. Am Chem Soc J 75:278-81 Ja 20 '53

Reaction of triphenyltin hydride with methyllithium. H. Gilman and S. D. Rosenberg. bibliog Am Chem Soc J 75:3592-3 Jl 20 '53

Reaction of trityl methyl ether with phenyllithium and with *n*-butyllithium. H. Gilman, W. J. Meikle and J. W. Morton, jr. bibliog Am Chem Soc J 74:6282-4 D 20 '52

Reactions of nitrous oxide with organolithium compounds. F. M. Beringer, J. A. Farr, jr. and S. Sands. bibliog Am Chem Soc J 75:3984-7 Ag 20 '53

Solubility of diborane- and boron-containing lithium salts. J. R. Elliott and others. Am Chem Soc J 74:5211-12 O 20 '52

Stereochemistry of an elimination reaction effected by butyllithium. R. L. Letsinger and E. Bobko. bibliog Am Chem Soc J 75: 2649-51 Je 5 '53

Sufination of organolithium derivatives of thiophene and furan. W. E. Truce and E. Wellisch. bibliog Am Chem Soc J 74: 5177-9 O 20 '52

Synthesis of N,N-dialkyl-β-hydroxyamides from N,N-dialkylamides and ketones using lithium reagents. W. H. Puterbaugh and C. R. Hauser. bibliog Am Chem Soc J 75: 2415-17 My 20 '53

LITHIUM fluoborate

Preparation of lithium fluoborate. I. Shapiro and H. G. Weiss. Am Chem Soc J 75:1753-4 Ap 5 '53

LITHIUM fluoride

Absorption bands and lines in irradiated LiF. C. J. Delbecq and P. Pringsheim. bibliog J Chem Phys 21:794-800 My '53

Fluoride model systems; the binary systems CaF_2-BeF_2, MgF_2-BeF_2, and LiF-MgF_2. W. E. Counts and others. bibliog Am Cer Soc J 36:12-17 Ja 1 '53

Internuclear distance and dipole moment of the LiF molecule. J. W. Trischka. J Chem Phys 20:1811-12 N '52

Radiofrequency spectra of Li^6F^{19} by the molecular beam electric resonance method. J. C. Swartz and J. W. Trischka. bibliog diags Phys R 88:1085-92 D 1 '52

Vacuum-tight seal between LiF and silver. R. C. Lord and R. S. McDonald. diag R Sci Instr 23:442 Ag '52

LITHIUM hydride
Preparation of diborane from lithium hydride and boron trihalide ether complexes. J. R. Elliott, E. M. Boldebuck and G. F. Roedel. bibliog Am Chem Soc J 74:5047-52 O 20 '52

LITHIUM hydroxide
Effect of lithium hydroxide on the activity of cracking catalysts. P. Stright and J. D. Danforth. bibliog J Phys Chem 57:448-52 Ap '53
Vapor pressures of inorganic substances; dissociation pressures of lithium hydroxide between 650° and 800°K. W. E. Ditmars and H. L. Johnston. diags Am Chem Soc J 75:1830-2 Ap 20 '53

LITHIUM silicates
Effect of alumina and lime upon the solubility of lithium silicates. R. M. Williams and H. E. Simpson. bibliog Cer Ind 60: 137-8+ Ap '53

LITHIUM stearate
Better lubrication boosts production; lithium base grease in hot strip mill. A. D. Binz. il Steel 132:88+ Ja 26 '53

LITHOGRAPHIC technical foundation
LTF research study of tone control arouses interest. C. F. King. il Inland Ptr 130:57-60 F '53
Lithographic technical foundation uses tv to visit research lab. C. F. King. Inland Ptr 130:56-7 Ja '53
Will televise LTF developments for New York lithographic group. il Inland Ptr 130: 52 Mr '53

LITHOGRAPHY
Air dampening system developed to speed map production for army's engineer corps. C. F. King. diag Inland Ptr 131:61-3 Ap '53

LITHOLOGY. See Rocks

LITTLE, Arthur D., inc.
Projects that do turn a profit. il Bsns W p56+ Jl 11 '53

LITTLE, Carl Victor
Columnist turns songster. J. Wagner. Ed & Pub 86:67 Ap 11 '53

LITTLE, Henry G.
Campbell-Ewald's Henry G. Little is 20-year veteran of agency business. por Ptr Ink 241:124 N 21 '52; Adv Agency 46:56 Ja '53
Portrait. Sales Management 69:28 O 15 '52

LITTLE ROCK, Arkansas

Bridges

Bridge that was sot in its ways. il Bsns W p96 F 7 '53

LITTLETON, Jesse Talbot, 1887-
Sketch. bibliog por Am Cer Soc Bul 32:194-5 My 15 '53

LITTLEWOOD, William, 1898-
Air-line official to deliver 1952 Wright brothers lecture. por Aeronautical Eng R 11:17 O '52

LIVE stock. See Livestock

LIVER
Cytoplasmic localization of highly polymerized liver ribonucleic acid. E. L. Grinnan and W. A. Mosher. bibliog Franklin Inst J 255:347-51 Ap '53
Effect of nuclear counting procedures on determination of the desoxypentosenucleic acid content of rat liver cell nuclei. S. Albert and others. bibliog Science 117: 551-3 My 22 '53
In vivo conversion of glycine to serine. G. L. Nardi. bibliog Science 117:160-1 F 13 '53
Lack of effect of 2-desoxy-D-glucose on rat liver adenosinetriphosphatase and pyrophosphatase. M. H. Ross and J. G. Archer. Franklin Inst J 255:161-2 F '53
Mass isolation of whole cells from rat liver. N. G. Anderson. bibliog il Science 117:627-8 Je 5 '53
Presence of the triphosphothiamine (TPT) in the liver. A. Rossi-Fanelli and others. bibliog il Science 116:711-13 D 26 '52
Variation in extractability of phosphatase and nitrogen in liver of rats on protein-varied diets. M. H. Ross and others. Franklin Inst J 255:87-9 Ja '53

Diseases

See also
Jaundice

LIVER extracts
Enzymatic cleavage of the citrovorum factor. J. C. Keresztesy and M. Silverman. Am Chem Soc J 75:1512 Mr 20 '53

LIVERPOOL

Lighting

Lighting in Liverpool. il Elec R (Lond) 151: 1012 N 7 '52

LIVESTOCK
American bankers association's long-range livestock program. Banking 45:60+ Mr '53
Biochemistry and increased livestock production. J. Duckworth. Chem & Ind p333-6 Ap 11 '53
How to apply livestock capital gains law. S. H. Hart. Banking 46:69 Jl '53
Problem of high feed prices vs. cheaper meat prices. L. N. Burch. Banking 46:64-5 Jl '53

See also
Cattle industry and trade
Meat industry and trade
Swine

Accounting

How to get livestock farmers out of accrual-basis tax trap. A. Morris. J Account 94:616-17 N '52

Diseases and pests

See also
Foot-and-mouth disease

Transportation

On the Union Pacific, livestock dines in style; new feed and rest stockyard. il plans diag Ry Age 135:86-7+ Jl 13 '53

Ecuador

Ecuador encourages imports of livestock. For Comm W 49:5 Ap 13 '53

Scotland

Nutritional factors limiting increased livestock production from hills. C. F. Mills. bibliog Chem & Ind p330-3 Ap 11 '53

LIVESTOCK insurance. See Insurance, Livestock

LIVESTOCK judging pavilion. See Pavilions

LIVESTOCK shows
Houston; big brother to a boy and his steer. il Bsns W p28-9 F 14 '53

LIVING rooms
Idea for a living room; angled window wall with planter. il plan Am Bld 75:192 F '53

LLOYDMINSTER development company, ltd.
Security I like best. J. P. O'Rourke. Comm & Fin Chr 177:1563 Ap 9 '53

LLOYD'S, London
May get bank cover from London Lloyd's; Lewis issues sharp retort on plan of new Bank-share owners league. M. Lewis. East Underw 54:34 F 6 '53; Same abr. Weekly Underw 168:398+ F 7 '53; Abstract. Nat Underw 57:29, 36 F 5 '53
Scarborough plan sponsor goes after Martin Lewis. J. R. Humphreys. Nat Underw 57: 1+ F 19 '53; Excerpt. Weekly Underw 168:593 F 28 '53

LLOYDS bank, limited
Statement by the chairman. Lord Balfour. Economist 166:241-4 Ja 24 '53

LOAD (mechanics)
Automobile dynamic loads. T. K. Garrett. diags Automobile Eng 43:60-4 F '53; Discussion. 43:330-1 Ag '53
Axial tension and bending interaction curves for members loaded inelastically. D. O. Brush and O. M. Sidebottom. il diags A S M E Trans 75:63-71; Discussion. 71-2 Ja '53
Bolt design for repeated loading; new approach to strength calculations. E. I. Radzimovsky. bibliog(43 titles) diags Machine Design 24:135-6 N '52
Collapsing load of a strut with elastically-fixed ends. M. J. Gercke. Engineering 176: 67-70 Jl 17 '53
Design working loads for operating wire rope. L. C. Torell. Eng & Min J 153:97+ D '52
Dynamic loads on gear teeth. W. A. Tuplin. il diags Machine Design 25:203-11 O '53
Group loadings applied to the analysis of frames. I. F. Morrison. diags Am Soc C E Proc 79 [no 183]:1-15 Ap '53

LOAD (mechanics)—*Continued*

Horizontal thrust on a two-pinned parabolic arch. R. Hicks. diags Engineering 176:34 Jl 10 '53

Inelastic behavior in tests of eccentrically loaded short reinforced concrete columns. E. Hognestad. il diags Am Concrete Inst J 24:117-39 O '52; Discussion. 25:140^1-140^{14} pt 2 D '53

Limit analysis of voussoir (segmental) and concrete arches. A. Kooharian. diags Am Concrete Inst J 24:317-28 D '52; Discussion. 25:328^1-328^4 pt 2 D '53

Load-carrying capacity of fillet weld connections. F. Koenigsberger and H. W. Green. il diags Welding J 32:859-63 S '53

Multiply-loaded and continuously-loaded struts. W. J. Duncan. diags Engineering 174:180-2, 202-3 Ag 8-15 '52

New breaker block designed to limit roll loads. W. H. Bailey. il diags Iron & Steel Eng 30:99-101 F '53

Plastic collapse loads for plane frames. B. G. Neal and P. S. Symonds. bibliog diags Engineer 194:315-19, 363-4 S 5-12 '52

Portable load-measuring set; Boulton Paul aircraft, limited. il Engineering 175:93 Ja 16 '53

Stability of thin-shelled structures. G. C. Ernst. bibliog il diags Am Concrete Inst J 24:277-91 D '52; Discussion. 25:292^1-292^5 pt 2 D '53

Stiffness charts for gusseted members under axial load. J. E. Goldberg. bibliog diags Am Soc C E Proc 79 [no 179]:1-15 Mr '53

Stress and deflections in axially loaded cylindrical containers. D. P. Timo. il Machine Design 24:169-72 N '52

Study of the practical efficiency under static loading of riveted joints connecting plates. W. M. Wilson and others. il diags Ill U Eng Exp Sta Bul 402:1-75 '52 (pa 75c)

Tensile properties of some aircraft structural materials at various rates of loading. R. F. Klinger. il diags Am Soc T M Proc 50:1035-50; Discussion. 1051-3 '50

See also

Airplanes—Load

Bridges—Load

LOADING and unloading

Automatic loaders for crankshaft lathes. N. D. Cooper. il Tool Eng 30:145-6 Je '53

Automatic loaders for LeBlond crankshaft lathes; abstract. N. D. Cooper. il Automotive Ind 108:48+ My 15 '53

Faster unloading. Bsns W p52+ My 9 '53

Handling sheet and wet-lap bales from storage to carrier. plan diags Pulp & Pa of Can 53:119-22 O '52

Lumber unstacker has high capacity. il Machine Design 25:326 Ap '53

Packaged timber handling at Copper Queen branch, Phelps Dodge corp. J. H. Jett and W. P. Crawford. il diags Min Eng 5:270-3 Mr '53

Press unloader handles diversified stampings. H. Sahlin. il diags Tool Eng 30:63-5 Mr '53

Pulpwood yardster. il Paper Tr J 135:22 N 21 '52

Ready-made loaders. Bsns W p74 My 2 '53

Retriever unloads diecaster automatically. R. E. Fromson. il diag Am Mach 96:100-1 D 22 '52

Robots lug-box handling; Calavo growers of California. C. R. Havighorst. il Food Eng 25:64-5+ Ap '53

Transfer car eliminates overhead handling; Bridgeport brass co. W. J. Krailing. il diag Tool Eng 31:50-2 Jl '53

Unitized loading of chipboard. D. S. Adams. il Pulp & Pa of Can 53:124 O '52

See also

Coal loading machines

Dumping appliances

Freight handling

Airplanes

Airfreight handling needs cited. Aviation W 57:88+ D 8 '52

Air freight handling operations. C. Froesch and others. Mech Eng 74:837-9 O '52

Cargo-loading system for aircraft. il Engineering 174:804 D 19 '52

For swift air freight turnaround, cargo trays. il Bsns W p29 Ja 24 '53

Results of Loadair operation in South America; abstract. H. W. Anderson. il S A E J 61:47 F '53

Cars

Airslide covered hopper car. il diags Ry Loco & Cars 127:78-80 Je '53

Car loading made easy; grinding machine plant of Norton co.; illustrations with text. Mill & Factory 53:87 S '53

Car unloader saves time. il Chem Eng 59:190 N '52

Cuts clay unloading time over 80 per cent; Hough Payloader. il Cer Ind 59:99 D '52

Great Northern tackles head-end delays; speed handling of storage mail and railway express on passenger trains. il map diag Ry Age 134:115-18 Mr 9 '53

Hopper, conveyor and silo replace yard gang; unloading carloads of foundry sand. E. H. Taylor. il plan diag Iron Age 170:105-6 O 23 '52

Limestone handling at Oxford paper co. D. S. Adams. diags Pulp & Pa of Can 54:127-8 Ag '53

Missouri Pacific builds coal transfer on Mississippi. il map plans diags Ry Age 134:94-6 Ap 20 '53

More light on claim causes results in suggested new prevention activity; transportation and packing survey. il Ry Age 133:85-7 N 3 '52

Piggy-back car loads over sides. il Ry Age 134:19 Je 1 '53

Portable yard ramp that one man can handle. il Mill & Factory 51:149 D '52

Scrap; by the bucketful; Atwood vacuum machine co. il Steel 132:76 Ja 26 '53

Simple controls load cars automatically. il Coal Age 58:99 Ag '53

Talk-backs in freight transfer. il Ry Age 134:59-61 Ap 6 '53

Two tricks cut time and cost in loading mine cars. il diag Coal Age 58:122+ Je '53

Unloading gondola cars mechanically reduces cost, time and man-hours. il Mill & Factory 53:137 Jl '53

Unloading hoppered-bottom cars. T. S. Abbott. diags Rock Prod 55:74-5+ S '52; Same. il Paper Ind 34:854-6 O '52; Same cond. Iron Age 170:160-3 S 4 '52; Abstract. Coal Age 57:117 N '52

Unloading timesaver. il Steel 132:107 Je 29 '53

Motor trucks

Boosts output, deliveries, sales the pallet way; Pepsi-Cola bottling co. plan Food Eng 25:127 Ja '53; il Mill & Factory 52:117-18 Ap '53

Conveyor smooths-out unloading operation. il Chem Eng 60:214+ Ja '53

Crone and Taylor unloader and stacker. il Engineering 176:288 Ag 28 '53

Elevator aids loading oil drums on trucks. O. O. Henderson. diags Elec World 139:112+ Mr 9 '53

Mechanical unloader handles block cubes. il Concrete 61:18 Je '53

Quick loading with rocking bucket. il Eng N 150:123-4 My 7 '53

Roller-bed unloader may answer one delivery problem; Arthur Rehberger & son, inc. il Brick & Clay Rec 123:60-1 S '53

Safer, economic hauling; Autocar co. il Nat Safety N 68:174 O '53

Self-levelling loading dock ramp. Engineer 194:874 D 26 '52

They didn't spare the distribution; Wolf's huge new Detroit warehouse. il Food Eng 24:145-7 N '52

Trucks with built-in roller conveyors. il Automotive Ind 109:59+ O 15 '53

Unloading dock cuts materials handling cost. il Safety Maint & Prod 106:52 O '53

Ships

Bauxite carrier, ore ship unloads own ore in eight hours with built-in conveyer. Iron Age 170:209 D 4 '52

Belt conveyers, arteries of new ore dock. W. H. Raff. il Iron Age 170:133-6 D 18 '52

Belt conveyors double capacity of ore-handling pier at Baltimore. il Eng N 149:26 O 30 '52

LOADING and unloading—Ships—*Continued*

Better handling, better fruit; United fruit co.'s mechanical banana-unloading terminal. J. V. Ziemba. il Food Eng 25:90-1 Ag '53

Handling plant in bauxite ore carrier. diags Engineer 195:98 Ja 16 '53

How to turn a beach into a port. il Bsns W p30-1 Jl 4 '53

Mobile three-ton cargo crane. il Engineering 174:185 Ag 8 '52

Self-service ships. il Chem W 71:58-9 N 29 '52

Self-unloading cement ship. B. Nordberg. il Rock Prod 56:96-9 Je '53

Unloaders for Fairless. Steel 131:129+ N 17 '52; Same. plan Marine Eng 58:136+ F '53

See also

Stowage

Tank barges

15-barge tows unload fast at river terminal. D. J. Warren. il Nat Pet N 44:90-2 N 26 '52

Fool-proof barge unloading bridge costs less. il Nat Pet N 45:52-4 My 27 '53

Tank cars

Safe car loading of volatile gasolines. W. B. Norris. diags Pet Processing 8:255 F '53

Tank ships

Diesels power tanker loading station. M. D. Pugh. il Diesel Power 30:50-1 N '52

New tanker-loading terminal. D. H. Stormont. il Oil & Gas J 51:120-1 O 27 '52

Submarine-line terminal is opened for business; Ventura, Calif. J. Joseph. il World Oil 135:260-1 N '52

Tank trucks

Automatic petroleum loading system. il Elec J 151:577 Ag 21 '53

How to design a modern gasoline loading dock. W. G. Rolf. il Pet Refiner 31:144 D '52

LOADING machines

Baker-Lull launches rugged front-end loader. H. W. Richardson. il diag Constr Methods 35:116+ S '53

Batch loader pivots over stockpiles. il Constr Methods 35:134+ Ja '53

Jaeger rolls into loader field with torque-converter one-yd unit. H. W. Richardson. il Constr Methods 35:93+ Ap '53

Mechanical trimming of bulk cargo; Merton overhead loader. il Engineer 194:649-50 N 14 '52; Engineering 174:676 N 21 '52

Portable power loader; R. A. Lister and co. il Engineer 195:116 Ja 16 '53; Engineering 175:157 Ja 30 '53

Transmission and gear co. new front-end loader. il Roads & Eng Constr 91:112 Ap '53

LOANS

Credit; loan demand at hot pace. R. M. Stroupe. Iron Age 171:96 Je 4 '53

Equity capital vs. loans. R. P. Soule. Burroughs Clearing House 37:11 Ja '53

Financing; key to modernization sales. il Dom Eng 180:177-88+ N; 102+ D '52

Insurance companies make loans to shipping lines. Marine Eng 58:85-6 S '53

U.S. school loans top $40 million. Eng N 149:74 N 27 '52

See also

Credit
Credit, Bank
Government loans and grants
Interest
Mortgages
Reconstruction finance corporation
Veterans—Loans

LOANS, Bank

Ample working capital is rudder steering printing industry through equipment buying. R. H. Matson. Credit & Fin Management 54:12-13+ D '52

Bank credit outlook. W. T. Taylor. Comm & Fin Chr 177:579+ F 5 '53

Bank loan conditions today. M. J. Drake. Comm & Fin Chr 177:2746 Je 25 '53

Bank policies on conservation farming credit. R. D. Hale. Banking 45:79-82 Je '53

Bankers liberalize policy. C. R. Walker. Manuf Rec 122:35 O '53

Banking and the security markets. A. H. Cook. Comm & Fin Chr 177:199+ Ja 15 '53

Changing pattern of advances. Economist 166:826 Mr 21 '53

Coasting days over, time to pedal; younger bank officers and need of care in loan policies. H. H. Heimann. Credit & Fin Management 55:20-1 Ap '53

Colombia authorizes bank to make loans to small industry, issue credit bonds. For Comm W 49:8 F 23 '53

Constructive risk lending to growing enterprises. E. L. Worstall. Comm & Fin Chr 178:19 Jl 2 '53

Cost of money. Bsns W p64+ Ja 10 '53

Demand for advances. Economist 167:863-4+ Je 20 '53

Fred Florence says, never let go of a customer; methods and policies of Republic national bank of Dallas. E. Whitmore. il Am Bsns 23:12-13+ Ap '53

Good outlook for credit; results of a national survey by the Credit policy commission; with comments divided according to Federal reserve districts. Banking 45: 41-9 Ja '53

How a big bank helps small banks with farm machinery loans. A. B. Rose. Banking 45:78-9 My '53

Industrialist urges banks to make capital loans. Burroughs Clearing House 37:5-6 Jl '53

Livestock price skid effect on bank loans. T. L. Westra. Banking 45:66-7 Ap '53

Loans by banks for the purpose of purchasing or carrying stocks registered on a national securities exchange; amendment no. 12 to Regulation U; text. Fed Res Bul 39:599 Je '53

Modern bank has a sales package; selling bank services. R. F. Bates. il Bankers Mo 69:16+ D '52

More credit for industry. Economist 167:921-2 Je 27 '53

Notes for oil operators who need a loan. B. A. Cunningham, jr. Pet Eng 25:A43-6 Ap '53

Prospects for commercial bank loans. S. Stidham. Comm & Fin Chr 177:1746+ Ap 23 '53

Real estate lending in 1953. J. R. Jones. Comm & Fin Chr 177:1107+ Mr 12 '53

Recent credit and monetary developments, first half of 1953. Fed Res Bul 39:689-96 Jl '53

Servicing spells the difference. L. D. Meredith. Bankers Mo 70:7-8+ F '53

Short-cut slashes work done for banks on assignments of policies for loans. Nat Underw (Life ed) 57:2+ Je 26 '53

Some bankers blame taxes. Bsns W p 104-5 Ap 4 '53

Speeding loan applications by means of telephone recording; Bank of the commonwealth, Detroit. il Burroughs Clearing House 37:15-16 Mr '53

We welcome church loans; Bank of Asheville. L. W. Harrison. il Bankers Mo 70:7-8+ Je '53

When a sale is a loan; Supreme court of Indiana decision that purported sale of conditional sales contracts was a loan; Wayne pump co. vs. Dept. of treasury. F. C. Fiechter, jr. Burroughs Clearing House 37:75-6 My '53

See also

Agricultural credit
Veterans—Loans

Collateral

Audit of collateral; multiple-copy form for receipt, control and delivery of loan collateral; Trust co. of Georgia. Banking 45: 57 Ja '53

See also

Trust receipts
Warehouse receipts

Installment payment

Auditing instalment loans. N. T. Shepherd. Banking 45:53 O; 47+ N '52

Traps in bank instalment credit. Credit & Fin Management 54:20-1 D '52

Two-way loan payment record; Merchandise national bank of Chicago. E. H. Smith. il Bankers Mo 70:26-7 Jl '53

LOANS, Bank—*Continued*

Taxation

British proposal to tax borrowing; Hicks scheme. P. Einzig. Comm & Fin Chr 176:1838 N 13 '52

LOANS, Foreign

Assisted power schemes; some activities of the International bank. J. C. Hancock. Elec R (Lond) 151:783-4 O 10 '52
Europe's third chance; dollars for defence industries. Economist 165:759-60 D 13 '52
Foreign aid in fiscal year 1952; with tables by program and by country, July 1945 through June 1952. C. E. Shepler. map Survey of Cur Bsns 32:6-11 O '52
More imports, less foreign aid gifts. H. V. Prochnow. Comm & Fin Chr 176:2223+ D 11 '52
Portugal to receive credit for railway. For Comm W 49:4 Ja 26 '53
Secretary Sawyer's survey of Europe. C. Sawyer and others. For Comm W 48:15-20 D 22 '52
U.S. foreign assistance reviewed. For Comm W 48:27 D 1 '52
See also
Export-import bank of Washington

LOBLAW groceterias company

Sales, net continue high. Barron's 33:19 My 25 '53

LOCAL government

Caution on local government. Economist 167:8 Ap 4 '53

LOCATING (machine work)

Accurate hole location with spur gear tool. W. G. Magee. il Am Mach 97:184 Je 8 '53
Centering and side-clamping collet. M. Montag. diags Mach 59:196-7 F '53
Centerpunch guide spots holes within close tolerance. A. Sciarrino. diags Am Mach 97:173 S 14 '53
How to control coordinate tolerances. A. L. Levitt. diags Am Mach 96:166-7 O 13 '52
How to design diamond pin locators. E. J. LaBroad. diags Am Mach 96:108 D 8 '52; Same. Tool Eng 29:45-6 D '52
Locating dimensions for tube welding fixtures. H. W. Smith. diags Tool Eng 31:47-8 S '53
Locating pins substitute for drill jig. C. Y. Lee. diags Am Mach 97:142 Ag 3 '53
Machine tool control; Hilger projector and scale. il Automobile Eng 43:18 Ja '53
Perkin-Elmer machine tool locating microscope. il Tool Eng 31:107 Jl '53
Plate jigs locate drilling operations from hole in work. W. M. Halliday. diags Mach 59:202-3 Ap '53
Self-positioning jig cuts, drill breakage. R. Double. il diag Am Mach 97:178 Mr 16 '53
Slot-milling fixture with a sliding locator. W. M. Halliday. diags Mach 59:205-6 Ja '53
Target fixtures precision-weld new gun pedestal. E. C. Pearson and F. George. il diag Am Mach 97:114-17 Ja 5 '53

LOCATION in industry

By joining up with supermarkets, staging razzle-dazzle drives, S&Ls build up new business. il Bsns W p64+ Ja 24 '53
Development areas revisited. Economist 165:183-4, 249-50 O 18-25 '52
Should management move to the country? Fortune 46:142-3+ D '52
When big business comes to a country town. J. Garth. il Am Bsns 23:26-7+ Mr '53
See also
Bank buildings—Location
Factories—Location
Industry—Decentralization
Office buildings, Industrial—Location
Retail trade—Store location

LOCK jaw. See Tetanus

LOCKERS

Change rooms can make a difference. il Safety Maint & Prod 106:30-4 Jl '53

LOCKFOAM. See Plastic materials, Cellular

LOCKHEED aircraft corporation

Plush is the pitch for airlines. il Bsns W p29 D 13 '52

LOCKING devices

Feeler switch holds riveter clamp within set distance of stringer edge. C. H. Rowan. il Tool Eng 29:43 D '52
Remote column lock for radial drill. I. Epstein. diag Am Mach 96:168 O 13 '52
Various methods of locking threaded members; drawings. Product Eng 23:148-9 O '52

LOCKS (hydraulic engineering)

Eastham oil dock. il plans diags Engineer 194:827-8, 857-60 D 19-26 '52
$8-million lock job progresses on the Monongahela. il Eng N 150:48 Ja 29 '53
Limpet dam and tunnel for lock gate renewal. il plan diags Engineer 196:279-80 Ag 28 '53
Lock controls, New Jersey; unit prices. Eng N 149:105 D 18 '52
Lock number five, Monongahela river, refaced by grout-intrusion method. J. S. Minnotte. il map plan diags Civil Eng 22:872-5 O '52

LOCOMOTIVE boilers

See also
Master boilermakers' association

Pulverized coal firing

Pulverized coal combustion in a water-cooled radiant tube; abstract. R. A. Sherman and others. Power 97:152 Mr '53

LOCOMOTIVE industry

Engineering outlook; the locomotive and rolling stock industries. Engineering 175:263-6 F 27 '53

LOCOMOTIVE maintenance officers' association

Annual meeting, Chicago, Sept. 15-17; with committee reports. Ry Mech & Elec Eng 126:77-84 N '52
Annual meeting, Chicago, Sept. 14-16. Ry Age 135:98-100 S 21 '53

LOCOMOTIVE shops

Cleaning Diesel shop floors. il Ry Mech & Elec Eng 126:73-4 D '52
Diesel shop pattern is slowly taking shape. il plans Ry Loco & Cars 127:53-8 O '53
Duluth, South Shore & Atlantic adds Diesel shop to enginehouse. il plan Ry Age 134:40-2 Ja 19 '53
Erie holds open house at a Diesel shop. il Ry Age 135:17 Ag 24 '53
Katy converts two steam shops for Diesel repairs. il Ry Age 134:74-7 Je 1 '53
M-K-T converts Waco back shop. il plan Ry Loco & Cars 127:59-65 O '53
More Diesels for the JCL. il Diesel Power 31:62-4 Ag '53
Standardized buildings for locomotive repairs. Diesel Power 31:80 Ag '53
Storehouse-to-shop tunnel; Frisco gains added Diesel repair space. il Ry Age 134:14 Ap 20 '53
Using standardized buildings; prefabricated frames in Diesel shops. il diag Ry Age 134:94-6 Mr 9 '53

Electric equipment

Santa Fe extends size and scope of its electrical shop. il Ry Loco & Cars 127:97-100 Ap '53

Employees

Skin hazards in railroad roundhouses and machine shops. L. Schwartz. Ind Med 21:482-4 O '52

Equipment

Baltimore & Ohio changes Glenwood shop into Diesel repair center; illustrations with text. plan Ry Loco & Cars 127:63-70 Ja; 87-90 Mr '53
Carbon grounds cleared in place; Elco machine. il Ry Loco & Cars 127:96-7 Mr '53
Generator dolly. il diags Ry Loco & Cars 127:91 Ap '53
How the Baltimore & Ohio centralizes freight Diesel repairs. il Ry Age 133:38-41 D 29 '52
How to determine what Diesel facilities are needed. Ry Mech & Elec Eng 126:77-81 O '52
Miscellaneous Diesel shop ideas. il Ry Loco & Cars 127:69 Jl '53
Shop tools for Diesel work; report of Locomotive maintenance officers' association. il Ry Mech & Elec Eng 126:80-2 N '52
Steam tools can fix Diesels, too. il Ry Loco & Cars 127:77-9 Ap '53
Steamer is still with us; shops of the Norfolk & western railway; illustrations with text. E. J. Tangerman. Am Mach 97:137-46 Je 22 '53

LOCOMOTIVE shops—Equipment—*Continued*

Storage rack for Diesel engine casings. il Ry Loco & Cars 127:87 Ap '53

Streamlining Diesel repair shops; Atlantic coastline railroad. il Diesel Power 30:50-1 O '52

Layout

Baltimore & Ohio changes Glenwood shop into Diesel repair center; illustrations with text. plan Ry Loco & Cars 127:63-70 Ja; 87-90 Mr '53

Chesapeake & Ohio Diesel shop at Huntington. il plans diags Ry Loco & Cars 127:50-5 Ja '53

Diesels take over another steam facility. il Ry Age 133:48-51 N 24 '52

More Diesel power begets biggest Diesel shop in Canada. il plan diag Ry Age 133:65-7 D 8 '52

Lighting

Illumination; report of A.A.R. Electrical section. il Ry Mech & Elec Eng 126:113-14 N '52

Lighting a locomotive servicing pit. W. C. Kuhnke. il diags Illum Eng 47:559-60 O '52

LOCOMOTIVE works

Equipment

Diesel locomotive erecting shop; Castle engine works. il Engineer 196:216 Ag 14 '53

Gas-fired annealing of locomotive tubes; Ashford locomotive works. il Engineering 175:144 Ja 30 '53

LOCOMOTIVES

British-built locomotives of 1952. il Engineer 195:2-4, pl 2 Ja 2 '53

From coal to Diesel and back again. Bsns W p63-4+ My 16 '53

Indian metre gauge locomotives. il Engineer 194:590-1 O 31 '52; Engineering 174:575 O 31 '52

Iron horse, towed across Seattle, reaches its last home in a park. il Bsns W p 113-14 Jl 25 '53

Locomotive construction; A.A.R. Mechanical division committee report. Ry Loco & Cars 127:64-7 Ag '53

Locomotives for the Sudan railways. il Engineer 194:628 N 7 '52

Locomotives ordered in U.S. 1932 to 1952; tabulation. Iron Age 171:440 Ja 1 '53

Motive power for railways. C. M. Cock. Engineering 174:421-4, 453-4 S 26-O 3 '52; Same cond. Engineer 194:428-30 S 26 '52; Abstract. Elec R (Lond) 151:671-2 S 26 '52

Pipe-lines hauled on to river bed by locomotives. il Engineering 174:383 S 19 '52

Progress in railway mechanical engineering, 1951-1952. il plan diags Mech Eng 75:291-306 Ap '53

Shunting locomotives for South African railways. il Engineer 194:876 D 26 '52

Standard class 4 2-6-0 locomotives. il Engineer 194:833 D 19 '52; Engineering 175:12-13 Ja 2 '53

Standard class 2 locomotives for British railways. il Engineer 195:207 F 6 '53; diags Engineering 175:217-18 F 13 '53

See also
Electric locomotives
Locomotive boilers

Bearings

Crankshaft and bearing failures; report of Locomotive maintenance officers' association. Ry Mech & Elec Eng 126:78-80 N '52

Cleaning

See also
Locomotives, Diesel-electric—Cleaning

Design

Articulated locomotives for New South Wales railways. il diags Engineer 194:572-5 O 31 '52

Some locomotive dimensions compared. W. A. Tuplin. Engineer 195:487-8 Ap 3 '53

Failure

Bureau of locomotive inspection annual report. Ry Loco & Cars 127:76-8 Mr '53; Same abr. Ry Age 134:55-6 F 23 '53

Fuel

From coal to Diesel and back again. Bsns W p63-4+ My 16 '53

History

Notable locomotives of 1902. E. C. Poultney. il Engineer 194:802-4 D 12 '52

Some locomotives of 1903. E. C. Poultney. il Engineer 196:230-4 Ag 21 '53

Maintenance and repair

Maintenance of locomotives on British railways. Engineering 175:85-6 Ja 16 '53

See also
Locomotive shops

Manufacture

Standard specifications for bronze castings in the rough for locomotive wearing parts; data sheet. Foundry 81:183-4 F '53

Performance

British locomotive performance in practice. W. A. Tuplin. Engineer 194:506-9+ O 17 '52

Present-day locomotive working in Great Britain; King class 4-6-0s of the former G.W.R. O. S. Nock. il diags Engineer 196: 34-6, 66-8 Jl 10-17 '53

Present-day locomotive working in Great Britain; Thompson and Peppercorn Pacifics of the former L.N.E.R. O. S. Nock. il diag Engineer 195:754-6, 786-9 My 29-Je 5 '53

Statistics

Motive power orders in 1952. H. C. Wilcox and F. C. Miles. il Ry Age 134:226-32 Ja 12 '53

Testing

Performance and efficiency tests on the Britannia locomotives. O. S. Nock. diags Engineer 196:103-4, 136-8 Jl 24-31 '53

Valves and valve gear

British locomotives fitted with cam poppet valve gear. diags Engineer 195:326 F 27 '53; Engineering 175:299-300 Mr 6 '53

Wheels

Rail and flange lubrication. il Ry Age 135: 70 S 21 '53

See also
Locomotives, Diesel
—Wheels

LOCOMOTIVES, Diesel

Air-Maze oil-bath filter adapted to Diesels. il Ry Age 134:35-6 Je 29 '53

Diesel bandwagon; pace is slowing down. A. Jansen. Barron's 33:15-16 My 11 '53

Diesel locomotive with oil-operated gearbox; Andrew Barclay, sons and co. il Engineering 174:250-1 Ag 22 '52

Diesel locomotives at Idarado. J. S. Wise. Min Cong J 39:25-6 Ja '53

Diesel locomotives for Denmark. il Engineer 195:99 Ja 16 '53; Engineering 175:87 Ja 16 '53

Diesel locomotives underground in Wyoming; abstract. J. L. Fellows. Min Cong J 38:91 O '52

Diesel-mechanical locomotives for steelworks. il Engineering 174:606 N 7 '52

Diesel mechanical shunting locomotives. il Engineer 194:551 O 24 '52

EMD's hydraulic switcher. il diag Diesel Power 31:83 Jl '53

Freight handled by Diesel power, 1946-1952. Comm & Fin Chr 177:1972 My 7 '53

German Diesel locomotive. plan diag Mech Eng 74:822-3 O '52

Highlighting the Atlantic City railroad convention. il diag Diesel Power 31:40-3 Jl '53

Hunslet 170 b.h.p. mines locomotive. il Engineer 195:710 My 15 '53; Engineering 175: 701-2 My 29 '53

Selling Diesels abroad. il Bsns W p 153-4 Je 20 '53

Symposium on underground Diesels. D. R. Ramsay and others. il plan Can Min J 73: 61-8 N '52

Fuel

How D&RGW uses low-cost fuel. il Ry Age 135:83-5 O 19 '53

What is fuel for Diesel locomotives? L. E. Talbot. Ry Loco & Cars 127:82-4 Mr '53

LOCOMOTIVES, Diesel—*Continued*

History

Forty years of Sulzer Diesel rail traction il Engineering 174:830-1, pl 64-5 D 26 '52

Wheels

New York Central investigates Diesel wheel slip and slide. F. Thomas. il diags Diesel Power 31:68-72+ Ap '53

LOCOMOTIVES, Diesel-electric

Air filter adhesive developed in laboratory and field tests; Diesel-engine filtration study. A. W. Hardy and others. il Ry Loco & Cars 127:65-71 Mr '53

Alco-GE 800-hp. switcher. il Ry Loco & Cars 127:53-4 Jl '53

Alco-GE switcher and engine. il diag Diesel Power 31:34-5 S '53

Army road switchers present unusual design problems. A. Ross and R. J. Martin. il Ry Loco & Cars 127:69-73 Je '53

Care and charging of batteries. S. K. Lessey. il diag Diesel Power 30:74-7 O; 63-5 N '52

Diesel-electric locomotives (cont). Ry Mech & Elec Eng 126:95-6 O; 75-6 D '52; [cont as] Ry Loco & Cars 127:71-2 Ja; 65-6 F; 91-2 Mr; 86 My; 102 Je; 80 Jl; 113 S; 90 O '53

Diesel-electric locomotives for Australia. il Engineer 196:108-9 Jl 24 '53; Engineering 176:139-41 Jl 31 '53; Elec J 151:257-9 Jl 24 '53; Elec R (Lond) 153:185-6 Jl 24 '53

Diesel-electric locomotives for Ceylon. il Engineer 194:721-2 N 28 '52; Engineering 174: 696, 700-1 N 28 '52; Elec J 149:1665-6 N 28 '52; Elec R (Lond) 151:1159-61 N 28 '52

Diesel-electrics; how to keep 'em rolling (cont). H. R. Hill and others. il diags Ry Mech & Elec Eng 126:89-94 Ag; 90-4 O; 84-9 D '52; [cont as] Ry Loco & Cars 127:80-7 Ja; 98-104 Mr; 101-6 Ap; 80-4 My; 74-7 Jl; 105-11 S; 82-7 O '53

Diesel engines for use in Diesel-electric locomotives; tabulations. Automotive Ind 108:273 Mr 15 '53

Diesel locomotives in Thailand and Pakistan. K. Askry. il Diesel Power 31:44-5 Mr '53

Diesel power for Victorian railways. il Ry Age 134:75 Mr 23 '53

Diesel water tanks; report of Master boiler makers' association. il diags Ry Mech & Elec Eng 126:63-5 N '52

Diesels carried big 1952 loads; tabulation. Ry Age 134:17 Mr 23 '53

Diesels pay off for Canada rails. Diesel Power 31:82-3 Ag '53

Diesels serve Rhodesian railways. il Diesel Power 31:31 My '53

Diesels were big fuel savers in '52. Ry Age 134:17 Ap 20 '53

Dynamic braking on Diesel-electric locomotives. A. V. Johansson and H. R. Stiger. il diags Elec Eng 72:300-5 Ap '53; Abstract. Diesel Power 31:77 F '53

Electric and Diesel-electric locomotives at Chuqui have unusual features. H. J. Tyler. il Eng & Min J 154:116-17 My '53

Electric Diesel-electrics in open-pit mines. H. J. Tyler. il Ry Age 135:19 O 5 '53

Engineering highlights of 1952; rail transportation. C. A. Scarlott. Westinghouse Eng 13:38-9 Ja '53

Fairbanks-Morse's Train master. il Diesel Power 30:58-9+ D '52

1,500-h.p. Diesel-electric locomotives for the Queensland railways. il Engineering 176:172-3 Ag 7 '53

Flashover torque of a d-c generator; abstract. O. C. Coho. Elec Eng 72:638 Jl '53

Flexi-coil truck; Diesel-electric locomotive; Electro-motive division of General Motors. il Diesel Power 30:57 O '52

Forty years of Sulzer Diesel rail traction. il Engineering 174:830-1, pl 64-5 D 26 '52

G.E. rounds out industrial switcher line. il Ry Age 135:69 Ag 10 '53

How Diesels affect railroad storekeeping. J. F. Duffy. il Diesel Power 31:59-61 S '53

Increased power for Baldwin-Lima-Hamilton locomotives. il Diesel Power 30:46-9 N '52

Industrial locomotives. il Blast F & Steel Pl 41:806-8 Jl '53

Locomotive for foreign service; Alco-G.E. il diag Ry Age News ed 134:12-13 Je 22 '53

More Diesels for the JCL. il Diesel Power 31:62-4 Ag '53

Motive power for railways. C. M. Cock. Engineering 174:422, 453-4 S 26-O 3 '52; Same cond. Engineer 194:428-30 S 26 '52

Motive power orders in 1952. H. C. Wilcox and F. C. Miles. il Ry Age 134:226-32 Ja 12 '53

Santa Fe's Diesel motive power. T. T. Blickle. il Ry Loco & Cars 127:84-9 S; 70-4 O '53

Slug; designed to boost tractive effort of Diesel-electric yard switchers. il Diesel Power 30:37 D '52

Standard Diesel-electric shunting locomotives. il Engineer 195:840 Je 12 '53; Engineering 175:756-7 Je 12 '53

Take over the rails. K. W. Bennett. Iron Age 171:94 F 5 '53

Train master; new locomotive packs 2,400 horsepower. il diags Ry Age 133:41-4 N 24 '52; Same cond. Ry Mech & Elec Eng Age 135:90-1 S 21 '53

Train masters get workout on eastern demonstration tour; illustrations with text. Ry 126:59-62 D '52

Transport commission's results; annual report. Elec R (Lond) 152:1459-60 Je 26 '53

2400-hp Diesel locomotive announced by Fairbanks, Morse & co. il Mech Eng 75:30-1 Ja '53

Utilities save with Diesel-electric switching. J. A. Ferriss. il Power Eng 56:70 D '52

Variable-gauge Diesel-electric locomotives. il Engineering 176:233 Ag 21 '53

What Diesels mean to railroads. C. Kerr, jr. il Ry Age 134:69-71 Ap 6 '53

Cleaning

Cleaning Diesel-electric locomotives. W. E. Lasky. il Diesel Power 30:40-5 D '52

Diesel locomotive cleaning arrangement. il Ry Loco & Cars 127:75 Mr '53

Dirt causes failures. J. F. Sheneman. il Diesel Power 31:62-4 Mr '53

Control

Diesel-electrics; how to keep 'em rolling; Diesel engine governor. B. L. Judy and others. il diags Ry Loco & Cars 127:98-104 Mr '53

Diesel electrics; how to keep 'em rolling; locomotive excitation system. B. L. Judy and A. V. Johansson. diags Ry Loco & Cars 127:80-4 My; 74-7 Jl '53

Diesel-electrics; how to keep 'em rolling; static control devices. B. L. Judy and M. W. Bellis. il diags Ry Mech & Elec Eng 126:84-9 D '52

Cost of operation

Spokane International nears goal; 23.4 per cent return on Diesels. J. B. Williams. il Ry Age 133:56-7 N 17 '52

Failure

Report on explosion of air reservoir on Diesel-electric. Ry Loco & Cars 127:96 My '53

Gearing

Induction hardening boron steel gears. G. Van Camp. il Materials & Methods 36:121-2 N '52

Lubrication

Should Diesel crankcase oils be mixed? W. K. Simpson. Ry Age 134:14-15 F 2 '53; Same. Ry Loco & Cars 127:124+ Mr '53

Maintenance and repair

Automatic welding of aluminum pistons. il Ry Loco & Cars 127:76-7 F '53

Baltimore & Ohio changes Glenwood shop into Diesel repair center; illustrations with text. plan Ry Loco & Cars 127:63-70 Ja; 87-90 Mr '53

Center bolster clamp. il diags Ry Mech & Elec Eng 126:65 D '52

Chesapeake & Ohio Diesel shop at Huntington. il plans diags Ry Loco & Cars 127:50-5 Ja '53

Class repairs for Diesel locomotives; abstracts. J. R. Early; W. A. Thomas. Ry Age News ed 134:9-10 My 11 '53

Diesel shop pattern is slowly taking shape. il plans Ry Loco & Cars 127:53-8 O '53

LOCOMOTIVES, Diesel-Electric—Maintenance and repair—*Continued*

Diesels take over another steam facility. il Ry Age 133:48-51 N 24 '52

Ducts for rewiring locomotives. il plan diags Ry Loco & Cars 127:91-4 Je '53

Duluth, South Shore & Atlantic adds Diesel shop to enginehouse. il plan Ry Age 134:40-2 Ja 19 '53

Effect of design on locomotive maintenance. Ry Loco & Cars 127:75-6 F '53

Erie's maintenance program. W. Rudolph. il Diesel Power 31:41-3 F '53

Hints on repairing locomotive air compressors. Ry Mech & Elec Eng 126:62-4 D '52

How apprentices should be trained; report of Locomotive maintenance officers' association. Ry Mech & Elec Eng 126:82-4 N '52

How the Baltimore & Ohio centralizes freight Diesel repairs. il Ry Age 133:38-41 D 29 '52

How to determine what Diesel facilities are needed. Ry Mech & Elec Eng 126:77-81 O '52

Katy converts two steam shops for Diesel repairs. il Ry Age 134:74-7 Je 1 '53

Maintenance hints from the B&O. E. H. Averill. il diag Diesel Power 31:64-6 O '53

Metal spraying on the Burlington. il Ry Loco & Cars 127:86-7 Ap '53

Miscellaneous Diesel shop ideas. il Ry Loco & Cars 127:69 Jl '53

M-K-T converts Waco back shop. il plan Ry Loco & Cars 127:59-65 O '53

More Diesel power begets biggest Diesel shop in Canada. il plan diag Ry Age 133:65-7 D 8 '52

Northern Pacific's South Tacoma electric shop. il Ry Loco & Cars 127:74-9 Ja '53

One building houses car and Diesel shop; Ann Arbor railroad. il plan diags Ry Mech & Elec Eng 126:66-9 O '52; Same cond. Ry Age 133:108-9 O 6 '52

Paste for string bands and calking; Silastic paste. Ry Loco & Cars 127:94 Je '53

Portable Diesel bed plate miller. il Ry Loco & Cars 127:86 Mr '53

Refresher course in Diesel trouble-shooting; Missouri Pacific sound-slide film. il Ry Age 133:62-3 N 17 '52

Santa Fe extends size and scope of its electrical shop. il Ry Loco & Cars 127:97-100 Ap '53

Steam tools can fix Diesels, too. il Ry Loco & Cars 127:77-9 Ap '53

Streamlining Diesel repair shops; Atlantic coastline railroad. il Diesel Power 30:50-1 O '52

Ten ways to train maintainers for Diesel locomotives. J. W. Teker and E. R. Ainsworth. il Ry Age 134:122-6 Mr 9 '53

Welding Diesel locomotive parts; report of Master boiler makers' association. il Ry Mech & Elec Eng 126:65-8 N '52

Winter operation

Weather is important in Diesel operations in Canada. il Ry Age 134:80-2 Mr 23 '53

LOCOMOTIVES, Electric. See Electric locomotives

LOCOMOTIVES, Gas turbine

Critical review of gas turbine progress, 1952. Engineer 195:124-6 Ja 23 '53

Free piston engine and gas turbine power French experimental locomotive; development of work undertaken by De Pescara. W. F. Bradley. diags Automotive Ind 107:74+ O 15 '52

Gas turbine locomotive. Franklin Inst J 255:163-4 F '53

Gas-turbine progress report; railroad. K. A. Browne and others. il plan diag A S M E Trans 75:161-8 F '53

Locomotive experiences. C. A. Cardew. il Engineer 195:392 Mr 13 '53

Motive power for railways. C. M. Cock. Engineering 174:422-4, 453-4 S 26-O 3 '52; Same cond. Engineer 194:429-30 S 26 '52

New contender; gas turbines. il Bsns W p41-4 Ja 10 '53

1952 a year of coal-burning turbine progress. il Ry Age 134:86-8 Ap 20 '53

Renault gas turbine locomotive. F. Picard. il diags Engineer 195:358-60 Mr 6 '53

LOCOMOTIVES, Gas turbine-electric

Coal-burning gas turbine. il diag Engineer 194:643-5 N 14 '52; Abstract. Metal Prog 63:170+ F '53

Gas turbine as railroad motive power. J. K. Hodnette. il Ry Age 133:54-5 N 24 '52

Gas turbine electric experience; Metrovick locomotive. E. H. Livesay. il Engineer 194:444-6, 477-9 O 3-10 '52; Discussion. 194:553-4, 585, 800-1 O 24-31, D 12 '52

Gas turbine-electric locomotives; progress report. il Diesel Power 31:54-9 Je '53

How gas turbines perform on the Union Pacific. il Ry Age 134:39-43 F 16 '53

Operating experiences with two gas turbine locomotives. A. W. J. Dymond. il Engineer 195:278-80, 327-8 F 20-27 '53; Engineering 175:247-8, 276-8 F 20-27 '53

Problem for refiners; residual fuel found highly corrosive in locomotive-type gas turbines. D. H. Stormont. Oil & Gas J 51:66 Mr 9 '53

Progress continues on coal-burning gas turbine plant. J. I. Yellott and P. R. Broadley. il diag Power Eng 57:87-9 Je '53

What the Union Pacific gas turbines have been doing. A. H. Morey and F. Fahland. il plan diag Ry Age 133:44-7 D 29 '52

Where will the gas turbine go? J. E. Wilson. il Ry Age 135:94-5+ S 21 '53

Testing

British road tests reveal efficiency of a gas-turbine locomotive. E. C. Poultney. Ry Age 134:39-41 F 2 '53

LOCOMOTIVES, Industrial

Diesel locomotive with oil-operated gearbox; Andrew Barclay, sons and co. il Engineering 174:250-1 Ag 22 '52

Diesel-mechanical locomotives for steelworks. il Engineering 174:606 N 7 '52

Diesel mechanical shunting locomotives. il Engineer 194:551 O 24 '52

G.E. rounds out industrial switcher line. il Ry Age 135:69 Ag 10 '53

Industrial locomotives. il Blast F & Steel Pl 41:806-8 Jl '53

Sentinel geared steam shunting locomotives. il plan diag Engineer 195:643-4 My 1 '53

Utilities save with Diesel-electric switching. J. A. Ferriss. il Power Eng 56:70 D '52

See also
Locomotives, Mine

LOCOMOTIVES, Mine

Air mules; compressed-air locomotives for mine haulage. il Comp Air Mag 57:351 D '52

Automatic wheel welder saves labor and material. il Coal Age 58:97 Jl '53

Diesel locomotives at Idarado. J. S. Wise. Min Cong J 39:25-6 Ja '53

Diesel locomotives underground in Wyoming; abstract. J. L. Fellows. Min Cong J 38:91 O '52

Electric Diesel-electrics in open-pit mines. H. J. Tyler. il Ry Age 135:19 O 5 '53

Granby adopts air trammers; cuts drifting labor costs 26 per cent. D. W. Pringle. il Eng & Min J 154:72-4 Ag '53

Hunslet 170 b.h.p. mines locomotive. il Engineer 195:710 My 15 '53; Engineering 175:701-2 My 29 '53

Symposium on underground Diesels. D. R. Ramsay and others. il plan Can Min J 73:61-8 N '52

See also
Electric locomotives, Mine

LODGE, Henry Cabot, 1902-

Eisenhower is still naming names. por(p28) Bsns W p30 D 6 '52

LOGARITHMS

Gear ratio logarithms; data sheet. G. M. Mencke. diags Machine Design 25:177-84 F; 173-7 Mr '53

LOGGING. See Lumbering

LOGGING roads. See Forest roads

LOGS of wells. See Petroleum—Well logging

LOMONOSSOFF, George Vladimir, 1876-1952

Sketch. por Engineer 194:763 D 5 '52

LONDON

See also
Population—London

Bridges

Structural engineering on Thameside. E. Granter. Engineering 174:582 O 31 '52

LONDON—*Continued*

Subway

Push button signalling control at Ealing Broadway. il Engineer 194:723 N 28 '52; Engineering 174:737 D 5 '52; Elec J 149:1664 N 28 '52; Elec R (Lond) 151:1211 D 5 '52

Reconditioning wheel sets for London transport railways. il(p272) Engineering 175:269 F 27 '53

Replacement of hydraulic lifts by London Transport. il Engineer 194:703 N 21 '52; Elec J 149:1580 N 21 '52

Tunnels

Structural engineering on Thameside. E. Granter. Engineering 174:582 O 31 '52

Water supply

Fiftieth anniversary of the Metropolitan water board. Engineer 195:497 Ap 3 '53

Institution of civil engineers; presidential address. H. F. Cronin. Engineering 174:605-6, 622-3, 675-6, 709 N 7-28 '52; Excerpts. Engineer 194:612-14 N 7 '52

London, England, water supply; abstract. H. F. Cronin. Water & Sewage Works 99:453-4 N '52

Metropolitan water board, 1903-53. W. H. Girling. Engineering 175:476 Ap 10 '53

Metropolitan water board's works in 1952. il Engineer 195:150-1 Ja 23 '53

102 inch water main for M.W.B. Engineer 196:59-60 Jl 10 '53

LONDON and Lancashire insurance company, limited

Reports 1952 another year of substantial gains. East Underw 54:22 Je 12 '53

LONDON brick company

Statement by the chairman. A. T. Worboys. Economist 167:569 My 23 '53

LONDON stock exchange

Cautious revel in the markets. Economist 167:175-6 Ap 18 '53

Cheers for the gods. Economist 166:894+ Mr 28 '53

Cold feet on options; dealings not to be resumed. Economist 167:462+ My 16 '53

Investment for all. Economist 166:375-8, 431-3, 499-501 F 7-21 '53

Shares for sale. Economist 166:431-3 F 14 '53

£27,000 million of investments. Economist 167:539 My 23 '53

Year of four per cent. Economist 166:751-2 Mr 14 '53

LONDON tin corporation, limited

Statement by the chairman. J. I. Spens. Economist 164:789-90 S 27 '52

LONDON university

Queen Mary college

Nuclear-particle laboratory at Queen Mary college. Engineering 176:91 Jl 17 '53

LONE star cement corporation

Seven companies likely to increase dividends in 1953; with comparative balance sheet items. Mag of Wall St 91:399 Ja 10 '53

LONE star gas company

Stock offer underwritten. Comm & Fin Chr 177:2131 My 18 '53

LONG BEACH, California

Happy Long Beach; it has $120-million from saved-up oil revenues. il Eng N 150:82-3 Ap 30 '53

Land subsidence repairs mount into millions. maps Eng N 150:42-3 F 5 '53

LONG ISLAND, New York

Industries

Contractors and regional association work together as cooperation develops new construction. A. Smith. il map Eng N 150:62-3+ My 14 '53

LONG ISLAND lighting company

Bonds offered. Comm & Fin Chr 176:1964 N 24 '52

Preferred stock sold. Comm & Fin Chr 177:2131 My 18 '53

LONG ISLAND railroad

Pennsylvania railroad wants Long Island restored as sound enterprise. Ry Age 133:13-14 D 8 '52

LONG range shipping bill. See Merchant marine—United States

LONGEVITY

Human life span may reach 125 years in two centuries. Chem & Eng N 31:2070 My 18 '53

Increase in life expectancy forecast. L. I. Dublin. Comm & Fin Chr 177:1131 Mr 12 '53

Life span keeps rising; death rate statistics. Nat Underw (Life ed) 57:9 F 20 '53

New life expectancy study under pensions; new table known as GA 1951 table. R. M. Peterson. East Underw 53:10 D 5 '52

New table indicates retirement reserve may be inadequate. Nat Underw (Life ed) 57:1+ Mr 13 '53; Same. East Underw 54:5 Mr 13 '53

Practice of public health, 1952. Pub Health Rep 68:197-8 F '53

See also
Old age

LONGSHOREMEN

AFL tells dockers to clean up or get out. Bsns W p 114-15 F 7 '53

Dock quickie tied up New York piers. il Bsns W p 155 D 6 '52

Man to clean up New York docks? Dave Beck. Bsns W p 134-7 F 14 '53

On New York's piers crime comes out in the open. il Bsns W p28-9 D 20 '52

Racket rule on New York's docks brings showdown after 50 years. il Bsns W p 164-8 Je 20 '53

Wage chronology; North Atlantic longshoring, 1934-51. Mo Labor R 75:410-12 O '52

Wage chronology; Pacific longshore industry, 1951. Mo Labor R 75:525-7 N '52

LONGSHOREMEN'S association, International. See International longshoremen's association

LONGWALL system. See Coal mines and mining—Longwall system

LOOM fixers

Loomfixer training; Henderson cotton mills. R. B. Pressley. il Textile World 103:100-1 Je '53

Ten ways a head loomfixer can help weaveroom supervisors. W. C. Westbrook. il Textile World 103:177+ S '53

LOOMS

Cost-cutting equipment offered for weaving. il Textile World 102:117-18+ N '52

Here's the new H-B loom at Borden mills. R. B. Pressley. il diag Textile World 103:98-101+ O '53

How Exposition cotton mills brought 222 looms up to date. E. A. Satterfield. il Textile World 103:118-19 F '53

How modern is your weave-room machinery? R. B. Pressley. il Textile World 103:107+ My '53

How to make a 20-loom dobby chain for $7.25. O. Staubli. il Mod Textiles Mag 33:54 N '52

How you can reduce seconds caused by barré cloth. R. B. Pressley. il Textile World 103:112-13+ Ja '53

Improved loom drive requires few adjustments. il Textile World 103:146 Ag '53

Italian shuttleless loom weaves 300 ppm. diags Textile World 103:186 S '53

Keep up loom assignments by keeping down end breakage; nomograph. J. E. Allen. Textile World 103:137+ O '53

Loom brake release gives constant warp tension. il Textile World 103:158 Ja '53

New loom for filling mixing offered by Crompton & Knowles. il Mod Textiles Mag 34:78 Ja '53

Positive-action leno motion uses no doups. H. M. Brown. il diags Textile World 103:169+ S '53

Shuttleless narrow-fabric loom weaves 2,000 ppm. R. C. Scott. il Textile World 103:110-11+ Ja '53

Two new looms are designed to mix filling. il Textile World 103:145-6 Ja '53

See also
Shuttles

Maintenance and repair

Are your weave-room methods as modern as these? il Textile World 102:117-19+ D '52

Five-minute check for W-3 automatic magazines. E. P. Schremp. il diags Textile World 102:124-5+ D '52

LOOMS—Maintenance and repair—*Continued*

Five steps to keep your looms in good condition. R. B. Pressley. il Textile World 102:132-3+ D '52

Here's the way to stop transfer filling breaks. R. B. Pressley. il Textile World 103:108-9+ Mr '53

How to make your loom leathers last longer. R. B. Pressley. diags Textile World 102:104-5+ D '52

How to run a big rayon-weaving job. il Textile World 102:112-13+ D '52

Planned loom fixing results in premium cloth at Reeves brothers. R. B. Pressley. il Textile World 103:101-3+ My '53

See also

Loom fixers

LORAN system

Continuous-indicating loran navigator. R. B. Williams, jr. il diags Electronics 26:166-9 Jl '53

Stagger-tuned loop antennas for wide-bank low-frequency reception. D. K. Cheng and R. A. Galbraith. il diags Inst Radio Eng Proc 41:1024-31 Ag '53

LORD Baltimore press

How a printer turns boxmaker. il Bsns W p 182+ Ap 25 '53

LORILLARD, P., company

Debentures and stock offered. Comm & Fin Chr 177:1681 Ap 20 '53

Ganger of Lorillard. Fortune 47:104-5 Ja '53

LOS ANGELES

Hard luck clover leaf for utilities; effect of Los Angeles freeway. J. H. Collins. Pub Util 51:30-6 Ja 1 '53

Los Angeles passes laws to organize slum-clearance. Eng N 149:55 D 11 '52

Harbor

Largest ocean terminal nears finish. Eng N 149:148 N 13 '52

Hotels, restaurants, etc.

Statler center; how to be efficient though big. il Bsns W p70-1+ Ap 18 '53

Industries

Los Angeles, queen city of the West. D. A. Lundy. il Chem & Eng N 31:320-4 Ja 26 '53

Railroads

Short-haul passenger service, a problem; Pacific Electric. O. A. Smith. il map Ry Age 133:43-7 O 27 '52

Rapid transit

Commuters' hope. Bsns W p 120+ Mr 21 '53

Streets

Off-center laning adds more street capacity. J. Joseph. il plan Roads & Sts 96:68-9 Jl '53

Water supply

Reservoir treatment by improved methods. R. L. Derby and F. W. Townsend. il diags Water & Sewage Works 100:211-16 Je '53

LOSS executives association

Loss executives association highly constructive factor in insurance. E. N. Eager. East Underw 53:64 D 12 '52

LOSSEN rearrangement. See Molecular rearrangements

LOST customers. See Prospect lists—Lost customers; Sales letters—Lost customers

LOST wax process

Aircraft casting expands. A. C. Williams and J. H. Massa. Steel 131:120+ N 17 '52

Investment castings; they're getting bigger. J. R. Burns. il diags Product Eng 24:137-40 Ap '53

Limitations of investment cast tool alloys. D. Von Ludwig. il Tool Eng 30:51-5 Je '53

Lost wax; growing pains can be fun; Precision metalsmiths. R. M. Lorz. il Iron Age 171:43 Ap 30 '53

Mechanical properties of alloy steels in investment castings. S. C. Churchill. il diag Engineering 175:164-7 F 6 '53

Metal casting methods; die casting and investment casting. J. B. McIntyre. bibliog il Metallurgia 48:123-9 S '53

New precision investment foundry. T. Operhall. il Foundry 81:86-93+ Ja '53

Plastic patterns offer advantages in investment casting. R. S. Banister. il Foundry 81:120-3 S '53

LOUD speaking apparatus

Asco Audiomat. I. Greene. il diag Radio & Tv N 49:58-9 My '53

Coaxial speaker dividing networks. L. C. Goss. diags Radio & Tv N 50:36-7 Jl '53

Docking and navigating electronic system for tankers. il Marine Eng 58:106+ Ja '53

Equalizer-preamp. A. J. Rose. il diags Radio & Tv N 49:43-6+ Je '53

Fisher master audio control. J. R. Russell. il diag Radio & Tv N 49:62-3+ Je '53

Four problem preamps. G. L. Augspurger. il diags Radio & Tv N 48:60-2+ N '52

Frisco's radio-loudspeaker system allows faster car inspection. il Ry Age 134:47-8 F 23 '53

Hi-fi loudspeaker design. A. B. Cohen. il diags Radio & Tv N. 48:56-8+ D '52

Improved corner horn speaker system. G. L. Augspurger. il diags Radio & Tv N 49:48-9 F '53

Modernised public address system; installation at Glasgow central station. il Elec J 151:487 Ag 14 '53

New audio electronic system developed for tankers. Marine Eng 58:68 S '53

On the Atlantic Coast Line, lots of uses for talk-back loudspeakers. il plan Ry Age 133:41-3 O 20 '52

Portable public address system. L. E. Garner, jr. il diag Radio & Tv N 48:42-4 N '52

Preamp. bibliog il diags Radio & Tv N 48:50-2+ N '52

Reinforced plastics in a revolutionary loudspeaker. il Mod Plastics 30:96-7 D '52

Remote volume control. C. R. Ellis. diags Radio & Tv N 48:64-5 N '52

Sound-reinforcing system for theater-type studio. L. J. Kleinklaus. il diags Electronics 26:174-5 S '53

Talk-backs in freight transfer. il Ry Age 134:59-61 Ap 6 '53

Cabinets

Building the E-V Regency. H. Souther. il diags Radio & Tv N 50:50-1 Ag '53

Cabinetry. J. Markell. il diags Radio & Tv N 48:35-7+ N '52

Custom audio. H. Becker. il Radio & Tv N 48:46-7 N '52

EW speaker enclosure. J. Holzman. il diags Radio & Tv N 50:43+ Jl '53

Electro-Voice Aristocrat; folded corner horn enclosure. H. Souther. il diags Radio & Tv N 49:64-5 Je '53

Electro-Voice Baronet; construction details on folded horn cabinet. diags Radio & Tv N 49:57 My '53

Loudspeaker enclosures. W. A. Stocklin. diags Radio & Tv N 49:43-7+ My '53

R-J speaker enclosure; design details. Radio & Tv N 49:53 Ap '53

Rating

Loud-speakers for high-fidelity reproduction. diag Consumers Res Bul 31:19-22 Ap '53

Testing

Objective testing of pickups and loudspeakers; abstract. K. R. McLachlan and R. Yorke. diags Electronics 26:204-6+ S '53

LOUDNESS. See Hearing; Sound

LOUGHEED, W. F.

SLA convention speakers at the forum on Canadian resources. por Special Lib 44:153 Ap '53

LOUISIANA

See also

Gas, Natural—Louisiana
Petroleum—Louisiana
Petroleum industry and trade—Louisiana
Roads—Louisiana
Water, Underground—Louisiana

Industries and resources

Louisiana's industrial promotion program moves into high gear. Manuf Rec 122:30-1 J[illegible] '53

LOUISIANA power and light company

Preferred stock offered. Comm & Fin Chr 177:1839 Ap 27 '53

LOUISVILLE, Kentucky

Sewerage

City, agency fight on treatment finances. Eng N 149:55-6 D 18 '52

State halts city sewer work. Eng N 150:48 Mr 19 '53

LOUISVILLE and Nashville railroad

Five diversified stocks with strong investment appeal; with comparative balance sheet items. Mag of Wall St 92:396 Je 27 '53

Five undervalued sound investments; with comparative balance sheet items. Mag of Wall St 91:350 D 27 '52

LOUISVILLE gas and electric company

Louisville Gas & Electric; internal financing of expansion helps earnings outlook. E. Etherington. Barron's 33:17-18 Mr 9 '53

Seven companies likely to increase dividends in 1953; with comparative balance sheet items. Mag of Wall St 91:399 Ja 10 '53

Stock offering. Comm & Fin Chr 177:626 F 9 '53

LOURO inamui

Anthocyanidin of louro inamui. E. Cocker and W. Cocker. Chem Soc J p5035-6 D '52

LOVE, George Hutchinson

Businessmen in the news. por Fortune 47:56 F '53

LOVELL, Stanley Platt, 1890-

Man with a dress form. Fortune 46:232 O '52

LOW temperature. See Temperature, Low

LOW temperature laboratories. See Cryogenic laboratories

LOWENSTEIN, M., and sons, inc.

Likely to net $5 per share this year. Barron's 32:17 O 13 '52

LOWRANCE, Everett

Top banana. Fortune 47:166 My '53

LOWRY, Homer H. 1898-

Fossil fuels will be utilized mainly as chemical raw materials; Pittsburgh award to H. H. Lowry. por Chem & Eng N 30:5442 D 29 '52

LOYALTY tests

New government employee security program; statement by Scientists' committee on loyalty and security. Science 117:sup3 Je 5 '53

LUANDA, Angola

Water supply

New water supply system planned. For Comm W 48:6 O 20 '52

LUBRICATING grease institute, National. See National lubricating grease institute

LUBRICATING greases

Additives for greases. R. T. Macdonald and J. L. Dreher. Oil & Gas J 51:54-5 Ja 5 '53

Basic properties of lubricating greases. C. J. Boner. il Machine Design 25:129-35 My '53

Better lubrication boosts production; lithium base grease in hot strip mill. A. D. Binz. il Steel 132:88+ Ja 26 '53

Develop new grease for walking cams. D. R. Oberlink. il Min Cong J 39:51+ Ja '53

Effect of di-ester lubricants on aircraft rubber parts. R. M. Harper. Rubber Age 73:355-8 Je '53

Grease output forecast. Oil & Gas J 51:83 S 22 '52

In the grease. Bsns W p96-7 D 27 '52

Lithium greases. H. C. Meyer, jr. il Pet Eng 25:C 15-16+ My '53

National lubricating grease institute 20th annual meeting, Chicago. Chem & Eng N 30:4730+ N 10 '52

New high temp lubricants increase range of motors. Brick & Clay Rec 121:80+ O '52; Machine Design 24:224+ N '52; Power 96:132-3 D '52; Chem Eng 59:231-2 N '52

Performance of synthetic greases. E. R. Booser and others. Oil & Gas J 51:58+ Ja 5 '53

Silica aerogel-thickened greases. E. C. Milberger and L. J. Swatik. Oil & Gas J 51:55-6 Ja 5 '53

Simplifying grease lubrication for automotive equipment; abstract and discussion. L. W. McLennan and E. Amott. S A E J 60:110-12 O '52

Study of soap aerogels from lubricating greases. W. H. Peterson and A. Bondi. bibliog il J Phys Chem 57:30-5 Ja '53

Where to use synthetic greases. E. R. Booser and others. Chem Eng 60:307-8+ F '53

Manufacture

Brooks Oil expands plant capacity. Iron & Steel Eng 30:118 Je '53

Continuous method for manufacture of lithium grease. P. J. Baker and N. T. Joyner. diags Oil & Gas J 51:56+ Ja 5 '53

High-speed milling and grease-producing plant. il diag Engineering 176:253 Ag 21 '53

Modern grease plant develops, produces and packages high quality lubricants; B-A's new grease plant at Clarkson. il Can Chem Process 37:35-6+ Jl '53

Testing

Measurement of viscosity; expressing rheological properties of greases. Chem Age (Lond) 68:209-11 Ja 31 '53

Tests for ball and roller bearing greases. H. A. McConville. il Product Eng 24:160-3 Mr '53

LUBRICATING oil industry

Custom-built lubes and services termed compounders' key to profit; Independent oil compounders association 5th annual meeting, Chicago, Sept. 25-26. Nat Pet N 44:65-7 O 8; 50-1 O 22 '52

Label lubes properly so customer can decide which to buy. D. C. O'Hara. Nat Pet N 44:63 N 12 '52

Lost motor oil sales are serious but they can be greatly reduced. H. Ridder. Nat Pet N 44:40-3 D 24 '52

Lube picture dark. J. C. Casper. Oil & Gas J 51:84-5 Mr 16 '53

Advertising

Sohio ads stress oil change education. H. Ridder. il Nat Pet N 45:58-61 Ja 14 '53

Statistics

Motor oil sales ratios still going down. H. Ridder. map Nat Pet N 44:25-9 D 17 '52

U.S. lube capacity shows little change. Oil & Gas J 52:92-3 Je 1 '53

LUBRICATING oils

Aircraft turbine engine synthetic lubricants and their lubricating properties; abstract. R. L. Johnson and others. S A E J 61:26 Ag '53

Are motor oil additives useful? Nat Pet N 45:74-6 Ja 21 '53; Discussion. 45:39-40 F 4; 44 F 18 '53

Army, navy reported shying away from re-refined oil. Nat Pet N 45:91 F 4 '53

Boosters for better lubricants. D. K. Jackson. il Can Chem Process 37:56+ S '53

Case for synthetic lubricants in winter operation of automotive engines. J. A. Miller and H. F. Galindo. S A E J 61:33-5 Ap '53; Excerpts. Oil & Gas J 51:75-6 Mr 2 '53

Chemical addition agents for lubricating oils. W. D. Thomas. il Pet Refiner 32:103-6 Ja '53

Claims for moly lube oil additive lack proof; text of National better business bureau's bulletin. Nat Pet N 45:98-9 My 6 '53

Contribution to the theory of oil whip. H. Poritsky. bibliog diags A S M E Trans 75:1153-8; Discussion. 1158-61 Ag '53

Effect of alkyl substitution on antioxidant properties of phenols. J. I. Wasson and W. M. Smith. bibliog Ind & Eng Chem 45:197-200 Ja '53

Effects of solid inclusions in sleeve-bearing oil supply. H. G. Rylander. il diags Mech Eng 74:963-6 D '52; Excerpts. Machine Design 24:265-6+ N '52; Discussion. Mech Eng 75:416-18 My '53

Engine lubricating oils. J. G. Withers. bibliog il Automobile Eng 42:387-93 O '52

Ester-type, synthetic jet lube operates from -65° to 450° F. diag Chem & Eng N 31:1756 Ap 27 '53

Giant tube for oil. il Mod Packaging 27:124-5 S '53

Heavy duty lubricating oils; abstract. J. W. Vollentine. S A E J 61:112 F '53

How motor oil keeps engines young. H. Ridder. Nat Pet N 44:67-8 N 12 '52

Let service choose Diesel lubricants. C. G. A. Rosen. S A E J 60:38-43 D '52

LUBRICATING oils—*Continued*

Lubricants must survive rough treatment. M. S. Clark. il Steel 131:228+ O 13 '52

Lubricating large engines. B. Corrigan. il Diesel Power 30:50-4 D '52

Molecular structure and properties of lubricating oil components. J. G. Lillard, W. C. Jones, jr. and J. A. Anderson, jr. bibliog Ind & Eng Chem 44:2623-31 N '52

Motor oil. il Chem Eng 60:229 F '53

New oil will take hotter jets higher; Standard Oil's Esso aviation turbo oil 15. G. L. Christian. il diag Aviation W 58:72+ Ap 27 '53

New service classification adopted for oil designation. S A E J 61:96-7 Mr '53

New subzero tool oil developed. H. C. Plummer. il Pet Eng 25:C 18 Ja '53

New-type motor oil. G. Weber. il Oil & Gas J 51:74-5 N 10 '52

N&W demonstrates how hot boxes can be controlled. il Ry Age 134:103-8 Je 15 '53; Same. Ry Loco & Cars 127:45-52 Jl '53

Performance of turbo-engine synthetic oils. A. B. Crampton and others. S A E J 61:27-9 Ag '53; Abstract. Oil & Gas J 51:76-7 Mr 2 '53

Pointers on selling more motor oil. J. B. Lightburn. Nat Pet N 44:92 O 15 '52

Re-refiners ask lube quality tests. Nat Pet N 44:36 N 5 '52

Selecting the right plain bearing lubricant. B. M. Dunham. il Product Eng 24:134-5 Mr '53

Sensitivity of bearing materials to abrasive dirt in oil supply. A. E. Roach. il diags Product Eng 23:155-9 D '52

Service classifications for engine lubricants. Automotive Ind 107:69+ O 1 '52

Should Diesel crankcase oils be mixed? W. K. Simpson. Ry Age 134:14-15 F 2 '53; Same. Ry Loco & Cars 127:124+ Mr '53

Synthetic lubricants; engineering possibilities. W. A. Zisman. Oil & Gas J 51:74-5 Mr 2 '53

Synthetics for jet engines. A. L. Foster. Pet Eng 25:C3-4 F '53

Tailoring lubricating oils to fit service requirements. J. A. Miller and B. M. Berry. S A E J 61:74-7; Discussion. 77-8 Mr '53

Turbo-engine synthetic lubes. il diag Oil & Gas J 52:333 Je 22 '53

Viscosity of lubricating oil-Freon-22 mixtures. J. L. Little. diags Refrig Eng 60:1191-5 N '52; Discussion. 61:62+ Ja '53

See also
Oil reclamation

Analysis

Analysis of lubricating oils. E. E. Smith and others. bibliog diags Ohio State U [Columbus] Eng Exp Sta Bul 152:1-49 '53 (pa 52)

Analyzed oil samples from construction equipment cut maintenance costs. il Constr Methods 35:156-8+ Jl '53

Determination of iron in used lubricating oils; spectrochemical analysis by the buffered direct current arc. J. E. Barney, 2d and W. A. Kimball. bibliog il Anal Chem 24:1548-50 O '52

Marine turbine oil test kit. il Marine Eng 58:76 Ag '53

Spectrograph as a maintenance tool. il Diesel Power 31:42-8 My '53

Spectrographic determination of trace elements in lubricating oils. R. F. Meeker and R. C. Pomatti. bibliog Anal Chem 25:151-4 Ja '53

Spectrographic oil analysis for Diesel locomotive maintenance. Pet Processing 8:156 F '53

Spectroscopic inspection of lubricating oil; abstract. H. Sennstrom. S A E J 61:117-18 Mr '53

Color

Color of lubricating oils. D. R. Manning. Pet Eng 24:C70 O '52

Manufacture

Continuous contact filtration; Filtrol corp.; percolation filtration; Attapulgus clay co. flow diags Pet Refiner 31:234-5 S '52

Crude distillation for maximum lubes; Foster Wheeler corp. flow diag Pet Refiner 31:180-1 S '52

Crude evaluation, approved method; data on the solvent refining of both distillate and residual lubricating oils. J. B. Stripling. Pet Refiner 31:137-9 O '52

Duo-Sol; Milwhite co., inc. flow diag Pet Refiner 31:184-5 S '52

Evaluating viscosity index improvers. E. J Reeves. Pet Refiner 32:139-41 F '53

Furfural refining; Texaco development corp flow diag Pet Refiner 31:188-9 S '52

Lube-oil processing and instrumentation. E. W. Midlam and J. D. Dorsey. il diags Instruments 25:1568-70+ N '52

Mass transfer data for furfural extraction. L. Garwin and E. C. Barber. bibliog diags Pet Refiner 32:144-8 Ja '53

Modernized motor oil facilities; Whiting refinery. H. F. Nolting and R. B. Selund. flow diags il Pet Processing 8:76-80 Ja '53

Nitrobenzene extraction; Atlantic refining co. flow diag Pet Refiner 31:194-5 S '52

Percolation decolorization of a lubricating oil fraction by Fuller's earth. W. T. Granquist and H. J. Streich. bibliog Ind & Eng Chem 44:2898-903 D '52

Phenol extraction; M. W. Kellogg co. flow diag Pet Refiner 31:194-5 S '52

Propane deasphalting; M. W. Kellogg co. flow diag Pet Refiner 31:198-9 S '52

Propane deasphalting of residua. J. G. Ditman and F. T. Mertens. il diag Pet Processing 7:1628-32 N '52

Propane dewaxing; M. W. Kellogg co. flow diag Pet Refiner 31:198-9 S '52

Solvent dewaxing; Texaco development corp. flow diag Pet Refiner 31:202-3 S '52

TCP process offers these advantages. L. P. Evans and others. flow diag diags Pet Refiner 32:117-22 My '53; Same cond. Oil & Gas J 52:116-18+ Je 8 '53

Vacuum's new lube plant on last lap of construction. E. Symonds. flow diag il Oil & Gas J 51:259+ D 22 '52

What's happening in lubricating-oil manufacture? E. P. King. bibliog diags Oil & Gas J 51:122+ Mr 16 '53; Same. Pet Refiner 32:123-7 Mr '53

Phosphorus content

Phosphorus in the lubricants field. C. V. Smalheer and T. W. Mastin. bibliog and patent list il Pet Processing 7:1780-4 D '52

Specifications

Automotive, oil industry accord seen on API motor oil classification system. Nat Pet N 45:50 My 20 '53

Testing

Developments in the specification and testing of lubricants for hypoid axles with particular reference to a full-scale British test procedure. A. Towle. 14pls Inst Pet J 38:747-62 S '52

From test machine to gear-box; problems associated with the translation of laboratory test results into predictions of field-service performance of gear lubricants. J. R. Hughes. bibliog Inst Pet J 38:712-18 S '52

Low temperature sludging test; abstracts. J. G. McNab and others. Automotive Ind 108:85 F 15 '53; S A E J 61:88-9 Ag '53

Proposed method of test for pour stability characteristics of winter grade motor oils. Am Soc T M Proc 50:295-8 '50

Research instruments aid engine maintenance; based on papers by J. L. Broughten and others. il diags S A E J 61:44-52 Jl '53

Results of tests on proposed method for determining pour stability characteristics of winter grade motor oils. Am Soc T M Proc 50:264-70 '50

Road and laboratory wear tests of gear oils. H. L. Bingham and J. G. Withers. diag Inst Pet J 38:718-28 S '52

Testing refrigeration oils. H. Steinle. bibliog il diags Refrig Eng 61:1065-71+ O '53

Transportation

Clippers; Union's answer to lube delivery woes. F. Breese. il Nat Pet N 45:67-8+ Ap 15 '53

LUBRICATION and lubricants

API lube men hear oil-change rules; industry pushes service designations. H. Ridder. Nat Pet N 44:42-4 N 19 '52

LUBRICATION and lubricants—*Continued*

Application of lubricants to antifriction bearings. L. Ballard. Mach 59:196-8 Ja '53

Automatic chassis lubrication for trailers. Automobile Eng 43:245 Je '53

Ball bearing lubrication; reference sheet. diags Tool Eng 30:75-8 My '53

Bearings, lubricants, and lubrication; digest of 1951 literature. Mech Eng 74:885-91 bibliog(137 titles, p889-91) N '52

Corrosion factors in design and lubrication. F. L. LaQue. il diags Product Eng 23:142-7 O '52

Effect of lubricant on gear performance. V. N. Borsoff and S. S. Sorem. bibliog il diag Iron & Steel Eng 30:83-8 F '53; Same cond. Machine Design 25:304+ Je '53

Engineering possibilities of synthetic lubricants. W. A. Zisman. Machine Design 25:174-6+ Ja '53; Abstract. S A E J 61:41-2 F '53

Experiments with water-lubricated tapered-land thrust bearings. M. Levinsohn and N. E. Reynolds. il diags A S M E Trans 75:1137-45 Ag '53

Foolproof lubrication system; Temco aircraft corp. il Mill & Factory 51:102-4 O '52

Fool-proof machinery lubrication; North American aviation, inc. J. Joseph. il Mill & Factory 53:118-19 S '53

Forum on technical progress; lubrication. il Steel 132:442-4+ Ja 5 '53

Gear lubrication symposium. bibliog 27pls diags Inst Pet J 38:606-68, 699-782 Ag-S '52; Discussion. 38:668-98, 782-804 Ag-S '52

Handle, check and store your power plant lubricants properly. C. W. Bell. il diags Power Eng 57:105-6 Ap '53

Here are storage and handling pointers on lubes. il diags Power 97:89-91 My '53

How to use molybdenum disulphide as a lubricant. L. M. Davison. il Am Mach 96:106-8 D 22 '52

Ideal lubrication program for a small plant. il Factory Management 111:130-1 Ap '53

Industrial lubricants, today. Power 97:76-7+ F '53

Lubricating flexible couplings. A. F. Brewer. il diags Diesel Power 31:56-61 Ag '53

Lubrication. Nat Safety N 67:159 Mr '53

Lubrication; continuous forging under high heat, pressure, a problem. Iron Age 170:178 N 13 '52

Lubrication economy. W. F. Schaphorst. Pulp & Pa of Can 54:116 Mr '53

Lubrication in metal working. A. L. H. Perry. Metallurgia 48:3-10 Jl '53

Lubrication of gyroscopes. J. E. Brophy and J. B. Romans. il A S M E Trans 75:1147-52 Ag '53

Molybdenum disulfide as a lubricant. il Diesel Power 31:90-3 Ap '53

More new oils for the tough spots. Mod Ind 25:105-6 Ap '53

New automatic lubricating system Stacey-Klonne dry seal gas holders. A. E. Harvey. Am Gas Assn Proc 1952:613-14

Pinic acid diesters; preparation, properties, and lubricant applications. C. M. Murphy, J. G. O'Rear and W. A. Zisman. bibliog Ind & Eng Chem 45:119-25 Ja '53

Plan your power plant lubrication with a practical approach. C. W. Bell. il Power Eng 56:85-7+ D '52

Polyalkylene glycols as lubricants and hydraulic lift fluids in tow motors and lift trucks. T. W. Rodes. Ind & Eng Chem 44:sup 137A-8A+ O '52

Properties and uses of pure molybdenum disulphide as a lubricant; abstracts. A. Sonntag. Machine Design 25:284+ Jl '53; Tool Eng 31:135-6 S '53

Selecting and applying lubricant to plain bearings. L. Ballard. il diags Mach 59:184-7 N '52

Selection of lubricants for industrial applications; abstract and discussion. H. E. Priston. Chem & Ind p57-8 Ja 17 '53

Silicones help to assure accurate power control. L. G. Friedle. il Power Eng 57:90-2 My '53

Some considerations in bearing operation. R. J. S. Pigott. Machine Design 24:296+ D '52

Synthetic lubricants from ethylene. J. H. Boyd. Pet Eng 25:C62 Ap '53

Today's lubricants. C. L. Pope. il diag Factory Management 111:113-25 Jl '53

Use of synthetic lubricants. Pet Eng 25:C62-3 Ap '53

Wear phenomena; effects of lubrication and the nature of the superficial layer. F. T. Barwell. bibliog Automobile Eng 43:77-80 F '53; Abstract. Metal Prog 63:198+ Ja '53

What's ahead the next ten years in materials and components; lubrication. Am Mach 96:A20-1 Mid-N '52

See also

Bearings
Friction
Graphite
Lubricating greases
Lubricating oils
Lubricators
Oil reclamation
Oil seals

also subdivision Lubrication under special subjects, e.g.

Airplane engines
Automobile engines
Automobiles
Electric motors
Knitting machines
Machine tools
Rolling mills
Steam turbines, Marine
Textile machinery

History

Lubrication, an old problem. Mech Eng 75:361-2 My '53

Testing

Gear lubrication symposium; testing of gear lubricants. bibliog 16pls diags Inst Pet J 38:699-782; Discussion. 782-804 S '52

Jobber tests customer lubes. il Nat Pet N 44:59-61 O 29 '52

Mechanical testing of gear lubricants. J. R. Hughes and R. Tourret. il diags Engineering 175:200-3, 257-9 F 13, 27 '53

Radioactive gears speed lube studies. V. N. Borsoff and S. S. Sorem. il diag Power 97:96-7+ Mr '53; Abstract. Iron Age 170:136 S 25 '52

LUBRICATION and lubricants (cutting and grinding)

Cadillac teams CO_2 with silicon carbides to grind carbide tools better. T. N. Chambers and J. Kwolek. il Am Mach 97:172-5 F 16 '53

CO_2 cools carbide grinders. A. B. Albrecht. il Am Mach 96:97 D 8 '52

CO_2 cuts milling costs. Steel 132:125 My 25 '53

Carbon dioxide permits improved machining time; A. V. Roe Canada, limited. E. W. Bartle. il Mach 59:157-8 Ap '53

Compounds extend tap life. Steel 132:84 Ja 12 '53

Cutting fluids; their role in machining. S. J. Beaubian and A. G. Cattaneo. il diags Steel 132:106-9 Ap 13 '53

Cutting-oil dermatitis. G. E. Morris and C. C. Maloof. il Ind Med 21:573-4 D '52

Gases are good cutting coolants. D. G. Pahlitzsch. diag Am Mach 97:196-7 F 16 '53

Here's a summary of make and user opinions; cutting oils. E. J. Tangerman. Am Mach 97:160-3 Ap 13 '53

How to handle chips and trimmings; oil extraction and purification. il diags Am Mach 97:168-72 My 11 '53

How water soluble oils affect carbide milling cutter life. J. R. Roubik. il Iron Age 170:112-15 O 23 '52

Is coolant for carbides really necessary? L. J. St Clair. Am Mach 97:129 Jl 20 '53

Mist cooling. B. C. Brosheer. il diags Am Mach 97:137-52 S 14 '53

Oils decide which chip system to use. J. D. Romer. il diags Am Mach 97:102-3 Ag 17 '53

Piping coolant to grinders. il diags Heating-Piping 25:88-9 Je '53

Pump mounts standardized; three types are approved to govern machine tool lubricating and coolant pumps. Steel 131:294+ O 13 '52

Small plant reclaims cutting oil, saves itself $9000 a year; illustrations with text. Factory Management 110:102-3 N '52

Special handling of cutting fluids and machine lubricants; Continental motors corp. J. Geschelin. il Automotive Ind 109:32-3+ S 15 '53

What you should know about simple cutting fluids. R. G. Moyer. il Am Mach 97:154-7 Ap 13 '53

LUBRICATION and lubricants (cutting and grinding)—*Continued*

Why Boeing wets diamond wheels. K. Lowther and S. L. Hargrove. il Am Mach 97:164-5 Ap 13 '53

Why not make your own cutting oil? L. Salz. Am Mach 97:158-9 Ap 13 '53

Cleaning

Select coolant cleaning equipment to fit your job. L. L. Fowler. il Iron Age 171:133-6 My 14 '53

Testing

Lathe test for the evaluation of cutting fluids. J. D. Oathout and others. il diags A S M E Trans 75:1081-5; Discussion. 1085-6 Ag '53

Metal-cutting with wax lubricants. J. B. Carse and A. E. Budner. Tool Eng 30:65-72 Ap '53

LUBRICATION and lubricants (metal drawing)

Lubricants for drawing metals. A. A. Brown. Iron & Steel Eng 30:96-100 Je '53; Abstract. Materials & Methods 36:200+ N '52; Discussion. il Iron & Steel Eng 30:100-4 Je '53

New lubricant improves die life, and finish. W. E. Curtiss. il Iron Age 170:94-5 O 30 '52

LUBRICATION research

Contribution to the theory of oil whip. H. Poritsky. bibliog diags A S M E Trans 75:1153-8; Discussion. 1158-61 Ag '53

Solution of the Reynolds equation for slider-bearing lubrication. A. Charnes and others. bibliog diag A S M E Trans 74:867-73; 75: 269-71, 507-12, 1117-21, 1125-36 Jl '52, F, My, Ag '53; Discussion. 75:271-2, 512-13, 1121-3 F, My, Ag '53

See also

National lubricating grease institute

LUBRICATORS

Air-borne oil cuts bearing wear in spreader stokers. C. Filter. il diags Power 96:112-13 D '52

Automatic conveyor trolley wheel lubricator. il Factory Management 111:114 My '53

Automatic oil dispenser keeps center lubricated. N. Palmer. diag Am Mach 97:172 S 14 '53

Centralized lubrication; Exchange lemon products co. il Food Eng 24:76-7+ D '52

Dies fog-oiled from stripper tubes. A. E. Chambers. il diag Am Mach 97:186-7 O 12 '53

How's your mechanical lubricator? il Diesel Power 30:78-9+ O '52

Lubricating systems; sales squirt up. Steel 132:63 F 9 '53

Lubricator for chains. il diag Engineering 174: 518 O 17 '52

Piping changes improve lubrication. C. T. Baker. diags Heating-Piping 25:106-7 Je '53

Rail and flange lubrication. il Ry Age 135: 70 S 21 '53

LUCAS, Howard J. 1885-

Winner of the 1953 Scientific apparatus makers award in chemical education. por(cover) Chem & Eng 31:778 F 23 '53

LUCIFERIN

Beta-luciferin of cypridina. H. S. Mason. bibliog Am Chem Soc J 74:4727 S 20 '52

LUCITE

Effects of biaxial stretch-forming on tensile and crazing properties of polymethyl methacrylate sheets. B. M. Axilrod and others. bibliog il diag Mod Plastics 30:117-18+ D '52

LUCKEY, George P. 1891-

Businessmen in the news. por Fortune 47: 59 Ap '53

LUCOFLEX

Lucoflex solution to corrosion in chemical plants. il Can Chem Process 37:62+ F '53

LUFKIN, Wilfred W. 1903-

Businessmen in the news. por Fortune 46:52 D '52

LUGGAGE, Plastic

Jet-age luggage. E. F. Bushman. il Mod Plastics 30:82-5 Mr '53

LUKENS steel company

Lukens Steel's net may top $9 per share in fiscal '53. Barron's 33:27 Mr 16 '53

LUMBER

Transportation

Barges help solve Chesapeake's marine materials handling problems. il Paper Ind 34: 1240-1 Ja '53

Effect of water transportation on forest utilization in eastern Canada; abstract. R. D. Collier. Pulp & Pa of Can 54:88 F '53

Mechanized woods operations solve Brown co. transport problems. il Paper Ind 35: 217-18 My '53

Modern tugs and brave men operate Abitibi's 185-mile lifeline. il map Paper Ind 35: 315-16 Je '53

New flexible type deepsea bundle raft. Paper Tr J 135:9 N 21 '52; Pulp & Pa of Can 54: 138 Ap '53

Safety measures on logging craft. il Nat Safety N 68:42+ Ag '53

Water transportation. J. M. Cloutier. Pulp & Pa of Can 54:114, 118-19 F '53

LUMBER camps

Food supply

Feeding in logging camps, 1952; commentaries on Dr D. L. Gibson's report. C. H. Egerton and others. Pulp & Pa of Can 54:175-6+ Ap '53

Heating

Report on Jotul stove performance test. A. L. Vanslyke. il plans diag Pulp & Pa of Can 54:132-4+ Ag; 154+ S '53

LUMBER drying

Kiln drying of timber; problem of staining by chemical changes. Chem Age (Lond) 67: 870 D 27 '52

LUMBER handling

Hydraulic model study of Manicouagan River holding boom. G. R. Lord. il maps Pulp & Pa of Can 53:150+ O '52

Logging with tractors; equipment, logging arch and winches; abstract. H. F. Wahl. S A E J 60:112+ N '52

Lumber unstacker has high capacity. il Machine Design 25:326 Ap '53

Multiple log conveyor system in operation at H&W mobile plant. il Paper Ind 35:533-4 Ag '53

Packaged timber handling at Copper Queen branch, Phelps Dodge corp. J. H. Jett and W. P. Crawford. il diags Min Eng 5:270-3 Mr '53

Paul Bunyan has a rival; Berger-Rees air tongs. il diags Comp Air Mag 58:283 O '53

Preparation, handling, and transportation of pulpwood east of the Rockies. J. A. Holekamp. il Tappi 36:sup 139A-44A F '53

Pulpwood handling with rubber-mounted loading devices. T. N. Busch. Pulp & Pa of Can 54:166+ Ag '53

Pulpwood yardster. il Paper Tr J 135:22 N 21 '52

Tree-length logging of pulpwood. G. J. Carr. il Pulp & Pa of Can 53:136-8+ N '52

See also

Wood handling

LUMBER trade

Bradbury lumber co. Fortune 47:237 F '53

Lumber makers plan $1,100,000 research program to find new products, markets. S. E. Cohen. il Ind Marketing 38:168-72 S '53

See also

Lumber yards

Wood, Laminated

Securities

Stocks of timber. I. U. Cobleigh. Comm & Fin Chr 177:676 F 12 '53

Statistics

Lumber and manufactures, Nov.-Dec. 1951-Jan.-Nov. 1952. Survey of Cur Bsns 33: S31-2 Ja '53 [cont monthly]

Brazil

U.S. aid sought for development of Brazilian lumber concession. For Comm W 48:13 O 6 '52

British Guiana

Ambitious lumbering operations undertaken in British Guiana; British Guiana timbers, ltd. For Comm W 49:21 Ap 27 '53

LUMBER trade—*Continued*

Canada

Markets and marketing; key to better woodlot management. N. W. Adams. Pulp & Pa of Can 53:121-2; Discussion. 122 D '52
See also
Booth, John Rudolphus

Chile

Chilean exports of lumber increased. For Comm W 49:16 Mr 2 '53

Guatemala

Guatemala hopes to export more lumber; domestic sales decline. For Comm W 48:21+ D 1 '52

Honduras

Honduran lumber exports expand. For Comm W 48:20 N 24 '52

South Africa

South Africa offers favorable market for U.S. softwoods. For Comm W 49:13 Mr 23 '53

Tennessee

Tennessee story; forest products rank high in state's economy. Manuf Rec 121:97-9 N '52

United States

Forest-products industries of the United States. F. F. Wangaard. Mech Eng 75:9-15 Ja '53

LUMBER workers

Canadian bucksaw contest finals. R. W. Upton. il Pulp & Pa of Can 54:141-2+ Ap '53
Depot hospitals. J. L. Francoeur. Pulp & Pa of Can 54:144, 146, 151 Ja '53
Passing show; unionization of woods labour and relations with woods labour unions. M. MacLaggan. Pulp & Pa of Can 54:67-9 Ja '53
Study of woods labour turnover. M. S. M. Hamilton. Pulp & Pa of Can 54:156+; Discussion. W. C. Harrison. 160+ Ap '53

LUMBER yards

Builders' department highlights small town lumber yard. il plans Am Bld 74:112 S '52
How to stage a successful lumber yard promotion. il Am Bld 74:146-50 O '52

LUMBERING

Air power helps run logging donkeys. il Comp Air Mag 58:52 F '53
Better pulpwood costs for the small operator. R. H. Van Voorhis. Tappi 36:sup22A+ S '53
Demonstration of good cutting practices. E. Bonner. Pulp & Pa of Can 54:145 Jl '53
Good logging practices increase forest yields; abstract. J. A. Doyle. Pulp & Pa of Can 53:133+ D '52
Integrated logging; key to stand improvement. H. I. Baldwin. bibliog Pulp & Pa of Can (Convention no) 54:291+ [F] '53
Integration of pulpwood and lumber uses in Northeastern hardwoods; abstract. W. A. Hosmer. Pulp & Pa of Can 54:92+ F '53
Logging and utilization in spruce-fir in the East; abstract. R. S. Johnson. Pulp & Pa of Can 54:91 F '53
Logging and utilization in spruce-fir in the West; abstract. L. A. deGrace. Pulp & Pa of Can 53:133 D '52
Ontario-Minnesota begins logging of rugged Canadian wilderness. il Paper Ind 34:838-9 O '52
Report of cutting tool committee, Woodlands section C.P.P.A. Pulp & Pa of Can 53:156+ O '52
Some aspects of a modern pulpwood logging operation. J. H. Merrill. Pulp & Pa of Can 54:132+ Mr '53
Tree-length logging of pulpwood. G. J. Carr. il Pulp & Pa of Can 53:136-8+ N '52
Truck loggers association annual meeting, Vancouver, B.C. Jan. 14-16. Pulp & Pa of Can 54:193+ Ap '53
Yesterday and today in the Ontario bush. Pulp & Pa of Can 54:209-10 My '53

Accidents

Use of safety hats in logging operations. Pulp & Pa of Can 53:165 N '52
Water transportation. J. M. Cloutier. Pulp & Pa of Can 54:114, 118-19 F '53

Safety measures

Quebec pulp and paper safety association and Quebec lumbermen's accident prevention association joint annual meeting, Montreal, Sept. 12. Pulp & Pa of Can 53:194+ O '52
Safety clothing for woodsworkers. G. Claus. il Pulp & Pa of Can 54:138+; Discussion. 142+ S '53

Study and teaching

Developments in training aids for conventional tools. A. M. Stewart. Pulp & Pa of Can 53:160+ O '52
Post graduate course in logging at the University of New Brunswick. Pulp & Pa of Can 53:173-4+ O '52
Training aids for mechanical saws. L. Kerr. Pulp & Pa of Can 53:165-6 O '52

LUMINANCE. See Luminosity

LUMINESCENCE

Alpha-particle induced phosphorescence of silver-activated sodium chloride. C. E. Mandeville and H. O. Albrecht. bibliog Phys R 90:25-8 Ap 1 '53
Atomic mercury as a luminescent activator. J. S. Prener and others. J Chem Phys 21:759-60 Ap '53
Copper-activated zinc sulfide phosphors with new emission characteristics. H. C. Froelich. Opt Soc Am J 42:982 D '52
Effects of neutron bombardment on a zinc sulfide phosphor. A. W. Smith and J. Turkevich. bibliog J Chem Phys 21:367-8 F '53
Electroluminescent screens. diag Electronics 26:160+ Mr '53
Electron trapping states in phosphors. R. T. Ellickson. Opt Soc Am J 43:196-7 Mr '53
Electron traps in the thallium-activated potassium chloride phosphor. P. D. Johnson and F. E. Williams. bibliog diags J Chem Phys 21:125-30 Ja '53
Electronic transitions in the luminescence of zinc sulfide phosphors. R. H. Bube. bibliog diag Phys R 90:70-80 Ap 1 '53
Face in the dark; clock face. il Bsns W p 140 Je 13 '53
Fast neutron counting with hydrogenous liquid phosphors. G. R. Keepin and R. H. Lovberg. R Sci Instr 23:483-4 S '52
Field strength and temperature studies of electroluminescent powders in dielectric media. S. Roberts. Opt Soc Am J 42:850-4 N '52
Fluorescence, phosphorescence, and photostimulation of NaCl(AgCl) with high-energy irradiation. M. Furst and H. Kallmann. bibliog il diags Phys R 91:1356-67 S 15 '53
Induced conductivity in luminescent powders; ac impedance measurements. H. Kallman and others. bibliog Phys R 89:700-7 F 15 '53
Influence of electric fields on luminescence. F. Matossi and S. Nudelman. Phys R 89:660-1 F 1 '53
Intensification in zinc selenide phosphors. S. Larach. J Chem Phys 21:756 Ap '53
Interaction of manganese activator ions in zinc-orthosilicate phosphors. S. Larach and J. Turkevich. bibliog diag Phys R 89:1060-5 Mr 1 '53
Investigation of the thermoluminescence of fluorite colored by X-ray irradiation. J. J. Hill and J. Aron. bibliog J Chem Phys 21:223-8 F '53
Luminescence and photoconductivity in cadmium sulfide at the absorption edge. C. C. Klick. bibliog Phys R 89:274-7 Ja 1 '53
Luminescence and thermionic emission of barium oxide. V. L. Stout. bibliog diags Phys R 89:310-14 Ja 1 '53
Luminescence and trapping in phosphors containing gallium. R. H. Bube and S. Larach. bibliog J Chem Phys 21:5-11 Ja '53
Luminescence behavior in tritium oxide. W. M. Jones. J Chem Phys 20:1974 D '52
Luminescence in cell-free extracts of luminous bacteria and its activation by DPN. B. L. Strehler. bibliog Am Chem Soc J 75:1264 Mr 5 '53
Luminescence of divalent manganese in solids. C. C. Klick and J. H. Schulman. Opt Soc Am J 42:910-16 D '52
Luminescence of ice and tritiated ice. L. I. Grossweiner and M. S. Matheson. J Chem Phys 20:1654-5 O '52

LUMINESCENCE—*Continued*

Magnesium oxide phosphor activated by tetravalent manganese. J. S. Prener. bibliog J Chem Phys 21:160-1 Ja '53

Makes blacklight signs in porcelain enamel. il Cer Ind 59:64-5 D '52

Mechanism of conductivity in semiconducting phosphors. J. E. Rosenthal and A. Bramley. J Chem Phys 20:1496 S '52

Mechanism of phosphorescence in crystal phosphors. D. Curie. bibliog Phys R 90:154-5 Ap 1 '53

Multiple emission bands in zinc cadmium sulfide phosphors. E. B. Fehr and others. bibliog diag Opt Soc Am J 42:917-22 D '52

Nature of fluorescent centers and traps in zinc sulfide. H. A. Klasens. bibliog diags Electrochem Soc J 100:72-80 F '53

Optical measurements on electroluminescent zinc sulfide. J. F. Waymouth. Electrochem Soc J 100:81-4 F '53

Paramagnetic resonance in phosphors. W. D. Hershberger and H. N. Leifer. bibliog diag Phys R 88:714-20 N 15 '52

Paramagnetic resonance in phosphors at microwave frequencies. W. D. Hershberger and H. N. Leifer. Rs Mod Phys 25:291 Ja '53

Phosphorescence emission of benzophenone. J. Ferguson and H. J. Tinson. Chem Soc J p3083-5 Ag '52

Phosphorescence of thoria. C. E. Mandeville and H. O. Albrecht. il Phys R 90:992-3 Je 1 '53

Phoswich, a multiple phosphor. D. H. Wilkinson. diags R Sci Instr 23:414-17 Ag '52

Plastic scintillation phosphors. R. M. Kloepper and M. L. Wiedenbeck. R Sci Instr 23:446-7 Ag '52

Raman spectrum and cathodo-luminescence spectrum of aluminum phosphate. B. D. Saksena and L. M. Pant. bibliog il J Chem Phys 21:1414 Ag '53

Receiver of high effective absorption for penetrating radiation. R. Frerichs. J Ap Phys 23:697-8 Je '52

Saturation and voltage effects in cathodoluminescence. P. H. Dowling and J. R. Sewell. bibliog Electrochem Soc J 100:22-33 Ja '53

Scintillation response of organic phosphors. G. T. Wright. bibliog Phys R 91:1282-3 S 1 '53

Slow component in the decay of the scintillation phosphors. J. A. Jackson and F. B. Harrison. Phys R 89:322 Ja 1 '53

Some optical properties of potassium iodide-thallium phosphors. P. H. Yuster and C. J. Delbecq. bibliog diag J Chem Phys 21:892-8 My '53

Streaming potential measurements and the adhesion of phosphors on cathode ray screens. J. F. Hazel and G. L. Schnable. bibliog diags Electrochem Soc J 100:65-71 F '53

Tv has a chemical face. Chem W 71:36+ D 27 '52

Temperature-sensitive phosphor used to measure surface temperatures in aerodynamics. L. C. Bradley, 3d. il diags R Sci Instr 24:219-20 Mr '53

Theory of sensitized luminescence in solids. D. L. Dexter. bibliog J Chem Phys 21:836-50 My '53

Thermoluminescence and surface correlation of limestones. D. F. Saunders. bibliog diags Am Assn Pet Geologists Bul 37:114-24 Ja '53

Thermoluminescence as a research tool. F. Daniels and others. bibliog il Science 117:343-9 Ap 3 '53

Thermoluminescence of ice. E. C. Avery and L. I. Grossweiner. J Chem Phys 21:372-3 F '53

Thermoluminescence of quartz and fused quartz colored by X-ray irradiation. R. Yokota. Phys R 91:1013-14 Ag 15 '53

Uniform, nonhydrogenous screens of ZnS-type phosphors. D. O. Caldwell and J. R. Armstrong. il R Sci Instr 23:508 S '52

Use of thermoluminescence of limestones in sub-surface stratigraphy. J. M. Parks, jr. bibliog map diags Am Assn Pet Geologists Bul 37:125-42 Ja '53

LUMINESCENCE, Biological

Beta-luciferin of cypridina. H. S. Mason. bibliog Am Chem Soc J 74:4727 S 20 '52

LUMINOSITY

Correction of low intensity luminance functions for the Purkinje effect. C. S. Bridgman. bibliog Opt Soc Am J 42:832-6 N '52

Luminance thresholds for the resolution of visual detail during dark adaptation. J. L. Brown and others. Opt Soc Am J 43:197-202 Mr '53

Photopic luminosity curve for a group of fifteen Egyptian trichromats. I. G. H. Ishak. bibliog Opt Soc Am J 42:529-34 Ag '52

Proposed usage of the words luminance and helios. G. A. Fry. diags Illum Eng 48:406-8; Discussion. 408-10 Ag '53

Time-resolved spectroscopy of ultraspeed pellet luminosity. W. A. Allen and E. B. Mayfield. il J Ap Phys 24:131-3 F '53

LUMISTANOL

Infra-red spectra of natural products; the stereochemistry of lumistanol. A. R. H. Cole. Chem Soc J p4969-72 D '52

LUMISTEROL

Crystallographic examination of the structure of lumisterol. D. C. Hodgkin and D. Sayre. diags Chem Soc J p4561-6 D '52

LUNCHES, Employees'

Fine food at low price, and a profit; Moloney electric co. il Factory Management 111:135 Mr '53

Food service. il Nat Safety N 67:67-8 Mr '53

Food vending in the factory. il Mod Ind 25:53-5 My '53

Hot food in a cold emergency; Pennsylvania Power & Light feeds crew repairing storm damage. il Elec World News ed 139:16-17 F 2 '53; Edison Elec Inst Bul 21:80 Mr '53

Mobile lunch train for workers has electric cold and hot cars. il Refrig Eng 61:538 My '53

Vending fills the bill-of-fare. A. E. Yohalem. il Mill & Factory 51:96-7 O '52

LUNCHROOMS and cafeterias, Employees'

Cafeteria costs. Bsns W p 170 Je 20 '53

Flexible lunch room serves tricot knitting mill; Julius Kayser & co. T. B. Winston. il Textile World 103:135 Ag '53

Food service. il Nat Safety N 67:67-8 Mr '53

Solving a space problem in staff facilities; Crocker first national bank, San Francisco. E. Burke. il Burroughs Clearing House 37:36-7 My '53

Electric equipment

All-electric canteen; equipment of the General electric co. Stanmore laboratories. il Elec R (Lond) 151:957-8 O 31 '52

LUNGS

Molecular structure of the galactogen from beef lung. M. L. Wolfrom, G. Sutherland and M. Schlamowitz. bibliog Am Chem Soc J 74:4883-6 O 5 '52

Retention of air-borne particulates in the human lung. H. D. Landahl and others. diags A M A Archives Ind Hygiene & Occup Med 3:359-66; 6:508-11 Ap '51, D '52

Diseases

Cigarette smoke and the incidence of primary neoplasm of the lung in the albino mouse. J. M. Essenberg. il diag Science 116:561-2 N 21 '52

Did you give him cigarettes? smoking and lung cancer. Economist 165:883 D 27 '52

Occupational factors in lung cancer. L. Breslow. bibliog Pub Health Rep 68:286-8 Mr '53

Dust diseases

Baritosis. E. P. Pendergrass and R. R. Greening. il A M A Archives Ind Hygiene & Occup Med 7:44-8 Ja '53

Detection of early lung functional changes in industrial exposure; abstract. H. L. Motley. Nat Safety N 67:147-8 Je '53

Etiology of corundum smelter's lung; bauxite worker's lung, Shaver's disease. H. Gärtner. A M A Archives Ind Hygiene & Occup Med 6:339-43 O '52

Pneumoconiosis due to diatomaceous earth; clinical and X-ray aspects. R. H. Smart and W. M. Anderson. bibliog il Ind Med 21:509-18 N '52; Abstract. Nat Safety N 67:64+ F '53

LUNGS—Dust diseases—*Continued*
Pneumosilicosis. S. Ambery. bibliog India Rubber World 128:344+ Je '53
Retention, distribution and elimination of inhaled particles; with particular reference to the evaluation of radiologic risk. M. Eisenbud. bibliog A M A Archives Ind Hygiene & Occup Med 6:214-25 S '52
Symposium, 7th, Saranac Lake, Sept. 22-26. Ind Med 21:546-8 N '52
See also
Silicosis

LUNGS, Artificial
Heart and lung machine. il Engineer 196:150-1 Jl 31 '53

LUPEOL
Chemistry of the triterpenes; the action of formic acid on lupeol. T. R. Ames and others. Chem Soc J p2868-72 Jl '52
Chemistry of the triterpenes; the conversion of lupeol into germanicol (*iso*lupeol); the structure of lupeol hydrochloride. T. G. Halsall, E. R. H. Jones and G. D. Meakins. Chem Soc J p2862-7 Jl '52

LUPINES
Preliminary study of the main polysaccharide of lupinus termis seeds. W. Tadros and M. Kamel. Chem Soc J p4532-3 N '52

LUPININE
Stereochemistry of alkaloids. R. C. Cookson. bibliog Chem & Ind p337-40 Ap 11 '53

LURIUM. See Aluminum alloys

LUSK, Robert E.
Portrait. Sales Management 69:29 N 1 '52

LUSTER
Improvement of luster of cotton; decrystallizing and mercerizing; influence on luster. L. Fourt and P. Streicher. bibliog Textile Res J 23:23-8 Ja '53

LUTETIUM

Isotopes

Decay scheme of natural lutetium 176. J. R. Arnold and T. Sugihara. Phys R 90:332 Ap 15 '53

LUTIDINE
Addition compounds of chromium(VI) oxide with heterocyclic nitrogen bases; reactions with the lutidines, vinylpyridines, 2,4,6-collidine and α-picoline. H. H. Sisler and others. bibliog Am Chem Soc J 75:446-8 Ja 20 '53
Some disubstituted pyridines related to 2,6-lutidine. R. A. Barnes and H. M. Fales. Am Chem Soc J 75:3830-1 Ag 5 '53

Analysis

Determination of pyridine and pyridine-base compounds in river water and industrial wastes. R. C. Kroner, M. B. Ettinger and W. A. Moore. bibliog Anal Chem 24:1877-81 D '52

LYCOMARASMINE
Biological activity of mixtures of lycomarasmin and glutamic acid, glutamine glutathione, or cysteine. A. E. Dimond and P. E. Waggoner. bibliog Science 117:42-3 Ja 9 '53

LYLE, Charles G.
Second ADR award presented to Lyle, Iannarone and Thomas. por Am Dyestuff Rep 41:865 D 22 '52

LYMAN family
Lyman trains up its own customers. il Bsns W p74-6+ Jl 11 '53

LYMAN gun sight corporation
Lyman trains up its own customers. il Bsns W p74-6+ Jl 11 '53

LYMPHOCYTES. See Blood

LYNCH, Thomas F.
Businessmen in the news. por Fortune 46:62 O '52

LYONS, William
Making the Jaguar Britain's hot export. por Bsns W p 140-2 N 1 '52

LYSERGIC acid
Stereochemistry of alkaloids. R. C. Cookson. bibliog Chem & Ind p337-40 Ap 11 '53

LYSINE
Biosynthetic pathways; the biosynthesis of lysine by torulopsis utilis. M. Strassman and S. Weinhouse. bibliog Am Chem Soc J 75:1680-4 Ap 5 '53
Conversion of L-lysine-6-C^{14} to pipecolic acid in the rat. M. Rothstein and L. L. Miller. Am Chem Soc J 75:4371-2 S 5 '53
New synthesis of DL-lysine-6-C^{14} and DL-α-aminoadipic acid-6-C^{14}. M. Rothstein and C. J. Claus. bibliog Am Chem Soc J 75:2981-2 Je 20 '53
Some peptides of lysine. S. G. Waley and J. Watson. Chem Soc J p475-9 F '53

LYSOZYME
Sequence of four amino acids at the amino end of the single polypeptide chain of lysozyme. W. A. Schroeder. bibliog Am Chem Soc J 74:5118-24 O 20 '52

LYXOSE
Synthesis of 4-deoxy-L-ribose from D-lyxose. P. W. Kent and P. F. V. Ward. Chem Soc J p416-18 F '53

M

M BAR oil company
Stock offered. Comm & Fin Chr 176:2532 D 29 '52

MCALPINE, Robert, and sons, ltd.
Canadian subsidiary formed by British firm of general contractors. Roads & Eng Constr 91:92 Mr '53

MACARONI
Mueller's macaroni products; nominated for packaging's Hall of fame. il Mod Packaging 26:90-6+, cover F '53

Manufacture

New continuous plant pays off in efficiency, quality, sanitation; A. Zerega's son's, inc. J. V. Ziemba. flow sheet (p 134-7) il Food Eng 24:78-81+ D '52

MACAROONS. See Cookies

MCBAIN, Hughston Maynard, 1902-
Businessmen in the news. por Fortune 47:50 My '53

MCCABE, Edward A.
Congress tackles Taft-Hartley. por Bsns W p 174-5 F 21 '53

MCCALL, Susan
Scholarship winner. J. L. Collings. por Ed & Pub 85:48 N 15 '52

MCCARRAN act. See Immigration law

MCCARTHY, Joseph Raymond, 1909-
Declares McCarthyism a press problem. P. Hoyt. Ed & Pub 86:74 F 21 '53
Greeks, the Senator, and the slump. Bsns W p30 Ap 11 '53
Portrait. Bsns W p29 N 8 '52

MCCLOY, John Jay, 1895-
Aldrich to London; McCloy to Chase National. por Bsns W p48 D 13 '52
Businessmen in the news. por Fortune 47:37 Ja '53

MCCOLLUM, Leonard Franklin, 1902-
Portrait. Bsns W p34 Ja 24 '53

MCCONNELL, Joseph Howard, 1906-
Businessmen in the news. por Fortune 47:63 Ap '53

MCCONNELL, Robert J.
Answer man. R. E. Ellsworth. pors Mod Textiles Mag 34:38+ Je '53

MCCONNELL, Samuel K. 1901-
Congress moves to give T-H a new look. por Bsns W p 138+ Ja 17 '53
Portrait. Bsns W p29 N 8 '52

MCCORMACK, Emmet J. 1880-
Businessmen in the news. por Fortune 47:60 Mr '53

MCCORMICK, Edward Theodore, 1911-
Little Mac's big job. pors Bsns W p 118+ Mr 28 '53

MCCOY, George Walter, 1876-1952
Sketch. C. Armstrong. Science 116:468 O 31 '52

MCCOY, Whitley P.
New boss conciliator. Bsns W p123+ Jl 11 '53

MCDONALD, David John, 1902-
Dave McDonald's flub. por Fortune 47:92+ Ap '53
Hints of a McDonald-Lewis tie. por Bsns W p 105-6 Jl 4 '53
Portrait. Bsns W p 157 N 15 '52
Why new USW chief must go after raises. por Bsns W p 121-3 Ja 10 '53

MCDONALD, Harry A. 1894-

Portrait. Dun's R 60:121 O '52

MACDONALD, Thomas Harris, 1881-

He revised our road maps. Comp Air Mag 58:228 Ag '53

MacDonald retires as Commissioner of public roads; F. V. du Pont takes over. pors Eng N 150:52+, cover Ap 2 '53

Mr Highway; retires from Bureau of public roads; career outlined. pors Roads & Sts 96:60-2+ My '53

MCDONNELL, Everett N. 1893-

E. N. McDonnell to receive F. Paul Anderson medal. por Heating-Piping 25:207 Ja '53; Dom Eng 181:84-5+ F '53

MCDONNELL aircraft corporation

Headed for new production peak. Barron's 32:21-2 N 10 '52

MCDONOUGH, Everett Goodrich, 1905-

Cold wave brings honors to E. G. McDonough. por(cover) Chem & Eng N 30:5254 D 15 '52

MCFADDEN, Haynes

Sketch. por Banking 45:82+ Ap '53

MCGEE, Dean A.

Directs Kerr-McGee activities. por Oil & Gas J 52:156 Je 22 '53

MCGINNIS, Patrick Benedict, 1904-

Businessmen in the news. por Fortune 47:55 Mr '53

McGinnis moves from Norfolk Southern to Central of Georgia. por Ry Age 134:51 Ja 26 '53

MCGRAW, Curtis Whittlesey, 1895-1953

Sketch. por Am Mach 97:173 S 28 '53

MCGRAW, Donald C.

Elected president of McGraw-Hill publishing co. por Ind Marketing 38:40+ O '53

MCGRAW electric company

Emphasis shifted from consumer goods to heavier equipment. W. I. Latourette. Barron's 33:11-12 Jl 13 '53

Five outstanding candidates for stock-splits; with comparative balance sheet items. Mag of Wall St 91:296 D 13 '52

MACGREGOR, John R. 1883-1952

Federation father, Mattiello lecturer, exemplifies industry's practical chemists. por Paint Oil & Chem R 115:32 N 6 '52

Sketch. por Paint Oil & Chem R 115:15 D 18 '52

MCGUIRE act. See Price fixing, Resale

MACH number. See Aerodynamics

MACH-ZEHNDER interferometer. See Interferometers

MACHINABILITY. See Metal cutting; Steel cutting

MACHINE design. See Machinery—Design

MACHINE parts

Fastening of inserts in molded and cast parts; drawings with text. Product Eng Hdbk p G 16-17 '53

Metal-carbon composites for mechanical and electrical parts. E. P. Eaton, jr. il Product Eng 23:173-5 N '52

Pace quickens in powdered metals. il Bsns W p43-4+ Mr 28 '53

Stainless steel parts reduce maintenance costs. M. Gallup. diag Iron Age 170:68 D 25 '52

Where does shell molding fit in your parts picture? H. S. Shroka. il Iron Age 171:154-7 Je 18 '53

See also

Bearings

Bolts and nuts

Repair parts

MACHINE pins. See Pins, Machinery

MACHINE shop management

Analysis of cost estimating principles and practices. L. E. Doyle. Tool Eng 28:37-40 My; 43-6 Je; 29:55-8 Jl; 61-4 Ag '52; Same cond. Product Eng Hdbk p A2-9 '53

Best ideas from popular departments of American machinist. il Am Mach 96:K 1-9 Mid-N '52

Direct data cuts estimating time 66 per cent. P. Anjanos. il diags Am Mach 97:172-7 Mr 16 '53

Gage and tool control for multi-plant operation. T. J. Bizzoco. Tool Eng 31:49-51 Ag '53

Handling times; reference book sheet. V. G. Hotchkiss. Am Mach 97:187, 189, 191 Je 8 '53

How good is your organization? G. S. Odiorne. Am Mach 97:148 F 16 '53

How to organize production processes; Olivetti applies technique to typewriter building in Italy. A. Sanvenero. il Am Mach 97:133-7 F 16 '53

How to pick the right machine tool. J. Meehan. diags Am Mach 97:176-8 Je 8 '53

I know every time anyone in my organization blows his nose! G. S. Odiorne. Am Mach 97:133 My 25 '53

Increasing production from tools, dies. E. E. Griffiths. il Tool Eng 30:37-45 Ap '53

Integrate materials handling with management. Am Mach 97:144-5 My 11 '53

Management clinic; problems confronting metalworking executives. Steel 131:73 O 20 '52 [cont weekly]

Manufacturing cost control. E. H. Anderson. Steel 131:53-5 O 27 '52

Maximum tool-and-gage control. H. M. Baldwin and A. A. Tumser. il Factory Management 110:110-12 O '52

Processes and costs. R. W. Bolz. il diags Machine Design 25:112-19 Jl '53

Should you buy tool-design work based on competitive bids? J. J. Kohl. Am Mach 97:134-7 Ap 27 '53

Too small for a training program? G. S. Odiorne. Am Mach 97:125 Jl 20 '53

Tooling and low cost production. E. A. Cyrol. Tool Eng 30:52-5 F '53

See also

Assembly methods

Inspection

Machine shop practice

Machine tools

Machinery, Replacement of

Tool engineering

Tool rooms

MACHINE shop practice

Abstracts of foreign technical literature (cont). M. Kronenberg. Tool Eng 29:137-9 D '52; 30:133-5 Ja; 132-5 F; 182-5 Mr; 168-70 Ap; 171-3 My; 148-50 Je; 31:135-7 Jl; 130-2 Ag; 143-4 S; 141-2 O '53

Annual handbook of product design for 1953; fabrication and production processes. il diags Product Eng Hdbk p D 1-25+ '53

Automation triples pail-line output; Rheem manufacturing co.; illustrations with text. E. F. Paquette. plan diags Am Mach 96:98-9 D 22 '52

Best ideas from popular departments of American machinist. il diags Am Mach 96:K9-49 Mid-N '52

Boeing produces small turbo-jet engines. il Mach 59:149-55 N '52

Building carriages for the atomic gun; Dravo corp. D. A. Booth. il Mach 59:157-62 Je '53

Cases in methods improvement; Micro division of Minneapolis-Honeywell regulator co. il Factory Management 111:118-21 F '53

Check these points when you plan automation. J. McDougall. Am Mach 97:210+ Ja 5 '53

Cold-heading and grinding valve push-rods for Buick engines. H. Chase. il Mach 59:186-9 Ag '53

Collimator and how to use it. R. F. Mitchell. il diags Am Mach 96:161-4 N 10 '52

Conveyorized lines speed delivery of 105-mm shell. G. E. Avery. il Am Mach 97:169-73 Ap 13 '53

Coordinate setting machine; optical tooling equipment. il diags Aero Digest 66:26-32 Ja '53

Crankshaft production; Ambrose Shardlow & co. ltd. il Automobile Eng 43:23-32 Ja '53

Dam tooling turns out tough steel rollers and tracks; tractor gates for the Garrison dam. G. W. Hilton and T. Shields. il diags Am Mach 96:130-2 N 24 '52

Decimal dimensioning saves time and reduces errors. G. E. Rowbotham. diags Tool Eng 30:63-4 Je '53

Drake's basic machine shop practice. H. P. Manly. 416p $3 Frederick J. Drake & co. 117 Green Bay road, Wilmette, Ill. '53

Ford makes headlight liners in progressive dies. il Am Mach 97:169 Mr 16 '53

Forming and assembling condenser coils and fins. R. Wagner. il diag Mach 59:192-4 Ag '53

Forum on economics of tooling. R. A. Peterson. S A E J 61:42-5 Ag '53

MACHINE shop practice—*Continued*

From open fields to tank production in 18 months; Chrysler Delaware tank plant. T. Mac New. il Automotive Ind 107:34-7+ D 15 '52

Gadgets; ingenious devices and ideas to help the tool engineer. il diags Published in monthly numbers of Tool engineer

Good setups speed steering gear production; Ross gear & tool co. H. Chase. il Iron Age 170:65-7 D 25 '52

High-frequency reciprocating drill. E. A. Neppiras. bibliog diags J Sci Instr 30:72-4 Mr '53

How jet-engine combustion chambers are fabricated; Ryan aeronautical co. L. A. Prchal. il Mach 59:189-91 D '52

How Oak Ridge machines beryllium. J. M. Case and E. R. Watkins. il diags Am Mach 96:93-7 D 22 '52

How Sylvania fashions fluorescent fixtures; presswork, painting, assembly; illustrations with text. E. J. Tangerman and C. Emerson. diags Am Mach 97:127-46 Ap 13 '53

How to lay out large work without fixtures. M. Donald. diags Am Mach 97:102-3 Mr 30 '53

Huge mechanical press speeds production of steel cartridge cases. H. G. Hron. il Mach 59:151-7 Ja '53

Ideas for shop and drafting-room. diags Mach 59:202 Ja '53

Improved plaster tooling; plaster of Paris castings impregnated with resin; Plaspreg. J. Starr. il Tool Eng 30:68-9 F '53

In shops around the country; illustrations with text (cont). Mach 59:188-9 N; 180-1 D '52; 182-3 Ja; 186-7 F; 188-9 Mr; 186-7 Ap; 198-9 My; 198-9 Je; 198-9 Ag; 60:186-7 S; 192-3 O '53

Instrument makers turn talents to helicopter transmissions. E. Altholz. il Mach 59:167-72 Mr '53

It's the little things that count in the production of small parts at Eastside tool & die works; illustrations with text. Mill & Factory 52:119 Ap '53

Latest improvements in press automation at Ford. M. J. Rowan. il diags Am Mach 96:109-18 D 8 '52

Low-costs methods speeds die construction; Allied products corp. W. C. Miller. il Am Mach 96:93-6 D 8 '52

Manufacturing 90-mm. shells; Bryant heater division; Affiliated gas equipment co. O. L. Ducharme. il diag Mach 59:143-51 Mr '53

Mass production; but with an eye on versatility; machining zinc die castings for Chevrolet carburetor; Rochester products division, General motors corp. H. Chase. il Steel 131:110-12 D 15 '52

Northrop plant producing range finders for tanks; illustrations with text. Mach 59:194-5 My '53

Odd measuring problems. F. R. Archibald. diags Am Mach 97:105-8 Ag 3 '53

Oil casing by the mile, automatically; illustrations with text. Am Mach 97:130-1 S 14 '53

Outstanding operations on Ford's new tractor engine. J. Geschelin. il Automotive Ind 108:48-51 F 1 '53

Packard produces lightweight Diesel engines. C. H. Wick. il Mach 59:155-61 D '52

Packard's precision job-lot tooling makes high-speed Diesels for the navy. B. C. Brosheer. il diags Am Mach 96:149-53 N 24 '52

Place of the tool and die shop in industry told on film. il Mach 60:201 S '53

Precision tooling is a must. A. Ashburn. il diags Am Mach 97:97-101 Ag 17 '53

Producing gage-blocks to millionths; Continental machines, inc. R. A. Gierlich. il diag Mach 59:147-56 F '53

Rings hung up for upside-down turning. il Am Mach 96:113 O 27 '52

Self-propelled fixtures expedite operations at Budd's tank plant. T. Mac New. il Automotive Ind 108:66-70 Ja 1 '53

Shop shots; illustrations with text (cont). Am Mach 96:166-7 N 10; 118-19 D 22 '52; 97:112-13 Mr 2; 104-5 Mr 30; 128-9 My 25; 162-3 Je 22; 138-9 Ag 3 '53

Simplified tooling doubles production. F. L. McKeen. il diags Tool Eng 30:37-41 Mr '53

Space machine tools with coordinated optics. W. M. Stocker, jr. il diags Am Mach 97:99-101 Mr 30 '53

Supercharger rotors machined with good setups; Pesco products division of the Borg-Warner corp. G. E. Campbell. il Iron Age 170:100-1 O 2 '52

Target fixtures precision-weld new gun pedestal. E. C. Pearson and F. George. il diag Am Mach 97:114-17 Ja 5 '53

Temporary tooling breaks production bottleneck; aircraft engine production; Ford motor co. E. C. Beaudet. il Iron Age 171:138-42 Mr 26 '53

Timken-Detroit's new axle and gear plant. J. Geschelin. il Automotive Ind 107:50-3+ N 15 '52

Tool talk; illustrations with text. Am Mach 96:136-7 N 24 '52

Tooling for toys; A. C. Gilbert co. G. F. Schumacher. il diag Tool Eng 29:63-9 D '52

Tools and talent make microwave tubes; illustrations with text. W. M. Stocker, jr. Am Mach 97:134-5 Je 22 '53

Tungsten-carbide shell cores. E. Altholz. il Mach 59:159-64 Ap '53

When you drill an oil well every bit counts; illustrations with text. E. J. Tangerman. Am Mach 97:137-46 My 25 '53

See also

Airplane engines—Manufacture
Automobile engines—Manufacture
Broaching
Centering (machine work)
Chucks
Dies
Diesel engines—Manufacture
Drafting room practice
Drilling and boring (metal working, etc.)
Forging
Gages
Gear cutting
Gearing—Manufacture
Grinding
Hard facing
Indexing (machine work)
Inspection
Lapping
Lathes
Machine shop management
Machine tools
Machinery
Metal cutting
Metal finishing
Milling
Railroads—Shops
Riveting
Rolling (metal work)
Rolling mills
Sheet metal work
Tapping
Tolerance
Welding

Bibliography

American Machinist special reports showing sequence and dates. Am Mach 96:E232+ Mid-N '52

MACHINE shops

Short-order shops save time in development projects; general engineering laboratory. S. A. Yingling. il plans Mach 60:191-3 S '53

See also

Airlines—Shops
Airplane factories
Automobile factories
Locomotive shops
Machine shop management
Machine shop practice
Machine tools
Motor bus lines—Shops
Railroads—Shops
Tool rooms

Accounting

How to control shop costs. A. E. Grover. Am Mach 97:147-62 Mr 16 '53

Air conditioning

Air conditioning gives you fast money return; Rotor tool co.; with cost data. H. P. Bailey. il diag Power 97:73-5 Je '53

Costs

Machinery replacement; how costs are determined. E. C. Varnum. Tool Eng 30:70-4 Je '53

Processes and costs. R. W. Bolz. il diags Machine Design 25:112-19 Jl '53

Employees

Employing physically handicapped workers pays off. W. H. Kelly. Am Mach 96:102-3 D 22 '52

How to welcome new employees; reference book sheet. J. B. Bennet. Am Mach 96:151, 153 O 27 '52

MACHINE shops—Employees—*Continued*

Keeping that well-trained assistant. E. W. Fair. Am Mach 97:136 S 14 '53

Lapointe cited as high standard in industrial labor peace. Am Mach 96:139 D 22 '52

Mobility of tool and die makers, 1940-1951; survey of the work experience, training, and personal characteristics of the workers in a critical occupation. S. Swerdloff and others. U S Bur Labor Statistics Bul 1120: 1-67; pa 35c Supt. of doc. '53; Abstract. Mo Labor R 75:605-10 D '52

See also
Toolmakers

Equipment

From open fields to tank production in 18 months; Chrysler Delaware tank plant. T. Mac New. il Automotive Ind 107:34-7+ D 15 '52

1953 American Machinist production preview. il Am Mach 97:145-280 Ja 19 '53

What's ahead the next ten years in metal-working production. Am Mach 96:secA-J Mid-N '52

See also
Holding devices
Machine tools
Surface plates

Heating and ventilation

Heating installation cost cut in half; Vahl engineering co. R. B. Richards. il plan Steel 131:94-5 O 20 '52

Lighting

Dual light source in machine shop. G. P. Leyes. il Illum Eng 48:23-4 Ja '53

Good machine shop lighting. Q. P. Dobras. il diag Safety Maint & Prod 106:14-16+ S '53

High-bay industrial lighting; data sheet. F. E. Blair. il plan Illum Eng 48:411-12 Ag '53

Lighting a machine shop; data sheet. P. S. Schmidt and L. E. Mueller. il plan Illum Eng 48:383-4 Jl '53

Records

Catalog your industrial supplies. H. D. Rhodenbaugh. Am Mach 97:128-9 Je 22 '53

Increasing production from tools, dies. E. E. Griffiths. il Tool Eng 30:37-45 Ap '53

Maximum tool-and-gage control. H. M. Baldwin and A. A. Tumser. il Factory Management 110:110-12 O '52

Simple tool-crib control system speeds service. J. Lawler, jr. il Iron Age 171:112-14 Ap 30 '53

Safety measures

How Oak Ridge machines beryllium. J. M. Case and E. R. Watkins. il Am Mach 96: 93-7 D 22 '52

Keeping weak links out of safety; Chain belt co. A. W. Bathke. il Am Mach 96:134-5 D 8 '52

Safety precautions. Am Mach 97:184+ Mr 30 '53

See also
Presses—Safety devices

MACHINE tool distributors' association, American. See American machine tool distributors' association

MACHINE tool industry

Back in the news; Telenar press. Bsns W p46+ Je 20 '53

Britons look at U.S. machine tool industry. Steel 132:85 My 11 '53

Foreign machine tools; answer to a present need, or threat to security. R. M. Kovel; T. Berna. Steel 131:92-4+ N 17 '52

Foreign tools look hot; promise stiffer competition for domestic makers. Bsns W p28-9 O 25 '52

Machine tool high spots. Published in weekly numbers of Iron age

Machine tool imports hit peak. Steel 131:71 O 20 '52

Machine tool industry report. S. E. Bergstrom. il Aero Digest 66:98+ F '53

Machine tools; heavy civilian buying cushions dip in defense volume. A. Glenn. Barron's 33:9+ My 25 '53

Machine tools hit the road. il Bsns W p 166 Ap 18 '53

Tools; builders seek end of cycles. R. M. Lorz. Iron Age 171:62 Je 11 '53

Vance committee advocates standby production lines for war material. Am Mach 97: 290-1 Ja 19 '53

Rental plan

Are civilian producers in or out on government machine-tool leasing? Am Mach 97: 171 S 28 '53

Fight looms over leasing US-owned machine tools for non-defense work. il Am Mach 97:196 Mr 16 '53

Securities

Have machine tools seen the peak? with data on machine tool companies. P. Dobbs. Mag of Wall St 91:301-3+ D 13 '52

Statistics

Dollar volume of U.S. machine tool exports by type of machine, imports by country of origin and by type; tabulations. Iron Age 171:462 Ja 1 '53

Index of machine tool new orders and shipments, 1946-1952; machine tool shipments by class of products; machine tool shipments by states; metalworking machinery (except machine tools); index of machine tool new orders, for domestic use; small cutting tools for machine tools and metalworking machinery; tabulations. Automotive Ind 108:330-1 Mr 15 '53

Machine-tool backlog melting; graph. Fortune 46:32 D '52

Machine tool industry employment still on upgrade, survey shows. il Am Mach 97:177 Ap 27 '53

Machine tool labor; tabulation. Iron Age 171:461 Ja 1 '53

Machine tool orders and shipments; tabulations. Iron Age 171:458-9 Ja 1 '53

Machine tool shipments, 1948-1952; tabulation. Automotive Ind 109:80 S 1 '53

Shipments; new orders, domestic and foreign; tabulations. Steel 132:178-9 Ja 5 '53

Surplus tools

Storage program by tool builders? E. C. Kreutzberg. il Steel 131:72 D 8 '52

Used machines

See Machine tools, Used

China

China gets into the act. R. Westgate. il Am Mach 97:169 S 14 '53

Germany

German machine tool industry looks to home market as inflow of export orders drops sharply. Am Mach 97:173 Jl 6 '53

Rising German challenge in the world's machine tool markets. B. Finney. Am Mach 96:98-101 D 8 '52

US army, Marshall plan responsible for rebirth of German machine tool building firm. il Am Mach 97:151 Ag 17 '53

Great Britain

American abroad looks at British machine tools. H. T. Johnson. Am Mach 96:176-7 N 24 '52

Cost of defence tools. Economist 167:765 Je 13 '53

Council of the machine tool trade association statement on the report of the British metalworking machine-tool productivity team. Engineering 176:10 Jl 3 '53

Engineering outlook; the machine-tool industry. Engineering 175:196-9 F 13 '53

Machine tool productivity report. Engineer 195:903-4 Je 26 '53

Machine tools over the hump. Economist 164: 771-2 S 27 '52

Hungary

Hungary boosts iron-curtain machine-tool production. il Am Mach 97;162-3 Ja 5 '53

Japan

Survey of Japan's machine tool industry. T. Mac New. il Automotive Ind 107:73 O 1 '52

MACHINE tool industry—*Continued*

Latin America

Machine tool market in Latin America. G. M. Galster. Automotive Ind 107:48-9+ N 15 '52

Rumania

Rumania develops machine-tool industry. J. Cardew. il Am Mach 97:174-5 Je 8 '53

Russia

Russia builds high-production machine tools; illustrations with text. Am Mach 97:104-6 Mr 2 '53

Russian machine tools. il Am Mach 96:131-3 D 8 '52

Russian tools; abstract. J. Mannin. Automotive Ind 109:63+ Ag 15 '53

MACHINE tools

Aircraft machine tools. A. Kastelowitz. Tool Eng 31:137-8 O '53

American abroad looks at British machine tools. H. T. Johnson. Am Mach 96:176-7 N 24 '52

American institute of electrical engineers 5th annual special conference on machine tools, Albany; abstracts of papers. Automotive Ind 107:174+ N 15 '52

Are machine tools too elaborate? Am Mach 97:132-6 Ag 3 '53

Central hydraulic supply applied to battery-type machine tools. il diags Steel 132:98+ Je 15 '53

Even unskilled operators set up their own machines; rubber stamps on setup sheet, pictures proper tool arrangement; sheet lists operations, proper feeds, speeds, etc.; Temco aircraft corp. P. F. Young. il diags Am Mach 97:109-13 Ja 5 '53

Ford amasses 5000 machine tools to build P & W aircraft engines. J. Geschelin. il Automotive Ind 107:64-7+ N 1 '52

Ford bet a billion on new tooling. il Am Mach 97:120-84 O 12 '53

Forum on technical progress; machining and tooling. il Steel 132:346-7+ Ja 5 '53

Hautau automatic nut-torquing machine provides high production rates. il Am Mach 97:186 S 28 '53

How to pick the right machine tool. J. Meehan. diags Am Mach 97:176-8 Je 8 '53

Improved Budd-Ranney bar machine has two independent spindles. il Am Mach 97:156 Ag 17 '53

Increasing production from tools, dies. E. E. Griffiths. il Tool Eng 30:37-45 Ap '53

Ingenious devices speed production; Sweden freezer manufacturing co.; illustrations with text. H. E. Jackson. Mill & Factory 53:120-1 Jl '53

Machine tools and tooling; panel discussion. S A E J 61:35-6 Ag '53

Machine tools in aviation. T. Berna. il Aero Digest 66:17-19 Ja '53

Made over machines, fixtures get production moving; production of army CD-80 tank transmissions at Buick motor division. D. F. Taylor. il Iron Age 170:101-4 O 23 '52

Manchester Repetition centring and spot facing machine. il Engineer 195:404 Mr 13 '53

Much special tooling needed for landing gear production. R. E. Reiter. il Mach 60:157-61 S '53

New Britain machine co. bar machine designed for simple setups. il Machine Design 25:162 Ag '53

New horizons for machine tools; teaching and research in the field of metal cutting. P. A. Smith. il Tech R 55:93-6+ D '52

New machine eliminates one operation. il Steel 131:86+ O 6 '52

New ways in machine tools. Economist 165:721 D 6 '52

1953 American Machinist production preview. il Am Mach 97:146-92 Ja 19 '53

Pipe-flange facing machine. il Engineering 174:173 Ag 8 '52

Production tomorrow. E. F. Gibian. S A E J 61:17-19 My '53

Productivity team report on machine tools. Engineer 195:185 Ja 30 '53

Refrigeration industry needs high speed production machinery. W. P. Hill. il Refrig Eng 61:641-3 Je '53

Review of trends disclosed at International machine tool exhibition. il Automobile Eng 42:395-404 O '52

Rindis universal machine tool performs 50 operations. il Am Mach 97:204 S 14 '53

Russia builds high-production machine tools; illustrations with text. Am Mach 97:104-6 Mr 2 '53

Semi-automatic machine for processing steel oil pans for large Diesel engines. il Mach 60:222 O '53

Simplified tooling doubles production. F. L. McKeen. il diags Tool Eng 30:37-41 Mr '53

6000 pieces per hour produced on double end machine. il Automotive Ind 109:82 O 1 '53

Small tools do big jobs at low cost. il Mill & Factory 52:97-100 Je '53

Special machine improves stainless roll finish. M. B. Hanks. il Steel 131:66-7+ D 22 '52

Special tools and fixtures cut machining time; Ryan aeronautical co. il Iron Age 171:137 My 14 '53

Talented tooling; illustrations with text. diags Am Mach 97:170-1 Je 8 '53

Titanium carbide alloys in tooling. W. L. Kennicott. il diags Tool Eng 30:61-4 Ap '53

Tool engineering kinks; drawings with text; reference book sheet. W. A. Waara. Am Mach 97:129 Mr 30 '53

Tools at work; illustrations with text. Tool Eng 30:56-7 Je; 31:48-9 Jl; 52-3 Ag; 64-6 S; 74-5 O '53

Turbo-jet engines require modern machine tools. E. W. Bartle. il diags Mach 59:154-65 Jl '53

What's ahead the next ten years in machining. Am Mach 96:E-E25 Mid-N '52

What's ahead the next ten years in tools and tooling. Am Mach 96:C-C15 Mid-N '52

See also

Airplane factories—Equipment
Broaching machines
Cutting tools
Drilling and boring machinery
Feed mechanism
Gear cutting machines
Grinding machines
Hobs
Lapping machines
Lathes
Machine shop practice
Machine tool industry
Metal cutting
Milling cutters
Milling machines
Planing machines
Pneumatic tools
Punches
Punching machinery
Reamers
Saws, Metal working
Screw machines
Shears (machines)
Slotting machines
Threading machines
Tool engineering
Tool steel

Control

Analysis of developments in automation. C. J. Jacoby, 3d. Mech Eng 74:810-11+ O '52

Automation of machine tools. J. Y. Kaplan. il diags Tool Eng 30:53-60 Ap; 50-6 My '53

Coordination of electrical, hydraulic and mechanical elements in machine tool design. K. O. Tech. il Machine Design 25:186-7+ Je '53

Fiber ducts save time in wiring machine panels. R. T. Johnstone. il Am Mach 96:105 D 8 '52

High-speed router is remote controlled. il Steel 131:126 D 15 '52

Machine tool control gear. J. O. Knowles. il Elec R (Lond) 151:795-7 O 10 '52

Optical control on a machine tool. il diags Engineer 195:97 Ja 16 '53; Engineering 175:22 Ja 2 '53

Reactor control provides constant cutting speed. Tool Eng 30:77 Ap '53

Design

Applied psychology and machine design. Engineering 174:265-6 Ag 29 '52

Changes in machine tool design to facilitate automation design. R. Juengel. Automotive Ind 108:90+ My 15 '53

Coordination of electrical, hydraulic and mechanical elements in machine tool design; abstracts. K. O. Tech. Automotive Ind 108:47-8 My 15 '53; Machine Design 25:186-7+ Je '53

Machine builder solves a problem; National Acme solved machining problems for valve bodies. il Steel 131:108+ N 10 '52

Pneumatic systems in machine design and control. H. C. Town. diags Mach 59:161-7 Ja '53

MACHINE tools—Design—*Continued*

Round bar slides for machines. W. A. S. Douglas. il diags Product Eng 23:162-6 D '52
Self propelled fixtures; transfer machines handle four-ton armor plate weldment; Massey-Harris co. J. S. Kis, jr. and R. M. Olsen. il Iron Age 170:108-10 O 2 '52
Work-handling devices improve quality, reduce machine-cycling time. E. C. Beaudet. il Iron Age 171:218-21 My 7 '53

Electric driving

Adjustable-speed d-c drives for deep-draw presses; abstract. C. E. Robinson and A. P. DiVincenzo. diag Elec Eng 72:688 Ag '53
Appraisal and application of electrical power drives for machine tools; abstract. F. H. Schroeder. Elec J 150:1389-91 Ap 24 '53
Contouring with heavy machine tools. W. B. Wigton; J. L. Dutcher. il diags Am Mach 96:114-19 O 27 '52
International machine tool exhibition, London, Sept. 17-Oct. 4. il Elec R (Lond) 151: 587-606 S 19 '52; Electrician 149:925-8 S 26 '52
Machine tool electrification forum, 17th; abstracts of papers. Automotive Ind 108:46-8+ My 15 '53
Machine tool electrification forum, 17th, Pittsburgh, April 14-15. Am Mach 97:176 Ap 27 '53; Automotive Ind 108:130+ My 1 '53; Mach 59:268 My '53
Mounting keeps vibration in its place. W. C. Gallmeyer. il diags Steel 132:90-1 My 18 '53; Same cond. Tool Eng 31:82 Jl '53
Slipping the induction motor. R. Y. Newton. il diag Gen Elec R 55:41-2+ S '52; Same cond. Machine Design 25:268+ F '53

Exhibitions

Brussels to be host to third European machine tool exhibition in 1953. For Comm W 49:12 Ja 12 '53
European developments displayed at machine tool shows. Materials & Methods 37:184+ F '53
European machine tool exhibition, Hanover, Sept. 14-23. il Am Mach 96:182-4 O 13 '52; Mach 59:206-7 N '52
European machine tool exhibition, 2d, Hanover, Sept. 14-23. il Engineer 194:510-12, 542-5, 586-8 O 17-31 '52
European machine-tool exhibition, 3d, Brussels, Sept. 4-13. il Am Mach 97:164-8 S 28 '53
International machine tool exhibition, London, Sept. 17-Oct. 4. il Am Mach 96:185-6 O 13 '52
International machine tool exhibition, Olympia, Sept. 17-Oct. 4. il diags Engineer 194:supp 1-16, pl 1-4 S 12; supp 1-16, pl 1-4, S 19; 402-9 S 26; 438-43 O 3; 474-7 O 10 '52 Engineering 174:321-33, pl 15-18, 361-8, pl 21-2, 393-400, pl 24-7, 431-5, pl 33-6, 478-80, pl 40-1, 504, 511-12 S 12-O 17 '52
Nearly 1000 machine tools shown at Canada's trade fair. il Am Mach 97:164-7 Je 22 '53
Security barriers down as Soviet bloc countries show machine tools at Leipzig fair. Am Mach 97:170 S 28; 204-7 O 12 '53
Special report on British and German machine tool expositions. J. P. Crosby. Automotive Ind 107:55+ N 15 '52; Same. Tool Eng 29:55-6 D '52
Strong bid; German machine-tool show beckons American dollars. Mod Ind 24:92+ O '52

Fixtures

Adjustable tool-setter for boring and turning tools. N. Palmer. diags Am Mach 97:157 Jl 6 '53
Angle fixture used to inspect complex work. R. H. Fry. diags Am Mach 97:171 S 14 '53
Better tooling gives interchangeability. il Steel 131:98-100 N 10 '52
Cam operated fixture simplifies machining of spiral grooves. J. H. Pauli, jr. diags Am Mach 97:157 Jl 6 '53
Dow taper attachment. il Tool Eng 31:109 Jl '53
Drillpress fixture turns plastic disk to size. H. Gifford. diag Am Mach 97:174 My 11 '53
Fixture multiplies drill's capacity; Ryan aeronautical co. il Steel 132:117 Je 1 '53
Grinding fixture aids die manufacture; B. Jahn manufacturing co. R. LeGrand. il diags Am Mach 96:134-5 N 24 '52
Grinding fixture for holding work at any angle. J. Sobkowiak. diags Mach 59:194-5 Mr '53
Hand tapping aided by simple drillpress fixture. F. T. O'Grady. diag Am Mach 97:175 My 11 '53
Hinge assembly fixture. I. Berkowitz. diags Am Mach 97:146 Jl 20 '53
Ingenious toolholder saves machine downtime. M. Maloney. il diags Am Mach 97:108-9 Ag 3 '53
Jigs and fixtures; costs for temporary tooling go down with building blocks. il Iron Age 171:171 Je 18 '53
Lever type clamps for jigs and fixtures. W. H. Litten. diags Mach 59:196-7 My '53
National broach & machine co. air-powered fixture broaches holes, keyways, and contours. il Am Mach 97:230 O 12 '53; Same. Mach 60:227-8 O '53
1953 American Machinist production preview. il Am Mach 97:193-209 Ja 19 '53
Producing radii for optical tools. H. H. Fromicke. diags Am Mach 97:180 Je 8 '53
Production fixture increases drill press output. D. E. Harris. il Iron Age 171:130 Ap 16 '53
Simple fixture turns many radii. D. Watson. diag Am Mach 96:121 D 22 '52
Simple holding fixture for light cuts. R. Isetts. diag Mill & Factory 53:131 S '53
Tailstock mounted contour fixture saves space on lathe. L. R. Elliott. diag Am Mach 97:136 Ag 17 '53
Universal jig fixture system. il Aero Digest 66:56 Ja '53
Unusual fixture saves time and avoids large outlay; Ryan aeronautical co. il Iron Age 171:126 Ja 29 '53
V-blocks feature low head-room clamping. W. M. Halliday. diags Mach 59:208 D '52
What's ahead the next ten years in tools and tooling; jigs and fixtures. Am Mach 96: C6-7 Mid-N '52
See also
Jigs
Milling machines—
Fixtures

History

Exhibition of old machine tools at Birmingham. il Engineering 175:289-90, pl 6 Mr 6 '53

Lubrication

Modern machine-tool lubrication practice. W. D. Whalen. il diags Mech Eng 74:803-9 O '52; Discussion. 75:335-6 Ap '53

Manufacture

Conveyors boost machine tool production; Brown & Sharpe mfg. co. il Steel 131: 94-5 N 3 '52
Machine tool know how spreads to subcontractor. il Iron Age 171:156 Ap 23 '53
Machine tool plant features inline production layout; Norton co. il Steel 132:114 Ap 13 '53
Plant expands, so does safety; Monarch machine tool co. il Safety Maint & Prod 105:68-75 Ap '53; Excerpts. Steel 131:74-5+ O 27 '52
Toolmaker aids South's industrial growth; Wysong and Miles co. il Manuf Rec 122: 36-7 O '53

Safety devices

Safety guard held firmly by magnet. il Mill & Factory 52:140 Ja '53

Standards

Pump mounts standardized; three types are approved to govern machine tool lubricating and coolant pumps. Steel 131:294+ O 13 '52
Transfer-type machine tools can be standardized. W. G. Patton. il Iron Age 171: 129-32 F 12 '53

Testing

Dynamometers change art to science. E. J. Tangerman. il diags Am Mach 96:130-4 O 13 '52
Micro-inch inspection in the Timken gage laboratory. M. C. Curtis. il Mach 59:180-7 Je '53

MACHINE tools—*Continued*

Unit construction

Unitization for easy manufacture of profile grinder. il diags Product Eng 24:160-2 Ap '53

MACHINE tools, Used

Used machinery and industrial mobilization. A. M. Johnson. Tool Eng 31:132-4 O '53

Used machinery; fast market for old tools slows down. Steel 131:123 O 13 '52

What's ahead the next ten years in rebuilt equipment. Am Mach 96:M-M2 Mid-N '52

MACHINE work

See also

Broaching
Centering (machine work)
Drilling and boring (metal working, etc.)
Grinding
Holding devices (machine work)
Honing
Indexing (machine work)
Locating (machine work)
Machine shop practice
Metal cutting
Milling
Plastic materials—Cutting
Polishing
Tolerance
Trepanning
Turning

Copying processes

Duplicating milling machine. il Tool Eng 31:112 O '53

French automatic copying lathe features hydraulic carriage feed. il Am Mach 97:168 Ag 3 '53; Mach 59:215-16 Ag '53; Tool Eng 31:120 S '53

H.E.B. copying lathe. il Aero Digest 66:82 Ja '53

Hydraulic copying attachment for lathes. il Engineering 174:183-4 Ag 8 '52

Hydraulic copying attachment for lathes. il Engineering 176:235 Ag 21 '53

Hydraulic copying attachment for most standard lathes. il Am Mach 96:204 N 10 '52

Hydrotracer hydraulic copying attachment. il Engineering 176:185 Ag 7 '53

Look at European machine tool tracer attachments. il diags Product Eng 24:142-9 Ja '53

Mammoth lathe gives automatic duplication. il Tool Eng 30:108 Je '53

Non-circular gears generated automatically. E. C. Beaudet. il Iron Age 171:122-3 F 19 '53

Timing belts drive spindles in duplicator. il diags Product Eng 24:162-5 My '53

Unique drilling duplicator developed by Northrop tool engineers. L. Donner. il diags Mach 59:214-17 Jl '53

Upside-down bed on copying lathe. il diags Machine Design 25:135 Je '53

MACHINE works

Disaster without warning; Norton co. il Factory Management 111:112A-112F Jl '53

Fully air conditioned for comfort and efficiency; Rotor tool co. il Factory Management 111:B94-101 pt 2 My '53

Jobbing shop runs on mass production; Link-Belt's new Colmar, Pa. plant. il Steel 131:70 D 8 '52

Machine tool plant features inline production layout; Norton co. il Steel 132:114 Ap 13 '53

Modernisation of Diesel engine works; Henry Meadows, ltd. il Engineer 194:426-7 S 26 '52

Monarch completes large expansion and modernization program. il Mach 59:260 D '52

New plant becomes a good neighbor; Airco equipment manufacturing division of Air reduction co. il Mill & Factory 52:99 Ja '53

New plant keeps up with the future; Norton co. il plan Mod Ind 26:50-1 Jl '53

Production lines in a job shop; Atwood vacuum machine co. il plan Factory Management 111:B296-9 pt 2 My '53

Reconstruction of an engineering works. il Engineer 196:269 Ag 28 '53

Straight line production at Norton's new facility. il plan Automotive Ind 108:73 My 1 '53

Torpedoed by a tornado, but back in production in 62 hours; Norton co. il Mill & Factory 53:97 Ag '53

See also

Locomotive works

Equipment

Cadillac tank plant. S. Bell. il Comp Air Mag 58:9-11 Ja '53

Conveyors boost machine tool production; Brown & Sharpe mfg co. il Steel 131:94-5 N 3 '52

Diesel engine production; Frank Perkins, limited. il plan Automobile Eng 43:332-44 Ag '53

Effluent-treatment plant for tank factory. il map plan diags Engineering 174:681-4, pl 55-6 N 28 '52

Extensions to a Diesel engine works; Eastfield works of F. Perkins, ltd. il Engineer 196:22-4 Jl 3 '53; Engineering 176:12-13, 16 Jl 3 '53

Extensions to the works of Guy motors, limited. il Engineering 176:108 Jl 24 '53

Fisher T-48 tank plant fully conveyorized. J. Geschelin. il Automotive Ind 108:48-51 Ap 1 '53

Greater automaticity in tooling for J-47 turbojet engines; Evendale, Ohio, plant of the General electric co. T. Mac New. il diag Automotive Ind 108:60-72+ My 1 '53

How Dixie powers fighting tanks; Michoud ordnance plant. E. J. Tangerman. il Am Mach 97:145-54 Ap 27 '53

Jet engine parts produced in record time; Avco manufacturing corp. J. W. Greve. il diags Tool Eng 30:63-9 My '53

Machining plant for turbine casings; Rugby works of the British Thomson-Houston co. il Engineer 196:105-6 Jl 24 '53; Engineering 176:97-8 Jl 24 '53

Machining techniques in a new tractor engine plant. C. H. Wick. il Mach 59:163-71 Je '53

Mobile crane works in Sunderland. il Engineer 196:148-50 Jl 31 '53

Modernised oil engine works; Hazel Grove works of Mirrlees, Bickerton and Day, ltd. il Engineer 195:216-18 F 6 '53; plan diags Engineering 175:171-3, 176, pl 3 F 6 '53; Elec J 150:433-5 F 6 '53

Moving tons or ounces, all in day's work at Cadillac tank plant; illustrations with text. S A E J 61:60-4 My '53

Open house launches $6 million Norton grinding machine expansion. il Am Mach 97:201 Ap 13 '53

Re-layout, better handling, improved methods save $200,000 per year; Walker-Turner division, Kearney & Trecker corp. W. F. Wilson. il plans diags Am Mach 97:163-8 Mr 16 '53

Self-propelled fixtures expedite operations at Budd's tank plant. T. Mac New. il Automotive Ind 108:66-70 Ja 1 '53

Special fixtures eliminate welding stresses in bus bodies. T. Mac New. il Automotive Ind 108:66-7 Je 1 '53

Tailors in steel to Canadian industry; John Inglis co. I. Mac Fadden. il Welding J 32:997-9 O '53

V-12 tank engine production at Chrysler plant. J. Geschelin. il Automotive Ind 107:50-3 D 15 '52

Layout

Grinding-machine plant; Norton co. il plan Mech Eng 75:407-8 My '53

Plant expands, so does safety; Monarch machine tool co. il Safety Maint & Prod 105:68-75 Ap '53; Excerpts. Steel 131:74-5+ O 27 '52

Re-layout, better handling, improved methods save $200,000 per year; Walker-Turner division, Kearney & Trecker corp. W. F. Wilson. il plans diags Am Mach 97:163-8 Mr 16 '53

Management

From single units to mass production in one big move; Solar aircraft co. B. A. Willsey. il Iron Age 171:129-32 Mr 26 '53

Quality control through the introduction of statistical methods; International harvester co. il Automobile Eng 42:533-4 D '52

Schedule a slice out of down time; Warner & Swasey co. il Steel 132:66-7 Ja 26 '53

Safety measures

℞ fitted glasses protect more than eyes; Allis-Chalmers manufacturing co. M. F. Biancardi. Am Mach 97:192-3 Ap 13 '53

MACHINERY

Preservation of historic machinery and its problems; abstract. A. Stowers. Engineer 195:353 Mr 6 '53

See also

Agricultural machinery
Assembling methods
Balancing of machinery
Bearings
Belting
Bending machines
Bolts and nuts
Bottle washing machines
Bottling machines
Broaching machines
Calculating machines
Calenders
Casting machines
Clutches
Coal mining machinery
Conveying machinery
Couplings
Cranes, derricks, etc.
Crankshafts
Crushing machinery
Cylinders (engines, etc.)
Diesel engines
Drilling and boring machinery
Dyeing machines
Electric machinery
Electric welding machines
Engines
Excavating machinery
Eyeletting machines
Fans, Mechanical
Feed mechanism
Filing machines
Filling machines
Fits (machinery)
Floor cleaning machines
Food machinery
Foundry machinery
Friction
Gear cutting machines
Gearing
Governors (machinery)
Grinding machines
Harvesting machinery
Hoisting machinery
Hydraulic machinery
Hydraulic presses
Ice machines
Interchangeable mechanism
Internal combustion engines
Jigs
Keys and keyways (machinery)
Knitting machines
Lathes
Locomotives
Looms
Lubrication and lubricants
Machine shop practice
Machine tools
Machinery industry
Mechanical engineering
Mechanical handling
Mechanical movements
Metal working machinery
Milling machines
Mining machinery
Molding machines
Moving picture machines
Packaging machinery
Packing
Paper cutting machines
Paper making machinery
Paving machines
Photography of machinery
Pins, Machinery
Plating machinery
Pneumatic machinery
Pneumatic tools
Polishing machines
Power transmission
Presses
Printing presses
Pulleys
Pumps
Punching machinery
Railroads—Track cleaning machinery
Refrigeration and refrigerating machinery
Road making machinery
Rock drills
Rubber machinery
Screw machines
Shafting
Shafts
Sheet metal working machinery
Shoe machinery
Shoveling machines
Slotting machines
Spinning machinery
Springs (mechanism)
Steam engines
Steam turbines
Tabulating machines
Tamping machines
Testing machines
Textile machinery
Threading machines
Time study (of machinery)
Tools
Tractors
Trenching machinery
Turbines
Valves
Washing machines
Wire forming machines
Woodworking machinery
Woolen and worsted machinery

Bedplates

Flame hardening; lathe ways to 30 ft long rapidly hardened, quenched in new setup. il Iron Age 170:217-18 N 6 '52; Tool Eng 29:47 D '52; Steel 131:86 D 29 '52

Structural behaviour of the main engine seatings and bedplate in a cargo ship under static bending tests; abstracts. A. J. Johnson and J. E. Richards. Engineer 194:698 N 21 '52; Engineering 174:755 D 12 '52

Control

Automatic relay control. E. Brooke. il diag Machine Design 25:154-8 Ap '53

Future use of digital computers. M. Rees. Machine Design 25:324+ O '53

Making machines remember; use of memory devices in machine control elements. I. M. Sage. bibliog(p274) il diags Product Eng 24:141-9 Ap '53

Design

Analytical methods for deriving cam profiles. Z. Jania. diags Tool Eng 31:81-8 O '53

Analyzing nonlinear servos. J. M. Nightingale. diags Machine Design 25:139-42 Ag '53

Annual handbook of product design for 1953; design analysis and mechanical parts. diags Product Eng Hdbk p F 1-33+ '53

Assigning tolerances for maximum economy. E. W. Pike and T. R. Silverberg. bibliog diags Machine Design 25:139-46 S '53

Axial tension and bending interaction curves for members loaded inelastically. D. O. Brush and O. M. Sidebottom. il diags A S M E Trans 75:63-71; Discussion. 71-2 Ja '53

Basic engineering standards and their place in design. G. C. Adams. diags Inst Mech Eng Proc (A) 166 no 2:164-9 '52; Same cond. Engineering 173:380-1, 411-12 Mr 21-28 '52; Same cond. Engineer 193:405-7 Mr 21 '52; Discussion. Inst Mech Eng Proc (A) 166 no 2:170-9 '52

Calling in psychologists early. Bsns W p80-2 D 20 '52

Cam curvature. A. R. Holowenko and A. S. Hall. diags Machine Design 25:170-7 Ag; 162-9 S '53 (to be cont)

Corrosion factors in design and lubrication. F. L. LaQue. il diags Product Eng 23:142-7 O '52

Design aid for shrink-fit calculations. S. Archer. Engineering 176:228-9 Ag 21 '53

Designing for low maintenance. H. A. Bolz. il diags Machine Design 25:114-20 F '53

Designing with engineering materials. R. L. Stedfeld and others. il diags Machine Design 25:137-92 O '53

Designing with plug welds. O. Blodgett. il diags Machine Design 24:152-3 N '52

Designing with tubular sections. L. F. Spector. il diags Machine Design 24:117-24 N '52

Determining moments of inertia of nonsymmetrical components; data sheet. W. E. Soong. diag Machine Design 25:181-3 My '53

Developing special machines to increase production and reduce costs. R. L. Kessler. il Tool Eng 30:70-4 My '53; Same cond. Automotive Ind 108:50-3+ Ap 15 '53

Dimensions and tolerances for mass production. E. Buckingham. diags Mach 59:163-9 My; 172-9 Je; 180-5 Ag; 60:176-85 S; 197-203 O '53

Eccentric gear mechanisms for producing varying angular velocity with circular spur gears. P. Grodzinski. il diags Machine Design 25:141-50 My '53

Flexure pivots; design formulas and charts. A. G. Thorp, 2d. il diags Product Eng 24:192-200 F '53

Graphical linkage analysis. R. A. Kraus and K. S. Rangasami. diags Machine Design 25:177-82 Je '53

Hole fits. G. E. Hieber. diags Machine Design 25:116-20 Ja '53

Human factors in industrial design. J. W. Dunlap. il Advanced Management 18:69-72 Ja '53

Influence of strain gradient on brittle coating sensitivity. A. J. Durelli and S. Okubo. il Product Eng 24:136-7 Ja '53

Linkage design. P. T. Nickson. il diags Machine Design 25:137-44 Jl '53

Machine design via the movies. il Mill & Factory 51:99 O '52

Polydyne cam design. D. A. Stoddart. bibliog diags Machine Design 25:121-35 Ja; 146-54 F; 149-64 Mr '53

Processes and costs. R. W. Bolz. il diags Machine Design 25:112-19 Jl '53

Providing adequate power in computer drives. M. Felstein. bibliog il diags Machine Design 25:156-62 Ja '53

Quality control methods; their use in design. D. Shainin. il Machine Design 24:102-8 Jl; 171-5 Ag; 168-74 S; 193-8 O; 161-8 N; 173-9 D '52; 25:150-5 Ja; 160-5 F; 165-9 Mr; 176-80 My '53

MACHINERY—Design—*Continued*

Redesign for economy; Hydraguide power steering gear. C. Holt. il diags Machine Design 25:164-7 Je '53

Reducing costs through design. C. W. Metter. il Machine Design 25:158-61 My '53

Static-dynamic load machine for high pressure. E. T. Fleischhauer and E. G. Dorsey, jr. il diag A S M E Trans 75:381-3 Ap '53

Switch from casting to weldment requires careful analysis. diags Iron Age 171:208-9 Mr 5 '53

Synthesis of gearless differentials. M. Daniloff. diags Product Eng Hdbk p E2-7 '53

Welded design improves jointer. il Machine Design 24:134 N '52

Welded steel structures permit greater strengths at less cost. diags Iron Age 170:152-3 N 20 '52

See also

Gearing—Design

Keys and keyways (machinery)

Machine tools—Design

Machinery, Kinematics of

Exhibitions

British industries fair. il Metallurgia 47:183-98+ Ap '53

British industries fair, Birmingham and London, April 27-May 8. il diags Engineer 195:582-6, 618-21, 654-9 Ap 24-My 8 '53; Engineering 175:513-14, 545-8, pl 12-15, 577-80, pl 16-17, 630-1 Ap 24-My 15 '53

Engineering, marine and welding exhibition, London, Sept. 3-17. il Engineering 176:257-65, 272, pl 13-16, 289-97, pl 17-18, 321-9, pl 19-22, 353-8, 391-5, pl 28-30 Ag 28-S 25 '53

Hanover technical fair. il plan diag Engineer 195:660-2, 690-2, 725-7, 772-3, 803-4 My 8-Je 5 '53

See also

Machine tools—Exhibitions

Foundations

Air force's heavy press program holds promise for construction. il Eng N 149:21-2 N 27 '52

Concrete blocks, set on springs, cushion air-operated drop stamps. il Automotive Ind 108:92+ Ja 1 '53; Steel 132:98+ F 9 '53

Design and construction of a fully vibration-controlled forging hammer foundation. A. M. Klein and J. H. A. Crockett. il diags Am Concrete Inst J 24:421-44 Ja '53; Same cond. Civil Eng 23:6-12 Ja '53

Effects of resilient foundation on vibration isolation. H. Himelblau, jr. il diags Product Eng 23:170-2 N '52

Floating hammer forges 15,000th ingot. il diag Iron & Steel Eng 29:126 O '52; Mill & Factory 51:144 N '52; Mach 59:260 F '53

Forge hammer set afloat; raft-like buildup for nickel alloy forging cuts vibration. E. M. Kline. il Steel 131:256+ O 13 '52

Forge support proves tough. il diag Eng N 149:46-7 D 11 '52

Forging to reduce vibration. diag Metal Prog 63:89 F '53

Generator foundation for cosmotron meets unique requirements. J. M. Ruddy. il diags Eng N 150:44-5 Mr 26 '53

How to burn foundation holes; illustrated instructions. Power 97:139 Je '53

How to cut vibration in big turbine-generator foundations. F. P. Witmer. diags Power 96:86-7 N '52

Machine foundation supported by steel rods driven through clay. E. E. Howard. Civil Eng 23:248-9 Ap '53

Novel hammer foundation. R. Hammond. il diags Engineer 195:573-5 Ap 17 '53

Steady-state forced vibration of continuous frames. C. T. G. Looney. diags Am Soc C E Proc 78 [no 136]:1-21 Je '52; Discussion. 79 [no D-136]:1-14 Ap '53

History

Engineering Hall, Birmingham museum of science and industry. il Engineering 176:214-16, pl 12 Ag 14 '53

Leasing

Leasing; key to introduction of Fairchild's Scan-a-graver. C. A. Harrison. il Sales Management 69:24-5 N 20 '52

Shoe machines ordered on sale. Bsns W p41 F 28 '53

Maintenance and repair

Back to work because of braze welding. R. L. Fuller. il Welding J 31:1057-8 N '52

Designing for low maintenance. H. A. Bolz. il diags Machine Design 25:114-20 F '53

For your spare parts needs analyze each machine; Kaiser steel corp. J. Joseph. il Mill & Factory 52:134-6 Je '53

Hard surfacing. S. Elonka. il diags Power 97:107-22 Mr '53; Same cond. Am Mach 97:113-28 Ag 17 '53

Hardfacing gives metals a new lease on life. R. J. Kembel. il diags Mill & Factory 52:119-21 Je '53

Proper surfacing alloy gives maximum wear. Brick & Clay Rec 122:68-72 F '53

Thread inserts cut overhaul time. il Steel 132:92 Je 22 '53

Tooling applications of hard facing alloys. L. V. LaRou. il Tool Eng 30:65-9 Je '53

Vice of service; twelve basic rules on how to help your machine service man. Constr Methods 35:206 Jl '53

See also

Electric welding machines—Maintenance and repair

Mounting

See also

Machinery—Vibration

Moving

Heavy presses are set by novel methods. il Constr Methods 35:56-8 Mr '53

Name plates

See Name plates

Noise

Measurement and interpretation of machinery noise with special reference to oil engines. C. H. Bradbury. diags Inst Mech Eng Proc (B) 1B no 1:1-8, pl 1-4 '52; Same abr. il Engineer 192:773-5 D 14 '51; Discussion. Inst Mech Eng Proc (B) 1B no 1:8-18 '52

Noise; does your plant deafen workers? T. Metaxas. Iron Age 171:55-7 Je 11 '53

Noise is news; claims for loss of hearing in industrial jobs menace plants financially. il Mod Ind 25:48-52 F '53

Noise; shop problem. il diags Am Mach 96:109-16 D 22 '52

Reducing the noise of industrial machines. P. H. Geiger and R. N. Hamme. diag Arch Rec 113:173-4 Ja '53

Patents

Noteworthy patents. diags Published in monthly numbers of Machine design

Safety devices

Design for safety. Machine Design 25:142 Ag '53

Electrical control of dangerous machinery and processes; electrically interlocked guards on machines. W. F. Cooper. il diags Inst E E Proc 98 pt 2:349-57 Je '51; Discussion. 98 pt 2:358-61; 100 pt 2:183-7 Je '51, Ap '53

Guarding the machine. bibliog il Nat Safety N 67:181+ Mr '53

Plan machine guards for taller men; American standard safety code. Nat Safety N 68:106-7 S '53

What guards the guard? J. Okun. il Safety Maint & Prod 106:28-30 O '53

See also

Presses—Safety devices

Standards

See also

Machine tools—Standards

Testing

Production testing goes for a spin. G. W. Ehrsam, jr. il Steel 132:92-4 Je 15 '53

MACHINERY—*Continued*

Transportation

Engine shipped as one unit on special railroad car. Steel 131:227 O 13 '52

How goosenecks simplify hauling. il Constr Methods 34:86 O '52

See also

Electric generators—Transportation

Vibration

Analyzing beam vibration. G. Sonnemann. bibliog diags Machine Design 25:123-8 Je '53

Effects of ball mill vibration. il Chem Age (Lond) 68:417-19 Mr 21 '53

Effects of resilient foundation on vibration isolation. H. Himelblau, jr. il diags Product Eng 23:170-2 N '52

How to measure machine-tool vibration. S. Heller. diags Am Mach 97:141 Jl 6 '53

Metal-cutting chatter and its elimination. R. S. Hahn. bibliog il diags A S M E Trans 75:1073-80 Ag '53

Oil whip; what it is and how to prevent it. D. P. Timo. diags Product Eng 24:171-3 F '53

Plastic models for vibration analysis. G. O. Sankey. il diag Machine Design 25:125-8 My '53

Practical approach to optimum machining; forces and vibration on the tool affect its life. A. B. Albrecht. il diag Am Mach 97:142-5 Je 8 '53

Suppression of noise and vibration in plating shops; abstract. Metal Finishing 51:110 Je '53

Use of the centrifugal governor mechanism as a torsional vibration absorber. O. A. Pringle. diags A S M E Trans 75:59-61; Discussion. 61-2 Ja '53

Vector method of solving vibration problems. C. H. Helmer. diags Engineering 174:620-1, 685-6 N 14, 28 '52

Vibrations in knee-type horizontal milling machines. I. Bendixen. bibliog diags A S M E Trans 75:567-72 My '53; Abstract. Am Mach 96:176-7 S 15 '52; Discussion. il A S M E Trans 75:572-4 My '53

See also

Balancing of machinery

Diesel engines—Vibration

Grinding machines—Vibration

MACHINERY, Automatic

Air, key to small plant automation. A. H. Allen. il Iron Age 171:108-12 Ja 15 '53

Analysis of developments in automation. C. J. Jacoby, 3d. Mech Eng 74:810-11+ O '52

Automatic attachments; drill makes chips fly. F. M. Butrick, jr. diags Steel 131:80-1 D 1 '52

Automatic bar pointer improves spring production. W. G. Patton. il plan Iron Age 170:120-2 N 27 '52

Automatic factory, trends and prospects; abstract. Management R 41:737-8 N '52

Automatic handling of smaller pieces pays off in stamping; Fisher Body's Hamilton, Ohio plant. E. C. Beaudet. il plan Iron Age 171:232-5 My 7 '53

Automatic machine assembles, inspects small parts; carburetor assembly lines at the Rochester products division plant of General motors corp. J. J. Obrzut. il Iron Age 171:236-8 My 7 '53

Automatic milling machines. il Automotive Ind 108:74 Ap 1 '53; Tool Eng 30:119 My '53

Automaticity can increase your drilling production. R. H. Cowan. il diags Mach 59:184-7 Mr '53

Automation. D. A. Wallace. Advanced Management 18:52-6 Ja '53

Automation, and the transfer type of machine tool; abstract. S. I. Rice. il Automotive Ind 108:46-7 My 15 '53

Automation applied to engine balancing equipment; DeSoto engine plant. J. Geschelin. il Automotive Ind 109:70-2+ O 1 '53

Automation assures precision assemblies. C. F. Hautau. il diags Tool Eng 31:37-42 Ag '53

Automation boosts output; abstract. G. M. Muschamp. Steel 132:74 Ja 12 '53

Automation compounds maintenance problems; Ford motor co. W. Rudolph. il Mill & Factory 53:93-5 O '53

Automation cuts forging costs, improves quality. E. G. de Coriolis and J. D. Nesbitt. il diags Iron Age 170:106-9 N 27 '52

Automation in broaching. A. Lundell. il Mach 60:168-73 S '53

Automation is the keynote in Ford's Cleveland foundry and engine plant; illustrations with text. S A E J 61:38-45 My '53

Automation of machine tools. J. Y. Kaplan. il diags Tool Eng 30:53-60 Ap; 50-6 My '53; Excerpt. Automotive Ind 108:42-3 Ap 15 '53

Automation review and forecast. il Iron Age 171:294-6 Ja 1 '53

Automation triples pail-line output; Rheem manufacturing co.; illustrations with text. E. F. Paquette. plan diags Am Mach 96:98-9 D 22 '52

Automotive advances pace automation. J. Geschelin. il Automotive Ind 108:348+ Mr 15 '53

Axle shafts machined on special automatics. il Automotive Ind 108:68+ Ap 1 '53

Carousel for car wheels. il Steel 132:168-9 Je 1 '53

Changes in machine tool design to facilitate automation design; abstract. R. Juengel. Automotive Ind 108:90+ My 15 '53

Check these points when you plan automation. J. McDougall. Am Mach 97:210+ Ja 5 '53

Connecting rod and piston automation; Ford Cleveland engine plant. J. Geschelin. il Automotive Ind 108:64-7+ Ap 1 '53

Controlling machine tool down time; abstract. R. E. Cross. Automotive Ind 108:80+ Ap 15 '53

Cylinder blocks machined on transfer unit. il Automotive Ind 107:74 N 1 '52

Downtime roadblocks automation; main topic at ASTE convention, Detroit. Iron Age 171:99 Mr 26 '53

Finned coils made automatically; Carrier corp.; illustrations with text. D. W. Pennock. Am Mach 97:133-6 My 11 '53

Ford's automated engine plant. C. Winkelman. il Factory Management 110:93-108 D '52

Future of automatic machinery. N. Wiener. Mech Eng 75:130-2 F '53; Discussion. 75:589-90 Jl '53

Greater emphasis on automation in stamping production; Ford motor co. T. Mac New. il Automotive Ind 107:34-8+ N 15 '52

Guide to automation; will it pay off? A. F. Vinson. Steel 132:76 F 2 '53

How Ford organizes automation programs. J. McDougall. Am Mach 97:128-9 F 2 '53

Integrating electrical elements of automatic machine tools. K. O. Tech. il Tool Eng 30:143-5 Je '53

Landing gear cylinders machined on automatic double-end unit. il Automotive Ind 109:65 Jl 15 '53

Latest automatic equipment at De Soto engine plant. J. Geschelin. il Automotive Ind 108:52-5+ Je 1 '53

Latest improvement in press automation at Ford. M. J. Rowan. il diags Am Mach 96:109-18 D 8 '52

Looking for new fields to conquer? take a look at the manufacture of automation equipment. F. G. Lawrence. Steel 132:89-90 My 11 '53

Machining aluminum alloys on automatics. L. F. Spencer. diags Tool Eng 30:55-64 Ja '53

Making a production line automatic; Crankshaft press shop of Chrysler corp. il diag Mod Ind 25:46-7 F '53

Mechanized manufacture; Ford motor co. il Automobile Eng 43:359-62 S '53

Method of automation; abstract. C. F. Hautau. Machine Design 25:310+ My '53

Multi-spindle automatics boost short run production; Independent pneumatic tool co. J. P. Bank. il Iron Age 171:142-4 F 26 '53

New Britain single spindle automatic designed for short or production runs. il Am Mach 97:204 Mr 16 '53; Same. Mach 59:211 Mr 16 '53

MACHINERY, Automatic—*Continued*

Potentialities of automation discussed at Conveyor institute meeting. Automotive Ind 108:226+ My 15 '53

Problems of the automatic factory; Ford motor co.; abstracts. D. S. Harder and D. J. Davis. Automotive Ind 108:40-1+ Ap 15 '53; S A E J 61:25-30 My '53; Machine Design 25:261-2+ Jl '53

Progress in automatic production. H. L. Waddell. Mech Eng 75:207-10 Mr '53

Project Tinkertoy; boon to electronics industry. flow chart il Am Mach 97:208-9 O 12 '53

Robot plants; reds try our way. il Iron Age 171:82 F 12 '53

Stamping plant relies on automation; Ford motor co. il Iron Age 170:162-4 D 11 '52

Warner & Swasey adds smaller automatics to its line. il Am Mach 97:206 Je 8 '53

What's ahead the next ten years in tools and tooling; automation. Am Mach 96:C 12-15 Mid-N '52

Wickman six-spindle automatic for one-inch bars. il diags Engineering 176:249-50 Ag 21 '53

Work-handling devices improve quality, reduce machine-cycling time. E. C. Beaudet. il Iron Age 171:218-21 My 7 '53

See also

Screw machines

Bibliography

Selected references on automation. Factory Management 111:280+ Je '53

MACHINERY, Kinematics of

Stroboscopic analysis; developments in measuring and testing methods for high speed machinery. il Automobile Eng 43:19-22 Ja '53

Synthesis of gearless differentials. M. Daniloff. diags Product Eng Hdbk p E2-7 '53

See also

Cams

Mechanical movements

MACHINERY, Replacement of

American industry is being taxed into obsolescence. T. Berna. il Mill & Factory 53:77-82 O '53

Capital goods replacement challenges business papers, advertisers. J. F. Fitzsimmons. Ind Marketing 38:116+ Ja '53

Don't overlook fringe benefits of machine tools. D. M. Pattison. il diags Iron Age 171:138-9 My 21 '53

Equipment policy; National center of education and research in dynamic equipment policy, Illinois institute of technology. Bsns W p66 Jl 25 '53

Machinery replacement; how costs are determined. E. C. Varnum. Tool Eng 30:70-4 Je '53

Machinery replacement program determines cost of obsolescence. R. S. Collier. Tool Eng 30:65-8 Ja '53

Replacement analysis. E. S. Roscoe. bibliog Advanced Management 17:18-21 S '52

Replacement formulas; are they a help or headache? H. D. Sharpe, jr. Tool Eng 31:43-4 Ag '53

Urge revised tax depreciation policies to spur machine replacement. Ind Marketing 38:65+ Jl '53

MACHINERY in industry

How to mechanize. Cer Ind 61:46-7 Jl '53

See also

Machinery, Replacement of

MACHINERY industry

Capital goods manufacturers eye world markets as key to healthy industrial economy. Am Mach 97:162-3 Jl 20 '53

Is machinery promotion dull? dealer proves it isn't, hikes sales ten per cent. M. Reinsberg. il Ind Marketing 37:58-9+ D '52

Machinery and allied products institute conference, Washington, June 11-12. Am Mach 97:174 Je 22 '53

Machinery; thinner order books; graph. Fortune 47:28 Mr '53

Tripling capital goods exports. Bsns W p 156-7 Jl 25 '53

See also

Agricultural machinery industry

Machinery—Leasing

Textile machinery industry

United engineering and foundry company

Directories

1953 American Machinist production preview. il Am Mach 97:145-280 Ja 19 '53

Finance

Financial data on machinery manufacturers, 1931-1951; tabulation. Iron Age 171:459 Ja 1 '53

Institutional investment in machinery firms totalled $286 million in '52. Am Mach 97:158 Ag 3 '53

History

1877 to 1952; highlight survey of development. il Am Mach 96:3-19 Mid-N '52

Statistics

Machinery and equipment; tabulations. Steel 132:180-3 Ja 5 '53

Machinery exports reach new high in 1952. Machine Design 25:204 S '53

1953, metalworking to stay near peak; metalworking facts for 1953. Am Mach 97:129-44 Ja 19 '53

Germany

German machinery exports decrease. For Comm W 49:11 My 18 '53

Great Britain

Britain's paper-making machinery industry. Paper Tr J 135:25 N 7 '52

Engineering industries of Sheffield. M. A. Fiennes. il Engineering 176:57-9, pl 1-4 Jl 10 '53

Engineering outlook. Engineering 175:9-11, 70-2, 136-9, 196-9, 232-5, 263-6, 296-9, 328-31, 359-61, 389-92, 421-4, 453-6, 484-6 Ja 2, 16, 30, F 13-Ap 17 '53

Expansion of the internal-combustion engine industry. Engineering 174:233-4 Ag 22 '52

Streamlining production of internal combustion engines. Engineer 194:231-2 Ag 15 '52; Same cond. Electrician 149:483-4 Ag 15 '52

MACHINISTS

How to make machinists from scratch. G. F. Meyer. il Mill & Factory 51:135-8 N '52

Machinist; will you hire a cripple? Nick Bell, paraplegic, is skilled machinist; has shop but can't get jobs from industry. T. Metaxas. Iron Age 171:74 My 21 '53

See also

Toolmakers

MACHINISTS, International association of. See International association of machinists

MCKAY, Douglas, 1893-

Eisenhower's Cabinet; a gamble. por Bsns W p30 N 29 '52

New Interior chief. B. F. Linz. por Oil & Gas J 51:56 D 1 '52

Secretary of the Interior. por Nat Pet N 44:39-40 N 26 '52

Sketch. por Elec World 138:80-1 D 1 '52

MCKESSON and Robbins, inc.

Debentures offered. Comm & Fin Chr 177:941 Mr 2 '53

MCKETTA, John J.

Refiner editorial director wins AIChE award for best paper. por Pet Refiner 31:104 N '52

MCKIBBIN, Jack M.

Portrait. Fortune 46:121 D '52

MACKIE, David I.

David I. Mackie named first full-time chairman of Eastern railroad presidents group. por(p8) Ry Age 133:11+ D 29 '52

MACKIE, George Kerr, 1904-

Sketch. por Explosives Eng 31:4-5 Ja '53

MACKINAC straits

Record high contracts let for bridge project. il map diag Eng N 150:25-6 Mr 12 '53

MCLAUGHLIN, James Francis, 1895-

Businessmen in the news. por Fortune 47:61 Ap '53

MACLAURIN series

Application of Maclaurin series to the analysis of beams in bending. M. Hetényi. diags Franklin Inst J 254:369-80 N '52

MCLOUTH steel corporation

Steel capacity in Detroit area. Bsns W p27 My 30 '53

MACMILLAN, Viola

President of the Prospectors and developers association. pors Eng &, Min J 154:126 S '53

MCNAMEE, Raymond W. 1907-

R. W. McNamee named twenty-first Herty medalist. por(cover) Chem & Eng N 31:1644 Ap 20 '53

MCQUAIL, James A.

Half-century club; careers epitomizing contributions to coal-mining progress. por (p 102) Coal Age 58:103 Ja '53

MACROCYCLES. See Cyclic compounds

MACROMOLECULES. See Molecules

MACROPHAGES

Disposition of intraperitoneally injected foreign matter in amphibia. T. W. Easton. Science 117:8-9 Ja 2 '53

See also

Cells

MACROZAMIN

Macrozamin; azoxymethane and some simple analogues. B. W. Langley, B. Lythgoe and L. S. Rayner. Chem Soc J p4191-8 N '52

MACY, R. H., and company

Common dividend protected by earnings rise. Barron's 33:17-18 My 25 '53

New life for giant Macy's. Bsns W p86+ Ap 11 '53

Prop for Macy's. Bsns W p 120+ N 22 '52

MADDEN, John T. 1896-

Businessmen in the news. por Fortune 47:60 Mr '53

MADRID

Hotels, restaurants, etc.

Fiesta for Hilton's Madrid hotel. il Bsns W p 152-5 Jl 25 '53

MAFFRY, August

Speeding flow of private funds abroad; Maffry report. Bsns W p 136-7 Ja 17 '53

MAGAMPS. See Amplifiers

MAGAZINES. See Periodicals

MAGDSICK, Henry Herbert, 1888-

IES gold medal award recipient. E. S. Lee. por Gen Elec R 55:7 N '52

MAGEE, Frank

Frank Magee; from A to Z for Alcoa. pors Bsns W p70-3+ Je 6 '53

MAGIC chef, inc.

Broadening the focus at Magic Chef. il Bsns W p 170-1 Ap 11 '53

MAGNAFLUX testing. See Magnetic testing

MAGNAMYCIN. See Carbomycin

MAGNESIA

Absolute spectral diffuse reflectance of magnesium oxide in the near infrared. C. L. Sanders and E. E. K. Middleton. Opt Soc Am J 43:58 Ja '53

Active magnesia; adsorption in preferred positions. W. C. Walker and A. C. Zettlemoyer. bibliog diags J Phys Chem 57:182-6 F '53

Blame MgO expansion in mortars. J. W. McBurney. Brick & Clay Rec 122:32+ Ap '53

Experimental determination of the surface tension of magnesium oxide. G. Jura and C. W. Garland. bibliog Am Chem Soc J 74:6033-4 D 5 '52

Heat treatment of dolomite; the activity of lime and of magnesia in relation to their temperature of preparation. H. T. S. Britton, S. J. Gregg and G. W. Winsor. bibliog J Ap Chem 2:693-7 D '52

Heat treatment of dolomite; the precipitation of magnesia from sea-water by calcined dolomite. H. T. S. Britton, S. J. Gregg and E. G. J. Willing. J Ap Chem 2:701-3 D '52

Index of refraction of magnesium oxide. R. E. Stephens and I. H. Malitson. diag J Res Nat Bur Stand 49:249-52 O '52

Irradiation-induced photoconductivity in magnesium oxide. H. R. Day. bibliog Phys R 91:822-7 Ag 15 '53

Magnesium oxide phosphor activated by tetravalent manganese. J. S. Prener. bibliog J Chem Phys 21:160-1 Ja '53

Masonry cracking; magnesium oxide in mortar may be cause. Eng N 150:34 My 7 '53

Mechanism of self-sustained electron emission from magnesium oxide. D. Dobischek and others. diags Phys R 91:804-12 Ag 15 '53

Oxides of uranium; the system UO_2-MgO-O. J. S. Anderson and K. D. B. Johnson. Chem Soc J p 1731-7 Je '53

Preparation of magnesium targets from MgO. L. N. Russell and others. R Sci Instr 23:764 D '52

Secondary electron emission of crystalline MgO. J. B. Johnson and K. G. McKay. bibliog il diags Phys R 91:582-7 Ag 1 '53

Solid state reaction between magnesium and chromium oxides. G. Parravano. Am Chem Soc J 74:6123-5 D 5 '52

Thermal stress failure of pure refractory oxides. B. Schwartz. bibliog il diags Am Cer Soc J 35:325-33 D 1 '52

Use of magnesium oxide in determination of carbon and hydrogen in fluoro-organic compounds. W. H. Throckmorton and G. H. Hutton. bibliog Anal Chem 24:2003-4 D '52

Viscosity studies of system CaO-MgO-Al_2O_3-SiO_2; 35, 45, and 50 per cent SiO_2. J. S. Machin and others. Am Cer Soc J 35:322-5 D 1 '52

What type of thermal insulation is best? E. H. Thring. il Can Chem Process 37:60-2 Ja '53

MAGNESITE brick

Chemically bonded magnesite brick; burned magnesite brick; prices, 1947-1952; tabulations. Iron Age 171:436 Ja 1 '53

MAGNESIUM

Automotive service experience with magnesium; abstract. F. H. Mason. Automotive Ind 107:74+ D 15 '52

Boom in magnesium wrought goods for defense. il Steel 132:62 Mr 2 '53

Chemical and physical changes in magnesium-treated irons. M. Okamoto and R. Yoda. il Foundry 80:126-7 O '52

Consumer applications highlight International magnesium exposition, Washington, March 31-April 2. Am Mach 97:200 Ap 13 '53

Designing magnesium castings and forgings. G. L. Moore, diags Product Eng 23:263-6+ D '52

How to plan a practical magnesium-anode program. J. N. Hunter, jr. diag Oil & Gas J 51:284+ O 13 '52

International magnesium exposition, 1st, Washington, March 31-April 2. il Metal Finishing 51:103-5+ Je '53

International magnesium exposition, Washington. il Iron Age 171:81 Ap 9 '53

Magnesium anode system resurveyed after 2½ years; Chocolate Bayou transmission lines of Pan American gas co. C. E. Sonntag, jr. il Oil & Gas J 51:303-4+ O 13 '52

Magnesium anodes used to check hull corrosion. il Marine Eng 57:150+ D '52

Magnesium as a wear resistant metal. E. L. Schaper. il Materials & Methods 38:120-3 O '53

Magnesium auto body. H. Edwards. il Light Metal Age 10:10-11 D '52

Magnesium auto body; abstract. R. J. Cross. Mech Eng 75:322-3 Ap '53

Magnesium becomes versatile. il Steel 132:62 Ap 6 '53

Magnesium body. il Automobile Eng 42:525-6 D '52

Magnesium castings drilled, reamed, c'bored at high speed; special machine built by Snyder tool and engineering co. W. G. Patton. il Iron Age 170:162-4 D 4 '52

Magnesium gains favor as plane metal. I. Stone. il Aviation W 57:31-4 D 29 '52

Magnesium in military aircraft; abstract. D. H. Black. il Light Metal Age 10:20-1 D '52

Magnesium industry puts on big show. Materials & Methods 37:7+ My '53

Magnesium missiles; illustrations with text. Aviation W 58:42 My 11 '53

Magnesium, 1952. J. D. Hanawalt. Eng & Min J 154:86 F '53

Magnesium quotas up; filing dates are set. For Comm W 49:22 Ja 5 '53

Magnesium waveguide characteristics. Electronics 26:198+ Ap '53

Magnesium wrought products, 1947-1952; tabulation. Steel 132:176 Ja 5 '53

Magnesium's sights set high. A. W. Winston. il Steel 132:82-3 Mr 30 '53

MAGNESIUM—*Continued*

Magnetoresistance of Mg, Cu, Sb, and Al at liquid helium temperatures. G. B. Yntema. bibliog Phys R 91:1388-94 S 15 '53

More magnesium; producers hunt markets. Steel 131:60 N 17 '52

New demands lead to new directions in engineering materials; aluminum and magnesium. T. C. Du Mond. il Materials & Methods 37:83-5 Je '53

Performance of magnesium galvanic anodes in underground service; abstract. O. Osborn and H. A. Robinson. Am Water Works Assn J 45:sup62 Ap '53

Review of magnesium production and uses. W. S. Loose. il Electrochem Soc J 99: sup304C-5C N '52

Service experience with magnesium in the commercial highway transportation industry. G. K. Glaza and R. E. Perry. Automotive Ind 107:123-4+ D 15 '52

What's ahead the next ten years in materials and components. Am Mach 96:A7 Mid-N '52

What's the matter with magnesium? secret of success as a corrosion mitigator is proper use. M. E. Parker. World Oil 135:314+ O '52

Zone-heated dies deep-draw thin magnesium; Emerson electric mfg. co. il Am Mach 97:129-31 Ap 27 '53

Analysis

Colorimetric determination of magnesium with Eriochrome black T. A. E. Harvey, jr., J. M. Komarmy and G. M. Wyatt. bibliog Anal Chem 25:498-500 Mr '53

Comparison of some simple condensed spark circuits in the spectrographic analysis of aluminium and magnesium alloys and pure magnesium. E. C. Mills and S. E. Hermon. Metallurgia 46:213-15 O '52

Determination of calcium, magnesium, and iron in limestone by titration with Versenate. Kuang Lu Cheng, T. Kurtz and R. H. Bray. bibliog Anal Chem 24:1640-1 O '52

Determination of hydrogen in magnesium, lithium, and magnesium-lithium alloys. M. W. Mallett, A. F. Gerds and C. B. Griffith. il diags Anal Chem 25:116-19 Ja '53

Determination of trace impurities in magnesium by activation analysis. G. J. Atchison and W. H. Beamer. bibliog Anal Chem 24:1812-15 N '52

Separation of high specific activity sodium^{22} from large quantities of magnesium. V. J. Linnenbom. J Chem Phys 20:1657-8 O '52

Finishing

Finishing magnesium; you can get better results with these simple rules. Iron Age 171:138-9 F 19 '53

Fire hazards

Built to burn; National fire protection association issues pamphlet, Standards for magnesium. il Nat Safety N 66:46 N '52

Magnesium hazards. Safety Maint & Prod 104:56-8 N '52

Safety at Dominion Magnesium with particular reference to the handling of molten metal. D. J. McPhail. flow sheet il Can Min J 74:87-9 S '53

Isotopes

Absolute determination of resonant energies for the radiative capture of protons by boron, carbon, fluorine, magnesium, and aluminum in the energy range below 500 kev. S. E. Hunt and W. M. Jones. diag Phys R 89:1283-7 Mr 15 '53

Beta-spectrum of Mg^{28}. L. Marquez. Phys R 90:330-1 Ap 15 '53

Decay of Mg^{28}. A. H. Wapstra and A. L. Veenendaal. bibliog Phys R 91:426 Jl 15 '53

Decay scheme of magnesium 28. R. K. Sheline and N. R. Johnson. bibliog diag Phys R 90:325 Ap 15 '53

Energy levels in magnesium, vanadium, chromium, and manganese. H. J. Hausman and others. bibliog Phys R 88:1296-9 D 15 '52

Energy levels in Si^{28} excited by alpha-particles on Mg^{24}. S. G. Kaufman and others. Phys R 88:673-6 N 1 '52

Gamma-rays from Mg^{26}. J. E. May and B. P. Foster. bibliog diags Phys R 90:243-7 Ap 15 '53

Internal pair conversion in Mg^{24}. S. D. Bloom. bibliog diags Phys R 88:312-21 O 15 '52

Levels of Al^{25} from the Mg$^{24}(d,n)$Al^{25} reaction. E. Goldberg. bibliog Phys R 89:760-5 F 15 '53

New long-lived magnesium-28 isotope. R. K. Sheline and N. R. Johnson. Phys R 89: 520-1 Ja 15 '53

New nuclides produced in chlorine spallation. M. Lindner. Phys R 91:642-4 Ag 1 '53

Nuclear gamma-rays from low energy proton bombardment of sodium, magnesium, and aluminum. H. Casson. bibliog diags Phys R 89:809-20 F 15 '53

Preliminary experiments using Mg^{28} as a tracer with chlorophylls, plants, and their extracts. R. S. Becker and R. K. Sheline. diag J Chem Phys 21:946-7 My '53

Preparation of magnesium targets from MgO. L. N. Russell and others. R Sci Instr 23: 764 D '52

Synchrocyclotron production and properties of magnesium 28. J. W. Jones and T. P. Kohman. Phys R 90:495-6 My 1 '53

Triton-induced activities in magnesium and aluminum. E. Iwersen and others. Phys R 91:1229-31 S 1 '53

Metallography

Metallographic observations of the deformation of high-purity magnesium in creep at 500°F. A. R. Chaudhuri and others. bibliog il J Metals 5:Trans 712-16 sec 2 My '53

Protection

Anticorrosive primers; pigments and vehicles applicable to magnesium. A. L. Alexander and others. bibliog il Ind & Eng Chem 44: 2409-14 O '52

Developments to watch. Product Eng Hdbk p C33 '53

Getting the most from HAE coatings. M. Frager and H. A. Evangelides. il Metal Prog 62:81-4 S '52; Same cond. Product Eng 23:278-80+ D '52

Magnesium finishes for aircraft evaluated. H. D. Childers. il diags Iron Age 170:157-61 D 4 '52

Organic finishes for aluminum and magnesium aircraft alloys; abstract. A. E. Mallory. Metal Prog 63:108 Je '53

Protective finish for magnesium; Iridite no. 15. Metal Finishing 51:84+ My '53

Recent developments in protective coatings. A. G. Gray. il Metal Prog 62:90-3 N '52

Wear characteristics of magnesium. E. L. Schaper. il S A E J 61:37-9 Ag '53

Welding

Resistance welding of dissimilar metals to magnesium for electrical connections. P. Klain and H. W. Croisant. il Welding J 32: 217-24 Mr '53

Spot welding of magnesium with three-phase low frequency equipment. P. Klain and others. il Welding J 32:7-18 Ja '53; Discussion. J. J. Riley. 32:323 Ap '53

MAGNESIUM acetate

Activities of aqueous magnesium and barium acetate solutions at 25°. R. H. Stokes. Am Chem Soc J 75:3856-7 Ag 5 '53

MAGNESIUM alloys

Acoustic wave velocities, elastic constants, and Debye characteristic temperature for polycrystalline MgCd. C. S. Smith and W. E. Wallace. J Chem Phys 21:1120 Je '53

Brillouin zone investigation of Mg alloys; Hall effect and conductivity. A. I. Schindler and E. I. Salkovitz. bibliog diags Phys R 91:1320-2 S 15 '53

Designations and applications of chemical and electrochemical treatments for magnesium alloys; engineering file facts. Materials & Methods 37:121 Ja '52

Effect of temperature on the high-temperature strength of alloys in the aluminum-magnesium system; abstract. I. I. Kornilov and L. I. Pryakhina. Metal Prog 64:140+ Ag '53

Magnesium as a wear resistant metal. E. L. Schaper. il Materials & Methods 38:120-3 O '53

MAGNESIUM alloys—*Continued*

Magnesium-cadmium alloys; the cadmium-rich alloys; some lattice parameters and phase relationships between 24 and 300°; structure of the $MgCd_3$ superlattice; Schottky defects and the anomalous entropy. D. A. Edwards, W. E. Wallace and R. S. Craig. bibliog Am Chem Soc J 74: 5256-61 N 5 '52

Magnesium casting alloys containing zirconium. F. P. Strieter. bibliog il Metal Prog 63:75-82 Mr '53

Magnesium; direct extrusion of alloys. J. Alico. bibliog il Light Metal Age 11:10-11+ Ap '53

Magnesium-rare earth casting alloys. J. C. McDonald. il J Metals 4:242-4 Mr '52; Same cond. Product Eng Hdbk p B 14-15 '53

Magnesium-rich side of the magnesium-zirconium constitution diagram. J. H. Schaum and H. C. Burnett. il diags J Res Nat Bur Stand 49:155-62 S '52

New aluminum-magnesium metals highly corrosion resistant. Iron Age 170:196-7 D 4 '52

Sheet magnesium problem licked. il diag Aviation W 58:40 Ja 12 '53

Analysis

Comparison of some simple condensed spark circuits in the spectrographic analysis of aluminium and magnesium alloys and pure magnesium. E. C. Mills and S. E. Hermon. Metallurgia 46:213-15 O '52

Determination of hydrogen in magnesium, lithium, and magnesium-lithium alloys. M. W. Mallett, A. F. Gerds and C. B. Griffith. il diags Anal Chem 25:116-19 Ja '53

Gravimetric determination of thorium and rare earth elements in magnesium alloys. G. B. Wengert and others. bibliog Anal Chem 24:1636-8 O '52

Semi-quantitative spot test for tin in magnesium and aluminium alloys. J. Clark and W. Stross. Metallurgia 46:215-16+ O '52

Testing

Aluminum-six per cent magnesium alloys for elevated-temperature service. L. W. Eastwood and others. Am Soc T M Proc 50: 1013-34 '50

Magnesium-cerium cast alloys for elevated-temperature service. K. Grube and L. W. Eastwood. bibliog il diags Am Soc T M Proc 50:989-1010; Discussion. 1011-12 '50

Magnesium-cerium wrought alloys for elevated-temperature service. K. Grube and others. il diags Am Soc T M Proc 50:965-88 '50

Stress and plastic strain relations of a magnesium alloy. A. E. Johnson and N. E. Frost. diag Engineer 194:713-19 N 28 '52

MAGNESIUM aluminate

See also
Spinels

MAGNESIUM association

Annual meeting, 8th, New York, Nov. 10-11. Am Mach 96:178 N 24 '52

Annual meeting, 8th, New York, Nov. 10-11; with abstracts of papers. Light Metal Age 10:18-21 D '52

Annual meeting, 8th, New York; with abstracts of papers. Automotive Ind 107:74+ D 15 '52

MAGNESIUM bromide

Aldol type condensation of ketones and esters in the presence of diethylaminomagnesium bromide and related compounds. K. Sisido, H. Nozaki and O. Kurihara. bibliog Am Chem Soc J 74:6254-6 D 20 '52

Rearrangement of 9α,11α-oxido-$\Delta^{7,22}$-ergostadiene-3β-ol acetate with magnesium bromide. W. E. Bachmann, J. P. Horwitz and R. J. Warzynski. bibliog Am Chem Soc J 75:3268-9 Jl 5 '53

MAGNESIUM carbonate

See also
Dolomite

MAGNESIUM compounds

Bromomagnesium salts of dialkyl phosphites as intermediates in the synthesis of substituted hydroxymethyl phosphonic acid esters. O. Gawron and others. bibliog Am Chem Soc J 75:3591-2 Jl 20 '53

MAGNESIUM fluoride

Fluoride model systems; the binary systems CaF_2-BeF_2, MgF_2-BeF_2, and LiF-MgF_2. W. E. Counts and others. bibliog Am Cer Soc J 36:12-17 Ja 1 '53

MAGNESIUM founding

Application of shell molding to the production of magnesium castings; abstract. Metal Prog 64:270+ O '53

Casting magnesium in shell molds. N. Sheptah. Automotive Ind 109:111+ Jl 1 '53

Grain refinement of magnesium castings; use of hexachlorobenzene as a grain refining agent. R. T. Wood. il Foundry 81:98-9+ F '53

Large magnesium castings for the air-frame industry; abstract. R. H. Osbrink. Light Metal Age 10:19-20 D '52

Light metals; American foundrymen's society annual meeting, Chicago; abstracts of papers. Foundry 81:159-60+ Je '53

Magnesium association 8th annual meeting, New York, Nov. 10-11. Foundry 81:206+ Ja '53

Magnesium castings. T. E. Leontis and H. E. Elliott. il Foundry 81:146-9 My '53

Magnesium-rare earth casting alloys. J. C. McDonald. il J Metals 4:242-4 Mr '52; Same cond. Product Eng Hdbk p B 14-15 '53

Rapid advances made in casting light-metal alloys; Rolle mfg. co. J. H. Hall. il Foundry 81:114-17+ Je '53

Recent developments open new fields for magnesium castings. il Materials & Methods 37:9+ Ja '53

Tolerances and specifications for aluminum and magnesium castings. W. D. Stewart. Machine Design 25:284+ Ja '53

MAGNESIUM hydroxide

Catalysis by $Cu(OH)_2$; inhibition by magnesium hydroxide; abstract. J. D'Ans and J. Mattner. Chem Age (Lond) 67:805 D 13 '52

MAGNESIUM industry and trade

Statistics

Magnesium production and consumption, prices and scrap recovery; tabulations. Iron Age 171:422-3 Ja 1 '53

MAGNESIUM metallurgy

Electrolytic refining of magnesium may discharge chlorine, hydrochloric acid, and sulfur dioxide to the atmosphere. L. C. McCabe. Ind & Eng Chem 44:sup 123A-4A+ O '52

MAGNESIUM oxide. See Magnesia

MAGNESIUM oxychloride cement. See Cement—Magnesium oxychloride cement

MAGNESIUM phosphate

Free energy of formation of magnesium phosphate. J. B. Bookey. bibliog Iron & Steel Inst J 172:66-8 S '52

MAGNESIUM silicates

High temperature heat contents of magnesium orthosilicate and ferrous orthosilicate. R. L. Orr. bibliog Am Chem Soc J 75:528-9 F 5 '53

MgO—Al_2O_3—SiO_2—H_2O system and the related metamorphic facies. H. S. Yoder, jr. il diags Am J Sci Bowen vol p569-627 bibliog(p625-7) '52

See also
Forsterite

Analysis

Effect of moisture on the chromatographic properties of a synthetic hydrated magnesium silicate. M. L. Wolfrom and others. bibliog Anal Chem 24:1670-1 O '52

MAGNESIUM sulfate

Production of fertilizer from phosphate rock by fusion with magnesium and potassium sulfates. G. L. Bridger and D. R. Boylan. bibliog flow sheet il Ind & Eng Chem 45: 646-52 Mr '53

MAGNESIUM titanates

Low temperature heat capacities and entropies at 298.16°K. of magnesium orthotitanate and dititanate. S. S. Todd. bibliog Am Chem Soc J 74:4669-70 S 20 '52

MAGNESOL. See Magnesium silicates

MAGNETIC amplifiers. See Amplifiers

MAGNETIC anisotropy. See Magnetic properties

MAGNETIC brakes. See Brakes, Magnetic

MAGNETIC chucks. See Chucks, Magnetic

MAGNETIC clutches. See Clutches, Magnetic

MAGNETIC field

Arc interruption phenomena in a magnetic field at altitude; abstract. J. P. Dallas. Elec Eng 72:770 S '53

Conductivity of thin films in a longitudinal magnetic field. E. Koenigsberg. diags Phys R 91:8-9 Jl 1 '53

Debunching of electron beams constrained by strong magnetic fields. M. Chodorow and others. diag Inst Radio Eng Proc 41:999-1003 Ag '53

Double focusing of charged particles with a wedge-shaped, non-uniform magnetic field. R. M. Sternheimer. R Sci Instr 23:629-34 N '52

Electromagnetokinetic phenomenon involving migration of neutral particles. A. Kolin. diags Science 117:134-7 F 6 '53

Field theory. F. J. Dyson. il diag Sci Am 188:57-62+ Ap '53

Flow over thick plate with circular hole. W. R. Smythe. diag J Ap Phys 23:447-52 Ap '52

Forces acting on superconductors in magnetic fields. I. Šimon. bibliog il diags J Ap Phys 24:19-24 Ja '53

Free energies and phase transition of a cylindrical superconductor. P. M. Marcus. bibliog diags Phys R 88:373-81 O 15 '52

Hall effect modulators and gyrators employing magnetic field independent orientations in germanium. W. P. Mason and others. il diags J Ap Phys 24:166-75 F '53

Integrable case of electron motion in electric and magnetic field. H. Poritsky and R. P. Jerrard. diags J Ap Phys 23:928-30 Ag '52

Magnetic force welding. M. Zucker and G. Cubitt-Smith. il diags Welding J 31:1141-53 D '52

Momentum determination from cloud-chamber photographs in axially symmetrical magnetic fields. A. M. Cormack. diag R Sci Instr 24:232 Mr '53

Nuclear radiofrequency spectra of D_2 and H_2 in intermediate and strong magnetic fields. N. J. Harrick and others. bibliog Phys R 90:260-6 Ap 15 '53

Quenching of *ortho*-positronium decay by a magnetic field. J. Wheatley and D. Halliday. Phys R 88:424 O 15 '52

Radiation of a high energy electron in a constant magnetic field. M. Neuman. bibliog Phys R 90:682-9 My 15 '53

Some magnetization studies of Cr^{+++}, Fe^{+++}, Gd^{+++}, and Cu^{++} at low temperatures and in strong magnetic fields. W. E. Henry. bibliog Rs Mod Phys 25:163-4 Ja '53

Spin paramagnetism of Cr^{+++}, Fe^{+++}, and Gd^{+++} at liquid helium temperatures and in strong magnetic fields. W. E. Henry. bibliog diag Phys R 88:559-62 N 1 '52

Theory of magnetic effects on the noise in a germanium filament. H. Suhl. il Bell System Tech J 32:647-64 My '53

See also

Betatron
Cyclotron
Electric field
Magnets
Sound—Recording and reproducing—Magnetic recording
Zeeman effect

MAGNETIC induction

Measurement of turbulent velocity fluctuations by the method of electromagnetic induction. L. M. Grossman and A. F. Charwat. il diags R Sci Instr 23:741-7 D '52

MAGNETIC instruments

Apparatus for the simultaneous determination of adsorption isotherms and magnetic susceptibility. W. A. Milligan and H. B. Whitehurst. il diag R Sci Instr 23:618-20 N '52

Design for air core magnetic lens coils. M. S. Freedman and others. diag R Sci Instr 23:571-2 O '52

Determining the position of reinforcement in concrete; Covermeters. il Engineering 175:640 My 15 '53

Magnetic potential divider. G. Hinman and F. Crane. diags R Sci Instr 23:438-40 Ag '52

Magnetic transient recorder for radiation pulses. J. Racker. il diags Tele-Tech 12:92-4 Je '53

Magnetic weighing and gas-density balances. J. H. Simons and others. diags R Sci Instr 24:36-42 Ja '53

Nuclear resonance spectrometer. L. Malling. il diags Electronics 26:184-7 Ap '53

Simplified method for the absolute calibration of velocity gauges. D. S. Cohen. diag R Sci Instr 24:74-5 Ja '53

See also

Fluxmeters
Magnetic measurements
Magnetometers
Permeameters

MAGNETIC lenses

Double focusing of charged particles with a wedge-shaped, non-uniform magnetic field. R. M. Sternheimer. R Sci Instr 23:629-34 N '52

MAGNETIC materials

Approach to saturation in dilute ferromagnetics. A. D. Franklin and A. E. Berkowitz. Phys R 89:1171 Mr 15 '53

Behavior of rectangular hysteresis loop magnetic materials under current pulse conditions. E. A. Sands. diags Inst Radio Eng Proc 40:1246-50 O '52

Butterfly curve tracer for magnetic materials. G. M. Ettinger. bibliog il diags Electronics 26:119-21 Mr '53

Catalysis of *cis-trans* isomerization by paramagnetic substances. H. McConnell. bibliog J Chem Phys 20:1043-4 Je '52

Core materials for small transformers. C. C. Horstman. il Tele-Tech 11:40-2+ O '52

Development of mechanical and magnetic hardness in a ten per cent V-Co-Fe alloy. R. W. Fountain and J. F. Libsch. bibliog il J Metals 5:Trans 349-56 sec 2 F '53

Ferromagnetic alloys in the system copper-manganese-indium. R. R. Grinstead and D. M. Yost. bibliog il diags Am Chem Soc J 75:1803-9 Ap 20 '53

Grain-oriented iron-silicon alloys. G. H. Cole. bibliog il Elec Eng 72:411-16 My '53

High-frequency calibration of magnetic materials. Franklin Inst J 254:534-6 D '52; Same. il Elec Eng 72:95-6 Ja '53; Same cond. Tele-Tech 12:79+ Ja '53

Increase of high magnetostriction by magnetic anneal. H. E. Stauss and G. Sandoz. bibliog J Metals 4:Trans 1342-3 D '52

Magnetic ceramics; ferrites; the latest in magnetic materials for r.f. F. E. Vinal. il Q S T 37:44-6 F '53

Magnetic material from aluminum and iron; 16-Alfenol. Electronics 26:222+ Ag '53; Mech Eng 75:400 My '53; Materials & Methods 38:170+ Jl '53

Magnetic materials. G. H. Stearley. bibliog il diags Materials & Methods 37:115-30 Ap '53 (reprints 25c)

New demands lead to new directions in engineering materials; materials with better electrical properties. T. C. Du Mond. il Materials & Methods 37:72-4 Je '53

New magnet materials; Bismanol and Ferroxdure. E. M. Underhill. Electronics 26:198+ Je '53

Papers and pertinent discussions presented at the Washington conference on magnetism, University of Maryland, Sept. 2-6, 1952. bibliog Rs Mod Phys 25:1-351 Ja '53

Permanent magnetic properties in 18-8 obtained by cold working. S. Storchheim. Iron Age 171:140-2 F 12 '53

Powdered magnetic cores. W. J. Polydoroff. bibliog il Tele-Tech 12:69-71+ F '53

Preparation in sheet form of large single crystals of silicon-iron of predetermined orientation for magnetic purposes. R. G. Martindale and D. A. Langford. bibliog il diags Inst E E Proc 100 pt 2:417-26 Ag '53

Properties and heat treatment of diffusion hardening permanent magnet alloys; tabulations; engineering file facts. K. Hoselitz. Materials & Methods 37:135 Ap '53

Radio progress during 1952; magnetics. bibliog Inst Radio Eng Proc 41:492-3 Ap '53

Sintering of ultrafine ferromagnetic powders. N. I. Ananthanarayanan and J. F. Libsch. bibliog J Metals 5:Trans 79-80 Ja '53

MAGNETIC materials—*Continued*

Special magnetic materials in wow meter. il Product Eng 23:222 O '52

Theory of the microwave permeability tensor and Faraday effect in nonsaturated ferromagnetic materials. G. T. Rado. Phys R 89:529 Ja 15 '53

Tiny Alnico magnet built into tv electron gun tube. il Iron Age 171:178 Ap 2 '53

You'll be getting better electrical sheet and strip; highly oriented polycrystalline-silicon steel with the same characteristics of a single crystal. N. P. Goss. il diags Iron Age 171:147-52+ F 5 '53

See also

Alnico
Iron
Iron alloys
Magnets
Manganese alloys
Steel alloys

Testing

Microradiography of permanent magnet alloys. H. J. Goldschmidt. il Metallurgia 47: 215-20 Ap '53

Testing; high frequency magnet properties. il Product Eng 23:197-8 N '52; Electronics 25:212+ D '52

MAGNETIC measurements

Analysis of measurements on magnetic ferrites. C. D. Owens. bibliog il diags Inst Radio Eng Proc 41:359-65 Mr '53

Bridged tee detector for nuclear magnetic resonance. C. E. Waring and others. il diags R Sci Instr 23:497-8 S '52

Frequency stabilization of apparatus for the measurement of paramagnetic resonance absorption. J. M. Hirshon and others. bibliog R Sci Instr 23:772 D '52

Magnetic analog for the interaction of dislocation loops. E. W. Hart. J Ap Phys 24: 224-5 F '53

Method of winding coreless soils of small diameter. H. Preston-Thomas. R Sci Instr 23:645-6 N '52

Papers and pertinent discussions presented at the Washington conference on magnetism, University of Maryland, Sept. 2-6, 1952. bibliog Rs Mod Phys 25:1-315 Ja '53

See also

Fluxmeters
Magnetic permeability
Magnetic susceptibility
Magnetic testing
Magnetometers
Permeameters
Potentiometers

MAGNETIC moment

Anomalous magnetic moment of the electron. S. H. Koenig and others. bibliog diags Phys R 88:191-9 O 15 '52

Determination of $g_J(^2S_{1/2})$ of potassium in terms of the proton gyromagnetic ratio. P. Franken and S. Koenig. bibliog Phys R 88:199-201 O 15 '52

Deviations from Brillouin's free-spin theory in manganese fluosilicate. R. C. O'Rourke. bibliog diag Phys R 90:786-90 Je 1 '53

Deviations from *LS* coupling in the spheroidal core nuclear model. J. P. Davidson and E. Feenberg. bibliog Phys R 89:856-63 F 15 '53

Effects of departures from the single particle model on nuclear magnetic moments. A. de-Shalit. bibliog Phys R 90:83-6 Ap 1 '53

Exchange magnetic moments of nuclei with almost closed shells of nucleons. R. W. Cole. bibliog Phys R 89:883-4 F 15 '53

g Factor of ferrites. T. Okamura and others. bibliog Phys R 88:1425-6 D 15 '52

Ground state hyperfine structure and nuclear magnetic moment of praseodymium. H. Lew. Phys R 89:530 Ja 15 '53

Gyromagnetic ratio of supermalloy. G. G. Scott. Phys R 89:618 F 1 '53

Hyperfine structure and nuclear moments of Pr^{141}. H. Lew. bibliog diags Phys R 91: 619-30 Ag 1 '53

Inner bremsstrahlung and the magnetic moment of the neutrino. E. J. Hellund. bibliog Phys R 90:721 My 15 '53

Inner bremsstrahlung and the magnetic moment of the neutrino. J. Weneser. Phys R 91:1025-6 Ag 15 '53

Interaction moment contributions to magnetic moments of nuclei. A. Russek and L. Spruch. bibliog Phys R 87:1111-17 S 15 '52

Magnetic moment of the helium atom in the metastable triplet state. V. Hughes and others. bibliog diags Phys R 91:828-41 Ag 15 '53

Magnetic moments of odd-odd nuclei and the strong spin-orbit coupling shell model. H. M. Schwartz. bibliog Phys R 89:1293-4 Mr 15 '53

Magnetic moments of Si^{29}, S^{33}, Zn^{67}, As^{75}, Se^{77}, Te^{123}, and Te^{125}. H. E. Weaver, jr. bibliog il diags Phys R 89:923-30 Mr 1 '53

Magnetic saturation and apparent molecular fields of $MnCl_2{\cdot}4H_2O$. W. E. Henry. bibliog Phys R 90:492 My 1 '53

Method for determining magnetic moments and for measuring susceptibilities and permeabilities. S. J. Barnett. diag J Ap Phys 23:975-6 S '52

Nuclear gyromagnetic ratios. Yu Ting and D. Williams. bibliog Phys R 89:595-6 F 1 '53

Nuclear magnetic moment of Cr^{53} and Sr^{87}. C. D. Jeffries and P. B. Sogo. Phys R 91:1286 S 1 '53

Nuclear magnetic moment of Pr^{141} from the hyperfine structure of Pr II. P. Brix. bibliog Phys R 89:1245-6 Mr 15 '53

Nuclear moments of Ta^{181}. B. M. Brown and D. H. Tomboulian. bibliog diags Phys R 88: 1158-62 D 1 '52

Number theory and the magnetic properties of an electron gas. M. F. M. Osborne. bibliog diags Phys R 88:438-51 N 1 '52

Pair creation in intermediate coupling theory. R. G. Moorhouse. bibliog diags Phys R 89:958-65 Mr 1 '53

Perturbations of atomic *g* values. M. Phillips. bibliog Phys R 88:202-5 O 15 '52

Relativistic contribution to the magnetic moment of $^3S_1$ helium. W. Perl and V. Hughes. bibliog Phys R 89:886-7; 91:842-52 F 15, Ag 15 '53

Relativistic contributions to the magnetic moment of *n*-electron atoms. W. Perl. bibliog Phys R 91:852-8 Ag 15 '53

Relativistic corrections to magnetic moments of nuclear particles. G. Breit and R. M. Thaler. Phys R 88:1214-15 D 1 '52

Relativistic corrections to the magnetic moments of nuclear particles. G. Breit and R. M. Thaler. bibliog Phys R 89:1177-86 Mr 15 '53

Rotational magnetic moment, magnetic susceptibilities, and electron distribution in the hydrogen molecule. N. J. Harrick and N. F. Ramsey. bibliog Phys R 88: 228-32 O 15 '52

Spin and magnetic moment of Ca^{43}. C. D. Jeffries. Phys R 90:1130 Je 15 '53

Studies in co-ordination chemistry; magnetic moments and bond types of transition-metal complexes. F. H. Burstall and R. S. Nyholm. Chem Soc J p3570-9 S '52

MAGNETIC permeability

Eddy-currents in solid cylindrical cores having non-uniform permeability. H. Aspden. diags J Ap Phys 23:523-8 My '52

Measurement of permeability tensor in ferrites. J. O. Artman and P. E. Tannenwald. il Phys R 91:1014-15 Ag 15 '53

Measurements of magnetic permeability; discussion. Inst E E Proc 100 pt 2:259-60 Je '53; Same cond. Elec J 150:373-4 Ja 30 '53; Excerpts. Elec R (Lond) 152:257-8 Ja 30 '53

Method for determining magnetic moments and for measuring susceptibilities and permeabilities. S. J. Barnett. diag J Ap Phys 23:975-6 S '52

Method of measuring the magnetic permeability of rod specimens. H. Aspden. diags J Sci Instr 29:371-4 N '52

Permeability of silicon-iron at very low flux densities; abstract. E. Both. Elec Eng 72: 797 S '53

See also

Permeameters

MAGNETIC properties

Anisotropy in the paramagnetic resonance spectrum of peroxylamine disulfonate ion. S. I. Weissman and D. Banfill. bibliog Am Chem Soc J 75:2534 My 20 '53

MAGNETIC properties—*Continued*

Anomalous behavior of the *g* factor of FeCr spinels as a function of temperature. J. S. van Wieringen. Phys R 90:488 My 1 '53

Anomalous magnetic resonance absorption of copper acetate at 40 kMc/sec. H. Abe and J. Shimada. diag Phys R 90:316 Ap 15 '53

Anomalous paramagnetism of copper sulfate pentahydrate. W. E. Henry. Phys R 87:1133 S 15 '52

Antiferromagnetic resonance above the Curie temperature. R. K. Wangsness. bibliog Phys R 89:142-4 Ja 1 '53

Application of the theory of numbers to the magnetic properties of a free electron gas. M. C. Steele. bibliog Phys R 88:451-64 N 1 '52

Calculation of the half-widths of one-body resonances. J. L. Johnson and J. L. McHale. bibliog Phys R 91:87-9 Jl 1 '53

Chlorine pure quadrupole resonances. D. W. McCall and H. S. Gutowsky. J Chem Phys 21:1300 Jl '53

Complicated domain patterns on iron-silicon single crystals. C. F. Ying and others. il J Ap Phys 23:1399-45 D '52

Concept of spin-lattice relaxation in ferromagnetic materials. P. W. Anderson. Phys R 88:1214 D 1 '52

Crystalline field in chrome alum. W. H. Kleiner. bibliog J Chem Phys 20:1784-91 N '52

Cyclotron resonances, magnetoresistance, and Brillouin zones in semiconductors. W. Shockley. diags Phys R 90:491 My 1 '53

Dipolar broadening of magnetic resonance lines in magnetically diluted crystals. C. Kittel and E. Abrahams. Phys R 90:238-9 Ap 15 '53

Dipolar broadening of the quadrupole resonance line width in zero applied field. A. Abragam and K. Kambe. bibliog Phys R 91:894-7 Ag 15 '53

Domain properties in $BaTiO_3$. W. J. Merz. il diags Phys R 88:421-2 O 15 '52

Domain structure of Rochelle salt and Kh_2PO_4. T. Mitsui and J. Furuichi. bibliog il diags Phys R 90:193-302 Ap 15 '53

Electron distribution in molecules; proton and fluorine magnetic resonance shifts in the halomethanes. L. H. Meyer and H. S. Gutowsky. bibliog il J Phys Chem 57:481-6 My '53

Electron distribution in triphenylmethyl; hyperfine structure of the paramagnetic resonance absorption of $(C_6H_5)_3C^{13}$. S. I. Weissman and J. C. Sowden. Am Chem Soc J 75:503 Ja 20 '53

Energy absorption in ferromagnetic resonance. J. A. Young, jr. and E. A. Uehling. Phys R 90:990-1 Je 1 '53

Evidence for domain structure in antiferromagnetic CoO from elasticity measurements. M. E. Fine. Phys R 87:1143 S 15 '52

Hyperfine structure in the paramagnetic resonance of the ion $(SO_3)_2NO^{--}$. J. Townsend and others. Phys R 89:606 F 1 '53

Intensities of nuclear magnetic resonances in cubic crystals. G. D. Watkins and R. V. Pound. Phys R 89:658 F 1 '53

Interatomic electric quadrupole-quadrupole coupling in salts of cerium. R. Finkelstein and A. Mencher. bibliog J Chem Phys 21:472-9 Mr '53

Investigation of proton magnetic resonance line width of sorbed water. T. M. Shaw and R. H. Elsken. bibliog J Chem Phys 21:565-6 Mr '53

Low frequency resonances in the spectra of diatomic molecules. R. E. Coté and P. Kusch. bibliog Phys R 90:103-10 Ap 1 '53

Magnetic analysis of the deuteron-beryllium reactions. R. W. Gelinas and S. S. Hanna. bibliog diags Phys R 89:483-8 Ja 15 '53

Magnetic analysis of the $F^{19}(d,p)F^{20}$ and $F^{19}(d,\alpha)O^{17}$ reactions. H. A. Watson and W. W. Buechner. bibliog Phys R 88:1324-31 D 15 '52

Magnetic analysis of the $Sr^{88}(d,p)Sr^{89}$ reaction. C. E. McFarland and F. B. Shull. Phys R 89:489 Ja 15 '53

Magnetic anisotropy of cellulosic materials. L. Loeb and L. A. Welo. bibliog diags Textile Res J 23:251-7 Ap '53

Magnetic anisotropy of the iron-group fluorides. J. W. Stout and L. M. Matarrese. bibliog diags Rs Mod Phys 25:338-43 Ja '53

Magnetic crystal anistropy and magnetostriction of iron-nickel alloys. R. M. Bozorth and J. G. Walker. bibliog Phys R 89:624-8 F 1 '53

Magnetic properties and structure of copper laurate. A. Gilmour and R. C. Pink. Chem Soc J p2198-201 Ag '53

Magnetic properties of adsorbed vapors. W. O. Milligan and H. B. Whitehurst. bibliog J Phys Chem 56:1073-7 D '52

Magnetic properties of some anhydrous chlorides. N. Elliott. bibliog J Chem Phys 21:890-1 My '53

Magnetic resonance. K. K. Darrow. bibliog il diags Bell System Tech J 32:74-99, 384-405 Ja-Mr '53

Magnetic resonance absorption in conductors. N. Bloembergen. bibliog J Ap Phys 23:1383-9 D '52

Magnetic resonance spectrum of a linear three-spin system; the configuration of the bifluoride ion. J. S. Waugh, F. B. Humphrey and D. M. Yost. bibliog J Phys Chem 57:486-90 My '53

Magnetoresistance effect in InSb. G. L. Pearson and M. Tanenbaum. bibliog Phys R 90:153 Ap 1 '53

Magnetoresistance of bismuth crystals at low temperatures. P. B. Alers and R. T. Webber. bibliog Phys R 91:1060-5 S 1 '53

Nuclear hyperfine structure of Mn^{++}. M. Sachs. bibliog Phys R 90:1058-60 Je 15 '53

Nuclear magnetic resonance experiment on a four-proton system in a single crystal of $K_2HgCl_4 \cdot H_2O$. J. Itoh and others. diags J Chem Phys 20:1503-4 S '52; Correction. 21:190 Ja '53

Nuclear magnetic resonance in metals; broadening of absorption lines by spin-lattice interactions. H. S. Gutowsky and B. R. McGarvey. J Chem Phys 20:1472-7 S '52

Nuclear magnetic resonance in solid hydrogen. F. Reif and E. M. Purcell. bibliog il diags Phys R 91:631-41 Ag 1 '53

Nuclear magnetic resonance in thallium compounds. H. S. Gutowsky and B. R. McGarvey. bibliog diag Phys R 91:81-6 Jl 1 '53

Nuclear magnetic resonance measurements of selenium. H. E. Walchli. Phys R 90:331-2 Ap 15 '53

Nuclear magnetic resonance modulation correction. E. R. Andrew. Phys R 91:425 Jl 15 '53

Nuclear magnetic resonance multiplets in liquids. H. S. Gutowsky and others. bibliog il diag J Chem Phys 21:279-92 F '53

Nuclear magnetic resonance of aligned radioactive nuclei. N. Bloembergen and G. M. Temmer. bibliog Phys R 89:883 F 15 '53

Nuclear magnetic resonance splittings in weak fields. W. E. Quinn and R. M. Brown. J Chem Phys 21:1605-6 S '53

Nuclear quadrupole resonance in rhombic sulfur and the quadrupole moments of S^{33} and S^{35}. H. G. Dehmelt. bibliog Phys R 91:313-14 Jl 15 '53

Nuclear quadrupole resonance of bromine in molecular solids. S. Kojima and others. J Chem Phys 21:1415-16 Ag '53

Nuclear resonance modulation correction. M. M. Perlman and M. Bloom. Phys R 88:1290-1 D 15 '52

Nuclear spin of V^{50} by paramagnetic resonance. C. Kikuchi and others. il Phys R 88:142-3 O 1 '52

Papers and pertinent discussions presented at the Washington conference on magnetism, University of Maryland, Sept. 2-6, 1952. bibliog Rs Mod Phys 25:1-351 Ja '53

Paramagnetic effect in superconductors. T. S. Teasdale and H. E. Rorschach, jr. Phys R 90:709 My 15 '53

Paramagnetic resonance absorption in additively colored crystals of alkali halides. C. A. Hutchison, jr. and G. A. Noble. bibliog Phys R 87:1125-6 S 15 '52

Paramagnetic resonance absorption in salts of V and Mn. C. A. Hutchison, jr. and L. S. Singer. bibliog diags Phys R 89:256-62 Ja 1 '53

MAGNETIC properties—*Continued*

- Paramagnetic resonance absorption in solutions of potassium in liquid ammonia. C. A. Hutchison, jr. bibliog diags J Phys Chem 57:546-53 Je '53
- Paramagnetic resonance absorption of free radicals. T. L. Chu and others. bibliog J Phys Chem 57:504-7 My '53
- Paramagnetic resonance in copper acetate at 47 000 mc/sec. T. Okamura and others. Phys R 89:525 Ja 15 '53
- Paramagnetic resonance in liquids. M. A. Garstens and S. H. Liebson. J Chem Phys 20:1647-8 O '52
- Paramagnetic resonance in manganese formate. D. J. E. Ingram. bibliog Phys R 90:711 My 15 '53
- Paramagnetic resonance in *N*- and *P*-type silicon. F. K. Willenbrock and N. Bloembergen. Phys R 91:1281 S 1 '53
- Paramagnetic resonance in phosphors. W. D. Hershberger and H. N. Leifer. bibliog diag Phys R 88:714-20 N 15 '52
- Paramagnetic resonance in the solid state. B. Bleaney. bibliog il diags J Phys Chem 57:508-17 My '53
- Paramagnetic resonance of manganese activated zinc orthosilicates. E. G. Spencer and others. bibliog J Chem Phys 20:1177-8 Jl '52
- Permalloy problem. R. M. Bozorth. bibliog Rs Mod Phys 25:42-8 Ja '53
- Poles of the *S* matrix for resonance reactions. M. Moshinsky. Phys R 91:984-5 Ag 15 '53
- Properties of the Cr^{+++} ion in the paramagnetic alums at low temperatures. R. P. Hudson. bibliog Phys R 88:570-2 N 1 '52
- Proton magnetic resonance line in liquid crystals. R. D. Spence and others. il J Chem Phys 21:380 F '53
- Pseudo-quadrupole effect for nuclei in molecules. N. F. Ramsey. Phys R 89:527 Ja 15 '53
- Rb^{87} and Cs^{133} magnetic resonance shifts in the solid halides. H. S. Gutowsky and B. R. McGarvey. J Chem Phys 21:1423-4 Ag '53
- Shape of exchange narrowed paramagnetic resonance lines. R. T. Weidner and C. A. Whitmer. Phys R 91:1279-80 S 1 '53
- Some magnetic properties of gadolinium metal. J. F. Elliott and others. bibliog Phys R 91:28-30 Jl 1 '53
- Some properties of superconductors below 1°K; Zr, Hf, Cd, and Ti. T. S. Smith and J. G. Daunt. bibliog Phys R 88:1172-6 D 1 '52
- Spin paramagnetism of Cr^{+++}, Fe^{+++}, and Gd^{+++} at liquid helium temperatures and in strong magnetic fields. W. E. Henry. bibliog diag Phys R 88:559-62 N 1 '52
- Spin-spin relaxation in ferromagnetic resonance. F. Keffer. Phys R 88:686-7 N 1 '52
- States of solid methane as inferred from nuclear magnetic resonance. K. Tomita. bibliog diags Phys R 89:429-38 Ja 15 '53
- Sublattice effects in magnetic resonance. R. K. Wangsness. bibliog Phys R 91:1085-91 S 1 '53
- Temperature variation of the paramagnetic resonance absorption of two free radicals. L. S. Singer and E. G. Spencer. J Chem Phys 21:939-40 My '53
- Theory of the magnetoresistive effect in semiconductors. V. A. Johnson and W. J. Whitesell. bibliog Phys R 89:941-7 Mr 1 '53
- Theory of the paramagnetism of uranyl-like ions. R. J. Elliott. bibliog Phys R 89:659-60 F 1 '53

See also

Diamagnetism
Magnetic permeability
Magnetic susceptibility
Magnetic testing

MAGNETIC recording. See Moving picture sound recording—Magnetic recording; Sound—Recording and reproducing—Magnetic recording

MAGNETIC resonance absorption. See Magnetic properties

MAGNETIC separators

- Basco sheet steel separator. il Blast F & Steel Pl 41:1092 S '53
- Electromagnetic separation of isotopes. il Engineering 175:475 Ap 10 '53
- Induced-roll magnetic separators now recovering staurolite. il Eng & Min J 153:108-9 D '52
- Magnetic separator recovers Alnico from grinder. il diag Electronics 26:228+ F '53
- Magnetic separators contribute to rubber reclaiming process. il Rubber Age 73:648 Ag '53
- Ridding iron ups standard output 20 per cent; Orange county ceramic tile mfg. co. il Cer Ind 60:72-3 Mr '53

MAGNETIC storms

- Effect of equatorial ring current on cosmic-ray intensity. S. B. Treiman. bibliog diag Phys R 89:130-3 Ja 1 '53
- Waboden diary; story of magnetic storms vs airborne geophysicists. M. Briggs-Smith. il Eng & Min J 154:84-7 Mr '53

MAGNETIC surveying

- Air surveys speed Canadian exploration. T. M. O'Malley. il map Pet Eng 25:B78+ F '53
- Improved magnetic method can avoid drilling failures. M. Milstein. maps World Oil 136:87-9+ Ja '53
- Waboden diary; story of magnetic storms vs airborne geophysicists. M. Briggs-Smith. il Eng & Min J 154:84-7 Mr '53

MAGNETIC susceptibility

- Accuracy of determination of the magnetic susceptibility of solids by the Gouy method. C. M. French and D. Harrison. Chem Soc J p2538-40 S '53
- Anisotropic susceptibility of polycrystalline graphite. W. P. Eatherly and J. D. McClelland. Phys R 89:661-2 F 1 '53
- Anomalous susceptibilities of three-membered ring compounds. J. R. Lacher and others. bibliog J Chem Phys 20:1047-8 Je '52
- Apparatus for the simultaneous determination of adsorption isotherms and magnetic susceptibility. W. A. Milligan and H. B. Whitehurst. il diag R Sci Instr 23:618-20 N '52
- De Haas-van Alphen effect in enriched tin isotopes. T. G. Berlincourt. bibliog Phys R 88:242-8 O 15 '52
- Detection of free radicals by means of paramagnetic resonance absorption; biradicals. C. A. Hutchison, jr. and others. bibliog J Chem Phys 20:1485-6 S '52
- Effect of sorption on the structure of surfaces of solids; magnetic susceptibility of sorbed NO_2-N_2O_4 on rutile; the stoichiometry of rutile. L. H. Reyerson and J. M. Honig. bibliog Am Chem Soc J 75:3920-2 Ag 20 '53
- Exchange coupling and the Curie-Weiss law. R. K. Wangsness. J Chem Phys 20:1656 O '52
- High temperature susceptibility of permanent dipole lattices. R. Rosenberg and M. Lax. bibliog diags J Chem Phys 21:424-8 Mr '53
- Magnetic study of polymerization retardation. J. L. Ihrig and H. N. Alyea. bibliog diag Am Chem Soc J 75:2917-21 Je 20 '53
- Magnetic susceptibilities of hydrogenated pyridine and quinoline solutions of cupric and nickelous acetate and salicylaldehyde. W. K. Wilmarth, M. K. Barsh and S. S. Dharmatti. Am Chem Soc J 74:5035-7 O 20 '52
- Magnetic susceptibility of a diamagnetic electron gas; the role of small effective electron mass. E. N. Adams, 2d. bibliog diags Phys R 89:633-48 F 1 '53
- Magnetic susceptibility of adsorbed paramagnetic salts. M. T. Rogers and R. V. Vennen. bibliog Am Chem Soc J 75:1751-2 Ap 5 '53
- Magnetic susceptibility of certain organic compounds; the constitution of *ortho*, *meta*, and *para* nitroanilines. H. Mikhail. bibliog J Chem Phys 21:1004-6 Je '53
- Magnetic susceptibility of colored potassium chloride from 1°K to 300°K. C. V. Heer and C. Rauch. bibliog Phys R 90:530-1 My 15 '53
- Magnetic susceptibility of liquid nitric oxide and the heat of dissociation of $(NO)_2$. A. L. Smith and H. L. Johnston. bibliog Am Chem Soc J 74:4696-8 S 20 '52
- Magnetic susceptibility of urania-thoria solid solutions. J. K. Dawson and M. W. Lister. Chem Soc J p5041-2 D '52

MAGNETIC susceptibility—*Continued*

Magnetochemistry of the heaviest elements; sodium plutonyl acetate. J. K. Dawson. Chem Soc J p2705-7 Jl '52

Method for determining magnetic moments and for measuring susceptibilities and permeabilities. S. J. Barnett. diag J Ap Phys 23:975-6 S '52

Parallel susceptibility of an antiferromagnet at low temperatures. J. R. Tessman. bibliog Phys R 88:1132-7 D 1 '52

Preliminary magnetic study of purple sulfur. T. Freund and others. J Chem Phys 21:180 Ja '53

Preparation and magnetic susceptibility of clathrate compounds of nitric oxide and of oxygen. D. F. Evans and R. E. Richards. Chem Soc J p3295-7 Ag '52

Relation between the de Haas-van Alphen effect and the magnetoresistance in bismuth. T. G. Berlincourt. Phys R 91:1277-8 S 1 '53

Rotational magnetic moment, magnetic susceptibilities, and electron distribution in the hydrogen molecule. N. J. Harrick and N. F. Ramsey. bibliog Phys R 88:228-32 O 15 '52

Studies in co-ordination chemistry; the magneto-chemistry of simple and complex fluorides of transition metals. R. S. Nyholm and A. G. Sharpe. Chem Soc J p3579-87 S '52

MAGNETIC tape

Bing's mirror to reflect in December; device for magnetic tape recording of video signals. il Electronics 26:8 F '53

F-m recording in guided missiles. A. A. Gerlach. il diags Electronics 26:108-11 Ja '53

How 3-M's crying letter upped response to 63 per cent; Minnesota Mining's recording tape for radio stations. il Sales Management 70:38-9 Mr 15 '53

Magnetic tape drive designed for minimum speed variation. E. S. Kinney. il diags Machine Design 25:219-21 O '53

Magnetic tape recording system for precision data; abstract. L. L. Fisher. Product Eng 24:308+ My '53

Manufacture of magnetic recording materials. E. Schmidt and E. W. Franck. il Soc Motion Picture & Tv Eng J 60:453-62 Ap '53

Methods of measuring surface induction of magnetic tape. J. D. Bick. diags Soc Motion Picture & Tv Eng J 60:516-25 Ap '53

Performance of high-output magnetic tape. L. B. Lueck and W. W. Wetzel. Electronics 26:131-2 Mr '53

XY toll ticketing system. H. L. Foote. il diag Elec Eng 72:517-22 Je '53

MAGNETIC tape recording. See Sound recording and reproducing—Magnetic recording

MAGNETIC testing

Accuracy of electromagnetic coating thickness measuring apparatus; abstract. J. H. Zaat. Metal Finishing 51:78-9 F '53

Development of a flaw detector for tubes. R. D. Kodis. il diags Am Soc T M Proc 50:1196-206 '50

Ferrite in austenitic steels estimated accurately; Aminco-Brenner Magne-Gage calibrated by means of iron powder-bakelite compacts. T. V. Simpkinson. il Iron Age 170:166-9 D 11 '52

Induced voltage flaw detector; patent. diags Electronics 26:208+ Ap '53

Magnaflux for quality control of pipe-line welds. G. L. C. Dehn. il diags Welding J 32:721-7 Ag '53

Metropolitan-Vickers permanent-magnet crack detector. J. W. Walley. il Engineering 176:5 Jl 3 '53

New flaw-detecting ink; Lumor. il Chem Age (Lond) 67:637 N 8 '52; Engineering 174:648 N 14 '53; Metallurgia 46:255-6 N '52

Non-destructive testing reveals casting defects. J. M. Anspach. il diags Am Mach 97:120-2 Mr 2 '53

Process control in gun tube manufacture. H. C. Dill and F. B. Stern, jr. il Metal Prog 63:161-2 Je '53

MAGNETIC units

Extension and dissemination of the electrical and magnetic units by the National bureau of standards. F. B. Silsbee. il diags U S Nat Bur Stand Circ 531:1-33 bibliog(p28-33); pa 25c Supt. of doc. '52

MAGNETISM

Equilibrium reaction $NiCl_2+H_2=Ni+2HCl$; ferromagnetism and the third law of thermodynamics. R. H. Busey and W. F. Giauque. bibliog diag Am Chem Soc J 75:1791-4 Ap 20 '53

Ferromagnetism at very high frequencies; temperature dependence of the magnetic spectrum of a ferrite. G. T. Rado and others. bibliog Phys R 88:909-15 N 15 '52

Magnetic structure transitions. J. S. Smart. diags Phys R 90:55-8 Ap 1 '53

Mercury and magnetism identify mixed carbide blanks. C. Edgar. Am Mach 97:187 S 14 '53

Mixing of states and antiferromagnetism. H. P. Hanson. bibliog Phys R 89:1154 Mr 1 '53

Neutron diffraction studies of antiferromagnetism in manganous fluoride and some isomorphous compounds. R. A. Erickson. bibliog diag Phys R 90:779-85 Je 1 '53

Papers and pertinent discussions presented at the Washington conference on magnetism, University of Maryland, Sept. 2-6, 1952. bibliog Rs Mod Phys 25:1-351 Ja '53

Paramagnetism in a thermochromic compound. W. G. Nielsen and G. K. Fraenkel. bibliog diag J Chem Phys 21:1619 S '53

Theory of the Ising model of ferromagnetism. G. F. Newell and E. W. Montroll. bibliog(47 ref) diags Rs Mod Phys 25:353-89 Ap '53

Two-electron example of ferromagnetism. J. C. Slater and others. bibliog diags Phys R 91:1323-41 S 15 '53

See also

Demagnetization
Diamagnetism
Electricity
Electromagnetism
Gyromagnetic effect
Magnetic measurements and other headings beginning Magnetic
Magnetization
Magnets

MAGNETISM, Terrestrial

Electromagnetic field of a rotating uniformly magnetized sphere. A. Baños, jr. and R. K. Golden. bibliog diags J Ap Phys 23:1294-9 D '52

Gravity and magnetic investigation of the structure of the Cortlandt complex, New York. N. C. Steenland and G. P. Woollard. bibliog maps diags Geol Soc Bul 63:1075-104 N '52

See also

Auroras

MAGNETITE

Bethlehem's Marmora mine prepares for production. il map Eng & Min J 154:95-7 Ap '53

Bristol magnetite deposit. W. K. Buck. bibliog il Can Min J 74:55-7 Ja '53

Dropball cuts blasting costs at Tahawus. P. W. Allen. il Min Eng 5:379-81 Ap '53

Effect of heat treatment and certain additives on the strength of fired magnetite pellets. S. R. B. Cooke and W. F. Stowasser, jr. il Min Eng 4:Trans 1223-30 D '52

Growing of single crystals of magnetite. J. Smiltens. bibliog il J Chem Phys 20:990-4 Je '52

Magnetic study of low temperature transformation in magnetite. H. J. Williams and R. M. Bozorth. Rs Mod Phys 25:79-80 Ja '53

Mechanism of transition in magnetite at low temperatures. H. J. Williams and others. bibliog diags Phys R 91:1107-15 S 1 '53

Microstructures in iron ore pellets. S. R. B. Cooke and T. E. Ban. il diags Min Eng 4: Trans 1053-8 N '52

Treatment of titaniferous magnetite ore from Iron mountain, Wyo. A. E. Back and others. bibliog 5pls U S Bur Mines Rep of Invest 4902:1-15 '52

MAGNETIZATION

Magnetic transfer of 18-8 stainless recording wire; abstract. S. Storchheim. J Metals 4:1039 O '52

MAGNETIZATION—*Continued*

Papers and pertinent discussions presented at the Washington conference on magnetism, University of Maryland, Sept. 2-6, 1952. bibliog Rs Mod Phys 25:1-351 Ja '53

Reversal of spontaneous magnetization as a function of temperature in LiFeCr spinels. E. W. Gorter and J. A. Schulkes. bibliog Phys R 90:487-8 My 1 '53

Spontaneous magnetization of a triangular Ising lattice. R. B. Potts. Phys R 88:352 O 15 '52

Spontaneous magnetization of a two-dimensional rectangular Ising model. C. H. Chang. Phys R 88:1422 D 15 '52

Theory of spin waves in ferromagnetic media. C. Herring and C. Kittel. Phys R 81:869-80 Mr 1 '51; Correction. 88:1435 D 15 '52

MAGNETOACOUSTICS

Magnetically induced ultrasonic velocity changes in polycrystalline nickel. S. J. Johnson and T. F. Rogers. bibliog diags J Ap Phys 23:574-7 My '52

MAGNETOMETERS

Air surveys speed Canadian exploration. T. M. O'Malley. il map Pet Eng 25:B78+ F '53

Electro-magnetometer for exploration. W. Rintoul. il Pet Eng 25:B95-6 Mr '53

Microwave magnetometer. P. J. Allen. il diags Inst Radio Eng Proc 41:100-4 Ja '53

See also

Magnetic surveying

MAGNETO-OPTICS

See also

Faraday effect

Kerr effect

MAGNETORESISTANCE. See Electric resistance

MAGNETOS

Testing of magneto insulation for arc resistance and resistance to spark atmospheres. A. L. Coats and C. Pomeroy. il Electrochem Soc J 100:63-4 F '53

MAGNETOSTRICTION

Increase of high magnetostriction by magnetic anneal. H. E. Stauss and G. Sandoz. bibliog J Metals 4:Trans 1342-3 D '52

Magnetic crystal anisotropy and magnetostriction of iron-nickel alloys. R. M. Bozorth and J. G. Walker. bibliog Phys R 89:624-8 F 1 '53

Magnetostriction devices and mechanical filters for radio frequencies. W. V. Roberts. diags Q S T 37:24-7 Je; 28-30+ Jl; 32-5+ Ag '53

Magnetostriction in Alnico V magnets. J. R. Ireland. Electronics 26:234+ My '53

Magnetostriction of single crystals of cobalt and nickel ferrites. R. M. Bozorth and J. G. Walker. bibliog Phys R 88:1209 D 1 '52

Magnetostrictive sonic delay line. H. Epstein and O. Stram. R Sci Instr 24:231-2 Mr '53

Measurement of magnetostriction in single crystals. R. M. Bozorth and R. W. Hamming. bibliog Phys R 89:865-9 F 15 '53

Some applications of permanently magnetized ferrite magnetostrictive resonators. W. V. Roberts. diags RCA R 14:3-16 Mr '53

Some metallurgical applications of ultrasonics. A. E. Crawford. bibliog il diags Metallurgia 47:109-13 Mr '53

MAGNETRON

Applying pulse magnetrons to radar equipment. C. V. Litton and P. W. Crapuchettes. il Tele-Tech 12:60-2+ S '53 (to be cont)

Calculation of a waveguide-loaded resonator for interdigital magnetrons. G. Hok. bibliog diags Inst Radio Eng Proc 41:763-9 Je '53

Conductance measurements on operating magnetron oscillators. M. Nowogrodzki. bibliog diags Inst Radio Eng Proc 40:1239-43 O '52

50-watt fm magnetron for relay service. D. P. Kennedy. il diags Tele-Tech 12:66-8 Ag '53

Genesis of a generator, the early history of the magnetron. R. L. Wathen. il diags Franklin Inst J 255:271-87 bibliog(38 titles, p286-7) Ap '53

Grid magnetron delivers modulated uhf output. P. L. Spencer. il diags Electronics 26: 148-53 My '53

Hf brazes high-vacuum joints; Western Electric. H. W. Garbe. il diags Am Mach 97: 131-5 Mr 16 '53

Instabilities in the smooth-anode cylindrical magnetron. L. A. Harris. bibliog diags J Ap Phys 23:562-7 My '52

Inverted magnetron. J. F. Hull. il diags Inst Radio Eng Proc 40:1038-41 S '52; Discussion. F. Ludi. 41:799 Je '53

Measurements of some operational characteristics of an amplitude-modulated injection-locked uhf magnetron transmitter. L. L. Koros. bibliog diags Inst Radio Eng Proc 41:4-10 Ja '53

Production testing of magnetron cavities. M. Nowogrodzki. il diags Electronics 26: 258+ My '53

Statistical approach to the space-charge distribution in a cut-off magnetron. G. Hok. diags J Ap Phys 23:983-9 S '52

Testing

Microwave devices for magnetron production testing. M. Nowogrodzki. il diags Tele-Tech 11:36-7+ O '52

MAGNETS

Doing things with magnets in shop and home. R. J. Nemmers. il Comp Air Mag 58:136-8 My '53

Improved magnetic tool speeds fishing technique. J. H. Kirby, 2d. il World Oil 135: 135-6 N '52

Iron powder magnets. il Engineer 195:740-1 My 22 '53; Engineering 175:682-4 My 29 '53; Metal Prog 64:190+ S '53

Magnetic nameplate makes it easier to photograph machines. J. T. Harrington. il Ind Marketing 38:88 S '53

Magnets of pressed powdered iron; abstract. J. Lamberton. Metal Prog 62:183 N '52

Micropowder magnets. il Elec J 150:1645-6 My 8 '53

NBS develops simple magnetizer for charging permanent magnets. G. M. Orr. il Elec Eng 72:659-60 Jl '53

New permanent magnet from powdered manganese bismuthide. E. Adams and others. bibliog il diags J Ap Phys 23:1207-11 N '52

Optimum design of permanent magnets; abstract. H. K. Ziegler. Elec Eng 72:445 My '53

Permanent magnet fractional horsepower motors and generators; abstract. W. R. Goss. Power 97:158+ My '53

Permanent magnet suitable for magnetic ion sources. R. N. Little, jr. and others. diags R Sci Instr 23:768 D '52

Permanent magnets attract more industry attention. E. E. George. il Steel 132:110-13 Ap 20 '53

Safety guard held firmly by magnet. il Mill & Factory 52:140 Ja '53

Specific heat discontinuity in antiferromagnets and ferrites. L. N. Howard and J. S. Smart. bibliog Phys R 91:17-19 Jl 1 '53

Spherical model of a ferromagnet. H. W. Lewis and G. H. Wannier. Phys R 88:682-3 N 1 '52

Spin-lattice relaxation in ferromagnets. E. Abrahams and C. Kittel. bibliog Phys R 88:1200 D 1 '52

Synchronous machines with rotating permanent-magnet fields; abstract. W. W. Brainard; F. Strauss. il Elec Eng 72:246-7 Mr '53

See also

Electromagnets

MAGNIFICATION

Apparent magnification in out-of-focus images. W. Wallin. Opt Soc Am J 43:60-1 Ja '53

MAIL advertising. See Advertising, Mail

MAIL cars. See Postal cars

MAIL handling

Ten ways to save postage. H. L. Wylie. Am Bsns 23:14-15 Ag '53

Two tons of mail handled daily with conveyor system; John Hancock mutual life insurance co. W. Norris. il diag Am Bsns 23:20-1+ Jl '53

Union Pacific mechanizes mail handling. il plan diag Ry Age 134:109-13 Je 15 '53

See also

Air mail service

Railway mail service

MAIL order business

Great mail order combination of Sears-Roebuck and Simpson's. H. F. Travis. il Mag of Wall St 91:352-4+ D 27 '52

Ten big benefits you enjoy when you put your policies in writing; Aldens, Chicago mail order company. J. C. Staehle. Sales Management 70:24-5+ Ja 1 '53

Why ten per cent of Tandy's letters are never mailed. M. K. Pirie. Sales Management 69:41-2+ N 20 '52

See also

Montgomery Ward and company

Sears, Roebuck and company

Advertising

Adventures in writing mail-order copy. J. Caples. Adv Agency 45:20+ O '52

Scientific advertising; reprint of book published in 1923; mail-order lessons. C. Hopkins. Adv Agency 45:64-5 D '52

Self-liquidating mail-order campaign gets money for educational advertising program; Rayex nite glasses. N. Kelne. il Ptr Ink 241:40+ O 31 '52

MAIL service, Railway. See Railway mail service

MAILING lists

Check your mailing list backwards. P. Brady. Ptr Ink 242:39 F 13 '53

MAINE

See also

Manganese mines and mining—Maine

Roads—Maine

MAINE, Gulf of

Seismic-refraction profile across the Gulf of Maine. S. Katz and others. map Geol Soc Bul 64:249-51 F '53

MAINE central railroad

Bonds offered. Comm & Fin Chr 177:940 Mr 2 '53

Net well ahead of 1951. Barron's 32:19-20 N 24 '52

Security I like best. B. F. Seligmann. Comm & Fin Chr 176:2326 D 18 '52

MAINE university

University of Maine celebrates fifty years of forestry teaching and forty years of the pulp and paper course. Paper Tr J 137:46-8 O 16 '53

MAINTENANCE departments

Annual plant maintenance show, 3d, Cleveland. Safety Maint & Prod 105:21+ Mr '53

Efficient maintenance constantly improves a plant. H. E. Jackson. il Mill & Factory 51:123-6 O '52

Maintenance stockroom pays eight ways; Perfection stove co. A. D. Buschmann. il Factory Management 111:130-2 F '53

Make your paper work pay off in good maintenance control. R. P. Neuschel and J. T. Garrity. il Mill & Factory 53:75-9 Jl '53

Some considerations regarding a factory maintenance engineering department. M. Bentham. diags Inst Mech Eng Proc (B) 1B no 1:33-9; Discussion. 40-8 '52; Engineer 193:510-11 Ap 11 '52

Training for maintenance men; panel discussion. Factory Management 111:266+ Jl '53

Want to get more out of maintenance dollars? F. F. Middleswart. il Factory Management 111:300 F '53

See also

Factories—Maintenance and repair

MAKEREADY. See Printing, Practical—Presswork

MALACHITE green

Polarographic reduction of crystal-violet, brilliant-green, malachite-green, and auramine. R. C. Kaye and H. I. Stonehill. Chem Soc J p3231-9 Ag '52

MALARIA

Antimalarial activity of 4,000 compounds. Pub Health Rep 68:56 Ja '53

3 : 5-Diamino-1-aryl-1 : 2 : 4-triazoles as potential antimalarials. J. P. Thurston and J. Walker. Chem Soc J p4542 N '52

Household insecticides, their role in public health. J. M. Andrews. bibliog Soap & San Chem 28:135-8+ S '52

Insecticides in public health; repercussions on food production. F. P. Coyne. bibliog Chem & Ind p965-8 O 4 '52

New malaria drug. Oil Paint & Drug Rep 163:38 Mr 9 '53

New synthesis of chloroquine. W. S. Johnson and B. G. Buell. bibliog Am Chem Soc J 74:4513-16 S 20 '52

Rates of hydrolysis of some acridine antimalarials. D. L. Hammick, S. F. Mason and G. W. Meacock. Chem Soc J p4745-7 D '52

MALAYA

See also

Electric apparatus industry—Malaya

Rubber industry and trade—Malaya

Economic conditions

Economic conditions abroad (cont). For Comm W 48:3 N 17; 3 D 29 '52; 49:5 Mr 23; 6 My 18 '53

Politics and government

Malaya's road to independence. Economist 167:909-10 Je 27 '53

MALEIC acid

Hydrogen-bonding in maleic and phthalic acids. W. H. T. Davison. Chem & Ind p408 Ap 25 '53

Mechanisms of elimination reactions; the alkaline dehydrohalogenation of chloro- and bromo-maleate and fumarate. S. J. Cristol and A. Begoon. Am Chem Soc J 74:5025-9 O 20 '52

Stereochemistry of the furan-maleic acid reaction. J. A. Berson and R. Swidler. bibliog Am Chem Soc J 75:1721-6 Ap 5 '53

Strengths of maleic and similarly constituted acids. L. Hunter. Chem & Ind p 155 F 14 '53

MALEIC anhydride

Interaction of dienophiles with aromatic substances. L. J. Andrews and R. M. Keefer. bibliog Am Chem Soc J 75:3776-9 Ag 5 '53

Interaction of naphthalene and maleic anhydride through the agency of aluminium chloride. G. Baddeley and others. Chem Soc J p3605-7 S '52

Kinetics of the association of maleic anhydride and butadiene. B. Eisler and A. Wassermann. Chem Soc J p 1943-4 Je '53

Spectrophotometric investigations of organic complexes from copolymerization monomers; the instantaneous complex formation of parasubstituted styrenes and maleic anhydride. E. R. Garrett and R. L. Guile. Am Chem Soc J 75:3958-60 Ag 20 '53

MALEIC hydrazide. See Dihydropyridazinedione

MALEIMIDES

Syntheses of pyrroles, a porphyrin, and the maleinimide related to the uroporphyrins. S. F. MacDonald. Chem Soc J p4184-90 N '52

MALENKOV, Georgiĭ Maksimilianovich, 1902-

Dictator nobody knows. por Bsns W p163-4 Mr 21 '53

Portraits. Bsns W p162 Mr 14; p28 Je 27 '53

MALIC acid

Malic acid-fructose reaction. G. E. Livingston. bibliog Am Chem Soc J 75:1342-4 Mr 20 '53

MALINGERING

Malingering, with reference to the eye, ear, nose and throat. S. L. Shapiro. Ind Med 22:65-8 F '53

Occupational nail marks, true and false. F. Ronchese. bibliog il Ind Med 22:45-8 F '53

MALLEABLE founders' society

Annual meeting, Hot Springs, Va. June 8-9; with abstracts of papers. Foundry 81:130+ Ag '53

Fall meeting, Cleveland, Sept. 26. Foundry 80:231+ N '52

Semi-annual meeting, Cleveland, Jan. 23. Foundry 81:222+ Mr '53

MALLEABLE iron. See Cast iron

MALLINCKRODT, Edward, 1878-

Award. por(cover) Chem & Eng N 30:4831 N 17 '52

Eighth annual Midwest award. por Chem & Eng N 30:4830-1 N 17 '52

MALLORY, Cassius C.

Businessmen in the news. por Fortune 47:60 Mr '53

MALLORY, P. R., and company
Preferred stock oversubscribed. Comm & Fin Chr 177:1258-9 Mr 23 '53
Short-term market pays off. Bsns W p44 My 16 '53

MALONAMIC acid
Hydrolysis of amides of dibasic acids; the acid hydrolysis of malonamide and malonamic acid. H. G. Ivory and others. Chem Soc J p3264-8 Ag '52

MALONATES
Alkylated derivatives of ethyl *t*-butylmalonate and the corresponding barbituric acids. M. T. Bush and W. D. Beauchamp. bibliog Am Chem Soc J 75:2949-51 Je 20 '53
*cyclo*Propanes; the addition of ethyl sodiomalonate to ethyl *cyclo*propane-1 : 1-dicarboxylate and its 2-vinyl derivative. R. W. Kierstead, R. P. Linstead and B. C. L. Weedon. Chem Soc J p3616-21 S '52
*cyclo*Propanes; the malonate condensation with 1 : 4-dibromobut-2-ene; a convenient new route to vinyl*cyclo*propane derivatives. R. W. Kierstead, R. P. Linstead and B. C. L. Weedon. Chem Soc J p3610-16 S '52
Sodium hydride as a condensing agent with acylaminomalonates in the synthesis of amino acids. J. Shapira, R. Shapira and K. Dittmer. bibliog Am Chem Soc J 75:3655-7 Ag 5 '53
Structure of diethyl dibenzhydrylmalonate. A. C. Cope and W. R. Lyman. bibliog Am Chem Soc J 75:3312-15 Jl 20 '53
Use of various aminomalonates in the synthesis of α-substituted tryptophans. H. M. Kissman and B. Witkop. bibliog Am Chem Soc J 75:1967-74 Ap 20 '53

MALONIC acid
Alkylation of malonic ester by ethylene oxide catalyzed by anhydrous $AlCl_3$. C. Raha. bibliog Am Chem Soc J 75:4098 Ag 20 '53
Comparison of the magnitudes of the isotope intermolecular effects in the decarboxylations of malonic-1-C^{14} acid and malonic-2-C^{14} acid at 154°. G. A. Ropp and V. F. Raaen. bibliog Am Chem Soc J 74:4992-4 O 20 '52
Decarboxylation of α,β-unsaturated malonic acid derivatives via β,γ-unsaturated intermediates; the effect of α-substituents upon product composition and rate. E. J. Corey. bibliog Am Chem Soc J 75:1163-7 Mr 5 '53
Interaction of dimethylmalonyl chloride with malonic ester; a new synthesis of filicinic acid. E. B. Reid and T. E. Gompf. bibliog Am Chem Soc J 75:1661-3 Ap 5 '53
Intermolecular carbon isotope effect in the decarboxylation of normal malonic acid in quinoline solution. P. E. Yankwich and R. L. Belford. bibliog Am Chem Soc J 75:4178-82 S 5 '53
Intramolecular carbon isotope effects in the decarboxylation of malonic acid and bromomalonic acid. P. E. Yankwich and E. C. Stivers. bibliog diag J Chem Phys 21:61-6 Ja '53
Mechanism of the decarboxylation of α,β- and β-γ-unsaturated malonic acid derivatives and the course of decarboxylative condensation reactions in pyridine. E. J. Corey. bibliog Am Chem Soc J 74:5897-905 D 5 '52
Participation of ATP and coenzyme A in the enzymatic decarboxylation of malonic acid. O. Hayaishi. bibliog Am Chem Soc J 75:4367 S 5 '53
Salt effects and chelation in the decomposition of diazomalonic acid. C. V. King and I. A. Lichtman. bibliog Am Chem Soc J 75:3949-53 Ag 20 '53
Structure of the decomposition products of malonic ester acid chlorides. S. J. Davis. Chem & Ind p323-4 Ap 4 '53
Synthesis of isoquinolines by the use of acetamidomalonic ester. A. Galat. bibliog Am Chem Soc J 75:1738-9 Ap 5 '53
Synthesis of polyaminomalonic acid. M. Frankel and others. bibliog Am Chem Soc J 75:78-9 Ja 5 '53
Temperature coefficient of the intermolecular carbon isotope effect in the decarboxylation of normal malonic acid. P. E. Yankwich, R. L. Belford and G. Fraenkel. bibliog Am Chem Soc J 75:832-5 F 20 '53

MALONYLAMINOPYRIDINE
Malonyl-α-aminopyridine; hyrolysis of its diazonium coupling products and related compounds. H. R. Snyder and M. M. Robison. Am Chem Soc J 74:5945-9 D 5 '52
Structure and reactions of malonyl-α-aminopyridine. H. R. Snyder and M. M. Robison. bibliog Am Chem Soc J 74:4910-16 O 5 '52

MALONYL chloride
Heterocyclic syntheses with malonyl chloride; 2 : 2-disubstituted 6′-amino-2′ : 4-diketopyrano(3′ : 4′-5 : 6)-1 : 3-dioxins and simpler derivatives of 4-keto-1 : 3-dioxin. S. J. Davis and J. A. Elvidge. Chem Soc J p2251-7 Ag '53
Heterocyclic syntheses with malonyl chloride; pyrano-1 : 3-dioxins from ketones. S. J. Davis and J. A. Elvidge. Chem Soc J p4109-14 N '52

MALPRACTICE liability insurance. See Insurance, Malpractice liability

MALT
Fire protection in malt drying. Safety Maint & Prod 106:72 S '53
Quality of cereals and their industrial uses; selection of barleys for malting. I. A. Preece. bibliog Chem & Ind p 160-2 F 21 '53
Quality of cereals and their industrial uses; some malting methods. R. M. Thomson. bibliog Chem & Ind p 112-16 F 7 '53

MALTOSE

Analysis

Analysis of a mixture of glucose, maltose, and fermentable oligosaccharides; improved yeast fermentation method. S. C. Pan, L. W. Nicholson and P. Kolachov. bibliog diags Anal Chem 25:231-7 F '53

MAMEY. See Mammea americana

MAMMALS
Composition of mammalian desoxyribonucleic acids. E. Chargaff and R. Lipshitz. bibliog Am Chem Soc J 75:3658-61 Ag 5 '53
Induced emigrations among small mammals. J. B. Calhoun and W. L. Webb. Science 117:358-60 Ap 3 '53
Relation of adrenal weight to body weight in mammals. J. J. Christian. bibliog Science 117:78-80 Ja 23 '53

MAMMARY glands
Visible intra-epithelial iron in the mammary glands of various species. H. E. Rawlinson and G. B. Pierce. bibliog il Science 117:33-4 Ja 9 '53

MAMMEA americana
Isolation of the toxic principles of mamey. M. P. Morris and C. Pagán. bibliog Am Chem Soc J 75:1489 Mr 20 '53

MAN

Origin and antiquity

First Americans. Sci Am 188:54 Mr '53

MAN, Prehistoric
See also
Iraq—Antiquities

MANAGEMENT
Efficiency in management translated into profits; with profit and efficiency comparisons of 74 leading companies. H. Wingate. Mag of Wall St 91:170-2+ N 15 '52
Engineering in management. J. G. Pleasants. Mech Eng 74:781-3+ O '52
How to light a candle; managerial force is new to society. R. W. Johnson. il Dun's R 60:23-4+ N '52
Management looks ahead in the electric power industry. W. L. Cisler. Elec Eng 71:1079-81 D '52
Management of engineering work. T. M. Linville. Elec Eng 71:1091-5 D '52
Management's debt to the engineer. L. F. Urwick. Mech Eng 75:374-9+ My '53
Management's problems. R. J. Sund. Paper Tr J 136:28+ Ja 9 '53
Management's professional responsibilities; reprinted from Dec. 1946 issue. A. G. Coons. Advanced Management 17:20-3 O '52
Management's responsibility for development of engineers. F. K. McCune. Elec Eng 72:491-5 Je '53
Management's sixth sense; essential qualities of successful manager. L. M. Wasserbly. Dun's R 61:27+ Ap '53

MANAGEMENT—*Continued*

Ten years' progress in management. L. M. Gilbreth and others. bibliog A S M E Trans 75:653-710 My '53

Why depend on a hunch? applications of technometry. J. G. Glover. il Dun's R 60: 26-7+ O '52

See also

Business management
Committees (in management)
Employment management
Executives
Factory management
Foundry management
Industrial management
Machine shop management
Mine management
Office management
Retail trade—Store management

also subdivision Management under special subjects, e.g.

Airplane factories
Coal mines and mining
Newspapers
Railroads

International aspects

International scene, a challenge to management. A. M. Lederer. Advanced Management 18:36-8 Ja '53

Study and teaching

Education for management in Great Britain. M. E. Murphy. J Bsns 26:37-47 Ja '53

Teaching the total management function through job rotation and other ways. H. V. Olsen. Advanced Management 18:17-20 Ja '53

Utility officials class bound; summer course on management at Georgia institute of technology. Elec World News ed 138:22-3 N 24 '52

Terminology

See also

Industrial management—Terminology

MANAGEMENT, British institute of. See British institute of management

MANAGEMENT consultants

Management consultant as a tool for executive development. D. P. Hess. Advanced Management 18:30-1 Ja '53

Plant study; picking out the flaws; management consultant sees firm's afflictions with overall approach. R. M. Lorz. Iron Age 171:56 Ja 29 '53

Small business gains from consultant's broad experience. G. T. Trundle, jr. Iron Age 171:164-5 Je 18 '53

See also

Business consultants

MANCHESTER guardian (newspaper)

Manchester guardian plans London edition. R. Erwin. Ed & Pub 86:38 F 14 '53

MANDELIC acid

Crystallographic data. H. A. Rose. il diags Anal Chem 24:1680-1 O '52

Selective absorption of optical antipodes by proteins. W. Bradley and G. C. Easty. Chem Soc J p 1519-24 My '53

MANDRELS. See Arbors and mandrels

MANGANATES

Disproportionation of manganate ion; manganese dioxide as heterogeneous catalyst. F. R. Duke. bibliog J Phys Chem 56:882-4 O '52

MANGANESE

Interaction of manganese activator ions in zinc-orthosilicate phosphors. S. Larach and J. Turkevich. bibliog diag Phys R 89:1060-5 Mr 1 '53

Iron sulfide ores; Minnesota ores may yield new sulfur, manganese sources. Iron Age 171:141 F 19 '53; Mech Eng 75:326 Ap '53

Luminescence of divalent manganese in solids. C. C. Klick and J. H. Schulman. Opt Soc Am J 42:910-14 D '52

Magnesium oxide phosphor activated by tetravalent manganese. J. S. Prener. bibliog J Chem Phys 21:160-1 Ja '53

Manganese(II), -(III), -(IV) equilibrium in iodic acid. G. R. Waterbury and D. S. Martin, jr. bibliog Am Chem Soc J 75:4162-7 S 5 '53

Manganese find in Africa. Bsns W p 158 Jl 25 '53

Manganese from waste slag. Comp Air Mag 58:199 Jl '53

Manganese, 1952. E. J. Gealy. Eng & Min J 154:99+ F '53

Manganese; retrieved from steel slag. Iron Age 171:42 Ja 8 '53

Manganese reversal of aureomycin inhibition of bacterial cell-free nitro-reductase. A. K. Saz and R. B. Slie. Am Chem Soc J 75: 4626-7 S 20 '53

Manganese sources; soot and slag. Materials & Methods 38:6 S '53

Metallurgical research in uranium, manganese and nodular cast irons. L. W. Goodwin, ed. bibliog il diags Colorado School of Mines (Golden) Quarterly 47 no 1:1-87 '52 (pa $1.50)

Nuclear hyperfine structure of Mn^{++}. M. Sachs. bibliog Phys R 90:1058-60 Je 15 '53

Paley report; manganese. J Metals 4:1141-2 N '52

Paramagnetic resonance of manganese activated zinc orthosilicates. E. G. Spencer and others. bibliog J Chem Phys 20:1177-8 Jl '52

Production of high manganese slags by selective oxidation of spiegeleisen. M. B. Royer and R. C. Buehl. bibliog il J Metals 4:Trans 1295-300 D '52

Sources of manganese developed. Blast F & Steel Pl 40:1344 N '52

Titanium can replace manganese for sulfur control of steel. J. D. Roach and R. S. Stewart. bibliog Iron Age 171:150-3 Je 4; 126-8 Je 11 '53

Analysis

Periodate method for manganese and effect of band width. M. D. Cooper. il Anal Chem 25:411-16 Mr '53

Isotopes

Energy levels in magnesium, vanadium, chromium, and manganese. H. J. Hausman and others. bibliog Phys R 88:1296-9 D 15 '52

Neutron capture γ-rays from scandium, vanadium, manganese, cobalt, and copper. G. A. Bartholomew and B. B. Kinsey. bibliog diags Phys R 89:386-95 Ja 15 '53

MANGANESE alloys

Ferromagnetic alloys in the system copper-manganese-indium. R. R. Grinstead and D. M. Yost. bibliog il diags Am Chem Soc J 75:1803-9 Ap 20 '53

Kinetics of ordering in Ni_3Mn. L. R. Aronin. J Ap Phys 23:642-3 Je '52

Martensite habit plane in quenched Ti-Mn alloys. You Chao Liu and H. Margolin. bibliog il diags J Metals 5:Trans 667-70 My '53

Titanium-manganese system. D. J. Maykuth and others. bibliog il J Metals 5:Trans 225-30 sec 2 F '53; Discussion. 5:Trans 1566-8 sec 2 N '53

See also

Iron alloys—Manganese alloys

Testing

Torsion pendulum of improved design for measuring damping capacity. J. W. Jensen. il diag R Sci Instr 23:397-401 Ag '52

MANGANESE bismuthide

New permanent magnet from powdered manganese bismuthide. E. Adams. il diag Rs Mod Phys 25:306-7; Discussion. 308-9 Ja '53

New permanent magnet from powdered manganese bismuthide. E. Adams and others. bibliog il diags J Ap Phys 23:1207-11 N '52

MANGANESE chloride

Magnetic saturation and apparent molecular fields of $MnCl_2 \cdot 4H_2O$. W. E. Henry. bibliog Phys R 90:492 My 1 '53

MANGANESE compounds

Bispentanedione diaquo manganese(III) compounds. G. H. Cartledge. Am Chem Soc J 74:6015-18 D 5 '52

Paramagnetic resonance absorption in salts of V and Mn. C. A. Hutchinson, jr. and L. S. Singer. bibliog diags Phys R 89:256-62 Ja 1 '53

X-ray *K* absorption edges of covalently bonded Cr, Mn, Fe, and Ni. G. Mitchell and W. W. Beeman. bibliog J Chem Phys 20:1298-301 Ag '52

MANGANESE ferrates
g Factor of ferrites. T. Okamura and others. bibliog Phys R 88:1425-6 D 15 '52

MANGANESE fluoride
Neutron diffraction studies of antiferromagnetism in manganous fluoride and some isomorphous compounds. R. A. Erickson. bibliog diag Phys R 90:779-85 Je 1 '53

MANGANESE fluosilicate
Deviations from Brillouin's free-spin theory in manganese fluosilicate. R. C. O'Rourke. bibliog diag Phys R 90:786-90 Je 1 '53

MANGANESE formate
Paramagnetic resonance in manganese formate. D. J. E. Ingram. bibliog Phys R 90:711 My 15 '53

MANGANESE industry and trade

Statistics

Manganese, 1947-1952; tabulation. Steel 132:177 Ja 5 '53

MANGANESE metallurgy
Domestic chrome and manganese ores can be upgraded and utilized. H. A. Doerner. Min Eng 5:385-6 Ap '53
Manganese from open hearth slag could supply half of U.S. needs. R. C. Buehl and others. il J Metals 5:520-1 Ap '53
Manganese nitration method test planned under new DMPA pact. Oil Paint & Drug Rep 164:3 Jl 6 '53
Ore-dressing tests of Aroostook county, Maine, manganese ores. F. D. Lamb and others. U S Bur Mines Rep of Invest 4951:1-10 '53
Upgrading domestic manganese ores by leaching with caustic soda. R. V. Lundquist. Min Eng 5:Trans 413-17 Ap '53

Electrometallurgy

Recent advances in the electrolytic extraction of manganese, chromium and cobalt. J. W. Cuthbertson. bibliog Chem & Ind p 1165-70 N 29 '52

MANGANESE mines and mining

Brazil

Manganese; Brazil our biggest source? map Iron Age 171:37-8 Ja 15 '53
Venture in Brazil slated to yield 5.5-million tons of manganese ore. Eng & Min J 154:186 F '53

Maine

Maple Mountain-Hovey Mountain manganese project, central district, Aroostook county, Maine. N. A. Eilertsen. bibliog 26pls U S Bur Mines Rep of Invest 4921:1-118 '52
Ore-dressing tests of Aroostook county, Maine, manganese ores. F. D. Lamb and others. U S Bur Mines Rep of Invest 4951:1-10 '53

Philippine Islands

Interest lags in Philippine manganese. W. F. Boericke and N. N. Lim. il map Eng & Min J 154:97-9 Mr '53

Utah

Manganese deposits of southeastern Utah. A. A. Baker and others. bibliog il maps U S Geol S Bul 979-B:63-157, pl 2-3[in pocket]; pa 60¢ Supt. of doc. '52

MANGANESE ores
Concentration of western manganese ores; abstract. C. H. Shack and J. V. Batty. Min Cong J 38:118 O '52
Domestic chrome and manganese ores can be upgraded and utilized. H. A. Doerner. J Metals 5:39-40 Ja '53
U.S. imports, U.S. mine shipments, world production of ores; shipments of U.S. manganiferous ores; tabulations. Iron Age 171:434 Ja 1 '53

MANGANESE oxides
Anomaly in the heat capacity of manganous oxide. R. K. Wangsness. bibliog Science 116:537 N 14 '52
Disproportionation of manganate ion; manganese dioxide as heterogeneous catalyst. F. R. Duke. bibliog J Phys Chem 56:882-4 O '52
Formation of dithionate and sulfate in the oxidation of sulfur dioxide by manganese dioxide and air. A. E. Back and others. bibliog pl U S Bur Mines Rep of Invest 4931:1-14 '52
Some structural properties of α-MnO_2 containing NH_4^+, K^+, Na^+, Ca^{++}, and Ba^{++} ions. K. H. Maxwell, G. Butler and H. R. Thirsk. Chem Soc J p4210-15 N '52

MANGANESE pyrophosphate
Free-radical formation in oxidations by manganic pyrophosphate. A. Y. Drummond and W. A. Waters. Chem Soc J p2836-7 S '53

MANGANESE steel
Manganese steels; composition, properties, heat treatment, etc., tabulation; engineering file facts. Materials & Methods 38:105 Jl '53
Weldability of austenitic manganese steels. F. Danhier. Welding J 32:sup 155-6 Mr '53

MANGANESE sulfates
System $MnSO_4$-H_2SO_4-H_2O. D. Taylor. Chem Soc J p2370-5 Je '52

MANGOES
Vegetative propagation of mango (mangifera indica L.) by air-layering (gootee). L. B. Singh. Science 117:158-9 F 13 '53

MANHOLES
Pre-cast concrete sections cut manhole costs. S. J. Ward. il Elec World 139:100 Ja 12 '53

MANIPULATORS
Arm with mechanical muscle. il Am Mach 96:129 N 24 '52
New turnover fixture for large truck chassis; Reo motors, inc. il Automotive Ind 108:43 My 15 '53
Salem-Brosius light stock manipulator. il Blast F & Steel Pl 41:684 Je '53

MANITOBA
See also
Mines and mineral resources—Manitoba
Petroleum—Manitoba
Roads—Manitoba

Sanitary affairs

Problems of public health engineering. L. A. Kay. il Munic Util 91:25-6+ Je '53

MANN, Philip, 1886-
Mr Craftsman of York, still likes linotype work. por Inland Ptr 130:36 Mr '53

MANNICH bases
β-Acylethylation with ketonic Mannich bases; the synthesis of some diketones, ketonic sulfides, nitroketones and pyridines. N. S. Gill and others. bibliog Am Chem Soc J 74:4923-8 O 5 '52
Chelating properties of 8-quinolinol Mannich bases. J. P. Phillips and Q. Fernando. bibliog Am Chem Soc J 75:3768-9 Ag 5 '53
Degradation of Mannich base oximes. Z. Kyi and W. Wilson. Chem Soc J p798-802 Mr '53
Low temperature pyrolysis of boron trifluoride-Mannich base complexes; 2-nitro-1-alkenes. W. D. Emmons and others. Am Chem Soc J 75:1993-4 Ap 20 '53
Mannich bases and other compounds derived from benzsuberone. D. S. Tarbell, H. F. Wilson and E. Ott. bibliog Am Chem Soc J 74:6263-6 D 20 '52
Mannich bases derived from α-phenoxyacetophenones. J. B. Wright and E. H. Lincoln. bibliog Am Chem Soc J 74:6301-2 D 20 '52
Mannich bases of acylaminomalonates, and a synthesis of DL-aspartic acid. R. O. Atkinson. Chem Soc J p3317-18 Ag '52
New synthesis of indole-3-aldehydes; the reaction of hexamethylenetetramine with some Mannich bases. H. R. Snyder, S. Swaminathan and H. J. Sims. bibliog Am Chem Soc J 74:5110-13 O 20 '52

MANNICH reaction
Abnormal Mannich reaction. J. Meinwald and F. B. Hutto, jr. bibliog Am Chem Soc J 75:485-6 Ja 20 '53
Mannich reaction of diphenylacetonitrile; products and derivatives. H. E. Zaugg, B. W. Horrom and M. R. Vernsten. bibliog Am Chem Soc J 75:288-91 Ja 20 '53
Mannich reactions involving the use of acetaldehyde, monochloroacetaldehyde and dichloroacetaldehyde. A. V. Logan and W. D. Schaeffer. Am Chem Soc J 74:5538-9 N 5 '52
Studies on 4-hydroxycoumarins; 3-substituted-aminomethyl-4-hydroxycoumarin derivatives by the Mannich reaction. D. N. Robertson and K. P. Link. bibliog Am Chem Soc J 75:1883-5 Ap 20 '53

MANNOGALACTAN
Guar mannogalactan studies. A. J. Haug. bibliog Tappi 36:47-64 Ja '53

MANNOOCTOSE
Convenient synthesis of D-manno-L-*manno*-octose. J. V. Karabinos and C. S. Hudson. Am Chem Soc J 75:4324-5 S 5 '53

MANNOSE
Derivatives of D-*manno*hexodialdose (6-*aldo*-D-mannose). C. E. Ballou and H. L. Fischer. bibliog Am Chem Soc J 75:3673-5 Ag 5 '53
Mannose-containing polysaccharides; the galactomannan of fenugreek seed (trigonella fœnum-græcum). P. Andrews, L. Hough and J. K. N. Jones. Chem Soc J p2744-50 Jl '52
Mannose-containing polysaccharides; the polysaccharides in the seeds of iris ochroleuca and I. sibrica. P. Andrews, L. Hough and J. K. N. Jones. Chem Soc J p 1186-92 Ap '53
Preparation of higher-carbon sugars from D-mannose including crystalline D-manno-L-*manno*-octose. J. V. Karabinos, R. M. Hann and C. S. Hudson. bibliog Am Chem Soc J 75:4320-4 S 5 '53
Protection against alloxan diabetes by mannose and fructose. G. Bhattacharya. bibliog Science 117:230-1 F 27 '53

MANNOSIDES
Action of acidic reagents on ethylene oxide anhydro-sugars; the action of hydrochloric acid on methyl 2 : 3-anhydro-4 : 6-*O*-benzylidene-α-D-mannoside. F. H. Newth and R. F. Homer. Chem Soc J p989-92 Mr '53

MANNOSIDOSTREPTOMYCIN
Streptomycin; the structure of mannosidostreptomycin. J. Fried and H. E. Stavely. bibliog Am Chem Soc J 74:5461-8 N 5 '52

MANOGENIN
Transformation of manogenin to hecogenin. N. L. Wendler, H. L. Slates and M. Tishler. bibliog Am Chem Soc J 74:4894-7 O 5 '52

MANOMETERS
Electrical manometer for gas pressures up to 40 mm of mercury. F. H. Reynolds. bibliog diags J Sci Instr 30:92-6 Mr '53
Manometric gas analysis apparatus. J. N. Pitts, jr., D. D. DeFord and G. W. Recktenwald. bibliog il diags Anal Chem 24:1566-8 O '52
Multitube differential pressure manometer for measuring the average flow of fluids in closed ducts. G. B. Clark. il diags Ill U Eng Exp Sta Bul 410:1-30 '53 (pa 30c)
Precise gas manometer. L. Akobjanoff. diag R Sci Instr 23:447-8 Ag '52
Pressure measurements. diags Can Chem Process 37:88-9 Ap; 104+ My; 70-1 Je 1 '53
Recording mercurial manometer for the pressure range 0-760 mm of mercury. H. J. Svec and D. S. Gibbs. diags R Sci Instr 24:202-4 Mr '53
Sensitive method for determination of vapor composition. K. M. Sancier. diags Anal Chem 24:1563-6 O '52
To measure very low differential pressures; micromanometer. Refrig Eng 61:977 S '53

MANPOWER. See Labor supply

MANSFIELD tire and rubber company
Stock offered. Comm & Fin Chr 177:2009 My 11 '53

MANUFACTURERS
Do we make it or buy it? Hotpoint co., International harvester co. and others. il Bsns W p 117-18 F 28 '53
Sales wins a bigger voice on biggest-company boards. L. M. Hughes. Sales Management 70:24-5+ Ja 15 '53

Directories

Bibliography

Industrial directories. 3d rev. Cleveland Pub Lib Business Information Bur Bul v 23 no 5:17-20 N '52 (pa 10c)

Insurance requirements

See also
Insurance, Manufacturers' output

MANUFACTURERS' agents
Commission rates paid manufacturers' agents. Sales Management 69:92 D 15 '52
How to know when to use manufacturers' agents. T. A. Staudt. Ind Marketing 37:46-8+ O '52
Ninety-nine lives of Charlie Soames. R. A. Smith. Fortune 47:100-3+ Ja '53
Now manufacturers rep gets into co-op ads. Sales Management 70:114+ Ja 15 '53

Directories

Directory of representatives; listing by states and cities of manufacturers' western representatives handling electrical lines. Elec West 110:71-5 pt 2 Ap '53
Directory of representatives serving tv-radio and electronic manufacturing, listed alphabetically under states and cities. Tele-Tech 11:149-56+ N '52
Who's who among your suppliers; agents representing manufacturers of paper mill equipment, paper making materials and chemicals. Paper Tr J 136:91-304 Je 19 '53

MANUFACTURERS' demonstrations. See Department stores—Manufacturers' demonstrations

MANUFACTURERS' liability insurance. See Insurance, Manufacturers' liability

MANUFACTURERS' literature. See Advertising literature

MANUFACTURERS' output insurance. See Insurance, Manufacturers' output

MANUFACTURES
Should the U.S. lower tariffs on manufactured products? J. S. Coleman; H. W. Rose. il Mod Ind 25:57-8+ My '53; Discussion. Dun's R & Mod Ind 62:181-5 Ag '53

See also
Bricklaying
Catalogs
Chemistry, Technical
Coke manufacture
Commerce
Cost accounting
Factories
Factory management
Gas manufacture
Glass manufacture
Industry
Inspection
Labor and laboring classes
Machine shops
Machinery
Metal work
Metals
Paper making
Patents
Production
Products, New
Standardization
Textile fabrics
Trade marks

Statistics

Business inventories; recent trends and position. L. J. Paradiso and G. B. Wimsatt. Survey of Cur Bsns 33:9-15 My '53
Financial experience of large and medium size manufacturing firms, 1927-51. L. F. McHugh and L. G. Rosenberg. Survey of Cur Bsns 32:7-13 N '52
Fourteen important ratios for 36 manufacturing lines. R. A. Foulke, comp. Dun's R 60:28-9+ D '52
Industrial production, 1952; with charts and tables. Survey of Cur Bsns 33:12-14 F '53
Manufacturers' expenditures for new plant and equipment, by major industry groups, 1951; tabulation. Ind Marketing 38:62 Ja '53
Manufacturers' new and unfilled orders; with tables of new and unfilled orders, 1948-Sept. 1952. Survey of Cur Bsns 32:17-18 N '52
Recent trends in manufacturers' orders. Survey of Cur Bsns 33:4-5 Mr '53
Revision of business sales, orders, and inventories; with detailed tables; orders, 1946-51; manufacturers' sales and inventories, 1949-51; wholesale sales, selected periods, 1948-52; wholesale inventories, 1948-52. Survey of Cur Bsns 32:12-18 O '52

Alabama

Alabama story; manufacturing. il Manuf Rec 122:69-78 Je '53

Tennessee

Tennessee story; manufacturing is widely diversified. il Manuf Rec 121:83-91 N '52

United States

Congress, management, public must be sold industry census. S. E. Cohen. Ind Marketing 38:112+ Je '53

MANUFACTURING chemists' association
Annual meeting, 81st, White Sulphur Springs, June 11-13. Oil Paint & Drug Rep 163:5+ Je 15 '53
Annual winter conference, 2d, New York. Chem W 71:12-13, 47 D 6 '52

MANUFACTURING chemists' association—*Continued*
MCA and SOCMA make plans for cooperative action. Chem & Eng N 30:5258 D 15 '52
Pollution abatement conference, 9th, Detroit. Chem & Eng N 31:995-6 Mr 9 '53
Semiannual meeting, New York, Nov. 25; with abstracts of papers. Chem & Eng N 30:5148-50+ D 8 '52; Oil Paint & Drug Rep 162:7+ D 1 '52

MANUFACTURING plants. See Factories

MANUSCRIPTS

Bibliography

Census of autograph music manuscripts of European composers in American libraries. O. E. Albrecht. 331p bibliog(p329-31) $8.50 Univ. of Pennsylvania press, 3436 Walnut st, Philadelphia 4 '53

MAO, Tse-tung, 1893-
Portrait. Bsns W p29 Je 27 '53

MAPLE
Preliminary separations of maple hydrol lignin. M. Granath and C. Schuerch. bibliog Am Chem Soc J 75:707-9 F 5 '53

MAPPING
American congress on surveying and mapping 12th annual meeting, Washington, June 11-13. Science 116:681-2 D 19 '52
See also
Topographical maps

MAPPING, Aerial
Aerial pix make exact area maps. il Am Gas Assn Mo 35:10-11+ Ja '53; Same. Gas Age 111:11-13 Ja 29 '53; Same. Pub Works 84:66-7 F '53
Aerial survey helps Clinchfield double production in Virginia. A. E. Flowers. il maps Min Cong J 38:30-2 N '52
Mesa air maps prove invaluable tools. D. Smith. il Pub Works 84:57+ Jl '53
Stockpile can be measured from air. il diag Eng & Min J 153:104-5 D '52
See also
Surveying, Aerial

MAPS
Air dampening system developed to speed map production for army's engineer corps. C. F. King. diag Inland Ptr 131:61-3 Ap '53
Dot-reading overlay for the measurement of map areas. J. M. Robinson. Pulp & Pa of Can 54:82 F '53
Evaluation of modern maps. R. E. Harrison. Special Lib 44:45-7 F '53
New scribing methods may replace drafting in preparation of maps. Eng N 150:27 Ap 16 '53
Scriber removes a map bottleneck. Midwest Eng 5:31 F '53
Zoning maps for airports. B. E. Beavin. diags Am Soc C E Proc 79 [no 174]:1-9 F '53
See also
Electric distribution—Maps
Geological maps
Oil lands—Maps
Petroleum pipe lines—Maps
Sanborn map company
Topographical maps

Bibliography

Selected bibliography of southern California maps. E. L. Chapin, jr. 124p pa $3 Univ. of California press, Berkeley 4, Calif. '53

MAPS, Topographical. See Topographical maps

MARACAIBO, Lake
New design barge to drill in Lake Maracaibo. H. Weil. il Pet Eng 25:B40+ Mr '53
Venezuela's fabulous Lake Maracaibo. il Pet Eng 24:B 108+ O '52

MARATHON corporation
Details of Marathon-Northern paper mills merger. Paper Tr J 136:35 My 15 '53
Exchange offer made. Comm & Fin Chr 177:2009 My 11 '53
Northern Paper to merge with Marathon. Paper Tr J 136:11-12 Ja 30 '53
Packy weds Fluffy; company editor dramatizes a merger. R. Newcomb and M. Sammons. il Ind Marketing 38:97+ O '53

MARBLE
Tennessee Copper explores use of rock grinding media. F. M. Lewis. il Min Eng 5:491 My '53
X-ray line broadening of plastically deformed marble. D. Rosenthal and M. Kaufman. bibliog J Ap Phys 23:600-1 My '52
See also
Concrete blocks—Marble facing

MARCKWALD reaction. See Chemical reaction

MARCONI, Guglielmo, 1874-1937
Bending of the microwaves; Marconi's third great discovery, his prophecy of 1932. Tele-Tech 12:57+ Ag '53
Spirit of discovery; an appreciation of the work of Marconi. E. H. Armstrong. bibliog Elec Eng 72:670-6 Ag '53

MARCUSE, Moses M. 1874-
M. M. Marcuse completes 50 years with West. por Soap & San Chem 28:171+ D '52

MARDEN, John W. 1887-
Introduction with comments on the medalist's achievements. C. M. Slack. Electrochem Soc J 100:sup39C-40C F '53

MAREMONT automotive products, inc.
Stock offered. Comm & Fin Chr 177:1903 My 4 '53

MARGARINE. See Oleomargarine

MARGIN buying. See Stocks—Margin buying

MARINE biology
See also
Algae
Plankton

MARINE boilers. See Boilers, Marine

MARINE engineering
Engineering outlook; shipbuilding and marine engineering. Engineering 175:389-92 Mr 27 '53
Marine turbine research by Pametrada. Engineering 175:727-8, 781 Je 5, 19 '53
Pametrada; progress report for 1951. Engineer 194:251 Ag 22 '52; Engineering 174:278-9 Ag 29 '52
Pametrada; progress report for 1952. Engineer 195:762 My 29 '53
Shipbuilding and marine engineering in 1952. il Engineer 195:16-19, 53-5, pl 2, 102-6, 135-7 Ja 2-23 '53
Welding in marine engineering. H. N. Pemberton. diags Inst Mech Eng Proc (A) 167 no 1:48-61, pl 1-8 '53; Same abr. Engineering 175:73-6, 80, 122-5 Ja 16-23 '53; Same cond. Engineer 195:131-3, 160-2 Ja 23-30 '53
See also
Boilers, Marine
Diesel engines, Marine
Gas turbines, Marine
Motor ships
Naval architecture
Propellers
Ship propulsion
Ship propulsion, Electric
Ship resistance
Shipbuilding
Steam turbines, Marine
Steamboats
Steering gear
Warships

Study and teaching

Training of engineering designers. H. G. H. Tracy. il Engineer 195:884-5 Je 26 '53

MARINE engines
See also
Boilers, Marine
Diesel engines, Marine
Gas turbines, Marine
Motor boat engines, Outboard
Motor ships
Steam turbines, Marine

MARINE fauna
See also
Daphnia
Foraminifera
Plankton
Porpoises

MARINE gas turbines. See Gas turbines, Marine

MARINE insurance. See Insurance, Marine

MARINE structures
Engineering developments in the port of Dublin. il plans diags Engineering 174:1-3, 814-17 Jl 4, D 26 '52
See also
Breakwaters
Concrete construction, Subaqueous
Docks
Dry docks
Jetties
Paint, Anti-fouling
Piers
Piles and pile driving
Wharves, Concrete

MARINE surveying. See Hydrographic surveying

MARINE terminals. See Terminals

MARINE workers
See also
Longshoremen
Seamen

MARION power shovel company
May pay preferred arrears in '53. Barron's 32:19 N 3 '52

MARITIME law

Sovereign immunity of state agencies. O. R. Houston. bibliog Weekly Underw 168:1418-19 My 23 '53

See also

Salvage

MARITIME meteorology. See Meteorology, Maritime

MARITIME PROVINCES, Canada

Maritime Provinces. J. Foshay. Special Lib 44:146-7 Ap '53

MARK, Herman Francis, 1895-

H. F. Mark. G. Oster. por(front) J Chem Educ 29:544 N '52

MARKET areas

Sales in seven added store types, 187 metropolitan areas. Sales Management 69:83-4+ N 10 '52

See also

Shopping areas

MARKET development departments

Management looks at market development. L. A. Hatch. Chem & Eng N 30:5354-6 D 22 '52

MARKET research

Annual marketing research conference; contributed papers, 1953. D. R. G. Cowan, ed. (Mich. business papers no. 27) 116p Univ. of Michigan, Bur. of business research, School of business administration, Ann Arbor, Mich. '53 (pa $2)

Annual marketing research conferences; contributed papers, March 16, 1951 and May 9-10, 1952. (Mich. business papers no. 25) 54p Univ. of Michigan press, 311 Maynard st, Ann Arbor, Mich. '52 (pa $2)

Are you sure you can identify your real buyers and prospects? W. Kuswa. Sales Management 70:42+ Mr 1 '53

Assignment for to-morrow. T. G. MacGowan. Dun's R 60:25+ S '52

Chemical market research. R. M. Lawrence; M. W. Leland; P. Frisselle. Chem Eng Prog 48:528-33 O '52

Companies average 0.1 percent of sales for market research. Ind Marketing 38:114 O '53

Dealer survey leads to new package and new display program; automobile battery cables. K. R. MacLean. il Ptr Ink 241:38+ N 28 '52

Don't sell market research short. Ptr Ink 241:126 N 21 '52

Economic effects of marketing research. S. H. Rewoldt. (Mich. business studies v. 11, no. 4) 118p bibliog(p115-18) pa $2 Univ. of Michigan press, 311 Maynard st, Ann Arbor, Mich. '53

Engineering approach to sales; case history of chlorine and caustic. M. E. Clark. maps Chem Eng Prog 48:643-6 D '52

Fats market research needed. G. L. Prichard. Oil Paint & Drug Rep 163:76-7 My 11 '53

Hood-winking the pollsters; naming of New York's Ad Lib restaurant. E. Graham, jr. Adv Agency 46:75-6 Mr '53

How Cleveland electric illuminating co. makes long term plans for industrial sales. R. C. Hienton. Elec World 139:86-7+ Mr 9 '53

How to use trade show medium for sales forecasting studies. J. T. Fosdick. Sales Management 70:19-20 pt 2 Ja 1 '53

Increasing distribution efficiency by better organized research. C. W. Smith. bibliog J Marketing 17:233-45 Ja '53

Is the day of the individual research scholar passing? marketing Hall of fame. P. D. Converse. J Marketing 17:182-3 O '52

Laundry equipment national market sum of widely varying city habits. Sales Management 70:98+ F 15 '53

Magnaflux finds bigger markets with a new research plan. il Ind Marketing 38:134+ F '53

Management looks at market development. L. A. Hatch. Chem & Eng N 30:5354-6 D 22 '52

Management tool; market research. il Steel 132:70-1 F 9 '53

Market attitudes; research report from the medical field. T. Caplow. Harvard Bsns R 30:105-12 N '52

Market management by hunch or fact? A. W. Conover. Am Gas Assn Mo 35:4-6+ S '53

Market research. L. B. Hitchcock. Chem & Eng N 30:4823-6 N 17 '52

Market research seen as more specialized. R. D. Crisp. Ed & Pub 86:22 F 21 '53

Market survey of new products. G. D. Bieber. Chem Eng Prog 48:647-9 D '52

Marketing determination. R. O. Eastman. Advanced Management 18:62-4 Ja '53

Marketing research is more than surveys. R. J. Holloway. bibliog J Marketing 17:298-300 Ja '53

Marketing research; milestone or millstone? J. E. Jeuck. J Marketing 17:381-7 Ap '53; Discussion. R. Westfall. 18:174-7 O '53

Mass market; where to from here? Bsns W p46 My 16 '53

Next time pre-test your research. G. Fisk. Ptr Ink 241:64-5+ N 14 '52

Organization administration of chemical market research. R. B. Wittenberg. Chem Eng Prog 48:575-8 N '52

Political pollsters' cautious forecasts not expected to hurt marketing research. C. Day. Ptr Ink 241:38-9 N 14 '52

Psychology for marketing and economics. W. Alderson. bibliog J Marketing 17:119-35 O '52

Selling and market research; an important aspect of the chemical industry. Chem Age (Lond) 67:867-9; 68:13-14 D 27 '52-Ja 3 '53

Top executives tell how to use social sciences in advertising. H. E. Green. Ptr Ink 242:35-7+ F 27 '53

Why customers change brands. N. H. Comish. Dun's R 61:29+ Mr '53

Why do you let Americans skip breakfast, and like it? Better breakfast week. L. B. Colby. il Sales Management 70:48+ Mr 1 '53

See also

Chemical market research association

Consumer panels

Interviewing

Questionnaires

Bibliography

Research in marketing. J. H. Lorie, ed. Published in quarterly numbers of Journal of marketing

Study and teaching

Teaching of marketing research. L. O. Brown. J Marketing 17:433-6 Ap '53

MARKET research, Jobbers'

How a bright distributor hangs more wallpaper. H. C. Schroder. il Sales Management 69:33-4+ N 10 '52

MARKET research, Newspaper

Baltimore news-post starts consumer panel. Ed & Pub 86:30 Ja 24 '53

Brand preferences by Negroes shown in Baltimore study. il Adv Agency 45:74+ O '52

Bureau extends tests of health barometer. Ed & Pub 85:28 O 4 '52

Grocery inventory hailed as great door opener. E. Battey. Ed & Pub 85:15+ O 25 '52

Omaha World-Herald reports folks well-off. Ed & Pub 86:16 Ap 11 '53

MARKET research, Retail

Do you know or are you guessing? survey of 4,300 34th street, New York City shoppers. T. D. Ellsworth and others. J Retailing 28:97-106+ Fall '52

MARKET statistics

Are you talking to your prospects as if they lived in 1900? R. R. Reed. Adv Agency 46:52-4+ Mr '53

Big differences revealed in product sales by areas. Adv Agency 45:83+ O '52

From 126 fast-growing markets, here's how Fedway picked eight. L. M. Hughes. Sales Management 70:75-6+ Mr 1 '53

Future sales ratings. Sales Management 70:68 Ja 1 '53 [cont monthly]

How 300 experts rate '53 prospects in 108 basic industries. Sales Management 70:69-71 Ja 1 '53

Population gain; key to vast consumer sales; abstract. R. V. Peel. Management R 41:619-20 S '52

Potential markets for bolstering our economy; conclusions based on 1950 census of population. M. Smith. map Mag of Wall St 91:111-13+ N '52

Rate will be slower for new households. Bsns W p52+ Ja 17 '53

MARKET statistics—*Continued*

Regional markets for chemicals. R. H. Ewell. Chem Eng Prog 48:578-84 N '52

Sales in seven added store types, 187 metropolitan areas. Sales Management 69:83-4+ N 10 '52

Where to get facts on your industrial market. A. H. Dix. Ptr Ink 242:35-9 Mr 13 '53

See also

Consumption (economics)—Statistics

Farm income

Income—Statistics

Input-output data

Bibliography

Finding the facts and figures. R. M. Lawrence and J. H. Sprague. map Chem Eng Prog 49:43-6 Ja '53

MARKET stores

Back to the general store; supermarket-that-sells-everything; packaging must carry the load. il Mod Packaging 26:85-90+ O '52

Concentration of retail volume; bugaboo or bonanza? W. E. Holden. Ptr Ink 241:70+ D 12 '52

Food chains, building supermarkets, see no trouble raising funds. Bsns W p 130-1 Jl 18 '53

Packages are changing as the grocery super idea spreads. J. Nash. il Ptr Ink 242:96-7 Mr 20 '53

Pattern of distribution changes. G. C. Papineau. il Ptr Ink 241:47-9 D 12 '52

Rack jobber's viewpoint; non-food products in supermarkets. il diag Mod Packaging 26: 81-7+ Jl '53

Sizing up a retailer. Bsns W p52+ My 23 '53

Sophisticated supermarket borrows department-store technique to triple its customer capacity; Grand union, Elmwood, N.J. il plans diags Arch Forum 97:136-40 S '52

Supermarket that will try anything; J. Weingarten, inc. il Bsns W p90-4 Jl 11 '53

Supermarkets. Bsns W p58-9 Je 6 '53

Supermarkets get into book-lending. il Bsns W p46+ Mr 21 '53

Weingarten's sparring partner; Henke & Pillot, inc. il Bsns W p94 Jl 11 '53

What department store management should know about supermarkets. V. Lebow. J Retailing 29:17-20+ Spring '53

Why manufacturers of nonfood lines have a rack problem in super markets. J. Lorin. il Ptr Ink 241:52-4 O 17 '52

Fires and fire protection

Supermarket fires. Safety Maint & Prod 104:46+ O '52

Lighting

Super market lighting for atmosphere. il Illum Eng 48:140 Mr '53

MARKET stores, Wholesale

Distributor style supermart; Northwest electric supply co. il Elec West 111:110 Ag '53

MARKET surveys

Bay City story; survey of the plumbing, heating and appliance needs. il Dom Eng 180:91-121+ N; 80-7+ D '52

Bay City tells all; remodeling spree to open huge new markets. G. L. Milne. Sales Management 70:70+ F 1 '53

Changed American market. map Bsns W p74-6+ Jl 4 '53

Co-op effort on survey produces data for all; U.S. farm market. Ed & Pub 86:18 Ja 3 '53

Economy's hidden pressures. Bsns W p 143 Je 20 '53

How many of these houses are there in your town? C. L. Allen. Dom Eng 180:88-90 D '52

Let's look into your town; remodeling needs. P. B. B. Andrews. Dom Eng 180:122-4+ N '52

Market survey of an industry; paint, varnish and lacquer. C. W. Berl. Chem Eng Prog 49:40-2 Ja '53

Markets after defense expansion; results of survey indicate that 1953 is likely to be another good year. C. Sawyer. Comm & Fin Chr 177:110-11 Ja 8 '53

Neglected load; commercial electric cooking. il Elec World 139:113-20 Mr 23 '53

New products; odds are you fail. E. C. Kellogg. Iron Age 171:95-6 F 5 '53

Regional markets for chemicals. R. H. Ewell. Chem Eng Prog 48:578-84 N '52

Sales; market development saves time. R. M. Nelson. Iron Age 171:74 Mr 26 '53

Survey and new markets prove ad effectiveness for Hough. il Ind Marketing 37:44-5+ S '52

Tough market survey made easy through a civic promotion. il Ind Marketing 37:64+ O '52

See also

Questionnaires

MARKETING

Distribution's role in higher living standards. T. V. Houser. Comm & Fin Chr 176:1732-3+ N 6 '52

Free markets mean economic advance. D. C. Abbott. Comm & Fin Chr 177:11-12 sec 2 Je 25 '53

How a bright distributor hangs more wallpaper. H. C. Schroder. il Sales Management 69:33-4+ N 10 '52

How to plan, organize, and control marketing in your business; with chart. Gen Elec R 56:29-37 Jl '53

How to sell without salesmen. Bsns W p 142-3 Ap 18 '53

Is the freezer-food plan here to stay? W. Lapin. Sales Management 69:102+ O 15 '52

Lower defense production schedules and marketing. J. M. Rathmell. J Retailing 28:169-72+ Winter '52

Marketing advantages luring plants South. S. Fish. Manuf Rec 121:62-3 N '52

Marketing challenge of post-defense period. J. J. Nance. Comm & Fin Chr 177:2072-3 My 14 '53

Marketing trends; round table discussion. A. N. Seares and others. Advanced Management 18:61-9 Ja '53

Marketing updates. Bsns W p45-6 Ja 3 '53

Missing link; dealer cannot supply product. J. H. Lavenson. Ptr Ink 242:81 F 20 '53

Nine ways to insure profits in a buyers' market. J. E. Jump. Adv Agency 46:86-7 Ap '53

Now you can buy coal in a food store, too! D. J. Atchison. il Sales Management 70: 34+ Mr 15 '53

Pick-it-yourself. Bsns W p52 Je 27 '53

Product-line management; many multiproduct firms find this concept of marketing helps. Mod Ind 24:63-4+ D '52

Product that sells. il Fortune 47:110-12+ Mr '53

Sales or production, which is best background for a top executive? Ind Marketing 38:52-4+ Ja '53

Search for the consumer dollar. Mod Ind 25: 107-8+ F '53

Strategy of the seller or, what businessmen won't tell. J. McDonald. Fortune 46:124-7+ D '52

Symposium on fundamentals of chemical marketing. H. G. Johnson and others. Chem & Eng N 30:4822-6, 4938-41, 5030-3, 5143-5, 5244-7, 5354-6, 5437-41 N 17-D 29 '52

Ten years' progress in management; marketing and distribution. N. Hall. A S M E Trans 75:683-5 My '53

What two men did to 350 million curls. il Sales Management 69:76+ D 15 '52

Wine on the U.S. dinner table; Fromm & Sichel, inc. launches Chateau Masson line. il Bsns W p48+ N 8 '52

You decide; competitors or partners. W. C. Caswell. Chem W 71:20-2+ N 1 '52

See also

Advertising

Brokers

Chain stores

Containers

Dealer helps

Dealer relations

Display of merchandize

Distribution (economics)

Exclusive agencies

Exhibits

Export trade—Marketing

Factors

Farm market

Industrial market

Jobbers

Jobbers, Wagon

Machinery—Leasing

Mail order business

Manufacturers' agents

Market stores

Merchandizing

Price policies

Products, New

Retail trade

Sales management

Salesmanship

Salesmen

Salesmen, Retail

Securities—Marketing

Self-service

Shopping centers

Vending machines

MARKETING—*Continued*

Accounting

Distribution cost analysis; discussion. N A C A Bul 34:187-94 sec 3 S '52

Bibliography

Book reviews. C. J. Dirksen, ed. Published in quarterly numbers of Journal of marketing

Department store outlets

Is Fedway in your sales future? L. M. Hughes. il Sales Management 70:34-6+ F 15 '53

Direct selling

Now a soda fountain in every home! ice cream manufacturer in New Orleans. il Sales Management 70:86+ Mr 1 '53

Sell a few, sell them hard; reorganizing industrial sales to sell retail accounts. il Chem W 71:43+ O 25 '52

Law

Legislative and judicial developments in marketing. W. F. Brown, ed. Published in quarterly numbers of Journal of marketing

Market stores outlets

Why super markets use rack jobbers. M. M. Zimmerman. il Sales Management 69:108+ O 15 '52

Sectional distribution

New national advertiser in the making; Whitney & co.'s salmon. L. F. Thomann. il Ptr Ink 241:37 N 28 '52

One-market saturation selling wins leadership for Laurel Springs. C. J. Knapp. il Sales Management 69:53-4+ N 20 '52

MARKETS, Municipal

Chicago wholesale fresh fruit and vegetable market. J. D. Butterworth. J Marketing 17:291-4 Ja '53

MARKETS, New

Before stainless steel could be used in skyscraper sidewalls. R. J. Ritchey. il Sales Management 69:30-2 N 1 '52

Bring a barrel of your material, we'll tell you if it's pumpable. D. P. Woodlee. il Sales Management 69:52+ D 1 '52

Do-it-yourself field beckons industrial producers; Skil corp. W. H. Ferry. il Ind Marketing 38:52-4+ Ap '53

11 copy themes to promote new uses for products. T. M. Jones. il Ptr Ink 241:30-3 N 28 '52

15 ways to boost sales by promoting new uses for products. T. M. Jones. il Ptr Ink 241:33-5+ N 21 '52

Florida potter looks to Latin America for markets; Poinciana chinaware, inc. il Cer Ind 60:115 Je '53

Productive teamwork between manufacturer and distributor; Polyken. G. C. Stineback. il Sales Management 69:40+ O 15 '52

Survey and new markets prove ad effectiveness for Hough. il Ind Marketing 37:44-5+ S '52

Where you can sell enameled products. C. P. Lohman. Cer Ind 60:125+ Ap '53

See also

Advertising copy—Use appeal

MARKOFF processes. See Probabilities

MARKS and Spencer, limited

Statement by the chairman. S. Marks. Economist 167:846-7 Je 20 '53

MARMOTS

Histological changes in the tissues of the hibernating marmot following whole body irradiation. K. C. Brace. bibliog Science 116:570-1 N 21 '52

MARRUBIIN

Constitution of marrubiin. W. Cocker and others. Chem Soc J p2540-8 S '53

MARS (planet)

Mars. G. de Vaucouleurs. il map Sci Am 188:65-73 My '53

MARS metal corporation

Stock offering. Comm & Fin Chr 178:298 Jl 27 '53

MARSHES

Blasting a channel through New Jersey mud flats. P. W. Miller. il Explosives Eng 31:18-19 Ja '53

Piling platforms solve drilling in coastal swamp. J. A. Kornfeld. il maps plan Oil & Gas J 51:210+ S 29 '52

Thruway problems in Montezuma swamp. W. Robinson. il map diag Roads & Sts 95:44-7+ D '52

MARSHMALLOWS

Air-cushion pack; heat-sealed polyethylene bag for Fireside marshmallows. il Mod Packaging 26:100-1 Jl '53

MARTEL, Frank Xavier

Splitup in Detroit worries AFL; revolt of the locals. Bsns W p 154 Je 6 '53

MARTENSITE

Effect of a prequench on the martensite reaction in tool steel. J. J. Gilman. il J Metals 4:Trans 1300-1 D '52

Effect of carbon on the volume fractions and lattice parameters of retained austenite and martensite. C. S. Roberts. bibliog J Metals 5;Trans 203-4 F '53

Effect of silicon on the tempering of martensite; abstract. A. G. Allten and P. Payson. Metal Prog 62:134 N '52

Influence of deformation on the kinetics of the martensitic transformation; abstract. O. P. Maksimova and A. I. Nikonorova. Metal Prog 63:140+ Mr '53

Kinetics of the martensite transformation above room temperature; abstract. G. V. Kurdyumov and O. P. Maksimova. Metal Prog 63:142+ F '53

Line-broadening of martensite in nickel steels. R. A. Smith. bibliog Iron & Steel Inst J 173:147-52 F '53; Discussion. 174:347-52 Ag '53

Martensite habit plane in quenched Ti-Mn alloys. You Chao Liu and H. Margolin. bibliog il diags J Metals 5:Trans 667-70 My '53

Nucleation of isothermal martensite; abstract. J. C. Fisher. J Metals 4:1042 O '52

Plastic critical temperature in strain-induced martensite reactions. C. D. Starr. J Metals 5:Trans 654 My '53

Rate of formation of isothermal martensite in Fe-Ni-Mn alloy. R. E. Cech and J. H. Hollomon. bibliog il J Metals 5:Trans 685-9 sec 2 My '53

Specific heat of austenite and martensite. E. Griffiths and P. R. Pallister. diags Iron & Steel Inst J 175:30-2 S '53

Stabilization of the austenite-martensite reaction in a high chromium steel. S. C. Das Gupta and B. S. Lement. bibliog il diags J Metals 5:Trans530-6 Ap '53

Time duration of the formation of a martensite plate and the influence of metallurgical variables; abstract. R. F. Bunshah and R. F. Mehl. J Metals 4:1042 O '52

Transformation of deformed austenite into martensite; abstract. G. V. Kurdyumov and others. Metal Prog 62:146+ S '52; Discussion. M. Cohen. 63:114+ Ap '53

MARTIN, Archer John Porter, 1910-

Nobel awards point to chemistry as key to medical advances. pors Chem & Eng N 31:155, cover Ja 12 '53

Nobel prize awards. por Chem Age (Lond) 67:664 N 15 '52

MARTIN, George E.

Joins Public works as highway editorial consultant. por Pub Works 84:80+ Ja '53

MARTIN, Glenn L., company

Martin aircraft back on the rails. Bsns W p62 Ja 31 '53

MARTIN, Harold

Newcomer, but a pioneer. por Cer Ind 60:58-9+ Mr '53

MARTIN, Minta d. 1953

Sketch. por Aeronautical Eng R 12:34 My '53

MARTIN, William McChesney, 1906-

Portrait. Bsns W p29 Mr 21 '53

MARTIN'S stores of Massachusetts, inc.

New neighbors. Bsns W p42+ Ja 17 '53

MARVEL, David T.

They're in the news. H. Woodward. por Sales Management 70:26 F 1 '53

MARYLAND

See also

Public works—Maryland

Roads—Maryland

MARYLAND casualty company
Common stock reserved for conversion underwritten. Comm & Fin Chr 177:2570 Je 15 '53
Stock offering underwritten. Comm & Fin Chr 177:941 Mr 2 '53

MARYLAND university

Psychiatric institute

Opening of the new Psychiatric institute of the University of Maryland. J. E. Finesinger. Science 117:291 Mr 20 '53

MASHBURN, Lloyd Abner, 1897-
Veteran of union and civic service named Assistant labor secretary. por Eng N 150:31 Ja 29 '53

MASKING for color correction. See Color printing

MASON, Lowell Blake, 1893-
Good cop; Mason prefers horse sense to the big whip. B. Lefferts. por Barron's 32:5+ D 29 '52

MASONIC temples

Lighting

Lighting a Masonic assembly room; data sheet. H. A. Klopot. il Illum Eng 48:503 S '53

MASONRY
Precast masonry units speed economical home construction. il plans diags Am Bld 74:138-41 O '52
Tough waterproofing problem solved by new masonry paint. il Am Bld 74:169 S '52

See also
Brick construction
Concrete blocks

Repair

How to repair leaking masonry. il Constr Method 35:86+ Mr '53

MASS (chemistry)
Atomic masses from palladium through xenon. R. E. Halsted. bibliog Phys R 88:666-72 N 1 '52
Derivation of the mass-energy relation. H. E. Ives. Opt Soc Am J 42:540-3 Ag '52
Discontinuities in the nuclear mass surface. A. E. S. Green and D. F. Edwards. bibliog Phys R 91:46-53 Jl 1 '53
Mass assignment and gamma-radiations of the seven-hour molybdenum isomer. G. E. Boyd and R. A. Charpie. Phys R 88:681-2 N 1 '52
Mass surfaces. A. E. S. Green and N. A. Engler. bibliog Phys R 91:40-5 Jl 1 '53
Nuclear mass determination from disintegration energies; oxygen to sulfur. C. W. Li. Phys R 88:1038-42 D 1 '52
Transport of momentum, mass, and heat in turbulent jets. L. G. Alexander and others. il diags Ill U Eng Exp Sta Bul 413:1-88 bibliog(76 titles, p85-8) '53 (pa 75c)

MASS spectra
Appearance potential of C^+ in the mass spectra of some substituted methanes and the heat of sublimation of carbon. H. Branson and C. Smith. bibliog J Chem Phys 20:1047 Je '52
Mass relation of heavy particles. H. Enatsu. Phys R 89:1304-5 Mr 15 '53
Mass spectra and appearance potentials of ketene monomer and dimer; relation to structure of dimer. F. A. Long and L. Friedman. bibliog Am Chem Soc J 75:2837-40 Je 20 '53
Mass spectra of fluorocarbons. F. L. Mohler and others. bibliog J Res Nat Bur Stand 49:343-7 N '52
Mass spectra of six lactones. L. Friedman and F. A. Long. bibliog Am Chem Soc J 75:2832-6 Je 20 '53
Mass spectrum of CO_2. A. S. Newton. J Chem Phys 20:1330-1 Ag '52
Masses of light atoms. K. Ogata and H. Matsuda. bibliog il diag Phys R 89:27-32 Ja 1 '53
Structure and mass spectrum of elementary particles. H. Yukawa. bibliog Phys R 91:415-17 Jl 15 '53
Zr^{92}-Mo^{92} and Zr^{94}-Mo^{94} pairs and the Zr^{96}-Mo^{96}-Ru^{96} triplet. J. S. Geiger and others. bibliog diags Phys R 89:621-3 F 1 '53

MASS spectrographs
Masses of light atoms. K. Ogata and H. Matsuda. bibliog il diag Phys R 89:27-32 Ja 1 '53

MASS spectrometers
Angular aberrations in sector shaped electromagnetic lenses for focusing beams of charged particles. E. G. Johnson and A. O. Nier. bibliog diags Phys R 91:10-17 Jl 1 '53
Brazing vacuum-tight joints in high nickel alloys. R. A. Wallace and W. R. Vanderveer. il diags Materials & Methods 36:117-18 D '52
Cement base for the hot filament mass spectrometer source. J. E. Hand. R Sci Instr 24:181 F '53
Decrease of N^{15} to N^{14} ratio measurement as a function of pump-out time for Nier-type isotope-ratio mass spectrometer. J. George. bibliog diag Anal Chem 24:1662-4 O '52
Direct comparison of *m/e* for the positron and the electron. L. A. Page and others. bibliog diag Phys R 89:1273-7 Mr 15 '53
Emission regulator for mass spectrometer. A. K. Solomon and D. C. Caton. diags R Sci Instr 23:757-9 D '52
Exceptionally stable regulated power supply for electrometer tubes. W. P. Senett and R. W. Pierce. bibliog diags R Sci Instr 23:534-7 O '52
Factors influencing the life of self-quenching counters. S. S. Friedland and H. S. Katzenstein. bibliog il R Sci Instr 24:109-12 F '53
Free molecular flow in the sample inlet to the mass spectrometer. P. D. Zemany. diag J Ap Phys 23:924-7 Ag '52
Gas sample intake for mass spectrometer. H. von Ubisch. diag J Sci Instr 29:412-13 D '52
Instrument frontier. il diags Fortune 46:146-9+ D '52
Ion-resonance mass spectrometer. Materials & Methods 38:218+ O '53
Kinetic studies with a fast-scanning mass spectroscope. E. G. Léger and C. Ouellet. bibliog il J Chem Phys 21:1310-11 Jl '53
Mass spectrometer. A. O. C. Nier. diags Sci Am 188:68-72+ Mr '53
Mass spectrometer; patent. diags Electronics 26:258+ Jl '53
Mass synchrometer doublet measurements at masses 28 and 30. L. G. Smith and C. C. Damm. Phys R 90:324-5 Ap 15 '53
Radiofrequency mass spectrometer for upper air research. J. W. Townsend, jr. il diags R Sci Instr 23:538-41 O '52
Recording system for mass spectrometers. K. K. Jensen, W. E. Bell and F. E. Blacet. diag Anal Chem 24:1614-15 O '52
Studies of ionization efficiency; the ionization potentials of some organic molecules. J. D. Morrison and A. J. C. Nicholson. bibliog J Chem Phys 20:1021-3 Je '52
Vacuum bakeout ovens; cleaning of precision parts for mass spectrometers. il Electronics 26:276+ F '53

MASS spectrometric analysis
Detection of atoms and free radicals in flames by mass spectrometric techniques. S. N. Foner and R. L. Hudson. bibliog il diags J Chem Phys 21:1374-82 Ag '53
Detection of the HO_2 radical by mass spectrometry. S. N. Foner and R. L. Hudson. diag J Chem Phys 21:1608-9 S '53
Determination of benzene, cyclohexane, and methylcyclopentane by mass spectrometer. S. Meyerson. bibliog diag Anal Chem 25:338-41 F '53
Determination of hydrogen sulphide, methyl mercaptan, dimethyl sulphide and disulphide in kraft pulp mill process streams. V. F. Felicetta and others. bibliog diags Tappi 36:425-32 S '53
Determination of some chlorine-substituted methanes and ethanes; infrared and mass spectrometric determination. R. B. Bernstein, G. P. Semeluk and C. B. Arends. bibliog Anal Chem 25:139-42 Ja '53
Electron impact studies in CH_4, CH_3Cl, CH_3Br and CH_3I. H. Branson and C. Smith. bibliog Am Chem Soc J 75:4133-8 S 5 '53

MASS spectrometric analysis—*Continued*

Free radicals by mass spectrometry; the rate of combination of methyl radicals. K. U. Ingold and F. R. Lossing. bibliog diags J Chem Phys 21:1135-44 Jl '53

Helium diffusion through glass. F. J. Norton. bibliog diags Am Cer Soc J 36:90-6 Mr 1 '53

Identification of complex organic materials; by mass spectrometric analysis of their pyrolysis products. P. D. Zemany. bibliog il Anal Chem 24:1709-13 N '52

Mass spectra of the tetramethyl compounds of carbon silicon, germanium, tin, and lead. V. H. Dibeler. bibliog J Res Nat Bur Stand 49:235-9 O '52

Measurement of deuterium oxide concentration in water samples by the mass spectrometer. H. W. Washburn, C. E. Berry and L. G. Hall. bibliog Anal Chem 25:130-4 Ja '53

Polymer degradation studies by absorption and mass spectrometry. B. G. Achhammer. bibliog Anal Chem 24:1925-30 D '52

Resolving normal and isomeric paraffins in complex hydrocarbon mixtures; a mass-spectrometric method. H. Sobcov. bibliog Anal Chem 24:1908-11 D '52

Table for calculation of N^{15} concentration by mass spectrometric isotope analysis. L. D. Abbott, jr. and M. J. Dodson. Anal Chem 24:1860 N '52

Vacuum lock for routine solid analyses with a mass spectrometer. C. M. Stevens. diags R Sci Instr 24:148-51 F '53

MASSACHUSETTS

See also

Roads—Massachusetts

MASSACHUSETTS institute of technology

Annual report. J. R. Killian, jr. Tech R 55: 34-5+ N '52

History of bacteriology at M.I.T. M. P. Horwood. il Tech R 55:151-4+ Ja '53

Metal processing; teaching of metal working, casting, and welding. H. F. Taylor. il Tech R 55:97-100+ D '52

New horizons for machine tools; teaching and research in the field of metal cutting. P. A. Smith. il Tech R 55:93-6+ D '52

Medical department

M.I.T. enterprise in occupational health. H. L. Hardy. il Tech R 55:315-18+ Ap '53

Metals processing laboratory

Metals processing laboratory. il plans Tech R 55:89-92+ D '52

MASSACHUSETTS investors trust

Making friends for a mutual fund. Bsns W p 104-6+ My 16 '53

MASSACHUSETTS mutual life insurance company

Important announcements by Massachusetts Mutual. L. J. Kalmbach. Weekly Underw 168:1104-5 Ap 18 '53

Massachusetts Mutual lowers premium on term, increases dividends. East Underw 54: 1+ Ap 10 '53

MASTER boiler makers' association

Annual meeting, Chicago, Sept. 15-17; with committee reports. Ry Mech & Elec Eng 126:61-8 N '52

Annual meeting, Chicago, Sept. 14-16. Ry Age 135:98-100 S 21 '53

MASTICS

Plastic or mastic coverings for exterior walls of houses. F. L. Browne. Paint Oil & Chem R 116:36-7 Ag 13 '53

MASTOIDS

Impedance of the human mastoid. E. K. Franke. Acoustical Soc Am J 24:410-11 Jl '52

MATCH books

Little things go over big on company match books. R. Newcomb and M. Sammons. il Ind Marketing 38:96+ Jl '53

See also

Advertising mediums—Match books

MATCHES

Billions of matches; but the bright economic light comes from other sources. H. Murphy. Barron's 32:11-12 N 3 '52

Matches under the microscope; inquiry of Monopolies commission into matches and match-making machinery of Great Britain, 1949-1952. Economist 167:533-4+ My 23 '53

Opening the matchbox. Economist 167:925 Je 27 '53

MATERIA medica

See also

Analgesics
Anesthetics
Anticonvulsants
Drugs
Medicine
Pharmaceutical research

MATERIAL control

Materials control plan for a job shop; Specialty assembling & packing co. S. Eisenberger. Factory Management 111:99-101 O '53

See also

Inventories
Stores systems

MATERIAL handling

Assembly line fabrication methods for aircraft exhaust systems; Ryan aeronautical co. il diag Automotive Ind 107:54-5+ O 1 '52

Better handling saves building space. J. E. Wiltrakis. il plan Am Mach 96:136-8 D 8 '52

Bin to fit varied handling needs. il Factory Management 111:146 F '53

Bulk-handling dry ingredients. W. G. Hoskins. il diags Food Eng 25:94-100 My '53

Can you use an idea to speed production and ease material handling problems? illustrations with text. W. Rudolph. Mill & Factory 53:94-5 Jl '53

Chemical engineering unit operations. R. L. Speaker. bibliog (55 ref) il Ind & Eng Chem 45:88-92 Ja '53

Cycle charting, with handligs; quick new way to analyze and improve your materials handling methods. W. W. Phillips and S. W. Earle. Factory Management 111:105-7 Ag '53

Easy-to-reach storage racks and trays for movement of auto radio tuner units. il Electronics 26:228+ Ja '53

Full-fashioned mill reduces costs with a special handling system. H. B. LeFeaux. il plan Textile World 103:80-1+ Ap '53

Handling, the new technology. L. L. Goodman. Metallurgia 46:227-30 N '52

Handling time; reference book sheet. V. G. Hotchkiss. Am Mach 97:187, 189, 191 Je 8 '53

How American industry is attacking the problem of materials handling. J. R. Bright. flow plan flow chart diags Inst Mech Eng Proc (A) 167 no 2:113-40, pl 1-10 '53; Excerpts. Engineer 195:594-6, 622-5 Ap 24-My 1 '53

Integrate materials handling with management. Am Mach 97:144-5 My 11 '53

Latest sodium handling techniques. J. M. Gill and others. il diags Chem Eng 60:217-19 Mr '53

Less handling, the better; materials handling provides greatest potential for reducing production costs. E. C. Kellogg. Iron Age 171:139-40 My 7 '53

Major revision of plant layout; near-revolution in production methods; Pittsburgh plate glass co. il Factory Management 111: 134-7 O '53

Material handling layout of blast furnace and coke plant at Fairless works; abstract. C. Lord. Steel 131:112+ O 6 '52

Materials handling. T. W. Rodes. Published in monthly numbers of Industrial and engineering chemistry

Materials handling automation has vital role in Buick V-8 production. J. Geschelin. il Automotive Ind 108:32-6 Mr 1 '53

Materials handling devices speed resistance welding. il Welding J 32:144 F '53

Materials handling; offices have it, too! abstract. Management R 42:23-4 Ja '53

Materials handling tips. E. E. Schaffer. diags Iron Age 171:240-1 My 7 '53

Modern handling methods. il Nat Safety N 67:157 Mr '53

National conveyor institute, 1st, Urbana, Ill. April 14-16. Foundry 81:181 Je '53

Program for better handling of maintenance stores; Ethyl corp. A. S. Barton. il Factory Management 111:128-33 O '53

MATERIAL handling—*Continued*

Stud welding speeds parts processing; lugs welded to hard-to-handle parts for easier handling. R. M. Lorz. il Iron Age 171:71 Mr 12 '53

Train arrivals, handling costs, and the holding and storage of raw materials. M. D. J. Brisby and R. T. Eddison. Iron & Steel Inst J 172:171-83 O '52; Discussion. 174:341-4 Ag '53

Trends in materials handling. il plans diags Factory Management 111:B278-301 pt 2 My '53

Unusual materials handling speeds exhaust system output; Ryan aeronautical co. R. L. Clark. flow diag il Iron Age 170:116-18 O 23 '52

What's ahead the next ten years in plant services. Am Mach 96:J9-10 Mid-N '52

Workshop seminars; Materials handling conference and 5th National materials handling exposition, Philadelphia, May 18-22; program and list of exhibitors. Iron Age 171:274+ My 7 '53

See also

Coal handling
Conveying machinery
Electric trucks, Industrial
Factory transportation
Freight handling
Loading and unloading
Lumber handling
Mechanical handling
Motor trucks, Industrial
Ore handling
Pallets
Paper handling
Steel handling
Storage
Tote boxes
Wood handling

Bibliography

Information on materials handling. Am Mach 96:J 18+ Mid-N '52

Exhibitions

Materials handling show, 5th, Philadelphia. il Iron Age 171:126-9 My 28 '53

National materials handling exposition, Philadelphia, May 18-22. Foundry 81:218+ Jl '53

National materials handling exposition, Philadelphia, May 18-22. il Ind Marketing 38:72-4+ Jl '53

National materials handling show, 5th, Philadelphia, May 18-22. il diag Automotive Ind 108:32-3 My 15; 49+ Je 15 '53

New equipment at 5th National materials handling exposition, Philadelphia, May 18-22. Am Mach 97:178-88 My 11 '53; Textile World 103:119-26 Jl '53

Safety measures

Handle it safely. L. Stemp. il Inland Ptr 130:38-9 O '52

Material mishandling, big accident cause. Factory Management 111:274 Ja '53

See also

Lifting

Study and teaching

Materials handling training for supervisors. W. J. Grohs and R. W. Mallick. il Factory Management 110:84-7 N '52

Tables, calculations, etc.

Handy chart tells yardage being moved. W. F. Schaphorst. Brick & Clay Rec 122:37 My '53

MATERIALS

Annual engineering materials review and forecast. T. C. Du Mond. il diags Materials & Methods 37:101-16 Ja '53 (reprints 25c)

Annual handbook of product design for 1953; non-metallic materials and finishes. il diags Product Eng Hdbk p C'1-33+ '53

Basic materials conference and exposition, New York, June 15-19; list of committee members, sponsors, exhibitors; program. Materials & Methods 37:131+ Je '53

Chemical engineering materials of construction; sixth annual review. bibliog il Ind & Eng Chem 44:2285-380 O '52 (reprints 75c)

Condensed review of some recently developed materials, arranged alphabetically by trade names; with names and addresses of manufacturers. Mach 59:161-78 N '52

Condensed review of some recently developed materials arranged alphabetically by trade names; with names and addresses of manufacturers. Mach 60:169-87 O '53

Designing with engineering materials. R. L. Stedfeld and others. il Machine Design 25:137-92 O '53

How economic factors influence materials selection. L. C. Bailey and R. J. Lund. bibliog il Materials & Methods 37:85-91 My '53

How materials engineering works at Northrop. C. M. Miller. il Materials & Methods 37:83-5 Ap '53

How to select and specify materials. J. W. Frazier. Machine Design 25:292+ Ag '53

Materials and design. il Mod Ind 25:89-90+ Ja '53 [cont monthly]

Materials and the atomic age. J. C. Robinson. Materials & Methods 38:166+ Ag '53

New demands lead to new directions in engineering materials. T. C. Du Mond. il Materials & Methods 37:65-96 Je '53

Productionizing new materials. H. W. Benjamin. diags Machine Design 25:314-16+ O '53

Report on materials. Machine Design 25:245-6+ F '53

Selecting materials for small assemblies; Hunter spring co. L. B. Glaser. il diags Materials & Methods 37:101-3 My '53

What's ahead the next ten years in materials and components. Am Mach 96:A2-21 Mid-N '52

See also

Airplanes—Materials
Automobiles—Materials
Building materials
Ceramic materials
Electric industries—Materials
Insulating materials
Mechanical handling
Packaging materials
Paint materials
Paper making materials
Plastic materials
Raw materials
Refractory materials
Road materials
Silicones
Stores systems
Strategic materials
Strength of materials
Substitutes
Tanning materials
Textile fibers

MATERIALS, Strategic. See Strategic materials

MATERNAL and infant welfare

APHA conference report; mother and child. Pub Health Rep 68:218-19 F '53

Birth statistics in maternal and child health programs. W. Haenszel. bibliog Pub Health Rep 68:71-80 Ja '53

Opinions of physicians about EMIC reported. Pub Health Rep 68:122 Ja '53

Professional training for pediatricians and nurses. Pub Health Rep 68:138-9 Ja '53

MATHEMATICAL biology. See Biomathematics

MATHEMATICAL economics. See Economics, Mathematical

MATHEMATICAL instruments

See also

Calculating machines
Differential analyzers
Integrators

MATHEMATICAL physics

Completeness relations for loss-free microwave junctions. T. Teichmann. bibliog diag J Ap Phys 23:701-10 Jl '52

Continuum in special relativity. B. Leaf. Phys R 90:1090-101 Je 15 '53

Flow over thick plate with circular hole. W. R. Smythe. diag J Ap Phys 23:447-52 Ap '52

Radiation from a horizontal dipole in a semi-infinite dissipative medium. R. H. Lien. bibliog diag J Ap Phys 24:1-4 Ja '53

Solutions to the wave equation in hyperbolic space. J. W. Miles. bibliog J Ap Phys 23:1400 D '52

Synthesis of transfer functions with poles restricted to the negative real axis. L. Weinberg. diags J Ap Phys 24:207-16 F '53

Theory of finite displacement operators and fundamental length. B. T. Darling and P. R. Zilsel. bibliog Phys R 91:1252-6 S 1 '53

See also

Aerodynamics
Approximate computation
Boundary value problems
Differential equations
Elasticity
Equation of state
Gases
Hydrodynamics
Impact
Light, Scattering of
Magnetism
Optics
Sound
Statistical mechanics
Struve function
Thermodynamics
Whittaker's function

MATHEMATICAL statistics
See also
Statistical methods

MATHEMATICAL theory of communication. See Communication, Theory of

MATHEMATICIANS
See also
Clifford, William Kingdon

MATHEMATICS
Methods of conjugate gradients for solving linear systems. M. R. Hestenes and E. Stiefel. bibliog J Res Nat Bur Stand 49:409-36 D '52
See also
Calculus
Determinants (mathematics)
Differential equations
Fourier's series
Functions
Graphic statics
Inequalities, Linear
Integral equations
Integration
Laplace transformation
Mathematical physics
Matrices
Mechanics
Numbers
Numbers, Transfinite
Probabilities
Statistical methods

Study and teaching

Is the traditional program in college mathematics adequate for the training of prospective engineers and scientists? K. L. Noble. J Eng Educ 43:121-3 O '52
Minimum mathematical requirements for engineering college admission and factors which affect this problem; panel discussion. G. C. Ernst and others. J Eng Educ 43:136-44 N '52
Teaching with color. W. C. Krathwohl. J Eng Educ 43:155-8 N '52

Tables, calculations, etc.

Struve function of order three-halves. K. Christoph and others. J Res Nat Bur Stand 50:21-9 Ja '53

Tests and scales

Diagnostic test in simple mathematics. F. C. Schmidt and C. E. Kaslow. J Chem Educ 29:624 D '52

MATHIESON chemical corporation
Earnings increased. Comm & Fin Chr 178:298 Jl 27 '53
Five medium priced growth stocks; with comparative balance sheet items. Mag of Wall St 91:74 O 18 '52
Five stocks with unique growth prospects; with comparative balance sheet items. Mag of Wall St 92:453 Jl 11 '53
Five undervalued sound investments; with comparative balance sheet items. Mag of Wall St 91:350 D 27 '52
Gain in sales, profits. Barron's 33:19-20 Ap 20 '53
Translating visions and dreams into realities; studies in dynamic management. R. Colston. Mag of Wall St 92:211+ My 16 '53

MATRICES
Analysis of elastic structures by matrix transformation with special regard to semimonocoque structures. B. Langefors. bibliog diags J Aeronautical Sci 19:451-8 Jl '52; Discussion. H. Falkenheiner. 20:293-4 Ap '53
Determination of modes and frequencies above the fundamental by matrix iteration. P. Cicala. J Aeronautical Sci 19:719-20 O '52
Evaluation of the energy matrix of the tensor forces. I. Talmi. bibliog Phys R 89:1065-71 Mr 1 '53
Fredholm theory of the *S* matrix. J. Hamilton. bibliog Phys R 91:1524-6 S 15 '53
Matrix elements of β-decay in *jj* coupling. I. Talmi. bibliog Phys R 91:122-5 Jl 1 '53
Matrix elements of spin-spin interaction. F. R. Innes. bibliog Phys R 91:31-4 Jl 1 '53
Matrix methods for redundant structures. B. Langefors. J Aeronautical Sci 20:292-3 Ap '53
Matrix representation of transistor circuits. J. Shekel. bibliog diags Inst Radio Eng Proc 40:1493-7 N '52
Method of computing exact inverses of matrices with integer coefficients. J. B. Rosser. J Res Nat Bur Stand 49:349-58 N '52
Return-difference matrix in linear networks; abstract. L. Tasny-Tschiassny. diags Inst E E Proc 100 pt 3:248-9 Jl '53
S-matrix and causality condition; Maxwell field. N. G. van Kampen. bibliog Phys R 89:1072-9 Mr 1 '53
S matrix and causality condition; nonrelativistic particles. N. G. van Kampen. bibliog Phys R 91:1267-76 S 1 '53
Symmetry of the *S* matrix. F. Coester. bibliog Phys R 89:619-20 F 1 '53

MATTER
See also
Adsorption
Atoms
Chemistry
Colloids
Compressibility
Diffusion
Dynamics
Elasticity
Electrons
Gases
Ions
Molecules
Physics
Quantum theory
Radioactivity
Solids
Solution (chemistry)
Specific gravity
Viscosity
Wave mechanics

MATTRESSES

Advertising

Small company goes national by joining forces with competition. N. Kelne. il Ptr Ink 242:39-41 F 27 '53

MAU MAU. See Kenya

MAWARDI, Osman K. 1917-
Dr O. K. Mawardi receives biennial award for outstanding contributions to acoustics. L. L. Beranek. por Acoustical Soc Am J 24:544-5 S '52

MAXWELL, Marvin Wilbur
Railroad engineers receive Julian C. Smith medal. Roads & Eng Constr 91:102 My '53

MAY department stores company
Debentures offered. Comm & Fin Chr 177:725 F 16 '53

MAYER, Louis Burt, 1885-
Portrait. Fortune 47:93 Ja '53

MAYER, Rene, 1895-
France shifts to foreign goals. por Bsns W p 130-1 Ja 17 '53

MAYERS, L. and C., company, inc.
World peace contests. Mod Ind 24:168 N '52

MAYNARD, Thomas Poole, 1883-1952
Memorial. J. G. Lester and A. S. Furcron. bibliog por(pl 10) Geol Soc Proc 1952:119-20 Je '53

MAYS, Edwin L.
Now, a national credit card. Fortune 46:180 O '52

MEAD, Edward
Dr Heckle and Mr Tide S. H. Margolis and M. Silverstein. por Ptr Ink 241:36-8 N 21 '52

MEADOWS, Algur Hurtle, 1899-
Businessmen in the news. por Fortune 46:48 N '52

MEANS, Gardiner Coit, 1896-
Zoysia grass ain't hay. Fortune 47:218 Ap '53

MEANY, George, 1894-
Building trades veteran heads AFL. J. Gambatese. pors Eng N 149:29+ D 4 '52
New chief, new era for AFL. por Bsns W p 114 N 29 '52
Portrait. Bsns W p 133 My 30 '53

MEASUREMENT
Amateur scientist; origins and history of modern high precision in mechanical arts. A. G. Ingalls. diags Sci Am 188:115-16+ Ap '53
How round is round? A. C. Sanford. il diag Am Mach 96:124-6 N 10 '52
Odd measuring problems. F. R. Archibald. diags Am Mach 97:105-8 Ag 3 '53
Precise angular standard made from gageblocks. il Mach 59:200-1 Ag '53
Proposal for integral international standardization. A. Caquot. diags Standardization 23:403-5 D '52
Truth and measurement. I. F. Kinnard. Elec Eng 72:581-3 Jl '53
Units and standards of measurement employed at the National physical laboratory; light; photometry, colorimetry, and radiometry. Opt Soc Am J 42:858-61 N '52 (reprints 15c)

MEASUREMENT—*Continued*

Units for measuring variations in measurements; with data sheet, statistician's tables for appraising variability. W. J. Youden. il Metal Prog 64:91-6, 96B S '53

See also

Calorimeters and calorimetry
Color measurement
Colorimeters and colorimetry
Distances—Measurement
Electric measurements
Flow meters
Frequency meters
Gages
Gas, Natural—Measurement
Gas flow
Gearing—Measurement
Magnetic measurements
Measuring instruments
Micrometers
Optical measurements
Petroleum—Measurement
Porosity—Measurement
Pressure measurement
Pyrometers and pyrometry
Radio measurements
Radioactivity—Measurement
Screw threads—Measurement
Sound—Measurement
Standards of length
Statistical methods
Surveying
Tanks—Measurement
Temperature—Measurement
Thermometers and thermometry
Thickness measurement
Vacuum tubes—Measurement uses
Vibration—Measurement
Viscosity—Measurement
Water flow
Weights and measures

MEASUREMENTS, Magnetic. See Magnetic measurements

MEASURING instruments

Continuous recording of the effective diameter of screw gauges. P. W. Harrison and Mrs J. G. Wood. il diag Engineer 195:205-6 F 6 '53; Same. Engineering 175:318-19 Mr 6 '53

Correct choice of instruments in pulp and paper manufacture. L. Walter. il Paper Ind 34:1453-5 Mr '53

Measurement and control instruments. il diags Paper Tr J 137:131-47 S 18 '53

Micro-inch inspection in the Timkin gage laboratory. M. C. Curtis. il Mach 59:180-7 Je '53

1953 American Machinist production preview. il Am Mach 97:245-52 Ja 19 '53

Some practical applications of measurement and control instruments in a paper mill. R. W. Peters and B. W. Huston. il diags Tappi 36:sup 127A-33A S '53

SRRL mechanizes the Fibrograph; illustrations with text. Textile World 103:107 F '53

Stelometer measures fiber strength and elongation; abstract. K. L. Hertel. il Textile World 103:97+ Ap '53

See also

Comparators
Dilatometers
Gages
Micrometers
Pressure gages
Protractors
Thickness measurement

Manufacture

Castings for measuring instruments; new Kent non-ferrous foundry. il Metallurgia 47:206-8 Ap '53

MEASURING instruments, Electric

Checking the water-cement ratio of concrete; Ratiometer. il Engineering 175:608 My 8 '53

Clearanceometer for determining blade-tip clearances of axial-flow compressors. A. W. Brunot and R. O. Fulton. il diag A S M E Trans 75:1-5; Discussion. 5-6 Ja '53

How to find scale thickness in tubes. il Power 96:154 D '52

Instrument has wide measuring range. il Product Eng 24:218 Ja '53

Measurement of blade-tip clearances in aircraft turbines by a capacitance method. I. A. Mossop and F. D. Gill. bibliog diags Inst E E Proc 100 pt 2:377-84 Ag '53; Same cond. Engineer 195:291-2 F 20 '53; Abstract. Elec R (Lond) 152:458 F 27 '53; Discussion. Inst E E Proc 100 pt 2:384-6 Ag '53

See also

Gages, Electric

MEASURING instruments, Optical

Broaches gaged by optical projection. il Automotive Ind 108:57 Je 15 '53; Mach 59:212-13 Je '53

Calibration of disc recordings by light-pattern measurements. P. E. Axon and W. K. E. Geddes. il diags Inst E E Proc 100 pt 3:217-27 Jl '53

Coordinate setting machine; optical tooling equipment. il diags Aero Digest 66:26-32 Ja '53

Die inspection tool; Profiloscope. il Engineer 195:735 My 22 '53; Engineering 175:621 My 15 '53; Metallurgia 48:101-2 Ag '53

Dividing head ordered; optical head gives three-second accuracy. Steel 131:309 O 13 '52

Entire cam contour checked in 40 seconds; optical gaging. il Am Mach 97:140 Ag 31 '53

Fiber length and coarseness of pulp by projection. diags Tappi 36:sup 121A-3A S '53

Hilger and Watts two precision projectors. il Engineer 196:252 Ag 21 '53

Machine tool control; Hilger projector and scale. il Automobile Eng 43:18 Ja '53

Optical control on a machine tool. il diags Engineer 195:97 Ja 16 '53; Engineering 175:22 Ja 2 '53

Optical dynamic weighbar for a fatigue-testing machine. P. G. Forrest. il diags Engineering 175:801 D 19 '52

Optical gaging; broach checking unit simplifies inspection of broach teeth. il Iron Age 171:166-7 Ap 23 '53

Optical gaging comes out of the toolroom. G. H. DeGroat. il diags Am Mach 97:125-40 Ja 5 '53

Optical gaging speeds inspection. R. W. Brown. il Tool Eng 30:44-6 Mr '53

Optical methods simplify tooling problems. A. E. Rylander. il diags Tool Eng 31:42-6 S '53

Space machine tools with coordinated optics. W. M. Stocker, jr. il diags Am Mach 97:99-101 Mr 30 '53

Tooling with light beams. il Mill & Factory 52:100-1 Ja '53

Tooth form checking; Kodak's contour projector. il Steel 132:140+ My 18 '53

What's ahead the next ten years in tools and tooling; optical tools. Am Mach 96:C9-10 Mid-N '52

See also

Collimators
Interferometers
Optical flats

MEASURING tape

Selecting materials for small assemblies; Hunter spring co. L. B. Glaser. il diags Materials & Methods 37:101-3 My '53

See also

Surveyors' tape

MEAT

See also

Fish as food
Pork
Sausage

Prepackaging

Armour meat products; nominated for packaging's Hall of fame. il Mod Packaging 26:112-17+, cover Je '53

Morrell integrates its packaging. D. Reedquist. il plan Food Eng 25:74-6+ S '53

New hi-vac packager keeps meat longer. il Food Eng 25:97 S '53

Plastic meat casing. il Mod Packaging 26:114-16 Mr '53

Pre-combined ham wrap. il Mod Packaging 26:134-5 Ap '53

Prepackaging is fanning out. il Food Eng 24:112-14 D '52

Preservation

See also

Canned meat

Prices

Drop in cattle prices reaches consumer level. Bsns W p32 Ja 31 '53

Shrinkage

Conduct meat shrinkage tests; gas and electric range comparisons; A.G.A. laboratories. Am Gas Assn Mo 34:14-15+ Jl-Ag '52; 35:14-16 F '53

Less beef shrinkage in gas ranges, AGA research group finds. il Am Gas J 179:46 Ag '53

MEAT—*Continued*

Storage

Preservation of smoked meats. S. Parker. bibliog Refrig Eng 60:1177-8 N '52

Transportation

Trucks fresh meats nationally; Dugdale packing co. il Food Eng 25:96+ Ag '53

MEAT, Canned. See Canned meat

MEAT, Smoked

Divorces smoke from cook; Peter Eckrich & sons. C. W. Schmidt. il Food Eng 25:80-2 Jl '53

Electrostatics create flash smoking; coating. R. E. Morse and D. B. Pivan. il diag Food Eng 25:70-1+ S '53

Preservation of smoked meats. S. Parker. bibliog Refrig Eng 60:1177-8 N '52

MEAT industry and trade

Four-nation swap gets U.S. a beef bargain. Bsns W p 131 F 14 '53

New Irish-British meat trade agreement relaxes restriction on outside exports. For Comm W 50:13 Jl 20 '53

Shrinking steer. Bsns W p53-4 Je 27 '53

See also

Canned meat
Meat—Prepackaging
Packing houses
Packing industry

Finance

Have meat-packing stocks ended their slump? H. J. Travis. il Mag of Wall St 91:588-9+ F 21 '53

Meat packers; profits look fatter after a lean 1952. J. A. McWethy. Barron's 33:9+ Ja 26 '53

Securities

Have meat-packing stocks ended their slump? H. J. Travis. il Mag of Wall St 91:588-9+ F 21 '53

Great Britain

Meat from the Commonwealth; with table of net imports of meat, 1938-51. Economist 165:721-2 D 6 '52

More red meat. Economist 166:39-40 Ja 3 '53

MEAT inspection

Poultry meat inspection; abstract. H. J. Stafseth. Pub Health Rep 67:987-8 O '52

MECHANICAL analogies. See Aerodynamics—Mechanical analogies; Electric circuits—Mechanical analogies; Radio modulation—Mechanical analogies

MECHANICAL drawing

How to rough-sketch your ideas on paper. E. H. Freedman. il plans diags Factory Management 110:84-9 D '52

See also

Drafting room practice
Engineering drawing

MECHANICAL engineering

ASME technical digest; substance in brief of papers presented at ASME meetings. Published in monthly numbers of Mechanical engineering

Bolt design for repeated loading; new approach to strength calculations. E. I. Radzimovsky. bibliog(43 titles) diags Machine Design 24:135-46 N '52

Mechanical engineering around Bristol. A. B. Cooper. map Inst Mech Eng Proc (A) 166 no 3:278-82, pl 1-8; Discussion. 283-4 '52

Mechanical engineering research board report for 1951. Engineering 174:730 D 5 '52

Mechanical engineering research board report for 1952. Engineer 196:173-4 Ag 7 '53

Mechanical engineering research; progress at East Kilbride laboratory. Metallurgia 48:70 Ag '53

See also

Aeronautic engineering
Automobile engineering
Automobiles
Balancing of machinery
Boilers
Chemical engineering
Electric engineering
Hydraulic machinery
Locomotives
Lubrication and lubricants
Machine shop practice
Machine tools
Machinery
Marine engineering
Mechanical movements
Mechanics
Motor trucks
Power transmission
Pumping
Springs (mechanism)
Standardization
Steam engineering
Steam engines
Tolerance

Bibliography

Reviews of books and notes on books received in the Engineering societies library. Published in monthly numbers of Mechanical engineering

Study and teaching

What are contemporary demands on engineering curricula? N. P. Bailey. J Eng Educ 43:303-6 Ja '53; Abstract. Machine Design 24:280+ N '52

Tables, calculations, etc.

Frequency-response analysis for industrial automatic-control systems. D. W. St Clair and others. bibliog diags A S M E Trans 74:1133-47; Discussion. 1147-50 O '52

Method of obtaining shear stress-strain graphs by interpretation of moment-twist data. P. H. Kaar. A S M E Trans 75:521-3 My '53

Practical solution of a three-dimensional flow problem of axial-flow turbomachinery. L. H. Smith, jr. and others. bibliog diags A S M E Trans 75:789-99; Discussion. 799-803 Jl '53

Stress distribution and strength condition of two rolling cylinders pressed together. E. I. Radzimovsky. diags Ill U Eng Exp Sta Bul 408:1-40 '53 (pa 50c)

Three-mass space oscillator. R. K. Bernhard. il diags Machine Design 25:157-63 Je '53

Torsional vibration notes with solutions for an untuned viscous damper and flexible coupling with nonlinear elasticity. F. P. Porter. diags A S M E Trans 75:241-62; Discussion. 262-8 F '53

Vector method of solving vibration problems. C. H. Helmer. diags Engineering 174:620-1, 685-6 N 14, 28 '52

MECHANICAL engineering research organisation

Report for 1951. Chem Age (Lond) 67:731-2 N 29 '52

MECHANICAL equipment of buildings

Mechanical installations in buildings. P. T. Fletcher. plan Inst Mech Eng Proc (A) 166 no 3:361-6, pl 1-2 '52

Mechanical installations in buildings; approximate calculation for heat requirement of a room with low-temperature radiant panels. P. T. Fletcher. Inst Mech Eng Proc (A) 166 no 4:466 '52

Mechanical parking system for installation in buildings. diags Arch Rec 113:175 Ja '53

See also

Air conditioning
Electric wiring
Elevators
Heating
Hot water supply
Lighting
Plumbing

MECHANICAL handling

Automatic handling of smaller pieces pays off in stamping; Fisher Body's Hamilton, Ohio plant. E. C. Beaudet. il plan Iron Age 171:232-5 My 7 '53

Avoid unnecessary manual handling. H. Miedendorp. il Mod Textiles Mag 34:94+ S '53

Castings to chemicals are carried in bulk. il Mod Ind 25:128-30 Ap '53

Chip handling; automatic scrap removal helps raise lathe output. il Iron Age 171:139-40 F 19 '53

Conveyors and conveying equipment; shipments of industrial electric trucks and tractors; overhead traveling cranes and monorail systems; shipments of paper product shipping containers; industrial trucks, tractors, trailers and portable elevators; value of shipments of excavating and earthmoving equipment; tabulations. Automotive Ind 108:332 Mr 15 '53

Dealer-contractor cooperate, mechanize material handling; Block coal & supply co. il Brick & Clay Rec 122:53-5+ My '53

Die elevator soothes storage headache. il Steel 131:124 D 15 '52

MECHANICAL handling—*Continued*

Easy handling, smooth flow cut costs; Standard pressed steel co. il plan Mill & Factory 52:122-3 Je '53

Equipment; how to move materials. K. W. Bennett. il Iron Age 170:41 O 16 '52

Everything is handled mechanically; Louisville plant of Philip Morris; illustrations with text. Mill & Factory 51:94-5 O '52

Flexibility; careful planning gives best return on space, equipment; Ryan aeronautical co. Iron Age 171:260+ My 7 '53

Forum on technical progress; handling and packaging. il Steel 132:426-9+ Ja 5 '53

Good handling speeds heat treating of small parts; Ford's River Rouge plant. H. Chase. il Iron Age 171:141-3 My 14 '53

Good handling topped the must list when this new plant was built; Randolph Metal Products' plant; illustrations with text. Factory Management 111:102-3 F '53

Handling automotive engines automatically during balancing. A. B. Pedersen. il Mach 59:188-92 Je '53

Hearth baking goes modern; Henry S. Levy & son, inc. J. V. Ziemba. il Food Eng 25:90-2+ Ja '53

How American industry is attacking the problem of materials handling. J. R. Bright. flow plan flow chart diags Inst Mech Eng Proc (A) 167 no 2:113-40, pl 1-10 '53; Excerpts. Engineer 195:594-6, 622-5 Ap 24-My 1 '53

How to handle chips and trimmings. il diags Am Mach 97:149-72 My 11 '53

Important materials handling ideas; John Labatt, limited. il Factory Management 111: 76-81 Ag '53

Improved materials handling speeds motor repair. W. G. Patton. il Iron Age 171:104-6 Ja 15 '53

Jib cranes and hoists ease work; Reliance electric and engineering co. il Mill & Factory 52:78 F '53

Last word dozen-oven bakery; National biscuit co.'s new plant in Chicago. F. W. McCarthy. il Food Eng 25:57-62 Ag '53

Lift cart; unusual hydraulic gadget moves jet engines deftly. il Iron Age 171:154 Je 25 '53

Lift trucks play one-night stands; Yale & Towne manufacturing co. traveling materials handling equipment show. il Iron Age 171:71 F 26 '53; Nat Safety N 68:60 S '53

Materials handling. Food Eng 25:95-7+ O '53

Materials handling, a growth industry. R. L. Winkler. Comm & Fin Chr 177:2312 My 28 '53

Materials handling at RCA and other companies, progress in 1952. il diag Mill & Factory 52:87-118 My '53

Materials handling box with a hinged drop chute. il Mill & Factory 51:92 D '52

Materials handling equipment. il diag Paper Tr J 137:83-98 S 18 '53

Materials handling equipment. E. G. Thomssen. il Soap & San Chem 28:103+ O '52

Materials handling; hydraulic rams, conveyors speed movement of coils in process. il diag Iron Age 171:185-6 Je 18 '53

Materials handling; it can cost you or pay you. il Steel 132:116-19 My 11 '53

Materials handling review and forecast. il Iron Age 171:289 Ja 1 '53

Materials handling survey shows what's needed. il Mod Ind 25:45-7 My '53

Mechanical handling aids building of new underground hoist room; New Park mining co. J. B. Huttl. il diags Eng & Min J 153: 100-2 N '52

Mechanization knocks M-H manhours for a loop; Roman cleanser co. D. G. Baird. il Mill & Factory 52:88-90 Ja '53

Mechanized handling of bulk materials pays off in two years. H. L. Humes. il diag Factory Management 111:90-1 Ja '53

Metal stampings produced with latest handling methods at new Ford plant. J. W. Greve. il plan Tool Eng 29:37-42 D '52

Modern materials handling cuts costs; General Refractories new Los Angeles plant. il Brick & Clay Rec 121:53-5 D '52

Modern materials handling keys Bay West expansion. D. W. Zeigler. il Paper Ind 34: 1236-9 Ja '53

Moving tons or ounces, all in day's work at Cadillac tank plant; illustrations with text. S A E J 61:60-4 My '53

New handling equipment. il Factory Management 111:256+ Ap '53

New starch-handling system saves $61 in starch every 24 hrs.; Avondale mills. R. B. Pressley. il diag Textile World 103:138-41 S '53

1953 American Machinist production preview; plant service equipment; parts and materials. il Am Mach 97:253-60 Ja 19 '53

No-strain-in-our-jobs is theme of materials-handling program; Firestone textiles. il diag Textile World 102:95-9 D '52

Output up 50 per cent by mechanizing; Stahl-Meyers' new meat-handling system. il Food Eng 25:125+ Ja '53

Robots lug-box handling; Calavo Growers of California. C. R. Havighorst. il Food Eng 25:64-5+ Ap '53

Standard pressed steel co. moves chips for profits. B. W. Van Dyke. il diag Am Mach 97:200-1 My 11 '53

Tall materials handling goal. K. Rannells. Iron Age 171:163 My 7 '53

These materials-handling ideas pay off at American thread co. T. L. Griffith. il Textile World 103:114 Ag '53

They do things the easy way; Gerber's baby foods. I. C. Miller. il diag Food Eng 25: 66-9+ Ag '53

They produce concrete block untouched by hand; Bickerstaff concrete products co. il Brick & Clay Rec 123:53-4 S '53

Top notch material toters; report of panel on material handling. il S A E J 61:64-5 S '53

Top-rank quick freeze operation; Lamb-Western, inc. P. Lamb and C. R. Havighorst. flow sheet(p 118-21) il Food Eng 25:68-73 Ja '53

Transfer car eliminates overhead handling; Bridgeport brass co. W. J. Krailing. il diag Tool Eng 31:50-2 Jl '53

Trends in electrical equipment for materials handling in the steel industry. S. Rifkin. il diags Iron & Steel Eng 30:84-90 Ag '53

Trends in materials handling. il plans diags Factory Management 111:B278-301 pt 2 My '53

Untouched by human hands; processing corn flakes. il Can Chem Process 36:64+ N '52

Vernon kilns collects dividends from improved handling methods. il Cer Ind 59:102-3+ O '52

Versatile fixtures for high production gas carburizing. T. A. Frischman. il diags Materials & Methods 36:109-11 D '52

What's ahead the next ten years in plant services; cranes, hoists, and monorails. Am Mach 96:J 10-11 Mid-N '52

Wire-inserted fabric sock used to connect vibrating equipment. S. R. Nemeth. diags Chem Eng 59:174 O '52

Working-height handling moves tank springs at Maremont; illustrations with text. R. A. Graham. Am Mach 97:114-18 Ag 3 '53

Yale & Towne materials handling show starts two-year transcontinental tour. il Steel 132:180 Mr 2 '53; Ind Marketing 38: 30 Ap '53

See also

Assembling methods
Barrel handling
Brick handling
Cableways
Cargo handling
Coal handling
Coal loading machines
Conveying machinery
Cranes, derricks, etc.
Dumping appliances
Electric trucks, Industrial
Elevators
Freight handling
Fruit handling
Hoisting machinery
Loading and unloading
Lumber handling
Manipulators
Mine haulage
Monorail conveyors
Motor trucks, Industrial
Ore handling
Packaging machinery
Paper handling
Pipe handling
Pneumatic conveying
Positioning equipment
Scrapers
Steel handling
Tractors, Industrial
Trucks
Wood handling

Cost

Receiving bagged materials into paper mills in unit loads. D. S. Adams. il Pulp & Pa of Can 54:136-7 Je '53

MECHANICAL handling—*Continued*

Exhibitions

Materials handling exposition, Philadelphia, May 18-22; list of exhibitors. Steel 132:128+ My 11 '53

Materials handling show, 5th, Philadelphia. il Iron Age 171:126-9 My 28 '53

Materials handling show, Philadelphia, May 18-22. il diag Automotive Ind 108:60-4+ My 15 '53

National materials handling exposition, 5th, Philadelphia, May 18-22. il Am Mach 97:194-6 Je 8 '53

Power movers on display; Materials handling exposition, Philadelphia. il Food Eng 25:79-81 Ag '53

Safety measures

Safety and materials handling. G. W. Harper. il Safety Maint & Prod 106:26-7 S '53

Standards

Materials handling standards. R. A. Moody. il Steel 132:122-4 My 11 '53

MECHANICAL handling systems, inc.

Stock offered. Comm & Fin Chr 178:242-3 Jl 20 '53

MECHANICAL models

See also

Railroads—Models

MECHANICAL movements

Adjustable-stroke driving mechanism for reciprocating slide. W. M. Halliday. diags Mach 59:198-200 Ap '53

Angle-true motion provided by orthodromic mechanisms for connecting parallel shafts in precision applications. M. Daniloff. bibliog diags Machine Design 25:153-7 My '53

Automatic rejecting system. H. Murro. diag Mach 59:205-6 Ap '53

Chain-driven intermittent rotary movement. L. Kasper. diags Mach 59:203-4 D '52

Eccentric gear mechanisms for producing varying angular velocity with circular spur gears. P. Grodzinski. il diags Machine Design 25:141-50 My '53

Fixed stroke converted into variable stroke. L. Kasper. diags Mach 59:197-8 Mr '53

Gear and clutch mechanism for variable operating conditions. W. M. Halliday. diags Mach 59:200-2 F '53

Ingenious mechanisms. Published in monthly numbers of Machinery

Linear movement reduced by differential chain drive mechanism. L. Kasper. diags Mach 59:207-8 My '53

Mechanical linearizer. A. S. Gutman. il Machine Design 25:175 My '53

Mechanism for varying rotation of winding mandrels. H. B. Schell. diags Mach 60:195-6 S '53

Modified eccentric provides adjustable die stroke. L. Kasper. diag Mach 59:206-7 Ap '53

Modified Geneva drives and special mechanisms; drawings with text. S. Rappaport. Product Eng 24:174-5 F '53

Modifying starwheel mechanisms. J. E. Vandeman and J. R. Wood. il diags Machine Design 25:255-61 Ap '53

Motion of a link chain over a roller. A. E. R. de Jonge. diags A S M E Trans 75:747-58 Jl '53

Motocylinder for reciprocating-motion applications. J. C. Marshall and D. L. Treder. il diags Westinghouse Eng 13:72-3 Mr '53

Rectangular motion to produce accurate stepping movements; AMA Accounting Center reader. il diags Machine Design 25:113 Ja '53

Simple cam made practical by increasing speed. L. Kasper. diags Mach 60:207-8 O '53

Swashplate mechanisms. R. Hadekel. diags Machine Design 25:141-5 F '53

See also

Cams
Feed mechanism
Gearing
Geneva stop
Links and link motion
Machinery, Kinematics of
Ratchet mechanism

MECHANICAL toys. See Toys, Mechanical

MECHANICS

See also

Aerodynamics
Aeronautics
Balancing of machinery
Deformation (mechanics)
Disks, Rotating
Dynamics
Elasticity
Fluids
Force and energy
Friction
Gases
Hydraulics
Hydrodynamics
Inertia (mechanics)
Liquids
Load (mechanics)
Machinery
Mechanical engineering
Mechanical movements
Moments of inertia
Photoelasticity
Physics
Power transmission
Springs (mechanism)
Steam engines
Strains and stresses
Thermodynamics
Torsion
Vibration
Viscosity
Wave mechanics

Electric analogies

Analogous systems in engineering design. R. C. McMaster and others. bibliog il diags Product Eng 24:184-95 Ja '53

Design and testing of an electronic simulator for a hydraulic remote-position-control servo mechanism. F. J. U. Ritson and P. H. Hammond. diags Inst E E Proc 99 pt 2:533-48; Discussion. 549-52 D '52

Design of a simple electronic flutter simulator. F. Smith and W. D. T. Hicks. il diags Roy Aeronautical Soc J 57:29-38 Ja '53

Diode limiters simulate mechanical phenomena. C. D. Morrill and R. V. Baum. bibliog diags Electronics 25:122-6 N '52

Duality in mechanics. P. Le Corbeiller and Y. Yeung. bibliog diags Acoustical Soc Am J 24:643-8 N '52

Introduction to electrical circuit analogies for beam analysis. S. U. Benscoter and R. H. MacNeal. Machine Design 25:264+ Ja '53

University of Michigan studies vehicle suspensions with analog. A. Lange and J. Dute. diags S A E J 60:23-4 D '52

See also

Hydromechanics—Electric analogies

MECHANICS, Applied

Commonsense in applied mechanics. W. A. Tuplin. diags Engineer 195:898-900 Je 26 '53

Nonlinear analysis of electro-mechanical problems. Y. H. Ku. bibliog diags Franklin Inst J 255:9-31 Ja '53

MECHANICS, Household

Do-it-yourself field beckons industrial producers; Skil corp. W. H. Ferry. il Ind Marketing 38:52-4+ Ap '53

Power tools for home use gain sales. il Steel 132:63 Ap 27 '53

MECHANICS, Statistical. See Statistical mechanics

MECHANICS, Wave. See Wave mechanics

MECHANICS' liens

Law and your profits; case clears up some cloudy points about mechanics' liens. W. H. Hillyer. Heating-Piping 25:110-11 S '53

Review of mechanics' lien provisions. Dom Eng 181:195 My '53

MEDALS

AIC gold medal presented to Carnegie Tech's John Warner. Chem & Eng N 31:2181 My 25 '53

Construction heroes; winners of Carnegie hero medal. H. F. Unger. il Constr Methods 35:98+ Ja '53

Dr John T. Blake named Charles Goodyear medalist for 1953. Rubber Age 73:385 Je '53

E. N. McDonnell to receive F. Paul Anderson medal. Heating-Piping 25:207 Ja '53; Dom Eng 181:84-5+ F '53

EEI medals cite resuscitation training and valor of electric company personnel. il Edison Elec Inst Bul 21:55-8 F '53

1953 TAPPI medal to Roger Griffin; presentation by J. D. Clark; response by R. C. Griffin. il Tappi 36:sup82A+ Mr '53

Presentation of Industrial research institute's 1953 medal to E. V. Murphree. Chem & Eng N 31:1864 My 4 '53

Railroad engineers receive Julian C. Smith medal. Roads & Eng Constr 91:102 My '53

Roger C. Griffin awarded TAPPI medal. Tappi 36:sup71A Ja '53

MEDALS—*Continued*

Wooding wins Lincoln gold medal for 1953. Welding J 32:1001-2 O '53

See also

Edison medal

Faraday medal

Guggenheim, Daniel, medal

Harriman memorial medals for safety

Lamme, B. G., medals

Olney medal

Schoellkopf medal

MEDIANS. See Frequency distribution

MEDIATION and conciliation service, Federal. See United States—Federal mediation and conciliation service

MEDIATION board, National. See National mediation board

MEDICAL advertising

Simplicity of new campaign makes it an eye-catcher. Ptr Ink 241:27 D 26 '52

See also

Advertising—Physicians, Appeal to

Drug trade—Advertising

MEDICAL and pharmaceutical chemistry. See Chemistry, Medical and pharmaceutical

MEDICAL buildings

See also

Health centers

Physicians' offices

MEDICAL centers

See also

Health centers

MEDICAL chemistry. See Chemistry, Medical and pharmaceutical

MEDICAL climatology. See Climatology, Medical

MEDICAL colleges

See also

Medical education

Washington university, St Louis—School of medicine

MEDICAL education

Professional training for pediatricians and nurses. Pub Health Rep 68:138-9 Ja '53

Psychiatry in medical education. S. D. Vestermark. Pub Health Rep 67:1120-3 N '52

See also

Anatomical models

Medical service, Industrial—Study and teaching

Television in medical education

MEDICAL ethics

Problem of experimentation on human beings; physician's point of view. O. E. Guttentag. bibliog Science 117:207-10 F 27 '53

MEDICAL examinations. See Insurance, Life—Medical examinations; Physical examinations

MEDICAL expense insurance. See Insurance, Medical expense

MEDICAL geography

Geography of disease. J. M. May. maps Sci Am 188:22-7 F '53; Discussion. M. Rosenblum. 188:4+; Reply. 6 Ap '53

MEDICAL instruments and apparatus

Electronic-acoustical devices in medical research. J. K. Hilliard. il Tele-Tech 12:62-3+ Ag '53

Flexible rubber bags finding application in medical field. Rubber Age 72:362 D '52

See also

Electrotherapeutics—Apparatus and instruments

Radiotherapy—Apparatus

Surgical instruments and apparatus

MEDICAL jurisprudence

Disability evaluation. E. D. McBride. Ind Med 21:519-21 N '52

See also

Chemistry, Legal

MEDICAL laboratories

APHA conference report; BW defense, general services of virus laboratories. Pub Health Rep 68:199-201 F '53

Chemical corps medical laboratories. J. H. Wills. Science 116:sup3 O 24 '52

Clinical labs advised to raise their professional standards. Chem & Eng N 31:2190 My 25 '53

Research laboratories, School of medicine, Washington university, St Louis, Mo. il plans Arch Rec 112:109-14 S '52

State interest encourages private laboratories. A. Dickman. Pub Health Rep 68:103-4 Ja '53

See also

Pharmaceutical laboratories

MEDICAL laws and regulations

Problem of experimentation on human beings; civil rights of military personnel regarding medical care and experimental procedures. W. H. Johnson. Science 117:212-15 F 27 '53

Problem of experimentation on human beings; limits of the right of a person to consent to experimentation on himself. A. M. Kidd. Science 117:211-12 F 27 '53

See also

Public health laws

MEDICAL literature

Logic and language in medical writing. J. Bauer. Science 117:40-1 Ja 9 '53

MEDICAL periodicals

Vital notes on medical periodicals. Published by Florida state board of health library, L.-F. Davis, chairman, P.O. box 210, Jacksonville 1

MEDICAL photography. See Photography, Medical

MEDICAL research

Bio-electric and lunarcyclic phenomena. L. R. C. Haward. Elec R (Lond) 153:229-30 Jl 31 '53

Cobalt-60 irradiator; new tool for medical research. E. D. Trout and J. Vlach. il Gen Elec R 55:44-7 N '52

Controlling the environment for clinical research; facilities at the University of Illinois. M. K. Fahnestock and others. il plans diags Heating-Piping 25:123-7 Ja '53

Electronic-acoustical devices in medical research. J. K. Hilliard. il Tele-Tech 12:62-3+ Ag '53

Medical research aids polio coverage. S. Miller and R. D. Brown. Spectator 161:24-5+ Ap '53

Problem of experimentation on human beings; symposium. bibliog Science 117:205-15 F 27 '53

See also

Cancer

Insurance, Life—Medical research

Pharmaceutical research

MEDICAL schools. See Medical colleges

MEDICAL service

APHA conference report; varied methods and practices in providing medical services. Pub Health Rep 68:269-72 F '53

Aspects of health care treated at N.A.I.C. meeting. Nat Underw 56:19+ D 11 '52; Same. Nat Underw (Life ed) 56:5+ D 12 '52

Experience with home care in four large cities. H. J. Bakst and others. Pub Health Rep 68:92-5 Ja '53

General practitioner and preventive medicine; APHA conference report. Pub Health Rep 68:132-4 Ja '53

Methods of administration in medical care plans; APHA conference report. Pub Health Rep 68:118-24 Ja '53

Problems of progress in medicine. O. C. Hobby. Comm & Fin Chr 177:2642-3 Je 18 '53

See also

Dental service

Cost

Baltimore City reviews prescription practices. F. F. Furstenberg and others. Pub Health Rep 68:120-1 Ja '53

Patient and taxpayer; health service estimates, 1951-1954. Economist 166:860 Mr 28 '53

Finance

Nation's health; President's commission on the health needs of the Nation. Sci Am 188:40+ F '53

Group and prepayment plans

Brooklyn medical society head offers plan to give comprehensive care. L. Berger. Nat Underw (Life ed) 56:11 O 24 '52; Same abr. Nat Underw 56:28 N 6 '52

Community medical plan. Iron Age 170:32 O 30 '52

MEDICAL service—Group and prepayment plans—*Continued*

Group medicine; American federation of medical centers. Bsns W p 122+ N 1 '52

Making more medicine cheaper for more people. Bsns W p 194-6+ N 22 '52

Propose insured medical care through team practice; American federation of medical centers. Nat Underw 56:27 N 6 '52; Same. Nat Underw (Life ed) 56:8 N 7 '52

Successful prepaid medicine in industry. C. M. McGill and S. S. Pinto. Ind Med 21:438-9 S '52

12 years of experience modify prepay concepts. J. A. Hannah. Pub Health Rep 68: 119-20 Ja '53

Voluntary health plans. Safety Maint & Prod 104:71 D '52

Socialization

Better than nationalized medicine; recommendations of the Commission. Bsns W p27 D 20 '52

British national health service. Safety Maint & Prod 105:73 Ja '53

How much health? Economist 167:78-9 Ap 11 '53

Medical mobility. Economist 166:792 Mr 21 '53

Patient and taxpayer; health service estimates, 1951-1954. Economist 166:860 Mr 28 '53

Statistics in a health department medical care plan. M. Taback and H. Williams. bibliog maps Pub Health Rep 68:157-66 F '53

Unfree health service. Economist 167:500 My 23 '53

MEDICAL service, Industrial

Current problems in industrial medicine; the changing pattern. Ind Med 21:496-500 O '52

Do you need plant dispensary? T. Metaxas. Iron Age 170:31-2 O 30 '52

Forecasting the number of employee visits to an industrial health service; Oak Ridge national laboratory. J. S. Felton and M. D. Owen. il Ind Med 22:1-7 Ja '53

Health programs. Safety Maint & Prod 104: 68-9 D '52

History of the Bayway refinery medical department. T. F. Nevins, jr. il Ind Med 21: 549-50 N '52

Industrial health; abstracts of current literature on industrial hygiene, medicine, and nursing. F. A. Van Atta. Published in monthly numbers of National safety news

Industrial medicine plan that allows free choice of physicians. W. von Pechmann. Ind & Eng Chem 45:sup 105A-6A Ja '53

Industrial physicians in New York state and the Nation. Ind Med 21:543-5 N '52

Industry calls in the doctor. R. C. Page. Harvard Bsns R 31:109-17 S '53

Measuring plant needs for medical service. T. A. Coates. Nat Safety N 68:20-1+ Jl '53

Medical service. bibliog il Nat Safety N 67: 221+ Mr '53

Patterns of medical service. Safety Maint & Prod 105:57 Mr '53

People need maintenance, too. W. E. Park. Nat Safety N 67:32-3+ My '53

Small plant group cooperative medical service. D. M. Thompson. Ind Med 22:34-6 Ja '53

Survey of industrial medical practices in the greater Philadelphia area. R. R. Bresler. Ind Med 21:461-5 O '52

Technique of the build-up of an individual industrial medical practice. G. Everts. A M A Archives Ind Hygiene & Occup Med 6:481-6 D '52

See also

Alcoholism
Dental service, Industrial
Diseases, Industrial
Eye—Examination
First aid in illness and injury
Hospitals, Industrial
Hygiene, Industrial
Nurses and nursing, Industrial
Physical examinations
Psychiatry, Industrial
Trade unions—Health service

Cost

Medicine; how much does it cost? Industrial health congress. K. W. Bennett. il Iron Age 171:52 Ja 29 '53

Study and teaching

Case study method adapted to in-plant training in occupational medicine. J. S. Felton. bibliog Ind Med 21:567-71 D '52

Education of the industrial physician; Caterpillar tractor co.'s training program. H. A. Vonachen and M. H. Kronenberg. Ind Med 21:561-6 D '52

Pittsburgh experience in undergraduate and graduate industrial medical education. T. L. Hazlett. A M A Archives Ind Hygiene & Occup Med 6:476-7 D '52

Great Britain

Industrial hygiene in Britain. B. H. Harvey. A M A Archives Ind Hygiene & Occup Med 7:187-92 Mr '53

Sweden

Industrial medicine in Sweden; recent experiences and future problems. S. Forssman. bibliog A M A Archives Ind Hygiene & Occup Med 6:407-15 N '52

MEDICAL service, Military. See Medicine, Military

MEDICAL service, Ship

Industrial medicine goes to sea. J. G. Hewitt. bibliog Ind Med 21:535-7 N '52

MEDICAL statistics

Statistics in a health department medical care plan. M. Taback and H. Williams. bibliog maps Pub Health Rep 68:157-66 F '53

See also

Birth certificates
Mortality—Statistics

MEDICINAL chemistry. See Chemistry, Medical and pharmaceutical

MEDICINE

Historical relations of medicine and engineering. W. S. McCann. A M A Archives Ind Hygiene & Occup Med 7:87-92 F '53

What is expected of constructive medicine? Ind Med 21:446 S '52

See also

Anesthetics, Local
Antiseptics
Bacteriology
Chemistry, Medical and pharmaceutical
Chemotherapy
Diseases
Drugs
Electrotherapeutics
First aid in illness and injury
Hospitals
Hygiene, Industrial
Infectious diseases
Medical service
Medical service, Industrial
Moving picture photography—Medical applications
Nurses and nursing
Physicians
Poisons
Psychotherapy
Public health
Surgery
Television—Medical applications

Bibliography

Armed forces medical library catalog, 1952. 813p $17.50 Card division, Library of Congress, Washington 25 '53

Quarterly cumulative index medicus. v 49, January-June, 1951. 1560p American medical assn, 535 N. Dearborn st, Chicago 10 '52

History

See also

Electrotherapeutics—History

Nomenclature

Terminology of pigment cells. T. B. Fitzpatrick and A. B. Lerner. Science 117:640 Je 5 '53

Specialization

We are in danger of building a Tower of Babel. V. Bush. Pub Health Rep 68:149-52 F '53

Sweden

See also

Medical service, Industrial—Sweden

MEDICINE, Military

Problem of experimentation on human beings; civil rights of military personnel regarding medical care and experimental procedures. W. H. Johnson. Science 117:212-15 F 27 '53

MEDICINE, Preventive

General practitioner and preventive medicine; APHA conference report. Pub Health Rep 68:132-4 Ja '53

MEDICINE, Psychosomatic
Psychogenic aspects of diseases of the skin of industrial workers, with discussion of red hands of occupational origin. J. V. Klauder. bibliog il Ind Med 21:413-19 S '52; Excerpts. Nat Safety N 67:86 Ja '53
Psychological impact of cancer surgery. A. Sutherland. Pub Health Rep 67:1139-43 N '52
Sequence of emotional reactions in radical mastectomy patients. M. Bard. Pub Health Rep 67:1144-8 N '52

MEDICINE, Socialized. See Medical service—Socialization

MEDICINES, Proprietary
Lydia Pinkham makes bid for younger generation. il Mod Packaging 26:130 O '52

MEEHANITE
Cast meehanite rolls used for heavy-duty bending. M. R. Nelson. il Iron Age 171:135-7 My 28 '53

MEERWEIN-PONNDORF reduction. See Reduction, Chemical

MEETINGS. See Business conferences; Conventions

MEGABRECCIA. See Breccia

MEHL, Robert Franklin, 1898-
Sketch. H. J. Heine. por Metal Prog 64:74-6 S '53

MEIGGS, Henry, 1811-1877
Colossus of Andean railroading. Comp Air Mag 58:78-9 Mr '53

MEINEL, Aden B.
Adolph Lomb medal awarded to Aden B. Meinel. por Opt Soc Am J 42:986 D '52

MELAMINE
Cyanamides; sulphonyl derivatives related to dicyandiamide and melamine. F. Kurzer and J. R. Powell. Chem Soc J p2531-7 S '53
Kinetics of the condensation of melamine with formaldehyde. M. Okano and Y. Ogata. bibliog Am Chem Soc J 74:5728-31 N 20 '52
Sulphonyl-compounds derived from dicyandiamide and melamine. F. Kurzer and J. R. Powell. Chem & Ind p 195-6 F 28 '53

MELAMINE resins
Dish washing eliminated; restaurant service system utilizes disposable plastic-surfaced paper plate liners. il Mod Plastics 30:80-1 Ja '53
Effect of temperature on the creep and recovery of a melamine-glass fabric laminate. W. J. Worley and W. N. Findley. bibliog diags Am Soc T M Proc 50:1399-413 '50
Melamine-formaldehyde resins for use in wet-strength papers. il Paper Ind 35:668-9 S '53
Urea-formaldehyde and melamine-formaldehyde condensations; mechanisms. H. P. Wohnsiedler. bibliog il Ind & Eng Chem 44:2679-86 N '52
Use of aluminum chloride in melamine-treated papers. F. W. Boughton and K. J. Mackenzie. bibliog Tappi 36:268-70 Je '53
Wet-strength papers open new vistas; exhibition of paper products. il Paper Tr J 136:14-17 Je 26 '53

MELANINS
Formation of tyrosine melanin. G. R. Clemo and F. K. Duxbury. Chem Soc J p3844-8 O '52
Formation of tyrosine melanin; the use of carboxyl-labelled tyrosine and dihydroxyphenylalanine in melanin formation. G. R. Clemo, F. K. Duxbury and G. A. Swan. Chem Soc J p3464-8 S '52
Melanin and its precursors; further syntheses of 5 : 6-dihydroxyindole and its derivatives. J. Harley-Mason. Chem Soc J p200-3 Ja '53
Melanin and its precursors; synthesis of 5- and 7-hydroxyindole from dihydroxyphenylalanines. R. I. T. Cromartie and J. Harley-Mason. Chem Soc J p2525-7 Jl '52

MELIBIOSE
Improvements in the preparation of melibiose from raffinose; a new form of melibiose. H. G. Fletcher, jr. and H. W. Diehl. bibliog Am Chem Soc J 74:5774-6 N 20 '52

MELILITE
Studies on the melilite solid solutions. R. W. Nurse and H. G. Midgley. bibliog diags Iron & Steel Inst J 174:121-31 Je '53

MELTING
Blocked capillary method for determining melting pressures; the melting curve of helium from 1.5° to 4°K. C. A. Swenson. bibliog il diags Phys R 89:538-44 F 1 '53
Electromagnetic levitation of solid and molten metals. E. C. Okress and others. il diags. J Ap Phys 23:545-52 My '52; Correction. 23:1413 D '52
Theory of fusion and condensation. A. J. F. Siegert. bibliog Phys R 90:97-101 Ap 1 '53

MELTING points
Effect of pressure on the melting point of Teflon tetrafluoroethylene resin. P. L. McGeer and H. C. Duus. J Chem Phys 20:1813-14 N '52
Formula for the melting points of inorganic compounds of type MXO_n. S. Fujiwara. bibliog J Chem Phys 20:1338-9 Ag '52
Melting-point diagrams for binary triglyceride systems. R. Kerridge. Chem Soc J p4577-9 D '52
Melting point of chromium. Engineer 194:169 Ag 1 '52
Routine calibration of precious-metal thermocouples at the palladium point. E. G. Knowles and R. C. Jewell. diags Iron & Steel Inst J 172:409-12 D '52

MEMBRANES
Air sampling with membrane filters. M. W. First and L. Silverman. bibliog il diag A M A Archives Ind Hygiene & Occup Med 7:1-11 Ja '53
Domestic and European molecular filter membranes. H. F. Clark and others. Am Water Works Assn J 44:1052-6 N '52
High-polymer solutions; osmotic-pressure measurements with poly(vinyl alcohol) membranes. H. T. Hookway and R. Townsend. Chem Soc J p3190-5 Ag '52
Solution for the rectangular membrane. S. F. Borg. bibliog J Aeronautical Sci 20:220-1 Mr '53
Theory of membrane potential. M. Nagasawa and Y. Kobatake. diags J Phys Chem 56:1017-24 N '52
Use of the membrane filter in the bacteriological examination of water. E. W. Taylor. Chem & Ind p 124-5 F 7 '53

MEMORIALS
See also
War memorials

MEMORY
How to improve your memory. W. Schweisheimer. Am Bsns 23:18-19+ O '53
Memory; executives shouldn't forget; memory course helps businessmen remember facts, faces and names. T. Metaxas. Iron Age 171:99 Je 18 '53

MEMORY tubes. See Storage tubes

MEMPHIS, Tennessee

Water supply

All-electric pumping station to increase city's water supply. Elec Eng 72:377 Ap '53; Same. Pub Works 84:67 Je '53

MEMPHIS cotton market. See Cotton exchanges

MENNE, Wilhelm Alexander
W. A. Menne; Verband der chemischen industrie. por(cover) Chem & Eng N 30:4626 N 3 '52

MENNEN, William Gerhard
American male likes to smell nice, too. pors Bsns W p 148+, cover My 9 '53

MENNEN company
American male likes to smell nice, too. il Bsns W p 148+ My 9 '53

MEN'S furnishing goods
See also
Hats

Advertising

Make the male animal more style conscious. R. Mohr. il Ptr Ink 242:74+ Ja 23 '53
What's wrong with men's wear advertising? neglects to build up brand names. J. Freedman. il Adv Agency 46:59+ F '53

MEN'S wear inter-industry council
Men's wear council issues style supplement. Ed & Pub 86:26 Ja 24 '53

MENTAL defectives. See Feeble minded

MENTAL diseases
Mental health in the United States. R. H. Dysinger, ed. bibliog Ann Am Acad 286: 1-174 Mr '53
See also
Schizophrenia

Bibliography

Tuberculosis and mental illness; a selected bibliography, 1803-1952. 27p Veterans administration, Washington 25 '53

MENTAL hospitals. See Hospitals, Psychiatric

MENTAL hygiene
How to have a nervous breakdown. Mod Ind 25:54-6 Ap '53
Mental hygiene in the United States. R. H. Dysinger, ed. bibliog Ann Am Acad 286:1-174 Mr '53
Psychology, mental health, and aging; PHR conference report. Pub Health Rep 67:1124-9 N '52

MENTAL hygiene, Industrial
Should mentally ill workers be hired? Factory Management 111:294+ S '53
Three-step mental health program guarantees new deal for problem employees. A. O. England. Factory Management 111:148-50 S '53
See also
Psychiatry, Industrial

MENTAL hygiene, School
Mental health screening of school children. C. A. Ullmann. Pub Health Rep 67:1219-23 D '52

MENTHADIENE
Nopol; synthesis of 1(7),8-*p*-menthadiene and 1(7)-*p*-menthene. R. L. Webb and J. P. Bain. Am Chem Soc J 75:4279-81 S 5 '53

MENTHANE
p-Menthane-2 : 3-diols; the hydroxylation of (±)-*cis*- and (±)-*trans*-menth-2-enes. A. K. Macbeth and W. G. P. Robertson. Chem Soc J p895-900 Mr '53

MENTHENE
Nopol; synthesis of 1(7),8-*p*-menthadiene and 1(7)-*p*-menthene. R. L. Webb and J. P. Bain. Am Chem Soc J 75:4279-81 S 5 '53
p-Menthane-2 : 3-diols; the hydroxylation of (±)-*cis*- and (±)-*trans*-menth-2-enes. A. K. Macbeth and W. G. P. Robertson. Chem Soc J p895-900 Mr '53

MENTHOFURAN
Substituted menthofurans. R. H. Eastman and R. P. Wither. Am Chem Soc J 75:1492-3 Mr 20 '53

MENTHONE
Researches in the menthone series; pyrolysis of (—)-menthyl acetate. N. L. McNiven and J. Read. Chem Soc J p2067-9 Je '52

MENTHYL acetate
Researches in the menthone series; pyrolysis of (—)-menthyl acetate. N. L. McNiven and J. Read. Chem Soc J p2067-9 Je '52

MENTHYL benzoate
Stereospecificity in thermal elimination reactions; the pyrolysis of (—)-menthyl benzoate. D. H. R. Barton, A. J. Head and R. J. Williams. diag Chem Soc J p 1715-19 Je '53

MEPHENESIN. See Toloxypropanediol

MERCANTILE bank of India
Eastern banks raise dividends. Economist 166:759-60 Mr 14 '53

MERCANTILE stores company
Profit uptrend continuing. Barron's 33:27 My 11 '53

MERCAPSOL process. See Gasoline—Manufacture

MERCAPTANS
Molar polarizations of isomeric propyl and butyl mercaptans. S. Mathias. bibliog J Phys Chem 57:344-6 Mr '53
Properties of thiolesters; kinetics of hydrolysis in dilute aqueous media. L. H. Noda, S. A. Kuby and H. A. Lardy. bibliog Am Chem Soc J 75:913-17 F 20 '53
2-Pyrimidinethiols. R. A. Mathes. Am Chem Soc J 75:1747-8 Ap 5 '53
Quinone imides; addition of mercaptans to *p*-quinonedibenzenesulfonimide. R. Adams, E. F. Elslager and T. E. Young. bibliog Am Chem Soc J 75:663-6 F 5 '53
Rearrangement of benzyl sulfides to mercaptans and of sulfonium ions to sulfides involving the aromatic ring by alkali amides. C. R. Hauser, S. W. Kantor and W. R. Brasen. bibliog Am Chem Soc J 75:2660-3 Je 5 '53
Thiazolethiols and their derivatives. J. J. D'Amico. bibliog Am Chem Soc J 75:102-4 Ja 5 '53

Analysis

Direct titration of gasoline mercaptans. G. E. Mapstone. Pet Processing 7:1655 N '52

MERCAPTOACETIC acid
Iron-thioglycolate complexes. D. L. Leussing and I. M. Kolthoff. bibliog Am Chem Soc J 75:3904-11 Ag 20 '53
Preparation and chlorinolysis of α-mercaptodiethylacetic acid. L. Field and R. O. Beauchamp, jr. bibliog Am Chem Soc J 74:4707-8 S 20 '52
Quinones; the addition of mercapto-acids to benzoquinones and 1 : 4-naphthaquinone. A. Blackhall and R. H. Thomson. Chem Soc J p 1138-43 Ap '53

MERCAPTOBENZOIC acid
Cleavage of the carbon-sulfur bond; kinetics of the reaction of thiobenzoic acid with aniline. P. J. Hawkins, D. S. Tarbell and P. Noble, jr. bibliog Am Chem Soc J 75: 4462-5 S 20 '53

MERCAPTO compounds
Anhydrous chlorination of thioesters and related compounds. I. B. Douglass and C. E. Osborne. Am Chem Soc J 75:4582-3 S 20 '53
Attempted Fries reaction with thiolesters; the formation of trithioörthoesters. D. S. Tarbell and A. H. Herz. bibliog Am Chem Soc J 75:1668-72 Ap 5 '53
Formation and kinetics of formation of substituted mercaptopyrylium salts. F. J. Ozog, V. Comte and L. C. King. bibliog Am Chem Soc J 74:6225-8 D 20 '52
2-Mercaptobenzothiazole derivatives. C. G. Moore and E. S. Waight. diag Chem Soc J p4232-51 N '52
Mercaptocarboxylic acids as reagents for the identification of carbonyl compounds. J. J. Ritter and M. J. Lover. bibliog Am Chem Soc J 74:5576-7 N 20 '52
o-Mercapto-azo-compounds; action of thiocyanic acid on diazotised *o*-nitroarylamines. A. Burawoy and C. Turner. Chem Soc J p959-62 Mr '53
Studies in organic sulfur compounds; synthesis of 21-thiolacetates of adrenal cortical hormones. C. Djerassi and A. L. Nussbaum. bibliog Am Chem Soc J 75:3700-3 Ag 5 '53
Synthesis of (arylthioalkyl)- and (arylsulfonylalkyl)-silanes. H. Gilman, L. F. Cason and H. G. Brooks, jr. bibliog Am Chem Soc J 75:3760-2 Ag 5 '53
Synthetic hypoglycemic agents. H. L. Yale. bibliog Am Chem Soc J 75:675-8 F 5 '53
Ultraviolet absorption spectra of fully aromatic esters and thiolesters. G. Cilento. bibliog Am Chem Soc J 75:3748-50 Ag 5 '53

MERCAPTO group
Absorption spectra of SH and SD produced by flash photolysis of H_2S and D_2S. D. A. Ramsay. bibliog il diags J Chem Phys 20: 1920-7 D '52
Interactions of metal ions with the sulfhydryl group of serum albumin. I. M. Klotz, J. M. Urquhart and H. A. Fiess. Am Chem Soc J 74:5537-8 N 5 '52
Model for the configuration of sulfhydryl groups in proteins. R. E. Benesch and R. Benesch. Am Chem Soc J 75:4367-9 S 5 '53
Protection against X-rays and therapy of radiation sickness with β-mercaptoethylamine. Z. M. Bacq and others. bibliog Science 117:633-6 Je 5 '53

MERCAPTOTHIAZOLE
Chloro-substituted unsaturated alkylmercapto thiazoles. J. J. D'Amico. Am Chem Soc J 75:681-2 F 5 '53

MERCERIZING
Determination of the fastness of dyeings and prints to mercerizing. Am Dyestuff Rep 41: 713 O 27 '52
Improvement of luster of cotton; decrystallizing and mercerizing; influence on luster. L. Fourt and P. Streicher. bibliog Textile Res J 23:23-8 Ja '53

MERCHANDIZE cards

Carding techniques; Monowatt. il Mod Packaging 26:104-6 Ag '53

MERCHANDIZING

Buyer, seller, collector; credit man must be all of them. J. H. Wendt. Credit & Fin Management 55:20-1 F '53

How sound is your buying? R. J. Ginzl, jr. J Retailing 28:167-8+ Winter '52

Lift trucks get lift from show biz; Yale & Towne mfg. co. traveling show. il Mod Ind 25:117-18+ Mr '53

Merchandising trends; panel discussion. E. B. Weiss and others. Paper Tr J 135: 19-20+ O 24 '52

$1,000,000 hoist in sales when Gossard digs in at point-of-purchase. W. Baudette. il Sales Management 70:42-5 Mr 15 '53

Promotional value of your star or show. G. N. Montgomery. Adv Agency 46:28+ Ap '53

Retail trade; new trends in merchandising. E. M. Stanton. Trusts & Estates 92:513-15+ Jl '53

Treasure hunt stirs point-of-purchase push for California wines. E. A. Rossi. il Sales Management 69:30-2+ D 15 '52

Walt Disney's Peter Pan; merchandising tie-in with 12 national advertisers. C. Day. il Ptr Ink 242:34 F 6 '53

See also

Advertising
Buying habits
Catalogs
Chain stores
Coupons
Dealer helps
Delivery of goods
Department stores—Management
Disney, Walt, productions
Display of merchandize
Domestic appliances—Merchandizing
Electric apparatus and appliances—Merchandizing
Exhibits
Gas industry—Merchandising
Gasoline service stations—Automobile accessories
Jobbers
Labels
Leaders (merchandizing)
Mail order business
Marketing
Package goods
Premiums (merchandizing)
Price policies
Purchasing
Retail trade
Returned goods
Sales management
Sales promotion
Samples (merchandizing)
Self service
Self service stores
Showrooms
Special sales

Study and teaching

See also

Retail trade—Study and teaching

MERCHANT marine

Largest-ever merchant fleet. Economist 166: 237-8 Ja 24 '53

Maritime administration reports increase in ships, 1952. Weekly Underw 168:1545 Je 6 '53

Rough seas ahead for ship operators. Bsns W p 102-4 N 15 '52

World merchant fleet reached grand total of 90,200,000 tons, Lloyd's Register states. Weekly Underw 168:1546 Je 6 '53

Italy

Italian merchant marine nearing prewar tonnage; old ships being replaced. For Comm W 48:27 O 20 '52

United States

Administration officials promise new approach to maritime problems; excerpts from addresses. L. Saltonstall and others. Marine Eng 58:34-42 Jl '53

American merchant marine needs passenger ships. W. E. Maloney. Marine Eng 58:43+ F '53

Committee of shipowners proposes plan to strengthen merchant marine. Marine Eng 58:70 My '53

Decade of transition; our early steam navy and merchant marine. R. T. Merrill. il plans diags U S Naval Inst Proc 78:1004-15 S '52

Long-range shipping bill as enacted. Marine Eng 57:51-3 N '52

Mariner ships meet growing demands of U.S. industry and commerce. A. W. Gatov. For Comm W 48:15+ O 20 '52

Mariners strengthen United States maritime power. A. W. Gatov. Marine Eng 58:72+ My '53

Maritime industry needs a constructive federal policy. L. Saltonstall. Marine Eng 58: 68-70 My '53

Merchant steam vessels of the United States, 1807-1868; the Lytle list. W. M. Lytle, comp. 294p Steamship historical soc. of America, E. A. Patt, West Barrington, R.I. '53 ($5)

New maritime policies in the making. L. Saltonstall. Marine Eng 58:34-5 Ja '53

Report on shipping situation by the National federation of American shipping. Weekly Underw 168:458 F 14 '53

Shipbuilding tops 2,500,000 tons; merchant vessels to be built as of Jan. 1, 1953; merchant vessels built, 1952; tables. Marine Eng 58:40-3 F '53

Shipping lines are wondering what the G.O.P. will do. A. Glenn. Barron's 32:9-10 D 29 '52

Supports private merchant marine. C. Sawyer. Marine Eng 57:64-6 N '52

U.S. merchant marine news. Published in Foreign commerce weekly

United States merchant marine plays vital role in distribution of world trade. E. W. Clark. For Comm W 49:16-17+ My 18 '53

Why Mariners were needed. E. L. Cochrane. Marine Eng 58:71+ My '53

See also

Ship subsidies
Shipping—United States

MERCHANT marine academy, Kings Point, New York. See United States merchant marine academy, Kings Point, New York

MERCK, George Wilhelm, 1894-

Business men in the news. por Fortune 47:60 Ap '53

MERCK and company, inc.

Low-priced stocks headed for higher levels. J. S. Williams. Mag of Wall St 91:239 N 29 '52

Merck, Sharp & Dohme announce merger plan. Oil Paint & Drug Rep 163:5 Mr 9 '53

MERCURATION

Mercuration of dialkyl phosphonates. R. B. Fox and D. L. Venezky. bibliog Am Chem Soc J 75:3967-9 Ag 20 '53

MERCURIALIS

Drying oil in the seeds of mercurialis perennis (dog's mercury). T. P. Hilditch. Chem & Ind p981 O 4 '52

MERCURY

Atomic mercury as a luminescent activator. J. S. Prener and others. J Chem Phys 21: 759-60 Ap '53

Better way to recover spilled mercury. E. J. Erwood. Chem Eng 59:174-5 O '52

Condition for the creeping of a liquid past a mercury seal. R. S. Jessup. diags J Ap Phys 23:543-5 My '52

Enhancement of the green continuum of Hg by a rare gas. C. Kenty and D. A. Larson. bibliog Phys R 89:180-1 Ja 1 '53

Enhancement of the reducing properties of metallic mercury in presence of thiocyanate and cyanide; its analytical applications; abstract. F. Burriel-Marti. Chem Age (Lond) 67:561 O 25 '52

Heat capacity of mercury from 15 to 330° K.; thermodynamic properties of solid liquid and gas; heat of fusion and vaporization. R. H. Busey and W. F. Giauque. bibliog Am Chem Soc J 75:806-9 F 20 '53

Inhibitory effects of mercury and of hydrogen in the gas-phase oxidation of *n*-hexane. N. J. H. Small and A. R. Ubbelohde. diag Chem Soc J p4619-28 D '52

Isotopic exchange between the valence states of mercury. R. L. Wolfgang and R. W. Dodson. bibliog J Phys Chem 56:872-6 O '52

Kinetics of the reaction of potassium ferrocyanide and nitrosobenzene; the catalytic action of mercuric ions and ultraviolet light. S. Ašperger, I. Murati and O. Čupahin. Chem Soc J p 1041-6 Ap '53

Liquid metals; the viscosity of mercury vapor and the potential function for mercury. L. F. Epstein and M. D. Powers. bibliog J Phys Chem 57:336-41 Mr '53

MERCURY—*Continued*

Mercury and magnetism identify mixed carbide blanks. C. Edgar. Am Mach 97:187 S 14 '53

Mercury in 1952. S. H. Williston. il Min Cong J 39:124 F '53

Mercury, 1952. H. M. Myer. Eng & Min J 154:95 F '53

Mercury photo-sensitized oxidation of ethane and methane. J. A. Gray. diags Chem Soc J p3150-4 Ag '52

Mercury photosensitized oxidation of paraffins. B. D. Darwent. bibliog J Chem Phys 20:1979-80 D '52

Mercury-photosensitised reactions of tetrafluoroethylene. B. Atkinson. diag Chem Soc J p2684-94 Jl '52

Optically induced nuclear magnetization; a progress report. F. Bitter and others. diag Rs Mod Phys 25:174-7 Ja '53

Processes involving ions and metastable atoms in mercury afterglows. M. A. Biondi. bibliog diag Phys R 90:730-7 Je 1 '53

Quenching of mercury resonance radiation; the production of metastable ($^3P_0$) atoms. B. D. Darwent and F. G. Hurtubise. bibliog J Chem Phys 20:1684-8 N '52

Reaction of Hg($^3P_1$) with ethylene. B. D. Darwent. bibliog J Chem Phys 20:1673-8 N '52

Running metal. Can Chem Process 36:22 O '52

Self-diffusion of liquid mercury. R. E. Hoffman. bibliog diag J Chem Phys 20:1567-70 O '52

Solubility of indium in mercury. W. M. Spicer and C. J. Banick. bibliog Am Chem Soc J 75:2268-9 My 5 '53

Thermal resistivity of mercury in the intermediate state. J. K. Hulm. Phys R 90:1116 Je 15 '53

Thermal resistivity of superconducting mercury in the intermediate state. R. T. Webber and D. A. Spohr. bibliog Phys R 91:414-15 Jl 15 '53

Total fast neutron cross sections of Co, Ga, Se, Cd, Te, Pt, Au, Hg, and Th. M. Walt and others. Phys R 89:1271-2 Mr 15 '53

See also
Amalgams

Analysis

Detector monitors vapor concentration; abstract. C. S. Presenz. il diags Electronics 26:198+ Ag '53

2-(*o*-Hydroxyphenyl)-benzimidazole as a reagent for the determination of mercury. J. L. Walter and H. Freiser. bibliog diag Anal Chem 25:127-30 Ja '53

Isotopes

Energy levels and wavelengths of the isotopes of mercury-199 and -200. K. Burns and K. B. Adams. bibliog Opt Soc Am J 42:716-21 O '52

Gamma-gamma directional correlations in Co^{59}, Xe^{131}, and Hg^{198}. D. Schiff and F. R. Metzger. bibliog diag Phys R 90:849-52 Je 1 '53

Isotope enrichment by the photoexcitation of specific isotopes. C. C. McDonald and H. E. Gunning. bibliog J Chem Phys 20:1817 N '52

Photochemical enrichment of mercury 202. M. Zelikoff and others. J Chem Phys 21:376 F '53

MERCURY acetate

Preparation of $\triangle^{7,9(11)}$-*allo*-steroids by the action of mercuric acetate on Δ^7-*allo*-steroids. W. V. Ruyle and others. bibliog Am Chem Soc J 75:2604-9 Je 5 '53

MERCURY arc rectifiers. See Electric rectifiers

MERCURY boilers. See Boilers, Mercury

MERCURY chlorides

High field conductance of mercuric chloride at 25 and 45°. F. E. Bailey, jr. and A. Patterson, jr. bibliog Am Chem Soc J 74:5759-61 N 20 '52

MERCURY compounds

Infusible white precipitate; some new evidence as to its structure, from a study of its thermal decomposition. D. R. Glasson and S. J. Gregg. Chem Soc J p 1493-9 My '53

Mercurial diuretics; ionization of organic mercurials. R. L. Rowland. bibliog Am Chem Soc J 74:5482-4 N 5 '52

Photolysis of some mercury dimercaptides. R. J. Kern. bibliog Am Chem Soc J 75:1865-6 Ap 20 '53

Polarographic analysis of the serum albumin-mercury and zinc complexes. H. A. Saroff and H. J. Mark. bibliog Am Chem Soc J 75:1420-6 Mr 20 '53

Preparation of some unsaturated aliphatic derivatives of mercury and boron. E. Rothstein and R. W. Saville. Chem Soc J p2987-91 Ag '52

Quicksilver conquest. il Chem W 72:54 Ap 4 '53

Analysis

Determination of phenyl mercuric salts in the paper mill system. A. Schwerdle. bibliog Tappi 36:94-6 F '53

Estimation of mixed phenyl and ethyl mercuric compounds. D. Polley and V. L. Miller. bibliog Anal Chem 24:1622-3 O '52

MERCURY electrodes. See Polarographic analysis; Polarography

MERCURY hydride

Potential energy curve of mercury hydride. G. Glockler and Sister H. Ven Horst. bibliog J Chem Phys 20:1448-51 S '52

MERCURY industry and trade

Statistics

U.S. mercury statistics; world production of mercury, by countries, 1942-1951; tabulations. Iron Age 171:424 Ja 1 '53

MERCURY mines and mining

Mexico

Geology of the quicksilver deposits of Canoas, Zacatecas, Mexico. D. Gallagher. map diag U S Geol S Bul 975-B:47-85, pl 7-11[in pocket]; pa $1.00 Supt. of doc. '52

MERCURY oxalate

Photothermal decomposition of mixed silver and mercurous oxalates. L. Suchow and S. L. Hersh. bibliog J Phys Chem 57:437-9 Ap '53

MERCURY oxides

Low temperatures heat capacities of inorganic solids; the heat capacity and entropy of red mercuric oxide. T. W. Bauer and H. L. Johnston. bibliog Am Chem Soc J 75:2217-19 My 5 '53

MERCURY poisoning

Behavior of mercury in the animal organism following inhalation. W. F. Ashe and others. bibliog diag A M A Archives Ind Hygiene & Occup Med 7:19-43 Ja '53

MERCURY steam plants. See Steam plants—Binary vapor systems

MERCURY vapor electric lamps. See Electric lamps, Mercury vapor

MEREDITH publishing company

Security I like best. T. C. Henderson. Comm & Fin Chr 177:1422 Ap 2 '53

Stock offered. Comm & Fin Chr 177:2249-50 My 25 '53

MERIT rating. See Employees—Rating

MEROCYANINES. See Cyanines

MERRIAM, John Francis, 1904-

President, Northern natural gas company. por Pet Eng 25:A 122 My '53

MERRILL Lynch, Pierce, Fenner and Beane

High costs hit Wall Street. Bsns W p60+ F 21 '53

MERRILL petroleums, ltd.

Stock offered. Comm & Fin Chr 177:2009 My 11 '53

MERRITT-CHAPMAN and Scott corporation

Big construction backlog brightens outlook. Barron's 33:16-17 Jl 27 '53

Black Horse sees new fields to conquer. Eng N 149:43-4+ O 2 '52

MESA, Arizona

Mesa air maps prove invaluable tools. D. Smith. il Pub Works 84:57+ Jl '53

MESIDINE

Molecular polarisation and molecular interaction; the apparent dipole moments of mesidine, aminodurene, and methylmesidine in benzene and dioxan solutions. J. W. Smith. Chem Soc J p 109-13 Ja '53

MESITOIC acid. See Isodurylic acid

MESITYL oxide

Some physical properties of diacetone alcohol, mesityl oxide and methyl isobutyl ketone. E. T. J. Fuge, S. T. Bowden and W. J. Jones. bibliog J Phys Chem 56:1013-16 N '52

MESITYLUREA

Mesitylurea and mesitylsemicarbazide. J. Packer, J. Vaughan and T. W. Watts. Chem Soc J p2654-6 Jl '52

MESITYLENE

Colored complexes with inorganic salts mounted on silica gel. H. A. Benesi. Am Chem Soc J 75:2250-1 My 5 '53

Infrared spectra of solutions of iodine in mesitylene. N. S. Ham and others. bibliog J Chem Phys 20:1336-7 Ag '52

Polymethylbenzene complexes of iodine and iodine monochloride. L. J. Andrews and R. M. Keefer. bibliog Am Chem Soc J 74:4500-3 S 20 '52

Polyphosphoric acid as a dehydrating agent; identification of the hydrocarbons from mesitylene and aliphatic acids. H. R. Snyder and R. W. Roeske. bibliog Am Chem Soc J 74:5820-2 D 5 '52

Restricted rotation in aryl amines; stereoisomeric diglutarimidomesitylenes. R. Adams and D. C. Blomstrom. bibliog Am Chem Soc J 75:2375-7 My 20 '53

Studies on hydrogen cyanide; the reaction of the sesquichloride of hydrogen cyanide with mesitylene in the presence of aluminium chloride. L. E. Hinkel and G. H. R. Summers. Chem Soc J p2813-16 Jl '52

MESO compounds

Cyclic meso-ionic compounds; further studies on the stereochemistry of the sydnones, with a description of a heterodyne capacitance meter for dielectric-constant measurements in the range 2—3. R. A. W. Hill and L. E. Sutton. diags Chem Soc J p 1482-90 My '53

MESOMERISM

Mechanism of aromatic side-chain reactions, with special reference to the polar effects of substituents; mesomeric effects of elements of the oxygen group. J. W. Baker, G. F. C. Barrett and W. T. Tweed. Chem Soc J p2831-9 Jl '52

MESONS

Absorption of slow π^- mesons by He^4 nuclei. A. G. Petschek. bibliog Phys R 90:959-67 Je 1 '53

Angular and energy distributions in photomeson production. B. T. Feld. Phys R 89:330-1 Ja 1 '53

Atomic number dependence of neutral meson yield from proton bombardment. R. W. Hales and B. J. Moyer. bibliog diags Phys R 89:1047-53 Mr 1 '53

Capture of μ-mesons in heavy elements. J. W. Keuffel and others. bibliog il diags Phys R 87:942-52 S 15 '52

Charge independence and multiple pion production. L. Van Hove and others. Phys R 88:1211-12 D 1 '52

Cloud-chamber study of neutron production by sea-level cosmic rays with particular reference to μ-mesons stopped in lead. E. J. Althaus and R. D. Sard. bibliog il diags Phys R 91:373-84 Jl 15 '53

Coulomb and nuclear interactions of cosmic-ray mesons and protons in lead. W. L. Whittemore and R. P. Shutt. bibliog Phys R 88:1312-21 D 15 '52

Coupling constant of the nucleon-μ-meson interaction. M. A. Preston and M. F. Duret. bibliog Phys R 88:1425 D 15 '52

Damping of virtual nucleon-pair formation in pseudoscalar meson theory. K. A. Brueckner and others. bibliog diag Phys R 90:476-8 My 1 '53

Decay of a neutral *V* particle into two mesons. B. Dayton and D. Willard. il Phys R 91:348-50 Jl 15 '53

Diffusion cloud-chamber study of pion interactions in hydrogen and helium. E. C. Fowler and others. bibliog il diags Phys R 91:135-49 Jl 1 '53

Double meson photoproduction. R. D. Lawson and S. D. Drell. bibliog Phys R 90:326-7 Ap 15 '53

Effect of final state interactions on reaction cross sections. K. M. Watson. bibliog Phys R 88:1163-71 D 1 '52

Electron-neutron interaction as deduced from pseudoscalar meson theory. B. D. Fried. bibliog diags Phys R 88:1142-9 D 1 '52

Electronic component at low altitudes produced by π-meson decay. E. D. Palmatier. bibliog diags Phys R 88:761-72 N 15 '52

Energy loss of cosmic-ray mu-mesons in sodium iodide crystals. A. Hudson and R. Hofstadter. bibliog il diag Phys R 88:589-96 N 1 '52

Energy spectrum of positrons from the decay of the μ-meson. H. J. Bramson and others. bibliog Phys R 88:304-8 O 15 '52

Equivalence theorems for pseudoscalar coupling. J. M. Berger and others. Phys R 87:1061-5 S 15 '52

Evidence for the emission of a neutrino following the nuclear capture of a negative μ-meson. W. F. Fry. il Phys R 90:999-1000 Je 1 '53

Example of multiple meson production observed with a high pressure hydrogen-filled cloud chamber. O. Kusumoto and others. diags Phys R 90:998-9 Je 1 '53

Examples of multiple pion production in *n-p* collisions observed at the cosmotron. W. B. Fowler and others. bibliog il Phys R 91:758-9 Ag 1 '53

Excitation curve for photomesons from beryllium. D. Luckey. Phys R 90:711-12 My 15 '53

Excitation function for charged π-meson production in hydrogen and carbon by 345- to 380-Mev protons. S. Passman and others. diag Phys R 88:1247-53 D 15 '52

Fermi's theory of nucleon collisions and the zero-point energy of pions. F. C. Auluck and D. S. Kothari. Phys R 90:1002-3 Je 1 '53

First-order meson wave equations. H. S. Green. bibliog Phys R 89:965-7 Mr 1 '53

Gamma-rays from negative μ-meson capture in lead. G. G. Harris and T. J. B. Shanley. bibliog il Phys R 89:983-90 Mr 1 '53

Grain density in the tracks of 117- and 222-Mev π^- mesons in emulsions. A. H. Morrish. Phys R 91:423-4 Jl 15 '53

Inner bremsstrahlung in μ-meson decay. A. Lenard. bibliog Phys R 90:968-73 Je 1 '53

Interactions of μ-mesons. W. D. Walker. bibliog il diags Phys R 90:234-8 Ap 15 '53

Internal pair production of γ-rays of mesonic origin; alternate modes of π^0 decay. P. Lindenfeld and others. bibliog diags Phys R 89:531-7 F 1 '53

Ionization energy losses of relativistic μ mesons in gases. J. E. Kupperian, jr. and E. D. Palmatier. bibliog diags Phys R 91:1186-91 S 1 '53

K mesons. J. Crussard and others. bibliog diags Phys R 90:1127-9 Je 15 '53

Lifetimes of the μ^--mesons stopped in Li, Be, and C. W. E. Bell and E. P. Hincks. Phys R 88:1424-5 D 15 '52

Lifetimes of the π^+ and π^- mesons. R. P. Durbin and others. bibliog diags Phys R 88:179-83 O 15 '52

Mass of cosmic-ray mesons at mountain altitudes. G. Ascoli. bibliog il diags Phys R 90:1079-87 Je 15 '53

Mean life of negative μ mesons stopped in iron. A. H. Benade. bibliog diag Phys R 91:971-2 Ag 15 '53

Mean lifetimes of *V*-particles and heavy mesons. W. L. Alford and R. B. Leighton. bibliog il diags Phys R 90:622-9 My 15 '53

Measurements of meson masses and related quantities. F. M. Smith and others. Phys R 91:765-6 Ag 1 '53

Meson theory of β-decay and the ΔL-forbidden transitions. S. Nakamura. bibliog Phys R 89:16-19 Ja 1 '53

Meson theory of nuclear forces and low energy properties of the neutron-proton system. M. M. Lévy. bibliog diags Phys R 88:725-39 N 15 '52

Mesonic Auger effect. G. R. Burbidge and A. H. de Borde. bibliog Phys R 89:189-93 Ja 1 '53

μ-Meson capture and nuclear shell structure. J. M. Kennedy. diags Phys R 87:953-8 S 15 '52

Multiple Coulomb scattering of high energy pions in photographic emulsions. M. Backus and others. bibliog Phys R 88:1431-2 D 15 '52

MESONS—*Continued*

Multiple meson production by high energy nucleon-nucleon collisions. H. Fukuda. bibliog Phys R 89:842-7 F 15 '53

Multiple meson production in nucleon-nucleon collisions. H. W. Lewis. bibliog Rs Mod Phys 24:241-8 O '52

Multiple scattering and the many-body problem; applications to photomeson production in complex nuclei. K. M. Watson. bibliog Phys R 89:575-87 F 1 '53

Multiplicity of neutrons from the interaction of μ^- mesons at rest in Pb, Bi, Sn, and Al. M. Widgoff. bibliog diag Phys R 90:891-9 Je 1 '53

Negative pion activation of bromide. T. T. Sugihara and W. F. Libby. Phys R 88:587-8 N 1 '52

Neutral meson production in n-p collisions. R. H. Hildebrand. bibliog diag Phys R 89:1090-2 Mr 1 '53

Neutron and meson stars induced in the light elements of the emulsion. M. Blau and others. bibliog Phys R 91:949-57 Ag 15 '53

Neutrons produced in the absorption of negative π-mesons at rest. V. C. Tongiorgi and D. A. Edwards. diag Phys R 88:145-6 O 1 '52

New approach to the problem of higher order corrections in the meson theory of nuclear forces. J. Werle. Phys R 89:527-9 Ja 15 '53

Non-adiabatic treatment of the relativistic two-body problem. M. M. Lévy. bibliog diags Phys R 88:72-82 O 1 '52

Nuclear cross section for 37-Mev positive pions in Pb. K. J. Button. bibliog diag Phys R 88:956-7 N 15 '52

Nuclear cross sections for negative pions of energy 113 and 137 Mev. R. L. Martin. diags Phys R 87:1052-60 S 15 '52

Nuclear forces from pseudoscalar meson theory. M. Ruderman. bibliog diags Phys R 90:183-5 Ap 15 '53

Nuclear forces in pseudoscalar meson theory. K. Nakabayasi and I. Sato. Phys R 88:144-5 O 1 '52

Nuclear interactions of 210-Mev π^- mesons in emulsions. A. H. Morrish. bibliog diags Phys R 90:674-7 My 15 '53

Nuclear photostar production. I. Reff. bibliog Phys R 91:150-5 Jl 1 '53

Photomesonic fission of bismuth. G. Bernardini and others. bibliog Phys R 90:573-4 My 15 '53

Photomesons from the deuteron. J. A. Thie. Phys R 88:420-1 O 15 '52

Photoproduction of mesons in deuterium. M. Lax and H. Feshbach. bibliog Phys R 88:509-15 N 1 '52

Photoproduction of neutral mesons in hydrogen. Y. Goldschmidt-Clermont and others. Phys R 89:329-30 Ja 1 '53

Photoproduction of neutral mesons in hydrogen at high energies. R. L. Walker and others. diag Phys R 89:1301-2 Mr 15 '53

Photoproduction of π^0 mesons in hydrogen and deuterium. N. C. Francis. bibliog Phys R 89:766-74 F 15 '53

π^- and μ^-meson-induced fission. W. John and W. F. Fry. bibliog Phys R 91:1234-6 S 1 '53

π^0 Production cross section for 430-Mev protons on H and Be. J. Marshall and others. bibliog diags Phys R 88:632-41 N 1 '52

Pion production ratios by proton bombardment. R. Sagane. diag Phys R 90:1003 Je 1 '53

Positive photomesons from hydrogen at 0°. N. Jarmie and others. diag Phys R 91:1023-4 Ag 15 '53

Positive π-meson production by negative π-mesons. W. F. Fry. diags Phys R 91:1576-7 S 15 '53

Production cross section and frequency of neutral mesons in cosmic rays. G. Salvini and Y. B. Kim. bibliog il diags Phys R 88:40-50 O 1 '52

Production of charged photomesons from deuterium and hydrogen. R. S. White and others. bibliog diags Phys R 88:836-50 N 15 '52

Production of charged photomesons from helium; hydrogen-helium ratios. M. J. Jakobson and others. bibliog Phys R 91:695-8 Ag 1 '53

Production of charged π-mesons in H, D, C, Cu, and Pb by 381-Mev protons. M. M. Block and others. bibliog diags Phys R 88:1239-47 D 15 '52

Production of heavy mesons. L. S. Kothari. bibliog Phys R 90:1087-9 Je 15 '53

Production of high-energy electron pairs by negative pions in nuclear collisions. M. Schein and others. bibliog diags Phys R 91:973-80 Ag 15 '53

Production of mesons above 10 Bev. C. B. A. McCusker and others. bibliog diags Phys R 91:384-7 Jl 15 '53

Production of negative μ-mesons and their behavior in nuclear research emulsions. D. F. Sherman. bibliog il diags Phys R 90:469-72 My 1 '53

Production of photomesons in deuterium. J. Keck and R. Littauer. diag Phys R 88:139-40 O 1 '52

Production of π^0 mesons by γ-rays on hydrogen. A. Silverman and M. Stearns. bibliog diag Phys R 88:1225-30 D 15 '52

Production of π^0 mesons in hydrogen and deuterium by high energy γ-rays. G. Cocconi and A. Silverman. bibliog diag Phys R 88:1230-3 D 15 '52

Production of positive pions by 341-Mev protons on protons. W. F. Cartwright and others. bibliog diags Phys R 91:677-88 Ag 1 '53

Production of V_1^0 particles by negative pions in hydrogen. W. B. Fowler and others. il Phys R 91:1287 S 1 '53

Pseudoscalar mesons with applications to meson-nucleon scattering and photoproduction. S. D. Drell and E. M. Henley. bibliog Phys R 88:1053-64 D 1 '52

Quantum corrections to classical nonlinear meson theory. D. R. Yennie. bibliog diags Phys R 88:527-36 N 1 '52

Range distribution of μ-mesons from π-meson decay in photographic emulsion. W. F. Fry and G. R. White. bibliog Phys R 90:207-10 Ap 15 '53

Range distribution of sea-level mesons at low geomagnetic latitudes. L. del Rosario and J. Dávila-Aponte. bibliog diags Phys R 88:998-1002 D 1 '52

Ratio of positive to negative π-meson production from deuterium. J. Carothers and C. G. André. diag Phys R 88:1426-7 D 15 '52

Relation between the photoproduction and scattering cross sections for π-mesons in complex nuclei. N. C. Francis and K. M. Watson. Phys R 89:328-9 Ja 1 '53

Some consequences of invariance under charge conjugation. L. Wolfenstein and D. G. Ravenhall. Phys R 88:279-82 O 15 '52

Some K-particle mass measurements. D. M. Ritson. Phys R 91:1572 S 15 '53

Spectrum and half-life of the κ meson. J. P. Davidson. Phys R 91:1020-1 Ag 15 '53

Spin orbit coupling and mesonic Lamb shift. R. Chisholm and B. Touschek. diags Phys R 90:763-5 Je 1 '53

Spin-orbit coupling in pseudoscalar meson theory. L. Dresner. diags Phys R 91:201-2 Jl 1 '53

Suggested scheme for meson production. H. Messel and H. S. Green. bibliog Phys R 89:315-16 Ja 1 '53

Surface production of charged mesons by photons on nuclei. S. T. Butler. bibliog Phys R 87:1117-24 S 15 '52

Symmetrical pseudoscalar meson theory of nuclear forces. J. V. Lepore. Phys R 88:750-1 N 15 '52

τ-Meson decay in flight. M. Annis and N. F. Harmon. bibliog il Phys R 88:1202-3 D 1 '52

Test of the charge symmetry hypothesis; positive to negative pion production ratio obtained in bombarding carbon with alpha-particles and protons. H. W. Wilson and W. H. Barkas. diag Phys R 89:758-9 F 15 '53

Total cross sections of 37-Mev pions in hydrogen. C. E. Angell and J. P. Perry. Phys R 90:724 My 15 '53

Unusual π-μ decays in photographic emulsions. W. F. Fry. bibliog diags Phys R 91:130-4 Jl 1 '53

V-particle and the composite pion. R. J. Finkelstein. Phys R 88:555-8 N 1 '52

MESONS—*Continued*

X-rays from mesic atoms. M. Camac and others. bibliog Phys R 88:134 O 1 '52

X-rays from the π-mesic atom. A. M. L. Messiah and R. E. Marshak. Phys R 88:678 N 1 '52

Scattering

Angular distribution of pions scattered by hydrogen. H. L. Anderson and others. bibliog diags Phys R 91:155-68 Jl 1 '53

Application of the theory of the effective range to meson nucleon scattering. K. A. Brueckner. bibliog Phys R 87:1026-30 S 15 '52

Charge-exchange scattering of 34-Mev π-mesons in hydrogen and deuterium. A. Roberts and J. Tinlot. bibliog diags Phys R 90:951-9 Je 1 '53

Classical scattering of neutral mesons. C. R. Mehl and P. Havas. bibliog Phys R 91:393-7 Jl 15 '53

Coulomb effects in pion scattering by protons under the charge independence hypothesis. L. Van Hove. Phys R 88:1358-60 D 15 '52

Covariant meson-nucleon equation. S. Deser and P. C. Martin. bibliog diags Phys R 90:1075-8 Je 15 '53

Differential cross sections for the scattering of 58-Mev π^+ mesons in hydrogen. D. Bodansky and others. bibliog diag Phys R 90:996-7 Je 1 '53

Elastic pion-deuteron scattering. E. Arase and others. Phys R 90:160-1 Ap 1 '53

Elastic scattering of π-mesons by deuterons. T, A. Green. Phys R 90:161-2 Ap 1 '53

Elastic scattering of pions in deuterium. K. A. Brueckner. bibliog Phys R 90:715-16 My 15 '53

Fourth-order corrections to the scattering of pions by nonrelativistic nucleons. J. S. Blair and G. F. Chew. bibliog Phys R 90:1065-7 Je 15 '53

Graphical method for obtaining phase shifts from the experimental data on meson-nucleon scattering. J. Ashkin and S. H. Vosko. Phys R 91:1248-51 S 1 '53

Large angle scattering of negative pions in aluminum, copper, and lead. H. H. Heckman and L. E. Bailey. bibliog diags Phys R 91:1237-42 S 1 '53

Meson-nucleon scattering. R. Karplus and others. bibliog diag Phys R 90:1072-5 Je 15 '53

Meson-nucleon scattering and the classical strong-coupling theory. D. Feldman. bibliog Phys R 88:890-1 N 15 '52

Nucleon polarization in pion proton scattering. E. Fermi. Phys R 91:947-8 Ag 15 '53

Phase-shift analysis of the scattering of positive mesons at 58 Mev. D. Bodansky and others. Phys R 90:997-8 Je 1 '53

Pion-nucleon scattering when the coupling is weak and extended. G. F. Chew. bibliog Phys R 89:591-3 F 1 '53

Pseudoscalar mesons with applications to meson-nucleon scattering and photoproduction. S. D. Drell and E. M. Henley. bibliog Phys R 88:1053-64 D 1 '52

Recoil effects in meson-nucleon scattering. E. M. Henley and M. A. Ruderman. Phys R 90:719 My 15 '53

S wave in pion-nucleon scattering. R. E. Marshak. bibliog diag Phys R 88:1208-9 D 1 '52

Scattering and absorption of π^+ mesons by aluminum. J. F. Tracy. bibliog il diags Phys R 91:960-71 Ag 15 '53

Scattering of charge symmetric pseudoscalar mesons by nucleons. W. W. Wada. bibliog Phys R 88:1032-6 D 1 '52

Scattering of 40-Mev positive pions by hydrogen. J. P. Perry and C. E. Angell. diags Phys R 91:1289 S 1 '53

Sign of the phase shifts in meson-nucleon scattering. H. A. Bethe. bibliog Phys R 90:994-5 Je 1 '53

Study of elastic pion-hydrogen scattering in photographic emulsions. G. Goldhaber. bibliog il Phys R 89:1187-9 Mr 15 '53

MESQUITE gum

Constitution of mesquite gum; determination of the structure of the amide of 6-β-(4-methyl D-glucopyruronosyl) α-methyl-D-galactopyranoside. M. A. Akher, F. Smith and D. Spriestersbach. Chem Soc J p3637-40 S '52

MESSER, Don M.

Messer credo; serve one another; president, National association of credit men. por Credit & Fin Management 55:12-13+ Jl '53

METABOLISM

Antimetabolites of uridine with two structural alterations. D. W. Visser, G. Barron and R. Beltz. bibliog Am Chem Soc J 75:2017-19 Ap 20 '53

Fractionation of hydrogen isotopes in biological systems. M. L. Eidinoff and others. bibliog Am Chem Soc J 75:248-9 Ja 5 '53

5-Hydroxytryptophan decarboxylase; a new route of metabolism of tryptophan. S. Udenfriend, C. T. Clark and E. Titus. Am Chem Soc J 75:501-2 Ja 20 '53

Metabolic degradation in the mouse of 1,2,5,6-dibenzanthracene-9,10-C^{14}; some quinone metabolites retaining the intact ring system. C. Heidelberger, H. I. Hadler and G. Wolf. bibliog Am Chem Soc J 75:1303-8 Mr 20 '53

Metabolic fate of imidazoleacetic(C^{14}OOH) acid in the rat. L. P. Bouthillier and G. Léveillé. Am Chem Soc J 75:4075-7 Ag 20 '53

Metabolism and removal of Ca^{45} in man. J. Bellin and D. Laszlo. bibliog Science 117:331-4 Mr 27 '53

Metabolism of hummingbirds. O. P. Pearson. il Sci Am 188:69-72 Ja '53

Nicotinic acid metabolism; the metabolism of radioactive nicotinic acid and nicotinamide in the rat. P. Lin and B. C. Johnson. bibliog diags Am Chem Soc J 75:2974-7 Je 20 '53

Nicotinic acid metabolism; the use of paper chromatography in the study of nicotinic acid metabolism. B. C. Johnson and P. Lin. bibliog diags Am Chem Soc J 75:2971-3 Je 20 '53

Respiration of the parts of the hybrid gastrula rana pipiens x rana sylvatica. L. C. Sze. bibliog diag Science 117:479-80 My 1 '53

Review of biochemistry. K. Rees. Chem Age (Lond) 68:79-85 Ja 10 '53

Some aggregate analogs of *p*-aminobenzoic acid and dimethyldiaminobenzene possessing unusual biological properties. D. W. Woolley. bibliog Am Chem Soc J 74:5450-3 N 5 '52

Synthesis of sugars from simpler substances; enzymic synthesis of a pentose. L. Hough and J. K. N. Jones. Chem Soc J p4047-52 O '52

METACHROMASIS

Metachromasy of rhodamine 6G produced by polyvinyl sulfate. M. Koizumi and N. Mataga. Am Chem Soc J 75:483-4 Ja 20 '53

METACHROME dyeing. See Dyes and dyeing—Metachrome process

METADYNE

Transient analysis of the metadyne generator; abstract. M. Riaz. diag Elec Eng 72:541 Je '53

Transition between metadyne and amplidyne modes in a d.c. cross-field generator. E. J. Davies. bibliog diag Inst E E Proc 100 pt 2:191-5 Ap '53

METAL ceramics. See Cermets

METAL cladding. See Metals, Clad

METAL cleaning

Acid derusting and descaling compound. il Metal Finishing 51:111 Ja '53

Alkaline cleaning for metal finishing. A. G. Gray. il diags Metal Prog 63:84-7 F '53

Cleaner salvages equipment. il Pet Eng 24:C24 O '52

Cleaners for copper and brass. il Consumers Res Bul 31:10-11 F '53

Cold cleaner cuts costs; powder and a liquid, branded Houghto-Clean 440 and 439. D. C. Miner. il Steel 132:100-1 Mr 16 '53

Detrex ultrasonic degreaser employs ceramic transducer. il Am Mach 97:144 Mr 30 '53; Machine Design 25:248 My '53; Mach 59:185 My '53; Materials & Methods 37:144 My '53; Iron & Steel Eng 30:131-2 Ap '53; Iron Age 171:150-1 Ap 9 '53

Electrolytic alkaline descaling process. Metal Finishing 50:80 D '52

Forum on technical progress; cleaning and finishing. il Steel 132:386-7+ Ja 5 '53

METAL cleaning—*Continued*

High flash point emulsion cleaner developed; Pennsalt EC-54. Materials & Methods 37: 136+ Ja '53; Metal Finishing 51:113-14 Ja '53

How to descale titanium. A. E. Durkin. bibliog Materials & Methods 38:107-9 O '53

How wet blasting cuts mold cleaning costs. E. F. Anderson. il Cer Ind 60:104-5 Je '53

Maizo blast machine deburs soft-metal parts. il Am Mach 97:174 Jl 20 '53; Automotive Ind 109:68 Jl 15 '53

Mechanism cleaner. il Automobile Eng 42: 408 O '52

Metal cleaners. M. A. Lesser. bibliog il Soap & San Chem 28:42-5+ O; 46-9+ N '52

Meter parts blast cleaned. Steel 131:113 D 1 '52

Portable surface cleaning plant. il diag Engineer 194:392 S 19 '52

Radioactive tracers track metal cleaner effectiveness. J. W. Hensley. il Iron Age 170:151-4 N 13 '52

Sandblasting equipment cleans welds and doubles production at less cost per unit. il Mill & Factory 52:133 F '53

Ultrasonic cleaning pays off for small parts. il diag Steel 131:92-3 N 3 '52

Ultrasonics; a sound method of cleaning. R. E. Homan. il diag Am Mach 97:120-4 Jl 6 '53

Use of metal cleaners in metalworking; tabulation. Iron Age 171:467 Ja 1 '53

Wet blasting process for the cleaning and finishing of rubber molds. E. F. Anderson. il Rubber Age 73:71-2 Ap '53

Wheelabrator wet-blasting cleaning and finishing machine. il Mach 59:212 D '52; Tool Eng 29:105 D '52

See also

Castings—Cleaning
Degreasing
Polishing materials
Steel—Cleaning

Bibliography

Metal cleaning bibliographical abstracts, 1842-1951. J. C. Harris, comp. (Special tech. pub. no. 90-B) 132p Am. soc. for testing materials, 1916 Race st, Philadelphia 3 '53 (pa $4.25)

METAL cleaning, Electrolytic

See also

Polishing, Electrolytic

METAL coating

Brazed, welded tubing coated for corrosion protection. H. Chase. il Iron Age 171:118-19 Ja 29 '52

Coatings cut corrosion costs. L. G. Jones. il Power Eng 57:87-9 Jl; 74-5 Ag '53

Economical coatings by vacuum metallizing. M. Shepard. il Materials & Methods 37:97-9 Je '53

Economical finishing with vacuum metalizing. G. W. Carr. il Metal Finishing 50: 60-4 N '52

Flow of liquid metals on solid metal surfaces and its relation to soldering, brazing and hot-dip coating; abstract and discussion. G. L. J. Bailey and H. C. Watkins. Engineering 174:414 S 26 '52

High vacuum creates miracle in plating. il Elec West 109:100 O '52

Influence of fuel gas on the spraying of metal powders. W. McDermott and R. Dickinson. Engineer 196:6-9 Jl 3 '53

Inorganic finishes for metal products. Product Eng Hdbk p C 12-15 '53

Metal finishing by high-vacuum metallization. G. H. Bancroft. il diag Metal Prog 64:87-90 S '53

Metal spray, welding rod turn old parts into gold; Atlanta transit co. il Bus Transportation 32:30-1 Mr '53

Metal spraying on the Burlington. il Ry Loco & Cars 127:86-7 Ap '53

Metallizing in the paper mills. il diag Paper Tr J 136:19-20 My 29 '53

Metallising of glass, ceramic and plastic surfaces. R. J. Heritage and J. R. Balmer. bibliog il Metallurgia 47:171-4 Ap '53; Same. Metal Finishing 51:75-8+ Ag '53

Molybdenum-rich and tungsten-rich coatings on steel. Engineer 195:172-3 Ja 30 '53

New demands lead to new directions in engineering materials; coatings and finishes. T. C. Du Mond. il Materials & Methods 37: 92-3 Je '53

Protection of tubular structures from the weather by metallizing. A. Clift. il Metal Prog 62:100-4 N '52

Research and development of methods of vapor deposited coatings for titanium and titanium alloys; abstract. Metal Prog 63: 192+ Mr '53

Spray and sinter to make high temperature alloy parts. J. E. Cline and others. Product Eng 24:272+ F '53

Sprayed metal molds. W. Brenner and L. Hase. bibliog il diags Mod Plastics 30:105-9+ S '52

Surface coating protection by the evaporation-condensation of the rarer metals; abstract. Metal Finishing 51:77 My '53

Use of vacuum metallizing and vapor coating growing. Iron Age 171:134-6 F 26 '53

Vacuum metallizing as a production process. J. G. Seiter. il diags Tool Eng 31:49-53 S '53

Vacuum metallizing of metals and plastics. R. W. Brown. Can Chem Process 36:38+ N '52

Vacuum metallizing of plastics. J. G. Seiter. il India Rubber World 128:493-6 Jl '53

Vacuum metallizing process. Electronics 26: 324+ Mr '53

See also

Aluminum coating
Electroplating
Galvanizing
Zinc coating

Testing

Accuracy of electromagnetic coating thickness measuring apparatus; abstract. J. H. Zaat. Metal Finishing 51:78-9 F '53

METAL coloring

Buffing and coloring; abstract. W. Burkhart. Metal Finishing 51:84 Mr '53

See also

Aluminum—Coloring
Steel—Blackening

METAL congress, National. See National metal congress

METAL corrosion. See Corrosion and anti-corrosives

METAL cutting

Analysis of maximum temperatures in workpieces. A. O. Schmidt. bibliog diags Tool Eng 31:53-8 Jl '53

Cam curves aren't tough. J. E. Hyler. il Steel 132:70-1 Ja 12 '53

Chips from the machining panel, SAE national aeronautic meeting. H. W. Ingalls. S A E J 61:78-80 My '53

Contour cutting. R. H. Eshelman. il diags Tool Eng 31:67-78 S '53

Cutting fluids; their role in machining. S. J. Beaubian and A. G. Cattaneo. il diags Steel 132:106-9 Ap 13 '53

Cutting titanium down to size; Aircraft gas turbine division, General electric co. V. L. Coughlin. il diags Mill & Factory 53:114-17 S '53

Deformation work absorbed by the workpiece during metal cutting. E. G. Thomsen and others. bibliog il diags A S M E Trans 75:591-8; Discussion. 598-603 My '53

Forum on technical progress; machining and tooling. il Steel 132:346-7+ Ja 5 '53

Guideposts to titanium cutting. V. J. Gauthier. il Steel 132:76-9 Mr 23 '53

High-speed cutting machine for tough metals. il Engineer 194:393 S 19 '52

How Oak Ridge machines beryllium. J. M. Case and E. R. Watkins. il diags Am Mach 96:93-7 D 22 '52

How Oldsmobile machines 90-millimeter cannon. J. G. Coleman. il diags Mach 60:152-6 S '53

How to machine the rarer metals; reference book sheet. il diags Am Mach 97:183, 185 Ap 13 '53

How to machine titanium. il Iron Age 170: 278-9 O 9 '52

Influence of machining and grinding methods on the mechanical and physical condition of metal surfaces; abstract. P. Spear and others. Metal Prog 62:190+ D '52

Interrupted-cut problem trimmed in tooling. Tool Eng 30:84 Ap '53

METAL cutting—*Continued*

Jones & Lamson conducts high-level machining seminar series for production executives. Am Mach 97:171 Je 22 '53

Machinability of high-phosphorus irons improved by ladle additions. E. A. Loria. bibliog il Am Mach 97:92-5 Ag 31 '53

Machinability of metal powder parts. J. L. Everhart. il Materials & Methods 37:98-100 Ap '53

Machinability studies; which gray irons for large volume production? E. A. Loria. il Iron Age 171:131-3 Ap 9 '53

Machinability theory pays off. R. K. Gould. il Steel 131:98-102 Ag 18 '52; Same cond. Product Eng 23:268+ N '52

Machine builder solves a problem; National Acme solved machining problems for valve bodies. il Steel 131:108+ N 10 '52

Machining air-tank heads for guided missiles; Rheem mfg. co. il Mach 59:201 Mr '53

Machining aluminum alloys on automatics. L. F. Spencer. diags Tool Eng 30:55-64 Ja '53

Machining of high temperature alloys. P. G. DeHuff and D. C. Goldberg. il Aero Digest 65:92-100 N '52; Same cond. Automotive Ind 106:46-9+ My 1 '52; Same cond. Machine Design 24:270+ S '52; Same cond. Steel 130:76-8 Ap 28 '52

Machining review and forecast. il Iron Age 171:290-2 Ja 1 '53

Maintaining constant surface cutting speed. J. L. Dutcher. il diags Mach 59:160-7 Ag '53

Metal-cutting chatter and its elimination. R. S. Hahn. bibliog il diags A S M E Trans 75:1073-80 Ag '53

Metal-cutting friction coefficient needs reinterpretation. M. Kronenberg. diag Tool Eng 31:49-50 O '53

Metal-cutting temperatures and tool wear. A. O. Schmidt. bibliog il diags Tool Eng 29:33-5 Jl; 51-4 Ag '52; Excerpts. Metal Prog 64:186+ Jl '53

New horizons for machine tools; teaching and research in the field of metal cutting. P. A. Smith. il Tech R 55:93-6+ D '52

Practical approach to optimum machining. A. B. Albrecht. il diags Am Mach 97:121-5 My 25; 142-5 Je 8; 130-3 Je 22; 142-4 Jl 6 '53

Precision machining of aircraft control parts. C. H. Wick. il diags Mach 59:165-9 Ap '53

Relative abrasiveness of the cast surfaces of various gray-iron castings on single-point tools of high-speed steel. J. Datsko and O. W. Boston. il A S M E Trans 75:103-8 Ja '53; Abstract. Metal Prog 63:180+ My '53

Seminars inform engineers on high-speed cutting; Jones & Lamson machine co. Tool Eng 31:101 Jl '53

Shell machining techniques. M. L. Backstrom. diags Tool Eng 30:45-51 Ja '53

Significance of the thermal number in metal machining. B. T. Chao and K. J. Trigger. bibliog diags A S M E Trans 75:109-15; Discussion. 115-20 Ja '53

Simple modification speeds angular facing. W. Gardiner. diag Am Mach 96:173 N 10 '52

Some observations on chip curl in the metal-cutting process under orthogonal cutting conditions. R. S. Hahn. bibliog il diags A S M E Trans 75:581-7; Discussion. 587-90 My '53

Sparks tame super-hard carbide alloys. il Bsns W p43-4 Ap 18 '53

Thin metals that remain flat after machining. J. C. Wagner. il Metal Prog 63:92-4 Je '53

Titanium carbide alloys in tooling. W. L. Kennicott. il diags Tool Eng 30:61-4 Ap '53; Excerpt. Automotive Ind 108:88+ Ap 15 '53

Unorthodox methods of machining hard materials. P. Grodzinski. bibliog(29 ref) Metallurgia 47:34-8 Ja '53

What constituents affect machinability of gray irons? E. A. Loria and others. Am Mach 96:122-4 O 27 '52

What's ahead the next ten years in machining. Am Mach 96:E-E25 Mid-N '52

See also

Broaching
Cutting tools
Drilling and boring (metal working, etc.)
Electric cutting
Gear cutting
Lubrication and lubricants (cutting and grinding)
Machine tools
Machine work
Milling
Milling cutters
Oxyacetylene cutting
Oxygen cutting
Pipe cutting
Saws, Metal working
Screw machines
Shears (machines)
Steel cutting
Thread cutting
Threading machines
Tool steel
Trepanning

Tables, calculations, etc.

Chart to determine savings from more machinable material; reference book sheet. T. Hicks. Am Mach 97:163 Jl 6 '53

Cutting feeds and speeds for standard tools; tabulation; reference sheets. Tool Eng 30:79-81 Mr '53

Cutting-time calculations; reference book sheet. V. G. Hotchkiss. Am Mach 97:191 My 11 '53

How round is round? A. C. Sanford. il diag Am Mach 96:124-6 N 10 '52

Planing, shaping and slotting; reference sheet. Tool Eng 30:85-6 Je '53

Reference tables help you to shear economically. D. D. Amison. il Am Mach 97:151-3 Ap 13 '53

Shear-angle relationship in metal cutting. M. C. Shaw and others. bibliog diags A S M E Trans 75:273-83; Discussion. 283-8 F '53

METAL detectors. See Metals—Detection

METAL drawing

Cold-drawn pinions and small gears. il diags Product Eng Hdbk p D8-9 '53; Same cond. Am Mach 95:113 Ag 20 '51

Cup drawing from a flat blank. S. Y. Chung and H. W. Swift. bibliog diags Inst Mech Eng Proc 165 (W.E.P. no 68):199-223; Discussion. 224-8 '51

Cushion-rubber pad draw; machine incorporates Guerin and die-quench operations with basic draw. Steel 132:131-2 My 18 '53

Cylindrical shells; experimental investigation into redrawing; abstract. S. Y. Chung and H. W. Swift. Metal Prog 63:216+ My '53

Deep drawing steel sheet surface quality. R. J. Walter. J Metals 5:630 My '53

Drawing and welding two-piece fenders. H. Chase. il Automotive Ind 107:68-71 N 1 '52

Drawing; conveyers, integrated presses help boost shell output; Rheem mfg. co. il Iron Age 171:166 F 5 '53; Steel 132:122+ F 2 '53; Mach 59:164-6 Mr '53

Economics of spinning and drawing. J. W. Lengbridge. flow diag il diags Tool Eng 30:89-94 Ap '53; Excerpts. Machine Design 25:267+ Jl '53

Forming and drawing heavy stampings for IHC crawler tractor. J. C. O'Rourke. il Automotive Ind 107:70-1 O 1 '52

Hydraulic Press Manufacturing line of presses for Hidraw process. il diags Am Mach 97:182 Ap 27 '53; Iron Age 171:164-5 Ap 9 '53; Mach 59:224-5 My '53

Jet-engine parts produced with minimum scrap loss; Cyril Bath co. C. J. Bath. il Mach 59:180-3 Mr '53

Manufacture and manipulation of seamless tubes; Messrs. Accles and Pollock, limited. il Engineering 176:161-5, 176, 193-5, 208, 225-7, 240 Ag 7-21 '53

New draw capacity fills western need; Sierra Drawn Steel's 100,000-pound capacity machine. il Steel 131:91 O 6 '52; Iron Age 170:204-5 N 6 '52

New test for drawability; sheet and strip steels; abstracts. C. B. Buker and J. R. Speer. Materials & Methods 38:156+ Ag '53; il S A E J 61:24-5 O '53

New tester accurately checks drawability of sheet steel. W. G. Patton. il Iron Age 171:143-5 Mr 19 '53

Plastic forming of metals. il diags Fortune 46:138-41+ N '52

Presses; two hydraulic units halve operations in drawing small tube. il Iron Age 170:186-7 D 11 '52

METAL drawing—*Continued*

Spun and drawn zinc parts have many applications. E. V. Gent. il diags Materials & Methods 36:102-4 D '52

Talks on draw dies. S. R. Cope. diags Am Mach 97:110-13 Ag 3; 106-9 Ag 17; 96-9 Ag 31; 164-6 S 14; 126-9 S 28; 120-3 O 26 '53 (to be cont)

Titanium can be deep drawn; Worcester pressed steel co. J. W. Gulliksen. il Iron Age 171:136-9 F 12 '53

Which metal form, spun or drawn? J. W. Lengbridge. il diags Materials & Methods 38:87-91 Ag '53

Zone-heated dies deep draw thin magnesium; Emerson electric mfg. co. il Am Mach 97: 129-31 Ap 27 '53

See also

Lubrication and lubricants (metal drawing)
Wire drawing

METAL finishing

Automatic controls for surface finishing jet engine parts. R. J. Thomas. il diags Automotive Ind 109:48-50 S 1 '53

Brushes; production tools for good surface finishes. R. O. Peterson. il Iron Age 171: 134-7 Mr 19 '53

Can you use these new metal finishing ideas? bibliog(50 ref) il Iron Age 171:132-6 F 26 '53

Deburring in a nutshell; application of crushed walnut shells. il Mill & Factory 51:98 O '52

Designations and applications of chemical and electrochemical treatments for magnesium alloys; engineering file facts. Materials & Methods 37:121 Ja '53

Effect of axial slip on facing with a lathe. P. M. Gilet. il diags Engineering 175:229 F 20 '53

Electro-finishing of metals; RIC lecture and discussion. S. Wernick. Chem Age (Lond) 67:773 D 6 '52

Finishing weld beads on stainless steel; illustrated instructions. E. M. Rains. Sheet Metal Worker 44:70-1+ Mr '53

Forum on technical progress; cleaning and finishing. il Steel 132:386-7+ Ja 5 '53

Grit-blasting machine gives satin finish. il Comp Air Mag 58:230 Ag '53

How you can specify surface finishes. il diags Steel 132:74-8 Ja 19 '53

Incentive standards reduce costs in metal-finishing operations. A. F. Cuoco and A. S. Hylicke. Tool Eng 31:68-74 Ag '53

Inhibitors for metal finishing. R. O. Bailey. il Metal Finishing 51:65-8 S '53

Inorganic finishes for metal products. Product Eng Hdbk p C 12-15 '53

It will pay you to examine surface treatment methods. A. G. Gray. il Steel 132: 92-4+ My 18 '53

Machine developed for surface finishing hand tools. il Metal Finishing 51:111-12 Ja '53

Metal-finishing process relieves yarn friction; vapor blasting. il Textile World 103:150 Jl '53

Metal finishing review and forecast. il diags Iron Age 171:286-8 Ja 1 '53

Metal surfaces improved with new blasting process; Metablast process. il Materials & Methods 38:180+ O '53

Metal washing, pickling, electroplating, sand blasting, painting, coating, physical testing and polishing departments, by states; tabulation. Iron Age 171:468 Ja 1 '53

Mill rolls; better roll finish permits longer life, greater loads. il Iron Age 171:134-5 F 19 '53

New demands lead to new directions in engineering materials; coatings and finishes. T. C. Du Mond. il Materials & Methods 37: 92-3 Je '53

1953 American Machinist production preview. il Am Mach 97:237-40 Ja 19 '53

Organic finishes for metal products. Product Eng Hdbk p C6-9 '53

Pickling and bright dipping of copper and copper-rich alloys. E. E. Halls. Metal Finishing 51:68-73 My '53

Porcelain enamel; orphan of the metal finishing industry. E. M. Smith. il Metal Finishing 51:71-4 Ag '53

Porosity of anodized films; abstract. O. Kubaschewski and A. von Krusenstjern. Metal Finishing 51:83-4 Ap '53

Precision tumbling produces fine finish; Slidabrading. R. DePastina. il diags Am Mach 97:113-15 Jl 6 '53

Production costs lowered with pre-coated coil stock. A. E. Uhleen. il diag Iron Age 170:145-7 D 18 '52

Slidabrading; faster, cheaper way to precision-finish small parts. R. De Pastina. il Factory Management 111:106-8 Ja '53

Some practical aspects of specifying surface finishes. J. Adiletta. il diags Product Eng 23:150-4 D '52

Specification of color in finishes. C. R. Smedley. il Machine Design 25:187-92 O '53

Superfinishing of mill rolls lengthens their life. il Mach 59:192 Mr '53

Surface contamination and quality in titanium fabrication. V. C. Petersen. il Materials & Methods 38:72-3 Jl '53

Technical developments of 1952. N. Hall. il Metal Finishing 51:92A-92B, 93-100 bibliog and patent list (246 ref, p99-100) Ja '53

Tool finishing costs reduced by wet blasting. E. F. Anderson. il Tool Eng 30:53-4 Ja '53

Trade secrets; courts consider them property. A. W. Gray. bibliog Metal Finishing 51:75-7 F '53

Trends in better finishes for automobiles. J. Parina, jr. il Metal Prog 64:83-6 Jl '53

Washing dollars out of deburring; Ryan aeronautical co. G. B. Ashmead. il Metal Finishing 51:71-3 O '53

Wet blasting with fine particles; based on papers by W. I. Gladfelter and others. il diag S A E J 61:63-8 O '53

What's ahead the next ten years in finishing. Am Mach 96:H-H7 Mid-N '52

Wheelabrator wet-blasting cleaning and finishing machine. il Mach 59:212 D '52; Tool Eng 29:105 D '52

See also

Abrasive belts
Aluminum—Finishing
Grinding
Honing
Lacquer and lacquering
Lapping machines
Magnesium—Finishing
Phosphate coating
Pickling (metals)
Polishing
Polishing, Electrolytic
Shot blasting
Shot peening
Steel—Finishing
Tumbling barrels

Patents

Patents. Published in monthly numbers of Metal finishing

Standards

Metal thicknesses revised. Standardization 23: 405 D '52

METAL finishing (periodical)

Fifty years of publishing. T. A. Trumbour. il Metal Finishing 51:86-92 Ja '53

METAL foils

Energy loss of protons in metallic foils and mica. D. Kahn. bibliog diag Phys R 90:503-9 My 15 '53

Foil strain gauges. il Automobile Eng 43: 53-4 F '53

Foil strain gauges. il Engineer 195:398 Mr 13 '53

Foil strain gauges for torque and pressure measurement. Engineering 175:119 Ja 23 '53

Metal-clad laminates used in printed circuitry. N. A. Skow. Machine Design 25:284+ S '53

Transmission of electrons through thin metallic foils. C. H. Chang and others. bibliog Phys R 90:544-7 My 15 '53

Ultra-thin strip grows. Steel 132:98+ F 16 '53

See also

Aluminum foil
Lead foil

METAL furniture. See Furniture, Metal

METAL powder association

Annual meeting, 9th, Cleveland, April 21-22. Materials & Methods 37:8+ Je '53

Annual meeting, 9th, Cleveland, April 21-22; program, list of exhibitors. Materials & Methods 37:15+ Ap '53

METAL powders

Ancient Egypt's powdered metal is being used to-day on a rapidly expanding scale. il Dun's R 60:56+ O '52
Considering powder metallurgy. H. W. Greenwood. Engineer 195:269-70 F 20 '53
Copper, lead, zinc, iron powder prices and shipments; iron powder imports; number of U.S. stamping, metal powder part shops; tabulations. Iron Age 171:454 Ja 1 '53
Effect of cycle-sintering in the powder metallurgy process; abstract. H. H. Hausner. J Metals 4:1039-40 O '52
Exchange reaction between deuterium and ammonia on the surface of metal powders. J. R. Gutmann. bibliog diag J Phys Chem 57:309-12 Mr '53
Floating die table equalizes press action. G. Karian. il diags Iron Age 170:78-80 D 25 '52
Granular powders for powder-metallurgical applications; tabulations; engineering file facts. H. B. Michaelson, comp. Materials & Methods 38:127, 129, 131 Ag '53
How powder metal is being made. S. Bradbury. Product Eng 23:153 O '52
How powder metallurgy is progressing. H. W. Greenwood. bibliog(31 ref) il Metallurgia 46:289-92+ D '52
How to weld grounding cables; powdered metal, firing charge; illustrated instructions. il diag Power 97:123-5 Mr '53
Influence of fuel gas on the spraying of metal powders. W. McDermott and R. Dickinson. Engineer 196:6-9 Jl 3 '53
Machinability of metal powder parts. J. L. Everhart. il Materials & Methods 37:98-100 Ap '53
Metal powder filters. A. J. Langhammer and P. Glick. il diags Product Eng 24:179-82 Ap '53
Metal powder; industry using more; Iron Age survey. Iron Age 171:49 Ja 15 '53
Metal powder parts for production use, estimate of metalworking industry use in 1951; tabulation. Iron Age 171:465 Ja 1 '53
Metal-powder sintered bearings; tentative standard; reference book sheet. Am Mach 97:287 Ja 19 '53
Metal powders grow; can uses keep up? il Steel 132:49-50 Ap 27 '53
Moisture-aging of powder-core toroids. E. J. Oelbermann and others. il Electronics 26:236+ My '53
Pace quickens in powdered metals. il Bsns W p43-4+ Mr 28 '53
Powder-metal gears. D. W. Lynch and others. il Am Mach 95:104-10 Ag 20 '51; Same cond. Product Eng Hdbk p D2-6 '53
Powder metal; production costs cut in molding of generator brushes. Iron Age 170:192 D 11 '52
Powder metallurgy widely applied in Sweden. H. H. Hausner. Materials & Methods 36:186+ D '52
Preforming complex carbide shapes lowers costs. F. J. Lennon, jr. il Iron Age 171:153-5 F 5 '53
Re-set pawl tolerance held by powder metallurgy; National cash register co. il diag Am Mach 96:126-7 O 13 '52
Sorption of gases on metal powders and subsequent change in metal reactivity at room temperature. Hung Li Wang and N. Hackerman. bibliog J Phys Chem 56:771-4 Je '52
South Carolina gets region's first metal powder plant. Manuf Rec 122:42+ Ja '53
Special report; powder metallurgy in Sweden. il Product Eng 23:200 N '52
Texture of fine ferromagnetic powders. L. Weil. bibliog Rs Mod Phys 25:324-6 Ja '53
Trapping of gases in cold-compacted powders. J. Williams. diags Iron & Steel Inst J 172:19-24 S '52
What's ahead the next ten years in casting and molding; powder metallurgy. Am Mach 96:B6-7 Mid-N '52
Which metal form for jet engine blades? J. L. Everhart. il Materials & Methods 37:92-6 F '53
World congress on powder metallurgy. Reutte, Austria, June 22-26; with abstracts of papers. Metal Prog 62:79-83 N '52

See also

Aluminum, Powdered
Cermets
Copper, Powdered
Iron, Powdered
Steel, Powdered
Zinc, Powdered
Zirconium, Powdered

Fire hazards

Spontaneous combustion of metal powders. B. Kopelman and V. B. Compton. il Metal Prog 63:77-9 F '53

METAL protection

Adhesion of lacquers to nonferrous metals. L. R. Brantley, A. Woodward and G. Carpenter. bibliog il Ind & Eng Chem 44:2386-9 O '52
Attack of metals by free radicals and atoms. F. W. Thompson and A. R. Ubbelohde. bibliog J Ap Chem 3:27-36 Ja '53
Battle against decay. il diags Fortune 47:148-51+ F '53
Bearings; fingerprint contamination can be eliminated. J. H. Gustafson. Iron Age 171:203-4 Mr 5 '53
Coatings to protect metal ducts when subjected to corrosive fumes. J. W. McWilliams. Heat & Ven 50:111-12 O '53
Cold-dip plastic coating simplifies corrosion protection. Iron Age 171:117 Ja 29 '53
Corrosion control grows in importance. diag Steel 132:48-9 Mr 30 '53
15th biennial report on materials of construction; how protective coatings fight corrosion. K. Tator. il diags Chem Eng 59:143 D '52
GM's Electro-motive division uses VPI paper to halt rust in parts shipments. R. C. Lambrecht. il Factory Management 111:148-9 Mr '53
How the army coats 200 vehicles a day. D. Markstein. il Mill & Factory 51:106 D '52
How volatile corrosion inhibitors cut costs for G.M. Diesel by $100,000 a year. il Mod Packaging 26:114-17+ D '52
More about ceramic coatings. bibliog il Product Eng 23:134-41 O '52
Mothballing a gas plant at Naval petroleum reserve number one in California. R. Sneddon. il Pet Eng 25:C14-15+ Ja '53
Navy studies anti-corrosion gels. Aviation W 58:58 Mr 23 '53
New uses for VCI. il Mod Packaging 27:156-60 O '53
Phosphate coatings benefit metal finishing and working. A. G. Gray. il Metal Prog 63:106-9 Ap '53
Poof, there goes rust; VPI in combination with compressed air. il Comp Air Mag 58:20 Ja '53
Protection; resin-based coatings stand up to salt spray tests. il Iron Age 171:181-2 F 5 '53
Pyrophyllite in refractory enamels. G. J. Bishop, 3d. il Am Cer Soc Bul 31:493-6 D 15 '52
Recent developments in protective coatings. A. G. Gray. il Metal Prog 62:90-3 N '52
Removable rust preventives in metalworking; tabulation. Iron Age 171:466 Ja 1 '53
Selecting protective coatings for metals. J. B. Campbell. bibliog il Materials & Methods 38:109-24 Ag '53 (reprints 25¢)
Synthetic resin for surface protection of metals. Engineering 175:557 My 1 '53
Thermo-chemical process protects metals from corrosion; Permyron process. Materials & Methods 36:158+ N '52
Wear resistant coatings to protect ferrous metals. Product Eng 24:146-7 Mr '53
What's ahead the next ten years in finishing; chemical treatment. Am Mach 96:H7 Mid-N '52

See also

Alloys, Hard facing
Aluminum—Protection
Aluminum coating
Chromium plating
Chromizing
Corrosion and anticorrosives
Electroplating
Enamel and enameling
Galvanizing
Magnesium—Protection
Metal coating
Paint, Protective
Phosphate coating
Pipe coating
Pipe lines—Protection
Steel—Protection
Tungsten carbide coating
Zinc coating

Cathodic protection

Battle against corrosion; cathodic protection. R. H. Wilcox. il diag Mill & Factory 51:115-18 O '52

METAL protection—Cathodic protection—
Continued

Cathodic protection at compressor stations. J. C. Berringer. il Pet Eng 25:D99-100 My '53

Cathodic protection can save chemical process equipment. L. P. Sudrabin. il Chem Eng 60:196-200 My '53

Cathodic protection licks corrosion. L. C. Werkin. bibliog il Pet Refiner 31:122-4 O '52

Extending hot water tank life. R. L. Horst. Am Gas Assn Mo 35:10-11+ Je '53

How cathodic protection can slow down corrosion. A. W. Peabody. diags Factory Management 111:140-4 O '53

How to control marine corrosion with galvanic anodes. R. D. Taylor. il Marine Eng 58:69-73 Je '53

Magnesium anodes used to check hull corrosion. il Marine Eng 57:150+ D '52

Prevention of rust. H. H. Uhlig. il diags Tech R 55:251-4+ Mr '53

See also

Pipe lines—Cathodic protection

Steel—Cathodic protection

Water pipes—Cathodic protection

METAL spinning

Economics of spinning and drawing. J. W. Lengbridge. flow diag il diags Tool Eng 30:89-94 Ap '53; Excerpts. Machine Design 25:267+ Jl '53

Hot spinning improves workability of titanium. A. S. Rose. il diags Iron Age 171:119-21 F 19 '53

Large spun metal shapes. W. A. Wenman. il Materials & Methods 37:93-5 Ap '53

Spinning non-circular aircraft components; Boeing airplane co. J. S. Walker. il Mach 60:194-6 O '53

Spun and drawn zinc parts have many applications. E. V. Gent. il diags Materials & Methods 36:102-4 D '52

Spun metal shapes meet tough requirements. H. Edlund. il Materials & Methods 38:134-6 O '53

Which metal form, spun or drawn? J. W. Lengbridge. il diags Materials & Methods 38:87-91 Ag '53

METAL spraying. See Metal coating

METAL stitching. See Sheet metal work

METAL trade

End is in sight for squeeze on metals. Bsns W p30-1 N 22 '52

Free world's metal resources and expected demand. A. J. Murphy. il Metal Prog 63:68-73+ Ja '53

Glamorous rare minerals and new metals; with data on companies producing new metals. L. A. Lukens. Mag of Wall St 91:292-4+ D 13 '52

In sight; supply-demand balance for metals; quarterly survey. Steel 132:55-6 My 4 '53

International metal scene. A. Fletcher. Comm & Fin Chr 177:1436+ Ap 2 '53

Metal accords to stabilize world market. F. E. Wormser. Oil Paint & Drug Rep 164:3 S 28 '53

Metal industries; C&EN annual review. I. E. Campbell. il Chem & Eng N 31:49-51 Ja 5 '53

Metals in review. il Eng & Min J 154:72-99+ F '53

Metals market; supply catches up! Materials & Methods 38:6+ O '53

Metals; monthly analysis of the metals market. W. F. Boericke. Automotive Ind 108:86+ Ja 1 '53 [cont monthly]

Recent trends in metal controls. F. E. Wormser. Comm & Fin Chr 176:2497+ D 25 '52

Why the upsurge in metals? il Chem Eng 60:211-13 Mr '53

See also

Aluminum industry and trade

Copper industry and trade

Iron industry and trade

Lead industry and trade

Metal workers

Metals, Non-ferrous

Mineral industries

Scrap metal industry

Sheet metal trade

Steel industry and trade

Tin industry and trade

Tin plate

Zinc industry and trade

Advertising

Vanadium sales message attracts unusual readership. il Ind Marketing 37:152 N '52

Statistics

Metal industry facts. Iron Age 171:399-488 Ja 1 '53

Metals and manufactures, Nov.-Dec. 1951-Jan.-Nov. 1952. Survey of Cur Bsns 33:S32-4 Ja '53 [cont monthly]

Great Britain

Advances in nonferrous metals in Great Britain since 1945. L. G. Beresford. il diag Metal Prog 63:103-8 Ja '53

Metal conservation in Britain; report of the metals economy advisory committee to the British Ministry of supply; abstract. Metal Prog 63:226+ Ja '53

U.K. frees copper, zinc end-use; copper purchase still controlled. For Comm W 49:6 Ja 26 '53

Italy

Resurrection of metallurgy in Italy. A. Scortecci. il map Metal Prog 63:89-93+ Ja '53

Japan

Metal industry in Japan. Metal Prog 63:112-14+ Ja '53

Netherlands

Metallurgical research in the Netherlands. J. D. Fast and E. M. H. Lips. il Metal Prog 63:109-11 Ja '53

United States

New metals revolutionizing industry. B. W. Corrado. il Mag of Wall St 92:379-81+ Je 27 '53

Nonferrous metals; grabbing bigger share of the market. J. V. Sherman. Barron's 33:9+ Ja 12 '53

Road ahead. Iron Age 170:292-4+ O 9 '52

METAL waste

Better chip handling in and out of the plant; Buick V-8 engine plant. H. Chase. il diag Iron Age 171:157-9 Ap 2 '53

Chip engineering vital counterpart to automated machining lines; Ford-Cleveland engine plant. il Iron Age 170:142-4 D 18 '52

Chip handling; automatic scrap removal helps raise lathe output. il Iron Age 171:139-40 F 19 '53

Chip handling is big business at DeSoto. B. C. Brosheer. il diags Am Mach 97:140-3 Mr 16 '53

Full conveyorization eliminates manual chip handling; Stewart-Warner corp. D. C. Peterson. il diags Am Mach 96:162-5 O 13 '52

How to handle chips and trimmings. il diags Am Mach 97:149-72 My 11 '53

Oils decide which chip system to use. J. D. Romer. il diags Am Mach 97:102-3 Ag 17 '53

Pneumatic conveyors simplify Studebaker's chip handling. O. H. Klausmeyer and W. C. Tiedge. il diags Am Mach 97:117-21 S 28 '53

Practical approach to optimum machining; chip studies reveal what happens during turning. A. B. Albrecht. il diag Am Mach 97:121-5 My 25 '53

Removal of toxic materials by sewage sludges. W. Rudolfs and A. L. Zuber. bibliog Sewage & Ind Wastes 25:142-54 F '53

Standard pressed steel co. moves chips for profits. B. W. Van Dyke. il diag Am Mach 97:200-1 My 11 '53

See also

Metal working plants—Waste

Scrap metal

Slag

Tailings

METAL work

Fabrication of beryllium metal. E. Creutz and D. Gurinsky. il Metal Prog 62:82-4 D '52

How crystal structure affects metal forming. S. Storchheim. diags Am Mach 97:139-47 S 28 '53

Manufacturing tolerances; the Pilot + 2 limit system. F. W. M. Lee. Automobile Eng 43:263-6 Je '53; Same abr. Am Mach 97:137-41 Je 8 '53; Same cond. Machine Design 25:116-22 Ag '53; Same cond. Tool Eng 31:54-8 Ag '53

METAL work—*Continued*
1953 forum on technical progress. Steel 132:205-460 Ja 5 '53
On the foot-hills of the plastic range. H. W. Swift. Engineering 174:383-4, 420-1, 450 S 19-O 3 '52
Stamping and forming review and forecast. diags Iron Age 171:300 Ja 1 '53
Unitized designs are replacing built-up assemblies. C. F. Marschner. il diags Product Eng 24:199-201 My '53
See also
Aluminum work
Brass founding
Copperwork
Dies
Electroplating
Extrusion process
Forging
Foundry practice
Heat treatment
Machine shop practice
Machine tools
Metal cutting
Metal drawing
Metal spinning
Pickling (metals)
Plating
Polishing
Punching
Rolling (metal work)
Sheet metal work
Shells (metal work)
Shot peening
Solder and soldering
Stamping
Steel work
Tin plate
Turning
Welding

Bibliography

Six-year bibliography of press-working articles in American machinist. Am Mach 96:D50+ Mid-N '52

METAL work, Architectural
See also
Sheet metal work, Architectural

METAL workers
Don't chop up your trainees. H. D. Rhodenbaugh. Am Mach 97:111 Ag 17 '53
Earnings in selected industries, late 1951 and early 1952; cutlery, hand tools, and general hardware. L. E. Lewis. Mo Labor R 75:416-17 O '52
Earnings in selected industries, late 1951 and early 1952; electroplating, plating and polishing industry. A. N. Jarrell. Mo Labor R 75:414-15 O '52
Employment and earnings, metalworking plant data; tabulations. Iron Age 171:479-88 Ja 1 '53
Employment, hours, earnings, nonferrous metal manufacturing and finishing, 1948-1952; tabulation. Iron Age 171:424 Ja 1 '53
Employment outlook in metalworking occupations. il map U S Bur Labor Statistics Bul 1130:186-224; pa 30c Supt. of doc. '53
Metalworking wages and hours; production workers; employment tabulations. Steel 132:194 Ja 5 '53
Profit-sharing doubles production; Commercial steel treating corp. D. G. Baird. il Mill & Factory 52:133-6 My '53
Shift operations in the metalworking industries, 1951. R. H. Lewis and E. P. Spector. Mo Labor R 75:615-19 D '52
See also
Foundries—Employees
Steel workers

METAL working industries
Business roundup. Iron Age 171:274-7 Ja 1 '53
Gas; boon to metalworking. il Steel 131:74-5 N 3 '52
Metalworking industry defies pessimists; prosperity holds. I. H. Such and others. Ind Marketing 38:20-9 Jl '53
Metalworking meetings scheduled for 1953. Iron Age 171:477-8 Ja 1 '53
Metalworking to spearhead major industrial expansion the next decade. Am Mach 96:20-31 Mid-N '52
Midyear supply-demand balance? quarterly survey. Steel 132:59-60 F 9 '53
1953; back to normal. Steel 132:37-8 Ja 12 '53
1953 forum on technical progress. Steel 132:205-460 Ja 5 '53
1953 selling prices; check of 1152 businessmen reveals that they're giving increased attention to prices. il Steel 132:37-8 Ja 26 '53
1952, what happened in metalworking; chronology of important events. Steel 132:463-6+ Ja 5 '53
Pressure on profits mounts as metalworking sales soar. Steel 131:119 O 13 '52
Securing a competitive position by sound engineering and modern equipment. W. W. Sieg. il Metal Prog 63:80-2 F '53
Seventy-five years of metalworking production; chart. Am Mach 96:33-40 Mid-N '52
Three factors affect metalworking growth, three affect national economy. Am Mach 96:31-2 Mid-N '52
Too little post-defense planning. Steel 132:57-8 Mr 2 '53
Trade associations and technical societies in the metalworking industry. Iron Age 171:470-6 Ja 1 '53
Will the upward trend continue? Steel 131:75 D 8 '52
See also
Sheet metal trade

History

1877 to 1952; highlight survey of development. il Am Mach 96:3-19 Mid-N '52

Regulation

Freer market for metals. il Steel 132:67-8 Mr 16 '53

Statistics

American Machinist index of metalworking production. Published in American machinist
Metal industry facts. Iron Age 171:399-488 Ja 1 '53
Metals and manufactures, Nov.-Dec. 1951-Jan.-Nov. 1952. Survey of Cur Bsns 33:S32-4 Ja '53 [cont monthly]
Metalworking's muscles get stronger. Iron Age 171:226-7 Ja 1 '53
1953 metalworking facts and figures. Steel 132:155-202 Ja 5 '53
1953, metalworking to stay near peak; metalworking facts for 1953. Am Mach 97:129-44 Ja 19 '53
What metalworking management expects in 1953. Steel 132:115-22 Ja 5 '53

Belgium

Western Europe seeks answer to falling exports problem. il Steel 131:86-7 D 15 '52

Canada

Canada goes full blast on defense, lets civilian metalworking slide. Am Mach 96:188-9 N 10 '52

Europe

Western Europe seeks new markets for its growing metalworking production. il Steel 131:54-5 D 29 '52

France

Western Europe seeks answer to falling exports problem. il Steel 131:86-7 D 15 '52

Germany

East German build-up. Iron Age 170:105 D 4 '52

Great Britain

Europe's metalworking exports face cost test in 1953. il Steel 131:46-7 D 22 '52
US pressed steel productivity team looks at British metalworking. il Am Mach 97:168 Je 22 '53

Portland, Oregon

Portland metalworking tops lumber as the city's largest industry. T. M. Rohan. il Iron Age 171:92-3 Je 4 '53

Russia

Robot plants; reds try our way. il Iron Age 171:82 F 12 '53

Scandinavia

Scandinavian metalworking plants. F. J. Robbins. Metal Prog 63:138+ Ja '53

Sweden

European competition strengthens as Korean boom fades. il Steel 131:76-7 D 8 '52
Powder metallurgy widely applied in Sweden. H. H. Hausner. Materials & Methods 36:186 D '52

Texas

Houston Chamber reports cities need for metals production. Manuf Rec 122:37 F '53
Texas invites industry. Steel 132:65 F 9 '53

METAL working machinery

Combination forming and welding machine. il Mach 59:221 Ja '53

Combined welding and forming lower appliance costs. J. Maloney. il Steel 131:104+ N 24 '52

Cyril bath co. universal contour forming machine. il Engineer 195:475 Mr 27 '53

Machine bonds lead-steel. Steel 132:78-9 Ja 12 '53

New draw capacity fills western need; Sierra Drawn Steel's 100,000-pound capacity machine. il Steel 131:91 O 6 '52; Iron Age 170:204-5 N 6 '52

Plastic forming of metals. il diags Fortune 46:138-41+ N '52

Pullomax universal machine for cutting and forming sheet and plate. il diags Engineering 175:236-7 F 20 '53

Quick-change machine does almost any job. il Factory Management 111:166-7 S '53

Snyder special machine for processing aircraft parts. il Mach 59:214-15 Ag '53

Tube flaring at high-production rate on Parker machine. il Am Mach 97:201 S 14 '53

What's ahead the next ten years in metalworking production. Am Mach 96:secA-J Mid-N '52

See also

Electric welding machines
Filing machines
Forging machinery
Foundry machinery
Lathes
Machine tools
Molding machines
Presses
Punching machinery
Saws, Metal working
Sheet metal working machinery
Stretching machines
Wire forming machines

METAL working plants

New A.P.V. factory and foundries. il Metallurgia 47:295-9 Je '53

Warehouse; precision piles up profits; Eastern brass & copper co. R. L. Hatschek. il Iron Age 171:57 Ap 16 '53

See also

Aluminum works
Brass works
Foundries
Machine works
Rolling mills
Sheet metal shops
Steel works

Electric equipment

Jet part plant expanded; Bingham-Herbrand corp. Steel 132:174+ Je 1 '53

Steel drum manufacture; St Vincent works of Rheem-Lysaght, ltd. il Elec R (Lond) 152:451-5 F 27 '53

What's ahead the next ten years in materials and components; electrical equipment. Am Mach 96:A 12-16 Mid-N '52

Employees

See Metal workers

Equipment

Air keeps small plant in the running; Aero fastener corp. il Steel 132:68-9 Ja 26 '53

Close control of all variables in heat treating landing gear struts; Landing gear division, Willys-Overland motors, inc. M. W. McLaughlin. il Automotive Ind 108:53+ My 15 '53

Conveyor network moves press scrap. H. C. Tuttle. il Steel 131:100-1 D 8 '52

Galvanizing can be automatic; Hotpoint co. L. Baker. flow diag il Steel 132:170-1 My 25 '53

Good handling topped the must list when this new plant was built; Randolph Metal Products' plant; illustrations with text. Factory Management 111:102-3 F '53

High output of quality gears requires tailor-made shop; Fairfield mfg. co. H. J. Bates. il plans Iron Age 171:141-5 Je 4 '53

High-speed gaging clears bottleneck; Couch-Uthe co. il diags Steel 132:112 My 4 '53

How to revamp a modern plant; Metalab equipment corp. E. J. James. il diags Am Mach 97:121-31 Ag 3 '53

Hydraulic press and drawbench installation in America; Barberton works of the Babcock and Wilcox co. il diags Engineer 195:147-9 Ja 23 '53; Same cond. Mech Eng 74:818-20 O '52

Manufacture and manipulation of seamless tubes; Messrs. Accles and Pollock, limited. il Engineering 176:161-5, 176, 193-5, 208, 225-7, 240 Ag 7-21 '53

Mass-producing 105-millimeter cartridge cases. C. H. Wuerz. il Mach 59:168-72 Ag '53

Mechanization cuts costs and improves products; Geo. D. Roper corp. G. Rigeman. il diags Tool Eng 31:61-3 S '53

1953 American Machinist production preview. il Am Mach 97:145-280 Ja 19 '53

Overhead conveyors boost production 400 per cent, cut handling 50 per cent; Landers, Frary & Clark. L. F. Spencer. il diags Iron Age 171:212-16 My 7 '53

Painting on the run; R. C. Mahon co. il Mill & Factory 52:126 Je '53

Palletized materials handling speeds truck loading; Columbia metal stamping co. il Iron Age 170:208-9 D 4 '52; Steel 131:110+ D 1 '52

Pipe-fabrication works of Stewarts and Lloyds of India, ltd. il plan Engineering 174:267-9, 272 Ag 29 '52

Plant frills proved practical; Duncan electric mfg. co.; illustrations with text. E. J. Tangerman. Am Mach 97:119-24 Jl 20 '53

Preparation of structural steel sections; Norwich works of Boulton and Paul, ltd. il Engineer 195:872-4 Je 19 '53

Production flow gets green light; Atwood vacuum machine co. il Steel 132:120-1 My 11 '53

Quantity up, quality too; Carrier corp. il diag Steel 132:90-1 Je 15 '53

Room for work and safety; Link-Belt co. il Nat Safety N 68:38-9 S '53

Shearing and slitting; cut it yourself. il Steel 132:49 Je 8 '53

Versatile tooling for making torsion bars; Maremont automotive products, inc. il Automotive Ind 108:56-8 My 15 '53

What's ahead the next ten years in metalworking production. Am Mach 96:secA-J Mid-N '52

What's ahead the next ten years in plant services. Am Mach 96:J-J 17 Mid-N '52

Work saving ideas at B&W. W. Rudolph. il Mill & Factory 53:100-1 Ag '53

See also

Machine tools
Metal working machinery

Heating and ventilation

13 is a lucky number for this industrial plant; unit heaters installed in Vahl engineering co. il plan diag Dom Eng 181:100-1+ Ja '53

Insurance requirements

Fire and failure. B. McCall. Am Mach 97:136 My 25 '53

Management

Costs cut $2 million in five years; Thompson products, inc. R. M. Lorz. Iron Age 171:69 Je 25 '53

Management clinic; problems confronting metalworking executives. Steel 131:73 O 20 '52 [cont weekly]

Safety measures

Anybody seen my hat? safety hat program at American smelting and refining co. R. C. Beckstead. il Safety Maint & Prod 104:13+ D '52; Same abr. Eng & Min J 154:98-9 Ja '53

Use of respirators assures workers' safety; Richmond radiator co. il Cer Ind 60:128 Je '53

Waste

Critical review of the literature of 1952 on sewage, waste treatment, and water pollution; pickling. bibliog Sewage & Ind Wastes 25:644-6 Je '53

How to fight pollution; Timken roller bearing co. R. A. Dilley. il Factory Management 110:121-5 N '52

Ion exchange; new hope for waste recovery. A. G. Gray. flow sheet il plan Steel 131:96-100 O 20 '52

Metal-finishing wastes treatment at the Meadville, Pa., plant of Talon, inc. H. W. McElhaney. flow diag il Sewage & Ind Wastes 25:475-82; Discussion. A. K. Graham. 482-3 Ap '53

METAL working plants—Waste—*Continued*

Practical methods for in-plant reduction of metal finishing wastes. W. L. Pinner. Sewage & Ind Wastes 24:1432-5 N '52

Treatment of finishing process wastes at the Ternstedt instrument plant. A. W. Sundwick and J. S. Delos. flow diag plan Sewage & Ind Wastes 25:44-7 Ja '53

Treatment of metal finishing wastes. A. G. Gray. flow diags il diag Metal Prog 62:77-81 D '52

See also

Metal waste

METAL working saws. See Saws, Metal working

METALATION

Metalation of indole, N-methylindole and N-phenylindole with *n*-butyllithium. D. A. Shirley and P. A. Roussel. bibliog Am Chem Soc J 75:375-8 Ja 20 '53

METALLIC films. See Films, Metallic

METALLIC soap. See Soap, Metallic

METALLIZING. See Metal coating

METALLO organic compounds. See Organometallic compounds

METALLOGRAPHIC specimens

Measurement of internal boundaries in three-dimensional structures by random sectioning. C. S. Smith and L. Guttman. bibliog diags J Metals 5:Trans 81-7 Ja '53

Metallographic examination of ceramic-metal seals. A. G. Pincus. bibliog il diags Am Cer Soc J 36:152-8 My 1 '53

Recommended techniques for polishing titanium for metallographic examination. R. Osadchuk and others. Metal Prog 64:129-31+ O '53

METALLOGRAPHY

Advances in metallurgy revealed in ASM sessions. il diag Steel 131:78+ O 27 '52

Application of fluorescence X-rays to metallurgical microradiography. H. R. Splettstosser and H. E. Seemann. bibliog il diag J Ap Phys 23:1217-22 N '52

Camera for texture mapping by X-ray diffraction. C. J. Milner and J. A. James. bibliog il diags J Sci Instr 30:77-83 Mr '53

Constitution of titanium-rich Ti-Cr-Al alloys at 1800° and 1400°F. J. L. Taylor and P. Duwez. bibliog J Metals 5:Trans 253-6 sec 2 F '53

Copper-zinc constitution diagram, redetermined in the vicinity of the beta phase by means of quantitative metallography. L. H. Beck and C. S. Smith. bibliog il J Metals 4:Trans 1079-83 O '52

Correlations between the creep behavior and the resulting structures in alpha solid solutions. O. D. Sherby and J. E. Dorn. bibliog il J Metals 5:Trans 324-30 sec 2 F '53

Deformation by transformation makes alloys tougher. E. S. Machlin. il diags Iron Age 171:106-9 Ja 22 '53

Densification and kinetics of grain growth during the sintering of chromium carbide. H. J. Hamjian and W. G. Lidman. il J Metals 5:Trans 696-9 sec 2 My '53

Effects of macrostructure on the performance of Alnico permanent magnets. D. G. Ebeling and A. A. Burr. bibliog il diags J Metals 5:Trans 537-44 Ap '53

Fractographic patterns of segregation. C. A. Zapffe. bibliog il Metallurgia 48:130-2 S '53

Grain boundary barriers in germanium. W. E. Taylor and others. bibliog diags Phys R 88:867-75 N 15 '52

Grain size, key to mechanical properties. H. A. Unckel. bibliog il Iron Age 170:148-52 D 18 '52

Henry Clifton Sorby; pioneer in metallurgical microscopy. E. N. Simons. Metallurgia 46:199-200 O '52

How crystal structure affects metal forming. S. Storchheim. diags Am Mach 97:139-47 S 28 '53

Incident-light phase-contrast microscope and its use in metallography. F. Gabler and R. Mitsche. Metal Prog 64:134+ Ag '53

Intermediate phases in the Mo-Fe-Co, Mo-Fe-Ni, and Mo-Ni-Co ternary systems. D. K. Das and others. bibliog il diags J Metals 4:Trans 1071-5 O '52

Kinetics of ordering in Ni_3Mn. L. R. Aronin. J Ap Phys 23:642-3 Ja '52

Measurement of particle sizes in opaque bodies. R. L. Fullman. bibliog diags J Metals 5:447-52 Mr '53

Mechanism of work hardening of metals. N. F. Mott. bibliog diags Inst Mech Eng Proc (A) 166 no 4:413-18 '52; Same abr. Engineer 194:694-7 N 21 '52; Abstract. Metal Prog 63:166+ F '53

Metallography; new instrumentation and techniques. A. B. Kinzel. il diags Metal Prog 63:78-83 Ja '53

Metallography of hafnium. H. P. Roth. bibliog il Metal Prog 63:84-9 Je '53

Methods in electron microscopy of solids. R. D. Heidenreich. il R Sci Instr 23:583-94 N '52

Microconstituents in chromium-base chromium-iron-molybdenum alloys and their behavior with heat treatment. J. P. Hammond and others. bibliog il J Metals 4:Trans 1329-42 D '52

Microconstituents in high-temperature alloys; abstract. H. J. Beattie and F. L. VerSnyder. Metal Prog 62:132-3 N '52

Microsegregation in the lead-antimony alloys. A. C. Simon and E. L. Jones. bibliog il diags Electrochem Soc J 100:1-10 Ja '53

Order-disorder transformation viewed as a classical phase change; abstract. F. N. Rhines and J. B. Newkirk. Metal Prog 62:139-40+ N '52

Polygonization during diffusion; copper-nickel couples. R. W. Balluffi. il J Ap Phys 23:1407-8 D '52

Regarding sigma phase formation. D. S. Bloom and N. J. Grant. J Metals 5:Trans 88 Ja '53

Relation of the anodic corrosion of lead and lead-antimony alloys to microstructure. J. B. Burbank and A. C. Simon. bibliog il diag Electrochem Soc J 100:11-14 Ja '53

Replica method for study of the structure of lead-antimony alloys. J. Burbank. il J Metals 5:Trans 55-6 Ja '53

Reversal of the strain-induced martensitic transformation in the copper-zinc system. J. E. Reynolds, jr. and M. B. Bever. il J Metals 4:Trans 1065-6 O '52

Silver-cadmium eutectoid. G. R. Speich and D. J. Mack. bibliog il J Metals 5:Trans 549-53 Ap '53

Solid solutions of metallic compounds; abstract. I. I. Kornilov. Metal Prog 63:190+ Ja '53

Some applications of the thermodynamic theory of irreversible processes to physical metallurgy. E. S. Machlin. bibliog J Metals 5:Trans 437-45 Mr '53

Some metallographic observations on the fatigue of metals. P. J. E. Forsyth. Metal Prog 63:214+ Ja '53

Specialized microscopical techniques in metallurgy. S. Tolansky. Metal Prog 63:182+ My '53

Statistical grain structure studies; plane distribution curves of regular polyhedrons. F. C. Hull and W. J. Houk. bibliog il diags J Metals 5:Trans 565-72 Ap '53

Study metal behaviour with large metal crystals. R. Maddin and N. K. Chen. il Iron Age 170:108-11 O 23 '52

Surface effects in the slip and twinning of metal monocrystals. J. J. Gilman and T. A. Read. bibliog il diags J Metals 4:Trans 875-83 Ag '52; Discussion. 5:Trans 735-6 sec 2 My '53

System zirconium-chromium. R. F. Domagala and others. bibliog il J Metals 5:Trans 279-83 sec 2 F '53

System zirconium-copper. C. E. Lundin and others. bibliog il diags J Metals 5:Trans 273-8 sec 2 F '53

Systems zirconium-molybdenum and zirconium-wolfram. R. F. Domagala and others. bibliog il J Metals 5:Trans 73-9 Ja '53

Theory of the deviation from close packing in hexagonal metal crystals. J. B. Goodenough. bibliog diags Phys R 89:282-94 Ja 1 '53

Thermal and dilatometric investigation of the alloys of cobalt with chromium and molybdenum. A. G. Metcalfe. bibliog il diags J Metals 5:Trans 357-64 sec 2 F '53

METALLOGRAPHY—*Continued*

Time-temperature relationship for recrystallization and grain growth; abstract. F. R. Larson and J. Salmas. Metal Prog 64:167-8 O '53

Titanium-chromium phase diagram. F. B. Cuff and others. il J Metals 4:Trans 848-53 Ag '52; Discussion. 5:Trans 743-4 sec 2 My '53

Titanium-manganese system. D. J. Maykuth and others. bibliog il J Metals 5:Trans 225-30 sec 2 F '53; Discussion. 5:Trans 1566-8 sec 2 N '53

Titanium-nickel phase diagram. H. Margolin and others. bibliog il J Metals 5:Trans 243-7 sec 2 F '53

Titanium-tungsten and titanium-tantalum systems. D. J. Maykuth and others. bibliog il diag J Metals 5:Trans 231-7 sec 2 F '53

Torsion texture of 70-30 brass and Armco iron. W. A. Backofen and B. B. Hundy. J Metals 5:Trans 61-2 Ja '53

Transformation in cobalt-nickel alloys. J. B. Hess and C. S. Barrett. bibliog J Metals 4:Trans 645-7 Je '52; Discussion. il 5: Trans 729-30 sec 2 My '53

Transformation kinetics and mechanical properties of titanium-aluminum-chromium alloys; abstract. H. D. Kessler and M. Hansen. Metal Prog 64:174+ O '53

Transformation kinetics and mechanical properties of titanium-aluminum-molybdenum alloys; abstract. H. D. Kessler and M. Hansen. Metal Prog 64:168+ O '53

Vanadium-uranium constitutional diagram. H. A. Saller and F. A. Rough. il J Metals 5:Trans 545-8 Ap '53

Why metals are weak. J. C. Fisher. il diags Gen Elec R 56:15-17 Jl '53

See also

Aluminum—Metallography
Copper—Metallography
Etching (metals)
Iron—Metallography
Metallographic specimens
Steel—Metallography
Titanium—Metallography

History

Foundations of metallography. F. C. Thompson. Metallurgia 47:175-8 Ap '53

Nomenclature

Rational phase nomenclature. E. E. Thum. Metal Prog 63:136+ Je '53

METALLURGICAL analysis

Analysis of metals; use of spectroscopy demonstrated. A. C. Menzies. Chem Age (Lond) 68:393-4 Mr 7 '53

Determination of nonmetallic compounds in metals. H. F. Beeghly. Anal Chem 24:1713-21 bibliog(113 ref, p 1720-1) N '52

Industrial chrome ore analysis; an industry standard sample of metallurgical chrome ore. W. H. Hartford. bibliog Anal Chem 25:290-6 F '53

Metallurgical applications of X-ray fluorescent analysis. P. K. Koh and B. Caugherty. bibliog J Ap Phys 23:427-33 Ap '52

Recent developments in metallurgical analysis. T. S. West. bibliog(135 ref) Metallurgia 46:313-16; 47:45-51, 97-103+ D '52-F '53

Review of analytical chemistry; ferrous metallurgy. H. F. Beeghly. Anal Chem 25: 30-6 bibliog(161 ref, p35-6) Ja '53

Review of analytical chemistry; nonferrous metallurgy. M. L. Moss. bibliog(118 ref) Anal Chem 25:37-41 Ja '53

Simplify analytic procedure. Min Cong J 39: 61 Mr '53

What's ahead the next ten years in inspection and testing; metallurgical control. Am Mach 96:I 7-8 Mid-N '52

See also

Assaying

also subdivision Analysis under names of metals, e.g.

Aluminum
Aluminum alloys
Boron
Copper
Gold
Iron
Lead
Magnesium
Metals
Steel
Zinc

METALLURGICAL apparatus

See also

Classifiers
Furnaces, Metallurgical
Magnetic separators
Metallurgical plants—Equipment

METALLURGICAL laboratories

British iron and steel research association North-east coast laboratories. Metallurgia 48:67-9 Ag '53; Excerpts. Engineering 176: 116-17 Jl 24 '53

French metallurgical research. Chem Age (Lond) 68:26 Ja 3 '53

G.E. adding metallurgical developments laboratory. Blast F & Steel Pl 41:1196 O '53

G.K.N. group research laboratory. il Metallurgia 47:283-6 Je '53

New metallurgical research center in France. plan Metal Prog 63:83-6 Mr '53

Swinden laboratories, Rotherham. il Engineer 194:166-8 Ag 1 '52; Engineering 174:150-1 Ag 1 '52

See also

Foundry laboratories
Massachusetts institute of technology—Metals processing laboratory

METALLURGICAL literature

SLA Science-technology. Metals section regional meeting, Philadelphia, Oct. 20. Special Lib 44:30-1 Ja '53

METALLURGICAL plants

Australian newsletter. Chem Age (Lond) 67: 493-4 O 11 '52

Cheaper, better stainless; Simplex ferrochromium; Electro metallurgical co.'s ferroalloy plant. il Steel 132:70 My 25 '53

Chuqui inaugurates new plant. il Eng & Min J 154:126-7 Je '53

Chuquicamata, story of Chilean copper. flow sheets il plans diags J Metals 5:19-33 Ja '53

Climax by-product plant operating at full capacity. flow sheet Min Eng 5:41 Ja '53

Ferroalloys; world's largest plant; Electro metallurgical co. W. V. Packard. il Iron Age 171:70-1 My 28 '53

From ore testing to cost estimation; mill design symposium. S. D. Michaelson and others. Min Eng 5:868-75 S '53

How Northern Rhodesia meets rising base metal demands. H. L. Talbot and F. H. Chapman. flow sheets il map Eng & Min J 154:82-7 Ag '53

Improved flowsheet increases recovery and mill capacity; Nevada-Massachusetts co. flow sheet il Eng & Min J 154:96-7 Ja '53

New ferro-alloys and alloying metals; Electro metallurgical co.'s new plant at Marietta, Ohio. il Metal Prog 64:87-8 Jl '53

Oliver's new taconite plant tuning up. il Eng & Min J 154:100-2+ Ag '53

Reserve mining company building large plant to process taconite. C. Longenecker. il Blast F & Steel Pl 41:189-91 F '53

Sherrit Gordon uses ammonia leach for Lynn Lake Ni-Cu-Co sulphides. flow sheet il Min Eng 5:57-81 Je '53

Weedon Pyrite plant mills 220 tons per day. flow sheet il Eng & Min J 154:133-4 My '53

See also

Aluminum works
Blast furnaces
Brass works
Iron works
Smelting works
Steel works

Costs

Methods of estimating plant construction cost. H. V. Hughes. Min Eng 5:874-5; Discussion. 875 S '53

Electric equipment

Electrical and metallurgical improvements at Kennecott's Utah copper division mills. R. J. Corfield and A. G. Johnson. il diag Min Eng 5:274-6 Mr '53

Equipment

ASARCO rehabilitates copper refinery. G. H. Weis and others. il plans diags J Metals 5: 616-23 My '53

Approach to melting reactive metals eliminates use of refractory containers. T. T. Magel and others. il diags J Metals 4: 1286-8 D '52

Automatic zinc sampler saves handling time. F. J. Meek. il diag J Metals 5:404 Mr '53

METALLURGICAL plants—Equipment—*Cont.*

Big new plants highlight beneficiation development; annual review, 1952. E. H. Crabtree. il Min Eng 5:156-61 F '53

Crushing plant dust control at the Ray mines division, Kennecott copper corp. J. F. Knudsen. bibliog flow sheet il Min Eng 5: Trans 689-95 Jl '53

De-sliming tailings for backfilling at Kerr-Addison. H. R. Rice. il diag Can Min J 74: 53-7 Ag '53

Developments in milling practice in southeast Missouri; St Joseph lead co. N. A. Stockett. il Min Cong J 39:84-8 Ap '53

Electrical and metallurgical improvements at Kennecott's Utah copper division mills. R. J. Corfield and A. G. Johnson. il diag Min Eng 5:274-6 Mr '53

Electrolytic zinc plant at Monsanto, Illinois. T. I. Moore and L. A. Painter. flow diag il plans diags J Metals 4:Trans 1149-59 N '52

Factors affecting ore separations in a four-inch DSM cyclone separator. E. C. Herkenhoff. diags Eng & Min J 154:88-91 Ag; 95-9+ S '53

Fundamentals of mill design. H. L. McNeill. Min Eng 5:870-1 S '53

General design sulphide ore plant; Chuquicamata. W. Jurden and others. flow sheets il plans diags Min Eng 4:1174-212 D '52

How new leach-float plant handles Greater Butte's ore. J. B. Huttl. flow sheets il Eng & Min J 154:90-3 Je '53

Milling in review. Eng & Min J 154:121-7 F '53

Milling methods at Hayden. J. L. Stevens. il Min Cong J 38:46-8 O '52

Mineral dressing, 1952. N. Arbiter. il Min Cong J 39:69-71 F '53

New acid-leaching section raises Cyprus copper recovery by ten per cent. A. W. Schlechten and J. L. Bruce. il maps Eng & Min J 153:88-91 D '52

New oxide lead unit for Darwin. J. B. Huttl. flow sheet il Eng & Min J 154:81-3 Mr '53

New plant makes available increased supply of alloys; Electro metallurgical co. C. Longenecker. il Blast F & Steel Pl 41:1171-5 O '53

Oxide plant; Chuquicamata. E. V. Herring and J. C. Allen. Min Eng 4:1212-14 D '52

Pilot cyclone plane paves way for two full-scale operations; Cleveland-Cliffs iron co. W. R. Van Slyke and R. A. Derby. flow sheet il Eng & Min J 154:88-94 Ap '53

Principles of present-day dust collectors and their application to mining and metallurgical industries. J. M. Kane and R. H. Walpole. diags Min Eng 5:Trans 85-8 Ja '53

Product and process developments mark new alloys plant; Electro metallurgical co. il Foundry 81:172+ Jl '53

Selection of conveyors for handling hot bulk materials. J. W. Snavely. flow diag il diags Min Eng 5:Trans 512-17 My '53

What automatic controls can the mill operator use? J. E. Lawver. bibliog il diags Min Eng 5:982-4 O '53

White Pine copper. R. H. Ramsey. flow sheets il map plans diags Eng & Min J 154:80-6 Ja '53

See also
Concentrators

Power

Chuquicamata, story of Chilean copper; waste heat power plant. il diag J Metals 5:31-2 Ja '53

Chuquicamata sulphide plant; electrical distribution. S. F. French. il diag Min Eng 4:1203-7 D '52

Chuquicamata sulphide plant; waste heat power plant. B. F. Koch. flow sheet il diag Min Eng 4:1207-9 D '52

Electromet's 200,000-kw industrial power plant. il Power Eng 57:82-3+ Jl '53

Four million units per day is consumption of Canadian smelting concern. il Elec J 150: 1727-8 My 15 '53

Quality control

Control of quality in the production of wrought non-ferrous metals and alloys; symposium. Engineering 175:438, 471 Ap 3-10 '53; Discussion. 175:471-2, 501-3 Ap 10-17 '53; Engineer 195:502-3, 522-4, 553 Ap 3-17 '53

Safety measures

Anybody seen my hat? safety hat program at American smelting and refining co. R. C. Beckstead. il Safety Maint & Prod 104:13+ D '52; Same abr. Eng & Min J 104:98-9 Ja '53

Safety at Dominion Magnesium with particular reference to the handling of molten metal. D. J. McPhail. flow sheet il Can Min J 74:87-9 S '53

United States Vanadium's all-out safety drive pays off at uranium mills. T. R. Van Fleet and A. M. Simpson. il Eng & Min J 154:98-9 Ap '53

Waste

Electrolytic refining of magnesium may discharge chlorine, hydrochloric acid, and sulfur dioxide to the atmosphere. L. C. McCabe. Ind & Eng Chem 44:sup 123A-4A+ O '52

METALLURGICAL research

Aspects of nuclear fission of interest to foundrymen and metallurgists. E. W. Colbeck. bibliog(25 titles) il diags Metallurgia 48:33-40 Jl '53; Same cond. Engineering 175:797-9 Je 19 '53

Automotive research; trailblazer for metalworking. il Steel 131:166-8+ O 13 '52

British guides to metallurgical literature and information. B. Fullman. Special Lib 43: 348-51 N '52

Clues to stronger metals; work with laboratory-grown perfect crystals at GE. J. H. Hollomon. Steel 132:104+ My 18 '53

Electric smelting at Bureau of mines seeks utilization of Northwest ores. R. T. C. Rasmussen. bibliog il J Metals 4:1273-9 D '52

Examination of Joule's work on the metallurgy of amalgams. H. J. Axon. Metallurgia 47:27-8 Ja '53

Metal research; B.N.F.M.R.A. laboratories inspected. il Elec J 150:1054 Mr 27 '53

Metal solidification studies; radioactive tracer methods. Tech R 55:88 D '52

Metallurgical developments in 1952. Engineer 195:109-10 Ja 16 '53

Metallurgical research in the Netherlands. J. D. Fast and E. M. H. Lips. il Metal Prog 63:109-11 Ja '53

Metallurgical research; work of the British non-ferrous metals research association. il Automobile Eng 43:258-62 Je '53

Non-ferrous metals research progress. il Metallurgia 47:203-5 Ap '53; Elec R (Lond) 152:806-8 Ap 10 '53

Presidential address to the Institute of metals. F. C. Thompson. Engineering 175: 394 Mr 27 '53

Radioisotopes in metallurgy. H. R. Spedden. Metal Prog 63:186-8 Je '53

Research in progress; summary of some of the outstanding projects. J Metals 4:1039-44; 5:153-6 O '52, F '53

Review of metallurgical developments. L. B. Pfeil. Engineer 195:739-40 My 22 '53; Same. Engineering 175:651-2 My 22 '53

Scientific and technical research in metallurgy in the United States. G. Blanc. Metal Prog 63:180+ Je '53

Scientific research in Australia. Engineering 174:784-5 D 19 '52

See also
Corrosion research
Foundry research
Fulmer research institute
Iron research
Steel research
also British iron and steel research association

METALLURGISTS

See also
Danse, L. A.
Redmond, John

METALLURGY

Big new plants highlight beneficiation development; annual review, 1952. E. H. Crabtree. il Min Eng 5:156-61 F '53

Chemico metal techniques. W. N. Porter. il Min Cong J 38:44-7 N '52

METALLURGY—*Continued*

Forum on technical progress; materials and metallurgy. il diag Steel 132:280-2+ Ja 5 '53

Ion exchange, does it have a role in the mineral industry? N. Arbiter. il diag Eng & Min J 153:80-5 N '52

Irreversible phenomena in metallurgy. R. A. Oriani. bibliog diags J Phys Chem 56:1025-30 D '52

Melting review and forecast. il Iron Age 171:297 Ja 1 '53

Metallurgical formulas. F. Warneke. diags Min Cong J 39:50 S '53

New ways to metals. il diags Fortune 47:152-7+ Ap '53

Nonferrous metallurgy, 1952. A. W. Schlechten. il Eng & Min J 154:132-4+ F '53

Research engineer looks at metallurgy. C. G. A. Rosen. il diags Metal Prog 63:93-6+ Ap '53

Review of metallurgical developments. L. B. Pfeil. Engineer 195:739-40 My 22 '53; Same. Engineering 175:651-2 My 22 '53

Some metallurgical applications of ultrasonics. A. E. Crawford. bibliog il diags Metallurgia 47:109-13 Mr '53

Specialized microscopical techniques in metallurgy. S. Tolansky. Metal Prog 63:182+ My '53

See also

Aluminum metallurgy
Assaying
Blast furnaces
Cobalt metallurgy
Copper metallurgy
Cyanide process
Electrodeposition of metals
Electrometallurgy
Flotation process
Furnaces, Metallurgical
Gold metallurgy
Hydrometallurgy
Iron metallurgy
Lead metallurgy
Manganese metallurgy
Metallography
Metallurgical analysis
Metallurgical laboratories
Metallurgical plants
Metallurgical research
Metals
Open hearth process
Ore treatment
Pickling (metals)
Silver metallurgy
Sintering
Slag
Smelting
Steel metallurgy
Zinc metallurgy

Bibliography

British guides to metallurgical literature and information. B. Fullman. Special Lib 43:348-51 N '52

Dictionaries

Metallurgical dictionary. J. G. Henderson and J. M. Bates. 396p Reinhold pub. corp, 300 W. 42d st, New York 36 '53 ($8.50)

History

Pirotechnia of Vannoccio Biringuccio. J. R. Zietz, jr. bibliog J Chem Educ 29:507-10 O '52

Study and teaching

ECPD lists accredited metallurgical engineering colleges. J Metals 5:455 Mr '53

Metal processing at M.I.T.; teaching of metal working, casting, and welding. H. F. Taylor. il Tech R 55:97-100+ D '52

What are the contemporary demands on engineering curricula? mining and metallurgical engineering. C. L. Wilson. J Eng Educ 43:312-15 Ja '53

Textbooks

Current Russian metallurgical texts. C. A. Zapffe. il diags Metal Prog 60:78-80+ Ag '51; 63:91-5 Mr '53

Canada

Advances in chemical metallurgy. A. F. Cadenhead. Can Chem Process 37:38+ My '53

Great Britain

British guides to metallurgical literature and information. B. Fullman. Special Lib 43:348-51 N '52

METALS

Activity of fresh metal surfaces. Engineer 195:894-5 Je 26 '53

ASM sessions of Western metal congress, Los Angeles, March 23-27. Steel 132:86-90 Mr 30 '53

American society for metals Western metals exposition and congress, Los Angeles, March 23-27; abstracts of papers. Light Metal Age 11:18-19+ Ap '53

Annual handbook of product design for 1953; metals and alloys. il Product Eng Hdbk p B 1-31+ '53

Attack of metals by free radicals and atoms. F. W. Thompson and A. R. Ubbelohde. bibliog J Ap Chem 3:27-36 Ja '53

Changes in the electrical, thermal, and thermoelectrical properties of monovalent metals by lattice distortions. A. W. Sáenz. bibliog Phys R 91:1142-51 S 1 '53

Charge-transfer no-bond adsorption of inert atoms or molecules on metals. J. C. P. Mignolet. J Chem Phys 21:1298 Jl '53

Chemical engineering materials of construction; less common metals. L. F. Yntema and W. R. Bekebrede. il Ind & Eng Chem 44:2364-70 bibliog(148 ref, p2369-70) O '52

Critical review of literature on the toxicity of industrial wastes and their components to fish. P. Doudoroff and M. Katz. Sewage & Ind Wastes 25:802-39 bibliog(155 titles, p834-9) Jl '53

Development of rare metals. J. W. Marden. Electrochem Soc J 100:sup37C-9C F '53

Diffusion in metals. A. D. LeClaire. Iron & Steel Inst J 174:229-36 Jl '53

Effect of slightly elevated-temperature treatment upon microscopic and submicroscopic residual stresses induced by small inelastic strains in metals. H. T. Corten and T. M. Elsesser. bibliog A S M E Trans 74:1297-302 N '52

Effect of stress on metal electrode potentials. R. E. Fryxell and N. H. Nachtrieb. bibliog il diags Electrochem Soc J 99:495-503 D '52

Effects of crystal fields on the properties of transition-metal ions. L. E. Orgel. Chem Soc J p4756-61 D '52

Electrochemical behaviour of metals and corrosion; abstract and discussion. M. Pourbaix. Chem & Ind p215-16 Mr 7 '53

Electromagnetic levitation of solid and molten metals. E. C. Okress and others. il diags J Ap Phys 23:545-52 My '52; Correction. 23:1413 D '52

Electronic energy bands in metals. G. Parzen. bibliog diag Phys R 89:237-43 Ja 1 '53

Energy stored in a metal during plastic deformation. L. M. Clarebrough and others. bibliog Engineer 195:316-17 F 27 '53

Field emission microscope and flash filament techniques for the study of structure and adsorption on metal surfaces. J. A. Becker and C. D. Hartman. bibliog il diags J Phys Chem 57:153-9 F '53

Forum on technical progress; materials and metallurgy. il diag Steel 132:280-2+ Ja 5 '53

Fragments of chemistry; physical properties of metal solutions. C. A. Kraus. J Chem Educ 30:83-7 F '53

Free energy of vaporization of metals from 0° to 2000° C. J. W. Evans. bibliog J Metals 5:Trans 655-7 My '53

Glamorous rare minerals and new metals; with data on companies producing new metals. L. A. Lukens. Mag of Wall St 91:292-4+ D 13 '52

Grain size, key to mechanical properties. H. A. Unckel. bibliog il Iron Age 170:148-52 D 18 '52

Impurities may be beneficial. Blast F & Steel Pl 41:947-8 Ag '53

Interactions of metal ions with the sulfhydryl group of serum albumin. I. M. Klotz, J. M. Urquhart and H. A. Fiess. Am Chem Soc J 74:5537-8 N 5 '52

Irreversible polarographic reduction of simple metal ions in the presence of acid serum albumin. C. Tanford. bibliog Am Chem Soc J 74:6036-9 D 5 '52

Metal ion catalysis in the hydrolysis of Schiff bases. G. L. Eichhorn and J. C. Bailar, jr. bibliog Am Chem Soc J 75:2905-7 Je 20 '53

Metallurgy for nuclear reactors. J. E. Burke. il diags Gen Elec R 56:6-9 Mr '53

Metals and alloys review and forecast. bibliog il Iron Age 171:282-5 Ja 1 '53

Metals in the jetomic age. A. G. Gray. bibliog il Steel 131:148-53 O 13 '52

METALS—*Continued*

Method of representation of five-component and more complex metallic systems; abstract. I. I. Kornilov. Metal Prog 63:190+ Mr '53

Mobility of interstitial atoms in a face-centered metal. H. B. Huntington. bibliog diags Phys R 91:1092-8 S 1 '53

Model for epitaxy in metal-rock salt pairs. O. G. Engel. J Chem Phys 20:1174 Jl '52

Neutralization of ions and ionization of atoms near metal surfaces. L. J. Varnerin, jr. diag Phys R 91:859-63 Ag 15 '53

New demands lead to new directions in engineering materials. T. C. Du Mond. Materials & Methods' 37:87-8 Je '53

New metals. N. Arbiter. il Eng & Min J 154:94-9 Jl '53

New metals age. L. P. Lessing. il Fortune 47:109-15 Ja '53

New products and technology feature 34th National metal congress, Philadelphia. il Chem & Eng N 30:4618+ N 3 '52

Nuclear magnetic resonance in metals; broadening of absorption lines by spin-lattice interactions. H. S. Gutowsky and B. R. McGarvey. J Chem Phys 20:1472-7 S '52

On the foot-hills of the plastic range. H. W. Swift. Engineering 174:383-4, 420-1, 450 S 19-O 3 '52

Paper-thin metals; availability stimulates design. M. Sherman. il Product Eng 24:138-41 Ja '53

Paramagnetic relaxation in metals. A. W. Overhauser. diags Phys R 89:689-700 F 15 '53

Polarographic method for the indirect determination of polarization curves for oxygen reduction on various metals; chromium, molybdenum, tantalum, titanium, tungsten, and zirconium. P. Delahay and L. J. Stagg. Electrochem Soc J 99:546-8 D '52

Properties processing and uses of metal-bonding adhesives. O. W. Loudenslager. bibliog il diags Rubber Age 73:641-7 Ag '53; Excerpt. Automotive Ind 108:85-6 Ap 15 '53

Proposed tentative recommended practice for codification of light metals and alloys, cast and wrought; data sheet. Foundry 80:170 N '52

Recovery of metals from industrial wastes. Chem Age (Lond) 68:385-7 Mr 7 '53

Relationship between metallic radii in body-centered cubic and close-packed structures. J. Thewlis. bibliog Am Chem Soc J 75:2279-80 My 5 '53

Residual stresses introduced during metal fabrication. K. R. Van Horn. bibliog(38 titles) il J Metals 5:Trans 405-22 Mr '53

Simple recording tensile machine for metal monocrystals. J. J. Gilman. diags R Sci Instr 23:759-60 D '52

Symposium on the properties of metallic surfaces. Engineering 174:689, 750-1, 797, 828-9 N 28, D 12-26 '52; Engineer 194:724-5, 758-9 N 28-D 5 '52

Tentative theory of metallic whisker growth. J. D. Eshelby. bibliog diag Phys R 91:755-6 Ag 1 '53

Thermal conductivity data presented for various metals and alloys up to 900° C. L. Silverman. J Metals 5:631-2 My '53

Thermalization of positrons in metals. R. L. Garwin. Phys R 91:1571-2 S 15 '53

What's ahead the next ten years in materials and components; nickel, other metals. Am Mach 96:A9-10 Mid-N '52

See also

Alloys
Assaying
Bearing metals
Cast iron
Corrosion and anticorrosives
Creep of metals
Deformation (mechanics)
Electrodeposition of metals
Fatigue in metals
Films, Metallic
Foundry practice
Geology
Glass—Joining to metal
Heat treatment
Indium
Metal trade
Metallography
Metallurgy
Mines and mineral resources
Ore deposits
Passivity
Pickling (metals)
Rare earth metals
Scrap metal
Sheet metal
Slag
Solder and soldering
Solutions, Solid
Steel
Strength of materials
Tellurium
Thallium
Welding

Aging

Effect of quench ageing on strain ageing in iron. A. H. Cottrell and G. M. Leak. bibliog Iron & Steel Inst J 172:301-6 N '52; Discussion. 174:344-7 Ag '53

Analysis

Analysis of metals by spectroscopy: abstract and discussion. A. C. Menzies. Chem & Ind p 151 F 14 '53; Same. Chem Age (Lond) 68:393-4 Mr 7 '53

Determination of heavy metals and silica in chromate-treated cooling waters. S. Sussman and I. L. Portnoy. bibliog Anal Chem 24:1644-6 O '52

Determination of trace metals in petroleum fractions. J. H. Karchmer and E. L. Gunn. bibliog Anal Chem 24:1733-41 N '52

Fast spectrographic method for metal impurities in cracking feed. Pet Processing 8:101-2 Ja '53

Review of analytical chemistry; nonferrous metallurgy. M. L. Moss. bibliog(118 ref) Anal Chem 25:37-41 Ja '53

Spectrographic method for analysis of cracking catalysts. C. W. Key and G. D. Hoggan. bibliog Anal Chem 24:1921-5 D '52

Spectrometer cuts analysis time, speeds warehousing operations; Fairchild engine & airplane corp. Iron Age 171:155-6 Mr 26 '53; Steel 132:147 Ap 27 '53

Cleaning

See Metal cleaning

Conservation

Conservation through progress; research in the telephone industry. M. J. Kelly. Metal Prog 63:90+ Mr '53

Dynamic program for conservation. J. R. Townsend. il Metal Prog 63:79-81 Je '53

Economic utilisation of copper-base alloys; report of Technical council sub-committee T.S. 38 of the Institute of British foundrymen. Engineering 176:222-4 Ag 14 '53

How to save those critical alloys; recommendations on conserving needed metals by API interim advisory group. Pet Processing 7:1776-7 D '52

Saving scarce materials; abstract. Metal Prog 63:172-3+ F '53

Detection

Electronic pipefinder; M-scope locates buried metal pipes, cables, other such objects. il Oil & Gas J 51:115-16 Ja 12 '53

New detector locates tramp metal in iron ore. W. H. Schwedes and C. W. Clapp. il diag Iron Age 171:140-1 F 26 '53

Failure

Conical surfaces of fracture produced by asymmetrical impulsive loading. J. S. Rinehart and P. Pearson. bibliog il diags J Ap Phys 23:685-7 Je '52

Scabbing of metals under explosive attack; multiple scabbing. J. S. Rinehart. il diags J Ap Phys 23:1229-33 N '52

See also
Steel—Failure

Gas content

Attainment of equilibrium in gas-metal reactions. N. A. Gokcen. bibliog J Metals 5:Trans 191-4 F '53

Trapping of gases in cold-compacted powders. J. Williams. diags Iron & Steel Inst J 172:19-24 S '52

Hydrogen content

Low-hydrogen welding rods. J. D. Fast. bibliog il Welding J 32:516-20 Je '53

Nitrogen content

Nitrogen in metals. D. O. Caldwell. bibliog R Sci Instr 23:501-2 S '52

Polishing

See Polishing; Polishing, Electrolytic

Prices

E&MJ metal prices, 1897-1952; chart and tables. Eng & Min J 154:86a-86b, 87 F '53

Price propping. Bsns W p27 My 30 '53

METALS—Prices—*Continued*

Prices of alloys and plastics. W. L. Nelson. Oil & Gas J 52:327 Je 22 '53

Recent trends in metal controls. F. E. Wormser. Comm & Fin Chr 176:2497+ D 25 '52

Scaling

High temperature oxidation of some iron-chromium alloys. D. Caplan and M. Cohen. bibliog il diag J Metals 4:Trans 1057-65 O '52

Scaling characteristics make or break a high temperature metal. D. D. Cubicciotti. bibliog diag Iron Age 171:144-6 My 21 '53

See also
Steel—Scaling

Shrinkage

See Shrinkage of metals

Specifications

Here's how to untangle metal specifications; new cross index of chemically equivalent specifications. A. G. Gray. il Steel 132:80-4 Ja 19 '53

Teamwork smooths out specifications troubles; cross index of chemically equivalent specifications is first major compilation from military agency. Steel 132:86-7 F 23 '53

Temperature effect

Aid for the high-temperature designer; new parameter predicts how stressed materials behave. J. Miller. Gen Elec R 55:51-3 N '52

Behavior of materials under conditions of thermal stress. S. S. Manson. Machine Design 25:364+ O '53

Determination of plate compressive strengths at elevated temperatures. G. J. Heimerl and W. M. Roberts. il U S Nat Advisory Com for Aeronautics 1950:251-6 '51

Effect of temperature on the high-temperature strength of alloys in the aluminum-magnesium system; abstract. I. I. Kornilov and L. I. Pryakhina. Metal Prog 64:140+ Ap '53

Effect of tensile strain at low temperatures on deformation twinning in ingot iron. G. W. Geil and N. L. Carwile. bibliog il J Metals 5:Trans 213-17 sec 2 F '53

Effect of various treatments on the fatigue of notched S-816 and Timken 16-25-6 alloys at elevated temperatures. W. E. Jones, jr. and G. B. Wilkes, jr. il diags Am Soc T M Proc 50:744-60; Discussion. 761-2 '50

Heating tube failures, cause and prevention. J. J. B. Rutherford. bibliog il Pet Processing 8:62-9 Ja '53

How to evaluate high temperature performance of materials. L. B. Pfeil. bibliog il Materials & Methods 37:79-84 Mr '53

Influence of chemical composition on rupture test properties at 1500°F. of forged chromium-cobalt-nickel-iron base alloys; abstract. J. W. Freeman and others. Metal Prog 63:164+ Ap '53

Machine for tensile testing at controlled temperatures and constant true strain rates. E. L. Bartholomew, jr. and others. il diags R Sci Instr 24:196-202 Mr '53

Optical and infrared reflectivity of metals at low temperatures. T. Holstein. Phys R 88:1427-8 D 15 '52

Properties and structure of titanium after 30-min. heating at 1200 to 2000° F. E. Walden and L. A. Dixon. il Metal Prog 64:88-9 Ag '53

Properties of some binary aluminium alloys at elevated temperatures. J. V. Lyons and W. I. Pumphrey. bibliog il Metallurgia 46:219-26, 299-304 N-D '52

Small additions raise strength of zirconium at elevated temperatures. A. D. Schwope and W. Chubb. bibliog il J Metals 4:1138-40 N '52

Stress-rupture characteristics of unalloyed titanium plotted. F. B. Cuff, jr. and N. J. Grant. il Iron Age 170:134-9 N 20 '52

Subsurface porosity developed in sound metal during high-temperature corrosion. A. D. Brasunas. il Metal Prog 62:88-90 D '52

Symposium on strength and ductility of metals at elevated temperatures; with particular reference to effects of notches and metallurgical changes. (Special tech. pub. no. 128) 249p $3.25 Am. soc. for testing materials, 1916 Race st, Philadelphia 3 '53

See also
Creep of metals
Iron—Temperature effect
Steel—Testing—Temperature effect

Testing

Black light spots defects in materials. N. E. Walters. il Materials & Methods 36:105-7 N '52

Dilastrain method for determining endurance limit of materials. J. L. Rosenholtz and D. T. Smith. il Metal Prog 61:85-8 F '52; Discussion. J. L. Rosenholtz and D. T. Smith. 63:118+ Mr '53

Forum on technical progress; inspecting and testing. il Steel 132:316-18+ Ja 5 '53

Influence of specimen dimension and shape on the results in tension impact testing. D. S. Clark and D. S. Wood. bibliog diags Am Soc T M Proc 50:577-86 '50

Interferometer procedure applied to the study of the chemical durability of silicates, enamels, and metals. R. G. Pike and D. Hubbard. bibliog J Res Nat Bur Stand 50:87-93 F '53

Method for making tension tests of metals using a miniature specimen. R. L. Templin and W. C. Aber. il diags Am Soc T M Proc 50:1188-94; Discussion. 1195 '50

Miniature ultrasonic flaw detector. il Metallurgia 47:211 Ap '53; Engineer 195:424 Mr 20 '53; Engineering 175:363 Mr 20 '53; Elec J 150:886 Mr 13 '53

New flaw-detecting ink; Lumor. il Chem Age (Lond) 67:637 N 8 '52

Non-destructive testing. A. Gobus. il Factory Management 110:130-2 O '52

Nondestructive testing. S. A. Wenk. il Steel 131:158-60+ O 13 '52

Non-destructive testing; its techniques, applications, and scope in industry. J. D. Hislop. il diag Elec J 150:617-18 F 20 '53

Production testing goes for a spin. G. W. Ehrsam, jr. il Steel 132:92-4 Je 15 '53

Simple recording tensile machine for metal monocrystals. J. J. Gilman. diags R Sci Instr 23:759-60 D '52

Testing and inspection review and forecast. Iron Age 171:305 Ja 1 '53

Testing brightens profit picture. W. E. Thomas. flow sheet il Steel 132:104-8+ F 2 '53

Ultrasonic inspection of sub-surface defects. il Product Eng 24:212-13 Mr '53

Ultrasonics; inspection applications grow. R. H. Frank. il diags Steel 130:99-102 Je 16 '52; Same abr. Product Eng 23:256+ O '52

See also
Electric testing of metals
Magnetic testing

Textile uses

See also
Aluminum—Textile uses

Wear

Hardness, elastic modulus, and wear of metals; abstracts. T. L. Oberle. S A E J 60:42-5 Ag '52; Automotive Ind 106:37-8 F 15 '52; Product Eng 23:254+ Mr '52; Machine Design 24:228+ My '52; Metal Prog 63:137-8 F '53; Discussion. S A E J 60:45-6 Ag '52

Mechanism of wear. W. E. Jominy. diags S A E J 61:23-5 Ag '53

Metal transfer and wear. I. Feng. il diags J Ap Phys 23:1011-19 S '52

Radioactive tracers reveal friction and wear of metals. J. T. Burwell and C. O. Strang. il diag Metal Prog 60:69-74 S '51; Same cond. Product Eng Hdbk p A 10-12 '53

Wear characteristics of magnesium. E. L. Schaper. il S A E J 61:37-9 Ag '53

Wear phenomena; effects of lubrication and the nature of the superficial layer. F. T. Barwell. bibliog Automobile Eng 43:77-80 F '53; Abstract. Metal Prog 63:198+ Ja '53

See also
Cylinders (engines, etc.)—Wear

METALS—*Continued*

X ray inspection

Aspects of nuclear fission of interest to foundrymen and metallurgists. E. W. Colbeck. bibliog(25 titles) il diags Metallurgia 48: 33-40 Jl '53; Same cond. Engineering 175: 797-9 Je 19 '53

Determination of the texture of rolled sheet from X-ray diffraction photographs. A. E. De Barr and B. Roberts. il diags Iron & Steel Inst J 164:285-7 Mr '50; Abstract. Metal Prog 63:210-11 Ap '53

Economic aspect of radiographic inspection. V. E. Pullin. Engineer 194:641-3 N 14 '52

Microradiography of permanent magnet alloys. H. J. Goldschmidt. il Metallurgia 47: 215-20 Ap '53

Modifications of an X-ray method for the measurement of retained austenite concentrations in hardened steels. K. E. Beu. J Metals 4:Trans 1327-8 D '52

Portable X-ray unit has 250,000-volt capacity. il Foundry 80:280-1 N '52; Mach 59:214-15 N '52; Materials & Methods 36:149 N '52

Production inspection X-ray. D. Goodman. il Aero Digest 66:22-5 My '53

Radiography with gamma rays machines; Gamma industries inc. il Foundry 81:282+ O '53

X-ray fluoroscopy analyzes alloys; Thomson laboratory. R. M. Brissey and G. A. Chase. il diags Am Mach 97:132-3 Ap 27 '53

See also
Welding—X ray inspection

METALS, Clad

Composite metals; a new key to design flexibility. J. Ottmar. il Product Eng 23:153-7 N '52

See also
Aluminum, Copper clad
Copper, Lead clad
Steel, Clad
Steel, Lead clad

Patents

Patents on clad metals pooled. Steel 131:72 N 10 '52

METALS, Cold treatment of

Anti-friction bearings stabilized in sub-zero refrigerating machines. J. D. Fitzpatrick. il Automotive Ind 109:56+ Jl 15 '53

Cold storage smooths aircraft parts forming. il Steel 132:99 F 23 '53

Jet engine parts chilled for assembly. il Automotive Ind 109:63+ Ag 1 '53

Low-temperature treatments improve products and processes. W. H. Miller. il Iron Age 171:121-5 My 28 '53

Sub-zero technique in engineering; abstract. R. H. Warring. Product Eng 24:266+ F '53

See also
Aluminum, Cold treatment of

METALS, Cold working of

Cold extrusion ready to invade metalworking markets. D. I. Brown. il diags Iron Age 171:152-5 Ap 23 '53

Cold-forming of channels on a vertical hydraulic press. R. Wagner. il diags Mach 59:195-8 N '52

Cold-rolled fillets. R. J. Love. diags Engineering 174:164 Ag 8 '52

Cold work studies on copper at low temperatures. R. R. Eggleston. bibliog J Ap Phys 23:1400-1 D '52

Cold working of metals reduces waste and improves quality; Delco-Remy division, General motors corp. J. Geschelin. il Automotive Ind 108:32-5+ Ap 15 '53

Deformation of copper single crystals at 300°K and 78°K. T. H. Blewitt. bibliog il diag Phys R 91:1115-21 S 1 '53

Electron microscope study of the effect of cold work on the subgrain structure of copper. L. Delisle. bibliog il diags J Metals 5: Trans 660-6 My '53

How Delco-Remy cold forms metals. R. L. Kessler and others. il diags Am Mach 97: 135-42 Jl 20 '53

Influence of cold-work on the Hall effect of a metal. B. Wiener and G. Groetzinger. bibliog il diag J Ap Phys 23:441-4 Ap '52

Measurement of the internal energy in copper introduced by cold work. B. Welber. bibliog diags J Ap Phys 23:876-81 Ag '52

Mechanism of work-hardening of metals. N. F. Mott. bibliog diags Inst Mech Eng Proc (A) 166 no 4:413-18 '52; Same abr. Engineer 194:694-7 N 21 '52

Neutron diffraction studies of cold-worked brass. R. J. Weiss and others. bibliog J Ap Phys 23:1379-82 D '52

New effect of cold work on powder X-ray patterns. S. Annaka. il J Chem Phys 20: 1662-3 O '52

Separation of stacking fault broadening in cold-worked metals. B. E. Warren and B. L. Averbach. J Ap Phys 23:1059 S '52

Small angle scattering of X-rays from cold-worked solids. D. L. Dexter. bibliog Phys R 90:1007-12 Je 15 '53

Softening of metals during cold-working. N. H. Polakowski. bibliog(48 ref) diags Iron & Steel Inst J 169:337-46 D '51; Abstract. Metal Prog 61:122+ Je '52; Discussion. Iron & Steel Inst J 172:28-40 S '52

Study of the annealing kinetics in cold worked copper. D. Bowen and others. J Ap Phys 23:630-4 Je '52

X-ray study of cold work in thoriated tungsten. M. McKeehan and B. E. Warren. J Ap Phys 24:52-6 Ja '53

See also
Steel, Cold working of

METALS, Creep of. See Creep of metals

METALS, Heat resisting. See Alloys, Heat resisting; Steel, Heat resisting

METALS, Liquid

Development of special pumps for liquid metals; their power supply, valves, bearings, and instrumentation. E. F. Brill. Mech Eng 75:369-73 My '53

Electromagnetic pumps for high temperature liquid metal. J. F. Cage, jr. il diag Machine Design 25:178-9+ Mr '53

Nuclear power plants; design and performance of liquid-metal heat exchangers and steam generators. R. D. Brooks and A. L. Rosenblatt. bibliog Mech Eng 75:363-8 My '53

On the frontier; pump for driving liquid metals into a reactor. il Fortune 47:104-5 My '53

Solubility of hydrogen in certain liquid metals. Y. L. Yao. J Chem Phys 21:1308-9 Jl '53

Spreading of liquid metals on solid surfaces; surface chemistry of high-energy substances. A. Bondi. diags Chem R 52:417-58 bibliog(p456-8) Ap '53

See also
Mercury

METALS, Molten

Automatic pouring of molten metals. Franklin Inst J 254:414 N '52

Automatic surface follower for measuring the rate of evaporation of molten metals undergoing vacuum distillation. M. J. Spendlove and H. W. St Clair. il diags R Sci Instr 23:471-5 S '52

Corrosion of materials by liquid low melting alloys; engineering file facts. Materials & Methods 37:131 Mr '53

Flow of liquid metals on solid metal surfaces and its relation to soldering, brazing and hot-dip coating; abstract and discussion. G. L. J. Bailey and H. C. Watkins. Engineering 174:414 S 26 '52

Molten metal pump built. Steel 132:121 F 2 '53

Neutron diffraction and atomic distribution in liquid lead and liquid bismuth at two temperatures. P. C. Sharrah and G. P. Smith. bibliog J Chem Phys 21:228-32 F '53

Partition functions for relating entropy to disorder in the melting of pure metals. J. F. Lee. J Chem Phys 21:382 F '53

Producing circuits with molten metal spray. il Electronics 26:262+ Je '53

Thermodynamic study of liquid metallic solutions; approximate thermodynamic data from the phase diagram for the systems copper-bismuth, copper-lead and copper thallium. O. J. Kleppa. Am Chem Soc J 74: 6047-51 D 5 '52

Thermodynamic study of liquid metallic solutions; the systems zinc-bismuth and zinc-lead. O. J. Kleppa. bibliog Am Chem Soc J 74:6052-6 D 5 '52

METALS, Non-ferrous

Advances in nonferrous metals in Great Britain since 1945. L. G. Beresford. il diag Metal Prog 63:103-8 Ja '53

Annual engineering materials review and forecast; nonferrous metals. T. C. Du Mond. il diag Materials & Methods 37:103-8 Ja '53

Control of quality in the production of wrought non-ferrous metals and alloys; symposium. Engineering 175:438, 471 Ap 3-10 '53; Discussion. 175:471-2, 501-3 Ap 10-17 '53; Engineer 195:502-3, 522-4, 553 Ap 3-17 '53

Forum on technical progress; nonferrous metals. il diag Steel 132:256-8+ Ja 5 '53

Metal casting methods; non-ferrous ingots. J. B. McIntyre. bibliog il Metallurgia 48:63-7 Ag '53

Metal research; B.N.F.M.R.A. laboratories inspected. il Elec J 150:1054 Mr 27 '53

Nonferrous metallurgy, 1952. A. W. Schlechten. il Eng & Min J 154:132-4+ F '53

Nonferrous metals engineer faces challenge after century of progress. R. W. Diamond and B. P. Sutherland. J Metals 4:1033-5 O '52

Nonferrous metals; grabbing bigger share of the market. J. V. Sherman. Barron's 33:9+ Ja 12 '53

Things to watch in nonferrous foundry practice. H. Brown. il Foundry 81:108-10+ Ag '53

Typical Brinell hardness numbers of some nonferrous alloys; data sheet. Foundry 81:203-4 My; 175-6 Je '53

See also

Brass
Bronze
also names of non-ferrous metals, e.g. Aluminum; Copper; Lead; Magnesium; Tin; Zinc

Prices

Nonferrous prices; tabulation. Steel 132:173 Ja 5 '53

Statistics

Bauxite imports for consumption; shipments of magnesium wrought products; U.S. tin consumption, by finished products; U.S. consumption of nickel; copper production, deliveries and stocks; total shipments of copper castings; copper exports; copper imports; copper consumption; refined lead; U.S. lead consumption; tabulations. Automotive Ind 108:336-7 Mr 15 '53

Nonferrous castings shipments; tabulations. Steel 132:167 Ja 5 '53

Nonferrous metals; production, prices, mining, scrap; tabulations. Iron Age 171:415-24 Ja 1 '53

METALS, Powdered. See Metal powders

METALS, Tarnishing of. See Tarnishing of metals

METALS processing laboratory. See Massachusetts institute of technology—Metals processing laboratory

METAMORPHISM

Fossils in metamorphic rocks; a review. W. H. Bucher. Geol Soc Bul 64:275-300, pl 1-2 bibliog(p296-300) Mr '53

$MgO—Al_2O_3—SiO_2—H_2O$ system and the related metamorphic facies. H. S. Yoder, jr. il diags Am J Sci Bowen vol p569-627 bibliog(p625-7) '52

Metamorphism of basaltic rocks; a review. A. Poldervaart. Geol Soc Bul 64:259-73 bibliog(p271-3) Mr '53

Petrography and metamorphism of sediments of Ouachita facies. A. Goldstein, jr. and D. H. Reno. il maps diags Am Assn Pet Geologists Bul 36:2275-90 D '52

METANETHOLE

Structural and stereochemical correlation of metanethole with other dimerides of aryl propenyl compounds. W. Baker and others. Chem Soc J p4310-14 N '52

METAPHOSPHATES

Linear polymetaphosphates; quaternary ammonium salts. R. K. Iler. bibliog J Phys Chem 56:1986-9 D '52

METASTABILITY

Diffusion, de-excitation, and ionization cross sections for metastable atoms. M. A. Biondi. bibliog diag Phys R 88:660-5 N 1 '52

Effect of temperature on the duration of the $^3P_2$ metastable level of neon. F. A. Grant and A. D. Krumbein. bibliog il diags Phys R 90:59-62 Ap 1 '53

Hyperfine structure of the metastable triplet state helium-3. G. Weinreich and others. Phys R 91:195-6 Jl 1 '53

Lifetime of metastable states of noble gases. A. V. Phelps and J. P. Molnar. bibliog il diag Phys R 89:1202-8 Mr 15 '53

Magnetic moment of the helium atom in the metastable triplet state. V. Hughes and others. bibliog diags Phys R 91:828-41 Ag 15 '53

Metastable flow of Freon-12. P. F. Pasqua. bibliog flow diag il diag Refrig Eng 61:1084A-1088; Discussion. 1088+ O '53

Metastable state of V^{52}. T. Wiedling. diag Phys R 91:767 Ag 1 '53

METATHESIS. See Double decomposition

METCALFE, James J.

Jim Metcalfe puts living into verse. G. A. Brandenburg. por Ed & Pub 86:54 F 14 '53

METEORITES

Abundances of the elements. H. C. Urey. bibliog Phys R 88:248-52 O 15 '52

Meteorites as cosmic-ray meters. S. F. Singer. Phys R 90:168 Ap 1 '53

Urey postulates asteroid collision as probable source of meteorites. Chem & Eng N 30:5272 D 15 '52

Bibliography

Bibliography on meteorites. H. Brown, G. Kullerud and W. Nichiporuk, eds. 686p $10 Univ. of Chicago press, 5750 Ellis av, Chicago 37 '53

METEOROLOGICAL instruments

Final approach visibility studies at airports in the United States. B. C. Haynes. bibliog il map diags Aeronautical Eng R 12:44-8 Mr '53

Measuring the weather. A. D. Hay. il diag Heating-Piping 25:98-101 Mr '53

National bureau of standards mobile low-level sounding system. P. D. Lowell and others. bibliog il diags J Res Nat Bur Stand 50:7-17 Ja '53

Weather prediction by radioactive pen. Franklin Inst J 254:348-9 O '52; Same. il Elec Eng 71:1054 N '52

See also

Altimeters
Anemometers
Barometers
Bolometers
Hygrometers
Radio meteorographs
Thermometers and thermometry

METEOROLOGICAL research

Jet was chasing its tail; jet stream, recently discovered meterorological phenomenon. il map Gen Elec R 56:42-7 Jl '53

Project Cirrus; story of cloud seeding. il Gen Elec R 55:8-26 N '52

See also

Radio meteorographs
Weather control

METEOROLOGY

See also

Atmospheric electricity
Atmospheric nucleation
Atmospheric temperature
Auroras
Climate
Floods
Hurricanes
Lightning
Radar—Meteorological use
Rain and rainfall
Rain making
Snow
Solar radiation
Weather forecasting
Winds

METEOROLOGY, Aeronautic

Final approach visibility studies at airports in the United States. B. C. Haynes. bibliog il map diags Aeronautical Eng R 12:44-8 Mr '53

Jet stream from 10,000 to 40,000 feet above the surface of the earth. J. Namias. il diags Sci Am 187:26-31 O '52

Navy grants PAA jet stream contract; high-altitude jet stream sweeps eastward across the Pacific. Aviation W 58:18 Mr 30 '53

Possibility of soaring on traveling waves in the jet stream. J. Kuettner. il map Aeronautical Eng R 11:22-8 D '52

See also

Radio meteorographs

METEOROLOGY, Maritime

Special weather phenomena of the Pacific. P. R. Lackner. il U S Naval Inst Proc 78:1198-207 N '52

METEORS

Extended-range high-frequency radio communication at relatively low power, by means of overlapping oblique reflections from meteor ionization trails. O. G. Villard, jr. and others. Science 117:638-9 Je 5 '53

Meteor scatter; extended-range communication in 15- and 20-meter bands. O. G. Villard, jr. and A. M. Peterson. il map diags Q S T 37:11-15+ Ap '53

METER reading

Outside reading of inside meters. L. S. Thomas. il Am Gas Assn Mo 35:21 S '53

Telemeter offers gas industry opportunity to read meters outside premises. il Gas Age 112:25-7 Ag 13 '53

METER shops. See Electric utilities—Meter shops

METERS

Hour meters for better maintenance. J. Gutbrod. il Factory Management 111:98-9 Je '53

Tests show accuracy of crude oil meters. F. J. Daasch. il diags World Oil 135:315-18 O '52

See also

Automobile parking—Meters
Dynamometers
Electric meters
Flow meters
Frequency meters
Gages
Gas meters
Meter reading
Orifice meters
Tachometers
Venturi meters
Viscosimeters
Voltmeters
Water meters

METHACRYLATES

β-Ray initiation of polymerization of styrene and methyl methacrylate. W. H. Seitzer, R. H. Goeckermann and A. V. Tobolsky. Am Chem Soc J 75:755-6 F 5 '53

Cross-linked polymers; factors influencing the efficiency of cross-linking in copolymers of methyl methacrylate and glycol dimethacrylates. S. Loshaek and T. G. Fox. bibliog Am Chem Soc J 75:3544-50 Jl 20 '53

Dilute solution hydrodynamic behavior of flexible chain molecules; polymethyl methacrylate. T. G. Fox and L. Mandelkern. J Chem Phys 21:187-8 Ja '53

Effect of water on the induction period of the polymerization of methyl methacrylate. I. C. Schoonover and others. bibliog J Res Nat Bur Stand 49:359-64 D '52

High-polymer solutions; the determination of number-average molecular weights from measurements of osmotic pressure. E. Ducker and others. Chem Soc J p4390-3 N '52

Methyl methacrylate plastics; engineering file facts. Materials & Methods 37:123 Je '53

New apparatus for rate studies applied to the photopolymerization of methyl methacrylate. M. A. Naylor and F. W. Billmeyer, jr. bibliog il diag Am Chem Soc J 75:2181-5 My 5 '53

New $8,000,000 plant in Houston to make acrylate. F. L. Resen. il Oil & Gas J 51:92-3+ My 4 '53

Raman spectrum of monomeric methyl methacrylate at -180°C. S. C. Sirkar and N. K. Roy. il J Chem Phys 21:938-9 My '53

Testing

Effects of moderate biaxial stretch-forming on tensile and crazing properties of acrylic plastic glazing. B. M. Axilrod and others. bibliog il diag J Res Nat Bur Stand 49:331-42 N '52; Same cond. Mod Plastics 30:117-18+ D '52

METHACRYLIC acid

Copolymerization behavior of ionizable monomers. T. Alfrey, jr., C. G. Overberger and S. H. Pinner. bibliog Am Chem Soc J 75:4221-3 S 5 '53

METHANE

Absolute intensity of the ν_4 infrared absorption band of methane and its enhancement by nitrogen at high pressures. H. L. Welsh and P. J. Sandiford. bibliog J Chem Phys 20:1646-7 O '52

Adsorption at water-helium, -methane and -nitrogen interfaces at pressures to 15,000 P.S.I.A. E. W. Hough, B. B. Wood, jr. and M. J. Rzasa. bibliog il J Phys Chem 56:996-9 N '52

Appearance potential of C^+ in the mass spectra of some substituted methanes and the heat of sublimation of carbon. H. Branson and C. Smith. bibliog J Chem Phys 20:1047 Je '52

Diffusion in the system CH_4-TCH_3 to 300 atmospheres pressure. Q. R. Jeffries and H. G. Drickamer. J Chem Phys 21:1358 Ag '53

Electron impact studies in CH_4, CH_3Cl, CH_3Br and CH_3I. H. Branson and C. Smith. bibliog Am Chem Soc J 75:4133-8 S 5 '53

Exchange reactions of methane and monodeuteromethane with atomic deuterium. D. W. Coillet and G. M. Harris. bibliog Am Chem Soc J 75:1486-7 Mr 20 '53

Freezing point and vapor pressure data for solutions of carbon dioxide with some halogen substituted methanes. T. De Vries and W. N. Vanderkooi. Am Chem Soc J 75:2253-4 My 5 '53

Gas production in the photolysis of liquid methyl iodide. R. H. Schuler and C. T. Chmiel. bibliog Am Chem Soc J 75:3792-6 Ag 5 '53

Heat capacities of multimolecular layers of methane adsorbed on rutile. K. S. Dennis, E. L. Pace and C. S. Baughman. Am Chem Soc J 75:3269-70 Jl 5 '53

Influence of sulfite on the methane fermentation of sodium and calcium acetates; abstract. M. A. Noordam-Geldewagen and others. Sewage & Ind Wastes 24:1437-8 N '52

Investigation of the production of acetylene by flames of methane and oxygen. P. H Kydd. Am Chem Soc J 74:5536-7 N 5 '52

Kinetics of the oxidation of methane by nitrous oxide. P. L. Robinson and E. J. Smith. diag Chem Soc J p3895-904 O '52

Mercury photo-sensitized oxidation of ethane and methane. J. A. Gray. diags Chem Soc J p3150-4 Ag '52

Molecular kinetics and mechanism of methane-deuterium exchange reactions on nickel. M. C. Markham, M. C. Wall and K. J. Laidler. bibliog J Phys Chem 57:321-3 Mr '53

New source of gas? coal mines yield marketable natural gas in Belgium. P. Reed. Oil & Gas J 52:81 My 11 '53

Production of methane from coal. L. W. Alberts and others. bibliog flow diag Chem Eng Prog 48:486-93 O '52

Reaction mechanisms; hydrazine from ammonia and acetylene from methane; abstract. M. Burton. Chem & Eng N 31:1405-6 Ap 6 '53

Reactions of methane with iodine activated by radiative neutron capture. J. F. Hornig and others. bibliog J Chem Phys 20:1556-60 O '52

Rotation-vibration spectra of diatomic and simple polyatomic molecules with long absorbing paths; the spectrum of tri-deuteromethane in the photographic infrared. L. F. H. Bovey. bibliog il J Chem Phys 21:830-6 My '53

Solubilities and structures in aqueous aliphatic hydrocarbon solutions. W. F. Claussen and M. F. Polglase. bibliog diag Am Chem Soc J 74:4817-19 O 5 '52

Some partial molal volumes of gases in solution. R. H. Schumm and O. L. I. Brown. Am Chem Soc J 75:2520-1 My 20 '53

Some thermodynamic properties of methane adsorbed on rutile between 80 and 140°K. E. L. Pace and others. bibliog J Chem Phys 21:1225-8 Jl '53

States of solid methane as inferred from nuclear magnetic resonance. K. Tomita. bibliog diags Phys R 89:429-38 Ja 15 '53

Substituted methanes; infrared spectral data, assignments, potential constants, and calculated thermodynamic properties for CF_3Br and CF_3I. P. R. McGee and others. J Chem Phys 21:242-6 F '53

Substituted methanes: potential constants for CBr_3Cl. A. G. Meister and F. L. Voelz. J Chem Phys 21:158 Ja '53

METHANE—*Continued*

Substituted methanes; vibrational spectra, potential constants, and calculated thermodynamic properties of bromochloromethane. A. Weber and others. bibliog J Chem Phys 21:930-3 My '53

Synthesis of methane by hydrogenation of carbon monoxide in a tubular reactor. M. M. Gilkeson, R. R. White and C. M. Sliepcevich. bibliog flow diag il diag Ind & Eng Chem 45:460-7 F '53

Thermodynamics of combustion gases; temperatures of methane-air and propane-air flames at atmospheric pressure. R. W. Smith, jr. and others. bibliog U S Bur Mines Rep of Invest 4938:1-3 '53

Thermodynamics of combustion gases; temperatures of methane-air, propane-air, and ethylene-air flames. R. W. Smith, jr. and others. bibliog U S Bur Mines Rep of Invest 4983:1-21 '53

Vapor pressure of the deuteromethanes. G. T. Armstrong and others. bibliog J Chem Phys 21:1297-8 Jl '53

Vibration frequencies of the halogenated methanes and the substitution product rule. K. S. Pitzer and E. Gelles. bibliog J Chem Phys 21:855-8 My '53

See also
Chlorofluoromethanes
Fire damp

Analysis

Continuous determination of small percentages of methane in gases. H. Nash, jr. and others. diag Anal Chem 24:1650-2 O '52

METHANESELENOL

Vapour pressure and improved preparation of methaneselenol. G. E. Coates. Chem Soc J p2839 S '53

METHANESULFONIC acid

Methanesulphonic acid-sulphur trioxide complex; detection by Raman spectroscopy. I. Sandeman. Chem Soc J p 1135-8 Ap '53

METHANESULFONYL chloride

Reaction of methanesulfonyl chloride with alcohols in the presence of pyridine. C. R. Noller and others. bibliog Am Chem Soc J 75:3851-2 Ag 5 '53

METHANETHIOL

Boiling point and composition of methanethiol-isobutane azeotrope. F. R. Brooks and A. C. Nixon. Am Chem Soc J 75:480 Ja 20 '53

Lethality of methyl mercaptan to king salmon as influenced by variation of the volume of test solution. E. P. Haydu and others. Tappi 36:131-3 Mr '53

Analysis

Determination of hydrogen sulphide, methyl mercaptan, dimethyl sulphide and disulphide in kraft pulp mill process streams. V. F. Felicetta and others. bibliog diags Tappi 36:425-32 S '53

METHANOL

Bolaform electrolytes; conductance of bisquaternary salts of dicarboxylic acid bis-β-tertiaryaminoalkyl amides in methanol. H. Eisenberg and R. M. Fuoss. bibliog il diags Am Chem Soc J 75:2914-17 Je 20 '53

Commercial solvents corp., Sterlington, La. F. L. Resen. flow diag il Oil & Gas J 51:298+ S 29 '52

Conductivities and densities of the system ammonium chloride-zinc chloride-methanol from -50° to 20°C. L. R. Dawson and others. bibliog Electrochem Soc J 99:536-41 D '52

Decomposition of methanol-C^{14} under the influence of its own radiation. W. J. Skraba and others. J Chem Phys 21:1296 Jl '53

Densities of mixtures; water and methanol. G. Chapas. Am Chem Soc J 74:6275 D 20 '52

Dissociation of 3,3′,5,5′-tetranitro-4,4′-dihydroxydiphenyl in methanol. H. Hart and W. J. Detroit. Am Chem Soc J 74:5214-15 O 20 '52

Dissolution of metals over the temperature range of 25 to -60°; the dissolution of zinc in hydrochloric acid-methyl alcohol-water solutions. J. Y. Welsh and A. B. Garrett. bibliog J Phys Chem 56:727-30 Je '52

Electrochemistry of boron trifluoride coordination compounds; the system boron trifluoride-methanol. N. N. Greenwood and R. L. Martin. Chem Soc J p757-64 Mr '53

Electrolytic oxidation of salts of aliphatic acids by the Hofer-Moest reaction; formation of methanol from sodium acetate. T. Kunugi. bibliog Am Chem Soc J 75:1597-9 Ap 5 '53

Hydrogen transfer reactions accompanying the cobalt catalyzed synthesis from acetylene, carbon monoxide and methanol. P. Pino and A. Miglierina. bibliog Am Chem Soc J 74:5551 N 5 '52

Intermolecular forces in acetone and methyl alcohol. V. Myers. J Chem Phys 20:1806 N '52

Ion association of 2-1 salts in methanol. F. M. Sacks and R. M. Fuoss. bibliog Electrochem Soc J 99:483-7 D '52

Methanol-insoluble material in sorgo and beet juices. W. A. Harris and others. bibliog Ind & Eng Chem 44:2414-17 O '52

Reaction of α- and β-cholestanyl *p*-toluenesulfonates with methanol. H. R. Nace. bibliog Am Chem Soc J 74:5937-8 D 5 '52

Reactions of some *p*-aminotriphenylmethyl ions with methanol and methylate ion. H. Walba and G. E. K. Branch. Am Chem Soc J 75:2149-52 My 5 '53

Relative acidity of water, methanol and other weak acids in isopropyl alcohol solution. J. Hine and M. Hine. bibliog Am Chem Soc J 74:5266-71 N 5 '52

Studies in the polyene series; the preparation and rearrangement of some dialkenylmethanols. K. R. Bharucha and B. C. L. Weedon. Chem Soc J p 1584-92 My '53

Surface roughness as related to hysteresis of contact angles; the systems paraffin-ethylene glycol-air, paraffin-methyl cellosolve-air and paraffin-methanol-air. J. W. Shepard and F. E. Bartell. J Phys Chem 57:458-63 Ap '53

Thermal analysis of the systems hydrazine-methanol and hydrazine-ethanol. J. M. Corcoran, H. W. Kruse and S. Skolnik. bibliog J Phys Chem 57:435-7 Ap '53

Vapor-liquid equilibria at 760 mm. pressure; 2-propanol-methanol, 2-propanol-ethyl alcohol, 2-propanol-propanol, and 2-propanol-2-butyl alcohol systems. L. H. Ballard and M. Van Winkle. bibliog Ind & Eng Chem 44:2450-3 O '52

Analysis

Sensitive method for determination of vapor composition. K. M. Sancier. diags Anal Chem 24:1563-6 O '52

METHANOLYSIS

Constitution of sapote gum; methanolysis of sapote gum methyl ether. E. V. White. bibliog Am Chem Soc J 75:257-9 Ja 20 '53

Picrotoxin and tutin; methylation and methanolysis. J. C. Benstead and others. Chem Soc J p2292-9 Je '52

Preparation and characterization by alkaline methanolysis of 5,5-diethyl-4-(tetraacetyl-β-D-glucosyloxy)-2,6(1,5)-pyrimidinedione. J. A. Snyder and K. P. Link. bibliog Am Chem Soc J 75:1881-3 Ap 20 '53

Racemizing effect of the phenyl substituent of optically active hydrogen 2-phenyl-2-butyl phthalate in methanolytic reaction. H. H. Zeiss. bibliog Am Chem Soc J 75:3154-5 Jl 5 '53

METHAZONIC acid

Reactions of methazonic acid; a novel reaction of 3-aminolepidine. D. W. Ockenden and K. Schofield. Chem Soc J p 1915-19 Je '53

METHIODIDES

Infrared spectra of quaternary methiodides of *NN*-disubstituted thioamides. J. D. S. Goulden. Chem Soc J p997-8 Mr '53

Synthesis of 1-alkyl-1 : 2 : 3 : 4-tetrahydro-2-3′-indolylmethyl-6 : 7-dimethoxy*iso*quinolines and the ready cleavage of their methiodides. J. M. Osbond. Chem Soc J p 1648-50 My '53

METHIONINE

Aminos spell opportunity. Chem W 72:46+ Mr 7 '53

Effect of 2-aminofluorene on the utilization of S^{35} DL-methionine. A. W. Wase and others. bibliog Science 116:536-7 N 14 '52

METHIONINE—*Continued*
Effect of ultraviolet radiation on sulfhydryl and disulfide containing amino acids. K. Schocken. bibliog Science 116:544-6 N 14 '52
Experiments in the synthesis of methionine. D. O. Holland and J. H. C. Nayler. Chem Soc J p3403-9 S '52
Structural observations on active methionine. J. Baddiley, G. L. Cantoni and G. A. Jamieson. Chem Soc J p2662-4 S '53

METHOD X company
Sparks tame super-hard carbide alloys. il Bsns W p43-4 Ap 18 '53

METHOXYACETONE
Studies in the polyene series; acetylenic alcohols from methoxyacetone, and their conversion into unsaturated aldehydes. R. Ahmad and B. C. L. Weedon. Chem Soc J p2125-9 Jl '53

METHOXYACETOPHENONE
Conversion of α-diazo-*o*-methoxyacetophenone to coumaranone. A. K. Bose and P. Yates. Am Chem Soc J 74:4703-4 S 20 '52

METHOXY benzene. See Anisole

METHOXY compounds
Methoxyindan and methoxytetralin esters. E. C. Horning and G. N. Walker. Am Chem Soc J 75:4592-3 S 20 '53

METHOXY ethanol. See Methyl cellosolve

METHOXY group
Alkyl-oxygen fission in carboxylic esters; reactions of secondary alcohols containing the 2 : 4 : 6-trimethoxyphenyl radical. J. Kenyon and R. F. Mason. Chem Soc J p4964-9 D '52
Methoxyl content of gum tragacanth. K. Selby. Chem Soc J p2504 Ag '53
Studies in the Wagner rearrangement; the directive effects of the methyl and methoxyl groups. C. J. Collins and B. M. Benjamin. bibliog Am Chem Soc J 75:1644-7 Ap 5 '53

METHOXYPHENYLCYCLOHEXANE
cis- and *trans*-1,4-bis-(*p*-methoxyphenyl)-cyclohexane. G. P. Mueller and F. C. Bateman. bibliog Am Chem Soc J 74:5631-2 N 20 '52

METHOXYPREGNENOLONE
16α-Methoxy-5-pregnen-3β-ol-20-one. D. Gould, F. Gruen and E. B. Hershberg. Am Chem Soc J 75:2510-11 My 20 '53

METHOXYTHIOPHENE
Preparation and reactions of 2-methoxythiophene. J. Sicé. bibliog Am Chem Soc J 75:3697-700 Ag 5 '53

METHYL acetate
Effect of structure on reactivity; catalysis in the ammonolysis and hydrolysis of methyl acetate. T. A. Koch, J. G. Miller and A. R. Day. Am Chem Soc J 75:953-5 F 20 '53

METHYL acrylate. See Methacrylates

METHYL alcohol. See Methanol

METHYLAMINE
N-ethyl(or -methyl or -phenyl)-N-2-halogenoethyl-1′(or -2′)-naphthylmethylamines; structure and pharmacological activity. N. B. Chapman and J. W. James. Chem Soc J p 1865-8 Je '53
Photochemical decomposition of methylamine. J. S. Watson and B. D. Darwent. J Chem Phys 20:1041-2 Je '52
Physiologically active amines; tertiary amines and quaternary salts related to β-(*o*-methoxyphenyl) - isopropyl - N - methylamine. R. V. Heinzelman and B. D. Aspergren. Am Chem Soc J 75:925-7 F 20 '53
Physiologically active secondary amines; β-*o*-methoxyphenyl) - isopropyl - N - methylamine and related compounds. R. V. Heinzelman. bibliog Am Chem Soc J 75:921-5 F 20 '53
Preliminary analysis of the pure-rotational spectrum of methyl amine. D. R. Lide, jr. J Chem Phys 20:1812-13 N '52
Syntheses of methylamine-C^{14} and diazomethane-C^{14}. A. R. Jones and W. J. Skraba. bibliog Science 117:252-3 Mr 6 '53

METHYL aminofluorene
Synthesis of 2-methylaminofluorene-N-methyl-C^{141}. J. N. Little and F. E. Ray. Am Chem Soc J 74:4955-6 O 5 '52

METHYL anilinomagnesium bromide
Mixed condensation of ketones in the presence of methylanilinomagnesium bromide. W. D. Garden and F. D. Gunstone. Chem Soc J p2650-4 Jl '52

METHYL arabinose
Preparation of 2 : 3-anhydromethyl-D-lyxoside from 2-toluene-*p*-sulphonyl methyl-D-xylofuranoside, and synthesis of 2-methyl D-xylose, 3-methyl D-arabinose, and 3 : 5-dimethyl- D-arabinose. E. E. Percival and R. Zobrist. Chem Soc J p564-6 F '53

METHYL benzene. See Toluene

METHYL benzoic acid. See Toluic acid

METHYL benzophenanthrene
Synthesis of polynuclear aromatic hydrocarbons; methylbenzo(c)phenanthrenes. M. S. Newman, H. V. Anderson and K. H. Takemura. bibliog Am Chem Soc J 75:347-9 Ja 20 '53

METHYL benzoxanthene
3 : 4-Benzoxanthens; the synthesis and oxidation of 5-, 6-, 7-, and 8-methyl-3 : 4-benzoxanthen. M. Gindy and I. M. Dwidar. Chem Soc J p893-5 Mr '53

METHYL borates
Decomposition of aliphatic diazo-compounds by trimethyl borate; the preparation of branched-chain paraffins of high molecular weight. G. D. Buckley and N. H. Ray. Chem Soc J p3701-4 O '52
Procedures for the preparation of methyl borate. H. I. Schlesinger and others. bibliog Am Chem Soc J 75:213-15 Ja 5 '53

METHYL bromide
Rotation vibration bands of some symmetric top molecules under high resolution. T. A. Wiggins and others. bibliog J Chem Phys 21:1368-73 Ag '53
Some bands of methyl bromide in the near infrared under high resolution. D. H. Rank and others. Opt Soc Am J 43:157-62 Mr '53
Some reactions of tris-(*p*-nitrophenyl)-methyl bromide. J. E. Leffler. bibliog Am Chem Soc J 75:3598-600 Jl 20 '53

METHYL bromocrotonate
α- and γ-additions in the Reformatsky reaction with methyl γ-bromocrotonate. A. S. Dreiding and R. J. Pratt. bibliog Am Chem Soc J 75:3717-23 Ag 5 '53
Structure of the solid product from the condensation of methyl γ-bromocrotonate with sodium methoxide. A. S. Dreiding and R. J. Pratt. bibliog Am Chem Soc J 75:4580-1 S 20 '53

METHYL butane
Thermodynamic functions of 2,2,3-trimethylbutane. D. W. Scott and G. Waddington. bibliog Am Chem Soc J 75:2006-7 Ap 20 '53

METHYL butyl acrylate
Polymerizability of methyl α-*tert.*-butylacrylate. J. W. C. Crawford. Chem Soc J p2658-61 S '53

METHYL catechol
Oxidation of 4-methylcatechol in aqueous solution by ferric ion. H. Burton and H. B. Hopkins. Chem Soc J p2445-7 Je '52

METHYL cellobioside
Effect of daylight on the periodate oxidation of β-methyl glucoside, β-methyl cellobioside, and cellulose. F. S. H. Head. bibliog Textile Inst J Trans 44:T209-23 My '53

METHYL cellosolve
Surface roughness as related to hysteresis of contact angles; the systems paraffin-ethylene glycol-air, paraffin-methyl cellosolve-air and paraffin-methanol-air. J. W. Shepard and F. E. Bartell. J Phys Chem 57:458-63 Ap '53

METHYL cellulose
Detection and determination of end groups in *O*-methylcelluloses. D. I. McGilvray. Chem Soc J p2577-82 S '53
Effect of a wetting agent on the hydrolysis of highly methylated cotton cellulose. R. E. Reeves and B. J. Barrett. Textile Res J 23:510-12 Jl '53
Heterogeneous hydrolysis of highly methylated cotton cellulose. R. E. Reeves, B. J. Barrett and L. W. Mazzeno, jr. bibliog Am Chem Soc J 74:4491-4 S 20 '52
Methylcelluloses and cellulose-glycollate in finishing processes; abstract. Jahn. Am Dyestuff Rep 41:748 N 10 '52
Moisture regain of methylcellulose and cellulose acetate. G. C. Gibbons. bibliog Textile Inst J Trans 44:T201-8 My '53
See also
Carboxymethyl cellulose

METHYL chloride. See Chloromethane

METHYL chloroform. See Trichloroethane

METHYL chloroformate

Photochlorination of methyl chloroformate in the gas phase. J. H. Brandy and D. J. Le Roy. J Chem Phys 21:1049-53 Je '53

METHYL chrysene

Isolation of methylchrysene from petroleum. R. J. Moore, R. E. Thorpe and C. L. Mahoney. Am Chem Soc J 75:2259 My 5 '53

METHYL cinnoline

Cinnolines; the nature of the C($_3$)-position; the synthesis of 3-methyl-, 3-chloro-, and 3-bromo-cinnoline; also, of cinnoline and the *Bz*-nitrocinnolines. E. J. Alford and K. Schofield. Chem Soc J p609-12 F '53

METHYL compounds

Condensations of cinchoninaldehyde; with the quaternary alkiodides of some heterocyclic active methyl compounds. A. P. Phillips. Am Chem Soc J 75:383-4 Ja 20 '53

Countercurrent distribution of methyl esters of higher fat acids. J. A. Cannon, K. T. Zilch and H. J. Dutton. bibliog Anal Chem 24:1530-2 O '52

Experiments on the preparation of indolocarbazoles; the synthesis of indolo(3′:2′-1:2)carbazole and its 3-methyl derivative. J. A. Hall and S. G. P. Plant. Chem Soc J p 116-19 Ja '53

Methyl derivatives of uranium(IV) borohydride. H. I. Schlesinger and others. Am Chem Soc J 75:222-4 Ja 5 '53

See also

Methyl group

METHYL coumarin

Synthesis of some 3-substituted-4-methylcoumarins. C. H. Schroeder and K. P. Link. bibliog Am Chem Soc J 75:1886-8 Ap 20 '53

METHYL cyanide. See Acetonitrile

METHYL cyclobutane

Molecular structures of octafluorocyclobutane and of methylcyclobutane. H. P. Lemaire and R. L. Livingston. bibliog Am Chem Soc J 74:5732-6 N 20 '52

METHYL cyclohexane

Epimeric alcohols of the *cyclo*hexane series; (±)-*cis*-3-methyl*cyclo*hexylmethanol and (±)-*cis*-3-methyl*cyclo*hexanecarboxylic acid. L. H. Darling, A. K. Macbeth and J. A. Mills. Chem Soc J p 1364-8 My '53

Formation of five- and six-membered rings by the acyloin condensation; cyclization of diethyl 2-carboxy-2-methylcyclohexane-1-acetate. J. C. Sheehan and R. C. Coderre. bibliog Am Chem Soc J 75:3997-9 Ag 20 '53

METHYL cyclohexanemethanol

Alicyclic glycols; a chemical proof of the configurations of the 1:2-, 1:3-, and 1:4-dimethyl*cyclo*hexanes, and of the 2-, 3-, and 4-methyl*cyclo*hexylmethanols. G. A. Haggis and L. N. Owen. Chem Soc J p408-12 F '53

METHYL cyclohexanol

Relative configurations of the 2- and 3-hydroxycyclohexanecarboxylic acids and the related methylcyclohexanols; the stereochemistry of the catalytic hydrogenation of substituted cyclohexanones. S. Siegel. bibliog Am Chem Soc J 75:1317-20 Mr 20 '53

Studies of configuration; the configurations of the 3-methylcyclohexanols. D. S. Noyce and D. B. Denny. bibliog Am Chem Soc J 74:5912-15 D 5 '52

Synthesis of *cis*- and *trans*-3-methylcyclohexanol; reassignment of configuration of the 3-methylcyclohexanols. H. L. Goering and C. Serres, jr. bibliog Am Chem Soc J 74:5908-12 D 5 '52

METHYL cyclohexenone

2-Methyl-2-cyclohexenone. E. W. Warnhoff and W. S. Johnson. bibliog Am Chem Soc J 75:494-6 Ja 20 '53

METHYL cyclohexylamines

Preparation of N-alkyl-2-methylcyclohexylamines. L. E. Craig and I. J. Ressa. bibliog Am Chem Soc J 75:3836-8 Ag 5 '53

Studies of configuration; the configurations of the 3-methylcyclohexylamines. D. S. Noyce and R. J. Nagle. bibliog Am Chem Soc J 75:127-9 Ja 5 '53

METHYL cyclopentane

Analysis

Determination of benzene, cyclohexane, and methylcyclopentane by mass spectrometer. S. Meyerson. bibliog diag Anal Chem 25:338-41 F '53

METHYL cyclopentene

Rates, equilibrium and temperature coefficients in the reversible hydration of gaseous 1-methylcyclopentene-1 by dilute nitric acid. R. W. Taft, jr. and others. bibliog Am Chem Soc J 74:4735-7 O 5 '52

Thermodynamic properties of the three monomethylcyclopentenes and nine dimethylcyclopentenes. H. J. Hrostowski and G. C. Pimentel. bibliog Am Chem Soc J 75:539-42 F 5 '53

METHYL cyclopentenone

Some reactions of 3-methyl*cyclo*pent-2-enone. R. M. Acheson. Chem Soc J p3415-18 S '52

METHYL cyclopropane

Absorption spectrum of cyclopropane in the vacuum ultraviolet; note on the absorption spectrum of methyl cyclopropane. P. Wagner and A. B. F. Duncan. bibliog J Chem Phys 21:516-19 Mr '53

METHYL cyclopropene

Structure of Feist's methylcyclopropenedicarboxylic acid. M. G. Ettlinger. bibliog Am Chem Soc J 74:5805-6 N 20 '52

METHYL cyclopropylcarbinol

Dehydration of methylcyclopropylcarbinol over alumina; a synthesis of vinylcyclopropane. V. A. Slabey. bibliog Am Chem Soc J 74:4930-2 O 5 '52

METHYL dibenzopyracylene

Synthesis of fluoranthenes; iodination of tetrahydrofluoranthenes, leading to the syntheses of 3-methyl-1:2-5:6-dibenzopyracylene. J. M. Beaton and S. H. Tucker. Chem Soc J p3870-4 O '52

METHYL diethanolamine

Selective absorption of hydrogen sulfide. F. E. Miller and A. L. Kohl. flow diag Oil & Gas J 51:175-6+ Ap 27 '53

METHYL diphenylamine

Internuclear cyclisation; the cyclisation of derivatives of diphenylmethane, benzophenone, and *N*-methyldiphenylamine. D. H. Hey and R. D. Mulley. Chem Soc J p2276-87 Je '52

METHYL estrone

Dehydrogenation and structure proof of 1-methylestrone. A. S. Dreiding and W. J. Pummer. bibliog Am Chem Soc J 75:3162-5 Jl 5 '53

METHYL ethers

N-substituted glycosylamines; acetates, benzoates, and methyl ethers. G. P. Ellis and J. Honeyman. Chem Soc J p2053-7 Je '52

Reaction of trityl methyl ether with phenyllithium and with *n*-butyllithium. H. Gilman, W. J. Meikle and J. W. Morton, jr. bibliog Am Chem Soc J 74:6282-4 D 20 '52

METHYL ethyl ketone. See Butanone

METHYL fluoranthene

Synthesis of fluoranthenes; 10-methylfluoranthene; correction of its melting point. S. H. Tucker and M. Whalley. Chem Soc J p3187-9 Ag '52

METHYL formanilide

Formylation of the dimethoxybenzenes using phosphorus oxychloride and N-methylformanilide. A. H. Sommers, R. J. Michaels, jr. and A. W. Weston. bibliog Am Chem Soc J 74:5546 N 5 '52

METHYL furan

Dehydration of aqueous methyl ethyl ketone with 2-methyl furan. A. S. Smith, J. F. LaBonte. bibliog Ind & Eng Chem 44:2740-3 N '52

Existence of two solid forms of 2-methylfuran. J. B. Hickman. Am Chem Soc J 75:4344-6 S 5 '53

METHYL galactopyranoside

Constitution of mesquite gum; determination of the structure of the amide of 6-β-(4-methyl D-glucopyruronosyl) α-methyl-D-galactopyranoside. M. A. Akher, F. Smith and D. Spriestersbach. Chem Soc J p3637-40 S '52

METHYL galacturonic acid
Synthesis of 2-*O*-methyl- and 3 : 4 -di-*O*-methyl-D-galacturonic acid. R. A. Edington and E. E. Percival. Chem Soc J p2473-7 Ag '53

METHYL glucamine
Polyhydroxyamine. Chem Eng 60:230+ F '53

METHYL glucosamine
3,4-Dimethyl-D-glucosamine hydrochloride and derivatives. R. W. Jeanloz. bibliog Am Chem Soc J 74:4597-9 S 20 '52
Streptomycin; synthesis of 3,6-dimethyl-N-methyl-D-glucosamine. J. Fried and D. E. Walz. bibliog Am Chem Soc J 74:5468-72 N 5 '52

METHYL glucoside
Effect of daylight on the periodate oxidation of β-methyl glucoside, β-methyl cellobioside, and cellulose. F. S. H. Head. bibliog Textile Inst J Trans 44:T209-23 My '53
Methyl glucoside, new industrial polyl for protective coatings. J. P. Gibbons. Paint Oil & Chem R 116:12-15 Ap 23 '53
4-Methyl β-methylglucoside and some further derivatives of β-methylglucoside. D. I. McGilvray. Chem Soc J p3648 S '52

METHYL group
Characterization of methyl and methylene groups in steroids by infrared spectrometry. R. N. Jones, A. R. H. Cole and B. Nolin. bibliog diags Am Chem Soc J 74:5648-68 N 20 '52
Chemical properties of the methyl group. P. D. Bartlett. bibliog il J Chem Educ 30: 22-31 Ja '53
Effect of methyl substitution on the decarboxylation of picolinic acids. N. H. Cantwell and E. V. Brown. bibliog Am Chem Soc J 74:5967-70 D 5 '52
Free radicals by mass spectrometry; the rate of combination of methyl radicals. K. U. Ingold and F. P. Lossing. bibliog diags J Chem Phys 21:1135-44 Jl '53
Hyperconjugation; bathochromic shifts resulting from methyl substitution in conjugated systems. V. A. Crawford. Chem Soc J p2061-5 Jl '53
Kinetics and mechanism of methyl-silicon cleavage by sulfuric acid. L. H. Sommer, W. P. Barie and J. R. Gould. Am Chem Soc J 75:3765-7 Ag 5 '53
Methyl-substituted αβ-unsaturated acids. P. C. Jocelyn and N. Polgar. Chem Soc J p 132-7 Ja '53
Orienting influence of the methyl group in toluene in the Gomberg reaction. R. H. Wilson. bibliog J Ap Chem 3:37-9 Ja '53
Photochemical studies; the reactions of methyl radicals with oxygen. R. B. Martin and W. A. Noyes, jr. bibliog Am Chem Soc J 75:4183-5 S 5 '53
Rate of combination of methyl radicals. K. U. Ingold and F. P. Lossing. J Chem Phys 21:368 F '53
Reaction of methyl radicals with isobutyryl and α-deuteroisobutyryl chlorides. C. C. Price and H. Morita. bibliog Am Chem Soc J 75:3686-8 Ag 5 '53
Reactions of free radicals with aldehydes; the reactions of methyl and *t*-butoxy radicals with acetaldehyde and acrolein. D. H. Volman and R. K. Brinton. bibliog J Chem Phys 20:1764-8 N '52
Reactions of methyl radicals with acetone. M. T. Jaquiss, J. S. Roberts and M. Szwarc. Am Chem Soc J 74:6005-7 D 5 '52
Reactions of methyl radicals with the hydrogen isotopes. E. Whittle and E. W. R. Steacie. bibliog J Chem Phys 21:993-9 Je '53
Studies in the Wagner rearrangement; the directive effects of the methyl and methoxyl groups. C. J. Collins and B. M. Benjamin. bibliog Am Chem Soc J 75:1644-7 Ap 5 '53
Studies in the Wagner rearrangement; the steric effect of an ortho methyl group. B. M. Benjamin and C. J. Collins. bibliog Am Chem Soc J 75:402-5 Ja 20 '53
Synthesis of hydroaromatic compounds containing angular methyl groups; 1,2-cyclopentanonaphthalene series. M. S. Newman, G. Eglinton and H. M. Grotta. bibliog Am Chem Soc J 75:349-52 Ja 20 '53

Analysis
Determination of C-methyl groups in some unsaturated straight-chain compounds. A. D. Campbell and V. J. Chettleburgh. Chem Soc J p 1942 Je '53

METHYL halides
Structure of the methyl halides. S. L. Miller and others. bibliog J Chem Phys 20:1112-14 Jl '52

METHYL hexane
Racemization of *d*(+)-3-methylhexane. H. E. Heller. bibliog Am Chem Soc J 74: 4858-61 O 5 '52

METHYL hippurate
Kinetics of the α-chymotrypsin catalyzed hydrolysis of methyl hippurate in aqueous solutions at 25° and *p*H 7.9. H. T. Huang and C. Niemann. bibliog Am Chem Soc J 74:4634-8 S 20 '52

METHYL indole
Metalation of indole, N-methylindole and N-phenylindole with *n*-butyllithium. D. A. Shirley and P. A. Roussel. bibliog Am Chem Soc J 75:375-8 Ja 20 '53

METHYL iodide
Dissociation energy of the C-I bond in methyl iodide from electron impact measurements. C. A. McDowell and B. G. Cox. J Chem Phys 20:1496-7 S '52
Electronic orbitals, shapes, and spectra of polyatomic molecules; pentatomic molecules; CH_3I. A. D. Walsh. Chem Soc J p2321-4 Ag '53
Gas production in the photolysis of liquid methyl iodide. R. H. Schuler and C. T. Chmiel. bibliog Am Chem Soc J 75:3792-6 Ag 5 '53
Influence of temperature and state on infrared absorption spectra; methyl iodide. I. L. Mador and R. S. Quinn. bibliog J Chem Phys 20:1837-42 D '52
Iodine inhibition in the flash photolysis of methyl iodide. N. Davidson and T. Carrington. bibliog Am Chem Soc J 74:6277-9 D 20 '52
Radiolysis of liquid methyl iodide. R. C. Petry and R. H. Schuler. bibliog Am Chem Soc J 75:3796-802 Ag 5 '53
Reaction of methyl iodide with *o*-phenylenediamine; homomorphs of *o*-di-*t*-butylbenzene. H. C. Brown and K. L. Nelson. bibliog diag Am Chem Soc J 75:24-8 Ja 5 '53
Rotation vibration bands of some symmetric top molecules under high resolution. T. A. Wiggins and others. bibliog J Chem Phys 21:1368-73 Ag '53

METHYL isobutyl ketone
Some physical properties of diacetone alcohol, mesityl oxide and methyl isobutyl ketone. E. T. J. Fuge, S. T. Bowden and W. J. Jones. bibliog J Phys Chem 56:1013-16 N '52

METHYL isoquinoline
Papaverine homologs; the preparation of some 3-methylisoquinolines. E. R. Shepard and others. bibliog Am Chem Soc J 74:4611-15 S 20 '52

METHYL ketene
Preparation and dimerization of methylketen. A. D. Jenkins. diag Chem Soc J p2563-8 Jl '52

METHYL linoleate
Protective effect against X-irradiation of methyl linoleate in the rat. H. J. Deuel, jr. and others. bibliog Science 117:254-5 Mr 6 '53

METHYL linolenate
Studies by infrared spectra on the initiation process in autoxidation of methyl linolenate. N. A. Khan. J Chem Phys 21:952 My '53

METHYL magnesium iodide
Action of methylmagnesium iodide on two nitramines. A. H. Lamberton. Chem Soc J p4539-40 N '52
Further structural evidence for the reaction product of cholesterol-α-oxide and methylmagnesium iodide. R. B. Turner. bibliog Am Chem Soc J 74:5362-4 N 5 '52
Reaction of azomethines with methylmagnesium iodide. P. M. Maginnity and T. J. Gair. bibliog Am Chem Soc J 74:4958-9 O 5 '52

METHYL mercaptan. See Methanethiol

METHYL methacrylate. See Methacrylates

METHYL morphinan

Syntheses in the morphine series; the synthesis of *N*-methylmorphinan. D. Ginsburg and R. Pappo. Chem Soc J p 1524-36 My '53

Synthesis of N-methylmorphinane. C. F. Koelsch and N. F. Albertson. bibliog Am Chem Soc J 75:2095-7 My 5 '53

METHYL naphthalene

Bromination of 2-methylnaphthalene. N. B. Chapman and J. F. A. Williams. Chem Soc J p5044-6 D '52

Crystal and molecular structure of octamethylnaphthalene; a non-planar naphthalene derivative. D. M. Donaldson and J. M. Robertson. diags Chem Soc J p 17-24 Ja '53

Evaluation of vacuum rectification columns; monomethylnaphthalenes as a binary test mixture. J. Feldman and others. bibliog Ind & Eng Chem 45:214-15 Ja '53

Separation of 1- and 2-methylnaphthalenes by azeotropic distillation. J. Feldman and M. Orchin. bibliog Ind & Eng Chem 44:2909-14 D '52

Synthesis of polymethylnaphthalenes. B. J. Abadir, J. W. Cook and D. T. Gibson. Chem Soc J p8-17 Ja '53

Ultraviolet absorption spectra of some polymethylnaphthalenes. W. L. Mosby. bibliog Am Chem Soc J 75:3348-9 Jl 20 '53

METHYL naphthyl sulfide

Methyl β-naphthyl sulphide. N. P. Buu-Hoï, N. Hoán and D. Lavit. Chem Soc J p485-9 F '53

METHYL niacinamide. See Methyl nicotinamide

METHYL nicotinamide

Analysis

Fluorometric determination of N_1-methylniacinamide. M. Kato and others. Science 116:462 O 24 '52

METHYL nitrate

Thermodynamic properties of methyl nitrate. P. Gray and P. L. Smith. Chem Soc J p2380-5 Ag '53

METHYL norcholestene

Steroids; 3-methyl-A-norcholest-3(5)-ene. C. W. Shoppee and G. H. R. Summers. Chem Soc J p2528-30 Jl '52

METHYL oleate

Reactions of fatty materials with oxygen; polarographic and infrared spectrophotometric investigation of peroxides from autoxidized methyl oleate. D. Swern and others. bibliog Am Chem Soc J 75:3135-7 Jl 5 '53

METHYL orange

Methyl purple vs methyl orange in alkalinity titrations. R. W. Frey. Water & Sewage Works 100:228 Je '53

METHYL parafynol

Anticonvulsant activity and toxicity of methylparafynol (Dormison®) and some other alcohols. R. W. Schaffarzick and B. J. Brown. bibliog Science 116:663-5 D 12 '52

METHYL parathion

Buscopan in treatment of experimental poisoning by parathion, methyl parathion, and systox. W. B. Deichmann and R. Rakoczy. A M A Archives Ind Hygiene & Occup Med 7:152-6 F '53

METHYL pentaerythrityl ether

Methylpentaerythrityl ether. S. Wawzonek and J. P. Henry. Am Chem Soc J 75:1258-9 Mr 5 '53

METHYL phenanthridone

Internuclear cyclisation; the synthesis of some methyl-, halogeno-, and carbomethoxy-*N*-methylphenanthridones. R. A. Heacock and D. H. Hey. Chem Soc J p4059-64 O '52

METHYL phenylheptanol

Preparation and dehydration of 2-methyl-6-phenylheptan-3-ol. D. H. Hey and others. Chem Soc J p2021-5 Jl '53

METHYL phloroglucinol

Usnic acid; *C*-diacetyl derivatives of phloroglucinol and *C*-methylphloroglucinol. F. M. Dean and A. Robertson. Chem Soc J p 1241-9 Ap '53

METHYL phosphines

Liquid ammonia chemistry of the methyl phosphines. R. I. Wagner and A. B. Burg. bibliog diags Am Chem Soc J 75:3869-71 Ag 20 '53

METHYL piperidine

Synthesis of 4,4-diphenyl-1-methylpiperidine. N. Sperber, M. Sherlock and D. Papa. bibliog Am Chem Soc J 75:1122-5 Mr 5 '53

METHYL propanethiol

Thermodynamic properties of 2-methyl-2-propanethiol from 0 to 1000°K. J. P. McCullough and others. bibliog diag Am Chem Soc J 75:1818-24 Ap 20 '53

METHYL purple

Methyl purple vs methyl orange in alkalinity titrations. R. W. Frey. Water & Sewage Works 100:228 Je '53

METHYL pyridindole

Chemistry of the mitragyna genus; derivatives of harman. G. G. Doig, J. D. Loudon and P. McCloskey. Chem Soc J p3912-16 O '52

Conversion of tetrahydroharman alkaloids into derivatives of linear pyrroquinolones. B. Witkop and S. Goodwin. bibliog Am Chem Soc J 75:3371-6 Jl 20 '53

METHYL pyridine

Studies of coal tar bases; hydrogenation of 2-methylpyridine. J. I. Jones and A. S. Lindsey. Chem Soc J p3261-4 Ag '52

METHYL pyrrole

Emission spectrum of undecomposed *N* methylpyrrole. G. Milazzo. J Chem Phys 21:163-4 Ja '53; Correction. 21:1312 Jl '53

METHYL siloxanes. See Siloxanes

METHYL styrene

Copolymerization of butadiene and alphamethylstyrene in emulsion at 12.8°. J. W. L. Fordham and H. L. Williams. bibliog J Phys Chem 57:346-9 Mr '53

Ionic polymerization; copolymerization of styrene, *p*-chlorostyrene and α-methylstyrene with meta and para substituted styrenes catalyzed by stannic chloride. C. G. Overberger and others. bibliog Am Chem Soc J 74:4848-53 O 5 '52

Kinetics of catalytic polymerizations; the kinetics and mechanism of the polymerization of α-methylstyrene catalyzed by aluminium chloride. D. O. Jordan and A. R. Mathieson. Chem Soc J p2354-8 Je '52

Kinetics of catalytic polymerizations; the molecular-weight distribution of poly-(α-methylstyrene) prepared by the aluminium chloride-catalyzed polymerization. D. O. Jordan and A. R. Mathieson. Chem Soc J p2363-6 Je '52

Physical properties of *o*-, *m*- and *p*-methylstyrene. H. E. Clements, K. V. Wise and S. E. J. Johnsen. bibliog Am Chem Soc J 75:1593-5 Ap 5 '53

Polymerisation of α-methylstyrene catalysed by stannic chloride in ethyl chloride solution. F. S. Dainton and R. H. Tomlinson. Chem Soc J p 151-60 Ja '53

Polymerization; the reactions of amylsodium with α- and β-methylstyrenes. A. A. Morton and E. Grovenstein, jr. bibliog Am Chem Soc J 74:5437-40 N 5 '52

METHYL sulfide

Organometallic and organometalloidal fluorine compounds; electrochemical fluorination of dimethyl sulphide and carbon disulphide. A. F. Clifford and others. diag Chem Soc J p2372-5 Ag '53

Analysis

Determination of hydrogen sulphide, methyl mercaptan, dimethyl sulphide and disulphide in kraft pulp mill process streams. V. F. Felicetta and others. bibliog diags Tappi 36:425-32 S '53

METHYL tartronic acid

C-14 tracer studies in the rearrangements of unsymmetrical α-diketones; ethyl α,β-diketobutyrate to methyltartronic acid. H. W. Davis, E. Grovenstein, jr. and O. K. Neville. bibliog Am Chem Soc J 75:3304-5 Jl 20 '53

METHYL thianaphthene

Substitution reactions of 2- and 3-methylthianaphthene. D. A. Shirley, M. J. Danzig and F. C. Canter. bibliog Am Chem Soc J 75:3278-80 Jl 5 '53

METHYL thiazole

Preparation of methylthiazoles. R. P. Kurkjy and E. V. Brown. bibliog Am Chem Soc J 74:5778-9 N 20 '52

METHYL thiophene

Vapor phase halogenation of thiophene and 2-methylthiophene. C. D. Hurd and H. J. Anderson. bibliog Am Chem Soc J 75: 3517-20 Jl 20 '53

METHYL vinyl ketone

New process for methyl vinyl ketone; patent. Chem Eng 60:386+ Ap '53

METHYL vinyl pyridine

New pyridine plant makes MVP. il Chem Eng 60:112 F '53

Phillips synthesize pyridines; petrochemical plant opens new source of supply. J. M. Folz and others. flow diag il Pet Processing 7:1802-3 D '52

METHYL xylofuranoside

Preparation of 2 : 3-anhydromethyl-D-lyxoside from 2-toluene-*p*-sulphonyl methyl-D-xylofuranoside, and synthesis of 2-methyl D-xylose, 3-methyl D-arabinose, and 3 : 5-dimethyl D-arabinose. E. E. Percival and R. Zobrist. Chem Soc J p564-6 F '53

METHYL xylose

Preparation of 2 : 3-anhydromethyl-D-lyxoside from 2-toluene-*p*-sulphonyl methyl-D-xylofuranoside, and synthesis of 2-methyl D-xylose, 3-methyl D-arabinose, and 3 : 5-dimethyl D-arabinose. E. E. Percival and R. Zobrist. Chem Soc J p564-6 F '53

Synthesis of 3 : 4-dimethyl D-xylose and 4-methyl D-xylose. L. Hough and J. K. N. Jones. Chem Soc J p4349-51 N '52

METHYLAL

Condensation of methylal and other acetals with olefins. O. C. Dermer and J. J. Hawkins. bibliog Am Chem Soc J 74:4595-7 S 20 '52

METHYLATION

C-methylation of 4 : 6-dihydroxycoumaran-3-one. T. P. C. Mulholland and G. Ward. Chem Soc J p 1642-3 My '53

Effect of methylation on the light absorption of phenols. A. Burawoy and J. T. Chamberlain. Chem Soc J p2310-16 Je '52

Effect of methylation on the light absorption of phenols; monophenylazophenols. A. Burawoy and J. T. Chamberlain. Chem Soc J p3734-40 O '52

Picrotoxin and tutin; methylation and methanolysis. J. C. Benstead and others. Chem Soc J p2292-9 Je '52

Reductive methylation of steroid ketones. J. C. Babcock and L. F. Fieser. bibliog Am Chem Soc J 74:5472-4 N 5 '52

Study of mycological methylation with radioactive methyl donors or sources. F. Challenger and others. bibliog Chem & Ind p 128-9 F 7 '53

Synthetical and stereochemical investigations of reduced cyclic bases; the synthetic *cis*- and *trans*-octahydroindoles and the anomalous exhaustive methylation products of the *trans*-base. F. E. King and others. Chem Soc J p250-5 Ja '53

METHYLENE

Correlations of infrared spectra with structure. J. Bomstein. bibliog Anal Chem 25: 512-14 Mr '53

Interaction of methylene deformation frequencies in paraffin crystals. R. S. Stein and G. B. B. M. Sutherland. J Chem Phys 21:370-1 F '53

Thermodynamic properties and the characteristic CH_2 frequencies of *n*-paraffins. W. B. Person and G. C. Pimentel. bibliog Am Chem Soc J 75:532-8 F 5 '53

METHYLENE blue

Photometric determination of sulfide and reducible sulfur in alkalies. M. S. Budd and H. A. Bewick. bibliog diag Anal Chem 24:1536-40 O '52

METHYLENE chloride

Diffusion of benzene and methylene chloride vapors into polystyrene. F. A. Long and R. J. Kokes. bibliog Am Chem Soc J 75: 2232-7 My 5 '53

Microwave spectra, structure, dipole moment, and chlorine nuclear quadrupole coupling constants of methylene chloride. R. J. Myers and W. D. Gwinn. bibliog J Chem Phys 20:1420-7 S '52

Analysis

Determination of some chlorine-substituted methanes and ethanes; infrared and mass spectrometric determination. R. B. Bernstein, G. P. Semeluk and C. B. Arends. bibliog Anal Chem 25:139-42 Ja '53

METHYLENE compounds

Quinone imides; addition of active methylene compounds of *p*-quinonedibenzenesulfonimide and its derivatives. R. Adams and D. C. Blomstrom. bibliog Am Chem Soc J 75:3403-5 Jl 20 '53

Quinone imides; addition of active methylene compounds to 1,4-naphthoquinonedibenzenesulfonimide. R. Adams and W. Moje. bibliog Am Chem Soc J 74:5557-60 N 20 '52

Reactions of orthoesters with active methylene compounds. R. G. Jones. bibliog Am Chem Soc J 74:4889-91 O 5 '52

METHYLENE cyclohexanone

Dimer of 2-methylenecyclohexanone. E. W. Warnhoff and W. S. Johnson. bibliog Am Chem Soc J 75:496-7 Ja 20 '53

METHYLENE cyclopropane

Synthesis and properties of methylenecyclopropane. J. T. Gragson and others. bibliog Am Chem Soc J 75:3344-7 Jl 20 '53

METHYLENE group

Characterization of methyl and methylene groups in steroids by infrared spectrometry. R. N. Jones, A. R. H. Cole and B. Nolin. bibliog diags Am Chem Soc J 74:5648-68 N 20 '52

METHYLENE iodide

Fluorescence obtained from formic acid, carbonyl chloride, and methylene iodide. P. J. Dyne and D. W. G. Style. pl Chem Soc J p2122-4 Je '52

Origins of the fluorescences obtained from formic acid and methylene iodide. D. W. G. Style and J. C. Ward. Chem Soc J p2125-7, pl 1-2 Je '52

METHYLENIMINE

Action of hydrogen sulphide on certain methyleneimines. E. R. Braithwaite and J. Graymore. Chem Soc J p 143-5 Ja '53

Derivatives of *o*-, *m*-, and *p*-aminobenzotrifluoride; azomethines containing the trifluoromethyl group. P. M. Maginnity and J. L. Eisenmann. bibliog Am Chem Soc J 74:6119-21 D 5 '52

Macrozamin; azoxymethane and some simple analogues. B. W. Langley, B. Lythgoe and L. S. Rayner. Chem Soc J p4191-8 N '52

Photochemical decomposition of azomethane. M. H. Jones and E. W. R. Steacie. bibliog J Chem Phys 21:1018-25 Je '53

Reaction of azomethines with methylmagnesium iodide. P. M. Maginnity and T. J. Gair. bibliog Am Chem Soc J 74:4958-9 O 5 '52

Structures and properties of some metal derivatives of azo and azomethine dyes. J. C. Bailer, jr. and C. F. Callis. bibliog Am Chem Soc J 74:6018-21 D 5 '52

METHYLIDYNE (free radical)

Rotational and vibrational temperatures of CH in flames at atmospheric pressure. H. P. Broida. bibliog J Chem Phys 21:340-6 F '53

METHYLOL compounds

Analysis

Quantitative determination of methylol phenols by paper chromatography. J. H. Freeman. bibliog Anal Chem 24:2001-2 D '52

METLON

All that glitters is not gold; it's aluminum; Metlon, a non-tarnishing yarn. il Sales Management 70:56-9+ Mr 15 '53

METOPON

Structure of metopon. G. Stork and L. Bauer. Am Chem Soc J 75:4373-4 S 5 '53

METRIC system

Cuba adopts metric weight system. For Comm W 48:3 N 3 '52

Genesis of the metric system and the work of the International bureau of weights and measures; tr. by R. E. Oesper. H. Moreau. il maps J Chem Educ 30:3-20 Ja '53

METROPOLITAN districts

Metropolitan road system to be established in greater Toronto. map Roads & Eng Constr 91:125-7+ Ap '53

METROPOLITAN districts—*Continued*

New housing in metropolitan areas, 1949-51. M. F. Carney. U S Bur Labor Statistics Bul 1115:1-64; pa 35c Supt. of doc. '52

Our growing suburbs; with table showing changes between 1940 and 1950 in leading metropolitan areas. Life Ins Courant 58:61 My '53

Sales in seven added store types, 187 metropolitan areas. Sales Management 69:83-4+ N 10 '52

Water-supply and sewerage to be under unified control in greater Toronto. il map plan Munic Util 91:15-19+ F '53

See also

Shopping areas

METROPOLITAN Edison company

Bonds offered. Comm & Fin Chr 177:2250 My 25 '53

METROPOLITAN life insurance company

New titles given 20 men advanced by Metropolitan Life. East Underw 53:1+ D 19 '52

METROPOLITAN opera company

Dallas turns out for New York Met. il Bsns W p30-2 My 16 '53

MEXICAN light and power company, ltd.

Public utility securities. O. Ely. Comm & Fin Chr 176:1539 O 23 '52

MEXICO

English investments in Mexico; a story of bonanzas and heartbreaks. J. F. Rippy. J Bsns 25:242-8 O '52

Operating a radio factory in Mexico. L. Wilcoxon. il Midwest Eng 5:5-6+ N '52

See also

Aeronautics—Mexico
Airlines—Mexico
Chemical industries—Mexico
Electricity supply—Mexico
Hydroelectric plants—Mexico
Investments, Foreign (in Mexico)
Mines and mineral resources—Mexico
Paper industry and trade—Mexico
Petroleum industry and trade—Mexico
Railroads—Mexico
Tourist trade—Mexico

Commerce

Europeans court Mexico's big market. il Bsns W p 168-70 N 22 '52

Commercial policy

Controls on international trade (cont). For Comm W 49:9 Ja 5 '53

Economic conditions

Business opportunity in Mexico. Comm & Fin Chr 177:1320 Mr 26 '53

Economic conditions abroad (cont). For Comm W 48:3 O 27; 4+ D 8 '52; 49:3 Ja 19; 3+ Mr 9; 3 My 4; 3+ Je 15; 50:3 Jl 6 '53

First-hand view of Mexico today. V. L. Horoth. map Mag of Wall St 91:67-9+ O 18 '52

Mexican trade seasonally quiet; wholesale price index declines. For Comm W 49:2+ Ap 13 '53

Politics and government

Clean living in Mexico. Economist 167:30-1 Ap 4 '53

MEXICO, Gulf of

Occurrence of hydrocarbons in recent sediments from the Gulf of Mexico. P. V. Smith, jr. bibliog Science 116:437-9 O 24 '52

Oil discovery and recovery methods advance; Magnolia field research laboratories investigate recent deposits in Gulf of Mexico. J. Menneer. il Pet Eng 25:B71+ Mr '53

MEXICO university

Mexico's University City. il plans diag Arch Forum 97:99-119 S '52

MIAMI

$150-million expressway system proposed for Miami's traffic problem. Eng N 150:51 Ja 15 '53

MIAMI copper company

Security I like best. H. L. Schick. Comm & Fin Chr 178:254+ Jl 23 '53

MICA

Alternatives to mica. E. R. Haines. il Elec R (Lond) 153:437-41 Ag 28 '53

Built-up mica plate for high-temperature applications. C. L. Dawes and W. R. Mansfield. bibliog il diags Elec Eng 72:145-50 F '53

Developments to watch. Product Eng Hdbk p C33 '53

Energy loss of protons in metallic foils and mica. D. Kahn. bibliog diag Phys R 90:503-9 My 15 '53

Improved electrical insulation from mica paper. R. L. Griffeth and E. R. Younglove. il Product Eng 24:210-13 My '53

Kings Mountain mica operation. E. D. White. flow sheet il Eng & Min J 154:94-6 Mr '53

Mica deposits of the southeastern Piedmont. R. H. Jahns and others. il maps diags U S Geol S Professional Pa 248-A:1-102, pl 1-6 bibliog(p96-9); pa $1.25; 248-B:103-39; pa 60c Supt. of doc. '52

Mica, 1952. W. F. Dietrich. Eng & Min J 154:110 F '53

Rate of nucleation of ammonium iodide on mica. R. S. Bradley. diag Chem Soc J p4530-2 N '52

Report of ISO committee on standards for the quality of mica. Standardization 23:292-3 S '52

Spruce Pine, N.C. mineral kingdom. C. H. Vivian. il map Comp Air Mag 58:152-9, 187-94 Je-Jl '53

Synthetic mica investigations; hot-pressed machinable ceramic dielectric. J. E. Comeforo and others. bibliog il Am Cer Soc J 36:286-94 S 1 '53

Synthetic mica investigations; role of fluorides in mica batch reactions. W. Eitel and others. bibliog Am Cer Soc J 36:341-8 O 1 '53

Synthetic mica used commercially. Electronics 26:6 Mr '53

MICE

Development of strains of albino mice with predictable susceptibilities to audiogenic seizures. H. Frings and M. Frings. bibliog Science 117:283-4 Mr 13 '53

Nature of genetic resistance to infection in mice. J. A. Weir and others. bibliog Science 117:328-30 Mr 27 '53

Skeletal difference between sublines of the C3H strain of mice. E. L. Green. Science 117:81-2 Ja 23 '53

Diseases and pests

Outbreak of mouse-pox (infectious ectromelia) in the United States. J. J. Trentin and B. A. Briody. bibliog Science 117:226-8 F 27 '53

MICELLES

Critical concentrations of potassium *n*-alkanecarboxylates as determined by the change in color and spectrum of pinacyanole. S. H. Herzfeld. bibliog J Phys Chem 56:953-9 N '52

Critical micelle concentrations by a bubble pressure method. A. S. Brown and others. diag J Phys Chem 56:701-5 Je '52

Effect of salt on the critical concentrations of potassium *n*-alkanecarboxylates as determined by the change in color of pinacyanole. S. H. Herzfeld. bibliog J Phys Chem 56:959-63 N '52

New method of measuring diffusion coefficients. K. J. Mysels and D. Stigter. bibliog diags J Phys Chem 57:104-6 Ja '53

Solubilization in alcohol-soap micelles; electrolytes as additives. H. B. Klevens. bibliog Am Chem Soc J 74:4624-6 S 20 '52

Structure of micelles. G. D. Halsey, jr. bibliog J Phys Chem 57:87-9 Ja '53

MICHAEL reaction

Colchicine studies; synthesis and reactions of 2-arylcyclohept-2-enones. D. Ginsburg and R. Pappo. bibliog Am Chem Soc J 75:1094-7 Mr 5 '53

MICHAELIS-MENTEN theory

Curve fitting of enzymatic reactions based on the Michaelis-Menten equation. G. A. Fleisher. bibliog Am Chem Soc J 75:4487-90 S 20 '53

Evaluation of the constants V_m and K_m in enzyme reactions. B. H. J. Hofstee. Science 116:329-31 S 26 '52; Discussion. G. S. Eadie. 116:688 D 19 '52

MICHIGAN

See also

Copper mines and mining—Michigan
Gasoline industry—Michigan
Iron mines and mining—Michigan
Taxation—Michigan

MICHIGAN, Lake

Lake Michigan erosion studies. J. R. Hardin and W. H. Booth, jr. map plan diags Am Soc C E Proc 78 [no 115]:1-12 F '52; Discussion. 78[no D-115]:1-10 N '52

Method for predicting Michigan-Huron Lake level fluctuations. D. M. Pierce and J. E. Vogt. Am Water Works Assn J 45:502-20 My '53; Abstract. Water & Sewage Works 100:348 S '53

MICHIGAN university

University of Michigan celebrates centennial of engineering; with brief history of Department of naval architecture and marine engineering. L. A. Baier. il Marine Eng 58:61-2 O '53

MICROAMMETER. See Ammeters

MICROAMPERE integrator. See Integrators

MICROANALYSIS

Analysis; minute quantities of elements identified in thin films. Iron Age 170:194+ N 6 '52; Tool Eng 30:55 F '53

Automatic titrator using electrolytically generated titrants. W. N. Carson, jr. bibliog diags Anal Chem 25:226-30 F '53

Chemical analyses in the submicromolar region. L. B. Rogers. bibliog J Chem Educ 29:612-15 D '52

Determination of milligram and submilligram quantities of copper by the iodate titration of cuprous thiocyanate. K. Tantranon and B. B. Cunningham. bibliog Anal Chem 25:194-5 Ja '53

Future of clinical microchemical analysis. D. Glick. bibliog il diags Chem & Eng N 31:139-42 Ja 12 '53

Infrared microspectroscopy; a capillary cell for liquids. E. R. Blout and others. bibliog il diag Opt Soc Am J 42:966-8 D '52

Microdetermination of carboxy groups in aromatic and aromatic-type heterocyclic acids. M. Beroza. diag Anal Chem 25:177-9 Ja '53

Microdetermination of flash point on petroleum products. P. McCutchan and D. A. Young. bibliog diags Anal Chem 24:1974-6 D '52

Microdetermination of osmium. W. J. Allan and F. E. Beamish. bibliog diag Anal Chem 24:1608-12 O '52

Microgram and submicrogram determination of phosphate; applications of sealed tube digestion and capillary cell spectrophotometry. F. L. Schaffer, J. Fong and P. L. Kirk. bibliog il diags Anal Chem 25:343-6 F '53

Microgravimetric methods for platinum; a comparative study. A. P. Blackmore and others. bibliog Anal Chem 24:1815-19 N '52

Microthermal analysis of the system 1,2,3,4-tetrachlorobenzene-pentachlorobenzene. C. J. Arceneaux. bibliog il Anal Chem 25:486-9 Mr '53

Modified Van Slyke method for microquantitative determination of aliphatic amino groups. A. S. Hussey and J. E. Maurer. diags Anal Chem 24:1642-4 O '52

Photometer and absorption cell attachment for ultramicro-spectrophotometry. R. Craig and others. bibliog il diag R Sci Instr 24:49-52 Ja '53

Photometric determination of microgram quantities of palladium with beta-furfuraldoxime. E. W. Rice. bibliog Anal Chem 24:1995-7 D '52

Photonephelometric microdetermination of sulfate and organic sulfur. G. Toennies and B. Bakay. bibliog Anal Chem 25:160-5 Ja '53

Recent developments in quantitative organic microanalysis. W. Kirsten. bibliog(62 ref) il diags Anal Chem 25:74-86 Ja '53

Semi-quantitative spot test for tin in magnesium and aluminium alloys. J. Clark and W. Stross. Metallurgia 46:215-16+ O '52

Titration of uranium(IV) by electrolytically generated ceric ion. N. H. Furman, C. E. Bricker and R. V. Dilts. bibliog diag Anal Chem 25:482-6 Mr '53

MICROBALANCE. See Balances

MICROBIOLOGIC assay. See Biological assay

MICROBIOLOGY

Application of paper chromatography to microbiology; abstract and discussion. A. J. Woiwood; H. Proom. bibliog Chem & Ind p 1153-4 N 22 '52

MICROCALORIMETER. See Calorimeters and calorimetry

MICROCHEMISTRY

Cholesterol and companions; microdetermination of Δ^7-stenols. K. Nakanishi, B. K. Bhattacharyya and L. F. Fieser. diag Am Chem Soc J 75:4415-17 S 20 '53

Recent advances in microbiological methods; symposium. M. Stacey and others. Chem & Ind p 124-6 F 7 '53

Apparatus

Calculator for selection of sample weights in microdetermination of carbon and hydrogen. R. C. Thompson. bibliog diags Anal Chem 25:535-6 Mr '53

Mighty mites of product research; microchemistry. il Mod Ind 25:44-5 Mr '53

Miscellaneous microchemical devices; simple low-pressure hydrogen sulphide generator. J. T. Stock and P. Heath. diag Metallurgia 47:51 Ja '53

MICROFILM records

From closed frontier to wide open office spaces; microfilm processing of records; Valley national bank, Phoenix. O. A. Burton. Credit & Fin Management 55:22-3 Ap '53

In the records. Am Cer Soc Bul 32:86 Mr 15 '53

MICROFILMS

Bibliography

Union list of microfilms, supplement 1949-1952. E. E. Campion, ed. 995p $10 J. W. Edwards, Ann Arbor, Mich. '53

MICROLOG. See Petroleum—Well logging

MICROMETERS

Use of micrometer Baly cells with Beckman and Cary ultraviolet spectrophotometers. R. C. Hirt and F. T. King. bibliog il Anal Chem 24:1545-8 O '52

MICROORGANISMS

Application of partition paper chromatography to microbiology. H. Proom and A. J. Woiwood. bibliog il diags Chem & Ind p311-15 Ap 4 '53

Applications of the technique of paper chromatography to microbiology. W. G. C. Forsyth. bibliog Chem & Ind p315-16 Ap 4 '53

Biological deterioration of polysulfide polymers employed as linings for gasoline storage tanks. F. H. Allen and D. Fore, jr. il Ind & Eng Chem 45:374-7 F '53

Here's how to nip those beverage contaminators. N. F. Insalata. il Food Eng 25:70-2 Ap '53

Influence of age of serum on microbiological response. E. S. Wynne and D. A. Mehl. Science 117:153-5 F 13 '53

Use of bacterial phosphatases in differentiating certain micro-organisms. J. Trammer. Chem & Ind p 126 F 7 '53

See also

Bacteria
Fermentation
Microscope and microscopy
Plankton
Protozoa
Viruses

MICROPHONES

Calibration and use of probe-tube microphones. R. W. Benson. bibliog il diags Acoustical Soc Am J 25:128-34 Ja '53

Pressure microphone for tv and broadcast service. L. J. Anderson. il diag Tele-Tech 12:58-9+ Ja '53

Uniaxial microphone. H. F. Olson and others. il diags RCA R 14:47-63 Mr '53

MICROPHOTOGRAPHY

See also

Microfilm records
Microfilms

MICROPHYSIOLOGY (term)

Microphysiology. R. S. Anderson. Science 116:sup3 N 14 '52

MICRORADIOGRAPHY. See Radiography

MICROSCOPE, X ray. See X-ray microscope

MICROSCOPE and microscopy

Amateur scientist. A. G. Ingalls. il Sci Am 188:80-4 Ja '53

MICROSCOPE and microscopy—*Continued*

Counting of dust particles by phase microscopy. G. Crossmon. bibliog il A M A Archives Ind Hygiene & Occup Med 6:416-20 N '52

Determination of surface geometry and structure by microscopy and diffraction. C. F. Tufts. bibliog il diags Anal Chem 24:1700-4 N '52

Fiber analysis of paper and paperboard; revision of TAPPI tentative standard T 401 m-42. bibliog Tappi 36:sup 170A-8A Ag '53

Flying-spot microscope. F. Roberts and others. il diags Electronics 26:137-9 Jl '53

Formation of the diffraction image with electrons in the Gabor diffraction microscope. M. E. Haine and T. Mulvey. bibliog il diags Opt Soc Am J 42:763-73 O '52

Incident-light phase-contrast microscope and its use in metallography. F. Gabler and R. Mitsche. Metal Prog 64:134+ Ag '53

Industrial chemical microscopy; abstract. C. Arceneaux. Chem & Eng N 31:663 F 16 '53

Microscope for edges of turbine blades. il Engineering 176:192 Ag 7 '53

Microscope tells toxicity of dust. Nat Safety N 67:67 My '53

Microscopic study of molecular complex formation and soil removal. D. G. Stevenson. bibliog il diags Textile Inst J Trans 44:T 12-35 Ja '53

New production tool; microscopic analysis as method of determining origin of water in oil formations. D. H. Stormont. Oil & Gas J 52:147 Je 22 '53

Perkin-Elmer machine tool locating microscope. il Tool Eng 31:107 Jl '53

Practical approach to the study of stones in glass. H. R. Swift. bibliog il Glass Ind 34:191-4+ Ap '53

Precision microscope superstage. T. M. Putnam and J. F. Miller. diags R Sci Instr 23:760-1 D '52

Study in diffraction microscopy with special reference to X-rays. A. V. Baez. il diags Opt Soc Am J 42:756-62 O '52

Uses of the hot-stage microscope; abstract. P. J. E. Forsyth. Metal Prog 63:204+ Je '53

See also

Electron microscope
Metallography
Microtomes
Photomicrography
X ray microscope

Technique

High-speed counting of steel foundry dust particles; use of Flying-Spot microscope. G. M. Michie. il diags Engineer 195:485-7 Ap 3 '53

Improved boat for collecting thin sections for electron microscopy. F. W. Bishop. bibliog il diag R Sci Instr 24:78-9 Ja '53

Improved slide holder for thin sectioning of rocks. D. J. Jones. il Econ Geol 48:149-50 Mr '53

Preparation of uniformly dispersed specimens of particulate matter for electron microscopy. R. E. Hartman and others. il J Ap Phys 24:90-2 Ja '53

Specialized microscopical techniques in metallurgy. S. Tolansky. Metal Prog 63:182+ My '53

Two methods of measuring the degree of straightness of a microscope stage. R. M. Tennent. diag J Sci Instr 30:89-90 Mr '53

See also

Electron microscope—Replica technique
Microtomes

Ultraviolet microscope

Ultraviolet microscopy of the living cell's response to lethal X-radiation. P. O. Montgomery and S. Warren. bibliog il Science 117:589-91 My 29 '53

MICROSCOPIC models

New medium for modeling microscopic structures in three dimensions. C. W. Rutschkey. Science 117:114-15 Ja 30 '53

MICROSTRIP

Manufacture of microstrip; new system of microwave circuitry, developed by Federal telecommunication laboratories; illustrations with text. Elec Com 29:250-9 D '52

Microstrip, a new transmission technique for the kilomegacycle range. D. D. Grieg and H. F. Engelmann. il diags Inst Radio Eng Proc 40:1644-50 D '52; Same. Elec Com 30:26-35 Mr '53

Microstrip brings the size down; technique of fabricating radar wave guides and components. il diag Aviation W 58:46-7 F 2 '53

Microstrip components. J. A. Kostriza. il diags Inst Radio Eng Proc 40:1658-63 D '52; Same. Elec Com 30:46-54 Mr '53

Microstrip; transmission technique for the kilomegacycle range. G. W. O. Howe. diags Wireless Eng 30:75-6 Ap '53

Simplified theory of microstrip transmission systems. F. Assadourian and E. Rimai. diags Inst Radio Eng Proc 40:1651-7 D '52; Same. Elec Com 30:36-45 Mr '53

MICROTOMES

Cantilever microtome for precision sectioning in electron and light microscopy. G. G. Cocks and C. M. Schwartz. il diags R Sci Instr 23:615-18 N '52

Microtome for use in measuring fineness of wool fibres by transverse sections. C. L. de Cuenca. il Textile Inst J 43:P729-33 S '52

MICROWAVE communication. See Radio communication—Short wave

MID-CENTURY conference on resources for the future

Comprehensive program being developed for Mid-century conference on resources for the future. Chem & Eng N 31:2046+ My 18 '53

Resources parley gets minerals steering unit. Oil Paint & Drug Rep 164:7 O 5 '53

Resources unit picks two more committees. Oil Paint & Drug Rep 164:5+ S 21 '53

Water group formed for resources study. Oil Paint & Drug Rep 164:4+ S 14 '53

MIDDLE EAST. See Near East

MIDDLE SOUTH utilities, inc.

Registers with SEC. Comm & Fin Chr 177:1259, 1369-70 Mr 23, 30 '53

MIDDLE WEST

See also

Sewerage—Middle-western states

MIDGES

Studies on natural pollination of hevea brasiliensis in Brazil. H. E. Warmke. bibliog Science 116:474-5 O 31 '52

MIDGLEY, Thomas, 1889-1944

T. Midgley, jr.; with list of his publications. por(front) Am Chem Soc J 75:2791-5 Je 20 '53

MIDLAND, Michigan

Water supply

Management and operation of Saginaw-Midland water supply system. A. Eckert. Am Water Works Assn J 45:1075-8 O '53

MIDLAND bank, limited

Statement by the chairman. Lord Harlech. Economist 166:249-51 Ja 24 '53

MIDWESTERN independent statistical service

Annual meeting, Chicago. Nat Underw 57:7+ My 28 '53

MIGRATION

See also

Immigration and emigration

MILDEW

Ketone derivatives of rhodanine show mildewproofing activity. Chem & Eng N 31:1990+ My 11 '53

Mildew and micro-organisms in textiles; abstract. Am Dyestuff Rep 41:787 N 24 '52

MILITARY administration

Fighting-man and the frocks. R. Hargreaves. il U S Naval Inst Proc 78:1188-97 N '52

Government by generals. Economist 165:872-4 D 27 '52

MILITARY air bases. See Air bases, Military

MILITARY air transport service. See United States—Military air transport service

MILITARY airplanes. See Airplanes, Military

MILITARY and naval service insurance. See Insurance, Military and naval service

MILITARY art and science
Library of Congress. Class U, Military science. 3d ed 86p pa 75c Supt. of doc. '52
See also
Aeronautics, Military
Atomic bombs
Radio communication, Military
Strategy
War

Amphibious warfare

Amphibious power in the atomic age. F. E. Haynes. il U S Naval Inst Proc 78:1102-9 O '52
Mechanized landing force and the blitz beachhead. A. J. Stuart. il U S Naval Inst Proc 78:1208-17 N '52

MILITARY bridges
Heavy tactical bridge made light. il Eng N 149:28 O 23 '52
New bridge gets army OK. Steel 131:128 N 3 '52

MILITARY buildings
Alaskan lump-sum program successful. il Eng N 149:28 N 20 '52
Aluminum put to good use at Greenland air base. Materials & Methods 36:194+ D '52
Army discloses data on sub-Pentagon; underground communications center for the three military services at Fort Ritchie, Md. il Eng N 149:28 N 13 '52
Block-houses on the last frontier; defense installations in Alaska. G. W. Avery. il Concrete 60:28+ O '52
Joint planning standards developed for building programs of all armed forces. E. Mickel. Arch Rec 113:12 Ja '53
Riley group chides services on construction. Eng N 149:26 O 23 '52
U.S. Corps of engineers' regulations for the use of concrete masonry; prevention of wall crackling. D. L. Chaney. Concrete 61:8-10 F '53
See also
Barracks
United States—Air service—Barracks and quarters

Heating and ventilation

Fuel savings by armed forces modernization program. Heat & Ven 50:144+ Jl '53

MILITARY censorship. See Censorship, Military

MILITARY communications. See Communications, Military

MILITARY education
See also
Television in military education

MILITARY engineering
Engineers tackle tough assignment supporting stabilized front in Korea. il Eng N 149:23-4 N 27 '52
New developments in military earth moving equipment. D. A. Hausmann. Roads & Sts 96:80+ Ja '53
See also
Military bridges
Radio apparatus—Military use
United States—Navy—Construction battalions
Water supply for armies

Study and teaching

Engineering training in the Royal electrical and mechanical engineers. Engineering 175:139 Ja 30 '53; Elec R (Lond) 152:269-70 Ja 30 '53

MILITARY fabrics

Testing

Field testing and correlation of laboratory and field test data. L. I. Weiner and S. J. Kennedy. bibliog il Textile Inst J 44:P433-71; Discussion. P471-4 Ag '53

MILITARY government. See Military administration

MILITARY history
Fighting-man and the frocks. R. Hargreaves. il U S Naval Inst Proc 78:1188-97 N '52

MILITARY hospitals. See Hospitals, Military

MILITARY hygiene
See also
Water supply for armies

MILITARY medicine. See Medicine, Military

MILITARY pensions. See Pensions, Military

MILITARY preparedness. See United States—Defenses

MILITARY research
Improving the internal information services in scientific research organizations. S. Herner. bibliog Special Lib 44:15-19 Ja '53
Military research in the universities. J. R. Killian, jr. J Eng Educ 43:13-17 S '52
See also
United States—Army—Laboratories

MILITARY sea transportation service. See United States—Military sea transportation service

MILITARY service
Manpower utilization and national security. A. S. Adams. J Eng Educ 43:325-7 Ja '53
Manpower utilization and national security. C. H. Brown. Mech Eng 74:892-6+ N '52; Same. J Eng Educ 43:328-37 Ja '53; Same. Midwest Eng 5:3-5+ F '53

Insurance aspects

Advertising to families of service personnel. E. A. Anderson. Rough Notes 96:42 Mr '53
A.L.C., L.I.A.A., hold states should regulate life soliciting at military camps. Nat Underw (Life ed) 57:2 F 20 '53
Defense department chill thaws on insurance selling problem on military bases. Nat Underw (Life ed) 56:1 O 31 '52
Defense department issues military sales directive. Nat Underw (Life ed) 57:1+ Je 5 '53
Defense department to ask commissioners aid on agent activity; military post soliciting. East Underw 53:14 N 7 '52
Martin wants states to correct war base abuse. East Underw 54:16 Je 12 '53
Officials confer on military post sales. East Underw 53:10 D 19 '52
Protection of GI on insurance is declared joint aim. Nat Underw 56:1 D 18 '52; Same. Nat Underw (Life ed) 56:1 D 19 '52
Require licenses in military post states. East Underw 54:6 F 20 '53
See also
Insurance, Military and naval service

Labor problems

EMC urges deferment requests follow 19-step outline. Elec Eng 71:1052-3 N '52; Tele-Tech 11:33 N '52
Manpower commission study urges better use of engineers. Product Eng 23:203 O '52

Safety measures

See also
United States—Army—Safety program

MILITARY strategy. See Strategy

MILITARY supplies
Diesel usage in the army; abstract. C. Bullard. Elec J 150:976 Mr 20 '53
New concepts of military packaging; storage and trans-shipment problems. S. S. Horwitz. il Mod Packaging 26:128-32+ S '52
New defense facilities; list of certificates of necessity authorizing new or expanded facilities for the manufacture of automotive and aviation war goods (cont). Automotive Ind 107:134+ N 1; 146+ N 15; 142+ D 15 '52; 108:76+ Ja 15; 136+ Ap 15; 86+ Je 15; 109:118+ Jl 15; 102+ Ag 15; 126+ S 15; 130+ O 15 '53
Petroleum products. W. E. Kuhn. Oil & Gas J 52:139 My 11; 261 My 25 '53
Rigid barriers for the military. G. S. Mustin. bibliog il Mod Packaging 27:163-7+ O '53
See also
United States—Armed services—Equipment and supplies

Standards

British service view of A-B-C standardization. Standardization 23:345-8 O '52
New catalog for defense; Defense department's standardization and cataloging program. J. W. Fowler. Dun's R 60:25-6+ N '52

MILITARY tanks. See Tanks, Military

MILITARY training
British service view of A-B-C standardization. Standardization 23:345-8 O '52
Eisenhower orders restudy of U.M.T.; text of statement. Comm & Fin Chr 178:362 Jl 30 '53

MILK
Calcium salts and the rennet coagulation of milk. G. T. Pyne. Chem & Ind p302-3 Mr 28 '53
Food and water borne disease outbreaks; incidence of infectious hepatitis by state. C. C. Dauer. Pub Health Rep 67:1089-95 N '52
Removal of thiamin and riboflavin from milk for dietary use. L. F. Adamson. bibliog Science 117:253 Mr 6 '53
See also
Casein
Milk supply

Analysis

Isolation of crystalline α-lactalbumin from milk. W. G. Gordon and W. F. Semmett. bibliog Am Chem Soc J 75:328-30 Ja 20 '53

Fluorine content

Rational approach to fluoridation. J. E. McKee. bibliog Am Water Works Assn J 45:381-4; Discussion. C. N. Sawyer. 385-6 Ap '53

Preservation

Canned whole milk. il Mod Packaging 27:128-31+ S '53
Cow to can; new process may revolutionize milk industry. N. Willatt. Barron's 32:11-12 O 6 '52
See also
Milk plants—Equipment

Transportation

Carnation ok's LPG; with cost data. W. J. Thompson. il Food Eng 25:56-7 Je '53
Tank trucks equipped with milk receiving unit. il Food Eng 25:159 Ap '53

MILK, Dried
Packeted dry milk; fractional packaging. il Mod Packaging 26:112-15 F '53

MILK, Powdered. See Milk, Dried

MILK bottles
Milk in bottles ready for baby; Sunrise dairies. il Food Eng 24:141 N '52

MILK containers
Elsie Daisy; framing her in yellow daisy gives Borden's identifying symbol. il Mod Packaging 26:92-3 N '52
Millions in yogurt; Dannon made the product suit the package. il Mod Packaging 26:130-1 N '52

Manufacture

Pyramid-type paper bottles made, filled link-fashion. il Food Eng 25:48-9 S '53

MILK cooling
Bulk milk cooling. A. C. Woodruff. il Refrig Eng 60:1276-8+ D '52; Discussion. 61:60 Ja '53

MILK delivery
Bringing delivery route costs under standards. W. D. Holdsworth. N A C A Bul 34:254-62 O '52

MILK handling
Bulk milk cooling. A. C. Woodruff. il Refrig Eng 60:1276-8+ D '52; Discussion. 61:60 Ja '53

MILK plants

Accounting

Beneficial costing for milk products. R. W. Cherry. N A C A Bul 34:50-7 S '52

Employees

Earnings in selected industries, late 1951 and early 1952; milk-dealer industry. A. N. Jarrell. Mo Labor R 75:422-3 O '52

Equipment

Paper milk containers cased automatically. Food Eng 25:158 Ap '53
Progress in canned fresh milk; International milk processors, inc. il Food Eng 24:90-2 N '52

Sanitation

Benefits of cleaning pipelines in place; Damascus milk co. R. B. Parker and others. bibliog il Food Eng 25:82-6+ Ja '53
Cleaning stainless lines in place; Cornell university experimental milk plant. R. F. Holland and others. il Food Eng 25:75-8 My '53

MILK powder. See Milk, Dried

MILK supply
Milk sanitation honor roll for 1950-52. Pub Health Rep 67:914-16 S '52

MILK waste. See Dairy waste

MILKING machines
Milking machines; abstract. H. S. Hall. Elec R (Lond) 152:245 Ja 30 '53

MILLER brewing company
Rise of Miller High Life. il Fortune 47:130-3+ F '53

MILLER manufacturing company
Securities offered. Comm & Fin Chr 178:298 Jl 27 '53
Security I like best. P. P. Chester. Comm & Fin Chr 177:2302 My 28 '53

MILLIKIN, Eugene Donald, 1891-
Portrait. Bsns W p29 N 8 '52

MILLINERY workers
Earnings in selected industries, late 1951 and early 1952; millinery industry. L. E. Badenhoop. Mo Labor R 75:419-20 O '52

MILLING
CO_2 cuts milling costs. Steel 132:125 My 25 '53
Cutting forces and temperatures when milling with carbide cutters. H. Opitz and J. Kob. bibliog il Tool Eng 30:35-41 Ja '53
How to tap, mill and broach titanium. V. L. Coughlin. il diags Iron Age 171:186-8 Mr 5 '53
Influence of higher rake angles on performance in milling. J. H. Crawford and M. E. Merchant. il A S M E Trans 75:561-6 My '53; Same cond. Am Mach 96:172-5 Jl 7 '52
Milling accurate keyways. F. E. Riley. diags Tool Eng 30:42 Mr '53
Milling rotor blades for ram-jet engines. il Mach 59:200-2 My '53
Turret lathe flute-milling attachment. C. T. Bower. diags Mach 60:198-200 S '53
Workpiece and surface temperatures in milling. A. O. Schmidt. bibliog diags A S M E Trans 75:883-9; Discussion. 889-90 Jl '53

Tables, calculations, etc.

Milling-machine feed rate; nomograph; reference book sheet. T. Hicks. Am Mach 97:181 Ap 13 '53

MILLING cutters
Cutting forces and temperatures when milling with carbide cutters. H. Opitz and J. Kob. bibliog il Tool Eng 30:35-41 Ja '53
Helix angle facing ground on spar mill cutter tips. il Iron Age 171:153 Mr 26 '53
High-rake milling. C. Edgar and others. il Am Mach 97:133-8 S 28 '53
How to run a milling machine. H. E. Linsley. il Am Mach 97:154-6 F 16 '53
How water soluble oils affect carbide milling cutter life. J. R. Roubik. il Iron Age 170:112-15 O 23 '52
Influence of higher rake angles on performance in milling. J. H. Crawford and M. E. Merchant. il A S M E Trans 75:561-6 My '53; Same cond. Am Mach 96:172-5 Jl 7 '52; Conclusions. Iron Age 170:194-5 S 11 '52
Power required by carbide-tipped face-milling cutters. W. W. Gilbert and others. il diags A S M E Trans 75:1087-92; Discussion. 1092-3 Ag '53
Progressive radius milled by key-shaft guided cutter. E. Winkler. diags Am Mach 96:170 N 10 '52
Tungsten carbide insert blades speed milling of gear cases. il Iron Age 171:187-8 Ap 2 '53

MILLING machines
American machinery co. vertical milling machine features extensive handwheel controls. il Am Mach 97:182 Jl 6 '53
Arbor stabilizer for horizontal milling machine. C. H. Winterburn. diag Mach 59:208 Ja '53
Automatic processing for engine casings. il Tool Eng 31:112 S '53

MILLING machines—*Continued*

Backlash eliminator permits two-direction milling; 2-24 Cincinnati automatic milling machines. il diag Machine Design 25:140 My '53
Bokoe model two milling machine. il Tool Eng 31:112 Ag '53
Cincinnati line of automatic milling machines. il Am Mach 97:150-1 Mr 2 '53; Mach 59:205-6 Mr '53; Automotive Ind 108:74 Ap 1 '53; Tool Eng 30:119 My '53
Duplicating milling machine. il Tool Eng 31:112 O '53
Elliott improved milling machines. il Engineer 195:870 Je 19 '53
Fast miller gives fine finish. I. Stone. il Aviation W 58:52+ Ap 27 '53
German milling machine has 42 speeds and 50 feeds. il Am Mach 97:214 Je 8 '53
Gray introduces line of heavy-duty planer-type milling machines. il Am Mach 97:200 S 14 '53
High-speed mill flies into aircraft parts; Consolidated Vultee aircraft corp. il Steel 132:116-17 My 25 '53
How to run a milling machine. H. E. Linsley. il diags Am Mach 97:149-64 F 16 '53
Hydraulic clamping accelerates spar milling. il diags Mach 59:180-1 Ja '53
Integrally-stiffened skin milling. J. Daugherty and J. M. Delfs. il diag Aero Digest 66:90-102+ Ap '53
Kearns Optimetric jig mill. il Mach 59:219 My '53
Keller machine designed for electric tracer control. il Automotive Ind 109:85 O 1 '53; Same. Mach 60:220 O '53
Magic mill cuts machine time by 90 per cent. il Mill & Factory 52:130 Ap '53
Milling machine; Morey machinery co. il Tool Eng 29:99 D '52
Miracle miller moves metal at 10,700 rpm; 375 ipm. il Am Mach 97:201 F 16 '53
Morey machine for milling and profiling large castings. il Am Mach 97:190 Jl 6 '53
Multiple serration setup for milling machine. H. Dahl. diags Am Mach 97:132 F 2 '53
New two-headed miller quadruples production. il Factory Management 110:145 N '52
1953 American Machinist production preview. il Am Mach 97:172-7 Ja 19 '53
Portable Diesel bed plate miller. il Ry Loco & Cars 127:86 Mr '53
Reed-Prentice vertical milling machine. il Mach 59:228 D '52
Rigidmils fashion aircraft propellers. il Mach 59:193-5 Ja '53
Rockwell improved punch and die milling machine. il Engineer 195:631 My 1 '53
Snyder automatic machine for processing jet-engine compressor casings. il Mach 60:204-5 S '53
Special milling machine designed to machine rotor blades. il Iron Age 171:112 Ja 8 '53
Table moves to within 0.0004 in. on Nube vertical milling machine. il Am Mach 96:214 O 13 '52
Thiel duplex 158 punch and die milling machine. il Automobile Eng 43:370 S '53
Transfer machine combines rough and finish milling. il Iron Age 171:147 Ap 23 '53
Turbine blades automatically; Ex-Cell-O precision profile miller and grinders. il Aero Digest 66:62+ Ja '53
Underarm support aids milling and boring of large work. D. M. Laflin. il Mach 59:156-60 N '52
Vibrations in knee-type horizontal milling machines. I. Bendixen. bibliog diags A S M E Trans 75:567-72 My '53; Abstract. Am Mach 96:176-7 S 15 '52; Discussion. il A S M E Trans 75:572-4 My '53
Victomatic heavy-duty milling machine. il Engineering 176:25 Jl 3 '53
Viking bench-type mill. il Tool Eng 31:110 Jl '53
Werner knee type vertical milling machine. il Mach 59:221-2 Ag '53
What's ahead the next ten years in machining. Am Mach 96:E 12-15 Mid-N '52
You'll run machines at higher speeds; new high-speed milling machine. il Factory Management 111:127 Ap '53

Control

Computers and servos combine to permit machining by the numbers. il Mill & Factory 53:91 Ag '53
Contour tracer for automatic machinery; patent. diags Electronics 26:198+ S '53
Punched tape guides milling machine cutters. J. O. McDonough. il diags Electronics 26:135-7 Ap '53

Fixtures

Automatic indexing and drilling fixture. A. Clarke. diags Am Mach 97:177 Ap 13 '53
Bore rectangular holes with this milling attachment. A. Clarke. diags Am Mach 97:135 Ag 17 '53
Contour-milling fixture for irregular shapes. V. Gabriel. diags Am Mach 97:188 O 12 '53
How to mill a large radius. E. Winkler. diag Am Mach 96:170 O 13 '52
Pivoting fixture used for milling a curved surface. R. Mery. diags Mach 60:197-8 S '53
Quick-acting fixture holds balls accurately for milling operation. R. Mery. diags Mach 59:203-4 Ap '53
Quick-acting miller clamp. C. T. Bower. diags Am Mach 97:132 Mr 2 '53
Slot-milling fixture with a sliding locator. W. M. Halliday. diags Mach 59:205-6 Ja '53
Spar mill tooling. J. M. Stolz. il diags Tool Eng 31:63-5 Jl '53

MILLIVOLTMETERS. See Voltmeters

MILLS, Ball. See Ball mills

MILWAUKEE

Consultants propose expressway plan to relieve Milwaukee's congestion. plan Eng N 149:47-8 D 4 '52
Expressway plan developed for city of Milwaukee. plan Civil Eng 22:1052-3 D '52
New Milwaukee parking law arouses opposition. Eng N 150:46-7 Mr 19 '53

Industries

Milwaukee; more than beer makes it famous il Bsns W p 102-6+ N 8 '52

Streets

Rubber-asphalt pavement test in Milwaukee. J. Hubel. il Pub Works 83:77 D '52

MIND and body

See also
Medicine, Psychosomatic
Mental hygiene

MINE accidents

Health and safety in the mineral industry; annual review, 1952. S. H. Ash. Min Eng 5:174-6 F '53
Mining sets new safety records in 1952. J. T. Ryan, jr. il Min Cong J 39:66-8 F '53

See also
Coal mines and mining—Accidents and explosions
Coal mines and mining—Safety measures
Mining engineering—Safety measures

MINE buildings

Better rock-disposal and better car-cleaning; Lehigh navigation coal co. il diags Coal Age 58:92-5 Je '53
Service buildings for one third less; Red jacket coal corp. il plan diags Coal Age 58:100-2 Ap '53

See also
Headframes

MINE cars

Better rock-disposal and better car-cleaning; Lehigh navigation coal co. il diags Coal Age 58:92-5 Je '53
Coal mine haulage; shuttle car haulage in difficult conditions; Jamison coal & coke co. W. B. Jamison. il Min Cong J 39:65-7 Ag '53
Determination of mine car capacities. E. T. Lang and others. Min Cong J 38:68-9 D '52
Diesel-powered shuttle car. G. R. Hunt. il Can Min J 73:65-7 N '52
Dropbottom cars from autos serve Kanawha mines. J. H. Edwards. il plan Coal Age 58:88-91 Jl '53
Miami car puller improves loading operations. il diags Eng & Min J 154:106+ Ap '53
Origin and growth of sprags. T. Allen. Coal Age 58:137 My '53

MINE cars—*Continued*

Pillar-mining team; continuous miner and tracklaying shuttle car; Jamison coal & coke co. il Coal Age 58:98-9 Jl '53

Shuttle cars from autos. J. H. Edwards. il Coal Age 58:88-91 Ap '53

Simple controls load cars automatically. il Coal Age 58:99 Ag '53

Two tricks cut time and cost in loading mine cars. il diag Coal Age 58:122+ Je '53

Water in shuttle-car tires doubles service life. il Coal Age 58:110 Jl '53

See also

Mine haulage

MINE construction

Aluminum mine props save labor, last longer, improve safety in German coal mines. M. Stern. il Min Eng 5:492-3 My '53

Mechanical handling aids building of new underground hoist room; New Park mining co. J. B. Huttl. il diags Eng & Min J 153:100-2 N '52

Storke level; key to $25 million Climax project. C. M. Cooley. il plans diag Min Eng 5:36-40 Ja '53

Taconite calls for large-scale construction. il Eng N 149:39-40+ D 18 '52

See also

Concrete construction in mines
Headframes
Mine roofs
Mine shafts

MINE doors

Air-operated doors protect shaft crews; Kennecott copper corp. plan diag Eng & Min J 154:112 Ja '53

MINE drainage

Drainage of Morton pit a big job. il Eng & Min J 154:102 Ap '53

Effective air lift for mine shafts. diags Eng & Min J 154:106 Je '53

Mine drainage. E. I. McGee. il diags Min Cong J 39:42-5 Ag '53

Mine drainage at Eureka corp. ltd., Eureka, Nev. G. W. Mitchell. il map diags Min Eng 5:Trans 812-17 Ag '53

See also

Mine pumping, Electric
Mine pumps

MINE dust

How to build a dust-control program and how to keep it working. K. T. Miller. il Coal Age 58:104-6 F '53

Underground dust control and ventilation at Kerr-Addison. J. D. Mateer. il plans diags Can Min J 74:81-6 S '53

MINE equipment

Diesel-powered equipment underground. J. H. East, jr. il Min Cong J 39:22-5 Ja '53

Granby adopts air trammers; cuts drifting labor costs 26 per cent. D. W. Pringle. il Eng & Min J 154:72-4 Ag '53

Greater Butte mine output nears 10,000-ton mark. J. B. Huttl. il diags Eng & Min J 154:77-81 Ap '53

New equipment in 1952. il Eng & Min J 154:147-9+ F '53

Survey of mining practice. A. H. Hubbell. il Eng & Min J 154:111-20 F '53

Underground metal mining progress, 1952. S. H. Boshkov. il Min Cong J 39:54-7 F '53

Underground receiver at Rödsand provides steady mine air supply. C. C. Austin. il diag Eng & Min J 154:92-3 Ag '53

Why mines in Norway and Sweden adopted flat drill steel. C. C. Austin. diags Eng & Min J 154:86-7 O '53

Wire rope cappings. R. Saxton. il Can Min J 74:60-1 Ja '53

See also

Coal mines and mining—Equipment
Electricity in mining
Fans, Mine
Mine cars
Mine hoisting
Mining machinery
Rock drills

MINE filling

Anthracite mechanical mining investigations; preliminary testing of Brieden pneumatic packing machine. C. A. Landsidle and others. 5pls U S Bur Mines Rep of Invest 4978:1-13 bibliog(33 titles, p 12-13) '53

De-sliming tailings for backfilling at Kerr-Addison. H. R. Rice. il diag Can Min J 74:53-7 Ag '53

Filling with unclassified tailing in modified cut-and-fill stopes, Dayrock mine, Wallace, Idaho. P. H. Toepfer. bibliog 2pls U S Bur Mines Information Circ 7649:1-14 '52

Underground stowing by power. il Engineering 175:373 Mr 20 '53

MINE fires

See also

Coal mines and mining—Fires and fire protection

MINE foremen

How not to be it. il Coal Age 58:108+ O '53

Supervisors' responsibilities. H. Northover. Coal Age 57:102+ D '52

Twenty questions. Coal Age 58:118+ Je '53

Wanted; navigators by the dozen. Coal Age 58:108+ S '53

MINE forests. See Forests and forestry, Mine

MINE gases

Practical method for teaching mine workers and officials use of gas-detecting equipment. D. S. Kingery and F. D. Baker. 12pls U S Bur Mines Information Circ 7639:1-6 '52

See also

Methane

MINE haulage

Cleveland-Cliffs conveyor system uses twisted belt. D. K. Campbell and others. il Min Eng 5:676-8 Jl '53

Coal mine haulage. W. B. Jamison; J. D. Sutton. il plans diags Min Cong J 39:65-70 Ag '53

Dart's Aardvark; Diesel-powered truck for use in underground mining operations. il Diesel Power 31:47 S '53

Haulage system in St Joseph lead co. mines of southeast Missouri. E. A. Jones. flow diag il map Min Eng 5:Trans 387-94 Ap '53

Improving haulage safety. Coal Age 58:110+ Mr '53

National lead co. mechanization at Fredericktown, Mo. H. A. Krueger. il map Min Eng 5:Trans 796-801 Ag '53

Stepping up haulage and power; American mining congress Coal division; abstracts of papers. Coal Age 58:99-101 Je '53

Symposium on underground Diesels. D. R. Ramsay and others. il plan Can Min J 73:61-8 N '52

Underground coal transportation, 1952. N. G. Alford. il Min Cong J 39:114-15+ F '53

Underground haulage; abstracts of papers at American mining congress Coal division annual meeting. Min Cong J 39:71-2 Je '53

Use of Diesel equipment in a zinc-lead mine. V. C. Allen. Min Cong J 39:26+ Ja '53

Winter checkpoints for Diesel haulage equipment. E. D. Prieto. Min Cong J 38:122-3 O '52

World's largest battery-operated haulage unit; Olga coal co. il Coal Age 58:114 Ag '53

See also

Coal mining machinery—Conveyors
Electric locomotives, Mine
Locomotives, Mine
Mine cars
Mine tracks
Motor trucks in mining

MINE hoisting

Installing hoist underground has advantages; Day mines, inc. diags Eng & Min J 154:118 My '53

Mechanical handling aids building of new underground hoist room; New Park mining co. J. B. Huttl. il diags Eng & Min J 153:100-2 N '52

MINE hoisting, Electric

A.c. mine winders; installation in South African goldfields. il diag Elec R (Lond) 152:1230-4 My 29 '53

Automatic winding in mine shafts; abstract and discussion. B. L. Metcalf and G. Cuttle. Elec R (Lond) 152:953-4 Ap 24 '53

MINE inspectors' institute of America

Annual meeting, 43d, Birmingham, Ala. June 8-9. Coal Age 58:134-5+ Jl '53

MINE lighting

Fluorescent mine lighting. il Elec R (Lond) 151:753 O 3 '52

More light for coal mines. T. Allen. il Coal Age 58:97 Ap '53

MINE locomotives. See Locomotives, Mine

MINE management
Contract system spells good administration for U.S. Vanadium. il Min Eng 5:756 Ag '53

See also
Coal mines and mining—Management
Mine foremen
Mining methods

MINE models
Analysis of mine opening failure by means of models. B. York and J. J. Reed. il Min Eng 5:Trans705-10 Jl '53
How to make better mine models. E. L. Phillips. il diags Eng & Min J 154:94-6 Ag '53

MINE pumping
Effective use of air-lifts. P. S. Cross. diags Can Min J 73:66 O '52
Moving a lake to work a strip mine; J. Robert Bazley, inc. H. Davis. il diag Coal Age 58:102-5 O '53
New attack on Fad shaft water means more power for pumps. E. J. Watts. il Eng & Min J 154:130+ Ap '53

MINE pumping, Electric
Mine drainage at Eureka corp. ltd., Eureka, Nev. G. W. Mitchell. il map diags Min Eng 5:Trans 812-17 Ag '53
Unwatering Eldorado mine. E. J. Bolger. il map plan diags Can Min J 73:74-9 N '52

MINE pumps
Centrifugal pump maintenance. E. H. Fry. il Min Cong J 39:48-9 Jl '53
Minimum continuous flow of centrifugal pumps. E. C. Condict. diag Eng & Min J 153:110-12 N '52
Should I specify open or closed impellers? J. A. Cable. il Eng & Min J 154:94-5 O '53

History

Cornish pumping engine. W. T. Hooper. il Engineer 196:262-3 Ag 28 '53

MINE railroads. See Mine tracks

MINE rescue work
First aid, fast! mine rescue organization mobile rescue stations. il Safety Maint & Prod 105:55-6 My '53
National first-aid and mine rescue contest, Columbus, Ohio, Oct. 2-4, 1951. W. H. Tomlinson. 4pls U S Bur Mines Information Circ 7658:1-71 '53

MINE roofs
Anthracite mechanical mining investigations; measurement of loads borne by underground-roadway supports. A. Allan, jr. and others. bibliog 18pls U S Bur Mines Rep of Invest 4946:1-12 '53
Arches for main haulage timbering; weak roof held by concrete block arches; Hillman coal & coke co. W. W. Dartnell. il diag Min Cong J 39:30-2+ My '53
Bolting beats bad top. J. H. Edwards. il Coal Age 58:94-9 Ja '53
Bolts conquer mean top; Red parrot coal co. il Coal Age 58:89-91 Je '53
Economies through roof bolting in an Indiana coal mine. L. W. Kelly. 8pls U S Bur Mines Information Circ 7653:1-10 '52
Keeping safety up-to-date; controlling mine roof. W. H. Bennett. Coal Age 58:98-9 O '53
Lever-held unit drills hard roof. il Coal Age 58:157 My '53
Modified roof bolts make convergence detectors. plan diag Coal Age 58:87 Jl '53
Overlying roof bolted without removing bony; Lancashire no. 20 mine, Elmora, Pa. il Coal Age 58:158 My '53
Rock bolting practices in Canadian metal mines; symposium. S. Thib and others. il plans diags Can Min J 74:56-72 S '53
Rock bolting progress at Sunshine. W. B. Foster. il Min Cong J 39:26-8 Jl '53
Roof action; American mining congress Coal division annual conference of committees, Pittsburgh, Nov 20; abstracts of papers. Min Cong J 38:65 D '52
Roof bolt testing. L. A. Panek and others. il Min Cong J 39:47-9 Je '53
Roof bolting; abstracts of papers at American mining congress Coal division annual meeting. Min Cong J 39:65-7 Je '53
Roof bolting in the red ore mines of the Birmingham district. L. S. Chabot, jr. il Min Cong J 38:33-6 N '52
Roof control in longwall. R. T. Todhunter, jr. il plan diags Coal Age 57:88-92 D '52
Roof sewing at the Sulitjelma mine in Norway. C. C. Austin. diag Eng & Min J 154:91 S '53
Roof support and pillar extraction; American mining congress Coal division; abstracts of papers. Coal Age 58:152+ Je '53
Roof support for continuous mining. J. A. Younkins. plans diags Min Cong J 39:44-6 Jl '53
Shaft sinking; roof support; American mining congress, Western division meeting; abstracts of papers. Min Cong J 38:101-4 O '52
Successful roof-bolting at Idamay. A. E. Flowers. il plan Coal Age 58:74-9 O '53
Technique for sounding roof. W. J. Egan. il Coal Age 58:104+ Ag '53
Testing of roof-bolting systems installed in concrete beams. R. G. Wuerker. bibliog(42 titles) il diags Min Eng 5:Trans 606-14 Je '53
Use of roof bolts in mining operations continues to grow. Iron Age 171:162+ Ap 23 '53
Use of torque wrench to determine load in roof bolts; slotted-type bolts. A. J. Barry and others. bibliog 4pls U S Bur Mines Rep of Invest 4967:1-7 '53
Use of wooden rock bolts in the Day mines. R. Farmin and C. E. Sparks. il diag Min Eng 5:Trans 922-4 S '53

MINE shafts
Bethlehem Steel's new Grace mine. A. W. Knoerr. il plan Eng & Min J 154:88-90+ Ja '53
Inclined shaft sinking, Sterling mine, New Jersey zinc co. F. W. Sauerwein. il plan diags Min Cong J 38:53-5 O '52
New raising technique developed experimentally; Tennessee copper co. il Eng & Min J 154:102 Je '53
Shaft plumbing method improved at mine in Sweden. K. Kangas. il diags Eng & Min J 154:84-5 Je '53

See also
Headframes
Mine hoisting
Shaft sinking

MINE signals, Electric
Prevention of block signal violations. E. C. Brown and A. R. Anderson. il diags Min Cong J 39:74-7 Ag '53

MINE stowage. See Mine filling

MINE surveying
Suspension transit speeds surveying. il diag Coal Age 57:116 N '52

MINE sweepers
Building wooden ships for iron men; Higgins, inc. il Marine Eng 58:50-4 Ap '53
German minesweepers in World war II. F. Ruge. il U S Naval Inst Proc 78:994-1003 S '52

MINE taxation
Changes needed in Internal revenue code. D. Reed. Min Cong J 39:89 Ap '53
Committee studies iron ore taxation in Minnesota. Eng & Min J 154:127-8 Je '53
Mining taxation. G. S. Borden. Min Eng 4:1049-51 N '52
Tax panel. E. C. Johnson and others. Min Cong J 38:105-9 O '52

MINE telephone
See also
Radio telephone in mines

MINE timber
Appalachian coal companies grow timber as a crop. B. Rhodes. il Min Cong J 39:27-30 Ja '53
Mine-timber preservation by the collar method. E. Roberts. bibliog 6pls U S Bur Mines Rep of Invest 4980:1-14 '53
Packaged timber handling at Copper Queen branch, Phelps Dodge corp. J. H. Jett and W. P. Crawford. il diags Min Eng 5:270-3 Mr '53
Packaged timber handling at Hecla. W. H. Love. il Min Cong J 39:22-4 S '53
Western mines grow own timber on tree farms. H. Olson. il Min Cong J 38:56-9 N '52

MINE timbering
Lift speeds timber handling. il Min Eng 5:688 Jl '53

MINE timbering—*Continued*
Old problem, new approach; hand-hydraulic timber setter. W. E. Connor and A. G. Frank. il Coal Age 58:106-7 My '53
Timber setting machine at West Monarch colliery. T. Smith. il Can Min J 73:56-7 D '52
See also
Mine roofs

MINE tracks
Haulage roads; American mining congress Coal division annual conference of committees, Pittsburgh, Nov. 20; abstracts of papers. Min Cong J 38:67-9 D '52
Haulage system in St Joseph lead co. mines of southeast Missouri. E. A. Jones. flow diag il map Min Eng 5:Trans 387-94 Ap '53
High capacity track haulage; Mathies coal co. D. H. Davis. il diags Min Cong J 39:29-32 Jl '53

MINE transportation
See also
Motor trucks in mining

MINE valuation
Changing factors in mine valuation. S. H. Dolbear. Min Eng 5:Trans 925-8 S '53
Periodic mine revaluation. S. H. Dolbear. il Min Cong J 38:75-7 D '52; Discussion. 39:96 Je '53

MINE ventilation
Colliery ventilation; abstract. W. I. Jones. Elec R (Lond) 151:458 Ag 29 '52
Keeping safety up-to-date; more and better ventilation. W. H. Bennett. Coal Age 58:99 O '53
Some aspects of mine ventilation. W. Wilson. diags Can Min J 74:68-74 Ap '53
Some factors affecting and suggested ways for improving coal mine ventilation, with particular reference to mines in Illinois, Indiana, and western Kentucky. C. A. Herbert. 4pls U S Bur Mines Information Circ 7656:1-15 '53
Underground dust control and ventilation at Kerr-Addison. J. D. Mateer. il plans diags Can Min J 74:81-6 S '53
Uphill continuous mining. il plan Coal Age 57:94-5 D '52
Ventilating practices that minimize explosion hazards in bituminous-coal mines. M. J. Ankeny and others. 8pls U S Bur Mines Information Circ 7648:1-6 '52
Ventilation; American mining congress Coal division annual conference of committees, Pittsburgh, Nov. 20; abstracts of papers. Min Cong J 38:69 D '52
See also
Fans, Mine

MINE water
How to avoid stream pollution from acid mine drainage. il diag Coal Age 58:96-101 F '53
Surface-water seepage into anthracite mines in the Lackawanna basin, Northern field; anthracite region of Pennsylvania. S. H. Ash and others. bibliog il maps fold maps U S Bur Mines Bul 518:1-37; pa 75c Supt. of doc. '52
See also
Mine drainage
Mine pumping, Electric

MINERAL industries
Industrial minerals; annual review, 1952. I. Campbell. il Min Eng 5:162-6 F '53
Industrial minerals, 1952. J. L. Gillson. il Min Cong J 39:90-6 F '53
Non-metallics. il Eng & Min J 154:160-6 Jl '53
Nonmetallics, 1952. il map Eng & Min J 154:100-10+ F '53
Resources parley gets minerals steering unit. Oil Paint & Drug Rep 164:7 O 5 '53
Safeguarding our mineral-dependent economy. T. S. Lovering. bibliog Geol Soc Bul 64:101-25 F '53
See also
Aggregates
Coal trade
Feldspar
Limestone
Metal trade
Metallurgy
Mines and mineral resources
Mining industry and finance
Petroleum industry and trade
Phosphates
Quarries and quarrying
Rock products industry
Salt
Stone, Crushed
Sulfur industry and trade

Statistics
Mineral production; report of U.S. Bureau of mines. Mech Eng 75:233-5 Mr '53
1952 mineral production maintains dollar value. Min Eng 5:361 Ap '53

Taxation
Depletion committee recommends test case. Brick & Clay Rec 122:83 Ja '53

Canada
Mineral production increases again, 1952. H. McLeod. il Can Min J 74:62-72 F '53

New England
See also
Mines and mineral resources—New England

MINERAL lands
Public lands panel. A. V. Watkins and others. Min Cong J 38:94-6 O '52
Tidelands issue. Pub Util 50:520-2 O 9 '52
See also
Coal lands
Mines and mineral resources
Oil lands

MINERAL producers' association
Annual meeting, 10th, Pittsburgh, Sept. 17. Coal Age 58:140+ O '53

MINERAL wool
India asks U.S. capital for rock-wool industry. For Comm W 49:7 Ap 6 '53
Mineral wool blocks spaced on ducts for efficient, dependable service. il diags Pet Eng 25:C48-9 F '53; Same. Sheet Metal Worker 44:45-6 F '53
Self-retaining mineral wool boards. il Pet Eng 24:C35-6 O '52

MINERALOGICAL analysis
Calcination and fluorescence in the evaluation of samples of the sillimanite minerals. W. R. Foster and others. bibliog Am Cer Soc Bul 31:326-8 S 15 '52
Inorganic chromatography on cellulose; determination of tantalum and niobium in low-grade phosphatic and siliceous ores. R. A. Mercer and A. F. Williams. Chem Soc J p3399-403 S '52
Inorganic chromatography on cellulose; the quantitative determination of tantalum and niobium in complex minerals, ores, and synthetic materials. A. F. Williams. Chem Soc J p3155-63 Ag '52
Method for determining the age of igneous rocks using the accessory minerals. E. S. Larsen, jr. and others. bibliog Geol Soc Bul 63:1045-52 O '52
Qualitative color test for rapid identification of the clay mineral groups. W. W. Hambleton and C. G. Dodd. bibliog Econ Geol 48:139-46 Mr '53
Quantitative analysis of clay minerals with the X-ray spectrometer. G. Talvenheimo and J. L. White. bibliog Anal Chem 24:1784-9 N '52
See also
Clay—Analysis

MINERALOGICAL research
Radioactivity in mineral dressing. A. M. Gaudin. Engineering 174:677 N 21 '52

MINERALOGY
Some simple aids in the hydrothermal investigation of mineral systems. R. Roy and E. F. Osborn. bibliog diags Econ Geol 47:717-21 N '52
Sources of error in the decrepitation method of study of liquid inclusions. T. E. Stephenson. bibliog diag Econ Geol 47:743-50 N '52
See also
Abrasives
Crystallography
Feldspar
Geology
Metals
Mica
Minerals
Mines and mineral resources
Ore deposits
Rocks
Talc

MINERALOGY, Determinative

Application of polarization figures and rotation properties to the identification of certain telluride minerals. D. H. Hase. bibliog Econ Geol 47:807-14 D '52

Relations between composition and indices of refraction in natural plagioclase. F. Chayes. bibliog Am J Sci Bowen vol p85-105 '52

MINERALS

Amateur scientist; study of rocks. A. G. Ingalls. il diags Sci Am 187:94-8 N '52

Calcination and fluorescence in the evaluation of samples of the sillimanite minerals. W. R. Foster and others. bibliog Am Cer Soc Bul 31:326-8 S 15 '52

Fields of formation of some common hydrothermal-alteration minerals. B. Stringham. bibliog Econ Geol 47:661-4 S '52

Glamorous rare minerals and new metals; with data on companies producing new metals. L. A. Lukens. Mag of Wall St 91: 292-4+ D 13 '52

How induced radioactivity may help separate minerals. A. M. Gaudin and others. bibliog Eng & Min J 153:95-9+ N '52

Industrial minerals; annual review, 1952. I. Campbell. il Min Eng 5:162-6 F '53

Industrial minerals, 1952. J. L. Gillson. il Min Cong J 39:90-6 F '53

List of Canadian gems and ornamental minerals. D. S. M. Field. Can Min J 74:82-3 Ap '53

Non-metallics. il Eng & Min J 154:160-6 Jl '53

Nonmetallics, 1952. il map Eng & Min J 154: 100-10+ F '53

Preliminary report; nonmetallic deposits accessible to the Alaska railroad as possible sources of raw materials for the construction industry. F. A. Rutledge and others. bibliog 42pls U S Bur Mines Rep of Invest 4932:1-129 '53

Quest for minerals. Comp Air Mag 58:141-2 My '53

Radioactivity in mineral dressing. A. M. Gaudin. Engineering 174:677 N 21 '52

See also

Aggregates
Apatite
Asbestos
Chromite
Clay
Coal
Dolomite
Feldspar
Magnetite
Metals
Mica
Mineralogical analysis
Mines and mineral resources
Ore deposits
Pegmatites
Petroleum
Phosphate rock
Phosphates
Potash
Quartz
Rocks
Salt
Sand
Spinels
Sulfur
Talc
Vermiculite
Zircon

MINERALS in the body

Nature of the mineral phase of bone. W. F. Neuman and M. W. Neuman. il diags Chem R 53:1-45 bibliog(p37-45) Ag '53

MINERALS separation, limited

Statement by the chairman. J. N. Buchanan. Economist 167:481 My 16 '53

MINERS

Hidden payroll. W. T. Simons and M. C. Brown. il Eng & Min J 154:100-1 S '53

How to handle red unionists. J. M. Gambatese. Eng & Min J 154:96-100 My '53

Induction and training of new employees; symposium. A. E. O'Brien and others. Can Min J 74:76-81 S '53

John Redington; a symbol the Cousin Jacks in North America. G. E. Cole. Can Min J 74:78-9 Ap '53

Manpower and labor relations, 1952. M. P. Romney. il Min Cong J 39:52-3+ F '53

Settlement of industrial disputes; is compulsion the answer? J. C. Cameron. maps Can Min J 74:70-2 Mr '53

See also

Coal miners
Mine foremen
United mine workers of America

Diseases and hygiene

Health and safety in the mineral industry; annual review, 1952. S. H. Ash. Min Eng 5:174-6 F '53

MINERS' lamps. See Safety lamps, Electric

MINES, Military

Transportation

Engineering a wirebound crate for mine fairings. H. A. Wolsdorf. il Mod Packaging 27:168-9+ O '53

MINES, Submarine

See also

Mine sweepers

MINES and mineral resources

Geology in the mining industry, 1952. R. M. Foose. il Min Cong J 39:98-100+ F '53

Mineral resources. D. H. McLaughlin. il Min Eng 5:137-41 F '53

Mining geology; annual review, 1952. J. D. Forrester. il Min Eng 5:149-50 F '53

See also

Bauxite
Coal
Coal mines and mining
Copper mines and mining
Geochemistry
Geology
Iron mines and mining
Lead mines and mining
Lignite
Manganese mines and mining
Mercury mines and mining
Minerals
Mining engineering
Mining industry and finance
Mining machinery
Oil shales
Ore deposits
Ore sampling
Petroleum
Petroleum supply
Phosphates
Prospecting
Quarries and quarrying
Salt domes
Salt mines and mining
Shale
Sulfur mines and mining
Uranium mines and mining
Zinc mines and mining

Abandoned mines

Abandoned mines may serve for oil storage. il Min Eng 5:755 Ag '53

Alabama

Alabama story; minerals. il Manuf Rec 122: 86-8 Je '53

Alaska

Preliminary report; nonmetallic deposits accessible to the Alaska railroad as possible sources of raw materials for the construction industry. F. A. Rutledge and others. bibliog 42pls U S Bur Mines Rep of Invest 4932:1-129 '53

See also

Copper mines and mining—Alaska

Alberta

Annual report of Alberta mines division, 1952. J. Crawford. Can Min J 74:79-81 Mr '53

Arizona

Bibliography and index of literature on uranium and thorium and radioactive occurrences in the United States. M. Cooper. Geol Soc Bul 64:197-234 F '53

Australia

Opals from Australian deserts. L. A. Bingham. il Can Min J 74:74-6 Jl '53

Titanium; rutile and ilmenite deposits along Australia's eastern coastline. J. Loughlin. diag Light Metal Age 11:16-17+ F '53

British Columbia

Geochemical prospecting finds widespread application in British Columbia. H. V. Warren and R. E. Delavault. il Min Eng 5:980-1 O '53

1952 in British Columbia mining. G. C. Cross. il diag Can Min J 74:75-8 F '53

California

Concentration of bastnaesite and other cerium ores; with analytical methods. J. B. Zadra and others. U S Bur Mines Rep of Invest 4919:1-15 '52

Canada

Asbestos in Canada. Can Chem Process 37: 18+ S '53

Canada; aluminum to zinc. R. L. Edsall. Can Min J 74:58-61 Ag '53

Canada's mineral resources; an American view. R. B. McEntire. Comm & Fin Chr 177:1439+ Ap 2 '53

MINES and mineral resources—Canada—*Cont.*

Changing land; oil, mining spawn many enterprises in western Canada. J. Montagnes. Barron's 33:25 Mr 23 '53
List of Canadian gems and ornamental minerals. D. S. M. Field. Can Min J 74:82-3 Ap '53
Metals from the Northland. map Economist 166:529-30+ F 21 '53
Mineral production increases again, 1952. H. McLeod. il Can Min J 74:62-72 F '53
Mineral technology in Canada, in 1952. H. R. Rice. flow sheet il diags Can Min J 74:113-19 F '53
More Canadian gemstones. D. S. M. Field. il Can Min J 73:86-8 N '52
New Northwest developments; power galore and new mining fields. A. F. G. Cadenhead. map Can Chem Process 37:18+ Ap '53
Shortage of engineers in the Canadian mineral industry. R. E. Findlay. Can Min J 73:84-6 N '52

See also
Iron mines and mining—Labrador

Colorado

Beryllium deposits of the Mount Antero region, Chaffee county, Colorado. J. W. Adams. bibliog il maps diag U S Geol S Bul 982-D:95-119; pa 15c Supt. of doc. '53
Effect of uranium-vanadium deposits on the vegetation of the Colorado plateau. H. L. Cannon. Am J Sci 250:735-70, pl 1 bibliog(57 titles, p767-70) O '52
Investigation of the New Anniversary Bucky pegmatite, Gunnison county, Colo. S. R. Wilson and W. A. Young. 3pls U S Bur Mines Rep of Invest 4939:1-7 '53
U.S. Vanadium's Uravan, Colo. mill doubles output. il Min Eng 4:1025-6 N '52

Cyprus

Middle East's only asbestos mine operated on island of Cyprus. il Min Eng 5:879 S '53
New acid-leaching section raises Cyprus copper recovery by ten per cent. A. W. Schlechten and J. L. Bruce. il maps Eng & Min J 153:88-91 D '52

Florida

Du Pont building ilmenite facility in Florida. Manuf Rec 122:52 O '53
Mining and concentration of ilmenite and associated minerals at Trail Ridge, Fla. J. H. Carpenter and others. flow sheet il Min Eng 5:Trans 789-95 Ag '53

Great Lakes states

Lake States mining companies also raise trees. J. Calkins. il Min Cong J 39:38-40+ Je '53

Greenland

Danish corporation granted fifty-year mining concession in east Greenland. For Comm W 49:7+ Mr 2 '53

Idaho

Block caving at Bunker Hill mine. C. E. Schwab. il plan diags Min Eng 5:Trans 985-90 O '53
Use of wooden rock bolts in the Day mines. R. Farmin and C. E. Sparks. il diag Min Eng 5:Trans 922-4 S '53

See also
Phosphate rock—Idaho

Illinois

Geology and mineral resources of the Hardin and Brussels quadrangles (in Illinois). W. W. Rubey. bibliog maps diags U S Geol S Professional Pa 218:1-179, pl 1-21; pa $2.25 Supt. of doc. '52
How Minerva oil co. produces high-grade ceramic fluorspar. O. E. Anderson. flow sheet il Eng & Min J 154:72-8 Mr '53

India

Steatite deposits of Bheraghat, Jabalpur district, M.P., India. V. N. Chhibber. il Econ Geol 48:53-7 Ja '53

Israel

Israel to mine half-million tons copper ore a year. A. Dor. Eng & Min J 154:137 Ja '53

Jamaica

Kaiser opens Jamaica bauxite facilities. il Steel 132:50 F 23 '53

Japan

Geophysical exploration grows in Japan. il Min Eng 5:468 My '53

Lake Superior region

Underground radio communication in Lake Superior district mines. E. W. Felegy. bibliog Min Eng 5:Trans 518-21 My '53

Libya

Libya rules minerals are state-owned. For Comm W 49:21 Je 8 '53

Manitoba

Mineral development in Manitoba in 1952. J. P. de Wet. il Can Min J 74:89-93 F '53

Mexico

Mining in Mexico. H. S. Strouth. il Min Eng 5:591-2 Je '53

Michigan

Limestone; unsung but vital rock. R. D. Raddant. il Iron Age 171:78-9 My 21 '53

Middle Atlantic states

Resources for the chemical industry in the United States; natural resources. H. P. Greenwald and P. M. Ambrose. map Ind & Eng Chem 45:506-10 Mr '53

Missouri

National lead co. mechanization at Fredericktown, Mo. H. A. Krueger. il map Min Eng 5:Trans 796-801 Ag '53

Montana

Corundum deposits of Montana. S. E. Clabaugh. il maps diags U S Geol S Bul 983:1-100, pl 1-6[in pocket] bibliog(96-8) '52
Crystal Mountain fluorite deposits, Ravalli county, Mont. J. W. Taber. 2pls U S Bur Mines Rep of Invest 4916:1-8 '52
Geology of the Canyon Ferry Quadrangle. Mont. J. B. Mertie, jr. and others. bibliog U S Geol S Bul 972:1-97, pl 1-2; pa 75c Supt. of doc. '51

Nevada

Bibliography and index of literature on uranium and thorium and radioactive occurrences in the United States. M. Cooper. Geol Soc Bul 64:197-234 F '53
Kaiser streamlines mining and processing of Nevada fluorspar. flow sheet il Eng & Min J 154:96-8 O '53
Mine drainage at Eureka corp. ltd., Eureka, Nev. G. W. Mitchell. il map diags Min Eng 5:Trans 812-17 Ag '53

New Brunswick

Current activities in New Brunswick mining. G. S. Clements. maps Can Min J 74:75-7 Ap '53
Huge New Brunswick metal find sets off exploration boom. maps Eng & Min J 154:101-2+ My '53

New England

Mineral resources. J. M. Trefethen. Ind & Eng Chem 44:2529-30 N '52

New Mexico

Bibliography and index of literature on uranium and thorium and radioactive occurrences in the United States. M. Cooper. Geol Soc Bul 64:197-234 F '53
Concentration of bastnaesite and other cerium ores; J. B. Zadra and others. U S Bur Mines Rep of Invest 4919:1-15 '52

Newfoundland

Mining industry of Newfoundland, 1952. C. K. Howse. il Can Min J 74:111-12 F '53

North Carolina

Kings Mountain mica operation. E. D. White. flow sheet il Eng & Min J 154:94-6 Mr '53
Method for concentration of North Carolina spodumene ores. M. K. Banks and others. bibliog flow sheet Min Eng 5:Trans 181-6 F '53

MINES and mineral resources—North Carolina —*Continued*

Mining and milling of lithium pegmatites at Kings Mountain, N.C. E. R. Goter and others. flow sheet il Min Eng 5:Trans 890-3 S '53

Spruce Pine mineral kingdom. C. H. Vivian. il map Comp Air Mag 58:152-9, 187-94 Je-Jl '53

Northwest Territories, Canada

Mineral developments in the District of Mackenzie. A. B. Irwin. il map Can Min J 74:49-54 Ja '53

Mineral production in the Northwest Territories in 1952. F. Whyard. il map Can Min J 74:79-82 F '53

Nova Scotia

Mining industry of Nova Scotia, 1952. A. K. McKinnon. il Can Min J 74:109-10 F '53

Mining society of Nova Scotia 66th annual meeting, Sydney, July 2-4; with abstracts of papers. Coal Age 58:140-1+ Ag '53

Ontario

Bethlehem's Marmora mine prepares for production. il map Eng & Min J 154:95-7 Ap '53

Ontario annual review, 1952. J. C. Browning. il map Can Min J 74:94-100 F '53

Safety in pit operations at Munro mine, Canadian Johns-Manville. G. Kallunki. il Can Min J 74:103-7 S '53

Pennsylvania

Summit develops Pennsylvania nonmetal mine. G. Ahl, jr. and C. M. Dolliver, jr. il Min Eng 5:977 O '53

Quebec (province)

Geology of the country bordering the southern section of Quebec north shore and Labrador railway. P. E. Grenier. bibliog il map Can Min J 74:76-81 My '53

Quebec annual review, 1952. J. C. Browning. il Can Min J 74:101-8 F '53

Rhodesia

How northern Rhodesia meets rising base metal demands. H. L. Talbot and F. H. Chapman. flow sheets il map Eng & Min J 154:82-7 Ag '53

Sahara desert

Plan to top mineral resources of Sahara desert advanced by French. Iron Age 170: 42 N 27 '52

Saskatchewan

History of uranium discoveries, Lake Athabasca. A. H. Lang. bibliog il maps Can Min J 74:69-76 Je '53

Mineral development in Saskatchewan in 1952. J. P. de Wet. il map Can Min J 74: 83-8 F '53

New trends in prospecting for uranium ore; St Mary's channel, Saskatchewan. R. G. Hoiles. Can Min J 74:83-6 My '53

South Africa

Asbestos industry, southern Africa. M. C. G. Meyer. Can Min J 74:72-3 Ag '53

South African mines, new and old. Can Min J 74:67-8 Ja '53

Uranium separation in South Africa. Can Min J 73:83 O '52

South Dakota

Progress report on pegmatite investigations in South Dakota, for fiscal year ended June 30, 1951. S. M. Runke and others. bibliog U S Bur Mines Rep of Invest 4928:1-46 '52

Southeastern states

Mica deposits of the southeastern Piedmont; general features. R. H. Jahns and others. il map diags U S Geol S Professional Pa 248-A:1-102, pl 1 bibliog(p96-9); pa $1.25 Supt. of doc. '52

Tennessee

Tennessee story; minerals offer great opportunity for new industry. il Manuf Rec 121:100-3 N '52

Transvaal

Second uranium plant on the Witwatersrand goldfields. Can Min J 74:77-8 Jl '53

Uranium profits on the Rand. Economist 166: 387-8 F 7 '53

Uganda

Uganda ores look good to prospectors. il Bsns W p 166-7 Mr 14 '53

United States

Defense minerals progress; abstract. H. I. Young. Min Cong J 38:87-8 O '52

Key-commodities outlook. Mech Eng 75:23-5 Ja '53

Small mines; with map and table of defense minerals exploration administration projects. il plan Eng & Min J 154:150-9+ Jl '53

Special conference on strategic minerals; American mining congress, Western division; abstracts of papers. Min Cong J 38: 111-13 O '52

That Paley report; panel discussion. Min Cong J 38:36-46+ D '52

What the Paley report means to U.S. miners. O. Herres. Eng & Min J 153:72-5 D '52

Utah

On the road to a ghost town? merger brings jobs nearer, in Park City, Utah. il Bsns W p80-2+ Je 27 '53

See also

Manganese mines and mining—Utah

Virginia

Mica deposits of the southeastern Piedmont; Amelia district, Va. R. W. Lemke and others. il maps U S Geol S Professional Pa 248-B:103-39, pl 2-6 [in pocket]; pa 60c Supt. of doc. '52

Wyoming

Air tramway solves transport problem at Magnet Cove. C. F. Dwyer. il Eng & Min J 153:88-9 O '52; Same. Rock Prod 55: 118-19 D '52

Yukon

Yukon mining in 1952. G. C. Cross. il Can Min J 74:73-4 F '53

MINESWEEPERS. See Mine sweepers

MINIATURE electric circuits. See Electric circuits—Miniature circuits

MINIMUM wage

Proceedings of the 17th annual conference of State minimum-wage administrators, held by the Women's bureau, Washington, D.C., Sept. 18-19, 1952. 42p U S Women's bur, Washington, D.C. '53

Threat to Walsh-Healey act. Bsns W p 135 Mr 7 '53

MINING congress, American. See American mining congress

MINING costs

Granby adopts air trammers; cuts drifting labor costs 26 per cent. D. W. Pringle. il Eng & Min J 154:72-4 Ag '53

Hidden payroll. W. T. Simons and M. C. Brown. il Eng & Min J 154:100-1 S '53

Unit copper production costs increase in foreign mines. W. F. Boericke. Eng & Min J 154:99 O '53

See also

Coal mines and mining—Costs

MINING engineering

Analysis of mine opening failure by means of models. B. York and J. J. Reed. il Min Eng 5:Trans705-10 Jl '53

Exploration and development of a new ore mine. R. P. Bremner. Iron & Steel Eng 30: 80-5 My '53

Iron ore project in Canada. il map diags Engineer 195:399-401 Mr 13 '53

Mineral technology in Canada, in 1952. H. R. Rice. flow sheet il diags Can Min J 74:113-19 F '53

See also

Blasting
Coal mines and mining
Electricity in mining
Mine construction
Mine drainage
Mine haulage
Mine hoisting
Mine management
Mine shafts
Mine ventilation
Mining machinery
Mining methods
Ore sampling
Prospecting
Quarries and quarrying
Rock drills
Shaft sinking

MINING engineering—*Continued*

Power

More power for potash mines through better distribution. A. B. Chafetz. il Eng & Min J 153:92-6 D '52

Power for processing taconite. il Eng & Min J 153:103+ D '52

Power from hot water. flow diag il diags Engineer 194:719-21 N 28 '52; Engineering 174:660-1, 691-3 N 21-28 '52

Safety measures

Air-operated doors protect shaft crews; Kennecott copper corp. plan diag Eng & Min J 154:112 Ja '53

Design working loads for operating wire rope. L. C. Torell. Eng & Min J 153:97+ D '52

Effective accident prevention at Canadian Malartic. G. G. Mabee. Can Min J 74:96-8 S '53

Health and safety in the mineral industry; annual review, 1952. S. H. Ash. Min Eng 5:174-6 F '53

Miners and quarrymen honored at safety award ceremonies. Explosives Eng 31:13-17 Ja '53

Mining sets new safety records in 1952. J. T. Ryan, jr. il Min Cong J 39:66-8 F '53

New records in mining safety; 1952 National safety competition. Nat Safety N 68: 94 S '53

Prevention of block signal violations. E. C. Brown and A. R. Anderson. il diags Min Cong J 39:74-7 Ag '53

Prevention of falls down openings in mines. il Nat Safety N 66:116-17+ O '52

Progress of the Red Lake safety group. J. R. Smith. Can Min J 74:90-1 S '53

Replacement of rock bolts with used hoisting rope cuts cost of holding ground. R. S. Haflidson and others. il plan diags Eng & Min J 154:100-2 Ja '53

Safe blast hole-drilling. il Min Eng 5:780-1 Ag '53

Safety in maintenance work. V. A. Andrew. il Can Min J 74:98-103 S '53

Safety in pit operations at Munro mine, Canadian Johns-Manville. G. Kallunki. il Can Min J 74:103-7 S '53

Sentinels of safety; trophy awards. Min Cong J 39:91 Ag '53

West Virginia safety council Mines and mining section 19th annual conference, Charleston, April 22. Coal Age 58:168 Je '53

When mines work together; Lake Superior mines safety council. il Nat Safety N 66: 18-20 N '52

See also
Holmes safety association

Study and teaching

ECPD lists accredited mineral engineering colleges. Min Eng 5:384 Ap '53

Estimate of the success of the five-year mineral engineering programs. W. B. Plank. J Eng Educ 43:103-6 O '52

First gain in five years for mineral engineering enrollment. W. B. Plank. Min Eng 5: 382 Ap '53

What are the contemporary demands on engineering curricula? mining and metallurgical engineering. C. L. Wilson. J Eng Educ 43:312-15 Ja '53

MINING engineers

Engineer selection and training; Island creek coal co. W. C. Nelson and J. J. Yorke. il Min Cong J 38:49-52+ O '52

Labor legislation, as it affects the engineer. Min Eng 5:880 S '53

Mining engineer supply. A. V. Corlett. bibliog Can Min J 73:80-4 N '52

Shortage of engineers in the Canadian mineral industry. R. E. Findlay. Can Min J 73: 84-6 N '52

MINING industry and finance

Financing domestic mining ventures. C. C. Bailey and others. il Min Eng 5:584-8, 679-84 Je-Jl '53

Mining on credit; fluorspar in Newfoundland. Fortune 46:236 N '52

What the next decade can mean to mining. R. Everett and others. Eng & Min J 154: 88-93 Jl '53

See also
Gold mines and mining—Finance
Gold mines and mining—Securities
Mine taxation
Mine valuation
Mineral industries
Mines and mineral resources
Mining costs

Securities

See also
Gold mines and mining—Securities

Canada

Industrial empire in the Yukon; Frobisher, ltd. il map Bsns W p41-2+ Mr 14 '53

Metal rumors spark a rush. Bsns W p48-9 Mr 14 '53

Rhodesia

Mining loan made to northern Rhodesian group; Rhodesia Congo border power corp. For Comm W 50:2 Jl 13 '53

United States

Trade not aid; damage to basic U.S. industries which politics would cause. J. E. Kelly. il Min Cong J 39:86-7 Je '53

MINING law

Analysis of Public law 552; Federal coal mine safety act. M. J. Ankeny. il Min Cong J 39:41-5 S '53

Federal law to prevent major coal-mine disasters, 1952. Mo Labor R 75:505-7 N '52

Public lands panel. A. V. Watkins and others. Min Cong J 38:94-6 O '52

See also
Mine taxation

MINING machinery

Don't overshoe your crawler tractor. E. A. Braker. Min Cong J 38:55 O '52

Gismo multiplies miners' output. il Eng & Min J 154:148-9+ F '53

Inclined shaft sinking, Sterling mine, New Jersey zinc. co. F. W. Sauerwein. il plan diags Min Cong J 38:53-5 O '52

Mining speed-up; Gismo. Bsns W p70+ Ja 17 '53

Trends in mechanized mining. S. S. Clarke. il Min Cong J 39:39-41 My '53

See also
Coal mining machinery
Rock drills

Maintenance and repair

Are you hard facing effectively? H. S. Avery. il diags Min Cong J 39:106-11 Ap '53

Trackless equipment maintenance accented by TCI. H. M. Scrugham. il Min Eng 5:589-90 Je '53

MINING methods

After two centuries of mining Cornwall keeps its methods up-to-date. S. J. Shale. flow sheet il plans Min Eng 5:670-5 Jl '53

Block caving at Bunker Hill mine. C. E. Schwab. il plan diags Min Eng 5:Trans 985-90 O '53

Costs cut by change to sublevel long-hole benching; Reeves MacDonald. J. B. Huttl. diag Eng & Min J 154:100-1 Ap '53

Drilling progress at Homestake. C. N. Kravig. il Min Cong J 39:38-41+ Ag '53

Geofragmental mining methods in underground properties. P. B. Bucky. plan diags Explosives Eng 30:152-5+ S '52

Hydraulic methods for underground mining of silica sand. A. D. Bryant. il diag Min Eng 5:282-3 Mr '53; Abstract. Rock Prod 55:118+ O '52

Mining methods; annual review, 1952. C. H. Johnson. il Min Eng 5:142-8 F '53

National lead co. mechanization at Fredericktown, Mo. H. A. Krueger. il map Min Eng 5:Trans 796-801 Ag '53

New life for Vermont's 160-year old copper mine. G. P. Lutjen and J. H. Kearney. il diag Eng & Min J 154:73-4 O '53

Operations of Patino mines and enterprises at Llallaqua-Unica mine, Bolivia. K. O'Donnell. flow sheets il plan diags Can Min J 73:41-6 D '52

Quick survey of South African practice. Eng & Min J 154:117 My '53

MINING methods—*Continued*

Recovery of diamonds by modern mechanical methods. J. Bone. flow sheets diags Inst Mech Eng Proc (A) 166 no 3:367-75 '52

Resurrection cuts mining costs, makes lower grade ore economic. C. N. Stout and J. S. Wright. il plans diags Min Eng 5:45-8 Ja '53

Rhokana's practice shows some changes. L. W. Allen. Eng & Min J 154:117-18 My '53

Shrinkage stoping with mechanical loading at Renabie. P. S. Cross. plans diags Can Min J 74:55-8 Jl '53

Some features of current mining practices at Kerr-Addison gold mines, ltd. W. S. Row. diags Min Eng 5:Trans 294-303 Mr '53

Steep Rock's A and B zones to yield 3½-million tons per year. K. L. McRorie. il map diags Eng & Min J 154:82-5 Ap '53

Survey of mining practice. A. H. Hubbell. Eng & Min J 154:111-20 F '53

Trackless equipment facilities change from open pit to underground; Ozark ore co.'s Iron Mountain mine. W. F. Shinners. il plan diag Min Eng 5:370-4 Ap '53

Typical small-scale operation in east Africa; Kitere mine. E. J. Langevad. il maps diag Can Min J 74:62-7 Ag '53

Underground metal mining progress, 1952. S. H. Boshkov. il Min Cong J 39:54-7 F '53

Underground mining methods at International nickel co. H. J. Mutz and others. il maps plans diags Min Eng 5:Trans 57-82 Ja '53

Underground mining of cement rock; Coplay cement manufacturing co. A. F. Rambosek. diag Rock Prod 55:100-1 O '52

United States gypsum co. mine, Heath, Mont. G. C. Mathis. il map plan diags Min Eng 5:Trans 177-80 F '53

United States Vanadium's tungsten mine in California. R. L. Behme. il diag Explosives Eng 31:39-44+ Mr '53

See also

Blasting
Coal mines and mining—Methods
Mine management
Mining engineering
Oil shales—Mining methods
Quarries and quarrying
Shaft sinking
Sulfur mines and mining

Stripping operations

American smelting & refining co.'s Van Stone mine. J. B. Huttl. flow sheet il Eng & Min J 154:72-6 Ap '53

Bethlehem's Marmora mine prepares for production. il map Eng & Min J 154:95-7 Ap '53

Bigger dippers, giant trucks and new drills feature current open-pit mine operation. il Eng & Min J 154:100-1 Mr '53

Carryall scraper plays major role in open pit mining at Inspiration. H. H. Mellus. il Min Eng 5:978-9 O '53

Cost of big draglines justified by advantages obtained. P. H. Woods. il Eng & Min J 154:107-9 Ja '53

Dropball cuts blasting costs at Tahawus. P. W. Allen. il Min Eng 5:379-81 Ap '53

Eagle Mountain helps Kaiser meet growing western steel needs. K. B. Powell. il diags Min Eng 5:478-83 My '53

Geomines; major open-pit tin producer in the Belgian Congo. H. Barzin. flow sheets il Eng & Min J 153:86-9 N '52

Heavy duty trucks in open pit operations. J. Wells. il Min Cong J 39:41-3 Jl '53

Kaiser stepping up production at Eagle Mountain iron mine. G. W. Huseman. il map diag Eng & Min J 154:80-6 My '53

Kings Mountain mica operation. E. D. White. flow sheet il Eng & Min J 154:94-6 Mr '53

Mining and milling of lithium pegmatites at Kings Mountain, N.C. E. R. Goter and others. flow sheet il Min Eng 5:Trans 890-3 S '53

Mining copper at Bagdad, Ariz. O. Hondrum. il Explosives Eng 30:143-5+ S '52

New ideas for Bagdad Copper. E. R. Dickie and others. il Eng & Min J 154:88-93 Mr '53

Open pit mining; American mining congress, Western division; abstracts of papers. Min Cong J 38:96-9 O '52

Open-pit mining operations; Chuquicamata. G. S. Wyman and L. E. Fish. il Min Eng 4:1169-73 D '52

Reserve mining co. starts taconite plant at Babbitt. il Eng & Min J 153:72-9 N '52

Rotary drilling in open pit operations. G. R. Putnam. il Min Cong J 39:44-6 Je '53

Safety in pit operations at Munro mine, Canadian Johns-Manville. G. Kallunki. il Can Min J 74:103-7 S '53

Semi-trailer truck has place in modern open-pit haulage; Jones & Laughlin steel corp. J. F. Linden. il Eng & Min J 154:72-6 Je '53

Truck haulage and maintenance. H. C. Weed and C. A. Lindberg. il Min Cong J 38:29-33 Mr '53

Trucks make marginal open-pit mining pay. il Bsns W p 122-4+ Ap 11 '53

Use of a caved block as an ore pass and its application to open-pit mining; Inspiration consolidated copper co. H. C. Weed. il diags Min Eng 5:Trans 886-9 S '53

World's largest walking dragline. J. Grinrod. il diag Can Min J 74:58-60 Ja '53

See also

Coal mines and mining—Stripping operations

MINING towns

Boom at Rhyolite, 1905. A. A. Richie. il Eng & Min J 154:94-5+ Je '53

City to grow in Arizona desert. Eng N 149:25 D 11 '52

Golden jubilee of a great silver camp. il Can Min J 74:47-52 Ag '53

Sherritt Gordon moves a 2000-ton concentrator, and a town 165 miles. T. E. Burke-Gaffney. il Min Eng 5:582-3 Je '53

Taconite brings the modern mining town. il maps Eng N 149:34-6+ O 23 '52

MINNEAPOLIS

Rapid transit

Fare ups and downs. Bsns W p 134 Jl 18 '53

Streets

How city engineer and police cooperate to keep Minneapolis winter traffic moving. H. G. Erickson. il Roads & Sts 96:54-6 S '53

MINNEAPOLIS and St Louis railway

Outlook is favorable. Barron's 32:19-20 N 3 '52

MINNEAPOLIS gas company

Stock offering. Comm & Fin Chr 177:626 F 9 '53

MINNEAPOLIS-HONEYWELL regulator company

Sales, profits in sharp upswing. Barron's 33:19 My 4 '53

Security I like best. W. B. Anderson. Comm & Fin Chr 177:1850 Ap 30 '53

MINNEAPOLIS-MOLINE company

Sales increase, earnings lower. Comm & Fin Chr 177:142 Ja 12 '53

MINNEAPOLIS, St Paul and Sault Ste Marie railway

Earnings. Comm & Fin Chr 177:834 F 23 '53

Soo line earnings increase despite strikes, drought. Barron's 32:21 D 22 '52

MINNESOTA

See also

Geology—Minnesota
Iron mines and mining—Minnesota
Iron ores—Minnesota

MINNESOTA mining and manufacturing company

Five stocks with unique growth prospects; with comparative balance sheet items. Mag of Wall St 92:453 Jl 11 '53

MINORS. See Children—Law

MIRRORS

Generation of high aperture parabolic surfaces of revolution. R. E. Lewis and others. il diags R Sci Instr 23:555-8 O '52

Review of work on dichroic mirrors and their light-dividing characteristics. M. E. Widdop. plan diags Soc Motion Picture & Tv Eng J 60:357-66 Ap '53

Manufacture

Temperature control in mirror making. il Glass Ind 34:314+ Je '53

MISCIBILITY of solvents. See Solvents

MISHIMA alloys. See Iron alloys

MISSILES, Guided. See Guided missiles

MISSING persons
Lost policyholders are located by State Mutual. Weekly Underw 167:1194 N 1 '52

MISSISSIPPI chemical corporation
Stock offered. Comm & Fin Chr 177:835 F 23 '53

MISSISSIPPI river
Bank stabilization by revetments and dikes. R. H. Haas and H. E. Weller. il diag Am Soc C E Proc 78[no 148]:1-12 S '52

MISSISSIPPI river fuel corporation
Mississippi River Fuel earnings rise despite adverse rate rulings. Barron's 33:17-18 F 16 '53
Recent rate hike brightens outlook. Barron's 33:30 Je 29 '53

MISSOURI
See also
Geology—Missouri

Industries and resources

Missouri lists 206 new plants or expansions in '52. Manuf Rec 122:52 F '53

MISSOURI Basin commission (proposed)
Federal commission proposed for Missouri Basin development. Eng N 150:24 F 26 '53
Management of Missouri Basin projects. D. L. Maffitt. bibliog Am Water Works Assn J 45:679-84 Jl '53

MISSOURI Basin inter-agency committee
Missouri basin inter-agency committee tries conciliation of high vs. low dam issue. Eng N 150:22 Ap 2 '53

MISSOURI Basin survey commission
Missouri Basin survey commission reports. Civil Eng 23:344 My '53

MISSOURI-KANSAS-TEXAS railroad
Directors approve plan. Comm & Fin Chr 176:1566 O 27 '52
Railroad securities. Comm & Fin Chr 176:1644 O 30 '52

MISSOURI Pacific railroad
Equipment trust certificates offered. Comm & Fin Chr 177:2353-4 Je 1 '53
New plan of reorganization is filed. Comm & Fin Chr 177:2131 My 18 '53
New plan presented. Comm & Fin Chr 177:627 F 9 '53

MISSOURI river
Governors approve Missouri compact. Eng N 149:26-7 D 11 '52
Missouri Basin groups oppose halting Oahe and Tuttle Creek dam projects. Eng N 150:23 Ap 30 '53
Missouri; no waltz for Ike. map Elec World News ed 139:15-17 Ja 5 '53
New proposal on an old problem. Elec World 139:94-5 F 23 '53
Probable Illinoian age of part of the Missouri river, South Dakota. C. R. Warren. bibliog map diags Geol Soc Bul 63:1143-55 N '52
State versus federal control in the Missouri valley; recommendations of Missouri Basin survey commission. Pub Util 51:583-5 Ap 23 '53
Taste and odor problems during spring run-off; panel discussion. J. F. Erdei and others. diag Am Water Works Assn J 44:1127-43 D '52

Flood control projects

Dam construction races to reduce future Missouri River flood threats. il Eng N 149:27-8 N 6 '52
Missouri is channeled to rescue St Joe. il Eng N 149:28 O 16 '52
Missouri river corralled at Garrison dam. il maps Constr Methods 35:149+ Je '53
Missouri river projects; abstract. D. Maffitt. Water & Sewage Works 100:347-8 S '53

MITCHELL, Don G. 1905-
Shifting the weight at Sylvania. pors Bsns W p 114-15, cover My 2 '53

MITCHELL, James Paul, 1902-
Manpower mobilizer. por Bsns W p29 Ap 11 '53

MITCHELLS and Butlers, limited
Statement by the chairman at 65th annual general meeting. R. H. Butler. Economist 165:792 D 13 '52

MITELLA
Splash-cup dispersal mechanism in chrysosplenium and mitella. D. B. O. Savile. Science 117:250-1 Mr 6 '53

MITES
Cage for rearing predator-prey populations of mites. T. Burnett. diags Science 117:554-5 My 22 '53

MITOCHONDRIA
Disruption of mitochondria of saccharomyces by ultraviolet irradiation. A. Sarachek and G. F. Townsend. bibliog il Science 117:31-3 Ja 9 '53
Synthesis of lecithin in isolated mitochondria. E. P. Kennedy. bibliog Am Chem Soc J 75:249-50 Ja 5 '53

MITOSIS. See Cell division (biology)

MITRAGYNA
Chemistry of the mitragyna genus; derivatives of harman. G. G. Doig, J. D. Loudon and P. McCloskey. Chem Soc J p3912-16 O '52
Chemistry of the mitragyna genus; synthesis of a degradation product of mitragynine. J. W. Cook, J. D. Loudon and P. McCloskey. Chem Soc J p3904-12 O '52

MITRAGYNINE
Chemistry of the mitragyna genus; synthesis of a degradation product of mitragynine. J. W. Cook, J. D. Loudon and P. McCloskey. Chem Soc J p3904-12 O '52

MIXED crystals. See Solutions, Solid

MIXERS
Asphalt and bituminous mixing plant; Frederick Parker, ltd. Engineer 195:798-9 Je 5 '53
Development of active mixer practice at Appleby-Frodingham; abstract. A. Jackson. Engineering 174:765 D 12 '52; Discussion. Engineer 194:785-7 D 12 '52
Frederick Parker, ltd. announces Spot-Mix plant. il Roads & Eng Constr 91:74 My '53
High density bleach mixer. il Paper Tr J 136:22 Ja 2 '53
Improved Cedarapids bituminous-mixing plant. il Roads & Eng Constr 91:78 Ja '53
Ingredient mixer. il diag Machine Design 24:183-4 D '52
Internal sludge mixer operation at Stamford, Conn. A. L. Wilcox. il Sewage & Ind Wastes 25:614-17 My '53
It's doughnuts to dollars. il Chem Eng 59:180 N '52
Measuring the big stir. J. Y. Oldshue. il diag Can Chem Process 36:70-1 D '52
Mixer speeds bleaching. il Chem Eng 60:240 Mr '53
New mixer for laboratory work. Chem Age (Lond) 67:806 D 13 '52
Your guide to mixer costs. G. E. Lewis. Chem Eng 60:191-4 Ja '53
See also
Banbury mixers
Concrete mixers
Egg beaters
Food mixers

MIXING
Chart helps find blend composition for three components. J. T. Hogan. Chem Eng 60:174 F '53; Discussion. 60:247-8 Je '53
Chemical engineering unit operations. J. H. Rushton. bibliog il Ind & Eng Chem 45:93-5 Ja '53
Influence of nonrandomness of mixing in the cell model of solutions. I. Saroléa. J Chem Phys 21:182-4 Ja '53
Mixing and distribution of liquids in high-velocity air streams. J. P. Longwell and M. A. Weiss. bibliog il diags Ind & Eng Chem 45:667-77 Mr '53
Mixing of liquids in chemical processing. J. H. Rushton. bibliog il diags Ind & Eng Chem 44:2931-6 D '52
Radioactive tracers to mark interfaces and measure intermixing in pipelines. D. E. Hull and J. W. Kent. Ind & Eng Chem 44:2745-50 N '52
See also
Agitation
Homogenization
Mixers

MIXTURES
Adsorption from binary mixtures; determination of individual adsorption isotherms. J. J. Kipling and D. A. Tester. Chem Soc J p4123-33 N '52

MIXTURES—*Continued*

Analysis of a concentration anomaly in the ultracentrifugation of mixtures. W. F. Harrington and H. K. Schachman. bibliog il Am Chem Soc J 75:3533-9 Jl 20 '53

Cluster theory of the saturated vapor pressure of helium isotope mixtures. W. Band and R. A. Nelson. bibliog Phys R 90:744-7 Je 1 '53

Composition of acetic acid-water mixtures. J. J. Kipling. Chem Soc J p2858-62 Jl '52

Densities of mixtures; water and methanol. G. Chapas. Am Chem Soc J 74:6275 D 20 '52

Dielectric constants of water-ethyl acetate mixtures. A. P. Altshuller. J Chem Phys 21:562 Mr '53

Effect of 1470A irradiation of nitrogen-hydrogen mixtures and of ammonia. M. H. J. Wijnen and H. A. Taylor. bibliog diag J Chem Phys 21:233-6 F '53

Effect of pressure on diffusion in CS_2 organic mixtures. R. C. Koeller and H. G. Drickamer. bibliog J Chem Phys 21:575-88 Ap '53

Electrolyte-solvent interaction; quaternary salts in methanol-nitromethane and methanol-benzene mixtures. R. C. Miller and R. M. Fuoss. bibliog Am Chem Soc J 75:3076-80 Jl 5 '53

Elementary mechanisms of magnetization in mixed oxides of iron and cobalt. C. Guillaud. bibliog diags Rs Mod Phys 25:64-74 Ja '53

Estimation of heterogeneity from diffusion measurements. P. A. Charlwood. bibliog J Phys Chem 57:125-8 Ja '53

Free volume theory of multicomponent fluid mixtures. Z. W. Salsburg and J. G. Kirkwood. bibliog J Chem Phys 20:1538-43 O '52

Induced infrared absorption in hydrogen and hydrogen foreign gas mixtures at pressures up to 1500 atmospheres. D. A. Chisholm and others. Phys R 88:957-8 N 15 '52

Interaction coefficients of gas mixtures. R. A. Gorski and J. G. Miller. bibliog diag Am Chem Soc J 75:550-2 F 5 '53

Macroscopic equations of transport. J. G. Kirkwood and B. Crawford, jr. bibliog J Phys Chem 56:1048-51 D '52

Molecular sound velocity and molecular compressibility of liquid mixtures. O. Nomoto. bibliog J Chem Phys 21:950-1 My '53

Osmotic properties of aqueous sodium chloride-cesium chloride mixtures at 25°. R. A. Robinson. Am Chem Soc J 74:6035-6 D 5 '52

Properties of *n*-butforane and its mixtures with *n*-butane. J. H. Simons and J. W. Mausteller. diag J Chem Phys 20:1516-19 O '52

Quick method gives specific gravities of mixtures. R. S. Cook. Chem Eng 60:233-4 Mr '53

Separation of mixtures with triethylamine-sulfur trioxide. W. B. Hardy and M. Scalera. Am Chem Soc J 74:5212-14 O 20 '52

Simplified relation between thermodynamics and molecular distribution functions for a mixture. B. H. Zimm. J Chem Phys 21:934-5 My '53

Solubility characteristics of some binary liquid mixtures. D. N. Campbell and J. B. Hickman. bibliog Am Chem Soc J 75:2879-81 Je 20 '53

Solutions of fluorocarbons and hydrocarbons; the energy of mixing. R. Dunlap. bibliog J Chem Phys 21:1293-4 Jl '53

System water-dioxane-hydrogen chloride. R. A. Robinson. Am Chem Soc J 74:6125 D 5 '52

Thermal diffusion in isotopic mixtures in the critical region. F. E. Caskey and H. G. Drickamer. bibliog J Chem Phys 21:153-6 Ja '53

Ultrasonic absorption in liquid mixtures and structural effects. D. Sette. bibliog J Chem Phys 21:558 Mr '53

Velocity measurements of air-water mixtures. L. G. Straub and others. il diags Am Soc C E Proc 79 [no 193]:1-14 My '53

Venturi as a meter for gas-solids mixtures. L. Farbar. bibliog flow diag il diags A S M E Trans 75:943-51 Jl '53

Viscosity of binary liquid mixtures. F. W. Lima. bibliog J Phys Chem 56:1052-4 D '52

Volumetric and phase behavior of mixtures of nitric oxide and nitrogen dioxide. F. T. Selleck, H. H. Reamer and B. H. Sage. bibliog Ind & Eng Chem 45:814-19 Ap '53

MOBILE, Alabama

Mobile; industry springs up across the bay. il Bsns W p 182-4+ Je 13 '53

MOBILE gas service corporation

Offers common shares. Comm & Fin Chr 178:53 Jl 6 '53

MOBILHOME corporation of America

New job for prefabs; building offices in a hurry. il Bsns W p68-70 My 23 '53

MODELING materials

Modeling plastisol; Pyrocon. il Mod Plastics 30:181 F '53

MODELS

Applications of scale models in engineering. R. Hammond. il maps plans diags Engineer 194:181-4, 212-15 Ag 8-15 '52

Contour developer for sheet metal products. L. W. Goodwin. il diag Tool Eng 29:48-51 D '52

Display of engineering models. Engineer 195:905 Je 26 '53

Radio-controlled models; abstract and discussion. P. A. Cummins. Inst E E Proc 99 pt 3:405-6 N '52

See also

Airplane models
Hydraulic models
Mine models
Ship models
Ships—Model testing
Structural engineering—Model testing

also subdivision Models under special subjects, e.g.

Electric lines
Electric substations
Paper mills
Power plants
Railroads

MODELS, Anatomical. See Anatomical models

MODELS, Layout

Alcoa's scale model press plant gives shop men voice in plant layout. il Am Mach 97:188-9 S 14 '53

Model of television plant facilitates rearrangement of production lines. il Electronics 26:222 F '53

Planning with plastics. il Mod Plastics 30:96-7 Mr '53

Plant layout; three dimensions help. E. C. Kellogg. il Iron Age 171:75-6 Mr 19 '53

With two and three dimensional models plant layout is simplified. il Mill & Factory 53:137-8 S '53

MODELS, Miniature

Models make blueprint reading easy for management. il Bsns W p 190-2+ N 8 '52

MODELS, Plastic

Indestructible anatomical models. il Mod Plastics 30:90-3 Mr '53

Modeling plastisol; Pyrocon. il Mod Plastics 30:181 F '53

New business; slab analysis by photograph; Presan corp. il Eng N 149:44 O 16 '52

Photo-elastic research on plates in transverse bending. A. Kuske. bibliog il diags Engineering 175:20-1, 36-9 Ja 2-9 '53

Planning with plastics. il Mod Plastics 30:96-7 Mr '53

Plastic-model plant, midget equipment make process revisions come alive; American Maize-products co. il Food Eng 25:93+ Ja '53

Plastic models for vibration analysis. G. O. Sankey. il diag Machine Design 25:125-8 My '53

Plastic used in building scale models; experimental work at the David Taylor model basin. il Machine Design 25:111 Ja '53

Plastics prototypes revolutionize preparation for manufacture; abstracts. W. A. Stanley. il Automotive Ind 107:98+ Jl 1 '52; Machine Design 24:301+ O '52; diags S A E J 60:48-51 N '52

Scope and limitations of the photoelastic method of stress analysis; abstract. H. T. Jessop. Aviation W 58:34+ Ja 12 '53

Ship and plane testing models; production techniques, using polyester-glass. il Mod Plastics 30:125-6+ N '52

Stresses in rotating parts. R. L. Lake and A. J. Durelli. il Machine Design 25:128-31 Jl '53

MODELS, Wax

Investigation of the piercing process by means of model wax billets. J. L. Holmquist. il diags Iron & Steel Eng 29:53-65; Discussion. 65-8 D '52

MODERN packaging (periodical)

Honors for Modern packaging. il Mod Packaging 26:99 N '52

MODERN plastics (periodical)

Plastics Futures issue honored. il Mod Plastics 30:88 D '52

MODULAR design. See Building—Standards

MOELLER, Lewis N.

Senior CEC admiral retires to civvies; takes job with Palmer & Baker, of Mobile. pors Eng N 150:80+ My 14 '53

MOISTURE

Determination of moisture in oils and greases. R. Y. Meelheim and J. N. Roark. diag Anal Chem 25:348-9 F '53

Effect of moisture and fungus on plastic insulating materials. R. K. Witt and others. diags Mod Plastics 30:119-20+ S '52

Effect of moisture on compressibility of natural high polymers. C. E. Weir. bibliog J Res Nat Bur Stand 49:135-9 S '52

Improved Dean and Stark moisture determination apparatus. A. W. Billitzer. diag Anal Chem 25:533-4 Mr '53

Moisture control with closed hoods. S. Lukianovitch. Pulp & Pa of Can 54:126-31 S '53

Moisture regain of methylcellulose and cellulose acetate. G. C. Gibbons. bibliog Textile Inst J Trans 44:T201-8 My '53

Nomograph gives moisture regain. J. T. Hogan. bibliog Chem Eng 59:153-4 N '52

Rapid method for moisture content estimation in plant products. H. F. Reichard. Chem Eng 60:172-3 F '53

See also

Coal—Moisture content
Dampness in buildings
Evaporation
Gas, Natural—Moisture content
Humidity
Hygrometers
Refrigeration and refrigerating machinery—Moisture problem
Soil moisture
Water vapor
Wool—Moisture content

MOLASSES

How much steam to heat molasses? H. B. Wayne; K. W. Buxton. diag Power Eng 57:82 My; 103 Je '53

MOLDED products

Bath tubs of reinforced plastics. il Mod Plastics 30:96-7 F '53

Color styling varied with two-piece plastic base; liquefier and mixer. il Machine Design 25:137 My '53

Delicate parts embedded in compression molded, clear plastics. T. Harris. il Materials & Methods 36:108-9 N '52

Engineering design for rubber-phenolics. A. P. Landall. il India Rubber World 128:776+ S '53

Fire extinguisher housed in urea. il Mod Plastics 30:95 O '52

Food slicer. il Mod Plastics 30:156 Ja '53

From porcelain to plastics. il Mod Plastics 30:99-100 N '52

How to select glass fabrics for plastics reinforcement. L. M. Calhoun and others. il Mod Plastics 30:84-7+ F '53

Impact properties of molded ethyl cellulose. il Product Eng Hdbk p C 18-19 '53

Large molded parts; big promise in plastics. il Bsns W p48+ Ja 3 '53

Materials supply and demand. Mod Plastics 30:57-68 Ja '53

Molding eliminates sewing on automobile seat cushions and interior side panels. il Mod Plastics 30:105-8+ D '52

More plastics in a telephone. L. W. Droel. il Mod Plastics 30:89-91 D '52

Moulded plastic radar scanners and stressed components. il Engineering 175:28-9 Ja 2 '53

New strength for styrene. il Mod Plastics 30:91-8 N '52

New wood flour moldings complete with plastics. J. Starr. il Materials & Methods 37:92-3 Mr '53

Plastics moldings will get still larger. Materials & Methods 37:7-8 Je '53

Plastics products. il Published in monthly numbers of Modern plastics

Servel goes all-plastic; Wonderbar refrigerette. D. Dailey. il Mod Plastics 30:111-13+ N '52

Slide projector molded of phenolic and high-impact styrene. il Mod Plastics 30:165 D '52

Specialization pays off; knife handles molded of impact phenolics. il Mod Plastics 30:80-1 Mr '53

Swimming pool ladder step. il Mod Plastics 30:179 Ap '53

Vacuum bottles in the modern manner; molded of high impact styrene. il Mod Plastics 30:105-7 O '52

What glass fiber-filled molding resins have to offer. K. Rose. il Materials & Methods 37:87-9 Ja '53

See also

Molds (for plastics)
Plastic materials
Resinous products

Decoration

Molded plastics plus precious metals; coloring added to television escutheon by hot foiling and plating operations; illustrations with text. J. B. Loeffler. il Mod Plastics 30:92-3 D '52

Manufacture

A.S.M.E. Rubber and plastics division meeting; symposium on molded goods. Rubber Age 73:222 My '53

Compression molded phenolics used for large tv cabinets. K. Rose. il Materials & Methods 38:226+ O '53

Progress in manufacturing methods in the molded rubber products industry. J. H. Gerstenmaier and F. J. Fetter. il India Rubber World 128:761-5 S '53

Scientific sampling. R. K. Mueller. il Mod Plastics 30:79-84 Ap '53

Setting up a plant for custom molding reinforced plastics. R. S. Morrison. il Mod Plastics 30:109-11+ F '53

See also

Molding machines (for plastics)

MOLDED products, Mechanical

Geared motor for toys or models has cellulose acetate housings and gears. il Mod Plastics 30:200 N '52

In these applications, thick polyester parts save money, reduce weight; Induction heating corp. E. S. Goodridge. il Materials & Methods 36:98-9 N '52

Lawn mower rolls on copolymer. il Mod Plastics 30:102-3 Ap '53

Molded commutator assemblies. il diags Machine Design 25:202 O '53

Moulded nylon. il Automobile Eng 43:81-2 F '53

Molded plastic gears. F. R. Zumstein. il diag Am Mach 95:114-18 Ag 20 '51; Same cond. Product Eng Hdbk p D9-11 '53

Room coolers. il Mod Plastics 30:95-9+ Ap '53

Why Bell & Howell uses butyrate. il Mod Plastics 30:75-7 Ja '53

See also

Gearing, Plastic

MOLDING

Basic principles of injection molding. C. E. Beyer and R. B. Dahl. Mod Plastics 30:103-4+ Mr '53

Fabrication; molding and curing; abstract. India Rubber World 128:784 S '53

Getting the best from Plastisols; slush molding operations. il Mod Plastics 30:116-18 N '52

New resin for the resin pulp molding industry. R. Lindenfelser. bibliog(52 ref) Tappi 36:sup20A+ Je '53

New waveguide molding process. il Tele-Tech 12:166 My '53

Pressure gage for injection molding. F. E. Towsley and C. E. Beyer. il diags Mod Plastics 30:109-10+ Ap '53

Rivets covered by injection molding. il Mod Plastics 30:123 Ap '53

See also

Extrusion process (plastics)
Nylon—Molding

MOLDING machines

Automatic molding machine operates on rotary principle; Osborn mfg. co. L. F. Miller. il plan diag Foundry 81:238+ O '53

High-speed molding is done automatically; Symington-Gould corp. W. G. Gude. il Foundry 81:98-101 Ap '53

MOLDING machines (for plastics)

Details that count. il Mod Plastics 30:124-5 F '53

Develop 70,000 psi injection press, anti-swing crane at Argonne lab. il Am Mach 97:203 F 16 '53

Forming problems overcome; U.S. gasket co. il Mod Plastics 30:121 F '53

Fully automatic injection machine. il diags Mod Plastics 30:118-19+ Ap '53

Injection molder; Lewis welding & engineering corp. il Tool Eng 30:156 Ap '53; Am Mach 97:205 Ap 13 '53

Injection molding; low cost press has flexibility. il Iron Age 171:136-7 F 19 '53

Machines for thermoplastics. Mod Plastics 30:109 Ja '53

Measurement of heating capacities of injection molding machines. C. E. Beyer and R. B. Dahl. diag Mod Plastics 30:124+ S '52

Moulding equipment at the plastics exhibition. il Engineer 195:867-8 Je 19 '53

Plastics; machinery market booms molding machines and pellet presses. H. R. Simonds. il Iron Age 171:182-5 Mr 5 '53

Plastics machinery; permanent market for press makers. il Steel 132:69 Mr 16 '53

Reed-Prentice plastic injection-molding machine develops 450-ton locking pressure. il Am Mach 97:176 S 28 '53; Same. Mach 60:217 O '53

Reinforced plastic mouldings; Turner Atherton machine. il Elec R (Lond) 151:1345-6 D 19 '52

Some design considerations for injection-molding heating chambers. G. D. Gilmore and G. B. Thayer. diags A S M E Trans 75:903-7 Jl '53

Some design considerations for injection molding heating chambers. G. D. Gilmore and G. B. Thayer. diags India Rubber World 128:207-10 My '53

Vacuum formed thermoplastics for large, thin parts. K. Rose. il Materials & Methods 37:94-5 My '53

Vacuum machines make short work of molding plastics. il Comp Air Mag 58:144 My '53

Weigh feeding for injection machines. il Mod Plastics 30:132 N '52

What's ahead the next ten years in casting and molding; plastic molding. Am Mach 96:B5-6 Mid-N '52

MOLDS (botany)

Anti-mold wrapping; Milpure. Bsns W p72+ Jl 25 '53

Chemistry of mould metabolites; isolation and characterisation of a red pigment from coriolus sanguineus, (Fr.). G. W. K. Cavill and others. Chem Soc J p525-9 F '53

Detergents effective in removing mold from fruit. R. D. Haynes and others. il diag Food Eng 25:87+ Mr '53

Penicillin production by pigment-free molds. R. F. Anderson and others. bibliog diag Ind & Eng Chem 45:768-73 Ap '53

Pinning down bag-borne bacteria. W. L. Owen. il Food Eng 25:57-8+ Ja '53

Study of mycological methylation with radioactive methyl donors or sources. F. Challenger and others. bibliog Chem & Ind p 128-9 F 7 '53

See also

Aspergillus
Fungi
Mildew
Paper—Mold resistance

MOLDS (for casting)

Autoclino automatic shell mould making machine. il Engineer 195:859-60 Je 19 '53; Engineering 175:745 Je 12 '53

Automatic, rotating table machine makes shell molds. il Foundry 80:265 N '52

Design and production of shell mold patterns improved. il Iron Age 170:172-4 D 11 '52

Effect of metal/mould reaction on 85 : 5 : 5 : 5 leaded gunmetal sand castings; abstract and discussion. N. B. Rutherford. Engineering 174:462 O 10 '52

Effect of mould material and alloying elements on metal/mould reaction in copper-base alloys; abstract and discussion. N. B. Rutherford. Engineering 174:462 O 10 '52

How to make a mold for a pulley casting. P. Dwyer. il diags Foundry 80:223-4+ S; 229-30+ O '52

How X-3 car wheels are made. il diag Ry Age 134:84-7 Ap 6 '53; Same. Ry Loco & Cars 127:61-5 My '53

Machine produces shell molds automatically. il Foundry 80:267 O '52

Mechanised shell moulding; Polygram automatic shell moulding machine Mark IV. il Metallurgia 47:91-2 F '53

Mold design for casting steel in sand. R. W. Tindula. bibliog(52 titles) Foundry 81:242+ O '53

New method simplifies shell mold assembly. R. Herold. diags Foundry 80:142+ D '52

Phenol, shot in the arm; shell molding. Chem W 72:61-4 Ja 17 '53

Phenolic duplicating masters; quick-curing casting resin replaces steel in production of multi-cavity molds from original models. il Mod Plastics 30:98-9 S '52

Selecting a resin for shell molds. M. F. Drumm. Automotive Ind 109:66+ Jl 1 '53

Shell moulds and cores. il Engineer 194:845 D 19 '52

Small, intricate castings produced at low cost; shell molding. il Mill & Factory 52:120 F '53

Standardized graphite molds. Blast F & Steel Pl 41:1094 S '53

Studies high pressure molding; research at the University of Wisconsin. R. Heine and T. Barlow. Foundry 81:146+ Ag '53

Zircon and its foundry applications. W. M. Peterson. il. Foundry 81:92-5 Ap '53

See also

Cores
Steel ingots—Molds

Cement-sand molds

Casting in cement bonded sand. J. B. McIntyre. il Foundry 80:90-1+ D '52

Permanent molds

Permanent mold process. H. E. Bourassa. il Light Metal Age 11:12-14+ F '53

Plaster molds

Press dies cast from plaster forms. H. Cope and H. Landis. il Mach 59:190-1 Ap '53

Testing

Titanium casting research tests shell molded refractories. J. G. Kura. il diags Iron Age 170:88-92 O 30 '52

MOLDS (for ceramic products)

How to recognize and cure plaster mold defects. G. M. Thoman. il Cer Ind 61:62-3+ Ag; 76+ S '53

Tinted plaster ups mold life by 30 to 50 per cent; Puritan pottery plaster. Cer Ind 59:71 O '52

MOLDS (for glass)

Clinic covers glass mold metallurgy and care. Cer Ind 59:80+ N '52

How wet blasting cuts mold cleaning costs. E. F. Anderson. il Cer Ind 60:104-5 Je '53

New cast iron increases glass mould life. N. Davis. il Cer Ind 60:133+ Ap '53

Some tips on how to weld glass molds. G. Miller. Cer Ind 59:87 D '52

MOLDS (for plastics)

Forming phenolic and polyester parts in vinyl plastisol molds. Rubber Age 74:648 Ag '53

Sprayed metal molds. W. Brenner and L. Hase. bibliog il diags Mod Plastics 30:105-9+ S '52

Vinyl molds. il Mod Plastics 30:176-7 S '52

MOLDS (for rubber)

Molding and curing; abstract. J. E. Martin. Rubber Age 73:803 S '53

Production of cast aluminum molds for forming foam rubber products. R. F. Dalton. il Rubber Age 73:211-12 My '53

Tire molds, an advanced example of the casting art; Goodyear tire & rubber co. il diags Metal Prog 63:97-104 F '53

Wet blasting process for the cleaning and finishing of rubber molds. E. F. Anderson. il Rubber Age 73:71-2 Ap '53

MOLECULAR association

Associating effect of the hydrogen atom; the S-H-N bonds; esters of thion- and dithiocarbamic acids. A. A. Burrows and L. Hunter. Chem Soc J p4118-22 N '52

MOLECULAR beams

Molecular beam investigation of rotational transitions; the rotational levels of KBr and their hyperfine structure. B. P. Fabricand and others. bibliog Phys R 91:1403-8 S 15 '53

Molecular beam investigation of rotational transitions; the rotational levels of KCl and their hyperfine structure. C. A. Lee and others. bibliog diags Phys R 91:1395-403 S 15 '53

MOLECULAR compounds

Free-electron model for π-molecular complexes. K. E. Shuler. bibliog diags J Chem Phys 20:1865-71 D '52

Molecular addition compounds of titanium tetrachloride with several ethers. P. M. Hamilton and others. bibliog Am Chem Soc J 75:2881-3 Je 20 '53

Molecular complexes involving iodine. S. H. Hastings and others. bibliog Am Chem Soc J 75:2900-5 Je 20 '53

Molecular compounds and their spectra; the interaction of electron donors and acceptors. R. S. Mulliken. bibliog diags J Phys Chem 56:801-22 O '52

Preparation and magnetic susceptibility of clathrate compounds of nitric oxide and of oxygen. D. F. Evans and R. E. Richards. Chem Soc J p3295-7 Ag '52

Regularities in the spectra of molecular complexes. H. McConnell and others. bibliog J Chem Phys 21:66-70 Ja '53

Spectroscopic study of the benzene-*s*-trinitrobenzene molecular complex. D. M. G. Lawrey and H. McConnell. bibliog Am Chem Soc J 74:6175-7 D 20 '52

Strained homomorphs; general summary. H. C. Brown and others. bibliog diags Am Chem Soc J 75:1-6 Ja 5 '53

Studies in spectroscopy; molecular compound formation with polyhalogeno-iodo-compounds. R. N. Haszeldine. Chem Soc J p2622-6 S '53

MOLECULAR orbitals

Application of molecular-orbital theory to some binuclear co-ordination compounds. J. D. Dunitz and L. E. Orgel. diags Chem Soc J p2594-6 S '53

Electronic orbitals, shapes, and spectra of polyatomic molecules. A. D. Walsh. Chem Soc J p2260-331 Ag '53

Exchange interactions. C. Zener and R. R. Heikes. diags Rs Mod Phys 25:191-8 Ja '53

Excited states of acetylene; description and analysis of the near-ultra-violet absorption spectra of acetylene and dideuteroacetylene; nature of the excited state. C. K. Ingold and G. W. King. pl diags Chem Soc J p2725-44 S '53

Excited states of acetylene; possibilities of interaction between σ-bond hybridisation and π-electron excitation with resulting changes of shape during transitions. C. K. Ingold and G. W. King. diags Chem Soc J p2702-4 S '53

Excited states of acetylene; theoretical methods for analysis of near-ultra-violet band-systems of acetylenes. C. K. Ingold and G. W. King. diags Chem Soc J p2708-24 S '53

Ferromagnetism and the band theory. J. C. Slater. bibliog Rs Mod Phys 25:199-210 Ja '53

Free-electron network model for conjugated systems. K. Ruedenberg and C. W. Scherr. bibliog diags J Chem Phys 21:1565-96 S '53

Free electron wave function as approximations to MO wave functions for conjugated molecules. H. H. Jaffé. diags J Chem Phys 20:1646 O '52

Improvement in the π-electron approximation in LCAO MO theory. R. Pariser. J Chem Phys 21:568-9 Mr '53

LCAO MO self-consistent field calculation of the ground state of H_2O. F. O. Ellison and H. Shull. bibliog J Chem Phys 21:1420-1 Ag '53

Method for estimating electronic repulsion integrals over LCAO MO'S in complex unsaturated molecules. R. G. Parr. J Chem Phys 20:1499 S '52

Mnemonic device for molecular orbital energies. A. A. Frost and B. Musulin. diags J Chem Phys 21:572-3 Mr '53

Molecular-orbital calculations for Clar's hydrocarbon 1 : 13 : 12-6 : 16 : 7-dibenzonaphthacene (zethrene). C. A. Coulson and C. M. Moser. Chem Soc J p 1341-7 My '53

Molecular-orbital calculations on the benzoate ion. C. M. Moser. Chem Soc J p 1073-8 Ap '53

Molecular orbital theory of alternant hydrocarbons. R. B. Potts. J Chem Phys 21:758-9 Ap '53

Molecular-orbital theory of conjugated organic compounds with application to the perturbed benzene ring. P.-O. Löwdin. bibliog diags J Chem Phys 21:496-515 Mr '53

Molecular orbital treatment of the ionization equilibria of triarylchloromethanes. A. Streitwieser, jr. bibliog Am Chem Soc J 74:5288-90 N 5 '52

Quantum-mechanical treatment of aliphatic compounds; paraffins. R. D. Brown. Chem Soc J p2615-21 S '53

Relative energies of polar and nonpolar valence bond functions and molecular orbital method. M. Wolfsberg. J Chem Phys 21:943-4 My '53

Semilocalized orbitals; relationship of *n*-center orbitals, two-center orbitals, and bond properties. C. R. Mueller. J Chem Phys 20:1600-4 O '52

Small-ring compounds; molecular orbital calculations of properties of some small-ring hydrocarbons and free radicals. J. D. Roberts, A. Streitwieser, jr. and C. M. Regan. bibliog Am Chem Soc J 74:4579-82 S 20 '52

Studies in molecular orbital theory of valence; the transition state in Walden inversion type reactions. H. H. Jaffé. J Chem Phys 21:1618 S '53

Theoretical considerations concerning Hammett's equation; calculation of ρ- values. H. H. Jaffé. bibliog J Chem Phys 21:415-19 Mr '53

Theoretical considerations concerning Hammett's equation; σ-values for pyridine and other aza-substituted hydrocarbons. H. H. Jaffé. J Chem Phys 20:1554-5 O '52

Unified orbital theory of the excited states of the fluorine molecule. C. R. Mueller. bibliog J Chem Phys 21:1013-17 Je '53

MOLECULAR rearrangements

Acylarylnitrosamines; the rearrangement, decomposition, and deacylation of acylarylnitrosamines. D. H. Hey, J. Stuart-Webb and G. H. Williams. Chem Soc J p4657-65 D '52

Alicyclic glycols; *cyclo*pentane-1 : 3-diol, anionotropic rearrangement in some reactions of 3 : 5-dibromo*cyclo*pentene. L. N. Owen and P. N. Smith. Chem Soc J p4035-47 O '52

Amadori rearrangement under new conditions and its significance for nonenzymatic browning reactions. J. E. Hodge and C. E. Rist. bibliog Am Chem Soc J 75:316-22 Ja 20 '53

Aniohotropic systems; syntheses and rearrangements in the *cyclo*heptenyl series. E. A. Braude, W. F. Forbes and E. A. Evans. Chem Soc J p2202-7 Ag '53

Azulenes; an attempted synthesis of 1-isopropyl-4,8-dimethylazulene; migration of an isopropyl group. W. Herz. bibliog Am Chem Soc J 75:73-7 Ja 5 '53

Beckmann rearrangements; aldoximes. E. C. Horning and V. L. Stromberg. bibliog Am Chem Soc J 74:5151-2 O 20 '52

Beckmann rearrangements; an investigation of special cases. E. C. Horning, V. L. Stromberg and H. A. Lloyd. bibliog Am Chem Soc J 74:5153-5 O 20 '52

Benzidine rearrangement; kinetics and temperature coefficients of the rearrangements of hydrazobenzene and certain substituted hydrazobenzenes. L. J. Croce and J. D. Gettler. bibliog Am Chem Soc J 75:874-9 F 20 '53

MOLECULAR rearrangements—*Continued*

C-14 tracer studies in the rearrangements of unsymmetrical α-diketones; ethyl α,β-diketobutyrate to methyltartronic acid. H. W. Davis, E. Grovenstein, jr. and O. K. Neville. bibliog Am Chem Soc J 75:3304-5 Jl 20 '53

C^{14} tracer studies in the rearrangements of unsymmetrical α-diketones; *p*-methoxy-benzylideneacetophenone oxide. E. C. Hendley and O. K. Neville. Am Chem Soc J 75:1995-6 Ap 20 '53

Claisen rearrangement of phenyl allyl ethers, labeled with carbon-14. J. P. Ryan and P. R. O'Connor. bibliog Am Chem Soc J 74:5866-9 D 5 '52

Composition of cycloheptanol produced by the Demianov rearrangement. P. A. S. Smith and D. R. Baer. Am Chem Soc J 74:6135-7 D 5 '52

Cyclic polyolefins; cycloöctanediols; molecular rearrangement of cycloöctene oxide on solvolysis. A. C. Cope, S. W. Fenton and C. F. Spencer. bibliog Am Chem Soc J 74:5884-8 D 5 '52

Dienone-phenol rearrangement with mineral acids. A. S. Dreiding, W. J. Pummer and A. J. Tomasewski. bibliog Am Chem Soc J 75:3159-61 Jl 5 '53

Exchange of Br^{80} atoms with bromoölefins; induced rearrangement of the bromopropenes. R. R. Williams, jr. and others. bibliog Am Chem Soc J 74:5737-9 N 20 '52

Formic acid rearrangement of 3,4-dimethyl-1-hexyn-3-ol. T. Takeshima. bibliog Am Chem Soc J 75:3309-12 Jl 20 '53

Formic acid rearrangement of 2-phenyl-3-butyn-2-ol. T. Takeshima. bibliog Am Chem Soc J 75:4107-8 Ag 20 '53

Free radical rearrangements in the decarbonylation of aldehydes. D. Y. Curtin and M. J. Hurwitz. bibliog Am Chem Soc J 74:5381-7 N 5 '52

Free radical rearrangements; the free β-methyl-β-α-tolylpropyl (*p*-methylneophyl) radical. W. H. Urry and N. Nicolaides. bibliog Am Chem Soc J 74:5163-8 O 20 '52

Gelsemine; the chemistry and rearrangements of spiroöxindoles. B. Witkop and J. B. Patrick. bibliog Am Chem Soc J 75:2572-6 Je 5 '53

Halogen migration in the Friedel-Crafts acylation of olefins. C. L. Stevens and E. Farkas. bibliog Am Chem Soc J 75:3306-8 Jl 20 '53

Infrared spectra of synthetic polypeptides prepared by the Lossen rearrangement. C. D. Hurd, L. Bauer and I. M. Klotz. bibliog Am Chem Soc J 75:624-6 F 5 '53

Kinetics and mechanism of nucleophilic displacements in allylic systems; reaction of 3 : 3-dichloroprop-1-ene with the ethoxide ion. P. B. D. de la Mare and C. A. Vernon. Chem Soc J p3325-31 S '52

Kinetics and mechanisms of nucleophilic displacements in allylic systems; the reactions between 3 : 3-dichloroprop-1-ene and the thiophenoxide ion. P. B. D. de la Mare and C. A. Vernon. Chem Soc J p3331-4 S '52

Kinetics and mechanisms of nucleophilic displacements in allylic systems; the reactions of 3 : 3 : 3-trichloro-2-methylprop-1-ene with nucleophilic reagents. P. B. D. de la Mare and C. A. Vernon. Chem Soc J p3628-31 S '52

Kinetics of anionotropic rearrangement; a comparison of the effects of the phenyl, furyl, and thienyl groups on reactivity. E. A. Braude and J. S. Fawcett. Chem Soc J p4158-62 N '52

Mechanism and scope of the Neber rearrangement. M. J. Hatch and D. J. Cram. bibliog Am Chem Soc J 75:38-44 Ja 5 '53

Mechanism of the benzidine rearrangement; general acid catalysts. M. D. Cohen and G. S. Hammond. bibliog Am Chem Soc J 75:880-3 F 20 '53

Mechanism of the *para*-Claisen rearrangement. H. Conroy and R. A. Firestone. bibliog Am Chem Soc J 75:2530-1 My 20 '53

Migration aptitudes in the Stieglitz rearrangement. M. S. Newman and P. M. Hay. bibliog Am Chem Soc J 75:2322-4 My 20 '53

Migration ratios in the rearrangement of 2,2-diarylethanols. J. G. Burr, jr. and L. S. Ciereszko. bibliog Am Chem Soc J 74:5426-30 N 5 '52

Migration ratios observed in the reaction of diarylethylamines with nitrous acid. L. S. Ciereszko and J. G. Burr, jr. bibliog Am Chem Soc J 74:5431-3 N 5 '52

Molecular rearrangement of the phenylhydrazones of thio-oxindole-3-aldehyde and of 3-acetyl(thio-oxindole). R. H. Glauert and F. G. Mann. Chem Soc J p2401-4 Je '52

Molecular rearrangements; the retropinacolone rearrangement of 2,2-diphenylcycloalkanols. R. E. Lyle, N. B. Martin, jr. and H. L. Fielding. bibliog Am Chem Soc J 75:4089-90 Ag 20 '53

Neighboring carbon and hydrogen; rearrangement as a sequel to neighboring functional group participation; solvolysis of 2-methyl-2-methoxy-1-propyl *p*-bromobenzenesulfonate. S. Winstein, C. R. Lindegren and L. L. Ingraham. bibliog Am Chem Soc J 75:155-8 Ja 5 '53

New intramolecular rearrangement. W. T. Caldwell and G. C. Schweiker. bibliog Am Chem Soc J 74:5187-9 O 20 '52

New syntheses of heterocyclic compounds; 2 : 10-diazaphenanthrenes by application of the Stieglitz rearrangement. S. S. Berg and V. Petrow. Chem Soc J p3713-16 O '52

Nucleophilic displacement *via* frontal attack; the stereochemistry of the Stevens rearrangement. J. H. Brewster and M. W. Kline. bibliog Am Chem Soc J 74:5179-82 O 20 '52

Old and new ideas on saturated rearrangements. C. K. Ingold. diags Chem Soc J p2845-52 S '53

para-Claisen rearrangement. S. J. Rhoads, R. Raulins and R. D. Reynolds. bibliog Am Chem Soc J 75:2531-2 My 20 '53

Problem of the unsaturated three-membered ring containing nitrogen. D. J. Cram and M. J. Hatch. bibliog Am Chem Soc J 75:33-8 Ja 5 '53

Racemization in the camphene hydrochloride-isobornyl chloride rearrangement. W. R. Vaughan and R. Perry, jr. bibliog Am Chem Soc J 75:3168-72 Jl 5 '53

Rearrangement amination of *o*-chloro-and *o*-bromophenyl methyl sulfides and *o*-bromophenyl methyl sulfone in liquid ammonia. H. Gilman and G. A. Martin. bibliog Am Chem Soc J 74:5317-19 N 5 '52

Rearrangement and cleavage of benzoin and α-substituted benzoins by alkali. D. B. Sharp and E. L. Miller. bibliog Am Chem Soc J 74:5643-6 N 20 '52

Rearrangement of α-aminoketones during Clemmensen reduction; influence of phenyl substitution. N. J. Leonard, G. Fuller and H. L. Dryden, jr. bibliog Am Chem Soc J 75:3727-30 Ag 5 '53

Rearrangement of α-aminoketones during Clemmensen reduction; the fate of asymmetry at the α-carbon. N. J. Leonard, R. C. Sentz and W. J. Middleton. Am Chem Soc J 75:1674-5 Ap 5 '53

Rearrangement of 2-bromo-1-methoxy-1,1,2-triphenylethane and 1-*p*-anisyl-2-bromo-1-methoxy-1,2-diphenylethane. D. Y. Curtin and E. K. Meislich. Am Chem Soc J 74:5518-20 N 5 '52

Rearrangement of halotropones; chloride exchange in tribromotropolone. W. V. Doering and L. H. Knox. bibliog Am Chem Soc J 74:5683-7 N 20 '52

Rearrangement of the neophyl radical. F. H. Seubold, jr. bibliog Am Chem Soc J 75:2532-3 My 20 '53

Rearrangements in the reactions of 2-(4-substituted)-phenylethylamines-1-C^{14} with nitrous acid. J. D. Roberts and C. M. Regan. bibliog Am Chem Soc J 75:2069-72 My 5 '53

Role of neighboring groups in replacement reactions; polarimetric acetolysis rate of *trans*-2-acetoxycyclohexyl *p*-toluenesulfonate. S. Winstein and R. Heck. bibliog Am Chem Soc J 74:5584-6 N 20 '52

Stereochemistry of the S_N2' reaction. G. Stork and W. N. White. Am Chem Soc J 75:4119-20 Ag 20 '53

Stereospecificity in rearrangements; *erythro*- and *threo*-1-*p*-chlorophenyl-1,2-diphenyl-2-bromoethanol. D. Y. Curtin and E. K. Meislich. bibliog Am Chem Soc J 74:5905-8 D 5 '52

MOLECULAR rearrangements—*Continued*

Stereospecificity of the Baeyer-Villiger rearrangement. K. Mislow and J. Brenner. bibliog Am Chem Soc J 75:2318-22 My 20 '53

Stereospecificity in the rearrangement of 17-hydroxy-20-ketosteroids. R. B. Turner. bibliog Am Chem Soc J 75:3484-8 Jl 20 '53

Steroids and Walden inversion. C. W. Shoppee and G. H. R. Summers. pl Chem Soc J p3361-81 S '52

Studies in molecular rearrangement; oxotropic rearrangements in the five-membered heterocyclic series. E. A. Braude, J. S. Fawcett and D. D. E. Newman. Chem Soc J p4155-8 N '52

Studies in stereochemistry; molecular rearrangements in the 3,4-dimethyl-4-phenyl-3-hexanol system. D. J. Cram and J. D. Knight. bibliog Am Chem Soc J 74:5839-46 D 5 '52

Studies in the mechanism of the Willgerodt reaction; direction of migration of the functional group in aliphatic ketones. E. Cerwonka, R. C. Anderson and E. V. Brown. bibliog Am Chem Soc J 75:28-30 Ja 5 '53

Studies in the polyene series; the preparation of oct-4-ene-2 : 7-dione and octa-3 : 5-diene-2 : 7-dione, intermediates for the synthesis of carotenoids; the anionotropic rearrangement of some hexa-2 : 5-diene-1 : 4-diols. R. Ahmad and others. Chem Soc J p4089-98 N '52

Synthesis of polyenes; prototropic rearrangements in β-ionols and related compounds. W. Oroshnik, A. D. Mebane and G. Karmas. bibliog Am Chem Soc J 75:1050-8 Mr 5 '53

Synthesis of 3-substituted chromones by rearrangement of *o*-acyloxyacetophenones. W. D. Ollis and D. Weight. Chem Soc J p3826-30 O '52

See also

Wagner rearrangement

MOLECULAR refraction. See Refraction, Molecular

MOLECULAR weights

Concentration effect on sedimentation rate and its use in estimating molecular weights. R. H. Golder. bibliog Am Chem Soc J 75:1739-41 Ap 5 '53

Correction of absorption and fluorescence in the determination of molecular weights by light scattering. B. A. Brice, G. C. Nutting and M. Halwer. bibliog Am Chem Soc J 75:824-8 F 20 '53

Coumarone-indene resins; molecular weight distribution. A. C. Zettlemoyer and E. T. Pieski. Ind & Eng Chem 45:165-7 Ja '53

Determination of molecular weights of dextrans by means of alkaline copper reagents. H. S. Isbell and others. bibliog J Res Nat Bur Stand 50:81-6 F '53

Factors affecting molecular weight of enzymatically synthesized dextran. H. M. Tsuchiya, N. N. Hellman and H. J. Koepsell. bibliog Am Chem Soc J 75:757-8 F 5 '53

High-polymer solutions; the determination of number-average molecular weights from measurements of osmotic pressure. E. Ducker and others. Chem Soc J p4390-3 N '52

Kinetics of catalytic polymerizations; molecular-weight distribution in polar polymerizations. D. O. Jordan and A. R. Mathieson. Chem Soc J p2358-62 Je '52

Kinetics of catalytic polymerizations; the molecular-weight distribution of poly-(α-methylstyrene) prepared by the aluminium chloride-catalyzed polymerization. D. O. Jordan and A. R. Mathieson. Chem Soc J p2363-6 Je '52

Macromolecular properties of polyvinylpyrrolidone; molecular weight distribution. L. E. Miller and F. A. Hamm. bibliog J Phys Chem 57:110-22 Ja '53

Molecular weight and shape of desoxypentose nucleic acid. P. Doty and B. H. Bunce. bibliog Am Chem Soc J 74:5029-34 O 20 '52

Molecular weight of potato amylopectin as determined by light, scattering. L. P. Witnauer and others. J Chem Phys 20:1978-9 D '52

Statistical mechanics of dilute polymer solutions; variation of the osmotic second coefficient with molecular weight. W. R. Krigbaum and P. J. Flory. bibliog diags Am Chem Soc J 75:1775-84 Ap 20 '53

Studies in Newtonian flow; viscosity *vs* molecular weight in liquids; viscosity *vs* concentration in polymer solutions. A. K. Doolittle. J Ap Phys 23:418-26 Ap '52

Use of unfiltered light in determining molecular weights by light scattering. M. Kerker. J Chem Phys 20:1653-4 O '52

Velocity of sound in liquids and molecular weight. S. Parthasarathy and N. N. Bakhshi. J Phys Chem 57:453-4 Ap '53

MOLECULES

Adsorption of flexible macromolecules. R. Simha, H. L. Frisch and F. R. Eirich. bibliog J Phys Chem 57:584-9 Je '53

Adsorption on proteins and interactions between protein molecules in solution. T. L. Hill. J Chem Phys 21:1395-6 Ag '53

Application of Eller's optical machine to the determination of the molecular structure of gases by electron diffraction. L. Bru and others. il J Chem Phys 20:1069-70 Jl '52

Application of Eller's optical machine to the determination of the molecular structure of gases by electron diffraction; nonrigid molecules. L. Bru and others. il J Chem Phys 20:1911-13 D '52

Application of the cell method to r-mer liquids. I. Prigogine and others. J Chem Phys 21:559-60 Mr '53

Application of the cell method to the statistical thermodynamics of solutions; experimental. V. Mathot and A. Desmyter. bibliog diag J Chem Phys 21:782-8 My '53

Application of the cell model to the statistical thermodynamics of solutions; volume change of mixing in solutions of molecules slightly different in size. I. Prigogine and A. Bellemans. bibliog J Chem Phys 21:561-2 Mr '53

Application of the Fermi-Thomas method to molecules. W. A. Bowers. J Chem Phys 21:1117-18 Je '53

Approximate formulas for many-center integrals in the theory of molecules and crystals. P. Löwdin. bibliog J Chem Phys 21:374-5 F '53

Chemical modulation; a method for investigating transient molecules. E. J. Bair and others. J Chem Phys 21:759 Ap '53

Chemical significance of quadrupole spectra. B. P. Dailey. bibliog J Phys Chem 57:490-6 My '53

Dipole-dipole interaction in simple lattices. T. H. Berlin and J. S. Thomsen. diags J Chem Phys 20:1368-74 S '52

Dipoles on a lattice; the spherical model. M. Lax. bibliog J Chem Phys 20:1351-9 S '52

Effect of dipolar ions upon the activity coefficients of neutral molecules. A. P. Altshuller. bibliog J Phys Chem 57:375-6 Mr '53

Electric dipole moments of several molecules from the Stark effect. S. N. Ghosh and others. bibliog J Chem Phys 21:308-10 F '53

Electron coupled interactions between nuclear spins in molecules. N. F. Ramsey. bibliog Phys R 91:303-7 Jl 15 '53

Electron diffraction investigation of the molecular structures of ketene, carbonyl fluoride and tetrafluoroethylene. T. T. Broun and R. L. Livingston. bibliog Am Chem Soc J 74:6084-91 D 5 '52

Electron distribution in molecules; F^{19} nuclear magnetic shielding and substituent effects in some benzene derivatives. H. S. Gutowsky and others. bibliog il diag Am Chem Soc J 74:4809-17 O 5 '52

Electron distribution in molecules; proton and fluorine magnetic resonance shifts in the halomethanes. L. H. Meyer and H. S. Gutowsky. bibliog il J Phys Chem 57:481-6 My '53

Electron distribution in molecules; the proton magnetic spectra of simple organic groups. L. H. Meyer, A. Saika and H. S. Gutowsky. bibliog il Am Chem Soc J 75:4567-73 S 20 '53

Electronic orbitals, shapes, and spectra of polyatomic molecules. A. D. Walsh. Chem Soc J p2260-331 Ag '53

MOLECULES—*Continued*

Electronic structures and spectra of some molecules related to oxygen. L. E. Orgel. Chem Soc J p 1276-8 Ap '53

Exchange terms in the HLSP theory of an *n*-electron molecule. K. Nukasawa. J Chem Phys 20:1983 D '52

Flow birefringence in solutions of macromolecules. R. Cerf and H. A. Scheraga. il diags Chem R 51:185-261 bibliog(p256-61) O '52

Force constants in polyatomic molecules. W. J. O. Thomas. Chem Soc J p2383-9 Je '52

Forces between hydrogen molecules. A. A. Evett and H. Margenau. Phys R 90:1021-3 Je 15 '53; Abstract. J Chem Phys 21:958-9 My '53

Gaussian approximation for the probability density of a molecule in a cell. G. Careri. diag J Chem Phys 20:1114-16 Jl '52

High temperature susceptibility of permanent dipole lattices. R. Rosenberg and M. Lax. bibliog diags J Chem Phys 21:424-8 Mr '53

Hydrogen bonding and the interactions of water molecules. E. S. Campbell. bibliog J Chem Phys 20:1411-20 S '52

Interactions of randomly disordered molecules. M. Atoji and W. N. Lipscomb. bibliog diag J Chem Phys 21:1480-6 S '53

Interactions of some neutral organic molecules with proteins. I. M. Klotz and J. Ayers. bibliog Am Chem Soc J 74:6178-80 D 20 '52

Intermolecular forces in acetone and methyl alcohol. V. Myers. J Chem Phys 20:1806 N '52

Intermolecular potentials for the systems CO_2-CO_2 and CO_2-N_2O. I. Amdur and others. bibliog J Chem Phys 20:1620-3 O '52

Kinetics of surface reactions in the case of interactions between adsorbed molecules. K. J. Laidler. bibliog J Phys Chem 57:318-19 Mr '53

Localized functions in molecules and crystals. G. F. Koster. bibliog diags Phys R 89:67-77 Ja 1 '53

London dispersion forces between unlike molecules. J. F. Hornig and J. O. Hirschfelder. J Chem Phys 20:1812 N '52

Low frequency resonances in the spectra of diatomic molecules. R. E. Coté and P. Kusch. bibliog Phys R 90:103-10 Ap 1 '53

Magnetic hyperfine structure in diatomic molecules. R. A. Frosch and H. M. Foley. bibliog diags Phys R 88:1337-49 D 15 '52

Microwave absorption and molecular structure in liquids; measurement in organic halides at 10-cm wavelength. F. H. Branin, jr. and C. P. Smyth. bibliog diag J Chem Phys 20:1121-8 Jl '52

Molecular configuration of polyelectrolytes. P. J. Flory. J Chem Phys 21:162-3 Ja '53

Molecular constants of cesium chloride by the molecular beam electric resonance method. R. G. Luce and J. W. Trischka. bibliog diag J Chem Phys 21:105-9 Ja '53

Molecular dimensions of cellulose derivatives. P. Doty, N. S. Schneider and A. Holtzer. bibliog Am Chem Soc J 75:754 F 5 '53

Molecular images with the projection microscope; the ionization potential of zinc phthalocyanine. R. Gomer and D. A. Speer. bibliog il J Chem Phys 21:73-80 Ja '53

Negative cluster concentrations. J. E. Kilpatrick. J Chem Phys 21:1366-7 Ag '53

Photoionization of molecules in the vacuum ultraviolet. E. C. Y. Inn. bibliog Phys R 91:1194-5 S 1 '53

Possible microwave absorption in the molecules belonging to the point groups $D_{2d} \equiv V_d$ and T_d. M. Mizushima and P. Venkateswarlu. bibliog J Chem Phys 21:705-9 Ap '53

Probability factor in bimolecular reactions; uncomplicated ion-dipole systems. H. Kacser. bibilog diag J Phys Chem 56:1101-6 D '52

Properties of freshly formed surfaces; dynamic surface potentials and the adsorption process; molecular orientation in soluble films of decyl alcohol. C. C. Addison and D. Litherland. diag Chem Soc J p 1143-50 Ap '53

Pseudo-quadrupole effect for nuclei in molecules. N. F. Ramsey. Phys R 89:527 Ja 15 '53

Quasi-chemical treatment of mixtures of oriented molecules. H. Tompa. bibliog J Chem Phys 21:250-8 F '53

Radial distribution functions and the equation of state of fluids composed of molecules interacting according to the Lennard-Jones potential. J. G. Kirkwood and others. bibliog J Chem Phys 20:929-38 Je '52

Radial distribution functions and the equation of state of monatomic fluids. R. W. Zwanzig and others. bibliog J Chem Phys 21:1268-71 Jl '53

Relation of smoke point to molecular structure. R. A. Hunt, jr. bibliog Ind & Eng Chem 45:602-6 Mr '53

Representation of gas properties in terms of molecular clusters. H. W. Woolley. bibliog J Chem Phys 21:236-41 F '53

Rotation-vibration spectra of diatomic and simple polyatomic molecules with long absorbing paths; the spectra of the HCN and DCN molecules from 2.5μ to 0.5μ. A. E. Douglas and D. Sharma. bibliog diags J Chem Phys 21:448-58 Mr '53

Semi-empirical theory of the electronic spectra and electronic structure of complex unsaturated molecules. R. Pariser and R. G. Parr. bibliog J Chem Phys 21:466-71, 767-76 Mr, My '53

Solutions of some problems concerning long random coils. C. A. Holingsworth. bibliog diags J Chem Phys 20:1580-90 O '52

Some molecular constants of $HC^{13}N$. R. E. Kagarise and others. J Chem Phys 20:1437-8 S '52

Spatial correlation of electrons in molecules. J. E. Lennard-Jones. bibliog diags J Chem Phys 20:1024-9 Je '52

Spin echo measurements of nuclear spin coupling in molecules. E. L. Hahn and D. E. Maxwell. bibliog il diags Phys R 88:1070-84 D 1 '52

Spin interactions of accelerated nuclei in molecules. N. F. Ramsey. bibliog Phys R 90:232-3 Ap 15 '53

Statistical theory of r-mer solutions. I. Prigogine and others. J Chem Phys 21:560-1 Mr '53

Study of three-center integrals useful in molecular quantum mechanics. R. S. Barker and H. Eyring. bibliog J Chem Phys 21:912-17 My '53

Theory of the rotational spectra of allene-type molecules. M. Mizushima. bibliog diags J Chem Phys 21:1222-4 Jl '53

Transformation properties of internal coordinates under covering operations. M. C. Tobin. J Chem Phys 20:1980 D '52

See also

Atoms
Chemical bonds
Isomerism
Molecular rearrangements
Molecular weights
Polymers
Stereochemistry

Models

Method for the construction of inexpensive molecular models. J. C. McGowan and K. Moss. bibliog il Chem & Ind p292-3 Mr 28 '53

Rotation

Aid in the determination of internal parameters from rotational constants for polyatomic molecules. D. Kivelson and E. B. Wilson, jr. J Chem Phys 21:1236 Jl '53

Approximate treatment of the effect of centrifugal distortion on the rotational energy levels of asymmetric-rotor molecules. D. Kivelson and E. B. Wilson, jr. bibliog J Chem Phys 20:1575-9 O '52

Asymmetric internal rotational barriers about single bonds. N. W. Luft. bibliog J Chem Phys 21:179 Ja '53

Asymmetric rotor; hydrogen sulfide absorption in the regions 8700 cm^{-1} and 11 000 cm^{-1}. K. K. Innes and others. bibliog J Chem Phys 21:545-7 Mr '53

Asymmetric rotor; the hydrogen sulfide spectrum in the 5150 cm^{-1} region. H. C. Allen, jr. and others. J Chem Phys 20:1709-10 N '52

MOLECULES—Rotation—*Continued*

Born repulsion and restricted free rotation. J. van Dranen. bibliog J Chem Phys 20:1982-3 D '52

Complete symmetry group for internal rotation in CH_3CF_3 and like molecules. H. T. Minden. J Chem Phys 20:1964-5 D '52

Correlations between monocyclic and polycyclic unsaturated compounds from molecular rotation differences. J. A. Mills. Chem Soc J p4976-85 D '52

Critical point and the disturbed rotation of molecules in the liquid state. J. van Dranen. bibliog J Chem Phys 21:1404-5 Ag '53

Evaluation of the zeta-sums for rotation-vibration interaction in axially symmetrical molecules. R. C. Lord and R. E. Merrifield. bibliog J Chem Phys 20:1348-50 S '52

Evidence for one-dimensional rotation in ammonium iodide. R. C. Plumb and D. F. Hornig. bibliog J Chem Phys 21:366-7, 1113 F, Je '53

Excitation of molecular rotation-vibration by electron impact. P. M. Morse. bibliog Phys R 90:51-5 Ap 1 '53

Excitation of molecular rotations and vibrations in inelastic scattering processes. E. H. Kerner. bibliog diag Phys R 91:1174-81 S 1 '53

Experimental evidence of restricted rotation in $CH_3—C{\equiv}C—CF_3$. B. Bak and others. bibliog J Chem Phys 21:1612-13 S '53

Heat capacity, gas imperfection, infra-red spectra, and internal rotation barriers of ethyl alcohol. G. M. Barrow. bibliog J Chem Phys 20:1739-44 N '52

Heats of formation and potential barriers for the internal rotation in hydrocarbon molecules. K. Ito. bibliog Am Chem Soc J 75:2430-5 My 20 '53

Hindered rotation involving two asymmetric groups. D. G. Burkhard. bibliog diag J Chem Phys 21:1541-9 S '53

Intensities of vibration-rotation bands. R. C. Herman and K. E. Shuler. J Chem Phys 21:373-4 F '53

Interaction with molecular rotation of the nuclear electric quadrupole moments of two nuclei having spins 3/2. G. W. Robinson and C. D. Cornwell. bibliog J Chem Phys 21:1436-42 S '53

Internal rotation in dichlorobutine. Y. Morino and others. J Chem Phys 20:1976-7 D '52

Loose transition states involving internal rotation. N. W. Luft. J Chem Phys 21:754-5 Ap '53

Methylchloroform; the infrared spectrum from 130-430 cm.$^{-1}$, the energy levels and potential for internal rotation and the thermodynamic properties. K. S. Pitzer and J. L. Hollenberg. bibliog Am Chem Soc J 75:2219-21 My 5 '53

Molecular rotation differences for 17-hydroxy-20-ketosteroids. R. B. Turner. bibliog Am Chem Soc J 75:3604-5 Jl 20 '53

Molecular rotations of polycyclic compounds; general principles and the correlation of the triterpenoids with the steroids. W. Klyne. Chem Soc J p2916-32 Jl '52

Preliminary analysis of the pure-rotational spectrum of methyl amine. D. R. Lide, jr. J Chem Phys 20:1812-13 N '52

Rotation vibration bands of some symmetric top molecules under high resolution. T. A. Wiggins and others. bibliog J Chem Phys 21:1368-73 Ag '53

Rotational and vibrational temperatures of CH in flames at atmospheric pressure. H. P. Broida. bibliog J Chem Phys 21:340-6 F '53

Rotational intensity distributions of OH and OD in an electrodeless discharge through water vapor. H. P. Broida and W. R. Kane. bibliog Phys R 89:1053-9 Mr 1 '53

Rotational line strengths in slightly asymmetric rotors. D. R. Lide, jr. bibliog J Chem Phys 20:1761-3 N '52

Rotational temperatures of OH in diluted flames. W. R. Kane and H. P. Broida. bibliog il J Chem Phys 21:347-54 F '53

Rotational temperatures of OH in several flames. H. P. Broida and G. T. Lalos. bibliog il J Chem Phys 20:1466-71 S '52

Some methods of determining molecular constants. D. H. Rank. bibliog J Chem Phys 20:1975-6 D '52

Theory of centrifugal distortion constants of polyatomic rotor molecules. D. Kivelson and E. B. Wilson, jr. bibliog diags J Chem Phys 21:1229-36 Jl '53

Theory of successive rotational transitions in crystals. T. J. Krieger and H. M. James. bibliog J Chem Phys 21:176-7 Ja '53

Vibrational and centrifugal effects on nuclear interactions and rotational moments in molecules. N. F. Ramsey. bibliog Phys R 87:1075-9 S 15 '52

Zeeman effect in rotational spectra of asymmetric-rotor molecules. B. F. Burke and M. W. P. Strandberg. Phys R 90:303-8 Ap 15 '53

Size

Collision diameters of some gases as functions of temperature. I. Glassman and B. L. Harris. bibliog J Phys Chem 56:797-9 Je '52

Molecular size distribution in the copolymerization of N-carboxyamino acid anhydrides. L. Gold. bibliog J Chem Phys 21:1190-2 Jl '53

Size and shape of polyelectrolyte molecules in solution. T. L. Hill. bibliog J Chem Phys 20:1173-4 Jl '52

Vibration

Application of perturbation theory to the *F* and *G* matrix method of calculating molecular vibration frequencies. P. W. Higgs. J Chem Phys 21:1131-4 Jl '53

Assignment of frequencies for the methyl halomethanes and silanes $(CH_3)XY_3$, $(CH_3)_2XY_2$ and $(CH_3)_3XY$. M. C. Tobin. bibliog Am Chem Soc J 75:1788-90 Ap 20 '53

Bipyramidal XY_5 molecular model; classical vibration problem. J. S. Ziomek and C. B. Mast. diags J Chem Phys 21:862-9 My '53

Classification of normal vibrations of molecules. Y. Morino and K. Kuchitsu. J Chem Phys 20:1809-10 N '52

Effects of vibrational state on rotational intensity distributions in OH. A. M. Bass and H. P. Broida. J Chem Phys 21:173 Ja '53

Evaluation of the zeta-sums for rotation-vibration interaction in axially symmetrical molecules. R. C. Lord and R. E. Merrifield. bibliog J Chem Phys 20:1348-50 S '52

Excitation of molecular rotation-vibration by electron impact. P. M. Morse. bibliog Phys R 90:51-5 Ap 1 '53

Excitation of molecular rotations and vibrations in inelastic scattering processes. E. H. Kerner. bibliog diag Phys R 91:1174-81 S 1 '53

Excited electronic states and molecular vibrations of thiophosgene. J. Duchesne. bibliog J Chem Phys 21:548-9 Mr '53

Formulation of isotopic splitting in terms of the reciprocal kinetic energy matrix. W. J. Taylor. J Chem Phys 21:763-4 Ap '53

Infrared spectra and the molecular structure of pyramidal molecules. H. H. Nielsen. diags J Chem Phys 21:142-4 Ja '53

Intensities of vibration-rotation bands. R. C. Herman and K. E. Shuler. J Chem Phys 21:373-4 F '53

Interactions in vibrating molecules. P. Torkington. bibliog diag J Chem Phys 21:83-7 Ja '53

Method for computing zero-point energies. P. W. Higgs. J Chem Phys 21:1300 Jl '53

Nuclear quadrupole coupling constants and molecular vibrations. J. Duchesne. J Chem Phys 20:1804-5 N '52

Potential energy curve of mercury hydride. G. Glockler and Sister H. Ven Horst. bibliog J Chem Phys 20:1448-51 S '52

Rotational and vibrational temperatures of CH in flames at atmospheric pressure. H. P. Broida. bibliog J Chem Phys 21:340-6 F '53

Symmetry factoring of the kinetic and potential energy matrices. B. Crawford, jr. J Chem Phys 21:1108-9 Je '53

Vibration potential function of the ClO_2 molecule. J. Duchesne and A. H. Nielsen. bibliog diag J Chem Phys 20:1968-9 D '52

MOLECULES—Vibration—*Continued*

Vibrational analysis of the fluorescence of naphthalene vapor. O. Schnepp and D. S. McClure. bibliog il J Chem Phys 20:1375-83 S '52

Vibrational and centrifugal effects on nuclear interactions and rotational moments in molecules. N. F. Ramsey. bibliog Phys R 87:1075-9 S 15 '52

MOLINA, Edward C. 1877-

Presentation of the Elliott Cresson medals. por Franklin Inst J 254:457-9 D '52

MOLINEAUX, Charles B.

Sketch. por Civil Eng 22:960 N '52

MOLLERIZING. See Aluminum coating

MOLLUSKS, Fossil

Introduction to check list of Japanese tertiary marine mollusca. K. Hatai and S. Nisiyama. map Am Assn Pet Geologists Bul 37:539-48 Mr '53

MOLOTOV, Vi͡acheslav Mikhailovich, 1890-

Portrait. Bsns W p 162 Mr 14 '53

MOLTEN iron. See Iron, Molten

MOLTEN metals. See Metals, Molten

MOLTEN salts. See Salts, Molten

MOLTEN steel. See Steel, Molten

MOLYBDATES

Light scattering investigation of the polymolybdates. M. Kestigian and others. bibliog J Chem Phys 21:952-3 My '53

MOLYBDENUM

Adsorption studies on metals; physical and chemical adsorption of gases on molybdenum. F. H. Healey, J. J. Chessick and A. C. Zettlemoyer. bibliog J Phys Chem 57:178-82 F '53

Chemical engineering materials of construction; less common metals. L. F. Yntema and W. R. Bekebrede. il Ind & Eng Chem 44:2364-70 bibliog(148 ref, p2369-70) O '52

Cold-rolling and annealing textures of molybdenum single crystals. N. K. Chen and R. Maddin. bibliog il diags J Metals 5: Trans 300-4 sec 2 F '53

Effect of molybdenum and of nickel on the rate of nucleation and the rate of growth of pearlite. R. W. Parcel and R. F. Mehl. bibliog il J Metals 4:Trans 771-80 Jl '52; Discussion. 5:Trans 740-1 sec 2 My '53

Electron ejection from Mo by He^+, He^{++}, and He_2^+. H. D. Hagstrum. bibliog diags Phys R 89:244-55 Ja 1 '53

Electronic and lattice specific heats in W, Mo, and Re. M. Horowitz and J. G. Daunt. bibliog Phys R 91:1099-106 S 1 '53

Evidence for preferential one-step divalent changes in the molybdate-catalyzed reduction of perchlorate by stannous ion in sulfuric acid solution. G. P. Haight, jr. and W. F. Sager. bibliog Am Chem Soc J 74: 6056-9 D 5 '52

High temperature magnetic susceptibility of V, Nb, Ta, W, and Mo. C. J. Kriessman. bibliog diag Rs Mod Phys 25:122-6 Ja '53

Low even configurations of the first spectrum of molybdenum. (Mo I). R. E. Trees and M. M. Harvey. bibliog J Res Nat Bur Stand 49:397-408 D '52

Materials of construction data; molybdenum. L. F. Yntema and W. R. Bekebrede. bibliog Ind & Eng Chem 44:2376-80 O '52

Molybdenum, 1952. R. W. Geehan. Eng & Min J 154:99 F '53

Molybdenum products, concentrates; tabulations. Steel 132:177 Ja 5 '53

Molybdenum; uses, outlook, availability, price and suppliers, etc. il map Iron Age 170:280-1 O 9 '52

Nickel, molybdenum world quotas set for first quarter. Oil Paint & Drug Rep 162:3 D 22 '52

Occurrence of chi phase in molybdenum-bearing stainless steels. P. K. Koh. il J Metals 5:Trans 339-43 sec 2 F '53

Oxidation-reduction potential of the sexa- and quinquevalent molybdenum system. H. K. El-Shamy and A. M. El-Aggan. Am Chem Soc J 75:1187-90 Mr 5 '53

Periodic deviations in the Schottky effect for molybdenum. E. G. Brock and others. bibliog Phys R 89:851-4 F 15 '53

Properties, heat treatment, corrosion resistance, etc; engineering file facts. Materials & Methods 37:125 Je '53

Salt bath case hardening with molybdenum and tungsten. il Materials & Methods 37: 94-7 Mr '53

Solubility of carbon and oxygen in molybdenum. W. E. Few and G. K. Manning. bibliog il diags J Metals 4:Trans 271-4 Mr '52; Discussion. 5:Trans 746-7 sec 2 My '53

Storke level; key to $25 million Climax project. C. M. Cooley. il plans diag Min Eng 5:36-40 Ja '53

Thermal and dilatometric investigation of the alloys of cobalt with chromium and molybdenum. A. G. Metcalfe. bibliog il diags J Metals 5:Trans 357-64 sec 2 F '53

World production of molybdenum, from 1941; U.S. molybdenum output; tabulations. Iron Age 171:424 Ja 1 '53

Analysis

Vacuum-fusion analysis of molybdenum; abstract. M. W. Mallett and C. B. Griffith. Metal Prog 64:178+ O '53

Isotopes

Core isomerism; remarks on Mo^{93m}. M. Goldhaber. bibliog Phys R 89:1146-7 Mr 1 '53

Fission asymmetry as a function of excitation energy of the compound nucleus. J. L. Fowler and others. Phys R 88:71-2 O 1 '52

Formation and decay of Mo^{93m}. C. W. Forsthoff and others. bibliog Phys R 90:1004-5 Je 1 '53

Identification of the seven-hour Mo^{93} isomer. D. E. Alburger and S. Thulin. bibliog Phys R 89:1146 Mr 1 '53

Isomeric branching and threshold behavior of the reaction $Mo^{92}(n,2n)Mo^{91}$. J. E. Brolley, jr. Phys R 89:877 F 15 '53

Lower limit for the lifetime of the 665-kev excited state of Mo^{97}. F. R. Metzger and W. B. Todd. bibliog Phys R 91:1286-7 S 1 '53

Mass assignment and gamma-radiations of the seven-hour molybdenum isomer. G. E. Boyd and R. A. Charpie. Phys R 88:681-2 N 1 '52

Molybdenum 90. R. M. Diamond. Phys R 89:1149-50 Mr 1 '53

$(n,2n)$ Reactions in C^{12}, Cu^{63}, and Mo^{92}. J. E. Brolley, jr. and others. bibliog diag Phys R 88:618-21 N 1 '52

Photoprotons from Mo^{100} and Mo^{92}. W. A. Butler and G. M. Almy. bibliog diag Phys R 91:58-65 Jl 1 '53

Zr^{92}-Mo^{92} and Zr^{94}-Mo^{94} pairs and the Zr^{96}-Mo^{96}-Ru^{96} triplet. J. S. Geiger and others. bibliog diags Phys R 89:621-3 F 1 '53

Metallography

Recrystallization data applied to control of the mechanical properties of molybdenum; abstract. J. H. Bechtold. Metal Prog 64: 205-6 O '53

Protection

Better coating for moly; chromium-frit combination cuts rapid oxidation in jet engine use. Steel 131:97 Ag 11 '52; Cer Ind 59:71 S '52; Aviation W 57:44 Ag 18 '52; Iron Age 170:174 Ag 14; 192 Ag 18 '52; Metal Finishing 50:61 O '52; Mech Eng 74:824 O '52; Glass Ind 34:144 Mr '53

MOLYBDENUM alloys

Systems zirconium-molybdenum and zirconium-wolfram. R. F. Domagala and others. bibliog il J Metals 5:Trans 73-9 Ja '53

Transformation kinetics and mechanical properties of titanium-aluminum-molybdenum alloys; abstract. H. D. Kessler and M. Hansen. Metal Prog 64:168+ O '53

Wrought nickel-molybdenum alloys. Engineering 176:248 Ag 21 '53

MOLYBDENUM blue

Photometric determination of silica in alkalies. O. A. Kenyon and H. A. Bewick. bibliog Anal Chem 25:145-8 Ja '53

Photometric determination of silicon in ferrous, ferromagnetic, nickel, and copper alloys; a molybdenum blue method. C. L. Luke. bibliog Anal Chem 25:148-51 Ja '53

Reduction of phosphomolybdic acid by compounds possessing conjugated double bonds. S. Burstein. bibliog Anal Chem 25: 422-4 Mr '53

MOLYBDENUM carbide
Equilibrium measurements in the Mo-C-H system. L. C. Browning and P. H. Emmett. bibliog Am Chem Soc J 74:4773-4 O 5 '52

MOLYBDENUM cyanides
Charge transfer reaction between molybdo- and molybdioctacyanides. R. L. Wolfgang. Am Chem Soc J 74:6144-5 D 5 '52

MOLYBDENUM metallurgy
Climax by-product plant operating at full capacity. flow sheet. Min Eng 5:41 Ja '53

MOLYBDENUM oxides
High temperature thermodynamic properties of molybdenum trioxide. L. A. Cosgrove and P. E. Snyder. bibliog Am Chem Soc J 75:1227-8 Mr 5 '53
Production of acetonitrile and other low molecular weight nitriles. W. I. Denton and R. B. Bishop. bibliog flow diag Ind & Eng Chem 45:282-6 F '53

Analysis

Identification of molybdenum and tungsten oxides by X-ray powder patterns. A. Magnéli and others. bibliog Anal Chem 24:1998-2000 D '52

MOLYBDENUM silicide
Moly based metal ceramic designed for high temperature use. il Iron Age 170:114 O 16 '52

MOLYBDENUM steel
Carbides in chromium, molybdenum, and tungsten steels. K. Kuo. bibliog pl diags Iron & Steel Inst J 173:363-75 Ap '53

MOLYBDENUM sulfide
How to use molybdenum disulphide as a lubricant. L. M. Davidson. il Am Mach 96:106-8 D 22 '52
Molybdenum disulfide as a lubricant. il Diesel Power 31:90-3 Ap '53
Properties and uses of pure molybdenum disulphide as a lubricant; abstracts. A. Sonntag. Machine Design 25:284+ Jl '53; Tool Eng 31:135-6 S '53

MOLYBDOCERIC acids
Determination of the valence of a heteropoly anion; dodecamolybdoceric(IV) acid and its salts; structural considerations. L. C. W. Baker, G. A. Gallagher and T. P. McCutcheon. bibliog Am Chem Soc J 75:2493-5 My 20 '53

MOMENTS of inertia
Determining moments of inertia of nonsymmetrical components; data sheet. W. E. Soong. diag Machine Design 25:181-3 My '53
Evaluating moments of inertia by graphical techniques; data sheet. J. Modrovsky. plan diags Machine Design 25:185-8 Ag '53

MONAZITE
Thorium and its sources in the western hemisphere. A. J. Strod. bibliog Am Cer Soc Bul 32:122-3 Ap 15 '53

Analysis

Amperometric titration method for thorium in the presence of the rare earths of monazite sand. L. Gordon and C. R. Stine. bibliog Anal Chem 25:192-4 Ja '53
Spectrophotometric determination of thorium in monazite sands. C. V. Banks and C. H. Byrd. bibliog(51 ref) Anal Chem 25:416-19 Mr '53

MOND, Ludwig
Discovery recalled. il Engineering 176:87 Jl 17 '53; Metallurgia 48:92 Ag '53

MONEL metal
Correlation of polarized light extinctions with crystal orientation in 70 nickel-30 copper alloy. H. C. Vacher. bibliog il J Res Nat Bur Stand 49:149-53 S '52
Creep-rupture and recrystallization of monel from 700-1700°F; abstract. N. J. Grant and A. G. Bucklin. Metal Prog 62:172 N '52
Heat conduction in alloys at low temperatures. I. Estermann and J. E. Zimmerman. bibliog diags J Ap Phys 23:578-88 My '52
NBS uses polarized light to study grain orientation in alloys. Iron Age 171:196-7 Mr 5 '53; Franklin Inst J 255:335-7 Ap '53; Steel 132:115-16 My 4 '53

MONETARY unions
Living with the dollar; delicate crusade for an Atlantic payments union. Economist 165:580-96 N 22 '52; Discussion. 165:678-9 D 6 '52
No Atlantic payments likely. P. Einzig. Comm & Fin Chr 176:2244 D 11 '52

See also
European payments union

MONEY
Are new fluid monetary theories all wet? goods are real wealth. J. S. Draper. Credit & Fin Management 55:14-15 My '53
Cheap money philosophy scored. W. J. Grede. Manuf Rec 121:63 N '52
Credit and the problem of a sound exchange medium. W. E. Spahr. Comm & Fin Chr 177:1860+ Ap 30 '53
Currency convertibility, our constant quest. H. Bratter. Banking 45:142-3 Mr '53
Economics and politics of money. G. L. Bach. Harvard Bsns R 31:84-96 Mr '53
Key to Eisenhower's economics; sound money. Bsns W p80-2+ Mr 28 '53
Monetary statistics, Nov.-Dec. 1951-Jan.-Nov. 1952. Survey of Cur Bsns 33:S 18 Ja '53 [cont monthly]
Money; it has been dearer. Bsns W p 126-8 My 16 '53

See also
Banks and banking
Capital
Counterfeits and counterfeiting
Credit
Finance
Foreign exchange
Gold as money
Inflation (finance)
Investments
Prices
Silver as money

Devaluation

Dollar devaluation. M. Palyi. Comm & Fin Chr 177:89+ Ja 8 '53
France's devaluation dilemma. P. Einzig. Comm & Fin Chr 177:2544 Je 11 '53
Speculative pressure and sterling convertibility. P. Einzig. Comm & Fin Chr 177:1128 Mr 12 '53

History

Beads, skins, tobacco coins of early American trade. W. J. Brons. il Bankers Mo 69:8-12+ S '52
Unique coin collections trace evolution of the silver dollar. il Bankers Mo 69:38 S '52

International aspects

America's contribution to world disorder. R. Leon. Comm & Fin Chr 178:4 Jl 2 '53
Chasm or gap? assessment of dollar supply available to the free world in the next few years; with charts. Economist 165:581-3 N 22 '52
Convertibility; its internal and external conditions. D. H. Robertson. Comm & Fin Chr 177:2753 Je 25 '53
Convertibility of currency; how it works, and doesn't. Bsns W p 194-6+ Mr 28 '53
Decision and the dollar; what policy changes will be made at the Commonwealth conference. Economist 165:513-15 N 22 '52
Foreign gold and dollar holdings. Comm & Fin Chr 177:695 F 12 '53
Gold dollar price and sterling convertibility. P. Einzig. Comm & Fin Chr 176:1935 N 20 '52; Discussion. 176:2135; 177:106 D 4 '52, Ja 8 '53
Gold outflow; what it means. A. T. Boanas. Comm & Fin Chr 177:1118 Mr 12 '53
Living with the dollar; delicate crusade for an Atlantic payments union. Economist 165:580-96 N 22 '52; Discussion. 165:678-9 D 6 '52
No Atlantic payments likely. P. Einzig. Comm & Fin Chr 176:2244 D 11 '52
Should we re-examine our gold buying policy? H. M. Bratter. Comm & Fin Chr 177:91+ Ja 8 '53
Sterling area's gold and dollar reserves increase $82 million. For Comm W 48:7 D 1 '52
Sterling convertibility and recent U.S. gold outflow. P. Einzig. Comm & Fin Chr 177:484 Ja 29 '53
Sterling convertibility and the coming Commonwealth conference. P. Einzig. Comm & Fin Chr 176:2039 N 27 '52
Sterling convertibility still far off. P. Einzig. Comm & Fin Chr 176:2506 D 25 '52
Sterling surplus with dollar countries down. For Comm W 50:9 Jl 20 '53
That immortal dollar shortage. H. Bratter. Banking 45:135-6 F '53

MONEY—International aspects—*Continued*

Vital problem of currency convertibility. B. H. Beckhart. Comm & Fin Chr 177:97+ Ja 8 '53

Will Bretton Woods plan be revised? P. Einzig. Comm & Fin Chr 176:2135 D 4 '52

Will sterling damage the dollar? F. Pick. Comm & Fin Chr 177:6+ Ja 1 '53; Discussion. 177:210 Ja 15 '53

World currency convertibility coming, but still far off. H. A. Stevenson. Comm & Fin Chr 176:2034 N 27 '52

World fund's position on currency convertibility. P. Einzig. Comm & Fin Chr 177: 2426 Je 4 '53

See also

Bank for international settlements

Foreign exchange

Arabia

Saudi Arabia makes hard currency move. A. N. Young. Barron's 33:16 My 4 '53

Brazil

Free cruzeiro. Economist 166:597 F 28 '53

Canada

Canada's floating dollar. Economist 166:365-6 F 7 '53

Canadian dollar. L. Rasminsky. Comm & Fin Chr 177:1217+ Mr 19 '53

Dollar duel or dollar duet? H. Buck. Dun's R 61:25, 30+ Ja '53

Dominion's dollar; is it too strong? Bsns W p90+ N 1 '52

Czechoslovakia

Drastic medicine for the Czech economy. Economist 167:745-6 Je 13 '53

Soviets tighten Czech leash. Bsns W 154+ Je 13 '53

Egypt

Egypt's sterling. Economist 166:99 Ja 10 '53

Europe

Convertibility à la Muette. Economist 166: 887-8 Mr 28 '53

France

Capital francs for tourists. Economist 167:47 Ap 4 '53

France's devaluation dilemma. P. Einzig. Comm & Fin Chr 177:2544 Je 11 '53

French and convertibility. Economist 166:295 Ja 31 '53

Release of French sterling. Economist 165: 782 D 13 '52

Great Britain

Bank buys dollars. Economist 166:295-6 Ja 31 '53

Importance of Britain's gold reserve. P. Bareau. Burroughs Clearing House 37:10-11 Je '53

Monetary policy in the Dominions. Economist 167:868+ Je 20 '53

Money rates in U.S. and Britain. P. Einzig. Comm & Fin Chr 177:2328 My 28 '53

No prospect of immediate sterling convertibility. P. Einzig. Comm & Fin Chr 177: 1542 Ap 9 '53

Peace prospects and sterling convertibility. P. Einzig. Comm & Fin Chr 177:1752 Ap 23 '53

Speculative pressure and sterling convertibility. P. Einzig. Comm & Fin Chr 177: 1128 Mr 12 '53

Twelve months of credit expansion. Economist 167:855-6+ Je 20 '53

Will there be a floating pound sterling? P. Einzig. Comm & Fin Chr 177:821 F 19 '53

Greece

Drachma devalued. Economist 167:182 Ap 18 '53

Israel

Israel pounds and sheckels. Economist 166: 762 Mr 14 '53

Japan

Japan's sterling shortage. Economist 167:388 My 9 '53

United States

Dollar literacy; the American must. O. W. Adams. Comm & Fin Chr 177:2313+ My 28 '53

Free-market money policy. L. Stafford. Banking 46:39-41+ Jl '53

Monetary policy and savings. E. S. Adams. Comm & Fin Chr 177:1006+ Mr 5 '53

Monetary system of the United States. R. A. Young. Fed Res Bul 39:98-109, 219-34, 456-62 F-Mr, My '53

Money rates in U.S. and Britain. P. Einzig. Comm & Fin Chr 177:2328 My 28 '53

Needed; a commission to study money problem. W. L. Hemingway. Comm & Fin Chr 177:192 Ja 15 '53

New direction of monetary policy. E. S. Adams. Banking 45:53-4+ F '53

Outlook for the dollar. R. Rodgers. Comm & Fin Chr 176:1731+ N 6 '52

Recent credit and monetary developments, first half of 1953. Fed Res Bul 39:689-96 Jl '53

Sound money or depression. M. E. Shoup. Comm & Fin Chr 177:2750 Je 25 '53

United States money in circulation, by denominations, 1939-1950 and monthly, Oct. 1951-Nov. 1952. Fed Res Bul 39:25 Ja '53 [cont monthly]

Why we should restore the gold standard. S. Bridges. Comm & Fin Chr 178:205+ Jl 16 '53

MONEY market

Business and money market outlook. H. H. Edmiston. Comm & Fin Chr 177:2075+ My 14 '53

Flexible money market policy marks 1952 bond market. H. F. Jonsson. Trusts & Estates 92:29-31 Ja '53

Free money market? prospects of continued flexible credit policy. H. F. Jonsson. Trusts & Estates 91:634-5 S '52

Money market. Nat City Bank p99-102 S '52

Money market. Nat City Bank p27-8 Mr '53

Money market flexibility. Trusts & Estates 92:501-3 Jl '53

Outlook for money rates and fixed income securities. R. F. Murray. Comm & Fin Chr 177:2514-15+ Je 11 '53

Recent money market developments. Survey of Cur Bsns 33:3-5 Jl '53

Strong money factors key first quarter outlook. D. H. Stevens. Barron's 32:26 D 29 '52

Tight money market. Burroughs Clearing House 37:5-6 O '52

Treasury refunding prospects. Comm & Fin Chr 177:1224 Mr 19 '53

Whither interest rates? Burroughs Clearing House 37:3-4 Je '53

See also

Interest

MONEY orders

Savings bank money order in 12 seconds; Erie County savings bank of Buffalo. Banking 45:58 Ja '53

See also

Postal service—Money orders

MONEY raising campaigns

Helping run community drives. Bsns W p 105 Jl 25 '53

New twist on charity check-off; Fairchild aircraft division. J. H. Baylis. Factory Management 111:121 Ag '53

Painless giving; inplant charity drives. Bsns W p 171 Mr 21 '53

MONOCHROMATORS

High transmission slow neutron velocity selector. J. G. Dash and H. S. Sommers, jr. il diags R Sci Instr 24:91-6 F '53

Image forming properties of the Ebert monochromator. W. G. Fastie. diags Opt Soc Am J 42:647-51 S '52

Latex particle size determination using diffraction peaks obtained with the point focusing X-ray monochromator. W. E. Danielson and others. bibliog il J Ap Phys 23:860-5 Ag '52

Point focusing X-ray monochromator for the study of low angle diffraction. L. Shenfil and others. bibliog il diags J Ap Phys 23: 854-9 Ag '52

Reduction of scattered light in a Littrow-type monochromator. A. Walsh. Opt Soc Am J 43:58 Ja '53

Slit curvature in grating monochromators employing single or multiple diffraction. C. S. Rupert. diag Opt Soc Am J 42:779-81 O '52

Small plane grating monochromator. W. G. Fastie. il diags Opt Soc Am J 42:641-7 S '52

MONOCROTALIC acid
Structure of monocrotaline; synthesis of monocrotalic acid. R. Adams, B. L. Van-Duuren and B. H. Braun. bibliog Am Chem Soc J 74:5608-11 N 20 '52

MONOCROTALINE
Structure of monocrotaline. R. Adams, P. R. Shafer and B. H. Braun. bibliog Am Chem Soc J 74:5612-15 N 20 '52

MONOLAYERS. See Films

MONOMOLECULAR films. See Films

MONON. See Chicago, Indianapolis and Louisville railway

MONOPOLIES
Anti-trust suit against DuPont gets under way in federal court. Rubber Age 72:366-7 D '52
Big business in a competitive society. A. D. H. Kaplan and A. E. Kahn. Fortune 47: 1-14 sec 2 F '53
British retail changes due. il Bsns W p72+ D 13 '52
Government rests its case in DuPont anti-trust suit. Rubber Age 72:649 F '53
Investigating the investigators; Monopolies commission operations examined regarding length of time used to publish fact-finding reports. Economist 167:584-5 My 30 '53
Matches under the microscope; inquiry of Monopolies commission into matches and match-making machinery of Great Britain, 1949-1952. Economist 167:533-4+ My 23 '53
Measurement of industrial concentration. M. A. Adelman. bibliog R Econ & Stat 33: 269-96 N '51; Discussion. 34:156-78, 343-67 My, N '52
Opening the matchbox. Economist 167:925 Je 27 '53
Soap splitup? Bsns W p53-4 D 20 '52
Vertical integration and the monopoly problem. C. D. Edwards. J Marketing 17:404-10 Ap '53
See also
United shoe machinery corporation

MONORAIL conveyors
If it's overhead handling you want, consider monorail systems. il diags Mill & Factory 52:82-6 Ja; 84-7 F '53
Monorail conveyor system reduces blast-cleaning costs. W. I. Gladfelter. il plan diags Foundry 80:104-5+ D '52
Overhead conveyors boost production 400 per cent, cut handling 50 per cent; Landers, Frary & Clark. L. F. Spencer. il diags Iron Age 171:212-16 My 7 '53
Super carriers cut congestion and cost; Douglas Aircraft. J. Shinn. il Am Mach 97:138-9 My 11 '53
U-shaped monorail section feature of molding unit. L. D. Pridmore. il Foundry 80:144 D '52

Lubrication

Automatic conveyor trolley wheel lubricator. il Factory Management 111:114 My '53

MONOTYPE corporation, limited
Statement by the chairman. G. Harvie-Watt. Economist 166:774 Mr 14 '53

MONROE calculating machine company
Import deal. Bsns W p94 Jl 4 '53

MONSANTO chemical company
Five unusual candidates for stock splits; with comparative balance sheet items. Mag of Wall St 92:91 Ap 18 '53
How a big company controls itself. il Bsns W p76-8, 80-2 D 6 '52
Portrait of the week. Chem W 71:19-20 N 29 '52
Security I like best. D. W. McKnight. Comm & Fin Chr 177:994+ Mr 5 '53
Soil conditioners; the fight goes on; with editorial comment. il Bsns W p43-6 Ja 31 '53
Why Monsanto makes a profit. Chem Eng 60:316+ F '53

MONTAN wax
Montan wax; its place and that of its derivatives in the floor wax industry. C. J. Marsel. bibliog diags Soap & San Chem 29:120-1+ Ja '53

MONTANA
See also
Copper mines and mining—Montana
Geology—Montana
Hydroelectric plants—Montana
Mines and mineral resources—Montana
Petroleum industry and trade—Montana
Silver mines and mining—Montana
Tungsten mines and mining—Montana

MONTANA-DAKOTA utilities company
Dynamic utility; with table of ten year earnings and dividend record, 1942-52. S. Devlin. Mag of Wall St 91:245+ N 29 '52
Stock offering underwritten. Comm & Fin Chr 177:2010 My 11 '53

MONTE CARLO
Monte Carlo; paradise of monetary freedom. F. Plachy. il Burroughs Clearing House 37:34-5+ N '52

MONTEREY oil company
Stock offered. Comm & Fin Chr 178:149 Jl 13 '53

MONTGOMERY Ward and company
Go through picket lines; federal judge warns carriers. Bsns W p 124-5 Jl 18 '53

MONTICELLITE
Heat of formation of merwinite and monticellite. K. J. Neuvonen. bibliog Am J Sci Bowen vol p373-80 '52

MONTMORILLONITE
Adsorption of serum lipids by montmorillonite. E. Nikkilä and N. Oker-Blom. bibliog Science 116:685-6 D 19 '52
Organic derivatives of montmorillonite. W. F. Spencer and J. E. Gieseking. bibliog J Phys Chem 56:751-3 Je '52

MONTREAL

Libraries

Libraries in Montreal. M. J. Henderson. il Special Lib 44:142-4 Ap '53

MONUMENTS

Cleaning

Cleopatra's needle. S. G. Burgess and R. J. Schaffer. il Chem & Ind p 1026-9 O 18 '52

MOON
Amateur scientist. A. G. Ingalls. diags Sci Am 188:84-7 Ja '53
Lunar dx on 144 mc.! E. P. Tilton. il Q S T 37:11-12+ Mr '53
Minimum night temperatures at or near full moon. H. Henstock. Science 116:257-60; 117: 302-4 S 5 '52, Mr 20 '53; Discussion. R. L. Edwards and others. 117:305-10 Mr 20 '53

MOORE, Frank Marshall
Good way to recall a good photographer. J. L. Collings. Ed & Pub 86:43 Ja 3 '53

MOORE, Neil A.
Businessmen in the news. por Fortune 46:52 D '52

MOORE, William Talman, 1913-
Businessmen in the news. por Fortune 47:60 Mr '53

MOOSE JAW, Saskatchewan

Sewerage

Treatment of sewage for industrial utilization. J. E. Haack. flow sheet Munic Util 90:20-1+ O '52

MOQUETTE. See Pile fabrics

MORGAN, William Fellowes, 1860-1943
Has he a rival? T. R. Hollcroft. Science 117: 234 F 27 '53

MORISON, Stanley
Eminent Stanley Morison. J. L. Frazier. por Inland Ptr 130:50 F '53

MORLEY, Christopher Darlington, 1890-
Bibliography of Christopher Morley. G. R. Lyle and H. T. Brown, jr. 198p $4 Scarecrow Press, 3341 Prospect av, N.W., Washington 7, D.C. '52

MOROCCO
See also
Petroleum industry and trade—Morocco
World war, 1939-1945—Morocco

Commercial policy

French Morocco adopts bonus exchange plan. For Comm W 50:16 Jl 6 '53

Politics and government

North Africa; how long can U.S. straddle the fence? il map Bsns W p 110-12 D 20 '52

MORPHAN. See Azabicyclo compounds

MORPHINE

Conversion of *trans* to *cis* fusions of rings II and III in the morphine series. M. Gates. and R. Helg. bibliog Am Chem Soc J 75:379-81 Ja 20 '53

New synthetic approach to the morphine structure. B. Belleau. Am Chem Soc J 75:1159-63 Mr 5 '53

Studies on the antidiuretic action of morphine. N. J. Giarman and others. bibliog Science 117:225-6 F 27 '53

Syntheses in the morphine series; model experiments for the introduction of oxygen at $C_{(6)}$. D. Elad and D. Ginsburg. Chem Soc J p2664-70 S '53

Syntheses in the morphine series; the synthesis of *N*-methylmorphinan. D. Ginsburg and R. Pappo. Chem Soc J p 1524-36 My '53

MORPHOLINE

Ethyl β-morpholinocrotonate. J. F. Tinker and T. E. Whatmough. Am Chem Soc J 74:5235 O 20 '52

2-Phenyl-2-*p*-chlorophenyl-4-methylmorpholine. H. Gilman and C. C. Wanser. bibliog Am Chem Soc J 74:5523-4 N 5 '52

Reactions of iodine-amine complexes with unsaturated compounds; an investigation of the scope of the reaction with the iodine-morpholine complex. P. L. Southwick and D. R. Christman. bibliog Am Chem Soc J 75:629-32 F 5 '53

Synthesis of acetomorpholide and thioacetomorpholide from morpholine and sulfur. N. O. Brace. Am Chem Soc J 75:357-8 Ja 20 '53

MORRILL, Edward F.

President Mid-Valley pipeline co. por Pet Eng 24:A72 N '52

MORRIS, Phillip, and company

Plant dedications; Louisville, Ky.; illustrations with text. Mod Ind 24:48-9 O '52

MORRIS and Essex railroad

Security I like best. G. A. Bailey. Comm & Fin Chr 177:2406 Je 4 '53

MORRISON, William C.

Going abroad for business, Jervis B. Webb co. por Bsns W p 128-9 F 14 '53

MORTALITY

See also

Longevity

Statistics

Chronic disease mortality in influenza epidemics. Pub Health Rep 68:173 F '53

Cities of 100,000 population or more with highest and lowest death rates during 1950; tabulation. Spectator 161:106 Ap '53

Cities with populations of 100,000 or more having lowest and higest mortality rates during 1951; tabulation. Spectator 161:119 My '53

Death rate down one per cent; fatality rates for 1952. A. D. Battey. map Nat Safety N 68:18-19+ Jl '53

Death rates by industry, 1949-1951; tabulation. Iron Age 171:485 Ja 1 '53

Deaths by homicide and suicide; with table. Spectator 160:56-7 N '52

Deaths from accidents by automobile and in the home, 1949-1950; tabulation. Spectator 161:104-6 Ap '53

Deaths from diabetes, pneumonia and influenza, and polio in 83 leading cities, 1950 and 1951; table. Spectator 161:92-3 Je '53

Deaths from tuberculosis at all-time low mark. Weekly Underw 168:1194 Ap 25 '53

Life policyholder '52 death rate near record low point. Nat Underw (Life ed) 57:20 Ap 10 '53

Life span keeps rising; death rate statistics. Nat Underw (Life ed) 57:9 F 20 '53

Major causes of death in 84 leading cities during 1951 and 1950; tabulation. Spectator 161:121-2 My '53

Metropolitan statisticians report increased life span. Nat Underw (Life ed) 56:4 O 24 '52

Morbidity and mortality experience among chromate workers; respiratory cancer and other causes. H. P. Brinton and others. Pub Health Rep 67:835-47 S '52

Needed improvements in mortality data. I. M. Moriyama. Pub Health Rep 67:851-6 S '52

See also

Fetus, Death of

MORTAR

Improved portland cement mortars with polyvinyl acetate emulsions. J. M. Geist, S. V. Amagna and B. B. Mellor. bibliog il Ind & Eng Chem 45:759-67 Ap '53

Masonry cracking; magnesium oxide in mortar may be cause. Eng N 150:34 My 7 '53

Relation between bond and the surface physics of masonry units. J. C. Thornton. il diags Am Cer Soc J 36:105-20 Ap 1 '53

MORTGAGE bankers association of America

Annual convention, Chicago. Burroughs Clearing House 37:11-12 N '52

Mortgage Bankers plan fight on agents' bill. Weekly Underw 166:846 Mr 28 '53

MORTGAGE exchange

Mortgage trading exchange established in Canada. J. Montagnes. Barron's 32:14 D 1 '52

Toronto mortgage exchange. Burroughs Clearing House 37:9-10 D '52

MORTGAGES

Builders hit GI loan snags. Eng N 149:70 O 30 '52

Economics of savings, capital flow, and mortgages. M. Nadler. Comm & Fin Chr 177:1444-5 Ap 2 '53

ENR survey shows rate boost has done little for builders. Eng N 150:85 My 28 '53

Equities vs. mortgages as savings bank investment. A. J. Casazza. Comm & Fin Chr 176:2330+ D 18 '52

Financing air conditioning through the open-end mortgage. G. Barker. Sheet Metal Worker 44:sup3-6 S '53

Higher rate needed for VA and FHA mortgages. S. E. Neel. Comm & Fin Chr 176:1728+ N 6 '52

Home builders welcome moves to improve mortgage market. Eng N 150:21-2 My 14 '53

Invest $4 billion in mortgages in 1952; purchases by life insurance companies. Comm & Fin Chr 177:24 Ja 1 '53

Maps a revised home loan policy. L. L. Frank. Comm & Fin Chr 177:1452 Ap 2 '53

Market for GI, FHA mortgages uncertain as long-term money gets more expensive. Eng N 150:153 My 14 '53

More mortgages at higher rates. Bsns W p27 My 9 '53

Mortgage finance in 1953. M. L. Colean. Comm & Fin Chr 176:2338+ D 18 '52

Mortgages as life insurance investments. L. D. Meredith. Comm & Fin Chr 177:690-1 F 12 '53

New look at mortgage lending; bank participation. H. T. Denyes. Comm & Fin Chr 177:2738+ Je 25 '53

News for mortgage credit men. Banking 45:94+ Ja '53 [cont monthly]

Pensions funds as a market for mortgages. R. F. Murray. Comm & Fin Chr 177:478 Ja 29 '53

Real estate lending in 1953. J. R. Jones. Comm & Fin Chr 177:1107+ Mr 12 '53

Secondary mortgage market. M. L. Colean. Comm & Fin Chr 177:692-3 F 12 '53

Servicing spells the difference. L. D. Meredith. Bankers Mo 70:7-8+ F '53

Signs of trouble in home mortgage field. T. E. Lovejoy, jr. Comm & Fin Chr 177:2322-3 My 28 '53; Excerpts. East Underw 54:18 My 15 '53

Study of federal home financing essential! H. D. Pettibone. Comm & Fin Chr 177:483 Ja 29 '53

Urban mortgage lending and municipal bonds. M. Bodfish. Comm & Fin Chr 177:2526-7 Je 11 '53

Washington's housing dilemma. Bsns W p32 F 21 '53

See also

Banks and banking—Mortgage departments

Chattel mortgages

Mortgage exchange

also American bankers association—Savings and mortgage division; Federal housing administration—Insured mortgage plan; Federal national mortgage association; Mortgage bankers association of America; New York mortgage exchange

Accounting

Audit control of mortgages. K. L. Birchby. Banking 45:106 Je '53

MORTGAGES, Farm
Life companies hold farm loans. Spectator 161:11 Ap '53

MORTUARY chapels

Lighting

Lighting a funeral home. W. E. Halteman. il diag Illum Eng 47:667-8 D '52

MOSES, Colter Hamilton, 1888-
Ham Moses; the only way out is to grow. pors Bsns W p72-3+, cover My 30 '53
Portrait. Fortune 46:127 O '52

MOSES, Louis
Moses wins 1952 Kelly award. por Iron & Steel Eng 29:135 O '52

MOSES, Robert, 1888-
Old highway hands win top prizes in GM contest. por Eng N 150:21-2 Je 25 '53
Robert Moses wins General Motors top award; essay competition on How to plan and finance the roads we need. Roads & Sts 96:59 Jl '53

MOSQUITOES
Bugs got you down? Safety Maint & Prod 106:39 Ag '53
Chamber for observations on living larvae of anopheline mosquitoes. J. C. Jones. Science 117:42 Ja 9 '53
Insects v. insecticides. R. L. Metcalf. il Sci Am 187:21-5 O '52

Extermination

DDT in Sardinia. il map Fortune 47:113-20 Mr '53
Microanatomical study of DDT-moribund anopheles quadrimaculatus Say. J. C. Jones. bibliog Science 117:452-3 Ap 24 '53
Recommendations on insecticide use to prevent development of resistance. Pub Works 84:98 Je '53
What next for mosquito control? il Pub Works 84:71-2 Je '53

MOTELS. See Tourist camps, hostels, etc.

MOTHERS
Feeding of mothers and children under emergency conditions. M. M. Heseltine. Pub Health Rep 67:872-5 S '52

MOTHPROOFING preparations
First glass aerosol; Larvex mothproofing spray. il diags Mod Packaging 26:90-3+ Ja '53
Reaction of formaldehyde and phenols with wool; the formation of covalent linked mothproofing agents. K. G. Johnson. bibliog il Textile Res J 23:449-57 Jl '53

MOTION
Motion due to slow precession of a gyroscope driven and supported by a Hooke's joint. R. N. Arnold and L. Maunder. il diags Inst Mech Eng Proc (B) 1B no 3:77-89; Discussion. 89-90 '52
Motion of a sphere moving parallel to a plane boundary. F. C. Karal. diags J Ap Phys 24:147-51 F '53
See also
Dynamics
Machinery, Kinematics of
Mechanical movements
Mechanics
Velocity
Vibration
Vortex motion

MOTION picture industry. See Moving picture industry

MOTION study
Control of brickmaking costs through motion-time-analysis. A. B. Segur. Am Cer Soc Bul 32:47-8 F 15 '53
Electronic motion analysis. K. V. Smith. Franklin Inst J 254:347-8 O '52; Same. il Steel 131:119+ D 15 '52
New motion time method defined; General electric co. H. C. Geppinger. il diags Iron Age 171:106-8 Ja 8 '53
Studies in relationships of therbligs. G. Nadler and J. W. Wilkes. il Advanced Management 18:20-2 F '53

MOTOCYLINDER
Motocylinder for reciprocating-motion applications. J. C. Marshall and D. L. Treder. il diags Westinghouse Eng 13:72-3 Mr '53

MOTOR boat engines, Outboard

Specifications

1953 U.S. outboard motors; tabulations. Automotive Ind 108:294-5 Mr 15 '53

Statistics

Outboard engine production and value by hp ratings and displacement, 1951-1950; tabulations. Automotive Ind 108:295 Mr 15 '53

MOTOR boats
Air-sea crash rescue tender. il Engineer 194:525-6 O 17 '52; Engineering 174:577 O 31 '52
Alden designs Long Beach fireboat. plans diag Marine Eng 58:81-2 Mr '53
Boats for drilling personnel fitted with warning devices as a guard against explosions. il Oil & Gas J 52:127 Je 8 '53
Boats for the Royal yacht. Engineer 196:220 Ag 14 '53; Engineering 176:170 Ag 7 '53
Customs launches for Nigeria. il Engineer 195:906-7 Je 26 '53
Customs patrol launch, Sunga Marutham. il Engineer 195:530-1 Ap 10 '53; Engineering 175:395 Mr 27 '53
High-tensile steel canal boat. il Engineer 194:267 Ag 22 '52; Engineering 174:256 Ag 22 '52
Light alloy patrol launch. il Engineer 195:612 Ap 24 '53
Mathis yard building powerful fireboat for New York. il Marine Eng 58:50 Jl '53
Passenger launch Ikeja. il Engineer 195:62 Ja 9 '53
Spaulding designs new San Diego ferryboat. Marine Eng 58:49 Jl '53
They're cheaper from abroad. il Bsns W p 132-4 Ja 17 '53
See also
Motor ships

Exhibitions

Marine engines at the motor show, London, Oct. 22-Nov. 1. il Engineer 194:622-3 N 7 '52
National motor boat show, 43d, New York, Jan. 9-17. Automotive Ind 108:55+ F 1 '53

MOTOR bus associations
See also National association of motor bus operators

Directories

1953 association index. Bus Transportation 32:53-4+ Ap '53

MOTOR bus drivers
Fricke's Glad you're aboard, wins him Man of year honors. G. J. MacMurray. Bus Transportation 32:61 Ap '53
Mental factors in traffic accidents; abstract. H. Brandaleone. Safety Maint & Prod 104:52-3 N '52
Virginia transit co. will add more women drivers to overcome manpower shortage. Bus Transportation 31:71 N '52
We can spot the man who'll have an accident; transit profile. il Bus Transportation 32:32-4+ Mr '53
We tell our drivers how to cut claims after an accident; Holyoke street railway co. F. J. Dignam. il Bus Transportation 32:25-7 My '53

MOTOR bus engines
Air starters for commercial vehicles. T. Mac New. il diag Automotive Ind 109:48-9+ Ag 15 '53
Commercial vehicle show; review of current developments. il diags Automobile Eng 42:417-29 N '52
Long-distance Diesel 'buses on the European continent. J. A. Steenman. Inst Mech Eng Proc (Auto div pt 1):23-7; Discussion. il diags 27-33 '51-52
New small Diesel engine powers Fiat truck and bus. W. F. Bradley. il diag Automotive Ind 64+ Mr 1 '53
Perkins Diesel engine of 108 b.h.p. for commercial vehicles. il Engineering 175:461 Ap 10 '53

Cleaning

Cleaning, a part of maintenance. il Diesel Power 31:48-9 O '53

Cooling

Water-temperature control in truck and bus engines; report of round-table discussion. S A E J 60:52-4 N '52

Fans

Hot motor troubles are ended with converted fans. il Bus Transportation 32:38-9 My '53
How to keep fan pulleys tight. M. DeLucchi; A. Ryd. diags Bus Transportation 32:64 Ag '53

MOTOR bus engines—*Continued*

Fuel

Comparison of liquefied petroleum gas, gasoline, and Diesel fuel in city-bus operation. F. C. Burk and others. Pet Refiner 32: 119-21 Je '53; Excerpts. Automotive Ind 109:51+ Jl 1 '53

Fuel feeding

Commercial vehicle show; review of current developments; carburation and induction systems. il diag Automobile Eng 42:426-9 N '52

Maintenance and repair

Atom enters the bus business; radioactive tracers to measure engine wear. Bus Transportation 32:64 Je '53

How we cut high costs of broken piston rings; Indianapolis railways, inc. G. Prather. il diags Bus Transportation 32:51-3 Je '53

Portland makes it easy to cut GM-71 counterbore. B. A. Crawford. il diags Bus Transportation 32:53 S '53

Southwestern Greyhound stresses, PM. W. J. Granberg. il Diesel Power 31:40-3 Mr '53

Three ways to repair loose blades. il Bus Transportation 32:41 Je '53

Radiators

Here's how to overcome radiator tank corrosion. il Bus Transportation 32:35 Mr '53

Specifications

Engine tune up specifications, 1953; tabulation. Bus Transportation 32:69-74 Je '53

1953 motor bus engine specifications; tabulation. Bus Transportation 32:78-9 F '53

Valves

Valve project nets $5,500; San Antonio transit co. il diags Bus Transportation 31:37 D '52

MOTOR bus industry and trade

Statistics

Bus production drops in 1952. E. F. Theisinger. Bus Transportation 32:34-6 F '53

Busses; shipments from U.S. factories, 1949-1952; tabulation. Steel 132:184 Ja 5 '53

Factory sales and their wholesale value, U.S. plants, 1900-1952; monthly motor vehicle factory sales, by years, 1938-1952; chart and tables. Automotive Ind 108:93-4 Mr 15 '53

Factory sales of motor vehicles to domestic and foreign markets, 1943-1952; tabulation. Automotive Ind 108:95 Mr 15 '53

Revenue motor bus factory sales, 1941-1951; motor bus factory sales by type of bus. 1946-1952; truck trailer shipments by type, 1949-1952; shipments by months, 1950-1952; tabulations. Automotive Ind 108:97 Mr 15 '53

Austria

Commercial vehicle industry in Austria has slow growth. D. Scott. il Automotive Ind 109:56+ S 15 '53

Great Britain

Development of transport and commercial vehicles in Bristol. A. W. Hallpike. diags Inst Mech Eng Proc (Auto div pt 2):59-64, pl 1-4; Discussion. 64-6 '51-52

MOTOR bus lines

American transit association regional conference, Boston, March 5-6. Bus Transportation 32:64-5 Ap '53

Biggest task for transit is to get its story told; interview with George Anderson. Bus Transportation 32:42-4 Ap '53

Intercity carriers urged to back Monday holiday plan. Bus Transportation 31:56 D '52

Millions of new riders; goal for intercity carriers as they look to the future. Bus Transportation 32:26-7 S '53

1952 in review shows many gains for transit and intercity carriers. Bus Transportation 32:34-6 Ja '53

Pennsylvania bus association annual meeting, Pocono Manor, Pa. June 29-30. Bus Transportation 32:90-1 Ag '53

Private transit and private parking have common aims. J. J. Hassett. Pub Util 52: 227-34 Ag 13 '53

See also

Trolley buses

also National association of motor bus operators; Transcontinental bus system, inc.

Accidents

Pennsylvania turnpike commission checks into bus accidents. Roads & Sts 95:41 D '52

We tell our drivers how to cut claims after an accident; Holyoke street railway co. F. J. Dignam. il Bus Transportation 32:25-7 My '53

Advertising

Capital transit company proves direct mail can bring new riders. Bus Transportation 32:50-1 O '53

Ernie and Bea at the United transit co. tell transit story on Providence tv. il Bus Transportation 32:40-2 O '53

Greyhound sponsors national tv show. Bus Transportation 32:59 F '53

Manufacturer will furnish free ad mats to carriers. il Bus Transportation 32:51 S '53

Promotion ideas for transit. il Bus Transportation 31:56-7 D '52

We're in transit for a profit and advertising helps get it; Louisville transit co. F. J. Johnson. il Bus Transportation 32:36-8 Ap '53

When a long strike sends all of your customers to competitors; Pacific Greyhound sales campaign, intensive advertising. G. G. Magnuson. il Sales Management 69:72+ N 1 '52

Baggage

Intercity baggage service; is it a problem again? J. L. Roland. Bus Transportation 31:54-5 N '52

Limitation of liability in baggage ticket where no receipt is issued. H. S. Daynard. East Underw 53:34 N 14 '52

Claims

Claim savings by the clock; Connecticut railway and lighting co. Bus Transportation 32:35 Jl '53

What verdict would you return in these bus accident cases? L. T. Parker. Bus Transportation 32:42-4 Jl '53

Consolidation

ICC examiner's report calls for disapproval of Continental purchase of American system. Bus Transportation 32:66 Ap '53

ICC gives Transcontinental okay on American purchase. Bus Transportation 32:81 Je '53

Costs

1952 ME awards. il Bus Transportation 31:27-50 N '52

Transit pars; pattern for profit. Bus Transportation 31:51-3+ N '52

What the bus industry spent in 1952; tabulation. Bus Transportation 32:41 F '53

Development work

Need more riders on outlying lines? move 'em there; Hull City transport co. built 200 homes; plans to build another thousand. il Bus Transportation 32:31 S '53

Employees

Armed guards ride Augusta buses after 60 days that shook the city. Bus Transportation 32:56 S '53

Busy bus machinist builds own business; Dan Plankenhorn makes new type washer seal. il Bus Transportation 32:39 Jl '53

Demands of labor still a real problem. Bus Transportation 31:63+ D '52

Here's how Detroit street railway trains their own mechanics. il Bus Transportation 32:35-7 O '53

How management can do a better managing job; Cleveland transit system. Bus Transportation 32:36-7+ Mr '53

Increase your shop efficiency with training and upgrading; Crescent stages, inc. il diags Bus Transportation 32:42-4 Mr '53

Labor developments in the bus industry. P. B. Willauer. Published in monthly numbers of Bus transportation

MOTOR bus lines—Employees—*Continued*

Methods used in upgrading shop employees. Bus Transportation 32:46-7 Mr '53

NLRB sets down union's attempt to organize UTC's supervisors. Bus Transportation 32:63 O '53

New three-year labor contract approved by Greyhound workers. Bus Transportation 32:64 O '53

New York gets a new look as bus strike hits city. il Bus Transportation 32:62-3 F '53

Personnel expert gives eight steps for selection of employees. Bus Transportation 32:65 Ja '53

See also
Motor bus drivers

Equipment and supplies

Forecast, foul weather ahead; snow fighting equipment. il Bus Transportation 32:57 Ag '53

1953 bus show in print. il Bus Transportation 32:178-9+ Ag '53

1953 buyers' guide; bus parts, materials, accessories, shop equipment and tools. Bus Transportation 32:65+ Je '53

Express service

Quaker City expands promotion campaign. il Bus Transportation 32:58-9 Ap '53

Fares

Court raises Denver tram fare, but city tries to take it away. Bus Transportation 32:53 My '53

Downtown five-cent ride urged for Frisco. Bus Transportation 32:88 Ag '53

Fare trend is upward, three-month survey shows. Bus Transportation 32:62 Ap '53

NARUC calls for adoption of operating ratio theory. Bus Transportation 32:29-31 Ja '53

20-cent cash fare for St Louis Public Service. Bus Transportation 31:59 D '52

Finance

Detroit Street Railway chalks up black figure for first time in 23 months. Bus Transportation 31:66 D '52

New York city sponsors action to aid private transit lines. Bus Transportation 32:57 Mr '53

Traveling billboard buses can boost your revenues. il Bus Transportation 32:28-9 My '53

Fires and fire protection

New fire prevention standards for modern transit operation. Bus Transportation 32:52 Ja '53

Franchises

Akron franchise change places company on 95 per cent operating ratio. Bus Transportation 32:76-7 Je '53

Free transportation

Niagara Frontier Transit shows profit on bargain riding. Bus Transportation 32:49 Jl '53

St Louis Public Service woos shopper in effort to boost transit riding. il Bus Transportation 31:68-9 N '52

Where to find more bus riders, maybe. J. H. Collins. Pub Util 51:152-8 Ja 29 '53

Garages

Automatic door control saves time-labor for Indianapolis shop. il diag Bus Transportation 31:40-1 D '52

New London transport garage. il Elec R (Lond) 151:491 S 5 '52

Laws and regulations

Bill backed by New York intercity carriers passes; places jitney carriers under jurisdiction of PSC. Bus Transportation 32:54 My '53

When are you liable? L. T. Parker. Bus Transportation 32:56-7+ F '53

Maintenance and repair

Announcing, ME for '53. il Bus Transportation 32:32-3 Ja '53

Centralized shop cuts costs with these new ideas; Crescent operations. il Bus Transportation 32:48-9 O '53

Consulting department. Published in monthly numbers of Bus transportation

Crack maintenance set-up helps Niagara Transit roll out of red. il Bus Transportation 31:29-31+ D '52

Howjadoits. il diags Published in monthly numbers of Bus transportation

Intercity maintenance lauded in report of ICC safety body. Bus Transportation 32:53 Jl '53

LATL bakes and freezes them and makes parts assembly easy. il Bus Transportation 32:40-1 S '53

Maintenance man looks at bus design. F. MacManus. Bus Transportation 31:32-3 D '52

Metal spray, welding rod turn old parts into gold; Atlanta transit co. il Bus Transportation 32:30-1 Mr '53

1952 ME awards. il Bus Transportation 31:27-50 N '52

Salvaging isn't a job at Cleveland transit system; it's a project worth $228,788! il Bus Transportation 32:31-3+ Ap '53

Specify what you want to buy and maintenance costs will dip. S. D. Forsythe. il Bus Transportation 32:48-9 My '53

28th annual maintenance issue. il plan diags Bus Transportation 32:37-64 Je '53

Valve project nets $5,500; San Antonio transit co. il diags Bus Transportation 31:36-7 D '52

Winter is here and so is your spring breakage problem. il Bus Transportation 31:46-7 D '52

See also
Motor buses—Cleaning

Management

I'll take those losing bus lines and make them show a profit; Jesse L. Haugh. Bus Transportation 32:40-1 My '53

Industry watches Worcester operation as Walsh takes over for new owners. Bus Transportation 32:64 F '53

St Louis ponders ownership of transit facilities as Public service company rides out the storm. Bus Transportation 32:69+ F '53

Negro passengers

Federal court rebuffs plaintiff in Georgia Jim Crow bus case. Bus Transportation 32:60 Ja '53

New Jim Crow court decision causes concern to carriers. Bus Transportation 31:59 D '52

Public relations

Charleston Transit reveals some ideas on how to use new riders' views. il Bus Transportation 32:43 O '53

GE film hits traffic mess; sells greater use of buses. il Bus Transportation 31:68 D '52

Here's how your ME pennant can do a selling job for you. il Bus Transportation 31:38-9 D '52

Ohio Valley bus co. works hard to get new riders and keep them. il Bus Transportation 32:42-3 S '53

Quaker City expands promotion campaign. il Bus Transportation 32:58-9 Ap '53

Radio communication

Somerset shows how two-way radios can pay off. il Bus Transportation 32:42-4 F '53

Safety measures

How safety slogans helped cut Salt Lake City lines accidents. il Bus Transportation 32:52-3 F '53

Operation zero cut our accidents; Southern coach lines, inc. il Bus Transportation 32:34-5 Ap '53

Transportation safety. Safety Maint & Prod 104:34-9 D '52

Securities

Bus business. I. U. Cobleigh. Comm & Fin Chr 177:464 Ja 29 '53

Service

Forgotten man is a bus rider. J. H. Collins. Pub Util 52:219-26 Ag 13 '53

Putting the bus in ski business. H. E. Jackson. il Bus Transportation 31:34-6 D '52

MOTOR bus lines—*Continued*

Shops

Crescent costs dip in centralized shop. il Bus Transportation 32:47 S '53
Gaslight thinking snuffed out in today's bus shop. il Bus Transportation 32:62-3 Je '53
Guided shop tours help cure students of vandalism urge; illustrations with text. Bus Transportation 32:46-9 Ja '53
How to turn a small bus shop into a profitable business; York utilities co. il Bus Transportation 32:25-7 Jl '53
I know now that modern tools can cut shop costs; New Orleans public service. R. W. Ziifle. il Bus Transportation 32:38-40 Je '53
Let gages take guesswork out of inspection. H. A. Grenert. il Bus Transportation 32:48-50 Je '53
Minutes cut in night servicing mean savings of $20,000 a year. il Bus Transportation 32:42-3 Je '53
Modern tools for better maintenance; Pacific Greyhound. il Bus Transportation 32:40-1 Jl '53
New dream shop opened by PGL; illustrations with text. Bus Transportation 32:44-7 Je '53
Shop-made oven cuts repair cost on generators; Modern coach co. il Bus Transportation 32:48-9 S '53
Six ideas that can stretch your maintenance dollar; illustrations with text. Bus Transportation 32:60-1 Je '53

Statistics

Census of common carrier bus service; tabulation. Bus Transportation 32:40 F '53
Intercity trends, 1950-1952; tabulation and charts. Bus Transportation 32:32-3 F '53

Taxation

Congress gets intercity tax story. J. G. Scott. Bus Transportation 32:117+ S '53
Facts and figures aid Pennsylvania carriers in fight to reduce state gross receipts tax. Bus Transportation 32:66-7 F '53

Terminals

Buses load underground in new terminal. il plan Eng N 150:41-2+ Ap 9 '53
Cleanliness of terminal facilities still a problem for intercity carriers. Bus Transportation 32:56 Ja '53
Greyhound opens new terminal. il plans Bus Transportation 32:28-9 Mr '53
New Greyhound terminal swings into operation; illustrations with text. Bus Transportation 32:48-9 Ap '53
Pre-loading system ends terminal tangles; Chicago Greyhound terminal. il Bus Transportation 32:28-9 Jl '53
Security Square will house buses, offices, bomb shelter. Bus Transportation 32:89 Ag '53

See also
Port of New York authority—Bus terminal

Tickets

New interline book tickets get trial run at Carolina trailways. F. Kane. il Bus Transportation 32:62-3 Ag '53
Safeway may hold the answer to Interline ticket problems. il Bus Transportation 32:28-30 S '53

Vandalism

Guided shop tours help cure students of vandalism urge; illustrations with text. Bus Transportation 32:46-9 Ja '53

Baltimore

New traffic czar holds no brief for transit and Baltimore transit co. loves it; Henry A. Barnes. Bus Transportation 32:56-7 O '53
Political confusion keynotes Baltimore transit tangle. Bus Transportation 32:52 My '53

Chicago

Chicago Motor Coach's yardstick operation passes into hands of CTA. E. L. Klein. il Bus Transportation 31:56-9+ N '52

Columbus, Ohio

Four transit companies are ready to move into Columbus hot-spot. Bus Transportation 32:147 S '53

Denver

Court raises Denver tram fare, but city tries to take it away. Bus Transportation 32:53 My '53

Detroit

Detroit to revive commission to look into rapid transit. Bus Transportation 32:88 Ag '53
Here's how Detroit street railway trains their own mechanics. il Bus Transportation 32:35-7 O '53

Los Angeles

Forgotten man is a bus rider. J. H. Collins. Pub Util 52:219-26 Ag 13 '53
Where to find more bus riders, maybe. J. H. Collins. Pub Util 51:152-6 Ja 29 '53

Nashville, Tennessee

New company takes over in Nashville but old court case is still pending. Bus Transportation 32:59 S '53

New York (city)

Ebinger advises eight changes after survey of NYTA bus lines. Bus Transportation 32:58 O '53
New York city sponsors action to aid private transit lines. Bus Transportation 32:57 Mr '53
New York gets a new look as bus strike hits city. il Bus Transportation 32:62-3 F '53
New York's bus drivers get stalled. il Fortune 47:78 Mr '53

New York (state)

New York committee on industry problems could set national trend. Bus Transportation 32:54-5 S '53

Pennsylvania

Facts and figures aid Pennsylvania carriers in fight to reduce state gross receipts tax. Bus Transportation 32:66-7 F '53

Philadelphia

How Philadelphia transportation company promoted the new Quaker city parking ban. il Bus Transportation 32:45-7 F '53

St Louis

St Louis ponders ownership of transit facilities as Public service company rides out the storm. Bus Transportation 32:69+ F '53
St Louis talks itself blue on transit authority question. Bus Transportation 32:68 Ja '53

Tennessee

Tennessee hit with utility question; are buses ballot boxes or vehicles? Bus Transportation 32:65 F '53

Washington, D.C.

Security Square will house buses, offices, bomb shelter. Bus Transportation 32:89 Ag '53

MOTOR bus lines, Municipal
Chicago Motor Coach's yardstick operation passes into hands of CTA. E. L. Klein. il Bus Transportation 31:56-9+ N '52

MOTOR bus lines, School
'52 school bus census. Bus Transportation 32:37 F '53

MOTOR bus lines, Tourist
Intercity carriers show large gains in their tour business. Bus Transportation 32:50 S '53

MOTOR buses
Bus of knockdown type developed in France. W. F. Bradley. il Automotive Ind 108:60-1+ Ap 1 '53
Commercial vehicle show; review of current developments. il diags Automobile Eng 42:417-51 N '52
Development of transport and commercial vehicles in Bristol. A. W. Hallpike. diags Inst Mech Eng Proc (Auto div pt 2):59-64, pl 1-4; Discussion. 64-6 '51-52
He drives a bus full of cheesecake, watta job! traveling fashion show bus owned by the Hess department store. J. Breslin. il Bus Transportation 31:60 D '52

MOTOR buses—*Continued*

Long-distance Diesel 'buses on the European continent. J. A. Steenman. Inst Mech Eng Proc (Auto div pt 1):23-7; Discussion. il diags 27-33 '51-52

1953 bus show in print; illustrations with text. Bus Transportation 32:67-85 Ag '53

Transit brings out new low-cost buses. il Automotive Ind 107:41 D 15 '52

See also

Motor bus lines

Trolley buses

Air conditioning

Bus air conditioning. H. O. Schjolin. il diags Refrig Eng 61:42-4 Ja '53

New air conditioning system spells comfort for bus travelers. il Refrig Eng 61:745+ Jl '53

Axles

Chicago transit authority rear axle tool cuts maintenance time. R. J. Repplinger. il Bus Transportation 32:55 Ap '53

Commercial vehicle show; review of current developments; front axles and steering. il Automobile Eng 42:437-8 N '52

Commercial vehicle show; review of current developments; rear axles. il Automobile Eng 42:434-6 N '52

1953 axle specifications; tabulation. Bus Transportation 32:80 F '53

Bodies

Commercial vehicle show; review of current developments; bodywork. il Automobile Eng 42:446-51 N '52

Mass production techniques applied to building bus bodies; Superior coach corp. J. Geschelin. il Automotive Ind 109:58-61 S 1 '53

Special fixtures eliminate welding stresses in bus bodies. T. Mac New. il Automotive Ind 108:66-7 Je 1 '53

Brakes

See Brakes, Motor bus

Chartering

Public Service sells ideas and charter revenues roll in. il Bus Transportation 32:34-6 My '53

Trailways hauls scouts on 8,000-mile charter. Bus Transportation 32:50 S '53

Chassis

Seddon chassis; range of Diesel-engined goods and passenger vehicles. il diags Automobile Eng 43:43-52 F '53

Cleaning

Automotive fleet cleaning. E. Weller. il Soap & San Chem 28:44-5+ N '52

Cycloning dirty buses clean. il Bsns W p104 Jl 18 '53

$74 device solved washer problem. B. Schmidt and A. Guillot. il Bus Transportation 32:46 My '53

We swept out old style cleaning and brought in a $16,000 saving. T. Smith. il plan Bus Transportation 32:58-9 Je '53

Clutches

Commercial vehicle show; review of current developments; clutches. il Automobile Eng 42:429-30 N '52

Cost of operation

Tests show Diesel buses cost less to operate than LP-gas or gasoline. Nat Pet N 45:56-7 My 27 '53

Design

Maintenance man looks at bus design. F. MacManus. Bus Transportation 31:32-3 D '52

Electric equipment

Commercial motor show; electric vehicles to meet special requirements. Elec R (Lond) 151:737-8 O 3 '52

Commercial vehicle show; review of current developments; electrical equipment. il diags Automobile Eng 42:442-5 N '52

International commercial motor show, London. il Electrician 149:985-6 O 3 '52

Report on round table on alternating-current generating systems for trucks and buses; SAE summer meeting, Atlantic City, June 2. S A E J 61:53-4 Ja '53

Use of battery additives. Bus Transportation 32:47+ O '53

Exhibitions

British transport show discloses increasing use of Diesel engines. W. F. Bradley. il Automotive Ind 107:50-3+ N 1 '52

Commercial motor show, London. il Engineer 194:421-4, 456-9 S 26-O 3 '52; Engineering 174:412-13, 436-7, 467-8, 472, 498-501, pl 43-6 S 26-O 17 '52

Hydraulic equipment

Total control with power hydraulics; abstract. R. H. Fritzges. Machine Design 25:428+ Ap '53

Lubrication

Service tests in rear axles of buses and trolley-buses. H. E. Styles and A. T. Wilford. Inst Pet J 38:775-82 S '52

Maintenance and repair

See Motor bus lines—Maintenance and repair

Manufacture

Driveshafts for Mack trucks and buses balanced to close tolerances. T. Mac New. il Automotive Ind 108:74+ Ap 15 '53

GMC celebrates 30 years of bus building. il Bus Transportation 32:54-5 Jl '53

Mass production techniques applied to building bus bodies; Superior coach corp. J. Geschelin. il Automotive Ind 109:58-61 S 1 '53

Special fixtures eliminate welding stresses in bus bodies. T. Mac New. il Automotive Ind 108:66-7 Je 1 '53

Painting and finishing

Air hoists take the pain out of painting. il Bus Transportation 32:40-1 Ap '53

Great Lakes discovers two keys to hot spray success. il Bus Transportation 32:38-9 O '53

Hot spray for bus refinishing. Bus Transportation 32:45+ Jl '53

Mobile spray booth ups Cleveland transit system paint schedules. il Bus Transportation 32:30-1 My '53

Road sanding devices

New road sanding blower unit sprays grit under drive wheels. il Bus Transportation 31:62 N '52

Seats

1953 bus show in print. il Bus Transportation 32:178-9+ Ag '53

Skidding

Brake controls stop skids. il Bus Transportation 32:41 Mr '53

Specifications

1953 city and intercity buses; tabulations. Automotive Ind 108:156-7 Mr 15 '53

1953 motor and trolley bus front end specifications; tabulation. diags Bus Transportation 32:75 Je '53

1953 motor bus component parts; specifications tabulated. Bus Transportation 32:74-5 F '53

1953 motor bus general characteristics; tabulation. Bus Transportation 32:76-7 F '53

Springs and suspension

Air springs make all roads smooth. il diags Comp Air Mag 58:51 F '53

Bellows replace springs in new coach. il diags Machine Design 25:136-7 Ja '53

Commercial vehicle show; review of current developments; suspension. il Automobile Eng 42:438-9 N '52

Get rid of unfit springs with shop-made testers. A. G. Lyons. il Bus Transportation 32:52 S '53

New GM intercity bus has air suspension system. il diags Automotive Ind 107:47+ O 15 '52

Recovering laminated spring leaves of commercial vehicles. Engineering 175:479 Ap 10 '53

MOTOR buses—Springs and suspension—*Cont.*
Winter is here and so is your spring breakage problem. il Bus Transportation 31:46-7 D '52

Steering gear

Commercial vehicle show; review of current developments; front axles and steering. il Automobile Eng 42:437-8 N '52

Testing

Experimental bench testing techniques for truck and bus components; abstracts. G. F. Roddewig. il Automotive Ind 108:46+ Mr 1 '53; S A E J 61:20-3; Discussion. 23-6 Mr '53

Transmission

Commercial vehicle show; review of current developments; gearboxes. il Automobile Eng 42:431-3 N '52
Heavy duty gearbox; David Brown 557 CM. il Engineer 196:111 Jl 24 '53; Engineering 176:191 Ag 7 '53

Weight

Chassis suspension system incorporates weight indicator. diag Automotive Ind 108:69 Ap 1 '53

Wheels

Wheel balancing does the trick. A. Bolan. il Bus Transportation 32:44-5 Ja '53

MOTOR camps. See Tourist camps, hostels, etc.

MOTOR cars (railroad)
Diesel cars opening new era. il Ry Age 134:70-2 Mr 23 '53
Getting more out of less; RDC cars. il maps Ry Age 134:137-40 My 18 '53
Standard railcars on French railways. il Engineer 194:774 D 5 '52

Diesel-electric

Mack's Diesel-electric rail bus. il Diesel Power 31:62-3 Ap '53
RDCs; Rx for ailing railroads. Bsns W p 116+ Ja 17 '53

History

Forty years of Sulzer Diesel rail traction. il Engineering 174:830-1, pl 64-5 D 26 '52

MOTOR courts. See Tourist camps, hostels, etc.

MOTOR cycle engines
Compact engines. il diag Automobile Eng 43:319-22 Ag '53

MOTOR fuels. See Automotive fuel

MOTOR ships
Chicago Socony joins Lakes fleet. il Marine Eng 58:52 O '53
Chotin fleet adds powerful towboat. il Marine Eng 58:75-6 Je '53
Cunard cargo liner Pavia. Engineer 195:891 Je 26 '53; Engineering 176:92 Jl 17 '53
Diesel towboat goes into coal trade. il Marine Eng 58:77-9 O '53
Electromagnetic couplings and gearbox on M.V. Surrey. il Engineer 194:314-15 S 5 '52; Engineering 174:299-301 S 5 '52; Electrician 149:773-4 S 12 '52
Ferries converted to Diesel reduce operating costs. il Marine Eng 58:77-8 Ag '53
Maid of Ashton for British railways Clyde coastal services. il Engineering 175:695 My 29 '53
Michigan State ferry Vacationland. il Engineer 194:361-3 S 12 '52
Motor cargo-liner Samoa. il Engineering 176:217 Ag 14 '53
Motor ship Braemar. il Engineer 195:809 Je 5 '53
Motorships for Clyde services. G. W. Trigg. il Engineer 195:792-3 Je 5 '53
Motor tug for Aden port trust. il Engineering 175:106-7 Ja 23 '53
M.V. Wokingham. Engineer 195:612 Ap 24 '53; Engineering 175:569 My 1 '53
New towboat joins U.S. Steel fleet. il Marine Eng 58:77-8 F '53
New York to have powerful fireboats. il Marine Eng 58:79-80 F '53
Post-war Italian liners; Guilio Cesare. il Engineering 175:261-2, pl 5 F 27 '53
Shallow-draft tugboat has high maneuverability. il Marine Eng 58:67-8 S '53
Staten Island yard launches Erie tugboat. il Marine Eng 58:59 Jl '53
Twin Diesel towboats enter river service. il Marine Eng 58:81-3 Ap '53

See also

Ship propulsion, Electric

MOTOR transport. See Highway transportation

MOTOR truck contents insurance. See Insurance, Motor truck contents

MOTOR truck drivers
Driver alertness on the highways can be the vital margin of safety. H. Ridder. Nat Pet N 45:89-90 F 4 '53
Driver of the year saves three lives; Cullen H. Newsome. Safety Maint & Prod 106:30 S '53
Everybody hates a truck driver; true or false? P. Sayward. il Sales Management 70:30-2+ Ja 15 '53
Procedure for measuring employee productivity. M. Kriesberg. Advanced Management 17:6-8 Ag '52
Psychological test of tractor-trailer drivers; abstract. D. J. Moffie and others. Safety Maint & Prod 104:44+ N '52
Ready mix truck drivers are salesmen; Dayton builders concrete co. il Concrete 61:10+ Ap '53

See also

Drivers as salesmen
Motor trucks, Industrial—Drivers
also International brotherhood of teamsters, chauffeurs, warehousemen and helpers of America

MOTOR truck driving
Taking the skids out of winter driving. il Bsns W p86-7+ F 21 '53

MOTOR truck engines
Air starters for commercial vehicles. T. Mac New. il diag Automotive Ind 109:48-9+ Ag 15 '53
Buda's compact 165-hp Diesel. il Automotive Ind 108:54 F 15 '53; Diesel Power 31:65 Mr '53
Commercial vehicle show; review of current developments. il diags Automobile Eng 42:417-29 N '52
Ford cost cutter engine for the two and three ton Thames trucks. il diags Automobile Eng 43:353-8 S '53
Ford 70 b.h.p. four-cylinder petrol engine. il diag Engineer 195:570 Ap 17 '53
Future developments in commercial vehicle engines. C. G. A. Rosen. il diags Automotive Ind 107:38-42+ O 15 '52; Excerpts. S A E J 61:33-8 Ja '53
Italian lightweight Diesel engine powers truck. il diag Product Eng 24:164-5 Ap '53
Mack brings out new Diesel engine. il diag Automotive Ind 109:98+ Jl 1 '53; Diesel Power 31:50-1 Ag '53
New Reo Gold comet engine develops 160 horsepower. il Automotive Ind 108:65+ Mr '53
New small Diesel engine powers Fiat truck and bus. W. F. Bradley. il diag Automotive Ind 108:64+ Mr 1 '53
Perkins Diesel engine of 108 b.h.p. for commercial vehicles. il Engineering 175:461 Ap 10 '53

Cooling

Water-temperature control in truck and bus engines; report of round-table discussion. S A E J 60:52-4 N '52

Fuel

Carnation ok's LPG; with cost data. W. J. Thompson. il Food Eng 25:56-7 Je '53
LPG as construction machinery fuel. M. H. Coons. il Constr Methods 35:68+ Ag '53

Fuel feeding

Commercial vehicle show; review of current developments; carburation and induction systems. il diag Automobile Eng 42:426-9 N '52

Lubrication

Centrifugal oil separator for commercial-vehicle engines. il diag Engineering 174:678 N 21 '52

MOTOR truck engines—*Continued*

Radiators

Radiator standard picturized! diags S A E J 61:91 My '53

Testing

International Harvester unifies engineering facilities. il Automotive Ind 107:48-9+ D 15 '52

MOTOR truck industry
Trucks skid. Bsns W p50 Je 27 '53

Securities

Is auto industry facing major test? with data on leading auto and truck manufacturers. G. L. Merton. Mag of Wall St 92:228-31+ My 16 '53

Statistics

Factory sales and their wholesale value, U.S. plants, 1900-1952; monthly motor vehicle factory sales, by years, 1938-1952; chart and tables. Automotive Ind 108:93-4 Mr 15 '53
Factory sales of motor vehicles to domestic and foreign markets, 1943-1952; tabulation. Automotive Ind 108:95 Mr 15 '53
High gear; truck output spurts ahead with bigger steel allotments; with table of truck production, 1951-52. J. D. Williams. Barron's 32:11-12 D 22 '52
Motor truck sales by gross vehicle weights, 1946-1952; chart and tabulation. Automotive Ind 108:96 Mr 15 '53
New truck registrations by makes and g.v.w., 1950-1952; tabulation. Automotive Ind 108:104 Mr 15 '53
New truck registrations by makes, by years, 1948-1952; tabulations. Automotive Ind 108:101 Mr 15 '53
1952 new truck registrations by rank; tabulation. Automotive Ind 108:104 Mr 15 '53
Number and per cent of trucks in use, by age groups, 1949-1952; tabulation. Automotive Ind 108:111 Mr 15 '53
Trucks in use by makes and by model year; tabulation. Automotive Ind 108:121 Mr 15 '53
U.S. exports of new trucks and chassis, 1950-1951; tabulation. Automotive Ind 108:123 Mr 15 '53
U.S. trailer and trailer chassis production, 1948-1952. Iron Age 171:443 Ja 1 '53

Austria

Commercial vehicle industry in Austria has slow growth. D. Scott. il Automotive Ind 109:56+ S 15 '53

Czechoslovakia

Transport vehicles of Czechoslovakia. D. Scott. il Automotive Ind 109:51+ Ag 1 '53

Great Britain

Markets for heavy vehicles. Economist 165:41-2 O 4 '52

South Africa

South Africa assembles more German trucks. For Comm W 48:21 D 8 '52

MOTOR truck insurance. See Insurance, Motor truck

MOTOR truck robberies
Truck cargo theft losses keep climbing. Nat Underw 57:11 F 12 '53

MOTOR truck service stations
How jobber serves trucks; Plymouth oil co. il Nat Pet N 45:81-4 F 4 '53
Making truck stops profitable. R. E. Bjorkback. il Nat Pet N 44:48-52 S 24 '52
To draw trucks and passenger cars; Flattop latest addition to Associated's chain of truck stations. F. Breese. il Nat Pet N 44:30-1+ D 3 '52

MOTOR truck trailers. See Trailers

MOTOR trucks
Commercial vehicle show; review of current developments. il diags Automobile Eng 42:417-51 N '52
Ford truck line for '53 largest in company's history. il Automotive Ind 108:172+ Mr 15 '53
GMC light trucks for '53. Automotive Ind 108:128+ Ja 15 '53
Many new features in IHC's R-line of trucks. il Automotive Ind 108:70+ F 15 '53
Range of middleweight trucks; Bedford vehicles. il Engineer 195:510 Ap 3 '53; Engineering 175:439 Ap 3 '53
SAE national transportation meeting, Pittsburgh, Oct. 22-4. S A E J 60:75-80B D '52
Tippers and trailers. il Automobile Eng 43:83-4 F '53
World's largest truck? Dart 60-ton dump. il Eng N 150:101 Ap 30 '53; Diesel Power 31:49 My '53

See also

Delivery of goods
Electric trucks
Loading and unloading—Motor trucks
Motor truck engines
Motor truck industry
Motor vehicles
Radio telephone on motor trucks
Refrigeration on cars, trucks, etc.
Tank trucks
Tractors
Trailers

Accidents

Trucking safety record continues five year rise. G. D. Sontheimer. Safety Maint & Prod 106:43+ Jl '53

Axles

Alloy conservation in steels for truck axle parts; abstract. T. A. Frischman. Automobile Eng 43:199 My '53
Axle tester provides laboratory proving ground. il Steel 132:83 F 16 '53
Commercial vehicle show; review of current developments; front axles and steering. il Automobile Eng 42:437-8 N '52
Commercial vehicle show; review of current developments; rear axles. il Automobile Eng 42:434-6 N '52
Dual front axle permits more payload, greater profit and safety. il Roads & Sts 96:108 My '53
Four-axled truck boosts payloads. il Eng N 150:98 Ap 30 '53
How to road test an axle in a quiet lab. il Bsns W p 116-18 Ja 24 '53
New British axles permit bigger logging loads. Pulp & Pa of Can 54:188 Ap '53
New dual axle has far-reaching significance in highway transport. Roads & Sts 96:80 My '53
Payloads increased by new pusher tractor axle. il diags Food Eng 24:141+ D '52
To help cure overload problems, add a steering axle to front axle. il Constr Methods 35:160+ Je '53
Two-speed axles have advantages on highway trucks. il Eng & Min J 153:110 D '52
White introduces steering pusher axle. il diags Automotive Ind 107:32 O 15 '52

Bodies

Aluminum bodies cut truck fleet costs. il Elec World 139:128 F 23 '53
Commercial vehicle show; review of current developments; bodywork. il Automobile Eng 42:446-51 N '52
Light-alloy bodies on lorries for bulk transport. il Engineering 175:473 Ap 10 '53
Some factors concerning bodies and related components for commercial vehicles; abstract. E. P. Lamb. S A E J 61:73 S '53
Warmley aluminium pig truck. il Engineer 196:186 Ag 7 '53

Cabs

Diamond T Tilt-cab requires no power for its operation. il Automotive Ind 109:70-1 S 1 '53
Swing to tilt-cab trucks. il Bsns W p54+ Mr 28 '53

Chassis

Seddon chassis; range of Diesel-engined goods and passenger vehicles. il diags Automobile Eng 43:43-52 F '53

Clutches

Clutches for commercial motor vehicles. il Engineer 194:234 Ag 15 '52
Commercial vehicle show; review of current developments; clutches. il Automobile Eng 42:429-30 N '52

Design

Tractor-trailer design requirements; abstracts. W. P. Davis. Automotive Ind 107:47+ S 15 '52; S A E J 60:51-2 D '52

MOTOR trucks—*Continued*

Electric equipment

Commercial vehicle show; review of current developments; electrical equipment. il diags Automobile Eng 42:442-5 N '52

International commercial motor show, London. il Electrician 149:985-6 O 3 '52

Report on round table on alternating-current generating systems for trucks and buses; SAE summer meeting, Atlantic City, June 2. S A E J 61:53-4 Ja '53

Equipment

Snooper tells how trucks operate; recording speedometer. il Nat Pet N 45:56-8 Ja 21 '53

Tachographs tell story of truck movements. J. Hubel. Pub Works 84:102-3 Ap '53

Exhibitions

British transport show discloses increasing use of Diesel engines. W. F. Bradley. il Automotive Ind 107:50-3+ N 1 '52

Commercial motor show, London, il Engineer 194:421-4, 456-9 S 26-O 10 '52; Engineering 174:412-13, 436-7, 467-8, 472, 498-501, pl 43-6 S 26-O 17 '52

Fires and fire protection

Tool kit for truck fires. il Safety Maint & Prod 106:41 Ag '53

Gearing

Commercial vehicle gearboxes. J. T. Riley. il Automobile Eng 43:345-50 Ag '53

Heating

New unit heats food cargo via engine-cooling system. il diag Food Eng 25:64+ F '53

Instrument panels

Tomorrow's heavy-duty trucks may have uniform instrument panels. diag S A E J 60:100 D '52

Laws and regulations

Duty deposits now canceled for U.S. vehicles trucking to Canada. For Comm W 48:8 O 13 '52

I.C.C. eases lease rules for farmer-owned trucks. Ry Age News ed 134:10-11 My 25 '53

New ICC vehicle safety regulations will affect many petroleum truckers. Nat Pet N 45:48 My 6 '53

Leasing

Debate pros and cons of owning versus leasing. S A E J 60:112+ D '52

Is it better to lease or own automotive equipment? based on papers by H. L. Willett jr. and others. S A E J 61:20-2 Je '53

Trucks on lease by Reo motors. Bsns W p50 Ja 24 '53

Length of service

Number and per cent of trucks in use, by age groups, 1949-1952; tabulation. Automotive Ind 108:111 Mr 15 '53

Trucks in use by makes and by model year; tabulation. Automotive Ind 108:121 Mr 15 '53

Maintenance and repair

Care cuts maintenance costs; Al Ives's interview with John Borgogno. Diesel Power 31:58-9 Mr '53

Checklist for fleet men. D. H. Mikkelson. S A E J 61:64-5 Ja '53

Cut out the old, weld in the new. L. F. Lillard. il Welding J 32:332 Ap '53

Engineering approach to service problems; symposium; abstracts of papers. S A E J 61:20-1 O '53

Fast replacement or heavy maintenance. C. C. Hudson. S A E J 61:64-7 Ag '53; Excerpts. Nat Pet N 45:59-60 Ja 28 '53; Discussion. S A E J 61:67-8 Ag '53

How to turn a small bus shop into a profitable business; York utilities co. il Bus Transportation 32:25-7 Jl '53

Jobber lops ten per cent off costs in first year of truck maintenance program; Lloyd Felker co. H. Ridder. Nat Pet N 45:59-60+ Mr 18 '53

Let power tools do the work. il Diesel Power 31:36-7 My '53

Preventive maintenance at lower cost. T. W. Lauer. Nat Pet N 45:58-62 Ap 8 '53

SAE speakers give nod to dealer shop; symposium on the maintenance of trucks and other automotive vehicles. Nat Pet N 45:55-6 F 11 '53

Truck haulage and maintenance. H. C. Weed and C. A. Lindberg. il Min Cong J 39:29-33 Mr '53

Management

Fleet management; a job evaluation; abstract. T. L. Preble. S A E J 61:46-7 F '53

Principles of fleet management. T. L. Preble. Edison Elec Inst Bul 21:199-202 Je '53

Manufacture

Driveshafts for Mack trucks and buses balanced to close tolerances. T. Mac New. il Automotive Ind 108:74+ Ap 15 '53

New turnover fixture for large truck chassis; Reo motors, inc. il Automotive Ind 108:43 My 15 '53

Materials

Lighter trucks for heavy hauling; illustrations with text. C. L. Burton and E. P. White. S A E J 61:34-5 F '53

Service experience with magnesium in the commercial highway transportation industry. G. K. Glaza and R. E. Perry. Automotive Ind 107:123-4+ D 15 '52

Weight reduction of power driven highway vehicles. J. N. Bauman. il diag S A E J 61:58-62 Mr '53

Painting and finishing

Reo adopts hot spray painting. il Automotive Ind 108:72-3+ Ja 1 '53

Skidding

Rolling wheels gather no skids. A. C. Gunsaulus. il diag S A E J 61:68-9 F '53

Taking the skids out of winter driving. il Bsns W p86-7+ F 21 '53

Specifications

1953 trucks; specifications; tabulations. Automotive Ind 108:149-55 Mr 15 '53

Springs and suspension

Air-borne trucks may fly low, but they won't leave the ground; pneumatic rubber suspension system. il Eng N 150:118 My 7 '53

Air-inflated truck spring introduced by General. il Nat Pet N 45:73 Ap 15 '53

Commercial vehicle show; review of current developments; suspension. il Automobile Eng 42:438-9 N '52

Steering gear

Air power steering. W. F. Bradley. diags Automotive Ind 108:71+ F 1 '53

Commercial vehicle show; review of current developments; front axles and steering. il Automobile Eng 42:437-8 N '52

White introduces steering pusher axle. il diags Automotive Ind 107:32 O 15 '52

Taxation

Industry needs drive to halt spread of contagious ton-mile tax theory. H. Ridder. Nat Pet N 44:87 O 1 '52

NRMCA reviews three per cent transportation tax. Concrete 61:28-9 O '53

Ohio adopts axle-mile tax. Ry Age News ed 135:10-11 Jl 20 '53

Oil truckers report soaring costs caused by New York ton-mile tax. R. E. Bjorkback. Nat Pet N 45:31+ Ja 28 '53

Truck weight distance tax. E. J. Nunan. Rock Prod 56:148+ Ap '53

Trucks can't recoup tax cost with a surcharge. Ry Age News ed 135:10 Ag 3 '53

U.S. Supreme court upholds truck taxes. Ry Age News ed 134:11-12 Mr 2 '53

Testing

Experimental bench testing techniques for truck and bus components; abstracts. G. F. Roddewig. il Automotive Ind 108:46+ Mr 1 '53; S A E J 61:20-3; Discussion. 23-6 Mr '53

MOTOR trucks—*Continued*

Transmission

Advantages and disadvantages of Hydra-Matic transmissions in truck operation; abstract. W. W. Edwards. S A E J 61:104-5 O '53

Advantages and disadvantages of torque converter type transmissions for medium and heavy duty trucks and tractors in both multiple stop and long distance operation. P. L. Gillan and W. S. Coleman. il S A E J 61:38-41 O '53

Commercial vehicle show; review of current developments; gearboxes. il Automobile Eng 42:431-3 N '52

Heavy duty gearbox; David Brown 557 CM. il Engineer 196:111 Jl 24 '53; Engineering 176:191 Ag 7 '53

Hydraulic torque converter; common-law spouse of heavy-duty truck. W. B. Gibson. S A E J 61:40-1 Ag '53

Hydraulic torque converter, its effect on the power train. R. M. Schaefer and J. A. Winter. S A E J 61:58-9 F '53

Machining the Wilson epicyclic gearbox. il Engineering 175:363-5, 368 Mr 20 '53

New Italian truck has special eight-speed transmission. il diag Automotive Ind 107:72 N 1 '52

Production of a heavy-duty Wilson gearbox. flow diag il diags Engineer 195:313-15 F 27 '53

Transmission bearings for heavy duty service; abstract. E. J. Barth and T. Backus. S A E J 60:107-8 O '52

Truck makers to come out with automatic transmissions for some models. H. C. Tuttle. diag Steel 131:71-2 N 17 '52

Weight

Chassis suspension system incorporates weight indicator. diag Automotive Ind 108:69 Ap 1 '53

Does the public benefit from size and weight restrictions? M. C. Horine. S A E J 61:18-21; Discussion. 21-3 S '53

Relation between highway cost and truck transportation to be studied by Research board. Roads & Eng Constr 91:112 Mr '53; Same. Roads & Sts 96:89-90 Mr '53; Same. Safety Maint & Prod 105:31-2 My '53

Trucks weighed at 50 miles per hour. il Pub Works 83:64 N '52

Weight reduction of power driven highway vehicles; abstracts. J. N. Bauman. Automotive Ind 108:44-6 Mr 1 '53; il diag S A E J 61:58-62 Mr '53; Nat Pet N 45:86-7 F 18 '53

Wheels

See also
Tire rims

MOTOR trucks, Amphibious

Hugh amphibious vehicle has one engine per wheel. il Automotive Ind 107:54+ D 15 '52

Swamp buggy under test in Ontario. il Roads & Eng Constr 90:52 D '52

MOTOR trucks, Industrial

Atomic-powered industrial trucks. B. I. Ulinski. Franklin Inst J 254:556-7 D '52

Burn new fuel; fork lift trucks. il Mill & Factory 53:246+ Ag '53

Casting jam-up yields to mechanical handling. il Steel 132:134 Ap 13 '53

Clark X-70 fork-lift truck. il Mill & Factory 52:272+ Je '53

Coil handling cost-cutter. il Steel 131:129 D 15 '52

Concrete slabs are piled neatly and seven-high by outsize straddle truck in casting yard. il Constr Methods 35:123+ Mr '53; Same. Concrete 61:46+ Ap '53

Design characteristics of fully automatic transmission for fork-lift industrial truck. diags Automotive Ind 109:62-3+ S 1 '53

Diesel fork lifts for safety and economy. L. C. Daniels. il Diesel Power 31:60-1 F '53; Abstract. S A E J 61:127 My '53

Diesel-powered towmotors. il Diesel Power 31:63-5 Je '53

Fork-lift truck transmission with torque converter designed to meet materials handling requirements. il diag Tool Eng 31:99 S '53

Fork truck simplifies handling in quenching steel castings. il Foundry 80:214+ O '52

Fork trucks and tractors reduce handling time at Cone mills; illustrations with text. Textile World 103:139 Ja '53

Forkloader. il Blast F & Steel Pl 41:1092 S '53

Fuel switch to LP (liquefied petroleum) gas saves $300 per fork truck per year. il Factory Management 111:140-1 F '53

Handling hazards defined. diag Steel 131:318+ O 13 '52

Handling materials in process. R. T. Kimmel. il plans Tool Eng 30:67-78 Mr '53

Heavy-duty fork lift truck; Mathews brothers. il Engineer 194:830 D 19 '52

History of material handling; abstract. H. R. Peck. S A E J 61:105 Ap '53

How high stacking affects fork truck stability. H. Milz. il diags Iron & Steel Eng 30:206+ S '53; Same. Paper Ind 35:791-2 O '53

How lift trucks modernize old plant. D. A. Reed. il Nat Pet N 44:54-7 D 17 '52

How to cut cost of fork truck operations. O. T. Henkle, jr. il Paper Tr J 137:54-5 O 16 '53; Same cond. Am Mach 97:107 Mr 2 '53

How to handle chips and trimmings; industrial-truck systems. il Am Mach 97:154-6 My 11 '53

Jobbing and production operations facilitated by lift trucks; Electro-alloys division of American brake shoe co. il Foundry 81:178+ F '53

Lift trucks get lift from show biz; Yale & Towne mfg. co. traveling show. il Mod Ind 25:117-18+ Mr '53

Making easy work of box, bin and skid handling. J. E. Hyler. il Mill & Factory 52:129-32 Je '53

Materials handling; foundry handling costs cut with wider use of industrial trucks. il Iron Age 170:120 O 23 '52

Mechanized handling makes old warehouse good as new; Morris paper co. A. T. Gaudreau. il plan Factory Management 11:96-9 Ap '53

Motorized buggies go underground to handle excavation beneath terrace; Kentucky state capitol. W. J. Pouchot. il Constr Methods 34:58-9+ N '52

Needed, an evaluation of fork lift trucks. D. C. Prosser. Automotive Ind 108:84+ My 15 '53

New fork-lift truck handles big pipe easily. D. H. Stormont. il Oil & Gas J 51:132 S 22 '52

Non-telescopic fork truck equipped with one-hp motor. il Am Mach 96:180 D 8 '52

Nothing stumps this fork truck. il Factory Management 111:158-61 Ja '53

Packaged timber handling at Hecla. W. H. Love. il Min Cong J 39:22-4 S '53

Polyalkylene glycols as lubricants and hydraulic lift fluids in tow motors and lift trucks. T. W. Rodes. Ind & Eng Chem 44: sup 137A-8A+ O '52

Pretty girls plus no experience do something for lift trucks; Buda co. il Ind Marketing 38:69 S '53

Pyramid lightweight motor truck. il Engineering 176:32 Jl 3 '53

Sets 7500 brick an hour; lift truck. il Brick & Clay Rec 122:59 Ap '53

Straddle truck cuts delivery costs. il Brick & Clay Rec 121:25 D '52

Tilt-up lift-slab job speeded by fork-lift truck. il Eng N 150:44 My 14 '53

Trend in trucks; toward more power. Mod Ind 24:149-50 N '52

What's ahead the next ten years in plant services; industrial trucks. Am Mach 96: J 12-14 Mid-N '52

Why Hyster's customer's like service-by-contract. il Sales Management 70:62+ Mr 1 '53

Wire handling; collapsible ram simplifies movement of coiled wire in mill. il Iron Age 171:256+ My 7 '53

Drivers

Carrier drivers show their skill; Universal lumber and box co. W. M. Allison. il Nat Safety N 68:158+ O '53

MOTOR trucks, Industrial—Drivers—*Continued*

Ford truck operators help train themselves; Monsanto chemical co. A. G. Erdman and S. A. Marino. il Factory Management 111:138-41 Mr '53

Hot competition brightens truck safety record. il Steel 132:186 My 25 '53

Rules for training truck operators. J. L. Van Cara. Safety Maint & Prod 104:86-7 O '52

Selecting and training fork-truck operators. D. R. Holm. Mech Eng 74:568-72 Jl '52; Discussion. 74:1033-4 D '52

Leasing

Leasing of Yale & Towne lift trucks hints at new marketing trend; experimental leasing plan of Yale & Towne and C.I.T. corp. il Ind Marketing 38:68+ Mr '53

Maintenance and repair

Holding a tight rein on truck operating costs; Kellogg co. D. G. Baird. il Mill & Factory 53:98-100 S '53

Hour meters for better maintenance. J. Gutbrod. il Factory Management 111:98-9 Je '53

Northern Pacific eases material handling equipment maintenance job. il diag Ry Age 133:86-7 D 1 '52

Truck down-time cut 86 per cent. D. G. Baird. il Mill & Factory 51:122-5 D '52

Safety measures

Do's and dont's for fork trucks. O. T. Henckle, jr. il Safety Maint & Prod 105:72-3+ Mr '53

Fork truck competition for operating safety. Safety Maint & Prod 105:36 Je '53

Industrial trucks and tractors. il Nat Safety N 67:158 Mr '53

Powered hand trucks; data sheet. il Nat Safety N 66:34-5+ N '52

Rules of the inside road. il Safety Maint & Prod 105:19-20+ My '53

Safe use and care of industrial trucks. il Safety Maint & Prod 104:40+ O '52

Safety saves; new safety film for truck operators. il Mill & Factory 52:107 Ap '53

Specifications

1953 industrial trucks; tabulations. Automotive Ind 108:338-45 Mr 15 '53

MOTOR trucks, Military

Austin offers three models of four-wheel drive vehicles. il Automotive Ind 107:59 N 1 '52

Making military truck bumperettes at Tuthill plant. il Automotive Ind 107:56 O 1 '52

Pocket-size jeep rides a copter; Mighty Mite. il Bsns W p31 Mr 28 '53

Specifications

Military cargo vehicle specifications; tabulation. Automotive Ind 108:162 Mr 15 '53

MOTOR trucks and roads

Build short-cut truck road. il map Rock Prod 56:124+ Je '53

Cracking and surface displacement evident in some sections of Washo test road. Roads & Eng Constr 91:72 My '53; Roads & Sts 96:81-2 My '53

Does the public benefit from size and weight restrictions? M. C. Horine. S A E J 61:18-21; Discussion. 21-3 S '53

Early damage to WASHO test road analyzed. Civil Eng 23:339 My '53

Highways for industry are highways for defense. J. R. B. Jones. Roads & Eng Constr 91:154+ Mr '53

Pennsylvania adds up-hill truck lanes. il Roads & Sts 95:104-5 D '52

Relation between highway cost and truck transportation to be studied by Research board. Roads & Eng Constr 91:112 Mr '53; Same. Roads & Sts 96:89-90 Mr '53; Same. Safety Maint & Prod 105:31-2 My '53

Road test data distorted, truckers say. Eng N 150:28 Ja 22 '53

Test trucks rolling on Washo road tests. Roads & Eng Constr 90:86 N '52; Roads & Sts 95:47 N '52

Washo and other current road tests. A. W. Johnson. il Roads & Eng Constr 90:130+ N '52

MOTOR trucks in construction work

Low-bed truck with front-wheel drive. il Roads & Eng Constr 91:94 Mr '53

Slop-tight endgate added to Mack trucks on job. il Constr Methods 35:59 Mr '53

Use your 4x4's the year around. R. H. Radtke. il Roads & Sts 95:110-11 D '52

MOTOR trucks in express service

Everybody hates a truck driver; true or false? P. Sayward. il Sales Management 70:30-2+ Ja 15 '53

MOTOR trucks in freight service

Another explosive round. Chem W 71:48-9 D 6 '52

Bison freight line repowers. il Diesel Power 31:94-5 Ap '53

Duty deposits now canceled for U.S. vehicles trucking to Canada. For Comm W 48:8 O 13 '52

Nailing down the facts in the truck issue. il Bsns W p 106-8 Mr 7 '53

Pacific Intermountain Express invites customers and competitors to its annual sales meeting. Sales Management 70:82-4 Mr 1 '53

Piggy backs, good or bad? trailers-on-flatcar service. J. S. Gallagher, jr. il Ry Age 134:80-3 Ap 20 '53

Snooper tells how trucks operate; recording speedometer. il Nat Pet N 45:56-8 Ja 21 '53

Supreme court upholds I.C.C. truck-lease rules. Ry Age 134:45 Ja 19 '53

Truckers tired of little brother role. Bsns W p26 F 21 '53

Trucks called safe for explosives. B. E. Stillwell. Ry Age 134:12-13 My 4 '53

Trucks, more potent fleet on the roads. Iron Age 171:46-7 Ja 15 '53

Where do trucks go from here? Bsns W p70+ N 22 '52

See also

Railroads—Motor vehicle auxiliaries

Railroads—Motor vehicle competition

Tank trucks

Accounting

Accounting for long-distance trucking operations; some interesting procedures set up by the ICC. P. Safro. J Account 94:620+ N '52

Advertising

Good humor in ads gives service edge over competition; Navajo freight lines, cartoons in trade journals and mail. L. F. Thomann. il Ptr Ink 242:25 Ja 2 '53

Finance

Financing the trucking industry; manuals pertaining to the financing of fleet operators. H. V. Odle. il Burroughs Clearing House 37:34-6+ Ja '53

MOTOR trucks in lumbering

Mechanized woods operations solve Brown co. transport problems. il Paper Ind 35:217-18 My '53

New British axles permit bigger logging loads. Pulp & Pa of Can 54:188 Ap '53

Self-loading trucks speed timber salvage. il Paper Tr J 135:40-1 S 5 '52; Same. Paper Ind 34:839-40 O '52

Single axle and double axle drive trucks vs. semi-truck trailer units; panel discussion. Pulp & Pa of Can 54:208+ Ap '53

Three truck loads in one. R. H. Forbes. il Diesel Power 31:61 Ap '53

MOTOR trucks in mining

Air-starting cuts cost of electrical maintenance on Mesabi operator's off-highway trucks. il Eng & Min J 153:118 S '52; Same. Constr Methods 35:128+ Ja '53

Dart sparks new ideas in world's largest end-dump trucks. il Constr Methods 35:111+ My '53

Heavy duty trucks in open pit operations. J. Wells. il Min Cong J 39:41-3 Jl '53

Semi-trailer truck has place in modern open-pit haulage; Jones & Laughlin steel corp. J. F. Linden. il Eng & Min J 154:72-6 Je '53

Truck haulage and maintenance. H. C. Weed and C. A. Lindberg. il Min Cong J 49:29-33 Mr '53

MOTOR trucks in mining—*Continued*

Truck haulage and maintenance in copper mines of the Southwest and northern Mexico; abstract. H. C. Weed. Min Cong J 38:97 O '52
Truck maintenance; Minnesota iron ranges; abstract. C. A. Lindberg. Min Cong J 38: 97-8 O '52
Trucks make marginal open-pit mining pay. il Bsns W p 122-4+ Ap 11 '53
Trucks with torque converters. F. Byars. il Min Eng 5:284-5 Mr '53
Two-speed axles have advantages on highway trucks. il Eng & Min J 153:110 D '52
World's largest dump truck handles 60-ton payload. il Coal Age 58:114 Ap '53; Eng & Min J 154:121 Ap '53

MOTOR trucks in repair service

Custom-built truck for sewer maintenance work. A. A. Appel. il Sewage & Ind Wastes 25:1100-1 S '53
Mobile units now being used for dehydration plant repairs. il World Oil 136:255 My '53
Quick refills for fire extinguishers; rolling fire extinguisher maintenance shop. il Nat Safety N 67:52-3 My '53
Selection and application of winches and allied equipment. H. J. Troche and B. A. Cooper. diags Am Gas Assn Proc 1952:393-401
This contractor believes in bigger and more complete service trucks; Union building & construction corp. il Roads & Sts 96:60+ Ja '53
Tooling takes to the road; Joy manufacturing co. H. B. Osborn, jr. il Tool Eng 31:79-80 O '53

MOTOR trucks in selling

See also
Exhibits, Traveling
Traveling stores

MOTOR trucks in the petroleum industry

Jobbers plan big investment in rolling stock. Nat Pet N 44:33-5 N 26 '52
Saudi Arabia; transportation in oil operations. E. J. Zinszer. il Pet Eng 24:A60+ N '52

MOTOR vehicles

Trackless train developed by R. G. LeTourneau. il Roads & Eng Constr 91:64 S '53; Rubber Age 73:804 S '53
Transport vehicles of Czechoslovakia. D. Scott. il Automotive Ind 109:51+ Ag 1 '53
Vehicles of the Communist world; 1952 Leipzig fair. D. Scott. il Automotive Ind 107: 60-3+ N 1 '52
Watermelon tires; Rolligons. il Bsns W p31 Mr 21 '53

See also
Automobiles
Diesel engines, Automotive
Highway transportation
Motor buses
Motor cars (railroad)
Motor trucks
Railroads—Motor vehicle auxiliaries
Taxicabs
Tractors
Trailers
Trolley buses

Axles

Build or buy this roading axle. il diags Constr Methods 35:114+ Ag '53

Cold weather operation

Volatility studies of military vehicles. K. Boldt and others. il S A E J 61:71-3 Mr '53

Inspection

Cars travel too fast for drivers and roads. T. N. Boate. Safety Maint & Prod 106:32-3 S '53

Springs and suspension

Automatic furnace heat treats high-strength torsion bars. R. Graham. il diag Iron Age 171:129-32 My 21 '53

Statistics

Estimated scrappage of motor vehicles, 1929-1952; ranking of the states according to 1952 total registrations; taxicab, motorcycle and trailer registrations, by states, 1950-1952; tabulations. Automotive Ind 108: 110 Mr 15 '53
Exports of motor vehicles 1950 and 1951; tabulation. Automotive Ind 109:66 Jl 1 '53
Factory sales of special types of vehicles, 1947-1952; tabulation. Automotive Ind 108: 95 Mr 15 '53
Motor-vehicle registrations, Canada. Roads & Eng Constr 91:192 Je '53
New car and truck registrations by years, 1929-1952; tabulation. Automotive Ind 108: 104 Mr 15 '53
New motor vehicle registrations, by states, 1950-1952; tabulations. Automotive Ind 108: 102 Mr 15 '53
1952 vehicle registrations up 2.6 per cent over 1951. M. Ainsworth. Automotive Ind 107:76+ N 15 '52
U.S. exports of new motor vehicles, 1920-1952; tabulation. Automotive Ind 108:122 Mr 15 '53
U.S. imports of new passenger cars, 1948-1952; motorcycle imports, 1948-1952; automotive exports; 1935-1952; tabulations. Automotive Ind 108:124 Mr 15 '53
U.S. motor vehicle registrations, 1900-1952; tabulation. Automotive Ind 108:107 Mr 15 '53
World registrations by continental divisions; total U.S. motor vehicle registrations by states, 1952-1951; tabulations. Automotive Ind 108:108 Mr 15 '53
World registrations by countries; tabulations. Automotive Ind 108:109 Mr 15 '53

Steering gear

Steering booster promotes safe driving; Air-O-Matic power steer booster. diags Comp Air Mag 58:287 O '53

Taxation

Road-user and property taxes on selected motor vehicles, 1953; charts and tables. E. M. Cope and R. W. Meadows. maps Pub Roads 27:127-53 Ap '53; Excerpts. Nat Pet N 45:58+ My 27 '53

MOTOR vehicles, Amphibious

Amphibious Otter. il Automotive Ind 108:68-9 F 1 '53
BARC. il Diesel Power 31:38-9 My '53
For rent; marsh buggies. Fortune 46:216 N '52
Muskeg beater; year-round transportation over formidable Canadian terrain promised by Imperial's unusual vehicle. il map Oil & Gas J 52:47 Je 29 '53

MOTOR vehicles, Military

Amphibious Otter. il Automotive Ind 108:68-9 F 1 '53
Defense contract awards; list of prime contracts for various types of automotive military equipment, including tanks, motorized gun carriages, trucks, warplanes, automotive components and spare parts, automotive maintenance equipment, etc. (cont). Automotive Ind 107:166+ O 15; 160+ N 15; 130+ D 15 '52; 108:102+ Ja 15; 576+ Mr 15; 152+ Ap 15; 200+ My 15; 100+ Je 15; 109:148+ Jl 15; 116+ Ag 15; 162+ S 15; 112+ O 15 '53
European civilian, military vehicles lack co-ordination. W. F. Bradley. il Automotive Ind 109:36-8+ S 15 '53
How the army coats 200 vehicles a day. D. Markstein. il Mill & Factory 51:106 D '52
Mobile staff offices. il Electrician 149:550 Ag 22 '52
New developments in military earth moving equipment. D. A. Hausmann. Roads & Sts 96:80+ Ja '53
Ordnance aims at standardized vehicles; abstract. W. O. Miller. S A E J 61:105 Ap '53
Saracen armoured infantry carrier for the army. il Engineering 175:725 Je 5 '53

See also
Tanks, Military

Maintenance and repair

Shelter for maintenance in the field. il Constr Methods 35:138+ S '53

Manufacture

Line welding speeds new armored hulls for the army's new personnel carrier. il Am Mach 96:120-1 O 27 '52
Special handling of cutting fluids and machine lubricants; Continental motors corp. J. Geschelin. il Automotive Ind 109:32-3+ S 15 '53
Versatile tooling for making torsion bars; Maremont automotive products, inc. il Automotive Ind 108:56-8 My 15 '53

MOTOR vehicles, Military—*Continued*

Testing

Volatility studies of military vehicles. K. Boldt and others. il S A E J 61:71-3 Mr '53

MOTOR vehicles, Steam

Granddaddy tractor; Steam wagon, built by David Spencer in 1880. M. A. Marschang. il Coal Age 58:97 O '53

MOTOROLA, inc.

Motorola; emphasis on electronics has strengthened its industry position. H. Bridgman. Barron's 33:19-20 Ja 19 '53

MOTORS, Electric. See Electric motors

MOULTON, Forest Ray, 1872-1952

Sketch. A. J. Carlson. Science 117:545-6 My 22 '53

MOUNT CARMEL, Pennsylvania

Industry; a town is dying without it; fadeout of coal mining is making Mount Carmel, Pa., a ghost town. E. C. Kellogg. il Iron Age 170:17-18 D 25 '52

MOUNT VERNON-WOODBERRY mills, inc.

Security I like best. G. F. Helbig. Comm & Fin Chr 176:2218 D 11 '52

MOUNTAIN climbing. See Mountaineering

MOUNTAIN railroads

Henry Meiggs, colossus of Andean railroading. il Comp Air Mag 58:78-9 Mr '53

How the Southern Pacific uses train-wayside radio in the high Sierra. il map Ry Age 134:39-41 Ja 26 '53

N&W line and grade change smooths routes in mountains. il plan Ry Age 135:81-3 S 7 '53

Snow removal in mountain districts. L. Wylie. il Ry Age 133:56-7 D 15 '52

MOUNTAIN roads

Alcan in British Columbia; construction battles difficult access. L. L. Wise. il maps Constr Methods 34:42-8 N '52

Contour method of grade design and earthwork calculation. C. V. Kane. maps diags Roads & Sts 95:53-4+ D '52; Abstract. Pub Works 84:64 F '53

Relocating a mountain highway in North Carolina. O. M. Davis. il Explosives Eng 30:146-51+ S '52

Second try promises success on spectacular mountain highway. il maps Eng N 149:28-30 O 2 '52

Six-year road modernization job is over; Ridge route through the Sierra Madre. il Eng N 150:35-6 Ap 2 '53

MOUNTAINEERING

Mount Everest expedition oxygen equipment. il Engineer 195:890-1 Je 26 '53; Same. Engineering 175:779-80 Je 19 '53

MOUNTAINS

Can cross sections of mountain ranges be used as guides to discover new mineralized areas? E. V. Reinhardt. map diags Eng & Min J 153:84-6 D '52

Caribbean research project. H. H. Hess and J. C. Maxwell. bibliog maps Geol Soc Bul 64:1-6 Ja '53

Examination of the physics of theories of orogenesis. A. E. Scheidegger. diags Geol Soc Bul 64:127-50 bibliog(p149-50) F '53

See also

Volcanoes

MOUNTIN, Joseph W. 1891-1952

Career in public health. T. Parran. bibliog pors Pub Health Rep 67:930-43 O '52

MOUSE pox. See Mice—Diseases and pests

MOVIDYN. See Water purification—Silver process

MOVING

Bank moving day; not a bandit in sight; Greenville, Miss. il Bsns W p72-3+ Je 13 '53

See also

Factories—Moving

MOVING of structures

Big span; fabricated steel overpass span 136 ft long carried on trailer. il Iron Age 170:168+ D 18 '52

Bridge floated to shore for dismantling. J. M. Scott. il diag Constr Methods 34:57-9 D '52

Cat moves tower 300 yards. il Iron Age 171:119 Mr 5 '53

Four houses are moved by barge. il Eng N 149:48 D 4 '52

Lift warehouse halves across water; illustrations with text. Constr Methods 34:124 D '52

Luff fall rigging moves bulky headframe; New Jersey zinc co. il plan diags Constr Methods 34:88-90+ D '52; Eng & Min J 153:72-5 D '52

Moving a 500-ton mine ore bin over two miles of rough terrain. R. K. Young. il Eng & Min J 153:86-7 D '52

1,900-ton tower moves on steel balls. il plan Constr Methods 35:78+ F '53; Munic Util 91:23+ Mr '53

Operation headframe saves weeks at Friedensville. il Min Eng 4:1143 D '52

Second-hand concrete pit brings a tidy construction saving; Kaiser steel corp. il Constr Methods 35:59 Je '53

Sherritt Gordon moves a 2000-ton concentrator, and a town 165 miles. T. E. Burke-Gaffney. il Min Eng 5:582-3 Je '53

Tower skids, rolls 67 ft into place. il Eng N 149:45 D 11 '52

See also

Bridges—Moving

MOVING picture cameras

Application of wide-angle optics to moderately high-speed motion picture cameras. H. E. Bauer and A. W. Blake. il diags Soc Motion Picture & Tv Eng J 60:38-47; Discussion. 47-8 Ja '53

Electronic camera in film-making. N. Collins and T. C. MacNamara. bibliog diags Soc Motion Picture & Tv Eng J 59:445-57; Discussion. 458-61 D '52

Isotransport camera for 100,000 frames per second. C. D. Miller and A. Scharf. il diags Soc Motion Picture & Tv Eng J 60:130-44 F '53

New automatic film-threading motion picture camera. G. J. Badgley and W. R. Fraser. il Soc Motion Picture & Tv Eng J 60:49-57 Ja '53

Outside controls in lightweight underwater camera. il diags Product Eng 24:136-8 Mr '53

Proposed American Standard PH22.90 aperture calibration of motion picture lenses. bibliog diag Soc Motion Picture & Tv Eng J 59:338-48 O '52

Rapid-sequence camera using 70mm film. C. A. Hulcher. il Soc Motion Picture & Tv Eng J 60:247-52 Mr '53

X-ray motion picture camera and printer for 70mm film. S. A. Weinberg and others. il diag Soc Motion Picture & Tv Eng J 60:31-7 Ja '53

MOVING picture films

Commercial experiences with Magna-Stripe. E. Schmidt. Soc Motion Picture & Tv Eng J 60:463-7; Discussion. 468-9 Ap '53

Dual photomagnetic intermediate studio recording; magnetic stripe on opposite edge of film from photo track. J. G. Frayne and J. P. Livadary. il diags Soc Motion Picture & Tv Eng J 59:388-97 N '52

Film runs non-circular-gear shaper. A. Ashburn. il Am Mach 97:149-50 F 2 '53

Further experiments in high-speed processing using turbulent fluids. L. Katz and W. F. Esthimer. il diags Soc Motion Picture & Tv Eng J 60:105-29 F '53

Kinescope recording film exposure control. R. E. Lovell and R. M. Fraser. il diag Soc Motion Picture & Tv Eng J 60:226-34 Mr '53

Magnetic sound tracks for processed 16mm motion picture film. T. R. Dedell. Soc Motion Picture & Tv Eng J 60:491-9; Discussion. 499-500 Ap '53

Magnetic striping of photographic film by the laminating process. A. H. Persoon. il diag Soc Motion Picture & Tv Eng J 60:485-8; Discussion. 489-90 Ap '53

Magnetic striping techniques and characteristics. B. L. Kaspin and others. il diags Soc Motion Picture & Tv Eng J 60:470-82; Discussion. 483-4 Ap '53

Rapid drying of normally processed black-and-white motion picture film. F. D. Miller. bibliog il diags Soc Motion Picture & Tv Eng J 60:85-104 F '53

Splicing motion picture safety film without cements or adhesives. L. A. Herzig. il diags Soc Motion Picture & Tv Eng J 60:181-8 F '53

MOVING picture films—*Continued*

Study of dropouts in magnetic film. E. W. Franck. il diags Soc Motion Picture & Tv Eng J 60:507-14; Discussion. 514-15 Ap '53

Reels

American standard reel spindles for 16-millimeter motion picture projectors. Soc Motion Picture & Tv Eng J 59:526 D '52

Standards

American standards. diags Soc Motion Picture & Tv Eng J 59:427-31 N '52

Dimensions for 100-mil magnetic coating on single-perforated 16mm motion-picture film; American standard. diag Soc Motion Picture & Tv Eng J 60:635 My '53 (reprints 25c)

Dimensions for 200-mil magnetic sound tracks on 35mm and 17½mm motion-picture film; American standard. diags Soc Motion Picture & Tv Eng J 60:633-4 My '53 (reprints 25¢)

Film dimensions committee report. Soc Motion Picture & Tv Eng J 59:423-5 N '52

Proposed American standard PH22.75 A and B windings of 16mm single-perforated film. Soc Motion Picture & Tv Eng J 60:188 F '53

Report of ISO committee on cinematography. Standardization 23:286-7 S '52

Standards PH22.5, PH22.12 and PH22.93 related to 16mm and 35mm low-shrink film. diags Soc Motion Picture & Tv Eng J 59: 527-34 D '52

35mm sound motion-picture film; usage in camera and projector; proposed American standard. diags Soc Motion Picture & Tv Eng J 60:628-9 My '53

MOVING picture industry

Chemicals on location; Hollywood market. il Chem W 72:45-6+ Ap 4 '53

Limelight on Roy. Fortune 47:76+ My '53

Motion-picture industry. M. Wolfson. Soc Motion Picture & Tv Eng J 60:636-9 My '53

New dimensions perk up Hollywood. Bsns W p 122+ Mr 14 '53

Selecting motion pictures for the foreign market. R. Carroll. J Marketing 17:162-71 O '52

Television and motion picture prospects. H. L. Golden. Comm & Fin Chr 177:1953+ My 7 '53

See also
Radio-Keith-Orpheum theaters corporation

Advertising

Movie ads out in feud over caustic reviews. D. Willens. Ed & Pub 86:65 Ja 10 '53

Directories

1952-53 motion picture and television almanac. C. S. Aaronson, ed. 24th ed 1010p Quigley publications, 1270 6th av, New York '52 ($5)

Securities

Hollywood answers tv with 3-D; earnings of individual motion picture and theatre companies. E. J. Mann. Comm & Fin Chr 177: 2628+ Je 18 '53

Television competition

What future for films? Economist 167:917-19 Je 27 '53

Yearbooks

Film Daily year book of motion pictures. J. Alicoate, ed. 35th ed 1152p Film daily, 1501 Broadway, New York 36 '53

1952-3 year book of the Canadian motion picture industry. H. Bossin, ed. 222p $2.25 Film publications of Canada, ltd, 175 Bloor st, East Toronto 5, Ont, Canada '53

Argentina

Film distribution in Argentina increasing. For Comm W 49:14 Je 15 '53

Australia

Australia buys most of its films from U.S. For Comm W 49:15 Je 22 '53

Belgium

Belgium provides producer film subsidy. For Comm W 49:11 Ja 12 '53

Canada

1952-3 year book of the Canadian motion picture industry. H. Bossin, ed. 222p $2.25 Film publications of Canada, ltd, 175 Bloor st, East Toronto 5, Ont, Canada '53

Great Britain

Background for film policy. Economist 167: 325 My 2 '53

Can cinemas pay; with table and graph of financial data. Economist 165:771-2 D 13 '52

Film policy in the open. Economist 166:755 Mr 14 '53

More first-feature films registered in Britain. For Comm W 50:8 Jl 6 '53

New market for films; in Britain and elsewhere. Economist 166:103-4 Ja 10 '53

What future for films? Economist 167:917-19; 168:41-3 Je 27-Jl 4 '53

Greece

Greek picture theater admissions top record. For Comm W 49:14 Je 15 '53

Hong Kong

Hong Kong audiences favor western films. For Comm W 49:19 F 23 '53

Italy

Italy establishes 1,180 new movie theaters. For Comm W 49:20 Je 1 '53

Malaya

Malaya sees three-dimensional films. For Comm W 49:15 Je 15 '53

MOVING picture laboratories

Electric equipment

Fast-acting exposure control system for color motion picture printing. J. G. Streiffert. il diags Soc Motion Picture & Tv Eng J 59:410-16 N '52

Equipment

Bridgamatic developing machine. J. A. Tanney and E. B. Krause. il Soc Motion Picture & Tv Eng J 60:260-7 Mr '53

Further experiments in high-speed processing using turbulent fluids. L. Katz and W. F. Esthimer. il diags Soc Motion Picture & Tv Eng J 60:105-29 F '53

MOVING picture machines

Improved 16mm sound film projector. il Engineer 195:257 F 13 '53; Engineering 175:199 F 13 '53

Linking of projectors for three-dimensional films. diag Engineer 195:763 My 29 '53; Elec R (Lond) 152:1221 My 29 '53

New professional television projector. W. E. Stewart. il Soc Motion Picture & Tv Eng J 60:390-8; Discussion. 398-9 Ap '53

Precision film editor utilizing nonintermittent projection. T. Johnke. il Soc Motion Picture & Tv Eng J 60:253-9 Mr '53

Projector has optical-magnetic sound head. il diags Machine Design 25:139-40 F '53

16 mm tv projector. diags Tele-Tech 12:141 S '53

Synchro-Lite powered 16mm projector. R. E. Putman and E. H. Lederer. il diag Soc Motion Picture & Tv Eng J 60:385-9 Ap '53

3-D movies; more synch units needed. il Iron Age 171:48-9 Ap 30 '53

Why Bell & Howell uses butyrate. il Mod Plastics 30:75-7 Ja '53

Control

Improved programme controller. R. S. Bernhardt and A. J. Copson. diag J Sci Instr 29:411-12 D '52

Standards

American standard reel spindles for 16-millimeter motion picture projectors. Soc Motion Picture & Tv Eng J 59:526 D '52

Method of determining resolving power of 16mm motion-picture projector lenses; American standard. diags Soc Motion Picture & Tv Eng J 60:631-2 My '53 (reprints 25¢)

MOVING picture photography

Color and reflectance of human flesh. A. Stimson and E. Fee. Soc Motion Picture & Tv Eng J 60:553-8 My '53

MOVING picture photography—*Continued*

Practical aspects of reciprocity-law failure. J. L. Tupper. Soc Motion Picture & Tv Eng J 60:20-8; Discussion. 28-9 Ja '53

Progress committee report. il Soc Motion Picture & Tv Eng J 60:535-52 bibliog(53 titles, p550-2) My '53

Shooting live television shows on film. K. Freund. il Soc Motion Picture & Tv Eng J 60:9-19 Ja '53

Television recording. W. D. Kemp. bibliog diags Soc Motion Picture & Tv Eng J 60:367-84 Ap '53

Apparatus and supplies

U.S. exports of motion picture films, equipment show drop; data for 1952. For Comm W 49:26 Mr 16 '53

High speed

Accuracy limitations on high-speed metric photography. A. E. Griffin and E. E. Green. bibliog Soc Motion Picture & Tv Eng J 59:485-92 D '52

Applications of high-speed photography in rocket motor research. F. G. Stratton and K. R. Stehling. il diag Soc Motion Picture & Tv Eng J 60:597-602 My '53

High-speed cine-electrocardiography. J. J. Fields and others. il diags Soc Motion Picture & Tv Eng J 59:493-7 D '52

History and present position of high-speed photography in Great Britain. W. D. Chesterman. bibliog(36 titles) Soc Motion Picture & Tv Eng J 60:240-6 Mr '53

Isotransport camera for 100,000 frames per second. C. D. Miller and A. Scharf. il diags Soc Motion Picture & Tv Eng J 60:130-44 F '53

Method of lighting large fields for high-speed motion picture photography. H. R. Clason. Soc Motion Picture & Tv Eng J 60:30 Ja '53

Optical aids for high-speed photography. D. C. Gilkeson and A. E. Turula. bibliog Soc Motion Picture & Tv Eng J 59:498-502 D '52

Rapid-sequence camera using 70mm film. C. A. Hulcher. il Soc Motion Picture & Tv Eng J 60:247-52 Mr '53

Reducing aberrations in rotating-prism compensators for nonintermittent motion pictures. G. Schwesinger. bibliog diags Opt Soc Am J 42:923-30 D '52

Simple electronic devices for high-speed photography and cinematography. P. Fayolle and P. Naslin. bibliog il diags Soc Motion Picture & Tv Eng J 60:603-26 My '53

Industrial applications

Machine design via the movies. il Mill & Factory 51:99 O '52

More uses for tv and films. il Mod Ind 25:131-2 Mr '53

Newsreels aid to production; Consolidated Vultee aircraft corp. il Manuf Rec 122:36-7 F '53

See also

Moving pictures in industry

Lighting

Precision color temperature meter for tungsten illumination. G. H. Dawson and others. il diags Soc Motion Picture & Tv Eng N 59:309-12 O '52

Medical applications

High-speed cine-electrocardiography. J. J. Fields and others. il diags Soc Motion Picture & Tv Eng J 59:493-7 D '52

X-ray motion picture techniques employed in medical diagnosis and research. S. A. Weinberg and others. bibliog il diag Soc Motion Picture & Tv Eng J 59:300-8 O '52

Scientific applications

Motion photography for combustion research. F. W. Bowditch. bibliog il diags Soc Motion Picture & Tv Eng J 59:472-84 D '52

Transient pressure recording with a high-speed interferometer camera. W. E. Buck. il diags Soc Motion Picture & Tv Eng J 59:369-77; Discussion. 377-8 N '52

MOVING picture photography, Submarine

Outside controls in lightweight underwater camera. il diags Product Eng 24:136-8 Mr '53

MOVING picture projectors. See Moving picture machines

MOVING picture screens

Screen brightness for 35mm motion pictures; American standard. Soc Motion Picture & Tv Eng J 60:630 My '53 (reprints 25¢)

MOVING picture sound recording

Comparison of recording processes. J. G. Frayne. Soc Motion Picture & Tv Eng J 59:313-18 O '52

Optimum slit height in photographic soundtrack reproducers. W. K. Grimwood and J. R. Horak. bibliog Soc Motion Picture & Tv Eng J 59:379-86; Discussion. 386-7 N '52

Sound-on-film recording using electrooptic crystal techniques. R. Dressler and A. A. Chesnes. bibliog il diags Soc Motion Picture & Tv Eng J 60:205-16 Mr '53

Magnetic recording

Building-block approach to magnetic recording equipment design. K. Singer and J. L. Pettus. bibliog il diags Soc Motion Picture & Tv Eng J 59:319-34 O '52

Commercial experiences with Magna-Stripe. E. Schmidt. Soc Motion Picture & Tv Eng J 60:463-7; Discussion. 468-9 Ap '53

Dual photomagnetic intermediate studio recording; magnetic stripe on opposite edge of film from photo track. J. G. Frayne and J. P. Livadary. il diags Soc Motion Picture & Tv Eng J 59:388-97 N '52

Magnetic sound tracks for processed 16mm motion picture film. T. R. Dedell. Soc Motion Picture & Tv Eng J 60:491-9; Discussion. 499-500 Ap '53

Magnetic striping of photographic film by the laminating process. A. H. Persoon. il diag Soc Motion Picture & Tv Eng J 60:485-8; Discussion. 489-90 Ap '53

Magnetic striping techniques and characteristics. B. L. Kaspin and others. il diags Soc Motion Picture & Tv Eng J 60:470-82; Discussion. 483-4 Ap '53

Manufacture of magnetic recording materials. E. Schmidt and E. W. Franck. il Soc Motion Picture & Tv Eng J 60:453-62 Ap '53

Methods of measuring surface induction of magnetic tape. J. D. Bick. diags Soc Motion Picture & Tv Eng J 60:516-25 Ap '53

Study of dropouts in magnetic film. E. W. Franck. il diags Soc Motion Picture & Tv Eng J 60:507-14; Discussion. 514-15 Ap '53

Wear of magnetic heads. G. A. del Valle and L. W. Ferber. il diags Soc Motion Picture & Tv Eng J 60:501-4; Discussion. 505-6 Ap '53

Standards

Dimensions for 100-mil magnetic coating on single-perforated 16mm motion-picture film; American standard. diag Soc Motion Picture & Tv Eng J 60:635 My '53 (reprints 25¢)

Dimensions for 200-mil magnetic sound tracks on 35mm and 17½mm motion-picture film; American standard. diags Soc Motion Picture & Tv Eng J 60:633-4 My '53 (reprints 25¢)

Standardization needs for 16mm magnetic sound. E. W. D'Arcy. Soc Motion Picture & Tv Eng J 60:526-30; Discussion. 530-4 Ap '53

MOVING picture studios

Equipment

Animation stand of new design. E. H. Bowlds. il Soc Motion Picture & Tv Eng J 60:58-65 Ja '53

Chemicals on location; Hollywood market. il Chem W 72:45-6+ Ap 4 '53

Lighting

Motion picture studio lighting and process photography committee report. il Soc Motion Picture & Tv Eng J 59:417-22 N '52

MOVING picture theaters

London cinema's display. il Electrician 149:348 Ag 1 '52

Air conditioning

Ultra modern movie theatre has very modern air conditioning. il Refrig Eng 60:1200 N '52

MOVING picture theaters—*Continued*

Television

Bell system plans for broadband network facilities. F. Loomis. il plan diags Tele-Tech 12:78-80+ Ap '53

Color tv projection system for theaters. diags Electronics 25:178+ O '52

Eidophor system of theater television. E. I. Sponable. il plan diags Soc Motion Picture & Tv Eng J 60:337-43 Ap '53

Experimental system for slightly delayed projection of television pictures. P. Mandel. bibliog il diags Inst Radio Eng Proc 40:1177-84 O '52

Fischer large-screen projection system. E. Baumann. bibliog il diags Soc Motion Picture & Tv Eng J 60:344-56 Ap '53

Movies, tv join hands. Bsns W p34 N 22 '52

Theater television moves ahead. Electronics 26:10+ Ja '53

Theatre tv specs proposed to FCC. il map diag Tele-Tech 11:42-3+ D '52

MOVING picture theaters, Open air

Acoustic problems at the Waldbühne open-air sound theater in Berlin. H. Simon. il diags Soc Motion Picture & Tv Eng J 59:512-16 D '52

Drive-in theaters; happy but griping. Bsns W p 129+ My 9 '53

Car heating equipment

It's busy now, but what about next winter; heating outdoor theaters. il plans diags Dom Eng 182:86-9+ Ag '53

MOVING pictures

Movie is successful sales aid; American airlines. J. A. Dearborn. il Ptr Ink 242:42+ Mr 6 '53

See also

Television broadcasting—Moving pictures

Animated cartoons

Animation for individual television stations. E. F. Hiser. diags Soc Motion Picture & Tv Eng J 59:293-9 O '52

Editing

Precision film editor utilizing nonintermittent projection. T. Johnke. il Soc Motion Picture & Tv Eng J 60:253-9 Mr '53

Rating

Ratings of motion pictures. Published in monthly numbers of Consumers' research bulletin

Standards

International standardization; technical committee 36 on cinematography. F. T. Bowditch; H. Kogel. Soc Motion Picture & Tv Eng J 59:349-55 O '52

Standards PH22.1, -.84, -.85 and -.92 positive-negative raw stock dimensions; 16mm projection lamps; enlargement ratio. diags Soc Motion Picture & Tv Eng J 60:66-72 Ja '53

MOVING pictures, Colored

Colour photography. R. B. Collins and C. H. Giles. il 4pls diags Soc Dyers & Col J 68:421-57 bibliog(161 ref, p455-7) N '52

Fast-acting exposure control system for color motion picture printing. J. G. Streiffert. il diags Soc Motion Picture & Tv Eng J 59:410-16 N '52

Intermediate positive-internegative system for color motion picture photography. C. R. Anderson and others. il diags Soc Motion Picture & Tv Eng J 60:217-25 Mr '53

Use of Ansco color film in commercial production. R. H. Ray. il Soc Motion Picture & Tv Eng J 59:406-9 N '52

MOVING pictures, Industrial. See Moving picture photography—Industrial applications; Moving pictures in industry

MOVING pictures, Stereoscopic

Basic principles of the three-dimensional film. R. Spottiswoode and others. bibliog il diags Soc Motion Picture & Tv Eng J 59:249-86 O '52; Correction. 59:516 D '52; Discussion. H. Dewhurst. 60:639-40; Reply. 640-1 My '53

Cinerama; a Wall Street hit? Bsns W p 171-2 N 8 '52

Cinerama, the broad picture. il Fortune 47:92-3+ Ja '53

Drawing in three dimensions for animation and stereoscopic processes. E. F. Hiser. diags Soc Motion Picture & Tv Eng J 59:287-92 O '52

Fox's moves. Bsns W p27 F 7 '53

Hollywood answers tv with 3-D; earnings of individual motion picture and theatre companies. E. J. Mann. Comm & Fin Chr 177:2628+ Je 18 '53

How 3-D motion picture and tv systems operate. diags Tele-Tech 12:66-7+ My '53

Linking of projectors for three-dimensional films. diag Engineer 195:763 My 29 '53; Elec R (Lond) 152:1221 My 29 '53

Malaya sees three-dimensional films. For Comm W 49:15 Je 15 '53

More 3-D. Bsns W p30 Ap 4 '53

New dimensions perk up Hollywood. Bsns W p 122+ Mr 14 '53

Reels, magazines, spindles for 3-D. Soc Motion Picture & Tv Eng J 60:309-10 Mr '53

SMPTE; exhibitor conference on 3-D, Feb. 5. Soc Motion Picture & Tv Eng J 60:190-2 F '53

Some geometrical conditions for depth effect in motion pictures. E. Millet. il diags Soc Motion Picture & Tv Eng J 59:517-23 D '52

Stereoscopic art; reprinted from PSA journal, the journal of the Photographic society of America, inc., Nov. and Dec. 1951, Jan. and Feb. 1952. J. A. Norling. bibliog il diags Soc Motion Picture & Tv Eng J 60:268-308 Mr '53

Third dimension; an industry changes its product. Bsns W p60-2+ Jl 25 '53

Third dimension; new bait for movie box offices. il Bsns W p 132-4+ N 8 '52

Three-dimensional motion picture applications. R. V. Bernier. bibliog il diags Soc Motion Picture & Tv Eng J 56:599-612 Je '51; Discussion. 59:70-4 Jl '52; 60:78-80 Je '53

MOVING pictures as evidence

Admit motion picture evidence in federal case. Weekly Underw 168:468 F 14 '53

MOVING pictures in advertising

America Fore's insurance film; Peace of mind. East Underw 54:26 Mr 6 '53; il Nat Underw 57:12 Mr 5 '53

Company film depicts insurance history; America fore insurance group's color movie, Peace of mind. F. J. Malley. il Spectator 161:30-1 Ap '53

Dialogue in The Keyston idea; a newspaper documentary film. Ed & Pub 85:56 O 18 '52

Eight ways to get distribution for your industrial film. B. Aitchison. il Ind Marketing 38:16+ Ag '53

Enchanting historical documentary color film produced by America Fore group. E. M. Ackerman. il Weekly Underw 168:636+ Mr 7 '53

Films spark water heater sales. il Am Gas Assn Mo 35:19 F '53

Freedom and power; theme of sound-color motion picture. Pub Util 50:515-16 O 9 '52

Gas companies have a hit show; public relations movie shown as part of discussion program. J. H. Collins. Pub Util 51:181-2 Ja 29 '53

GE film hits traffic mess; sells greater use of busses. il Bus Transportation 31:68 D '52

How 60-second theater screen ads sell our products abroad. Sales Management 70:132+ Mr 15 '53

Increased sales, good will featured in new training film. il Ind Marketing 38:106+ Mr '53

Movies are better than ever! film based on Domestic engineering's remodeling survey in Bay City, Mich. il Dom Eng 181:82-6 My '53

Product promotion on 16-mm film. il Chem W 72:36+ Ja 3 '53

Stone Container claims first industrial 3-D movie. il Ind Marketing 38:100 Je '53

28 visual aids old and new, make promotion, selling job easier. il Ind Marketing 37:74-5+ N '52

See also

Television advertising

MOVING pictures in education
Corrosion; movie is recommended as a teaching aid. M. G. Fontana. Ind & Eng Chem 45:sup99A-100A+ Ja '53
Motion picture demonstrations in analytical chemistry. R. A. Johnson. J Chem Educ 29:522-3 O '52
Newspaper films do big teaching job for press. D. Bentel. Ed & Pub 86:54 F 7 '53
Use of films as outside assignments. H. Wilke. J Eng Educ 43:171-2 N '52

Catalogs

Educational film guide. F. A. Krahn, ed. 11th ed rev 1037p H. W. Wilson co, New York '53

MOVING pictures in employee training. See Moving pictures in industry

MOVING pictures in industry
Baseboard heating; design and installation techniques; movie. il diags Dom Eng 182: 102-3 S '53
Companies use movies to help agents. East Underw 53:8+ N 7 '52
Films for management. Published in monthly numbers of Modern industry
Filmsound equipment for annual report; Ohio Edison co. Elec World 138:93 D 1 '52
Four ways to use plant newsreels. il Factory Management 111:282 F '53
Getting a new angle on aircraft production. il Bsns W p48-50 Ap 18 '53
If press can see secrets why not employes and public? Ford opens laboratories to press. il Sales Management 70:26-7 pt 2 Ja 1 '53
Increased sales, good will featured in new training film. il Ind Marketing 38:106+ Mr '53
Industrial films. Published in monthly numbers of Factory management and maintenance
It's movietime for plumbing contractors. il Dom Eng 181:104-5 Mr '53
New films. Iron Age 171:125 My 28 '53
New films; reviews of films pertinent to the metalworking operations. Iron Age 171:107 Ja 15 '53
Place of the tool and die shop in industry told on film. il Mach 60:201 S '53
Taking a candid look at your customer. il Mod Ind 25:50-2 My '53
Topnotch pump film covering all angles; from Allis-Chalmers moving picture. J. Gammell. il Power 97:114-17 Ap '53
Use of Ansco color film in commercial production. R. H. Ray. il Soc Motion Picture & Tv Eng J 59:406-9 N '52
What made Schenley use a film instead of its elaborate meeting? H. L. Laupheimer. il Sales Management 70:55-7 pt 2 Ja 1 '53
Wood, the machines, the people; Champion dramatizes the industry; three color movies. il Paper Tr J 137:24-5 O 9 '53

See also
Moving picture photography—Industrial applications

MOVING pictures in safety education
Aetna C. & S. Drivotrainer. il East Underw 54:21 F 27 '53; Same abr. Weekly Underw 168:586+ F 28 '53
Film festival awards Oscar to Institute motion picture, Poletop rescue. il Edison Elec Inst Bul 21:304-5 Ag '53
Hospital fire film. Safety Maint & Prod 105: 70 F '53
Railroad produces cartoon movie; Close call for Jimmy. il Nat Safety N 67:96+ My '53
Safety saves; new safety film for truck operators. il Mill & Factory 52:107 Ap '53
Traffic safety is theme of Disney film. Nat Safety N 68:180 O '53
Visual aids in safety training. il Nat Safety N 67:65-8+ Je '53

Catalogs

Current list of safety films. Nat Safety N 67:sup N 1-48 Je '53

MOVING stairways. See Escalators

MOWAT, Magnus, 1875-1953
Sketch. por Engineer 195:175-6 Ja 30 '53; Engineering 175:148 Ja 30 '53

MOZAMBIQUE
See also
Automobile industry and trade—Mozambique

MUCOCHLORIC acid
Mucochloric acid; reactions of the aldehyde group. D. T. Mowry. bibliog Am Chem Soc J 75:1909-10 Ap 20 '53

MUCOHALIC acids
Studies on the mucohalic acids; the chlorobromo acids; mechanism of formation of the mucohalic acids. H. H. Wasserman, F. M. Precopio and T. Liu. Am Chem Soc J 75:2527-8 My 20 '53

MUCONIC acid
Polyene acids; catalytic semi-hydrogenation of the three isomeric muconic acids and confirmation of their configurations. J. A. Elvidge, R. P. Linstead and J. F. Smith. Chem Soc J p708-11 F '53
Polyene acids; half methyl esters and amides of the muconic acids. J. A. Elvidge, R. P. Linstead and P. Sims. Chem Soc J p 1793-9 Je '53

MUCOPROTEINS
Separation and properties of a mucoprotein from a lymphatic organ. E. L. Hess, W. Ayala and A. Herranen. bibliog Am Chem Soc J 74:5410-14 N 5 '52

MUD
Filling on soft mud without dredging. Pub Works 83:84-5 N '52
See also
Petroleum—Mud fluids

MUFULIRA copper mines, limited
Statement by the chairman. R. L. Prain. Economist 165:485 N 15 '52

MULCHING
Mulching for roadside protection and improvement. il Roads & Eng Constr 91:128+ Ap '53; Same cond. Pub Works 84:99 Jl '53

MULLEN, James Whedbee, 1917-
In business for research. il Bsns W p 107-8 My 23 '53

MULLENDORE, William Clinton, 1892-
Portrait. Fortune 46:116 D '52

MULLIN, Sam S.
Businessmen in the news. por Fortune 47:56 Mr '53

MULLINS manufacturing company
Koldflo process will contribute to earnings this year. Barron's 33:27+ Mr 16 '53

MULLITE
Standard refractory tubes in recrystallised alumina, mullite and aluminous porcelain. Metallurgia 47:321-2 Je '53

MULTICON. See Television cameras

MULTIMETERS. See Electric meters

MULTIPLEX system. See Radio telephone—Multiplex system

MULTIPLIER tubes. See Photoelectric cells—Multiplier tubes

MULTIVIBRATORS
Continuous recorder keep-alive circuit uses multivibrators. R. L. Ives. il diags Electronics 25:161-3 N '52
How to design bistable multivibrators. R. Pressman. diags Electronics 26:164-8 Ap '53
Pulse duration and repetition rate of a transistor multivibrator. G. E. McDuffie, jr. diags Inst Radio Eng Proc 40:1487-9 N '52
Slow multivibrator using gas tubes. H. L. Armstrong. diags Electronics 26:202 S '53
Vacuum-tube circuits without plate supplies. P. R. Clark. diags Electronics 25:192+ D '52

MUNICIPAL accounting
New guide for municipal accounting issued by national committee. L. Morey. J Account 94:594-601 N '52
Standard classification of municipal accounts. 129p National committee on governmental accounting, 1313 E. 60th st, Chicago 37 '53 ($3)
What the state of Texas is doing to improve municipal auditing and financial reporting; abstract. O. F. Alexander. J Account 94: 487-8 O '52

MUNICIPAL advertising
Towns; how to get new industry. E. C. Kellogg. Iron Age 171:39 Ja 15 '53

MUNICIPAL bonds

California municipal financing. J. L. Beebe. Comm & Fin Chr 177:1230 Mr 19 '53

Firm municipal bond market ahead! A. K. Browne. Comm & Fin Chr 176:2136 D 4 '52

Housing bonds face new market troubles. Eng N 149:101 O 23 '52

It can't drop much. Bsns W p 132-3 Jl 11 '53

More tax-exempt plants; industrial-plant bonds. Bsns W p 148+ N 22 '52

Municipal bonds for bank investment. A. Jenner. Comm & Fin Chr 176:2222+ D 11 '52

Municipals; what can the market take? Bsns W p54+ Ja 24 '53

Outlook for tax-exempt bonds. H. C. Taylor. Comm & Fin Chr 176:1919+ N 20 '52

Public credit for private industry. S. Hazeltine. Banking 46:58 Jl '53

Reports 1952 municipal issues at record high; report of IBA municipal securities committee. Comm & Fin Chr 176:2353+ D 18 '52

State and city department bond proposals and negotiations. Published in weekly Monday numbers of Commercial and financial chronicle

Tax exempts; rising yields make them more attractive to more investors. C. ter Kuile. Barron's 33:11 Je 15 '53

Urban mortgage lending and municipal bonds. M. Bodfish. Comm & Fin Chr 177:2526-7 Je 11 '53

Voters like bond issues, too. Bsns W p 134+ N 15 '52

See also

Municipal finance

MUNICIPAL buildings

Houston's law enforcement center; police administration, corporation courts and jail building. il plans diag Arch Rec 112:124-9 S '52

See also

Municipal centers

MUNICIPAL centers

Plan $6 million civic center; Norfolk, Va. plan Eng N 150:50 F 5 '53

Structural forms keynote civic center; Charlotte, N.C. il plans diags Arch Rec 112: 121-5 D '52

MUNICIPAL contracts. See Contracts, Municipal

MUNICIPAL corporations

Water authorities in Pennsylvania; panel discussion. S. C. Braucher and others. Am Water Works Assn J 45:153-69 F '53

See also

Chicago transit authority

MUNICIPAL employees

See also

Police

MUNICIPAL engineering

Conservation and the public works engineer. E. A. Pratt. il Pub Works 83:57-8+ N '52

Dallas' industrial district grows on former flood lands. il Eng N 149:47-8+ O 23 '52

Priorities and allocations; effect on municipal engineering. G. Guetzkow. Pub Works 84: 76-8 Ja '53

Streamlined public works organization gets results; Phoenix, Ariz. A. R. Pierce. il Pub Works 83:47-9+ N '52

See also

City planning
Municipal improvement
Pavements
Public works
Refuse collection
Refuse disposal
Sewage disposal
Sewerage
Snow removal
Streets
Water purification
Water supply engineering

MUNICIPAL finance

Central planning; place and purpose; lessons in management survey of New York city. C. Heyel. il Dun's R 61:33-5+ My '53

City Hall can't make ends meet, either. Bsns W p61-2+ D 6 '52

Municipal statistics. J. B. Whitbeck. Special Lib 43:396-400 D '52

State and local government; receipt and expenditure programs. K. O. Nygaard. Survey of Cur Bsns 33:11-16 Ja '53

Urban growth and municipal finance; abstract. D. C. Corbett. Munic Util 91:44+ Mr '53

Value of municipal financing in preserving local autonomy. D. M. Wood. Comm & Fin Chr 176:2336+ D 18 '52

Where will the states get the money? boom coming in expenditures of state and local governments. Bsns W p 130+ O 25 '52

See also

Budget, Municipal
Municipal bonds
Municipal taxation
Public works—Finance
Waterworks—Finance

MUNICIPAL government

Central planning; place and purpose; lessons in management survey of New York city. C. Heyel. il Dun's R 61:33-5+ My '53

Phoenix meets the people, Know your city forums. D. Smith. il Pub Works 84:75+ O '53

See also

Municipal finance

City manager plan

Recent council-manager developments and directory of council-manager cities. 28p pa $1 International city managers' assn, 1313 E. 60th st, Chicago '53

MUNICIPAL improvement

Baltimore plan; is this the way to beat slums? il Eng N 150:49-50+ My 28 '53

Cave City; Arkansas makes its own revolution. il Bsns W p76-8+ My 30 '53

Cities plan $10 billion to rebuild blighted areas. il Eng N 149:22-4 D 25 '52

Philadelphia improvements planned to fit city purse. Eng N 149:53-4 N 20 '52

Road construction accompanies building boom in St Foy, Que. E. T. Nesbitt. il Roads & Eng Constr 90:111+ O '52

See also

City planning

MUNICIPAL liability

See also

Insurance, Liability—Municipal policies

MUNICIPAL officials

Directories

Municipal road officials; incorporated cities, towns and villages of Canada. Roads & Eng Constr 91:98+ Je '53

Recent council-manager developments and directory of council-manager cities. 28p pa $1 International city managers' assn, 1313 E. 60th st, Chicago '53

MUNICIPAL ownership

See also

Electric plants, Municipal
Electric utilities—Municipal ownership
Motor bus lines, Municipal
Rapid transit—Municipal ownership

MUNICIPAL statistics

See also

Cities and towns—Statistics

MUNICIPAL taxation

Fringe areas in California. Bsns W p 148+ Jl 18 '53

Suburbia; its taxes ache. Bsns W p 146 Jl 18 '53

Tax limitation in Ohio. G. W. Thatcher. Land Econ 28:373-9 N '52

MUNITION factories

Best shells; or the most? Economist 167:931 Je 27 '53

How thrive the armourers; Woolwich arsenal; with table of Royal ordnance factories; estimates of expenditure, 1952-53. Economist 165:706-8 D 6 '52

See also

Shells (projectiles)—Loading plants

MUNITIONS

Why not use the European arsenal? il Fortune 46:112 O '52

See also

Armaments
Automobile industry and trade—Munitions manufacture

MUNITIONS industry

Companies that make most arms; Korea and World war II; tabulation. Bsns W p30 Ja 24 '53

MUNITIONS industry—*Continued*

Czechoslovakia

Ordnance; reds have key arsenal; Czechoslovakia gives Russia one of Europe's most formidable war machines. map Iron Age 171:83 Ap 23 '53

Russia

How red arms stack up. il Bsns W p40-2+ F 7 '53

MUNTZ, Earl William, 1914-
Muntz keeps branching out. por Bsns W p99-100+ Jl 25 '53

MURAL painting and decoration
Biggest outdoor mural on Mexico university's library building. il Arch Forum 97:116-17 S '52

MURCHISON, Clinton Williams
Big wheeler-dealer from Dallas. F. Lincoln. pors Fortune 47:116-20+ Ja; 152-4+ F '53

MURDER
Murder and the penalty of death. T. Sellin, ed. bibliog Ann Am Acad 284:1-166 N '52

MURDOCK, Mac
They're in the news. H. Woodward. por Sales Management 70:26 Ja 1 '53

MUREXINE
Identification of murexine as β-[imidazolyl-(4)]-acryl-choline. V. Erspamer and O Benati. bibliog Science 117:161-2 F 13 '53

MURGATROYD, Mary Islay
Businessmen in the news. por Fortune 47:53 F '53

MURPHREE, Eger Vaughan, 1898-
Presentation of industrial research institute's 1953 medal. por Chem & Eng N 31:1864 My 4 '53
Recipient of the Industrial research institute medal. por Chem Eng 60:308 Ap '53

MURPHY, Ray Dickinson, 1887-
Businessmen in the news. por Fortune 47:63 Ap '53
New president of Equitable society. C. Axman. por East Underw 54:3-4+ My 22 '53

MURPHY, William Beverly, 1907-
Businessmen in the news. por Fortune 47:63 Ap '53

MURRAY, Philip, 1886-1952
Labor's problems; law, leaders; Murray's death a blow to CIO. Bsns W p 154-7+ N 15 '52
Murray; the union, his monument. por Iron Age 170:92 N 13 '52

MUSCLE
Artificial muscle. T. Hayashi and G. A. W. Boehm. il Sci Am 187:18-21 D '52
Dynamometer for the human calf muscles. O. C. J. Lippold and others. diags J Sci Instr 29:365-6 N '52
Electromyography and kinetics of stimuli in neuromuscular disorders. N. B. Dobin. bibliog il Ind Med 21:529-34 N '52
Mixed skeletal muscle fibers. R. Altschul. bibliog il Science 116:568-70 N 21 '52

MUSCLES
Effect of estrogen on the isometric tension of rabbit uterine strips. A. I. Csapo and G. W. Corner. bibliog Science 117:162-4 F 13 '53
Skeletal muscle spasm empirically treated with mephenesin (Tolserol) and diathermy; analysis of one hundred and six cases as compared with fifty-nine control cases. W. R. Nesbitt. bibliog Ind Med 21:599-601 D '52

MUSEUM exhibits
Chicago's electric theater; Museum of science and industry's electric industry exhibit, Chicago. W. H. Bromage. Pub Util 50:495-9 O 9 '52

MUSEUM of science and industry, Birmingham, England
Engineering Hall. il Engineering 176:214-16, pl 12 Ag 14 '53

MUSEUM of science and industry, Chicago
Chicago's electric theater; electric industry exhibit. W. H. Bromage. Pub Util 50:495-9 O 9 '52

MUSEUMS
Museum and planetarium built on old dam; Science park, Boston. il Eng N 150:31, cover Mr 12 '53

Directories

American association of museums, directory of professional and lay members. American assn. of museums, Smithsonian inst., Washington 25 '53

Electric equipment

Number one, London; Wellington museum. il Electrician 149:328 Ag 1 '52

Lighting

Lighting for Lords cricket gallery. il Elec J 151:503 Ag 14 '53
See also
Art galleries and museums—Lighting

MUSEUMS, Industrial. See Industrial museums

MUSHROOMS
Better color, better flavor in processed mushrooms by adding ascorbic acid. J. C. Bauernfeind and others. bibliog il Food Eng 24:89-92 D '52
Quality at a fast pace; Brandywine mushroom corp. J. V. Ziemba. flow sheet(p 120-3) il Food Eng 25:64-6+ Jl '53

MUSIC
Music subject headings, used on printed catalog cards of the Library of Congress. 133p $1.50 Library of Congress, Washington, D.C.; for sale by the Supt. of doc. '52

Bibliography

Census of autograph music manuscripts of European composers in American libraries. O. E. Albrecht. 331p bibliog(p329-31) $8.50 Univ. of Pennsylvania press, 3436 Walnut st, Philadelphia 4 '53

Instruction and study

Bio-mechanics, a new approach to music education. F. F. Polnauer. bibliog il diags Franklin Inst J 254:297-316 O '52

MUSIC in industry
Case for background music. D. McGrew. il Bankers Mo 70:14-16+ Jl '53
Music; how it builds morale in industry. P. Eastman. il Am Bsns 22:12-13+ N '52

MUSICAL education
See also
Music—Instruction and study

MUSICAL instruments
Tunes from grinding wheels; musical instruments, a novelty developed by Norton co. il Comp Air Mag 57:316 N '52
See also
Piano
Trumpet
Wind instruments

MUSICAL instruments, Electric
See also
Organ, Electric

MUSICAL pitch
Pitch discrimination. J. D. Harris. bibliog Acoustical Soc Am J 24:750-5 N '52

MUSICK memorial trophy
American engineers win trophy; Musick memorial trophy awarded to Lindberg and Wheeler for developing Sperry engine analyzer. Aeronautical Eng R 11:17-18 D '52

MUSSER, Fred
Biggest Christmas tree grower. por Fortune 46:140-1+ D '52

MUSTARD

Manufacture

Fine milling, fine mustard; Morton foods, inc. J. A. Morris. il diag Food Eng 25:125 Mr '53

MUTATION (biology)
Induced and other variations in bacterial cultures; the effect of ultra-violet irradiation on bact. coli with special reference to nutritional mutants. A. C. R. Dean and C. Hinshelwood. Chem Soc J p2817-31 Jl '52
Mutation of mating type in saccharomyces cerevisiae. S. Pomper and D. W. McKee. bibliog Science 117:455-6 Ap 24 '53
Reconsideration of the somatic mutation theory of cancer in the light of some recent developments. J. C. Fardon. bibliog Science 117:441-5 Ap 24 '53
See also
Genetics

MUTUAL funds. See Investment trusts

MUTUAL insurance. See Insurance, Mutual

MUTUAL insurance rating bureau

Mutual rate revision; changes now effective in 43 states and District of Columbia. Weekly Underw 167:1649 D 20 '52

MUTUAL life insurance company of New York

Mutual Life in force goes to $4,649,000,000. Weekly Underw 168:354 Ja 31 '53

Mutual of New York appoints four regional vice presidents for sales. East Underw 53:4 D 5 '52; Nat Underw (Life ed) 56:2 D 5 '52

MUTUAL security agency

Businessmen assess the MSA. Steel 132:75 My 25 '53

MSA guarantees conversion of German royalty payments to American firm. For Comm W 48:9 D 1 '52

New allotments made to Greece and U.K. For Comm W 49:4 Je 15 '53

Nod to Hunter; Hawker entry beats out Swift for MSA funds. N. McKitterick. il Aviation W 58:15 Ja 19 '53

Norway receives MSA credit of $4 million. For Comm W 49:8 Je 22 '53

Rand chosen Deputy administrator. Chem & Eng N 31:1540 Ap 13 '53

What is oil's role in the MSA program? interview with Cornelius J. Dwyer. World Oil 135:75-6+ D '52

MUTUAL security program

Congress weighs military assistance. Steel 132:53 F 16 '53

Foreign aid; Mr Stassen's hard money hunch is the one to play. J. C. Perham. Barron's 32:5 D 1 '52

Implementing the Mutual security program. H. E. Stassen. Comm & Fin Chr 178:10 Jl 2 '53

Military expenditures dominate foreign aid in first quarter. For Comm W 49:23 Je 29 '53

Science versus administration in certain U.S. foreign aid efforts. J. R. King. Science 117:568-9 My 22 '53

United States foreign aid in 1952; with tables. E. S. Kerber. Survey of Cur Bsns 33:13-19 Mr '53

Yugoslavia presents MSA purchase list. For Comm W 48:7 N 24 '52

MUTUAL telephone company (Hawaii)

Preferred stock offered. Comm & Fin Chr 178:53 Jl 6 '53

MYANESIN. See Toloxypropanediol

MYATT, DeWitt O.

Shearon to succeed Myatt as managing editor of Industrial and engineering chemistry. por Chem & Eng N 31:1557 Ap 13 '53

MYCOCERANIC acid

Constitution of mycoceranic acid. N. Polgar. Chem & Ind p353 Ap 11 '53

MYCOMYCIN

Chemistry of the antibiotic mycomycin, (−)-*n*-trideca-*trans*-3 : *cis*-5 : 7 : 8-tetraene-10 : 12-diynoic acid; abstract. W. D. Celmer and I. A. Solomons. Chem & Ind p241-2 Mr 14 '53

Mycomycin; stereoisomeric 3,5-diene fatty acid esters. W. D. Celmer and I. A. Solomons. bibliog Am Chem Soc J 75:3430-5 Jl 20 '53

Mycomycin; the structure of mycomycin, an antibiotic containing allene, diacetylene and *cis, trans*-diene groupings. W. D. Celmer and I. A. Solomons. bibliog Am Chem Soc J 75:1372-6 Mr 20 '53

MYERS, James Lawrence, 1890-

Old company tries new fields; Cleveland Graphite. por Bsns W p86+ D 20 '52

MYOGRAPHY

Electromyography and kinetics of stimuli in neuromuscular disorders. N. B. Dobin. bibliog il Ind Med 21:529-34 N '52

MYRRHIS odorata

Seed fat of myrrhis odorata; contributions to the chemistry of petroselinic acid. G. R. Clemo and R. Stevens. Chem Soc J p4684-5 D '52

MYTHOLOGY

Dictionaries

Everyman's dictionary of non-classical mythology. E. Sykes, comp. 262p $3.75 E. P. Dutton & co, 300 Fourth av, New York 10 '52

MYXOMA

Infect Australian rabbits with myxoma virus. F. M. Burnet. Pub Health Rep 68:100-1 Ja '53

N

NATO. See North Atlantic treaty organization

NAILING machines

Drives twenty nails a minute; Fox Nailer. il Comp Air Mag 58:25 Ja '53

Man against machine; output climbs 300 per cent in assembly test on wood shipping containers. il Steel 131:280+ O 13 '52; Mill & Factory 52:157-8 Ap '53

NAILS

Nails aplenty, but current demand trails production. il Steel 132:40 Ja 26 '53

NAILS, Aluminum

Nailing down their market; aluminum nails. il Bsns W p44+ F 21 '53

NAILS, Finger

Occupational nail marks, true and false. F. Ronchese. bibliog il Ind Med 22:45-8 F '53

NAISH, John V.

Businessmen in the news. por Fortune 47:58 F '53

NALDER, William H.

Bureau design engineer ends 43 years service. por Eng N 149:52 O 30 '52

NAME plates

Magnetic nameplate makes it easier to photograph machines. J. T. Harrington. il Ind Marketing 38:88 S '53

Manufacture

Manufacturing name plates; etching, anodizing and plating operations; Chicago thrift-etching corp. R. E. Pettit. il Metal Finishing 51:60-4+ Mr '53

NAME plates, Plastic

Automatic alarms use plastic name plates and lenses. il Mod Plastics 30:167 D '52

NAMES

See also

Trade names

NAMES, Personal

Naming of names; confusion of names in early history of chemistry. F. E. Wall. bibliog J Chem Educ 30:88-9 F '53

NAMES, Trade. See Trade names

NAMES of products. See Trade names

NANCE, James J. 1901-

Packard's road back. pors Fortune 46:116-19+ N '52

NAPHTHA

Cresylic acids in petroleum naphthas; assay recovery and characterization. S. G. Gallo, C. S. Carlson and F. A. Biribauer. bibliog Ind & Eng Chem 44:2610-15 N '52

Ethylene production and recovery. C. C. King and J. Warburton. diags Pet Processing 7:1644-7 N '52; Same. Oil & Gas J 51:92-4+ D 8 '52

Houdriforming at low pressure. J. C. Dart and others. Pet Eng (Ref annual) 24:C32-4 Jl 15 '52; Same. Am Pet Inst Proc 32 M(3):208-11 '52; Same. Oil & Gas J 51:386+ N 17 '52; Discussion. Am Pet Inst Proc 32 M(3):235-7 '52

Identification of cyclohexanethiol in virgin naphtha. R. C. Arnold, P. J. Launer and A. P. Lien. bibliog Anal Chem 24:1741-4 N '52

New reforming catalyst; abstract. R. A. Sanford and B. S. Friedman. Oil & Gas J 51:168-9 Mr 23 '53

Analysis

Oxygen and nitrogen compounds in shale-oil naphtha. R. A. Van Meter and others. bibliog Anal Chem 24:1758-63 N '52

Thiophenes in shale-oil naphtha. I. W. Kinney, jr., J. R. Smith and J. S. Ball. bibliog Anal Chem 24:1749-54 N '52

NAPHTHALENE

Aromatic azo-compounds; oxidation of azonaphthalenes and phenylazonaphthalenes. G. M. Badger and G. E. Lewis. Chem Soc J p2151-5 Jl '53

NAPHTHALENE—*Continued*

Assignment of the naphthalene bands at 3200-2900A. D. P. Craig and L. E. Lyons. bibliog J Chem Phys 20:1499-500 S '52

Benzotriazole analogs of certain naphthalene dye intermediates. M. Scalera and F. H. Adams. bibliog Am Chem Soc J 75:715-18 F 5 '53

Even-odd character of the 2900-3200A absorption transition in naphthalene. H. McConnell and D. S. McClure. J Chem Phys 21:1296-7 Jl '53

Infrared studies of mixed crystals; naphthalene-d_8 in naphthalene. W. B. Person and G. C. Pimentel. bibliog J Chem Phys 20:1913-15 D '52

Interaction of naphthalene and maleic anhydride through the agency of aluminium chloride. G. Baddeley and others. Chem Soc J p3605-7 S '52

Naphthalene and nitrogen; new volume source for petrochemicals? O. V. Tracy. Pet Processing 8:250-2 F '53

Phthalic anhydride. J. E. Sayre. Chem & Eng N 30:5138-42 D 8 '52

Solubilities of naphthalene and biphenyl in aqueous solutions of electrolytes. M. A. Paul. bibliog Am Chem Soc J 74:5274-7 N 5 '52

Solubility of naphthalene in supercritical ethylene. G. A. M. Diepen and F. E. C. Scheffer. J Phys Chem 57:575-7 Je '53

Symmetry assignments for the first two excited singlet electronic states of the naphthalene molecule. O. Schnepp and D. S. McClure. bibliog J Chem Phys 21:959 My '53

Synthesis and the physical properties of alkylnaphthalenes. D. G. Anderson, J. C. Smith and R. J. Rallings. Chem Soc J p443-50 F '53

Temperature dependence of the naphthalene bands at 3200-2900A. R. H. Knipe and others. bibliog il J Chem Phys 21:376-7 F '53

Vapour pressure and lattice energy of some aromatic ring compounds. R. S. Bradley and T. G. Cleasby. Chem Soc J p 1690-2 Je '53

Vibrational analysis of the fluorescence of naphthalene vapor. O. Schnepp and D. S. McClure. bibliog il J Chem Phys 20:1375-83 S '52

Analysis

Estimation of naphthalene in coal tar products by isotopic dilution analysis. W. S. McDonald and H. S. Turner. Chem & Ind p 1001-2 O 11 '52

NAPHTHALENE propionic acid

Preparation of 7,8-benzocoumarin and 1-methoxynaphthalene-2-propionic acid. C. F. Koelsch and P. T. Masley. Am Chem Soc J 75:3596 Jl 20 '53

NAPHTHALENE sulfonic acid

Hydrates of naphthalene-β-sulphonic acid. J. S. F. Gill and M. J. Thornton. diags Chem Soc J p914-21 Mr '53

NAPHTHENIC acid

Some recent advances in naphthenic acid technology. J. L. Jezl. Pet Processing 8:89-90 Ja '53

NAPHTHIDINE

Substituted benzidines and related compounds as reagents in analytical chemistry; the oxidation potentials of naphthidine, 3 : 3′-dimethylnaphthidine, and their sulphonic acids. R. Belcher, A. J. Nutten and W. I. Stephen. Chem Soc J p3857-61 O '52

NAPHTHOL

Alkylation of 2-naphthol by esters of aliphatic acids. S. Patai and M. Bentov. Am Chem Soc J 74:6118 D 5 '52

Improved method of preparing sulfonated 1-naphthol for carbohydrate tests. A. W. Devor. Anal Chem 24:1626 O '52

Reaction of *trans*-stilbene oxide and 1,1-diphenylethylene oxide with 2-naphthol. C. O. Guss, R. Rosenthal and R. F. Brown. bibliog Am Chem Soc J 75:2393-5 My 20 '53

NAPHTHOLS

Chloramines as a source of iodine chloride; the preparation of iodo-phenols, -naphthols, and -aromatic ethers by means of a chloramine and an iodide. B. Jones and E. N. Richardson. Chem Soc J p713-15 F '53

Condensation of 2 : 3-dichloro-1 : 4-naphthaquinone with α-naphthols. N. P. Buu-Hoï and P. Demerseman. Chem Soc J p4699-700 D '52

Dyeing with insoluble azodyes; stabilizing naphthol solution with polyamine condensates; patent. Am Dyestuff Rep 41:747 N 10 '52

Effect of solvents on the tautomeric equilibria of 4-arylazo-1-naphthols and the *ortho*-effect. A. Burawoy and A. R. Thompson. Chem Soc J p 1443-7 My '53

Nature of the internal hydrogen bond; tautomerism of 1-arylazo-2-naphthols. A. Burawoy, A. G. Salem and A. R. Thompson. Chem Soc J p4793-8 D '52

NAPHTHOQUINONE

Aromatic keto-enols; some new 2 : 3-dihydro-1 : 4-naphthaquinones and -anthraquinones. D. B. Bruce and R. H. Thomson. Chem Soc J p2759-66 Jl '52

Pyrolysis of the addition product of diphenyldiazomethane and 1,4-naphthoquinone. A. R. Bader and M. G. Ettlinger. bibliog Am Chem Soc J 75:730-4 F 5 '53

Quinones; the addition of mercapto-acids to benzoquinones and 1 : 4-naphthaquinone. A. Blackhall and R. H. Thomson. Chem Soc J p 1138-43 Ap '53

NAPHTHOXYACETIC acids

Synthesis of plant-growth regulators; dichloro-β-naphthyloxyacetic acids. P. M. James and D. Woodcock. Chem Soc J p2089-93 Jl '53

NAPHTHYLACETAMIDE

Bromination of aceto-β-naphthalide. F. Bell. Chem Soc J p5046-7 D '52

NAPHTHYLENE

See also

Acenaphthylene

NAPHTHYLMALONIC acid

C^{14} isotope effect in the decarboxylation of α-naphthyl- and phenylmalonic acids. A. Fry and M. Calvin. bibliog J Phys Chem 56:901-5 O '52

NARCOTICS

New successful narcotic antagonist; Nalline. Can Chem Process 36:88 S '52

See also

Barbiturates
Morphine
Opium
United nations—Commission on narcotic drugs

Law

Narcotic drugs classification measure approved by House. Oil Paint & Drug Rep 164:65 Jl 27 '53

Opium control accord signed by 17 countries. Oil Paint & Drug Rep 163:7 Je 29 '53

NARROW gage railroads. See Railroads, Narrow gage

NASHVILLE, Tennessee public library

Supermarkets get into book-lending. il Bsns W p46+ Mr 21 '53

NATION (periodical)

Nation index, 1865-1917. D. C. Haskell, comp. 2v 577p, 539p $25 New York public library, 5th av. & 42d st, New York 18 '53

NATIONAL academy of sciences

Annual meeting, Washington, April 27-29; abstracts of papers. Science 117:465-73 My 1 '53

Autumn meeting, St Louis, Nov. 10-12; abstracts of papers. Science 116:515-31 N 14 '52

NATIONAL advertisers, Association of. See Association of national advertisers

NATIONAL advertising. See Advertising, National

NATIONAL advisory committee for aeronautics. See United States—National advisory committee for aeronautics

NATIONAL agricultural advisory commission

Agricultural advisory unit established by Eisenhower. Oil Paint & Drug Rep 164:3+ Jl 27 '53

NATIONAL agricultural chemicals association

Annual meeting, 20th, Spring Lake, N.J. Sept. 9-11. Oil Paint & Drug Rep 164:5+ S 14 '53

Annual spring meeting, New Orleans. Chem & Eng N 31:1188 Mr 23 '53

NACA ready to press for passage of Miller measure at next session. Oil Paint & Drug Rep 164:3+ Ag 24 '53

NATIONAL agricultural limestone institute

Annual meeting, Washington, Jan. 19-21. Rock Prod 56:94-7+ F '53

NATIONAL association of bank auditors and comptrollers

Annual convention, 28th, Milwaukee. Burroughs Clearing House 37:36-7 D '52

Annual meeting, 28th, Milwaukee, Oct. 27-30; preliminary report. Burroughs Clearing House 37:13 O '52

NATIONAL association of claimants compensation attorneys

Claimants' association called insurance threat. V. Lemmon. Weekly Underw 167: 1511+ D 6 '52

NACCA, other loss problems studied by auto claim committee of Conference of mutual casualty companies at Chicago. Nat Underw 56:15-16 N 27 '52

NATIONAL association of corrosion engineers

Annual conference, 9th, Chicago, March 16-20. Chem & Eng N 31:1307-8 Mr 30 '53

Annual meeting, 9th, Chicago. Metal Prog 63: 112-14 My '53

NATIONAL association of cost accountants

Annual report, 33d. N A C A Bul 34:439-74 sec 3 N '52

NATIONAL association of credit men

Annual credit congress, 57th, Montreal, May 17-21. Credit & Fin Management 55:29-39 Jl '53

Annual meeting, 57th, Montreal, May 17-21; personnel of committees of various industry groups. G. J. Leclerc. Credit & Fin Management 55:35-8 F '53

Messer credo; serve one another; president. Credit & Fin Management 55:12-13+ Jl '53

NATIONAL association of electric companies

New horizons for the electric industry. R. A. Zachary. Pub Util 51:754-60 Je 4 '53

NATIONAL association of foremen

NAF; training ground for 50,000 foremen. Factory Management 111:290+ Ja '53

NATIONAL association of home builders

Annual convention, Chicago, Jan. 18-22; program and list of exhibitors. Am Bld 75: 106+ Ja '53

Annual meeting, Chicago. Eng N 150:50-2 F 26 '53

Maps a revised home loan policy. L. L. Frank. Comm & Fin Chr 177:1452 Ap 2 '53

Old houses for new? NAHB offers a trade-in plan to ease the buyer's down payment. Eng N 150:151-2 My 14 '53

Urban rebuilder; Cook heads NAHB's redevelopment drive. Eng N 150:59 Ap 2 '53

NATIONAL association of housing officials

Annual meeting, 19th, Buffalo. Eng N 149: 25-6 O 23 '52

NATIONAL association of independent insurers

Annual convention, 8th, Chicago. Nat Underw 56:23+ N 27 '52; Weekly Underw 167:1437+ N 29 '52

NATIONAL association of insurance agents

Annual convention, 56th, Cleveland, Sept. 21-25. East Underw 53:21-3+ S 26; 19+ O 3 '52; Nat Underw 56:29+ S 25; 2+ O 2 '52; Weekly Underw 167:765, 772-82, 1239-40 S 27, N 8 '52; Spectator 160:32-3 O '52

Eastern agents conference, Philadelphia. East Underw 54:1+ Ap 24 '53; Nat Underw 57: 9+ Ap 30 '53; Weekly Underw 168:1133+ Ap 25 '53

Executive committee discusses various matters of interest to producers. Weekly Underw 168:1336-7+ My 16 '53

Executive committee meeting, New York. East Underw 53:24+ D 19 '52; Nat Underw 56:1 D 11; 5-6 D 18 '52; Weekly Underw 167:1558+ D 13 '52

Executive committee meeting, White Sulfur Springs. East Underw 54:27+ Mr 20 '53; Weekly Underw 168:712+ Mr 14 '53

Midwest territorial conference, Detroit. Nat Underw 57:1+ F 26 '53

Midyear meeting, Hollywood, Fla. agents continue to meet competition in auto insurance with words. Nat Underw 57:1+ My 7 '53

NATIONAL association of insurance brokers

Annual meeting, Los Angeles, May 18-20. East Underw 54:24 My 29 '53; Nat Underw 57:8 My 28 '53; Weekly Underw 168:1482 My 30 '53

NATIONAL association of insurance commissioners

Annual meeting, 84th, San Francisco. East Underw 54:24+, 34-5, 38-9 Je 19 '53; Nat Underw 57:1+ Je 11; 1+, 5 Je 18 '53; Nat Underw (Life ed) 57:1+ Je 12; 1+ Je 19 '53; Weekly Underw 168:1612-17 Je 13 '53

Convention, New York. Nat Underw 56:1+ D 11 '52; Nat Underw (Life ed) 56:1, 20 D 12 '52

Meeting, Chicago. Nat Underw (Life ed) 57:2+ Ap 24 '53

Mid-winter meeting, New York. Weekly Underw 167:1562-7 D 13 '52

Mid-year meeting, New York. East Underw 53:20, 42, 89 D 12 '52

NAIC objectives. W. O. Martin, jr. Weekly Underw 168:217+ Ja 17 '53

Zone five meeting, Little Rock, April 2-3. Weekly Underw 168:990-1 Ap 11 '53

NATIONAL association of investment companies

Fund organization's role outlined. J. M. Sheffey. Barron's 33:37-8 Mr 23 '53

NATIONAL association of life underwriters

Agents-only forum to be feature of NALU annual meet. Nat Underw (Life ed) 57:1+ Mr 20 '53

Annual convention, 63d, Atlantic City, Sept. 8-12. East Underw 53:1+, 3+, 6-10+ S 12 '52; Nat Underw (Life ed) 56:1+ S 12; 1+ S 19 '52; Nat Underw (Life ed) Daily ed 56:3+ S 10; 3+ S 11 '52; Weekly Underw 167:656-61, 672-3 S 13 '52; Spectator 160: 26-7+ O '52

Clarifies N.A.L.U. stand on brokers. D. B. Fluegelman. Nat Underw (Life ed) 57:1+ Mr 13 '53

Committee chairmen appointed. Nat Underw (Life ed) 56:5 S 19 '52; East Underw 53: 12 N 7 '52

Eubank wants NALU to make clear its stand on brokers. East Underw 54:1+ Ja 23 '53

Midyear meeting, Chicago. Nat Underw (Life ed) 57:1+ Ap 17; 1+ Ap 24 '53

NALU committee reports reflect year of activity. Nat Underw (Life ed) 57:12+ Ap 17 '53

Underwriters association had fine year. D. B. Fluegelman. Weekly Underw 168:92+ Ja 3 '53

General agents and managers conference

Conference, Chicago. Nat Underw (Life ed) 57:6+ Ap 17 '53

NATIONAL association of manufacturers

NAM; an appraisal for businessmen. Mod Ind 24:56-7+ N '52

New role for business leaders. Bsns W p 180 D 6 '52

NATIONAL association of master plumbers. See National association of plumbing contractors of the United States

NATIONAL association of motor bus operators

Annual meeting, 24th, San Francisco, Sept. 23-25. Bus Transportation 32:27-34 O '53

NATIONAL association of mutual insurance companies

Midyear meeting, Chicago. Nat Underw 57: 7+ Ap 16 '53

NATIONAL association of oil equipment jobbers

Annual meeting, 2d, Columbus. Nat Pet N 44:86-91 O 15 '52

NATIONAL association of plumbing contractors of the United States (formerly National association of master plumbers)

Annual meeting, Kansas City, May 6-9. Dom Eng 181:100-2+ Je; 182:118+ Jl '53

NATIONAL association of public insurance adjusters

Annual convention, 3d, Chicago, June 17-19. Weekly Underw 168:1740 Je 27 '53

NATIONAL association of purchasing agents

International meeting, 38th, Los Angeles, May 24-27. Steel 132:65 Je 1 '53; Oil Paint & Drug Rep 163:5+ Je 1 '53

NATIONAL association of railroad and utilities commissioners

Annual meeting, 64th, Little Rock, Nov. 10-13. Ry Age 133:12 N 17 '52

Annual meeting, 65th, New York, Sept. 21-24. Ry Age 135:12-14 O 5 '53

NATIONAL association of railroad women

Annual meeting, 9th, White Sulphur Springs, Nov. 15. Ry Age 133:16 N 24 '52

NATIONAL association of real estate boards

Annual meeting, 45th, Miami Beach. Eng N 149:112 N 20 '52

NATIONAL association of securities dealers

Incredible, but true; repeal of securities acts and abolition of SEC and NASD advocated. Comm & Fin Chr 177:993+ Mr 5 '53; Discussion. 177:1108+ Mr 12 '53

Philadelphian quits N.A.S.D.; reprinted from the Philadelphia Evening bulletin. J. A. Livingston. Comm & Fin Chr 177:888 F 26 '53

NATIONAL association of sheet metal distributors

Annual meeting, 42d, Oct. 13-16; abstracts of papers. Sheet Metal Worker 44:98+ N '52

Spring meeting, 43d, Columbus, Ohio, May 14-15. Sheet Metal Worker 44:76+ Je '53

NATIONAL association of shippers advisory boards

Annual meeting, Omaha, Oct. 6-8. Ry Age 135:86+ O 19 '53

Annual meeting, St Louis, Oct. 7-9. Ry Age 133:51-3 O 20 '52

NATIONAL association of surety bond products

Annual meeting, New York, April 13-14. East Underw 54:40+ Ap 17 '53; Nat Underw 57:1+ Ap 16 '53; Weekly Underw 168:1082+ Ap 18 '53

Annual meeting, New York; contract bond panel. East Underw 54:29+ Ap 24 '53

NATIONAL automobile underwriters association

Annual meeting, 23d, New York, May 14. East Underw 54:26+ My 15 '53; Nat Underw 57:2 My 14 '53

NATIONAL aviation corporation

Trusts show big shift to aircraft. S. Altschul. Aviation W 58:79 F 16 '53

NATIONAL bank of Australasia

Statement by the chairman. H. D. Giddy. Economist 165:653 N 29 '52

NATIONAL bank of Egypt

Financial statement. Economist 167:121 Ap 11 '53

NATIONAL bank of India, limited

Financial statement. Economist 166:904 Mr 28 '53

NATIONAL biscuit company

Sound stocks with above-average yield; with comparative balance sheet items. Mag of Wall St 91:709 Mr 21 '53

NATIONAL board of fire underwriters

Annual meeting, New York. Nat Underw 57:1-2+ My 14 '53

Members of National Board standing committees. East Underw 54:26 Je 19 '53

National Board year, one of achievement. J. R. Cooney. Weekly Underw 168:9-10 Ja 3 '53

NATIONAL bureau of casualty underwriters

Annual meeting, 23d, New York, May 14. East 54:39 My 15 '53

NATIONAL bureau of standards. See United States—Standards, National bureau of

NATIONAL bus traffic association

Annual meeting, 18th, San Francisco, Sept. 22. Bus Transportation 32:34 O '53

NATIONAL business publications, inc.

Midsummer meeting, Colorado Springs. Ind Marketing 38:30+ Jl '53

NATIONAL can corporation

Report for 1952. Paint Oil & Chem R 116:18 Ap 9 '53

NATIONAL cargo bureau, inc.

National cargo bureau established. Marine Eng 57:54 N '52

National cargo bureau will offer rules for safe stowage of cargo. C. E. McDowell. East Underw 53:80-1 D 12 '52

NATIONAL cash register company

Broader product lines push sales up fivefold since 1940. J. C. Mueller. Barron's 33:19-20 Je 8 '53

NATIONAL chemical laboratory, Poona

National chemical laboratory. Engineer 194:203 Ag 8 '52

NATIONAL city bank of New York

National City; growth record best among major eastern banks. H. V. Keefe, jr. Barron's 33:15-18 Mr 2 '53

NATIONAL clay pipe manufacturers, inc.

Board of directors. Brick & Clay Rec 122:71 Mr '53

Fall meeting, New York, Oct. 28; with abstracts of papers. Brick & Clay Rec 121:29-30 D '52

Industry tells its story; public relations program. D. Skylar. Brick & Clay Rec 122:80 Mr '53

Look ahead, 1953. D. M. Strickland. Brick & Clay Rec 122:71 Mr '53

Research points the way. E. M. Davids. il Brick & Clay Rec 122:72, 76-7 Mr '53

16 million reached by ad campaign. N. Malone. il Brick & Clay Rec 122:78 Mr '53

NATIONAL coal association

Annual meeting, New York, Nov. 11-12. Coal Age 57:132-3+ D '52

NATIONAL concrete masonry association

Annual meeting, 33d, Cleveland, Jan. 26-29. Concrete 61:3-8+ Mr; 34-6+ Ap '53

Annual meeting, 33d, Cleveland, Jan. 26-29; with abstracts of papers; list of exhibitors. Rock Prod 56:153-62+ Mr '53

Leba to head Washington office. Concrete 60:12-13 N '52

Southeastern regional meeting, Miami Beach, Nov. 24-26; with abstracts of papers. Rock Prod 56:242-51+ Ja '53

NATIONAL concrete products association

Annual meeting, 4th, Toronto, Feb. 9-10. Rock Prod 56:170+ Mr '53

NATIONAL constructors association

NCA business formula; get together, exchange information, get it settled. Eng N 149:117-18 N 6 '52

NATIONAL container corporation

National Container 25th anniversary. il Tappi 36:sup96A-100A Jl '53

NATIONAL council on compensation insurance

National council on compensation insurance a stabilizing factor. East Underw 53:25+ D 26 '52

Reports for National compensation council. H. F. Richardson. East Underw 54:37+ Mr 13 '53

NATIONAL crushed stone association

Annual meeting, 36th, New York, Feb. 2-4. Rock Prod 56:78-90+ Mr '53

Board of directors mid-year meeting, Montebello, Quebec, June 16. Rock Prod 56:178+ Ag '53

NATIONAL dairy products corporation

National dairy products; research programs are paying off handsomely. C. A. Clark, jr. Barron's 33:19+ Ja 12 '53

New blue chip? investment audit. P. Dobbs. Mag of Wall St 92:392-4+ Je 27 '53

Stewart of National Dairy. Fortune 46:144-5 D '52

NATIONAL defense transportation association

Annual meeting, Louisville. Ry Age 135:11-13 O 19 '53

Annual meeting, 7th, New York, Oct. 26-29. Ry Age 133:14 N 3 '52

NATIONAL department stores corporation

Profit comeback likely. Barron's 32:20 O 13 '52

NATIONAL district heating association

Annual meeting, Chattanooga. Heating-Piping 25:82-3 Ag '53

NATIONAL drug trade conference

Annual meeting, New York, Dec. 2. Oil Paint & Drug Rep 162:4+ D 8 '52

NATIONAL electrical code

Code interpretations and conductor selection for cranes and hoists. L. Price. Iron & Steel Eng 29:130-6 N '52

Electrical installations; code requirements. B. Z. Segall. Oil & Gas J 51:185 O 20 '52

NFPA releases proposed electrical code changes. Standardization 23:339+ O '52; Same. Franklin Inst J 254:440-1 N '52

Residential wiring requirements in NE code. Elec West 109:87-8 D '52

NATIONAL electrical contractors association

District six meeting, Vancouver, B.C. May 8-9; District eight meeting, Billings, Mont. May 15-16. Elec West 110:131-3 Je '53

NATIONAL electrical manufacturers association

Annual meeting, 26th, Atlantic City, Nov. 10-13. Elec World News ed 138:46+ N 24 '52

NATIONAL exposition of power and mechanical engineering

Exposition, 20th, New York, Dec. 1-6. Midwest Eng 5:25-6 Ja '53

NATIONAL farm chemurgic council
Annual meeting, St Louis. Oil Paint & Drug Rep 163:7+ Mr 23 '53
National chemurgic conference, 18th, St Louis, March 9-11. Chem & Eng N 31:1183-4 Mr 23 '53

NATIONAL farm electrification conference
Farm electric group in limbo. Elec World 138:95 N 3 '52

NATIONAL federation of financial analysts societies
Annual business meeting, Philadelphia, April 12. Comm & Fin Chr 177:1633 Ap 16 '53

NATIONAL federation of textiles
Handy girl to have around; Irene L. Blunt. R. E. Ellsworth. il Mod Textiles Mag 34:36+ My '53

NATIONAL fertilizer association
Annual meeting, 28th, White Sulphur Springs, June 15-17. Oil Paint & Drug Rep 163:7+ Je 22 '53
Meeting, Miami Beach. Oil Paint & Drug Rep 162:4+ N 24 '52

NATIONAL fire protection association
Annual meeting, 57th, Chicago. East Underw 54:1+, 23-4 My 22 '53; Nat Underw 57:1+ My 21 '53
NFPA continues drive against fire loss. P. Bugbee. Weekly Underw 168:23+ Ja 3 '53

NATIONAL food and nutrition institute
Meeting, Washington, D.C. Dec. 8. Chem & Eng N 30:5370-1 D 22 '52

NATIONAL foreign trade council
Growing importance of foreign trade; work of National foreign trade council. R. F. Loree. Comm & Fin Chr 176:2015+ N 27 '52

NATIONAL forests. See Forest reserves

NATIONAL foundry association
Annual meeting, 44th, Chicago, Sept. 18-19. Foundry 80:153-4+ N '52

NATIONAL 4-H foundation
New frontiers for 4-H; opportunity for bank participation. J. W. Tapp. il Bankers Mo 70:5-6+ Mr '53

NATIONAL good roads association
Good roads group announces aims. Roads & Sts 96:125 Ja '53

NATIONAL gypsum company
He's betting the boom will last; Melvin H. Baker of National Gypsum. Bsns W p 182+ N 8 '52
National Gypsum acquires Asbestone corp. Manuf Rec 122:51 Ja '53

NATIONAL health and welfare retirement association
Annual meeting, New York, Oct. 30. East Underw 53:4 N 7 '52

NATIONAL heating wholesalers association
Annual meeting, Chicago, Jan. 29-30. Sheet Metal Worker 44:77-8 Mr '53
Summer meeting, Asheville, N.C. June 22-24. Sheet Metal Worker 44:78+ Ag '53

NATIONAL homes corporation
Putting over the prefab house. il Bsns W p54-7 N 15 '52

NATIONAL industrial advertisers association
Complete roster of past presidents. Ind Marketing 37:140-1 O '52
Urges membership drive. W. C. Sproull. Ind Marketing 38:142+ S '53

NATIONAL industrial conference board
Combing out facts for business. Bsns W p77-8+ My 23 '53
Giving them a stake in the company. Bsns W p 130-2 Mr 28 '53

NATIONAL industrial electronic service affiliates
Nationwide network of servicing organizations is planned. Iron Age 171:90 Je 4 '53

NATIONAL industrial sand association
Annual meeting, 18th, Hot Springs, Va. May 13-15. Rock Prod 56:116+ Je '53

NATIONAL industrial traffic league
Annual meeting, New York, Nov. 20-21. Ry Age 133:100-2 D 1 '52

NATIONAL insurance buyers association
Membership meeting, 1st, Chicago. Nat Underw 56:14 N 13 '52; Weekly Underw 167:1358 N 22 '52

NATIONAL insurance service and advisory organization. See National service organization

NATIONAL labor relations board
Employer guilty. Bsns W p 134 Ja 31 '53
Long-term safety. Bsns W p 149 F 28 '53
No union business on company time. Bsns W p 175 Mr 28 '53
Speedup on labor cases. Bsns W p 132-3 Ja 31 '53
Three-sided view of Labor board. Bsns W p 134-5 Mr 7 '53
What back pay? Supreme court decision. Bsns W p 143-4 Ja 17 '53
What kind of board? Fortune 47:81-2+ F '53

NATIONAL lead company
Merger; decide which way to jump? Iron Age 171:100-1 F 5 '53
National Lead arranges Doehler-Jarvis merger. Bsns W p68 D 20 '52
National Lead; improves earnings. H. Bridgman. Barron's 33:13-14 Jl 27 '53
Translating visions and dreams into realities; studies in dynamic management. R. Colston. Mag of Wall St 92:210-11 My 16 '53
12 promising specialties. P. Dobbs. Mag of Wall St 92:120+ Ap 18 '53

NATIONAL library of Canada. See Canada—National library

NATIONAL lime association
Annual meeting, 51st, Hot Springs, Va. June 8-10; with abstracts of papers. Rock Prod 56:75-9+ Jl '53
Operating division annual meeting, 7th, Mountain Lake, Va. Sept. 15-17; with abstracts of papers. Rock Prod 55:82-8+ N '52

NATIONAL lubricating grease institute
NLGI celebrates 20 years of service; plans new contributions to industry. Nat Pet N 44:46-7 N 5 '52

NATIONAL machine tool builders' association
Annual meeting, White Sulphur Springs; abstracts of papers. Automotive Ind 107:55+ D 15 '52
Annual meeting, White Sulphur Springs, Nov. 13-14. Am Mach 96:174-5 N 24 '52; Iron Age 170:68 N 20 '52; Mach 59:200-2 D '52
Spring meeting, 51st, New York, April 8-10. Am Mach 97:173-5 Ap 27 '53; Automotive Ind 108:73-4+ My 1 '53; Mach 59:210-12 My '53

NATIONAL manpower council
National manpower council; summary of statement on scientific and professional manpower. Science 117:617-22 Je 5 '53

NATIONAL mediation board
Airlines pool bargaining. Bsns W p 172+ Ap 25 '53
Mediation board tells Congress it may want to reexamine emergency-board procedures. Ry Age 134:12-13 F 9 '53

NATIONAL metal congress
Congress and exposition, 34th, Philadelphia. Chem & Eng N 30:4618+ N 3 '52
Congress, Philadelphia, Oct. 18-24; technical program. Iron Age 170:258+ O 9 '52; Steel 131:179-80+ O 13 '52
Congress, 34th, Philadelphia, Oct. 18-24; abstracts of papers. Iron Age 170:170-2 N 6 '52
Congress, 34th, Philadelphia, Oct. 18-24; with abstracts of papers. Automotive Ind 107:46-7+ N 15 '52
Congress, 35th, Cleveland, Oct. 17-23; program. Metal Prog 64:63-74 O '53

NATIONAL metal exposition
Exhibitors at the metal show; list. Steel 131:214+ O 13 '52
Exposition, 35th, Cleveland, Oct. 17-23; with list of exhibitors. il Metal Prog 64:76-96 O '53
Metal show in print. il Am Mach 96:192-6+ O 13 '52
Metal show in print. il Am Mach 97:214-16+ O 12 '53
National metal congress and exposition, 35th, Cleveland, Oct. 19-23; list of exhibitors. Am Mach 97:212-13 O 12 '53; Same. Materials & Methods 38:15+ O '53
National metal show, Cleveland, Oct. 19-23. il Automotive Ind 109:60-4+ O 15 '53
U.S. National metal congress and exposition, 34th, Philadelphia, Oct. 20-24. Engineer 194:699-700 N 21 '52
What's new at the National metal show, Philadelphia, Oct. 20-24. il diag Automotive Ind 107:56-8+ O 15 '52

NATIONAL oil jobbers council
Annual meeting, Chicago, Nov. 8-9. Nat Pet N 44:21-3 N 12 '52
Spring meeting, Montgomery, Ala. March 26-28. Nat Pet N 45:33-5 Ap 1 '53

NATIONAL oil scouts and landmen's association

Organized scouting observes its 30th anniversary. C. Hoot. Oil & Gas J 52:166 Je 8 '53

NATIONAL paint salesmen's association

Annual meeting, Detroit, Oct. 25. Paint Oil & Chem R 115:34 N 6 '52

NATIONAL paint, varnish and lacquer association

Annual convention, 64th, Chicago. Paint Oil & Chem R 115:19-23, 28-9 D 4 '52

Annual meeting, 64th, Chicago, Nov. 17-19; with abstracts of papers. Oil Paint & Drug Rep 162:69-81 N 24 '52

Annual meeting, 64th, Chicago; with abstracts of papers. Chem & Eng N 30:5050+ D 1 '52

Annual meeting, 65th, Atlantic City, Oct. 26-28; program. Paint Oil & Chem R 116:19-21 O 8 '53

Convention, 64th, Chicago, Nov. 17-19; program; registration list. Paint Oil & Chem R 115:18-25, 54-8+ N 6 '52

Transcript of lacquer panel presented at the NPVLA convention. Paint Oil & Chem R 115:115-20 D 4 '52

NATIONAL paper trade association

Meeting, New York, March 16-18. Paper Tr J 136:38+ Mr 27 '53

NATIONAL paperboard association

Spring meeting, Santa Barbara, May 19-20. Paper Tr J 136:14+ Je 12 '53

NATIONAL petroleum association

Semi-annual meeting, 50th, Cleveland. Oil & Gas J 51:99-101 Ap 20 '53; Nat Pet N 45:17-20 Ap 22 '53

NATIONAL petroleum council

Chapman names 103 to National petroleum council. Nat Pet N 44:39 D 24 '52

Meeting, Feb. 26. Nat Pet N 45:15-16 Mr 4 '53

NPC says synthetic liquid fuels production is uneconomic. Chem & Eng N 31:1088+ Mr 16 '53

NATIONAL petroleum news (periodical)

Lashes out at oil press. S. J. Spingarn. Nat Pet N 45:38-9 F 18 '53

NATIONAL press photographers association

Convention, Rochester, N.Y. Sept. 13-18. Ed & Pub 86:28 F 14 '53

NATIONAL production authority

NPA shakes up staff. Oil Paint & Drug Rep 164:3+ Jl 13 '53

Defense materials system

Defense materials system; are you ready for the change? Steel 132:65 My 25 '53

Heir to CMP; Defense materials system. Bsns W p 120 Ap 18 '53

Materials controls are extended two years under new procedure. Oil Paint & Drug Rep 164:3+ Jl 6 '53

What happens when DMS starts. Materials & Methods 37:262+ Je '53

NATIONAL provincial bank, limited

Statement by the chairman. Earl of Selborne. Economist 166:252-3 Ja 24 '53

NATIONAL ready mixed concrete association

Annual meeting, 23d, San Francisco. Concrete 61:6-8+ Ap '53; Rock Prod 56:100-8, 216-21+ Ap '53

Directors' semi-annual meeting, Swampscott, Sept. 28-Oct. 1. Rock Prod 55:93-5+ N '52

Midwest meeting, Chicago, Aug. 14. Rock Prod 56:127-8+ S '53

Stanton Walker, director of engineering, makes 23d consecutive annual report. Concrete 61:18 My '53

NATIONAL reclamation association

Annual meeting, 21st, Long Beach, Calif. Elec World 138:88-9 D 1 '52

NATIONAL research council

National research council endorses pretesting of chemical pesticides; statement part of series of studies on question of controlling the use of chemical additives in the production and processing of food. Oil Paint & Drug Rep 163:3+ F 16 '53

Chemical-biological coordination center

Chemical-biological coordination center; an experiment in documentation. R. L. Beard and K. F. Heumann. Science 116:553-4 N 21 '52

NATIONAL research development corporation. See Great Britain—National research development corporation

NATIONAL retail dry goods association

Annual convention, 42d, New York. Ed & Pub 86:11+ Ja 17 '53

Department stores worry. Bsns W p43-4+ Ja 24 '53

NATIONAL rural electric cooperative association

Annual meeting, San Francisco. Pub Util 51:315-17 F 26 '53

Annual meeting, San Francisco, Jan. 26-29. Elec World 139:80-1 F 9 '53

NATIONAL safety council

Auditor's report, 1952. Nat Safety N 67:44 My '53

Coal mining section meeting, Chicago, Oct. 20-23; with abstracts of papers. Coal Age 57:136-7+ D '52

Congress, Cement and quarry section meeting, 40th, Chicago, Oct. 20-24; with abstracts of papers. Rock Prod 55:109-11 D '52

Congress, 40th, Chicago. Oct. 20-24. Nat Safety N 66:22-3 N '52

Congress, 40th, Chicago; with abstracts of papers. Safety Maint & Prod 104:9-10+, 34-9, 62 D '52

Fight for life; report on the 39th year. Nat Safety N 66:97-124 N '52

Glass and ceramics section annual meeting, Chicago, Oct. 20; with abstracts of papers. Glass Ind 33:595-6+ N '52

Officers, directors and trustees elected at the 40th congress. Nat Safety N 66:26-7+ N '52

Officers, 1952-1953; portraits. Nat Safety N 66:29 D '52

Public service work. W. S. S. Rodgers. Nat Safety N 67:17+ Je '53

Safety followed through; highlights of two eventful years that followed the historic First safety congress. C. Fish. il Nat Safety N 68:108-9+ O '53

Safety's pioneers honored at Congress banquet. il Nat Safety N 66:22-3+ D '52

Unfinished business. N. H. Dearborn. Nat Safety N 66:17+ D '52

W.S.S. Rodgers heads NSC trustees. Nat Safety N 67:35 F '53

Chemical section

Chemical section was organized during the industry expansion of World war I. V. R. Croswell. Ind & Eng Chem 45:sup 115A-16A+ Mr '53

NATIONAL sand and gravel association

Annual meeting, 37th, San Francisco, Feb. 23-26; with abstracts of papers. Rock Prod 56: 100-15+ Ap '53

Directors' semi-annual meeting, Swampscott, Sept. 28-Oct. 1. Rock Prod 55:93-5+ N '52

Midwest meeting, Chicago, Aug. 14. Rock Prod 56:127-8+ S '53

NATIONAL sanitation foundation

National sanitation foundation announces first Seal of approval for food and other equipment with health connection. il Ind Med 21:489-90 O '52

NATIONAL science foundation

Awards. Chem Eng Prog 49:sup40 F '53

Awards fellowships. Chem & Eng N 31: 1678+ Ap 20 '53

Concerned over research needs. A. T. Waterman. Oil Paint & Drug Rep 163:5+ F 9 '53

Defense research. Mech Eng 75:321-2 Ap '53

Developing a National science foundation. Chem & Eng N 31:228-33 Ja 19 '53

Estimates for scientific research and development. Science 117:571 My 29 '53

Government-supported research. A. T. Waterman. J Eng Educ 43:153-4 N '52

National science foundation. P. E. Klopsteg. Midwest Eng 5:3-4+ D '52

National science foundation and the scientific manpower problem. C. A. Mills. Science 116:601-3 N 28 '52

National science foundation appoints Paul E. Klopsteg as associate director. J Eng Educ 43:311 Ja '53

Scientific manpower section

Keeping tabs on U.S. technical manpower. Bsns W p96+ My 9 '53

NATIONAL screw machine products association
Annual meeting, 20th, New York, April 21-23. Am Mach 97:206-7 My 11 '53

NATIONAL security council
Key man in security setup; R. Cutler. Bsns W p31-2 Jl 25 '53

NATIONAL security resources board. See United States—National security resources board

NATIONAL security traders association
Annual convention, Miami Beach, Oct. 20-23. Comm & Fin Chr 176:3-78 sec 2 N 13 '52

NATIONAL service life insurance. See Insurance, Military and naval service

NATIONAL service organization (formerly National insurance service and advisory organization)
NISAO now NSO; washes hands of multiple peril tie. Nat Underw 56:1 O 23 '52

NATIONAL slag association
Annual meeting, 35th, Washington, D.C. Nov. 12-13. Rock Prod 56:166+ Ja '53

NATIONAL steel corporation
Five undervalued sound investments; with comparative balance sheet items. Mag of Wall St 91:351 D 27 '52

NATIONAL tool and die manufacturers' association
Annual meeting, Rochester, Oct. 30-Nov. 2. Am Mach 96:179 N 24 '52; Iron Age 170:114 N 6 '52

NATIONAL warm air heating and air conditioning association
Annual meeting, 39th, Cincinnati, Dec. 3-4. Dom Eng 181:129+ Ja '53; Sheet Metal Worker 44:136+ Ja '53

NATIONS, Comity of. See Comity of nations

NATURAL gas. See Gas, Natural

NATURAL gasoline association of America
Annual meeting, 32d, Houston, Tex. April 29-May 1. Gas Age 111:39-41 Je 4 '53

NATURAL lighting. See Daylight

NATURAL resources
Outlines routes to resources problem. F. J. Curtis. Oil Paint & Drug Rep 162:5+ N 17 '52
Resources, today and tomorrow; report by the President's materials policy commission; with graphs and charts. Mod Ind 24:42-7 O; 50-3 N '52
U.N. validates rights of members to nationalize wealth and resources. R. S. Byfield. Manuf Rec 122:28+ Ja '53
What are natural resources? G. W. Keith. Pub Util 51:616-25 My 7 '53
See also
Coal
Conservation of resources
Fisheries
Forests and forestry
Fuel
Gas, Natural
Minerals
Mines and mineral resources
Oil lands
Oil shales
Ore deposits
Peat
Petroleum
Raw materials
Reclamation of land
Soil conservation
Water supply

NAUTICAL instruments
Instrument electronics. M. H. Aronson. diags Instruments 26:112+ Ja '53

NAVAHO Indians
Navajo comeback. F. Kutnewsky. il Comp Air Mag 58:80-2 Mr '53

NAVAL affairs committees. See United States—Congress—Naval affairs committees

NAVAL air stations. See Air bases, Military

NAVAL architects and marine engineers, Society of. See Society of naval architects and marine engineers

NAVAL architecture
New method for computing keel block loads; abstract and discussion. G. C. K. Yeh and W. J. Ruby. Marine Eng 58:60-1 Ja '53
Transom stern. M. St Denis. diag Marine Eng 58:53-4 Jl '53
Water forces on submerged bodies in motion; abstract. W. C. S. Wigley. Engineering 175:677 My 29 '53; Discussion. 175:677-8 My 29 '53; Engineer 195:607 Ap 24 '53
See also
Barges
Bulkheads (naval architecture)
Dredges
Ferryboats
Freight ships
Marine engineering
Motor ships
Power plants, Floating
Propellers
Ship propulsion
Ship resistance
Shipbuilding
Ships
Steamboats
Tank ships
Towboats
Train ferries
Warships

Designs and plans

Alden designs Long Beach fireboat. plans diag Marine Eng 58:81-2 Mr '53
Building the Mariner ships. il plans diags Marine Eng 58:79-89 My '53
Chesapeake & Ohio operates largest Lakes carferry. il plans diags Marine Eng 58:42-57 Mr '53
Sinclair's little supertanker, P. C. Spencer, makes good. il plans diags Marine Eng 58:52-64 Ag '53
600-foot Lakes ore carriers built in East Coast shipyard. R. M. Cashman and C. E. Ericson. il plans diag Marine Eng 58:36-47 Ja; 70-5 F; 64-75 Mr; 69-75 Ap '53
Steamer Edward B. Greene becomes the new Cleveland-Cliffs flagship. il plans Marine Eng 57:38-50 N '52
Sun Oil enters supertanker field with Delaware Sun class ships. il plans diags Marine Eng 58:50-4 S '53

NAVAL art and science
See also
Submarine warfare
Torpedoes

Bibliography

Notable naval books of 1952. L. H. Bolander. il U S Naval Inst Proc 79:91-7 Ja '53

NAVAL battles
Strategic aspects of the battle off Formosa. S. Fukudome. il U S Naval Inst Proc 78:1285-95 D '52
See also
World war, 1939-1945
—Naval operations

NAVAL hospitals. See Hospitals, Naval and marine

NAVAL law
Laws of the accountable officer. C. J. Harter. il U S Naval Inst Proc 79:58-63 Ja '53

NAVAL life

Fiction

Navy in literature. T. Taylor. il U S Naval Inst Proc 78:1110-13 O '52

NAVAL maneuvers
Mainbrace; potential becomes reality. H. B. Say. il U S Naval Inst Proc 79:74-83 Ja '53

NAVAL oil reserves. See Oil reserves (United States navy)

NAVAL ordnance laboratory, White Oak, Maryland
Good operation, maintenance assured at Naval ordnance laboratory for the air conditioning and refrigeration systems. C. E. Mandley. il Heating-Piping 25:136-9 Ja '53

NAVAL radiological defense laboratory. See United States—Navy—Laboratories

NAVAL research
Research and the naval officer. B. F. Brown. il U S Naval Inst Proc 79:38-43 Ja '53
Research for the Royal navy. T. Blore. il U S Naval Inst Proc 78:1314-23 D '52

NAVAL stations. See Navy yards and naval stations

NAVAL stores
Industrial waste guide; wood naval stores. H. H. Black and V. A. Minch. bibliog flow diag Sewage & Ind Wastes 25:462-74 Ap '53
Mexican naval stores giving US competition. Oil Paint & Drug Rep 164:5+ Jl 27 '53
Naval stores 1953 outlook. E. E. Holdman. Paint Oil & Chem R 115:100-1 D 4 '52
See also
Rosin

NAVAL supply center, Oakland
Right man for the right job. R. A. Hicks and others. bibliog Ind Med 22:69-75 F '53

NAVAL warfare
See also
Submarine warfare

NAVIES
See also
Airplane carriers
Great Britain—Navy
Naval architecture and other headings beginning Naval
Sea power
Submarine boats
United States—Navy
Warships

NAVIGATION

See also

Air navigation
Decca navigator system
Harbors
Pilots and pilotage
Radar aids to navigation
Radio aids to navigation
Shipping
Sounding
Steamboats
Waterways

NAVY yards and naval stations

Navy buildings; building types study. il map plans diags Arch Rec 112:165-96 S '52

NAZI party. See Germany—Nazi party

NEAR EAST

First-hand report; economic-political conditions in the Middle East. L. V. Horoth. map Mag of Wall St 92:271-3+ My 30 '53

Mr Dulles and the Arabs. Economist 167: 340-2 My 9 '53

New outlook for Middle East defence. map Economist 167:96-7 Ap 11 '53

See also

Petroleum—Near East
Petroleum industry and trade—Near East

Biography

Who's who in Egypt and the Near East, 1953. E. J. Blattner and J. E. Blattner, eds. 19th ed 644p Who's who in Egypt and the Near East, 50, Kasr-El-Nile st, Cairo; for sale by W. S. Heinman, 400 E. 72d st, N.Y. 21 '53 ($14)

Defenses

Arab defence plans. map Economist 165:877-8 D 27 '52

Egypt and Middle East defence. Economist 167:159-60 Ap 18 '53

India takes a hand in Cairo. Economist 167: 890+ Je 27 '53

NEBER rearrangement. See Molecular rearrangements

NEBRASKA

See also

Forests and forestry —Nebraska

NEEDLE bearings. See Bearings, Needle

NEENAH paper company

Neenah's new line-up; management executives. Paper Tr J 136:22 Ja 30 '53

NEG'ATOR. See Springs (mechanism)

NEGLIGENCE

Assault on another driver held negligence in operation of taxicab. Weekly Underw 168: 176 Ja 10 '53

Comparative negligence coming up as doctrine. Nat Underw 57:26+ Ja 29 '53

Employers and negligence claims. F. E. Sugden. Elec R (Lond) 152:1184 My 22 '53

Pennsylvania court favors absolute liability in trespass case tried originally on negligence theory alone. Weekly Underw 167: 1269 N 8 '52

Refusal to settle in policy limits not negligence. Nat Underw 57:35 Mr 19 '53

Suggests major change in injury cases; abstracts. D. W. Peck. East Underw 54:35+ F 13 '53; Nat Underw 57:24 F 12 '53

Warning on wide open type comparative negligence law. W. J. Palmer. Nat Underw 57:26-7+ Mr 19 '53

Wisconsin comparative negligence law has seamy side. C. L. Morris. Nat Underw 57:16 F 5 '53

See also

Damages
Employers' liability
Personal injuries

NEGOTIABLE instruments

Ambiguous instruments; Negotiable instrument blanks. F. C. Fiechter, jr. Burroughs Clearing House 37:78-80 Je '53

Negotiable instrument law. F. C. Fiechter, jr. Burroughs Clearing House 37:76+ Ap '53

Seasonal financing through field warehousing. V. L. Amato. N A C A Bul 34:238-43 O '52

See also

Commercial paper
Postal service—Money orders

NEGRO market

Brand preferences by Negroes shown in Baltimore study. il Adv Agency 45:74+ O '52

NEGRO newspapers

Negro papers serve American democracy. C. P. Browning. Ed & Pub 86:55 F 7 '53

Seven publications in newly formed defender group. Ed & Pub 86:46 Ja 10 '53

NEGROES

Employment and education fair in science. J. F. Codington. Science 117:567-8 My 22 '53

1952 Negro year book, a review of events affecting Negro life. J. P. Guzman, L. W. Jones and W. Hall, eds. 424p Wm. H. Wise & co, 50 W. 47th st, New York 36 '52 ($4)

See also

Insurance, Life—Negroes as policy holders
Motor bus lines—Negro passengers

Education

South's schools at stake. Bsns W p 170+ Jl 25 '53

Employment

Negroes in the United States; their employment and economic status. H. H. Ringe and S. Cooper. U S Bur Labor Statistics Bul 1119:1-58 bibliog(p53-5); pa 30c Supt. of doc. '53

Segregation

Only itself to blame. Bsns W p58-9 My 9 '53

South's schools at stake. Bsns W p 170+ Jl 25 '53

Statistics

Negroes in the United States; their employment and economic status. H. H. Ringe and S. Cooper. U S Bur Labor Statistics Bul 1119:1-58 bibliog(p53-5); pa 30c Supt. of doc. '53

NEILSEN, M.

Babcock & Wilcox elects two vice presidents. por Elec World 139:202 Ap 20 '53

NEISSERIA

Putrescine as a growth requirement for neisseria. W. H. Martin, jr. and others. Science 116:483-4 O 21 '52

NELSEN, Ancher

For REA; Ancher Nelsen, Republican. por Elec World 139:72 Ap 6 '53

NEMATODES

Eelworm problem; biological aspects. B. G. Peters; W. Heeley; A. W. Johnson. Chem & Ind p994-9 O 11 '52

NEMEROFF, Victor

Businessmen in the news. por Fortune 46:48 D '52

NEODYMIUM

Heat of combustion of neodymium. E. J. Huber, jr. and C. E. Holley, jr. Am Chem Soc J 74:5530-1 N 5 '52

Paramagnetic scattering of neutrons by trivalent ions of Nd and Er. W. C. Koehler and E. O. Wollan. Rs Mod Phys 25:128-9 Ja '53

Resistivity of lanthanum, cerium, praseodymium, and neodymium at low temperatures. N. R. James and others. bibliog Phys R 88:1092-8 D 1 '52

Isotopes

K/L ratio for the 90-kev line of Nd^{147}. A. B. Smith and A. C. G. Mitchell. Phys R 87: 1128-9 S 15 '52

Relative abundances and neutron capture cross sections of the neodymium isotopes. W. H. Walker and H. G. Thode. bibliog Phys R 90:447-8 My 1 '53

NEODYMIUM compounds

Analysis of the spectrum of the Nd^{+++} ion in the bromate crystal. R. A. Satten. bibliog diags J Chem Phys 21:637-48 Ap '53

NEODYMIUM ethyl sulfate

Measurement of the nuclear and electronic contributions to the specific heat of neodymium ethyl sulfate near 1°K. L. D. Roberts and others. bibliog diags Rs Mod Phys 25:170-3 Ja '53

NEOMYCIN

Streptomyces antibiotics; isolation of neomycin A. R. L. Peck and others. bibliog Am Chem Soc J 75:1018-21 Mr 5 '53

NEON
Dynamic characteristics of the plasma in discharges through rare gases. H. N. Olsen and W. S. Huxford. bibliog il diags Phys R 87:922-30 S 15 '52
Effect of temperature on the duration of the $^3P_2$ metastable level of neon. F. A. Grant and A. D. Krumbein. bibliog il diags Phys R 90:59-62 Ap 1 '53
High frequency breakdown in neon. A. D. MacDonald. Phys R 88:420 O 15 '52
Specific primary ionization of H_2, He, Ne, and A by high energy electrons. G. W. McClure. bibliog diags Phys R 90:796-803 Je 1 '53
See also
Electric lamps, Neon

Isotopes

Reaction energies of $Ne^{21}(d,\alpha)F^{19}$ and $Ne^{21}(d,p)Ne^{22}$ from magnetic analysis. C. Mileikowsky and W. Whaling. bibliog Phys R 88:1254-7 D 15 '52

NEON lamps. See Electric lamps, Neon

NEOPENTANE
Bromination of neopentane. S. W. Benson and H. Graff. J Chem Phys 20:1182 Jl '52
Compressibility of and an equation of state for gaseous neopentane. J. A. Beattie and others. J Chem Phys 20:1619-20 O '52

NEOPRENE
Creep of neoprene in shear under static conditions; ten years. W. N. Keen. diags A S M E Trans 75:891-3 Jl '53; Same. India Rubber World 128:351-3 Je '53
Keystone valve designed for low-pressure services has neoprene seat. il Marine Eng 58:130+ Je '53
Neoprene applications in engineering design. R. W. Malcolmson. il Mech Eng 73:627-32+ Ag '51; Same cond. Product Eng Hdbk p C24-9 '53
Neoprene-jacketed wire for wet locations. il Rubber Age 72:224 N '52
Neoprene painting system; Pennsylvania salt manufacturing co. Metal Finishing 51:89-90 My '53
Pad with neoprene to save critical parts from corrosion and wear. il Power 97:103-5 Ja '53
Practical neoprene compounds of low elastomer content. D. C. Thompson. bibliog Rubber Age 72:638-42 F '53
Special linings successful with abrasive sands at Trail Ridge plant. il Eng & Min J 154:102-4 Ja '53
Throw-away filter medium. Can Chem Process 36:50+ D '52
Versatile sole; neoprene crepe. il Safety Maint & Prod 105:29-30+ Je '53

NEPHELINE
Leucite, potash nepheline, and clinopyroxene from volcanic lavas from southwestern Uganda and adjoining Belgian Congo. T. G. Sahama. Am J Sci Bowen vol p457-70 bibliog(p469-70) '52

NEPHELINE syenite
Nepheline syenite tariff urged. Oil Paint & Drug Rep 164:3+ S 21 '53

NEPHELOMETRIC analysis
Photonephelometric microdetermination of sulfate and organic sulfur. G. Toennies and B. Bakay. bibliog Anal Chem 25:160-5 Ja '53

NEPTUNE meter company
Security I like best. M. F. Beal. Comm & Fin Chr 177:1630 Ap 16 '53

NEPTUNIUM
Infrared spectra and structure of uranyl and transuranium (*V*) and (*VI*) ions in aqueous perchloric acid solution. L. H. Jones and R. A. Penneman. bibliog J Chem Phys 21:542-4 Mr '53
Neptunium(IV)-neptunium(V) couple in perchloric acid; the partial molal heats and free energies of formation of neptunium ions. D. Cohen and J. C. Hindman. bibliog Am Chem Soc J 74:4682-5 S 20 '52
Oxidation potentials of the neptunium(III)-(IV) and the neptunium(V)-(VI) couples in perchloric acid. D. Cohen and J. C. Hindman. bibliog Am Chem Soc J 74:4679-82 S 20 '52

Isotopes

Radiations of U^{240} and Np^{240}. J. D. Knight and others. bibliog Phys R 91:889-93 Ag 15 '53

NEPTUNIUM compounds
New neptunium compounds. I. Sheft and S. Fried. diag Am Chem Soc J 75:1236-7 Mr 5 '53

NEPTUNIUM oxalates
Spectrophotometric study of Np(V) oxalate complexes. D. M. Gruen and J. J. Katz. bibliog Am Chem Soc J 75:3772-6 Ag 5 '53

NEPTUNIUM oxides
Entropy and low temperature heat capacity of neptunium dioxide. E. F. Westrum, jr. and others. diags J Chem Phys 21:419-23 Mr '53
Interpretation of the visible and near-infrared spectra of NpO_2^+ and PuO_2^{++} ions. D. M. Gruen. bibliog J Chem Phys 20:1818-19 N '52

NERNST, Hermann Walther, 1864-1941
Nernst memorial lecture. J. R. Partington. bibliog por(pl) Chem Soc J p2853-72 S '53

NERVES
Action of ultrasound on nerve tissue; a review. W. J. Fry. bibliog Acoustical Soc Am J 25:1-5 Ja '53
Nerve impulse. B. Katz. il diags Sci Am 187:55-64 N '52
Properties of myelinated fibers in sciatic nerve and in spinal cord (frog) as examined with microelectrodes; abstract. I. Tasaki. Science 116:529-30 N 14 '52

Blocking

Motor nerve filament block produced by botulinum toxin. V. B. Brooks. Science 117:334-5 Mr 27 '53
Sympathetic blocking β-haloalkylamines. E. Nyman and others. bibliog Science 116:600-1 N 28 '52

NERVOUS system
Nerve impulse. B. Katz. il diags Sci Am 187:55-64 N '52
Nervous reactions of the retina; abstract. E. D. Adrian. Elec J 150:458 F 6 '53

Diseases

Electromyography and kinetics of stimuli in neuromuscular disorders. N. B. Dobin. bibliog il Ind Med 21:529-34 N '52

NET fabrics
Mechanical requirements of stiff cloths for crinolines and similar heavy fabric structures. G. W. H. Stevens. Textile Inst J Trans 44:T347-57 Jl '53

NETHERLANDS
See also
Aeronautics—Netherlands
Electricity supply—Netherlands
Floods—Netherlands
Paper industry and trade—Netherlands
Petroleum industry and trade—Netherlands
Telephone—Netherlands

Economic conditions

Economic conditions abroad (cont). For Comm W 48:3 D 22; 5 D 29 '52; 49:3 Ja 26; 4+ Ap 13 '53
Holland and American aid. Economist 166:369 F 7 '53

NETWORK analyzers. See Electric distribution—Network analyzers

NEURALGIA
See also
Causalgia

NEUROSES
Executive neurosis. R. N. McMurry. Harvard Bsns R 30:33-47 N '52
Neuroses. S. W. Ginsburg. bibliog Ann Am Acad 286:55-64 Mr '53

NEUROSES, Experimental
Audiogenic seizure and the adrenal cortex. W. P. Hurder and A. F. Sanders. bibliog Science 117:324-6 Mr '53
Development of strains of albino mice with predictable susceptibilities to audiogenic seizures. H. Frings and M. Frings. bibliog Science 117:283-4 Mr 13 '53

NEUROSPORA

Accumulation of acetylmethylcarbinol (3-hydroxy-2-butanone) by acetate-requiring mutants of neurospora crassa. B. S. Strauss. bibliog Am Chem Soc J 75:1012 F 20 '53

NEUSHUL, Mike

Tobey's aluminum trucks. Fortune 47:202 Mr '53

NEUTRINOS

Beta-spectrum of tritium and the mass of the neutrino. L. M. Langer and R. J. D. Moffat. bibliog Phys R 88:689-94 N 15 '52

Double beta decay and theories of the neutrino; abstract. H. Primakoff. Science 116: 528 N 14 '52

Evidence for the emission of a neutrino following the nuclear capture of a negative μ-meson. W. F. Fry. il Phys R 90:999-1000 Je 1 '53

Inner bremsstrahlung and the magnetic moment of the neutrino. E. J. Hellund. bibliog Phys R 90:721 My 15 '53

Inner bremsstrahlung and the magnetic moment of the neutrino. J. Weneser. Phys R 91:1025-6 Ag 15 '53

Interference terms of the electron-neutrino angular correlation. M. Morita. Phys R 90:1005-6 Je 1 '53

Neutrino communication system. M. H. Shamos. Inst Radio Eng Proc 41:1060-1 Ag '53

Proposed experiment to detect the free neutrino. F. Reines and C. L. Cowan, jr. Phys R 90:492-3 My 1 '53

NEUTRONS

Activation cross sections for 14-Mev neutrons. S. G. Forbes. bibliog Phys R 88:1309-11 D 15 '52

Activation cross sections measured with antimony-beryllium photoneutrons. C. Kimball and B. Hamermesh. Phys R 89: 1306 Mr 15 '53

Angular distribution of $Li^6(n,\alpha)H^3$ for neutrons of 200, 270, 400, and 600 kev. L. E. Darlington and others. diags Phys R 90: 1049-53 Je 15 '53

Angular distribution of neutrons of the *d-d* reaction. P. Baker, jr. and A. Waltner. Phys R 88:1213-14 D 1 '52

Angular distribution of particles from stars. R. W. Waniek and T. Ohtsuka. Phys R 89:1307-8 Mr 15 '53

Angular distribution of prompt neutrons emitted in fission. J. S. Fraser. bibliog diags Phys R 88:536-41 N 1 '52

Average neutron total cross sections in the 3- to 12-Mev region. N. Nereson and S. Darden. bibliog il diags Phys R 89:775-85 F 15 '53

Characteristics of Br^{87}, a delayed neutron activity. A. F. Stehney and N. Sugarman. bibliog diag Phys R 89:194-203 Ja 1 '53

Characterization of nonorthophosphate P^{32} in neutron-irradiated potassium dihydrogen phosphate. J. W. Borland, A. J. MacKenzie and W. L. Hill. bibliog Ind & Eng Chem 44:2726-8 N '52

Cloud-chamber study of neutron production by sea-level cosmic rays with particular reference to μ-mesons stopped in lead. E. J. Althaus and R. D. Sard. bibliog il diags Phys R 91:373-84 Jl 15 '53

Cosmic radiation intensity-time variations and their origin; neutron intensity variation method and meteorological factors. J. A. Simpson and others. bibliog diags Phys R 90:934-50 Je 1 '53

Cosmic-ray neutron production in elements as a function of latitude and altitude. J. A. Simpson and R. B. Uretz. bibliog diags Phys R 90:44-50 Ap 1 '53

Cross sections for products of 90-Mev neutrons on carbon. D. A. Kellogg. bibliog Phys R 90:224-32 Ap 15 '53

Detection of fission neutrons. D. E. Alburger. R Sci Instr 23:765 D '52

Diffusion of neutrons. G. Jaffé. bibliog Phys R 88:603-11 N 1 '52

Discontinuities in the binding energies of neutrons and protons in light nuclei. M. G. Redlich. Phys R 88:38-9 O 1 '52

Disintegration of helium by 90-Mev neutrons. P. E. Tannenwald. bibliog il diags Phys R 89:508-17 Ja 15 '53

Distribution in energy of the neutrons from the interaction of 14-Mev neutrons with some elements. E. R. Graves and L. Rosen. bibliog diag Phys R 89:343-8 Ja 15 '53

Effect of bromine concentration on the products of the reactions of carbon tetrachloride with bromine activated by radiative neutron capture and by isomeric transition. J. F. Hornig and J. E. Willard. bibliog Am Chem Soc J 75:461-6 Ja 20 '53

Effect of neutron bombardment on the low temperature atomic heat of silicon. P. H. Keesom and others. bibliog Science 116:630-1 D 5 '52

Effects of neutron bombardment on a zinc sulfide phosphor. A. W. Smith and J. Turkevich. bibliog J Chem Phys 21:367-8 F '53

Electron-neutron interaction as deduced from pseudoscalar meson theory. B. D. Fried. bibliog diags Phys R 88:1142-9 D 1 '52

Energy spectrum of neutrons from thermal fission of U^{235}. B. E. Watt. diags Phys R 87:1037-41 S 15 '52

Evidence for a region of extra nuclear stability between the 82- and 126-neutron shells. B. G. Hogg and H. E. Duckworth. Phys R 91:1289-90 S 1 '53

Fast neutron counting with hydrogenous liquid phosphors. G. R. Keepin and R. H. Lovberg. R Sci Instr 23:483-4 S '52

Fast neutron scintillation spectrometer. R. F. Mozley and F. C. Shoemaker. diag R Sci Instr 23:569 O '52

Fission neutron spectrum of Pu^{239}. N. Nereson. Phys R 88:823-4 N 15 '52

Fission neutron spectrum of U^{235}. D. B. Nicodemus and H. H. Staub. bibliog diag Phys R 89:1288-90 Mr 15 '53

Formation of a compound nucleus in neutron reactions. H. Feshbach and others. Phys R 90:166-7 Ap 1 '53

Formation of He^6 by 14-Mev neutron bombardment of Li and Be. M. E. Battat and F. L. Ribe. bibliog diag Phys R 89:80-3 Ja 1 '53

Gamma-radiation from interaction of 14-Mev neutrons with iron. V. E. Scherrer and others. diags Phys R 89:1268-70 Mr 15 '53

Gamma rays from interaction of 14-Mev neutrons with various materials. V. E. Scherrer and others. Phys R 91:1476-8 S 15 '53

Half-life of Pd^{109} and neutron activation cross section of Pd^{102}. W. W. Meinke. bibliog Phys R 90:410-12 My 1 '53

High sensitivity fission counter. W. Baer and R. T. Bayard. diag R Sci Instr 24: 138-40 F '53

High transmission slow neutron velocity selector. J. G. Dash and H. S. Sommers, jr. il diags R Sci Instr 24:91-6 F '53

Inelastic collision cross sections for 14-Mev neutrons. D. D. Phillips and others. bibliog Phys R 88:600-2 N 1 '52

Interaction of 14-Mev neutrons with protons and deuterons. J. C. Allred and others. bibliog diag Phys R 91:90-9 Jl 1 '53

Interaction of 95-Mev protons with D, Li, Be, C, Al, Cu, and Pb nuclei. J. A. Hofmann and K. Strauch. bibliog diags Phys R 90: 449-60 My 1 '53

Irradiation-induced photoconductivity in magnesium oxide. H. R. Day. bibliog Phys R 91:822-7 Ag 15 '53

Irradiation of crystalline vitamin B_{12} with neutrons. P. Numerof and J. Kowald. diags Am Chem Soc J 75:4350-2 S 5 '53

Lattice expansion of quartz due to fast neutron bombardment. M. Wittels. il Phys R 89:856-7 F 1 '53

Long-lived delayed neutrons from fission. J. W. Kunstadter and others. diag Phys R 91:594-6 Ag 1 '53

Measurement of the transport mean free path of thermal neutrons in D_2O by a boron poisoning method. S. W. Kash and D. C. Woods. Phys R 90:564-6 My 15 '53

Multiplicity of neutrons from the interaction of μ-mesons at rest in Pb, Bi, Sn, and Al. M. Widgoff. bibliog diag Phys R 90:891-9 Je 1 '53

Neutron activation of Ca^{46}. L. G. Cook and K. D. Shafer. Phys R 90:1121 Je 15 '53

Neutron and meson stars induced in the light elements of the emulsion. M. Blau and others. bibliog Phys R 91:949-57 Ag 15 '53

NEUTRONS—*Continued*

Neutron detection system for use with pulsed accelerators. J. Halpern and others. diags R Sci Instr 23:678-80 D '52

Neutron-electron interaction. D. J. Hughes and others. Phys R 90:497-8 My 1 '53

Neutron energy distribution from the proton bombardment of Li, Be, and C at 375 Mev. W. F. Goodell, jr. and others. bibliog diags Phys R 89:724-7 F 15 '53

Neutron energy spectrum from U^{235} thermal fission. D. L. Hill. diag Phys R 87:1034-7 S 15 '52

Neutron induced scintillation in organic liquids. N. D. Mallory and others. R Sci Instr 23:769-70 D '52

Neutron irradiation of crystalline vitamin B_{12}. D. T. Woodbury and C. Rosenblum. bibliog Am Chem Soc J 75:4364-5 S 5 '53

Neutron measurements with the Brookhaven crystal spectrometer. L. B. Borst and V. L. Sailor. bibliog il diag R Sci Instr 24:141-8 F '53

Neutron monochomator crystals, Fe_3O_4 and Ge. A. W. McReynolds. Phys R 88:958-9 N 15 '52

Neutrons from the disintegration of phosphorus by deuterons. S. C. Snowdon. bibliog Phys R 87:1022-5 S 15 '52

Neutrons from the proton bombardment of Be^9. F. Ajzenberg and W. W. Buechner. bibliog diag Phys R 91:674-5 Ag 1 '53

Neutrons produced in the absorption of negative π-mesons at rest. V. C. Tongiorgi and D. A. Edwards. diag Phys R 88:145-6 O 1 '52

New rigorous lower bound on the range of the triplet neutron-proton interaction. L. L. Foldy. bibliog Phys R 89:1251-4 Mr 15 '53

Nuclear stars in emulsions. R. W. Waniek and T. Ohtsuka. diag Phys R 89:882 F 15 '53

Parameters for the slow neutron resonance in rhodium. V. L. Sailor. bibliog Phys R 91:53-7 Jl 1 '53

Photofission and photoneutron emission in uranium. R. B. Duffield and J. R. Huizenga. bibliog Phys R 89:1042-6 Mr 1 '53

Photoneutron cross sections. R. Montalbetti and others. bibliog diags Phys R 91:659-73 Ag 1 '53

Photoneutron production excitation functions to 320 Mev. L. W. Jones and K. M. Terwilliger. bibliog diag Phys R 91:699-707 Ag 1 '53

Photoneutron reaction in Ca^{40}. R. Braams and C. L. Smith. bibliog Phys R 90:995 Je 1 '53

Preparation of carrier-free Sb^{125} from neutron irradiated stannous chloride. J. D. Robinson and M. Kahn. bibliog Am Chem Soc J 75:2004-6 Ap 20 '53

Production of P^{33} with thermal neutrons. T. Westermark. Phys R 88:573-4 N 1 '52

Proportional fission neutron counters. R. C. Rohr and others. il diag R Sci Instr 23:595-8 N '52

Radiochemical studies on the fission of Th^{232} with Li+D neutrons. A. Turkevich and others. bibliog Phys R 89:552-5 F 1 '53

Reactions of methane with iodine activated by radiative neutron capture. J. F. Hornig and others. bibliog J Chem Phys 20:1556-60 O '52

Resistivity of Cu_3Au during neutron irradiation. H. L. Glick and others. Phys R 87:1074 S 15 '52

Resolution of the photon difference method. J. Goldemberg and L. Katz. Phys R 89:1300-1 Mr 15 '53

Slow neutron detector. D. E. Alburger. R Sci Instr 23:769 D '52

Slow neutron-induced radioactivities of nuclear explosions. C. E. Mandeville. Franklin Inst J 252:297-308; 255:133-7 O '51, F '53

Some aspects of neutron single crystal analysis. R. Pepinsky. bibliog Science 117:1-3 Ja 2 '53

Some questions of neutron optics. O. Halpern. Phys R 88:1003-7 D 1 '52

Spallation of Cu with high energy neutrons. L. Marquez. bibliog Phys R 88:225-7 O 15 '52

State of chemical combination of $iodine^{131}$ formed by neutron irradiation of tellurium in organic liquids. F. J. Keneshea, jr. and M. Kahn. bibliog Am Chem Soc J 74:5254-5 N 5 '52

Study of the spectrum of the neutrons of low energy from the fission of U^{235}. T. W. Bonner and others. diags Phys R 87:1032-4 S 15 '52

Thermal energy relaxation length of Ra-Be neutrons in water. J. Tittman. bibliog Phys R 90:256-7 Ap 15 '53

Thermal neutron diffusion length in a heterogeneous pile. G. N. Plass. J Ap Phys 23:621-4 Je '52

Total cross sections for 400-Mev neutrons. V. A. Nedzel. Phys R 90:169 Ap 1 '53

Total cross sections for 14-Mev neutrons. J. H. Coon and others. Phys R 88:562-4 N 1 '52

Total cross sections for 14-Mev neutrons. L. S. Goodman. Phys R 88:686 N 1 '52

Total cross sections of chlorine, sodium, titanium, and bromine of fast neutrons. H. R. Dvorak and R. N. Little, jr. bibliog diag Phys R 90:618-22 My 15 '53

Total cross sections of heavy nuclei for fast neutrons. D. W. Miller and others. bibliog Phys R 88:83-90 O 1 '52

Total fast neutron cross sections of Co, Ga, Se, Cd, Te, Pt, Au, Hg, and Th. M. Walt and others. Phys R 89:1271-2 Mr 15 '53

Total neutron cross section of sodium. P. H. Stelson and W. M. Preston. bibliog Phys R 88:1354-7 D 15 '52

Total neutron cross sections of chlorine and carbon. R. M. Kiehn and others. bibliog Phys R 91:66-7 Jl 1 '53

Total neutron cross sections of gold, chlorine, and phosphorus. S. C. Snowdon and W. D. Whitehead. bibliog Phys R 90:615-18 My 15 '53

Variational method for problems of neutron diffusion and of radiative transfer. S. Huang. bibliog Phys R 88:50-2 O 1 '52

Absorption

Thermal neutron absorption cross section of scandium. E. E. Lockett and E. Bowell. bibliog Phys R 89:657-8 F 1 '53

Capture

Determination of the neutron-proton capture cross section. G. von Dardel and A. W. Waltner. bibliog Phys R 91:1284-5 S 1 '53

Dissociation of ethyl bromide and iodide by neutron capture. S. Wexler and T. H. Davies. bibliog diag J Chem Phys 20:1688-94 N '52

Effect of capture on the slowing-down length of neutrons in hydrogenous mixtures. H. C. Volkin. Phys R 91:425-6 Jl 15 '53

Fast neutron cross sections and nuclear level density. D. J. Hughes and others. bibliog diags Phys R 91:1423-9 S 15 '53

Internal conversion of neutron capture γ-rays. C. T. Hibdon and C. O. Muehlhause. bibliog diags Phys R 88:943-4 N 15 '52

Neutron capture cross section of Em^{222}. A. P. Baerg. Phys R 90:1121 Je 15 '53

Neutron capture cross sections. B. Margolis. bibliog Phys R 88:327-31 O 15 '52

Neutron capture cross sections for production of Sc^{46} and Sr^{85}. W. S. Lyon. Phys R 89:1307 Mr 15 '53

Neutron capture γ-ray spectra from the elements $Z=17\text{-}30$ and $Z=45\text{-}57$. B. Hamermesh and V. Hummel. bibliog diag Phys R 88:916-19 N 15 '52

Neutron capture γ-rays from scandium, vanadium, manganese, cobalt, and copper. G. A. Bartholomew and B. B. Kinsey. bibliog diags Phys R 89:386-95 Ja 15 '53

Neutron capture γ-rays from titanium, chromium, iron, nickel, and zinc. B. B. Kinsey and G. A. Bartholomew. bibliog diags Phys R 89:375-85 Ja 15 '53

Neutron capture gamma-rays in cadmium, cobalt, and chlorine. W. A. Reardon and others. il diags Phys R 91:334-7 Jl 15 '53

Radiative capture of thermal neutrons by Cd^{113}. R. W. Pringle and others. diag Phys R 87:1016-17 S 15 '52

Relative abundances and neutron capture cross sections of the neodymium isotopes. W. H. Walker and H. G. Thode. bibliog Phys R 90:447-8 My 1 '53

NEUTRONS—Capture—*Continued*

Successive neutron capture in Ta. J. W. Mihelich. Phys R 91:427 Jl 15 '53

Thermal neutron capture cross section of hydrogen. B. Hamermesh and others. bibliog diag Phys R 90:603-6 My 15 '53

Thermal neutron capture cross sections. H. Pomerance. Phys R 88:412-13 O 15 '52

Thermal neutron capture cross sections of Pa^{231} and Pa^{232}. R. Elson and others. Phys R 90:102 Ap 1 '53

Thermal neutron fission and capture cross section of U^{232}. R. Elson and others. Phys R 89:320 Ja 1 '53

Thermal neutron-proton capture. S. P. Harris and others. bibliog diag Phys R 91:125-9 Jl 1 '53

Diffraction

Neutron diffraction and atomic distribution in liquid lead and liquid bismuth at two temperatures. P. C. Sharrah and G. P. Smith. bibliog J Chem Phys 21:228-32 F '53

Neutron diffraction by liquid helium. D. G. Henshaw and D. G. Hurst. Phys R 91:1222 S 1 '53

Neutron diffraction determination of the crystal structure of ammonium bromide in four phases. H. A. Levy and S. W. Peterson. bibliog diags Am Chem Soc J 75:1536-42 Ap 5 '53

Neutron diffraction studies of antiferromagnetism in manganous fluoride and some isomorphous compounds. R. A. Erickson. bibliog diag Phys R 90:779-85 Je 1 '53

Neutron diffraction studies of cold-worked brass. R. J. Weiss and others. bibliog J Ap Phys 23:1379-82 D '52

Neutron diffraction studies of various transition elements. C. G. Shull and M. K. Wilkinson. bibliog Rs Mod Phys 25:100-7 Ja '53

Neutron diffraction studies of zinc ferrite and nickel ferrite. J. M. Hastings and L. M. Corliss. bibliog diags Rs Mod Phys 25:114-19; Discussion. 119-21 Ja '53

Neutron diffraction studies on scandium orthovanadate and scandium oxide. W. O. Milligan and others. bibliog J Phys Chem 57:535-7 My '53

Neutron diffraction study of magnesium ferrite. L. M. Corliss and others. bibliog diags Phys R 90:1013-18 Je 15 '53

Neutron diffraction study of the NaCl-type modification of ND$_4$Br and ND$_4$I. H. A. Levy and S. W. Peterson. J Chem Phys 21:366 F '53

Scattering

Angular distributions of elastically scattered 1-Mev neutrons. M. Walt and H. H. Barschall. Phys R 90:714-15 My 15 '53

Cloud-chamber study of the scattering of fast neutrons in oxygen. J. P. Conner. bibliog Phys R 89:712-14 F 15 '53

Complete solution of the one-velocity diffusion problem at intermediate and large distances. L. Tonks. J Ap Phys 23:1085-8 O '52

Construction and calibration of a fast neutron scintillation spectrometer. G. L. Guernsey and others. bibliog il diags R Sci Instr 23:476-82 S '52

Differential and total neutron scattering cross sections of the deuteron in the energy range 0.1 to 1.0 Mev. P. R. Tunnicliffe. bibliog Phys R 89:1247-51 Mr 15 '53

Differential *n-p* scattering cross section for 220-Mev neutrons. G. Guernsey and others. bibliog diag Phys R 88:15-19 O 1 '52

Elastic scattering of protons and neutrons by deuterons. R. S. Christian and J. L. Gammel. bibliog Phys R 91:100-21 Jl 1 '53

Elastic scattering of protons and neutrons by helium. D. C. Dodder and J. L. Gammel. bibliog Phys R 88:520-5 N 1 '52

Energy distribution of slow neutrons scattered from solids. B. N. Brockhouse and D. G. Hurst. bibliog diags Phys R 88:542-7 N 1 '52

Gamma radiation from inelastic scattering of 2.7-Mev neutrons. V. E. Scherrer and others. Phys R 91:768-9 Ag 1 '53

Inelastic scattering of neutrons by Cd^{111}. A. E. Francis and others. bibliog diag Phys R 89:1232-6 Mr 15 '53

Inelastic scattering of thermal neutrons in lead. A. W. McReynolds. bibliog Phys R 91:1368-71 S 15 '53

Meson theory of nuclear forces and low energy properties of the neutron-proton system. M. M. Lévy. bibliog diags Phys R 88:725-39 N 15 '52

Methods for measuring fast neutron cross sections. H. H. Barschall. bibliog diags Rs Mod Phys 24:120-32 Jl '52

Multiple scattering of neutrons; scattering by spin-dependent forces and polarization phenomena. O. Halpern. bibliog Phys R 88:232-5 O 15 '52

Neutron energy distributions from Be, C, and Pb bombarded by 245-Mev protons. B. K. Nelson and others. bibliog diags Phys R 88:1-8 O 1 '52

Neutron-proton scattering using organic crystal scintillation detectors. M. E. Remley and others. bibliog diags Phys R 89:1194-8 Mr 15 '53

Neutron scattering by coupled paramagnetic ions. P. J. Bendt. bibliog diags Phys R 89:561-9 F 1 '53

Orbital effect in neutron-electron magnetic scattering. W. H. Kleiner. bibliog Phys R 90:168-9 Ap 1 '53

Paramagnetic scattering of neutrons by trivalent ions of Nd and Er. W. C. Koehler and E. O. Wollan. Rs Mod Phys 25:128-9 Ja '53

Scattering of neutrons by deuterons. R. K. Adair and others. bibliog Phys R 89:1165-70 Mr 15 '53

Scattering of slow neutrons by *ortho-* and *para*-hydrogen. A. T. Stewart and G. L. Squires. bibliog Phys R 90:1125 Je 15 '53

Scattering of slow neutrons by O$_2$ molecules. O. Halpern and G. L. Appleton. bibliog Phys R 90:869-79 Je 1 '53

Scattering of slow neutrons in polycrystalline media. R. W. Gurney. Phys R 88:466-7 N 1 '52

Slow neutron scattering cross sections for rare earth nuclides. W. C. Koehler and E. O. Wollan. bibliog Phys R 91:597-9 Ag 1 '53

Total cross sections of carbon and hydrogen for high energy neutrons. G. R. Mott and others. bibliog diag Phys R 88:9-14 O 1 '52

Total *n-p* scattering cross section at 4.75 Mev. E. M. Hafner and others. bibliog diags Phys R 89:204-22 Ja 1 '53

NEVADA

See also

Copper mines and mining—Nevada
Electricity supply—Nevada
Labor laws and legislation—Nevada
Mines and mineral resources—Nevada

NEW BRITAIN machine tool company

Record output into 1954 seen. Barron's 33:16-17 Je 22 '53

NEW BRUNSWICK

See also

Mines and mineral resources—New Brunswick
Roads—New Brunswick

Sanitary affairs

Jurisdiction over water supplies and sewerage. A. J. Cameron. Munic Util 91:26+ Jl '53

NEW employees. See Employment management—New employees

NEW ENGLAND

See also

Finance—New England
Gas, Natural—New England, Supply to
Hydroelectric plants—New England

Economic conditions

Economic and market potentials of the chemical industry. R. F. Elder and G. H. Ellis. bibliog Ind & Eng Chem 44:2550-5 N '52

Industries and resources

Financial aid for the new and small; development credit corporations. Bsns W p 112+ Jl 4 '53

New England blueprints industrial growth. Eng N 149:137-8 O 9 '52

NEW ENGLAND—Industries and resources—*Continued*

New trend gives small firms a chance; bold action getting venture capital for promising small business. W. V. Packard. map Iron Age 171:66-7 Ap 16 '53

Resources for the chemical industry in the United States. J. B. Calkin and others. il maps Ind & Eng Chem 44:2525-55 N '52 (reprints 75c)

NEW ENGLAND electric system

Costly water shortage seen over. Barron's 33:21-2 Mr 2 '53

Merge operations of 11 subsidiaries into two electric and two gas companies. Comm & Fin Chr 177:1904 My 4 '53

Stock offering. Comm & Fin Chr 177:2680 Je 22 '53

Stock offering underwritten. Comm & Fin Chr 177:2571 Je 15 '53

NEW ENGLAND gas association

Annual meeting, Boston, March 26-27. Am Gas Assn Mo 35:33 Ap '53; Am Gas J 178:16-17 Ap '53; Gas Age 111:66-7+ Ap 23 '53

NEW ENGLAND mutual life insurance company

Annual meeting, Boston. East Underw 54:1+ Mr 20 '53

NEW ENGLAND-New York inter-agency committee

Cussed independence in Yankee land. R. D. Grant. Pub Util 51:821-9 Je 18 '53

NEW ENGLAND power company

Preferred stock offered. Comm & Fin Chr 177:1050-1 Mr 9 '53

NEW ENGLAND states

Cussed independence in Yankee land. R. D. Grant. Pub Util 51:821-9 Je 18 '53

NEW ENGLAND telephone and telegraph company

Debentures offered. Comm & Fin Chr 176:2272 D 15 '52

NEW ENGLAND water works association

Annual meeting, 71st, Groton, Conn. Sept. 8-10; with abstracts of papers. Water & Sewage Works 99:448-54 N '52

NEW HAMPSHIRE

See also

Floods—New Hampshire

NEW JERSEY

See also

Roads—New Jersey

Zinc mines and mining—New Jersey

State building authority

Authorities' bond selling under fire in N.J. courts. Eng N 150:62 F 12 '53

N.J. State building authority is held invalid. Eng N 150:22 Je 11 '53

NEW JERSEY power and light company

Bonds offered. Comm & Fin Chr 177:2680-1 Je 22 '53

NEW MEXICO

See also

Geology—New Mexico

Mines and mineral resources—New Mexico

Petroleum—New Mexico

Petroleum industry and trade—New Mexico

Antiquities

Fluorine content of associated human and extinct animal bones from the Conkling cavern. T. D. Stewart. bibliog Science 116:457-8 O 24 '52

NEW MEXICO oil and gas engineering committee. See Petroleum industry and trade—New Mexico

NEW ORLEANS

New Orleans: an old gay city on the River. il Am Gas J 178:25 My '53

Tri-state industry hub. W. V. Packard. il Iron Age 170:100-1 D 4 '52

Harbor

$31 million planned for New Orleans' port. il Eng N 149:60+ O 9 '52

United Fruit opens new banana wharf. Eng N 150:55 Ja 15 '53

Hotels, restaurants, etc.

Gourmets approve commercial cooking in New Orleans, where they all cook with gas. J. D. Haverkamp. il Am Gas J 178:34-5+ My '53

Newspapers

Decision for papers; Times-Picayune and States. Bsns W p69-70 My 30 '53

NEW ORLEANS public service, inc.

Bonds offered. Comm & Fin Chr 177:2132 My 18 '53

NEW ORLEANS stock exchange

New officers. Comm & Fin Chr 176:2036 N 27 '52

NEW products. See Products, New

NEW SOUTH WALES

See also

Railroads—New South Wales

NEW TORONTO, Ontario

Water supply

Design of filtration plant affected by space limitations. R. W. Angus. il plan diags Munic Util 91:28-32+ Je '53

NEW WORLD life insurance company

Sammons offer to buy New World stock is opposed. Nat Underw (Life ed) 57:1+ F 27 '53

NEW YORK (city)

Future of New York city. C. V. ter Kuile. Comm & Fin Chr 176:2230+ D 11 '52

New York is different. A. B. Marvin. map Pub Util 50:772-9 N 20 '52

Racket rule on New York's docks brings showdown after 50 years. il Bsns W p 164-8 Je 20 '53

Slum clearance may bring conventions to New York. il plan diag Arch Rec 113:20 Ja '53

Steel-framed elevated highway as a traffic-relief measure. il map Roads & Eng Constr 91:87-9+ Jl '53

See also

Gas, Natural—New York (city), Supply to

Housing—New York (city)

Theater—New York (city)

Architecture

Office space; still not enough to end the squeeze. il Bsns W p86-8+ D 6 '52

Charities

Directory of social and health agencies of New York city, 1952-1953. D. M. Swart, ed. 551p $5 Columbia univ. press, 2960 Broadway, New York 27 '52

Crime

Business and crime on the waterfront. Bsns W p 144 D 20 '52

On New York's piers crime comes out in the open. il Bsns W p28-9 D 20 '52

Finance

See Finance—New York (city)

Hospitals

Dedicate new Beekman-Downtown hospital. East Underw 54:25 Ap 10 '53

Hotels, restaurants, etc.

Dinner at Leone's. Fortune 47:160 Mr '53

Lighting

Radio controlled light may save half million. il Electronics 26:18 Ap '53

Mayor's committee on management survey

Central planning; place and purpose; lessons in management survey. C. Heyel. il Dun's R 61:33-5+ My '53

Public works

New York city falls into line, requires contract bonds. Eng N 150:220-1 F 19 '53

Rapid transit

City hall studies plans to cut deficit. Bsns W p86-8+ Ap 18 '53

NEW YORK (city)—Rapid transit—*Continued*

Fare ups and downs. Bsns W p 134 Jl 18 '53

NYTA sets billion-dollar plan. il Bus Transportation 32:63 S '53

New York's city-owned transit passes to authority ownership. il Bus Transportation 32:50 Jl '53

Plans for transit system. S. H. Bingham. Pub Util 52:235-42 Ag 13 '53

Rockefeller Center

Making friends in business, a must. C. Hood. Am Gas Assn Proc 1952:247-50

Sanitary affairs

Air pollution control unit set up by New York. Eng N 149:45 D 4 '52

New York city turns to incineration. C. A. Rogus. il map Civil Eng 22:1030-5+ D '52

Sewerage

Sewage disposal problems in the world's largest city. R. H. Gould. map Sewage & Ind Wastes 25:155-60 F '53

Subways

Goodyear designs conveyor for subway system. Rubber Age 71:791 S '52; il Arch Rec 112:14 S '52; plan Civil Eng 22:905 O '52; Machine Design 24:245 O '52; Comp Air Mag 57:317 N '52; Mech Eng 74:826-7 O '52

Install high-speed public escalators. il Eng N 149:52 D 11 '52

Rock surgery under busy Manhattan. J. C. Pierce. il diag Comp Air Mag 57:335-8 D '52

Train that never stops. il Bsns W p32 Jl 11 '53

Two major subways get double-track connection. A. C. Maevis. il map Eng N 150:38-40, cover Ap 23 '53

Theaters

See Theater—New York (city)

Tunnels

Contractor can profit, city can save by incentive contract on tunnel job. Eng N 150:23-4 Je 11 '53

New York Port authority reveals third tube plans. Eng N 149:57-8 O 23 '52

Tennis courts go up in price as town fights bi-state agency. il Eng N 150:46-8 Je 25 '53

Third Lincoln tube. plan Eng N 149:25 O 2 '52

Water supply

New York city's quest for more water from Delaware river nears satisfaction. map Eng N 150:27 Je 25 '53

Water supply, Board of

New York city Water Board reorganizes its staff. Eng N 149:43 N 27 '52

NEW YORK (state)

See also
Public utilities—New York (state)

Power authority

New York takes its St Lawrence story to FPC. il Elec World 138:90-1 D 15 '52

NEW YORK airways, inc.

Across New York by helicopter; starting new kind of passenger service. il map Bsns W p32-3 Jl 18 '53

NEW YORK central and Hudson River railroad

Security I like best. A. Marx. Comm & Fin Chr 176:2326 D 18 '52

NEW YORK central railroad

Annual report, 1952. Ry Age News ed 134:24-5 My 11 '53

How do you doctor an ailing railroad? map Bsns W p86-8 Ja 3 '53

Railroad securities. Comm & Fin Chr 176:2404; 178:26 D 18 '52, Jl 2 '53

Security I like best. H. Zimmerman. Comm & Fin Chr 177:1422+ Ap 2 '53

Speeding up railroad Pullman ticket sales; Travel service center, Cleveland. il Bsns W p 174-6+ Je 6 '53

White of the New York Central. Fortune 47:126-7+ Mr '53

NEW YORK, Chicago and St Louis railroad

Bonds offered. Comm & Fin Chr 177:835 F 23 '53

Railroad securities. Comm & Fin Chr 177:2325 My 28 '53

Seven companies likely to increase dividends in 1953; with comparative balance sheet items. Mag of Wall St 91:400 Ja 10 '53

NEW YORK coal sales company

Diversify; only company which produces cement, aggregates, ready mix, and concrete products. B. Nordberg. il map plan diag Rock Prod 56:74-86+ F '53

NEW YORK compensation insurance rating board

Annual meeting, New York, Jan. 29. Weekly Underw 168:402 F 7 '53; East Underw 54:34 F 6 '53

NEW YORK curb exchange. See American stock exchange

NEW YORK fire insurance exchange

Exchange is winding up. Nat Underw 56:4 O 30 '52

NEW YORK life insurance company

New field set-up of New York Life. East Underw 54:11 Ja 2 '53

State examination of New York Life launched as news. East Underw 54:1+ Ja 9 '53

Two new geographical divisions created by New York Life; vice-presidents appointed. Weekly Underw 168:163 Ja 10 '53

NEW YORK mercantile exchange

Potato futures give bulls a bad day. il Bsns W p 122-5+ O 25 '52

NEW YORK mortgage exchange

Clearinghouse buys, sells mortgages. Bsns W p96 N 29 '52

Will be open market place for first and second mortgages covering metropolitan area. Comm & Fin Chr 176:1950 N 20 '52

NEW YORK, New Haven and Hartford railroad

Bonds offered. Comm & Fin Chr 177:143 Ja 12 '53

Construction vs. dividends; New Haven railroad stock fight over capital improvements may decide other roads' programs. il Eng N 150:26-7 F 12 '53

Fight's off. Bsns W p 104-5 Mr 7 '53

How to rebuild a railroad. il Bsns W p52-4+ Mr 14 '53

New Haven for investors. I. U. Cobleigh. Comm & Fin Chr 177:1210-11 Mr 19 '53

Railroad securities. Comm & Fin Chr 177:1542 Ap 9 '53

NEW YORK sewage and industrial wastes association

Annual meeting, 25th, New York, Jan. 22-23; with abstracts of papers. Water & Sewage Works 100:112-16 Mr '53

NEW YORK shipbuilding company

New York Ship changes ownership. Marine Eng 58:96+ Mr '53

NEW YORK state bar association

Insurance section

Annual meeting, New York, Jan. 26. East Underw 54:32-3 F 6 '53

NEW YORK state electric and gas corporation

N.Y. State Electric & Gas celebrates centennial. Gas Age 110:75-6 N 20 '52

NEW YORK stock exchange

Broadening the markets. Bsns W p 115-16 F 14 '53

Corporate membership approved. G. K. Funston. Comm & Fin Chr 177:1123 Mr 12 '53

Diversion of stock block purchases to stock exchange considered. H. J. King. Comm & Fin Chr 177:2518 Je 11 '53

Governors approve new commission rates. Comm & Fin Chr 178:366 Jl 30 '53

Higher rates for brokers on New York stock exchange. Bsns W p 129 Jl 18 '53

Market break; $12-billion. Bsns W p33-4 Je 20 '53

Monthly range of prices on the New York stock exchange for year 1952. Comm & Fin Chr 177:386-99 sec 2 Ja 22 '53

New influences in the stock market. I. Friend. Fortune 47:108-9+ Mr '53

New specialist rule adopted to attract large blocks of listed stocks to exchange market. Comm & Fin Chr 177:2310 My 28 '53

NYSE reports third-quarter profit. Comm & Fin Chr 176:1632 O 30 '52

NEW YORK stock exchange—*Continued*
NYSE reveals lower profit made in 1952. G. K. Funston. Comm & Fin Chr 177:1220 Mr 19 '53
NYSE would reduce membership. Comm & Fin Chr 176:2036 N 27 '52
Newcomers. J. S. Williams. Mag of Wall St 91:648-9+ Mr 7 '53
Paging Joe Public; educational program to expand public ownership of securities. G. K. Funston. Comm & Fin Chr 177:2073+ My 14 '53
Proposals for stimulating trading. Comm & Fin Chr 177:585 F 5 '53
Proposes new commission rates. G. K. Funston. Comm & Fin Chr 178:214 Jl 16 '53
Seat reduction plan narrowly approved. G. K. Funston. Comm & Fin Chr 176:2234 D 11 '52
Stock exchange members vote on incorporation. J. C. Perham. Barron's 33:14 Mr 2 '53
Wall Street finds the pickings slim. il Bsns W p43-4+ D 13 '52
Wall Street tries a rally. Bsns W p 148+ Ap 25 '53

NEW YORK, Susquehanna and western railroad
Getting a railroad back on the rails. map Bsns W p 180-2+ Je 6 '53

NEW YORK telephone company
Bonds offered. Comm & Fin Chr 177:2786 Je 29 '53

NEW YORK times
Five promotions on New York times; Joseph retires. Ed & Pub 85:54 D 6 '52

NEW YORK university
N.Y.U. completes 89th army safety course. Nat Safety N 67:50 Ja '53

Institute on federal taxation

Foundation clinic. Bsns W p 146 My 16 '53

NEW YORK world (newspaper)
1953 may see end of the World (New York World building). R. Erwin. il Ed & Pub 86:10-11+ Ja 3 '53

NEW ZEALAND
New Zealand and the Commonwealth conference. Economist 165:108-9 O 11 '52
New Zealand's criticisms of Britain. Economist 167:746-7 Je 13 '53
See also
Electricity supply—New Zealand
Hydroelectric plants—New Zealand

Commercial policy

New Zealand to modify allocations for 1954. For Comm W 50:17 Jl 6 '53

Economic conditions

Economic conditions abroad (cont). For Comm W 49:4 F 9; 3 Je 1 '53

Politics and government

Calm and caution in New Zealand. Economist 167:672-3 Je 6 '53

NEWCOMEN, Thomas, 1663-1729
Commemoration of Thomas Newcomen. Engineering 174:244 Ag 22 '52

NEWCOMEN society for the study of the history of engineering and technology
Summer meeting, Cambridge, May 27-29. Engineer 195:793 Je 5 '53; Engineering 175:755-6 Je 12 '53

NEWFOUNDLAND
Newfoundland finds high freight rates growing burden to economy. For Comm W 49:20 My 11 '53
See also
Mines and mineral resources—Newfoundland
Railroads—Newfoundland

Economic conditions

Economic conditions abroad. For Comm W 48:4 N 3 '52

NEWFOUNDLAND and Labrador corporation
Labrador ore; concessions granted by Newfoundland and Labrador corp. Bsns W p28 Jl 25 '53

NEWMAN, James Wilson
Businessmen in the news. por Fortune 47:38 Ja '53

NEWS
See also
Reporting
War news

International aspects

UN asks signatures on correction treaty. K. Teltsch. Ed & Pub 85:8 D 20 '52
See also
Newspapers—Foreign correspondents

NEWS agencies
More stories in fewer words-editors' appeal. J. Walker. Ed & Pub 86:11+ Ja 31 '53
Three press services plot fast election vote tabulations. R. Erwin. Ed & Pub 85:9+ O 4 '52
See also
Associated press
International news service

NEWS photographers
Dawson photo of Elizabeth captures prize. Ed & Pub 85:48 D 13 '52
Lensman helps bring slayer, dad together. Ed & Pub 86:52 Ap 11 '53
Mr Lensman, 1952. J. L. Collings. Ed & Pub 85:42 S 27 '52
Newly organized OPPA fights courtroom ban. J. L. Collings. Ed & Pub 85:44 D 6 '52
Stories you might like about photographers. J. L. Collings. Ed & Pub 86:64 Ja 10 '53
This Bodine; here's a master craftsman. J. L. Collings. Ed & Pub 85:55 N 29 '52
This was Jurkoski's biggest assignment; with Eisenhower to Korea. J. L. Collings. Ed & Pub 85:58 D 20 '52
See also
Moore, Frank Marshall
National press photographers association
Stroecker, Monroe D. B.

NEWS photographs
Baltimore judges reply to NPPA ban protest. J. L. Collings. Ed & Pub 85:47 N 1 '52
Basketball sequence pix without flash. J. L. Mahler. il Ed & Pub 86:9 Ja 3 '53
Big three news pictures picked by Dick Sarno. J. L. Collings. il Ed & Pub 85:54 N 15 '52
Contempt is hinted in murder case photos. Ed & Pub 85:48 O 25 '52
Do you like the stare or picture that's busy? J. L. Collings. Ed & Pub 85:44 O 11 '52
Lensmen do good job of shooting bandit. R. M. Cudahy. diag Ed & Pub 85:55 O 4 '52
Marine corps softens air crash restrictions. Ed & Pub 85:48 N 8 '52
96,000 pix taken weekly, survey shows. J. L. Collings. Ed & Pub 86:52 F 21 '53
Tom Howard tells story of death chair picture. G. A. Brandenburg. Ed & Pub 85:16 D 27 '52
Wilson Hicks tells why and how pix pull. R. Ellard. Ed & Pub 85:60 D 20 '52

Law

Courts urged to relax limits on photography. E. R. Campbell. Ed & Pub 85:9+ N 29 '52

NEWSPAPER advertising executives association
Annual meeting, 43d, Chicago. Ed & Pub 86:7-10+ Ja 31 '53

NEWSPAPER and mail deliverers' union
NLRB orders union to cease job coercion. Ed & Pub 85:13 D 6 '52

NEWSPAPER association managers
Stanford Smith heads NAM group. Ed & Pub 85:51 N 22 '52

NEWSPAPER associations
See also
Advertising—Rates
also American newspaper publishers' association; National press photographers association; Sigma delta chi

NEWSPAPER awards
All five winners in typo contest are repeaters. Ed & Pub 86:78 F 21 '53
New Mexico press association and North Carolina press association awards. Ed & Pub 86:49 Ja 31 '53
News, photo contests listed for new year. Ed & Pub 86:67 Ja 10 '53

NEWSPAPER awards—*Continued*

Salt Lake trib wins Inland's service trophy. Ed & Pub 85:49 O 4 '52

25 inland dailies get merit awards. Ed & Pub 85:54 O 18 '52

See also

Journalism awards

NEWSPAPER bulletin boards. See Bulletin boards, Newspaper

NEWSPAPER carriers

Baltimore carriers work under contract. Ed & Pub 86:40 F 21 '53

Call a day program is popular in Dayton. Ed & Pub 85:40 N 29 '52

Carrier papers add zest to route work. G. A. Brandenburg. Ed & Pub 85:38+ O 25; 60+ N 1 '52

Government big guns salute newspaperboys. il Ed & Pub 85:12-13+ O 11 '52

How Cleveland whips the carrier problem. E. R. Tidyman. il Ed & Pub 85:60 O 18 '52

Master carriers named from perfect service roll; St Paul (Minn.) Dispatch-pioneer press. I. Sundberg. Ed & Pub 86:42 Ja 31 '53

Paper uses carriers for survey on comics. G. A. Brandenburg. Ed & Pub 86:44 Ja 17 '53

Tells how carrier counsellors function. D. Lang. Ed & Pub 85:46 O 18 '52

Whistle may mean silver dollar for carrier. G. A. Brandenburg. Ed & Pub 86:46 Ja 10 '53

Training

ICMA carrier training program is launched. G. A. Brandenburg. Ed & Pub 86:49 F 14 '53

NEWSPAPER controllers and finance officers, Institute of. See Institute of newspaper controllers and finance officers

NEWSPAPER ethics

Canadians told true reporting is needed. E. Canham. Ed & Pub 86:12 F 14 '53

Declares McCarthyism a press problem. P. Hoyt. Ed & Pub 86:74 F 21 '53

Movie ads out in feud over caustic reviews. D. Willens. Ed & Pub 86:65 Ja 10 '53

News slanting is alarming press threat. Ed & Pub 86:52 F 7 '53

Press should uphold right to be wrong. S. Brown. Ed & Pub 86:14+ Ja 10 '53

Star's business practices defended. R. A. Roberts. Ed & Pub 86:9+ Ja 10 '53

Would public regard junkets as Nixonism? Ed & Pub 85:14 N 29 '52

See also

Newspapers—Advertising policies

NEWSPAPER libraries

Newspaper fact library urged as promotion aid; West coast regional conference of National newspaper promotion association, Los Angeles, Nov. 17-18. Ed & Pub 85:11 N 22 '52

Pence retires from library. Ed & Pub 86:43 Ja 3 '53

NEWSPAPER offices

1953 may see end of the World (New York World building). R. Erwin. il Ed & Pub 86:10-11+ Ja 3 '53

Specialists needed in planning efficient newspaper buildings. M. L. Pereira. il Ed & Pub 85:59-60 D 13 '52

$300,000 invested in Ontario plant; Niagara (Ont.) Evening review. il Ed & Pub 85:62 D 13 '52

Air conditioning

Humidity control for an air conditioned office building; Toledo Blade. F. M. Johnson. il Dom Eng 182:104 Ag '53; Abstract. Ed & Pub 86:62 Ap 11 '53

Equipment

Direct-delivery plan completed; San Francisco (Calif.) call-bulletin. il Ed & Pub 86:50 Ja 10 '53

Mechanical equipment of 2429 newspapers in 1695 plants; United States and Canada. Ed & Pub 85:1-68 sec 2 S 27 '52

Plant enlarged at Appleton, Wis. il Ed & Pub 86:45 F 14 '53

Lighting

Press room lighting; lighting data sheet. E. F. McDonnell, jr. il Illum Eng 48:13-14 Ja '53

NEWSPAPER representatives

McDevitt will gives firm to five employes. J. Walker. Ed & Pub 86:9 F 14 '53

See also

Advertising, Soliciting of

Advertising mediums—Newspapers

NEWSPAPER representatives, American association of. See American association of newspaper representatives

NEWSPAPER vendors

NLRB ruling describes system in Los Angeles. Ed & Pub 86:52 Ja 24 '53

NEWSPAPER week

Boston ceremony to open National newspaper week. Ed & Pub 85:9+ S 27 '52

NEWSPAPERS

Better papers, higher prices, seen for '53. G. A. Brandenburg. Ed & Pub 85:38 D 27 '52; 86:40 Ja 3 '53

Urges better paper with less space. B. L. Walters. Ed & Pub 86:11 F 7 '53

See also

Advertising mediums—Newspapers

Army newspapers

Audit bureau of circulations

College newspapers

Freedom of the press

Journalism

Newspaper offices

Newsprint paper

Reporters

Reporting

Television stations, Newspaper

Trade journals

Accounting

Controller of a newspaper can solve the month-end and year-end work load problem. G. E. Killian. J Account 95:230-1 F '53

How Dow Jones controls budget. L. Stemp. il Am Bsns 22:40+ O '52

Payroll machine saves $1,000 month. Ed & Pub 85:53-4 N 8 '52

Advertising

AAW booklet explains newspapers' retail role. Ed & Pub 86:18 F 14 '53

Bureau prepares ads that promote medium. M. C. Wallis. Ed & Pub 86:30 Ja 31 '53

Dialogue in The Keyston idea; a newspaper documentary film. Ed & Pub 85:56 O 18 '52

Gift promotion works; 1,288 belts prove it; News and observer, Raleigh, N.C. Sales Management 70:136 Mr 15 '53

London Mirror's promotion pitch. D. Willens. Ed & Pub 85:34 N 8 '52

New economic empire off to poetic start. T. S. Irvin. Ed & Pub 86:44 Ja 31 '53

Newspaper films do big job for press. D. Bentel. Ed & Pub 86:54 F 7 '53

Raw material makes powerful ad message. T. S. Irvin. Ed & Pub 85:50 N 15 '52

South Bend tribune shows retailers local impact. Ed & Pub 85:22 D 20 '52

Advertising departments

ANA survey critical of newspaper selling. Ed & Pub 86:15 Ja 31 '53

Publishers control own want ad picture. G. Gillett. Ed & Pub 85:28 O 25 '52

Want ad copy desk can be boon to salesman. D. L. Lionel. Ed & Pub 85:28 D 6 '52

Advertising executives

26 ad execs plan to attend API seminar. Ed & Pub 86:56 F 14 '53

Advertising policies

Advises drys to broaden their appeal; upholds Gannett refusal of liquor advertising. D. U. Bridge. Ed & Pub 85:14 S 27 '52

Decision for papers; unit advertising schemes. Bsns W p69-70 My 30 '53

Does rate box negate the ad-taker's efforts? D. L. Lionel. Ed & Pub 85:47 D 27 '52

Readers hold publishers responsible for ad claims. Ed & Pub 85:18 N 1 '52

Still on top. Bsns W p48 Jl 4 '53

Advertising rates

See Advertising—Rates

NEWSPAPERS—*Continued*

Advertising service

Augusta uses spotlight plan in two dailies. Ed & Pub 85:26 D 6 '52

Chicago Tribune study tells why people smoke. Ed & Pub 85:18 N 1 '52

Consumer surveys aid ad selling. K. Dennett. Ed & Pub 86:18 F 7 '53

How dailies can assist retailer, manufacturer. D. J. Swann. Ed & Pub 85:18 N 29 '52

Ideas, market data sell ads. M. F. Batterton. Ed & Pub 86:22 F 7 '53

Intense interest shown in merchandising survey. Ed & Pub 86:16+ Ja 31 '53

Lack of regular staff doesn't stop New Jersey daily. M. C. Wallis. Ed & Pub 85:16 N 15 '52

Merchandising builds sales, figures show. Ed & Pub 85:26 S 27 '52

Merchandising checklist rates bouquet for Roy. T. S. Irvin. Ed & Pub 85:50 D 13 '52

Newspaper advertising executives appraise media merchandising. H. E. Green. Ptr Ink 242:33+ Ja 30 '53

Pasadena star-news has tailor-made service. Ed & Pub 86:22 F 14 '53

Small-city newspaper inventory checks on sales. E. J. Dever, jr. Ptr Ink 241:104+ D 5 '52

Small staff for big job at Madison Newspapers. M. C. Wallis. Ed & Pub 86:18 Ja 10 '53

Study finds more papers give copy, layout service. Ed & Pub 85:20 O 4 '52

Want ads get full support at Los Angeles times. Ed & Pub 85:26 D 13 '52

What the space buyer wants from papers. M. Cardon. Ed & Pub 85:24 S 20 '52

See also

Advertising mediums—Newspapers

Market research, Newspaper

All day papers

See Newspapers—Editions

Bibliography

Union lists

Postwar foreign newspapers; a union list. 231p pa $1.60 Library of Congress; for sale by the Card division, Library of Congress, Washington 25 '53

Book reviews

Book reviewers for newspapers attend forum. Ed & Pub 86:46 Ja 31 '53

Business news

Press relations often a personnel function. R. Simon. Personnel J 31:377-80 Mr '53

Circulation

Newspaper sales up on tved inaugural. Ed & Pub 86:9 Ja 24 '53

See also

Audit bureau of circulations

Circulation departments

Study calls for better personnel procedures. G. A. Brandenburg. Ed & Pub 85:58 D 6 '52

Weekly inter-department meetings build teamwork. G. A. Brandenburg. Ed & Pub 85:46 N 8 '52

Column width

Agency production chiefs view 11-6 column. M. C. Wallis. Ed & Pub 85:22 N 29 '52

High price forces newsprint saving. W. L. Fanning. Ed & Pub 85:9+ D 27 '52

Los Angeles papers adopt 11-6 measure. Ed & Pub 85:61 O 18 '52

Mills say column-width saving may be illusory. J. M. Savage. Ed & Pub 85:7+ D 13 '52

New England conference studies effects of column width change. D. E. Young. Ed & Pub 85:53 N 8 '52

Saving from narrower column still in doubt. G. A. Brandenburg. Ed & Pub 85:9+ O 18 '52

Comic strip

Editors greet Lucy's boy with boast and sigh. Ed & Pub 86:13 Ja 24 '53

KFS offers I love Lucy as gag-a-day comic strip. E. Knoll. Ed & Pub 85:54 N 22 '52

Susie Q. panel converts into strip for McNaught. E. Knoll. Ed & Pub 85:50 D 20 '52

Consolidations

Combinations here to stay; papers better. G. C. Biggers. Ed & Pub 85:9+ D 20 '52

Correspondents, Washington

Fifteen-day runaround for atom sub story. M. Amrine. Ed & Pub 86:12+ F 7 '53

Reading for D-days Supreme Court chore. C. Moulton. Ed & Pub 86:14 F 14 '53

Country correspondents

Correspondents taught job by University of Missouri. D. Bentel. Ed & Pub 85:44 D 20 '52

Country newspapers

Grassroots press covers 52 per cent of people; Hometown America (10,000 population and under). R. Erwin. Ed & Pub 85:42 D 20 '52

Court news

Ban turns Jelke trial into three-ring circus. J. L. Kilgallen. Ed & Pub 86:15 F 21 '53

Court's censorship in sex case arouses press, public. R. Erwin. Ed & Pub 86:7+ F 14; 15+ F 21 '53

Defends newspaper function; Rosenberg trial. S. J. Ryan. Ed & Pub 86:9 F 7 '53

Newly organized OPPA fights courtroom ban. J. L. Collings. Ed & Pub 85:44 D 6 '52

Court reporting

See also

United States—Supreme court

Court rules

Courts urged to relax limits on photography. E. R. Campbell. Ed & Pub 85:9+ N 29 '52

Credit departments

Meeting the growing collection problem. D. L. Lionel. Ed & Pub 86:36 Ap 11 '53

Crime investigation

Persistent probing solves kidnap cases. H. Dunn. Ed & Pub 86:14 Ja 24 '53

Crime reporting

Baltimore judges reply to NPPA ban protest. J. L. Collings. Ed & Pub 85:47 N 1 '52

Bang, bang! deadline reports on bank bandit. Ed & Pub 85:12 O 4 '52

Contempt is hinted in murder case photos. Ed & Pub 85:48 O 25 '52

Turns burglar to talk to youths in prison; Don Kellerman. Ed & Pub 85:11 O 25 '52

Editions

Sales down only two per cent after all-day merger. Ed & Pub 85:48 O 4 '52

Editorial writers

Sargent heads editorial page conference. Ed & Pub 85:8 N 29 '52

Six get Reid foundation travel awards. Ed & Pub 85:52 D 6 '52

Would public regard junkets as Nixonism? Ed & Pub 85:14 N 29 '52

Editorials

Editorial influence dies from anonymity. C. M. Knapp. Ed & Pub 85:65 O 11 '52

Employees

Boston papers oppose payroll exposure order. Ed & Pub 85:12 S 27 '52

Employes cut short their purchase period; Daily Nugget Canada's first employe-owned daily newspaper. C. M. Fellman. Ed & Pub 85:44 N 29 '52

Exaction or negotiation? issue in bogus test case. Ed & Pub 85:7 N 22 '52

14 NYC papers negotiate with nine unions. Ed & Pub 85:59 O 25 '52

Specialists! there are nine on Chicago Tribune staff. G. A. Brandenburg. Ed & Pub 85:42 O 4 '52

Study calls for better personnel procedures. G. A. Brandenburg. Ed & Pub 85:58 D 6 '52

Sydney writer praises spirit on North Carolina dailies. R. McKie. Ed & Pub 85:30 D 6 '52

NEWSPAPERS—Employees—*Continued*

Three union leaders welcome Knight's team suggestion. Ed & Pub 85:9+ N 8 '52

$2,000,000 a year for Gannett pensions. Ed & Pub 85:46 N 22 '52

See also

Newspaper and mail deliverers' union

Printers

Reporters

Errors

Paul Bunyan's successor? Will Overhead truth, happy 20th birthday. B. Lloyd. Ed & Pub 86:45 Ja 24 '53

Extra editions

Eight Westchester dailies join in A-bomb extra. T. Goetz. il Ed & Pub 85:59 D 20 '52

Feature sections

Feature sections produce profit, if handled right. R. Erwin. Ed & Pub 85:14+ N 22 '52

Finance

Chicago News' net earnings drop in 1952. Ed & Pub 86:74 F 21 '53

Cinci enquirer reported on real upswing. Ed & Pub 86:10 Ja 17 '53

Controller can guide business. C. A. Weis. Ed & Pub 85:74 N 1 '52

50,000-circulation daily has lowest net since '46; revenue gains offset higher costs. R. U. Brown. Ed & Pub 86:7+ Ap 11 '53

Profit rates prescribed to help sick industry; Institute of newspaper controllers and finance officers. J. Walker. Ed & Pub 85:7+ N 1 '52

See also

Newspapers—Taxation

Food sections

Dailies publish average of three food pages. Ed & Pub 85:18 D 6 '52

Food editors on diet of facts. M. C. Wallis. Ed & Pub 85:11+ O 18 '52

Food fashions table is set for 135 editors. Ed & Pub 85:54 S 20 '52

Tie-'ins help build paper's food section. Ed & Pub 85:26 O 11 '52

Foreign correspondents

Sweden ends accreditation of press corps. H. E. Larson. Ed & Pub 86:34 Ja 3 '53

Foreign news

IPI study advocates more Russian experts. Ed & Pub 85:13 O 4 '52

Three IPI staffs study flow of foreign news. Ed & Pub 85:57 D 6 '52

Government news

Pentagon lays down exclusive query rules. J. J. Butler. Ed & Pub 85:8 D 13 '52

See also

Newspapers—Correspondents, Washington

Human interest stories

Stringer tells where to find human interest. R. Hayden. Ed & Pub 86:47 Ja 31 '53

Labor news

Reporters conditioned for recession in '53. J. Walker. Ed & Pub 85:10+ N 29 '52

Law

Advertisers conspiracy offends monopoly act; Las Vegas sun. A. W. Gray. Ed & Pub 85:45 D 27 '52

Georgia court voids contempt conviction. Ed & Pub 86:12 Ja 24 '53

Greater news service, stronger papers ahead; government interference. W. Dwight. Ed & Pub 85:11+ S 27 '52

Kansas City star indicted on ad, circulation counts; Star's business practices defended, by R. A. Roberts. Ed & Pub 86:7+, 9+ Ja 10 '53

Lively rivalry cited in answer to suit of Syracuse broadcasting stations. S. I. Newhouse. Ed & Pub 85:16a N 29 '52

$10,000 sought because letter wasn't printed. J. Walker. Ed & Pub 85:8+ N 1 '52

Tulsa world's letter selection is upheld. Ed & Pub 85:51 D 20 '52

See also

Copyright

Libel and slander

Privacy, Right of

Privileged communications

Letters

Public is laggard in expressing opinion. S. S. Talbert. Ed & Pub 86:10 Ja 24 '53

Magazine section

See also

Newspapers—Sunday supplements

Mail subscriptions

$1-a-month payment plan aids mail subscribers. G. A. Brandenburg. Ed & Pub 85:54 D 20 '52

Mailing

Circulators try varied combinations of machinery for mailroom efficiency. R. H. Ziegler. il Ed & Pub 85:53-4 O 11 '52

New machines set up mailroom efficiency. G. A. Brandenburg. Ed & Pub 86:38 Ap 11 '53

Make up

See also

Newspapers—Column width

Management

Urges publishers, unions solve production. J. S. Knight. Ed & Pub 85:7+ O 4 '52; Discussion. 85:9+ N 8 '52

Market research

See Market research, Newspaper

Medical news

Doctors help the press on Siamese twin story. Ed & Pub 85:8 D 27 '52

New York divulges sex-conversion secret. R. Erwin. Ed & Pub 85:14 D 6 '52

Press is kept outside as patients go on tv; Colorado psycopathic hospital. il Ed & Pub 85:15 D 13 '52

Working press wants to quiz surgeons; Brodie Siamese twins operation. Ed & Pub 86:8 Ja 3 '53

Monday editions

Just call me monitor, here's Monday news; taken from radio and television. J. Walker. Ed & Pub 86:52 Ja 31 '53

Moving picture news

Survey shows press is fair to movies. Ed & Pub 85:35 N 15 '52

Negro news

Newspapers of deep South liberalize Negro policies. R. W. Brown. Ed & Pub 85:9+ D 13 '52

Neighborhood editions

Neighborhood editions started in Houston. Ed & Pub 85:46 S 27 '52

Old editions

Are old newspapers newsy? it's debatable. Ed & Pub 85:36+ N 8 '52

Photography departments

Providence papers open new photo lab. J. L. Collings. plan Ed & Pub 85:42 O 18 '52

Political aspects

Ike press support 67 per cent; Stevenson backed by 14 per cent; roll call. map Ed & Pub 85:9-10+ N 1 '52

Let's get the facts on one-party press. T. S. Irvin. Ed & Pub 85:44 N 8 '52

Political influence

Editorial influence dies from anonymity. C. M. Knapp. Ed & Pub 85:65 O 11 '52

Editors give antidote for pressure groups. Ed & Pub 85:16+ O 11 '52

Rooseveltian knight tells of errant press. Ed & Pub 85:38 D 20 '52

Political news

AP report tells of '52 election coverage. Ed & Pub 86:10 Ap 11 '53

Bias charge debated at Boston dinner. Ed & Pub 85:58 N 22 '52

NEWSPAPERS—Political news—*Continued*

Condemns HST for press attitude. A. H. Sulzberger. Ed & Pub 85:12 N 22 '52
Page one display contradicts authors on press bias. Ed & Pub 85:7+ O 25 '52
Post-poll roundup of press performance. Ed & Pub 85:11+ N 15 '52
Press should study itself. B. Bingham. Ed & Pub 85:10 N 15 '52

Prices

Adequate rates needed to meet higher costs. G. A. Brandenburg. Ed & Pub 86:40 Ja 3 '53
40c home delivery price recommended. D. E. Young. Ed & Pub 86:48 Ja 31 '53
How Minneapolis Star and tribune promoted price rise. N. Doman. Ed & Pub 85:52 N 15 '52
Rison urges careful study of net rates. G. A. Brandenburg. Ed & Pub 85:50 O 11 '52

Printing

Multi-edition daily printing plastics direct. il Ed & Pub 85:58 S 20 '52
Six competitive dailies in Holland plant. Ed & Pub 85:30 N 29 '52
Stretchtype can help art staff. F. H. Bartz. Ed & Pub 85:65 D 13 '52
Test pages show shrinkage effects. Ed & Pub 86:41 F 14 '53

Prize contests

Chicago tribune offers air tour to teen-agers. G. A. Brandenburg. Ed & Pub 86:42 F 7 '53

Public attitude

Public panel on freedom of the press and other newspaper topics. J. Walker. Ed & Pub 86:9+ Ja 17 '53

Public relations

Failure begins at home in meeting criticism. T. S. Irvin. Ed & Pub 85:48 D 6 '52
Macon charity fund benefits from kid classic. S. Glassman. Ed & Pub 85:35 N 22 '52
Now is time for all good (promotion) men to aid. T. S. Irvin. Ed & Pub 86:40 Ja 17 '53
Silha wants to collect human interest stories. T. S. Irvin. Ed & Pub 85:50 N 22 '52

Radio program listing

Sponsored radio listings hand daily plus linage. R. B. McIntyre. Ed & Pub 86:18 Ap 11 '53

Reader interest

Bids for news diet balancing told ad chiefs. C. Watson. Ed & Pub 86:53 Ja 24 '53

Religious features

Many features offered for Lenten season use. E. Knoll. Ed & Pub 86:50 F 7 '53

Safety campaigns

Editorial enterprise can stand promotion. T. S. Irvin. Ed & Pub 86:56 F 7 '53

Sales promotion

Gala promotion is put behind AW in Texas. Ed & Pub 86:75 F 21 '53
Greater promotion to get ads urged; Central regional meeting of National newspaper promotion association, Columbus, Nov. 17-18. Ed & Pub 85:10+ N 22 '52
How Dacotah Dayleez became agency heroine. T. S. Irvin. Ed & Pub 85:44 S 27 '52
How to achieve economy and improve promotion. T. S. Irvin. Ed & Pub 86:46 Ap 11 '53
Is Yourtown bulging? tell partners about it. T. S. Irvin. Ed & Pub 85:40 O 25 '52
Made-to-order checklist of resolutions for '53. T. S. Irvin. Ed & Pub 86:38 Ja 3 '53
Mel Barker's recipe collection has a punch. T. S. Irvin. Ed & Pub 85:46 D 27 '52
Newspaper fact library urged as promotion aid; West coast regional conference of National newspaper promotion association, Los Angeles, Nov. 17-18. Ed & Pub 85:11 N 22 '52
Syndicate package for editor and readers. T. S. Irvin. Ed & Pub 86:68 F 21 '53
What does a promotion manager do? T. S. Irvin. Ed & Pub 86:42 Ja 10 '53
See also
Newspaper advertising executives association

School relations

We should do more with student opinions. T. S. Irvin. Ed & Pub 85:38 N 29 '52

Securities

Tax-free covenant must be in the bond. A. W. Gray. Ed & Pub 85:55 D 6 '52

Service

Daily's appeal nets $270,820 for cripples; Pittsburgh press. Ed & Pub 86:58 Ja 24 '53
Door-to-door canvass turns up voting mess. Ed & Pub 85:44 S 20 '52
Sally Joy Brown of Chicago tribune, a friend indeed. Ed & Pub 86:33 Ja 3 '53
$17,194 put into trust fund to help widow. Ed & Pub 86:51 F 7 '53
Tom Wallace favors crusades by newspapers. Ed & Pub 85:49 O 4 '52
Your traffic problem; doing anything about it? T. S. Irvin. Ed & Pub 86:54 Ja 24 '53
See also
Newspapers—Safety campaigns

Size

See also
Newspapers—Column width

Sports news

Hardest part of covering the World Series. Ed & Pub 85:11 O 11 '52

Statistics

Mechanical equipment of 2429 newspapers in 1695 plants; United States and Canada. Ed & Pub 85:1-68 sec 2 S 27 '52

Style manuals

See Printing, Practical—Style manuals

Sunday editions

571 pages handled for record edition; New York news. Ed & Pub 86:41 F 14 '53
Sunday news bows in Los Angeles with 96 pages. Ed & Pub 85:15 O 11 '52

Sunday supplements

Marriott to introduce new Sunday magazine. Ed & Pub 85:68 N 1 '52
19 dailies distribute weekend in second year. E. F. Mann. Ed & Pub 85:14 D 13 '52
Sunday supplement linage is on upgrade. Ed & Pub 85:9 O 25 '52
Supplements get ABC non-voting status. Ed & Pub 85:14 D 13 '52

Syndicate service

'53 brings new panels, comic strips, series. E. Knoll. Ed & Pub 86:58 Ja 10 '53
Not guilty is plea on price haggling charge. E. Knoll. Ed & Pub 86:50 Ja 17 '53
Omnibook world wide offers weekly novel. E. Knoll. Ed & Pub 85:40 D 27 '52
Syndicate heads report greater use of features. E. Knoll. Ed & Pub 86:5+ Ja 3 '53
Victor Lasky directs Spadea text features. E. Knoll. Ed & Pub 86:50 Ja 31 '53

Taxation

PNPA fights proposal for one cent per copy tax. Ed & Pub 86:12 Ja 31 '53

Telegraph service

See also
Associated press

Television competition

Newspaper reading increases in Videotown. Ed & Pub 85:11 S 20 '52
Survey finds most tv families read papers. Ed & Pub 85:18 N 15 '52

Transportation

Davenport papers find leased cars are best; plan in Indianapolis. Ed & Pub 85:44 N 22 '52

NEWSPAPERS—*Continued*

Weeklies

Quality is first goal of weeklies. C. W. Brown. Ed & Pub 85:48 O 18 '52

Weeklies in spotlight in New Jersey institute. Ed & Pub 85:62 O 18 '52

Women's section

For the ladies; columns from NEA, KFS strip. E. Knoll. Ed & Pub 86:70 F 21 '53

Woman's department heart of newspaper. A. Ryan. Ed & Pub 85:59 O 18 '52

Women's pages should strive to attract men. Ed & Pub 85:69 O 11 '52

Brazil

Report from Brazil; Ultima Hora's story. S. Wainer. Ed & Pub 85:4+ D 13 '52

California

Far West circulation spurt in decade seen. Ed & Pub 85:12 O 25 '52

Legal ban on bogus advocated by CNPA; 65th annual convention, San Francisco. Ed & Pub 86:11+ F 14 '53

Charleston, South Carolina

Charleston paper marks 150th year. Ed & Pub 86:14 Ja 3 '53

China

Mao's press plays hate America tune. P. S Lee. Ed & Pub 86:38 F 7 '53

Germany

Neue Zeitung reaches 231,000 in daily sales G. Genschow. Ed & Pub 86:57 Ja 24 '53

Great Britain

Astor paper says it's victim of vendetta. D Willens. Ed & Pub 85:60 N 15 '52

British team takes home many ideas for improving productivity. Ed & Pub 85:58 O 11 '52

By the press, for the press; proposed General council of the press. Economist 166: 552-3 F 28 '53

See also
Sunday pictorial newspapers (1920), limited

Italy

Italy needs U.S. press in red fight. M. Chinigo. Ed & Pub 85:68 O 11 '52

London

Kemsley sells Daily graphic to Rothermere. D. Wilens. Ed & Pub 85:10 D 20 '52

Puerto Rico

El Mundo of San Juan builds U.S. coverage. A. S. Keshen. Ed & Pub 86:46 F 7 '53

Switzerland

Freedom of an editor. Economist 167:731 Je 13 '53

Texas

Texas dailies honor founders of association. Ed & Pub 86:10 F 14 '53

NEWSPAPERS, Army. See Army newspapers

NEWSPAPERS, College. See College newspapers

NEWSPAPERS, Neighborhood

See also
Newspapers—Neighborhood editions

NEWSPAPERS, Trade union

Here's what your workers are reading; abstract. B. Savesky. Management R 41:583-4 S '52

Professionals put zip into union newspapers. il Bsns W p 172-4 Mr 21 '53

NEWSPRINT paper

Bagasse offers the South a new industry and an answer to the newsprint problem. M. Smith. Manuf Rec 121:50+ D '52

Bagasse; possibilities of making a substitute newsprint from bagasse fiber. Tappi 35:sup 92A+ N '52

Development of 65 per cent yield sulphite for newsprint furnish. F. P. Silver and L. R. Beath. flow sheets diag Pulp & Pa of Can (Convention no) 54:215-19+ [F] '53; Same. Paper Tr J 135:46-8+ My 15 '53; Same. Tappi 36:305-10 Jl '53

Dominican Republic to build $2.5 million bagasse plant. Paper Tr J 135:11-12 D 12 '52

Free press jeopardy seen in Coast audit; Newsprint situation in western region of North America. C. Watson. Ed & Pub 85:16 N 8 '52

Great Northern announces manufacture of newsprint from hardwood. Paper Ind 35:54 Ap '53

Great Northern newsprint using a large percentage of hardwood groundwood pulp. Tappi 36:sup95A-6A Jl '53

High-load grinding. A. J. Winchester and A. M. Cuthbertson. Pulp & Pa of Can (Convention no) 54:195-201 [F] '53

Increased newsprint from sawgrass not very likely. L. E. Pasek. Paper Tr J 137:12 S 11 '53

Ink transfer to newsprint; abstract. I. Olsson and L. Pihl. Paper Ind 34:1018 N '52

International's Gatineau mill boosts quality and output; Canadian international paper co. il Paper Ind 34:850-4 O '52

Mills invite full details on problems of dailies. R. M. Fowler. Ed & Pub 85:9+ O 18 '52

Modern laboratory at Kenora keeps constant check on newsprint. il Paper Ind 35:771-2 O '53

Newsprint from sawgrass? Paper Tr J 136: 12 Ap 3 '53

Newsprint from sawgrass planned in $500,000 Everglades project. Paper Ind 35:201-2 My '53

North America's newest newsprint mill in operation; Elk Falls co. il Paper Ind 34: 970-4 N '52

Papermaking in the second industrial revolution. P. R. Sandwell. Pulp & Pa of Can (Convention no) 54:170-3 [F] '53

Promotes Alaskan newsprint industry. I. J. Mason. Paper Tr J 136:34 Ap 17 '53

Pulps from straw and sugarcane bagasse for manufacture of newsprint. E. C. Lathrop. Tappi 36:sup 142A-4A Ja '53

S-H automatic roll wrapping machine. A. C. Attendu. il Pulp & Pa of Can 53:109 D '52

St Lawrence rapid routine groundwood testing equipment. J. H. Bardsley. il diag Pulp & Pa of Can 53:92-7 D '52

Secretary of commerce answers Kefauver on bagasse newsprint. Paper Tr J 137:76 O 16 '53

Semi-chemical newsprint at Richmond pulp & paper co. of Canada. J. N. Stephenson. flow sheet il Pulp & Pa of Can 54:104-8 S '53

Southern newspaper publishers association annual convention, 49th, White Sulphur Springs, Nov. 20-22. Ed & Pub 85:11-12+ N 29 '52

Temperature is sometimes controlling factor. C. F. King. Inland Ptr 130:60-1+ O '52

Ten-year high demand for newsprint seen. C. Watson. Ed & Pub 85:42 N 15 '52

Use of bagasse for newsprint feasible. Paper Ind 34:949-50 N '52

Utilization of hardwoods for production of newsprint in foreign countries. J. E. Atchison. Paper Tr J 136:24-5 Mr 20 '53

Waterproofing newsprint. bibliog il Can Chem Process 36:94+ S '52

Western newsprint production expected to rise 39 per cent by 1961. Paper Ind 34:1090 D '52

Prices

Canadian newsprint price going up; U.S. may follow suit. Paper Ind 34:1443 Mr '53

Statistics

Annual newsprint paper review, 1952. J. J. Zima. Paper Tr J 136:160-4+ F 20 '53

Newsprint demand to be satisfied by boosts in production; with table, world newsprint production, 1950-1953. Paper Ind 34:1327-8+ F '53

Newsprint, 1951. Tappi 36:sup88A Ap '53

1952 world newsprint production estimated at record high. Paper Ind 34:1203-4 Ja '53

NEWSSTANDS

Newsstand vs. subscription circulation. D. B. Arnold. Adv Agency 45:124-5 O '52

NEWTON, Chambers and company, limited
Statement by the chairman. S. Roberts. Economist 167:565-6 My 23 '53

NIACIN. See Nicotinic acid

NIACINAMIDE. See Nicotinamide

NIAGARA falls
New regulatory work proposed to improve distribution of flow. Eng N 150:26 My 28 '53
Preserving Niagara. Comp Air Mag 58:197 Jl '53
See also
Electrochemical industries—Niagara area

NIAGARA FALLS, New York
Electric transmission of water power adopted at Niagara Falls in 1891. C. A. Pohl. Civil Eng 22:885-6 O '52

NIAGARA Mohawk power corporation
Bonds offered. Comm & Fin Chr 177:836 F 23 '53
Public utility securities. O. Ely. Comm & Fin Chr 177:1559 Ap 9 '53

NIAGARA river

Power utilization

Congress hears five-company proposal for Niagara development. Pub Util 51:798-800 Je 4 '53
First holing through for Niagara bore. il Eng N 149:24 O 16 '52
Hydro-electric power developments at Niagara falls. il map Engineering 174:687-8 N 28 '52
More Canadian kilowatts at Niagara. H. R. Rice. il map diags Comp Air Mag 58:210-17, 244-50 Ag-S '53
Niagara should be a business company project. R. C. Woodbury. Pub Util 51:687-97 My 21 '53
Ontario hydro project at Niagara falls. H. R. Rice. il map diags Can Min J 74:63-8 My; 77-83 Je '53
Outlook for hydro redevelopment at Niagara. W. E. Miller. map Pub Util 51:531-8 Ap 23 '53
Rival Niagara plans aired. Elec World News ed 139:7 My 25 '53
Second stage of Niagara River development to bring cost to $299,000,000. il map diag Roads & Eng Constr 90:103-6+ O '52

NIAGARA wire weaving company, limited
Brief histories of some of our original 1903 advertisers or their successors. Pulp & Pa of Can 54:294+ My '53

NIARCHOS, Stravros S.
Greeks, the Senator, and the slump. Bsns W p30 Ap 11 '53

NICARAGUA
See also
Income tax—Nicaragua

Commerce

Nicaragua withdraws from GATT; duties may rise on U.S. items. For Comm W 49:7 Ja 26 '53

Economic conditions

Economic conditions abroad (cont). For Comm W 49:5 Je 1 '53

Economic policy

Nicaragua weighing world bank five-year economic development program. M. Bannell. Barron's 32:28 O 20 '52

NICHOLS, Marvin C.
New chief at USBR is a Texas engineer. por Elec World 139:62 My 4 '53

NICHOLS, William Thomas, 1901-
Man of the month. por Chem Eng 59:308 D '52

NICHOLS medal
Pioneering in abnormal reactions brings Nichols award to Fuson. Chem & Eng N 31:1182, 1184 Mr 23 '53

NICHOLSON, Gunnar Walfrid Enander, 1893-
Businessmen in the news. por Fortune 47:58 F '53

NICKEL
Action of metallic nickel on bismuth trichloride. E. H. Cornish. bibliog J Ap Chem 3:106-9 Mr '53
Aircraft industry gets steady flow of nickel. Aviation W 58:41-3 Ap 6 '53
Autos; stretching nickel thinner. R. D. Raddant. Iron Age 171:80 Ap 23 '53
Ceramic coating applied to nickel. Materials & Methods 38:240+ O '53
Chemical engineering materials of construction; nickel and nickel-base alloys. H. O. Teeple. il Ind & Eng Chem 44:2325-38 bibliog(293 ref, p2336-8) O '52
Crystallography of nickel kieselguhr. R. B. Roof, jr. J Chem Phys 20:1181-2 Jl '52
Effect of molybdenum and of nickel on the rate of nucleation and the rate of growth of pearlite. R. W. Parcel and R. F. Mehl. bibliog il J Metals 4:Trans 771-80 Jl '52; Discussion. 5:Trans 740-1 sec 2 My '53
Effect of some solid solution alloying elements on the creep parameter of nickel; abstract. T. H. Hazlett and E. R. Parker. Metal Prog 64:298+ O '53
Elastic constants of nickel. J. R. Neighbours and others. bibliog J Ap Phys 23:389-93 Ap '52
Enough nickel. Bsns W p32 Je 6 '53
Ferro-nickel; Hanna co. Bsns W p 124 Ja 24 '53
Field emission from nickel surfaces. R. Gomer. bibliog il J Chem Phys 21:293-303 F '53
In war, nickel is still short. Bsns W p 146+ Mr 7 '53
Ion exchange experiment for physical chemistry. T. H. Roberts and others. bibliog J Chem Educ 29:545-8 N '52
Magnetically induced ultrasonic velocity changes in polycrystalline nickel. S. J. Johnson and T. F. Rogers. bibliog diags J Ap Phys 23:574-7 My '52
Molecular kinetics and mechanism of methane-deuterium exchange reactions on nickel. M. C. Markham, M. C. Wall and K. J. Laidler. bibliog J Phys Chem 57:321-3 Mr '53
Nickel base indirectly heated oxide cathode. A. M. Bounds and P. N. Hambleton. bibliog diag Elec Eng 72:536-40 Je '53
Nickel-catalyzed hydrogenation of commercial aldol. C. K. Hancock and D. D. Henson. bibliog Ind & Eng Chem 45:629-32 Mr '53
Nickel-cobalt. il map Eng & Min J 154:146-9 Jl '53
Nickel in electronics. K. Jackson and R. O. Jenkins. Metallurgia 47:277-82 Je '53
Radiation damage and recovery in Cu, Ag, Au, Ni, and Ta. J. W. Marx and others. bibliog diags Phys R 88:106-12 O 1 '52
Reaction between wool and nickelammonium hydroxide; the adsorption of nickel by wool from solutions of nickelammonium hydroxide. J. W. Bell and C. S. Whewell. bibliog Soc Dyers and Col J 68:299-305 Ag '52
Relative catalytic activity of nickel produced by the reduction of nickel(II) bromide with liquid ammonia solutions of different alkali metals. G. W. Watt and P. I. Mayfield. bibliog Am Chem Soc J 75:1760-1 Ap 5 '53
Rotational relaxation in nickel at high frequencies. W. P. Mason. bibliog il Rs Mod Phys 25:136-9 Ja '53
Solubility and diffusion coefficient of carbon in nickel; reaction rates of nickel-carbon alloys with barium oxide. J. J. Lander and others. bibliog J Ap Phys 23:1305-9 D '52
Study of some phenomena associated with the adherence of sheet iron ground coats. H. F. Patrick and others. bibliog il Am Cer Soc J 36:305-13 S 1 '53
Study of the enameling of sheet nickel. J. H. Healy and A. I. Andrews. Am Cer Soc Bul 32:119 Ap 15 '53
Surface tension at elevated temperatures; furnace and method for use of the sessile drop method; surface tension of silicon, iron and nickel. W. D. Kingery and M. Humenik, jr. bibliog diags J Phys Chem 57:359-63 Mr '53
Thermogalvanic potentials; nickel in neutral sulfate solution. D. S. Carr and C. F. Bonilla. bibliog(56 ref) diag Electrochem Soc J 99:475-82 D '52
Thin films of ferromagnetic materials. E. C. Crittenden, jr. and R. W. Hoffman. bibliog diag Rs Mod Phys 25:310-15 Ja '53
What's ahead the next ten years in materials and components; nickel, other metals. Am Mach 96:A9-10 Mid-N '52

NICKEL—*Continued*

Analysis

Determination of trace metals in crudes and other petroleum oils; analysis for iron, nickel, vanadium, and copper. O. I. Milner and others. bibliog diags Anal Chem 24:1728-32 N '52

Photometric determination of silicon in ferrous, ferromagnetic, nickel, and copper alloys; a molybdenum blue method. C. L. Luke. bibliog Anal Chem 25:148-51 Ja '53

Polarographic determination of nickel in aluminium alloys. E. C. Mills and S. E. Hermon. Metallurgia 46:259-62 N '52

Spectrophotometric titrations with ethylenediaminetetraacetic acid; determination of iron, copper, and nickel. P. B. Sweetser and C. E. Bricker. bibliog diags Anal Chem 25:253-5 F '53

Isotopes

Angular correlation of the Ni^{60} γ-γ cascade. R. M. Kloepper. Phys R 91:1026 Ag 15 '53

Gamma-gamma angular correlation in Ni^{60}. E. D. Klema and F. K. McGowan. bibliog Phys R 91:616-18 Ag 1 '53

Neutron capture γ-rays from titanium, chromium, iron, nickel, and zinc. B. B. Kinsey and G. A. Bartholomew. bibliog diags Phys R 89:375-85 Ja 15 '53

Precipitate-ion exchange reactions using nickel-63. G. K. Schweitzer and P. B. Baum. Am Chem Soc J 74:6131-2 D 5 '52

Self-absorption phenomena in the measurement of the radioactivity of nickel-63. G. K. Schweitzer, B. R. Stein and J. W. Nehls. J Phys Chem 56:692-3 Je '52

Prices

Nickel; boost may hit alloy prices. R. L. Hatschek. Iron Age 171:39 Ja 8 '53

Nonferrous prices; tabulation. Steel 132:173 Ja 5 '53

Raney nickel

Cleavage of heterocycles with Raney nickel and with lithium. H. Gilman and D. L. Esmay. bibliog Am Chem Soc J 75:2947-9 Je 20 '53

Direct reduction of aldoses and ketoses by Raney nickel. J. V. Karabinos and A. T. Ballun. bibliog Am Chem Soc J 75:4501-2 S 20 '53

Kinetics of the Raney nickel catalyzed hydrogenation of crotonic acid. F. L. Morritz, E. Lieber and R. B. Bernstein. bibliog diags Am Chem Soc J 75:3116-21 Jl 5 '53

New unit for sponge nickel. il Chem Eng 60:114+ Mr '53

Raney nickel desulphurisation of *S*-benzyl-*N*-phthaloyl-L-cysteine. D. Fleš and K. Balenović. Chem Soc J p2447 Je '52

Reductions with hydrazine hydrate catalyzed by Raney nickel; aromatic nitro compounds to amines. D. Balcom and A. Furst. bibliog Am Chem Soc J 75:4334 S 5 '53

Selective reduction of the unsaturated compounds; deuterization of the Raney nickel catalysts. N. A. Khan. bibliog diag Science 117:130 F 6 '53

Stereochemistry of Raney nickel action. W. A. Bonner, J. A. Zderic and G. A. Casaletto. bibliog Am Chem Soc J 74:5086-90 O 20 '52

Temperature effect

High temperature reduces pure nickel tensile strength. il Product Eng 23:202 S '52; Mech Eng 74:825-6 O '52

NICKEL, Powdered

Initial phase of sintering; abstract. H. H. Hausner and J. L. Zambrow. J Metals 4:1040 O '52

NICKEL alloys

Alloy F is corrosion-resistant, stronger than austenitic steels. Chem & Eng N 31:1232 Mr 23 '53

Brazing vacuum-tight joints in high nickel alloys. R. A. Wallace and W. R. Vanderveer. il diags Materials & Methods 36:117-18 D '52

Corrosion-resistant alloy; Hastelloy F. il Machine Design 25:151-2 My '53; Materials & Methods 37:92-3 My '53

Electrodeposition of tin-nickel alloy plate from chloride-fluoride electrolytes. J. W. Cuthbertson and others. bibliog Electrochem Soc J 100:107-19 Mr '53

Experiences with field-applied Inconel digester linings. S. J. Baisch. il diags Tappi 36:221-5 My '53

Hall effect of copper-nickel alloys. A. I. Schindler and E. M. Pugh. bibliog diags Phys R 89:295-8 Ja 1 '53

Hall effects of the cobalt nickel alloys and of Armco iron. S. Foner and E. M. Pugh. bibliog il diag Phys R 91:20-7 Jl 1 '53

Hastelloy alloy F; a new corrosion-resistant alloy for lined digesters. M. A. Scheil. il Tappi 36:241-7 Je '53

Hastelloy F, a new alloy. Oil & Gas J 51:295 Ap 27 '53

Incoloy, new alloy for use in high-temperature applications. Engineer 194:617 N 7 '52

Inert arc welding of 90-10 cupro-nickel. L. H. Hawthorne. il Welding J 32:31-5; Discussion. 36 Ja '53

Kinetics of ordering in Ni_3Mn. L. R. Aronin. J Ap Phys 23:642-3 Je '52

Low expansion nickel alloys; engineering file facts. Materials & Methods 37:123 Ja '53

New alloy tough in the hot spots; NA22H. M. N. Ornitz and R. H. English. il Steel 131:90-1 N 17 '52; Abstract. Iron & Steel Eng 29:127 S '52

New alloy tough on corrosion; Hastelloy alloy F. il Steel 132:139 Ap 20 '53

New alloy tried in pulp digester resists corrosion; Hastelloy F. il Iron Age 171:148-50 Mr 26 '53

Nickel in electronics. K. Jackson and R. O. Jenkins. Metallurgia 47:277-82 Je '53

Nimonic 95. Engineer 194:184 Ag 8 '52; Engineering 174:182 Ag 8 '52

Silver brazing of nickel alloys; reference book sheet. diags Am Mach 95:169, 171, 173 S 17 '51; Same cond. Product Eng Hdbk p G 14-15 '53

Solubility and diffusion coefficient of carbon in nickel; reaction rates of nickel-carbon alloys with barium oxide. J. J. Lander and others. bibliog J Ap Phys 23:1305-9 D '52

Subsurface porosity developed in sound metal during high-temperature corrosion. A. D. Brasunas. il Metal Prog 62:88-90 D '52

Theoretical analysis of the diffusion processes determining the oxidation rate of alloys. C. Wagner. bibliog(47 ref) Electrochem Soc J 99:369-80 O '52

Thermodynamic properties of solid nickel-gold alloys. L. L. Seigle and others. bibliog diag J Metals 4:Trans 1320-7 D '52; Discussion. 5:Trans 728-9 sec 2 My '53

Tin-nickel alloy and nickelchromium coatings; abstract and discussion. S. C. Britton and others. Chem & Ind p 1152-3 N 22 '52

Titanium-nickel phase diagram. H. Margolin and others. bibliog il J Metals 5:Trans 243-7 sec 2 F '53

Transformation in cobalt-nickel alloys. J. B. Hess and C. S. Barrett. bibliog J Metals 4:Trans 645-7 Je '52; Discussion. il 5:Trans 729-30 sec 2 My '53

Wrought nickel-molybdenum alloys. Engineering 176:248 Ag 21 '53

See also

Alnico
Chromium nickel steel
Iron alloys—Nickel alloys
Monel metal
Nickel silver
Nickel steel
Permalloy

Analysis

Photometric determination of silicon in ferrous, ferromagnetic, nickel, and copper alloys; a molybdenum blue method. C. L. Luke. bibliog Anal Chem 25:148-51 Ja '53

Testing

Creep testing; three-year high temperature creep data on nickel alloys. il Iron Age 171:158 F 26 '53; Steel 132:112+ Mr 2 '53; Mech Eng 75:320-1 Ap '53

Creep tests on Nimonic alloys. Engineering 174:415 S 26 '52

Creep tests on Nimonic alloys under varying stress and temperature. D. C. Herbert and D. J. Armstrong. diag Engineering 175:605-6 My 8 '53

NICKEL ammonium hydroxide
Reaction between wool and nickelammonium hydroxide; the adsorption of nickel by wool from solutions of nickelammonium hydroxide. J. W. Bell and C. S. Whewell. bibliog Soc Dyers and Col J 68:299-305 Ag '52

NICKEL carbide
Production of nickel carbide by decomposition of *n*-hexane on metallic nickel. A. Cimino and G. Parravano. J Phys Chem 56:706-7 Je '52
Properties of nickel carbide. G. Meyer and F. E. C. Scheffer. Am Chem Soc J 75:486 Ja 20 '53

NICKEL carbonyl
Discovery recalled. il Engineering 176:87 Jl 17 '53; Metallurgia 48:92 Ag '53
Structure of nickel tetracarbonyl and some disubstituted derivatives. R. S. Nyholm and L. N. Short. Chem Soc J p2670-3 S '53
Studies in co-ordination chemistry; a ditertiary arsine nickel carbonyl and some halogen derivatives. R. S. Nyholm. Chem Soc J p2906-10 Jl '52

NICKEL chlorides
Studies on coördination compounds; the chelating tendencies of β-diketones with the chlorides of copper(II), nickel and barium in water-dioxane solutions. L. G. Van Uitert, W. C. Fernelius and B. E. Douglas. Am Chem Soc J 75:457-60 Ja 20 '53

NICKEL chromate
Catalytic activity of reduced nickel molybdate and reduced nickel chromate. J. Rooley, C. S. Rohrer and O. W. Brown. bibliog J Phys Chem 56:1082-4 D '52

NICKEL chromium steel
Hot-cold work improves 16-25-6 properties. M. Fleischmann. il diags Iron Age 170:123-7 N 20 '52

NICKEL clad steel. See Steel, Nickel clad

NICKEL compounds
Aquo and chloro complexes of cobalt(II) and nickel(II) in 2-octanol. W. D. Beaver and others. bibliog Am Chem Soc J 75:4566-60 S 20 '53
Compounds formed between nickel(II) and dimethylglyoxime by alkaline oxidation. E. Booth and J. D. H. Strickland. bibliog Am Chem Soc J 75:3017-19 Je 20 '53
Magnetic susceptibilities of hydrogenated pyridine and quinoline solutions of cupric and nickelous acetate and salicylaldehyde. W. K. Wilmarth, M. K. Barsh and S. S. Dharmatti. Am Chem Soc J 74:5035-7 O 20 '52
New method of studying basic metal salts applied to certain basic salts of nickel. W. J. Singley, jr. and J. T. Carriel. bibliog diag Am Chem Soc J 75:778-81 F 20 '53
Preparation of nickel(II) thiocyanate complex compounds with picolines and the determination of their heats of formation. A. V. Logan and D. W. Carle. Am Chem Soc J 74:5224-5 O 20 '52
Steric effects and the stability of complex compounds; the chelating tendencies of N-alkylethylenediamines, with copper(II) and nickel(II) ions. F. Basolo and R. K. Murmann. bibliog Am Chem Soc J 74:5243-6 N 5 '52
X-ray *K* absorption edges of covalently bonded Cr, Mn, Fe, and Ni. G. Mitchell and W. W. Beeman. bibliog J Chem Phys 20:1298-301 Ag '52

NICKEL ferrates
g Factor of ferrites. T. Okamura and others. bibliog Phys R 88:1425-6 D 15 '52
Hall effect in nickel ferrite. S. Foner. Phys R 88:955-6 N 15 '52
High frequency dispersion in nickel zinc ferrites. H. P. J. Wijn and others. bibliog Rs Mod Phys 25:91-2 Ja '53
Magnetostriction of single crystals of cobalt and nickel ferrites. R. M. Bozorth and J. G. Walker. bibliog Phys R 88:1209 D 1 '52
Neutron diffraction studies of zinc ferrite and nickel ferrite. J. M. Hastings and L. M. Corliss. bibliog diags Rs Mod Phys 25:114-19; Discussion. 119-21 Ja '53

NICKEL industry and trade
Nickel; expect good Nicaro report. A. K. Rannells. Iron Age 170:61 O 16 '52
Nickel export quotas set for third quarter. For Comm W 50:27 Jl 20 '53
Nickel, molybdenum world quotas set for first quarter. Oil Paint & Drug Rep 162:3 D 22 '52
Nickel, 1952. H. W. Davis. Eng & Min J 154:98 F '53

Statistics

Nickel industry in 1952. Engineering 175:19 Ja 2 '53
Nickel prices, use, production and imports; tabulations. Iron Age 171:420 Ja 1 '53
Nickel production, 1934-1952; tabulation. Steel 132:177 Ja 5 '53

Canada

Increased nickel output, Canadian resources and expansion. J. F. Thompson. Chem Age (Lond) 68:62 Ja 10 '53

NICKEL metallurgy
Bet on nickel; Freeport Sulphur to develop large new deposit in Cuba; will build to test new chemometallurgical process. W. F. Boericke. Barron's 33:17 My 18 '53
New ore treatment process. Can Chem Process 36:58+ S '52
Sherritt Gordon uses ammonia leach for Lynn Lake Ni-Cu-Co sulphides. flow sheet il Min Eng 5:576-81 Je '53

NICKEL mines and mining

Cuba

Bet on nickel; Freeport Sulphur to develop large new deposit in Cuba; will build to test new chemo-metallurgical process. W. F. Boericke. Barron's 33:17 My 18 '53
Discover big nickel deposit at Cuba's Moa Bay. il Min Cong J 39:33+ My '53; Min Eng 5:469 My '53
40 million-ton discovery in Cuba could make Freeport second largest nickel producer. il map Eng & Min J 154:132 My '53
More nickel. Bsns W p33 Ap 25 '53
Nickel; find prime new Cuban source. il Iron Age 171:81 Ap 23 '53

Ontario

Inco sets off 64-ton blast at Frood-Strobie mine. il Min Eng 5:27 Ja '53
Underground mining methods at International nickel co. H. J. Mutz and others. il maps plans diags Min Eng 5:Trans 57-82 Ja '53

NICKEL molybdate
Catalytic activity of reduced nickel molybdate and reduced nickel chromate. J. Rooley, C. S. Rohrer and O. W. Brown. bibliog J Phys Chem 56:1082-4 D '52

NICKEL ores
Nickel; boost U.S. production; DMPA-Hanna pact. Iron Age 171:51 Ja 29 '53

NICKEL oxides
Catalytic oxidation of carbon monoxide on nickel oxide. G. Parravano. bibliog Am Chem Soc J 75:1448-54 Mr 20 '53

NICKEL pipes. See Pipes, Nickel

NICKEL plate railroad. See New York, Chicago and St Louis railroad

NICKEL plating
Big savings in nickel. Bsns W p48 Mr 28 '53
Chemical plating; Kanigen process. Sci Am 188:56 My '53
Chemical plating of nickel; Kanigen. il Metal Prog 63:11 My '53
Chemical plating process applies nickel to most metals, glass, and plastics. Am Mach 97:150 Mr 30 '53; Steel 132:52 Mr 23 '53; Machine Design 25:240+ My '53; Ry Loco & Cars 127:90 My '53
Chromium-plated automobile parts; their materials, designs, and finishes. D. M. Bigge. diags S A E J 61:61-3 S '53
Effect of temperature on the cathode potential during nickel plating. D. R. Turner. bibliog diags Electrochem Soc J 100:15-21 Ja '53
Electrodeposition of tin-nickel alloy plate from chloride-fluoride electrolytes. J. W. Cuthbertson and others. bibliog Electrochem Soc J 100:107-19 Mr '53; Excerpts. Metal Finishing 51:64-9 Jl '53
Electroless nickel. H. J. West. Metal Finishing 51:68 S '53

NICKEL plating—*Continued*

Electroless nickel plating; where it stands today. J. B. Campbell. il Materials & Methods 37:96-100 My '53

Electroless plating. il Product Eng 24:221-3 My '53

Electroless plating produces hard nickel coating. E. L. Gostin. il Iron Age 171:115-19 Je 11 '53

General American develops new nickel plating device; process named Kanigen. Oil Paint & Drug Rep 163:44 Mr 23 '53

pH paper in plating practice; abstract. W. Zarncke. Metal Finishing 51:79-80 F '53

Improvement of properties of bright nickel baths by means of sulfurous acid and sulfites; abstract. H. Komusaari. Metal Finishing 51:71 Jl '53

Influence of supersonic wave field on bright nickel plating; abstract. A. Roll. Metal Finishing 51:83 Mr '53

Kanigen process offers even, nonporous nickel plating. Iron Age 171:188-9 Ap 2 '53

Lead-backed masking tape solves special plating problems; Pratt & Whitney aircraft division. W. J. Dyber. il Automotive Ind 108:82+ My 15 '53

Metal plating with chemicals only; Kanigen process. il Factory Management 111:160+ My '53

New chemical process plates nickel uniformly. il Electronics 26:286+ My '53

Nickel coats without electrodes; Kanigen. Mod Ind 25:101 My '53

Nickel-nickel phosphide non electrolytic plating process; Kanigen. W. J. Stebler. Metal Finishing 51:96-7 Ap '53; Same. Refrig Eng 61:402 Ap '53; Same cond. Ry Age 134:120+ Mr 23 '53; Excerpt. Oil Paint & Drug Rep 163:44 Mr 23 '53

Nickel plating process named Kanigen. Mech Eng 75:404-5 My '53

Nickel plating research extended. Iron Age 171:133-4 F 26 '53

Nomogram for analysis of watts type nickel plating solutions. I. Goldman. Metal Finishing 50:76-7 N '52

Non-electrolytic smoothing treatment for steel. W. A. Marshall. Metal Finishing 50:67-9 D '52

Peeling of nickel deposits. E. T. Richards. bibliog(53 ref) Metal Finishing 51:64-7 Ap; 60-5 My '53

Pipe nickel plated fast for AEC. W. V. Packard. il Iron Age 171:82 My 14 '53

Plating; variables affecting electrodeposited nickel studied by NBS. Iron Age 170:192 N 13 '52

Properties of electrodeposited nickel. il Metal Finishing 50:59-62 D '52; Excerpts. Materials & Methods 36:198+ D '52; Tool Eng 30:138-9 Ja '53

Properties of electrodeposited nickel and what influences them. W. A. Blum. il Materials & Methods 37:101-5 Ap '53

Small plating plants; how to save nickel solution; General Motors' Pontiac division. diags Iron Age 171:117 Ap 16 '53

Stretching the supply; Kanigan plating process. Chem W 72:50+ Mr 28 '53

NICKEL salicylaldehyde

Chemical reactions of complexes; action of hydrazines on nickel disalicylaldehyde. L. Sacconi. bibliog Am Chem Soc J 74:4503-5 S 20 '52

NICKEL silver

Standard commercial wrought tin and aluminum brasses, bronzes and nickel silvers; data sheet. A. H. Allen, comp. Metal Prog 63:96B F '53

Standard specifications for leaded nickel-brass (leaded nickel-silver) and leaded nickel-bronze (leaded nickel-silver) sand castings; data sheet. Foundry 81:219-20 Mr '53

NICKEL steel

Line-broadening of martensite in nickel steels. R. A. Smith. bibliog Iron & Steel Inst J 173:147-52 F '53; Discussion. 174:347-52 Ag '53

See also

Chromium nickel steel

NICKEL sulfate

Thermogalvanic potentials; nickel in neutral sulfate solution. D. S. Carr and C. F. Bonilla. bibliog(56 ref) diag Electrochem Soc J 99:475-82 D '52

NICOTINALDEHYDE

Preparation of nicotinaldehyde. H. N. Wingfield, W. R. Harlan and H. R. Hanmer. bibliog Am Chem Soc J 74:5796 N 20 '52

NICOTINAMIDE

Chemotherapy of tuberculosis; some *N*-substituted nicotinamides and nicotinamidines. J. N. Baxter and J. Cymerman-Craig. Chem Soc J p 1490-3 My '53

Analysis

Fluorometric determination of N_1-methylniacinamide. M. Kato and others. Science 116:462 O 24 '52

Nicotinic acid metabolism; the metabolism of radioactive nicotinic acid and nicotinamide in the rat. P. Lin and B. C. Johnson. bibliog diags Am Chem Soc J 75:2974-7 Je 20 '53

Nicotinic acid metabolism; the use of paper chromatography in the study of nicotinic acid metabolism. B. C. Johnson and P. Lin. bibliog diags Am Chem Soc J 75:2971-3 Je 20 '53

NICOTINE

Complex metal-nicotine compounds. C. R. Smith. bibliog Am Chem Soc J 75:2010-12 Ap 20 '53

Mechanism of microbial degradation of nicotine. E. Wada and K. Yamasaki. bibliog Science 117:152-3 F 13 '53

See also

Nornicotine

Analysis

Separation and determination of nicotine and nornicotine in tobacco. F. G. Houston. bibliog Anal Chem 24:1831-2 N '52

NICOTINIC acid

Fluorometric determination of N_1-methylniacinamide. M. Kato and others. Science 116:462 O 24 '52

See also

Isonicotinic acid

Analysis

Microbiologic assay for niacin; effect of total volume per tube on accuracy. D. M. Hegsted and C. E. Alvistur. Anal Chem 24:1635-6 O '52

Nicotinic acid metabolism; the metabolism of radioactive nicotinic acid and nicotinamide in the rat. P. Lin and B. C. Johnson. bibliog diags Am Chem Soc J 75:2974-7 Je 20 '53

Nicotinic acid metabolism; the use of paper chromatography in the study of nicotinic acid metabolism. B. C. Johnson and P. Lin. bibliog diags Am Chem Soc J 75:2971-3 Je 20 '53

NICOTINYL chloride

Preparation of nicotinyl chloride. H. N. Wingfield, jr., W. R. Harlan and H. R. Hanmer. Am Chem Soc J 75:4364 S 5 '53

NIELSEN, A. C., company

Probing overseas markets by A. C. Nielsen co. Bsns W p 120-1 Ja 31 '53

NIGERIA

Impasse in Nigeria. Economist 167:140-1 Ap 18 '53

See also

Agriculture—Nigeria

Bibliography

Nigerian publications, 1950-1952. 43p Ibadan university library, Ibadan, Nigeria '53

Foreign relations

Great Britain

Future of foreign firms in Nigeria. Economist 166:156 Ja 17 '53

Politics and government

Battle between Nigerian politicians. Economist 166:492-3 F 21 '53

Birth pangs of a Nigerian nation. Economist 167:671-2 Je 6 '53

Nigerian leaders reply to Mr Lyttelton's invitation to a conference. Economist 167:804 Je 20 '53

NIGERIA—Politics and government—*Cont.*
Nigerian setback. Economist 167:161-2 Ap 18 '53
Opinion in Nigeria. Economist 167:311-12 My 2 '53
Remaking Nigeria. Economist 167:585 My 30 '53

NIGHT clubs
Personal business; cost of entertaining customers at a night-club. Bsns W p 167-8 N 15 '52

NIGHT labor
Premium pay. Bsns W p 177-8 Mr 28 '53

NIGHT selling. See Retail trade—Hours of business

NILE river
Plans for Egypt's Nile revamp life-giving river. Eng N 150:87 Ap 16 '53

NIM (game)
Digital computer plays NIM. H. Koppel. il diag Electronics 25:155-7 N '52

NIMONIC alloys. See Nickel alloys

NIMONIC 95. See Nickel alloys

NINETEEN hundred and fifty-two
1952, what happened in metalworking; chronology of important events. Steel 132:463-6+ Ja 5 '53
This happened in 1952. il Ptr Ink 241:47-8+ D 26 '52

NINETEEN hundred and fifty-three
1953, new forces go to work. il Bsns W p27-32 Ja 3 '53

NIOBATES
Niobate and tantalate dielectrics. E. Wainer and C. Wentworth. bibliog Am Cer Soc J 35:207-14 Ag 1 '52

NIOBIUM
Behaviour of carbides in niobium stabilized austenitic stainless steel. T. V. Simpkinson. il Metallurgia 47:18-24 Ja '53
Chemistry of niobium and tantalum; reduction in solution. R. E. Elson. bibliog Am Chem Soc J 75:4193-5 S 5 '53
Easing a metals shortage. Bsns W p62+ Mr 7 '53
High temperature magnetic susceptibility of V, Nb, Ta, W, and Mo. C. J. Kriessman. bibliog diag Rs Mod Phys 25:122-6 Ja '53
Influence of carbon content on the acid resistance of titanium- and niobium-stabilized 18 Cr, 8-14 Ni steels. H. T. Shirley and J. E. Truman. 2pls Iron & Steel Inst J 172:377-80 D '52
Niobium in Africa; pyrochlore deposits may allow fuller use. Chem Age (Lond) 68:27-8 Ja 3 '53
Properties, heat treatment, corrosion resistance, etc.; engineering file facts. Materials & Methods 37:127 Je '53
Reactions during sintering of a zirconium carbide-niobium cermet. W. G. Lidman and H. J. Hamjian. bibliog il Am Cer Soc J 35:236-40 S 1 '52

Analysis

Analytical chemistry of niobium and tantalum; atmospheric chlorination of hydrolyzed oxide precipitates. C. F. Hiskey, L. Newman and R. H. Atkinson. diags Anal Chem 24:1988-91 D '52
Inorganic chromatography on cellulose; determination of tantalum and niobium in low-grade phosphatic and siliceous ores. R. A. Mercer and A. F. Williams. Chem Soc J p3399-403 S '52
Inorganic chromatography on cellulose; the quantitative determination of tantalum and niobium in complex minerals, ores, and synthetic materials. A. F. Williams. Chem Soc J p3155-63 Ag '52

Isotopes

Anion exchange of niobium in 7.0 molar hydrochloric acid. E. H. Huffman and G. M. Iddings. Am Chem Soc J 74:4714-15 S 20 '52
Gamma-radiations from Zr^{95} and Nb^{95}. C. E. Mandeville and others. bibliog diag Phys R 89:559-61 F 1 '53
Nuclear levels associated with zirconium 95 and niobium 95. J. M. Cork and others. Phys R 90:579-81 My 15 '53
Radiations from Zr^{97} and Nb^{97}. C. E. Mandeville and others. bibliog Franklin Inst J 254:381-9 N '52

NIOBIUM (term)
Columbium vs. niobium. H. G. Tanner. Chem & Eng N 31:1576-7 Ap 13 '53; Discussion. 31:1577, 3208 Ap 13, Ag 3 '53

NIOBIUM chlorides
Studies on the behaviour of halides of the transition metals with ammonia; the reaction of niobium pentachloride with ammonia. G. W. A. Fowles and F. H. Pollard. Chem Soc J p4938-42 D '52

NIOBIUM nitride
Anomalous critical current effect in superconducting NbN. F. C. Haley and D. H. Andrews. bibliog Phys R 89:821-3 F 15 '53
Preparation of crystalline nitrides of vanadium and niobium. F. H. Pollard and G. W. A. Fowles. Chem Soc J p2444-5 Je '52

NIOBIUM oxide
High-temperature heat contents of tantalum and niobium oxides. R. L. Orr. bibliog Am Chem Soc J 75:2808-9 Je 20 '53

NI-RESIST. See Iron alloys—Nickel alloys

NITRAMINES
Action of methylmagnesium iodide on two nitramines. A. H. Lamberton. Chem Soc J p4539-40 N '52
Condensations of primary aliphatic nitramines with formaldehyde. L. Goodman. bibliog Am Chem Soc J 75:3019-20 Je 20 '53
o-Mercapto-azo-compounds; action of thiocyanic acid on diazotised *o*-nitroarylamines. A. Burawoy and C. Turner. Chem Soc J p959-62 Mr '53
Nitramines and nitramides; the acid-catalysed decomposition of primary nitramines. J. Barrott, I. N. Denton and A. H. Lamberton. diag Chem Soc J p 1998-2005 Jl '53

NITRATES
Action of lithium aluminum hydride on nitrate and nitrate esters. L. M. Soffer, E. W. Parrotta and J. Di Domenico. bibliog Am Chem Soc J 74:5301-3 N 5 '52
Decomposition of nitrate crystals by ionizing radiations. G. Hennig and others. bibliog J Chem Phys 21:664-8 Ap '53
Electrolytic reduction of simple nitrate esters. F. Kaufman, H. J. Cook and S. M. Davis. bibliog Am Chem Soc J 74:4997-5001 O 20 '52
Photolysis of crystalline nitrates. P. Doigan and T. W. Davis. bibliog J Phys Chem 56:764-6 Je '52
Sugar nitrates; removal of nitrate and toluene-*p*-sulphonyl groups from esters of substituted methyl-D-glucosides. E. G. Ansell and J. Honeyman. Chem Soc J p2778-89 Jl '52
See also
Ammonium nitrate
Calcium nitrate

NITRATION
Aromatic nitration; the influence of solvent on anomalous orientation by the nitro group. G. S. Hammond, F. J. Modic and R. M. Hedges. bibliog Am Chem Soc J 75:1388-92 Mr 20 '53
Aromatic nitration; the ultraviolet spectra of aromatic nitro compounds in sulfuric acid. G. S. Hammond and F. J. Modic. bibliog Am Chem Soc J 75:1385-8 Mr 20 '53
Identification of isomers formed in the nitration of carbazole. D. B. Murphy and others. bibliog Am Chem Soc J 75:4289-91 S 5 '53
Kinetics and mechanism of aromatic nitration; variation of the rate of aromatic nitration in sulphuric acid media with composition of the solvent. R. J. Gillespie and D. G. Norton. Chem Soc J p971-9 Mr '53
Mononitration of benzene. K. A. Kobe and J. J. Mills. bibliog diag Ind & Eng Chem 45:287-91 F '53
Nitration as an analytical tool in the study of wood pulps. Ö. Bryde and others. bibliog Tappi 36:353-9 Ag '53
Nitration in sulphuric acid; kinetics of nitration of the trimethylphenylammonium ion. T. G. Bonner, F. Bowyer and G. Williams. Chem Soc J p3274-80 Ag '52
Nitration in sulphuric acid; the rates of nitration of nitrobenzene and pentadeuteronitrobenzene. T. G. Bonner, F. Bowyer and G. Williams. Chem Soc J p2650-2 S '53
Nitration of 2-acetamido-5-methoxytoluene. J. MacMillan. Chem Soc J p4019-24 O '52

NITRATION—*Continued*

Nitration of cyclopropane in the vapor phase; nitrocyclopropane. H. B. Hass and H. Shechter. bibliog Am Chem Soc J 75:1382-4 Mr 20 '53

Nitration of guanidine in sulphuric acid; kinetics of *N*-nitration of the guanidinium ion and denitration of nitroguanidine. G. Williams and R. J. J. Simkins. Chem Soc J p 1386-92 My '53

Nitration of guanidine in sulphuric acid; the reversible conversion of guanidine nitrate into nitroguanidine. R. J. J. Simkins and G. Williams. diag Chem Soc J p3086-94 Ag '52

Nitration of monodeuterobenzene. W. M. Lauer and W. E. Noland. bibliog Am Chem Soc J 75:3689-92 Ag 5 '53

Nitration of phenanthridine. A. G. Caldwell and L. P. Walls. Chem Soc J p2156-64 Je '52

Nitration of phenoxathiin and some new amino derivatives. J. F. Nobis, A. J. Blardinelli and D. J. Blaney. bibliog Am Chem Soc J 75:3384-7 Jl 20 '53

Nitration of trimethylphenylsilane. J. L. Speier. bibliog Am Chem Soc J 75:2930-1 Je 20 '53

Nitryl chloride as a nitrating agent. C. C. Price and C. A. Sears. Am Chem Soc J 75:3276-7 Jl 5 '53

Oxygen exchange between nitric acid and water; a correlation of oxygen exchange with aromatic nitration. C. A. Bunton and E. A. Halevi. Chem Soc J p4917-24 D '52

Substitution in polymethylbenzenes; the course of the nitration of durene in sulfuric acid-chloroform mixtures. G. Illuminati and M. P. Illuminati. bibliog Am Chem Soc J 75:2159-61 My 5 '53

What is selling continuous nitration? il diag Chem Eng 60:130+ Mr '53

NITRENES

Structure of the nitrenes. C. H. Hassall and A. E. Lippman. Chem Soc J p 1059-63 Ap '53

NITRIC acid

Behavior of liquid hydrocarbons with white fuming nitric acid. C. H. Trent and M. J. Zucrow. bibliog diag Ind & Eng Chem 44:2668-73 N '52

Corrosion of aluminum by nitric acid as a function of temperature. M. G. Fontana. Ind & Eng Chem 45:sup93A-5A F '53

Corrosion of 18-8s by nitric acid as a function of temperature. M. G. Fontana. Ind & Eng Chem 44:sup 101A-2A+ N '52

Cryoscopic constants of dissociating solvents (with special reference to nitric and sulphuric acids). P. A. H. Wyatt. Chem Soc J p 1175-80 Ap '53

Determination of thiophene by oxidative decomposition with nitric acid. L. S. Levitt and E. Howard, jr. bibliog Anal Chem 25:196-7 Ja '53

Electrolytic conductance of the nitric acid-nitrogen dioxide-water system at 32°F. G. D. Robertson, jr., D. M. Mason and B. H. Sage. bibliog diag Ind & Eng Chem 44:2928-30 D '52

Infra-red spectrum of nitric and of deuteronitric acid vapour; completion of identification of the fundamental frequencies; entropy of nitric acid; barrier resisting rotation of the hydroxyl group. H. Cohn, C. K. Ingold and H. G. Poole. diag Chem Soc J p4272-82 N '52

Kinetics of the thermal decomposition of nitric acid vapor; mechanism. H. S. Johnston, L. Foering and R. J. Thompson. bibliog diags J Phys Chem 57:390-5 Ap '53

Nitric foments a rock revolution. il Chem W 72:32+ Mr 21 '53

Oxygen exchange between nitric acid and water. C. A. Bunton, E. A. Halevi and D. R. Llewellyn. Chem Soc J p4913-24 D '52

Oxygen exchange between nitric acid and water; catalysis by nitrous acid. C. A. Bunton, E. A. Halevi and D. R. Llewellyn. Chem Soc J p2653-7 S '53

Rates and temperature coefficients in the hydration of two gaseous pentenes by dilute aqueous nitric acid. J. B. Levy and others. bibliog Am Chem Soc J 75:3955-7 Ag 20 '53

Rates, equilibrium and temperature coefficients in the reversible hydration of gaseous 1-methylcyclopentene-1 by dilute nitric acid. R. W. Taft, jr. and others. bibliog Am Chem Soc J 74:4735-7 O 5 '52

Solubility of uranyl oxalate in nitric acid. C. B. Amphlett and O. T. Davidge. Chem Soc J p2938-9 Jl '52

Synthesis of nitric esters by the addition of nitric acid to the ethylene oxide ring. P. L. Nichols, jr., A. B. Magnusson and J. D. Ingham. bibliog Am Chem Soc J 75:4255-8 S 5 '53

Three classes of metals and alloys for handling straight nitric acid. M. G. Fontana. Ind & Eng Chem 44:sup 101A-2A+ O '52

NITRIC oxide. See Nitrogen oxides

NITRIDES

Formation of nitrides from atmospheric exposure during creep rupture of 18 per cent Cr-8 per cent Ni steel. E. J. Dulis and G. V. Smith. il J Metals 4:Trans 1083-4 O '52

Preparation and reactions of carbonitrides on iron. W. K. Hall and others. bibliog Am Chem Soc J 75:1442-7 Mr 20 '53

Studies of compounds for superconductivity. W. T. Ziegler and R. A. Young. bibliog Phys R 90:115-19 Ap 1 '53

Thermodynamics of metal nitrides and of nitrogen in iron and steel. J. Pearson and U. J. C. Ende. bibliog Iron & Steel Inst J 175:52-8 S '53

NITRIDING process. See Case hardening—Nitriding process

NITRILES

Azo-bis nitriles; the decomposition of azo compounds derived from cycloalkanones; an accurate measure of differences in ring strain. C. G. Overberger and others. bibliog Am Chem Soc J 75:2078-82 My 5 '53

Derivatives of piperazine; addition of 1-arylpiperazines to α,β-unsaturated nitriles and esters. C. B. Pollard, E. G. Rietz and R. Robbins. bibliog Am Chem Soc J 75:2989-90 Je 20 '53

Ketimines; from fencholonitrile. P. L. Pickard and E. F. Engles. Am Chem Soc J 74:4607-8 S 20 '52

Preparation of δ-ketoacids and δ-ketonitriles from monocyanoethylated β-ketoesters. C. W. Yoho and R. Levine. bibliog Am Chem Soc J 74:5597-9 N 20 '52

Production of acetonitrile and other low molecular weight nitriles. W. I. Denton and R. B. Bishop. bibliog flow diag Ind & Eng Chem 45:282-6 F '53

Quinolizidine derivatives; a study of the reductive cyclization of some γ-(2-pyridyl)-butyronitriles. V. Boekelheide and others. bibliog Am Chem Soc J 75:3243-8 Jl 5 '53

Reduction of aliphatic nitriles by the Stephen reaction. J. A. Knight and H. D. Zook. bibliog Am Chem Soc J 74:4560-2 S 20 '52

Solvent effects in the conversion of nitriles to perhydro-*s*-triazines. W. D. Emmons and others. Am Chem Soc J 74:5524-5 N 5 '52

Trimerization of nitriles at high pressures. T. L. Cairns, A. W. Larchar and B. C. McKusick. bibliog Am Chem Soc J 74:5633-6 N 20 '52

See also

Acetonitrile

Acrylonitrile

NITRITES

Electronic structures and spectra of some molecules related to oxygen. L. E. Orgel. Chem Soc J p 1276-8 Ap '53

See also

Sodium nitrite

Analysis

Ultraviolet spectrophotometric determination of nitrites with 4-aminobenzenesulfonic acid. J. M. Pappenhagen and M. G. Mellon. bibliog Anal Chem 25:341-3 F '53

NITRO compounds

Anionotropic systems; the effect of a nitro-substituent on equilibrium and mobility in the 1 : 3-diphenylallyl alcohol system. E. A. Braude and E. S. Waight. Chem Soc J p419-24 F '53

NITRO compounds—*Continued*

Aromatic nitration; the influence of solvent on anomalous orientation by the nitro group. G. S. Hammond, F. J. Modic and R. M. Hedges. bibliog Am Chem Soc J 75:1388-92 Mr 20 '53

Aromatic nitration; the ultraviolet spectra of aromatic nitro compounds in sulfuric acid. G. S. Hammond and F. J. Modic. bibliog Am Chem Soc J 75:1385-8 Mr 20 '53

Characteristic infra-red absorption frequencies of aromatic nitro-compounds. R. R. Randle and D. H. Whiffen. Chem Soc J p4153-4 N '52

Inter- and intramolecular energy transfer processes; nitro-compounds and hydrocarbons. C. Reid. J Chem Phys 20:1212-13 Ag '52

β-(*p*-Nitrobenzoyl)-acrylic acid and *p*-nitroacrylophenone. H. F. Ginsberg, I. Lederman and D. Papa. bibliog Am Chem Soc J 75:4587-9 S 20 '53

Preferential reduction of nitro-groups in polynitro-compounds; 1 : 3 : 6-, 1 : 3 : 8-, and 1 : 4 : 5-trinitronaphthalene. E. R. Ward and L. A. Day. Chem Soc J p4529-30 N '52

Preparation of nitro compounds from oximes. D. C. Iffland and others. bibliog Am Chem Soc J 75:4044-6 Ag 20 '53

Preparation of nitro compounds from oximes; the improved synthesis of nitrocycloalkanes. D. C. Iffland and G. X. Criner. bibliog Am Chem Soc J 75:4047-8 Ag 20 '53

Reactions of aliphatic nitro compounds; alkylation by allyl-type halides. R. N. Boyd and R. J. Kelly. Am Chem Soc J 74:4600-2 S 20 '52

Reactions of aliphatic nitro compounds; condensations with isocyanates. R. N. Boyd and R. Leshin. Am Chem Soc J 75:2762-3 Je 5 '53

Reactions of fluorocarbon radicals; polyfluoroalkyl nitroso- and nitro-compounds. R. N. Haszeldine. Chem Soc J p2075-81 Jl '53

Reductions with hydrazine hydrate catalyzed by Raney nickel; aromatic nitro compounds to amines. D. Balcom and A. Furst. bibliog Am Chem Soc J 75:4334 S 5 '53

Relation between configuration and conjugation in diphenyl derivatives; the dipole moments of the monohalogeno- and mononitro-diphenyls. A. C. Littlejohn and J. W. Smith. Chem Soc J p2456-63 Ag '53

Removal of halogen from aromatic nitrohalo compounds. W. T. Smith, jr. and L. Campanaro. Am Chem Soc J 75:3602-3 Jl 20 '53

Studies in spectroscopy; the infra-red and ultra-violet spectra of some aliphatic nitrocompounds. R. N. Haszeldine. Chem Soc J p2525-7 S '53

See also
Nitroparaffins
Sodium methoxide

Analysis

Study of the diphenylamine test for aliphatic nitrocompounds. K. Grebber and J. V Karabinos. bibliog diag J Res Nat Bur Stand 49:163-6 S '52

NITROALKANES. See Nitroparaffins

NITROANILINE

Magnetic susceptibility of certain organic compounds; the constitution of *ortho*, *meta*, and *para* nitroanilines. H. Mikhail. bibliog J Chem Phys 21:1004-6 Je '53

NITROBENZENE

Acid strength of iodine monochloride, antimony trichloride and picric acid with reference to the bases pyridine and aniline in nitrobenzene. I. M. Kolthoff, D. Stőcesocá and T. S. Lee. bibliog Am Chem Soc J 75:1834-9 Ap 20 '53

Homolytic aromatic substitution; competitive experiments on the phenylation of benzene, nitrobenzene, chlorobenzene, and pyridine; partial rate factors for nitrobenzene. D. R. Augood, D. H. Hey and G. H. Williams. diags Chem Soc J p2094-102 Je '52

Nitration in sulphuric acid; the rates of nitration of nitrobenzene and pentadeuteronitrobenzene. T. G. Bonner, F. Bowyer and G. Williams. Chem Soc J p2650-2 S '53

Nitrobenzene extraction; Atlantic refining co. flow diag Pet Refiner 31:194-5 S '52

NITROBENZOIC acid

Preparation of some 4-*n*-alkyl-3-nitrobenzoic acids. H. A. Fahim and A. M. Fleifel. Chem Soc J p4519-21 N '52

NITROBENZOPHENONE

Influence of acidity function and water concentration on the rate of hydrolysis of *p*-nitrobenzophenone diethylketal in aqueous ethanol. W. W. Kaeding and L. J. Andrews. bibliog Am Chem Soc J 74:6189-93 D 20 '52

NITROCELLULOSE

Bonding of thin films. H. P. Meissner and J. Byrne. bibliog diag J Ap Phys 23:1170-3 O '52

Reflectance of thin cellulose nitrate films. L. Harris and J. K. Beasley. Opt Soc Am J 42:634-6 S '52

NITROCHLOROBENZENE. See Chloronitrobenzene

NITROCINCHOPHEN

6-Nitrocinchophen and related substances. C. M. McCloskey. bibliog Am Chem Soc J 74:5922-4 D 5 '52

NITROCINNAMIC acid

Mechanisms of elimination reactions; the spontaneous decomposition of salts of β-halo acids; *trans*-*m*-nitrocinnamic acid dibromide. S. J. Cristol and W. P. Norris. bibliog Am Chem Soc J 75:632-6 F 5 '53

NITROCINNOLINE

Cinnolines; the nature of the $C_{(8)}$-position; the synthesis of 3-methyl-, 3-choloro-, and 3-bromo-cinnoline; also, of cinnoline and the *Bz*-nitrocinnolines. E. J. Alford and K. Schofield. Chem Soc J p609-12 F '53

NITROCRESOL

3-Nitro-*o*-cresol. R. Long and K. Schofield. Chem Soc J p2437-8 Je '52

NITRODURENE

3-Nitrodurene. G. Illuminati. bibliog Am Chem Soc J 74:4951-2 O 5 '52

NITROETHANE

Rates of ionization of pseudo acids; steric effects in the base-catalyzed ionization of nitroethane. R. G. Pearson and F. V. Williams. bibliog Am Chem Soc J 75:3073-5 Jl 5 '53

NITROFLUORENONE

1-Nitrofluorenone. E. H. Huntress and others. bibliog Am Chem Soc J 75:743-4 F 5 '53

Some experiments on the nitrofluorenones and related nitrophenanthridones, and observations on the Ullmann fluorenone synthesis. A. J. Nunn, K. Schofield and R. S. Theobald. Chem Soc J p2797-803 Jl '52

NITROGEN

Absolute intensity of the ν_4 infrared absorption band of methane and its enhancement by nitrogen at high pressures. H. L. Welsh and P. J. Sandiford. bibliog J Chem Phys 20:1646-7 O '52

Active nitrogen. S. K. Mitra. bibliog Phys R 90:516-21 My 15 '53

Active nitrogen, airglow. O. Oldenberg. bibliog Phys R 90:727-30 Je 1 '53

Activities in light nuclei from nitrogen ion bombardment. L. D. Wyly and A. Zucker. Phys R 89:524-5 Ja 15 '53

Additional measurements of heat conductivity of nitrogen, carbon dioxide, and mixtures. F. G. Keyes. bibliog A S M E Trans 74:1303-6 N '52

Adsorption at water-helium, -methane and -nitrogen interfaces at pressures to 15,000 p.s.i.a. E. W. Hough, B. B. Wood, jr. and M. J. Rzasa. bibliog il J Phys Chem 56:996-9 N '52

Condensation of nitrogen in a hypersonic nozzle. W. W. Willmarth and H. T. Nagamatsu. bibliog il J Ap Phys 23:1089-95 O '52

Diffusion and solubility of nitrogen in beta zirconium. M. W. Mallett and others. bibliog Electrochem Soc J 100:103-6 Mr '53

Dissociation of H_2 and N_2 on tungsten filaments. M. Farber and A. J. Darnell. bibliog J Chem Phys 21:172-3 Ja '53

Drift velocity of ions in oxygen, nitrogen, and carbon monoxide. R. N. Varney. Phys R 89:708-11 F 15 '53

Dumping of foreign nitrogen here is charged by sellers; abstract. C. S. Edwards. Chem & Eng N 31:2182 My 25 '53

Effect of 1470A irradiation of nitrogen-hydrogen mixtures and of ammonia. M. H. J. Wijnen and H. A. Taylor. bibliog diag J Chem Phys 21:233-6 F '53

NITROGEN—*Continued*

Effects of carbon, oxygen and nitrogen on welds in titanium. D. C. Martin. il diags Welding J 32:sup 139-54 Mr '53

Electrical fields in the Crookes dark space of a low pressure glow discharge in air and N_2. R. P. Stein. bibliog diags Phys R 89:134-42 Ja 1 '53

Filling transformers for radar antenna stabilizers with nitrogen. il Electronics 26:280-2 Jl '53

Forbidden line of N II in the aurora. W. Petrie. Phys R 87:1002 S 15 '52

Formative time lags of uniform field breakdown in N_2. G. A. Kachickas and L. H. Fisher. bibliog Phys R 88:878-83 N 15 '52

Heats of adsorption of nitrogen and argon on porous and on non-porous carbon adsorbents at –195°. R. A. Beebe, B. Millard and J. Cynarski. bibliog Am Chem Soc J 75:839-45 F 20 '53

Measurement of the (n,H^3) cross section in nitrogen and its relationship to the tritium production in the atmosphere. E. L. Fireman. bibliog Phys R 91:922-6 Ag 15 '53

Measurements of the physical properties of active nitrogen. J. M. Benson. bibliog il diags J Ap Phys 23:757-63 Jl '52

Mechanism for active nitrogen. R. W. Nicholls. bibliog J Chem Phys 20:1040 Je '52

Migration of nitrogen in the Schmidt reaction. E. Lieber, R. A. Henry and W. G. Finnegan. Am Chem Soc J 75:2023 Ap 20 '53

Naphthalene and nitrogen; new volume source for petrochemicals? O. V. Tracy. Pet Processing 8:250-2 F '53

Nitrogen international output seen equal to use despite indicated surplus. Oil Paint & Drug Rep 163:3+ Ap 6 '53

Physical adsorption on single crystal zinc surfaces. T. N. Rhodin. bibliog diag J Phys Chem 57:143-8 F '53

PVT relations of nitrogen and ethylene mixtures at high pressure. W. P. Hagenbach and E. W. Comings. bibliog il diags Ind & Eng Chem 45:606-9 Mr '53

Shape and thickness of shock fronts in argon, hydrogen, nitrogen, and oxygen. E. F. Greene and D. F. Hornig. bibliog J Chem Phys 21:617-24 Ap '53

Simple method of purifying hydrogen, nitrogen and the inert gases; sodium-potassium alloy trap. E. R. Harrison. bibliog diag J Sci Instr 29:295 S '52

Spectrum of an argon-nitrogen mixture excited in an high voltage arc. R. W. Nicholls. bibliog J Chem Phys 21:568 Mr '53

Third Rydberg series of N_2. R. E. Worley. Phys R 89:863-4 F 15 '53

Transition probabilities; dipole velocity computations for C_2 and N_2^+; the question of degree of hybridization. H. Shull. J Chem Phys 20:1095-102 Jl '52

Use of ionization probability curves for the analysis of CO and N_2 mixtures. W. M. Hickam and R. E. Fox. J Chem Phys 20:1055 Je '52

Viscosity, thermal conductivity and specific heat of nitrogen at elevated pressures and temperatures. I. Granet and P. Kass. bibliog Pet Refiner 32:149-50 Mr '53

See also

Iron—Nitrogen content
Steel—Nitrogen effect
Petroleum—Nitrogen content

Analysis

Application of ter Meulen nitrogen method to petroleum fractions. J. Holowchak, G. E. C. Wear and E. L. Baldeschwieler. bibliog il diag Anal Chem 24:1754-7 N '52

Determination of basic nitrogen in oils. V. Z. Deal, F. T. Weiss and T. T. White. bibliog(82 ref) Anal Chem 25:426-32 Mr '53

Determination of nitrogen in petroleum and shale oil; report of A.P.I. subcommittee. bibliog Anal Chem 24:1806-11 N '52

Modification of Parnas-Wagner-Pregl micro-Kjeldahl apparatus. E. H. Sheers and M. S. Cole. diag Anal Chem 25:535 Mr '53

Recent developments in quantitative organic microanalysis. W. Kirsten. bibliog(62 ref) il diags Anal Chem 25:74-86 Ja '53

Table for calculation of N^{15} concentration by mass spectrometric isotope analysis. L. D. Abbott, jr. and M. J. Dodson. Anal Chem 24:1860 N '52

See also

Amino acids—Analysis

Industrial applications

Gases are good cutting coolants. D. G. Pahlitzsch. diag Am Mach 97:196-7 F 16 '53

New boost for your product with industrial gases. il Mod Ind 25:40-5 F '53

New nitrogen impact jar eliminates jarring action. il World Oil 136:124-6+ Mr '53

Pressurizing high pressure hot water systems with nitrogen and other methods. J. R. Kell. il diags Heating-Piping 25:84-7 F '53

See also

Case hardening—Nitriding process

Isotopes

Analysis of the energy levels of the mirror nuclei, C^{13} and N^{13}. R. G. Thomas. bibliog Phys R 88:1109-25 D 1 '52

Angular distribution of gamma-rays and short-range alpha-particles from $N^{15}(p,\alpha\gamma)C^{12}$. A. A. Kraus, jr. and others. Phys R 89:299-301 Ja 1 '53

Decrease of N^{15} to N^{14} ratio measurement as a function of pump-out time for Nier-type isotope-ratio mass spectrometer. J. George. bibliog diag Anal Chem 24:1662-4 O '52

Energy levels in N^{14} and C^{14} from deuteron bombardment of C^{13}. R. E. Benenson. bibliog diag Phys R 90:420-8 My 1 '53

Excited states of the N^{13} nucleus. H. L. Jackson and A. I. Galonsky. bibliog diag Phys R 89:370-4 Ja 15 '53

Ground state of N^{14}. A. M. Feingold. Phys R 89:318 Ja 1 '53

Ground-state parity of N^{14}. D. A. Bromley. bibliog diags Phys R 88:565-70 N 1 '52

Kinetics of the exchange of N^{15} between $N^{15}O_2$ and N_2O_5. A. R. Amell and F. Daniels. bibliog Am Chem Soc J 74:6209-12 D 20 '52

Levels in N^{14} from the $(C^{13}(p,\gamma)N^{14}$ reaction. D. Hicks and others. diag Phys R 90:163-4 Ap 1 '53

N^{14} level structure from the $C^{13}(p,n)N^{13}$ reaction. J. K. Bair and others. Phys R 90:575-6 My 15 '53

Oxidation of hydrazine in aqueous solution; the use of ^{15}N as a tracer in the oxidation of hydrazine. W. C. E. Higginson and D. Sutton. Chem Soc J p 1402-6 My '53

Physiological disposition of pentaquine labeled in the side chain with N^{15}. R. C. Elderfield and L. L. Smith. bibliog Am Chem Soc J 75:1022-4 Mr 5 '53

Role of N^{15} glycine, glutamine aspartate and glutamate in hypoxanthine synthesis. J. C. Sonne, I. Lin and J. M. Buchanan. Am Chem Soc J 75:1516-17 Mr 20 '53

Search for 1-Mev gamma from N^{16} decay. F. Boehm and others. bibliog Phys R 90:1119-20 Je 15 '53

Study of diazo-compounds by use of nitrogen isotopes; the reduction of mixed diazonium salts of anthranilic acid and aniline. P. F. Holt and B. I. Hopson-Hill. Chem Soc J p4251-4 N '52

Synthesis of pentaquine labeled in the quinoline ring with N^{15}. R. C. Elderfield, L. L. Smith and E. Werble. bibliog Am Chem Soc J 75:1245 Mr 5 '53

Synthesis of pentaquine labeled in the side chain with N^{15}. A. H. Blatt and N. Gross. bibliog Am Chem Soc J 75:1245-7 Mr 5 '53

Thermal decomposition of hydrazobenzene, studied by the use of nitrogen isotopes. P. F. Holt and B. P. Hughes. diag Chem Soc J p 1666-9 Je '53

NITROGEN, Liquid

Automatic liquid-nitrogen dispenser. J. E. Sherwood. diag R Sci Instr 23:446 Ag '52

Government erects $3,500,000 low temperature laboratory; NBS-AEC cryogenic engineering laboratory. flow diag il Refrig Eng 61:1084+ O '53

Some acoustical properties of lead and other substances at liquid nitrogen temperature. P. J. Ernst and P. Zayon. Acoustical Soc Am J 25:152-3 Ja '53

NITROGEN chloride

Infrared spectra and structure of the chloramines and nitrogen trichloride. G. E. Moore and R. M. Badger. bibliog Am Chem Soc J 74:6076-80 D 5 '52

NITROGEN compounds

Addition compounds of chromium(VI) oxide with heterocyclic nitrogen bases; reactions with the lutidines, vinylpyridines, 2,4,6-collidine and α-picoline. H. H. Sisler and others. bibliog Am Chem Soc J 75:446-8 Ja 20 '53

Carcinogenic nitrogen compounds; benzacridines, benzocarbazoles, and related compounds bearing ethyl and propyl groups. N. P. Buu-Hoï and others. Chem Soc J p4867-9 D '52

Carcinogenic nitrogen compounds; fluorine-containing 1 : 2- and 3 : 4-benzacridines. N. P. Buu-Hoï and P. Jacquignon. Chem Soc J p4173-5 N '52

Carcinogenic nitrogen compounds; Friedel-Crafts reactions with *m*- and *p*-fluorotoluene. N. P. Buu-Hoï and N. D. Xuong. Chem Soc J p386-8 F '53

Carcinogenic nitrogen compounds; indeno-(3′ : 2′-2 : 3)indoles, benzindeno(3′ : 2′-2 : 3)indoles, and related compounds. N. P. Buu-Hoï and N. D. Xuong. Chem Soc J p2225-8 Je '52

Effect of free residual chlorination on nitrogen compounds in water. M. J. Taras. bibliog Am Water Works Assn J 45:47-61 Ja '53

Electrolytic reduction of bicyclic α-aminoketones; a method for the synthesis of medium rings containing nitrogen. N. J. Leonard, S. Swann, jr. and E. H. Mottus. bibliog Am Chem Soc J 74:6251-3 D 20 '52

Heterocyclic nitrogen compounds; the condensation of phthalaldehydic acids and diamines. E. F. M. Stephenson. Chem Soc J p5024-7 D '52

Nitrogen analogs of ketenes; a new method of preparation. C. L. Stevens and J. C. French. bibliog Am Chem Soc J 75:657-60 F 5 '53

Nitrogen-containing ring of carpaine. H. Rapoport and H. D. Baldridge, jr. bibliog Am Chem Soc J 74:5365-8 N 5 '52

Non-exchange of oxygen between water and some compounds of nitrogen. F. Bonner and J. Bigeleisen. Am Chem Soc J 74:4944-5 O 5 '52

Problem of the unsaturated three-membered ring containing nitrogen. D. J. Cram and M. J. Hatch. bibliog Am Chem Soc J 75:33-8 Ja 5 '53

Pyridylethylation of active nitrogen compounds; further studies of the reactions of 2-vinylpyridine with ketones. M. H. Wilt and R. Levine. bibliog Am Chem Soc J 75:1368-72 Mr 20 '53

Quaternary salts of halogenated heterocyclic nitrogen compounds. C. T. Bahner and others. Am Chem Soc J 75:1472-3 Mr 20 '53

Reactions of certain nitrogen-containing compounds derived from benzotrifluoride. R. A. Cartwright and J. C. Tatlow. Chem Soc J p 1994-8 Jl '53

Reductive cyclization; a method for the synthesis of tricyclic compounds possessing a bridgehead nitrogen. N. J. Leonard and W. J. Middleton. bibliog Am Chem Soc J 74:5114-18 O 20 '52

Some nitrogen derivatives of dibenzothiophene. E. Sawicki and H. S. Green. Am Chem Soc J 75:1752-3 Ap 5 '53

Transformations of organic nitrogen base iodide and bromide salts to chlorides. A. P. Phillips and R. Baltzly. Am Chem Soc J 74:5231-2 O 20 '52

See also
Isoquinoline

Analysis

Oxygen and nitrogen compounds in shale-oil naphtha. R. A. Van Meter and others. bibliog Anal Chem 24:1758-63 N '52

NITROGEN dioxide. See Nitrogen oxides

NITROGEN fixation

Discoveries in nitrogen fixation. M. D. Kamen. il Sci Am 188:38-42 Mr '53

NITROGEN fluoride

Infrared spectra of NF_3 and PF_3. M. K. Wilson and S. R. Polo. bibliog J Chem Phys 20:1716-19 N '52

NITROGEN in metals. See Metals—Nitrogen content

NITROGEN in the body

Concerning the site of nitrogen absorption in rats fed autoclaved or raw soybean oil meal. R. Borchers. Science 117:482 My 1 '53

NITROGEN mustards

Action of ionizing radiations and of radiomimetic substances on deoxyribonucleic acid; physicochemical measurements of the action of bischloroethylmethylamine. J. A. V. Butler, L. Gilbert and D. W. F. James. Chem Soc J p3268-73 Ag '52

NITROGEN oxides

Application of a fast-scanning infrared spectrometer to a kinetic study of the NO_2-C_2H_5OH reaction. R. E. Nightingale and others. diag J Chem Phys 21:1398-9 Ag '53

Atmospheric window, 16 to 24 microns, and the second fundamental of nitrous oxide. A. Adel. il Phys R 88:128 O 1 '52

Decomposition of diethyl peroxide in the presence of nitric oxide and ethyl nitrite. J. B. Levy. bibliog Am Chem Soc J 75:1801-3 Ap 20 '53

Decomposition of nitrogen pentoxide in the presence of nitric oxide; effect of foreign gases. H. S. Johnston. bibliog Am Chem Soc J 75:1567-70 Ap 5 '53

Effect of sorption on the structure of surfaces of solids; magnetic susceptibility of sorbed NO_2-N_2O_4 on rutile; the stoichiometry of rutile. L. H. Reyerson and J. M. Honig. bibliog Am Chem Soc J 75:3920-2 Ag 20 '53

Effect of sorption on the structure of surfaces of solids; sorption of NO_2-N_2O_4 on rutile. L. H. Reyerson and J. M. Honig. bibliog Am Chem Soc J 75:3917-19 Ag 20 '53

Electrical conductivity of liquid dinitrogen tetroxide. C. C. Addison and J. Lewis. diag Chem Soc J p4079-80 O '52

Electrolytic conductance of the nitric acid-nitrogen dioxide-water system at 32°F. G. D. Robertson, jr., D. M. Mason and B. H. Sage. bibliog diag Ind & Eng Chem 44:2928-30 D '52

Emission bands of the NO molecule in the vacuum ultraviolet region. Y. Tanaka. bibliog il diag J Chem Phys 21:788-93 My '53

Gases produced by inert arc welding. J. J. Ferry and G. B. Ginther. bibliog Welding J 32:396-8 My '53

Infrared absorption of solid N_2O_5. R. Teranishi and J. C. Decius. J Chem Phys 21:1116 Je '53

Infrared intensity measurements on nitric oxide, hydrogen chloride, and hydrogen bromide. S. S. Penner and D. Weber. bibliog J Chem Phys 21:649-54 Ap '53

Intermolecular potentials for the systems CO_2-CO_2 and CO_2-N_2O. I. Amdur and others. bibliog J Chem Phys 20:1620-3 O '52

Kinetics of decomposition of nitric oxide. F. Kaufman and J. R. Kelso. bibliog J Chem Phys 21:751; Discussion. H. Wise and M. F. Frech. 752 Ap '53

Kinetics of decomposition of nitric oxide at elevated temperatures; effect of reaction products and the mechanism of decomposition. H. Wise and M. F. Frech. bibliog J Chem Phys 20:1724-7 N '52

Kinetics of the exchange of N^{15} between $N^{15}O_2$ and N_2O_5. A. R. Amell and F. Daniels. bibliog Am Chem Soc J 74:6209-12 D 20 '52

Kinetics of the oxidation of ethylene by nitrogen dioxide. T. L. Cottrell and T. E. Graham. Chem Soc J p556-63 F '53

Kinetics of the oxidation of methane by nitrous oxide. P. L. Robinson and E. J. Smith. diag Chem Soc J p3895-904 O '52

Liquid dinitrogen tetroxide solvent system. C. C. Addison and J. Lewis. Chem Soc J p 1869-79 Je '53

Liquid dinitrogen tetroxide solvent system; thermal and conductivity measurements on nitromethane-liquid dinitrogen tetroxide mixtures. C. C. Addison, N. Hodge and J. Lewis. diag Chem Soc J p2631-5 S '53

NITROGEN oxides—*Continued*

Magnetic susceptibility of liquid nitric oxide and the heat of dissociation of $(NO)_2$. A. L. Smith and H. L. Johnston. bibliog Am Chem Soc J 74:4696-8 S 20 '52

Molecular addition compounds of dinitrogen tetroxide; reactions with tertiary amines. D. A. Davenport, H. J. Burkhardt and H. H. Sisler. Am Chem Soc J 75:4175-8 S 5 '53

Nitrous oxide, an interfering factor in geochemistry. R. L. Slobod. flow sheets diag Pet Eng 25:B 129+ My '53

Oxidation of *n*-paraffins from propane to nonane by nitrous oxide. E. J. Smith. Chem Soc J p 1271-5 Ap '53

Photoionization cross section of nitric oxide. K. Watanabe and others. bibliog diag Phys R 91:1155-8 S 1 '53

Preparation and magnetic susceptibility of clathrate compounds of nitric oxide and of oxygen. D. E. Evans and R. E. Richards. Chem Soc J p3295-7 Ag '52

Reaction of dinitrogen tetroxide with olefins; octadec-1-ene and buta-1 : 3-diene. C. R. Porter and B. Wood. Inst Pet J 38:877-81 O '52

Reaction of dinitrogen tetroxide with tolane. K. N. Campbell, J. Shavel, jr. and B. K. Campbell. bibliog Am Chem Soc J 75: 2400-3 My 20 '53

Reactions of nitrous oxide with organolithium compounds. F. M. Beringer, J. A. Farr, jr. and S. Sands. bibliog Am Chem Soc J 75:3984-7 Ag 20 '53

Reactions of sodium carbonate and sodium hydroxide with dinitrogen tetroxide. C. C. Addison and J. Lewis. Chem Soc J p 1319-20 Ap '53

Rotational line-width measurements on NO, HCl, and HBr. D. Weber and S. S. Penner. bibliog J Chem Phys 21:1503-6 S '53

Separation of the absorption spectra of NO_2 and N_2O_4 in the range of 2400-5000A. T. C. Hall, jr. and F. E. Blacet. bibliog J Chem Phys 20:1745-9 N '52

Shock waves in chemical kinetics; the rate of dissociation of N_2O_4. T. Carrington and N. Davidson. bibliog il diags J Phys Chem 57:418-27 Ap '53

Six-millimeter spectra of OCS and N_2O. S. J. Tetenbaum. bibliog Phys R 88:772-4 N 15 '52

Some new data on the NO-N_2O_5 reaction. G. R. Cowan and others. bibliog J Chem Phys 21:1397-8 Ag '53

Study of the kinetics of the reaction between nitrogen dioxide and alcohols. A. M. Fairlie, jr., J. J. Carberry and J. C. Treacy. Am Chem Soc J 75:3786-9 Ag 5 '53

Theory of flame propagation. J. O. Hirschfelder, C. F. Curtiss and D. E. Campbell. bibliog J Phys Chem 57:403-14 Ap '53

Thermal decomposition of nitrous oxide. L. Friedman and J. Bigeleisen. bibliog Am Chem Soc J 75:2215-17 My 5 '53

Vapor pressures and freezing points of the system nitrogen tetroxide-nitric oxide. A. G. Whittaker and others. bibliog diag Am Chem Soc J 74:4794-7 O 5 '52

Volumetric and phase behavior of mixtures of nitric oxide and nitrogen dioxide. F. T. Selleck, H. H. Reamer and B. H. Sage. bibliog Ind & Eng Chem 45:814-19 Ap '53

Analysis

Analysis of gas mixtures containing oxides of nitrogen. C. L. Johnson. bibliog diag Anal Chem 24:1572-5 O '52

Physiological effect

Oxides of nitrogen; data sheet. bibliog il Nat Safety N 68:38-9+ Jl '53

NITROGEN pentoxide. See Nitrogen oxides

NITROGEN sulfide. See Sulfur nitride

NITROGLYCERINE

Plug for liquid nitro. Oil & Gas J 52:67-8 Je 8 '53

NITROGUANIDINE

Hydrazinolysis of nitroguanidine in alcoholic systems; preparation and reactions of 1,6-dinitrobiguanidine. R. A. Henry, S. Skolnik and G. B. L. Smith. bibliog Am Chem Soc J 75:955-62 F 20 '53

Nitration of guanidine in sulphuric acid; kinetics of *N*-nitration of the guanidinium ion and denitration of nitroguanidine. G. Williams and R. J. J. Simkins. Chem Soc J p 1386-92 My '53

Nitration of guanidine in sulphuric acid; the reversible conversion of guanidine nitrate into nitroguanidine. R. J. J. Simkins and G. Williams. diag Chem Soc J p3086-94 Ag '52

N - β - nitraminoethyl-N′-aryl-N″-nitroguanidines. A. F. McKay, W. G. Hatton and G. W. Taylor. bibliog Am Chem Soc J 75:1120-2 Mr 5 '53

N-β-nitraminoethyl-N′-methyl-N″-nitroguanidine. A. F. McKay and W. G. Hatton. bibliog Am Chem Soc J 75:963-5 F 20 '53

Nitroguanidines. A. F. McKay. Chem R 51: 301-46 bibliog(p343-6) O '52

Studies in the pyrazole series; the 1-nitroguanyl type. F. L. Scott, M. T. Kennedy and J. Reilly. bibliog Am Chem Soc J 75:1294-7 Mr 20 '53

NITROHIPPURIC acid

Spectra of azlactones; azlactones derived from substituted benzaldehydes and hippuric and nitrohippuric acid. D. A. Bassi, V. Deulofeu and F. A. F. Ortega. bibliog Am Chem Soc J 75:171-8 Ja 5 '53

NITROMERCAPTOBENZOTHIAZOLE

6-Nitro-2-mercaptobenzothiazole reagent for the identification of alkyl dihalides. H. B. Cutter and A. Kreuchunas. Anal Chem 25: 198 Ja '53

NITROMETHANE

Infrared spectra of tetranitromethane. P. H. Lindenmeyer and P. M. Harris. bibliog diags J Chem Phys 21:408-14 Mr '53

Liquid dinitrogen tetroxide solvent system; thermal and conductivity measurements on nitromethane-liquid dinitrogen tetroxide mixtures. C. C. Addison, N. Hodge and J. Lewis. diag Chem Soc J p2631-5 S '53

Thermal decomposition of nitromethane. L. J. Hillenbrand, jr. and M. L. Kilpatrick. bibliog diag J Chem Phys 21:525-35 Mr '53

NITROMETHYL propanol

Sulfonic acid esters of 2-nitro-2-methyl-1-propanol. R. N. Boyd and R. H. Hansen. bibliog Am Chem Soc J 75:3737-9 Ag 5 '53

NITROOLEFINS

Addition of hydroxylamine to ω-nitrostyrene, furylnitroethylene and nitroölefins. C. D. Hurd and J. Patterson. bibliog Am Chem Soc J 75:285-8 Ja 20 '53

Arylnitroalkenes; a new group of antibacterial agents. O. Schales and H. A. Graefe. bibliog Am Chem Soc J 74:4486-90 S 20 '52

NITROPARAFFINS

Action of oxidizing agents on salts of nitroalkanes; oxidative dimerization. H. Schechter and R. B. Kaplan. bibliog Am Chem Soc J 75:3980-3 Ag 20 '53

Ionisation of tri-*p*-tolylmethyl chloride in nitroalkanes. A. Bentley and A. G. Evans. Chem Soc J p3468-73 S '52

Low pressure catalytic hydrogenation of nitroparaffins. D. C. Iffland and F. A. Cassis, jr. bibliog Am Chem Soc J 74:6284-5 D 20 '52

See also
Nitropropane

Analysis

Colorimetric determination of nitroparaffins. L. R. Jones and J. A. Riddick. bibliog diag Anal Chem 24:1533-6 O '52

NITROPHENANTHRIDONE

Some experiments on the nitrofluorenones and related nitrophenanthridones, and observations on the Ullmann fluorenone synthesis. A. J. Nunn, K. Schofield and R. S. Theobald. Chem Soc J p2797-803 Jl '52

NITROPHENOL

Urinary excretion of paranitrophenol following exposure to parathion. J. Lieben and others. il A M A Archives Ind Hygiene & Occup Med 7:93-8 F '53

Urinary excretion of paranitrophenol following parathion exposure. J. Lieben and others. bibliog A M A Archives Ind Hygiene & Occup Med 6:491-5 D '52

NITROPHENYL phenol

Characterization of 2-hydroxy-2′-nitrobiphenyl. J. C. Colbert, D. Fox and W. A. Skinner. bibliog Am Chem Soc J 75:2249-50 My 5 '53

NITROPHENYLSERINE

β-*p*-Nitrophenylserines and the corresponding β-*p*-nitrophenylserinols. G. Carrara, E. Pace and G. Cristiani. bibliog Am Chem Soc J 74:4949-50 O 5 '52

NITROPHTHALIMIDES

4-Nitrophthalimides; derivatives of alkyl halides giving a saponification equivalent. J. H. Billman and R. V. Cash. Am Chem Soc J 75:2499-501 My 20 '53

NITROPROPANE

Analysis

Colorimetric determination of nitroparaffins. L. R. Jones and J. A. Riddick. bibliog diag Anal Chem 24:1533-6 O '52

NITROPRUSSIDES

Polarography of nitroprusside; equilibrium constant of the reaction between nitroprusside and hydroxyl ions. I. M. Kolthoff and P. E. Toren. Am Chem Soc J 75:1197-201 Mr 5 '53

NITROSOAMINES

Acylarylnitrosamines; the rearrangement, decomposition, and deacylation of acylarylnitrosamines. D. H. Hey, J. Stuart-Webb and G. H. Williams. Chem Soc J p4657-65 D '52

NITROSOANILINE

Kinetics of the hydrolysis of *p*-nitrosodimethylaniline. F. M. Miller and M. L. Adams. bibliog Am Chem Soc J 75:4599-600 S 20 '53

NITROSOBENZENE

Direct evidence for the $n \rightarrow \pi$ electronic transition of the nitroso-absorption. K. Nakamoto and K. Suzuki. J Chem Phys 20:1971-2 D '52

Kinetics of the reaction of potassium ferrocyanide and nitrosobenzene; the catalytic action of mercuric ions and ultra-violet light. S. Asperger, I. Murati and O. Cupahin. Chem Soc J p 1041-6 Ap '53

NITROSO compounds

Electronic structures and spectra of some molecules related to oxygen. L. E. Orgel. Chem Soc J p 1276-8 Ap '53

Reactions of fluorocarbon radicals; polyfluoroalkyl nitroso- and nitro-compounds. R. N. Haszeldine. Chem Soc J p2075-81 Jl '53

NITROSODIMETHYLANILINE

Colorimetric determination of ruthenium with *p*-nitrosodimethylaniline. J. E. Currah and others. bibliog Anal Chem 24:1980-2 D '52

Determination of phenols by the *p*-nitrosodimethylaniline method. R. H. Hill and L. K. Herndon. bibliog Sewage & Ind Wastes 24:1389-96 N '52; Discussion. 25: 311-13 Mr '53

NITROSONAPHTHOL

Inorganic complex compounds containing polydentate groups; zirconium(IV) complexes with 2-nitroso-1-naphthol. H. B. Jonassen and W. R. deMonsabert. Am Chem Soc J 74:5298-301 N 5 '52

NITROSOÖXAZOLIDINE

2-Propyl-4-ethyl-3-nitrosoöxazolidine, a novel product from the nitrous acid deamination of 2-amino-1-butanol. H. R. Nace and M. H. Gollis. bibliog Am Chem Soc J 74: 5189-92 O 20 '52

Reaction of 2-propyl-3-nitros-4-ethyloxazolidine and related compounds. H. R. Nace and E. P. Goldberg. bibliog Am Chem Soc J 75:3646-50 Ag 5 '53

NITROSTYRENE

Addition of hydroxylamine to ω-nitrostyrene, furylnitroethylene and nitroölefins. C. D. Hurd and J. Patterson. bibliog Am Chem Soc J 75:285-8 Ja 20 '53

Diene synthesis with unsymmetrical butadienes and β-nitrostyrenes. W. C. Wildman and others. bibliog Am Chem Soc J 75:1912-15 Ap 20 '53

Kinetic study of the alkaline scission of 4-hydroxy-3-methoxy-β-nitrostyrene. R. Stewart. bibliog Am Chem Soc J 74:4531-4 S 20 '52

NITROSYL chloride

2,2-Dimethyl-3-aminopentane and its reaction with nitrosyl chloride. W. A. Mosher, J. C. Cox, jr. and J. Kreitzer. bibliog Am Chem Soc J 75:4605 S 20 '53

Mechanism of the reaction between ozone and nitrosyl chloride. H. S. Johnston and F. Leighton, jr. Am Chem Soc J 75:3612 Jl 20 '53

NITROSYL compounds

Decomposition of nitrosyl disulfonate ion; the relation to the mechanisms of diazotization and deamination. J. C. M. Li and D. M. Ritter. bibliog Am Chem Soc J 75:3024-5 Je 20 '53

Iron catalyzed reaction between nitrosyl disulfonate and hydroxylamine monsulfonate ions. W. J. Ramsey and D. M. Yost. J Chem Phys 21:957-8 My '53

NITROTOLUENE

Some adsorption colors and their significance for thermochromic and tautomeric effects; experiments with anthrone derivatives, nitrotoluenes, spiropyrans and xanthhydrols. A. Schönberg, A. Mustafa and W. Asker. bibliog Am Chem Soc J 74:5640-3 N 20 '52

NITROURACIL

Permanganate oxidation of uracil and 5-nitrouracil. J. L. Fairley, L. L. Daus and B. Krueckel. bibliog Am Chem Soc J 75: 3842-3 Ag 5 '53

NITROUS acid

Evidence for a cyclic intermediate in the reaction of diarylethylamines with nitrous acid. P. S. Bailey and J. G. Burr, jr. bibliog Am Chem Soc J 75:2951-5 Je 20 '53

Migration ratios observed in the reaction of diarylethylamines with nitrous acid. L. S. Ciereszko and J. G. Burr, jr. bibliog Am Chem Soc J 74:5431-3 N 5 '52

Oxygen exchange between nitric acid and water; catalysis by nitrous acid. C. A. Bunton, E. A. Halevi and D. R. Llewellyn. Chem Soc J p2653-7 S '53

Potentiometric study of the reaction between nitrous acid and hydriodic acid. H. T. S. Britton and H. G. Britton. Chem Soc J p3892-5 O '52

Reaction of ethylamine-1-C^{14} with nitrous acid. J. D. Roberts and J. A. Yancey. bibliog Am Chem Soc J 74:5943-5 D 5 '52

Reaction of ring-substituted *cyclo*hexylamines with nitrous acid; an interpretation based on conformational analysis. J. A. Mills. Chem Soc J p260-4 Ja '53

Rearrangements in the reactions of 2-(4-substituted)-phenylethylamines-1-C^{14} with nitrous acid. J. D. Roberts and C. M. Regan. bibliog Am Chem Soc J 75:2069-72 My 5 '53

NITROUS oxide. See Nitrogen oxides

NITRYL chloride

Addition of nitryl chloride to some simple olefins. C. C. Price and C. A. Sears. bibliog Am Chem Soc J 75:3275-6 Jl 5 '53

Nitryl chloride as a nitrating agent. C. C. Price and C. A. Sears. Am Chem Soc J 75:3276-7 Jl 5 '53

NOBEL prizes

Nobel prizes in science. Sci Am 187:29-30 D '52

NOBLE, Edward John, 1882-

Businessmen in the news. por Fortune 47:60 Ap '53

His golden touch pans out again. pors Bsns W p82+ Mr 14 '53

NOISE

Analysis of noise; new American standard specifications of octave-band filter sets. A. Peterson. il diag Standardization 24:108-11 Ap '53

Announce noise control research program. Nat Safety N 67:148-9 Je '53

Cities fight noise. Safety Maint & Prod 104: 69 N '52

Committee to study noise problems. Nat Safety N 67:78-9 My '53

Controlling noise and vibration. Nat Safety N 67:62 Mr '53

Cut the racket! noisy industries should install hearing conservation programs. J. Sataloff. Safety Maint & Prod 105:68-71 Ja '53

Effect of frequency and amplitude distortion on the intelligibility of speech in noise. I. Pollack. Acoustical Soc Am J 24:538-40 S '52

Electrical noise from instrument cables subjected to shock and vibration. T. A. Perls. bibliog il diags J Ap Phys 23:674-80 Je '52

NOISE—*Continued*

Evaluation of noise samples. A. J. F. Siegert. bibliog J Ap Phys 23:737-42 Jl '52

Experimental approaches to the study of noise and noise transmission in piping systems. W. L. Rogers. bibliog il diags Heating-Piping 25:139-45 Jl '53; Abstract. Dom Eng 182:202+ Ag '53; Discussion. Heating-Piping 25:130-1 Ag '53

Experimental study of single bubble cavitation noise. M. Harrison. bibliog il diags Acoustical Soc Am J 24:776-82 N '52

How to eliminate office noises. Am Bsns 22:36 D '52

Industrial noise and cancer received most attention in 1952. H. H. Schrenk. Ind & Eng Chem 45:sup 109A F '53

Industrial noise and impaired hearing. Safety Maint & Prod 105:73-4 Ja '53

Loudness of bands of noise. I. Pollack. Acoustical Soc Am J 24:533-8 S '52

Masking of tones by white noise as a function of the interaural phases of both components; 500 cycles. L. A. Jeffress and others. bibliog Acoustical Soc Am J 24:523-7 S '52

Noise continues to be news. Mod Ind 25:94+ Je '53

Noise-free instrument cable. il Commun Eng 13:22+ Mr '53

Noise: industry sounds too loud. J. B. Delaney. Iron Age 170:103-4 D 4 '52

Noise is news; claims for loss of hearing in industrial jobs menace plants financially. il Mod Ind 25:48-52 F '53

Noise problem! C. R. Walmer. Safety Maint & Prod 106:28-9+ Jl '53; Abstract. Nat Safety N 68:42+ S '53

Quantum theory of a damped electrical oscillator and noise. J. Weber. bibliog diags Phys R 90:977-82 Je 1 '53

Random noise in dielectrics. H. Bauss and R. F. Boyer. J Ap Phys 23:802-3 Jl '52

Research starts on industrial noise. Standardization 24:109-10 Ap '53

Speech interference level may be clue in noise survey; abstract. A. F. Meyer, jr. and others. Pub Health Rep 68:240-1 F '53

Standards on sound recording and reproducing; methods of measurement of noise, 1953. Inst Radio Eng Proc 41:508-12 Ap '53 (reprints 50c)

Suppression of noise and vibration in plating shops; abstract. Metal Finishing 51:110 Je '53

Techniques for evaluation of noise-reducing piping components. D. B. Callaway and others. diags Acoustical Soc Am J 24:725-30 N '52

Temporary changes in acuity of the human ear following exposure to intense noise. J. B. Gallagher and J. E. Goodwin. bibliog A M A Archives Ind Hygiene & Occup Med 6:332-8 O '52; Abstract. Nat Safety N 67:64 F '53

Tentative estimate of a hearing damage risk criterion for steady-state noise. H. C. Hardy. Acoustical Soc Am J 24:756-61 N '52

Thermal-noise limit in the detection of underwater acoustic signals. R. H. Mellen. Acoustical Soc Am J 24:478-80 S '52

Unsolved basic physical research problems in the field of noise. H. C. Hardy. Acoustical Soc Am J 24:767-8 N '52

Unsolved military noise problems. L. L. Beranek. bibliog Acoustical Soc Am J 24:769-72 N '52

Unsolved problems relating to hearing loss in industry. G. D. Hoople. Acoustical Soc Am J 24:765-6 N '52

See also

Air conditioning equipment—Noise
Airplane engines—Noise
Airplanes—Noise
Automobile engines—Noise
Automobiles—Noise
Diesel engines—Noise
Ear—Injuries
Electric fans, Ventilating—Noise
Electric transformers—Noise
Intercommunicating systems—Noise
Machinery—Noise
Phonograph—Noise reduction
Radar receiving apparatus—Noise
Radio communication—Interference
Radio communication—Interference elimination
Radio receiving apparatus—Noise
Silencers
Sound absorbent materials
Sound filters
Telephone—Noise
Television receiving apparatus—Noise
Transistors—Noise
Vacuum tubes—Noise

NOLD, George Jacob, 1893-

Temporary head of the engineers. por Eng N 149:69 N 20 '52

NOMOGRAPHS

Air-cooling nomograph; reference sheet. E. Slusser. Electronics 25:164 N '52

Another quick way to compute economic lot sizes. S. Langner. Factory Management 111:123 Je '53

Bandwidth nomograph for pulse filter network; reference sheet. B. L. Adams and T. M. Stout. bibliog Electronics 25:142, 144 D '52

Calculating a circle the easy way. Coal Age 58:110 Jl '53

Centrifugal pumps; charts predict effects of changes in speed and size of homologous units; data sheet. A. E. Roach. Machine Design 25:183-5 Je '53

Chart for TE$_{11}$ mode piston attenuator; reference sheet. C. M. Allred. Electronics 26:142 Ja '53

Chart to determine savings from more machinable material; reference book sheet. T. Hicks. Am Mach 97:163 Jl 6 '53

Charts for refrigeration design. L. J. Murphy. Heat & Ven 50:87-8 Je '53

Circular nomogram theory and construction technique. E. C. Varnum. bibliog diags Product Eng Hdbk p F28-30 '53

Cooling-tower performance nomogram based on Merkel's approximate integration. H. Chilton. Inst E E Proc 99 pt 2:441-3 O '52

Coupling loop design; nomograph. K. A. Pullen. Tele-Tech 12:67 Ja '53

Direct nomographic method for solving flash equilibrium equations. P. M. Reilly. Pet Refiner 32:119-22 Mr '53

Don't overload motor and lineshaft bearings. Mill & Factory 51:91 N '52

Faster way to figure economic lot sizes. R. Galloway. il Factory Management 111:145 Mr '53

Gear design; nomograms simplify solution of preliminary design equations; data sheet. D. W. Botstiber and L. Kingston. Machine Design 24:161-4 D '52

Handy chart tells yardage being moved. W. F. Schaphorst. Brick & Clay Rec 122:37 My '53

High Q measurement; reference sheet. W. J. Spaven. diag Electronics 25:166 N '52

How to design notch networks; with nomographs. C. J. Savant, jr. diags Electronics 26:188-91 My '53

Nomogram for analysis of watts type nickel plating solutions. I. Goldman. Metal Finishing 50:76-7 N '52

Nomogram for evaluating test data; reference book sheet. E. C. Varnum. Product Eng 24:215 F '53

Nomogram for mean radius of curvature of helical tooth flanks. N. J. C. Peres. Engineering 174:235 Ag 22 '52

Nomograms for the computation of tropospheric refractive index. D. M. Swingle. bibliog Inst Radio Eng Proc 41:385-91 Mr '53

Nomograph determines lime kiln performance. Rock Prod 55:115 D '52

Nomograph for calculations of pounds of lime per barrel. Oil & Gas J 51:409 Ja 26 '53

Nomograph for the volume of cones and pyramids; reference book sheet. S. R. Heller, jr. diags Product Eng 23:207 N '52

Nomograph gives liquid volume within a slanting tube. J. Lowe. diag Chem Eng 60:211-12 Ap '53

Nomographic calculation for three-component distillation. W. Schotte and W. A. Selke. bibliog Ind & Eng Chem 45:472-6 F '53

Nomographic chart for uniformly distributed load. L. S. Muller. Am Concrete Inst J 24:862-4 My '53; Correction. 25:sup 10 O '53

Nomographic method for sleeve bearing design. D. F. Wilcock and M. Rosenblatt. il diag Machine Design 25:143-57 Ag '53; Correction. 25:197 O '53

Nomographs for designing electromagnets; reference book sheet. K. W. Henderson. Product Eng 24:229, 231, 233 My '53

NOMOGRAPHS—*Continued*
Q-meter correction chart for Q voltmeter loading. R. Lafferty. diag Tele-Tech 11:43 O '52
R-f coupling nomograph; reference sheet. R. E. Lafferty. diags Electronics 25:166 O '52
Simple way to draw nomographs. M. Rhoden. Chem Eng 59:146-7 N '52
Simplify your cost estimates. L. Lynn and J. R. McKlveen. bibliog Chem Eng 60:193-5 Ap '53
Simplifying data correlations by nomographs. G. E. Mapstone. Pet Refiner 32:119-23 Ja 23 Ja '53
What refrigeration do you need? beverage plant cooling requirements. T. Hicks. Food Eng 25:63+ F '53

NONCANCELLABLE policies. See Insurance, Accident—Noncancellable policies

NON-FERROUS founders' society
Annual meeting, Chicago, May 3. Foundry 81:202-4 Je '53
Celebrates ten years of service. J. W. Wolfe. Foundry 81:114-15+ Ap '53

NON-FERROUS metals. See Metals, Non-ferrous

NON-FORFEITURE benefits. See Insurance, Life—Policies—Non-forfeiture benefits

NONWOVEN fabrics. See Textile fabrics—Bonded web

NOOTKATIN
Chemistry of the natural order cupressales; nootkatin. H. Erdtman and W. E. Harvey. Chem & Ind p 1267 D 27 '52
Structure of nootkatin; an X-ray determination. R. B. Campbell and J. M. Robertson. map Chem & Ind p 1266-7 D 27 '52

NOPCO chemical company
12 promising specialties. P. Dobbs. Mag of Wall St 92:122 Ap 18 '53

NOPOL
Nopol; synthesis of 1(7),8-*p*-menthadiene and 1(7)-*p*-menthene. R. L. Webb and J. P. Bain. Am Chem Soc J 75:4279-81 S 5 '53

NORADRENALINE. See Arterenol

NORCHOLANIC acid
Steroids derived from bile acids; degradation of 3α,9α-epoxy-11-ketonorcholanic acid to 3α,9α-epoxy-11-ketoetiocholanic acid. V. R. Mattox and others. Am Chem Soc J 74:5818-19 D 5 '52

NORD, Melvin
Portrait. Chem Eng 60:332+ Ja '53

NORDBERG, Martin Emery, 1902-
Presentation of the John Price Wetherall medals. por Franklin Inst J 254:460-3 D '52

NORDESOXYCORTICOSTERONE
Steroids; 19-nor-desoxycorticosterone, a potent mineralocorticoid hormone. A. Sandoval and others. bibliog Am Chem Soc J 75:4117-18 Ag 20 '53

NORDHOFF, Heinz
Portrait. Bsns W p 106 Jl 11 '53

NORDIC council
Meeting, 1st, Copenhagen. Economist 166:744 Mr 14 '53

NORFOLK, Virginia
Plan $6 million civic center. plan Eng N 150:50 F 5 '53

NORFOLK southern railway
Cecil M. Self elected president of Norfolk Southern. Ry Age 134:58 F 23 '53

NORNICOTINE

Analysis

Separation and determination of nicotine and nornicotine in tobacco. F. G. Houston. bibliog Anal Chem 24:1831-2 N '52

NORNICOTYRINE
Synthesis of 3,2′-nornicotyrine. H. Rapoport and M. Look. bibliog Am Chem Soc J 75:4605-7 S 20 '53

NORPROGESTERONE
Steroids; 19-norprogesterone, a potent progestational hormone. C. Djerassi, L. Miramontes and G. Rosenkranz. bibliog Am Chem Soc J 75:4440-2 S 20 '53

NORTH AFRICA. See Africa, North

NORTH AMERICA

Discovery and exploration

Discovery of North America. J. H. L. Chambers, jr. il map U S Naval Inst Proc 79:64-72 Ja '53

NORTH AMERICAN aviation, inc.
Net, sales up for North American. S. Altschul. Aviation W 58:67 F 23 '53

NORTH AMERICAN car corporation
Continued progress seen. Barron's 32:21 N 24 '52

NORTH AMERICAN company
First quarter earnings. Comm & Fin Chr 177:1904 My 4 '53
Liquidation plan approved. Comm & Fin Chr 176:1866 N 17 '52
Public utility securities. O. Ely. Comm & Fin Chr 177:18 Ja 1 '53

NORTH AMERICAN refractories company
Security I like best. E. F. Hayes. Comm & Fin Chr 178:198+ Jl 16 '53

NORTH AMERICAN royalties, inc.
Shares offered. Comm & Fin Chr 177:1260 Mr 23 '53

NORTH ATLANTIC treaty organization
Atlantic allies. Economist 165:729-30 D 13 '52
Atlantic assizes. Economist 165:627-8 N 29 '52
Britain to ask NATO air slash. N. McKitterick. Aviation W 57:18 D 22 '52
Buying arms abroad to build up west Europe; offshore procurement. il Bsns W p 154-6 My 16 '53
Can NATO be salvaged? V. L. Horoth. Mag of Wall St 91:463-5 Ja 24 '53
Defence without a date. Economist 167:419-21 My 16 '53
Exercise holdfast. Economist 165:32+ O 4 '52
General Ridgway reports. Economist 167:722 Je 13 '53
How NATO fits into the pattern. Bsns W p192+ My 9 '53
Improving long-range NATO structure. Mag of Wall St 91:672 Mr 7 '53
Keeping NATO going is Eisenhower's problem in Europe. il Bsns W p27-8 Ja 17 '53
Lack of standardization stalls NATO rearmament. il Product Eng 24:196-7 Ja '53
Lord of the manor; it's an attitude which will cause trouble in Europe. F. Morley. Barron's 33:3 F 16 '53
Mainbrace; potential becomes reality. H. B. Say. il U S Naval Inst Proc 79:74-83 Ja '53
New strategy for NATO. C. J. V. Murphy. il Fortune 47:80-5+ Ja '53
NATO air power; a staff report. Aviation W 57:12 N 3 '52
NATO air power growing fast. R. Hazeltine. Aviation W 58:78+ Mr 2 '53
NATO aircraft; contract terms near on Hawker, Mystere buying. R. Hazeltine. Aviation W 58:22+ Mr 30 '53
NATO orders five jet fighter types. Aviation W 58:17 My 4 '53
NATO standards lack hit. W. L. Batt. Steel 131:149 D 15 '52
Task of ending European disunity. J. F. Dulles. Comm & Fin Chr 177:790 F 19 '53
Temptations of Taftism. Economist 167:642-4 Je 6 '53
Western disunion. Economist 166:397-9 F 14 '53
Will the right be realists? Economist 166:123-4 Ja 17 '53

NORTH CAROLINA
See also
Mines and mineral resources—North Carolina
Roads—North Carolina

Industries and resources

Big new industrial plants begin operation. Manuf Rec 122:48 My '53
More electronics plants. Manuf Rec 122:52 Mr '53
North Carolina's new industry is widely diversified. il Manuf Rec 122:38+ F '53

NORTH CAROLINA university
Water for education; University of North Carolina's new water treatment plant. M. D. Saunders. il Water & Sewage Works 100:142-5 Ap '53

NORTH DAKOTA
See also
Petroleum—North Dakota
Petroleum industry and trade—North Dakota

NORTH PACIFIC exploration, ltd.
Stock offered. Comm & Fin Chr 177:1582 Ap 13 '53

NORTHERN assurance company, limited
Statement by the chairman. G. F. Collie. Economist 167:696 Je 6 '53

NORTHERN Indiana public service company
Offering oversubscribed. Comm & Fin Chr 177:531 F 2 '53

NORTHERN natural gas company
Deal for the economics textbooks; cooperation between Northern Natural and El Paso. maps Bsns W p96+ Jl 18 '53
Debentures offered. Comm & Fin Chr 177:2571 Je 15 '53
Northern Natural's growing pains. H. D. Ralph. map Oil & Gas J 51:69+ N 3 '52
Northern Natural's 1953 results linked to pending rate cases. Barron's 33:31+ Mr 23 '53
Stock offering underwritten. Comm & Fin Chr 177:2011 My 11 '53

NORTHERN Pacific company
Security I like best; Williston Basin oil royalties. T. J. Hughes. Comm & Fin Chr 176:2114 D 4 '52

NORTHERN Pacific railway
Security I like best. G. M. Loeb. Comm & Fin Chr 177:90 Ja 8 '53

NORTHERN paper mills
Details of Marathon-Northern paper mills merger. Paper Tr J 136:35 My 15 '53
Northern Paper to merge with Marathon. Paper Tr J 136:11-12 Ja 30 '53
Packy weds Fluffy, company editor dramatizes a merger. R. Newcomb and M. Sammons. il Ind Marketing 38:97+ O '53

NORTHROP aircraft, inc.
Annual report. Aviation W 57:75 N '52

NORTHWEST
See also
Electricity supply—Northwestern states

NORTHWEST airlines, inc.
Changing course for Northwest airlines. Bsns W p70-2+ Je 20 '53
NWA buys Super Connie fleet. Aviation W 58:94 Ap 27 '53

NORTHWEST electric light and power association
Business development section meeting, Spokane, May 4-6. Elec World 139:272+ My 18 '53; Elec West 110:146+ Je '53
Engineering and operation section meeting, Portland, April 8-10. Elec World News ed 139:29 Ap 27 '53; Elec West 110:99-101 My '53
NWEL&P's new staff. Elec West 111:116 Jl '53

NORTHWEST public power association
Annual meeting, Spokane, May 6-8. Elec World 139:133 My 18 '53
Engineering and operation section meeting, Eugene, Ore. April 16-17. Elec West 110:107-8 My '53

NORTHWEST territories, Canada
See also
Gold mines and mining—Northwest Territories, Canada
Mines and mineral resources—Northwest Territories, Canada
Uranium mines and mining—Northwest Territories, Canada

NORTHWESTERN mutual life insurance company
Record-breaking sales by Northwestern in '52. Weekly Underw 168:358 Ja 31 '53
Views on business and company's future. E. Fitzgerald. East Underw 54:5 Ja 9 '53

NORTON company
Simplifying industrial pricing. Bsns W p54+ Je 13 '53
Twister strikes. T. Mac New. il Automotive Ind 109:79 Jl 1 '53

NORWAY
See also
Electric industries—Norway

Economic conditions

Economic conditions abroad (cont). For Comm W 48:7 O 6; 5+ D 15 '52

Economic relations

United States

Norway receives MSA credit of $4 million. For Comm W 49:8 Je 22 '53

NORWICH pharmacal company
Bucking drug, chemical downtrend. Barron's 32:17-18 N 3 '52

NOTCHED bar testing
Deformation twinning in Charpy V-notch specimens of ingot iron. G. W. Geil and N. L. Carwile. bibliog il Welding J 32:sup273-82 Je '53
Effect of variations in notch acuity on the behavior of steel in the Charpy notched-bar test. N. A. Kahn and others. bibliog il diags Am Soc T M Proc 50:619-47; Discussion. 647-8 '50
New notched-bar impact test; abstract. R. Mitsche. Metal Prog 64:284+ O '53
Notch impact tests of weld metal at low temperatures. M. Lefèvre and J. Lemoine. diags Welding J 32:sup 122-4 Mr '53
Notched-bar tensile properties of various materials and their relation to the unnotch flow curve and notch sharpness; abstract. H. Schwartzbart and W. F. Brown, jr. Metal Prog 64:218+ O '53
Notched slow-bend test as a brittle-fracture test. J. E. de Graaf and J. H. van der Veen. il Iron & Steel Inst J 173:19-30 Ja '53
Statistical analysis of behavior in the transition temperature zone. R. W. Vanderbeck and others. bibliog Welding J 32:sup325-32 Jl '53; Correction. 32:sup460 S '53

NOTIONS (merchandize)
Salesworthy notions; David Traum co. il Mod Packaging 26:122-3+ Ja '53

NOTTINGHAM university
Nottingham university engineering laboratories. il Metallurgia 47:272-4 My '53
Nottingham university extension opened. il Elec J 150:1327 Ap 17 '53
Nottingham university's new engineering laboratories. il Engineering 175:500-1 Ap 17 '53; Engineer 195:644-5 My 1 '53

NOURSE, Edwin Griswold, 1883-
CEA; advice from a veteran. por Bsns W p 101-2+ Ap 18 '53
Portrait. Dun's R 60:132 O '52

NOVA SCOTIA
See also
Mines and mineral resources—Nova Scotia
Petroleum—Nova Scotia
Roads—Nova Scotia

NOVACON. See Electric connectors

NOVOSTON. See Copper alloys

NOZZLES
Condensation of nitrogen in a hypersonic nozzle. W. W. Willmarth and H. T. Nagamatsu. bibliog il J Ap Phys 23:1089-95 O '52
Discharge coefficient of a critical-flow nozzle. H. Wise. J Ap Phys 23:801 Jl '52
Dribbleless nozzles. il Chem & Eng N 31:1919 My 4 '53
Effects of inertia on flow of steam through nozzles and blading of axial-flow turbines. W. J. Kearton. bibliog diags Inst Mech Eng Proc (A) 166 no 4:429-35; Discussion. 436-42 '52
Fuel injection nozzles; investigation into causes of corrosion. W. P. Mansfield. il Automobile Eng 43:215-17 My '53; Same cond. Engineering 175:564-6 My 1 '53; Discussion. Automobile Eng 43:331 Ag '53
Growth of small water droplets in steam nozzles. D. J. Ryley. bibliog Engineer 195:686-8 My 15 '53
Heat transfer in a nozzle at supersonic speeds. O. A. Saunders and P. H. Calder. bibliog diags Inst Mech Eng Proc (B) 1B no 6:232-7 '52; Same. Engineering 174:281-4 Ag 29 '52; Discussion. Inst Mech Eng Proc (B) 1B no 6:237-9 '52
Maintaining fuel injection nozzles. il Diesel Power 31:50-7 O '53
Maximum downward travel of heated jets from standard long radius ASME nozzles. L. Helander and others. il diags Heating-Piping 25:123-32 Mr '53
Metallic shadow-casting using a nozzle system. T. Hibi. il diag J Ap Phys 23:957-63 S '52
Metering of powdered solids in gas-solids mixtures. L. Farbar. bibliog flow diag il diags Ind & Eng Chem 44:2947-55 D '52
Normal shock wave phenomena in a convergent-divergent nozzle. B. W. Martin. diags Roy Aeronautical Soc J 57:455-60 Jl '53

NOZZLES—*Continued*

Nozzle containers. il Mod Plastics 30:170 Ap '53

One-dimensional irreversible gas flow in nozzles. Y. R. Mayhew and G. F. C. Rogers. Engineering 175:355-8 Mr 20 '53

Performance of conical jet nozzles in terms of flow and velocity coefficients. R. E. Grey, jr. and H. D. Wilsted. diags U S Nat Advisory Com for Aeronautics 1949:239-47 '51

Variable-area nozzles. il Machine Design 25: 198 O '53

NUBELON S. See Resinous products—Finishing materials

NUCLEAR emulsions. See Photographic emulsions

NUCLEAR physics

Glossaries

Glossary of terms in nuclear science and technology. sec 2-9 American soc. of mechanical engineers, 29 W. 39th st, New York 18 '50-52

NUCLEAR reactors. See Atomic piles

NUCLEAR research laboratories. See Atomic research laboratories

NUCLEAR shielding. See Radioactivity—Protection

NUCLEAR spin

Application of the *jj*-coupling model to moderately light nuclei. D. Kurath. bibliog Phys R 91:1430-47 S 15 '53

Concept of spin-lattice relaxation in ferromagnetic materials. P. W. Anderson. Phys R 88:1214 D 1 '52

Deviations from Brillouin's free-spin theory in manganese fluosilicate. R. C. O'Rourke. bibliog diag Phys R 90:786-90 Je 1 '53

Dipolar broadening of the quadrupole resonance line width in zero applied field. A. Abragam and K. Kambe. bibliog Phys R 91:894-7 Ag 15 '53

Dynamical theory of nuclear induction. R. K. Wangsness and F. Bloch. Phys R 89:728-39 F 15 '53

Electron coupled interactions between nuclear spins in molecules. N. F. Ramsey. bibliog Phys R 91:303-7 Jl 15 '53

Electron spin resonance in a silicon semiconductor. A. M. Portis and others. Phys R 90:988-9 Je 1 '53

Electronic structure of *F* centers; hyperfine interactions in electron spin resonance. A. F. Kip and others. bibliog Phys R 91:1066-71 S 1 '53

Electronic structure of *F* centers; saturation of the electron spin resonance. A. M. Portis. bibliog diag Phys R 91:1071-8 S 1 '53

Exchange frequency electron spin resonance in ferrites. J. Kaplan and C. Kittel. J Chem Phys 21:760-1 Ap '53

Excited states of even-even nuclei. G. Scharff-Goldharber. bibliog Phys R 90:587-602 My 15 '53

Gyromagnetic ratios of microcrystalline and macrocrystalline materials. S. J. Barnett. Phys R 90:3315-16 Ap 15 '53

Interaction between nuclear spins in HD gas. H. Y. Carr and E. M. Purcell. il Phys R 88:415-16 O 15 '52

Magnetic resonance spectrum of a linear three-spin system; the configuration of the bifluoride ion. J. S. Waugh. F. B. Humphrey and D. M. Yost. bibliog J Phys Chem 57:486-90 My '53

Matrix elements of spin-spin interaction. F. R. Innes. bibliog Phys R 91:31-4 Jl 1 '53

Model of metal-ammonia solutions, with reference to electron spin resonance experiments. J. Kaplan and C. Kittel. bibliog diag J Chem Phys 21:1429-33 S '53

Multiple scattering of neutrons; scattering by spin-dependent forces and polarization phenomena. O. Halpern. bibliog Phys R 88: 232-5 O 15 '52

Nuclear alignment and the entropy of liquid He^3. B. Weinstock and others. bibliog Phys R 89:787-9 F 15 '53

Nuclear spin of $_{95}$Am^{241}. M. Fred and F. S. Tompkins. Phys R 89:318 Ja 1 '53

Odd-odd spins and *j-j* coupling. R. W. King and D. C. Peaslee. Phys R 90:1001-2 Je 1 '53

Pairing effect in nuclei and isomerism. R. Katz. bibliog Phys R 91:1487 S 15 '53

Possible breakdown of isotopic spin and charge parity selection rules. D. H. Wilkinson. bibliog Phys R 90:721-2 My 15 '53

Purity of isotopic spin or charge parity states. G. A. Jones and D. H. Wilkinson. bibliog Phys R 90:722 My 15 '53

Spin and angular momentum in general relativity. P. G. Bergmann and R. Thomson. bibliog Phys R 89:400-7 Ja 15 '53

Spin and magnetic moment of Ca^{43}. C. D. Jeffries. Phys R 90:1130 Je 15 '53

Spin and parity of the 2.3-Mev excited state of Te^{124}. F. R. Metzger. Phys R 90:328-9 Ap 15 '53

Spin echo measurements of nuclear spin coupling in molecules. E. L. Hahn and D. E. Maxwell. bibliog il diags Phys R 88: 1070-84 D 1 '52

Spin interactions of accelerated nuclei in molecules. N. F. Ramsey. bibliog Phys R 90:232-3 Ap 15 '53

Spin-lattice relaxation in ferromagnets. E. Abrahams and C. Kittel. bibliog Phys R 88:1200 D 1 '52

Spin orbit coupling and the mesonic Lamb shift. R. Chisholm and B. Touschek. diags Phys R 90:763-5 Je 1 '53

Spin-orbit coupling in pseudoscalar meson theory. L. Dresner. diags Phys R 91:201-2 Jl 1 '53

Spin-spin interaction in HD nuclear resonance. B. Smaller and others. Phys R 88: 414-15 O 15 '52

Spin-wave theory as a variational method and its application to antiferromagnetism. R. Kubo. bibliog Rs Mod Phys 25:344-51 Ja '53

Spins and parities of excited states in even-even nuclei. M. J. Glaubman; I. Talmi. bibliog Phys R 90:1000-1 Je 1 '53

Spins of Li^6 and B^{10} in the shell model. N. Zeldes. Phys R 90:416-19 My 1 '53

Theory of the rotational spectra of allene-type molecules. M. Mizushima. bibliog diags J Chem Phys 21:1222-4 Jl '53

NUCLEATION. See Condensation

NUCLEATION, Atmospheric. See Atmospheric nucleation

NUCLEIC acids

Structure of nucleic acids; a new method of degradation; abstract. D. Lipkin and J. S. Dixon. Science 116:525 N 14 '52

Studies on the structure of nucleic acids; the kinetics of desoxyribonuclease action. L. F. Cavalieri and B. Hatch. bibliog Am Chem Soc J 75:1110-15 Mr 5 '53

See also

Desoxypentose nucleic acid

Analysis

Nucleic acid derivatives; apparatus for simultaneously separating and recording ultraviolet absorption. A. Deutsch, R. Zuckerman and M. S. Dunn. il diags Anal Chem 24:1763-9 N '52

Nucleic acid derivatives; separation and quantitative analysis by ultraviolet spectrophotometry. A. Deutsch, R. Zuckerman and M. S. Dunn. bibliog Anal Chem 24: 1769-73 N '52

NUCLEONS

Application of the theory of the effective range to meson nucleon scattering. K. A. Brueckner. bibliog Phys R 87:1026-30 S 15 '52

Coupling constant of the nucleon-μ-meson interaction. M. A. Preston and M. F. Duret. bibliog Phys R 88:1425 D 15 '52

Covariant meson-nucleon equation. S. Deser and P. C. Martin. bibliog diags Phys R 90:1075-8 Je 15 '53

Damping of virtual nucleon-pair formation in pseudoscalar meson theory. K. A. Brueckner and others. bibliog diag Phys R 90: 476-8 My 1 '53

Deviations from *LS* coupling in the spheroidal core nuclear model. J. P. Davidson and E. Feenberg. bibliog Phys R 89:856-63 F 15 '53

Energy levels and the structure of light nuclei. D. R. Inglis. diags Rs Mod Phys 25:390-450 bibliog(p449-50) Ap '53

NUCLEONS—*Continued*

Energy of nucleon-nucleon collisions. R. G. Glasser and M. Schein. bibliog diags Phys R 90:218-21 Ap 15 '53

Evaluation of the energy matrix of the tensor forces. I. Talmi. bibliog Phys R 89:1065-71 Mr 1 '53

Evidence for nonadditivity of nucleon moments in heavy nuclei. M. Ross. bibliog Phys R 88:935-42 N 15 '52

Exchange magnetic moments of nuclei with almost closed shells of nucleons. R. W. Cole. bibliog Phys R 89:883-4 F 15 '53

Experimental investigation of the nucleon cascade in water. C. B. A. McCusker and others. diag Phys R 89:1172-7 Mr 15 '53

Fermi's theory of nucleon collisions and the zero-point energy of pions. F. C. Auluck and D. S. Kothari. Phys R 90:1002-3 Je 1 '53

Fourth-order corrections to the scattering of pions by nonrelativistic nucleons. J. S. Blair and G. F. Chew. bibliog Phys R 90:1065-7 Je 15 '53

Graphical method for obtaining phase shifts from the experimental data on meson-nucleon scattering. J. Ashkin and S. H. Vosko. Phys R 91:1248-51 S 1 '53

Interactions of high energy nucleons with nuclei. G. Bernardini and others. bibliog diags Phys R 88:1017-26 D 1 '52

Low-energy properties of the nucleon-nucleon interaction. R. Jastrow. bibliog Phys R 91:749-50 Ag 1 '53

Many-body forces and nuclear saturation. S. D. Drell and K. Huang. bibliog diags Phys R 91:1527-42 S 15 '53

Many-nucleon forces. G. Wentzel. Phys R 91:1573-4 S 15 '53

Mass relation of heavy particles. H. Enatsu. Phys R 89:1304-5 Mr 15 '53

Meson-nucleon scattering. R. Karplus and others. bibliog diag Phys R 90:1072-5 Je 15 '53

Meson-nucleon scattering and the classical strong-coupling theory. D. Feldman. bibliog Phys R 88:890-1 N 15 '52

Multiple meson production in nucleon-nucleon collisions. H. W. Lewis. bibliog Rs Mod Phys 24:241-8 O '52

Nuclear constitution and the interpretation of fission phenomena. D. L. Hill and J. A. Wheeler. bibliog flow sheet diags Phys R 89:1102-45 Mr 1 '53

Nuclear forces from pseudoscalar meson theory. M. Ruderman. bibliog diags Phys R 90:183-5 Ap 15 '53

Properties of the Salpeter-Bethe two-nucleon equation. J. S. Goldstein. Phys R 91:1516-24 S 15 '53

Pseudoscalar mesons with applications to meson-nucleon scattering and photoproduction. S. D. Drell and E. M. Henley. bibliog Phys R 88:1053-64 D 1 '52

Radii of mirror nuclei. R. R. Wilson. Phys R 88:350-1 O 15 '52

Scattering of charge symmetric pseudoscalar mesons by nucleons. W. W. Wada. bibliog Phys R 88:1032-6 D 1 '52

Structure of the nucleon. R. G. Sachs. Phys R 87:1100-10 S 15 '52

Tensor force interaction between a shell closed except for a single vacancy and an external nucleon. J. Hope. Phys R 89:884-5 F 15 '53

Three-nucleon interactions in Yukawa theory. G. Wentzel. bibliog diags Phys R 89:684-8 F 15 '53

Scattering

Effect of a short-range repulsion on low energy singlet nucleon-nucleon scattering. M. H. Hull, jr. and A. Herschman. bibliog Phys R 90:482-5 My 1 '53

Polarization effects in nucleon-nucleon scattering. D. R. Swanson. bibliog diag Phys R 89:749-52 F 15 '53

Test for charge independence in high energy nucleon-nucleon scattering. B. A. Jacobsohn. bibliog Phys R 89:881-2 F 15 '53

NUCLEOSIDES

Enzymatic phosphorylation of nucleosides by phosphate transfer. G. Brawerman and E. Chargaff. Am Chem Soc J 75:2020-1 Ap 20 '53

NUCLEOTIDES

Determination of nucleotide sequence in polyribonucleotides. D. M. Brown and others. bibliog Chem & Ind p352-3 Ap 11 '53

DPN specific glycerol dehydrogenase from aerobacter aerogenes. R. M. Burton and N. O. Kaplan. bibliog Am Chem Soc J 75:1005-6 F 20 '53

Isolation of flavin nucleotides. E. Dimant, D. R. Sanadi and F. M. Huennekens. bibliog Am Chem Soc J 74:5440-4 N 5 '52

Liberation of polynucleotides by the alkaline hydrolysis of ribonucleic acid from yeast. K. C. Smith and F. W. Allen. bibliog Am Chem Soc J 75:2131-3 My 5 '53

Nucleotide synthesis by malt and prostate phosphatases. G. Brawerman and E. Chargaff. Am Chem Soc J 75:4113 Ag 20 '53

Nucleotides; a method suitable for the large-scale preparation of deoxyribonucleosides from deoxyribonucleic acids. W. Andersen, C. A. Dekker and A. R. Todd. Chem Soc J p2721-4 Jl '52

Nucleotides; a synthesis of uridine-5′ pyrophosphate, a breakdown product of the coenzyme uridine-diphosphate-glucose. N. Anand and others. Chem Soc J p3665-9 O '52

Nucleotides; mononucleotides derived from thymidine; identity of thymidylic acid from natural sources with thymidine-5′ phosphate. A. M. Michelson and A. R. Todd. Chem Soc J p951-6 Mr '53

Nucleotides; *N*-chloroamides as reagents for the chlorination of diesters of phosphorous acid; a new synthesis of uridine-5′ pyrophosphate. G. W. Kenner, A. R. Todd and F. J. Weymouth. Chem Soc J p3675-81 O '52

Nucleotides; pyrimidine deoxyribonucleoside diphosphates. C. A. Dekker, A. M. Michelson and A. R. Todd. Chem Soc J p947-51 Mr '53

Nucleotides; ribonucleoside-5′ phosphites; a new method for the preparation of mixed secondary phosphites. N. S. Corby, G. W. Kenner and A. R. Todd. Chem Soc J p3669-75 O '52

Nucleotides; some preliminary experiments on a projected synthesis of flavin-adenine dinucleotide; new methods for the preparation of riboflavin-4′ : 5′ phosphate. H. S. Forrest, H. S. Mason and A. R. Todd. Chem Soc J p2530-5 Jl '52

Nucleotides; the action of ribonuclease on simple esters of the monoribonucleotides. D. M. Brown and A. R. Todd. Chem Soc J p2040-9 Jl '53

Nucleotides; the action of ribonuclease on the 2′ : 3′-phosphates of uridine and cytidine. D. M. Brown, C. A. Dekker and A. R. Todd. Chem Soc J p2715-21 Jl '52

Nucleotides; the preparation of cyclic 2′ : 3′-phosphates of adenosine, cytidine, and uridine. D. M. Brown, D. I. Magrath and A. R. Todd. Chem Soc J p2708-14 Jl '52

Nucleotides; the synthesis and properties of adenosine-5′ uridine-5′ phosphate. D. T. Elmore and A. R. Todd. Chem Soc J p3681-6 O '52

Occurrence of a new flavin dinucleotide (FAD-X). F. M. Huennekens and others. bibliog Am Chem Soc J 75:3611-12 Jl 20 '53

Analysis

Nucleic acid derivatives; separation and quantitative analysis by ultraviolet spectrophotometry. A. Deutsch, R. Zuckerman and M. S. Dunn. bibliog Anal Chem 24:1769-73 N '52

NUMBERING systems

Here's how to untangle metal; specifications; new cross index of chemically equivalent specifications. A. G. Gray. il Steel 132:80-4 Ja 19 '53

Teamwork smooths out specifications troubles; cross index of chemically equivalent specifications is first major compilation from military agency. Steel 132:86-7 F 23 '53

NUMBERS

Perfect numbers. C. Reid. il Sci Am 188:84-6 Mr '53

NUMBERS, Theory of

Application of the theory of numbers to the magnetic properties of a free electron gas. M. C. Steele. bibliog Phys R 88:451-64 N 1 '52

Number theory and the magnetic properties of an electron gas. M. F. M. Osborne. bibliog diags Phys R 88:438-51 N 1 '52

See also

Numbers, Transfinite

NUMBERS, Transfinite

Is there an infinity? H. Hahn. diags Sci Am 187:76-80+ N '52

NURSES and nursing

Outlook for women in professional nursing occupations. il U S Women's Bur Bul 203-3, rev:1-80 bibliog(p77-9); pa 30c Supt. of doc. '53

Positive approach to a tuberculosis nursing program. D. E. Roberts. bibliog Pub Health Rep 68:338-40 Mr '53

Workers in the field of mental health. J. V. Coleman. Ann Am Acad 286:81-91 Mr '53

NURSES and nursing, Industrial

Industrial nursing. M. G. Fischer. Pulp & Pa of Can 53:168-9 D '52

Master mechanics in human maintenance. W. E. Park. Advanced Management 17:15-18 D '52

Sizing up the situation; number of nurses currently needed in various fields. Safety Maint & Prod 105:75 Ja '53

NURSES' associations

New structure of nursing organizations. Pub Health Rep 67:1258-60 D '52

NURSING homes

APHA conference report; nursing home responsibilities of state health departments. Pub Health Rep 68:228-9 F '53

Health department and nursing homes. M. Ranck and R. R. Cunningham. Pub Health Rep 67:829-34 S '52

NUTONE, Inc.

NuTone rings the bell. Fortune 46:170 D '52

NUTRITION

Caloric intake in relation to physique in children. P. S. Peckos. bibliog Science 117:631-3 Je 5 '53

Chemistry will be major factor in solving future nutrition problems. Chem & Eng N 31:144-5 Ja 12 '53

Digestibility of fats; abstract and discussion. H. Wilkinson. Chem & Ind p 15-16 Ja 3 '53

Domestic food consumption and expenditure, 1950; annual report of the National food survey committee. Chem & Ind p 119-21 F 7 '53

Factors affecting cereals as a food. J. Duckworth. Chem & Ind p 1139-45 bibliog(134 ref, p 1144-5) N 22 '52

Feeding of mothers and children under emergency conditions. M. M. Heseltine. Pub Health Rep 67:872-5 S '52

Food and the future; food production in Israel. J. Yudkin. maps Chem & Ind p 140-3 F 14 '53

Food and the future; present methods of attack on the problem. G. A. C. Herklots. Chem & Ind p 136-40 F 14 '53

Genetotrophic disease. R. B. Mefferd, jr. and J. B. Loefer. Science 117:sup3 My 1 '53

Human life span may reach 125 years in two centuries. Chem & Eng N 31:2070 My 18 '53

Natural desires lead to poor diet during times of plenty; National food and nutrition institute meeting, Washington, Dec. 8. Chem & Eng N 30:5370-1 D 22 '52

Necessary foods for emergency feeding. J. M. Hundley. Pub Health Rep 67:864-6 S '52

Nutritional problems and civil defense. J. Drummond. Pub Health Rep 67:857-9 S '52

Soft drinks and fruit juices; with comments on their nutritional value. V. L. S. Charley. bibliog Chem & Ind p 1090-7 N 8 '52

See also

Breakfasts

NUTRITION foundation

Annual meeting, New York. Chem & Eng N 30:4947-8 N 24 '52

NUTRITION research

Aminos spell opportunity. Chem W 72:46+ Mr 7 '53

Influence of amino acids upon incidence of tumors in *tu*^{50j} stock of D. melanogaster. S. Mittler. bibliog Science 116:657-9 D 12 '52

Influence of procaine penicillin on the efficiency of food utilization by pigs. K. L. Robinson and others. Chem & Ind p 18-19 Ja 3 '53

Nutrition studies expanded by vitamin research group. Chem & Eng N 31:1086+ Mr 16 '53

Nutritive value of teosinte. I. E. Melhus and others. bibliog Science 117:34-5 Ja 9 '53

NUTS

See also

Walnuts

NUTS, Salted

Unshelled peanuts now salted by new process. S. Siewart and J. G. Woodroof. flow sheet il Food Eng 24:110-11 N '52

NYASALAND

Climax in Central Africa; proposals for federating the two Rhodesias and Nyasaland. map Economist 166:337-9 F 7 '53

Reaction to federation. Economist 166:407 F 14 '53

Rear-guard action in Africa. map Bsns W p 166-7 F 21 '53

NYLON

Developments to watch. Product Eng Hdbk p C33 '53

Electrolytic interaction of nylon with sodium hydroxide solutions at different temperatures. F. T. Wall and P. M. Saxton. bibliog J Phys Chem 57:370-5 Mr '53

Modern Textiles handbook. L. Mauer and H. Wechsler. il diag Mod Textiles Mag 33:41+ D '52

Nylon process equipment meets novel standards for C-I-L's Maitland plant. il Can Chem Process 37:60+ Ag '53

Nylon rug carving. il Mod Textiles Mag 34:80 Ag '53

Progress in nylon. G. Boyo. il Mod Textiles Mag 34:46-7 S '53

Specific heat of synthetic high polymers; polyhexamethylene adipamide and sebacamide. R. C. Wilhoit and M. Dole. bibliog J Phys Chem 57:14-21 Ja '53

See also

Dyes and dyeing—Nylon

Industrial applications

How about nylon for wear parts? R. B. Zimmerli. il Am Mach 97:150-2 Je 8 '53

Machining of nylon. il Mill & Factory 51:118 O '52

Nylon bearing. il Iron Age 171:176-7 F 5 '53

Nylon-coated leather. F. Leonard and others. il Ind & Eng Chem 45:773-5 Ap '53

Nylon for bearings and gears. R. Lurie. il Gen Elec R 55:34-5+ Jl '52; Same cond. Machine Design 25:270+ Ja '53

Nylon jackets for connectors. il Mod Plastics 30:95 F '53

Knit goods

Analyzing knitted fabrics with pictures. R. C. Davis and A. Teszler. il diag Mod Textiles Mag 34:46+ Ja '53

Nylon tricot; care and waste. J. MacDonald, jr. Mod Textiles Mag 34:33+ Ap '53

Molding

Moulded nylon. il Automobile Eng 43:81-2 F '53

Testing

Stress relaxation of fibrous materials; instrumentation and preliminary results. E. T. Kubu. bibliog il diags Textile Res J 22:765-77 D '52

NYLON, Effect of light on

Degradation of nylon on exposure to light; abstract. Am Dyestuff Rep 41:750 N 10 '52

NYLON, Powdered

Nylon powder. Chem Eng 59:203-4 N '52

NYLON carding

How to do a better job in carding three-denier nylon. J. A. Newnam. il diags Textile World 102:114-15+ D '52

NYLON cord

How Aldora mills makes tire cord. E. D. White. il Textile World 103:108-11 Ag '53

NYLON fabrics

Behavior of nylon Oxford cloth 41 on pyrolysis. T. Hasselstrom and others. bibliog Textile Res J 22:742-8 N '52

Low-cost fur from a lab. il Bsns W p 134-6 Ap 4 '53

Truck tires of nylon. H. G. Harper. Roads & Eng Constr 90:126+ D '52

Heat setting

Heat setting machine for synthetic fabrics; patent. diags Am Dyestuff Rep 42:49 Ja 19 '53

Some developments in the setting and finishing of nylon textiles. G. K. Mecklenburgh and others. Soc Dyers & Col J 68:381-91 O '52

NYLON fibers

Mechanical behavior of nylon filaments in torsion. W. G. Hammerle and D. J. Montgomery. bibliog Textile Res J 23:595-604 S '53

NYLON finishing

Finishing nylon; durable coatings with polyvinylchloride; patent. Am Dyestuff Rep 42:50-1 Ja 19 '53

Quinone treatment for increasing heat resistance; patent. Am Dyestuff Rep 42:48 Ja 19 '53

Some developments in the setting and finishing of nylon textiles. G. K. Mecklenburgh and others. Soc Dyers & Col J 68:381-91 O '52

See also

Nylon fabrics—Heat setting

NYLON hosiery. See Hosiery

NYLON mills

Lighting

Lighting a nylon factory; an extensive hot-cathode installation. il plan Elec R (Lond) 151:443-5 Ag 29 '52

Management

Madison controls nylon throwing with tests, inspections, operator training. T. B. Winston. il Textile World 103:96-8+ Je '53

NYLON research

Behavior of nylon Oxford cloth 41 on pyrolysis. T. Hasselstrom and others. bibliog Textile Res J 22:742-8 N '52

NYLON sizing

Reaction of polyacrylic acid with nylon. A. C. Nuessle and R. F. Crawford. Textile Res J 23:462-8 Jl '53

Six things that help remove caked nylon size. S. Gellers. il Textile World 103:123+ Mr '53

NYLON spinning

Yarn characteristics simplify mill problems. D. M. Thornton. Mod Textiles Mag 34:34-5+ Jl '53; Same. Textile World 103:128-9+ Jl '53

NYLON throwing

Madison controls nylon throwing with tests, inspections, operator training. T. B. Winston. il Textile World 103:96-8+ Je '53

Throwing nylon for tricot knitting. V. A. Schiffer. Mod Textiles Mag 34:36+ S '53

NYLON weaving

Build sheer fabrics with the nylon matrix. F. P. Moore. il Mod Textiles Mag 34:31+ Ap '53

NYLON winding

Keep end use in mind in winding nylon. il Textile World 103:135+ Jl '53

NYLON yarn

Design and testing of a gummed nylon yarn for stocking knitting. J. M. Baldwin and W. D. Ewan. il Textile Inst J 44:P579-601; Discussion. P601-2 Ag '53

Now there's a way to relax and pre-shrink nylon. il Mod Textiles Mag 34:38 F '53

Seven points to watch when you knit crinkled nylon. J. H. Blore. il diags Textile World 103:110-11 Mr '53

NYQUIST diagram

Single connection between closed-loop transient response and open-loop frequency response. J. C. West and J. Potts. bibliog il diags Inst E E Proc 100 pt 2:201-8; Discussion. 209-12 Je '53

NYROP, Donald William, 1912-

Nyrop heads local service association. Aviation W 58:21-2 Mr 30 '53

O

O.E.E.C. See Organization for European economic cooperation

OAK

Peculiarities of white oak hardboard stock; abstract. S. L. Schwartz. Paper Tr J 136:98 F 20 '53

Studies in continuous alkaline pulping; high yield cellulose pulp from scrub oaks. W. J. Nolan and W. F. Brown. Tappi 35:505-10 N '52

OARAC. See Calculating machines

OATS

Effect of triphenyltetrazolium chloride on oat embryo respiration. G. O. Throneberry and F. G. Smith. bibliog Science 117:13-15 Ja 2 '53

Quality of cereals and their industrial uses; agronomic characteristics of oat varieties. D. Cameron. Chem & Ind p 117-18 F 7 '53

Separation and tentative identification of two new sterols from oats. D. R. Idler and others. bibliog Am Chem Soc J 75:1712-15 Ap 5 '53

OBELISKS

See also

Cleopatra's needle, London

OBERDORFER, Max R.

Businessmen in the news. por Fortune 47:61 Ap '53

OBESITY. See Corpulence

OBSERVATORIES, Astronomical. See Astronomical observatories

OBSOLESCENCE

Machinery replacement program determines cost of obsolescence. R. S. Collier. Tool Eng 30:65-8 Ja '53

See also

Depreciation

Machinery, Replacement of

OBSTETRICS

Use of analgesia opposed in premature labor: abstract. R. A. Nelson and F. E. Barry. Pub Health Rep 68:219 F '53

OCCUPATIONAL therapy

Outlook for women as occupational therapists. il U S Women's Bur Bul 203-2:1-51 bibliog(p48-51); pa 20c Supt. of doc. '52

OCCUPATIONS

Careers with future in the commercial field. J. L. Angel. 43 l pa $1 Modern vocational trends division, World trade academy press, 11 West 42d st, New York 36 '53

See also

Ability tests

Handicapped

Job analysis

Office workers

Radio workers

Research workers

OCCUPATIONS, Choice of

High school students advised not to become too specialized; 5th annual Chicago area career conference. Chem & Eng N 31:1743-4+ Ap 27 '53

How boiler supervisors can educate themselves for other positions; report of Master boiler makers' association. Ry Mech & Elec Eng 126:62-3 N '52

Retailers, it's your move! a study of college students' preference for careers in six major industries. J. Mason and E. L. Slater. J Retailing 28:49-60+ Summer '52

OCEAN

French explore sea depths for power and fresh water. il Eng N 150:38+ Mr 12 '53

Voyage of the Challenger. H. S. Bailey, jr. il map Sci Am 188:88-94 My '53

See also

Atlantic ocean

Canyons, Submarine

Coastal plains

Continental shelf

Hydrographic surveying

Meteorology, Maritime

Sea level

Waves

OCEAN bottom

Mapping the sea bottom. Comp Air Mag 58:142-3 My '53

Occurrence of hydrocarbons in recent sediments from the Gulf of Mexico. P. V. Smith, jr. bibliog Science 116:437-9 O 24 '52

OCEAN bottom—*Continued*

Possible deep-sea turbidity-current channels in the Indian ocean. R. S. Dietz. map Geol Soc Bul 64:375-7, pl 1 Mr '53

Seismic refraction measurements in the Atlantic ocean; Bermuda, Bermuda rise, and Nares basin. C. B. Officer and others. maps diags Geol Soc Bul 63:777-808, pl 1-4 bibliog(p807-8) Ag '52

Submarine topographic echoes from explosive sound. B. Luskin and others. bibliog Geol Soc Bul 63:1053-68, pl 1-7 O '52

See also

Canyons, Submarine

OCEAN currents

Charting the greatest river in the world. F. G. W. Smith and H. Chapin. il U S Naval Inst Proc 78:972-81 S '52

Estimated size of the Grand Banks turbidity current. P. H. Kuenen. bibliog Am J Sci 250:874-84 D '52

Turbidity currents and submarine slumps, and the 1929 Grand Banks earthquake. B. C. Heezen and M. Ewing. map Am J Sci 250:849-73 bibliog(p871-3) D '52

OCEAN travel

See also

Steamboat lines

OCEAN waves. See Waves

OCTABENZOYLSUCROSE

Octabenzoylsucrose and some of its transformation products. R. K. Ness and H. G. Fletcher, jr. bibliog Am Chem Soc J 74:5344-6 N 5 '52

OCTADECENOIC acids

Study of n-octadecenoic acids; the polymorphism of some elaidyl and petroselaidyl triglycerides. J. E. Minor and E. S. Lutton. bibliog Am Chem Soc J 75:2685-6 Je 5 '53

OCTADIENEDIONE

Studies in the polyene series; the preparation of oct-4-ene-2 : 7-dione and octa-3 : 5-diene-2 : 7-dione, intermediates for the synthesis of carotenoids; the anionotropic rearrangement of some hexa-2 : 5-diene-1 : 4-diols. R. Ahmad and others. Chem Soc J p4089-98 N '52

OCTAFLUOROCYCLOBUTANE

Molecular structures of octafluorocyclobutane and of methylcyclobutane. H. P. Lemaire and R. L. Livingston. bibliog Am Chem Soc J 74:5732-6 N 20 '52

OCTAHYDROHEPTALENE

Synthesis of 5,6,7,7a,8,9,10,11-octahydro-4H-benzo[ef]heptalene. A. G. Anderson, jr. and H. F. Greef. bibliog Am Chem Soc J 74:5124-5 O 20 '52

OCTAHYDROINDOLE

Synthetical and stereochemical investigations of reduced cyclic bases; the synthetic *cis* and *trans*-octahydroindoles and the anomalous exhaustive methylation products of the *trans*-base. F. E. King and others. Chem Soc J p250-5 Ja '53

OCTAHYDROPHENANTHRENE

Experiments in the 4-phenyl-2-cycloalkenone series; synthesis of 2,9-diketo-1,2,3,4,4a,9,10,10a-octahydrophenanthrene. E. D. Bergmann and J. Szmuszkovicz. bibliog Am Chem Soc J 75:3226-9 Jl 5 '53

OCTAHYDROPHENAZINE

Chemotherapy of filariasis; monoacyl derivatives of 5 : 10-dihydro- and *trans*-1 : 2 : 3 : 4 : 5 : 10 : 11 : 12-octahydrophenazine. J. S. Morley. Chem Soc J p4008-14 O '52

OCTAHYDROPYRROCOLINE

Octahydropyrrocoline; resolution and configuration. N. J. Leonard and W. J. Middleton. bibliog Am Chem Soc J 74:5776-7 N 20 '52

OCTANE

Equilibrium composition of combustion products of leaded octanes with air. E. B. Cook and others. bibliog U S Bur Mines Rep of Invest 4947:1-15 '53

Oxidative coupling of butanes and octanes. A. V. Grosse. Am Chem Soc J 75:1261 Mr 5 '53

OCTANE number

Octane number of catalytic gasolines. Oil & Gas J 51:188 O 20 '52

Significance of laboratory octane numbers in relation to road anti-knock performance. H. J. Eatwell and J. G. Withers. bibliog il Inst Mech Eng Proc (Auto div pt 3):111-20 '51-52; Excerpts. Engineering 173:279 F 29 '52; Discussion. Inst Mech Eng Proc (Auto div pt 3):121-40 '51-52

OCTENEDIONE

Studies in the polyene series; the preparation of oct-4-ene-2 : 7-dione and octa-3 : 5-diene-2 : 7-dione, intermediates for the synthesis of carotenoids; the anionotropic rearrangement of some hexa-2 : 5-diene-1 : 4-diols. R. Ahmad and others. Chem Soc J p4089-98 N '52

ODEON theatres, limited

Statement by the chairman. J. A. Rank. Economist 165:200-1 O 18 '52

ODLUM, Floyd Bostwick, 1892-

Portrait. Bsns W p94 My 2 '53

ODORANTS for natural gas. See Gas, Natural—Odorizing

ODORS

Abatement of sulphate pulp mill malodors by odor masking agents. W. C. Meuly and B. K. Tremaine. bibliog Tappi 36:154-61 Ap '53

Bacteria and odor control problem in occupied spaces. R. L. Kuehner. bibliog(31 titles) diags Heating-Piping 24:113-19 D '52; Abstract. Heat & Ven 50:86 Mr '53; Discussion. Heating-Piping 25:143-6 Mr '53

Basic odor research correlation conference, New York, April 23-24; with abstracts of papers. Heating-Piping 25:129-31 Je '53

Catalyst can end coffee plant odours and many other pollution problems. il diag Can Chem Process 37:48+ Ag '53

Catalytic combustion of odor-producing agents; heat recovery. L. C. McCabe. il diag Ind & Eng Chem 45:sup 109A-10A+ Mr '53

Chlorine dioxide for odor control. E. R. Woodward. bibliog il diags Tappi 36:216-21 My '53

Controlling nuisance odors at odorization stations. P. L. Covell. Am Gas Assn Proc 1952:776-7

Design of chimneys for odor dispersion; abstract. F. L. Cate. Tappi 35:sup80A+ D '52

Determination of hydrogen sulphide, methyl mercaptan, dimethyl sulphide and disulphide in kraft pulp mill process streams. V. F. Felicetta and others. bibliog diags Tappi 36:425-32 S '53

Effect of black liquor fixation on the release of kraft odors. R. H. Wright and others. bibliog Tappi 36:180-3 Ap '53

Effect of odors on food flavor. A. Turk. Heat & Ven 50:91 Ja '53

Eliminate offensive plant odors. A. W. Williams. il Mill & Factory 53:122-4 Jl '53

Exhaust nuisance stopped in wire mill; Ace wire mill. J. Bartol. il diag Power 97:120-1 Je '53

Experiences in masking kraft mill odors; abstract. B. F. May. Tappi 35:sup80A D '52

Experiences in the abatement of kraft mill odors; Gulf states paper corp. B. F. May. Tappi 36:374-8 Ag '53

Experiment to reduce odor from Nekoosa kraft mill. Paper Tr J 135:11 O 31 '52; Same. Paper Ind 34:1092-3 D '52

Intensity of the odor release at various points in the kraft pulping process. M. A. Schoening and R. H. Wright. bibliog il Tappi 35:564-9 D '52

Masking air-borne malodors; utilization of aromatic chemicals in industrial odor abatement. B. K. Tremaine. Tappi 36:sup 143A-6A Ag '53

Odorization and control of nuisance odors continue as big gas industry problems. E. L. Henderson. Am Gas J 177:17+ D '52

Odors and fragrances. R. Pantaleoni. bibliog il Chem & Eng N 31:1730-4 Ap 27 '53

Textile odors and deodorants; 1952 intersectional contest. diag Am Dyestuff Rep 42:67-9 F 2 '53

Try putting the smell to work. Bsns W p64+ N 8 '52

ODORS—*Continued*

Weyerhaeuser timber co. engineered out offensive odors from pulping (cooking) liquors. Tappi 35:sup 102A-4A N '52

See also

Deodorization
Deodorizers
Gas, Natural—Odorizing
Liquefied petroleum gas—Odorizing
Paper—Odors
Water purification—Taste and odor removal

Measurement

Measuring package odors. il Mod Packaging 26:149-50+ Je '53

New device, wider concept helps to measure odors quantitatively. V. E. Gex and J. P. Snyder. il diag Chem Eng 59:200-1+ D '52

Portable instrument for precision measuring of odors. il Paper Tr J 137:43-4 Jl 24 '53

OFFICE appliances

Air line agents answer calls faster with lazy susan filing device. il Am Bsns 22:30+ O '52

Automatic equipment brings a revolution in paperwork. il Steel 132:58-9 Je 8 '53

Business efficiency exhibition, London. Elec R (Lond) 152:1494-5 Je 26 '53

Business machines; industry output stays high despite scanty defense orders. A. Glenn. Barron's 32:9-10 N 24 '52

Company mails 180,000 statements each month with modern office equipment; Merrill Lynch, Pierce, Fenner & Beane. F. Bohne. il Am Bsns 23:10-11 Ja '53

Electronics in the modern office. R. W. Fairbanks. flow chart il diags Harvard Bsns R 30:83-98 S '52

Invading U.S. office machine market; C. Olivetti & co. il Bsns W p 122-5 Ja 31 '53

Mechanizing the small office. K. H. Goss. Am Gas Assn Mo 35:21-2+ My '53

Packaged power; application of the concept to office equipment such as desk calculators. J. L. Moody and L. Freiberg. il Machine Design 25:163-4 Ag '53

Truth about electronic business machines. H. O. Brayer. il Am Bsns 23:10-11+ Jl; 16-17+ Ag; 20-1+ S '53

Winners of Credit and financial management's awards for best articles on How we streamlined our office by installing modern equipment. J. N. Jones and others. Credit & Fin Management 55:8-11 My '53

See also

Accounting—Mechanical aids
Cash registers
Check writing machines
Dictating machines
Duplicating machines
Tabulating machines
Typewriters

Exhibitions

Equipment makers outdo themselves; National business show, New York city. il Credit & Fin Management 55:18 Ja '53

Manufacture

Re-set pawl tolerance held by powder metallurgy; National cash register co. il diag Am Mach 96:126-7 O 13 '52

OFFICE buildings

Aluminum; 234,000 sq. ft. of stamping; office building of the Aluminum company of America in Pittsburgh. il Light Metal Age 11:12-15 Ap '53

Commercial center planned for Denver to have 20-story main building. il Eng N 149:48 D 18 '52

Concrete canopies pay for themselves. il Eng N 150:64 Ja 8 '53

Flat-plate office building goes up fast. il plan diag Eng N 150:36-8 Ja 8 '53

New building draws 50,000 visitors; Lever House. W. Norris. il Am Bsns 23:20+ Ag '53

Office space; still not enough to end the squeeze. il Bsns W p86-8+ D 6 '52

Open-caisson method used to erect Tokyo office building. A. C. Mason. il plan diags Civil Eng 22:944-7 N '52

Potential demand for big-city office space is running high. il Eng N 150:24-5 Mr 19 '53

Two office buildings planned for Toronto. J. C. Smith. il Arch Rec 112:28 S '52

See also

Advertising agencies—Offices
Insurance company buildings
Newspaper offices
Physicians' offices

Air conditioning

Aluminum panels for heating, cooling; Alcoa's Pittsburgh office. J. J. Mann. il Power 96:71-4 N '52

Inside story of Lever House. G. W. Bond. il diag Refrig Eng 61:388-90 Ap '53

New way to heat and cool skyscrapers! Aluminum company of America's building in Pittsburgh. il Dom Eng 181:96-9+ F '53

Window units selected for office building; Gulf building. Heat & Ven 50:75 Jl '53

See also

Office buildings, Industrial—Air conditioning

Automobile parking space

Mechanical parking system for installation in buildings. diags Arch Rec 113:175 Ja '53

Electric equipment

Flexible installation; Liverpool exchange buildings. il Elec R (Lond) 152:1050-3 My 8 '53

Large office scheme. il Elec R (Lond) 152:59-62 Ja 9 '53

Modernize distribution; Angelus bldg, Los Angeles. il Elec West 110:91 Ja '53

Vertical rising mains. il Elec R (Lond) 151:1175-6 N 28 '52

Heating and ventilation

Boiler installation in New York office building is called world's biggest. il Dom Eng 182:108-9 O '53

Office heating. il Elec R (Lond) 152:397-9 F 20 '53

Why Consumers Power put new boilers on the roof of its building. A. D. Almquist. il Gas Age 112:28-9+ Jl 16 '53

See also

Publishers' offices—Heating and ventilation

OFFICE buildings, Industrial

Acme opens new windowless office. il Brick & Clay Rec 121:32 O '52

After a 65-yr. delay, Springs builds a general office; illustrations with text. R. B. Pressley. Textile World 102:127-9 D '52

At last, Springmaid gets a roof to cover her. il Bsns W p46-7 Ja 10 '53

Dealer's office is practical display; Georgia-Florida brick and tile co. il Brick & Clay Rec 122:51 Mr '53

Hung walls permit slanting windows for research and office building; Springs cotton mills. il Eng N 149:26 N 20 '52

Modern materials and techniques transform old building into a brand new one; Heppenstall co. il Mill & Factory 52:147 My '53

New job for prefabs; building offices in a hurry. il Bsns W p68-70 My 23 '53

Old buildings modernized with stainless exterior; Heppenstall co. office building. E. R. Woodward. il diags Sheet Metal Worker 44:67-9 Ap '53

Prefabricated home factory turns out office building. il Eng N 150:25 My 7 '53

Standardized building makes smart office. J. M. Werblow. il plan Eng N 149:37 N 20 '52

This office building will pay for itself in six years; Art metal construction co. il Am Bsns 22:16-17+ D '52

Air conditioning

Air distribution studies for louvered or egg-crate ceiling, Detroit Edison co.'s new office building. R. V. Martelli and H. O. Scarlett. il plans diags Heating-Piping 24:77-82 N '52; Discussion. W. O. Huebner. 25:119-20 Ja '53

Comfort air conditioning system emphasizes dehumidification; Toledo scale co. W. A. Fink. il Heat & Ven 49:108-10 N '52

Condensate pump simplifies air conditioning installation; Weil pump co. il diag Heating-Piping 25:96 My '53

OFFICE buildings, Industrial—Air conditioning—*Continued*

New techniques = new building; Heppenstall office building. il Heating-Piping 25:105 Mr '53

Location

Westchester gets ninth large firm in new offices-to-suburbs trend. il map Eng N 149: 46-7 D 25 '52

OFFICE communication

System cuts order handling time from four days to one day; Dow chemical co. W. F. Stumpfig. il Am Bsns 23:13+ Ag '53

OFFICE equipment

For office needs. il Mod Ind 24:149-50 O '52

Formed sheet in form writer. il Mod Plastics 30:188 N '52

Materials handling; offices have it, too! abstract. Management R 42:23-4 Ja '53

Modernizing for office efficiency. il Credit & Fin Management 55:28-9 Ja '53 [cont monthly]

OFFICE equipment industry

Business machine firms active. Electronics 26:6+ Ap '53

Business machines; industry output stays high despite scanty defense orders. A. Glenn. Barron's 32:9-10 N 24 '52

Advertising

Is hysteria in office equipment advertising dying down? il Ind Marketing 38:83+ My '53

OFFICE furniture

Offices feature new ideas. il Am Bsns 23: 22-3 S '53

See also

Chairs

Desks

Standards

How to conceal telephone wires, keep desks neat. A. R. Hutchinson. il Standardization 23:407 D '52

OFFICE lighting

How color influences efficiency in an office. R. L. Oetting. il Am Bsns 22:20-1+ D '52

How much does good lighting cost? R. L. Oetting. Am Bsns 23:22+ F '53

How you can eliminate lighting complaints. R. L. Oetting. il Am Bsns 22:20-1+ N '52

Illumination of offices. Electrician 149:997 O 3 '52

Lighting a large office. P. Lindholm. il plan Illum Eng 48:169-70 Mr '53

Lighting in the city. il Elec J 150:2133 Je 12 '53

Lighting tips. R. L. Oetting. Am Bsns 23: 36-7 S '53

Model office demonstrates better lighting. il Illum Eng 48:94 F '53

Right lighting for the right job. R. L. Oetting. il Am Bsns 22:14-15+ O '52

Surveys show better lighting raises office output. R. L. Oetting. il Am Bsns 23:18-19+ Ja '53

Tests aimed at realistic maintenance factors. R. L. Oetting and J. W. Tuttle. il diags Illum Eng 48:242-52 My '53

See also

Dentists' offices—Lighting

OFFICE machines. See Office appliances

OFFICE management

Accountant's natural advantages in developing work simplification programs. K. H. Bergstrom. J Account 95:449-53 Ap '53

Chrysler combines record keeping for group insurance and pensions. D. G. Baird. il Am Bsns 22:26+ N '52

Cost-reduction program for any office; job inventory. E. Whitmore. il Am Bsns 23: 10-13+ F '53

Getting along with stenos. Am Bsns 23:36+ F '53

Home office efficiency improves service to customers; Minute maid corp. L. Stemp. Am Bsns 23:36-7 Ja '53

How changes in management are affecting the task of getting work done in the office. J. E. McCabe. J Account 95:481-2 Ap '53

How firm can handle more than 4,000 orders a day; Allied radio corp. W. Norris. il Am Bsns 23:12-13+ O '53

New ideas in Sheaffer Pen office improve customer service. il Am Bsns 22:18-19+ O '52

Office quality; new ways to improve it with statistics. il Mod Ind 25:50-4 Mr '53

150,000 receiving reports yearly; Delco products division of General motors corp. il Am Bsns 22:24 N '52

Rise in overhead calls for cost-cutting in the office. S. Fish. Manuf Rec 121:40-1 D '52

Ten ways to save overtime. H. L. Wylie. Am Bsns 23:14-15 Jl '53

Ten ways to save paper. H. L. Wylie. Am Bsns 23:14-15 O '53

Ten ways to save postage. H. L. Wylie. Am Bsns 23:14-15 Ag '53

Ten ways to save steps. H. L. Wylie. Am Bsns 23:18-19 S '53

Two tons of mail handled daily with conveyor system; John Hancock mutual life insurance co. W. Norris. il diag Am Bsns 23:20-1+ Jl '53

Winners of Credit and financial management's awards for best articles on How we streamlined our office by installing modern equipment. J. N. Jones and others. Credit & Fin Management 55:8-11 My '53

Work-simplification program saves 162, 845 hours a year; Ford motor company of Canada. D. G. Baird. il Am Bsns 23:12-13+ My '53

Work-simplification program saves $61,000 in first year; Bell & Howell co. W. Norris. il Am Bsns 22:8-11 N '52

See also

Accounting

Billing

Business management

Color in office management

Commercial correspondence

Credit departments

Executives

Files and filing (documents, etc.)

Forms and blanks, Business

Office workers

Orders

Railroads—Office management

Reception rooms

Architects' offices; reception rooms; design details, materials, equipment. il plans Arch Rec 113:143-6+ Ja '53

OFFICE management association, Life. See Life office management association

OFFICE of price stabilization. See United States—Price stabilization, Office of

OFFICE supplies industry

Advertising

Daisy, daisy; it's a winning promotion theme! Oxford filing supply co. il Ptr Ink 242:49-50 F 20 '53

OFFICE workers

Be kind to beginners. B. S. Eckles. Personnel J 31:182-5 O '52

Continuing education of supervisors best way to combat clerical help dearth. G. Fergason. Nat Underw 57:11 Ap 2 '53; Same. Nat Underw (Life ed) 57:6 Mr 13 '53

Earnings in selected industries, late 1951 and early 1952; insurance-carrier industry. L. E. Lewis. Mo Labor R 75:420-1 O '52

Establishing individual incentives in the office; abstract. R. B. Wolcott, jr. Management R 41:664-5 O '52

Federal white-collar workers; their occupations and salaries, June 1951. C. E. Taylor. U S Bur Labor Statistics Bul 1117:1-43; pa 15c Supt. of doc. '53; Excerpt. Mo Labor R 75:489-94 N '52

Rise in overhead calls for cost-cutting in the office. S. Fish. Manuf Rec 121:40-1 D '52

Salary ranges in 304 offices. Am Bsns 23:8-10 Ap '53

Unionizing office workers. Bsns W p 121 Jl 18 '53

White-collar compensation; a study of salary levels, trends, and differentials. F. W. Mueller. Management R 41:591-600 S '52

White-collar employee, he's doing all right. J. M. Black and H. C. Capes. Personnel 29:113-32 S '52

See also

Bank employees

Secretaries, Private

OFFICES
Desk units save 625 square feet of floor space at United air lines. il Am Bsns 22:14-15+ N '52
Employee turnover is cut 50 per cent after remodeling program; Walter E. Heller & co. il Am Bsns 23:26 My '53
Here is spacesaving plan for salesmen's room. il Am Bsns 23:32 My '53
How one space became four; showroom and offices for Scarves by Vera. il plans diags Arch Rec 113:159-64 F '53
How to eliminate office noises. Am Bsns 22:36 D '52
Man without a desk. il Bsns W p 182-4+ Mr 14 '53
Modules for engineers give privacy without isolation. il Electronics 26:276+ Mr '53
Modules make semi-private offices. il Factory Management 111:144 Ja '53
New desk units save floor space, cut noise, and add privacy. il Am Bsns 23:30+ Mr '53
New ideas in office save space. il Am Bsns 23:22+ My '53
Office partitions that tilt to provide ventilation. il plan diags Am Bld 74:126-7 O '52
Offices executives need. il Am Bsns 23:14-19 Mr '53
Showroom and offices for Standard rug co. il plan Arch Rec 112:164-5 N '52

See also
Advertising agencies—Offices
Architects' offices
Newspaper offices
Office lighting
Physicians' offices
Printing offices
Publishers' offices

Accidents

See Offices—Safety measures

Heating and ventilation

Factory offices; warm air heated. A. Holton. il Sheet Metal Worker 44:64-5 N '52

Layout

Office layout. Nat Safety N 67:28 Mr '53
With space to spare. il plan Adv Agency 46:70-1 Mr '53

Safety measures

Office safety achieved with good equipment plus employe cooperation. East Underw 53:30 N 7 '52

OFFNER, Walter W.
Opportunist in X-rays. Fortune 47:218 My '53

OFFSET printing. See Printing, Offset

OGDEN, Chester F.
Purchasing is but one of his jobs. pors Elec World News ed 138:22-3 O 27 '52

OHIO

See also
Electric utilities—Ohio
Electrochemical industries—Ohio
Roads—Ohio

Industries and resources

Atomic boom in Ohio. map Economist 166:22-4 Ja 3 '53

Sanitary affairs

Garbage and refuse collection and disposal. Pub Works 84:66 Ja '53
Ohio villages balk at pollution control. il Eng N 150:46-7 Je 18 '53

OHIO Edison company
Preferred stock offered. Comm & Fin Chr 177:237 Ja 19 '53
Public utility securities. O. Ely. Comm & Fin Chr 177:604 F 5 '53
Stock offering underwritten. Comm & Fin Chr 177:143 Ja 12 '53

OHIO match company
Billions of matches; but the bright economic light comes from other sources. H. Murphy. Barron's 32:11-12 N 3 '52

OHIO power company
Bonds offered. Comm & Fin Chr 177:414 Ja 26 '53

OHIO river
Orsanco's sewage treatment standards set for another 300 miles of Ohio river. map Eng N 150:23 Ap 9 '53
Role of industry in the Ohio River valley pollution control program; abstract. E. J. Cleary. Water & Sewage Works 100:365-6 S '53

OHIO Valley electric corporation
AEC to get 1,800 mw from Ohio Valley. plan Elec World News ed 138:7-8 O 27 '52
Ohio Valley, AEC place $83.5 million in orders for electrical equipment. Elec World News ed 138:44 D 22 '52
Ohio Valley chooses its sites. map Elec World News ed 138:10 N 10 '52
Ohio Valley Electric formed. Elec World News ed 138:18 O 13 '52

OHMMETER
Low-resistance ohmmeter. J. P. C. McMath. il diags Radio & Tv N 49:61+ Ap '53

OIL, Gas. See Gas oil

OIL, Insulating. See Insulating oil

OIL, Transformer. See Insulating oil

OIL analysis
Analysis of crude shale oil. R. F. Stevens and others. bibliog 4pls U S Bur Mines Rep of Invest 4898:1-20 '52
Determination of basic nitrogen in oils. V. Z. Deal, F. T. Weiss and T. T. White. bibliog(82 ref) Anal Chem 25:426-32 Mr '53
Determination of moisture in oils and greases. R. Y. Meelheim and J. N. Roark. diag Anal Chem 25:348-9 F '53
Determination of trace metals in crudes and other petroleum oils; analysis for iron, nickel, vanadium, and copper. O. I. Milner and others. bibliog diags Anal Chem 24:1728-32 N '52
Proposed method of test for hydrocarbon type analysis of Diesel fuels by silica gel adsorption. diag Am Soc T M Proc 50:271-5 '50
Quantitative isolation of fatty acids in petroleum oils. L. R. Dickson and R. R. Jay. Pet Eng 25:C45-6 Mr '53
Review of analytical chemistry; essential oils and related products, 1951 and 1952. E. Guenther and E. E. Langenau. Anal Chem 25:12-17 bibliog(153 ref, p 15-17) Ja '53
Review of analytical chemistry; petroleum. H. Levin. Anal Chem 25:47-54 bibliog(182 ref, p52-4) Ja '53

See also
Fusel oil—Analysis
Lubricating oils—Analysis
Oil shales—Analysis
Petroleum—Analysis

OIL bulk stations
By-pass the bulk plant? midwest jobber says no; Yetter oil co. H. Ridder. il map Nat Pet N 45:52+ Mr 25 '53
Fuel distribution depot; Home counties petroleum products, ltd. il Engineer 194:702 N 21 '52
Petroleum distribution depot; Shell-Mex and B.P., ltd. il Engineer 196:204-5 Ag 14 '53; Engineering 176:250 Ag 21 '53

Electric equipment

Automatic petroleum loading system. il Elec J 151:577 Ag 21 '53
Oil distribution depot; Vacuum oil co.'s bulk terminal. Elec J 151:653 Ag 28 '53

Equipment

How lift trucks modernize old plant. D. A. Reed. il Nat Pet N 44:54-7 D 17 '52

OIL burners
Burner reflects new theory. il diag Chem Eng 60:208-9 F '53
Design, construction, and operation of oil burners for glass melting. T. Coyle. il Glass Ind 34:309-11+ Je '53
Know your oil burners. L. J. Murphy. il diags Mill & Factory 53:83-7 O '53
New oil burner pre-vaporizes fuel; abstracts. J. A. Johnson and R. H. Eustis. Nat Pet N 45:72-3 Ja 21 '53; Power Eng 57:59 F '53
Oil heating problem. F. Feigenbaum. diags Dom Eng 181:87+ My '53

Cleaning

Cleaning burners. Oil & Gas J 51:116 Ja 12 '53

Testing

Development of oil fuel burning equipment. il Engineer 196:185 Ag 7 '53; Engineering 176:119 Jl 24 '53

OIL cans
Don't throw away that oil can! drawings with text. Mill & Factory 53:108-10 O '53

OIL cartel. See Petroleum industry and trade—Trust investigation

OIL chemists' society, American. See American oil chemists' society

OIL companies

Atlantic plans distributor committee to help top management decide policy. Nat Pet N 45:23-4 F 25 '53
Clipper delivery the consignee way. F. Breese. il map Nat Pet N 45:48-54 F 11 '53
Consignee calls his friends best asset; Clyde D. Austin. M. Reid. il Nat Pet N 45:58-61 Mr 25 '53
Consignee partnership, how it grew; Elliot and Churchill, Middlebury, Vt. R. E. Bjorkback. il Nat Pet N 45:48+ My 27 '53
Consult-supplier month needs push to improve satisfactory progress. Nat Pet N 45:22 F 11 '53
Designing an efficient oil truck terminal; P. B. Mutrie motor trans., inc. il Nat Pet N 45:57-8 Ja 28 '53
Down to earth survey of the tidelands oil companies. L. A. Lukens. Mag of Wall St 92:390-1+ Je 27 '53
Jobber associations start ball rolling for Consult your supplier month. Nat Pet N 45:27-8 Ja 21 '53
Jobber promises supplier he'll put half of earnings back into business. Nat Pet N 45:35-6 F 18 '53
Jobbers can sell heavy oil to industry; Lloyd L. Felker co. L. Castle. il Nat Pet N 44:48+ D 3 '52
Jobbers will battle federal controls if they can trust suppliers. O. Ellis. Nat Pet N 44:40-2 N 19 '52
Majors pledge co-operation in making Consult your supplier month succeed. Nat Pet N 45:19-21 Ja 14 '53
Oil marketers who coach dealers need all the support they can get. F. C. Sturtevant. Nat Pet N 44:76+ O 1 '52
Pioneer jobber proves new ideas and equipment spell growth; Rennie oil co. L. Castle. il Nat Pet N 45:37-9+ Ja 21 '53
That sinister oil cartel. Fortune 46:113-14 O '52
Why a major switched to percentage margins. Nat Pet N 44:37-8 N 5 '52
Youth builds bright future for independents; survey of 71 men under 36 who are working for branded or unbranded distributorships. Nat Pet N 45:33-5 My 20 '53

See also
Esso standard oil company
National oil jobbers council
Shell oil company
Socony-Vacuum oil company
Standard oil company (New Jersey)
Standard oil company of Indiana

Accounting

Accounting for a bulk oil plant; a distributor's view. S. C. Matthias. N A C A Bul 34:535-44 D '52
Accounting turns loss to profit. M. Reid. il Nat Pet N 45:89-93 F 18 '53
API gives jobber accounting a boost. Nat Pet N 45:26-7 My 13 '53
Case for uniform accounting. W. H. Reich. Nat Pet N 45:30-1 Mr 11 '53

Costs

Majors hike marketing expenditures for 1953. G. W. Dietrich. Nat Pet N 44:17 N 12 '52

Credit problems

Eastern petroleum credit managers association convention, Atlantic City, March 30-31. Nat Pet N 45:34-5 Ap 8 '53
Eye on fundamentals cuts credit loss; Marshall oil co. Nat Pet N 45:21 Ap 8 '53
Imprinter speeds credit card sales. il Nat Pet N 45:31 Ja 21 '53
Jobber makes budget payment plan work. il Nat Pet N 45:58-9 F 11 '53
Machines play big role in jobber's credit program. C. O. Lyddon. il Nat Pet N 45:64-6 My 20 '53
Meters keep gasoline dealers paid up. il diag Nat Pet N 45:64+ F 18 '53
Motorists credit checks gaining in popularity. Nat Pet N 45:72 F 4 '53
Oil credit men taking careful look at universal cards; most neutral. F. C. Sturtevant. Nat Pet N 44:21-2 O 22 '52
Universal credit cards; what oil marketers think of them. F. C. Sturtevant. il Nat Pet N 44:29-33 N 19 '52

Equipment

Jobbers plan big investment in rolling stock. Nat Pet N 44:33-5 N 26 '52
See also
National association of oil equipment jobbers

Finance

See also
Royal Dutch-Shell group

Management

By-pass the bulk plant? midwest jobber says no; Yetter oil co. H. Ridder. il map Net Pet N 45:52+ Mr 25 '53
Everyone sells for Valley Oil. R. E. Bjorkback. il Nat Pet N 45:47+ F 18 '53
Jobber lops ten per cent off costs in first year of truck maintenance program; Lloyd Felker co. H. Ridder. Nat Pet N 45:59-60+ Mr 18 '53
Jobber pushes tobacco farm sales; T. W. McCracken. C. Boyd, jr. il Nat Pet N 45:56-8 Ap 22 '53
Jobber uses profit standards to operate business efficiently; Staten Island oil co. R. E. Bjorkback. il Nat Pet N 44:36-9 D 10 '52
Jobber's success built on records; American oil co. C. Boyd, jr. il Nat Pet N 45:48-53 Mr 11 '53
Management manual tells what it takes to build sound fuel oil business; Coastal oil co. il Nat Pet N 44:90-1+ O 1 '52
Office machines multiply jobber savings; Crown petroleum corp. F. C. Sturtevant. il Nat Pet N 45:48+ F 25 '53
Profit plow-back builds gasoline business; Pendergraft & Williford, inc. M. Reid. il Nat Pet N 44:48-50 O 29 '52
Service sells industrial trade; Inland oil co. H. Riddler. il Nat Pet N 44:42-6 O 22 '52
Station facelifting pays off for jobber. R. E. Bjorkback. il Nat Pet N 45:56-9 F 25 '53
Tips on improving an oil jobber's business. B. A. Brokaw. Nat Pet N 45:55-8 Mr 11 '53

Records

Jobber's success built on records; American oil co. C. Boyd, jr. il Nat Pet N 45:48-53 Mr 11 '53
New degree day system saves time. il Nat Pet N 45:55-6 Ja 28 '53

Securities

See Petroleum industry and trade—Securities

Service

Jobber tests customer lubes. il Nat Pet N 44:59-61 O 29 '52

Side line selling

Cultivating a wholesale TBA market. il Nat Pet N 45:52+ Ja 7 '53
Dealer meetings pep-up TBA sales; Douglas oil co. of California. F. Breese. il Nat Pet N 45:62+ Ap 1 '53
How oil's TBA supply setups work. F. C. Sturtevant. Nat Pet N 44:64+ O 1 '52
Jobber grows with many-sided operation. il Nat Pet N 45:80+ My 6 '53
Major company TBA sales promotion calls for planning and teamwork. F. C. Sturtevant. Nat Pet N 44:70-1 D 10 '52
Oil jobber finds profitable sideline in marketing cleaner for carburetors; Wells petroleum co. il Nat Pet N 45:84 Ap 1 '53
Oil-TBA men stress sales push, full service. F. C. Sturtevant. Nat Pet N 44:71-4+ N 26 '52
Salesmobile promotes seeing is selling theme. F. C. Sturtevant. il Nat Pet N 44:61+ N 5 '52
TBA managers want; better station tools, improved warehousing. il Nat Pet N 44:66-8+ N 26 '52

Florida

Florida, sunniland for oil. I. U. Cobleigh. Comm & Fin Chr 178:7 Jl 2 '53

OIL companies—*Continued*

Wichita, Kansas

Should jobbers push story of competition? here's what they say about it in Wichita. J. Barton. il Nat Pet N 45:46-50 Ap 15 '53

OIL delivery

Clippers; Union's answer to lube delivery woes. F. Breese. il Nat Pet N 45:67-8+ Ap '53

Cost trimming streamlines tank truck deliveries. R. E. Bjorkback. il Nat Pet N 45:49-54 Ap 8 '53

Degree day system, how it works. R. E. Bjorkback. Nat Pet N 45:48+ Ap 22 '53

New degree day system saves time. il Nat Pet N 45:55-6 Ja 28 '53

Truck radios save trips and money; W. Theodore Miller & son. il Nat Pet N 44:51-2 O 15 '52

OIL engines. See Diesel engines; Internal combustion engines

OIL films

Solution of the Reynolds equation for slider-bearing lubrication. A. Charnes and others. bibliog diag A S M E Trans 74:867-73; 75:269-71, 507-12, 1117-36 Jl '52, F, My, Ag '53; Discussion. 75:271-2, 512-13, 1121-3 F, My, Ag '53

OIL filters

Engine lubricating oil filter. il diag Engineer 194:360 S 12 '52

Maintenance of internal combustion engines; filtration of air and oil. P. H. Moore. il diags Pet Eng 24:C21+ N '52

OIL filters, Automobile

Centrifugal filtration. il Automobile Eng 42:386 O '52

Filter change month is opportunity to cultivate a natural TBA market. F. C. Sturtevant. Nat Pet N 45:74 Mr 4 '53

Filter promotion can help lube oil sales; selling the car owner on driving a safe car. J. B. Lightburn. Nat Pet N 45:74 Ap 1 '53

Making a profit on oil filters. il Nat Pet N 44:80+ O 1 '52

Oil filter refill. Consumers Res Bul 30:28 D '52

Oil filters. Consumers Res Bul 31:28 Ap '53

OIL fires

Air agitation snuffs fire like magic. il Nat Pet N 44:58-60 D 3 '52

Air agitation stops fuel oil fire. il Elec World 138:84 D 29 '52

Giving refinery fires the air; Socony's air agitation method. il Bsns W p68-9 N 29 '52

They put it out in 37 seconds; fighting oil fires. il Chem Eng 60:111-12+ Ja '53

See also

Oil tanks—Fire protection
Petroleum industry and trade—Fires and fire protection
Petroleum refineries—Fires and fire protection

OIL flow

Flow through cavities in porous media. A. E. Scheidegger. bibliog Pet Eng 25:B 121-2+ My '53

OIL fuel

Application of additives to fuel oil and their use in steam-generating units. J. B. McIlroy and others. il diag Power 97:86-8 Mr '53; Abstract. Power Eng 57:131 O '53

Building a better fuel oil. il Chem W 72:65-6 F 14 '53

Corrosion of mercury-boiler tubes during combustion of a heavy residual oil. A. M. Hall and others. bibliog flow chart il diags A S M E Trans 75:1037-49 Ag '53

Cyclic sulfides in a petroleum distillate. R. H. Brown and S. Meyerson. bibliog Ind & Eng Chem 44:2620-3 N '52

Effect of solvent properties in thermal decomposition of oil shale kerogen. W. D. Schnackenberg and C. H. Prien. bibliog Ind & Eng Chem 45:313-22 F '53

Flame radiation research at Ijmuiden. il Engineer 193:822-4 Je 20 '52; Same abr. Blast F & Steel Pl 40:1465-6+ D '52; Excerpts. Steel 131:94+ S 1 '52; Am Cer Soc Bul 31:404-5 O 15 '52

Fuel oil additive; Santolene H. Chem Eng 60:264 Ap '53

Fuel-oil ash deposition in open-cycle gas turbines. A. T. Bowden and others. diags Engineer 195:639-42 My 1 '53; Discussion. 195:627-8, 659-60 My 1-8 '53

Fuel oil sludge solvents. L. W. Fitzpatrick. Power Eng 57:97-8 Ap '53

How Maryland handles number six oil in glass tank firing. T. P. Coyle. Cer Ind 61:56 Ag '53

How they're improving Bunker C for gas turbines. Power Eng 57:108+ Ag '53

How to store, handle and heat fuel oil. P. R. Unger. diags Power Eng 57:80-1 O '53

Injection of oxygen-reformed natural gas and fuel oil into the blast furnace. J. O. Raick and J. E. Brassert. diag Iron & Steel Eng 29:75-80 D '52

Nitrogen compounds in domestic heating oil distillates. R. W. Sauer, F. W. Melpolder and R. A. Brown. Ind & Eng Chem 44:2606-9 N '52

Petroleum ash components and their effect on refractories. M. C. K. Jones and R. L. Hardy. Ind & Eng Chem 44:2615-19 N '52

Petroleum fuels gain. Oil & Gas J 51:68 Mr 9 '53

Problem for refiners; residual fuel found highly corrosive in locomotive-type gas turbines. D. H. Stormont. Oil & Gas J 51:66 Mr 9 '53

Underground oil storage; Edholm container uses excavations or caverns and ground water to store fuel oil. D. Ball. diag Pet Eng 24:A49-50+ D '52

U.S. oil outlook; how coal fits in. E. Ayres. Coal Age 58:70-3 Ag '53

Where residuals are heading. Pet Processing 8:521-4 Ap '53

See also

Airplane engines—Fuel
Automobile engines—Fuel
Automotive fuel
Boilers—Oil firing
Coal liquefaction
Diesel engines—Fuel
Gasoline
Internal combustion engines—Fuel
Liquid fuel
Locomotives, Diesel—Fuel
Oil burners
Oil fuel industry

Ash content

Measurement of ash content in residual fuel oil. F. W. Keith, jr. and F. Downing. diag Diesel Power 31:44-6 S '53

Manufacture

Effect of viscosity of fuel oil on cracking yields. W. L. Nelson. Oil & Gas J 51:143 Ap 13 '53

How residual fuels are treated for use in Diesel engines. F. P. Downing and others. diags Marine Eng 58:59-63 Ap '53

Hydrocol process; Texaco development corp. flow diag Pet Refiner 31:254-5 S '52

Prices

Eastern seaboard wholesale prices of number six fuel oil and bituminous coal (run of the mine) 1926 to 1951; tabulation. Nat Pet N 45:34 Ja 21 '53

Ellis may ask jobber earnings relief based on margins; survey returns lag. Nat Pet N 44:18-19 S 24 '52

OPS clarifies fuel oil prices in East. Nat Pet N 44:35 N 12 '52

Specifications

Commercial burner oil specifications. J. V. Resek. Mech Eng 74:475-9 Je '52; Discussion. 74:929-30 N '52

Storage

See Oil storage

Sulfur content

Fuel research and sulphur recovery; work of the Fuel research board in 1951. il Chem Age (Lond) 67:623-6 N 8 '52

Taxation

Revenue bureau issues final rules on Diesel fuel tax. Nat Pet N 45:36 Ja 7 '53

Testing

Corrosion aspects of Bunker C combustion in gas turbines. B. O. Buckland and C. M. Gardiner. Power 97:148+ S '53

OIL fuel—Testing—*Continued*

Laboratory evaluation of fuel oil stability. A. R. Rescorla, J. H. Cromwell and D. Milsom. bibliog il diags Anal Chem 24: 1959-64 D '52

More on fuel oil sampling. P. F. Schmidt. diags Power Eng 57:106+ Je '53

What is fuel for Diesel locomotives? L. E. Talbot. Ry Loco & Cars 127:82-4 Mr '53

See also

Flash points

OIL fuel industry

Cost trimming streamlines tank truck deliveries. R. E. Bjorkback. il Nat Pet N 45:49-54 Ap 8 '53

Ellis rips oil imports limiting bills as fuel control and coal subsidy. Nat Pet N 45: 21 F 25 '53

FTC calls Shell fuel oil exclusive dealing contract illegal. Nat Pet N 44:24 O 29 '52

Firm products markets this winter would lay good foundation for better crude prices. Oil & Gas J 51:276+ Ja 26 '53

Foreign oil; how it hurts America, how it can be curbed. map Coal Age 58:70-5 Mr '53

Fuel oil import flow seen peril to US coal. Oil Paint & Drug Rep 163:4+ F 23 '53

Fuel-oil outlook; abstract. A. J. McIntosh and J. A. Coble. Oil & Gas J 51:67 Mr 30 '53

Good heating oil supplies chase shortage fears. Nat Pet N 44:33-5 O 1 '52

Imports of residual fuel oil. W. L. Nelson. Oil & Gas J 51:131 Ja 12 '53

Jobber makes budget payment plan work. il Nat Pet N 45:58-9 F 11 '53

Jobbers can sell heavy oil to industry; Lloyd L. Felker co. L. Castle. il Nat Pet N 44:48+ D 3 '52

Jobbers unaware they are in red on heating oil sales, study shows. Nat Pet N 45: 55 Ap 8 '53

Management manual tells what it takes to build sound fuel oil business; Coastal oil co. il Nat Pet N 44:90-1+ O 1 '52

Need for adequate local fuel oil storage. Nat Pet N 45:28-30 My 13 '53

New degree day system saves time. il Nat Pet N 45:55-6 Ja 28 '53

New summer home for oil; abandoned slate pits. il Bsns W p45+ Jl 11 '53

Percentage margins. D. F. Benton. Nat Pet N 45:33 Mr 4 '53

Percentage margins are remedy for many marketing woes. Nat Pet N 45:34-5 Mr 4 '53

Percentage margins, good or bad? Nat Pet N 45:13-20 Ap 29 '53

Residual supply up 20 per cent since 1946. Nat Pet N 45:34 Ja 21 '53

Roads join fight on oil imports. Ry Age 134: 13-14 Mr 9 '53

Southerners fight foreign oil. map Manuf Rec 122:35+ Ap '53

See also

Petroleum industry and trade—United States—Imports problem

Statistics

Fuel oil demand, a look ahead to '55. A. J. McIntosh and J. A. Coble. map Nat Pet N 45:44-7 Ap 1 '53

Markets thru '55 appraised. A. J. McIntosh. Pet Processing 8:524 Ap '53

Canada

Spurt ahead in heavy crude? map Can Chem Process 37:14 F '53

OIL gas. See Gas, Oil

OIL handling

Automatic filling grows up; lube oil filling line at Richmond refinery. il Chem W 71: 56-7 N 15 '52

Drum filler cuts costs. il Chem Eng 59:208-9 D '52

OIL heat institute of America

Annual meeting, 31st, Chicago, April 20-22. Dom Eng 181:107 My; 95-6+ Je '53; Sheet Metal Worker 44:74-5+ Je '53

OIL heating

Anglo-Iranian oil co. heats oil pipe lines with electricity. diags Oil & Gas J 51:252+ D 22 '52

Cast-iron heating pipes for oil tankers. il diag Engineering 175:601 My 8 '53

Extended surfaces for heat exchangers; Sunrod system. il diags Engineering 174:745-7 D 12 '52

How to store, handle and heat fuel oil. P. R. Unger. diags Power Eng 57:80-1 O '53

Mineral oil used as a heat transfer medium. B. M. Dunham and H. S. Ostrander. diags Can Chem Process 37:66+ My '53

OIL industries

Vegetable oils freeze up. Chem W 71:54+ N 1 '52

See also

American oil chemists' society
Essential oils
Fish oil
Linseed oil
Lubricating oil industry
Lubricating oils
Oil companies
Oil fuel industry
Oils and fats
Petroleum industry and trade
Soybean oil
Tariff—United States—Oils and fats
Tung oil

Finance

Seasonal financing through field warehousing. V. L. Amato. N A C A Bul 34:238-43 O '52

Statistics

Report on oilseeds; with table. Economist 165:130+ O 11 '52

Canada

New extraction process for vegetable oils at Toronto elevators. il Can Chem Process 37:28-9 Ja '53

Egypt

Egypt's essential oil industry shows gains. For Comm W 48:19 D 8 '52

OIL industry information committee. See Petroleum industry and trade—Public relations

OIL lands

How to get Canadian oil and gas leases. I. S. Burn. il maps diag World Oil 135:318+ D '52

How to present property appraisal data. R. I. Bradley. World Oil 136:68+ Ja '53

Income tax encourages oil payments. E. E. Tomlins. World Oil 136:55-7 Mr '53

Oil and bentonite lands are offered for leasing. Oil Paint & Drug Rep 163:3+ My 4 '53

Public-lands report; Geological survey reports royalties from production on all government lands. Oil & Gas J 52:148 Je 22 '53

See also

Earthquakes and oil lands
Oil reserves (United States navy)
Petroleum laws and regulations

Maps

Permian basin. Oil & Gas J 51:supp O 20 '52

U.S. pool maps; principal oil and gas areas. Oil & Gas J 51:103-18 Mr 30 '53

World oil's 1952 oil map of west Texas and southeastern New Mexico. World Oil 135: supp O '52

OIL leases. See Oil lands

OIL measurement

Automatic tank gaging facilitates terminal operations installation at Esso's Wilmington, N.C., terminal cuts time, labor. C. C. Roberts. il diag Oil & Gas J 51:144+ N 10 '52

Remote oil gauging; Varioplex system. Bsns W p60+ Ap 18 '53

See also

Petroleum—Measurement

OIL mists

Oil mist tames tinning problems. il Steel 132: 80+ Ja 12 '53

Westinghouse announces redesigned precipitron oil mist control unit. il Marine Eng 58:112+ F '53

OIL pipe lines

Anglo-Iranian oil co. heats oil pipe lines with electricity. diags Oil & Gas J 51:252+ D 22 '52

How to connect into a full line without losing any oil. W. R. Hart. diags Oil & Gas J 51:127 N 3 '52

See also

Petroleum pipe lines
Petroleum products pipe lines

OIL pipes

High pressure fuel pipes: failures on C. I. engines and their prevention. il diags Automobile Eng 43:235-7 Je '53; Engineer 195: 628-30 My 1 '53; Engineering 175:585-7 My 8 '53

Piping changes improve lubrication. C. T. Baker. diags Heating-Piping 25:106-7 Je '53

See also

Petroleum pipe lines

OIL pumps

See also

Petroleum pipe lines—Pumping stations

OIL purification

Centrifugal oil separator for commercial-vehicle engines. il diag Engineering 174: 678 N 21 '53

OIL reclamation

Army, navy reported shying away from re-refined oil. Nat Pet N 45:91 F 4 '53

New installation reduces clay handling costs; Carolina power & light co. insulating oil purifying equipment. A. M. McCabe. il Elec World 138:130+ D 15 '52

Reclaiming system saves oil; Reynolds' new aluminum plant. il Chem Eng 59:230+ O '52

Re-refiner device claims to eliminate oil changes. Nat Pet N 45:60 F 11 '53

Small plant reclaims cutting oil, saves itself $9000 a year; illustrations with text. Factory Management 110:102-3 N '52

OIL refineries

See also

Petroleum refineries

OIL refining

See also

Petroleum refining

OIL reserves (United States navy)

Elk Hills plan approved. Oil & Gas J 51: 85-6 Mr 16 '53

Elk Hills problem; high-pressure water driving oil out of field. Oil & Gas J 51:45 Mr 2 '53

How wells are drilled in permafrost. R. C. Jensen. il map World Oil 135:152+ D '52

Josephus Daniels and the naval oil reserves. J. L. Bates. U S Naval Inst Proc 79:170-9 F '53

Mothballing a gas plant at Naval petroleum reserve number one in California. R. Sneddon. il Pet Eng 25:C14-15+ Ja '53

Operation Alaska. R. H. Meade. il World Oil 136:239-41 Ja '53

OIL sampling

More on fuel oil sampling. P. F. Schmidt. diags Power Eng 57:106+ Je '53

OIL sand

Plastic lithification of sands *in situ*. W. E. Brown and H. W. Patnode. il diag Am Assn Pet Geologists Bul 37:152-7 Ja '53

See also

Bituminous sand

OIL seals

How to prevent oil seal failure. R. O. Isenbarger. diags Product Eng 24:154-9 Ja '53

Low pressure reciprocating seals for hydraulic control valves. B. Cooke. diags Inst Mech Eng Proc 165 (W.E.P. no69):262-5, pl 1-2 '51; Discussion. Engineer 192:799-801 D 21 '51

OIL seeds

Report on oilseeds; with table. Economist 165:130+ O 11 '52

Synthesis of fatty acids and fats in ripening oilseeds; abstract. T. F. Hilditch. Chem & Ind p320 Ap 4 '53

OIL seeps. See Petroleum—Prospecting

OIL separators

Separate oil from your steam the modern way. G. S. Emmerson. diags Power Eng 57: 90-1+ Je '53

OIL shales

Autoradiographic study of marine shales. V. F. Ross. bibliog il Econ Geol 47:783-93 D '52; Discussion. D. McConnell. 48:147-8 Mr '53

Effect of solvent properties in thermal decomposition of oil shale kerogen. W. D. Schnackenberg and C. H. Prien. bibliog Ind & Eng Chem 45:313-22 F '53

Fuels from shale may soon be economically feasible. R. H. Taylor. World Oil 135:84 N '52

Gas from shale oil would cost 14.7c NCA study indicates. L. C. Kemp, jr. Eng & Min J 153:159 D '52

Prototype plants for synthetic liquid fuels. W. C. Schroeder. Am Gas Assn Proc 1952: 267-79

Analysis

Analysis of crude shale oil. R. F. Stevens and others. bibliog 4pls U S Bur Mines Rep of Invest 4898:1-20 '52

Composition of crude shale oils. G. U. Dinneen, J. S. Ball and H. M. Thorne. bibliog Ind & Eng Chem 44:2632-5 N '52

Composition of shale oil. W. E. Cady and H. S. Seelig. bibliog Ind & Eng Chem 44: 2636-41 N '52

Determination of nitrogen in petroleum and shale oil; report of A.P.I. subcommittee. bibliog Anal Chem 24:1806-11 N '52

Oxygen and nitrogen compounds in shale-oil naphtha. R. A. Van Meter and others. bibliog Anal Chem 24:1758-63 N '52

Thiophenes in shale-oil naphtha. I. W. Kinney, jr., J. R. Smith and J. S. Ball. bibliog Anal Chem 24:1749-54 N '52

Distillation

Engineering features of the Union oil-shale retort. H. C. Reed and C. Berg. il map diags A S M E Trans 75:453-7 Ap '53; Abstract. Oil & Gas J 51:142 S 29 '52

High temperature shale oil; product composition. G. U. Dinneen, J. R. Smith and C. W. Bailey. Ind & Eng Chem 44:2647-50 N '52

High temperature shale oil; production and utilization. F. E. Brantley and others. bibliog il diag Ind & Eng Chem 44:2641-7 N '52

Mechanical design in oil-shale retorting plants. L. H. Brakel. bibliog il plan diags A S M E Trans 75:441-51 Ap '53

New gas combustion retort will get oil from shale. il Chem Eng 59:251-2 N '52

Next step; commercial retort for processing shale oil. il diag Chem Eng 59:313-14+ O '52

Processing Australian shale oil. E. G. Nottes. bibliog(41 ref) il Pet Eng 24:C22-4+ D '52

Synthetic liquid fuels; annual report of the Secretary of the interior for 1951; oil from oil shales. 58pls U S Bur Mines Rep of Invest 4866:1-86 bibliog(26 titles, p85-6) '52; Excerpts. Pet Processing 7:1624-7 N '52

Synthetic liquid fuels; annual report of the Secretary of the interior for 1952; oil from oil shale. bibliog(22 titles) 35 pls U S Bur Mines Rep of Invest 4943:1-70 '53

Mining methods

Blasting research at the Bureau of mines oil-shale mine. F. D. Wright and others. 9pls U S Bur Mines Rep of Invest 4956: 1-23 '53

Millisecond-delay blasting of bench rounds; USBM oil shale mine. F. D. Wright. il Min Cong J 39:51-3+ Je '53

Australia

Processing Australian shale oil. E. G. Nottes. bibliog(41 ref) il Pet Eng 24:C22-4+ D '52

Kentucky

Relationship of natural gas occurrence and production in eastern Kentucky (Big Sandy gas field) to joints and fractures in Devonian bituminous shale. C. D. Hunter and D. M. Young. il maps diags Am Assn Pet Geologists Bul 37:282-99 F '53

OIL storage

Abandoned mines may serve for oil storage. il Min Eng 5:755 Ag '53

Laboratory evaluation of fuel oil stability. A. R. Rescorla, J. H. Cromwell and D. Milsom. bibliog il diags Anal Chem 24: 1959-64 D '52

Need for adequate local fuel oil storage. Nat Pet N 45:28-30 My 13 '53

New summer home for oil; abandoned slate pits. il Bsns W p45+ Jl 11 '53

Underground oil storage; Edholm container uses excavations or caverns and ground water to store fuel oil. D. Ball. diags Pet Eng 24:A49-50+ D '52

OIL tanks

Crude-oil working tanks. R. M. Carter. il diags Pet Eng 25:D32-7 Ja '53; Same cond. Oil & Gas J 51:98-100+ D 8 '52
Evolution of the oil tank. E. N. Zimmerman. il Pet Eng 24:A43-6+ D '52
How to store, handle and heat fuel oil. P. R. Unger. diags Power Eng 57:80-1 O '53
Measuring liquid content of tanks by remote control. il diags Oil & Gas J 52:124 Je 8 '53
New automatic tank battery. W. A. Middleton and E. B. Laguki. il diags World Oil 136:195-8+ Ap '53
Plastic tank stops corrosion. il Chem Eng 59:218 D '52
Portable submersible tank-battery barge withstands weather's Sunday punch. G. E. McClatchey. il Oil & Gas J 51:141-5, 169 F 23 '53
Reducing storage tank evaporation losses. diags Nat Pet N 44:60+ N 19 '52
Smart setup chases fuel-tank sludge. L. W. Fitzpatrick. plan Power 97:109 Ja '53
Use of variable vapor space tanks to conserve volatile oil products. Nat Pet N 44:98-100 N 26 '52
What's happening in liquid and gas storage. J. O. Jackson. bibliog il diags Pet Eng 24:A59+ D '52

Cleaning

How to gas-free storage tanks. il diags Pet Processing 7:1778-9 D '52
Portable heater used in tank cleaning at Rangely. R. W. Grisdale. il Oil & Gas J 51:190+ F 23 '53

Fire protection

Air agitation snuffs fire like magic. il Nat Pet N 44:58-60 D 3 '52
Water on troubled oils. il Ind & Eng Chem 45:sup 11A+ Ap '53

Painting

Proper painting of tanks assures long life. il Oil & Gas J 51:176-9 O 20 '52
Test proves undercoat vital to success of tank painting. il diag Oil & Gas J 51:117 D 8 '52

Protection

Improvement in tank bottom protection. H. Schmoldt. il diags Pet Eng 25:D29-30+ My '53
Tank insulation pays off in 19 months. il Oil & Gas J 51:140 D 1 '52

Repair

New method of rehabilitating cone-roof storage tanks. R. T. Effinger and D. G. Webb. il Oil & Gas J 51:100-1+ D 15 '52
Tank repairs simpler with portable gin pole. il diag Pet Processing 7:1651 N '52

Roofs

Engineering factors in selecting floating roofs. J. H. Wiggins. il diags Pet Eng 24:C 13-14+ D '52
Plastic roof developed for crude oil tanks. Nat Pet N 45:54 My 6 '53

OIL testing
See also
Oil fuel—Testing

OIL waste

Pollution of sea-water by oil. Engineering 174:151-2 Ag 1 '52
Prevention of pollution by oil. C. Koons. bibliog il diags Am Gas Assn Proc 1952:667-77

OIL well derricks. See Derricks, Oil well

OIL well drills. See Drills, Oil well

OIL wells. See Petroleum—Well drilling

OILS, Cutting. See Lubrication and lubricants (cutting and grinding)

OILS, Essential. See Essential oils

OILS, Lubricating. See Lubricating oils

OILS, Textile. See Textile oils

OILS and fats

Advanced food processing with improved fats and oils. il Food Eng 25:99-100+ Je '53
Chayen's impulse. diag Ind & Eng Chem 45:sup 11A+ Mr '53
Chemistry of polymerised oils; reduction of some organic peroxides with lithium aluminium hydride. M. Matic and D. A. Sutton. Chem Soc J p2679-82 Jl '52
Cold rendering displaces extraction processes; Chayen process. flow diag il Can Chem Process 36:38+ D '52
Cold rendering of fats; British glues and chemicals, ltd., develop new process. il Chem Age (Lond) 67:627-8 N 8 '52
Cold rendering process for oils and fats, impulse rendering. il Engineer 194:627 N 7 '52; Abstract. Engineering 174:595 N 7 '52
Fats and oils supply for 1952-53 seen near record. Oil Paint & Drug Rep 162:3+ O 27 '52
Fats, major chemical source for future use. D. Swern. Paint Oil & Chem R 116:44 S 10 '53
Fats market research needed. G. L. Prichard. Oil Paint & Drug Rep 163:76-7 My 11 '53
Fats, oils marketable abroad if competitive. Oil Paint & Drug Rep 163:5+ Ap 13 '53
Fats, oils outlook; abstract. G. L. Prichard. Oil Paint & Drug Rep 163:5+ Ap 20 '53
Fats, oils trade seen up slightly this year. Oil Paint & Drug Rep 163:4+ Mr 30 '53
Fats, oils use boost predicted this half. Oil Paint & Drug Rep 163:4+ Ap 6 '53
Flexible way to remove odors. il diag Chem Eng 60:120+ Mr '53
High-frequency impulses blast fats, oils from cellular matter; Chayen process. flow sheet il Chem & Eng N 30:5266+ D 15 '52
Imports regulations changes set. Oil Paint & Drug Rep 163:3+ Je 15 '53
Improvement in soybean oil quality highlights fats and oils trends. Food Eng 25:229-30 F '53
Kingan perfects continuous process that revolutionizes fat rendering. R. E. Morse and others. flow diag il Food Eng 24:72-4+ N '52
More fats and oils. Chem Eng 60:209-10 Mr '53
Reactions of *t*-butyl hypochlorite with vegetable oils and their derivatives; dechlorination of methyl alkoxychlorostearates with alkali. L. E. Gast and others. bibliog Am Chem Soc J 74:6280-1 D 20 '52
Reactions of fatty materials with oxygen; new method for concentrating long-chain peroxides. J. E. Coleman, H. B. Knight and D. Swern. bibliog Am Chem Soc J 74:4886-9 O 5 '52
Reduction of organic peroxides; abstract. M. Matic and D. A. Sutton. Paint Oil & Chem R 115:38 O 9 '52
Seed fat of myrrhis odorata; contributions to the chemistry of petroselinic acid. G. R. Clemo and R. Stevens. Chem Soc J p4684-5 D '52
Shock waves expel cold fat; Chayen process. il Chem Eng 60:118+ F '53
Synthesis of fatty acids and fats in ripening oilseeds; abstract. T. P. Hilditch. Chem & Ind p320 Ap 4 '53
Two routes to rendering; shock blast, flash heat; Chayen and Kingam processes. il Chem W 71:42+ D 20 '52

See also
Acids, Fatty
American oil chemists' society
Castor oil
Cottonseed oil
Drying oils
Emulsions
Essential oils
Fish oil
Gasoline
Insulating oil
Lard
Linseed oil
Lubricating greases
Lubricating oils
Lubrication and lubricants
Oil fuel
Oil industries
Oleomargarine
Olive oil
Palm oil
Peppermint oil
Petroleum
Rice oil
Shortening
Soap
Soybean oil
Tall oil
Tallow
Tung oil
Viscosity
Whale oil

Prices

Chemicals, oils and drugs price changes, Jan. 1, 1952 and Jan. 1, 1953 compared; table by commodity. Oil Paint & Drug Rep 163:9-10+ sec 2 Ja 26 '53
Chemicals, oils and drugs price record, selected years, 1939-1952; tables. Oil Paint & Drug Rep 163:7 sec 2 Ja 26 '53
Oils, fats and waxes; 1952 market trends. Oil Paint & Drug Rep 163:57-9 sec 2 Ja 26 '53

OILS and fats—*Continued*

Statistics

Fats and oils exports in 1950-52 reported. Oil Paint & Drug Rep 164:5+ Jl 13 '53
Oils, fats and waxes. Published in weekly numbers of Oil, paint and drug reporter
Vegetable oils, produced by Canadian plants in 1952. Can Chem Process 37:18+ Je 20 '53

OILWELL drilling contractors, American association of. See American association of Oilwell drilling contractors

OKLAHOMA

See also
Gas, Natural—Oklahoma
Geology—Oklahoma
Petroleum—Oklahoma
Petroleum industry and trade—Oklahoma
Roads—Oklahoma

Industries and resources

Oklahoma schedules industrial exposition. il Manuf Rec 122:28-9 Mr '53

OKLAHOMA CITY

Water supply

Actinomycetes in the Oklahoma City water supply. J. K. G. Silvey and A. W. Roach. bibliog il Am Water Works Assn J 45:409-16 Ap '53
Recurrent thirst. Bsns W p 128+ N 1 '52

OKLAHOMA gas and electric company
Oklahoma Gas and Electric in moderate profit uptrend. Barron's 33:27 Je 15 '53
Stock offered. Comm & Fin Chr 177:1840 Ap 27 '53

OKLAHOMA natural gas company
Stock offered. Comm & Fin Chr 177:2458-9 Je 8 '53

OKONITE company
1953 net to top last year's $13.36 per share. Barron's 33:15-16 Jl 27 '53

OLD age
Community health services for an aging population. J. W. Mountin. Pub Health Rep 67:949-53 O '52
Establishing housing standards for the aged. J. Masur. Pub Health Rep 67:1192-5 D '52
Housing and health facilities for our senior citizens. Pub Health Rep 67:1196-202 D '52
How big a problem are U.S. oldsters? C. E. Wright. il Bankers Mo 69:22-4+ O '52
Psychology, mental health, and aging; PHR conference report. Pub Health Rep 67:1124-9 N '52

See also
Age and employment
Longevity
Retirement

OLD age homes
Housing and health facilities for our senior citizens. Pub Health Rep 67:1196-202 D '52
Union makes a home for landlocked seafarers. il Bsns W p74-5 Ja 3 '53

See also
Nursing homes

OLD age pensions
Gives OASI explanation; problem of trying to get the public to understand difference between social security retirement benefits and those provided by an insurance contract. M. A. Linton. Nat Underw (Life ed) 57:11+ Ja 9 '53
One-man pension funds. J. P. Allison. Fortune 47:111 My '53
Partnership pension plans; drafting suggestions in anticipation of Jenkins-Keogh law. E. R. Finch, jr. Trusts & Estates 92:496-7 Jl '53
Social security benefit level as high as it should go; C.L.U. forum. J. O'Grady and others. Nat Underw (Life ed) 57:2+ Je 5 '53
Tax-favored pensions in sight for the self-employed. E. S. MacNeill and G. T. Wallis. Trusts & Estates 91:808-11 N '52
Well-balanced risks can provide old-age security. Weekly Underw 167:1602 D 13 '52

See also
Pensions, Industrial
Railroads—Pensions

Cost

Burden of pensions. Economist 167:889 Je 27 '53

OLDER workers. See Age and employment

OLEANOLIC acid
Chemistry of western Australian plants; oleanolic acid acetate from eucalyptus calophylla bark. D. E. White and L. S. Zampatti. Chem Soc J p5040 D '52
Chemistry of western Australian plants; the occurrence of betulic, oleanolic, and ursolic acids. J. R. Anstee and others. Chem Soc J p4065-7 O '52

OLEFINS
Addition of free radicals to unsaturated systems; radical addition to olefins of the type $R\cdot CH:CH_2$. R. N. Haszeldine and B. R. Steele. Chem Soc J p 1199-206 Ap '53
Addition of nitryl chloride to some simple olefins. C. C. Price and C. A. Sears. bibliog Am Chem Soc J 75:3275-6 Jl 5 '53
cis-Addition in the bromination of a bicyclic olefin. J. A. Berson and R. Swidler. bibliog Am Chem Soc J 75:4366-7 S 5 '53
Condensation of methylal and other acetals with olefins. O. C. Dermer and J. J. Hawkins. bibliog Am Chem Soc J 74:4595-7 S 20 '52
Cyclic polyolefins; cycloöctanediols; molecular rearrangement of cycloöctene oxide on solvolysis. A. C. Cope, S. W. Fenton and C. F. Spencer. bibliog Am Chem Soc J 74:5884-8 D 5 '52
Cyclic polyolefins; 1,2-diphenylcycloöctatetraene. A. C. Cope and D. S. Smith. bibliog Am Chem Soc J 74:5136-9 O 20 '52
Cyclic polyolefins; valence tautomerism of 1,3,5-cycloöctatriene and bicyclo [4.2.0]octa-2,4-diene. A. C. Cope and others. bibliog Am Chem Soc J 74:4867-71 O 5 '52
Dependence of the rate of hydration of isobutene on the acidity function, H_0, and the mechanism for olefin hydration in aqueous acids. R. W. Taft, jr. bibliog Am Chem Soc J 74:5372-6 N 5 '52
Diene addition between *trans*-piperylene and citraconic anhydride. W. Huang, H. L. Holmes and L. F. Fieser. Am Chem Soc J 74:5920-1 D 5 '52
Diene synthesis with unsymmetrical butadienes and β-nitrostyrenes. W. C. Wildman and others. bibliog Am Chem Soc J 75:1912-15 Ap 20 '53
Diluent reduces catalyst deactivation in slurry polymerization of light olefins; patent. diag Pet Processing 8:573+ Ap '53
Exchange of Br^{80} atoms with bromoölefins; induced rearrangement of the bromopropenes. R. R. Williams, jr. and others. bibliog Am Chem Soc J 74:5737-9 N 20 '52
Fluoro-olefins; the synthesis of hexafluorobuta-1:3-diene. R. N. Haszeldine. Chem Soc J p4423-31 N '52
Halogen migration in the Friedel-Crafts acylation of olefins. C. L. Stevens and E. Farkas. bibliog Am Chem Soc J 75:3306-8 Jl 20 '53
Hydrogen transfer reactions accompanying the cobalt-catalyzed addition of carbon monoxide to olefinic compounds. G. Natta, P. Pino and R. Ercoli. bibliog Am Chem Soc J 74:4496-8 S 20 '52
Isomerization of olefins. L. Berg and others. bibliog diag Pet Eng 25:C32-4 Ja '53
Kinetics of the gas phase reaction of olefins with ozone. R. D. Cadle and C. Schadt. Am Chem Soc J 74:6002-4 D 5 '52
Mechanism of the acid-catalyzed hydration of olefins. J. B. Levy, R. W. Taft, jr. and L. P. Hammett. bibliog Am Chem Soc J 75:1253-4 Mr 5 '53
Mechanisms of exchange and hydrogenation reactions of olefins. M. C. Markham and others. bibliog J Chem Phys 20:1331-2 Ag '52
2-Mercaptobenzothiazole derivatives; the reaction of di(benzothiazol-2-yl) disulphide with olefins. C. G. Moore. Chem Soc J p4232-7 N '52
Olefin-aldehyde condensation; the Prins reaction. E. Arundale and L. A. Mikeska. Chem R 51:505-55 bibliog(p550-5) D '52
Olefin co-ordination compounds; compounds with two double bonds attached to one platinum atom. J. Chatt and R. G. Wilkins. diags Chem Soc J p2622-6 Jl '52

OLEFINS—*Continued*

Oxo process in the U.S. for petrochemicals from olefins. P. W. Sherwood. bibliog il diag Pet Processing 8:241-8 F '53

Peroxide- and light-induced reactions of alcohols with olefins. W. H. Urry and others. Am Chem Soc J 75:250-1 Ja 5 '53

Peroxide and light induced reactions of amines with olefins; a one-step synthesis of *d,l*-coniine. W. H. Urry, O. O. Juveland and F. W. Stacey. Am Chem Soc J 74:6155 D 5 '52

Preparation and some properties of the C_4F_8 olefins. T. J. Brice and others. bibliog Am Chem Soc J 75:2698-702 Je 5 '53

Preparation of *cyclo*pentenones from the products of interaction of acid chlorides and olefins. G. Baddeley, H. T. Taylor and W. Pickles. Chem Soc J p 124-6 Ja '53

Preparation of $\Delta^{5,7}$-steroidal dienes. W. G. Dauben and others. bibliog Am Chem Soc J 75:3255-8 Jl 5 '53

Racemization of an optically active olefin during catalytic hydrogenation. D. J. Cram. Am Chem Soc J 74:5518 N 5 '52

Reaction of dinitrogen tetroxide with olefins; octadec-1-ene and buta-1 : 3-diene. C. R. Porter and B. Wood. Inst Pet J 38:877-81 O '52

Review of olefin isomerization. H. N. Dunning. bibliog(89 ref) Ind & Eng Chem 45: 551-64 Mr '53

Steroids; introduction of the 11-keto and 11α-hydroxy groups into ring C unsubstituted steroids; performic acid oxidation of 7,9(11)-dienes. C. Djerassi and others. bibliog diags Am Chem Soc J 75:3505-10 Jl 10 '53

Synthesis of fluorine-containing olefins. E. T. McBee, O. R. Pierce and M. C. Chen. Am Chem Soc J 75:2324-6 My 20 '53

Synthesis of 11-ketosteroids; dichromate oxidation of a bile acid $\Delta^{7,9(11)}$-diene. L. F. Fieser, W. Huang and J. C. Babcock. bibliog Am Chem Soc J 75:116-21 Ja 5 '53

Synthesis of 11-ketosteroids; oxidation of $\Delta^{7,9(11)}$-dienes with N-bromosuccinimide. L. F. Fieser, W. P. Schneider and W. Huang. bibliog Am Chem Soc J 75:124-7 Ja 5 '53

Uncatalyzed reaction of olefins with acyl chlorides; reaction of 1 : 1-diphenylethylene. F. Bergmann, S. Israelashvili and D. Gottlieb. Chem Soc J p2522-5 Jl '52

See also
Ethylene

Analysis

Isolation of olefins from Bradford crude oil. R. E. Putscher. bibliog flow diag Anal Chem 24:1551-8 O '52

OLEIC acid

Anodic syntheses; unsaturated and hydroxy-acids; a direct stereochemical connection of oleic and elaidic with erucic and brassidic acids. D. G. Bounds, R. P. Linstead and B. C. L. Weedon. Chem Soc J p2393-400 Ag '53

Binary freezing-point diagrams for acetamide with oleic and elaidic acids. R. R. Mod and E. L. Skau. J Phys Chem 56:1016-17 N '52

Double-bond reactivity of oleic acid during flotation. A. M. Gaudin and R. E. Cole. Min Eng 5:Trans 418 Ap '53

Radiochemical preparation of heptadecene-8. V. L. Burton and I. A. Breger. bibliog Science 116:477-9 O 31 '52

Solubilities of oleic and linoleic acids in common organic solvents. C. W. Hoerr and H. J. Harwood. bibliog J Phys Chem 56: 1068-73 D '52

OLEOMARGARINE

Branded margarine again? Economist 166: 761 Mr 14 '53

Complex process yields to robots. W. T. Force and J. H. Elliot. il Food Eng 25:54-5 Je '53

Package that molds the product; formed vinyl plastic cup gives decorative shapes to butter or margarine. il Mod Packaging 26:90-3 My '53

OLEUM. See Sulfuric acid

OLIGOPEPTIDES. See Peptides

OLIGOSACCHARIDES

Analysis of a mixture of glucose, maltose, and fermentable oligosaccharides; improved yeast fermentation method. S. C. Pan, L. W. Nicholson and P. Kolachov. bibliog diags Anal Chem 25:231-7 F '53

Enzymatic conversion of lactose into galactosyl oligosaccharides. J. H. Pazur. bibliog il Science 117:355-6 Ap 3 '53

Polymer-homologous series of oligosaccharides from cellulose. M. L. Wolfrom and J. C. Dacons. Am Chem Soc J 74:5331-3 N 5 '52

OLIN industries, inc.

Olin enters field as DPA okays third round of aluminum expansion. Eng N 149:71 N 27 '52

Olin's debut as aluminum producer. Bsns W p34 N 29 '52

OLIVE oil

Algerian olive oil output low; exports to U.S. small. For Comm W 49:16 Ja 19 '53

French olive oil output, use drop. For Comm W 49:25 My 4 '53

Mediterranean olive oil output seen halving '51. Oil Paint & Drug Rep 162:5+ D 29 '52

Olive oil output down in Mediterranean area. Oil Paint & Drug Rep 163:4 My 11 '53

Tunisian olive oil output high in 1952-53. For Comm W 49:17 Mr 2 '53

OLIVES

Faster brine making and filling; Vita food products, inc. J. V. Ziemba. il Food Eng 25:57+ S '53

Spanish olive trade up; crop is poor. For Comm W 48:13 D 29 '52

OLIVETTI, C., and company

Invading U.S. office machine market. il Bsns W p 122-5 Ja 31 '53

OLNEY medal

AATCC's Olney medal going to Roland Derby. Oil Paint & Drug Rep 164:7 Ag 3 '53

Ninth Olney medal awarded to Werner von Bergen. Am Dyestuff Rep 41:866-70 D 22 '52

OLSON, Robert E.

Motaloy, a gasoline additive. Bsns W p69 Ap 18 '53

OMAHA

Omaha meets the world; Omaha world trade fair and institute. il Bsns W p 124-5 Je 27 '53

See also
Floods—Omaha

OMAHA world trade fair and institute. See Fairs

O'MAHONEY, Jerry, inc.

Operations expanded. Barron's 32:24-5 D 15 '52

O'MAHONEY, Joseph Christopher, 1884-
Portrait. Dun's R 60:137 O '52

O'NEIL, William Francis, 1885-
Portrait. Dun's R 60:143 O '52

ONIONS

Stew in onions; market rise outruns statistics. Barron's 33:41+ Mr 30 '53

ONTARIO

See also
Gold mines and mining—Ontario
Hydroelectric plants—Ontario
Iron mines and mining—Ontario
Libraries, Special—Ontario
Mines and mineral resources—Ontario
Nickel mines and mining—Ontario
Paper mills—Ontario
Roads—Ontario
Silver mines and mining—Ontario

Hydroelectric power commission

Annual report, 44th. Engineering 175:50 Ja 9 '53

Annual report, 44th. il Elec R (Lond) 151: 1295-6 D 12 '52

Annual report, 44th, year ended Dec. 31, 1951. Elec J 149:1334, 1851-2 O 31, D 12 '52

Electricity, key to growth. R. L. Hearn. Comm & Fin Chr 177:6+ sec 2 Je 25 '53

Salvage and reclamation program saves $17 million for Ontario Hydro-electric commission. R. H. Saunders. Roads & Eng Constr 91:182+ Ap '53

Industries and resources

Lake shore of Ontario; Canada's golden strip. il maps Bsns W p58-62, cover F 7 '53

ONTARIO—*Continued*

Sanitary affairs

Sanitary engineering in Ontario. A. E. Berry. Munic Util 91:20-1 Mr '53

ONTARIO good roads association

Annual meeting, 51st, Toronto, Feb. 10-11; with abstracts of papers. Roads & Eng Constr 91:127-36+ Mr '53

ONTARIO road builders' association

Annual meeting, Toronto, Feb. 11. Roads & Eng Constr 91:137-40 Mr '53

OPACIFIERS

Fundamental aspects in research on titania-opacified enamels. S. S. Cole. bibliog Am Cer Soc J 35:181-8 Jl 1 '52

OPACITY

See also

Glass—Opacity

Paper—Opacity

OPALS

Opals from Australian deserts. L. A. Bingham. il Can Min J 74:74-6 Jl '53

OPEN air theaters. See Moving picture theaters, Open air

OPEN and closed shop

Closed shop upheld in unusual case. Eng N 149:28 N 27 '52

Open shop bastion wavers in Rochester, N.Y. il Bsns W p 161-2 My 16 '53

Union shop can be revoked by election. Eng N 149: 29 O 30 '52; Bsns W p 148 N 8 '52

Union shop in steel. Fortune 46:90 D '52

Union shop; presenting the company viewpoint. H. H. Carey. Personnel 29:133-5 S '52

Why working employer needn't join a union. Bsns W p 143 Ja 17 '53

OPEN hearth furnaces

All-basic open hearth furnace in Britain. D. D. Howat. diags Blast F & Steel Pl 41: 391-6 Ap '53

Heating up open hearth furnaces after rebuilding. H. M. Kraner and C. N. Jewart. diags Iron & Steel Eng 29:113-17 D '52; Abstract. Steel 131:138+ N 3 '52

Hot metal practice. S. G. Williams. Steel 132:137-8 My 18 '53

Inland steel increases annual open hearth capacity 750,000 tons. il diags Blast F & Steel Pl 41:78-80+, 203-8 Ja-F '53

Less downtime; abstract. H. N. Kraner and C. N. Jewart. Steel 131:138+ N 3 '52

Open hearth shop announces successful smoke control; Torrance works. diag Blast F & Steel Pl 41:1195 O '53

Repair and maintenance of open-hearth furnaces; cold-metal practice. J. E. Pluck. Iron & Steel Inst J 175:59-63; Discussion. 66-70 S '53

Repair and maintenance of open-hearth furnaces; hot-metal practice. S. G. Williams. diag Iron & Steel Inst J 175:64-6; Discussion. 66-70 S '53

Repair and maintenance of open-hearth furnaces in Germany. A. Mund and C. Kreutzer. diags Iron & Steel Inst J 174:373-7; Discussion. il 382-8 Ag '53

Repair and maintenance of open-hearth furnaces in U.S.A. R. W. Evans and I. S. Scott-Maxwell. Iron & Steel Inst J 174:378-82; Discussion. il diags 382-8 Ag '53

Self-contained replaceable panels for open hearth furnaces; patent. diags Iron & Steel Eng 30:23-4 Ag '53

Some factors affecting the operation and performance of open-hearth furnaces. D. F. Marshall. bibliog Iron & Steel Inst J 172:315-26 N '52; Discussion. 174:53-60 My '53

Steelworks furnace maintenance and repair; Iron and steel institute's engineers' group joint meeting with B.I.S.R.A. Plant engineering and steelmaking divisions; abstracts of papers. il Engineer 195:214-16 F 6 '53; Metallurgia 47:113-18 Mr '53

Youngstown sheet and tube company increases service to the Midwest; open hearth furnaces. C. Longenecker. il Blast F & Steel Pl 41:905-10 Ag '53

Control

Application of automatic combustion controls to a new open hearth shop. F. S. Swaney. il diags Iron & Steel Eng 30:111-18 Ap '53; Excerpts. Steel 131:109 O 6 '52

Automatic control of open-hearth furnaces. il Engineer 195:456-8 Mr 27 '53; Metallurgia 47:25-6+ Ja '53

Experiences with oxygen control in open hearth flue gases. F. P. Hubbell. diags Iron & Steel Eng 30:53-6; Discussion. 57-8 Ag '53

Foxboro controller regulates open hearth furnace reversals. il Blast F & Steel Pl 41: 1220 O '53

Cooling

Water-cooling of open-hearth furnaces. A. M. Frankau. diag Iron & Steel Inst J 174: 46-52 My '53

Firing

Solving dual-fuel problem; water-cooled burner handles up to 70 percent coke oven gas simultaneously with oil or tar. diags Chem Eng 59:248-9 O '52

Fuel

Pumping, transmission and burning of tar and pitch. W. A. Pond. Iron & Steel Eng 30:94-7; Discussion. 98-9 Jl '53

Lining

A.I.M.M.E. national open hearth steel committee and blast furnace coke oven and raw materials committee joint conference, Buffalo, April 22-24; abstracts of papers on refractories. Brick & Clay Rec 122:68-70 My '53

Open hearth zebra roof experience analyzed. T. H. Harley. J Metals 4:1146 N '52

Rammed and castable refractories find increased steel plant use. R. R. Fayles. il J Metals 5:34-6 Ja '53; Same. Steel 132: 87-8 Ja 19 '53

Testing and development of basic refractories for the open hearth. L. W. Austin. il diag Blast F & Steel Pl 41:639-45 Je '53

OPEN hearth process

American institute of mining and metallurgical engineers national open hearth committee 36th annual conference, Buffalo, April 20-22. Foundry 81:184+ Je '53

A.I.M.M.E. national open hearth steel committee and the blast furnace, coke oven and raw materials committee 36th annual conference, Buffalo, April 20-22; program. Blast F & Steel Pl 41:sup21-4+ Ap '53; J Metals 5:500-5 Ap '53

Attainment of maximum open hearth production. T. J. McLoughlin. plan Blast F & Steel Pl 40:1435-42 D '52; Same abr. Iron & Steel Eng 29:123-9 N '52; Abstract. Steel 131:138 N 3 '52

Basic Bessemer and open-hearth steels. O. Hengstenberg and W. Janiche. Engineer 196:270-1 Ag 28 '53

Development of active mixer practice at Appleby-Frodingham; abstract. A. Jackson. Engineering 174:765 D 12 '52; Discussion. Engineer 194:785-7 D 12 '52

Evaluation of the pH and conductivity methods of slag control. P. D. S. St Pierre. bibliog il J Metals 5:Trans 41-3 Ja '53

Manganese from open hearth slag could supply half of U.S. needs. R. C. Buehl and others. il J Metals 5:520-1 Ap '53

Physically hot iron preferred for open hearths. D. M. Morrison. bibliog il J Metals 5:522-4 Ap '53

Productivity in steelmaking; difference between United Kingdom and American practice. Engineering 174:612 N 7 '52

Some factors affecting open-hearth steel-plant performance. J. S. Curphey. diags Iron & Steel Inst J 174:305-16 Ag '53

Welding characteristics of open hearth and Bessemer seamless steel pipe. A. B. Wilder and others. bibliog il diags Am Soc T M Proc 50:763-80; Discussion. 781-8 '50

See also

Open hearth furnaces

OPEN house. See Visitors

OPEN pit mining. See Mining methods—Stripping operations

OPEPE. See Sarcocephalus diderrichii

OPERATING engineers, International union of. See International union of operating engineers

OPERATING rooms. See Hospitals—Operating rooms

OPERATIONS research

Operations research. M. G. Melden. Factory Management 111:113-20+ O '53

Operations research. A. N. Watson. Chem Eng 60:324+ F '53

Operations research as applied to industrial production and development. J. B. Lathrop. S A E J 61:46-9 My '53; Abstract. Product Eng 24:296+ My '53

Operations research for management. C. C. Herrmann and J. F. Magee. Harvard Bsns R 31:100-12 Jl '53

Quality control methods; their use in design. D. Shainin. il Machine Design 25:176-80 My '53

Statistical methods and operational research in transport. F. A. A. Menzler. Engineer 194:737-40 N 28 '52; Abstract. Engineering 174:738 D 5 '52

What's operations research all about? il Chem Eng 59:238+ O '52

See also

Industrial research

Glossaries

Operations research. M. G. Melden. Factory Management 111:238+ O '53

OPERATIONS research society of America

Annual meeting, 1st, Cleveland, May 15-16. Elec Eng 72:656-7 Jl '53

National meeting, 1st, Nov. 17-18. Science 116:704 D 26 '52

Operations research. Sci Am 188:31-2 Ja '53

OPHTHALMOSCOPE

Multibeam ophthalmoscope for the study of retinal physiology. S. A. Talbot and S. W. Kuffler. il diag Opt Soc Am J 42:931-6 D '52

OPINION polls

Measuring editorial interest in children's comics. H. Henry. J Marketing 17:372-80 Ap '53

Problem of interpretation in survey results. A. Westefeld. J Marketing 17:295-7 Ja '53

See also

Employees—Opinion polls

OPIUM

Opium control accord signed by 17 countries. Oil Paint & Drug Rep 163:7 Je 29 '53

Poppy juice; two United nations conferences on narcotics. Economist 167:610-11 My 30 '53

OPPENHEIMER, J. Robert, 1904-

Hidden struggle for the H-bomb. por Fortune 47:109-10+ My '53

OPTICAL compensators. See Compensators, Optical

OPTICAL flats

Determination of planeness and bending of optical flats. W. B. Emerson. bibliog il diags J Res Nat Bur Stand 49:241-7 O '52

OPTICAL illusions

Of spots before the eyes. E. F. Mauer. Science 116:693 D 19 '52

Optical illusions by printing. R. Sansone. il Mod Textiles Mag 34:59-62 O '53

OPTICAL instruments

Annual Physicial society exhibition, 36th, London, April 3-8. Opt Soc Am J 42:861-4 N '52

Application of Eller's optical machine to the determination of the molecular structure of gases by electron diffraction. L. Bru and others. il J Chem Phys 20:1069-70 Jl '52

Application of Eller's optical machine to the determination of the molecular structure of gases by electron diffraction; nonrigid molecules. L. B. Bru and others. il J Chem Phys 20:1911-13 D '52

Computation of spherical-mirror systems by means of finite-difference equations. L. P. Raitiere. diags Opt Soc Am J 42:960-5 D '52

General contribution formula for tangential rays. E. Delano. Opt Soc Am J 42:631-3 S '52

Looking in on dangerous operations at the Hanford works. J. M. Holeman. il diags Gen Elec R 55:27-31 N '52

New aberration function of optical instruments. E. Wolf. bibliog diags Opt Soc Am J 42:547-52 Ag '52

New kind of optical wedges. Franklin Inst J 255:268-9 Mr '53

Optical slit mechanism. R. V. Jones. il diags J Sci Instr 29:345-50 N '52

Surface-finish projector; Techne (Cambridge), limited. il diag Engineering 175:72 Ja 16 '53

See also

Collimators
Compensators, Optical
Densitometers
Diffraction gratings
Exposure meters
Interferometers
Lenses
Light filters
Measuring instruments, Optical
Microscope and microscopy
Mirrors
Monochromators
Moving picture photography—High speed
Ophthalmoscope
Photometers
Prisms
Projection apparatus
Refractometers
Schlieren apparatus
Spectrograph
Spectrometers
Spectrophotometers
Stroboscopic instruments
Tanks, Military—Range finders
Telescope

OPTICAL measurements

Assembled polygon for the calibration of angle blocks. C. E. Haven and A. G. Strang. il J Res Nat Bur Stand 50:45-50 Ja '53

Optical measurements on electroluminescent zinc sulfide. J. F. Waymouth. Electrochem Soc J 100:81-4 F '53

See also

Exposure meters
Optical flats

OPTICAL methods

Apparatus for measuring internal friction in transversely vibrating metal reeds; Strobotac. W. R. Jewell. diags R Sci Instr 24:5-10 Ja '53

Conference on optical methods in industry. Opt Soc Am J 42:590-3 Ag '52

Experimental technique used to measure transient waves through solids. W. A. Allen and C. L. McCrary. bibliog il diags R Sci Instr 24:165-71 F '53

Flow visualization in high vacuums. R. G. Folsom. bibliog il diags Chem Eng Prog 48:542-8 N '52

Measuring wavelength in millimeters; optical methods. J. R. Martin and C. F. Schunemann. il diags Electronics 26:184-7 My '53

Optics in petroleum processing. P. D. Foote. il Pet Processing 8:694-9 My '53

See also

Interferometers

OPTICAL properties

Absolute optical absorption from diffuse reflectance. P. D. Johnson. diag Opt Soc Am J 42:978-81 D '52

Application of polarization figures and rotation properties to the identification of certain telluride minerals. D. H. Hase. bibliog Econ Geol 47:807-14 D '52

Magneto-optical effects and paramagnetic resonance. W. Opechowski. bibliog Rs Mod Phys 25:264-68 Ja '53

Modified Silberstein model of optical anisotropy. F. Matossi. bibliog J Chem Phys 20:1934-5 D '52

Optical properties of crystalline thoria. O. A. Weinreich and W. E. Danforth. Phys R 88:953-4 N 15 '52

Optical properties of indium antimonide. M. Tanenbaum and H. B. Briggs. bibliog Phys R 91:1561-2 S 15 '53

Optical properties of natural and synthetic hackmanite. D. B. Medved. bibliog J Chem Phys 21:1309-10 Jl '53

Optical properties of pigment and pigmented films; abstract. R. H. Kienle. Paint Oil & Chem R 116:38+ S 24 '53

Optical studies on alkali feldspars. O. F. Tuttle. bibliog diags Am J Sci Bowen vol p553-67 '52

Some optical properties of molten silver bromide-alkali bromide solutions. C. D. Thurmond. bibliog Am Chem Soc J 75:3928-32 Ag 20 '53

Some optical properties of potassium iodide-thallium phosphors. P. H. Yuster and C. J. Delbecq. bibliog diag J Chem Phys 21:892-8 My '53

Stress-optical coefficient of plate glass. R. M. Waxler. diags Glass Ind 34:258-9+ My '53

Transmittancy of commercial sugar liquors; dependence on concentration of total solids. V. R. Deitz and others. bibliog J Res Nat Bur Stand 49:365-9 D '52

OPTICAL properties—*Continued*

Variation with temperature of the transparency of some optical materials in the Schumann region. A. Gilles and B. Vodar. Opt Soc Am J 42:783-4 O '52

See also

Refractive index

Textile fibers, Synthetic—Optical properties

OPTICAL rotation

Attempts to resolve racemic amines by means of optically active, acidic synthetic polymers. J. F. Bunnett and J. L. Marks. bibliog Am Chem Soc J 74:5893-7 D 5 '52

Configurations of rotational isomers and their normal frequencies. S. Mizushima and others. bibliog J Chem Phys 21:215-19 F '53

Dissociation constants of peptides; a survey of the effect of optical configuration. E. Ellenbogen. bibliog Am Chem Soc J 74:5198-201 O 20 '52

Internal rotation of a polypeptide chain. S. Mizushima and T. Shimanouchi. bibliog Am Chem Soc J 74:5550-1 N 5 '52

Optical resolution of aromatic amino-acids on paper chromatograms. C. E. Dalgliesh. Chem Soc J p3940-2 O '52

Optical resolution of 4 : 4′- and 5 : 5′-diquinolyl. M. Crawford and I. F. B. Smyth. Chem Soc J p4133-5 N '52

Optical rotation of peptides; α- and γ-dipeptides of glutamic acid and alanine. H. Sachs and E. Brand. bibliog Am Chem Soc J 75:4608-10 S 20 '53

Optically active forms of 1-methyl-2-2′-pyridylethylamine. N. B. Chapman and J. F. A. Williams. Chem Soc J p2797-9 S '53

Preparation of the optical forms of tris-2,2′-dipyridyl iron(III) and tris-1,10-phenanthroline osmium(III) perchlorates. E. P. Dwyer and E. C. Gyarfas. bibliog Am Chem Soc J 74:4699-700 S 20 '52

Resolution and reactions of 1 : 2 : 3 : 4-tetrahydro-1-naphthol; a new preparation of 1 : 2 : 3 : 4-tetrahydro-1-naphthyl hydroperoxide. A. G. Davies and A. M. White. Chem Soc J p3300-3 Ag '52

Resolution of DL-tryptophan by paper chromatography. K. Closs and C. M. Haug. il Chem & Ind p 103 Ja 31 '53

Restricted rotation about the aliphatic carbon-carbon bond. R. Adams, R. S. Voris and L. N. Whitehill. bibliog Am Chem Soc J 74:5588-92 N 20 '52

Restricted rotation in aryl amines; stereoisomeric diglutarimidomesitylenes. R. Adams and D. C. Blomstrom. bibliog Am Chem Soc J 75:2375-7 My 20 '53

Rotational isomerism and the vibrational spectrum of *sym*-dideuterodibromoethane. H. J. Bernstein and others. bibliog diags J Chem Phys 20:1227-31 Ag '52

Rotational isomerism as a general property of alkyl nitrites. P. Tarte. bibliog J Chem Phys 20:1570-5 O '52

Spontaneous optical resolution of solvated tri-*o*-thymotide. A. C. D. Newman and H. M. Powell. diags Chem Soc J p3747-51 O '52

Stereochemistry of Raney nickel action; the optical course of sulfoxide desulfuration. W. A. Bonner. bibliog Am Chem Soc J 74:5089-90 O 20 '52

Studies in stereochemistry; the preparation and complete resolution of the 3,4-dimethyl-4-phenyl-3-hexanol system. D. J. Cram and J. D. Knight. bibliog Am Chem Soc J 74:5835-8 D 5 '52

Suggestion on the application of Hudson's isorotation rules. W. A. Bonner, Mother M. J. Kubitshek and R. W. Drisko. bibliog Am Chem Soc J 74:5082-6 O 20 '52

Thermal mutarotation of some methylated D-fructoses. D. J. Bell. Chem Soc J p 1231-3 Ap '53

See also

Racemization

Verdet constant

OPTICAL society of America

Annual meeting. Glass Ind 33:597 N '52

Transparent tv screens made with chemical deposition; enzyme reaction; free radicals; halide crystals; discussion. Chem & Eng N 30:4481 O 27 '52

OPTICS

Algebra of possibilities relating regions in object and image space for a system of thin lenses. R. A. Satten. diags Opt Soc Am J 42:955-9 D '52

Cone channel condenser optics. D. E. Williamson. diags Opt Soc Am J 42:712-15 O '52

Optics in the oil industry. P. D. Foote. il Opt Soc Am J 42:886-97 D '52

Precalculation of optical systems. M. Herzberger. Opt Soc Am J 42:637-40 S '52

Reversibility and irreversibility in optics. R. C. Jones. diags Opt Soc Am J 43:138-44 F '53

Some questions of neutron optics. O. Halpern. Phys R 88:1003-7 D 1 '52

See also

Absorption of rays

Beer's law

Color

Diffraction

Electro-optics

Fluorescence

Focus (optics)

Interference (light)

Ives, Frederic, medal

Lenses

Light

Light filters

Luminescence

Measuring instruments, Optical

Photochemistry

Photoelasticity

Photographic optics

Photometry

Photomicrography

Polarization (light)

Prisms

Radiation

Reflection (optics)

Refractive index

Spectrum

Television

Visibility

Spain

Institute of optics in Madrid. N. L. Hyde. Opt Soc Am J 42:786-8 O '52

OPTICS, Electron. See Electron optics

OPTICS, Geometrical

Contributions of the single surfaces to the diapoint coordinates. M. Herzberger. Opt Soc Am J 42:544-6 Ag '52

Some geometrical conditions for depth effect in motion pictures. E. Millet. il diags Soc Motion Picture & Tv Eng J 59:517-23 D '52

Theory and applications of the photic field. P. Moon and D. E. Spencer. bibliog diags Franklin Inst J 255:33-50, 113-26 Ja-F '53

OPTICS, Physiological

Integrate capacity in time and space of the human peripheral retina. M. A. Bouman and G. van den Brink. diag Opt Soc Am J 42:617-20 S '52

Intensity-time relation for multiple flashes of light in the peripheral retina. E. Davy. bibliog Opt Soc Am J 42:937-41 D '52

Studies of psychophysical methods for measuring visual thresholds. H. R. Blackwell Opt Soc Am J 42:606-16 S '52

See also

Color sense

Eye—Accommodations and refraction

Sight

OPTIONS, Stock purchase. See Stock purchase options

ORANGE juice

Keeping orange juice fresh. C. E. Wright. il Food Eng 24:93+ N '52

ORANGE juice, Frozen

How good is frozen orange juice? M. D. Zinn and R. R. Bien. Food Eng 25:127+ My '53

Minute Maid concentrated frozen orange juice; nominated for packaging's Hall of fame. il Mod Packaging 26:86-91+, cover Mr '53

Orange juice in a bag; package for single fountain servings of frozen concentrate. il Mod Packaging 26:110-13+ S '52

Testing

Their abuse and field tests assure quality after as well as before; Minute Maid. C. H. Brokaw. il Food Eng 25:94-5 Jl '53

ORBAN, Kurt

Kurt Orban; foreign trader. Fortune 47:187 Mr '53

ORBITALS, Atomic. See Atomic orbitals

ORCHARD heaters

Transient and steady-state heat transfer in irradiated citrus fruit. H. F. Poppendiek. bibliog diag A S M E Trans 75:421-5 Ap '53

ORCHESTRAS

What makes a symphony go; Boston symphony orchestra. il Bsns W p 122-6+ N 8 '52

ORDERS

Automatic processing of orders for packaged products; abstract. G. S. Johnson. Mod Packaging 26:139 Je '53

How firm can handle more than 4,000 orders a day; Allied radio corp. W. Norris. il Am Bsns 23:12-13+ O '53

Manufacturers' new and unfilled orders; with tables of new and unfilled orders, 1948-Sept. 1952. Survey of Cur Bsns 32:17-18 N '52

New air tube system speeds order handling. Am Bsns 23:34 Ja '53

Revision of business sales, orders, and inventories; with detailed tables; orders, 1946-51; manufacturers' sales and inventories, 1949-51; wholesale sales, selected periods, 1948-52; wholesale inventories, 1948-52. Survey of Cur Bsns 32:12-18 O '52

Round-up of current practices in order-handling routines. il Sales Management 70: 106+ Mr 15 '53

System cuts order handling time from four days to one day; Dow chemical co. W. F. Stumpfig. il Am Bsns 23:13+ Ag '53

See also

Sales policies—Small orders

ORDERS, Unfilled

Manufacturers' new and unfilled orders; with tables of new and unfilled orders, 1948-Sept. 1952. Survey of Cur Bsns 32:17-18 N '52

ORDNANCE

Developments in naval aircraft ordnance. W. H. Huff. il Aero Digest 66:68+ Ap '53

Inyokern ordnance research laboratory. il plan diag Arch Rec 112:183 S '52

Titanium evaluated for ordnance. B. S. Mesick. J Metals 5:136-7 F '53

See also

Gun carriages

Guns (ordnance)

Manufacture

Central inspection set-up aids ordnance contractors; Pilot lot laboratory, Ordnance ammunition center. E. J. Cottrell. il Mach 59:162-8 D '52

West Coast producer steps up ordnance schedule; Rheem mfg. co. il Steel 132:132 Je 22 '53

Testing

Techniques and equipment for generation of dynamic high pressures. E. J. Mickevicz. il diags A S M E Trans 75:325-7 Ap '53

ORDNANCE department. See United States—Ordnance department

ORE analysis. See Mineralogy, Determinative

ORE bins

Moving a 500-ton mine ore bin over two miles of rough terrain. R. K. Young. il Eng & Min J 153:86-7 D '52

ORE cars

New Bessemer ore cars are short. il Ry Age 134:53 My 4 '53; Excerpt. Iron Age 171: 144+ Ap 16 '53

New ore car has features designed to facilitate loading, dumping, thawing. il Eng & Min J 154:100 Je '53

Standard wagons for British railways. il Engineer 195:424 Mr 20 '53; Engineering 175: 380-1 Mr 20 '53

ORE deposits

Can cross sections of mountain ranges be used as guides to discover new mineralized areas? E. V. Reinhardt. map diags Eng & Min J 153:84-6 D '52

Chlorite-calcite pseudomorphs after orthoclase phenocrysts, Ray, Ariz. G. M. Schwartz. bibliog diag Econ Geol 47:665-72 S '52

Fields of formation of some common hydrothermal-alteration minerals. B. Stringham. bibliog Econ Geol 47:661-4 S '52

Geologic character of typical pitchblende veins. D. L. Everhart and R. J. Wright. maps Econ Geol 48:77-96 bibliog(48 titles, p94-6) Mr '53

Preliminary description of the Nigerian lead-zinc field. J. L. Farrington. bibliog map diag Econ Geol 47:583-608 S '52

Some pipe deposits of eastern Australia. R. Blanchard. bibliog Econ Geol 47:822-3 D '52

Some simple aids in the hydrothermal investigation of mineral systems. R. Roy and E. F. Osborn. bibliog diags Econ Geol 47: 717-21 N '52

Study of lead sulfide solubility and its relation to ore deposition. J. J. Hemley. bibliog diag Econ Geol 48:113-38 Mr '53

Supergene and hydrothermal dispersion of heavy metals in wall rocks near ore bodies, Tintic district, Utah. H. T. Morris and T. S. Lovering. bibliog maps Econ Geol 47:685-716 N '52

Uranium deposits of the Grants District, New Mexico. C. C. Towle and I. Rapaport. il map Min Eng 4:1037-40 N '52

Where to look for ore. Chung Yu Wang. maps Min Eng 5:488-90 My '53

See also

Copper ores

Fluorspar

Geology

Gold ores

Iron ores

Lead ores

Mines and mineral resources

Uranium ores

Zinc ores

ORE docks

Barges that turn into piers; iron-ore shipping station of the Orinoco mining co. J. Hirt. il diag Comp Air Mag 57:312-13 N '52

Canton company expands ore handling facilities at Baltimore. il Manuf Rec 121:69 N '52

Canton railroad expanding ore loading facilities. Manuf Rec 121:57 O '52

Canton railroad expands ore dock at Baltimore. W. H. Raff. il plan diags Ry Age 133:52-5 D 15 '52

Dock that jack built. il Manuf Rec 122:32-3+ My '53

Prefab dock goes to Venezuela. il Constr Methods 35:132-3+ My '53

ORE handling

Aerial tramway centralizes plant of West African mine. A. R. Bunce. il plan Can Min J 74:62-3 Ja '53

Air tramway solves transport problem at Magnet Cove. C. F. Dwyer. il Eng & Min J 153:88-9 O '52; Same. Rock Prod 55:118-19 D '52

Belt conveyers, arteries of new ore dock. W. H. Raff. il Iron Age 170:133-6 D 18 '52

Belt conveyors double capacity of ore-handling pier at Baltimore. il Eng N 149: 26 O 30 '52

Concentrate stocking a help in shipping Lake iron ores. J. J. Foucault. il diag Eng & Min J 154:79-80 Mr '53

Drives for descending belt conveyors. R. U. Jackson. il diags Min Cong J 39:45-9 Ja '53; Excerpt. Eng & Min J 154:106-7 Ja '53

Kaiser aluminum starts shipping Jamaica bauxite to U.S.A. il map Eng & Min J 154: 96-8 Je '53

New ore bridge trolley at Pittsburgh Coke and Chemical. il Blast F & Steel Pl 41:1078-9 S '53

Trolley changeover increases ore bridge capacity; Granite City steel co. A. L. Williams. il Iron & Steel Eng 30:194+ S '53

See also

Ore cars

Ore docks

ORE sampling

Improve sampling practices. Min Cong J 39: 69 My '53

ORE ships

Bauxite carrier; ore ship unloads own ore in eight hours with built-in conveyer. Iron Age 170:209 D 4 '52

Handling plant in bauxite ore carrier. diags Engineer 195:98 Ja 16 '53

Large ore carriers for Great Lakes service. il plans Engineer 196:170-2 Ag 7 '53

Ore fleet totals 285 ships. Marine Eng 58:74 Jl '53

Plan 100,000,000 ton Great Lakes ore carry. Weekly Underw 168:266 Ja 24 '53

600-foot Lakes ore carriers built in East Coast shipyard. R. M. Cashman and C. E. Ericson. il plans diag Marine Eng 58:36-47 Ja; 70-5 F; 64-75 Mr; 69-75 Ap '53

ORE ships—*Continued*
Steamer Edward B. Greene becomes the new Cleveland-Cliffs flagship. il plans Marine Eng 57:38-50 N '52
Top ore carrier, the Weir; illustration with text. Bsns W p90 N 29 '52

ORE testing
Concentration tests on various base-metal ores. A. L. Engel. U S Bur Mines Rep of Invest 4927:1-14 '52
Ore testing to determine flowsheet prior to plant design. B. Irwin and others. Min Eng 5:868-9; Discussion. 869 S '53
Refractory properties of Pacific Northwest chromites. H. J. Kelly and others. 23pls U S Bur Mines Rep of Invest 4929:1-38 bibliog and patent list(192 titles, p28-38) '52
See also
Assaying
Ore sampling

ORE transportation
Trucks make marginal open-pit mining pay. il Bsns W p 122-4+ Ap 11 '53
See also
Iron ores—Transportation
Mine haulage
Ore cars
Ore ships

ORE treatment
Advance in milling practices; American mining congress, Western division; abstracts of papers. Min Cong J 38:110-11 O '52
American smelting & refining co.'s Van Stone mine. J. B. Huttl. flow sheet il Eng & Min J 154:72-6 Ap '53
Barvue milling plant sets sights for greater output. il diags Min Eng 5:783-5 Ag '53
Cove Creek sulphur. C. R. King. flow sheet il Min Eng 5:375-8 Ap '53
Geomines; major open-pit tin producer in the Belgian Congo. H. Barzin. flow sheets il Eng & Min J 153:86-9 N '52
How induced radioactivity may help separate minerals. A. M. Gaudin and others. bibliog Eng & Min J 153:95-9+ N '52
Improved flowsheet increases recovery and mill capacity; Nevada-Massachusetts co. flow sheet il Eng & Min J 154:96-7 Ja '53
Kings Mountain mica operation. E. D. White. flow sheet il Eng & Min J 154:94-6 Mr '53
Method for concentration of North Carolina spodumene ores. M. K. Banks and others. bibliog flow sheet Min Eng 5:Trans 181-6 F '53
Mineral dressing, 1952. N. Arbiter. il Min Cong J 39:69-71 F '53
Mining and concentration of ilmenite and associated minerals at Trail Ridge, Fla. J. H. Carpenter and others. flow sheet il Min Eng 5:Trans 789-95 Ag '53
Mining and milling of lithium pegmatites at Kings Mountain, N.C. E. R. Goter and others. flow sheet il Min Eng 5:Trans 890-3 S '53
New ideas for Bagdad Copper. E. R. Dickie and others. il Eng & Min J 154:88-93 Mr '53
New ways to metals. il Fortune 47:152-7+ Ap '53
Tennessee Copper explores use of rock grinding media. F. M. Lewis. il Min Eng 5:491 My '53
Treatment of titaniferous magnetite ore from Iron mountain, Wyo. A. E. Back and others. bibliog 5pls U S Bur Mines Rep of Invest 4902:1-15 '52
Typical small-scale operation in east Africa; Kitere mine. E. J. Langevad. il maps diag Can Min J 74:62-7 Ag '53
Value of ore-bedding systems. W. L. Howes. il Min Eng 5:872; Discussion. 872-3 S '53
Work indexes tabulated. F. C. Bond. Min Eng 5:Trans 315-16 Mr '53
See also
Ball mills
Crushing machinery
Cyanide process
Flotation process
Gold metallurgy
Hydrometallurgy
Iron metallurgy
Leaching
Metallurgical plants
Metallurgy
Separators
Sintering
Smelting
Tailings

OREGON
See also
Hydroelectric plants—Oregon

OREGON fibre products, inc.
Securities offered. Comm & Fin Chr 178:299 Jl 27 '53

ORES
See also
Copper ores
Geology
Gold ores
Iron ores
Lead ores
Manganese ores
Metallurgy
Metals
Mines and mineral resources
Ore deposits
Ore sampling
Ore treatment
Zinc ores

ORGAN
Characteristics of jet-edge-resonator whistles. W. L. Nyborg and others. bibliog diags Acoustical Soc Am J 25:138-46 Ja '53

ORGAN, Electric
Electronic organs. diag Electronics 26:420-2+ Ap '53
Fun with a home-built electronic organ. J. Kirk. il diags Radio & Tv N 49:59-61+ Mr '53
Transistor electric organ. L. E. Garner, jr. il diag Radio & Tv N 50:64-5 Jl '53
Transistor organs. J. D. Fahnestock. il diags Electronics 26:156+ F '53

ORGANIC acids. See Acids, Organic

ORGANIC compounds. See Chemistry, Organic

ORGANIZATION for European economic cooperation
OEEC and the dollar gap. Economist 166:29-30 Ja 3 '53

ORGANIZATION in industry
Coordinating design at the executive level; General electric co. A. N. BecVar. Advanced Management 18:77-80 Ja '53
Coordinating procurement; case study from the aircraft industry. H. T. Lewis. Harvard Bsns R 31:91-100 S '53
Decentralization; one cure for production headaches; Parker appliance co. S. Rogers. Factory Management 111:104-7 F '53
Developing new products. P. R. Marvin. Machine Design 25:114-19 S '53
Developing organization harmony. H. H. Anderson. Pet Eng 25:D21-4 F '53; Same. Am Pet Inst Proc 32(5):49-52 '52
G-E seeks conquest of bigness through fanned-out management. L. M. Hughes. Sales Management 69:24-7+ O 1 '52
How dual-engineering assures multiplant efficiency. J. G. Brown. Food Eng 24:106-9+ N '52
How good is your organization? G. S. Odiorne. Am Mach 97:148 F 16 '53
How Magnolia operates its maintenance priority system. F. L. Resen. il Oil & Gas J 51:207-9+ Mr 23 '53
How to plan, organize, and control marketing in your business; with chart. Gen Elec R 56:29-37 Jl '53
How to set up systems department. B. L. Smyth. Am Bsns 23:11+ Ap; 18-19 My; 26+ Je '53
Let's diagnose before prescribing; abstract. L. E. Kreig. Management R 41:717-18 N '52
Line, staff, and auxiliary. Bsns W p 117 Mr 7 '53
Management of engineering work. T. M. Linville. Elec Eng 71:1091-5 D '52
Organization and management control in a sewage treatment plant. R. D. Bargman. bibliog Sewage & Ind Wastes 25:1145-55 O '53
Organization manuals improve communication. L. L. Parrish. Advanced Management 17:22-5 S '52
Raising the level of management; a refresher course on supervisory and management duties; Leeds & Northrup co. C. R. Cary and H. H. Carey. Personnel 29:355-60 Ja '53
Recipe for profit; organized research. il Steel 132:55-62 Ap 27 '53
Staff assistant, wise or otherwise? A. S. Thompson, jr. Personnel 29:136-40 S '52
Ten years' progress in management; theory of organization and management. R. T. Livingston. A S M E Trans 75:655-60 My '53
Vertical integration and the monopoly problem. C. D. Edwards. J Marketing 17:404-10 Ap '53
See also
Accounting departments
Advertising departments
Committees (in management)
Controllers
Credit departments
Employment departments
Engineering departments

ORGANIZATION in industry—See also—*Cont.*
Instrument departments
Maintenance departments
Market development departments
Product planning departments
Purchasing departments
Research departments
Safety organization
Sales departments
Traffic departments, Industrial

ORGANIZATION of Central American states
Middle America meets. Bsns W p 159-60 Jl 25 '53

ORGANOMETALLIC compounds
Organometallic and organometalloidal compounds containing fluoroalkyl groups. H. J. Emeléus and R. N. Haszeldine. bibliog Science 117:311-15 Mr 27 '53
Organometallic and organometalloidal fluorine compounds. G. A. R. Brandt, H. J. Emeléus and R. N. Haszeldine. Chem Soc J p2198-205, 2549-55 Je-Jl '52
Organometallic and organometalloidal fluorine compounds; the electrochemical fluorination of dimethyl sulphide and carbon disulphide. A. F. Clifford and others. diag Chem Soc J p2372-5 Ag '53
Organometallic and organometalloidal fluorine compounds; trifluoromethyl arsenicals. H. J. Emeléus, R. N. Haszeldine and E. G. Walaschewski. Chem Soc J p 1552-64 My '53
Organometallic and organometalloidal fluorine compounds; trifluoromethyl compounds of phosphorus. F. W. Bennett, H. J. Emeléus and R. N. Haszeldine. Chem Soc J p 1565-71 My '53
Organometallic compounds of the alkali metals; the metallation and dimetallation of benzene. D. Bryce-Smith and E. E. Turner. Chem Soc J p861-7 Mr '53
Stability of metallo-organic compounds. H. H. Jaffé and G. O. Doak. bibliog J Chem Phys 21:196-200 F '53

ORIENTATION
Concerning the ability of homing pigeons to discriminate patterns of polarized light. K. C. Montgomery and E. G. Heinemann. Science 116:454-6 O 24 '52

ORIENTATION (chemistry)
Cooperative orientation effects in solutions. J. A. Barker. bibliog J Chem Phys 20:1526-32 O '52
Cooperative orientation in solutions; the accuracy of the quasi-chemical approximation. J. A. Barker. bibliog diag J Chem Phys 21:1391-4 Ag '53
Further evidence against the orientation of structure in glass fibers. R. T. Brannan. diag Am Cer Soc J 36:230-1 Jl 1 '53

ORIENTATION (crystals). See Crystals

ORIFICE meters
Computation of orifice coefficients. G. H. Forster, jr. Instruments 25:1425+ O '52
Computing gas volumes from orifice-meter charts integrator data, using a punched-card system. A. C. Buchanan, jr. and H. Skinner. flow plan Oil & Gas J 51:72-3+ F 2 '53; Same. World Oil 136:186+ Mr '53
Determination of basic orifice flow factor by indirect interpolation. J. Garrett. Pet Eng 25:D 19 My '53
Determination of orifice meter coefficients. Hu Shao Chio. bibliog diags Pet Eng 24: C5-8+ O '52
Dynamics of pulsative flow through sharp-edged restrictions, with special reference to orifice-metering. R. C. Baird and I. C. Bechtold. bibliog il diags A S M E Trans 74:1381-7 N '52; Same. Instruments 25: 481-6 Ap '52; Same. Pet Eng 24:D41-2+ Jl '52
Experimental evaluation of expansion factors for steam. J. W. Murdock and C. J. Foltz. A S M E Trans 75:953-9 Jl '53
Here's a new time-saving method of calculating orifice-meter charts. C. Hoot. il Oil & Gas J 51:106-7 Mr 9 '53
How New England companies solved problems of orifice metering. R. E. Lasselle. Gas Age 110:25+ N 6 '52
Orifice meter runs. W. A. Griffin. diag Instruments 25:1441-3 O '52
Principles of orifice measurement. W. A. Griffin. diags Am Gas J 177:23-6 N '52
Rupture-proof bellows-type orifice meters. A. I. Thompson. il diags Instruments 25:1593-6 N '52

ORIFICES
Discharge of air through orifices; data sheet. diag Heating-Piping 25:123-4 Jl '53
Here's help in sizing orifices for controlling steam flow. E. Gibbons. Chem Eng 60:234 Mr '53
How to use partially open gate valves as adjustable orifices. W. M. Fredder. Chem Eng 59:175-6 O '52
Measurement of water by circular orifice at end of discharge pipe. diag Water & Sewage Works 100:R61 My '53
NACA sonic-flow-orifice temperature probe in high-gas-temperature measurement. P. L. Blackshear, jr. diags A S M E Trans 75:51-4; Discussion. il 55-8 Ja '53
Periodic fluid flow through circular orifices. G. B. Thurston and C. E. Martin, jr. bibliog il diag Acoustical Soc Am J 25:26-31 Ja '53
Simple orifice construction based on pipe union. J. Lowenstein. diag Chem Eng 60: 233 My '53

ORIGIN of species. See Species, Origin of

ORLON
How du Pont assured a market for Orlon before making it. M. Reinsberg. il Ind Marketing 37:46-8+ S '52
How to protect your trade-mark; du Pont booklet points way. Ind Marketing 37:142+ S '52
Into the limelight. il Chem W 72:44+ Mr 14 '53
Modern Textiles handbook; acrylics. L. Mauer and H. Wechsler. il diag Mod Textiles Mag 34:42-4+ F '53
New wool-like fibres; abstract and discussion. D. Traill. Chem & Ind p217 Mr 7 '53
Preliminary study of the sizing of staple Orlon and Dacron. W. C. Wylie, jr. Am Dyestuff Rep 42:11-13 Ja 5 '53
Printing acrylic and polyester fibers. Am Dyestuff Rep 42:99-107 F 16 '53
Progress in acrylics. G. Boyo. il Mod Textiles Mag 34:52 S '53
Type 42 Orlon staple is more heat-stable, dyeable. Textile World 103:128 Je '53
Yarn characteristics simplify mill problems. D. M. Thornton. Mod Textiles Mag 34:34-5+ Jl '53; Same. Textile World 103:128-9+ Jl '53
See also
Dyes and dyeing—
Orlon

ORNITHINE
Synthesis of the diethylacetal of glutamic-γ-semialdehyde. N. Good and H. K. Mitchell. Am Chem Soc J 74:4952-3 O 5 '52

ORR, Robert W.
Story of R. W. Orr and associates. pors Adv Agency 45:64-6+ O '52

ORSAT apparatus
Small portable combustion tube for Orsat type of gas analysis apparatus. M. L. Robinson. diags Am Gas J 178:14-15+ Mr '53; Same abr. Oil & Gas J 51:346+ Mr 23 '53

ORTHOCLASE. See Feldspar

ORTHOFLOW process. See Gasoline—Manufacture

OSAGE county, Oklahoma
Kingdoms of oil. C. F. Mantooth. il World Oil 136:247-8+ Je '53

OSAZONES
Structure of Fischer's anhydro-lactosazone and other anhydro-osazones. S. Bayne. Chem Soc J p4993-6 D '52

OSBORN, Alexander Faickney, 1888-
Creative thinking. por Fortune 47:139 My '53

OSBORNE, Latham Edgar, 1895-
Portrait. Fortune 46:120 D '52

OSCILLATIONS
Almost sinusoidal oscillations in nonlinear systems. J. S. Schaffner. bibliog diags Ill U Eng Exp Sta Bul 395:1-64 bibliog(p63-4) '51 (pa 60c); 400:1-32 '52 (pa 25c)
Extinction of predominantly subharmonic oscillations in nonlinear systems. C. A. Ludeke and W. Pong. J Ap Phys 24:96-7 Ja '53
Forced oscillations with nonlinear restoring force. C. Hayashi. diags J Ap Phys 24:198-207 F '53

OSCILLATIONS—*Continued*

Oscillatory occurrences in ball bearings. M. S. Frenkel. diags Roy Aeronautical Soc J 56:885-908 D '52: Discussion. 57:530-2 Ag '53

Study of burner oscillations of the organ-pipe type. A. A. Putnam and W. R. Dennis. diags A S M E Trans 75:15-26; Discussion. 27-8 Ja '53

OSCILLATIONS, Electric

Hissing arc and radio-frequency self-generated oscillations in the d-c carbon arc. B. H. List and T. B. Jones. diag Elec Eng 72:683-6 Ag '53

Low-frequency self-generated oscillations in the d-c carbon arc. B. H. List and T. B. Jones. il diags Elec Eng 72:612-16 Jl '53

OSCILLATORS

Analysis and performance of locked-oscillator frequency dividers employing nonlinear elements. W. L. Hughes. il diags Inst Radio Eng Proc 41:241-5 F '53

Application of transistors to high-voltage low-current supplies. G. W. Bryan, jr. il diags Inst Radio Eng Proc 40:1521-3 N '52

Calculation of nuclear binding energies with single-particle oscillator wave functions. E. H. Kronheimer. bibliog Phys R 90:1003-4 Je 1 '53

Cascade lcr phase-shift oscillators. F. Butler. diags Wireless Eng 29:264-8 O '52

Clapp oscillator; explanation of the series-tuned Colpitts circuit. R. Cassey. diags Q S T 37:19-21+ F '53

Compact bandswitching v.f.o. multiplier. E. Snader. il diag Radio & Tv N 49:52-3+ F '53

Constant-amplitude oscillator. Franklin Inst J 255:64-6 Ja '53

Electrically tuned rc oscillator or amplifier. O. G. Villard, jr. and F. S. Holman. il diags Inst Radio Eng Proc 41:368-72 Mr '53

Eliminating oscillator hum in fm receivers. H. Michels. diags Radio & Tv N 49:82 F '53

F-m transistor oscillator. H. H. Wieder and N. Cass. diags Electronics 26:198+ Jl '53

High frequency titrimetry. P. W. West. bibliog Chem Age (Lond) 68:133-7 Ja 17 '53

Highly stable microwave oscillator and its application to the measurement of the spatial variations of refractive index in the atmosphere. L. Essen. bibliog diags Inst E E Proc 100 pt 3:19-24 Ja '53

Instantaneous measurement of a varying frequency. L. U. Hibbard and D. E. Caro. diags J Sci Instr 29:366-70 N '52

Isolating oscillator for seven mc. R. Clay. il diags Q S T 37:40-1+ Mr '53

Junction transistor tetrode for high-frequency use. R. L. Wallace, jr. and others. diags Inst Radio Eng Proc 40:1395-400 N '52; Abstract. Electronics 26:112-13 Ja '53

Low-cost audio oscillator. C. R. Gerber. il diag Radio & Tv N 49:62-4+ Ja '53

Low-distortion transistor audio oscillator. P. G. Sulzer. il diags Electronics 26:171-3 S '53

Low-drain transistor audio oscillator. D. E. Thomas. il diags Inst Radio Eng Proc 40:1385-95 N '52

Low-frequency function generator. R. H. Brunner. il diags Electronics 25:114-17 D '52

Measurement and control of the color characteristics of a flying-spot color signal generator. R. C. Moore and others. il diag Inst Radio Eng Proc 41:730-3 Je '53

Moisture-aging of powder-core toroids. E. J. Oelbermann and others. il Electronics 26:236+ My '53

Moving poles in nonlinear oscillating systems. W. B. Wrigley. diags Inst Radio Eng Proc 41:774-6 Je '53

Multiple-feedback oscillators; patent. diags Electronics 26:200+ Ja '53

New low frequency oscillator. il R Sci Instr 23:509 S '52

Oscillator booster for battery superhets. C. E. Cohn. diag Radio & Tv N 49:84 My '53

Oscillator for comparison measurement of power frequencies. A. L. Betts. bibliog diags Electronics 26:252+ Je '53

Quantum theory of a damped electrical oscillator and noise. J. Weber. bibliog diags Phys R 90:977-82 Je 1 '53

Reliable locked-oscillator pulse timer. P. G. Sulzer. bibliog il diags Tele-Tech 12:68-9+ Ap '53

Review of methods for measuring the constants of piezoelectric vibrators. E. A. Gerber. bibliog diags Inst Radio Eng Proc 41:1103-12 S '53

Simple remote tuning for the vfo. D. H. Mix. il diags Q S T 37:27-9 Ja '53

Simplified horizontal deflection generator. A. Newton. diags Electronics 26:170-1 Jl '53

Some limitations on the maximum frequency of coherent oscillations. R. S. Elliott. J Ap Phys 23:812-18 Ag '52

Stable-output oscillator. S. Rubin. il diag Electronics 25:154-5 O '52

Stable triode oscillator for uhf tv receivers. K. E. Loofbourrow and C. M. Morris. il diags Electronics 25:118-21 D '52

Three-tone oscillator broadcasts time signal. S. Feldman. il diags Electronics 26:162-3 S '53

Titrimetry and direct concentration measurement by means of high frequency oscillators; abstract. P. W. West. Chem Age (Lond) 67:497-8 O 11 '52

Transistor code practice oscillator. L. E. Garner, jr. il diags Radio & Tv N 49:40-1+ Ap '53

Transistor oscillator circuit. L. Fleming. diag Electronics 26:196+ Je '53

Transistors operate at 300 mc. G. M. Rose and B. N. Slade. il diag Electronics 25:116-18 N '52

Transitron sweep generator; patent. diag Electronics 26:248+ Ag '53

Traveling-wave oscillator tunes electronically. H. R. Johnson and J. R. Whinnery. bibliog il diags Electronics 26:177-9 Ag '53

Twenty-five cent oscillator. J. Fahnestock. diag Electronics 26:194+ Mr '53

Two r-c oscillator circuits. H. L. Armstrong. diags Electronics 26:234+ Jl '53

Uhf oscillator design notes. K. A. Pullen. diag Tele-Tech 12:80-1+ F '53

Use of admittance diagrams in oscillator analysis. H. J. Reich. diags Inst Radio Eng Proc 41:522-8 Ap '53

Why use a condenser in a v.h.f. oscillator? R. Wagner. il diags Radio & Tv N 49:40-1 Je '53

Wide-band data transmitter. D. J. Gray and others. bibliog diags Electronics 26:168-70 S '53

Wide range oscillator of high stability. D. E. Caro and L. U. Hibbard. il diags J Sci Instr 29:403-8 D '52

Wien bridge oscillator design. K. K. Clarke. diag Inst Radio Eng Proc 41:246-9 F '53

X-band oscillator. I. D. Olin. il diags Inst Radio Eng Proc 41:10-13 Ja '53

See also

Klystron

Magnetron

Multivibrators

Pulse generators

Frequency stabilization

Industrial frequency standard. H. W. Kline. il diag Electronics 25:130-1 N '52

Multichannel crystal control of vhf and uhf oscillators. A. Hahnel. il diags Inst Radio Eng Proc 41:79-81 Ja '53

OSCILLATORS, Crystal

Frequency-shift carrier-current equipment for telemetering and other control functions. R. W. Beckwith. bibliog diags Elec Eng 71:1026-31 N '52

Frequency-shifting crystal oscillators. M. Bernstein. diag Q S T 37:31 Jl '53

Loading of quartz oscillator plates. L. T. Sogn and P. A. Simpson. diags J Res Nat Bur Stand 49:325-30 N '52

Method of analysis of fundamental and overtone crystal-oscillator circuits. F. G. R. Rockstuhl. diags Inst E E Proc 99 pt 3:377-88 N '52

Negative resistance crystal oscillators. S. Bernstein. diags Electronics 26:198+ F '53

Precision transistor oscillator. il diag Tele-Tech 12:93+ Mr '53

OSCILLOGRAPHS

Carrier amplifier has zero drift; stress and strain recording oscillographs for aircraft testing. A. Perone. il diags Electronics 25:131-3 D '52

Corrosion; rotogenerated signal shown on oscilloscope in study method. J. B. McAndrew. plan Iron Age 170:172 N 13 '52

OSCILLOGRAPHS—*Continued*

French oscillographs. Elec R (Lond) 153:365 Ag 14 '53

Oscillograph records 14 channels of data. il diags Machine Design 25:138 S '53

Phase shift measurement system. E. S. Katz. diags Tele-Tech 11:39+ N '52

Play-back system aids seismic exploration. J. J. Jakosky and J. J. Jakosky, jr. il diags Pet Eng 24:B 112+ O '52

OSCILLOGRAPHS, Cathode ray

Application of the cathode-ray oscilloscope to polarographic phenomena; adsorption desorption relationships exhibited by alcohols at aqueous saline solution-mercury interfaces. J. W. Loveland and P. J. Elving. bibliog il diag J Phys Chem 56:935-48 N '52

Cathode-ray oscilloscopic investigation of phenomena at polarizable mercury electrodes. J. W. Loveland and P. J. Elving. il diags Chem R 51:67-117 bibliog(80 ref, p 115-17) Ag '52

Cathode-ray-tube beam intensifier. R. W. Rochelle. il diags Electronics 25:151-3 O '52

Cathode-ray tube plots transistor curves. J. Kurshaw and others. il diags Electronics 26:122-7 F '53

Compound sweep circuit. J. H. Porter. diag Electronics 25:172+ O '52

Deflection amplifier covering range up to 100 kc. R. G. Vaughn, jr. diags Radio & Tv N 48:112+ N '52

Determining properties of bulk semiconductors oscillographically by pulse-heating method. R. B. McQuistan. bibliog diags Electronics 26:150-5 Je '53

Direct-reading oscilloscope for 100-kv pulses. R. C. Hergenrother and H. G. Rudenberg. il diags Inst Radio Eng Proc 41:896-901 Jl '53

Electronic curve tracer; patent. diag Electronics 26:240+ S '53

Electronic measurement of camera shutter speeds. A. V. Donnelly. diags Electronics 26:234+ Ag '53

Electronics aids the dentist. D. Becker. il diags Electronics 25:148+ D '52

Fold light path in oscillograph camera. il diag Product Eng 23:142-3 D '52

Four-quadrant calibrator for calibrating deflection amplifiers. E. Gaynor and H. J. Tate. il diags Electronics 26:236+ S '53

Fundamental electronic circuits; cathode-ray tube circuits for voltage and current analysis. R. B. Immel. diag Product Eng 24:182-3 Ja '53

Line selector checks television waveforms. E. M. Buyer. il diag Electronics 26:153-5 S '53

Magnetic amplifier transient analyzer. W. A. Geyer. bibliog il diag Electronics 26:189-91 Jl '53

Oscilloscope as an a.c.-d.c. voltmeter. W. H. Buchsbaum. il diag Radio & Tv N 50:57+ Jl '53

Oscilloscope calibrator. R. Graham. il diag Radio & Tv N 49:70-1+ Je '53

Oscilloscopes; the electronic eye of the service technician. M. S. Kiver. il diags Radio & Tv N 49:31-4+ Ja '53

Oscilloscopic display of transistor static electrical characteristics. N. Golden and R. Nielsen. diags Inst Radio Eng Proc 40:1437-9 N '52

Phase shift by cro; reference sheet. J. F. Sodaro. diags Electronics 26:192, 194 My '53

Precision measurements with a cathode-ray oscilloscope. G. Robinson and R. Van Allen. il diags R Sci Instr 23:701-6 D '52

Remotely-steered coal-mining machine; patterns on cathode ray oscilloscope guide operator. J. Markus. il diags Electronics 26:148-51 Ag '53

Simplified vectorscope measures phase. W. L. Firestone and R. A. Richardson. il diags Electronics 26:180-2 S '53

Sinusoidal sweep expansion. S. E. Lehnert. diags Radio & Tv N 48:74+ N '52

Switch provides d-c reference display; oscilloscope displays magnitude of nonvarying signal component. R. S. Mackay. il diags Electronics 25:122-3 D '52

Test scope checks tv broadcasts. C. H. Moulton. il diags Electronics 26:138-40 Ja '53

Three-way camera records scope data. Aviation W 58:44 Ap 27 '53

Trouble shooting the electronic way; radar-type transmission line fault locator. R. L. Brinton. il Elec West 110:86-7 Mr '53

Power supply

Positive and negative high voltage supply. G. Robinson and R. Van Allen. il diag Tele-Tech 12:94-6+ Mr '53

R.f. high-voltage supply for your cro. L. E. Garner. il diags Radio & Tv N 49:66-7+ Mr '53

OSLO

Sewerage

Sewage treatment of Scandinavia. E. L. Knoedler. flow diag Water & Sewage Works 100:124-5 Mr '53

OSMIC acid

Ionization constants of osmic(VIII) acid. R. D. Sauerbrunn and E. B. Sandell. Am Chem Soc J 75:4170-2 S 5 '53

OSMIUM

Pentavalent osmium. F. P. Dwyer and J. W. Hogarth. Am Chem Soc J 75:1008-9 F 20 '53

Analysis

Determination of osmium; application of polarographic kinetic hydrogen peroxide current. I. M. Kolthoff and E. P. Parry. Anal Chem 25:188-9 Ja '53

Fire assay for osmium. W. J. Allan and F. E. Beamish. Anal Chem 24:1569-72 O '52

Microdetermination of osmium. W. J. Allan and F. E. Beamish. bibliog diag Anal Chem 24:1608-12 O '52

Isotopes

Decay of Re^{188} and the lifetimes of Os^{186m}, and Os^{188m}. C. C. McMullen and M. W. Johns. bibliog diag Phys R 91:418-19 Jl 15 '53

Hyperfine structure in the spectra of iridium and osmium. K. Murakawa and S. Suwa. Phys R 87:1048-9 S 15 '52

Probable existence of an $E3^{+}M4$ mixture in an isomeric transition. R. D. Hill and J. W. Mihelich. bibliog Phys R 89:323-4 Ja 1 '53

Radioactive decay of Cs^{134}, Os^{185}, Os^{191}, and Os^{193}. J. M. Cork and others. bibliog diags Phys R 90:444-7 My 1 '53

Radioisotopes of osmium. J. B. Swan and R. D. Hill. bibliog diag Phys R 88:831-5 N 15 '52

OSMIUM compounds

Preparation of the optical forms of tris-2,2′-dipyridyl iron(III) and tris-1,10-phenanthroline osmium(III) perchlorates. F. P. Dwyer and E. C. Gyarfas. bibliog Am Chem Soc J 74:4699-700 S 20 '52

OSMIUM oxides

Indoles; the action of ozone, and osmium tetroxide on some indole derivatives. D. W. Ockenden and K. Schofield. Chem Soc J p612-18 F '53

Reaction of osmium tetroxide with thiourea. R. D. Sauerbrunn and E. B. Sandell. bibliog Am Chem Soc J 75:3554-6 Jl 20 '53

OSMOMETERS

Convenient small osmometer. G. A. Hanks and S. G. Weissberg. bibliog il diag J Res Nat Bur Stand 49:393-6 D '52

Metal osmometer assembles, rinses, and fills easily. Chem & Eng N 31:1882-3 My 4 '53

OSMOSIS

Electric curtain stabilizes wet ground for deep excavation. H. W. Richardson. il plan diag Constr Methods 35:52-8 Ap '53

Electricity dries wet silt; principle known as electro-osmosis. il diag Eng N 150:36+ Ap 30 '53

Osmotic active substances of the Allwörden reaction. G. J. Schuringa and others. bibliog Textile Res J 23:645-6 S '53

Phenomenology of electro-osmosis and streaming potential. P. B. Lorenz. bibliog J Phys Chem 56:775-8 Je '52

See also

Electrophoresis

Osmotic pressure

OSMOTIC pressure

Electrokinetic relations in the quartz-acetone system. P. B. Lorenz. bibliog diags J Phys Chem 57:430-4 Ap '53

OSMOTIC pressure—*Continued*

High-polymer solutions; osmotic-pressure measurements with poly(vinyl alcohol) membranes. H. T. Hookway and R. Townsend. Chem Soc J p3190-5 Ag '52

High-polymer solutions; the determination of number-average molecular weights from measurements of osmotic pressure. E. Ducker and others. Chem Soc J p4390-3 N '52

Osmotic properties of aqueous sodium chloride-cesium chloride mixtures at 25°. R. A. Robinson. Am Chem Soc J 74:6035-6 D 5 '52

Statistical mechanics of dilute polymer solutions; variation of the osmotic second coefficient with molecular weight. W. R. Krigbaum and P. J. Flory. bibliog diags Am Chem Soc J 75:1775-84 Ap 20 '53

See also

Osmometers

OSTRACODA

Beta-luciferin of cypridina. H. S. Mason. bibliog Am Chem Soc J 74:4727 S 20 '52

OSTRACODA, Fossil

Ostracoda from wells in North Carolina. F. M. Swain. bibliog maps diags U S Geol S Professional Pa 234-A:1-58, pl 1-7; pa 75c '51; 234-B:59-93, pl 8-9; pa 40c Supt. of doc. '52

Ostracodes from the upper part of the Sundance formation of South Dakota, Wyoming and southern Montana. F. M. Swain and J. A. Peterson. bibliog U S Geol S Professional Pa 243-A:1-17, pl 1-2; pa 35c Supt. of doc. '52

OTIS and company

Oppression; SEC and Kaiser-Frazer corporation financing dispute with Otis & co. Comm & Fin Chr 177:2407+ Je 4 '53

U.S. Supreme court upholds Otis & co. in Kaiser-Frazer suit. Comm & Fin Chr 176:1522 O 23 '52

OTTAWA

Water supply

Complete water metering under way. W. E. MacDonald. il diags Munic Util 91:46+ Ap '53; Same cond. Am Water Works Assn J 45:909-16 S '53

New 24-mg. reservoir. C. T. Heeney. il Munic Util 91:23-4 Jl '53

OTTAWA chemical company

Business thrives on germs. il Bsns W p 186+ My 9 '53

OTTER tail power company

Public utility securities. O. Ely. Comm & Fin Chr 177:1987 My 7 '53

OTTO, Nikolaus August, 1832-1891

Otto and the Otto engine. Goldbeck. bibliog Engineer 194:677-9 N 21 '52

OUABAGENIN

Ouabagenin; the relationship between ouabagenin monoacetonide and anhydroöuabagenin. R. P. A. Sneeden and R. B. Turner. bibliog Am Chem Soc J 75:3510-13 Jl 20 '53

OUACHITA mountains

Geology

Petrography and metamorphism of sediments of Ouachita facies. A. Goldstein, jr. and D. H. Reno. il maps diags Am Assn Pet Geologists Bul 36:2275-90 D '52

Siliceous sediments of Ouachita facies in Oklahoma. A. Goldstein, jr. and T. A. Hendricks. bibliog map diag Geol Soc Bul 64:421-41, pl 1-4 Ap '53

OUTAGES. See Electric power—Interruptions

OUTBOARD, marine and manufacturing company

Good year in prospect. Barron's 32:25-6 D 8 '52

OUTBOARD motors. See Motor boat engines, Outboard

OUTDOOR advertising. See Advertising, Outdoor

OUTDOOR fireplaces. See Fireplaces, Outdoor

OUTPUT of workers. See Labor productivity

OVARIES

Biosynthesis of estrone and β-estradiol in the perfused ovary. N. T. Werthessen and others. bibliog Science 117:380-1 Ap 10 '53

OVENS

Drying oven for large transformers; General electric co. il Engineer 194:665-6 N 14 '52; Engineering 174:739 D 5 '52; Elec R (Lond) 151:1054-6 N 14 '52

New three-stage curing oven boosts grinding wheel output. il Iron Age 170:146 N 20 '52

See also

Core ovens

Electric ovens

OVENS, Baking

Oven cleaners. il Consumers Res Bul 31:25-6 My '53

Control

Bakes better products and saves fuel with new continuous-oven control; Schaible's bakery. R. N. Brey, jr. il diag Food Eng 25:62-3+ Jl '53

OVER-the-counter marketing. See Securities—Over-the-counter marketing

OVERBROOK press

Frank Altschul and the Overbrook press. P. K. Thomajan. il Inland Ptr 131:43-5+ Je '53

OVERHEAD expense

Accounting for factory overhead expenses in a multiple-use plant. L. W. Garner. Ind & Eng Chem 44:2829-32 D '52

Handling occasional custom work free of fixed burden. R. W. Sauber. N A C A Bul 34:401-6 N '52

Many techniques combine for good cost control. R. A. Powell. N A C A Bul 34:385-401 N '52

OVERHEAD lines. See Electric lines—Overhead lines

OVERSEAS press club

OPC memorial clubhouse fund is half raised. Ed & Pub 86:13 F 14 '53

OVERTIME

Seventh-day, premium pay problem. N. C. Rockwood. Rock Prod 56:95+ Ag '53

Ten ways to save overtime. H. L. Wylie. Am Bsns 23:14-15 Jl '53

OVERVOLTAGE

Effect of ultrasonic waves on hydrogen overvoltage. E. Yeager, T. S. Oey and F. Hovorka. bibliog diags J Phys Chem 57:268-75 Mr '53

Hydrogen overvoltage and atomic hydrogen electrodes. P. Van Rysselberghe. bibliog J Chem Phys 20:1522-3 O '52

Hydrogen overvoltage on bright platinum. S. Schuldiner. bibliog il Electrochem Soc J 99:488-94 D '52

OVERVOLTAGE (electric lines)

Power system transients; causes of overvoltages. E. O. Taylor. Elec J 149:1742-9 D 5 '52

OWENS-CORNING fiberglas corporation

Newcomers on the New York stock exchange. J. S. Williams. Mag of Wall St 91:648+ Mr 7 '53

OWENS-ILLINOIS glass company

Entry into new fields bolsters its growth rate. C. A. Clark, jr. Barron's 33:15+ F 23 '53

OXALACETIC acid

Preparation and stability of hydroxymaleic acid (oxaloacetic acid). J. C. Roberts. Chem Soc J p3315-16 Ag '52

OXALATES

Complex ions of chromium; reactions between hexaquochromium(III) and oxalate ions. R. E. Hamm and R. E. Davis. bibliog Am Chem Soc J 75:3085-9 Jl 5 '53

Structure of the oxalate ion. G. A. Jeffrey and G. S. Parry. Chem Soc J p4864-7 D '52

OXALIC acid

Acetic oxalic anhydride. W. R. Edwards, jr. and W. M. Henley. bibliog Am Chem Soc J 75:3587-9 Jl 20 '53

Condensation of oxalic esters with esters of β-alanine and N-substituted β-aminopropionic acids; synthesis of some derivatives of 2,3-dioxopyrrolidine and 2-oxo-3-methoxy-3-pyrroline. P. L. Southwick and R. T. Crouch. bibliog Am Chem Soc J 75:3413-17 Jl 20 '53

Isotope effect in the decomposition of oxalic acid. A. Fry and M. Calvin. bibliog diag J Phys Chem 56:897-901 O '52

Non-electrolytic smoothing treatment for steel. W. A. Marshall. il diag Metal Finishing 50:78-83+ N; 67-9 D '52

OXALIC acid—*Continued*

Structure of α-oxalic acid and of the carboxyl group. E. G. Cox, M. W. Dougill and G. A. Jeffrey. diags Chem Soc J p4854-64 D '52

Vapour pressure and lattice energy of hydrogen-bonded crystals; α- and β-anhydrous oxalic acid and tetragonal pentaerythritol. R. S. Bradley and S. Cotson. Chem Soc J p 1684-8 Je '53

OXALYL chloride

Raman and infrared spectral data, assignments, potential constants, and calculated thermodynamic properties for oxalyl chloride. J. S. Ziomek and others. bibliog diags J Chem Phys 21:90-100 Ja '53

Raman spectrum of oxalyl chloride. B. D. Saksena and others. J Chem Phys 21:1613-14 S '53

Structure of oxalyl chloride. R. E. Kagarise. J Chem Phys 21:1615-16 S '53

OXAMIC acid

Hydrolysis of amides of dibasic acids; the acid hydrolysis of oxamide and oxamic acid. J. Packer, A. L. Thomson and J. Vaughan. Chem Soc J p4516-18 N '52

Vapour pressure and lattice energy of hydrogen-bonded crystals; oxamide, oxamic acid, and rubeanic acid. R. S. Bradley and T. G. Cleasby. diags Chem Soc J p 1681-4 Je '53

OXAMIDE

Hydrolysis of amides of dibasic acids; the acid hydrolysis of oxamide and oxamic acid. J. Packer, A. L. Thomson and J. Vaughan. Chem Soc J p4516-18 N '52

Vapour pressure and lattice energy of hydrogen-bonded crystals; oxamide, oxamic acid, and rubeanic acid. R. S. Bradley and T. G. Cleasby. diags Chem Soc J p 1681-4 Je '53

OXAZINE

3 : 4-Dihydro-2-ketonaphtho(1′ : 2′-5 : 6)-1 : 3-oxazine. R. D. Haworth, R. MacGillivray and D. H. Peacock. Chem Soc J p2857-8 Jl '52

OXAZOLES

Oxazole cyanine and *mero*cyanine dyes, and intermediates. R. A. Jeffreys. Chem Soc J p4823-32 D '52

Synthesis of oxazoles from ethyl acetoacetate; ring-fission of some oxazole-5-carboxylic acids. J. W. Cornforth and Mrs R. H. Cornforth. Chem Soc J p93-8 Ja '53

OXAZOLIDINEDIONE

Structure of pyrrolidinetriones and oxazolidinediones. G. S. Skinner and C. B. Miller, jr. bibliog Am Chem Soc J 75:977-9 F 20 '53

OXAZOLIDONE

Electric moments and intermolecular hydrogen bonds of cyclic amides and oxazolidones. E. Fischer. Chem Soc J p4525-7 N '52; Correction. p2836 S '53

OXAZOLINE

Structures of the oxazoline derivatives of monosaccharides. J. T. Edward and E. F. Martlew. Chem & Ind p 1034 O 18 '52

OXAZOLONE

Ultraviolet absorption spectra of oxazolones and related compounds. E. L. Bennett and E. Hoerger. bibliog Am Chem Soc J 74:5975-9 D 5 '52

OXFORD university

American at Oxford. E. B. Skolnikoff. il Tech R 55:155-7+ Ja '53

In changing world Oxford maintains individualism. F. Morley. Barron's 33:6 Jl 27 '53

OXIDASES

Destruction of epinephrine by the DOPA-oxidase system of ocular tissue. W. J. Angenent and G. B. Koelle. bibliog Science 116:543-4 N 14 '52

Fractionation of D-amino acid oxidase by electrophoresis-convection. J. R. Cann and W. R. Frisell. bibliog Am Chem Soc J 75:2425-7 My 20 '53

OXIDATION

Activity of solid catalysts. W. B. Argo and J. M. Smith. bibliog flow diag diag Ind & Eng Chem 45:298-302 F '53

Alkaline permanganate oxidation of oil-shale kerogen. W. E. Robinson, H. H. Heady and A. B. Hubbard. bibliog Ind & Eng Chem 45:788-91 Ap '53

Aromatic azo-compounds; oxidation of azonaphthalenes and phenylazonaphthalenes. G. M. Badger and G. E. Lewis. Chem Soc J p2151-5 Jl '53

Aromatic azo-compounds; oxidation of *cis*- and *trans*-azobenzene and substituted azo-benzenes. G. M. Badger, R. G. Buttery and G. E. Lewis. Chem Soc J p2143-50 Jl '53

Attack of metals by free radicals and atoms. F. W. Thompson and A. R. Ubbelohde. bibliog J Ap Chem 3:27-36 Ja '53

Biochemical oxidation of dairy wastes. N. Porges and others. bibliog Sewage & Ind Wastes 24:874-81, 1144-9; 25:201-6 Jl, S '52, F '53; Discussion. 25:207-9 F '53

Black liquor oxidation and the absorption of non-condensable digester gases. M. A. Schoening and others. il Tappi 36:176-9 Ap '53

Catalytic oxidation of carbon monoxide on nickel oxide. G. Parravano. bibliog Am Chem Soc J 75:1448-54 Mr 20 '53

Catalytic oxidation procedure for determining sulphur compounds in kraft mill gases. H. W. Bialkowsky and G. G. DeHaas. bibliog diag Pulp & Pa of Can 53:99-105 O '52; Same. Tappi 36:330-6 Jl '53

Coal oxidation; comparative studies on phenols. G. R. Yohe and others. bibliog Am Chem Soc J 75:2688-93 Je 5 '53

Correlations between parabolic oxidation of metals and properties of oxides. A. Dravnierks. Electrochem Soc J 100:95-102 bibliog(126 ref, p 101-2) Mr '53

Destruction of phenols by oxidation with ozone. S. J. Niegowski. bibliog Ind & Eng Chem 45:632-4 Mr '53

Effect of daylight on the periodate oxidation of β-methyl glucoside, β-methyl cellobioside, and cellulose. F. S. H. Head. bibliog Textile Inst J Trans 44:T209-23 My '53

Effect of oxidation rates on graphitization of cupola melted malleable. M. Tilley. il Foundry 80:108-9+ N '52

Effect of packing type on the rate of black liquor oxidation. R. H. Wright. il diag Tappi 36:85-8 F '53

Electron diffraction studies on the oxidation of pure copper and pure zinc between 200° and 500°C. E. A. Gulbransen and W. R. McMillan. bibliog il Electrochem Soc J 99:393-401 O '52

Electron transfer processes and the oxidation-reduction reactions of hexacyanoferrate(III) ion in aqueous solution. A. W. Adamson. bibliog J Phys Chem 56:858-62 O '52

Free-radical formation in oxidations by manganic pyrophosphate. A. Y. Drummond and W. A. Waters. Chem Soc J p2836-7 S '53

Fume disposal by catalytic combustion creates new market for gas use. R. J. Ruff. il Gas Age 111:33-6 Mr 26 '53

Hardening of metals; abstract. J. L. Meijering. Metal Prog 64:182+ S '53

Identification and vapor phase oxidation of 0,3,4-bicyclononadiene. F. T. Wadsworth and F. J. Smith. bibliog diag Ind & Eng Chem 45:217-21 Ja '53

Inhibiting oxidation of waxes used on wrappers and cartons. R. F. Seubert and E. D. Andrews. Tappi 36:sup 174A-5A Je '53

Inhibition of acetaldehyde oxidation by hydrocarbons of various molecular structures. N. J. H. Small and A. R. Ubbelohde. diags Chem Soc J p637-42 F '53

Inhibitory effects of mercury and of hydrogen in the gas-phase oxidation of *n*-hexane. N. J. H. Small and A. R. Ubbelohde. diag Chem Soc J p4619-28 D '52

Isotope effect in the oxidation of a secondary carbinol. W. A. Bonner and C. J. Collins. bibliog Am Chem Soc J 75:2308-11 My 20 '53

Kinetic study of photo-oxidations on the surface of zinc oxide in aqueous suspensions. M. C. Markham and K. J. Laidler. bibliog J Phys Chem 57:363-9 Mr '53

Kinetics of the oxidation of ethylene by nitrogen dioxide. T. L. Cottrell and T. E. Graham. Chem Soc J p556-63 F '53

OXIDATION—*Continued*

Kinetics of the oxidation of galena in sodium-hydroxide solutions under oxygen pressure. J. E. Andersen and others. bibliog il diag J Metals 5:Trans 554-8 Ap '53; Discussion. 5:Trans 1556-8 sec 2 N '53

Kinetics of the oxidation of iron(II) by bromine. P. R. Carter and N. Davidson. bibliog J Phys Chem 56:877-81 O '52

Kinetics of the oxidation of methane by nitrous oxide. P. L. Robinson and E. J. Smith. diag Chem Soc J p3895-904 O '52

Logarithmic growth law for the oxidation of titanium. J. T. Waber, G. E. Sturdy and E. N. Wise. Am Chem Soc J 75:2269-70 My 5 '53

Mechanism of the oxidation of *p,p′*-dichlorobenzyl sulfide by peroxybenzoic and *para* substituted peroxybenzoic acids. C. G. Overberger and R. W. Cummins. bibliog Am Chem Soc J 75:4250-4 S '53

Mechanization of oxidation; oxidation and autoxidation of hydrazones. W. Witkop and H. M. Kissman. bibliog Am Chem Soc J 75: 1975-80 Ap 20 '53

Mercury photo-sensitized oxidation of ethane and methane. J. A. Gray. diags Chem Soc J p3150-4 Ag '52

Mercury photosensitized oxidation of paraffins. B. D. Darwent. bibliog J Chem Phys 20:1979-80 D '52

Metallic oxidation in chromium steel melting. D. C. Hilty and others. J Metals 5:Trans 649-53 My '53

New way to ethylene oxide; fluidized catalyst system. flow sheet il Chem Eng 60:134+ F '53

Oxidation of aromatic compounds in aqueous solution by free radicals produced by photo-excited electron transfer in iron complexes. H. G. C. Bates and N. Uri. bibliog Am Chem Soc J 75:2754-9 Je 5 '53

Oxidation of carboxylic acids containing a tertiary carbon atom. J. Kenyon and M. C. R. Symons. Chem Soc J p2129-32 Jl '53

Oxidation of cotton kier wastes; with cost data. N. L. Nemerow. bibliog Sewage & Ind Wastes 25:1060-4 S '53

Oxidation of ethylene to ethylene oxide. S. Wan. bibliog Ind & Eng Chem 45:234-8 Ja '53

Oxidation of ferrous hydroxide. J. E. O. Mayne. Chem Soc J p 129-32 Ja '53

Oxidation of glycols by aryl iodosoacetates; a kinetic study. K. H. Pausacker. Chem Soc J p 107-9 Ja '53

Oxidation of glycols with lead tetra-acetate; a kinetic study. J. P. Cordner and K. H. Pausacker. Chem Soc J p 102-6 Ja '53

Oxidation of hydrazine in aqueous solution; the nature of 1- and 2-electron-transfer reactions, with particular reference to the oxidation of hydrazine. W. C. E. Higginson, D. Sutton and P. Wright. Chem Soc J p 1380-6 My '53

Oxidation of hydrazine in aqueous solution; the use of ^{15}N as a tracer in the oxidation of hydrazine. W. C. E. Higginson and D. Sutton. Chem Soc J p 1402-6 My '53

Oxidation of 4-methylcatechol in aqueous solution by ferric ion. H. Burton and H. B. Hopkins. Chem Soc J p2445-7 Je '52

Oxidation of methyl dehydroabietate by molecular oxygen. P. F. Ritchie, T. F. Sanderson and L. F. McBurney. bibliog Am Chem Soc J 75:2610-12 Je 5 '53

Oxidation of monoethenoid fatty acids and esters; catalytic oxidation of elaidic acid, methyl elaidate, and *n*-propyl elaidate; the oxidation products. J. H. Skellon and M. N. Thruston. Chem Soc J p 138-42 Ja '53

Oxidation of monoethenoid fatty acids and esters; the preparation and catalytic oxidation of highly purified brassidic acid by gaseous oxygen. J. H. Skellon and C. G Taylor. Chem Soc J p 1433-5 My '53

Oxidation of *n*-paraffins from propane to nonane by nitrous oxide. E. J. Smith. Chem Soc J p 1271-5 Ap '53

Oxidation of simple organic substances by sodium metaperiodate in solutions exposed to daylight. F. S. H. Head and G. Hughes. Chem Soc J p2046-52 Je '52

Oxidation reactions with pertrifluoroacetic acid. W. D. Emmons and A. F. Ferris. Am Chem Soc J 75:4623-4 S 20 '53

Oxidation-reduction potential of chlorinated sewage. C. E. Keefer and J. Meisel. bibliog Sewage & Ind Wastes 25:759-66 Jl '53

Oxidations with phenyl iodosoacetate; the oxidation of primary aromatic amines. K. H. Pausacker. Chem Soc J p 1989-90 Jl '53

Oxidations with ruthenium tetroxide. C. Djerassi and R. R. Engle. bibliog Am Chem Soc J 75:3838-40 Ag 5 '53

Oxidative ring cleavage reactions of propylene sulfide. J. M. Stewart and H. P. Cordts. bibliog Am Chem Soc J 74:5880-4 D 5 '52

Periodate oxidation of pea cannery wastes. R. B. Flay. bibliog Sewage & Ind Wastes 25:953-7 Ag '53

Peroxides of tetrahydrocarbazole and related compounds; autoxidation of substituted tetrahydrocarbazoles. R. J. S. Beer, T. Broadhurst and A. Robertson. Chem Soc J p4946-51 D '52

Photoöxidation of crystalline estrogens in the presence of flavins. J. F. Nyc and others. bibliog Am Chem Soc J 75:907-10 F 20 '53

Photosensitized oxidation of paraffins. J. A. Gray. J Chem Phys 21:1300-1 Jl '53

Polarizing effect of trace amounts of antimony(III) on the electrolytic oxidation of arsenic in acid solution. B. B. Baker and W. M. MacNevin. bibliog Am Chem Soc J 75:1473-5 Mr 20 '53

Possible significance of Fenton's reaction in relation to oxidations effected by enzyme systems. D. J. Mackinnon and W. A. Waters. Chem Soc J p323-8 Ja '53

Practical results obtained with black liquor oxidation. O. Sylwan. il diag Paper Tr J 137:14-16 S 4 '53

Preliminary study of the oxidation and vapor pressure of chromium. E. A. Gulbransen and K. F. Andrew. bibliog Electrochem Soc J 99:402-6 O '52

Production of electronically excited molecules in the oxidation products of graphite. R. H. Busso. bibliog Am Chem Soc J 74: 6101-2 D 5 '52

Production of high manganese slags by selective oxidation of spiegeleisen. M. B. Royer and R. C. Buehl. bibliog il J Metals 4:Trans 1295-300 D '52

Products of oxidation of an olefin structurally related to GR-S. G. R. Mitchell and J. R. Shelton. bibliog Ind & Eng Chem 45: 386-92 F '53

Purpurogallin; further studies on the oxidation products of purpurogallin and purpurogallincarboxylic acid. W. D. Crow, R. D. Haworth and P. R. Jefferies. Chem Soc J p3705-13 O '52

Rates of chromic acid oxidation of some cyclanols. H. G. Kuivila and W. J. Becker, 3d. bibliog Am Chem Soc J 74:5329-30 N 5 '52

Reaction between ferrous iron and dissolved oxygen in brine. D. C. Bond and G. G. Bernard. bibliog diag Ind & Eng Chem 44:2435-8 O '52

Reactions of fatty materials with oxygen; new method for concentrating long-chain peroxides. J. E. Coleman, H. B. Knight and D. Swern. bibliog Am Chem Soc J 74:4886-9 O 5 '52

Redox diagrams. L. G. Sillén. bibliog J Chem Educ 29:600-8 D '52

Simplified method for the determination of chromic oxide (Cr$_2$O$_3$) when used as an index substance. D. W. Bolin and others. bibliog Science 116:634-5 D 5 '52

Sodium perborate as a reagent in organic chemistry; oxidation of polyhydric alcohols. S. M. Mehta and R. S. Iyer. Am Chem Soc J 74:5541-2 N 5 '52

Spectrophotometric method for following dichromate oxidations. M. J. Cardone and J. Compton. bibliog Anal Chem 24:1903-8 D '52

Stabilities of +4 and +5 oxidation states of the actinide elements; the Np(IV)-Np(V) couple in perchloric acid solution. L. B. Magnusson and J. R. Huizenga. bibliog Am Chem Soc J 75:2242-6 My 5 '53

OXIDATION—*Continued*

Stages in oxidations of organic compounds by potassium permanganate; the permanganate-manganate stage; the manganic-manganous stage. A. Y. Drummond and W. A. Waters. Chem Soc J p435-43 F '53

Studies by infrared spectra on the initiation process in autoxidation of methyl linolenate. N. A. Khan. J Chem Phys 21:952 My '53

Studies in the steroid group; oxidation of $5\alpha : 8\alpha$-epidoxyl-$\Delta^{9(11)}$-steroids. H. B. Henbest and others. Chem Soc J p4894-6 D '52

Studies on some metal electrodes; the temperature coefficients of the copper and antimony electrodes in solutions initially free from their ions; the mode of oxidation of these metals. A. R. Tourky and E. M. Khairy. Chem Soc J p2626-33 Jl '52

Studies on the structure of sphingomyelin; oxidation of products of partial hydrolysis. G. Rouser and others. bibliog Am Chem Soc J 75:310-12 Ja 20 '53

Studies on the structure of sphingomyelin; performic and periodic acid oxidation studies. G. Marinetti and others. bibliog Am Chem Soc J 75:313-15 Ja 20 '53

Synthesis in the santonin series; some oxidation products of α-(2-keto-4-methyl*cyclo*hexyl)propionic acid. G. R. Clemo and F. J. McQuillin. Chem Soc J p3835-9 O '52

Synthesis of 11-ketosteroids; dichromate oxidation of a bile acid $\Delta^{7,9(11)}$-diene. L. F. Fieser, W. Huang and J. C. Babcock. bibliog Am Chem Soc J 75:116-21 Ja 5 '53

Synthesis of 11-ketosteroids; oxidation of $\Delta^{7,9(11)}$-dienes with N-bromosuccinimide. L. F. Fieser, W. P. Schneider and W. Huang. bibliog Am Chem Soc J 75:124-7 Ja 5 '53

Theoretical analysis of the diffusion processes determining the oxidation rate of alloys. C. Wagner. bibliog(47 ref) Electrochem Soc J 99:369-80 O '52

Two complex salts of choline and copper chloride and their activity as catalysts of fat oxidation. P. L. White, D. M. Hegsted and J. Mayer. bibliog Am Chem Soc J 75:2352-4 My 20 '53

Unfamiliar oxidation states in liquid ammonia. A. W. Davidson and J. Kleinberg. bibliog J Phys Chem 57:571-5 Je '53

Water-soluble polycarboxylic acids by oxidation of coal. N. W. Franke and others. bibliog flow sheet il plan diag Ind & Eng Chem 44:2784-92 N '52

Autoxidation

Autoxidation of the saturated aliphatic diesters. M. W. Rigg and H. Gisser. bibliog Am Chem Soc J 75:1415-20 Mr 20 '53

Retardation of benzaldehyde autoxidation; a comparative study of the actions of *p*-cresol, *m*-2-xylenol, and their oxidation products. W. A. Waters and C. Wickham-Jones. Chem Soc J p2420-7 Je '52

Retardation of benzaldehyde autoxidation; a kinetic study of the actions of 3 : 5 : 3′ : 5′-tetramethyl-4 : 4′-diphenoquinone and the corresponding quinol. J. R. Dunn, W. A. Waters and C. Wickham-Jones. Chem Soc J p2427-31 Je '52

Retardation of benzaldehyde autoxidation; isolation of chain-termination products from 3 : 5 : 3′ : 5′-tetramethyl-4 : 4′-diphenoquinone. R. F. Moore and W. A. Waters. Chem Soc J p2432 Je '52

Unusual reactions of thallium; alkoxides and aryloxides of thallium as oxidising agents. L. P. McHatton and M. J. Soulal. Chem Soc J p2771-3 Jl '52

Bibliography

Oxidation of sulphate black liquor; review of the literature. T. T. Collins, jr. bibliog(67 ref) Paper Tr J 136:37-40 Mr 20; 19-22+ Mr 27 '53

OXIDATION, Heat of

Heat of oxidation of germanous iodide to germanic acid. W. L. Jolly and W. M. Latimer. bibliog Am Chem Soc J 74:5752-4 N 20 '52

OXIDATION, Physiological

Microbiological transformations of steroids. S. H. Eppstein and others. bibliog Am Chem Soc J 75:408-22 Ja 20 '53

Microbiological transformations of steroids; introduction of oxygen at carbon-11 of progesterone. D. H. Peterson and others. bibliog Am Chem Soc J 74:5933-6 D 5 '52

Microbiological transformations of steroids; the preparation of 11α-hydroxy-17α-progesterone. P. D. Meister and others. bibliog Am Chem Soc J 75:55-7 Ja 5 '53

Production of α-ketoglutarate in glucose oxidation by pseudomonas fluorescens. H. J. Koepsell, F. H. Stodola and E. S. Sharpe. bibliog Am Chem Soc J 74:5142-4 O 20 '52

OXIDATION ponds. See Sewage lagoons

OXIDATION potential. See Potential, Electric

OXIDATION reduction potential. See Potential, Electric

OXIDES

Adhesion of liquids to solids; molecular interaction between metal oxides and adsorbed vapors. E. H. Loeser, W. D. Harkins and S. B. Twiss. bibliog J Phys Chem 57:251-4 F '53

Behavior of refractory oxides in contact with metals at high temperatures. G. Economos. bibliog diag Ind & Eng Chem 45:458-9 F '53

Correlations between parabolic oxidation of metals and properties of oxides. A. Dravnierks. Electrochem Soc J 100:95-102 bibliog(126 ref, p 101-2) Mr '53

Di-*n*-alkylphosphine oxides; synthesis. R. H. Williams and L. A. Hamilton. Am Chem Soc J 74:5418-20 N 5 '52

Dynamic structure of oxide cracking catalyst. A. G. Oblad, S. G. Hindin and G. A. Mills. bibliog Am Chem Soc J 75:4096-8 Ag 20 '53

Electrical resistance of some refractory oxides and their mixtures in the temperature range 600° to 1500°C. J. R. Hensler and E. C. Henry. bibliog diags Am Cer Soc J 36:76-83 Mr 1 '53

Ferroelectricity in oxides of face-centered cubic structure. W. R. Cook, jr. and H. Jaffe. Phys R 89:1297-8 Mr 15 '53

Markings found in the oxide replicas for electron microscopy. S. Yamaguchi. il diags J Ap Phys 23:935-6 S '52

Oxidation products which contribute to the oxidation resistance of TiC-base cermets. H. M. Greenhouse. il Am Cer Soc J 35:271-4 O 1 '52

Papermakers challenge the sulfur shortage; cheap source of sulfur dioxide in spent oxide and dirty sulfur. S. Schwartz. flow diag Paper Tr J 136:18-19 Ja 30 '53

Processed spent oxide hailed as sulfur source. R. S. Aires. Paper Ind 34:964 N '52

Studies of the oxide cathode. L. S. Nergaard. bibliog diags RCA R 13:464-545 D '52

Subsolidus reactions in oxide systems in the presence of water at high pressures. E. F. Osborn. bibliog diags Am Cer Soc J 36:147-51 My 1 '53

Thermodynamic properties of the oxides and their vaporization processes. L. Brewer. Chem R 52:1-75 bibliog(p65-75) F '53

See also

Titanium oxides

OXIDIZING agents

See also

Ozone

Potassium chlorate

OXIMES

Beckmann rearrangements; aldoximes. E. C. Horning and V. L. Stromberg. bibliog Am Chem Soc J 74:5151-2 O 20 '52

Degradation of Mannich base oximes. Z. Kyi and W. Wilson. Chem Soc J p798-802 Mr '53

Preparation of nitro compounds from oximes. D. C. Iffland and others. bibliog Am Chem Soc J 75:4044-6 Ag 20 '53

Preparation of nitro compounds from oximes; the improved synthesis of nitrocycloalkanes. D. C. Iffland and G. X. Criner. bibliog Am Chem Soc J 75:4047-8 Ag 20 '53

OXIMES—*Continued*
Preparation of primary amines by reduction of oximes with lithium aluminum hydride and by the Leuckart reaction. C. R. Walter, jr. bibliog Am Chem Soc J 74:5185-7 O 20 '52

OXINDOLE
Gelsemine; the chemistry and rearrangements of spiroöxindoles. B. Witkop and J. B. Patrick. bibliog Am Chem Soc J 75:2572-6 Je 5 '53
New synthesis of oxindole. A. B. Neill. Am Chem Soc J 75:1508 Mr 20 '53

OXINE. See Quinolinol

OXO process
Oxo process in the U.S. for petrochemicals from olefins. P. W. Sherwood. bibliog il diag Pet Processing 8:241-8 F '53

OXOGLUTARIC acid
Kinetics of the metal-ion catalysed decarboxylation of acetonedicarboxylic acid. J. E. Prue. Chem Soc J p2331-8 Je '52

OXONIUM compounds
Infrared spectrum of the oxonium ion. C. C. Ferriso and D. F. Horning. bibliog Am Chem Soc J 75:4113-14 Ag 20 '53

OXYACETOPHENONE
Synthesis of 3-substituted chromones by rearrangement of *o*-acyloxyacetophenones. W. D. Ollis and D. Weight. Chem Soc J p3826-30 O '52

OXYACETYLENE cutting
Cut away frozen nuts and rivets. D. K. Feinthal. il Welding J 32:745 Ag '53
Cut out the old, weld in the new. L. F. Lillard. il Welding J 32:332 Ap '53
Gears cut by guided flame. R. E. Orton. il diag Tool Eng 30:37-44 F '53
Groove cutting for the shop. R. G. Householder. il diags Welding J 32:232-4 Mr '53
Hand-cutting clinic; illustrated instructions. P. F. McGonagle. Welding J 32:132-3 F '53
Machine cutting to prepare steel castings for welding. il Steel 131:284+ O 13 '52
Oxyacetylene in paper mill maintenance. D. B. Thomas. il Tappi 36:sup38A+ Jl '53
Quarry maintenance; Davidson granite co. J. D. Davidson. il Welding J 32:992-6 O '53
Rail-cutting aids road improvement. il diag Welding J 31:1056 N '52
Three-dimensional cutting equipment. il Welding J 32:782 Ag '53; Machine Design 25:227 O '53

OXYACETYLENE flame
Flame hardening; lathe ways to 30 ft long rapidly hardening, quenched in new setup. il Iron Age 170:217-18 N 6 '52; Tool Eng 29:47 D '52; Steel 131:86 D 29 '52
Flame hardening machines speed treatment of engine components. A. H. Allen. il Metal Prog 64:97-102 O '53
Flame hardening of large diameter thin-wall cylindrical shells. G. A. Weber. il diags Welding J 32:37-43 Ja '53
Longer life for truck center castings. il Welding J 32:237 Mr '53
Removing coil ends from commutator risers. C. F. Steinbrink. il Ry Loco & Cars 127:70-1 Jl '53
Surface hardening of steels and irons; flame hardening. J. L. Everhart. il Materials & Methods 38:145-7 O '53
Thermodynamics of combustion gases; temperatures and composition of the combustion products of oxyacetylene flames. H. E. Edwards and others. U S Bur Mines Rep of Invest 4958:1-7 '53

OXYACETYLENE welding
Cut out the old, weld in the new. L. F. Lillard. il Welding J 32:332 Ap '53
Examples of welding heat treated parts. il Roads & Sts 96:50 Ja '53
Hints for welding sheet steel; illustrated instructions. Y. Hale. diag Welding J 32:335 Ap '53
How to double a kelly's useful life; new welding method. R. B. Tuttle. il diags Oil & Gas J 51:148-50 O 20 '52
How to weld pipe. il diags Mill & Factory 51:128-31 D '52
Metal spray, welding rod turn old parts into gold; Atlanta transit co. il Bus Transportation 32:30-1 Mr '53
New life for worn surfaces. D. E. Lytle. il Welding J 31:1054-6 N '52
Old boiler tubes become gate frames. il Welding J 32:334 Ap '53
Oxyacetylene in paper mill maintenance. D. B. Thomas. il Tappi 36:sup38A+ Jl '53
Quarry maintenance; Davidson granite co. J. D. Davidson. il Welding J 32:992-6 O '53
Selection and evaluation of methods of hard facing. J. J. Barry. il Welding J 32:119-26 F '53
Some tips on how to weld glass molds. G. Miller. Cer Ind 59:87 D '52
These handrails are made from scrap. G. M. Priske. il diag Welding J 32:863 S '53
Welding Diesel locomotive parts; report of Master boiler makers' association. il Ry Mech & Elec Eng 126:65-8 N '52

OXY-CATALYST, inc.
Dravo is manufacturer's representative for air-pollution, heat-recovery device. il Eng N 150:115 Mr 5 '53

OXYCELLULOSE
Carbonyl oxycelluloses. W. M. Corbett and others. Chem & Ind p 154 F 14 '53

OXYGEN
Absorption coefficients of oxygen in the vacuum ultraviolet. K. Watanabe and others. bibliog diag J Chem Phys 21:1026-30 Je '53
Accommodation coefficient technique applied to a study of molecular oxygen film on tungsten. J. L. Morrison and W. E. Grummitt. bibliog J Chem Phys 21:654-8 Ap '53
Atmospheric characteristics of greatest human significance in aviation of the next decade. P. A. Campbell. diags Aeronautical Eng R 12:50-5 Ap '53
Atomic oxygen *g*-factors. E. B. Rawson and R. Beringer. Phys R 88:677-8 N 1 '52
Carbon-oxygen absorption band in the infrared spectra of alcohols. H. H. Zeiss and M. Tsutsui. bibliog Am Chem Soc J 75:897-900 F 20 '53
Cloud-chamber study of the scattering of fast neutrons in oxygen. J. P. Conner. bibliog Phys R 89:712-14 F 15 '53
Decomposition of *n*-butane in the presence of oxygen. W. G. Appleby and others. bibliog Am Chem Soc J 75:1809-14 Ap 20 '53
Detection of the HO_2 radical by mass spectrometry. S. N. Foner and R. L. Hudson. diag J Chem Phys 21:1608-9 S '53
Direct introduction of oxygen into the steroid nucleus; chromic anhydride oxidation of isoandrosterone acetate and androstanediol diacetate. H. B. MacPhillamy and C. R. Scholz. bibliog Am Chem Soc J 74:5512-14 N 5 '52
Direct introduction of oxygen into the steroid nucleus; studies on the chromic anhydride oxidation of dehydroisoandrosterone acetate dibromide. A. F. St André and others. bibliog Am Chem Soc J 74:5506-11 N 5 '52
Drift velocity of ions in oxygen, nitrogen, and carbon monoxide. R. N. Varney. Phys R 89:708-11 F 15 '53
Effect of oxygen on a radioreduction reaction. N. Todd and S. L. Whitcher. bibliog J Chem Phys 20:1172-3 Jl '52
Effect of small additions of oxygen on lattice constants and hardness of zirconium. R. M. Treco. bibliog il J Metals 5:Trans 344-8 sec 2 F '53
Effect of water on the burning velocities of cyanogen-oxygen-argon mixtures. R. S. Brokaw and R. N. Pease. bibliog Am Chem Soc J 75:1454-7 Mr 20 '53
Effects of carbon, oxygen and nitrogen on welds in titanium. D. C. Martin. il diags Welding J 32:sup 139-54 Mr '53
Elastic scattering of alpha-particles by oxygen. J. R. Cameron. bibliog diag Phys R 90:839-44 Je 1 '53
Electronic structures and spectra of some molecules related to oxygen. L. E. Orgel. Chem Soc J p 1276-8 Ap '53
Experiences with oxygen control in open hearth flue gases. F. P. Hubbell. diags Iron & Steel Eng 30:53-6; Discussion. 57-8 Ag '53
50 years of oxygen plants; abstract. diag Refrig Eng 61:978-9 S '53
Flame velocities in carbon monoxide-oxygen mixtures. T. W. Price and J. H. Potter. bibliog il diags A S M E Trans 75:91-6 Ja '53

OXYGEN—*Continued*

Gaseous detonations; nonsteady waves in CO-O_2 mixtures. G. B. Kistiakowsky and others. bibliog il diags J Chem Phys 20:994-1000 Je '52

Investigation of the production of acetylene by flames of methane and oxygen. P. H. Kydd. Am Chem Soc J 74:5536-7 N 5 '52

Investigation of the surface reaction of oxygen with carbon on tungsten with the field emission microscope. R. Klein. bibliog il diag J Chem Phys 21:1177-80 Jl '53

Isotope shift in neutral oxygen. L. W. Parker and J. R. Holmes. bibliog Opt Soc Am J 43:103-9 F '53

Kinetics of reaction between ammonia and oxygen in a quartz vessel. H. Wise and M. F. Frech. J Chem Phys 21:948-9 My '53

Kinetics of the oxidation of galena in sodium-hydroxide solutions under oxygen pressure. J. E. Andersen and others. bibliog il diag J Metals 5:Trans 554-8 Ap '53; Discussion. 5:Trans 1556-8 sec 2 N '53

Kinetics of the simultaneous reduction of oxygen and pervanadyl ion by iodide ion in acid solution. M. H. Boyer and J. B. Ramsey. bibliog Am Chem Soc J 75:3802-8 Ag 5 '53

Mechanism of aromatic side-chain reactions, with special reference to the polar effects of substituents; mesomeric effects of elements of the oxygen group. J. W. Baker, G. F. C. Barrett and W. T. Tweed. Chem Soc J p2831-9 Jl '52

Method for studying the mobility of chemisorbed films; oxygen on tungsten. R. Gomer and J. K. Hulm. Am Chem Soc J 75:4114-15 Ag 20 '53

Molecular association of oxygen and aromatic substances. D. F. Evans. Chem Soc J p345-7 Ja '53

New absorption bands of the oxygen molecule in the far ultraviolet region. Y. Tanaka. bibliog J Chem Phys 20:1728-33 N '52

New fine structure in neutral oxygen. L. W. Parker and J. R. Holmes. bibliog diag Phys R 90:142-3 Ap 1 '53

Non-exchange of oxygen between water and some compounds of nitrogen. F. Bonner and J. Bigeleisen. Am Chem Soc J 74:4944-5 O 5 '52

Normal boiling points of oxygen on the thermodynamic scale. J. G. Aston and G. W. Moessen. J Chem Phys 21:948 My '53

Oxygen exchange between nitric acid and water; catalysis by nitrous acid. C. A. Bunton, E. A. Halevi and D. R. Llewellyn. Chem Soc J p2653-7 S '53

Oxygen induced electroreduction of hydrogen peroxide and reduction of oxygen at the rotated gold wire electrode. I. M. Kolthoff and J. Jordan. bibliog Am Chem Soc J 74:4801-5 O 5 '52

Oxygen resources of San Diego bay. I. Nusbaum and H. E. Miller. bibliog map Sewage & Ind Wastes 24:1512-27 D '52

Photochemical studies; liquid acetone-oxygen and liquid acetone-heptane-oxygen. P. E. Frankenburg and W. A. Noyes, jr. bibliog Am Chem Soc J 75:2847-50 Je 20 '53

Photochemical studies; the reactions of methyl radicals with oxygen. R. B. Martin and W. A. Noyes, jr. bibliog Am Chem Soc J 75:4183-5 S 5 '53

Polarographic method for the indirect determination of polarization curves for oxygen reduction on various metals; chromium, molybdenum, tantalum, titanium, tungsten, and zirconium. P. Delahay and L. J. Stagg. Electrochem Soc J 99:546-8 D '52

Preparing crude rubber test specimens for oxygen-absorption measurements. W. J. Gowans. bibliog il Anal Chem 24:1648-9 O '52

Progress report on operation of pressure-gasification pilot plant utilizing pulverized coal and oxygen. G. R. Strimbeck and others. bibliog 24pls U S Bur Mines Rep of Invest 4971:1-27 '53; Same. Am Gas Assn Proc 1952:778-817

Scattering of slow neutrons by O_2 molecules. O. Halpern and G. L. Appleton. bibliog Phys R 90:869-79 Je 1 '53

Self-consistent calculation of the dissociation of oxygen in the upper atmosphere; three-body recombinations. H. E. Moses and T. Wu. Phys R 91:1408-9 S 15 '53

Shape and thickness of shock fronts in argon, hydrogen, nitrogen, and oxygen. E. F. Greene and D. F. Hornig. bibliog J Chem Phys 21:617-24 Ap '53

Solubility of carbon and oxygen in liquid bismuth. C. B. Griffith and M. W. Mallett. bibliog Am Chem Soc J 75:1832-4 Ap 20 '53

Solubility of carbon and oxygen in molybdenum. W. E. Few and G. K. Manning. bibliog il diags J Metals 4:Trans 271-4 Mr '52; Discussion. 5:Trans 746-7 sec 2 My '53

Solubility of oxygen in, and the oxides of, tantalum. R. D. Wasilewski. bibliog Am Chem Soc J 75:1001-2 F 20 '53

Studies of fast reactions which evolve gases; the reaction of sodium-potassium alloy with water in the presence and absence of oxygen. M. Kilpatrick, L. L. Baker, jr. and C. D. McKinney, jr. bibliog il diag J Phys Chem 57:385-90 Ap '53

Submarines to obtain oxygen from electrolysis of water. Chem & Eng N 31:1882 My 4 '53

To prevent explosions avoid maximum oxygen limits. J. D. Constance. Power 97:99 Ag '53

Vanadium-oxygen solid solutions. A. U. Seybolt and H. T. Sumsion. bibliog il diag J Metals 5:Trans 292-9 sec 2 F '53

See also

Combustion

Steel—Oxygen content

Analysis

Determination of oxygen in iron in the presence of sulphur by the vacuum-fusion method. H. L. Hamner and R. M. Fowler. il diags J Metals 4:Trans 1313-15 D '52

Determination of trace oxygen in gases. D. D. Williams, C. H. Blachly and R. R. Miller. bibliog diag Anal Chem 24:1819-21 N '52

Direct determination of oxygen in organic compounds; abstract. J. Unterzaucher. Chem Age (Lond) 67:566 O 25 '52

Direct semimicrodetermination of oxygen in organic substances; improved apparatus and procedure for use with carbon reduction-titrimetric carbon dioxide method. R. D. Hinkel and R. Raymond. bibliog diags Anal Chem 25:470-9 Mr '53

Manometric gas analysis apparatus. J. N. Pitts, jr., D. D. DeFord and G. W. Recktenwald. bibliog il diags Anal Chem 24:1566-8 O '52

One-minute test for package O_2. C. C. Taylor and S. C. Danforth. il diags Food Eng 24:75+ N '52

Recent developments in quantitative organic microanalysis. W. Kirsten. bibliog(62 ref) il diags Anal Chem 25:74-86 Ja '53

Removal of oxygen from solutions and the determination of traces of oxygen with the stationary platinum microelectrode. A. M. Peers. bibliog diags Chem & Ind p969-71 O 4 '52

Semimicrodetermination of dissolved oxygen. E. L. Harper. diags Anal Chem 25:187-8 Ja '53

Industrial applications

Blowing Thomas pig iron with pure oxygen; abstract. F. A. Springorum and others. Metal Prog 64:142+ Jl '53

Industrial oxygen; abstract. D. Ambrose. Chem & Ind p 151-2 F 14 '53

New boost for your product with industrial gases. il Mod Ind 25:40-5 F '53

Refining iron by pure oxygen; report of paper by H. Trenkler, prepared by J. R. Miller. Iron & Steel Eng 30:116 Ag '53

Silicon content of blast furnace iron lowered by oxygen injection in ladle. P. S. Leroy. bibliog diags J Metals 5:396-400 Mr '53

Use of oxygen in the petrochemical industry. P. W. Sherwood. bibliog il Pet Refiner 32:90-4 Je; 141-4 Jl '53

Use of tonnage oxygen in sewage treatment. D. A. Okun. bibliog flow chart il Water & Sewage Works 100:374-9 S '53

OXYGEN—Industrial applications—*Continued*

Wide range metering of oxygen in steel plants. M. S. Gare. flow charts diags Iron & Steel Eng 30:74-81; Discussion. 81-2 Jl '53

Isotopes

Carbon-oxygen exchange in chemisorbed carbon monoxide. R. P. Eischens and A. N. Webb. J Chem Phys 20:1048-9 Je '52

Chemistry of the isotopes of oxygen. M. Dole. diags Chem R 51:263-300 bibliog(p297-300) O '52

Effect of isotopic substitution on the collision properties of the carbon dioxide molecule. E. W. Becker and W. Beyrich. diag J Phys Chem 56:911-13 O '52

Electronic emission spectrum of $C^{13}O^{16}$. K. E. McCulloh and G. Glockler. bibliog Phys R 89:145-7 Ja 1 '53

Electronic structure of O_2. S. L. Miller and others. bibliog Phys R 90:542-3 My 15 '53

Exchange of isotopic oxygen between vanadium pentoxide, gaseous oxygen and water. W. C. Cameron, A. Farkas and L. M. Litz. diags J Phys Chem 57:229-38 F '53

Experimental evidence for the Fermi interaction in the β decay of O^{14} and C^{10}. R. Sherr and J. B. Gerhart. bibliog Phys R 91:909-14 Ag 15 '53

Free radical initiated $O^{16}O^{18}$-H_2O^{16} exchange reaction in aqueous solutions. E. J. Hart, S. Gordon and D. A. Hutchison. Am Chem Soc J 74:5548-9 N 5 '52

Isotopic composition of oxygen in the catalytic decomposition of hydrogen peroxide. M. Dole and others. bibliog J Chem Phys 20:961-8 Je '52

Mechanism of the reaction $O^{16}+h\nu\rightarrow 4He^4$. C. A. Hsiao and V. L. Telegdi. bibliog Phys R 90:494-5 My 1 '53

Microwave absorption spectrum of $(O^{16})_2$ and $O^{16}O^{17}$. S. L. Miller and C. H. Townes. bibliog Phys R 90:537-41 My 15 '53

O^{14} β-decay and the Fermi interaction. M. E. Rose. Phys R 90:1123-4 Je 15 '53

Oxygen exchange between nitric acid and water. C. A. Bunton, E. A. Halevi and D. R. Llewellyn. Chem Soc J p4913-24 D '52

Self-diffusion and structure of liquid water; measurement of the self-diffusion of liquid water with H^2, H^3 and O^{18} as tracers. Jui Hsin Wang, C. V. Robinson and I. S. Edelman. Am Chem Soc J 75:466-70 Ja 20 '53

Separation of isotopes by fractional distillation; determination of parameters from production data; value of the unit process separation factor for the $H_2{}^{16}O$-$H_2{}^{18}O$ system. I. Dostrovsky and others. diag Chem Soc J p3517-24 S '52

Separation of isotopes by fractional distillation; fractionating columns for the enrichment of the heavy isotopes of oxygen in water. I. Dostrovsky, D. R. Llewellyn and B. H. Vromen. diags Chem Soc J p3509-17 S '52

Tracer studies in the aquation and hydrolysis of cobalt complexes. C. A. Bunton and D. R. Llewellyn. Chem Soc J p 1692-6 Je '53

Manufacture

Butterley oxygen-generating plant for industrial and mobile use. il Engineering 176:237 Ag 21 '53

OXYGEN, Liquid

Heat transfer to boiling liquids at low temperatures and elevated pressures. A. G. Monroe, H. A. S. Bristow and J. E. Newell. bibliog diags J Ap Chem 2:613-24 N '52

Laboratory plant for making liquid air from liquid oxygen. A. J. Croft. flow diag il diag J Sci Instr 30:74-6 Mr '53

Molecular spectra of condensed oxygen and the O_4 molecule. A. L. Smith and H. L. Johnston. bibliog J Chem Phys 20:1972-3 D '52

Solubility diagram and the temperature-composition diagram at atmospheric pressure of the liquid system ozone-oxygen. H. J. Schumacher. J Chem Phys 21:1610-11 S '53

Manufacture

50 years of oxygen plants; abstract. diag Refrig Eng 61:978-9 S '53

Liquid O_2 unit travels by air. il diag Chem Eng 60:138-41 Ap '53

OXYGEN apparatus

Fresh air for firemen. il Safety Maint & Prod 105:62+ Je '53

Mount Everest expedition oxygen equipment. il Engineer 195:890-1 Je 26 '53; Same. Engineering 175:779-80 Je 19 '53

Oxygen equipment for the Mount Everest expedition. Comp Air Mag 58:258 S '53

Safety measures

Let's discuss oxygen safety in hospitals. H. A. McKennett. il Safety Maint & Prod 106:57-8 Jl '53

OXYGEN compounds

Preparation and magnetic susceptibility of clathrate compounds of nitric oxide and of oxygen. D. F. Evans and R. E. Richards. Chem Soc J p3295-7 Ag '52

Products of hydrogenation of carbon monoxide over an iron catalyst; oil-soluble oxygenated compounds. D. G. Cain, A. W. Weitkamp and N. J. Bowman. bibliog Ind & Eng Chem 45:359-62 F '53

Products of hydrogenation of carbon monoxide over an iron catalyst; water-soluble oxygenated compounds. A. Steitz, jr. and D. K. Barnes. bibliog Ind & Eng Chem 45:353-8 F '53

Surface complexes on carbon blacks; high temperature evacuation studies. R. B. Anderson and P. H. Emmett. bibliog J Phys Chem 56:753-5 Je '52

OXYGEN cutting

Advanced automatic flame cutting for machinery weldments; Marion power shovel co. H. B. Cary. il Welding J 32:957-65 O '53

Electronic control of oxygen cutting machine head; Metropolitan-Vickers electrical co. il diags Engineering 174:284-5 Ag 29 '52

Metal removal by oxygen processes. E. M. Holub. il Blast F & Steel Pl 40:1197-9 O '52

Metallurgical effects of oxygen cutting alloy steel (armor plate). F. C. Saacke. il Welding J 32:19-30 Ja '53

Oxygen lance piercing proves effective on Burlington bridge demolition. il Roads & Eng Constr 91:121-4 Ap '53

Recent developments in powder processes. R. S. Babcock. il Welding J 32:986-91 O '53

OXYGEN demand test. See Sewage—Testing

OXYGEN masks. See Oxygen apparatus

OXYSALTS. See Salts

OZARK mountains

Genetic relations of caves to peneplains and big springs in the Ozarks. J. H. Bretz. bibliog maps diag Am J Sci 251:1-24 Ja '53

OZONE

Chemical knife; preservation of ozone for thirty-six days. H. O. Albrecht. J Chem Phys 21:1421-2 Ag '53

Destruction of phenols by oxidation with ozone. S. J. Niegowski. bibliog Ind & Eng Chem 45:632-4 Mr '53

Evaluation of ozone protective agents for elastomers; apparatus for the evaluation under dynamic conditions. K. E. Creed, jr., R. B. Hill and J. W. Breed. bibliog il diags Anal Chem 25:241-4 F '53

Gases produced by inert arc welding. J. J. Ferry and G. B. Ginther. bibliog Welding J 32:396-8 My '53

Indoles; the action of ozone, and osmium tetroxide on some indole derivatives. D. W. Ockenden and K. Schofield. Chem Soc J p612-18 F '53

Kinetics of the gas phase reaction between acetylene and ozone. R. D. Cadle and C. Schadt. J Chem Phys 21:163 Ja '53

Kinetics of the gas phase reaction of olefins with ozone. R. D. Cadle and C. Schadt. Am Chem Soc J 74:6002-4 D 5 '52

Mechanism of the reaction between ozone and nitrosyl chloride. H. S. Johnston and F. Leighton, jr. Am Chem Soc J 75:3612 Jl 20 '53

Microwave spectrum and structure of ozone. R. H. Hughes. J Chem Phys 21:959-60 My '53

OZONE—*Continued*

Molecular structure, dipole moment, and *g* factor of ozone from its microwave spectrum. R. Trambarulo and others. bibliog il J Chem Phys 21:851-5 My '53

Ozone band at 1110 cm^{-1}. J. N. Howard and J. H. Shaw. bibliog J Chem Phys 21:558-9 Mr '53

Ozone, nature's air freshener. Westinghouse Eng 13:141-2 Jl '53

Solubility diagram and the temperature-composition diagram at atmospheric pressure of the liquid system ozone-oxygen. H. J. Schumacher. J Chem Phys 21:1610-11 S '53

Theory of flame propagation. J. O. Hirschfelder, C. F. Curtiss and D. E. Campbell. bibliog J Phys Chem 57:403-14 Ap '53

Vapor pressures and critical constants of pure ozone. A. C. Jenkins and C. M. Birdsall. bibliog flow sheet diags J Chem Phys 20:1158-61 Jl '52

See also

Rubber—Ozone effect

Water purification—Ozone treatment

Analysis

Construction and operation of an automatic ozone analyzer. A. D. Kiffer and L. G. Dowell. bibliog diags Anal Chem 24:1796-8 N '52

Bibliography

Rubber division library bibliography; determination of ozone in air. 11 l Rubber division lib, Univ. of Akron, Akron 4, Ohio '52

Industrial applications

New boost for your product with industrial gases. il Mod Ind 25:40-5 F '53

OZONE, Liquid

Manometric determination of the density of liquid ozone. C. Brown and K. D. Franson. diag J Chem Phys 21:917-19 My '53

OZONIDES

Crystalline ozonides from cis-trans-ethylene derivatives. S. M. Goodwin, N. M. Johnson and B. Witkop. bibliog Am Chem Soc J 75:4273-5 S 5 '53

OZONIZATION

Isotope effect during ozonization. W. A. Bonner and C. J. Collins. bibliog Am Chem Soc J 75:3693-4 Ag 5 '53

OZONIZERS

Influence of irradiation on discharge current in an ozonizer. S. Deb and others. bibliog il diag J Chem Phys 21:1486-92 S '53

OZONOLYSIS

Anomalies in the vapor phase ozonolysis of cyclohexene. R. H. Eastman and R. M. Silverstein. bibliog Am Chem Soc J 75:1493-4 Mr 20 '53

P

pH. See Hydrogen ion concentration

PACIFIC airmotive corporation

Reports record sales. Comm & Fin Chr 177:1370 Mr 30 '53

Security I like best. A. Croissant. Comm & Fin Chr 176:1818+ N 13 '52

PACIFIC can company

Increase in sales, prices, lifts net. Barron's 33:13-14 Jl 6 '53

PACIFIC coast electrical association

Administrative services section joint meeting with Pacific coast gas association's Accounting section, Phoenix, April 8-9. Elec West 110:102-6 My '53

Annual meeting, Hawaiian section, Nov. 13-14, Honolulu. Elec West 109:106-9 D '52

Annual meeting, 36th, May 13-15; with speeches. Elec West 110:136-45 Je '53

Business development section meetings. Elec West 110:116-20 Ap '53

Chairmen ready for new year. Elec West 111:120 Ag '53

Engineering and operating section meeting, Long Beach, Calif. March 5-6. Elec West 110:110-15 Ap '53

PCEA panorama; president's appointees. Elec West 111:113 Jl '53

PACIFIC coast gas association

Accounting section joint meeting with Pacific coast electrical association's Administrative services section, Phoenix, April 8-9. Elec West 110:102-6 My '53

Annual meeting, 59th, Los Angeles. Gas Age 110:35-6+ O 9 '52; Am Gas J 177:16-17+ O '52

Annual meeting, San Francisco, Sept. 9-11. Am Gas Assn Mo 35:37 O '53; Am Gas J 179:22-3 O 15 '53

Annual meeting, 66th, San Francisco, Sept. 9-11. Gas Age 112:25-7+ O 8 '53

PACIFIC electric railway

Commuters' hope. Bsns W p 120+ Mr 21 '53

PACIFIC finance corporation

Debentures sold. Comm & Fin Chr 176:1965-6 N 24 '52

PACIFIC fire rating bureau

Annual meeting, Phoenix. Nat Underw 56:9 N 6 '52

PACIFIC gas and electric company

Bonds offered. Comm & Fin Chr 177:2251 My 25 '53

Pacific G&E centennial celebration takes to the road. il Elec World News ed 138:16-17 O 13 '52

Story of a great utility; Pacific gas and electric of California. F. Maphis. Pub Util 50:932-3 D 18 '52

PACIFIC lighting corporation

Five timely selections in risk free stocks; with comparative balance sheet items. Mag of Wall St 92:280 My 30 '53

Five undervalued sound investments; with comparative balance sheet items. Mag of Wall St 91:351 D 27 '52

Pacific Lighting improved profit picture. E. Etherington. Barron's 33:17-19 My 11 '53

Preferred stock offered. Comm & Fin Chr 177:1370-1 Mr 30 '53

PACIFIC mills

Resume common dividends in '53. Barron's 33:19+ Mr 2 '53

PACIFIC ocean

Special weather phenomena of the Pacific. P. R. Lackner. il U S Naval Inst Proc 78:1198-207 N '52

PACIFIC telephone and telegraph company

Debentures offered. Comm & Fin Chr 176:2065 D 1 '52

Stock offered. Comm & Fin Chr 176:2438 D 22 '52

When utility vice presidents turn into professors. J. H. Collins. Pub Util 42:298-305 Ag 27 '53

PACKAGE design

Advertising is the great conditioner; packaging the closer of sales at retail today. A. Johnson. il Ptr Ink 241:94+ D 12 '52

Back to the general store; supermarket-that-sells-everything; packaging must carry the load. il Mod Packaging 26:85-90+ O '52

Brand-new Smith; design for Smith brothers' new chlorophyll cough-drop package. il Mod Packaging 26:133 S '52

British wit. il Mod Packaging 26:104-6 Mr '53

Bug bomb aerosol; nominated for packaging's Hall of fame. il Mod Packaging 26:94-9, cover My '53

Changing contours; new bottle design for Calvert Reserve and Publickers Philadelphia brand. il Mod Packaging 26:128-30 O '52

Cracker Jack; nominated for packaging's Hall of fame. il Mod Packaging 26:98-104+ O '52

Dr West's toothbrush nominated to packaging's Hall of fame. il Mod Packaging 26:88-93+, cover Ag '53

GE light bulbs nominated for packaging's Hall of fame. il Mod Packaging 26:96-102+, cover Ja '53

Gift-ties plus; Burlington mills turns foil and paperboard on ribbon packages into re-use Christmas-tree decorations. il Mod Packaging 26:142-3 S '52

How to wrap it up to sell itself; P.I. packaging panel tells how to make the most of retail trend to self-service and self-selection. il Ptr Ink 242:94+ Mr 20 '53

Jack Frost in miniature; replica of package on tablet wrapper; National sugar co. il Mod Packaging 26:109 F '53

PACKAGE design—*Continued*

Listerine; nominated to packaging's Hall of fame. il Mod Packaging 26:100-5, cover N '52

Meadow Gold butter; nominated to packaging's Hall of fame. il Mod Packaging 27:120-4+, cover O '53

Minute Maid concentrated frozen orange juice; nominated for packaging's Hall of fame. il Mod Packaging 26:86-91+, cover Mr '53

Music on tape; Magnecord's package for high-fidelity tape recordings. il Mod Packaging 26:84-5+ F '53

New dimensions for cosmetics. il Mod Packaging 27:132-4 S '53

Old-fashioned look; Baker Boy packaging attained by color-printing techniques, high-speed wrapping machines. il Mod Packaging 26:114-15 N '52

Package design for economy; pipe fittings and nipples. L. R. Michelsen. Am Gas Assn Mo 35:25-6 Ap '53

Self-service, challenge to packaging; abstract. Management R 41:623-4 S '52

Set-up box awards. il Mod Packaging 26:129-30+ Je '53

Swedish design; paperboard folding boxes for hand packaging operations. il Mod Packaging 26:124-6+ N '52

Taylor's wines; art of wine maker projected into sales through art of packaging. il Mod Packaging 26:94-8 N '52

Tell-tale De Moist; spring scale in hanger weighs moisture pick-up. il Mod Packaging 26:116-17 N '52

Testing consumer acceptance of new label design; abstract. F. C. Majorack. Mod Packaging 26:144 Je '53

These packages found new buyers in a neglected market. il Sales Management 70:30-2 F 15 '53

Uplift for footwear; Mishawaka rubber & woolen mfg. co. il Mod Packaging 26:165 Ap '53

Why Pangburn's hep with the hot-rod set. L. Lee. il Sales Management 70:52+ F 1 '53

See also

Candy boxes
Cigar boxes
Labels
Package goods—Gift packages

Family of products

Ann Page; fourth generation; latest label design stresses spot identification with high-fidelity product illustration. il Mod Packaging 26:110-13 O '52

Armour meat products; nominated for packaging's Hall of fame. il Mod Packaging 26:112-17+, cover Je '53

Carding techniques; Monowatt. il Mod Packaging 26:104-6 Ag '53

Clinching the pre-sell; Botany mills. il Mod Packaging 27:142-3 O '53

Domino sugar; nominated for packaging's Hall of fame. il Mod Packaging 26:116-21+ S '52

Eight factors to consider when repackaging your product. il Ptr Ink 242:39 Ja 30 '53

Elsie Dairy; framing her in yellow daisy gives Borden's identifying symbol. il Mod Packaging 26:92-3 N '52

For the young athlete; King mfg. co. packages junior sporting goods. il Mod Packaging 26:115 Jl '53

Heinz steps out in sweeping label redesign. il Mod Packaging 26:106-8+ S '52

Mueller's macaroni products; nominated for packaging's Hall of fame. il Mod Packaging 26:90-6+, cover F '53

New packages help Magna break bottleneck at the retail counter; family dress identifies this line of power tool accessories. R. L. Chambers. il Sales Management 69:76+ N 10 '52

One little Indian; Rath packing co. il Mod Packaging 26:184-6 Ap '53

Packaging overhaul; Mead Johnson & co. il Mod Packaging 26:120-4 My '53

Prince Matchabelli perfumes; nominated for packaging's Hall of fame. il Mod Packaging 26:104-9+, cover D '52

Pulling as a team; Thomas' coach-and-four provides unifying trademark in coordination and clean-up of line of baked goods. il Mod Packaging 26:136-7 S '52

Recut Diamond; packages require redress. il Mod Packaging 26:102-3+ F '53

Salesworthy notions; David Traum co. il Mod Packaging 26:122-3+ Ja '53

Self-service look; carefully planned redesign of Hudnut's hair preparations. il Mod Packaging 27:130-2 O '53

Shades of Wedgwood; Dorothy Gray. il Mod Packaging 26:106-7 Je '53

Shulton's Old Spice for men; nominated to packaging's Hall of fame. il Mod Packaging 27:102-7+, cover S '53

Stopette spray deodorant; nominated for packaging's Hall of fame. il Mod Packaging 26:136-41+, cover Ap '53

Sunsweet dried fruits; nominated to packaging's Hall of fame. il Mod Packaging 26:92-7+ Jl '53

30 toys under one name; Right-Time toys. il Mod Packaging 27:135 S '53

PACKAGE dyeing. See Dyes and dyeing—Package dyeing

PACKAGE engineer (term)

Package engineer; example from Bristol-Myers. il Mod Packaging 26:77-81+ F '53

PACKAGE goods

Automatic processing of orders for packaged products; abstract. G. S. Johnson. Mod Packaging 26:139 Je '53

Free-motion display; mobile aerial sculpture becomes powerful point-of-sale merchandiser. il Mod Packaging 26:108-9 N '52

How to wrap it up to sell itself; P.I. packaging panel tells how to make the most of retail trend to self-service and self-selection. il Ptr Ink 242:94+ Mr 20 '53

Indexing self-selection; Kleinert's uses tabs on carded baby pants. il Mod Packaging 26:83 Ag '53

In-pack premium; Soilax puts quality items right in or on packages. il Mod Packaging 26:110-11 D '52

Now you can buy coal in a food store, too! D. J. Atchison. il Sales Management 70:34+ Mr 15 '53

Packaging considerations in converting to self-service; abstract. D. W. Berlin. Mod Packaging 26:145 Je '53

Proud label; Masury backs its Swedish-formula enamel with Svensk label festooned with actual gold coin. il Mod Packaging 26:140-1 S '52

Rack jobber's viewpoint; non-food products in supermarkets. il diag Mod Packaging 26:81-7+ Jl '53

See also

Candy trade
Canned food
Containers
Drug packages
Food packages
Labels
Merchandize cards
Package design
Packaging
Packaging machinery
Toilet goods

Advertising

Ad execs forecast more advertising as result of self-service. Ptr Ink 242:31-3 F 6 '53

Advertising is the great conditioner; packaging the closer of sales at retail today. A. Johnson. il Ptr Ink 241:94+ D 12 '52

Copy is king again. G. Reiner. Ptr Ink 242:98+ Mr 20 '53

Your product's tv-quotient; how will your product look on television? il Mod Ind 24:53-6 O '52

Color

New theory aids package color choice. P. Hartley. Adv Agency 46:67+ Ja '53

Combination packages

Lifting the sales curve; Calvert's two-product summer home bar. il Mod Packaging 26:122+ Jl '53

Gift packages

Changing gift techniques. il Mod Packaging 26:81-7+ My '53

Décor for doorknobs; Yale & Towne creates box with gift appeal for decorator porcelain knobs. il Mod Packaging 26:86-7 Ag '53

Folding set-up box; Bloomingdale's tapered, nesting container is partly both. il Mod Packaging 26:98-100 D '52

Fruit by mail. il Mod Packaging 26:116-19+ Ja '53

PACKAGE goods—Gift packages—*Continued*

Gift packages promote good-will; McCormick & co. il Food Eng 25:182 S '53

Gift-shop touch; Hoff products. il Mod Packaging 26:101 Ag '53

Gift wines. il Mod Packaging 26:114-15+ My '53

How little stinkers make a million in sales; gift package for handkerchiefs. S. D. Knudson. il Sales Management 70:104-5 Ja 15 '53

Little cosmetic package. il Mod Packaging 26:106-7 N '52

Pass the cigars by mail; clever mailer package and greeting card. il Mod Packaging 26:97 F '53

Presentation packages. il Mod Packaging 26:100-1+ My '53

Valentine's day promotion pays off; Belding Corticelli sewing kits. M. Mazor. il Ptr Ink 242:66+ F 20 '53

New packages

Building a new market; Mystik adhesive products. il Mod Packaging 26:104-7 Jl '53

Chicken for everybody; Keeshin's five-color waxed wrapper for cut-up frozen fowl. il Mod Packaging 26:103-5 Ja '53

Dealer survey leads to new package and new display program; automobile battery cables. K. R. MacLean. il Ptr Ink 241:38+ N 28 '52

Do we need a new package? K. Groesbeck. Adv Agency 46:70+ F '53

Fixtureless blade packs; Pal blade co. il Mod Packaging 26:88-9+ My '53

Flash-bulb pocket pack. il Mod Packaging 26:107 My '53

Meeting the self-selling trends. il Mod Packaging 26:115-20+ Ap '53

New Laura Secord; Canadian candy firm's package modernization without loss of identity. il Mod Packaging 26:132 N '52

New life for pretzels; cellophane overwraps and bags. il Mod Packaging 27:95 S '53

Package engineering pays 207 per cent; Tillamook county creamery association. C. R. Havighorst. il diags Food Eng 25:90-3 Ap '53

Package that molds the product; formed vinyl plastic cup gives decorative shapes to butter or margarine. il Mod Packaging 26:90-3 My '53

Packaging problems in redesigning a product line; abstract. L. L. Duke. Mod Packaging 26:144-5 Je '53

Recut Diamond; packages require redress. il Mod Packaging 26:102-3+ F '53

Siamese twins; packaging of developer powders at the Charles Bruning co. il Mod Packaging 26:112-14 Jl '53

Snap-fold display box; Acushnet golf balls. il Mod Packaging 26:118-19+ F '53

Windows for ice cream; Richman's new pint carton. il Mod Packaging 26:126-8 Ap '53

Opening devices

Pre-applied tear tapes. il Mod Packaging 26:130-2 Ap '53

Protection

Canned parachutes. il Mod Packaging 26:120-1+ Jl '53

Desiccants for drugs. il Mod Packaging 26:86-8+ F '53

Package hygrometers measure moisture inside small, low-cost packages. K. C. Coon. il Mod Packaging 26:119-20+ Mr '53

Trends in dehydrated packaging; use of desiccants in military and non-military packages. R. H. Herrmann. il Mod Packaging 26:200-4 Ap '53

See also

Closures (containers)
Food packages—Protection
Packaging materials—Moisture protection

Testing

Forecasting shelf life. R. A. Easter. map Mod Packaging 26:128-30+ F '53

PACKAGING

Alka Seltzer bundles; cellophane wraps. il Mod Packaging 26:120 F '53

AMA national packaging conference and exposition, 22d, Chicago, April 20-23; with abstracts of papers. Mod Packaging 26:136-46 Je '53

Blow out the empty; inspection device. il Mod Packaging 26:126 Ja '53

Boom in aerosols. il Mod Packaging 26:91-7+ D '52

Britain's Vac-Pac. il Mod Packaging 26:110-11 My '53

Cellophane bags help Bamberger cut losses. Bsns W p56+ My 2 '53

Cherries in molded pulp; tray formed from plaster cast of an actual pack simplifies row-facing of fruit. il Mod Packaging 26:95 O '52

Cigars go self-service; Bayuk cigars, inc. il Bsns W p52+ Ap 25 '53

Coast's newest aerosol loader. il Soap & San Chem 28:122-3 N '52

Effect of packaging on corrosion of zinc plated equipment; abstract. K. G. Compton and others. Metal Prog 62:194 N '52

Forum on technical progress; handling and packaging. il Steel 132:426-9+ Ja 5 '53

Gains greater packaging efficiency by analyzing line performance; General mills, inc. W. P. Schommer. il Food Eng 25:86-9 Ap '53

Hardware; today's merchandising demands eye-catching packaging. il Mod Packaging 26:99-105+ S '52

Military packaging from a manufacturer's standpoint; abstract. J. D. Nunn. Mod Packaging 26:125-6 O '52

National packaging exposition, 22d, Chicago, April 20-23; abstracts of papers. Chem & Eng N 31:1914+ My 4 '53

Navy view of packaging; abstract. E. Heller. Mod Packaging 26:127 O '52

New concepts of military packaging; storage and trans-shipment problems. S. S. Horwitz. il Mod Packaging 26:128-32+ S '52

Now they're selling ice cream in theaters. N. Wood and E. Wood. il Sales Management 69:60-1 N 20 '52

Packaging of industrial goods is getting better; management tells how. il Ind Marketing 38:112-14+ F '53

Packaging radioactives. P. Colsman. Steel 131:124+ N 3 '52

Packaging welding electrodes increases sales 100 per cent; Harnischfeger corp. il Ind Marketing 38:100 My '53

Plug-lid tobacco tin; new top construction gives tighter force fit with easier opening. il Mod Packaging 26:109 S '52

Recent changes in basic air force packaging; abstract. R. Pass. Mod Packaging 26:124-5 O '52

Review and preview. il Mod Packaging 26:83-9+ Ja '53

Stretch-out with storage; Godchaux sugars, inc. il Mod Packaging 26:122-3 Je '53

Swedish design; paperboard folding boxes for hand packaging operations. il Mod Packaging 26:124-6+ N '52

Trends in military packaging; abstract. R. W. Johnson. Mod Packaging 26:126-7 O '52

Vacuum-packed hosiery; Gotham's new plastic-film pouch. il Mod Packaging 26:82-3 F '53

Weighting machine reduces manual handling. il Iron Age 171:211 My 7 '53

What to consider when bidding a government contract; packaging requirements; abstract. R. C. Butler. Mod Packaging 26:125 O '52

Why dealers and contractors like Pressteel's cartons. W. D. Runswick. il Sales Management 69:31-2 N 20 '52

Why didn't some one think of this before; Dryco leakproof capsule of lighter fluid. il Sales Management 70:64 F 1 '53

Wrap up savings in scientific packaging. A. Zimmerman. il Steel 131:57-9 O 6 '52

See also

Closures (containers)
Food packages
Fruit—Prepackaging
Glass containers
Meat—Prepackaging
Milk containers
Packaging machinery
Packaging materials
Packing for shipment
Paper boxes
Prepackaging
Sealing (packaging)
Vegetables—Prepackaging

Exhibitions

Automotive and aviation packaging wins awards; 7th annual Industrial packaging and materials handling exposition, Chicago. il Automotive Ind 107:40-1+ N 15 '52

PACKAGING—Exhibitions—*Continued*

British exposition reveals new interests. Mod Packaging 26:172 Mr '53

Industrial packaging and materials handling exposition, Boston, Oct. 19-22; list of exhibitors, plan. Mod Packaging 27:149 O '53

Industrial packaging and materials handling exposition, Chicago. Chem & Eng N 30:4480 O 27 '52

National packaging exposition, 22d, Chicago, April 20-23. il Mod Ind 25:71-2 My '53

National packaging exposition, 22d, Chicago, April 20-23; illustrations with text. Food Eng 25:83-7 Jl '53

National packaging exposition, 22d, Chicago, April 20-23; list of exhibitors, plan, program. Mod Packaging 26:152-3+, insert Ap '53; Excerpt. il Food Eng 25:118-23 Ap '53

Patents

U.S. patents digest. H. A. Levey, ed. Published in monthly numbers of Modern packaging

Tables, calculations, etc.

Mathematical approach to cushioning. M. Masel. bibliog diag Mod Packaging 26:133-5+ My '53

Unit packaging

Disposable injectables; pre-packaged parenterals in new throw-away syringes. il Mod Packaging 26:108-12+ Ja '53

Evaluation of bearing packages. W. E. Ellis and others. bibliog il Mod Packaging 26:127-32+ My '53

High-speed injectables; one-shot syringe packaging of antibiotics. il diag Mod Packaging 26:94-5 Ag '53

Low-cost couponing; new attachment on unit-packaging machine. il Mod Packaging 27:113 O '53

Packaged shoe shine; Gold seal co. il Mod Packaging 27:100-1 S '53

Packeted dry milk; fractional packaging. il Mod Packaging 26:112-15 F '53

Two-component mixer; elastic dental-impression materials. il Mod Packaging 26:129 Ap '53

Unit packaged for the assembly line. il Mod Packaging 26:126-8 Je '53

Upswing in unit packaging. il Mod Packaging 27:89-94+ S '53

Variety in portion control packages. il Food Eng 25:184+ Je '53

PACKAGING awards

Fibre box winners. il Mod Packaging 26:118-19+ My '53

Industrial award winners; selection of best shipping packages. il Mod Packaging 26:118-19+ N '52

PACKAGING departments

Package engineer; example from Bristol-Myers. il Mod Packaging 26:77-81+ F '53

PACKAGING institute

Annual forum, 14th, New York, Oct. 20-22; program. Mod Packaging 26:116-17 O '52

Annual forum, 14th, New York, Oct. 20-22; with abstracts of papers. Paper Tr J 135:29-31 N 7 '52

Annual forum, 14th, Oct. 20-22; with abstracts of papers. Mod Packaging 26:133-46 D '52

PACKAGING machinery

Battery of chip packagers lops labor costs; Blue Bird potato chips, inc. il Food Eng 25:50 Je '53

Counter-and-stacker attachment delivers tea bags ready for loading in carton. il Mod Packaging 26:91 N '52

Equipment makers aid cost reduction through innovations in machines. J. V. Ziemba. il Food Eng 25:101+ Ap '53

Hard-to-fill answer; Atlantic Coast Fisheries' machine feeds and fills fish fillets. il Mod Packaging 26:146-8+ S '52

In-plant box former; tomato pre-packager's machine. il Mod Packaging 26:98-9+ F '53

Labeling-cartoning teamwork; Wyeth, inc. il Mod Packaging 26:108-9 Je '53

Mechanization milestone; Mayfair packing co. il Mod Packaging 26:73-7 Mr '53

New equipment at the show; illustrations with text. Mod Packaging 26:166-71 Ap '53

New hi-vac packager keeps meat longer. il Food Eng 25:97 S '53

Packaging machines. Food Eng 25:109-12 O '53

Packs bulk foods in giant cardboard boxes. il diag Food Eng 25:101 My '53

Plant goes horizontal; White laboratories packaging problems encountered in move from multi-story to one-story plant. il Mod Packaging 26:125-7 S '52

Processors size up problems and find what it takes to cut costs. il Food Eng 25:97-9+ Ap '53

Specially engineered cartoning systems speed brewers' half-dozens. il Food Eng 25:131-3 Jl '53

They do things the easy way; Gerber's baby foods. I. C. Miller. il diag Food Eng 25:66-9+ Ag '53

See also

Filling machines

Wrapping machines

Maintenance and repair

Maintenance checklist. Food Eng 25:111+ Ap '53

Specifications

To make certain of new machine performance; spell it out in specs. C. O. Smith. Food Eng 25:94-6 Ap '53

PACKAGING materials

Battle of the films. J. M. Cowan. Tappi 36:sup 118A-21A Ja '53

Converted paper packaging materials. P. K. Wolper. Tappi 36:sup 151A-2A Je '53

End of cellophane glut likely to aid Dobeckmun. Barron's 33:23-4 Ja 12 '53

Epoxies best for wurst. il Chem W 72:91 F 28 '53

Evaluation of heat-seal adhesives; laboratory procedures for applying test coatings and test apparatus. H. Wittcoff and D. Peerman. il Mod Packaging 26:135-40 N '52

Gardner and Sorg announce joint packaging program. il Paper Ind 34:956 N '52

Golf balls in contoured plastic; U.S. rubber co. il Mod Packaging 26:120-1 Je '53

National packaging exposition, 22d, Chicago, April 20-23; abstracts of papers. Chem & Eng N 31:1914+ My 4 '53

New uses for VCI. il Mod Packaging 27:156-60 O '53

Packaging materials. Food Eng 25:115-18+ O '53

Polythene replaces asphalt. il Can Chem Process 37:66 F '53

Processing polyethylene into thin film. il Can Chem Process 37:48 Ap '53

Review and preview. il Mod Packaging 26:83-9+ Ja '53

Testing food packages and food packaging materials. W. L. Hardy. Tappi 36:sup 152A-3A Je '53

See also

Adhesives

Aluminum foil

Cellophane

Glassine

Packing for shipment

Paper, Greaseproof

Paper, Waxed

Paper board

Parchment paper

Plastic films

Waxes

Wrapping paper

Moisture protection

How volatile corrosion inhibitors cut costs for G.M. Diesel by $100,000 a year. il Mod Packaging 26:114-17+ D '52

Moisture equilibria of food products. diags Mod Packaging 26:133-7 Ja '53

Moistureproof shipment; General Mills transcontinental bulk shipment of dehydrated apple slices. C. E. Felt and others. il map diag Mod Packaging 26:133-6+ O '52

Odors

Measuring package odors. il Mod Packaging 26:149-50+ Je '53

Odor of packaging materials. bibliog Tappi 36:146A-8A Mr '53

Permeability

Water vapor permeability of sheet materials at 0°F.; TAPPI tentative standard T 482 m-52. diags Tappi 35:sup 129A-31A D '52

PACKAGING materials—*Continued*

Printing

New concepts for printing production; abstract. J. H. Winkler. Mod Packaging 26: 140-1 Je '53

Printed packaging materials seminar. Mod Packaging 26:138-40 D '52

Trend to fine-screen printing. il Mod Packaging 26:99-104 Je '53

Specifications

Accurate writing of specifications; abstract. A. R. Schettel. Mod Packaging 26:139-40 Je '53

PACKAGING research

Moisture equilibria of food products. diags Mod Packaging 26:133-7 Ja '53

Package engineer; example from Bristol-Myers. il Mod Packaging 26:77-81+ F '53

Packaging research and development. Mod Packaging 26:146 D '52

Printing and packaging research. Chem Age (Lond) 67:789-90 D 13 '52

PACKARD-BELL company

Security I like best. R. H. Huff. Comm & Fin Chr 176:1722 N 6 '52

PACKARD motor car company

Packard's road back. il Fortune 46:116-19+ N '52

PACKING

Effect of packing type on the rate of black liquor oxidation. R. H. Wright. il diag Tappi 36:85-8 F '53

How to seal rotating shafts against high pressures. W. Coopey. diags Chem Eng 58: 116-17 Jl '51; Same cond. Product Eng Hdbk p J26 '53

Hydraulic characteristics of packed towers operating under counter-current flow conditions. H. E. Rose and P. H. Young. bibliog il diags Inst Mech Eng Proc (B) 1B no 4:114-26; Discussion. 127-8 '52

Hydraulic packing; 1953 revisions to the hydraulic standards of the Joint industry conferences; reference sheets. diag Tool Eng 31:79-84 Ag '53

Multistage sealing for rotating shafts operating at elevated pressures and temperatures. A. F. Saxon. il diags Machine Design 25:170-2 Mr '53

New packing material for liquid-gas contacting. diags Chem Eng 60:370-2 F '53

Now let's pack your refrigerating compressor; illustrated instructions. S. Elonka. Power 97:122-3 Je '53

Packing problem solved with common garden hose. W. H. Higgins. Water & Sewage Works 100:419 O '53

Packing support for glass columns. P. Pantages and J. Feldman. diags Ind & Eng Chem 44:2783 N '52

See also

Gaskets

Bibliography

O-rings; annotated bibliography. B. J. Clinebell. diags India Rubber World 127:74-8 O '52

PACKING for shipment

Better industrial packaging. il Mod Packaging 27:105-9+ O '53

Camera helps fix responsibility for damaged goods. il Factory Management 111:154 F '54

Compartmented cookies; Kornreich Klein's cookie mailer. il Mod Packaging 26:94-5+ Ja '53

Economical cushioning; Haeger potteries finds pads and blankets less costly than loose excelsior. il Mod Packaging 27:152-3+ O '53

Electronic scale makes packing line really automatic; Calavo growers of California. il Factory Management 111:91 Ag '53

Foil liner for lettuce; crate liner of aluminum foil backed by wet-strength kraft delivers a premium crop. il Mod Packaging 26:130-2 D '52

Fruit by mail. il Mod Packaging 26:116-19+ Ja '53

GM's Electro-motive division uses VPI paper to halt rust in parts shipments. R. C. Lambrecht. il Factory Management 111: 148-9 Mr '53

Gerber's divisible case. E. N. Burnett. il Mod Packaging 26:148-51+ Ap '53

How volatile corrosion inhibitors cut costs for G.M. Diesel by $100,000 a year. il Mod Packaging 26:114-17+ D '52

IBM packs efficiently too; illustrations with text. H. Chase. Am Mach 97:119 Ag 3 '53

Mathematical approach to cushioning. M. Masel. bibliog diag Mod Packaging 26:133-5+ My '53

Moistureproof shipment; General Mills transcontinental bulk shipment of dehydrated apple slices. C. E. Felt and others. il map diag Mod Packaging 26:133-6+ O '52

New concepts of military packaging; storage and trans-shipment problems. S. S. Horwitz. il Mod Packaging 26:128-32+ S '52

New techniques in face brick packaging. il Brick & Clay Rec 123:44-5 Jl '53

New uses for VCI. il Mod Packaging 27:156-60 O '53

Packaging according to Hoiles; with cost data. F. S. Hoiles. il diags Brick & Clay Rec 123:60-2+ Ag '53

Pre-shipment testing; National safe transit program. il Mod Packaging 27:118-19 O '53

Pretesting packaged products for safe transit. R. F. Bisbee. Am Cer Soc Bul 32:309-12 S 15 '53

Reduction of product damage in shipping; abstract. W. B. White. Mod Packaging 26: 140 Je '53

Simplifying the complex; Link's Method II packaging of air force jet trainer. il Mod Packaging 26:105-7 O '52

Wrap up savings in scientific packaging. A. Zimmerman. il Steel 131:57-9 O 6 '52

See also

Containers (for shipping)	Crates
	Shipment of goods

PACKING houses

Industrial water use; meat-packing industry. M. D. Sanders and L. W. Petersen. bibliog Am Water Works Assn J 44:1035-7 N '52

Air conditioning

Conditioning air for process and comfort in meat packing plants. S. R. Lewis. Heating-Piping 25:175-6 Ja '53

Cleaning

These streamlined practices cut packers' cleaning costs. K. C. Tucker and R. Fiske. il Food Eng 25:91-2+ S '53

Equipment

Advanced meat processing units highlight AMI show; illustrations with text. Food Eng 24:94-6 N '52

Divorces smoke from cook; Peter Eckrich & sons. C. W. Schmidt. il Food Eng 25: 80-2 Jl '53

Kingan perfects continuous process that revolutionizes fat rendering. R. E. Morse and others. flow diag il Food Eng 24:72-4+ N '52

Modernization triples its output; New England provision co. J. V. Ziemba. il Food Eng 25:69-71+ My '53

Never too old to modernize. P. Jessen. diags Food Eng 25:78-80 S '53

Output up 50 per cent by mechanizing; Stahl-Meyers' new meat-handling system. il Food Eng 25:125+ Ja '53

Tough handling problems solved with air pumps; Trunz, Brooklyn, N.Y., meat packer. il diag Food Eng 25:50 F '53

Power

Engineering problems in packing house; abstract. L. E. Joslin. Heating-Piping 25:86 My '53

Plant power pinch ended by high-voltage setup; John J. Felin & co. il Food Eng 25: 67 Ja '53

Safety measures

Workers spot plant hazards; packing firm's accident rate and lost time plunge to new low. I. C. Miller. il Food Eng 25:92-3+ Mr '53

Waste

Air flotation recovers grease from waste liquids. Comp Air Mag 58:55 F '53

PACKING houses—Waste—*Continued*

Anaerobic digestion of packing plant wastes. W. J. Fullen. flow diags plan Sewage & Ind Wastes 25:576-85 My '53

Operating and economic factors involved in the study of a packinghouse waste problem. H. O. Halvorson. Sewage & Ind Wastes 25:170-4; Discussion. M. D. Sanders. flow diags 174-6 F '53

Rapid analysis of packinghouse wastes. K. A. Hirlinger and C. E. Gross. bibliog Sewage & Ind Wastes 25:958-62 Ag '53

Treatment of meat wastes; abstract. J. B. Rowntree. Sewage & Ind Wastes 24:1549-50 D '52

Why and how of treating rendering plant wastes. L. S. Farrell. il Water & Sewage Works 100:172-5 Ap '53

PACKING houses, Vegetable

Electric equipment

Tomato packing; use of electricity for grading and storing. il Elec R (Lond) 151:497-9 S 5 '52

PACKING industry

Packers lag, but they can dream. Bsns W p60-3 Ja 10 '53

Accounting

Cudahy accounts electronically. il Food Eng 25:81+ S '53

PAGE, Leigh, 1884-1952

Sketch. W. F. G. Swann. Science 117:289-90 Mr 20 '53

PAILS

Manufacture

Automation triples pail-line output; Rheem manufacturing co.; illustrations with text. E. F. Paquette. plan diags Am Mach 96:98-9 D 22 '52

PAIN

Experimental pharmacology and measurement of the subjective responses. H. K. Beecher. bibliog Science 116:157-62 Ag 15 '52; Discussion. J. D. Hardy and others. 117:164-5 F 13 '53

What is pain? W. K. Livingston. il diags Sci Am 188:59-66 Mr '53

See also

Causalgia

PAINE, Ralph Delahaye, 1906-

Fortune's wheel. por Fortune 47:80 Ap '53

PAINT

Alkyd modified latex paints. J. J. Clark, jr. il Paint Oil & Chem R 116:20-1 Je 4 '53

Custom-colored paint. il Bsns W p62+ Jl 18 '53

Emulsion paints; symposium. bibliog il diags Ind & Eng Chem 45:710-54 Ap '53

Focal point for paint research. il Can Chem Process 36:88-9 N '52

Formulating polyvinyl acetate emulsion paints; abstract. A. C. Fletcher. Paint Oil & Chem R 116:29 Jl 16 '53

Improved sphere paint. W. E. K. Middleton and C. L. Sanders. bibliog Illum Eng 48:254-6 My '53

Latex paint. bibliog il Paint Oil & Chem R 116:22-6+ S 24 '53

Latex paints reviewed at open forum on the relative merits of latex- versus oil-based paints. Paint Oil & Chem R 116:34 F 26 '53

Martin-Senour's new paint dispensing machine. il Paint Oil & Chem R 116:8 Jl 16 '53

NPVLA presses for bigger slash in navy paint output. Oil Paint & Drug Rep 164:3 Jl 6 '53

NPVLA urges cessation of navy paint manufacture. Oil Paint & Drug Rep 163:3+ Je 15 '53

New and more efficient type of leaded zinc oxide pigment for use in house paints. S. H. Adams. Paint Oil & Chem R 116:10 Ja 15 '53

New finish; Glidden shows new one-coat enamel; Nubelon S. Iron Age 171:74 Mr 12 '53; Materials & Methods 37:141 My '53

Paint and the building business (cont). il map diags Am Bld 74:120-6 S; 162-3 O '52

Paint classification system backing withdrawn by USDA. Oil Paint & Drug Rep 164:3 S 7 '53

Paints for that new spring coat. il Mod Ind 25:105 Ap '53

Plastic or mastic coverings for exterior walls of houses. F. L. Browne. Paint Oil & Chem R 116:36-7 Ag 13 '53

Porosity of paint films; water vapor adsorption and permeability. S. Eckhaus, I. Wolock and B. L. Harris. Ind & Eng Chem 45:426-8 F '53

Proud label; Masury backs its Swedish-formula enamel with Svensk label festooned with actual gold coin. il Mod Packaging 26:140-1 S '52

Reference book on paints; U.S. Bureau of reclamation. Consumers Res Bul 31:12 Ja '53

Reichhold introduces Wallpol for odorless vinyl flat wall paints. Paint Oil & Chem R 115:48 D 4 '52

Special paints and enamels. Consumers Res Bul 31:19 Ja '53

Touch-up aerosol enamels. F. S. Palmer and R. W. Morrow. Soap & San Chem 28:191+ D '52

See also

Aluminum—Paint	Plastic paint
Factories—Painting	Silver paint
Lacquer and lacquering	Varnish and varnishing
Pigments	

Color

Colorimetry of bronze paints. W. E. K. Middleton and A. G. Mungall. diag Opt Soc Am J 42:969-70 D '52

Drying

Infra-red drying. il Elec J 150:699-700 F 27 '53; Elec R (Lond) 152:595-9 Mr 13 '53

New process developed for industrial drying. Machine Design 24:236+ N '52

Put the infrared units in the spray booth; Baron industries of Los Angeles. il Elec West 109:104 O '52

Radiant heat; efficient method of drying paint. il Automobile Eng 42:546 D '52

Solvent vapors burned in stacks; catalytic burning of vapors eliminated odors and furnished heat. Safety Maint & Prod 104:67 D '52

Systematic investigation of infrared baking; abstract. W. Bruegel and A. Vlachos. Paint Oil & Chem R 116:26 F 26 '53

Failure

Don't paint your house too often. il Consumers Res Bul 31:17-18 Ap '53

Water penetration of emulsion polymer films. G. L. Brown and J. P. Scullin. Ind & Eng Chem 45:743-5 Ap '53

Heat absorption

How does your power plant paint absorb heat? L. G. Jones. diag Power Eng 57:64-5 F '53

History

Paints of the ancient Egyptians; abstract. H. E. Wulkan. Paint Oil & Chem R 115:38 O 9 '52

Testing

Color uniformity in flat wall paints. F. K. Wilson. il Paint Oil & Chem R 116:10B My 21 '53

Comparison of paint films of various thicknesses as traffic stripes. C. J. Keese. bibliog il Roads & Sts 95:99-101 D '52

Comparisons of latex-emulsion and oleoresinous flat wall paints, by the Baltimore club. Paint Oil & Chem R 115:102-4 D 4 '52; Abstract. Oil Paint & Drug Rep 162:77 D 1 '52

Dry hiding power of paints, by the New York club. Paint Oil & Chem R 115:97-9 D 4 '52; Abstract. Oil Paint & Drug Rep 162:78 D 1 '52

Evaluation of adhesion of organic coatings by ultracentrifugal and other methods. A. M. Malloy and others. bibliog il diags Paint Oil & Chem R 116:14-19 Ag 27; 26-32+ S 10 '53

Freeze-thaw studies of latex paint polymers. F. A. Digioia and R. E. Nelson. bibliog Ind & Eng Chem 45:745-8 Ap '53

Hand gage accurately measures paint coat thickness. il Iron Age 171:139 Mr 12 '53

In your power plant painting program, make simple reflection tests. L. G. Jones. il diag Power Eng 56:92+ D '52

PAINT—Testing—*Continued*

Paint coating thickness meters. R. Quarendon. il diag Engineer 196:130-3, 162-6 Jl 31-Ag 7 '53

Painting of plaster surfaces, by the Cleveland club. bibliog il Paint Oil & Chem R 115:57-8+ D 4 '52; Abstract. Oil Paint & Drug Rep 162:76-7 D 1 '52

Progress report on Southern club yellow pine study; tabulations. R. Tooke. Paint Oil & Chem R 116:42A-42B Mr 26 '53

Some results from road tests of traffic paints. F. G. Smith. Can Chem Process 37:63-4 Je 1 '53

Spray testing with natural and synthetic sea water; a study of organic coatings. A. L. Alexander and T. P. May. il Am Soc T M Proc 50:1144-50 '50

See also

Paint, Protective—Testing

Paint laboratories

PAINT, Antifouling

Reducing the barnacle bill. il Chem W 72:87+ F 28 '53

PAINT, Fire resisting

Evaluation of fire retardant paints. J. W. Suggitt. Can Chem Process 36:90-1 S '52

Fire-retardant finishes should possess properties of good paints; symposium. il Chem & Eng N 31:1402-3 Ap 6 '53

Synthetic latex in scrub-resistant intumescent coatings. E. K. Stilbert and I. J. Cummings. bibliog il Ind & Eng Chem 45:748-54 Ap '53

Target; damper on trestle fires. il Chem W 72:30 F 7 '53

PAINT, Heat resisting

Study of factors affecting heat resistant coatings, by the Houston club. il Paint Oil & Chem R 115:90-2 D 4 '52; Abstract. Oil Paint & Drug Rep 162:77-8 N 24 '52

PAINT, Protective

Aluminum paint. H. L. Warnecke. Paint Oil & Chem R 115:50 O 9 '52

Anticorrosive primers; pigments and vehicles applicable to magnesium. A. L. Alexander and others. bibliog il Ind & Eng Chem 44:2409-14 O '52

Battle against decay. il diags Fortune 47:148-51+ F '53

Casein paint. E. L. Barry. Can Chem Process 36:68+ N '52

Chemical institute of Canada Protective coatings divisions, 7th conference, Montreal, March 12. Can Chem Process 37:58 Ap '53

Coating research extends gate life at Safe Harbor dam. P. M. Hess. il Elec World 139:90-3 Ap 6 '53

Economic factors of atmospheric corrosion versus protection. C. C. Harvey. Pet Refiner 32:122-4 Je '53

Here's low-down on aluminum paint. M. C. Davis. il Power 96:123-5 D '52

Influence of the nature of the substratum on the behavior of metal protective paints; abstract. D. Cannegieter. Paint Oil & Chem R 116:56 My 7 '53

Lead-cyanamide paints. il Engineering 175:314-15 Mr 6 '53

Lecithin in paints. bibliog Paint Oil & Chem R 116:27-8+ Je 18 '53

Neoprene painting system; Pennsylvania salt manufacturing co. Metal Finishing 51:89-90 My '53

Preventing metallic corrosion; abstract. H. W. Rudd. Paint Oil & Chem R 116:43 My 21 '53

Prime and paint with vinyls. il Chem Eng 59:198-9 O '52

Proper painting of tanks assures long life. il Oil & Gas J 51:176-9 O 20 '52

Sound painting program can slash maintenance costs. K. Tator. il Chem Eng 59:144-6 D '52

Test proves undercoat vital to success of tank painting. il diag Oil & Gas J 51:117 D 8 '52

What's ahead the next ten years in finishing; organic coatings. Am Mach 96:H2-3 Mid-N '52

See also

Paint, Anti-fouling

Paint, Fire resisting

Testing

Magnesium finishes for aircraft evaluated. H. D. Childers. il diags Iron Age 170:157-61 D 4 '52

Measuring the continuity of a film over a conducting substrate; abstract. K. A. Panhaeuser. Paint Oil & Chem R 116:20 Ap 23 '53

Practical applications of radioisotopes in protective coatings. H. Gottlieb. il diags Paint Oil & Chem R 116:56-8+ O 8 '53

PAINT, Temperature indicating

New paints may aid process control. Cer Ind 59:87 D '52

Thermal chameleons. Ind & Eng Chem 45:sup 13A+ Mr '53

PAINT, varnish and lacquer association, National. See National paint, varnish and lacquer association

PAINT brushes

How to use and care for painting tools. il Am Bld 74:182-5 N '52

Open for inspection; Baker Brush's pressure-seal envelope. il Mod Packaging 26:98-9 Jl '53

Manufacture

Major revision of plant layout; near-revolution in production methods; Pittsburgh plate glass co. il Factory Management 111:134-7 O '53

PAINT factories

New plant gets control of its products; Pittsburgh plate glass co. Paint division. il Mod Ind 24:19-20+ N '52

Pacific's equipped for diversified production; Pacific paint & varnish co. il Paint Oil & Chem R 116:27-9 Mr 12 '53

Process industry follows single-story trend; Pittsburgh plate glass co., Paint & brush div. il diag Factory Management 111:B288-9 pt 2 My '53

St Paul firm avoids industrial malady, middle-aged plant; Farwell, Ozmun, Kirk & co. il Paint Oil & Chem R 116:20-1 Mr 12 '53

Employees

Earnings in paint and varnish industry, June 1952. A. N. Jarrell. Mo Labor R 75:519-21 N '52

Equipment

Cat catches fume for McDougall-Butler. M. E. Schleicher. il diags Paint Oil & Chem R 116:13-14+ Mr 12 '53

Horizontal plan reduces building costs, increases productivity. il Chem & Eng N 30:5376-7 D 22 '52

Power saves man-hours at Armstrong. il Paint Oil & Chem R 116:10-11 Ja 1 '53

PAINT industry and trade

Industry honors workers who have served it half a century. Paint Oil & Chem R 115:82-4+ N 6 '52

Lone Star plant adds space and equipment; Jones-Blair paint company of Dallas. il Paint Oil & Chem R 116:31-3 Mr 12 '53

Paints; sales held up well last year. Chem Eng 60:216 Mr '53

Trade sales in 1953 buyers market. A. P. Barberi and others. Paint Oil & Chem R 115:105-11 D 4 '52

See also National paint varnish and lacquer association

Accounting

Multiple base-burden allocation in a paint company. J. R. Raeder. N A C A Bul 34:58-65 S '52

Advertising

Do-it-yourself paint program running strong. T. L. Daniels. Paint Oil & Chem R 116:4 Jl 30 '53

Industry gets home market sales plan; Archer-Daniels-Midland co. il Paint Oil & Chem R 116:6-6B Jl 2 '53

Promotion of hidden component boosts rubber-based paint sales. il Ind Marketing 38:144-7 Je '53

Vehicle name goes on the label as Goodyear advertisements back maker's sales. Paint Oil & Chem R 116:6D Jl 2 '53

PAINT industry and trade—*Continued*

Exhibitions

Paint industries show exhibits feature new materials. Oil Paint & Drug Rep 162:79-82 D 1 '52
Paint industries' show; list of exhibitors. Paint Oil & Chem R 116:33-4+ O 8 '53
Paint show exhibitors, Chicago, Nov. 18-22; list. Paint Oil & Chem R 115:44-52 N 6 '52
To build the market, try a trailer. il Paint Oil & Chem R 116:8-9 Jl 30 '53

Finance

Brush marks; paint makers see flaws in today's shiny sales pictures. F. Henle. Barron's 33:9-10 Jl 13 '53

Statistics

Market survey of an industry; paint, varnish and lacquer. C. W. Berl. Chem Eng Prog 49:40-2 Ja '53
Record of a record breaker; paints. Chem W 72:49 F 28 '53
Total factory shipments of paint, varnish and lacquer, Dec. and twelve months, 1952 and 1951; paint, varnish and lacquer (total dollar volume) by months, 1951 and 1952; tabulations. Paint Oil & Chem R 116:10 Mr 12 '53

Canada

Canadian paint trade reports high sales. For Comm W 49:19 F 9 '53
Paints, varnishes and lacquers; tabulations. Can Chem Process 37:22+ Je 20 '53
Tricks of the trade with paint. il Can Chem Process 37:40 Mr '53

PAINT laboratories
Focal point for paint research. il Can Chem Process 36:88-9 N '52
Hilton-Davis opens laboratory to service paint industry. Paint Oil & Chem R 116:21 F 26 '53
London county council paint laboratory. Engineering 175:791-2 Je 19 '53

PAINT materials
Dehydrated castor oil. R. L. Terrill. Paint Oil & Chem R 116:13-14+ F 12 '53
Dispersion agent; Tenlo 70. Chem Eng 59: 202+ O '52
Lecithin in paints. bibliog Paint Oil & Chem R 116:27-8+ Je 18 '53
Methyl glucoside, new industrial polyl for protective coatings. J. P. Gibbons. Paint Oil & Chem R 116:12-15 Ap 23 '53
New whey to make paint. Paint Oil & Chem R 116:58 F 12 '53
See also
Drying oils
Finishing materials
Pigments
Tall oil
Titanium oxides
Tung oil
Varnish and varnishing

Prices

Protective coatings materials; 1952 market trends. Oil Paint & Drug Rep 163:56-7 sec 2 Ja 26 '53

Statistics

Protective coatings materials. Published in weekly numbers of Oil, paint and drug reporter

Testing

Kauri reduction test. T. C. Patton. Paint Oil & Chem R 116:51 My 7 '53

PAINT research
Bloom on pentaerythritol alkyd films; abstract. J. Ames and S. Gourley. Paint Oil & Chem R 116:27 F 26 '53
Effect of protein dispersion on freeze-thaw stability of latex emulsion, by the Northwestern club. Paint Oil & Chem R 115:52-4+ D 4 '52; Abstract. Oil Paint & Drug Rep 162:78 N 24 '52
Permeability to water of thin films of pure compounds. B. L. Harris and A. Bialecki. bibliog Paint Oil & Chem R 115:88+ D 4 '52
Practical applications of radioisotopes in protective coatings. H. Gottlieb. il diags Paint Oil & Chem R 116:56-8+ O 8 '53
Radiochemistry in paint research; new technique discussed by GCCA. Chem Age (Lond) 68:129-31 Ja 17 '53
Study of pigment dispersion, by the New York club. bibliog Paint Oil & Chem R 115:72-4+ D 4 '52; Abstract. Oil Paint & Drug Rep 162:75-6 D 1 '52

PAINT rollers
Roller-coater used to paint fences. E. J. Higgins. il Elec World 138:133+ D 15 '52
Rolling up roller sales. il Bsns W p82-3+ Ja 10 '53

Manufacture

Machine designed to sell paint. il Paint Oil & Chem R 116:12 Mr 12 '53

PAINT spraying
Better paint job by automatic spray; Nash motors. il Factory Management 111:136-7 Mr '53
Delpark filtration system for paint spray booth water. il Am Mach 97:205 Je 8 '53
Dual-feed protector; new spray gun mixes paint, catalyst. Steel 131:120 O 20 '52
Great Lakes discovers two keys to hot spray success. il Bus Transportation 32:38-9 O '53
Hot pressurized paint sprays without air jet. il diag Am Mach 97:164 Ag 3 '53
Hot spray finishing. G. W. H. Wylie. Can Chem Process 37:66+ Mr '53
Hot spray for bus refinishing. Bus Transportation 32:45+ Jl '53
How Sylvania fashions fluorescent fixtures; presswork, painting, assembly; illustrations with text. E. J. Tangerman and C. Emerson. diags Am Mach 97:127-46 Ap 13 '53
Reo adopts hot spray painting. il Automotive Ind 108:72-3+ Ja 1 '53
Steam spraying. Automobile Eng 42:526 D '52
Touch-up aerosol enamels. F. S. Palmer and R. W. Morrow. Soap & San Chem 28:191+ D '52

Booths

Mobile spray booth ups Cleveland transit system paint schedules. il Bus Transportation 32:30-1 My '53

PAINT spraying, Electrostatic
Electrostatic spray painting of tennis racket frames. Engineer 194:360-1 S 12 '52
New bunching conveyor improves automatic painting. H. Marks. il Factory Management 110:118-19 O '52
Production-line painting methods. J. T. Pederson. il diag Elec Com 30:84-95 Je '53
Robot spray gives prime primer; use of electrostatic painting at Studebaker corp. R. D. Raddant. il Iron Age 171:82 Je 25 '53
Screw mechanism groups cabinets for better finishes. il diag Iron Age 171:208-9 My 7 '53

PAINTING, Factory. See Factories—Painting

PAINTING, Industrial
Characteristics of 300 degree white baked enamel finishes. F. E. Guth. il Illum Eng 48:77-81 F '53
In your power plant painting program, make simple reflection tests. L. G. Jones. il diag Power Eng 56:92+ D '52
Painting on the run; R. C. Mahon co. il Mill & Factory 52:126 Je '53
Peeling problem; blast cleaning heads off paint peeling. il Steel 132:74 Ja 26 '53
Prepainted steel strip for production forming. K. Rose. il Materials & Methods 37: 158+ Mr '53
Refinery doesn't have to look dingy; Phillips petroleum co. focal-point painting. il Bsns W p50-1 Je 20 '53
Rheem steel drums coated and lithographed before forming. G. C. Close. il Mach 59: 182-5 Ap '53
See also
Automobiles—Painting and finishing
Car painting and finishing
Lacquer and lacquering
Motor buses—Painting and finishing
Paint, Protective
Paint spraying
Varnish and varnishing
also subdivision Painting under special subjects, e.g.
Coke plants
Factories
Gas meters
Oil tanks
Power plants
Steel works

Cost

What does painting cost? L. G. Jones. il Power Eng 57:90-3 O '53

PAJAMAS

25 big stores join Pleetway in sleep clinic promotions. il Sales Management 70:88-9 Ja 15 '53

PAKISTAN

Land of the five rivers. Economist 166:562 F 28 '53

Punjab powder keg? map Economist 166:578 F 28 '53

See also

Electricity supply—Pakistan
Hydroelectric plants—Pakistan
Investments, Foreign (in Pakistan)
Petroleum industry and trade—Pakistan

Commercial policy

Controls on international trade. For Comm W 48:9-10 D 15 '52; 49:7 Ja 5 '53

Pakistan and jute; sharp tightening of import controls. Economist 165:721 D 6 '52

Pakistan puts strict controls on 16 items. For Comm W 49:17 Je 8 '53

Pakistan strikes hard at dollar imports. For Comm W 49:8-9 Mr 30 '53

Economic conditions

Economic conditions abroad (cont). For Comm W 48:3+ D 1 '52

Pakistan weathers the storm. Economist 165: 765-6 D 13 '52

Foreign relations

Storm along the Indus; Hindu and Moslem fight over life-giving water. J. C. Perham. map Barron's 32:7-8 D 22 '52

Politics and government

Pakistan and its puritans. Economist 166: 152-3 Ja 17 '53

Pakistan's crisis. Economist 167:212-13 Ap 25 '53

Upheaval in Pakistan. Economist 167:369-70 My 9 '53

Yearbooks

Nalanda year-book and who's who in India and Pakistan, 1951-53. T. Das Gupta, ed. rev & enl ed 747p Rs 10; $3.50 R. N. Mitra, Nalanda Press, 159-60 Cornwallis st, Calcutta 6 '53

PALEOBOTANY

See also

Pollen, Fossil

Cretaceous

Critical analysis of cretaceous stratigraphy and paleobotany of Atlantic coastal plain. E. Dorf. bibliog Am Assn Pet Geologists Bul 36:2161-84 N '52

PALEOECOLOGY

Life and death assemblages among fossils. A. J. Boucot. bibliog Am J Sci 251:25-40 Ja '53

PALEONTOLOGY

Abstracts of papers at Cordilleran section of Geological society of America and West Coast section of Paleontological society meeting, Tucson, April 11-12. Geol Soc Bul 63:1319-48 pt 2 D '52

Fossils in metamorphic rocks; a review. W. H. Bucher. Geol Soc Bul 64:275-300, pl 1-2 bibliog(p296-300) Mr '53

New exploration tool; fossil pollen and spores used in new approach to determining age of rock formations. T. A. Armstrong. il Oil & Gas J 51:64-5 Mr 9 '53

Some facts about fossils in oil field discovery. bibliog il map diag World Oil 136: 96+ Ja '53

Studies of organic limestones and limestone-building organisms. J. H. Johnson, comp. bibliog il fold map diag Colorado School of Mines (Golden) Quarterly 47 no 2:1-94 '52 (pa $1.50)

See also

Brachiopoda, Fossil
Corals, Fossil
Foraminifera, Fossil
Graptolites
Mollusks, Fossil
Paleobotany
Stropheodonta
Vertebrates, Fossil

Cambrian

Ventral cephalic sutures in Cambrian trilobites. F. Rasetti. Am J Sci 250:885-98, pl 1 bibliog(p897-8) D '52

Cenozoic

Ostracoda from wells in North Carolina; cenozoic ostracoda. F. M. Swain. map diags U S Geol S Professional Pa 234-A:1-58, pl 1-7 bibliog(p52-3); pa 75c Supt. of doc. '51

Cretaceous

Age of the Bear River formation, Wyoming. T. Yen. bibliog Geol Soc Bul 63:757-63 Ag '52

Beaverhead formation, a Laramide deposit in Beaverhead county, Montana. W. R. Lowell and M. R. Klepper. bibliog maps Geol Soc Bul 64:235-43, pl 1-2 F '53

Biostratigraphy of the Maqfi section, Egypt. L. W. LeRoy. (Memoir 54) 73p, 13pls bibliog(p54-8) Geological soc. of America, 419 W. 117th st, New York 27 '53

Correlation of the cretaceous formations of the western interior of the United States. W. A. Cobban and J. B. Reeside, jr. 2pls maps Geol Soc Bul 63:1011-43 bibliog(372 titles, p 1034-43) O '52

Lower cretaceous in Colorado plateau. W. L. Stokes. bibliog maps diag Am Assn Pet Geologists Bul 36:1766-76 S '52

Mesozoic

Ostracoda from wells in North Carolina; mesozoic ostracoda. F. M. Swain. bibliog map diags U S Geol S Professional Pa 234-B:59-93, pl 8-9; pa 40c Supt. of doc. '52

Oligocene

Vicksburg (oligocene) smaller foraminifera from Mississippi. R. Todd. bibliog U S Geol S Professional Pa 241:1-53, pl 1-6 '52

Ordovician

See also

Graptolites

Silurian

Upper silurian brachiopods from southeastern Alaska. E. Kirk and T. W. Amsden. bibliog diags U S Geol S Professional Pa 233-C:53-66, pl 7-10; pa 55c Supt. of doc. '52

Tertiary

Biostratigraphy of the Maqfi section, Egypt. L. W. LeRoy. (Memoir 54) 73p 13pls bibliog(p54-8) Geological soc. of America, 419 W. 117th st, New York 27 '53

Introduction to check list of Japanese tertiary marine mollusca. K. Hatai and S. Nisiyama. map Am Assn Pet Geologists Bul 37:539-48 Mr '53

Alaska

Upper silurian brachiopods from southeastern Alaska. E. Kirk and T. W. Amsden. bibliog diags U S Geol S Professional Pa 233-C:53-66, pl 7-10; pa 55c Supt. of doc. '52

California

Are Petaluma horse teeth reliable in correlation? R. A. Stirton. bibliog il diags Am Assn Pet Geologists Bul 36:2011-25 O '52

Europe

Paleozoic and mesozoic arachnida of Europe. A. Petrunkevitch. (Memoir 53) 128p, 58pls bibliog(p119-22) Geological soc. of America, 419 W. 117th st, New York 27 '53 ($3)

Guam

Eocene foraminifera from Guam, and their implications. P. E. Cloud, jr. and W. S. Cole. bibliog map Science 177:323-4 Mr 27 '53

Japan

Introduction to check list of Japanese tertiary marine mollusca. K. Hatai and S. Nisiyama. map Am Assn Pet Geologists Bul 37:539-48 Mr '53

Mississippi

Vicksburg (oligocene) smaller foraminifera from Mississippi. R. Todd. bibliog U S Geol S Professional Pa 241:1-53, pl 1-6 '52

North Carolina

Ostracoda from wells in North Carolina. F. M. Swain. map U S Geol S Professional Pa 234-A:1-58, pl 1-7; pa 75c '51; 234-B:59-93, pl 8-9; pa 40c Supt. of doc. '52

PALEONTOLOGY—*Continued*

Northwestern states

Ostracodes from the upper part of the Sundance formation of South Dakota, Wyoming and southern Montana. F. M. Swain and J. A. Peterson. bibliog U S Geol S Professional Pa 243-A:1-17, pl 1-2; pa 35c Supt. of doc. '52

PALLADIUM

Palladium catalysis; change in the behavior of palladium-on-charcoal in hydrogenation reactions. W. H. Hartung and Y. Chang. Am Chem Soc J 74:5927-9 D 5 '52

Palladium catalysis; the hydrogenation of α-oximino ketones. Y. Chang and W. H. Hartung. bibliog Am Chem Soc J 75:89-91 Ja 5 '53

Routine calibration of precious-metal thermocouples at the palladium point. E. G. Knowles and R. C. Jewell. diags Iron & Steel Inst J 172:409-12 D '52

Transmission of hydrogen through palladium by electrolysis. H. B. Wahlin and V. O. Naumann. J Ap Phys 24:42-4 Ja '53

Analysis

Photometric determination of microgram quantities of palladium with beta-furfuraldoxime. E. W. Rice. bibliog Anal Chem 24:1995-7 D '52

Isotopes

Half-life of Pd^{109} and neutron activation cross section of Pd^{102}. W. W. Meinke. bibliog Phys R 90:410-12 My 1 '53

PALLADIUM chlorides

Improved photometric determination of carbon monoxide by means of palladious chloride. E. W. Rice. A M A Archives Ind Hygiene & Occup Med 6:487-90 D '52

PALLADIUM compounds

Chemistry of the platinum metals; fluoropalladates and fluoroplatinates. A. G. Sharpe. Chem Soc J p 197-9 Ja '53

Nature of the co-ordinate link; geometrical isomerism and simple reactions of ethylthio-bridged complexes of platinum(II) and of palladium(II). J. Chatt and F. A. Hart. Chem Soc J p2363-71 Ag '53

Nature of the co-ordinate link; palladous complexes of stable *cis*-configuration. J. Chatt and R. G. Wilkins. Chem Soc J p70-4 Ja '53

PALLADIUM plating

Palladium plating; abstract. Metal Finishing 51:102 Ja '53

PALLETS

Boosts output, deliveries, sales, the pallet way; Pepsi-Cola bottling co. plan Food Eng 25:127 Ja '53; il Mill & Factory 52:117-18 Ap '53

Five-high stacking gains 98,000 sq. ft. of storage space; Nordberg manufacturing co. J. T. Hanlon. il Factory Management 111:122-5 O '53

Golf tees speed city delivery; Frisco's new method of loading city delivery trucks. il Ry Age 135:96 Ag 10 '53

How to save on pallets. D. W. Kelsey. Iron Age 171:205 My 7 '53

Major considerations in industrial palletization. Tappi 35:sup38A+ D '52

New techniques in face brick packaging. il Brick & Clay Rec 123:44-5 Jl '53

Packaging according to Hoiles; with cost data. F. S. Hoiles. il diags Brick & Clay Rec 123:60-2+ Ag '53

Packaging and transporting clay products. il diag Brick & Clay Rec 122:55-6+ Ap '53

Unitized loading of chipboard. D. S. Adams. il Pulp & Pa of Can 53:124 O '52

PALM oil

Malayan output of palm oil down; trade decreases. For Comm W 48:19 O 27 '52

Replacements for palm oil in cold rolling steel. R. C. Williams. bibliog Iron & Steel Eng 30:65-6 Ag '53; Same cond. Steel 131:102 O 6 '52; Discussion. Iron & Steel Eng 30:66-8 Ag '53

PALMER, Edward P.

Kiewit and Palmer win Moles' awards. por Eng N 149:76-7 N 6 '52; Explosives Eng 30:190+ N '52; Comp Air Mag 57:350 D '52

Moles honor Peter Kiewit, E. P. Palmer. por Eng N 150:25 F 12 '53

PALMER, H. Bruce

Businessmen in the news. por Fortune 47:58 Mr '53

PALMETTOS

Palmetto fibre; Florida's little known big industry. il Manuf Rec 122:34-5+ Ja '53

PALMITIC acid

Evidence for α-sulfonation in the reaction of palmitic acid with sulfur trioxide. J. K. Weil, L. P. Witnauer and A. J. Stirton. bibliog Am Chem Soc J 75:2526-7 My 20 '53

Physical properties of fatty acids; some dilatometric and thermal properties of palmitic acid. T. L. Ward and W. S. Singleton. bibliog il J Phys Chem 56:696-8 Je '52

Analysis

Isolation of palmitic, stearic and linoleic acids from guayule resin. T. F. Banigan, jr. and J. W. Meeks. bibliog Am Chem Soc J 75:3829-30 Ag 5 '53

PALOMAR, Mount, observatory. See California institute of technology—Astrophysical laboratory

PALUEV, Konstantin

Adventure in democracy; Workshop for world understanding in Pittsfield, Mass. H. R. Sass. por Gen Elec R 56:30-1 My '53

PAMPA, Texas

How a small city prepared a three-year capital outlay budget. B. H. Cruce. il Pub Works 84:87-9+ O '53

PANAMA

See also

Income tax—Panama

Insurance law—Panama

PANAMA canal

First major overhaul begun. Elec Eng 72:663 Jl '53

PAN-AMERICAN conferences

See also

Inter-American convention of civil engineers

PAN AMERICAN highway

Solutions proposed for problem of controlling sand erosion along Pan American highway. E. E. Verbeemen; K. F. Shippey. diag Civil Eng 23:250 Ap '53

PAN AMERICAN railway congress association

Congress, 8th, Washington, June 12-20, Atlantic City, June 21-25. Ry Age News ed 134:9-10 Je 22; 135:9-10 Jl 6 '53

PAN-AMERICAN southern corporation

Pan-Am listens when jobbers speak; Distributor council program. J. Barton. Nat Pet N 45:46-50 Mr 4 '53

PAN AMERICAN union of engineering societies

Annual meeting, 2d. Min Eng 4:1087 N '52

PAN AMERICAN world airways

Airline angels a fish business; carries Canton Island catch to Hawaii. il Bsns W p 116-17 N 8 '52

PAA '52 profits hinge on new mail rate. Aviation W 58:99-100 My 11 '53

PAA president takes $3,125 salary cut; salaries and other compensation paid in 1952. Aviation W 58:26+ Je 1 '53

PAA signs firm contract for Comet 3. il Aviation W 57:13-14 O 27 '52

PanAm has another plan; tourist rate for cargo. Bsns W p 171-2 F 21 '53

PanAm reopens Comet contract; certification deadline will probably be extended. N. McKitterick. Aviation W 58:22+ Ap 13 '53

PANCREAS

Extraction of the hyperglycemic factor (HGF) of the pancreas with liquid ammonia. P. P. Foà and others. bibliog Science 117:82-4 Ja 23 '53

PANEL system of heating. See Electric heating—Panel system; Heating—Panel system; Hot water heating—Panel system

PANELING

Curved panels hug flat surfaces. il Mod Plastics 30:169 Mr '53

How to apply new gypsum panels. il Am Bld 75:240-1+ F '53

Prefabricated fence panel lowers cost. il Mill & Factory 53:130-1 Jl '53

PANHANDLE eastern pipe line company

Recent developments. Comm & Fin Chr 177:144 Ja 12 '53

PANSTROSIDE

Occurrence of panstroside. R. Foppiano and M. R. Salmon. Am Chem Soc J 74:4709 S 20 '52

PANTETHEINE

β-Aletheine and pantetheine. T. E. King, C. J. Stewart and V. H. Cheldelin. bibliog Am Chem Soc J 75:1290-2 Mr 20 '53

Coenzyme A; pantetheine-2′ and -2′ : 4′ phosphates and a new method for the synthesis of cyclic phosphates. J. Baddiley and E. M. Thain. Chem Soc J p903-6 Mr '53

Coenzyme A; the synthesis of pantetheine 4′-phosphate (acetobacter stimulatory factor), a degradation product of the coenzyme. J. Baddiley and E. M. Thain. Chem Soc J p 1610-15 My '53

N-pantothenylcysteine as a precursor for pantetheine and coenzyme A. G. M. Brown and E. E. Snell. Am Chem Soc J 75:2782-3 Je 5 '53

Synthesis of pantetheine-pantethine. E. L. Wittle and others. bibliog Am Chem Soc J 75:1694-700 Ap 5 '53

PANTOGRAPH

Pantographs give tunnel cross-section. il Eng N 149:40 N 27 '52

Phenolic duplicating masters; quick-curing casting resin replaces steel in production of multi-cavity molds from original models. il Mod Plastics 30:98-9 S '52

PANTOTHENIC acid

Pantothenic acid in coenzyme A; abstract. G. D. Novelli. Chem & Eng N 31:1630-1 Ap 20 '53

Analysis

Coenzyme A; the identification of pantothenic acid-4′ and -2′ : 4′ phosphates from a hydrolysate. J. Baddiley and E. M. Thain. Chem Soc J p3783-9 O '52

PAPAVERINE

Papaverine homologs; the preparation of some 3-methylisoquinolines. E. R. Shepard and others. bibliog Am Chem Soc J 74:4611-15 S 20 '52

PAPER

Converted paper packaging materials. P. K. Wolper. Tappi 36:sup 151A-2A Je '53

Mass transfer between solid wall and fluid streams. C. S. Lin, R. W. Moulton and G. L. Putnam. bibliog il diags Ind & Eng Chem 45:636-46 Mr '53

Michigan expands test of paper for snow fence. il Eng N 150:52 Ap 16 '53

Paper defects; panel discussion. L. P. Thompson and others. Tappi 36:sup 132A-5A Ag '53

Specialty papers. G. C. Borden. Tappi 35:sup 104A D '52

Specialty papers. W. T. Cusack. Tappi 35: sup 104A-6A D '52

Tsuso-rice paper. H. R. Murdock. Paper Tr J 136:18 F 13 '53

See also

Dyes and dyeing—Paper
Filter paper
Glassine
Newsprint paper
Paper board
Parchment paper
Tissue paper
Waste paper
Wood pulp
Wrapping paper

Analysis

Chemical methods; standards for wood, pulp and paper. Tappi 35:sup 116A-18A N '52

Fiber analysis of paper and paperboard; revision of TAPPI tentative standard T 401 m-42. bibliog Tappi 36:sup 170A-8A Ag '53

Polarographic determination of reducible sulphur in paper. L. Gordon and others. diags Tappi 36:204-6 My '53

Use of a spectrophotometer in the pulp and paper industry. T. R. Hobbs. diag Pulp & Pa of Can 54:87-90 Ja '53

X-ray calculator for identifying elements; for X-ray spectrograph (fluorescence analysis) users in the paper field. V. W. Palen. diag Paper Ind 34:1354-5 F '53

Color

Color measurement; abstracts. J. A. Van Den Akker. Paper Ind 34:1128+ D '52; Tappi 35:sup 112A-13A D '52

Color precursors in spruce- and western hemlockwoods and inner barks. W. Pigman and others. bibliog Tappi 36:4-12 Ja '53

Instrumentation studies; study of photoelectric instruments for the measurement of color; reflectance and transmittance. J. A. Van den Akker and others. bibliog il diags Tappi 35:sup 141A-58A N '52

Method for quantitative determination of wet bleed. C. C. Pearl and G. J. Carbone, jr. Tappi 36:206-7 My '53

See also

Dyes and dyeing—Paper

Dictionaries

Dictionary of paper, including pulps, boards, paper properties and related papermaking terms. 2d ed 393p bibliog(p392-3) $6.50 American paper and pulp assn, 122 E. 42d st, New York 17 '51

Dirt content

See also

Paper making—Dirt problem

Durability

See also

Paper, Laminated

Dyeing

See Dyes and dyeing—Paper

Electric properties

Electrical properties of the inorganic papers. T. D. Callinan. bibliog Elec Eng 72:441-3 My '53

Gloss measurement

B.&L. gloss as a routine control test. O. Anderson, jr. Tappi 36:sup 130A Ap '53

History

Progress of research in the pulp and paper industry. A. Abrams. Tappi 36:sup22A+ Mr '53; Same cond. Paper Tr J 136:88+ F 20 '53

Measurement

Fine measurement of paper thickness by air pressure; Aerosensor. diag Paper Tr J 137: 56 O 16 '53

Moisture content

Fielden Drimeter for continuously indicating moisture content of paper; abstract. V. J. McConchie. Pulp & Pa of Can 54:73 F '53

Moisture control with closed hoods. S. Lukianovitch. Pulp & Pa of Can 54:126-31 S '53

Moisture in paper by toluene distillation; TAPPI tentative standard T 484 m-53. diag Tappi 36:sup 137A-9A Ap '53

Moisture meter. il Paper Tr J 135:20+ N 7 '52

New Upson process for dimensional stabilization of cellulose materials. J. J. Upson. il Paper Tr J 137:14-16 Ag 7 '53

Mold resistance

Lever spore cloud method for the evaluation of antimycotic properties of paper and paperboard used in the soap industry. L. J. Vinson. il Tappi 36:234-6 My '53

Odors

Odor of packaging materials. bibliog Tappi 36:sup 146A-8A Mr '53

Opacity

Bleaching and its influence on pulp opacity; abstract. H. W. Giertz. Paper Ind 35:88 Ap '53

Some notes on opacity. W. R. Willets and L. E. Georgevits. Tappi 36:sup 133A-7A Ja '53

Permeability

Water vapor permeability of sheet materials at 0°F.; TAPPI tentative standard T 482 m-52. diags Tappi 35:sup 129A-31A D '52

Printing properties

Evaluating printability of a material. B. A. Gaffney and others. Paper Tr J 135:29-31 N 7 '52

How good are the best printing papers? C. Canfield. Paper Tr J 136:23-4+ Je 26 '53

Ink transfer to newsprint; abstract. I. Olsson and L. Pihl. Paper Ind 34:1018 N '52

Ink transfer to paper during printing; abstract. L. Pihl. Paper Ind 34:1148 D '52

PAPER—Printing properties—*Continued*

Ink transfer to representative paper sample; abstract. I. Olsson and L. Pihl. Paper Ind 35:360+ Je '53

Lamination-casting of coatings for the study of printing quality of coated papers. R. C. Hydell. diags Tappi 36:sup 169A-71A F '53

Measurement of paper properties important in offset printing. G. C. Wheeler. Tappi 36:sup 112A-14A; Discussion. 114A-15A Ja '53

Paper problems of the rotogravure printer. R. T. Van Derveer. Tappi 36:sup 190A-2A My '53

Printing ink-paper relationships; numerical evaluation of letterpress print and printing quality. A. C. Zettlemoyer and others. bibliog(71 ref) Tappi 36:sup 161A-9A F '53

Testing paper for offset lithography. W. Wass. il Inland Ptr 131:60-1 Ap '53

What are the present and future paper needs for gravure printing? F. MacArthur. Paper Tr J 137:56+ S 18 '53

See also
Paper board—Printing properties

Specifications

Paper testing and specifications. J. King. Paper Tr J 135:435-6+ N 14 '52

Standards

Analysis of calcium sulphate fillers; proposed revision of TAPPI official standard T 615 m-44. Tappi 36:sup 134A-5A Ap '53

Analysis of starch and starch products; TAPPI tentative standard T 638 m-53. Tappi 36:sup 135A-7A Ap '53

Strength

Acid-resistant wet strength paper; patent. Paper Ind 35:577 Ag '53

Bursting strength of paper; recommended test method. L. M. Faichney and S. G. Mason. bibliog diags Pulp & Pa of Can 53:123-6 N '52

Diaphragm error and testing rate in the paper bursting test. F. T. Carson and V. Worthington. bibliog diags Tappi 35:539-44 D '52

Load-strain behavior of wet-strength paper. T. S. Morse and others. bibliog il Tappi 36:65-9 F '53

Mannangalactan gums; the mechanism of retention by paper fibers. N. S. Gruenhut. bibliog Tappi 36:297-301 Jl '53

Melamine-formaldehyde resins for use in wet-strength papers. il Paper Ind 35:668-9 S '53

Methods of increasing the efficiency of wet-strength resins. J. V. Kindall and J. B. Davidson. Tappi 36:12-14 Ja '53

New apparatus for determination of the wet web strength of paper; abstract. W. Jensen and H. Jorri. diag Paper Tr J 136:28 My 1 '53

New urea formaldehyde resins for wet strength. Paper Ind 34:1352-3 F '53

Studies in tearing strength; influence of microcrêping; abstract. T. K. Wahlberg Paper Ind 35:479 Jl '53

Studies on paper wet strength; abstract. I. Yoshino and S. Senda. Paper Ind 34:882 O '52

Surface strength of paper; abstracts. A. Arnamo and others. diags Paper Ind 34:1148+ D '52; Pulp & Pa of Can 53:105 D '52

Wet-strength papers open new vistas; exhibition of paper products. il Paper Tr J 136:14-17 Je 26 '53

Wet-strength test for hanging stock. P. L. Page. Tappi 36:sup 128A-9A Ap '53

See also
Paper board—Strength

Testing

Bursting strength of paper; recommended test method. L. M. Faichney and S. G. Mason. bibliog diags Pulp & Pa of Can 53:123-6 N '52

Diaphragm error and testing rate in the paper bursting test. F. T. Carson and V. Worthington. bibliog diags Tappi 35:539-44 D '52

Dynamic calibration of Mullen tester gauges. N. G. M. Tuck and others. bibliog diags Pulp & Pa of Can 54:102-5 Ap '53

Experiments with the Kohler-Molins folding tester; abstract. S. Köhler. il diag Paper Ind 35:580-1 Ag '53

Instrumentation studies; automatic recording of the load-elongation characteristics of paper. K. W. Hardacker and others. bibliog il Tappi 35:sup 117A-24A O '52

Load-strain behavior of wet-strength paper. T. S. Morse and others. bibliog il Tappi 36:65-9 F '53

Measuring the stiffness of paper. R. B. Hobbs and V. Worthington. bibliog il diags Mod Packaging 26:127-9+ Jl '53

Method for quantitative determination of wet bleed. C. C. Pearl and G. J. Carbone, jr. Tappi 36:206-7 My '53

Paper stiffness measured by new NBS development. il diag Paper Ind 34:952 N '52

Paper testing and specifications. L. V. Forman. Paper Tr J 135:439-45 N 14 '52

Paper testing and specifications. J. King. Paper Tr J 135:435-6+ N 14 '52

Stiffness of paper. F. T. Carson and V. Worthington. bibliog il diags J Res Nat Bur Stand 49:385-91 D '52; Same. Tappi 36:36-42 Ja '53

Use of a spectrophotometer in the pulp and paper industry. T. R. Hobbs. diag Pulp & Pa of Can 54:87-90 Ja '53

Wet-strength test for hanging stock. P. L. Page. Tappi 36:sup 128A-9A Ap '53

Transportation

Time inc. transports paper stock 1,700 miles by water. il Paper Ind 35:425 Jl '53

Time-Life seagoing barge. C. L. Stillman. il Tappi 36:sup91A-3A Jl '53

Traffic management. Tappi 35:sup90A+ O '52

Wet strength

See Paper—Strength

PAPER, Chromatographic. See Chromatographic analysis

PAPER, Coated

Leatherette paper; abstract. K. Engel. Paper Ind 35:90 Ap '53

Multicolor letterpress printing developments. D. J. Andella. il Paper Tr J 135:18-22+ O 31 '52

PAPER, Filter. See Filter paper

PAPER, Glass

Paper made from glass fibres for the first time. il Pulp & Pa of Can 54:70 Ja '53

PAPER, Government

Bids and awards; GPO 1st quarter, 1953 paper needs. Paper Tr J 135:32+ D 19 '52

Bids and awards; GPO 2d quarter, 1953 paper needs. Paper Tr J 136:24+ Mr 27 '53

Bids and awards; GPO 3rd quarter, 1953 paper needs. Paper Tr J 136:33-8 Je 26 '53

Bids and awards; GPO 4th quarter, 1953 paper needs. Paper Tr J 137:29+ S 25 '53

PAPER, Greaseproof

Greaseproof and glassine. Can Chem Process 37:56 Ja '53

Pinholes in glassine and greaseproof papers. Tappi 36:sup 124A-5A S '53

PAPER, Hand made

Hand made papers of Japan; review. T. K. Tindale and H. R. Tindale. Paper Tr J 136:14 F 6 '53

PAPER, Insulating

Electrical properties of the inorganic papers. T. D. Callinan. bibliog Elec Eng 72:441-3 My '53

Improved electrical insulation from mica paper. R. L. Griffeth and E. R. Younglove. il Product Eng 24:210-13 My '53

Impulse puncture characteristics of mass-impregnated paper-insulated cables, with special reference to testing procedures. P. R. Howard. Inst E E Proc 100 pt 2:315-18 Je '53

Measurement of the thickness of capacitor paper. W. Souder and S. B. Newman. bibliog il U S Nat Bur Stand Circ 532:1-10; pa 15c Supt. of doc. '52

Variation at constant density of the dielectric breakdown of paper with air resistance; abstract. P. Cloke and K. K. Khandelwal. Elec Eng 72:157 F '53

PAPER, Laminated

Laminators. F. W. Egan. Tappi 36:sup 141A-2A My '53; Abstract. Paper Tr J 136:28 Ap 3 '53

PAPER, Laminated—*Continued*

New Jacksonville Fourdrinier is fitted with St Regis Panelyte. il Paper Tr J 137:19 S 4 '53

Paper-honeycomb cores for structural sandwich panels. R. J. Seidel. il Paper Ind 34:1112-15 D '52

Thermal insulation of paper honeycomb cores and sound absorption of sandwich panels. D. J. Fahey and others. bibliog il diags Paper Ind 35:658-62 S '53

Testing

Evaluating abrasion resistance of resin paper laminates by the Armstrong abrader. F. L. Graves. il diag Tappi 36:sup28A+; Discussion. sup34A+ Je '53

PAPER, Parchment. See Parchment paper

PAPER, Photographic. See Photographic paper

PAPER, Tissue. See Tissue paper

PAPER, Twisting

Development of twisting papers to capture new markets. L. S. Tobias. Tappi 35:sup 102A-4A D '52

PAPER, Waterproof

Foil liner for lettuce; crate liner of aluminum foil backed by wet-strength kraft delivers a premium crop. il Mod Packaging 26:130-2 D '52

Water-barrier materials; waterproof papers for case liners and barriers. M. L. Downs. il Mod Packaging 27:144-6 S '53

Waterproofing newsprint. bibliog il Can Chem Process 36:94+ S '52

PAPER, Waxed

Antioxidant for waxes di-tertiary-butyl-para-cresol. R. F. Seubert and E. D. Andrews. bibliog diag Mod Packaging 26:153-4 D '52

TAPPI-ASTM technical committee on petroleum wax; reports. Tappi 36:sup 117A-23A My '53

Tensile strength in waxes. R. T. Edwards. il Mod Packaging 26:123-7+ F '53

Manufacture

Manufacture and use requirements of bread wraps. J. Spalding. Tappi 36:sup 132A-3A Ap '53

Pacific waxed paper. il Tappi 36:sup94A+ F '53

PAPER associations

See also Technical association of the pulp and paper industry

PAPER bags

Coarse papers, bag and board. A. G. Durgin. Paper Tr J 135:329-30+ N 14 '52

Pinning down bag-borne bacteria. W. L. Owen. il Food Eng 25:57-8+ Ja '53

Polythene replaces asphalt. il Can Chem Process 37:66 F '53

Testing

Transport trials of paper bags; British experiment shows correlation with drop tests on filled bags but no correlation with paper-strength ratings. R. J. L. Allen and F. A. Paine. il diag Mod Packaging 26:156-9+ S '52

PAPER board

Coarse papers. P. S. Bolton. il Paper Tr J 135:338-44 N 14 '52

Coarse papers, bag and board. A. G. Durgin. Paper Tr J 135:329-30+ N 14 '52

Inside story of bristols. Inland Ptr 131:37 Ap '53

Paper and board sizings and the qualities they impart. A. C. Dreshfield. Tappi 36:sup 122A-9A F '53; Abstract. Paper Ind 34:1243-4 Ja '53

Unitized loading of chipboard. D. S. Adams. il Pulp & Pa of Can 53:124 O '52

See also

Paper boxes

Folding

Factors influencing the creasing of paperboard; abstract. H. O. Brynhildsen and others. il Paper Ind 35:694+ S '53

Manufacture

Continental Can's new Fourdrinier board machine, the world's largest. il Paper Tr J 137:24-5 Jl 31 '53

Corrugated liner, web printing, production problems. G. N. Holme. Tappi 36:sup 164A-6A My '53

Modern board mill stock preparation systems. R. W. Polleys. flow chart plans diags Pulp & Pa of Can 53:101-5 D '52

Paper and paperboard making (cont). H. Williamson. Paper Ind 34:975-6, 1117-19, 1356-7, 1461-2; 35:73-5 N-D '52, F-Ap '53

Papermaking (cylinder); discussion. Tappi 35:sup 116A-27A D '52

Printing properties

Numerical evaluation of printability of paperboard. C. Eckhart and L. K. Burnett. il Tappi 36:369-71 Ag '53

Printability of boxboard. J. J. Higgins. Pulp & Pa of Can 53:106-8 D '52

Some factors affecting printability of boxboard. A. T. Luey. Pulp & Pa of Can 54:118-21 S '53

Surface and body characteristics of board for printing. A. T. Luey. Tappi 36:sup 124A-7A Ap '53

Strength

Liner board strength relationships. Tappi 35:sup 107A-9A O '52

Testing

Measurement of dimensional stability of insulation board. S. G. Craig. il Tappi 36:sup 166A-9A S '53

Preliminary investigation of the adaptability of the General Electric puncture tester to the testing of structural insulation board. J. A. Van den Akker and others. bibliog il Tappi 36:111-23 Mr '53

PAPER board, Corrugated

Contemporary flute design. A. W. Werner. diags Tappi 36:sup 167A-70A My '53

Corrugated board containers. B. Gershill. Tappi 35:sup 133A-5A; Discussion. sup 135A-6A N '52

Corrugating problems spotlighted at Milwaukee conference; corrugating containers committee of Tappi and Tappi's Chicago section. Paper Ind 34:1247-8 Ja '53

Heavy loads in corrugated. il Mod Packaging 27:125 O '53

Papers presented at the 1952 corrugating conference, Milwaukee, Nov. 20-21. Tappi 36:sup38A+ Ja '53

Pictorial printing on corrugated. il Mod Packaging 26:98-100+ Ag '53

Technical association of the pulp and paper industry 38th annual meeting, New York, Feb. 17-18; papers presented at corrugated containers sessions. Tappi 36:sup 156A-90A My '53

Manufacture

Continuous manufacture of semichemical pulp for corrugating board; Bathurst power and paper co. J. M. Limerick. flow diag il Tappi 36:294-7 Jl '53

Operator designs a corrugator. K. W. Max. il Tappi 36:sup56A+ Ja '53

Résumé of answers to combiner questionnaire on corrugator roll wear, high and low corrugations, fingerlines, and heat and moisture control. H. T. Scordas. il Tappi 36:sup38A+ Ja '53

Use of the Va-Purge process in straw pulping for corrugating board manufacture. W. H. Palm and H. J. Ostrowski. il diags Pulp & Pa of Can 54:111-16 Jl '53; Same cond. Paper Ind 35:455-7 Jl '53

Warping and washboarding. C. R. Vander Meulen. il Tappi 36:sup44A+ Ja '53

Testing

High-low corrugations. F. E. Skiver. Tappi 36:sup54A+ Ja '53

Use of electronic gages to determine the fatigue point in corrugated containers. C. S. MacNair. il diags Tappi 36:sup 138A-42A Ja '53

PAPER board industry

New high annual record in production of paper and board indicated. W. L. Neubrech. Paper Ind 35:780-2 O '53

Statistics

Distribution of paper and board production by major grade groups by type of mill, 1951. W. H. Pederson. Tappi 36:sup48A+ My '53

PAPER board industry—Statistics—*Continued*

1952 U.S. paper and board production by division and state; tabulation. Paper Ind 35:778 O '53

Paper and board production in the United States, 1952, 1951, and 1950; tabulation. Tappi 36:sup82A Ap '53

United States

Reviews the economy of the pulp, paper and board industries. W. L. Neubrech. Paper Tr J 135:21-2 D 12 '52

PAPER board mills

Hinde & Dauch paper co. Tappi 36:sup96A Ap '53

How Gardner Board & Carton treats its visitors to tailor-made plant tours. il Paper Tr J 137:21 S 11 '53

Robert Gair co., inc. Tappi 36:sup 102A-5A Ag '53

Electric equipment

Infra-red drying of paper board; Treforest mills of the British coated board and paper mills. il Engineer 194:773 D 5 '52

Equipment

Advantages of the Howard Smith board creaser. B. B. Rogers. il Pulp & Pa of Can 53:120-2 N '52

Fibreboard Products modernizes and expands Washington plants. il Paper Ind 34:943-4 N '52

Hinde & Dauch. J. N. Stephenson and J. S. Turner. il Pulp & Pa of Can 54:80-92 Ag '53

Improvements at Fibreboard Products. il Paper Tr J 135:46, 48 O 17 '52

Modern board mill stock preparation systems. R. W. Polleys. flow chart plans diags Pulp & Pa of Can 53:101-5 D '52

Newest paperboard mill on Pacific coast; Flintkote mill. il Paper Tr J 136:14-17 My 29 '53

Operator designs a corrugator. K. W. Max. il Tappi 36:sup56A+ Ja '53

Résumé of answers to combiner questionnaire on corrugator roll wear, high and low corrugations, fingerlines, and heat and moisture control. H. T. Scordas. il Tappi 36:sup38+ Ja '53

Steam for box board; Vapor-Clarkson boiler for Hoerner corp. il Power Eng 56:79 N '52

Quality control

Some applications of statistical quality control in the paper boxboard industry. B. E. Sooy. diag Paper Tr J 136:20-2 Je 26 '53

PAPER box factories

Gair cartons division of Robert Gair co., inc., celebrates 45th anniversary. Tappi 36:sup 86A-7A Ja '53

National Container 25th anniversary. il Tappi 36:sup96A-100A Jl '53

Accidents

Injuries and accident causes in the manufacture of paperboard containers. G. R. McCormack and S. W. Homan. U S Bur Labor Statistics Bul 1139:1-59; pa 35c Supt. of doc. '53

Employees

How one company publicized its employee relations program; National container corp. C. E. Wright. Paper Tr J 137:29-30+ Ag 14 '53

Equipment

Factors in the design of a stock cleaning system for a folding box mill. J. T. Loomer. Tappi 36:sup 138A-9A Mr '53

Hinde & Dauch. J. N. Stephenson and J. S. Turner. il Pulp & Pa of Can 54:80-92 Ag '53

PAPER boxes

Best in folding boxes; winning entries in the 1953 carton competition. il Mod Packaging 26:178-81+ Ap '53

Coarse papers. P. S. Bolton. il Paper Tr J 135:338-44 N 14 '52

Coarse papers, bag and board. A. G. Durgin. Paper Tr J 135:329-30+ N 14 '52

Corrugated board containers. B. Gershill. Tappi 35:sup 133A-5A; Discussion. sup 135A-6A N '52

Fibre box winners. il Mod Packaging 26:118-19+ My '53

Folding set-up box; Bloomingdale's tapered, nesting container is partly both. il Mod Packaging 26:98-100 D '52

Glue-lap acceptance gains; corrugated container. il Mod Packaging 27:128-9+ O '53

In-plant box former; tomato pre-packager's machine. il Mod Packaging 26:98-9+ F '53

Packaging material specifications for high-speed automatic machines. D. Wallace. Tappi 36:sup 136A-9A Ag '53

Packs bulk foods in giant cardboard boxes. il diag Food Eng 25:101 My '53

Paperboard cartons with built-in spouts developed. Paper Ind 35:435 Jl '53

Self-tiered cartons; economical, easily set up double-decker merchandiser for industrial tape. il Mod Packaging 26:96-7 O '52

Set-up box awards. il Mod Packaging 26:129-30+ Je '53

Shift from wood to cardboard boxes saves 66 per cent in costs. Paper Tr J 137:50 Ag 21 '53

Swedish design; paperboard folding boxes for hand packaging operations. il Mod Packaging 26:124-6+ N '52

Vacuum sealing of folding cartons. W. J. Cupo. il diags Mod Packaging 26:149-52+ D '52

Manufacture

Development of adhesives for the glued lap joint on fiber containers. F. R. Di Franco. Tappi 36:sup 185A-6A My '53

Efficient carton stitching with wire-stitching machines. J. Prout. il diags Mod Packaging 26:126-7 D '52

Glued lap joints on fiber containers. A. W. Hoffman. Tappi 36:sup 187A-90A My '53

Machinery to manufacture glued lap joint-type containers. R. A. Thompson. il Tappi 36:sup 182A-5A My '53; Abstract. Paper Tr J 136:103 F 20 '53

Some production problems encountered in the manufacture of glued lap corrugated boxes. C. J. Jacobs. Tappi 36:sup 186A-7A My '53

Printing

Color coating container board. J. Gessner. Tappi 36:sup 160A-2A My '53

Coloring machines for boxboard. H. C. Baker. Tappi 36:sup 162A-3A My '53

How a printer turns boxmaker. il Bsns W p 182+ Ap 25 '53

Ink rub test; Sutherland instrument for evaluation of folding cartons. L. R. Ayers. il Mod Packaging 26:129-32 Ja '53

Pictorial printing on corrugated. il Mod Packaging 26:98-100+ Ag '53

Printing of folding boxes; abstract. W. D. Hall. Mod Packaging 26:143 Je '53

Specifications

Specifications for boxes to run on high-speed equipment; abstract. W. L. Rommey. Mod Packaging 26:143-4 Je '53

Testing

Box-strength calculator. K. Q. Kellicutt and others. bibliog il Mod Packaging 26:121-3+ Mr '53

Ink rub test; Sutherland instrument for evaluation of folding cartons. L. R. Ayers. il Mod Packaging 26:129-32 Ja '53

PAPER chemicals

Analysis of starch and starch products; TAPPI tentative standard T 638 m-53. Tappi 36:sup 135A-7A Ap '53

Cyanamide in the paper industry; North American cyanamid, ltd. Pulp & Pa of Can 54:192 Mr '53

Determination of alkoxyl groups; abstract. G. Gran. il diags Paper Ind 34:884+ O '52

Glycerine in paper production. E. S. Pattison. bibliog Paper Tr J 136:19-20 Mr 13 '53

Manufacture and properties of chlorine dioxide. E. Kesting. il diags Tappi 36:166-71 Ap '53

Market analyst looks at chemical trends in pulp and paper. C. R. Graham. Paper Ind 34:977-9 N '52

Mechanism of sulphur dioxide absorption in aqueous media. R. P. Whitney and others. bibliog Tappi 36:172-5 Ap '53

New materials for the industry. Paper Tr J 137:149-56 S 18 '53

PAPER chemicals—*Continued*

Paper chemicals; views and reviews. J. M. Walsh. Paper Tr J 136:153-4 F 20 '53

Papermakers challenge the sulfur shortage; cheap source of sulfur dioxide in spent oxide and dirty sulfur. S. Schwartz. flow diag Paper Tr J 136:18-19 Ja 30 '53

Some aspects of the double titration control test with respect to causticizing efficiency valuations. P. B. Borlew. bibliog Pulp & Pa of Can 54:94-7 Ja '53

TAPPI nonfibrous raw materials report, 1952. E. N. Poor. Tappi 36:sup28A+ Ap '53

Viscosity of starch and starch products; TAPPI suggested method T 637 sm-53. diag Tappi 36:sup 139A-40A Ap '53

Who's who among your suppliers; materials, chemicals used in manufacture or conversion; agents representing manufacturers of paper making materials and chemicals. Paper Tr J 136:226-82 Je 19 '53

Testing

Method of laboratory evaluation of chemicals as potential slimicides. S. I. Cohen and M. Kalm. bibliog Tappi 35:448-54 O '52

PAPER chromatography. See Chromatographic analysis

PAPER coating

China clay in aqueous suspension; effect of anions on flow properties. T. W. Alton and O. J. Schierholtz. bibliog Pulp & Pa of Can 54:67-72 F '53

Color coating. L. O. Carlisle. Tappi 36:sup 158A-60A My '53

Color coating container board. J. Gessner. Tappi 36:sup 160A-2A My '53

Considerations in the selection of equipment for coating preparation. J. T. Loomer. bibliog Tappi 36:sup 148A-52A F '53

Dilts coating laboratory. il Tappi 35:sup 100A-2A O '52

Enzyme treatment of high-solids starch-pigment mixtures. J. E. Wilber. bibliog diags Tappi 36:sup 156A-61A F '53

Equipment for color coating; Waldron corp. L. M. Stempel. il diags Tappi 36:sup 156A-8A My '53

Lamination-casting of coatings for the study of printing quality of coated papers. R. C. Hydell. diags Tappi 36:sup 169A-71A F '53

Large-scale preparation of clay slips. E. G. Heslop and H. M. Hughson. bibliog flow diag il Tappi 36:sup 152A-6A F '53

New developments in paper coating pigments. R. W. Hagemeyer. Paper Ind 35:783-4 O '53

New Upson process for dimensional stabilization of cellulose materials. J. J. Upson. il Paper Tr J 137:14-16 Ag 7 '53

Paper coating. N. Bearce. diags Paper Tr J 135:428+; Discussion. 433-4 N 14 '52

Paper coating. H. G. Davis. diags Paper Tr J 135:417-18+ N 14 '52

Styrene-butadiene type latex upgrades paper coatings. il Paper Ind 34:1460-1 Mr '53

Synthetic latexes for paper coatings. E. J. Heiser. Tappi 36:sup 133A-4A F '53

TAPPI coating conference, 4th, Cincinnati, May 25-27. Paper Tr J 136:27-8 Je 5 '53

TAPPI coating conference, 4th, Cincinnati, May 25-27; with abstracts of papers. Tappi 36:sup76A+ Jl '53

Bibliography

Coating of printing papers. C. J. West. (Bibliographic ser. no. 162) 2d ed 254p Institute of paper chemistry, Appleton, Wis. '52

Patents

Court decides machine coating patent invalid. Pulp & Pa of Can 53:118 O '52

Paper coating suit dismissed. Paper Tr J 135:11 O 31 '52

PAPER coating, Plastic

Machinery for coating paper with plastics. R. C. Sturken and L. W. Egan. bibliog (30 ref) diags Tappi 36:sup38A+ Je '53

Methods of reverse roll coating. R. F. Vokes. bibliog diags Tappi 36:sup64A+ Je '53

Polyethylene extrusion equipment and its application in the packaging industry. Tappi 36:sup 116A+ F '53

Progress in resin coating; new data on methods, with a comparison of properties of six different hot-melt plastic materials. L. M. Burgess and L. F. Swec. il diag Mod Packaging 26:151-5+ S '52; Same. Tappi 36:sup 174A-8A F '53

Rheological system for analyzing the flow properties of pseudoplastic and thixotropic pseudoplastic materials. R. N. Thompson and G. D. Hansen. Tappi 36:sup 172A-4A F '53

PAPER coloring. See Dyes and dyeing—Paper

PAPER containers

Cups and containers face all-out competitive selling. F. Manning. Paper Tr J 136:144+ F 20 '53

Technical association of the pulp and paper industry 38th annual meeting, New York, Feb. 17-18; papers presented at corrugated containers sessions. Tappi 36:sup 156A-90A My '53

See also

Paper bags

Paper board, Corrugated

Paper boxes

Testing

Use of electronic gages to determine the fatigue point in corrugated containers. C. S. MacNair. il diags Tappi 36:sup 138A-42A Ja '53

PAPER cups

Cups and containers face all-out competitive selling. F. Manning. Paper Tr J 136:144+ F 20 '53

Millions in yogurt; Dannon made the product suit the package. il Mod Packaging 26:130-1 N '52

Pinching bag; polyethylene-film tube holds stack as cups are withdrawn one at a time. il Mod Packaging 27:96-8 S '53

Pouring profits from paper cups; sketch of two leading cup bearers, Lily Tulip and Dixie. I. U. Cobleigh. Comm & Fin Chr 177:1632 Ap 16 '53

PAPER cutting machines

Control

Automatic spacing control for paper cutter. il diags Machine Design 25:262-4 Ap '53

PAPER drying

Certain-Teed dries paper with gas burners. R. P. Copeland. il Paper Tr J 136:14-15 Mr 13 '53

Drying of insulating board. H. C. Jessen. bibliog il plan diags Tappi 35:455-67 O '52

Drying theory and practice. C. E. Hill and C. J. Pyle. bibliog(28 titles) il diags Paper Tr J 135:402-17 N 14 '52

Drying tunnels for photo paper processing. W. Broemel. il Sheet Metal Worker 44:89 S '53

Evaporation of water in dryers; charts; data sheets. Pulp & Pa of Can 54:198-9 My '53

Fourdrinier paper machines; dry end. R. Estabrook. diags Paper Tr J 135:386+ N 14 '52

Fourdrinier paper machines; dry end. C. A. Redden. diags Paper Tr J 135:391-4 N 14 '52

PAPER felt. See Felt, Paper

PAPER finishing

Finishing and converting. B. L. Wiley. flow diag il plan diags Paper Tr J 135:450-63 N 14 '52

Finishing and converting supplies. il diags Paper Tr J 137:165-79 S 18 '53

Paper converting. C. W. Stillwell. Paper Tr J 135:446+ N 14 '52

See also

Paper coating

PAPER folding machines

Advantages of the Howard Smith board creaser. B. B. Rogers. il Pulp & Pa of Can 53:120-2 N '52

W-J variable size zig-zag folding unit. il Paper Tr J 135:24 N 7 '52

PAPER handling

Air cylinder and ramp for rolls from winder to header. diags Pulp & Pa of Can 53:125 O '52

Kicker for rolling paper rolls off conveyor. diags Pulp & Pa of Can 53:122-3 O '52

PAPER hanging

Waking up to do-it-yourself. il Bsns W p42-4 Jl 4 '53

PAPER industry and trade

About research and development. W. R. Barber. Paper Tr J 135:17+ N 28 '52

Customs court cases. W. B. Bullock. Paper Ind 34:724, 1096+, 1218+; 35:201, 537, 649 S, D '52-Ja, My, Ag-S '53

Management's problems. R. J. Sund. Paper Tr J 136:28+ Ja 9 '53

Men and ideas. E. Mahler. Paper Tr J 136: 74-6 F 20 '53; Pulp & Pa of Can 54:98-100 Ap '53

New high annual record in production of paper and board indicated. W. L. Neubrech. Paper Ind 35:780-2 O '53

Paper industry; its heritage, its potentialities; abstract. T. B. McCabe. Paper Tr J 136:38 Mr 27 '53

Paper on a global scale. Bsns W p 142-4 F 28 '53

Paper slumps and recovers. Chem Eng 60:194 Mr '53

Papermaking in the second industrial revolution. P. R. Sandwell. Pulp & Pa of Can (Convention no) 54:170-3 [F] '53

Protective coatings; C&EN annual review. H. Burrell. il Chem & Eng N 31:46-7 Ja 5 '53

Pulp and paper advances; Pulp and paper association annual meeting, Montreal. Can Chem Process 37:80-1 F '53

Pulp and paper; C&EN annual review. R. B. Hobbs and W. K. Wilson. Chem & Eng N 31:40-2 Ja 5 '53

Some economic aspects of the pulp and paper industry. A. N. Rumpf. Tappi 36:sup 133A-5A Mr '53

Tri-association western international meeting, Victoria, B.C. Sept. 26-27. Pulp & Pa of Can 53:96-8 O '52

We talk ourselves into recessions. C. Everest. Paper Tr J 136:26-8 Ja 2 '53

Wood, the machines, the people; Champion dramatizes the industry; three color movies. il Paper Tr J 137:24-5 O 9 '53

See also

Kimberly-Clark corporation
Newsprint paper
Paper board industry
Paper mills
Technical association of the pulp and paper industry

Advertising

Business paper drive finds new uses for industrial paper; Riegel paper corp. C. Downes. il Ind Marketing 37:41+ O '52

Weekly newspaper ads bring Northern into the community. il Ind Marketing 38:64+ My '53

Directories

Walden's ABC guide; edition for 1953; annual paper directory for manufacturer, merchant, converter. 519p pa $5 Walden, sons & Mott, 93 Worth st, New York 13 '53

Walden's directory; listing distributors of paper, cardboard, envelopes and paper products. p 143-318 pa $3 Walden, sons & Mott, 93 Worth st, New York 13 '52

Walden's paper production yearbook. 156p, 140p Walden, sons & Mott, 93 Worth st, New York 13 '52

Finance

Financial report paper and allied products, year 1951-2d quarter, 1952; tabulation. Paper Tr J 135:38 D 12 '52

Paper manufacturers top 1951 loan mark by 37 per cent. Paper Ind 35:535+ Ag '53

Role of life insurance companies in paper industry financing, 1949-51. H. Baumgarten. Tappi 35:sup22A+ N '52

Yesterday, today, and tomorrow. A. N. Rumpf. Tappi 35:sup50A+ D '52; Abstract. Paper Ind 34:1124+ D '52

History

Milestones; pulp and paper industry's growth. J. S. Turner. il Pulp & Pa of Can 54:102-10 Je; 76-91 Jl; 93-108 Ag; 109-15 S '53

Paper trade agreements aren't new; America's first was penned in 1795. Pulp & Pa of Can 54:109-10 Ag '53

Public relations

Community relations in action. D. J. Thomson. Paper Tr J 136:77-9 F 20 '53

Salesmen

Team work between paper merchant and manufacturer pays off. R. E. Knox. Paper Tr J 136:27-8 Mr 20 '53

What's wrong with my business or could it be me? S. W. Franklin. Paper Tr J 135:26-8+ D 26 '52

What's wrong with the wholesale paper salesman? C. L. Lapp. Paper Tr J 137:19 Ag 28 '53

Securities

Is paper industry facing a test? with statistical data on leading companies. P. Dobbs. Mag of Wall St 92:284-7+ My 30 '53

Role of life insurance companies in paper industry financing, 1949-51. H. Baumgarten. Tappi 35:sup22A+ N '52

Statistics

Billion dollar industry. Pulp & Pa of Can 53: 76-86 D '52

Distribution of paper and board production by major grade groups by type of mill, 1951. W. H. Pederson. Tappi 36:sup48A+ My '53

How and what the industry did in '52. W. L. Neubrech. Tappi 36:sup16A+ My '53; Excerpts. Paper Tr J 136:14-18 Ap 3 '53

How much will our industry grow? Paper Tr J 137:12-14 Jl 31 '53

1952 paper production exceeded all records but that of 1951. M. C. Dobrow. Paper Tr J 136:120+ F 20 '53

1952 U.S. paper and board production by division and state; tabulation. Paper Ind 35: 778 O '53

Paper and paper products, Nov.-Dec. 1951-Jan.-Nov.-1952. Survey of Cur Bsns 33:S36-7 Ja '53 [cont monthly]

Planned new capacity, 1952-1954. Tappi 36: sup86A+ S '53

Pulp, paper, and board; economic review, 1952; tabulations. W. L. Neubrech. Tappi 36:sup40A+ F '53

United States production paper and board production in 1952, 1951, and 1950; tabulation. Tappi 36:sup82A Ap '53

Alaska

Possibilities for development of the pulp and papermaking industry in Alaska. map Tappi 35:sup38A+ N '52

Promotes Alaskan newsprint industry. I. J. Mason. Paper Tr J 136:34 Ap 17 '53

British Columbia

Industry had early start in British Columbia. L. Manley. il Pulp & Pa of Can 54:155-6 My '53

Pulp and paper expansion continues in British Columbia. J. N. Stephenson. Pulp & Pa of Can 54:116 S '53

Canada

Billion dollar industry. Pulp & Pa of Can 53:76-86 D '52

Canada's pulp and paper industry. R. M. Fowler. Comm & Fin Chr 177:5+ sec 2 Je 25 '53; Same abr. Pulp & Pa of Can 54:91-4 Jl '53; Same cond. Paper Ind 35:567-8 Ag '53

Canada's pulp and paper industry in 1952. J. C. W. Evans. Paper Tr J 136:128-9 F 20 '53

C.P.P.A. president's report for the year 1952 R. M. Fowler. Pulp & Pa of Can (Convention no) 54:141-2+ [F] '53; Excerpts. Paper Tr J 136:17 F 6 '53

Canadian pulp and paper industry. R. M. Fowler. Comm & Fin Chr 177:1746+ Ap 23 '53

Fine paper manufacture in Canada. J. C. W. Evans. il Pulp & Pa of Can 53:100-4 N '52

Fine papers set pace in rapidly expanding Canadian industry. Paper Ind 34:1430+ Mr '53

High dollar and low demand strike Canadian earnings; Canadian pulp and paper industry. il Paper Ind 34:827-8 O '52

Market analyst looks at chemical trends in pulp and paper. C. R. Graham. Paper Ind 34:977-9 N '52

PAPER industry and trade—Canada—*Cont.*

Milestones; pulp and paper industry's growth. J. S. Turner. il Pulp & Pa of Can 54:102-10 Je; 76-91 Jl; 93-108 Ag; 109-15 S '53

Mr Fowler protests Minister of Justice answers; report on fine paper industry. Paper Tr J 135:20+ D 5 '52

Pulp and paper industry during 1952. R. M. Fowler. Pulp & Pa of Can 54:64-6 Ja '53; Same. Tappi 36:sup74A+ F '53

Pulp and paper, 1945-1952. R. M. Fowler. il Pulp & Pa of Can (Convention no) 54:137-40 [F] '53

China

Current developments in the paper industry in China. J. Cardew. Tappi 36:sup86A-9A Ag '53

Europe

European pulp and paper industry; its recovery and potential strength. J. E. Atchison. Paper Ind 34:857-9 O '52

Problems of European paper industry. L. Sutherland. Paper Ind 35:537 Ag '53

Finland

Finland; forest and forest industry. Tappi 35:sup96A-9A D '52

Pulp, newsprint, paper, and board. Tappi 36:sup84A+ Ap '53

Florida

St Joe's piney woods. Fortune 46:162 N '52

Germany

Western Germany's paper, paperboard production increases 15 percent. For Comm W 48:18 O 6 '52

Great Britain

Pulp and paper industry of the U.K. Paper Tr J 136:30+ Ja 16 '53

India

Indian pulp and paper industry in 1951; abstract. Paper Ind 34:1378+ F '53

New cellulosic raw materials for the Indian paper and board industry; abstract. R. V. Bhat. Pulp & Pa of Can 53:157 N '52

Japan

Hand made papers of Japan; review. T. K. Tindale and H. R. Tindale. Paper Tr J 136:14 F 6 '53

Mexico

Mexico develops its paper industry. Paper Tr J 136:33-4 Ja 9 '53

Michigan

What is the pulp and paper future of Michigan's upper peninsula? Paper Tr J 137:29 Jl 31 '53

Netherlands

Outlook brighter for Netherlands paper industry. For Comm W 48:19 O 20 '52

Norway

Norway's pulp and paper production. For Comm W 48:17 O 13; 18 O 27 '52

South Africa

South Africa active in paper. Pulp & Pa of Can 54:179-80 Mr '53

South Africa's forest and paper industry. G. Shipman. Pulp & Pa of Can 54:166+ Jl '53

South America

South America pulp and paper resources. Tappi 36:sup93A Jl '53

Southern states

Pulp and paper map, southern states, U.S.A.; revised to Feb. 27, 1953. Paper Ind 35:supp My '53

Some economic aspects of the development of the paper industry in the South. R. C. Sproull and R. H. Stevens. Paper Ind 35:174-9 My '53

Southern pulp and paper industry and the technologist. G. W. E. Nicholson. il Tappi 35:sup 126A-8A N '52

Sweden

Sweden paper industry. Tappi 36:sup90A+ S '53

United States

Forecast for 1953 expansion; $400,000,000. il Paper Ind 35:35-6 Ap '53

Future bright. Paper Ind 35:27-8+ Ap '53

Future of the paper industry. D. C. Everest. Tappi 36:sup84A-6A Ja '53

Industry and the new administration. E. W. Tinker. Paper Tr J 136:80-1 F 20 '53

Outlook good for remainder of year, Department of commerce reports. Paper Ind 35:428+ Jl '53

President's annual report; American paper and pulp association. S. Ferguson. Paper Tr J 136:66-7 F 20 '53

Prospects for exporting paper in 1953. F. C. Strype, jr. Paper Tr J 136:142-3 F 20 '53

Reviews the economy of the pulp, paper and board industries. W. L. Neubrech. Paper Tr J 135:21-2+ D 12 '52

Significance of its growth factors to the paper industry. L. T. Stevenson. Paper Tr J 136:130+ F 20 '53

Unbleached kraft paper review, 1952. D. Every. Paper Tr J 136:134 F 20 '53

United States paper industry; a review and forecast. L. T. Stevenson. Tappi 36:sup 14A+ Ag '53

Venezuela

Venezuelan market for paper. J. A. Stiles. Pulp & Pa of Can 53:181+ N '52

PAPER laboratories

International Paper opens research laboratory. il Paper Tr J 135:9-10 N 7 '52; Paper Ind 34:1078+ D '52; Tappi 36:sup90A-2A Ja '53

Mead dedicates $1 million lab. il Paper Tr J 136:13-14 My 8 '53; Paper Ind 35:307-8 Je '53; Tappi 36:sup 110A+ Je '53

Modern laboratory at Kenora keeps constant check on newsprint. il Paper Ind 35:771-2 O '53

Wyandotte new research center. il Tappi 36:sup 102A-3A Jl '53

PAPER making

Animal glues provide economy and facilitate papermaking. R. Tutt, jr. Paper Ind 34:1115-16 D '52

Applications of chemical engineering to pulp and paper technology. L. C. Jenness. Paper Tr J 135:271-2+ N 14 '52

C.P.P.A. Technical section Pacific coast branch annual meeting, Harrison Hot Springs, B.C. March 26-28; with abstracts of papers. Paper Tr J 136:23 Ap 10 '53

Canadian pulp and paper association Technical section 39th annual meeting, Montreal; with abstracts of papers. Paper Tr J 136:18+ F 6 '53

Chemical methods committee; report. Tappi 36:sup 127A-8A My '53

Development of paper properties. W. Harrison. Tappi 36:sup 131A-3A Mr '53

Effect of bark control on production of semichemical pulp; abstract. H. Sihtola. Pulp & Pa of Can 54:137 Je '53

Fiber flocculation. D. E. Beasley. Tappi 36:sup 159A-60A S '53

Half a century of paper mill chemistry. J. A. DeCew. Pulp & Pa of Can 54:166-7 My '53

Here's the inside story on modern book papers. W. B. Wheelwright. diags Inland Ptr 131:35-7 Ap '53

Instrumentation of the Bathurst BCM process. T. P. Wall. il diag Pulp & Pa of Can 54:64-6 F '53

Investigations on sheet formation; abstract. N. J. Lindberg. Paper Ind 34:1266-7 Ja '53

Making newsprint from a sugar byproduct in the Dominican Republic. Bsns W p 139 D 13 '52

Measurement and control conference, Cleveland, May 21-22. Tappi 36:sup72A+ Jl '53

Methods of increasing the efficiency of wet-strength resins. J. V. Kindall and J. B. Davidson. Tappi 36:12-14 Ja '53

Modern washing and bleaching at S. D. Warren co. H. F. Szepan. il Tappi 36:sup 125A-7A Ja '53

New methods for the removal of solids and gases from liquid suspensions with particular reference to pulp stock conditioning. H. Freeman and J. D. Boadway. il diags Pulp & Pa of Can 54:102-7 Mr '53; Same. Tappi 36:236-40 My '53

PAPER making—*Continued*

Pacific Coast division, American pulp and paper mill superintendents association and Pacific section, Technical association of pulp and paper industry joint annual spring meeting, Gearhart, Ore. May 22-23. Paper Tr J 136:18-22 Je 5 '53

Paper and paperboard making (cont). H. Williamson. Paper Ind 34:975-6, 1117-19, 1356-7, 1461-2; 35:73-5 N-D '52, F-Ap '53

Paper can be made from bagasse; W. R. Grace & co. il Pulp & Pa of Can 53:83-6 O '52

Paper from straw. A. E. Williams. il Chem Age (Lond) 68:177-81 Ja 24 '53

Processing and manufacturing trends in southern pulp and paper. A. W. J. Dyck. il Paper Ind 35:166-73 My '53

Removal of cooking liquor and washing of chemical pulp by the Von Hildebrandt continuous process. P. G. Von Hildebrandt. il Paper Tr J 137:20-1 Jl 24 '53

Review and summary of some principal TAPPI papers. Paper Tr J 136:96+ F 20 '53

Sanitary tissues. C. M. Howell. diags Paper Tr J 135:345-54 N 14 '52

Studies on the penetration of cooking liquors into bamboo chips. K. Singh. bibliog il diags J Ap Chem 2:669-81 D '52

TAPPI paper plastics conference, Syracuse; abstracts of papers. Paper Ind 34:1123-4 D '52

TAPPI paper-plastics conference, Syracuse, Nov. 5-6, 1952. Tappi 36:sup8A+ Je '53

Technical association of the pulp and paper industry 38th annual meeting, Feb. 16-19; abstracts of papers. Tappi 36:sup42A+ Mr '53

Tri-association western international meeting, Victoria, B.C. Sept. 26-27. Pulp & Pa of Can 53:96-8 O '52

Use of aluminum chloride in melamine-treated papers. F. W. Boughton and K. J. Mackenzie. bibliog Tappi 36:268-70 Je '53

Utilization of sugar cane bagasse in the pulp and paper industry. J. E. Atchison. il Paper Tr J 135:24+ O 17 '52; Discussion (Mr Celler gives his opinion on bagasse). 135:12+ N 28 '52

Va-Purge process. diag Paper Tr J 136:20-1 Je 12 '53

Va-Purge process in chemical pulping; a symposium. flow diag il diags Pulp & Pa of Can 54:98-125 Jl '53; Excerpts. Paper Ind 35:450-8 Jl '53; Discussion. Pulp & Pa of Can 54:126-34 Jl '53

See also

Digesters (paper making)
Felts (paper making)
Glassine—Manufacture
Paper board—Manufacture
Paper chemicals
Paper coating
Paper drying
Paper finishing
Paper making machinery
Paper making materials
Paper mills
Paper pulp
Paper research
Paper sizing
Technical association of the pulp and paper industry
Tissue paper
Wood pulp

Bacteria control

Microbiological control studies; evaluation of a new biocide; 3,5-dimethyltetrahydro-1,3,5, 2H-thiadiazine-2-thione. R. J. Herschler. bibliog Tappi 36:sup 163A-6A S '53

Beating

Beating; an old angle. H. D. Cook. il diags Tappi 36:sup 135A-8A F '53

Beating and refining. C. K. Textor. il Paper Tr J 135:281-2+ N 14 '52

Comparison of the behavior on beating of a chemical wood pulp and groundwood; abstract. W. Brecht and H. Cornel. Paper Ind 34:1150-1 D '52

Stock preparation. F. Herbolzheimer, jr. diags Paper Tr J 135:290+ N 14 '52

Stock preparation equipment. R. B. Morden. flow diags il Paper Tr J 136:21-8 My 1 '53

Bibliography

Stock preparation, pt. 1, Beating. C. J. West, comp. (Bibliographic ser. no. 181) 261p Institute of paper chemistry, Appleton, Wis. '53

Bibliography

Alkaline processes, pt 2, Black liquors. C. J. West, comp. (Bibliographic ser. no. 178) 377p Institute of paper chemistry, Appleton, Wis. '52

Alkaline pulping progress in 1951; a survey of the literature. S. D. Wells. Tappi 35: sup42A+ bibliog(670 ref, sup54A+) O '52

Bleaching

Bleachability test for highly lignified pulps. H. Girdler. Tappi 36:sup 128A Ap '53

Bleached semichemical pulps from mixed eastern hardwoods for use in high-grade bond paper. J. N. McGovern and F. A. Simmonds. Tappi 36:385-90 S '53

Bleaching and its influence on pulp opacity; abstracts. H. W. Giertz. Paper Ind 35:88 Ap '53; Pulp & Pa of Can 54:135 Je '53

Bleaching with chlorine dioxide. W. D. Harrison. Tappi 36:sup 142A-5A My '53

Chlorine bleaching. E. R. Barker, jr. il Paper Tr J 135:253-4+ N 14 '52

Chlorine bleaching. J. C. Cousins. diags Paper Tr J 135:258+ N 14 '52

Chlorine dioxide for pulp bleaching. V. Woodside and K. S. MacLeod. bibliog il diag Paper Tr J 137:26-31 Ag 21 '53

Effect of bleaching treatments on the physical properties of cotton linters pulp. E. F. Thode and others. Paper Tr J 137:16-18 Jl 3 '53

Explosions in chlorine absorption systems. E. A. Mason and others. bibliog diags Tappi 36:274-8 Je '53

High density bleach mixer. il Paper Tr J 136:22 Ja 2 '53

Mixer speeds bleaching. il Chem Eng 60:240 Mr '53

Peroxide bleaching. R. L. McEwen. diags Paper Tr J 135:244+ bibliog(118 ref, p251-2) N 14 '52

Peroxides. J. S. Reichert. diags Paper Tr J 135:230-43 N 14 '52

Peroxides to bleach sulphate pulp. K. G. Aitken. diag Can Chem Process 37:42+ F '53

Pulp bleaching with sodium chlorite. R. L. Carr and K. S. MacLeod. bibliog Tappi 36: sup 195A-8A My '53

Recent investigation of variables in zinc hydrosulphite bleaching of groundwood; abstract. E. T. Barnes. Paper Tr J 136:23 Ap 10 '53

Use of chlorine dioxide for bleaching in non-integrated paper mills. H. R. Murdock. Tappi 36:sup 146A-7A F '53

Uses of chlorine dioxide and chlorites in pulp and paper. F. Casciani. bibliog(108 ref) Paper Tr J 136:21-5 Mr 6 '53

Values of acidic reducing agents in kraft bleaching. H. B. Channon. Tappi 36:sup 198A-200A My '53

By-products

Attisholz yeast from waste sulphite liquor. Tappi 36:sup 104A+ Je '53

Can a pulp mill be made self-supporting in fuel? G. Edling. Paper Tr J 136:14-18 Ap 10 '53

Challenge of lignin. H. B. Marshall. Pulp & Pa of Can 54:112-15 Ap '53

Charmin's new yeast plant progresses. Paper Tr J 137:11-12 S 25 '53

Crown-Zellerbach markets by-product of sulfite waste; Orzan. Paper Ind 34:1093 D '52

Hoberg plans $2,500,000 torula yeast plant to combat pollution. Paper Ind 34:1210 Ja '53

Rhinelander Paper puts $400,000 evaporating plant into operation. il diag Paper Ind 34: 1074-6 D '52; Same. Paper Tr J 135:11-12+ D 26 '52; Same cond. Tappi 36:sup87A-9A Ja '53

Some economic aspects of burning sulphite waste liquor. W. J. Darmstadt and F. H. Richter. Tappi 36:sup 171A-4A Je '53

Spent sulphite liquor pollution abatement programs in the Pacific Northwest. H. R. Amberg. Paper Tr J 136:20-1+ F 27 '53

10,000,000th pound of torula yeast shipped by Rhinelander. Paper Ind 35:650 S '53

Utilization of ammonia-base sulphite liquor. J. B. Martin. Tappi 36:sup 175A-6A Je '53

PAPER making—By-products—*Continued*

Utilization of sulphite pulp mill wastes. S. R. P. Annett. Can Chem Process 36:84+ O '52

Utilization of sulfite pulp mill wastes and their markets. S. R. P. Annett and W. E. Stobo. il Paper Ind 34:1109-11 D '52

Wisconsin pulp makers get yeast chemicals from waste. il Bsns W p70+ N 29 '52

See also

Sulfite liquor

Tall oil

Bibliography

Utilization of waste sulphite liquor; a bibliography of the literature published during 1952. H. B. Marshall and J. M. Neate. Pulp & Pa of Can 54:125-35 Je; 113-26 Ag '53

Dirt problem

Clean pulp from unbarked hardwoods; Centri-Cleaner. diags Paper Ind 34:861-2 O '52

New methods for the removal of solids and gases from liquid suspensions with particular reference to pulp stock conditioning. H. Freeman and J. D. Boadway. il diags Pulp of Pa of Can 54:102-7 Mr '53; Same. Tappi 36:236-40 My '53

Pulp dirt count and evaluation. H. V. Charnell, jr. diag Tappi 36:sup 128A-31A Ag '53

Use of the Centricleaner with special reference to the cleaning of alkaline hardwood pulp. G. H. Tomlinson, 2d and N. G. M. Tuck. flow sheet diags Pulp & Pa of Can 53:109-14 N '52

Fillers

Analysis of calcium sulphate fillers; proposed revision of TAPPI official standard T 615 m-44. Tappi 36:sup 134A-5A Ap '53

Fillers and loading. R. J. Casey. il Paper Tr J 135:301-5 N 14 '52

Paper fillers. W. R. Willets. il Paper Tr J 135:306+ N 14 '52

History

Earliest papermaking in Ohio. E. F. Baker. Tappi 36:sup93A Ja '53

Patents

United States patents on papermaking, third quarter, 1952. C. J. West, comp. Tappi 35: sup 135A-41A D '52

United States patents on papermaking; fourth quarter, 1952. C. J. West, comp. Tappi 36:sup 150A-5A My '53

United States patents on papermaking; first quarter, 1953. Tappi 36:sup 164A-9A Ag '53

Pitch problem

Studies of pitch in sulphite pulp. E. Thommen. Paper Tr J 136:17-18 My 22 '53

Screening

Converting to high capacity pulp screens. W. C. Stevens and others. Tappi 36:372-4 Ag '53

Slime problem

Effective slime control with colloidal silver. il Paper Ind 35:459 Jl '53

Method of laboratory evaluation of chemicals as potential slimicides. S. I. Cohen and M. Kalm. bibliog Tappi 35:448-54 O '52

Soda process

High-yield cold soda pulps and products from several woods. K. J. Brown and J. N. McGovern. Paper Ind 35:66-9 Ap '53

Low molecular substances of lignin origin in black liquors from sulphate and soda pulping of spruce wood. T. Enkvist and B. Alfredsson. bibliog Tappi 36:211-16 My '53

Pulping sprucewood with alkaline dithionite; abstract. G. Jayme and G. Wörner. Paper Ind 34:1016 N '52

Soda pulping. H. L. Field. Paper Tr J 135: 190-7 N 14 '52

Soda pulping. F. Morrison. Paper Tr J 135: 184-9 N 14 '52

Use of the Centricleaner with special reference to the cleaning of alkaline hardwood pulp. G. H. Tomlinson, 2d and N. G. M. Tuck. flow sheet diags Pulp & Pa of Can 53:109-14 N '52

Va-Purge and the alkaline pulping of mixed hardwoods. W. G. Hartford. Pulp & Pa of Can 54:119-20 Jl '53

Study and teaching

School of pulp and paper technology for the South; North Carolina state college; abstract. C. E. Libby. Paper Tr J 136:96 F 20 '53

University of Maine celebrates fifty years of forestry teaching and forty years of the pulp and paper course. Paper Tr J 137:46-8 O 16 '53

Sulfate process

Abatement of sulphate pulp mill malodors by odor masking agents. W. C. Meuly and B. K. Tremaine. bibliog Tappi 36:154-61 Ap '53

Acid pulping with sodium sulphate liquors. G. A. Richter. Tappi 36:228-33 My '53

Alkaline pulping conference, 6th, Mobile, Ala. Nov. 12-14; with abstracts of papers. Paper Tr J 135:34-8 N 21 '52; Tappi 35:sup76A+ D '52; Paper Ind 34:1251-2 Ja '53

Canada paper company's five year expansion program; Windsor mills division of Howard Smith paper mills, limited. il Pulp & Pa of Can 54:86-92 Ap '53

Catalytic oxidation procedure for determining sulphur compounds in kraft mill gases. H. W. Bialkowsky and G. G. DeHaas. bibliog diag Pulp & Pa of Can 53:99-105 O '52; Same. Tappi 36:330-6 Jl '53

Chemical recovery unit. V. P. Owens. il diags Paper Tr J 135:215-29 N 14 '52

Chlorine dioxide for odor control. E. R. Woodward. bibliog il diags Tappi 36:216-21 My '53

Cooking sulphate pulp. R. N. Miller. diag Paper Tr J 135:164+ N 14 '52

Current recausticizing practice. D. C. Gillespie. flow sheet diags Tappi 36:147-51 Ap '53

Destruction of carbohydrates in the kraft cook; abstract. J. Saarnio and C. Gustafsson. Paper Ind 35:582 Ag '53

Determination of hydrogen sulphide, methyl mercaptan, dimethyl sulphide and disulphide in kraft pulp mill process streams. V. F. Felicetta and others. bibliog diags Tappi 36:425-32 S '53

Effect of black liquor fixation on the release of kraft odors. R. H. Wright and others. bibliog Tappi 36:180-3 Ap '53

Effect of kraft mill waste components on certain salmonoid fishes of the Pacific Northwest. E. P. Haydu and others. bibliog Tappi 35:545-9 D '52

Effect of sulfur compounds in the causticizing equilibrium. K. A. Kobe and J. A. Wilkinson. bibliog il diags Ind & Eng Chem 45:307-12 F '53

Experiences in the abatement of kraft mill odors; Gulf states paper corp. B. F. May. Tappi 36:374-8 Ag '53

Experiment to reduce odor from Nekoosa kraft mill. Paper Tr J 135:11 O 31 '52; Same. Paper Ind 34:1092-3 D '52

Harmac starts up pulp mill expansion. il Paper Tr J 137:14-16+ S 25 '53; Same. Paper Ind 35:788-90 O '53

Increase of yield and quality over conventional kraft cooking by the use of Va-Purge. T. W. Houghton. Pulp & Pa of Can 54:118-19 Jl '53

Intensity of the odor release at various points in the kraft pulping process. M. A. Schoening and R. H. Wright. bibliog il Tappi 35:564-9 D '52

Kraft liquor cycle from an operator's viewpoint. J. L. Brown. Tappi 36:sup 129A-32A Jl '53

Kraft mill corrosion; abstract. C. B. Christiansen. Paper Tr J 136:19-20 Je 12 '53

Kraft mill effluents. A. W. Pesch. Tappi 36: sup 124A-6A Jl '53

Kraft mill wastes research. W. A. Moggio. flow diag diags Paper Tr J 136:28-31 F 27 '53

Kraft pulping. F. W. Brainerd. flow sheet Paper Tr J 135:203-8 N 14 '52

Kraft pulping. T. J. Carlin. flow sheet diags Paper Tr J 135:197-8+ N 14 '52

Latest expansion program completed at Halifax Paper. il diag Paper Tr J 136:16-22 My 8 '53

Low molecular substances of lignin origin in black liquors from sulphate and soda pulping of spruce wood. T. Enkvist and B. Alfredsson. bibliog Tappi 36:211-16 My '53

PAPER making—Sulfate process—*Continued*

Mill study of kraft pulp refining. T. D. Syme and J. A. Dawson. diags Pulp & Pa of Can 53:106-14 O '52; Abstract. Tappi 35:sup 107A-8A D '52

Mill trials of Va-Purge in conventional kraft cooking equipment. E. G. Wilson. Pulp & Pa of Can 54:120-1 Jl '53

Nekoosa kraft pulp mill modernizes and expands. R. A. Nugent. Paper Tr J 136:24+ Ja 23 '53

New Zealand's new kraft pulp mill makes first export shipment. il Paper Tr J 137:12 O 2 '53

Peroxides to bleach sulphate pulp. K. G. Aitken. diag Can Chem Process 37:42+ F '53

Physical properties of slash pine semi-chemical kraft pulp and of its fully chlorited component. F. C. Keeney. bibliog il Tappi 35:555-63 D '52

Purified hardwood pulps for chemical conversion; aspen sulphite and prehydrolysis-sulphate pulps. F. A. Simmonds and others. bibliog Tappi 36:103-10 Mr '53

Review of the operation of the Tomlinson secondary recovery system. J. Allan. diag Pulp & Pa of Can (Convention no) 54:202-4 [F] '53

St Regis. Tappi 36:sup92A+ Ap '53

St Regis mill at Jacksonville in regular production. il map Paper Tr J 136:36-40+ Ja 16 '53; Same. Tappi 36:sup 116A-22A Mr '53; Same. Paper Ind 35:60-5 Ap '53

St Regis (Pensacola) to use barked sawmill slabs. Paper Tr J 135:9-10 N 21 '52

Semi-chemical pulping at Bathurst. R. J. P. Keswick. flow diag il Pulp & Pa of Can 53:127-31 N '52

Studies in continuous alkaline pulping. W. J. Nolan and others. diag Tappi 34:529-38; 35: 505-10; 36:406-17 D '51, N '52, S '53

Sulfate recovery units. J. H. Coulter, jr. flow sheet il diags Paper Tr J 135:210-15 N 14 '52

Sulfidity and alkaline pulping of beechwood; abstract. G. Jayme and W. Licht. Paper Ind 35:250 My '53

Unbleached kraft paper review, 1952. D. Every. Paper Tr J 136:134 F 20 '53

Use of sulphur in kraft pulp mills. J. E. Vassie. Tappi 36:367-8 Ag '53

Use of Va-Purge vapour-phase technique with mill equipment. R. J. P. Keswick. flow diag Pulp & Pa of Can 54:122-3 Jl '53

Values of acidic reducing agents in kraft bleaching. H. B. Channon. Tappi 36:sup 198A-200A My '53

Wet end operating conditions and paper qualities in a kraft mill. R. D. Rusch. Tappi 36:sup 143A-4A Je '53

Weyerhaeuser timber co. engineered out offensive odors from pulping (cooking) liquors. Tappi 35:sup 102A-4A N '52

Weyerhaeuser timber company's new kraft pulp mill at Everett, Wash. now in operation. il Paper Ind 35:766-7 O '53

Weyerhaeuser's new kraft mill. il Paper Tr J 137:21-2+ O 2 '53

Bibliography

Alkaline pulping progress in 1951; a survey of the literature. S. D. Wells. Tappi 35: sup42A+ bibliog(670 ref, sup54A+) O '52

Sulfite process

Ammonia versus calcium in acid making, cooking, and screening. L. A. LaFond. Tappi 36:sup 131A-2A Ag '53

Application of laboratory methods to acid making problems. J. W. Wainwright. diags Pulp & Pa of Can 54:91-3 Ja '53

Application of the Oliver vacuum cylinder to sulphite pulp drying. C. R. Tittemore. Pulp & Pa of Can 53:98-100 D '52

Bleached semichemical pulps from mixed eastern hardwoods for use in high-grade bond paper. J. N. McGovern and F. A. Simmonds. Tappi 36:385-90 S '53

Chemical study of the skinlike substance of sulphite pulps. R. R. Rollinson and L. E. Wise. bibliog Tappi 35:sup 139A-40A N '52

Cooking acid preparation in the sulfite process. M. J. Barsalou. bibliog il diags Paper Tr J 135:135-8+ N 14 '52

Design for ammonia-base sulphite raw-acid towers. R. P. Whitney and S. T. Han. bibliog diag Tappi 35:569-76 D '52

Development of 65 per cent yield sulphite for newsprint furnish. F. P. Silver and L. R. Beath. flow sheets diag Pulp & Pa of Can (Convention no) 54:215-19+ [F] '53; Same. Paper Tr J 135:46-8+ My 15 '53; Same. Tappi 36:305-10 Jl '53

Effect of chip dimensions on penetration of ammonia-base cooking acid; abstract. C. M. Howell and E. L. Cunningham. Paper Tr J 136:14 Je 5 '53

Effect of the cooking conditions on the viscose making properties of birch sulphite pulp; abstract. O. Perila. Pulp & Pa of Can 54:136-7 Jl '53

How Westvaco makes semi-chemical pulp at Mechanicville. J. C. W. Evans. il Paper Tr J 136:14-18 My 1 '53

International's Gatineau mill boosts quality and output; Canadian international paper co. il Paper Ind 34:850-4 O '52

Investigation of the mechanism of water removal from pulp slurries. W. L. Ingmanson. bibliog(25 ref) diag Tappi 35:439-48 O '52

Kenora mill operation of Jonsson knotters in refining of sulphite pulp stock; Askania regulator. Tappi 36:sup93A-4A Jl '53

Neutral sulfite semichemical pulping. W. Kraske. flow sheet Paper Tr J 135:173-9 N 14 '52

Neutral sulfite semichemical pulping. J. N. McGovern. flow sheet Paper Tr J 135:179-84 N 14 '52

Organization and implementation of an ammonia-base mill trial. J. L. Horton. bibliog diags Pulp & Pa of Can (Convention no) 54:205-9+ [F] '53

Purified hardwood pulps for chemical conversion; aspen sulphite and prehydrolysis-sulphate pulps. F. A. Simmonds and others. bibliog Tappi 36:103-10 Mr '53

Self-sluicing blowpits at Gatineau. P. N. Bowie-Evans. il diags Pulp & Pa of Can 53:88-91 D '52

Semi-chemical newsprint at Richmond pulp & paper co. of Canada. J. N. Stephenson. flow sheet il Pulp & Pa of Can 54:104-8 S '53

Semichemical pulping of hardwoods. H. L. Field. Tappi 36:sup 140A-3A Ag '53

Semichemical pulps of high brightness; abstract. H. Bouchayer. Paper Ind 34:882+ O '52

Studies of pitch in sulphite pulp. E. Thommen. Paper Tr J 136:17-18 My 22 '53

Sulphate formation in sulphite pulping. M. S. Anderson and G. S. McKnight, jr. bibliog Tappi 36:151-3 Ap '53

Sulfite acid preparation. D. Griffee. flow diag diags Paper Tr J 135:157-61 N 14 '52

Sulphite digester inspection. Tappi 35:sup 132A-4A D '52

Sulphite pulp acid making systems. O. E. Anderson. diags Paper Tr J 135:161-4 N 14 '52

Sulphite pulp manufacturers' research league, inc. research program. il Tappi 36:sup92A+ My '53

Sulfite pulping. F. Harlow. flow sheet diags Paper Tr J 135:169-73 N 14 '52

Sulfite pulping sulfur dioxide preparation. E. C. Uebrick. il diags Paper Tr J 135:153-7 N 14 '52

Sulfox process for recovering chemicals from sulphite mills. R. S. Aries and A. Pollak. bibliog flow sheets Tappi 35:sup 142A-6A D '52

Sulphur usage and distribution in sulphite pulping. C. H. Anderson. bibliog diag Tappi 36:255-60 Je '53; Abstract. Paper Tr J 136: 100 F 20 '53

Trials with the Va-Purge process at the Riverbend mill. L. R. Beath. Pulp & Pa of Can 54:121-2 Jl '53

Use of the Va-Purge principle in sulphite pulping at Ocean Falls, B.C. R. R. Edwards. Pulp & Pa of Can 54:110-11 Jl '53

Utilization of sulphite pulp mill wastes. S. R. P. Annett. Can Chem Process 36:84+ O '52

PAPER making—Sulfite process—*Continued*

Wet end operating conditions and paper qualities; sulphite papers. L. Sabatke. Tappi 36:sup 142A-3A Je '53

See also

Sulfite liquor

Tables, calculations, etc.

Application of multiple correlation methods in the pulp mill. F. L. Riley. Tappi 36:sup 192A-5A My '53

PAPER making machinery

All about the new paper machine. B. Kassing. il Paper Tr J 136:19-20+ Ja 23 '53

Application of the Oliver vacuum cylinder to sulphite pulp drying. C. R. Tittemore. Pulp & Pa of Can 53:98-100 D '52

Aquapulper and Beatapulper. H. D. Cook. il diag Pulp & Pa of Can 54:108-16 Mr '53

Automatic sheet transfer from wire to press on a Fourdrinier. L. Hornbostel. diags Tappi 36:145-7 Ap '53

Belting paper machine cone drives. S. L. Allen. Tappi 36:82-5 F '53

Britain's paper-making machinery industry. Paper Tr J 135:25 N 7 '52

Circular-orifice-type continuous stock proportioner. F. I. Anderson. il diags Pulp & Pa of Can (Convention no) 54:187-9 [F] '53

Closure of a tissue machine whitewater system. J. Mardon and R. M. Toller. diags Pulp & Pa of Can 54:81-6 Ja '53

Comparison of various refiners in groundwood pulping; abstract. W. Brecht and E. Müller. Paper Ind 34:882 O '52

Continental Can's new Fourdrinier board machine, the world's largest. il Paper Tr J 137:24-5 Jl 31 '53

Cylinder machine operations; panel discussion. Tappi 35:sup 129A-32A N '52

Deculator on a kraft paper machine; abstract. A. W. Duskin and W. B. Jenkins. Paper Tr J 136:104+ F 20 '53

E. D. Jones acquires manufacturing rights for French screen, filter. il Paper Ind 35:221-2 My '53

Fort Frances number five paper machine. Tappi 36:sup94A-5A Jl '53

Fourdrinier paper machines; dry end. R. Estabrook. diags Paper Tr J 135:386+ N 14 '52

Fourdrinier paper machines; dry end. C. A. Redden. diags Paper Tr J 135:391-4 N 14 '52

Fourdrinier paper machines; wet end. P. Baldwin. diags Paper Tr J 135:365-6+ N 14 '52

Gadget competition winners. M. Bourque; G. M. Smith. il diags Pulp & Pa of Can (Convention no) 54:178-80 [F] '53

Hoberg starts up new number one machine. il Paper Tr J 135:12 D 19 '52; Paper Ind 34:1204-5 Ja '53

Increased production from existing machines. J. R. Curtis. Tappi 36:sup 145A-9A My '53

Mando puts number three machine into operation after modernization. il Paper Ind 35:418-19 Jl '53

Mill study of kraft pulp refining. T. D. Syme and J. A. Dawson. diags Pulp & Pa of Can 53:106-14 O '52

Minnesota & Ontario paper co. number three paper machine. Tappi 36:sup 108A Ag '53

Minnesota & Ontario spends over million to modernize number three. Paper Tr J 136:11 Ap 10 '53

Modern cylinder machine wet-end helper drive at the E. B. Eddy co. A. C. McLaren. il diags Pulp & Pa of Can 54:117-20 Mr '53

New felt machine at Bird Phillipsdale mill. il Paper Tr J 136:24-5 My 8 '53

New improvement on high speed Fourdriniers. W. S. Corbin. Paper Tr J 136:19-20 Ap 10 '53

New Jacksonville Fourdrinier is fitted with St Regis Panelyte. il Paper Tr J 137:19 S 4 '53

New machine starts at Covington; West Virginia pulp & paper co. Paper Tr J 137:11 Jl 10 '53

New paper machine completes Nekoosa-Edwards program. B. L. Kassing. il Paper Ind 34:1346-50 F '53

Operation of a stacked press with vacuum transfer on an English newsprint machine. W. B. Dixon. diags Pulp & Pa of Can 53:115-18 O '52

Paper and paperboard making; Fourdrinier machine, fundamental principles. H. Williamson. Paper Ind 34:600-1 735-8, 859-60, 975-6, 1117-19, 1356-7, 1461-2; 35:73-5 Ag-D '52, F-Ap '53

Paper machine accessories. il diags Paper Tr J 137:117-23 S 18 '53

Paper machine drive fundamentals. E. J. Justus. il diags Paper Tr J 135:394-6+ N 14 '52

Paper machine; wet end. W. Corbin. diags Paper Tr J 135:374+ N 14 '52

Paper stock pulper; patent. diags Paper Ind 35:688+ S '53

Papermaking (cylinder); discussion. Tappi 35:sup 116A-27A D '52

Press section load requirements. R. R. Baker. Tappi 35:390-4 S '52; Abstract. Paper Tr J 135:31 O 24 '52; Discussion. Tappi 35:sup 140A-2A S '52

Sectional paper machine drive and operating efficiency. C. D. Beck. il diag Paper Ind 34:862-5 O '52

Some operating characteristics of a paper machine drier section equipped with forced ventilation. J. W. Oren and others. il plan diags Tappi 36:sup 159A-63A Ap '53

Stock preparation equipment. R. B. Morden. flow diags il diags Paper Tr J 136:14-22 Ap 24; 21-8 My 1 '53

Useless friction costs as much as useful friction. W. F. Schaphorst. Pulp & Pa of Can 53:100 D '52

Vacuum transfer from wire to press section. D. A. Ely. il Paper Tr J 136:18-19 Je 26 '53

Water extraction on paper machines; abstract. R. Thomann. il diag Paper Ind 34:882 O '52

West Virginia adds new machine. il Paper Ind 35:529-30 Ag '53; Same. Tappi 36:sup91A-4A Ag '53

Westminster starts up third paper machine. Pulp & Pa of Can 54:184+ Jl '53

Wet end operating conditions and paper qualities; coating base. W. J. Foote. bibliog il Tappi 36:sup 140A-2A Je '53

Wet end operating conditions and paper qualities; glassine and greaseproof. L. Parkinson. Tappi 36:sup 144A-5A Je '53

Wet end operating conditions and paper qualities in a kraft mill. R. D. Rusch. Tappi 36:sup 143A-4A Je '53

Wet end operating conditions and paper qualities; rag bond. L. A. Moss. Tappi 36:sup 139A-40A Je '53

Wet end operating conditions and paper qualities; sulphite papers. L. Sabatke. Tappi 36:sup 142A-3A Je '53

Who's who among your suppliers; agents representing manufacturers of paper mill equipment, paper making materials and chemicals. Paper Tr J 136:91-304 Je 19 '53

See also

Electric driving—Paper mills
Kamyr, inc.
Paper cutting machines
Paper drying
Rolls (paper machinery)
Wood grinders

Bearings

How to make anti-friction bearings live longer. W. F. Schaphorst. Pulp & Pa of Can 53:130 O '52

Cleaning

Factors in the design of a stock cleaning system for a folding box mill. J. T. Loomer. Tappi 36:sup 138A-9A Mr '53

Control

Application of instrumentation thinking to design and operation of process equipment. J. N. Franklin. diags Pulp & Pa of Can (Convention no) 54:181-6 [F] '53

Automatic control with the Betameter. J. Y. Chartrand. il diags Pulp & Pa of Can 54:108-11 Ap '53

Betameter in a basis-weight-control application. G. E. Wilson. il Pulp & Pa of Can (Convention no) 54:225-9 [F] '53

Control of moving webs. J. A. Baring. il diags Machine Design 25:151-7 S '53

PAPER making machinery—Control—*Cont.*

Correct choice of instruments in pulp and paper manufacture. L. Walter. il Paper Ind 34:1453-5 Mr '53

Magnetic amplifiers in paper mill controls. M. H. Fisher. il diags Paper Ind 34:1450-3 Mr '53; Same. Westinghouse Eng 13:59-63 Mr '53

Paper tensiometer. N. B. Rohrbaugh and G. E. Cassidy. il diag Paper Tr J 137:14-15 Jl 16 '53

Tensiometer increases Glatfelter production. R. Schuessler. il diag Paper Ind 34:1463-4 Mr '53

PAPER making materials

Banana stumps found suitable paper base by Indian government's Handmade paper research center. For Comm W 48:15 N 10 '52

Cellulosic raw materials from India; abstract. R. V. Bhat and others. Paper Ind 34:1266; 35:362 Ja, Je '53

Characteristics of pulp fibers from agricultural residues. E. C. Lathrop. Tappi 35: sup60A+ N '52

Cotton rags in '52. S. I. Lippman. Paper Tr J 136:146+ F 20 '53

New cellulosic raw materials for the Indian paper and board industry; abstract. R. V. Bhat. Pulp & Pa of Can 53:157 N '52

Newsprint from sawgrass? Paper Tr J 136: 12 Ap 3 '53

Paper from flosses of cryptostegia grandiflora; abstract. N. K. S. Iyengar. Paper Ind 34:1267 Ja '53

Place of agricultural residues in paper making today. C. B. Tabb. Chem & Ind p960-4 O 4 '52

Problems in applications of resins to paper; panel discussion. J. Pullman and others. Tappi 36:sup70A+ Je '53

Raw material supply situation. D. C. Everest. Paper Tr J 136:82-3 F 20 '53

Raw materials for paper-making. K. Brown. Chem Age (Lond) 67:755-8 D 6 '52

TAPPI fibrous agricultural residues conference, 6th, Peoria, Ill. Oct. 27-28; with abstracts of papers. Paper Tr J 136:29-30 Ja 2 '53; Tappi 35:sup72A+ D '52; 36:sup74A-8A Ja '53

What is wood as a chemical raw material? J. L. McCarthy and C. C. Heritage. Pulp & Pa of Can 54:189-92 My '53

Who's who among your suppliers; materials, chemicals used in manufacture or conversion; agents representing manufacturers of paper making materials and chemicals. Paper Tr J 136:226-82 Je 19 '53

See also

Bagasse
Bamboo
Cellulose
Cotton linters
Paper chemicals
Paper making—
  Fillers
Paper pulp
Paper sizing
Pine
Rags
Saw grass
Sorghum
Straw
Waste paper
Wood pulp
Wood waste

PAPER mills

Design of chimneys for odor dispersion. F. L. Cate. Tappi 36:225-8 My '53

Dynamic midget; story of the Cellulo co. P. E. Jacobs. il Paper Tr J 137:14-18 S 11 '53

Economic and engineering problems involved in building new mills. H. G. Ingraham. Tappi 36:sup 145A-7A Je '53

Everett's 60th year. J. Hayes. Tappi 35: sup92A-3A D '52

Isotope radiations control paper processing. Can Chem Process 37:24 F '53

Job organization and construction coordination. K. G. Taylor. Tappi 36:sup 115A-18A Ja '53

LongLac. Tappi 36:sup 100A-2A Jl '53

New Canadian papermill produces glassine paper; Canadian glassine co. il Paper Tr J 136:40-1 Ap 17 '53

New Scott paper mill progressing rapidly. il Paper Tr J 136:11-12 Je 12 '53

Parsons & Whittemore point four type program to engineer, develop, and build complete pulp and paper mill projects. Tappi 36:sup96A+ Ap '53

Rhinelander paper co. celebrates golden anniversary at modern mill. il Paper Ind 35:427-8 Jl '53

S.D. Warren co. to buy Central Paper. il Paper Tr J 136:22 Mr 20 '53

Saving heat in paper mills; abstract. N. Austin. Heating-Piping 25:87+ My '53

Success through service, is the motto at Cheney. Paper Tr J 137:52 S 18 '53

West Virginia pulp and paper co.; progress report. il map Paper Tr J 136:14-17 F 13 '53

Weyerhaeuser timber company's new kraft pulp mill at Everett, Wash. now in operation. il Paper Ind 35:766-7 O '53

See also

Brunswick pulp and paper company
Paper board mills
Paper making
Water supply for paper mills

Accidents

Chief engineer at Longview explains blow tank explosion. Paper Tr J 136:11-12 F 13 '53

Engineer's approach to accident prevention; abstract. G. W. Harper. Paper Tr J 135: 28-9 O 24 '52

Four year record; 11 Ontario mills reduce accidents 60 per cent. F. O. Soughton. Paper Ind 34:1494 Mr '53

LongLac reports success of human element program. F. O. Soughton. Paper Ind 34: 1374 F '53

1952 all-industry safety record shows improvement; pulp, paper down. Paper Ind 35:579 Ag '53

1952 NSC pulp and paper contest shows five per cent rate reduction. Paper Ind 34:1494+ Mr '53

PI contest report for six months shows 11 per cent decrease from 1952. Paper Ind 35:685-6 S '53

Psychology of industrial accidents. G. K. Cotts. Pulp & Pa of Can 54:192, 198+ Ag '53; Same cond. Paper Ind 35:556-7 Ag '53

Six-month frequency rate up for International Northern div. Paper Ind 35:685 S '53

Your industry and the public interest. D. Corbett. Pulp & Pa of Can 54:212+ Je '53

Costs

Estimating data for piping labor costs. L. L. Mrachek. diags Tappi 35:sup34A+ O '52

Methods for estimating construction costs. F. L. Plummer. il diag Tappi 36:sup 14A+ Jl '53

Pipe cost estimation; reprinted from Chemical engineering, Jan. 1950. R. A. Dickson. Tappi 35:sup8A+ O '52

Damage from floods

Brown co. survives worst flood in 17 years on Androscoggin. il Paper Ind 35:432+ Jl '53

Electric equipment

Accidents to electrical equipment. R. F. O'Connell. Pulp & Pa of Can 54:119-20 Je '53

Electric wire and cable recommendations for the pulp and paper industry. A. O. Mortenson. Tappi 36:sup 161A-3A Ag '53

Electrical hazards in the pulp and paper industry. W. Schweisheimer. Pulp & Pa of Can 54:184, 188 Mr '53

Electro-filter as a secondary recovery device. W. A. Thompson. il diags Pulp & Pa of Can (Convention no) 54:174-7+ [F] '53

Instrument applications in pulp and paper mills. E. F. Thode. il diags Paper Tr J 135:355+ N 14 '52

Magnetic amplifiers in paper mill controls. M. H. Fisher. il diags Paper Ind 34:1450-3 Mr '53; Same. Westinghouse Eng 13:59-63 Mr '53

Maintenance of electronic controls in paper mills. C. J. Meloun. il diag Paper Tr J 137: 14-18 Jl 17; 21-6 Ag 7 '53

Regulation systems; key to higher supercalender production. W. R. Harris. il diags Paper Tr J 136:22-3 F 13 '53

Suction pickup system speeds up newsprint production. C. A. Scarlott. il Westinghouse Eng 13:31-2 Ja '53

PAPER mills—Electric equipment—*Cont.*
Wire for wet locations. il Paper Tr J 135:27 O 31 '52; Same. Rubber Age 72:224 N '52
See also
Electric driving—
Paper mills

Employees

Bowater's prove value of systematic vocational training. W. G. Smith. il Pulp & Pa of Can 54:44-8 F '53
Canadian pulp and paper association Industrial relations section 7th annual meeting, Montreal, March 3-5. Pulp & Pa of Can 54:86-9 Mr '53
Combating heat and humidity. W. Schweisheimer. Paper Ind 35:671 S '53
Development of labour relations. C. Jordan. il Pulp & Pa of Can 54:160-2 My '53
Executive compensation plans. J. A. Keller. Paper Ind 35:793 O '53
Hand of the worker in the paper industry. W. Schweisheimer. Pulp & Pa of Can 53: 176+ Ag '52; Same cond. Paper Ind 35: 797 O '53
How Ontario rehabilitates its industrially injured. D. D. McRae. Paper Tr J 136:16-17 Mr 13 '53; Same. Pulp & Pa of Can 54: 202+ Jl '53
Human being, the most difficult measurement and control problem of all. H. A. Black. Tappi 36:sup 154A-6A S '53
Job evaluation. J. J. Butler and others. Paper Ind 34:1228, 1351, 1459; 35:72, 343-4, 460, 670 Ja-Ap, Je-Jl, S '53
Labor costs in pulp and paper industry, 1939-1953. Paper Tr J 137:24 Jl 24 '53
People have a place in your planning. A. J. Miller, jr. Tappi 35:sup 10A+ N '52
Personnel development at Pacific mills, limited. L. S. McGill. Pulp & Pa of Can 54:90-4 Mr '53
Selection of technical personnel. J. E. Todd. Paper Tr J 136:17-18 Mr 27 '53; Same. Tappi 36:sup 123A-4A Ap '53; Excerpts. Paper Ind 35:78 Ap '53
Slight increase in 1952 average wages in the pulp and paper industry. Pulp & Pa of Can 54:189-91 Jl '53
Ten steps to better employee relations. E. W. Fair. Paper Ind 34:1120 D '52
Union tells Australian workers to return company bonus; Australian paper manufacturers, ltd. incentive payment scheme. Paper Tr J 136:12 Ap 24 '53
Wages in pulp, paper, and paperboard mills, April 1952. F. W. Mohr. Mo Labor R 75: 626-9 D '52
What keeps workers happy? W. Schweisheimer. Pulp & Pa of Can 54:198, 202 S '53

Equipment

Adaptation of Va-Purge to chemical pulping with conventional equipment. J. S. Hart and R. K. Strapp. diags Pulp & Pa of Can 54:105-10 Jl '53; Same cond. Paper Ind 35: 452-4 Jl '53
Air cylinder and ramp for rolls from winder to header. diags Pulp & Pa of Can 53:125 O '52
Analysis of data on stock flow in pipes. R. E. Durst and others. bibliog Tappi 35:529-35 D '52
Application of instrumentation thinking to design and operation of process equipment. J. N. Franklin. diags Pulp & Pa of Can (Convention no) 54:181-6 [F] '53
Beta rays guide papermakers at Wausau paper mills co. Paper Ind 35:533 Ag '53
Beta rays now gage paper thickness. il Elec West 109:98 O '52
Betameter. D. C. Brunton. diags Pulp & Pa of Can (Convention no) 54:220-4 [F] '53
Betameter used for control in paper and pulp industry. Elec Eng 72:278-9 Mr '53
Black-Clawson (Shartle & Dilts) stock preparation equipment. il diag Tappi 36:sup 112A:13A Ag '53
Bowater's Calhoun plant to produce in 1954. il Paper Tr J 135:11 D 19 '52
Bowaters southern paper corp. D. G. Moon. il Tappi 36:sup78A+ F '53
Bulk unloading problems; how to avoid them. T. S. Abbott. il diags Paper Ind 34:854-6 O '52
Canada paper company's five year expansion program; Windsor mills division of Howard Smith paper mills, limited. il Pulp & Pa of Can 54:86-92 Ap '53
Canadian glassine company limited opens new plant. il Pulp & Pa of Can 54:93-5 Ap '53
Certain-Teed dries paper with gas burners. R. P. Copeland. il Paper Tr J 136:14-15 Mr 13 '53
Clean pulp from unbarked hardwoods; Centri-Cleaner. diags Paper Ind 34:861-2 O '52
Completion of modernization program helps set new production records at Powell River. Pulp & Pa of Can 54:180-2 Mr '53
Considerations in the selection of equipment for coating preparation. J. T. Loomer. bibliog Tappi 36:sup 148A-52A F '53
Consolidated puts $500,000 plant for evaporating liquor into operation. il Paper Ind 35: 39-40 Ap '53; Same cond. Paper Tr J 136: 12 Mr 13 '53; Same cond. Tappi 36:sup 100A+ Ap '53
Converting to high capacity pulp screens. W. C. Stevens and others. Tappi 36:372-4 Ag '53
Correct choice of instruments in pulp and paper manufacture. L. Walter. il Paper Ind 34:1453-5 Mr '53
Corrosion in the pulp and paper industry. F. A. Guba. Tappi 36:sup 134A-7A My '53
Deculator operation; abstract. C. Clark. Tappi 35:sup 110A-11A D '52
Design and operation of the Elk Falls co. woodroom and groundwood mill; abstract. J. W. Hill. Paper Tr J 136:23 Ap 10 '53
Design for ammonia-base sulphite raw-acid towers. R. P. Whitney and S. T. Han. bibliog diag Tappi 35:569-76 D '52
Eastern corp. installs beta gauge at Maine mills. il Paper Ind 35:436 Jl '53
Efficiency of a pyrites roaster; abstract. L. Broman. diag Paper Ind 35:252-3 My '53
Expansion of Bromptonville mill of Richmond pulp and paper co. il Paper Tr J 137:14-17 Jl 24 '53
Fielden Drimeter for continuously indicating moisture content of paper; abstract. V. J. McConchie. Pulp & Pa of Can 54:73 F '53
First details on Fort Frances mill modernization. R. Faegre. map Paper Tr J 137: 22-3 S 11 '53
Future plant robotization in the paper mill; use of instruments. L. Walter. il Paper Ind 35:558-60 Ag '53
Great Northern to increase production at East Millinocket. il Paper Ind 35:35 Ap '53
Halifax Paper's latest modernization project. il Paper Ind 35:446-9 Jl '53
Harmac starts up pulp mill expansion. il Paper Tr J 137:14-16+ S 25 '53; Same. Paper Ind 35:788-90 O '53
High density bleach mixer. il Paper Tr J 136:22 Ja 2 '53
High stacking and fork truck stability. H. Milz. il diags Paper Ind 35:791-2 O '53
How Champion paper & fiber co. developed dustless saw for slicing cement. il Paper Tr J 136:24 Ap 10 '53
How to use valves in solving today's control problems. C. S. Beard. il diags Paper Tr J 137:14-18+ O 9 '53
How Westvaco makes semi-chemical pulp at Mechanicville. J. C. W. Evans. il Paper Tr J 136:14-16 My 1 '53
Improvements at Ocean Falls continue. Pulp & Pa of Can 54:229-30 Ap '53
Instrumentation in the pulp and paper industry. D. B. Scrivens. flow sheet il diags Instruments 25:1420-4+ O '52
Instrumentation of recovery furnaces. J. R. Upson and T. C. Johnson. il diags Tappi 36:378-83 Ag '53
Instrumentation of the Bathurst BCM process. T. P. Wall. il diag Pulp & Pa of Can 54:64-6 F '53
Instruments in the new Riegel mill. C. E. Roth and others. il Tappi 36:sup 144A-6A F '53
International's Gatineau mill boosts quality and output; Canadian international paper co. il Paper Ind 34:850-4 O '52
Kenora mill operation of Jonsson knotters in refining of sulphite pulp stock; Askania regulator. Tappi 36:sup93A-4A Jl '53
Kicker for rolling paper rolls off conveyor. diags Pulp & Pa of Can 53:122-3 O '52

PAPER mills—Equipment—*Continued*

Latest expansion program completed at Halifax Paper. il diag Paper Tr J 136:16-22 My 8 '53

Limestone handling at Oxford paper co. D. S. Adams. diags Pulp & Pa of Can 54:127-8 Ag '53

Liquid ring compressor; some thermodynamic characteristics. H. E. Adams. diag Tappi 36:193-9 My '53; Abstract. Paper Tr J 136:106 F 20 '53

Machinery for coating paper with plastics. R. C. Sturken and L. W. Egan. bibliog(30 ref) diags Tappi 36:sup38A+ Je '53

Mando begins modernizations at Fort Frances and Kenora mills. il Paper Ind 34:1427-8 Mr '53

Mando completes installation of Briner economizers. C. Larson. il Paper Ind 34:829-30 O '52

Mando modernizes grinder and power facilities at Fort Frances. J. F. MacKellar. Paper Ind 35:765 O '53

Mando reviews year's progress in expansion and modernization. il Paper Ind 34:1082+ D '52

Measurement and control conference, Cleveland, May 21-22. Tappi 36:sup 127A-56A S '53

Metallizing in the paper mills. il diag Paper Tr J 136:19-20 My 29 '53

Methods for estimating construction costs. F. L. Plummer. il diag Tappi 36:sup 14A+ Jl '53

Modern materials handling keys Bay West expansion. D. W. Zeigler. il Paper Ind 34:1236-9 Ja '53

Moraine, America's most modern fine-paper mill. A. W. J. Dyck. il Paper Ind 34:1106-9 D '52

Most modern straw pulp mill; N.V. Maatschappij tot Stroveredling Sove, Arnhem, Holland; abstract. il Paper Ind 35:2250 My '53

Nekoosa-Edwards expansion. il Paper Ind 34:1344-5 F '53

Nekoosa-Edwards modernization and expansion program. il Paper Tr J 136:18-20+ Ja 23 '53

Nekoosa kraft pulp mill modernizes and expands. R. A. Nugent. Paper Tr J 136:24+ Ja 23 '53

New bleach plant poured for Hollingsworth & Whitney. il Paper Ind 35:39 Ap '53

New developments in recovery furnace design. W. J. Darmstadt. Tappi 36:289-91 Jl '53

New developments in recovery unit design. F. W. Hochmuth. il diags Tappi 36:359-66 Ag '53

New equipment and supplies review. il diags Paper Tr J 137:81-195 S 18 '53

North America's newest newsprint mill in operation; Elk Falls co. il Paper Ind 34:970-4 N '52

Our first year with a hot lime and zeolite feedwater treatment plant. M. R. Rivers and K. J. Linehan. Tappi 36:sup 130A-2A F '53

Pneumatic conveyors in pulp and paper mills. H. A. Stoess, jr. flow diag il diags Tappi 35:433-8 O '52

Post-war expansion at Powell River. il Paper Ind 35:210 My '53

Power boost at Ecusta Paper. il Paper Ind 35:638 S '53

Progress in automatic control. L. Walter. diags Paper Ind 35:334-6 Je '53

Progress made at all divisions of Rayonier. C. B. Morgan. il Paper Tr J 136:38-43 My 15 '53

Pulp mill machinery. il diags Paper Tr J 137:99-111 S 18 '53

Radioactive thickness gage controls paper weight. G. J. Leighton. il diags Electronics 25:112-13 D '52

Receiving bagged materials into paper mills in unit loads. D. S. Adams. il Pulp & Pa of Can 54:136-7 Je '53

Recent developments in instruments and machines used in British paper industry. il Paper Tr J 135:20+ N 7 '52

Recovery operation corrosion problems. H. O. Teeple. bibliog Tappi 36:sup 127A-8A Jl '53

Removal of bark from chips and wood pulp. L. Eberhardt. flow diag il diags Paper Tr J 135:23-4+ D 19 '52

Removal of cooking liquor and washing of chemical pulp by the Von Hildebrandt continuous process. P. G. Von Hildebrandt. il Paper Tr J 137:20-1 Jl 24 '53

Rhinelander Paper puts $400,000 evaporating plant into operation. il diag Paper Ind 34:1074-6 D '52; Same. Paper Tr J 135:11-12+ D 26 '52; Same cond. Tappi 36:sup87A-9A Ja '53

St Helens modernization. Tappi 36:sup 104A My '53

St Regis. Tappi 36:sup92A+ Ap '53

St Regis mill at Jacksonville in regular production. il map Paper Tr J 136:36-40+ Ja 16 '53; Same. Tappi 36:sup 116A-22A Mr '53; Same. Paper Ind 35:60-5 Ap '53

Self-sluicing blowpits at Gatineau. P. N. Bowle-Evans. il diags Pulp & Pa of Can 53:88-91 D '52

Semi-chemical pulping at Bathurst. R. J. P. Keswick. flow diag il Pulp & Pa of Can 53:127-31 N '52

Six-foot conveyor speeds chip handling at Crown Zellerbach mill. il Paper Ind 35:202+ My '53

Sorg expands converting department. il Paper Ind 34:1085-6+ D '52

Stainless steel big factor in modern mill construction at Jacksonville; St Regis paper co. il Paper Ind 35:773-4 O '53

Stainless steel in the Swedish pulp industry; circulating systems for sulphite digesters, and evaporators for black liquor in sulphate mills. E. G. Lindh. bibliog il diags Pulp & Pa of Can (Convention no) 54:239-46+ [F] '53

Stock preparation equipment. il diags Paper Tr J 137:113-16 S 18 '53

Technical advances point to control of digester corrosion. Chem & Eng N 30:4481-2 O 27 '52

TAPPI engineering conference, 7th, Chicago, Oct. 13-16; abstracts of papers. Paper Ind 34:1101-2+ N '52; Tappi 35:sup74A+ N '52

25,000 ton project nearing completion Down Under. J. T. Christiansen. il Paper Ind 35:328-30 Je '53

Two-stage pulping process; patent. diag Paper Ind 35:577-8 Ag '53

Use of beta meters for basis weight control; abstracts of papers. D. C. Brunton and others. Paper Tr J 136:27 F 6 '53

Use of graphic instrument panels. J. S. Detwiler. Pulp & Pa of Can 53:128-30 O '52

Use of radioisotopes in pulp and paper mills. L. Walter. Paper Ind 35:75-6 Ap '53

Use of the Centricleaner with special reference to the cleaning of alkaline hardwood pulp. G. H. Tomlinson, 2d and N. G. M. Tuck. flow sheet diags Pulp & Pa of Can 53:109-14 N '52

Venturi scrubber at Bathurst. C. V. Callaghan. diag Pulp & Pa of Can 54:106-7 Ap '53

Waste collection equipment. J. P. Forgac. Tappi 36:sup 177A-8A My '53

Waste space and motion cut to minimum at new National Container mill. Paper Ind 35:419-20 Jl '53

Western Canadian mill expansion; illustrations with text. Paper Ind 34:954-5 N '52

Weyerhaeuser's new kraft mill. il Paper Tr J 137:21-2+ O 2 '53

White liquor polishing station. il Paper Tr J 137:40 Jl 24 '53

Who's who among your suppliers; agents representing manufacturers of paper mill equipment, paper making materials and chemicals. Paper Tr J 136:91-304 Je 19 '53

Wood chipper and chipper motor selection. J. E. Irvine and E. W. Henderson. Pulp & Pa of Can (Convention no) 54:247-52 [F] '53

Wood room. J. Lewis. flow diag il diag Paper Tr J 135:112-20 N 14 '52

See also

Digesters (paper making)
Knives, Chipper
Paper making machinery
Wood grinders

Fires and fire protection

Fire causes and fire protection in the pulp and paper industry; abstract. B. Aschan. Paper Tr J 137:24 Jl 3 '53

PAPER mills—Fires and fire protection—*Cont.*

Fire hazards in hot processing of fiberboards; abstract. A. Hägglund. Paper Ind 35:89 Ap '53

How to reduce insurance rates by blockpile protection. R. C. Hodge. Pulp & Pa of Can 53:164+ D '52

Paper machine fires. G. W. Brahmst. Pulp & Pa of Can 53:188+ N '52; Same. Paper Tr J 136:24+ Ja 9 '53; Same. Tappi 36: sup 144A-6A Ja '53

Heating and ventilation

Hot air recovery system saves thousands each month in cold cash; Minnesota & Ontario paper co. il Factory Management 110:152-3 N '52

Moisture control with closed hoods. S. Lukianovitch. Pulp & Pa of Can 54:126-31 S '53

Paper mill ventilation with closed hoods at Iroquois Falls. J. C. Jordan. il plans diags Pulp & Pa of Can (Convention no) 54:253-66 [F] '53

Recover waste heat in plant exhaust air to cut steam and fuel costs. H. McCall. il diag Power 97:84-5 Mr '53

S. D. Warren solves foggy problem with space heaters. il Paper Ind 35:312 Je '53

Some operating characteristics of a paper machine drier section equipped with forced ventilation. J. W. Oren and others. il plan diags Tappi 36:sup 159A-63A Ap '53

History

Neenah mill of Kimberly-Clark. Tappi 36: sup90A+ Ap '53

Maintenance and repair

How to care for and maintain calenders and calender rolls today. A. Seaton. il diag Paper Tr J 137:14-16+ O 2 '53

How to install and maintain rubber belts. B. R. Forbes. il Paper Tr J 137:16+ Jl 10 '53

Maintenance control at Spruce Falls power & paper co. ltd. J. A. Ferrier. Pulp & Pa of Can 53:115-19 N '52

Oxyacetylene in paper mill maintenance. D. B. Thomas. il Tappi 36:sup38A+ Jl '53

Planning a preventive maintenance scheme for centrifugal pumps. L. F. Horne. il Pulp & Pa of Can 53:126-7 O '52

Plant maintenance aids. il diags Paper Tr J 137:181-8 S 18 '53

Plant maintenance conference and material show; Cleveland, Jan. 19-22. Paper Tr J 136:14-16 Ja 30 '53

Reduction of losses due to corrosion, possible through use of plastic coatings; abstract. R. R. Kelly. Paper Ind 34:869-70 O '52

Management

C.P.P.A. Industrial relations section fall meeting, St Adele, Que. Oct. 15-16; with abstracts of papers. Pulp & Pa of Can 53: 96-9 N '52

Increased production from existing machines. J. R. Curtis. Tappi 36:sup 145A-9A My '53

Problems of managing a paper mill. H. H. Hanson. Tappi 36:sup 120A-1A F '53

Well trained and organized instrument department; Union bag & paper corp. J. R. Upson. il Paper Ind 35:785-7 O '53

See also

Paper mills—Quality control

Models

British Columbia industry in miniature; model maker's reproduction of pulp and paper operation. il Pulp & Pa of Can 53:93 O '52

Power

Design and operation of furnaces for burning bark and wood. W. H. D. Clark. diags Pulp & Pa of Can 54:96-100 Mr '53

How power is produced at Port Alice. W. O. Stevens. il Paper Tr J 136:22-3 My 29 '53

Merrimac paper co. begins long-range electric power modernization. L. B. Rogers. il Power Eng 57:76-7+ O '53

Modernization of electrical distribution system at Powell river. E. N. Walton. il diags Pulp & Pa of Can (Convention no) 54:210-14 [F] '53

New paper mill dam brings progress to frontier Quebec; McCormick dam. il map Paper Ind 35:760-2 O '53

Packaged steam generators in the paper industry. F. X. Gilg. il Tappi 36:324-30 Jl '53

Power expansion at Nekoosa. F. H. Coldwell. il Paper Tr J 136:28+ Ja 23 '53; Same abr. Power 97:86-8 My '53

Power to make pulp and load ore; Marguerite River dam. il Pulp & Pa of Can 54:184 Jl '53

Protection for an industrial plant connected to a utility system with reclosing breakers. D. F. Langenwalter. bibliog diags Tappi 36:199-203 My '53

Rules for proper steam blast coil installation. R. G. Lubinsky. il diags Tappi 36:279-83 Je '53

Steam power generation. C. S. Taft. Tappi 36:sup 130A-2A Ap '53

Steam turbines boost paper output 12 per cent. il Power Eng 57:88-9 Ja '53; Same cond. Paper Ind 34:1077-8 D '52; Excerpts. Paper Tr J 135:12 O 24 '52

Turbulent suspension burning as applied to steam generating units for paper mills. O. de Lorenzi. diags Tappi 36:97-102 Mr '53

Quality control

Concepts of quality control. W. R. Purcell. Tappi 36:1-4 Ja '53

Conference on application of statistical methods to problems of pulp and paper industry, June 15-26; program. Tappi 36: sup 100A+ Mr '53

Facts versus opinions. W. R. Purcell. Tappi 36:sup 132A Jl '53

Quality control from a buyer's viewpoint. E. H. Balkema. Tappi 36:sup 154A-7A Je '53

Quality control program. J. F. Langmaid, jr. Tappi 36:sup 151A-4A S '53

Role of statistical methods in the modern quality control program. C. E. Noble. bibliog Paper Tr J 137:21-2+ Jl 10 '53

Technical association of the pulp and paper industry statistics conference, Orono, Maine, Aug. 4-16; list of papers. Tappi 35: sup72A+ O '52

See also

Paper board mills—Quality control

Safety measures

Accident prevention our business. D. Chant. Pulp & Pa of Can 54:281+ My '53

Annual labour-management safety conference, 3d, March 26-27. Pulp & Pa of Can 54:238+ Ap '53

Annual labor-management safety conference, 7th, Tacoma, March 12-13. Paper Ind 35:86 Ap '53

Comprehensive safety at Westvaco's Luke mill. il Paper Ind 34:980-3 N '52; Same cond. Mill & Factory 52:100-2 Mr '53

Contest report for first quarter shows ten per cent drop from 1952. Paper Ind 35:356+ Je '53

Fritz trophy to Westvaco for second straight year. il Paper Ind 34:992 N '52; Same. Nat Safety N 67:38-9+ Ja '53

Goodwill to men. J. S. Turner. Pulp & Pa of Can 54:152 Ja '53

Hand of the worker in the paper industry. W. Schweisheimer. Pulp & Pa of Can 53: 176+ Ag '52; Same cond. Paper Ind 35: 797 O '53

How our employees are protected in Quebec. W. L. Bennett. Pulp & Pa of Can 54:274+ My '53

Lively safety promotion methods at Scott paper co. F. W. Braun. il Paper Ind 35: 662-3 S '53

Management's function in the safety program. G. W. E. Nicholson. Paper Tr J 135: 19-20 N 7 '52; Same. Pulp & Pa of Can 54:204+ Ag '53

National safety council Pulp and paper section annual meeting, Chicago, Oct. 20-24. Paper Ind 34:991-3+ N '52

N.S.C. safety award winner; employees of West Virginia pulp and paper company won the Edward Benton Fritz memorial trophy. Pulp & Pa of Can 53:200 N '52

Ontario pulp and paper makers' safety association 38th annual meeting, Toronto, March 24. Pulp & Pa of Can 54:236+ Ap '53

PAPER mills—Safety measures—*Continued*

President speaks on safety. L. F. Whittemore. Pulp & Pa of Can 53:160+ D '52

Psychological warfare against accidents; Fraser paper, limited. G. F. Hutchings. Nat Safety N 66:93-5 D '52

Quebec pulp and paper safety association and Quebec lumbermen's accident prevention association joint annual meeting, Montreal, Sept. 12. Pulp & Pa of Can 53:194+ O '52

Suggested accident prevention program. Tappi 36:sup 100A+ Je '53

Teamwork called key to success of West Coast safety efforts; abstract. R. N. Gilmore. Paper Ind 34:1146 D '52

Wayagamack achievement. J. A. Draper. Pulp & Pa of Can 54:198+ Jl '53; Excerpt. Nat Safety N 68:164 O '53

West Virginia Pulp & Paper adds supply store to Tyrone safety program. il Paper Ind 35:358 Je '53

What Strathmore is doing to preserve its safety record. il Paper Tr J 137:45 O 16 '53

Waste

Annual report of Kalamazoo anti-pollution group encouraging; may be possible to utilize sludge from paper mill deinking wastes. Paper Ind 34:833-4 O '52

Asbestos waste treatment solves pollution problem. R. W. Simpson and others. flow diag il diags Water & Sewage Works 100: 248-52 Je '53

Black liquor oxidation and the absorption of non-condensable digester gases. M. A. Schoening and others. il Tappi 36:176-9 Ap '53

Chemical reaction equilibria in the combustion of sodium-base pulping liquors. M. N. May. bibliog Tappi 35:511-17 N '52

Chemical recovery unit. V. P. Owens. il diags Paper Tr J 135:215-29 N 14 '52

Conversion of sodium sulfide from spent cooking liquors to sodium sulfite; patent. diag Paper Ind 35:690 S '53

Critical review of the literature of 1952 on sewage, waste treatment, and water pollution; pulp and paper. bibliog Sewage & Ind Wastes 25:646-8 Je '53

Determination of sulfides in kraft black liquor; abstract. O. Bethge. Paper Ind 35: 478 Jl '53

Determination of total nonaqueous constituents in pulp mill liquors; application to all types of residual pulping liquors. J. H. Phillips and M. M. Rubright. bibliog diags Tappi 36:392-401 S '53

Effect of black liquor fixation on the release of kraft odors. R. H. Wright and others. bibliog Tappi 36:180-3 Ap '53

Effect of kraft mill waste components on certain salmonoid fishes of the Pacific Northwest. E. P. Haydu and others. bibliog Tappi 35:545-9 D '52

Effect of kraft mill wastes on stream bottom fauna. J. N. Wilson. bibliog maps Sewage & Ind Wastes 25:1210-18 O '53

Effect of packing type on the rate of black liquor oxidation. R. H. Wright. il diag Tappi 36:85-8 F '53

Hoberg and Northern report progress in pollution battle. Paper Ind 35:537-8 Ag '53; Excerpt. Tappi 36:sup97A-8A Ag '53

Increased pressure on industry expected in stream pollution; National council for stream improvement. Chem & Eng N 31: 867-8 Mr 2 '53

Industrial waste in town of 2,400 equals domestic sewage from city of 74,000; pollution of Spanish river. J. Wilkinson. Munic Util 91:22+ F '53

Influence of sulfite on the methane fermentation of sodium and calcium acetates; abstract. M. A. Noordam-Geldewagen and others. Sewage & Ind Wastes 24:1437-8 N '52

Inoculation studies in b.o.d. determination on sewage and pulp mill waste. R. Zehnpfennig and M. S. Nichols. Sewage & Ind Wastes 25:61-5 Ja '53

Investigation of wood-fibre discharges into the Spanish river. I. G. Simmonds. Munic Util 90:19-24+ D '52

Kraft liquor cycle from an operator's viewpoint. J. L. Brown. Tappi 36:sup 129A-32A Jl '53

Kraft mill effluents. A. W. Pesch. Tappi 36: sup 124A-6A Jl '53

Kraft mill wastes research. W. A. Moggio. flow diag diags Paper Tr J 136:28-31 F 27 '53

Lethality of methyl mercaptan to king salmon as influenced by variation of the volume of test solution. E. P. Haydu and others. Tappi 36:131-3 Mr '53

Low molecular substances of lignin origin in black liquors from sulphate and soda pulping of spruce wood. T. Enkvist and B. Alfredsson. bibliog Tappi 36:211-16 My '53

National council for stream improvement research and development activities, 1952. Tappi 36:sup 163A-6A Ap '53

New developments in recovery unit design. F. W. Hochmuth. il diags Tappi 36:359-66 Ag '53

Operation of an OCO water system on a board mill's white water. J. H. Wright. Tappi 36: sup 122A-4A Jl '53

Paper mill waste treatment. R. W. Simpson and J. J. Samsel. flow diags Paper Ind 35:551-3 Ag '53

Pilot plant for treatment of kraft mill wastes. W. A. Moggio and H. W. Gehm. flow diag il Sewage & Ind Wastes 25:305-10 Mr '53

Pollution of the Spanish river studied biologically. R. G. Ferguson. Munic Util 91:31-2+ F '53

Practical results obtained with black liquor oxidation. O. Sylwan. il diag Paper Tr J 137:14-16 S 4 '53

Present practice in treating papermaking effluent. H. W. Gehm. diags Paper Tr J 136:22-4 F 27 '53

Progress in stream improvement. W. M. Van Horn. bibliog(128 ref) il Paper Ind 34:1456-8; 35:70-1, 331-3 Mr-Ap, Je '53

Purification of waste liquors emanating from paper manufacture; abstract. M. Chêne and others. Paper Ind 34:886 O '52

Recent developments in the treatment of pulp and paper mill effluents. A. B. Horlock and R. S. Jobin. bibliog(27 ref) diag Paper Tr J 137:16-18+ Jl 31 '53

Résumé; TAPPI corrugated waste questionnaire. K. W. Max. Tappi 36:sup 175A-7A My '53

Review of the operation of the Tomlinson secondary recovery system. J. Allan. diag Pulp & Pa of Can (Convention nö) 54:202-4 [F] '53

Semi-chemical pulping waste treatment. R. E. Opferkuch. Paper Tr J 136:26-7 F 27 '53

Separation of solids in deinking waste by coagulation and filtration. J. O. Thompson and others. bibliog Tappi 36:207-10 My '53

Spanish River investigation. A. V. DeLaporte. il map Munic Util 90:36+ N '52

Specific heat of sulphate black liquor. R. L. Harvin and W. F. Brown. bibliog il diag Tappi 36:270-4 Je '53

Stream pollution. H. A. Rothchild. Tappi 36:sup 129A-33A Ja '53

Study of the components of jack pine groundwood white water with special emphasis on the foam phenomenon. J. W. Green and R. L. Leaf, jr. bibliog il diags Tappi 35:468-80 O '52

Submerged combustion evaporation. W. I. Weisman. diag Tappi 36:383-4 Ag '53

Sulphate black liquor evaporator tube plugging; progress report. W. J. Hall. il diags Tappi 36:127-30 Mr '53

Sulfate recovery units. J. H. Coulter, jr. flow sheet il diags Paper Tr J 135:210-15 N 14 '52

Ultimate analysis of black liquor. Tappi 36: sup 169A-72A S '53

Waste collection equipment. J. P. Forgac. Tappi 36:sup 177A-8A My '53

Waste control program. L. J. Bloom. Tappi 36:sup 178A-80A; Discussion. sup 180A-1A My '53

White water treatment. W. Rudolfs and H. R. Amberg. bibliog diag Sewage & Ind Wastes 24:1108-20, 1278-87, 1402-9, 1509-11; 25:70-8, 191-200 S '52-F '53

PAPER mills—Waste—*Continued*

Wisconsin anti-pollution progress compares favorably with European efforts. Paper Ind 34:1324 F '53

See also

Lignin

Paper making—By-products

Sulfite liquor

Bibliography

Alkaline processes, pt 2, Black liquors. C. J. West, comp. (Bibliographic ser. no. 178) 377p Institute of paper chemistry, Appleton, Wis. '52 (pa $5)

Oxidation of sulphate black liquor; review of the literature. T. T. Collins, jr. bibliog(67 ref) Paper Tr J 136:37-40 Mr 20; 19-22+ Mr 27 '53

White water; savealls. C. J. West, comp. (Bibliog. ser. no. 180) 149p Institute of paper chemistry, Appleton, Wis. '52 ($5)

Algeria

New mills in French North Africa. Paper Tr J 136:48 Mr 20 '53

British Columbia

North America's newest newsprint mill in operation; Elk Falls co. il Paper Ind 34: 970-4 N '52

Precast concrete sandwich panels as used in B.C. mill construction; Columbia cellulose co. C. H. Klotz. il Paper Ind 35:47-8 Ap '53

Canada

Before we became technical; personal narrative. T. L. Crossley. Pulp & Pa of Can 54: 163-6 My '53

Building products limited expands despite fires and floods. J. S. Turner. il Pulp & Pa of Can 54:94-101 Je '53

Fine paper manufacture in Canada. J. C. W. Evans. il Pulp & Pa of Can 53:100-4 N '52

Kimberly-Clark in Canada. Tappi 36:sup 101A-2A Ag '53

Western Canadian mill expansion; illustrations with text. Paper Ind 34:954-5 N '52

Dominican Republic

Dominican Republic to build $2.5 million bagasse plant. Paper Tr J 135:11-12 D 12 '52

Europe

European papermaking practices. L. Sutherland. Tappi 36:sup 116A-17A Ag '53

Finland

Steam power plant in the Kaukas mills; abstract. il Paper Ind 34:1498 Mr '53

Florida

Modern paper mill electrical installation; St Regis paper co. C. W. Bush. il Paper Tr J 136:36-8 Ap 17 '53

St Regis mill at Jacksonville in regular production. il map Paper Tr J 136:36-40+ Ja 16 '53

Morocco

New mills in French North Africa. Paper Tr J 136:48 Mr 20 '53

New England

Flood waters force closing of New England mills. il map Paper Tr J 136:11-12 Ap 3 '53

New Zealand

25,000-ton project nearing completion Down Under. J. T. Christiansen. il Paper Ind 35: 328-30 Je '53

Ontario

Four year record; 11 Ontario mills reduce accidents 60 per cent. F. O. Soughton. Paper Ind 34:1494 Mr '53

Southern states

Processing and manufacturing trends in southern pulp and paper. A. W. J. Dyck. il Paper Ind 35:166-73 My '53

Sweden

Stainless steel in the Swedish pulp industry; circulating systems for sulphite digesters, and evaporators for black liquor in sulphate mills. E. G. Lindh. bibliog il diags Pulp & Pa of Can (Convention no) 54:239-46+ [F] '53

PAPER patents. See Paper making—Patents

PAPER products

Finishing and converting. B. L. Wiley. flow diag il plan diags Paper Tr J 135:450-63 N 14 '52

Neenah mill of Kimberly-Clark. Tappi 36: sup90A+ Ap '53

New paper materials find use in gaskets, oil filters, embossed sheeting. E. C. Frazier. il Materials & Methods 38:92-3 Ag '53

Novel household, recreational, and industrial uses for paper demonstrated. il Tappi 36: sup 114A-16A Ag '53

Paper age. il Bsns W p 148 Je 20 '53

Paper converting. C. W. Stillwell. Paper Tr J 135:446+ N 14 '52

See also

Paper boxes

Paper cups

Paper towels

PAPER products plants

Equipment

Finishing and converting. B. L. Wiley. flow diag il plan diags Paper Tr J 135:450-63 N 14 '52

Modern materials handling keys Bay West expansion. D. W. Zeigler. il Paper Ind 34: 1236-9 Ja '53

PAPER pulp

Cereal straw pulping in the United Kingdom. L. G. Hebbs. Tappi 36:sup 148A-50A Mr '53

Decortication and pulping of seed flax straw. S. D. Wells. diag Tappi 36:sup 176A-8A Ap '53

Initial investigations of the Va-Purge process for straw pulping. H. J. Ostrowski. Pulp & Pa of Can 54:117-18 Jl '53

Investigation of the mechanism of water removal from pulp slurries. W. L. Ingmanson. bibliog(25 ref) diag Tappi 35:439-48 O '52

Most modern straw pulp mill; N.V. Maatschappij tot Stroveredling Sove, Arnhem, Holland; abstract. il Paper Ind 35:250 My '53

Pulps from straw and sugarcane bagasse for manufacture of newsprint. E. C. Lathrop. Tappi 36:sup 142A-4A Ja '53

Recent advances in pulping straw in the United States. S. I. Aronovsky. Tappi 36: sup 167A-71A Ap '53

Success through service, is the motto at Cheney. Paper Tr J 137:52 S 18 '53

Testing

Why study surface properties of paper materials; abstract. J. W. Beamesderfer. Paper Tr J 136:12 Je 5 '53

Why study the surface properties of materials of paper manufacture? abstract. E. F. Thode. Pulp & Pa of Can 54:136 Jl '53

PAPER pulp from wood. See Wood pulp

PAPER research

About research and development. W. R. Barber. Paper Tr J 135:17+ N 28 '52

Chemical study of the skinlike substance of sulphite pulps. R. R. Rollinson and L. E. Wise. bibliog Tappi 35:sup 139A-40A N '52

Expanding the horizons of wood carbohydrates. E. J. Howard. bibliog Pulp & Pa of Can 54:116-20 Ap '53

Investigation of the mechanism of water removal from pulp slurries. W. L. Ingmanson. bibliog(25 ref) diag Tappi 35:439-48 O '52

Kinetic coefficient of friction of paper. G. Broughton and J. L. Gregg. bibliog il Tappi 35:489-93 N '52

More and better research. F. J. Curtis. Tappi 36:sup 12A+ Ap '53

1952 summed up for pulp and paper. map Can Chem Process 37:73 F '53

PAPER research—*Continued*

Progress of research in the pulp and paper industry. A. Abrams. Tappi 36:sup22A Mr '53; Same cond. Paper Tr J 136:88+ F 20 '53; Abstract. Chem & Eng N 31:870 Mr 2 '53

Pulp and paper research at the University of Florida. W. J. Nolan. Paper Ind 35:185-7 My '53

Research. J. H. Hinman. il Tappi 36:sup 121A-3A Je '53

Research activities in the South. il Paper Ind 35:184 My '53

Research day at University of Maine; abstracts of papers. Paper Tr J 136:12-14+ Je 5 '53

Research in the pulp and paper industry. R. S. Hatch. Tappi 35:sup 125A-6A N '52

Significance of laboratory sizing data. E. D. Compton. bibliog Tappi 35:518-27 N '52

Some possible applications of radioisotopes in the pulp and paper industry. E. E. Dickey. Tappi 36:sup 108A-11A Ja '53

Sulphite pulp manufacturers' research league, inc. research program. il Tappi 36:sup92A+ My '53

See also

Paper laboratories

also Lawrence college—Institute of paper chemistry

PAPER rolls

Automatic paper roll wrapping machine. il Paper Tr J 136:30 F 6 '53

S-H automatic roll wrapping machine. A. C. Attendu. il Pulp & Pa of Can 53:109 D '52

PAPER sizing

Aid in paper microscopy; Du Pont fiber identification Stain A. G. K. Boger, jr. bibliog Paper Tr J 136:21-2 Ap 3 '53

Analyses of sizes used in photographic papers; abstract. R. Sève. Paper Ind 34:1380 F '53

Guar mannogalactan studies. A. J. Haug. bibliog Tappi 36:47-64 Ja '53

Paper and board sizings and the qualities they impart. A. C. Dreshfield. Tappi 36:sup 122A-9A F '53; Abstract. Paper Ind 34:1253-4 Ja '53

Significance of laboratory sizing data. E. D. Compton. bibliog Tappi 35:518-27 N '52

Starch sizing of paper. J. M. Newton. il Paper Tr J 135:314-18+ N 14 '52

Stearato chromic chloride as a sizing agent for paper; Quilon. R. J. Pavlin. Tappi 36:sup 107A-11A Jl '53

Surface properties of rosin size precipitate. E. F. Thode and others. bibliog Tappi 36:310-19 Jl '53

Use of asphalt emulsions in the manufacture of insulating board products. J. J. Perot. Tappi 36:69-70 F '53

Analysis

Analysis of rosin size; revision of TAPPI tentative standard T 628 m-43. Tappi 36:sup 142A-6A Mr '53

Testing

Liquid penetration test for measuring the sizing of paper. D. Price and others. il diag Tappi 36:42-6 Ja '53

PAPER towels

Germ-deadening paper toweling developed by armed forces. Paper Ind 35:646+ S '53

Manufacture

Modern materials handling keys Bay West expansion. D. W. Zeigler. il Paper Ind 34:1236-9 Ja '53

PAPER waste. See Waste paper

PAPER winders

Cameron machine installs new winder. il Pulp & Pa of Can 54:210 Jl '53; Same. Tappi 36:sup 114A Ag '53

PARACELSIAN

Single-crystal measurements on paracelsian. J. V. Smith. bibliog Am J Sci Bowen vol p513-15 '52

PARACELSUS, Theophrastus, bombast von Hohenheim, 1493-1541

Industrial medicine's Hall of fame. W. K. Frankel. por Ind Med 22:86-7 F '53

PARACHORS

Fluorinated esters; surface tension and parachor studies. R. Filler. bibliog Am Chem Soc J 75:3016-17 Je 20 '53

PARACHUTES

Canned parachutes. il Mod Packaging 26:120-1+ Jl '53

Drone saver; Q-2's parachute system recovers target jets. il Aviation W 58:28-9 Mr 9 '53

Pilotless jet planes recovered by parachute at 600 mph speeds. Elec Eng 72:470-1 My '53

Testing

Parachute testing; Goodyear aircraft corp. il diag Mech Eng 75:236-7 Mr '53

PARAFFIN

Lipoid-water partition coefficients of some aromatic bases. J. Cymerman-Craig and A. A. Diamantis. Chem Soc J p 1619-21 My '53

Petroleum waxes dominate field. B. H. Clary. Oil & Gas J 51:103 Ja 12 '53

Relation of crystal habit to the polymorphic behavior of long-chain paraffin hydrocarbons. B. J. Fontana. bibliog il J Phys Chem 57:222-6 F '53

Surface roughness as related to hysteresis of contact angles; the system paraffin-water-air. F. E. Bartell and J. W. Shepard. bibliog diags J Phys Chem 57:211-15 F '53

Surface roughness as related to hysteresis of contact angles; the systems paraffin-ethylene glycol-air, paraffin-methyl cellosolve-air and paraffin-methanol-air. J. W. Shepard and F. E. Bartell. J Phys Chem 57:458-63 Ap '53

Surface roughness as related to hysteresis of contact angles; the systems paraffin-3-molar calcium chloride solution-air and paraffin-glycerol-air. F. E. Bartell and J. W. Shepard. diags J Phys Chem 57:455-8 Ap '53

Analysis

Determination of oil content of paraffin and microcrystalline waxes. J. E. Blaylock. il diags Pet Refiner 31:133-5 N '52

Testing

TAPPI-ASTM technical committee on petroleum wax; reports. Tappi 36:sup 117A-23A My '53

Tensile strength in waxes. R. T. Edwards. il Mod Packaging 26:123-7+ F '53

PARAFFINS

Benz-1 : 3-oxathioles, benz-1 : 4-oxathien, and αω-bisarylthioalkanes. D. Greenwood and H. A. Stevenson. Chem Soc J p 1514-19 My '53

Decomposition of aliphatic diazo-compounds by trimethyl borate; the preparation of branched-chain paraffins of high molecular weight. G. D. Buckley and N. H. Ray. Chem Soc J p3701-4 O '52

Esters of 1,4,7-trihydroxyalkanes. C. R. Russell and others. Am Chem Soc J 75:726-7 F 5 '53

Insecticidal activity and chemical constitution; synthesis of some di-*p*-chlorophenylalkanes. E. J. Skerrett and D. Woodcock. Chem Soc J p3308-12 Ag '52

Mechanism of the alkylation of paraffins; the reaction of isobutane with 2-chloro-4,4-dimethylpentane, 3-chloro-5,5-dimethylhexane and 2- and 3-chloro-3,4,4-trimethylpentane. L. Schmerling and J. P. West. Am Chem Soc J 75:4275-7 S 5 '53

Mercury photosensitized oxidation of paraffins. B. D. Darwent. bibliog J Chem Phys 20:1979-80 D '52

Molecular configuration of liquid *n*-aliphatic homologues. S. A. Mumford. Chem Soc J p4897-913 D '52

Oxidation of *n*-paraffins from propane to nonane by nitrous oxide. E. J. Smith. Chem Soc J p 1271-5 Ap '53

Photosensitized oxidation of paraffins. J. A. Gray. J Chem Phys 21:1300-1 Jl '53

Polarizability and configuration of *n*-paraffins. R. S. Stein. bibliog J Chem Phys 21:1193-8 Jl '53

Polyhydroxyalkanes from furfural condensation products. C. R. Russell and others. bibliog Am Chem Soc J 74:4543-6 S 20 '52

PARAFFINS—*Continued*

Quantum-mechanical treatment of aliphatic compounds; paraffins. R. D. Brown. Chem Soc J p2615-21 S '53

Reaction of alkanes with hydrogen and deuterium; racemization and exchange. R. L. Burwell, jr. and W. S. Briggs. bibliog Am Chem Soc J 74:5096-102 O 20 '52

Relation between critical temperature and pressure of normal paraffins. Y. P. Varshni. J Chem Phys 21:1400 Ag '53

Resolving normal and isomeric paraffins in complex hydrocarbon mixtures; a mass spectrometric method. H. Sobcov. bibliog Anal Chem 24:1908-11 D '52

Sulfuric acid isomerization of methylalkanes, dimethylalkanes and dimethylcyclohexanes. A. K. Roebuck and B. L. Evering. bibliog Am Chem Soc J 75:1631-5 Ap 5 '53

Thermodynamic properties and the characteristic CH_2 frequencies of *n*-paraffins. W. B. Person and G. C. Pimentel. bibliog Am Chem Soc J 75:532-8 F 5 '53

Thiourea adducts of *n*-paraffins. R. L. McLaughlin and W. S. McClenahan. Am Chem Soc J 74:5804-5 N 20 '52

See also

Cycloparaffins

Ethane

Nitroparaffins

Analysis

Determination of n-paraffins in commercial petroleum waxes. H. Schindler and A. Kinsel. Pet Eng 25:C66-7 Ap '53

PARAGUAY

Commercial policy

Modification of Paraguay's foreign exchange system eases controls. For Comm W 49:9+ F 23 '53

Economic conditions

Economic conditions abroad (cont). For Comm W 48:8 O 6; 4+ N 24 '52; 49:4+ My 25 '53

PARALDEHYDE

Acid-base catalysis in non-aqueous solvents; the depolymerisation of paraldehyde in ethereal solutions of proton acids and Lewis acids. R. P. Bell and B. G. Skinner. Chem Soc J p2955-9 Ag '52

PARAMECIUM

Effect of X-rays on micronuclear number in paramecium aurelia. R. P. Geckler and R. F. Kimball. Science 117:80-1 Ja 23 '53

PARAMETERS

Aid for the high-temperature designer; new parameter predicts how stressed materials behave. J. Miller. Gen Elec R 55:51-3 N '52

Variation of transistor parameters with temperature. A. Coblenz and H. L. Owens. diags Inst Radio Eng Proc 40:1472-6 N '52

PARANITROPHENOL. See Nitrophenol

PARASITES

Chemical control of animal parasites; abstract and discussion. H. E. Harbour. Chem & Ind p 193 F 28 '53

PARATHION

Identification and properties of the colored compound formed in parathion estimations. R. C. Blinn, F. A. Gunther and M. J. Kolbezen. bibliog Am Chem Soc J 74:5516-18 N 5 '52

Parathion exposure and cholinesterase response of Quebec apple growers. K. Kay and others. bibliog A M A Archives Ind Hygiene & Occup Med 6:252-62 S '52

Reversed phase paper chromatography of parathion and related phosphate esters. R. L. Metcalf and R. B. March. bibliog Science 117:527-8 My 15 '53

Urinary excretion of paranitrophenol following parathion exposure. J. Lieben and others. bibliog A M A Archives Ind Hygiene & Occup Med 6:491-5 D '52

Physiological effect

Buscopan in treatment of experimental poisoning by parathion, methyl parathion, and systox. W. B. Deichmann and R. Rakoczy. A M A Archives Ind Hygiene & Occup Med 7:152-6 F '53

Exposure of Connecticut tobacco workers to parathion. R. A. Schaefer and G. H. Vance. A M A Archives Ind Hygiene & Occup Med 7:193-6 Mr '53

Studies on fate of parathion in rabbits, using radioactive isotope techniques. J. A. Jensen and others. bibliog A M A Archives Ind Hygiene & Occup Med 6:326-31 O '52

Urinary excretion of paranitrophenol following exposure to parathion. J. Lieben and others. il A M A Archives Ind Hygiene & Occup Med 7:93-8 F '53

PARCEL post

I.C.C. approves increase in parcel post rates. Ry Age News ed 134:11 Je 22 '53

Parcel post exports under new ruling. For Comm W 48:31 D 8 '52

What's ahead for Railway Express? F. Carpi. il Ry Age 134:149 My 18 '53

PARCEL post, Air mail. See Air mail parcel post

PARCEL post insurance. See Insurance, Parcel post

PARCHMENT paper

Chemically pure paper product; vegetable parchment. il Can Chem Process 37:64 Ap '53

PARDON

Pardoning power. A. W. Scott, jr. Ann Am Acad 284:95-100 N '52

PARK CITY, Utah

On the road to a ghost town? merger brings jobs nearer. il Bsns W p80-2+ Je 27 '53

PARK FOREST, Illinois

Water supply

Water supply problems of a fast growing community; Park Forest water co. R. Enzweiler. Am Water Works Assn J 44:1024-6 N '52

PARK Utah consolidated mines company. See United Park City mines company

PARKE-BERNET, inc.

Auction action; Parke-Bernet goes into industrial goods and real estate. Bsns W p 179 My 16 '53

PARKER, Cola Godden, 1890-

Portrait. Bsns W p77 My 23 '53

PARKER appliance company

Can't keep a sideline down. Bsns W p 176+ Ap 11 '53

PARKING meters. See Automobile parking—Meters

PARKINSON, Thomas Ignatius, 1881-

Made Equitable chairman. C. Axman. por East Underw 54:3+ F 20 '53

PARKS, Warren W.

Sketch. por Civil Eng 22:961 N '52

PARMELEE transportation company

Parmelee completes a century. il Ry Age 134: 132-3 My 18 '53

PAROLE

Alternatives to the death penalty. A. L. Wood. Ann Am Acad 284:63-72 N '52

Paroling of capital offenders. G. I. Giardini and R. G. Farrow. Ann Am Acad 284:85-94 N '52

PARROTS

Parakeets; a fad makes smuggling pay. il Bsns W p82-4 My 23 '53

PARSIDOL. See Diethylaminopropylphenothiazine

PARSLEY

Flavone glycosides of parsley. C. G. Nordström and others. bibliog Chem & Ind p85-6 Ja 24 '53

PARSONS, Charles Lathrop, 1867-

Former ACS secretary honored with first Parsons award. pors Chem & Eng N 30:5358-9, cover D 22 '52

PARTICLES

Additional light scattering functions for spherical particles of refractive index of 2. M. Kerker and H. E. Perlee. Opt Soc Am J 43:49-50 Ja '53

Carbon thermometer-heaters for use at low temperatures; effects of particle size and adsorption of hydrogen or helium. T. H. Geballe and others. bibliog R Sci Instr 23: 489-92 S '52

Chemical engineering unit operations; size reduction. L. T. Work. bibliog(109 ref) il Ind & Eng Chem 45:95-8 Ja '53

PARTICLES—*Continued*

Determination of the specific surface of barium sulphate; a comparison of results by different methods. D. W. Jopling. bibliog il diag J Ap Chem 2:642-51 N '52

Dielectric constants of solutions of charged particles. G. K. Fraenkel. J Chem Phys 20:1931-3 D '52

Diffusional processes in the growth of aerosol particles. H. L. Frisch and F. C. Collins. bibliog diags J Chem Phys 20:1797-803 N '52; Correction. 21:1116 Je '53

Direct measurement of particle track length in photonuclear emulsion. M. K. Juric and Z. A. Smokovic. diags R Sci Instr 23:564-5 O '52

Dynamic gas adsorption methods of surface area determination. H. G. Blocker, S. L. Craig and C. Orr, jr. J Phys Chem 57:517-20 My '53

Effect of Wiley mill cutting on solubility of cellulose fibers. A. F. Johnson and W. A. Mueller. Ind & Eng Chem 45:215-17 Ja '53

Experimental study of the coercive force of fine particles. W. H. Meiklejohn. bibliog il Rs Mod Phys 25:302-6 Ja '53

Flow of concentrated suspensions. P. S. Williams. J Ap Chem 3:120-8 Mr '53

High-speed counting of steel foundry dust particles; use of Flying-Spot microscope. G. M. Michie. il diags Engineer 195:485-7 Ap 3 '53

Hydrodynamic resistance of particles. N. Shoumatoff. bibliog Tappi 36:184-9 Ap '53

Influence of particle size on the dyeing properties of vat dyes. T. Flanagan. Soc Dyers & Col J 69:18-23 Ja '53; Discussion. 69:119-20 Ap '53

Latex particle size determination using diffraction peaks obtained with the point focusing X-ray monochromator. W. E. Danielson and others. bibliog il J Ap Phys 23:860-5 Ag '52

Measurement of particle sizes in opaque bodies. R. L. Fullman. bibliog diags J Metals 5:Trans 447-52 Mr '53

Measurement of particle sizes in polydispersed systems by means of light transmission measurements combined with differential settling. R. O. Gumprecht and C. M. Sliepcevich. bibliog J Phys Chem 57:95-7 Ja '53

Measuring particles in the range 0.005 to 10 microns. R. B. Campbell. il Franklin Inst J 254:531-3 D '52

Particle growth in the aqueous polymerization of vinyl acetate. W. J. Priest. bibliog J Phys Chem 56:1077-82 D '52

Particle localization by means of a scintillation detector. L. C. L. Yuan and H. L. Poss. il diag R Sci Instr 23:553-4 O '52

Permeation of water and isoöctane through plugs of microscopic particles of crushed quartz. R. T. Johansen and others. bibliog diag J Phys Chem 57:40-5 Ja '53

Photoelectric method of timing freely falling particles. E. B. Christiansen and D. H. Barker. bibliog il diags R Sci Instr 23:427-30 Ag '52

Preparation of dust samples for microscopic sizing. M. W. First. bibliog A M A Archives Ind Hygiene & Occup Med 7:58-60 Ja '53

Review of methods for determining particle size distribution of ceramic raw materials. R. S. Lamar. bibliog Am Cer Soc Bul 31:283-8 Ag 15 '52

Scattering of light by large spherical particles. R. O. Gumprecht and C. M. Sliepcevich. bibliog diags J Phys Chem 57:90-5 Ja '53

Separation of airborne dust and particles. C. N. Davies. bibliog diags Inst Mech Eng Proc (B) 1B no 5:185-98; Discussion. il 199-213 '52

Specific heat of small particles at low temperatures. G. Jura and K. S. Pitzer. diags Am Chem Soc J 74:6030-2 D 5 '52

Specimen charging in the electron microscope and some observations on the size of polystyrene latex particles. S. G. Ellis. bibliog il diags J Ap Phys 23:728-32 Jl '52

Surface area analysis by means of gas flow methods. G. Kraus, J. W. Ross and L. A. Girifalco. bibliog diags J Phys Chem 57:330-6 Mr '53

Surface areas of proteins; the mechanism of water sorption. J. M. Seehof, B. Keilin and S. W. Benson. bibliog Am Chem Soc J 75:2427-30 My 20 '53

See also

Aerosols
Brownian movements
Colloids
Dispersion
Drops
Dust
Electrophoresis
Flue dust
Granular materials
Micelles
Pigments
Powders
Sand
Sedimentation
Sediments

PARTICLES, Elementary

Approximate wave functions for unbound relativistic particles in a Coulomb field. G. K. Horton and R. T. Sharp. Phys R 89:885-6 F 15 '53

Classical equations of motion of point particles. P. Havas. bibliog Phys R 91:997-1007 Ag 15 '53

Cloud-chamber studies of the production of light positive particles near negative beta-ray emitters. G. Groetzinger and F. L. Ribe. bibliog diags Phys R 87:1003-11 S 15 '52

Coulomb functions for heavy nuclear particles. W. D. Barfield and A. A. Broyles. Phys R 88:892 N 15 '52

Cross sections for the formation of the compound nucleus by charged particles. M. M. Shapiro. bibliog Phys R 90:171-82 Ap 15 '53

Electromagnetokinetic phenomenon involving migration of neutral particles. A. Kolin. diags Science 117:134-7 F 6 '53

Elementary particles at rest. E. Bustamante. bibliog Phys R 88:1179-81 D 1 '52

Energy loss and Čerenkov radiation of a relativistic ionizing particle. P. Budini. bibliog Phys R 89:1147-8 Mr 1 '53

Evaluation of range straggling for heavy particles. D. O. Caldwell. bibliog Phys R 88:131-2 O 1 '52

Intrinsic parity of elementary particles. G. C. Wick and others. Phys R 88:101-5 O 1 '52

Radiative correction for the collision loss of heavy particles. V. Z. Jankus. bibliog Phys R 90:4-6 Ap 1 '53

Relativistic corrections to the magnetic moments of nuclear particles. G. Breit and R. M. Thaler. bibliog Phys R 89:1177-86 Mr 15 '53

Relativistic corrections to magnetic moments of nuclear particles. G. Breit and R. M. Thaler. Phys R 88:1214-15 D 1 '52

S matrix and causality condition; nonrelativistic particles. N. G. van Kampen. bibliog Phys R 91:1267-76 S 1 '53

Secondary particles resulting from 375-Mev alpha-bombardment of nuclei. R. W. Deutsch. Phys R 90:499-500 My 1 '53

Structure and mass spectrum of elementary particles. H. Yukawa. bibliog Phys R 91:415-17 Jl 15 '53

See also

Alpha rays
Beta rays
Deuterons
Electrons
Mesons
Neutrons
Photons
Protons
Radioactivity
V-particles

PARTITION (chemistry)

Adsorption on proteins, the grand partition function and first-order phase changes, according to approximate statistical mechanical theories. T. L. Hill. bibliog J Phys Chem 57:324-9 Mr '53

Lipoid-water partition coefficients of some aromatic bases. J. Cymerman-Craig and A. A. Diamantis. Chem Soc J p 1619-21 My '53

Partition functions for relating entropy to disorder in the melting of pure metals. J. F. Lee. J Chem Phys 21:382 F '53

Separation and analysis of tar bases by countercurrent distribution. C. Golumbic. bibliog Anal Chem 24:1849-50 N '52

PARTITIONS

Modules make semi-private offices. il Factory Management 111:144 Ja '53

Office partitions that tilt to provide ventilation. il plan diags Am Bld 74:126-7 O '52

PARTNERSHIP

Partnership pension plans; drafting suggestions in anticipation of Jenkins-Keogh law. E. R. Finch, jr. Trusts & Estates 92:496-7 Jl '53

See also

Insurance, Business—Partnership interest

Law

Surviving partner problems. Rough Notes 96:58+ Je '53

Taxation

Complexities of the partnership operation. J Account 94:471 O '52

Demise of a partner. J Account 95:220 F '53

Family partnerships and 1951 Revenue act. J Account 94:603-5 N '52

Income-tax position of the family partnership since the 1951 Revenue act; some unsettled issues. M. E. H. Ross. J Account 95:425-35 Ap '53

Minors of trusts as members of partnerships. L. B. Brown. Trusts & Estates 92:181-2 Mr '53

Survivorship problems; acquisition of deceased or retiring partner's interest. C. W. Tye. Rough Notes 96:56+ My '53

PASSAIC river

Controlling industrial pollution of the Passaic river; abstract. F. J. DeHooge. Water & Sewage Works 100:309 Ag '53

PASSENGER cars. See Cars

PASSIVITY

Cause of the chemical resistance of stainless steel. I. D. G. Berwick and U. R. Evans. bibliog il diags J Ap Chem 2:576-90 O '52

Nature of the films formed by passivation of iron with solutions of sodium phosphate. M. J. Pryor and others. bibliog Electrochem Soc J 99:542-5 D '52

Passivity of metals; intense attack at the water-line of otherwise passive metal. A. M. Peers and U. R. Evans. pl diags Chem Soc J p 1093-102 Ap '53

Passivity of metals; the anodic behaviour of iron oxide films. U. R. Evans and I. D. G. Berwick. diag Chem Soc J p3432-7 S '52

PASSPORTS

Passport procedures. W. K. Scott. Science 116:547-8 N 14 '52

Visas and meetings. Sci Am 188:46+ Mr '53

PASTURES

Manuring of grasslands; abstracts and discussion. R. A. Hamilton and others. Chem & Ind p 149-50 F 14 '53

See also

Grazing

PATCH test. See Skin—Diseases

PATCHOGUE-PLYMOUTH mills corporation

Outlook is brighter. Barron's 32:18 O 20 '52

PATENT laws and legislation

Again; new patent rules. Chem W 72:42+ Mr 21 '53

Great Britain

See also

Great Britain—Patent office

South Africa

Union of South Africa enacts new patent legislation. For Comm W 48:10 O 20 '52

United States

Blowing the cobwebs off. Chem W 71:30+ D 13 '52

Changes in the patent laws and what they mean. P. J. Gaylor. Pet Processing 7:1623 N '52

Codified patent law of 1952. F. Makara. Tappi 36:sup 158A Ap '53

Essentials of a valid patent. A. W. Gray. bibliog Machine Design 25:147-50 S '53

New patent law of 1953. H. A. Toulmin, jr. Product Eng 24:186-9 Ap '53

Patent disclosures (minimum requirements). C. H. Gerlach. Metal Prog 64:122+ Ag '53

Patents and public opinion. H. R. Mayers. Gen Elec R 55:48-50 N '52

Patents in the United States; some aspects of the 1953 act. S. T. Madeley. Metallurgia 47:229-30 My '53

Report of committee on patents; Patent act of 1952. Am Cer Soc Bul 32:219-20 Je 15 '53

United States patent law; new provisions in the 1953 act. S. T. Madeley. Elec R (Lond) 152:193-4 Ja 23 '53

What you should know about the new patent law. H. A. Toulmin, jr. Machine Design 25:215-18 O '53

PATENT medicines. See Medicines, Proprietary

PATENT office (Great Britain). See Great Britain—Patent office

PATENTS

Essentials of a valid patent. A. W. Gray. bibliog Machine Design 25:147-50 S '53

Inventors in gas industry are urged to study and follow patent requirements. E. W. Mason. Am Gas J 178:20-1+ F '53

Patents pending; squabble in England over shell-molding improvements may have repercussions in the United States. Bsns W p44+ Ap 18 '53

See also

Chemical patents
Electronics—Patents
Food—Patents
Glass machinery—Patents
Glass manufacture—Patents
Inventions
Machinery—Patents
Metal finishing—Patents
Metals, Clad—Patents
Paper making—Patents
Patent laws and legislation
Petroleum refining—Patents
Radio apparatus—Patents
Refrigeration and refrigerating machinery—Patents
Television apparatus—Patents
Textile patents
Trade marks
Trade secrets
Welding—Patents

Licensing

Schering sued by US over patent licenses. Oil Paint & Drug Rep 162:3+ D 8 '52

PATHOLOGY, Geographic. See Medical geography

PATIÑO, Antenor R. 1894-

Businessmen in the news. por Fortune 46:47 D '52

PATMAN law. See Price discrimination—Patman law

PATMAN monetary inquiry. See Government investigations

PATRICK, Joseph A.

Lawyer turns businessman, and thrives. pors Bsns W p86-9, cover D 27 '52

PATRIOTISM

See also

Loyalty tests

PATTERN making

Aircraft builder operating new pattern shop; Consolidated Vultee aircraft corp. T. A. Dickinson. il Foundry 81:190+ F '53

Current status of apprenticeship in the patternmaking industry. W. F. Patterson. Foundry 81:210 O '53

Design and production of shell mold patterns improved. il Iron Age 170:172-4 D 11 '52

Follow boards and matchplates. P. Dwyer. diags Foundry 81:195-6+ Ag; 225+ S; 197-9 O; 287-9 N '53

How to eliminate some machining on castings. H. L. Smith. diags Foundry 81:215+ Je '53

Metallic filler; pattern shop operation simplified with synthetic metal. il Iron Age 170:186-7 N 13 '52

Patternmaking; American foundrymen's society annual meeting, Chicago; abstracts of papers. Foundry 81:156+ Je '53

Patternmaking today. M. F. Kellner. il Foundry 80:102-3+ O '52

Patterns, their relation to castings production. T. H. Trevithick. diags Foundry 80:241+ N; 185+ D '52; 81:191+ Ja; 195-6+ F; 293-4+ Mr; 217-18+ Ap; 243-4+ My '53

Plastic patterns offer advantages in investment casting. R. S. Banister. il Foundry 81:120-3 S '53

Table settings for pattern draft; data sheet. R. F. Speerbrecher, comp. Foundry 80:169 N '52

What is a good pattern? W. Siebert. il diag Foundry 81:132-3 S '53

PATTERNS, Dress. See Dress patterns

PATTERSON, William J. 1880-

Patterson leaves I.C.C. after 39-year career. por Ry Age News ed 135:13 Jl 20 '53

PAULEY, Clarence O. 1879-
Accident and health industry pays tribute to retiring managing director. W. L. Clapp; E. J. Faulkner. por East Underw 54:31, 38 My 8 '53

PAULI, Wolfgang
Presentation of the Franklin medal. por Franklin Inst J 254:470-1 D '52

PAULING, Linus Carl, 1901-
Portrait. Fortune 46:206 D '52

PAULSEN, Carl G. 1887-
Sketch. por Civil Eng 22:960 N '52

PAVEMENTS
Aerial photographs facilitate surveys of pavement condition. A. R. Legault and H. M. McMaster. il Civil Eng 22:883-5 O '52
Anti-skid treatment of seal-coated pavements. N. R. Bangert. Roads & Sts 95:80 N '52
Jet aircraft offer new use for the Postonway road. il Brick & Clay Rec 121:50 O '52
Tar-rubber base paving tests set. Eng N 150:26 Ap 23 '53
Technical matters and trends that will affect crushed stone industry; abstract. A. T. Goldbeck. Rock Prod 56:80-1 Mr '53
See also
Bridges—Floors
Roads
Streets

Cutting

Battery of breakers speeds pavement cuts. il Roads & Sts 96:73 Ja '53
Cutter for concrete or black-top pavements; Tri-Line concrete cutter. il Roads & Eng Constr 90:132+ D '52
Engine piston drives road breaker tool. il diags Product Eng 23:138-9 D '52
Pavement saw speeds removal of old asphalt pavement. il Roads & Sts 96:80 Ag '53

Design

Comparison of design methods for airfield pavements; progress report. bibliog diag Am Soc C E Proc 78 [no 163]:1-37 D '52
Coordinate design with construction methods. W. W. Wanamaker. il Civil Eng 22:847-51 O '52
Design and construction of airfield pavements. M. J. Tomlinson. bibliog diags Roy Aeronautical Soc J 56:877-84 D '52
Design studies of Indiana bituminous concrete surface mixtures. W. H. Goetz and J. F. McLaughlin. bibliog il Roads & Sts 96:107-12 S '53
Special procedures for pavement design. L. A. Palmer. il diags Am Soc C E Proc 79 [no 195]:1-19 Je '53

Foundations

How and where to build macadam bases. F. E. Swineford. il Pub Works 84:80-1 S '53

Heating

Cable reduces snow removal costs. il Elec World 138:145 N 3 '52
Design of snow melting systems. W. P. Chapman. bibliog diag Heat & Ven 49:95-102 Ap; 88-91 N '52
He sells up to snow melting! Bill Kelly of Camden, N.J. il Dom Eng 181:101+ Ap '53
Snow-melting system; Hewitt-Robins, inc. il Safety Maint & Prod 104:42 N '52
Snow-melting system on city street in Ohio. Roads & Eng Constr 91:128+ Jl '53
See also
Pavements, Concrete—Heating

Maintenance and repair

Patching pavements properly. G. E. Martin. il Pub Works 84:76-91 Je '53
See also
Pavements—Resurfacing
Pavements, Bituminous—Maintenance and repair

Resurfacing

Sidewalk patching need not be a headache. G. E. Huey. il Pub Works 84:67+ Ap '53

Slipperiness

How to correct slick spots. G. E. Martin. il Pub Works 83:59 N '52

Surface treatment

See also
Pavements—Resurfacing

Testing

Indiana to compare pavement types. diags Roads & Sts 95:57-8+ N '52

PAVEMENTS, Asphalt
Asphalt membranes; their potential uses in highway and airfield pavement design. J. R. Benson. diags Roads & Sts 95:78-80 D '52
Asphalt membranes; their service record on Gulf Freeway fills. W. J. Von London. il diags Roads & Sts 96:104-6+ Ap '53
Indentation prevents slippage between asphaltic courses. A. H. Freer. diags Roads & Sts 95:93-4 N '52
Lay asphalt pavement to protect steep levee slope. E. D. White. il Constr Methods 34:88-9+ O '52
New jet-resistant asphalt carpet may solve some airfield runway problems. Roads & Eng Constr 90:86 N '52
Streets restored with emulsified asphalt. il Roads & Sts 95:82-3 O '52
See also
Pavements, Bituminous
Pavements, Bituminous concrete

Testing

Determining the stability of asphalt pavement by graphic means. P. P. Trebuss. Roads & Eng Constr 90:108+ O '52

PAVEMENTS, Bituminous
Anti-skid treatment of seal-coated pavements. N. R. Bangert. Roads & Sts 95:80 N '52
Asphalt sealer sprayed; air-placed sand follows. il Constr Methods 35:136-7 Ag '53
Association of asphalt paving technologists annual meeting, Houston, Jan. 26-28. Roads & Eng Constr 91:85+ Ap '53; Roads & Sts 96:116-18 Ap '53
Coal-tar pavements containing rubber show promise for jet-plane runways. Eng N 150:42 Mr 5 '53
Drag box paves school yard quick and true. K. N. Cundall. il Constr Methods 34:66+ D '52
Experiences with asphalt emulsion by the city of Dearborn, Mich. H. A. Hoxie. il Roads & Sts 96:131+ My '53
Frederick Parker, ltd. announces Spot-Mix plant. il Roads & Eng Constr 91:74 My '53
Improved Cedarrapids bituminous-mixing plant. il Roads & Eng Constr 91:78 Ja '53
Protective seal coating with coal tar pitch emulsion. C. M. Upham. il Roads & Sts 96:118-19+ My '53
Stress-conditioning flexible pavements. B. E. Gray. il Roads & Eng Constr 91:91-2+ S '53
Studies of the hardening properties of asphaltic materials. J. T. Pauls and J. Y. Welborn. il diag Pub Roads 27:187-202 Ag '53; Same cond. Roads & Eng Constr 91:100+ S '53

Maintenance and repair

How to correct slick spots. G. E. Martin. il Pub Works 83:59 N '52
How we do a better job of street patching. W. A. Coolidge. il Pub Works 84:81+ My '53

Rubber mixtures

Development and use of rubber in bituminous pavements. H. K. Fisher. il India Rubber World 127:220-2 N '52
Engineers surveyed for opinions on rubber in bituminous road mixes. H. K. Fisher. Roads & Sts 96:113 S '53
New synthetic-rubber compound for asphalt roads is undergoing study under Firestone Tire sponsorship. Roads & Eng Constr 91:78 S '53
New York city experiments with rubber-asphalt paving. il Roads & Eng Constr 91:60 S '53
Rubber-asphalt pavement test in Milwaukee. J. Hubel. il Pub Works 83:77 D '52
Rubber in pavements; progress report. il Pub Works 84:69-70 Jl '53
Rubber roads are permanent part of future highway scene. Rubber Age 73:368 Je '53
Use of rubber in bituminous road surfaces; abstract and discussion. A. R. Smee and L. Mullins. Chem & Ind p 193 F 28 '53

PAVEMENTS, Bituminous concrete

Cooperative study of fillers in asphaltic concrete. C. A. Carpenter. Pub Roads 27:101-10 D '52

Design studies of Indiana bituminous concrete surface mixtures. W. H. Goetz and J. F. McLaughlin. bibliog il Roads & Sts 96:107-12 S '53

First New England cold-mix asphaltic concrete plant; Dunning sand & gravel co. il diag Rock Prod 55:88-9 D '52

How to design a bituminous concrete mixture with graded aggregates. J. E. Myers. il Pub Works 84:63-4 Jl '53

New runway for Newark airport. il diags Roads & Sts 96:50-6 F '53

Plotting aggregate gradation specifications for bituminous concrete. J. B. Dalhouse. Pub Roads 27:155-8 Ap '53; Same. Roads & Eng Constr 91:129-31+ Ap '53

Shoo-fly for Michigan boulevard; heavy-duty detour pavement. il plan Roads & Sts 96:124-5+ My '53

Trends in use of hot-mix asphaltic concrete. W. F. Winters. Roads & Sts 96:113-15+ Jl '53

See also

Roads, Bituminous concrete

Testing

Asphaltic concrete testing methods appraised; abstract. F. J. Benson. Roads & Sts 96:113 Mr '53

PAVEMENTS, Concrete

Accepted methods of curing cement-concrete pavements. il Roads & Eng Constr 91:100-1+ Ja '53

Air-entrained concrete; abstract. L. E. Andrews. Roads & Sts 96:65-6 F '53

Airfield pavement vibrated full-depth; U.S. air force base just outside Lincoln, Neb. il Eng N 150:39 Je 18 '53

Application of vibration to concrete pavement construction. A. G. Timms. bibliog il Am Concrete Inst J 24:933-42 Je '53

Delaware darkens concrete pavement to reduce total paving outlay. il Eng N 150:60+ Je 4 '53

Experience with fly-ash blends in a test pavement built in 1938. W. T. McClenahan. il Eng N 150:32-4 Mr 12 '53

Highway department tests fly-ash in pavement mixes. W. L. Chilcote. il Eng N 149:40-1 O 23 '52

How Austin paves streets with its own crew. P. R. Hoffman. Pub Works 84:69-70 Ja '53

Steep San Francisco street repaved. il Roads & Sts 96:70 Jl '53

See also

Pavements, Bituminous concrete

Roads, Concrete

Heating

Follow good piping practices when installing snow melting coils. G. D. Lain. diags Heating-Piping 25:111-12 My; 103 Je '53

Hotel installs snow melter. il Am Bld 74:166-7 D '52

Joints

Lightweight joint cuts slab cost; Atlantic City naval air station. il Constr Methods 35:66-7 Ag '53

Maintenance and repair

Saws for making concrete pavement cuts. J. McNerney. il Pub Works 84:81-2+ F '53

Testing

Development of a cell for the installation of electrical resistance strain gages in concrete. H. E. Worley and R. C. Meyer. il diags Am Concrete Inst J 25:121-35 O '53

PAVEMENTS, Macadam

How and where to build macadam bases. F. E. Swineford. il Pub Works 84:80-1 S '53

PAVEMENTS, Rubber

See also

Pavements, Bituminous—Rubber mixtures

PAVEMENTS, Soil-cement

City adds low-cost curb, gutter. il Eng N 150:57-8 Ap 16 '53

Methods and equipment for soil-cement paving. il Pub Works 84:90-2 O '53

Soil cement streets for expanding air base; Edwards air force base. il Roads & Sts 96:48+ Je '53

32-acre soil-cement parking lot. il Roads & Sts 96:42-4 Ag '53

PAVILIONS

Putting a new twist into construction; livestock judging pavilion, North Carolina state fair. il Bsns W p50-2 F 14 '53

PAVING machines

Contractor's formless paver shows promise. H. J. Spelman, jr. il Constr Methods 35:128-9+ S '53

Drag box paves school yard quick and true. K. N. Cundall. il Constr Methods 34:66+ D '52

PAWNBROKING

See also

Provident loan society of New York

PAYMENT

See also

Checks

Collecting of accounts

Instalment plan

Payrolls

Wage payment plans

PAYROLLS

These $2 bills were lucky; cash pay day. J. R. McNulty. Personnel J 31:294-5 Ja '53

Accounting

Clock card is key to payroll; Packard motor car co. P. Eastman. il Am Bsns 23:24+ Jl '53

Payroll for 2,000 employees completed in ten hours; Dormeyer corp. F. J. Cummings. il Am Bsns 23:24 O '53

Payroll machine saves $1,000 month. il Ed & Pub 85:53-4 N 8 '52

Quick method for computing employee tenure. N. Friedman. Personnel 29:257-60 N '52

Statistics

Manufacturing production-worker payroll index, unadjusted; revised series; monthly figures and monthly averages, 1919-1950. Survey of Cur Bsns 32:19 O '52

PEABODY coal company

Sharp earnings recovery likely. Barron's 33:29-30 Je 15 '53

PEACE

Economic consequences of peace. P. Einzig. Comm & Fin Chr 177:1650 Ap 16 '53

Eisenhower urges Russia prove she wants world peace. Comm & Fin Chr 177:1741+ Ap 23 '53

Refugees from reality. Economist 165:213-14 O 25 '52

Research, religion and peace. R. W. Babson. Comm & Fin Chr 177:2102 My 14 '53

World peace contests of L. & C. Mayers co., inc. Mod Ind 24:168 N '52

See also

International relations

PEACHES

Effect of 3-chloro-isopropyl-N-phenyl carbamate on abscission of young fruits of peach. P. C. Marth and V. E. Prince. bibliog Science 117:497-8 My 8 '53

PEANUTS

Elevation of the intrinsic viscosity of peanut protein by treatment with terephthalyl dichloride. G. E. Mann. bibliog Am Chem Soc J 75:3526-9 Jl 20 '53

Milk casein and peanut protein fibres. R. L. Wormell. flow sheet il Textile Inst J 44:P258-68; Discussion. P268-71 Jl '53

Unshelled peanuts now salted by new process. S. Siewart and J. G. Woodroof. flow sheet il Food Eng 24:110-11 N '52

World output hits seven-year low. Oil Paint & Drug Rep 162:4 D 1 '52

PEARL, Leslie

Why Les Pearl is happy to be a space writer. S. H. Margolis and M. Silverstein. Ptr Ink 241:41-2+ D 5 '52

PEARL assurance company, ltd.

Pearl U.S. branch 25 years old. C. Axman. East Underw 53:19-20 O 31 '52

PEARL essence

Development and use of synthetic pearl essence. R. L. Shuman. Paint Oil & Chem R 116:22-3 Ap 9 '53

PEARL harbor, Attack on, 1941

I led the air attack on Pearl harbor. M. Fuchida. il U S Naval Inst Proc 78:sup 14, 939-52 S '52

PEARLITE. See Steel—Metallography

PEAS

Fractionation of starches from smooth and wrinkled seeded peas; molecular weights, end-group assays and iodine affinities of the fractions. A. L. Potter and others. bibliog il Am Chem Soc J 75:1335-8 Mr 20 '53

Trends speed cannery pace; Mammoth Springs canning co. J. P. Kraemer. il Food Eng 24:98-101 N '52

PEAS, Frozen

Top-rank quick-freeze operation: Lamb-Western, inc. P. Lamb and C. R. Havighorst. flow sheet(p 118-21) il Food Eng 25:68-73 Ja '53

PEAT

Electricity supply developments in southern Ireland; peat harvesting. il diags Engineer 194:253-4 Ag 22 '52

Peat as a roadbuilding material. Comp Air Mag 57:351 D '52

Peat-fired open-cycle gas turbine. il diags Engineer 195:350-2 Mr 6 '53; Engineering 175:308-11 Mr 6 '53; Elec R (Lond) 152:559-64 Mr 13 '53

Power from peat. il diag Elec J 150:765-8 Mr 6 '53

PEBBLE heaters

Latest pebble heater design; patent. Chem Eng 60:377-8 Ap '53

Pebble stoves for heating gases to high temperatures. R. C. Buehl and others. bibliog 4pls U S Bur Mines Rep of Invest 4949:1-8 '53

PECANS

Storage

Year 'round on pecans by refrigerated storage. J. G. Woodroof and E. K. Heaton. il Food Eng 25:83-5+ My '53

PECTIC acid

Structure of the triuronide from pectic acid. J. K. N. Jones and W. W. Reid. bibliog Chem & Ind p303 Mr 28 '53

PECTIC substances

Analysis

Colorimetric determination of pectic substances. E. A. McComb and R. M. McCready. bibliog Anal Chem 24:1630-2 O '52

PECTINS

Better pectins. G. H. Joseph. il Food Eng 25:71-3+ Je '53

Engineering quality pectins; Exchange lemon products co. G. H. Joseph and C. R. Havighorst. flow sheet(p 134-7) il Food Eng 24:87-9+ N '52

Physical chemistry of pectin jelly formation. D. W. Grover. Chem & Ind p 1216-17 D 13 '52

Survey of pectin studies, past and present; abstract. M. Olliver. Chem & Ind p33-4 Ja 10 '53

See also

Pectic substances

Analysis

Extraction and determination of total pectic materials in fruits. R. M. McCready and E. A. McComb. bibliog Anal Chem 24:1986-8 D '52

PEDESTRIANS

Street lighting for pedestrians. W. B. Elmer. il diags Elec World 138:102-4+ N 3 '52

PEEK, Milton L.

They're in the news. H. Woodward. por Sales Management 70:26 F 1 '53

PEENING

Investigation on peening. P. L. Calamari and others. il diag Welding J 32:sup387-402 Ag '53

See also

Shot peening

PEGMATITES

Economics of pegmatites. P. M. Tyler. bibliog Min Eng 5:Trans 894-8 S '53

Investigation of the New Anniversary-Bucky pegmatite, Gunnison county, Colo. S. R. Wilson and W. A. Young. 3pls U S Bur Mines Rep of Invest 4939:1-7 '53

Mica deposits of the southeastern Piedmont; general features. R. H. Jahns and others. il map diags U S Geol S Professional Pa 248-A:1-102. pl 1 bibliog(p96-9); pa $1.25 Supt. of doc. '52

Pegmatite layer in the Shonkin Sag laccolith, Montana. J. D. Barksdale. bibliog maps diags Am J Sci 250:705-20, pl 1-4 O '52

Progress report on pegmatite investigations in South Dakota, for fiscal year ended June 30, 1951. S. M. Runke and others. bibliog U S Bur Mines Rep of Invest 4928:1-46 '52

Strategic beryllium from domestic pegmatites. B. H. Clemmons and J. S. Browning. map Min Eng 5:786-8 Ag '53

PELARGONIDIN

Relation between spectral changes and *p*H of the anthocyanin pelargonidin 3-monoglucoside. E. Sondheimer. bibliog Am Chem Soc J 75:1507-8 Mr 20 '53

PELLETS

Laboratory procedures for determining pelletizing characteristics of iron ore concentrates. T. E. Ban and L. J. Erck. bibliog il diag Min Eng 5:Trans 803-11 Ag '53

Pelletizer mixer can control size and quality of pellets. il Brick & Clay Rec 123:49 Ag '53

Time-resolved spectroscopy of ultraspeed pellet luminosity. W. A. Allen and E. B. Mayfield. il J Ap Phys 24:131-3 F '53

Your drum pelletizer still tops for pellet formation. Brick & Clay Rec 123:55 Jl '53

PELLITORINE

Amides of vegetable origin; stereoisomeric *N* - *iso* - butylnona - 1 : 5 - diene-1-carboxyamides and the structure of pellitorine. L. Crombie. Chem Soc J p4338-46 N '52

Pellitorine isomers; the synthesis of N-isobutyl- *trans*-2,*trans*-4-decadienamide. M. Jacobson. bibliog Am Chem Soc J 75:2584-6 Je 5 '53

Structure of an insecticidal *iso*butylamide from pellitory root. L. Crombie. bibliog Chem & Ind p 1034-5 O 18 '52

PEMBROKE, New Hampshire

Casting for industry at a fish fry. il Bsns W p32-3 Je 27 '53

PENCE, Harry

Pence retires from library. por Ed & Pub 86:43 Ja 3 '53

PENDULUM

Torsion pendulum of improved design for measuring damping capacity. J. W. Jensen. il diag R Sci Instr 23:397-401 Ag '52

PENEPLAINS

Genetic relations of caves to peneplains and big springs in the Ozarks. J. H. Bretz. bibliog maps diag Am J Sci 251:1-24 Ja '53

PENICILLIN

Cobalt enhancement of penicillin activity against salmonella pullorum. A. Pital and others. bibliog Science 117:459-60 Ap 24 '53

Community program for the prevention of rheumatic fever recurrence. M. A. Smith. bibliog Pub Health Rep 68:16-19 Ja '53

Influence of procaine penicillin on the efficiency of food utilization by pigs. K. L. Robinson and others. Chem & Ind p 18-19 Ja 3 '53

Penicillin free of side reactions is developed; abstract. B. W. Churchill. Oil Paint & Drug Rep 164:7+ S 7 '53

Penicillin sales decline ending, price stability foreseen. Chem & Eng N 31:772 F 23 '53

Penicillin's awkward age. Chem W 71:69-70 N 29 '52

Production of better penicillin-producing strains by mutation induced by uranium nitrate. M. L. Gattani. Science 116:596-7 N 28 '52

Recovery from anthrax meningitis. D. Kindler. bibliog il Ind Med 21:487-8 O '52

Syntheses in the penicillin field; 4-formyl*iso*-oxazolones and derived thiazolidines. A. H. Cook and G. Shaw. Chem Soc J p4466-9 N '52

Synthesis of substituted penicillins and simpler structural analogs; the cyclization of a penicilloate derivative to methyl phthalimidopenicillanate. J. C. Sheehan, K. R. Henery-Logan and D. A. Johnson. bibliog Am Chem Soc J 75:3292-3 Jl 5 '53

PENICILLIN—*Continued*

Manufacture

Penicillin from chemically defined media. P. Hosler and M. J. Johnson. bibliog diag Ind & Eng Chem 45:871-4 Ap '53

Penicillin production by pigment-free molds. R. F. Anderson and others. bibliog diag Ind & Eng Chem 45:768-73 Ap '53

Treatment of waste waters from the manufacture of penicillin; abstract. G. E. Eden and G. F. Lowden. Sewage & Ind Wastes 25:242-3 F '53

PENICILLIN, Analogs of

Synthesis of analogs of penicillin. D. Todd and S. Teich. bibliog Am Chem Soc J 75:1895-900 Ap 20 '53

PENICILLIN G (benzylpenicillin)

Carboxy derivatives of benzylpenicillin. D. A. Johnson. bibliog Am Chem Soc J 75:3636-7 Ag 5 '53

PENICILLIUM

Polysaccharide of penicillium islandicum Sopp. J. Baddiley, J. G. Buchanan and E. M. Thain. Chem Soc J p 1944-6 Je '53

Rate of endogenous respiration as affected by the oxidation of exogenous substrates. H. J. Blumenthal and others. bibliog Science 116:475-7 O 31 '52

PENICILLIUM terlikowski

Gliotoxin; a related antibiotic from penicillium terlikowski; gliotoxin monoacetate. J. R. Johnson, A. R. Kidwai and J. S. Warner. bibliog diag Am Chem Soc J 75:2110-12 My 5 '53

PENICK and Ford, ltd., inc.

12 promising specialties. P. Dobbs. Mag of Wall St 92:122 Ap 18 '53

PENINSULAR telephone company

Stock offering underwritten. Comm & Fin Chr 177:1260 Mr 23 '53

PENN mutual life insurance company

Penn Mutual completes great production year. Weekly Underw 168:291 Ja 24 '53

PENNEY, J. C., company

Five unusual candidates for stock splits; with comparative balance sheet items. Mag of Wall St 92:91 Ap 18 '53

PENNIMAN, Abbot L. jr.

Al Penniman's job; to make sure Baltimore has power in plenty. pors Elec World News ed 138:22-4 D 22 '52

PENNINGTON, Mary Engle, 1872-1952

Sketch. por Refrig Eng 61:184 F '53

PENNSYLVANIA

See also

Allegheny county, Pennsylvania
Coal—Pennsylvania
Electricity supply—Pennsylvania
Mines and mineral resources—Pennsylvania
Roads—Pennsylvania

Sanitary affairs

Clean streams policy, progress aired. Eng N 149:24 N 20 '52

Pennsylvania asks court to back pollution law. Eng N 150:28 F 5 '53

PENNSYLVANIA electric company

Bonds offered. Comm & Fin Chr 178:54 Jl 6 '53

PENNSYLVANIA power and light company

Welcoming 75,000th stockholder. il Elec World News ed 138:32-3 O 13 '52; Edison Elec Inst Bul 20:391 N '52

PENNSYLVANIA railroad

Increased efficiency means bigger net for the Pennsy. Barron's 33:23+ Ja 19 '53

Philadelphia tears down its Chinese wall. il Bsns W p98-100+ F 14 '53

Security I like best. A. J. Neumark. Comm & Fin Chr 176:1843 N 13 '52

PENS

See also

Fountain pens

Rating

Laundry marking pens. il Consumers Res Bul 32:28-9 Ag '53

PENSION trusts

Assuring the harvest of old age; advantages of insured plans. N. B. Taft. Spectator 160:10-12+ O '52

Can economy stand actuarial soundness for pension plans generally. D. C. Bronson. Nat Underw (Life ed) 57:2 Ja 2 '53

Common stocks in retirement plans. C. R. Henderson. Management R 41:750-3 N '52

Do's and don'ts on pensions. Trusts & Estates 92:83 F '53

Employees' profit-sharing trusts, key to solving retirement problems. G. P. Jochum and R. E. Fulton. Comm & Fin Chr 176:2335+ D 18 '52

Essentials of pension fund investment. H. C. Bond. Trusts & Estates 91:641-2 S '52

Financing profit sharing plans. Trusts & Estates 92:137-8 F '53

Investing for pension and profit sharing trusts. J. H. Weedon. Comm & Fin Chr 176:2333+ D 18 '52

New pension plan. R. M. Sedgwick. Harvard Bsns R 31:70-82 Ja '53

Patterns in pension trusts; self-employed plans, equity funds, profit sharing. C. A. Bethel. Trusts & Estates 91:934-7 D '52

Pension and profit-sharing trusts; administrative functions of a committee; ABA committee report. Trusts & Estates 91:762-4 O '52

Pension funds. R. F. Murray. Comm & Fin Chr 176:2125+ D 4 '52

Pension funds as a market for mortgages. R. F. Murray. Comm & Fin Chr 177:478 Ja 29 '53

Pension rules restated. F. J. Amer. Trusts & Estates 92:322-3 My '53

Problems in pension fund purchases of equities. J. F. Bradley. Comm & Fin Chr 177:2746 Je 25 '53

Retirement funds for self-employed; meeting requirements of Keogh-Reed bills; ABA committee report. Trusts & Estates 91:783 O '52

Stacking up money for pensions; profit-sharing plans. H. Rice. Comm & Fin Chr 177:2630+ Je 18 '53

Tax problems

Ask tax ruling for profit sharing plans. East Underw 54:12 F 27 '53

PENSIONS

West Germany authorizes transfer of pensions and annuities abroad. For Comm W 49:7 F 2 '53

See also

Old age pensions

PENSIONS, Industrial

Assuring the harvest of old age. N. B. Taft. Spectator 160:10-12+ O '52

Bigger pensions in 1953. il Bsns W p 170 Mr 14 '53

Coordinating employee benefits with estate planning. F. J. Campbell, jr. Trusts & Estates 92:403-5 Je '53

Cost-of-living adjustments in pension plans; abstract. J. M. Hines. Management R 41:700-1 O '52

Current checklist for pension planning; abstract. M. M. Denker and C. T. Foster. Management R 41:633-5 S '52

December pension jam eased by fiscal-year shifts. Nat Underw (Life ed) 56:2 D 26 '52

Everyone at Bangor mills benefits from retirement plan. R. C. Scott. Textile World 102:130-1 D '52

How to retire an executive. Bsns W p66+ Ap 25 '53

Important features of pension planning disclose many necessary requirements. G. B. Carlson. Weekly Underw 168:598-9 F 28 '53

Insured profit sharing, pension planning. D. B. Maduro. Nat Underw (Life ed) 57:24 F 6 '53

Investors diversified services starts own pension plan. Comm & Fin Chr 177:1134 Mr 12 '53

It costs too much. Bsns W p 178 My 9 '53

New Gannett pension plan. Ed & Pub 85:63 O 11 '52

New table indicates retirement reserve may be inadequate. Nat Underw (Life ed) 57:1+ Mr 13 '53; Same. East Underw 54:5 Mr 13 '53

New twists in pension talks. Mod Ind 25:79-80+ Ja '53

Now is the time for management to look ahead on pension plans. L. A. Lincoln. Weekly Underw 168:595+ F 28 '53

PENSIONS, Industrial—*Continued*

Pension report published by Joint economic committee of United States Congress. Trusts & Estates 92:10 Ja '53

Pensions; here's what's new about them. Mod Ind 24:52-5 D '52

Portable pensions. Economist 166:651-3 Mr 7 '53

Record in new pension plans. Trusts & Estates 92:498 Jl '53

Revision of pension plan to meet economic conditions seen need. W. B. Dunckel. Weekly Underw 168:596 F 28 '53

Should pensions be transferable? abstract. A. M. Whitehill, jr. Management R 42:16-17 Ja '53

Social security benefits and deferred retirement; a plan for improved manpower utilization. E. L. Olrich. Personnel 29:361-8 Ja '53

Taking the gamble out of pensions. G. N. Calvert. Pub Util 51:415-19 Mr 26 '53

Taking the gamble out of pensions, perhaps. G. J. Eder. Pub Util 52:23-5 Jl 2 '53; Discussion. C. R. Henderson. 52:367-8 S 10 '53

Treasury ruling seen stimulating pension spread. Nat Underw (Life ed) 57:1+ Ap 10 '53

12 pension pitfalls. M. Goldstein. Nat Underw (Life ed) 56:12 N 21 '52

$2,000,000 a year for Gannett pensions. Ed & Pub 85:46 N 22 '52

See also

Insurance companies—Employees' pensions

Railroads—Pensions

Accounting

Audit aspects of pension administration. K. F. Hardy. N A C A Bul 34:500-8 D '52

Finance

Keyman insurance and a funded pension plan. Life Ins Courant 58:21-2 F '53

Long Island Lighting adopts fund idea for retirement plan; Equity annuity plan. Comm & Fin Chr 176:1650 O 30 '52

Pension funds. R. F. Murray. Comm & Fin Chr 176:2125+ D 4 '52

Pension funds as a market for mortgages. R. F. Murray. Comm & Fin Chr 177:478 Ja 29 '53

Pension funds; fastest grower of all. Bsns W p 128+ Mr 21 '53

Retirement plan with variable benefits; letter by Towers, Perrin, Forster & Crosby. East Underw 53:21 N 7 '52

Sees equity annuity as new principle in pension planning. H. H. Hennington. Nat Underw (Life ed) 56:2 N 14 '52

Stacking up money for pensions; profit-sharing plans. H. Rice. Comm & Fin Chr 177:2630+ Je 18 '53

Toledo plan gets a boost. Bsns W p 179 F 21 '53

See also

Pension trusts

Records

Chrysler combines record keeping for group insurance and pensions. D. G. Baird. il Am Bsns 22:26+ N '52

Tax problems

Would cut tax edge under pension plans; non-insured plans' advantage; abstracts. E. M. Thore. East Underw 53:8 N 21 '52; Nat Underw (Life ed) 56:6+ N 21 '52

PENSIONS, Military

Fewer war pensioners. Economist 166:14 Ja 3 '53

PENSTOCKS

Anderson Ranch Dam penstock test fracture repaired by welding. P. J. Bier. il plan diags Welding J 32:313-19 Ap '53

Mortar lining extends penstock life and restores original capacity. P. H. Yelton. il Elec World 139:106-8 F 9 '53

Photoelastic stress analysis solves penstock reinforcement problem. H. J. Kahm. il diags Civil Eng 22:866-7 O '52

Tunnels and underground penstocks require a million cu. yd. rock excavation; Alcan-British Columbia hydro project. W. G. Huber. il plans diag Civil Eng 23:102-7 F '53

PENTACHLOROBENZENE

Microthermal analysis of the system 1,2,3,4-tetrachlorobenzene-pentachlorobenzene. C. J. Arceneaux. bibliog il Anal Chem 25:486-9 Mr '53

PENTACHLOROPHENOL

No electrical hazard from pentachlorophenol. F. S. Glaza and R. M. Gooch. Elec World 139:88 Mr 9 '53

PENTAERYTHRITOL

Canadian pentaerythritol goes to market; St Maurice chemicals, ltd. flow diag il Can Chem Process 37:70+ O '53

Detonation of pentaerythritol tetranitrate. M. P. Murgai. bibliog J Chem Phys 21:1403-4 Ag '53

Ethylene glycol ethers of pentaerythritol. S. Wawzonek and C. Issidorides. bibliog Am Chem Soc J 75:2373-5 My 20 '53

Pentaerythritol. W. D. Morrison. Chem & Eng N 31:658-60 F 16 '53

Some ethers of pentaerythritol and their nitrate esters. R. Evans and J. A. Gallaghan. Am Chem Soc J 75:1248-9 Mr 5 '53

Vapour pressure and lattice energy of hydrogen-bonded crystals; α- and β-anhydrous oxalic acid and tetragonal pentaerythritol. R. S. Bradley and S. Cotson. Chem Soc J p 1684-8 Je '53

PENTAFLUOROPROPIONIC acid

Reactions of fluorocarbon radicals; synthesis and reactions of pentafluoropropionic acid. R. N. Haszeldine and K. Leedham. Chem Soc J p 1548-52 My '53

PENTALENE

Fused carbon rings; experiments directed towards the synthesis of simple pentalenes. C. T. Blood and R. P. Linstead. Chem Soc J p2255-62 Je '52

PENTANE

Compressibility of and an equation of state for gaseous normal pentane. J. A. Beattie, S. W. Levine and D. R. Douslin. bibliog Am Chem Soc J 74:4778-9 O 5 '52

Inhibition of side reactions during aluminum chloride-catalyzed pentane isomerization. E. E. Sensel and A. R. Goldsby. bibliog Ind & Eng Chem 44:2716-21 N '52

Isomate; Standard oil co. (Indiana). flow diag Pet Refiner 31:172-3 S '52

Isomerization of *n*-pentane in presence of molybdena-alumina catalysts at low hydrogen-hydrocarbon ratios. A. Clark and others. bibliog Ind & Eng Chem 45:803-6 Ap '53

Isomerization of pentanes and hexanes; nature and control of side reactions. B. L. Evering and others. bibliog Ind & Eng Chem 45:582-9 Mr '53

Liquid phase isomerization; Shell development co. flow diag Pet Refiner 31:168-9 S '52

Photobromination of pentane. M. S. Kharasch and others. J Chem Phys 20:1659-60 O '52

PENTANEDIONE

Bispentanedione diaquo manganese(III) compounds. G. H. Cartledge. Am Chem Soc J 74:6015-18 D 5 '52

1-PENTANOL. See Amyl alcohol

PENTANONE

Condensation of 2-hydroxy- and 2-acetoxy-cyclohexanone with 1-diethylamino-3-pentanone. J. Szmuszkovicz and H. Born. bibliog Am Chem Soc J 75:3350-2 Jl 20 '53

Vapor-liquid equilibria for ethyl alcohol binary systems. L. R. Hellwig and M. Van Winkle. bibliog Ind & Eng Chem 45:624-9 Mr '53

PENTAQUINE. See Aminoquinoline

PENTENE

Rates and temperature coefficients in the hydration of two gaseous pentenes by dilute aqueous nitric acid. J. B. Levy and others. bibliog Am Chem Soc J 75:3955-7 Ag 20 '53

PENTODES. See Vacuum tubes

PENTOSANS

Determination of pentosans in highly purified wood pulps; furfural analysis methods. E. D. Smith and L. N. Rogers. Tappi 36:390-2 S '53

PENTOSANS—*Continued*

Analysis

Colorimetric determination of pentosans in highly refined pulp. A. S. O'Brien and T. L. Davis. bibliog Tappi 35:499-505 N '52

PENTOSES

Synthesis of sugars from simpler substances; enzymic synthesis of a pentose. L. Hough and J. K. N. Jones. Chem Soc J p4047-52 O '52

Analysis

Detection of deoxy-sugars, glycals, and methyl pentoses in paper partition chromatography. J. T. Edward and D. M. Waldron. Chem Soc J p3631-4 S '52

Quantitative determination of pentoses with anthrone. R. R. Bridges. bibliog Anal Chem 24:2004-5 D '52

PEOPLES gas light and coke company

Stock offered. Comm & Fin Chr 176:2167 D 8 '52

PEORIA and eastern railway

Peoria & Eastern may pay income bond interest soon. Barron's 33:25 Ja 5 '53

PEPPERMINT oil

Mint oil production seen lower in new prediction. Oil Paint & Drug Rep 164:3+ S 21 '53

PEPSI-COLA company

New British cousin for Pepsi. il Bsns W p 112+ D 20 '52

PEPSIN

Phosphorus in pepsin and pepsinogen. G. E. Perlmann. bibliog Am Chem Soc J 74:6308-9 D 20 '52

PEPSINOGEN

Phosphorus in pepsin and pepsinogen. G. E. Perlmann. bibliog Am Chem Soc J 74:6308-9 D 20 '52

PEPTIC ulcers

Prevention of ulcers in the Shay rat by ox bile. C. Funk and others. bibliog Science 116:638-9 D 5 '52

PEPTIDES

Amino-acids and peptides; γ-L-glutamyl-L-alanine, -L-valine, and -L-leucine. D. A. Rowlands and G. T. Young. Chem Soc J p3937-40 O '52

Amino-acids and peptides; the nitrogenous constituents of some marine algae. D. M. Channing and G. T. Young. Chem Soc J p2481-91 Ag '53

Controlled synthesis of oligo-peptides; abstract. F. E. King. Chem & Ind p 1078 N 1 '52

Determination of the terminal carboxyl residues of peptides and of proteins. V. H. Baptist and H. B. Bull. bibliog Am Chem Soc J 75:1727-9 Ap 5 '53

Dissociation constants of peptides; a survey of the effect of optical configuration. E. Ellenbogen. bibliog Am Chem Soc J 74:5198-201 O 20 '52

Enzymic synthesis of peptide bonds; instances of protease-controlled specificity in the synthesis of acylamino acid anilides and acylpeptide anilides. J. Janssen, M. Winitz and S. W. Fox. bibliog Am Chem Soc J 75:704-7 F 5 '53

Glycine peptides; the polymerization of piperazine-2 : 5-dione at 180°. A. B. Meggy. Chem Soc J p851-5 Mr '53

Heats of hydrolysis of amide and peptide bonds. J. M. Sturtevant. Am Chem Soc J 75:2016-17 Ap 20 '53

Infrared spectra of synthetic polypeptides prepared by the Lossen rearrangement. C. D. Hurd, L. Bauer and I. M. Klotz. bibliog Am Chem Soc J 75:624-6 F 5 '53

Internal rotation of a polypeptide chain. S. Mizushima and T. Shimanouchi. bibliog Am Chem Soc J 74:5550-1 N 5 '52

Method for the synthesis of cyclic polypeptides. M. Winitz and J. S. Fruton. Am Chem Soc J 75:3041 Je 20 '53

Near infrared spectra of compounds with two peptide bonds and the configuration of a polypeptide chain. S. Mizushima and others. bibliog Am Chem Soc J 74:4639-41; 75:1863-5 S 20 '52, Ap 20 '53

New method for the preparation of thio acids and application to peptide chemistry. M. W. Cronyn and J. Jiu. Am Chem Soc J 74:4726 S 20 '52

New stepwise degradation of peptides. R. W. Holley and A. D. Holley. bibliog Am Chem Soc J 74:5445-8 N 5 '52

Optical rotation of peptides; α- and γ-dipeptides of glutamic acid and alanine. H. Sachs and E. Brand. bibliog Am Chem Soc J 75:4608-10 S 20 '53

Out-of-plane deformation frequency of the NH group in the peptide link. H. K. Kessler and G. B. B. M. Sutherland. J Chem Phys 21:570-1 Mr '53

Peptides isolated from a partial hydrolysate of steer hide collagen. T. D. Kroner, W. Tabroff and J. J. McGarr. bibliog Am Chem Soc J 75:4084-6 Ag 20 '53

Peptides; selective degradation by removal of the terminal amino-acid bearing a free amino-group; the use of alkyl alkoxydithioformates (dialkyl xanthates). G. W. Kenner and H. G. Khorana. Chem Soc J p2076-81 Je '52

Peptides; selective degradation from the carboxyl end; the use of carbodi-imides. H. G. Khorana. Chem Soc J p2081-8 Je '52

Peptides; selective removal of the *C*-terminal residue as a thiohydantoin; the use of diphenyl phosphor*iso*thiocyanatidate. G. W. Kenner, H. G. Khorana and R. J. Stedman. Chem Soc J p673-8 F '53

Peptides; the synthesis of peptides through anhydrides of sulphuric acid. G. W. Kenner and R. J. Stedman. Chem Soc J p2069-76 Je '52

π Helix, a hydrogen bonded configuration of the polypeptide chain. B. W. Low and R. B. Baybutt. bibliog Am Chem Soc J 74:5806-7 N 20 '52

Preliminary investigations on the preparation of optically active peptides using mixed carbonic-carboxylic acid anhydrides. J. R. Vaughan, jr. bibliog Am Chem Soc J 74:6137-9 D 5 '52

Preparation and properties of serum and plasma proteins; separation from human plasma of polysaccharides, peptides and proteins of low molecular weight; crystallization of an acid glycoprotein. K. Schmid. bibliog il Am Chem Soc J 75:60-8 Ja 5 '53

Preparation of peptides containing cysteine. L. C. King and F. H. Suydam. bibliog Am Chem Soc J 74:5499-501 N 5 '52

Sequence of four amino acids at the amino end of the single polypeptide chain of lysozyme. W. A. Schroeder. bibliog Am Chem Soc J 74:5118-24 O 20 '52

Some peptides of lysine. S. G. Waley and J. Watson. Chem Soc J p475-9 F '53

Study of the quantitative dinitrophenylation of amino acids and peptides. W. A. Schroeder and J. LeGette. bibliog Am Chem Soc J 75:4612-15 S 20 '53

Synthesis of a reversibly contractile amphoteric polypeptide. H. Tani and others. Am Chem Soc J 75:3042-3 Je 20 '53

Synthesis of carnosine and related peptides by the phthaloyl method. R. A. Turner. bibliog Am Chem Soc J 75:2388-90 My 20 '53

Synthesis of peptides. B. L. Shapiro. bibliog Chem & Ind p 1119-25 N 15 '52

Tetraethyl pyrophosphite as a reagent for peptide syntheses. G. W. Anderson, J. Blodinger and A. D. Welcher. bibliog Am Chem Soc J 74:5309-12 N 5 '52

Use of diester chlorophosphites in peptide syntheses; mixed anhydrides. G. W. Anderson and R. W. Young. bibliog Am Chem Soc J 74:5307-9 N 5 '52

Use of formyl as a protective group in peptide synthesis. S. G. Waley. bibliog Chem & Ind p 107-8 Ja 31 '53

Use of phosphite amides in peptide syntheses. G. W. Anderson and others. bibliog Am Chem Soc J 74:5304-6 N 5 '52

Analysis

Correlation between the structure of some dinitrophenyl peptides and their chromatographic behavior on silicic acid-celite. W. A. Schroeder and L. R. Honnen. bibliog Am Chem Soc J 75:4615-19 S 20 '53

PEPTIZATION. See Colloids

PER acids

Steroidal sapogenins; the reaction of peracids with enol acetates of Δ^8-7-keto and Δ^8-11-keto steroidal sapogenins. O. Mancera and others. bibliog Am Chem Soc J 75:4428-9 S 20 '53

PER DIEM rules. See Freight cars—Interchange

PERCARBONIC acids. See Peroxycarbonic acids

PERCEPTION

Nature of perceptual processes. R. T. Saucer. bibliog Science 117:556-8 My 22 '53

PERCHLORATES

Evidence for preferential one-step divalent changes in the molybdate-catalyzed reduction of perchlorate by stannous ion in sulfuric acid solution. G. P. Haight, jr. and W. F. Sager. bibliog Am Chem Soc J 74:6056-9 D 5 '52

PERCHLORIC acid

Acylation and allied reactions catalysed by strong acids; the dismutation of diphenylmethanol by perchloric acid. H. Burton and G. W. H. Cheeseman. Chem Soc J p986-9 Mr '53

Anomerization of sugar acetates; glucose pentaacetates in acetic acid-acetic anhydride mixtures catalyzed by sulfuric and perchloric acids. E. P. Painter. bibliog Am Chem Soc J 75:1137-46 Mr 5 '53

Disproportionation equilibria and rates in perchloric and hydrochloric acid solutions of plutonium; influence of α-particles. R. E. Connick and W. H. McVey. bibliog Am Chem Soc J 75:474-9 Ja 20 '53

Electrolytic reduction of perrhenate; studies in perchloric, ethanesulfonic, trifluoroacetic and hydrochloric acids. J. C. Hindman and P. Wehner. bibliog Am Chem Soc J 75:2869-72 Je 20 '53

Exchange reaction between the two oxidation states of iron in acid solution. J. Silverman and R. W. Dodson. bibliog J Phys Chem 56:846-52 O '52

Kinetics of the decarboxylation of 2,4,6-trihydroxybenzoic acid in perchloric acid solution. W. M. Schubert and J. D. Gardner. bibliog Am Chem Soc J 75:1401-5 Mr 20 '53

Neptunium(IV)-neptunium(V) couple in perchloric acid; the partial molal heats and free energies of formation of neptunium ions. D. Cohen and J. C. Hindman. bibliog Am Chem Soc J 74:4682-5 S 20 '52

Oxidation potentials of the neptunium(III)-(IV) and the neptunium(V)-(VI) couples in perchloric acid. D. Cohen and J. C. Hindman. bibliog Am Chem Soc J 74:4679-82 S 20 '52

Polarography of tungsten(VI); catalytic reduction of perchlorate. H. A. Laitinen and W. A. Ziegler. bibliog Am Chem Soc J 75:3045-8 Jl 5 '53

Preparation of anhydrous perchloric acid. G. F. Smith. bibliog diag Am Chem Soc J 75:184-6 Ja 5 '53

Rate of the reaction between thallium(III) and iron(II) in perchloric acid solution. O. L. Forchheimer and R. P. Epple. bibliog Am Chem Soc J 74:5772-4 N 20 '52

Stabilities of +4 and +5 oxidation states of the actinide elements; the Np(IV)-Np(V) couple in perchloric acid solution. L. B. Magnusson and J. R. Huizenga. bibliog Am Chem Soc J 75:2242-6 My 5 '53

Use of perchloric acid in removing interferences prior to the electrolytic determination of lead as lead dioxide. G. Norwitz and I. Norwitz. Metallurgia 46:318 D '52

PERCHROMATES

Triphenylmethylarconium perchoromate. F. P. Dwyer and N. A. Gibson. bibliog Chem & Ind p 153-4 F 14 '53

PERCOLATION

Theory of percolation for the case of two solutes. H. Fujita. bibliog J Phys Chem 56:949-53 N '52

PERCY, Charles Harting, 1919-

Portrait. Fortune 47:96 Mr '53

PERFLUORO compounds

Chemistry of the perfluoro acids and their derivatives; the perfluoro aldehydes. D. R. Husted and A. H. Ahlbrecht. bibliog Am Chem Soc J 74:5422-6 N 5 '52

Effects of structure on the viscosities of perfluoroalkyl ethers and amines. T. J. Brice and R. I. Coon. bibliog Am Chem Soc J 75:2921-5 Je 20 '53

Perfluorinated cyclic ethers. A. L. Henne and S. B. Richter. bibliog Am Chem Soc J 74:5420-2 N 5 '52

Perfluoroalkyl Grignard reagents; reaction of heptafluoropropylmagnesium iodide with carbonyl compounds, and the mechanism of reduction during Grignard reactions. R. N. Haszeldine. Chem Soc J p 1748-57 Je '53

Perfluoroalkyl Grignard reagents; the preparation and some reactions of heptafluoro-*n*-propylmagnesium iodide. R. N. Haszeldine. Chem Soc J p3423-8 S '52

Reactions of highly fluorinated organic compounds; reactions of perfluorodi*cyclo*hexyl and perfluoro(*iso*propyl*cyclo*hexane). G. B. Barlow and J. C. Tatlow. Chem Soc J p4695-8 D '52

Reactions of metallic salts of acids with halogens; some reactions of salts of fluorohalogenoacetates and of perfluoro-acids. R. N. Haszeldine. Chem Soc J p4259-68 N '52

Synthesis of certain ketones and α-substituted β-diketones containing perfluoroalkyl groups. L. B. Barkley and R. Levine. bibliog Am Chem Soc J 75:2059-63 My 5 '53

PERFLUOROCARBOXYLIC acids

Fluorinated esters; diesters of perfluorocarboxylic acids with alcohols and glycols. R. Filler and others. bibliog Am Chem Soc J 75:966-8 F 20 '53

Fluorinated esters; esters of perfluoro monocarboxylic and dicarboxylic acids with 1,1-dihydroperfluoroalcohols and α,α,ω,ω-tetrahydroperfluoroglycols. M. Hauptschein and others. bibliog Am Chem Soc J 75:87-9 Ja 5 '53

Pyrolyses of the salts of the perfluoro carboxylic acids. J. D. LaZerte and others. bibliog Am Chem Soc J 75:4525-8 S 20 '53

Studies on the thermal decomposition of silver salts of perfluorocarboxylic acids. A. D. Kirshenbaum, A. G. Streng and M. Hauptschein. bibliog diag Am Chem Soc J 75:3141-5 Jl 5 '53

PERFLUOROHEPTANE

Solubility of water in normal perfluoroheptane. G. J. Rotariu, D. W. Fraga and J. H. Hildebrand. Am Chem Soc J 74:5783 N 20 '52

PERFLUOROPROPIONIC acid

Chemistry of the perfluoro acids and their derivatives; perfluoropropionic acid. D. R. Husted and A. H. Ahlbrecht. bibliog Am Chem Soc J 75:1605-8 Ap 5 '53

PERFORMIC acid

Steroids; introduction of the 11-keto and 11α-hydroxy groups into ring C unsubstituted steroids; performic acid oxidation of 7,9(11)-dienes. C. Djerassi and others. bibliog diags Am Chem Soc J 75:3505-10 Jl 20 '53

Studies on the structure of sphingomyelin; performic and periodic acid oxidation studies. G. Marinetti and others. bibliog Am Chem Soc J 75:313-15 Ja 20 '53

PERFUMERY

French exports of perfumes, floral and essential oils show uptrend. For Comm W 49:10 Je 8 '53

Odors and fragrances. R. Pantaleoni. bibliog il Chem & Eng N 31:1730-4 Ap 27 '53

Prince Matchabelli perfumes; nominated for packaging's Hall of fame. il Mod Packaging 26:104-9+, cover D '52

Second battle of the scents; Colonia, inc. and Pope publishing corp. il Bsns W p47-8+ My 16 '53

See also

Odors

PERIODATES

Electrolytic preparation of periodate oxystarch. W. Dvonch and C. L. Mehltretter. Am Chem Soc J 74:5522-3 N 5 '52

Periodate-glycol reaction; a quantitative study of certain chemical equilibria and their effects upon the rate of reaction. J. E. Taylor. bibliog diags Am Chem Soc J 75:3912-16 Ag 20 '53

Periodate method for manganese and effect of band width. M. D. Cooper. il Anal Chem 25:411-16 Mr '53

Production of formyl esters of carbohydrates by periodate oxidation. G. R. Barker and D. C. C. Smith. bibliog Chem & Ind p 1035 O 18 '52

Reaction between periodate and cobaltous ions. R. E. Jentoft and R. J. Robinson. Am Chem Soc J 75:4083-4 Ag 20 '53

PERIODATES—*Continued*

Study of the periodate method for determining end-group values. M. Morrison, A. C. Kuyper and J. M. Orten. bibliog Am Chem Soc J 75:1502-4 Mr 20 '53

Threitan and erythritan and their reaction with periodate. H. Klosterman and F. Smith. bibliog Am Chem Soc J 74:5336-9 N 5 '52

PERIODIC acid

Action of phenylhydrazine on the periodate degradation products of β-4-glucopyranosyl sulfones. E. Blanchfield and T. Dillon. bibliog Am Chem Soc J 75:647-8 F 5 '53

Studies on the structure of sphingomyelin; performic and periodic acid oxidation studies. G. Marinetti and others. bibliog Am Chem Soc J 75:313-15 Ja 20 '53

PERIODIC system

Explanation of chemical variations within periodic major groups. R. T. Sanderson. bibliog Am Chem Soc J 74:4792-4 O 5 '52

Periodic table for the lecture room. F. J. Fornoff and others. il diag J Chem Educ 29:626-8 D '52

PERIODICALS

Adventure latest pulp to join class magazines. il Ptr Ink 242:15 F 6 '53

If I had my way with publishers. B. A. Evans. Aslib Proc 5:16-20; Discussion. 20-6 F '53

See also

Advertising mediums—Periodicals
Banks and banking—Periodicals
Chemistry—Periodicals
Employees' magazines
Engineering—Periodicals
House organs
Modern packaging (periodical)
Modern plastics (periodical)
Newspapers
Trade journals

Abbreviations

German and French abbreviations and terms used in serial publications and in bibliographical citations. J. E. Allerding. Special Lib 43:358-63 N '52

Advertising departments

Job applicants inept, says magazine CAM. D. L. Lionel. Ed & Pub 85:28 D 20 '52

Bibliography

Periodica chimica. M. Pflücke and A. Hawelek. 2d ed 411p Akademie-Verlag GmbH, Schiffbauerdamm 19, Berlin NW 7 '52

Union lists

Catalogue of union periodicals; the humanities. P. Freer, ed. v2 804p 42s National council for social research, Pretoria; for sale by Percy Lund, Humphries and co, 12 Bedford square, London, W.C.1 '52

Catalogue of union periodicals, volume one, Science and technology, second supplement. P. Freer, ed. £1 1s South African council for scientific and industrial research, Pretoria, South Africa '53

New serial titles; a union list of serials newly received by North American libraries prepared under the sponsorship of the Joint committee on the union list of serials. Published monthly by Card division, Library of Congress, Washington, 25, D.C.

Union list of periodicals in the San Francisco Bay region; compiled by Special libraries assn. 2d ed 126p pa $5 M. E. Koutecky, P. O. box 3495, San Francisco 20 '52

Circulation

Newsstand vs. subscription circulation. D. B. Arnold. Adv Agency 45:124-5 O '52

See also

Audit bureau of circulations

Directories

Editorial directory. 232p pa $27 Galub pub. co, 516 Fifth av, New York 36 '53

Indexes

International index to periodicals, April 1949-March 1952. v 12 2169p H. W. Wilson co, New York '52

Nation index, 1865-1917. D. C. Haskell, comp. 2v 577p, 539p $25 New York public library, 5th av. & 42d st, New York 18 '53

Quarterly cumulative index medicus. v 49, January-June, 1951. 1560p American medical assn, 535 N. Dearborn st, Chicago 10 '52

Subject index to periodicals, 1952. T. R. Powel, ed. 671p £5 5s Library assn, Chaucer house, Malet place, London, W.C.1 '53

See also

Chemical abstracts (periodical)

Marketing

Action reports for a magazine wholesaler. W. K. Tarrant. N A C A Bul 34:66-75 S '52

Typography

Typographic scoreboard; subject; Saturday evening post. J. L. Frazier. il Inland Ptr 130:47 Ja '53

Latin America

Two La Prensa exiles on Life's Spanish staff. Ed & Pub 85:47 D 20 '52

PERIODICALS, Medical. See Medical periodicals

PERIODICITY

See also

Periodic system

PERITENDINITIS

Management of bursitis of the shoulder in industry. B. Behrend and P. S. Friedman. il Ind Med 21:583-4 D '52

PERKIN medal

Dr C. A. Thomas wins Perkin medal for 1953. Oil Paint & Drug Rep 162:5+ D 1 '52

PERKIN reaction

Kinetic study of the Perkin condensation. R. E. Buckles and K. G. Bremer. bibliog Am Chem Soc J 75:1487-9 Mr 20 '53

PERKINS machine and gear company

Backlog higher despite record shipments. Barron's 33:22 Je 8 '53

PERLITE

Perlite concrete roof cast on metal lath. il Eng N 150:45 My 21 '53

Perlite, 1952. S. W. Johnson. map Eng & Min J 154:108-9+ F '53

PERLITE institute

Annual meeting, Minneapolis, Oct. 1-3. Concrete 60:12 N '52; Rock Prod 55:128+ D '52

PERLMAN, Isadore, 1915-

California section award. por(cover) Chem & Eng N 30:5048-9 D 1 '52

PERMAFROST. See Soils—Freezing

PERMALLOY

New gyromagnetic effect in permalloy and iron. S. J. Barnett and L. A. Giamboni. bibliog diags Phys R 88:28-37 O 1 '52

Permalloy problem. R. M. Bozorth. bibliog Rs Mod Phys 25:42-8 Ja '53

Uniaxial anisotropy of a permalloy crystal. S. Kaya. bibliog Rs Mod Phys 25:49-53; Discussion. 53-5 Ja '53

PERMANENT wave kits

Why 1.5 million teen-agers are likely Toni buyers; materials supplied to some 30,000 home economics teachers. il Sales Management 70:28-9 F 1 '53

PERMANENT wave preparations. See Hair preparations

PERMANGANATES

Alkaline permanganate oxidation of oil-shale kerogen. W. E. Robinson, H. H. Heady and A. B. Hubbard. bibliog Ind & Eng Chem 45:788-91 Ap '53

Can the oxygen demand in sulphite waste liquor effluent be measured by permanganate consumption? E. Schmidt. Tappi 36:291-4 Jl '53

Permanganate oxidation of ergosterol. M. Fieser and others. bibliog Am Chem Soc J 75:4066-71 Ag 20 '53

Permanganate oxidation of uracil and 5-nitrouracil. J. L. Fairley, L. L. Daus and B. Krueckel. bibliog Am Chem Soc J 75:3842-3 Ag 5 '53

PERMEABILITY

Apparatus for measuring gas permeability of sheet materials. D. W. Brubaker and K. Kammermeyer. bibliog il diag Anal Chem 25:424-6 Mr '53

PERMEABILITY—*Continued*

Determination of the transverse permeabilities of large core samples from petroleum reservoirs. R. E. Collins. diags J Ap Phys 23:681-4 Je '52

Hydroextraction techniques for permeability measurement. M. M. Haruni and J. A. Storrow. bibliog il diags Ind & Eng Chem 44:2751-67 N '52

Permeability and some other properties of a variety of refractory materials. G. B. Massengale and others. bibliog il diags Am Cer Soc J 36:222-9, 273-8 Jl 1-Ag 1 '53

Permeability for sinter beds. E. W. Voice and others. diags Iron & Steel Inst J 174:136-9 Je '53

Permeability method of specific surface determination; a correction factor. H. E. Rose. J Ap Chem 2:511-20 S '52

Permeability of blast furnace burdens. P. B. Stubbs and R. L. Stephenson. il diag Blast F & Steel Pl 41:772-5 Jl '53

Permeability of firebrick. il diag Glass Ind 34:427+ Ag '53

Permeability tests on blast-furnace raw materials. E. W. Nixon and F. R. Maw. plan diag Iron & Steel Inst J 174:331-5 Ag '53

Permeability to water of thin films of pure compounds. B. L. Harris and A. Bialecki. bibliog Paint Oil & Chem R 115:88+ D 4 '52

Permeation of water and isoöctane through plugs of microscopic particles of crushed quartz. R. T. Johansen and others. bibliog diag J Phys Chem 57:40-5 Ja '53

Permeation through and sorption of organic vapors by high polymers. J. A. Cutler and A. D. McLaren. bibliog Tappi 36:423-5 S '53

Porosity of paint films; water vapor adsorption and permeability. S. Eckhaus, I. Wolock and B. L. Harris. Ind & Eng Chem 45:426-8 F '53

Study on permeability to air of various fire bricks and of refractory-clay pots used for melting glass. il diag Brick & Clay Rec 123:39-40 O '53

See also

Glass—Permeability

Packaging materials—Permeability

Paper—Permeability

PERMEAMETERS

Automatic permeance measurement by the permeometer. F. A. Joy and A. W. Sherdon. bibliog il diags Heating-Piping 25:125-31 Jl '53

Calibration of magnetic materials. il Tele-Tech 12:79+ Ja '53

Testing; high frequency magnet properties. il Product Eng 23:197-8 N '52; Electronics 25:212+ D '52

PERMITTIVITY. See Dielectric constants

PERMYRON process. See Metal protection

PEROXIDASES

Antithyroid activity of some compounds that inhibit peroxidase. I. N. Rosenberg. bibliog Science 116:503-5 N 7 '52

Intermediate compounds formed when horseradish peroxidase reacts with potassium molybdicyanide and potassium chloriridate. P. George. bibliog Science 117:220-1 F 27 '53

Oxidation-reduction potentials of horseradish peroxidase. H. A. Harbury. Am Chem Soc J 75:4625 S 20 '53

Studies in peroxidase action; the oxidation of *p*-chloroaniline; a reaction involving dechlorination. D. G. H. Daniels and B. C. Saunders. Chem Soc J p822-6 Mr '53

PEROXIDES

Application of peroxygen compounds in the textile industry. R. A. Secord. Am Dyestuff Rep 41:581-4 S 15 '52

Chemistry of polymerised oils; reduction of some organic peroxides with lithium aluminium hydride. M. Matic and D. A. Sutton. Chem Soc J p2679-82 Jl '52

Effect of structure of diacyl peroxides on their radical-induced decomposition in vinyl monomers. W. Cooper. Chem Soc J p2408-15 Je '52

Organic peroxides; esters of the monopercarbonic acids. A. G. Davies and K. J. Hunter. Chem Soc J p 1808-11 Je '53

Organic peroxides; the preparation of alkyl hydroperoxides from hydrogen peroxide. A. G. Davies, R. V. Foster and A. M. White. Chem Soc J p 1541-7 My '53

Peroxide- and light-induced reactions of alcohols with olefins. W. H. Urry and others. Am Chem Soc J 75:250-1 Ja 5 '53

Peroxide and light induced reactions of amines with olefins; a one-step synthesis of *d,l*-coniine. W. H. Urry, O. O. Juveland and F. W. Stacey. Am Chem Soc J 74:6155 D 5 '52

Peroxide bleaching. R. L. McEwen. diags Paper Tr J 135:244+ bibliog(118 ref, p251-2) N 14 '52

Peroxides. J. S. Reichert. diags Paper Tr J 135:230-43 N 14 '52

Peroxides of tetrahydrocarbazole and related compounds; a synthesis of 5 : 6-dimethoxy-*cyclo*pentane*spiro*-2-ψ-indoxyl. R. J. S. Beer and others. Chem Soc J p4351-3 N '52

Peroxides of tetrahydrocarbazole and related compounds; 8-bromo-1 : 2 : 3 : 4-tetrahydrocarbazole. R. J. S. Beer, T. Broadhurst and A. Robertson. Chem Soc J p2440-2 Ag '53

Peroxides to bleach sulphate pulp. K. G. Aitken. diag Can Chem Process 37:42+ F '53

Preparation of β-hydroxydialkyl peroxides. M. R. Barusch and J. Q. Payne. Am Chem Soc J 75:1987-8 Ap 20 '53

Reactions of fatty materials with oxygen; new method for concentrating long-chain peroxides. J. E. Coleman, H. B. Knight and D. Swern. bibliog Am Chem Soc J 74:4886-9 O 5 '52

Reactions of fatty materials with oxygen; polarographic and infrared spectrophotometric investigation of peroxides from autoxidized methyl oleate. D. Swern and others. bibliog Am Chem Soc J 75:3135-7 Jl 5 '53

Reduction of organic peroxides; abstract. M. Matic and D. A. Sutton. Paint Oil & Chem R 115:38 O 9 '52

See also

Hydrogen peroxide

PEROXYCARBONIC acids

Organic peroxides; esters of the monopercarbonic acids. A. G. Davies and K. J. Hunter. Chem Soc J p 1808-11 Je '53

PERPETUITIES

Doctrine of the second look; another bite out of rule against perpetuities. G. Newhall. Trusts & Estates 92:13-14 Ja '53

PERPHTHALIC acid

Oxidation of phenylhydrazones with perphthalic acid. B. M. Lynch and K. H. Pausacker. Chem Soc J p2517-19 S '53

PERRHENIC acid

Electrolytic reduction of perrhenate; studies in perchloric, ethanesulfonic, trifluoroacetic and hydrochloric acids. J. C. Hindman and P. Wehner. bibliog Am Chem Soc J 75:2869-72 Je 20 '53

Electrolytic reduction of perrhenate; studies in sulfuric acid. P. Wehner and J. C. Hindman. bibliog Am Chem Soc J 75:2873-7 Je 20 '53

Vapor pressures of rhenium heptoxide and perrhenic acid. W. T. Smith, jr., L. E. Line, jr. and W. A. Bell. bibliog Am Chem Soc J 74:4964-6 O 5 '52

PERRY, John Holliday, 1881-

John H. Perry, sr. led vast news empire. por Ed & Pub 85:79 D 13 '52

PERSIA. See Iran

PERSON, Charles W.

Sketch. por Am Gas Assn Mo 35:8 Je '53

PERSONAL finance. See Finance, Personal

PERSONAL finance companies See Finance companies

PERSONAL injuries

Assault on another driver held negligence in operation of taxicab. Weekly Underw 168:176 Ja 10 '53

Compensation for personal injuries. C. F. Mayson. Engineering 175:660-1 My 22 '53

Date of "act or omission" held not to include date of "injury" in Connecticut limitation statute; Dincher v. Marlin firearms co. Weekly Underw 167:1199 N 1 '52

Disability evaluation. E. D. McBride. Ind Med 21:519-21 N '52

PERSONAL injuries—*Continued*

Economic and social dangers in high claims, awards analyzed. C. M. Smith. Weekly Underw 168:1487+ My 30 '53

Liability for personal injury. C. M. George. Weekly Underw 168:235 Ja 17 '53

Same devices, training available to defendant as to plaintiff attorneys. Nat Underw 57:30 F 12 '53

Suggests major change in injury cases; abstracts. D. W. Peck. East Underw 54:35+ F 13 '53; Nat Underw 57:24 F 12 '53

PERSONALITY

Psychopathic personality in industry. E. A. Corona. Personnel 29:467-9 My '53

Where do you stand? D. J. Wood. Mill & Factory 52:75-8 Je '53

See also

Leadership

PERSONALITY tests

Search for occupational personalities; the Rorschach test in industry. M. E. Steiner. bibliog Personnel 29:335-43 Ja '53

What am I? test is uncannily sharp in selecting agents. Nat Underw (Life ed) 57:2+ Mr 6 '53

What is your human management rating? Mod Ind 25:44-5 Ap '53

PERSONNEL administration. See Employment management

PERSONNEL associations. See Employment management associations

PERSONNEL departments. See Employment departments

PERSONNEL management. See Employment management

PERSONNEL workers. See Employment departments

PERSPECTIVE

Engineering perspective drawing. J. F. Lane. diags Machine Design 25:106-11 Ja '53

Kuhlmann perspective draughting machine. il diag Engineering 176:202-3 Ag 14 '53

PERSPEX

Some mechanical properties of perspex; discussion. E. A. W. Hoff. Chem & Ind p 1259-62 D 27 '52

PERSPIRATION

Investigations into fastness to perspiration. Soc Dyers & Col J 68:392-4 O '52

PER STIRPES (term)

Definition; per stirpes. E. S. MacNeill. Banking 45:66-7 My '53

PERSUASION. See Argumentation

PERSULFATES

Mechanism of initiation of emulsion polymerization by persulfate. I. M. Kolthoff, E. J. Meehan and E. M. Carr. Am Chem Soc J 75:1439-41 Mr 20 '53

Analysis

Volumetric determination of persulfate in the presence of organic substances. I. M. Kolthoff and E. M. Carr. bibliog Anal Chem 25:298-301 F '53

PERTHITE

Solid diffusion of radioactive sodium in perthite. M. L. Jensen. bibliog diag Am J Sci 250:808-21 N '52

PERTURBATION

See also

Problem of three bodies

PERTURBATION theory. See Quantum theory; Wave mechanics

PERU

See also

Bonds, Government—Peru
Geology—Peru
Irrigation—Peru
Petroleum industry and trade—Peru

Antiquities

Social influence of the potato. R. N. Salaman. il Sci Am 187:50-2+ D '52

Economic conditions

Economic conditions abroad (cont). For Comm W 49:3+ Ap 13; 50:6 Jl 20 '53

Peruvian bonds; new debt plan reflects improved economic conditions. L. Tanzer. Barron's 33:21-2 Mr 23 '53

Politics and government

Paradoxes in Peru. map Economist 166:427-8 F 14 '53

PESCARA system. See Gas turbines—Free piston engines

PESTICIDES

Miller pesticides bill is backed by NACA. Oil Paint & Drug Rep 163:3+ Ap 6 '53

Miller pesticides legislation not answer to control problem. Oil Paint & Drug Rep 164:3+ Jl 20 '53

Modern chemical methods of plant protection; abstract. E. Holmes. Chem & Ind p82 Ja 24 '53

NACA ready to press for passage of Miller measure at next session. Oil Paint & Drug Rep 164:3+ Ag 24 '53

National agricultural chemicals association told pesticides industry is facing an unprofitable year; abstracts of papers. Oil Paint & Drug Rep 163:5+ Mr 16 '53

National research council endorses pretesting of chemical pesticides; statement part of series of studies on question of controlling the use of chemical additives in the production and processing of food. Oil Paint & Drug Rep 163:3+ F 16 '53

Pesticides control bill offered by Representative Miller. Oil Paint & Drug Rep 163:3 Mr 30 '53

Pesticides formulation, relation to safety in use; abstract. W. J. Hayes, jr. and G. W. Pearce. Nat Safety N 68:136 O '53

Pesticides industry. A. W. Mohr. Oil Paint & Drug Rep 164:5+ S 14 '53

Pesticides output reported ten percent lower in 1952. Oil Paint & Drug Rep 163:47 Je 8 '53

See also

Insecticides
Rats—Extermination
Rodenticides

Analysis

Combustion techniques for the determination of residues of highly chlorinated pesticides by total chlorine analysis. E. J. Agazzi, E. D. Peters and F. R. Brooks. bibliog diags Anal Chem 25:237-40 F '53

PET milk company

Product line growing more diversified. Barron's 33:25 My 18 '53

PETERSON, Arnold Emanuel

Peterson Manufacturing; prayers for profits. Fortune 47:206 Ap '53

PETROCHEMICALS. See Petroleum chemicals

PETROGRAPHY. See Rocks

PETROLEUM

How inhibitors prevent corrosion in oil wells. T. M. Newell. il Oil & Gas J 51:145 F 9 '53

It pays to know your petroleum; explanation of the peculiar way oil and gas act under changing conditions. N. J. Clark. bibliog diags World Oil 136:165-6+ Mr; 208-10+ Ap '53

Origin of petroleum. F. Morton. il diags Pet Eng 25:A60+ Ja '53

Symposium on petroleum. J. G. McNab and others. il map diags Ind & Eng Chem 44:2556-650 N '52

Where petrochemicals come from; list of some obtainable by direct extraction from petroleum. Oil & Gas J 51:174-5 O 20 '52

See also

Gas, Natural
Gasoline
Hydrocarbons
Kerosene
Liquefied petroleum gas
Liquid fuel
Oil fuel
Oil lands
Oil reserves (United States navy)
Oil sand
Oil shales
Petroleum distillation and other headings beginning Petroleum

Acidation of wells

Acid action rate equalized in limestone and dolomite. P. L. Menaul. il World Oil 135:200+ D '52

Acidizing made the Ringwood pool. H. E. Lillibridge. map Pet Eng 24:B57+ N '52

New acidizing method. Oil & Gas J 51:70 D 8 '52

Removal of flow restrictions in well completions. C. E. Clason and W. F. Hower. Pet Eng (Ref annual) 25:B47-8+ Jl 15 '53; Same cond. Oil & Gas J 52:113-14+ My 11 '53

PETROLEUM—*Continued*

Analysis

American chemical society 121st meeting, Milwaukee, March 30-April 3; symposium. il diags Anal Chem 24:1728-63 N '52
American petroleum institute, committee on analytical research meeting, Houston, Oct. 28-30. Chem & Eng N 30:4734 N 10 '52
Analyses of crude oils from some west Texas fields. E. L. Garton and C. M. McKinney. bibliog(24 titles) pl U S Bur Mines Rep of Invest 4959:1-55 '53
Correlation of petroleum oil distillations. J. O. Francis and M. Van Winkle. bibliog Pet Eng 25:C26+ Ap '53
Crude evaluation, approved method; data on the solvent refining of both distillate and residual lubricating oils. J. B. Stripling. Pet Refiner 31:137-9 O '52
Determination of nitrogen in petroleum and shale oil; report of A.P.I. subcommittee. bibliog Anal Chem 24:1806-11 N '52
Determination of sulfur in petroleum distillates by X-ray absorption. A. Y. Mottlau and C. E. Driesens, jr. Anal Chem 24:1852-4 N '52
Determining the hydrogen sulfide content of crude oils. W. L. Nelson. Oil & Gas J 51:145 O 27 '52
Fast spectrographic method for metal impurities in cracking feed. Pet Processing 8:101-2 Ja '53
Isolation of methylchrysene from petroleum. R. J. Moore, R. E. Thorpe and C. L. Mahoney. Am Chem Soc J 75:2259 My 5 '53
Isolation of olefins from Bradford crude oil. R. E. Putscher. bibliog flow diag Anal Chem 24:1551-8 O '52
Metalliferous substances adsorbed at crude petroleum-water interfaces. C. G. Dodd, J. W. Moore and M. O. Denekas. bibliog Ind & Eng Chem 44:2585-90 N '52
Petroleum ash components and their effect on refractories. M. C. K. Jones and R. L. Hardy. Ind & Eng Chem 44:2615-19 N '52
Review of analytical chemistry. H. Levin. Anal Chem 25:47-54 bibliog(182 ref, p52-4) Ja '53
Spectrophotometric determination of aliphatic sulfides. S. H. Hastings. Anal Chem 25:420-2 Mr '53

Ash content

Petroleum ash components and their effect on refractories. M. C. K. Jones and R. L. Hardy. Ind & Eng Chem 44:2615-19 N '52

Chemistry

American chemical society Petroleum division meeting, Atlantic City. Oil & Gas J 51:79-80 S 22 '52
Composition of United States crude oils. H. M. Smith. bibliog map Ind & Eng Chem 44:2577-85 N '52
Metalliferous substances adsorbed at crude petroleum-water interfaces. C. G. Dodd, J. W. Moore and M. O. Denekas. bibliog Ind & Eng Chem 44:2585-90 N '52
Optical activity of petroleum. T. S. Oakwood and others. Ind & Eng Chem 44:2568-70 N '52
Petroleum acids and bases. H. L. Lochte. bibliog Ind & Eng Chem 44:2597-601 N '52
See also
Petroleum—Nitrogen content
Petroleum chemicals

Concessions

Concession headache; Peruvian government trying to unravel confused situation. Oil & Gas J 51:90 D 15 '52
Concession shared; Amerada, Conoco, Ohio each acquire one-sixth of Sinclair concession in Italian Somaliland. Oil & Gas J 51:93 O 20 '52
Concessions unraveled; Peruvian government completes auction of 110 parcels. Oil & Gas J 51:83 Mr 9 '53
Israel enacts new law to regulate petroleum concession operations. For Comm W 48:14 D 8 '52
Peru perks up; applications for concessions mount after new law eases restrictions. J. E. Rassmuss. il map World Oil 136:275-7+ Ap '53

Conservation

Conservation lethargy. D. H. Stormont. Oil & Gas J 51:45 Mr 2 '53
Conserving oil; Texas cuts oil waste. Bsns W p26 Ap 4 '53
FTC charges answered; Compact offers memo to Congress defending conservation practices of state agencies. Oil & Gas J 51:81 D 15 '52
Know-how; New Mexico's oil and gas conservation procedures. R. F. Carlson. Oil & Gas J 52:84-8+ Je 8 '53
Oil and gas conservation in the province of Alberta; aims and accomplishments. G. W. Govier. Pet Eng 25:B68+ F '53
Three Texans rule oil in name of conservation. Bsns W p 104-8 F 21 '53

Drilling muds

See Petroleum—Mud fluids

Electrolytic well models

Use of electric models in predicting production behavior. R. F. Nielsen. diags Oil & Gas J 51:95 Mr 2; 121 Mr 9; 151 Mr 16 '53

Emulsions

Emulsion treating costs can be cut. J. P. Everett. diags World Oil 135:212+ N '52
Engineering factors in heater-treater selection. Oil & Gas J 51:170 F 23 '53

Estimates

See also
Petroleum supply

Evaporation losses

Economics of reducing crude-oil vaporization losses; cooling the oil prior to sending it to storage. I. A. El-dib and R. L. Huntington. diag Oil & Gas J 51:90-2+ Mr 9 '53
Evaporation loss of petroleum from storage tanks; symposium. Am Pet Inst Proc 32(1):213-81 '52; Excerpts. Oil & Gas J 51:266-70+ N 17 '52; Nat Pet N 44:60+ N 19 '52; Abstract. Pet Refiner 31:144 N '52
Use of variable vapor space tanks to conserve volatile oil products. Nat Pet N 44:98-100 N 26 '52

Gas mixtures

Field processing of Arabian crude oil. R. A. Boettcher. flow diags il Oil & Gas J 51:165-9+ D 22 '52
Gas-oil-ratio control in thin oil columns; use of intermitters. R. C. Randle and J. H. Marchal. Oil & Gas J 51:114-18 Ap 13 '53; Same. Pet Eng (Ref annual) 25:B 110-14+ Jl 15 '53
Optimum separator pressures. R. F. Nielsen. Oil & Gas J 51:171 Ap 20 '53

Geology

American association of petroleum geologists, Society of exploration geophysicists and Society of economic paleontologists and mineralogists joint annual meeting. Houston, March 23-26; abstracts of papers. Oil & Gas J 51:174-9 Mr 30 '53
Anadarko basin oil accumulation. R. R. Wheeler. bibliog il maps Pet Eng 24:A45-6+ N '52
Bacterial aspects of the origin of petroleum. R. W. Stone and C. E. Zobell. bibliog Ind & Eng Chem 44:2564-7 N '52
Basal lower cretaceous accumulations in Alberta with special reference to the Campbell pool. P. Klaui. maps Pet Eng 25:B6-10 F '53
Can Ellenburger be subdivided? V. E. Barnes. Pet Eng 25:B 104+ My '53
Cuban exploration travels south. A. R. de la Roche. map World Oil 136:243-6 Je '53
Dilatancy in migration and accumulation of oil in metamorphic rocks. D. A. McNaughton. bibliog maps diags Am Assn Pet Geologists Bul 37:217-31; Discussion. 314-30 F '53
Discoveries in Panhandle back up geologic theory. F. R. Haeberle. map diag World Oil 135:116+ D '52
Evidence of catalytic action in petroleum formation. B. T. Brooks. bibliog(59 ref) il Ind & Eng Chem 44:2570-7 N '52

PETROLEUM—Geology—*Continued*

Evolution of petroleum. J. G. McNab, P. V. Smith, jr. and R. L. Betts. bibliog Ind & Eng Chem 44:2556-63 N '52

Exploration in Nova Scotia. R. A. Pohly. maps Oil & Gas J 51:118+ O 6 '52

Factors of sedimentary basin development that control oil occurence. L. G. Weeks. maps diags Am Assn Pet Geologists Bul 36: 2071-124 N '52

Flow through cavities in porous media. A. E. Scheidegger. bibliog Pet Eng 25:B 121-2+ My '53

Foraminifera, an evaluation. C. C. Church. Oil & Gas J 51:171-3 Mr 30 '53; Abstract. World Oil 136:75 Ap '53

Fracture-controlled production in Gilbertown field, Alabama. J. Braunstein. maps diags Am Assn Pet Geologists Bul 37:245-9; Discussion. 314-30 F '53

Fracture porosity in Gulf coast. M. A. Hanna. il maps diags Am Assn Pet Geologists Bul 37:266-81; Discussion. 314-30 F '53

Fracturing in Spraberry reservoir, west Texas. W. M. Wilkinson. il maps diag Am Assn Pet Geologists Bul 37:250-65; Discussion. 314-30 F '53

Gebo field, Hot Springs county, Wyoming. map Oil & Gas J 51:125-7 N 24 '52

Geological aspects of abnormal reservoir pressures in Gulf Coast Louisiana. G. Dickinson. maps diags Am Assn Pet Geologists Bul 37:410-32 bibliog(p431-2) F '53

Geological conditions of oil occurrence in Middle East fields. N. E. Baker and F. R. S. Henson. maps diags Am Assn Pet Geologists Bul 36:1885-901 O '52

Geology of the Gulf coast. maps diag Oil & Gas J 52:249-51+ Je 22 '53

Jefferson Island salt dome, Iberia and Vermilion parishes, Louisiana. J. B. Wharton, jr. maps diags Am Assn Pet Geologists Bul 37:433-4 F '53

Lithologic factors affecting prospects for early paleozoic oil and gas in West Virginia. O. L. Haught. map Am Assn Pet Geologists Bul 37:553-60 Mr '53

Look for oil on shelf areas. P. C. Ingalls. diag Oil & Gas J 51:393 Mr 23 '53

Louisiana-Arkansas region may yield additional oil. T. H. Philpott. maps diags World Oil 135:108+ N '52

New discoveries spur Saskatchewan exploration. M. Kamen-Kaye. il maps diag World Oil 135:326-8+ D '52

New exploration tool; fossil pollen and spores used in new approach to determining age of rock formations. T. A. Armstrong. il Oil & Gas J 51:64-5 Mr 9 '53

New gravity approach aids reef interpretation. R. A. Pohly. bibliog maps diags World Oil 136:116+ My '53

Occurrence of hydrocarbons in recent sediments from the Gulf of Mexico. P. V. Smith, jr. bibliog Science 116:437-9 O 24 '52

Odd geologic structures of southern Oklahoma. C. W. Tomlinson. il maps diags Am Assn Pet Geologists Bul 36:1820-40 S '52; Same. World Oil 135:103-4+ D '52; 136:90-2+ Ja '53

Oil production from fractured pre-Cambrian basement rocks in central Kansas. R. F. Walters. bibliog il map diags Am Assn Pet Geologists Bul 37:300-13; Discussion. 314-30 F '53

Optimism; a key to the Williston basin. P. C. Ingalls. Oil & Gas J 51:179 My 4 '53

Paleozoic beds south and east of Ouachita folded belt. H. J. Morgan, jr. map diags Am Assn Pet Geologists Bul 36:2266-74 D '52

Pennsylvanian cross sections of central Oklahoma. diags World Oil 136:83-5 F '53

Performance of fractured oil reservoirs. S. J. Pirson. Am Assn Pet Geologists Bul 37: 232-44; Discussion. 344-30 F '53

Permeabilities from capillary pressure and tortuosities. R. F. Nielsen. Oil & Gas J 51: 127 Ja 12 '53

Petrographic classification of argillaceous sedimentary and low-grade metamorphic rocks in subsurface. P. T. Flawn. Am Assn Pet Geologists Bul 37:560-5 Mr '53

Petrography and metamorphism of sediments of Ouachita facies. A. Goldstein, jr. and D. H. Reno. il maps diags Am Assn Pet Geologists Bul 36:2275-90 D '52

Quinduno field in Anadarko basin. C. C. Hemsell. maps diags Pet Eng 25:B69+ My '53

Reefal oil reservoirs in western Canada. R. Pot. map Pet Eng 25:B61-2+ F '53

Regional subsurface geology of the Midland basin. G. F. Warn and others. bibliog diag Oil & Gas J 51:113-14+ O 20 '52

Relative permeabilities from capillary-pressure curves. R. F. Nielsen. Oil & Gas J 51:139 Ja 19 '53

Review of the geology and activities in the Uinta basin. A. M. Current. fold maps [in pocket] Colorado School of Mines [Golden] Quarterly 48 no 3:1-36 '53 (pa 50c)

Ripple marks aid geologists. O. F. Evans. il diags World Oil 135:153-4+ O '52

Some facts about fossils in oil field discovery. bibliog il map diag World Oil 136:96+ Ja '53

Spraberry structural conditions. G. F. Warn. bibliog(36 titles) maps plan World Oil 136:83-6+ Mr; 100+ Ap '53

Story of geology; Hall of science at the International petroleum exposition. P. C. Ingalls. Oil & Gas J 52:483 My 18 '53

Stratigraphic details of lower Mississippian rocks of northeastern Utah and southwestern Montana. F. D. Holland, jr. il maps diags Am Assn Pet Geologists Bul 36: 1697-734 bibliog(p 1732-4) S '52

Stratigraphic trap possibilities; Anadarko basin. C. A. Moore. bibliog il maps diags Pet Eng 24:B7-12+ N '52

Structure and origin of northern Sangre de Cristo range, Colorado. J. W. Gabelman. il maps diags Am Assn Pet Geologists Bul 36:1574-612 bibliog(p 1611-12) Ag '52

Studies on soil samples from paraffine dirt bed. J. B. Davis. Am Assn Pet Geologists Bul 36:2186-8 N '52

Stylolites and oil migration. R. M. Ramsden. Am Assn Pet Geologists Bul 36:2185-6 N '52

Tortuosity as related to permeability and resistivity. R. F. Nielsen. diags Oil & Gas J 51:83 Ja 5 '53

Wellman reef; two million barrels in two years. J. A. Kornfeld. maps diag Oil & Gas J 51:135-8+ O 20 '52

What about southeastern Colorado? J. C. Maher. maps diags World Oil 135:101-2+ N '52

What are the possibilities in Beaver county, Oklahoma? W. H. Grimes. maps World Oil 136:84+ Je '53

Williston basin, new province for oil exploration. T. R. Barnes. maps diags Am Assn Pet Geologists Bul 37:340-54 F '53

Worland field; Big Horn and Washakie counties, Wyoming. J. S. Wold. map Oil & Gas J 51:112-14 D 8 '52

See also

American association of petroleum geologists

Petroleum—Prospecting

Salt domes

Glossaries

Bibliography

Know your oil words; list of glossaries of petroleum terms compiled by the Petroleum section of the Special libraries association. Pet Processing 8:70-1 Ja '53

Gulf Coast region

Gulf fields studied; Gulf Coast association of geological societies 2d annual meeting, Corpus Christi, Nov. 6-8; abstracts of papers. Oil & Gas J 51:76-7 N 10 '52

Measurement

Automatic weighing of crude oil proves accurate volume gauge. L. E. Slagle and D. C. Meyers. flow diag il diag World Oil 135:246-8+ O '52

How one firm is cutting losses of oil in transit. il Oil & Gas J 52:144 Je 15 '53

New measurement tables in use; revised ASTM-IP conversion factors interrelate US, British metric systems. il Pet Processing 8:865-7 Je '53

Tests show accuracy of crude oil meters. F. J. Daasch. il diags World Oil 135:315-18 O '52

PETROLEUM—*Continued*

Metal content

Determination of trace metals in crudes and other petroleum oils; analysis for iron, nickel, vanadium, and copper. O. I. Milner and others. bibliog diags Anal Chem 24:1728-32 N '52

Mechanism of occurrence of metals in petroleum distillates. R. A. Woodle and W. B. Chandler, jr. diag Ind & Eng Chem 44:2591-6 N '52

Mud fluids

Check your hydraulic system to cut your drilling costs. R. G. Hamaker. World Oil 136:128+ Mr '53

Drilling fluid for use in drilling high-temperature formations. T. E. Watkins. Oil & Gas J 51:100-1+ Ap 13 '53

Drilling muds in the Anadarko basin. W. L. Parry and others. diags Pet Eng 24:B36+ N '52

Effect of mud-treating chemicals on oil-well cements. F. M. Anderson. Oil & Gas J 51:283-4+ S 29 '52

Emulsion drilling fluids. D. L. Wilson. Pet Eng 24:B89+ N '52

Featherweight plastic foil restores lost circulation; Jelflake. G. F. Williams. il Oil & Gas J 51:279+ S 29 '52

Graphite's role as a drilling-mud additive. A. A. Townsend. Oil & Gas J 51:268+ S 29 '52

Here's how to correct your mud contamination. H. L. Strider. World Oil 136:170+ My '53

Here's how to rig a unitized trap. W. L. Broussard. il diags World Oil 136:174+ Ap '53

Hot wire tool locates lost circulation. R. A. Henderson. il diag World Oil 135:187-8 O '52

How an industry developed; rotary drilling fluids. E. W. Louden. il diags Oil & Gas J 51:246+ S 29 '52

How does the drilling contractor regard oil-base drilling fluid? K. B. Bright. Oil & Gas J 51:276 S 29 '52

How drilling mud affects Wilcox drilling and completions. A. Barry and others. il Oil & Gas J 51:273-5 S 29 '52

How San Juan operators are solving mud problems. E. J. Mayhew. map World Oil 136:136+ Mr '53

How to train mud engineers. F. Chisholm and B. Q. Green. il World Oil 136:115-18+ Ja; 125-6+ F '53

Lost circulation can be avoided or minimized. J. M. Bugbee. bibliog diags World Oil 136:150+ My; 132+ Je '53; Same. Pet Eng (Ref annual) 25:B97+ Jl 15 '53

Mud is important factor in deep drilling. G. O. Worley. il Pet Eng 25:B78 Ja '53

New chemical product removes mud cake. Z. V. Morgan. il World Oil 135:168+ D '52

New developments in oil-base drilling fluids. T. Randolph. il Oil & Gas J 51:260-3+ S 29 '52

New type drilling mud offers some interesting advantages. J. L. Lummus and T. H. Dunn. plan Oil & Gas J 51:380-2+ N 17 '52

Performance of power pumps in 700 hydraulic horsepower class. E. C. Hellums. bibliog Oil & Gas J 51:169-70+ O 20 '52; Same. Pet Eng 25:B64-6 Ja '53

Planning cuts mud costs. F. S. Bell. il World Oil 136:134+ F '53

Role of mud in deep drilling. V. B. Zacher and B. R. Zacher. Pet Eng 25:B51+ Ja '53

Shell mining own mud in Ventura Avenue field. D. H. Stormont. il Oil & Gas J 51:83-4 Ap 13 '53

Temperature surveys to locate zone of lost circulation. W. C. Goins, jr. and D. D. Dawson, jr. Oil & Gas J 52:170-1+ Je 22 '53

Viscometry and mud control. W. B. Lilienthal. il Oil & Gas J 51:124 O 27 '52

Wood fibers and tree bark yield effective lost-circulation material. T. R. Frost and R. A. Waldron. Oil & Gas J 51:289+ S 29 '52

Nitrogen content

Application of ter Meulen nitrogen method to petroleum fractions. J. Holowchak, G. E. C. Wear and E. L. Baldeschwieler. bibliog il diag Anal Chem 24:1754-7 N '52

Distribution of nitrogen in petroleum according to basicity. F. P. Richter and others. bibliog Ind & Eng Chem 44:2601-5 N '52

Nitrogen compounds in domestic heating oil distillates. R. W. Sauer, F. W. Melpolder and R. A. Brown. Ind & Eng Chem 44:2606-9 N '52

Pressure maintenance

See Petroleum—Production methods

Prices

Crude prices hiked. Oil & Gas J 51:124 F 23 '53

Crude prices rise. Oil & Gas J 52:140-1 Je 22 '53

Freed oil prices avoid inflationary spiral. Nat Pet N 45:33-4 F 18 '53

OPS asks PAD for study of request for California crude price hike. Nat Pet N 44:38 O 15 '52

OPS slams door on bid to decontrol oil prices; next move up to PAD. Nat Pet N 44:22 O 29 '52

OPS still cool to oil price decontrol. Nat Pet N 44:29 O 8 '52

Oil price controls likely to remain but in what form is big question. G. M. Green, jr. Nat Pet N 44:36-8 N 26 '52

Oil-price developments. Oil & Gas J 52:44 Je 29 '53

Oil under fire. Bsns W p32 Jl 11 '53

PAD backs price hike. Oil & Gas J 51:69 D 8 '52

Petroleum prices. D. Kliewer. World Oil 136:68-9+ F 15 '53

Probers examine world oil conditions and come up with praise for industry. Nat Pet N 45:17-19 F 25 '53

Top agency gets crude decontrol request. Nat Pet N 44:42 O 1 '52

Top man likely to make decision on giving West coast price hike. Nat Pet N 44:14-15 D 24 '52

Will world crude prices take drop? R. E. Spann. Pet Refiner 32:184+ Je '53

Production estimates

Algebraic estimate of reserves from decline curves. R. F. Nielsen. Oil & Gas J 51:137 O 27 '52

Allocating battery oil and gas production to individual wells; using punched-card computing system. J. W. Amyx and others. diags Oil & Gas J 51:66-9+ F 2 '53

Graphical estimation of reserves from decline curves. R. F. Nielsen. Oil & Gas J 51:311 S 29 '52

Lorenz factor, a measure of degree of heterogeneity. R. F. Nielsen. Oil & Gas J 52:111 Je 1 '53

Production history of a five-spot field. R. F. Nielsen. diags Oil & Gas J 51:191 Mr 30 '53

Use of electric models in predicting production behavior. R. F. Nielsen. diags Oil & Gas J 51:95 Mr 2; 121 Mr 9; 151 Mr 16 '53

Production methods

Acid gel fracturing increases production. R. S. Ousterhout and D. E. Ramsey. il World Oil 135:257-8+ O '52

Air-gas-drive history for noncommunicating layers. R. F. Nielsen. Oil & Gas J 52:263 My 25 '53

Air injection revives depleted field. W. M. Edinger. il diags World Oil 135:196-7+ N '52

Before 40,000, after 105,000 barrels monthly; hydraulic formation fracturing of the Olmos sands at Big Foot field, Texas. J. C. McCaslin. il maps Oil & Gas J 51:70-1 Mr 2 '53

Better fractures; improved techniques result in big increases in oil yield. G. C. Howard. Oil & Gas J 51:71-2 My 4 '53

Boron compounds used as water-flood tracers. P. G. Carpenter and others. World Oil 136:214+ Ap '53

Bugs may hike oil yield. A. H. Krell. Oil & Gas J 51:74 Ap 6 '53

PETROLEUM—Production methods—*Cont.*

Can the industry recover hidden Spraberry hoard? C. J. Deegan. diags World Oil 135:73-5 N '52

CO_2 flood recommended. K. B. Barnes. Oil & Gas J 51:64 N 3 '52

Community water pipe line serves four producing areas in north Oklahoma. K. B. Barnes. il plan diag Oil & Gas J 51:189-91 O 13 '52

Conditioning water for secondary-recovery in midcontinent oil fields. J. W. Watkins and others. bibliog 33pls U S Bur Mines Rep of Invest 4930:1-86 '52; Excerpts. Pet Eng 25: B51-6+ My '53

Deep well hydrafrac. Pet Eng 25:B94 Ja '53

Determination of performance curve in five-spot water flood. W. Hurst. diags Pet Eng 25:B40+ Ap '53

Does deep production pay? W. T. Rintoul. il Pet Eng 25:B91-2 Ja '53

Economical work-over jobs. W. J. Albright. il Pet Eng 24:B88 D '52

Flood popularity up in the Kentucky area. Oil & Gas J 52:51 Je 29 '53

Flooding a small fault segment in a deep-seated salt-dome field. J. A. Kornfeld. map diag Oil & Gas J 52:243-4+ Je 22 '53

Fluid injection operations. D. V. Carter. Pet Eng 25:B3 My '53

Fracturing answers near. H. D. Ralph. Oil & Gas J 51:64-5 Ap 6 '53

Gas-oil-ratio control in thin oil columns; use of intermitters. R. C. Randle and J. H. Marchal. Oil & Gas J 51:114-18 Ap 13 '53; Same. Pet Eng (Ref annual) 25:B 110-14+ Jl 15 '53

Giant Venezuela pressure maintenance program planned. il World Oil 136:278+ Ap '53

Goldsmith plan approved; gas and water injection in San Andres reservoir of west Texas. Oil & Gas J 51:39 Mr 2 '53

Guesswork is removed in flood evaluations; radioactivity logging in old wells proves useful tool in evaluating water-flood prospects. N. J. Mellies and C. W. Clark. maps diags World Oil 136:216+ My '53

Have you tried hydraulic fracturing? R. C. Clark and others. bibliog Oil & Gas J 52:78-80+ Je 29 '53

History of a five-spot flood. R. F. Nielsen. Oil & Gas J 51:141 Ap 13 '53

How imbibition works. il Oil & Gas J 51:230-2 N 17 '52

How natural gas used in pressure maintenance benefits gas utilities and customers. E. K. Parks. il diag Gas Age 112:21-3+ Ag 27 '53

How Richmond handles heavy-oil production in Venezuela's Boscan field. R. A. Armstrong. il map diag Oil & Gas J 51:170-1+ D 22 '52

How to do it! production hints. il diags Published in monthly numbers of World Oil

Increasing ultimate recovery in east Texas' Kilgore townsite area. C. E. Wright. il map diag Oil & Gas J 52:109-12 My 11 '53

Look at gas-injection projects in west Texas. P. E. Fletcher. Oil & Gas J 52:230-1+ My 25 '53

Look at producing progress. J. Menneer. Pet Eng 25:B9-10 My '53

Millions of barrels more oil for Healdton field. C. H. Riggs and J. E. Wey. bibliog flow diag map Oil & Gas J 52:96-100+ Je 15 '53

Mixtures for oil recovery by solvent methods. R. F. Nielsen. Oil & Gas J 51:135 N 24 '52

New fracturing method tested. il Oil & Gas J 52:56-7 Je 1 '53

New multiple fracturing process. G. Howard and W. G. Bearden. bibliog il diags World Oil 136:159-62 Ja '53

New process under test; Atlantic begins imbibition flood. R. F. Carlson. il diag Oil & Gas J 51:67-8 Ja 12 '53

New production methods. J. A. Perkins, jr. bibliog il diags World Oil 136:217-18+ F 15 '53

New technique proved; high-pressure gas injection. R. F. Carlson. Oil & Gas J 51:70 Mr 9 '53

New water-flood aid; use of carbon dioxide; abstract. P. D. Torrey. Oil & Gas J 51: 73 N 24 '52

Nowata water floods use modern techniques. A. Gibbon. il map plan World Oil 136:178-80+ F '53

Oil by shock? electric current through sands may raise output. C. M. Davis. il Oil & Gas J 51:64-5 N 3 '52

Overwater plant; Creole pressure maintenance facilities in Lake Maracaibo. il Oil & Gas J 51:89 F 9 '53

Permanent-type well completion. T. A. Huber and G. H. Tausch. Oil & Gas J 51:66 O 6 '52

Petroleum-engineering study of gas injection in the Cabin Creek field, Kanawha and Boone counties, W.Va. J. N. Magee and S. S. Taylor. bibliog 16pls U S Bur Mines Rep of Invest 4899:1-24 '52

Petroleum-engineering study of the Quapaw pool, Osage county, Okla. J. A. West. bibliog 27pls U S Bur Mines Rep of Invest 4913:1-39 '52

Pilot flood approved in Wilmington field. D. H. Stormont. il Oil & Gas J 51:82+ O 27 '52

Prospects for improving oil recovery. P. D. Torrey. bibliog Pet Eng 25:B 12+ Mr '53

Rock-scaling releases trapped oil. F. R. Cozzens. Pet Eng 25:B11-12 Ap '53

Rotative gas lift a success in deep well. J. F. McDonald. flow diag il diag World Oil 135: 195-8 D '52

Scurry unit set; biggest hurdle to operation of the world's largest water flood cleared. il map Oil & Gas J 51:68-9 O 27 '52

Stop that thief! F. R. Cozzens. diags World Oil 136:234+ My '53

Surface-active agents increase oil recovery. R. A. Caro and others. diag Oil & Gas J 51:62-3+ D 29 '52

Survey of injection of natural gas before and during water flooding. J. N. Breston. bibliog Pet Eng 24:B64-6+ Je '52; Same cond. Oil

Unitized water flood shows promise; project in Payton pool, Texas. N. P. Whaley. il map Oil & Gas J 51:112+ D 15 '52

Water flood evaluations aided by electric log. M. Cook. diag World Oil 135:206+ N '52

Water-flood ideas; abstracts of papers, A.I.M.E. Petroleum division. Oil & Gas J 51:68-9 O 6 '52

Water-flood offer to nonsigners of the Scurry area canyon reef operators committee unit-operation plan. T. A Armstrong. map Oil & Gas J 52:82-3 My 11 '53

Water-flood outlook, California fields. D. H. Stormont. Oil & Gas J 51:126 F 23 '53

Water flood recoveries. S. F. Shaw. bibliog Pet Eng 24:B70+ D '52

Water flooding, Fankhauser unit Greenwood county, Kansas. J. D. Walters. maps Pet Eng (Ref annual) 25:B38+ Jl 15 '53; Same abr. Oil & Gas J 51:96-7+ My 4 '53

& Gas J 51:400+ N 17 '52

Water flooding in Kansas' Golden Lane. il map Oil & Gas J 51:104-10 N 3 '52

Water flooding in Nowata county, Oklahoma oil fields. J. P. Powell and J. L. Eakin. bibliog 16pls U S Bur Mines Rep of Invest 4896:1-49 '52

Water floods pay off in Greenwood county, Kan. K. B. Barnes. il Oil & Gas J 51:83-4 O 20 '52

Water-imbibition displacement, can it release reluctant Spraberry oil? E. R. Brownscombe and A. B. Dyes. bibliog Oil & Gas J 51: 264-5+ N 17 '52

Well completion and remedial work. diags Pet Eng 24:B 18 O '52

Wettability in surface-active agent water flooding. T. F. Moore and H. A. Blum. bibliog il diags Oil & Gas J 51:108-9+ D 8 '52

Wetting agents studied in flooding. Oil & Gas J 51:65-6 N 3 '52

Which to use, I type or M type in high-pressure gas injection? R. L. Slobod and H. A. Koch, jr. bibliog diags Oil & Gas J 51:84-8+ Ap 6 '53

Workovers revive California field. R. B. Teissler. il World Oil 136:174-6+ Mr '53

See also

Petroleum—Acidation of wells

Petroleum—Mud fluids

Petroleum—Pumping

Petroleum—Well drilling

Petroleum—Well spacing

PETROLEUM—*Continued*

Production rate

Calculation of crude-oil run tickets by electronics. H. M. Spinning. Oil & Gas J 51:70-1+ F 2 '53
Types of production-decline curves. R. F. Nielsen. Oil & Gas J 51:135 S 22 '52

Prospecting

Atomic instruments for oil exploration. J. Mitchel. Safety Maint & Prod 104:34 N '52
Australia is beating the bushes for oil. J. L. Marshall. il map World Oil 136:282+ Ap '53
Eocene search in southern Joaquin valley. D. H. Stormont. map diag Oil & Gas J 51:148-9+ Mr 30 '53
Exploration activity continues high in the Permian basin. H. L. Fisher. map World Oil 135:104-6 O '52
Exploration drilling in western Canada. D. K. Seaman. il Oil & Gas J 52:81+ Je 1 '53
Exploration record continues upward trend. C. W. Smith. World Oil 136:93-6 F 15 '53
Exploratory drilling sets new record during 1952; with table of results of exploratory drilling in December and twelve months, 1952-1951, by districts. World Oil 136:98 F '53
First air survey made for Costa Rica. il maps Pet Eng 24:B 12+ O '52
First-quarter wildcat completions up five per cent over 1952. J. C. McCaslin. Oil & Gas J 51:320 Ap 27 '53
Flyer in oil. il Fortune 47:138-40+ Ap '53
Foraminifera, an evaluation. C. C. Church. Oil & Gas J 51:171-3 Mr 30 '53
Geological research and its practical application. J. E. Richey. Engineering 174:702-3 N 28 '52
Highlights on 1952's oil discoveries. maps Oil & Gas J 51:318-19+ Ja 26 '53
Hunt for crude; oil companies place a $2 billion bet on new finds. A. Glenn. Barron's 32:13-14 N 10 '52
It takes geology to find oil. P. C. Ingalls. Oil & Gas J 51:183 Mr 16 '53
Million-acre block to be tested. T. A. Armstrong. il maps Oil & Gas J 52:144-5 Je 22 '53
Mud flats shooting difficult. J. A. Kornfeld. il Oil & Gas J 51:141+ D 1 '52
Muskey beater; year-round transportation over formidable Canadian terrain promised by Imperial's unusual vehicle. il map Oil & Gas J 52:47 Je 29 '53
1952 exploratory drilling. F. H. Lahee. maps Oil & Gas J 51:138+ Mr 30 '53
Nitrous oxide, an interfering factor in geochemistry. R. L. Slobod. flow sheets diag Pet Eng 25:B 129+ My '53
Ohio's slim hole rig cuts exploratory drilling costs. G. Burgess and H. D. Hoopman. il World Oil 136:107-10+ Je '53; Same. Pet Eng (Ref annual) 25:B71-4 Jl 15 '53
Oil finding cost up 49 per cent. H. J. Struth. Pet Eng 25:A69+ My '53
Operating problems in oil exploration in the Arctic. K. L. Vonder Ahe. il Pet Eng 25:B 12+ F '53
Operation Alaska. R. H. Meade. il World Oil 136:239-41 Ja '53
Organized scouting observes its 30th anniversary. C. Hoot. Oil & Gas J 52:166 Je 8 '53
Prospecting outlook is for accelerated activity. World Oil 136:101-2+ F 15 '53
Search for oil; a risky business. J. G. Pew. Comm & Fin Chr 176:1927+ N 20 '52
Search for oil pushed in the land of icebergs; Phillips petroleum co. to explore Alaskan area. map World Oil 136:290+ Ap '53
Significance of oil and gas seeps in world oil exploration. W. K. Link. maps diags Am Assn Pet Geologist Bul 36:1505-40 Ag '52
Taming the prodigal wildcat. P. C. Ingalls. Oil & Gas J 51:173 O 6 '52
Ten rigs active in Strawn reef search in Schleicher county. J. A. Kornfield. maps Oil & Gas J 51:124-5+ O 20 '52
There's no easy road to oil finding. D. Hager. Oil & Gas J 51:182-3 My 4 '53
Toward a philosophy of oil-finding. W. E. Pratt. Am Assn Pet Geologists Bul 36:2231-6 D '52
Well-elevation services and how they operate. C. M. Davis. il maps Oil & Gas J 51:158-9 Ap 20 '53
Wildcat chances good in Basin. World Oil 135:116 O '52
Wildcatting tempo up. J. C. McCaslin. Oil & Gas J 51:127-8 F 23 '53

See also
Petroleum—Geology

Electric methods

Surface electrical method detects oil directly. H. M. Evjen. diags World Oil 136:93-4+ F '53

Geophysical methods

Air surveys speed Canadian exploration. T. M. O'Malley. il map Pet Eng 25:B78+ F '53
Atomic instruments used in oil exploration. J. Mitchel. Franklin Inst J 254:558-9 D '52
Br-r-r-rother, it's cold outside! prospecting in Canada's muskegs. J. Joseph. il World Oil 136:286-8 Ap '53
Cable handling device includes new features. J. E. Ortloff. il diags World Oil 136:107-8+ Ap '53
Electro-magnetometer for exploration. W. Rintoul. il Pet Eng 25:B95-6 Mr '53
Exploration activity in the Southeastern states. R. B. Baum. maps diags Oil & Gas J 51:183-4+ F 23 '53
Exploration in Nova Scotia. R. A. Pohly. maps Oil & Gas J 51:118+ O 6 '52
57 million pounds of explosives; seismograph crew in Terrebonne parish, Louisiana. D. Kliewer. il World Oil 136:45-7 Je '53
Geophysical activity soars to new all-time peak in 1952. E. A. Eckhardt. Oil & Gas J 51:144-5+ Mr 30 '53; Same. World Oil 136:82+ Ap '53
Geophysical crews busy in record numbers. World Oil 136:100 F 15 '53
Geophysics for the layman. P. C. Ingalls. diags Oil & Gas J 52:285 My 25 '53
Improved magnetic method can avoid drilling failures. M. Milstein. maps World Oil 136:87-9+ Ja '53
Instrumentation for geophysical exploration. D. H. Clewell and others. il diags R Sci Instr 24:243-66 Ap '53
Interpretation of seismic data in locating reefs in Alberta. P. I. Bediz. map diag World Oil 126:86+ F '53
Is seismology the career for you? R. J. Foster. il World Oil 135:112+ D '52
Need for quantity and quality in velocity surveys; symposium. Oil & Gas J 51:119-22+ Mr 30 '53
New aerial shooting technique faster. il Pet Eng 25:B85+ F '53
New gravity approach aids reef interpretation. R. A. Pohly. bibliog maps diags World Oil 136:116+ My '53
New shooting technique; mortar-ejected bomb exploded aboveground; abstract. J. J. Jakosky. diag Oil & Gas J 51:75-6 N 10 '52
Offshore exploration on the Gulf coast. S. M. Peña. il Oil & Gas J 52:172-3 Je 22 '53
Offshore surveys excite oil operators. R. Sneddon. il Pet Eng 25:B68+ Ja '53
Oil finding fable. P. C. Ingalls. Oil & Gas J 51:209 O 20 '52
Our human assets in geophysics. C. H. Johnson. Oil & Gas J 51:169-70 Mr 30 '53
Permian Basin geophysical society annual meeting, Midland, Tex. May 16. Oil & Gas J 52:145 My 25 '53
Play-back system aids seismic exploration. J. J. Jakosky and J. J. Jakosky, jr. il diags Pet Eng 24:B 112+ O '52
Role of electronics in geophysical instrumentation. F. F. Segesman. diag Oil & Gas J 51:152+ O 20 '52
Safe operations; a challenge to the geophysical industry. B. W. Sorge. Pet Eng 24:B 107-10+ S '52; Same. World Oil 135:160+ O '52
Seismic-problem panel. P. C. Ingalls. Oil & Gas J 51:78-9 O 20 '52
Seismic problems in Denver-Julesburg basin. J. A. Kornfeld. bibliog il map Oil & Gas J 51:152-4+ Mr 30 '53
Seismic proving ground; laboratory put parts through tough service conditions. J. A. Kornfeld. il Oil & Gas J 51:126 N 3 '52

PETROLEUM—Prospecting—Geophysical methods—*Continued*

Seismic shooting, improved methods. diags Oil & Gas J 51:128 O 6 '52

Seismic techniques in west Texas. P. C. Ingalls. map Oil & Gas J 51:169 F 9 '53

Use of salt water in logging dry shot holes. T. S. Hargest. diag Oil & Gas J 51:156+ F 23 '53

What role should gravity play? P. C. Ingalls. Oil & Gas J 52:145 Je 1 '53

Will electrologs yield velocity data? P. C. Ingalls. Oil & Gas J 51:369 D 22 '52

Study and teaching

How Sohio trains its exploration personnel. M. W. Sherwin. Oil & Gas J 51:109-10 My 4 '53

Tax problems

Capitalization of exploration expenses. D. L. Shepherd. World Oil 136:112+ Ap; 126+ My '53

Pumping

Artificial lift. J. E. Kastrop. World Oil 136: 181-2 F 15 '53

Deep well pumping in Canada. G. R. Manson and H. G. Bagnall. Pet Eng 25:B40+ F '53

Gas lift as it applies to deep production. C. R. Canalizo. Pet Eng 25:B76 F '53

Gas lift used to produce Plymouth field wells. D. M. Crawford. il diag Oil & Gas J 52:100-1 My 11 '53

How Minas crude is produced. il map Oil & Gas J 51:50-1+ D 29 '52

How to prevent failures in sucker-rod joints. A. A. Hardy. bibliog il diags Oil & Gas J 51:371-4+ N 17 '52

How to pump deep dual completions alternately. J. R. Hatfield. diags World Oil 136: 188 Ja '53

How to select a subsurface pump plunger to fit the job. K. N. Mills. il diags World Oil 136:224+ My '53

Hydraulically pumping dual completions. T. E. Horton. il diags World Oil 135:274-6 O '52

New gas lift system. R. P. Vincent and L. B. Wilder. il diags Pet Eng 24:B84+ N '52

No substantial change; 24,119 artificial-lift wells seen for '53. J. A. Kornfeld. Oil & Gas J 51:379 Ja 26 '53

Pumping unit converted. R. F. Carlson. il Oil & Gas J 51:389 Ja 26 '53

Pumping well service costs cut by corrosion control. B. W. Bradley. bibliog World Oil 135:214+ D '52

Richfield innovations at Wilmington field. D H. Stormont. il diag Oil & Gas J 51:104-5+ O 6 '52

Sonic pump successful; sound waves are used for lifting fluids. D. H. Stormont. il diag Oil & Gas J 51:32-3 F 2 '53

Standardized traps designed to meet characteristics of pumping wells in Wilmington field. D. H. Stormont. il Oil & Gas J 51: 194-5 F 23 '53

To reduce sucker rod stresses by rod weight compensator. J. R. Brennan. il diags Pet Eng 25:B 110+ My '53

Pumping, Electric

Don't let lightning strike twice; induced voltages can be dissipated without damage to the electrified pumping well. J. N. Poore. il diags World Oil 135:206+ D '52

Practices of oil pumping electrification. R. D. Call and F. K. Smith. il diags Pet Eng 25:B 12+ My '53

See also

Petroleum pipe lines
—Pumping stations, Electric

Statistics

Crude oil and lease condensate; by states, by square miles of surface area; tables. Oil & Gas J 52:146 Je 1 '53

International survey of oil fields. Oil & Gas J 51:278-9+ D 22 '52

1952 footage sets record, completions near peak; with table of wells completed in the United States during December, and twelve months, 1952. World Oil 136:48 F '53

1952's new reserves fall short of '51 peak. Pet Refiner 32:90+ Ap '53; Same, with additional tables. World Oil 136:66-7+ Ap '53

Petroleum reserves up, but years' supply lags. World Oil 136:200-2 F 15 '53

Petroleum summary; 1951; tabulation. Oil Paint & Drug Rep 163:69 F 23 '53

Producing oil wells; with table, active producing crude oil and condensate wells in U.S., methods of producing, and average output per well, by states and districts, at end of 1951 and 1952. World Oil 136: 208-9 F 15 '53

Reserves at new peak; A.P.I., A.G.A. estimate. Oil & Gas J 51:78-9 Mr 16 '53

Results of exploratory drilling in the United States in 1952, by states, and comparison with earlier years; tabulation. World Oil 136:96+ F 15 '53

Stocks of oils. World Oil 136:74-5 F 15 '53

United States crude oil production, by states, by years, 1875-1952; tabulations. World Oil 136:188+ F 15 '53

U.S. crude production. World Oil 136:183-5+ F 15 '53

U.S. crude production, by states and districts, Dec. and years 1951 and 1952; tabulation. World Oil 136:185 F 15 '53

World crude reserves increase 13.5 billion barrels. World Oil 136:264-5 F 15 '53

Sulfur content

Cyclic sulfides in a petroleum distillate. R. H. Brown and S. Meyerson. bibliog Ind & Eng Chem 44:2620-3 N '52

Determining the hydrogen sulfide content of crude oils. W. L. Nelson. Oil & Gas J 51: 145 O 27 '52

Drastic cuts in corrosion costs in sour crude field. F. H. Clements and J. P. Barrett. bibliog il map World Oil 135:264+ O '52

Elemental sulfur in crude oil. B. H. Eccleston, M. Morrison and H. M. Smith. bibliog diag Anal Chem 24:1745-8 N '52

High-sulfur crude oils; potential hydrogen sulfide liberation. W. L. Nelson. Oil & Gas J 51:309 S 29 '52

Identification of cyclohexanethiol in virgin naphtha. R. C. Arnold, P. J. Launer and A. P. Lien. bibliog Anal Chem 24:1741-4 N '52

Penalty for sourness in a crude oil. W. L. Nelson. Oil & Gas J 51:403 Ja 26 '53

Sour crude oil fields. W. L. Nelson. bibliog Oil & Gas J 51:145 My 4 '53

Sulfur content of cracked products. W. L. Nelson. bibliog Oil & Gas J 51:171 N 10; 137-8 N 24; 129 D 8 '52

Sulfur content of petroleum coke. W. L. Nelson. bibliog Oil & Gas J 51:125-6 Mr 9 '53

See also

Petroleum refining—
—Sulfur removal

Testing

ASTM manual on measurement and sampling of petroleum and petroleum products. 2d ed 133p pa $1.50 Am. soc. for testing materials. 1916 Race st, Philadelphia 3 '53

Tideland development

Billions in tidelands oil. L. A. Lukens. il Mag of Wall St 91:223-5 N 29 '52

Continental shelf could be a major source for U.S. oil. maps World Oil 136:64-5 Ap '53

Development bill; states would have no part in U.S. area of tidelands. Oil & Gas J 52: 149-50 Je 22 '53

Down to earth survey of the tidelands oil companies. L. A. Lukens. Mag of Wall St 92:390-1+ Je 27 '53

Geologic and engineering aspects of continental shelves. J. C. Miller. map diags Oil & Gas J 51:78-80+ Mr 2 '53

Getting ready to drill tidelands oil. il Bsns W p30-2 D 27 '53

Long Beach's oil; how to get it? D. H. Stormont. map Oil & Gas J 52:42-3 Je 29 '53

Louisiana offshore production. F. L. Resen. il map Oil & Gas J 52:222-4+ Je 22 '53

New Congress riled by proclamation placing tidelands in naval reserve. Nat Pet N 45:29 Ja 21 '53

Offshore bill passed. B. F. Linz. Oil & Gas J 52:49 Je 29 '53

PETROLEUM—Tideland development—*Cont.*

Offshore development to be speeded up; Eisenhower signs tidelands bill. L. J. Logan. World Oil 136:53-4 Je '53
Offshore exploration on the Gulf coast. S. M. Peña. il Oil & Gas J 52:172-3 Je 22 '53
Off-shore oil; federal strangle-hold over tidelands may be broken. E. N. Morse. Barron's 33:11-12 Ja 19 '53
Offshore problem still unsolved. P. C. Ingalls. Oil & Gas J 51:161 Ap 6 '53
Offshore surveys excite oil operators. R. Sneddon. il Pet Eng 25:B68+ Ja '53
Oil from the tidelands. il Manuf Rec 122:36-7 Jl '53
Portable submersible tank-battery barge withstands weather's Sunday punch. G. E. McClatchey. il Oil & Gas J 51:141-5, 169 F 23 '53
Submerged lands suit dismissal asked by Department of justice. Oil Paint & Drug Rep 164:3 S 14 '53
Tidelands action; Senate and House committees begin hearings. Oil & Gas J 51:101 F 16 '53
Tidelands bill passed following bitter fight. Oil Paint & Drug Rep 163:3+ My 11 '53
Tidelands bill passes. B. F. Linz. Oil & Gas J 52:88 My 11 '53
Tidelands bill signed. B. F. Linz. Oil & Gas J 52:58 Je 1 '53
Tidelands issue. Pub Util 50:520-2 O 9 '52
Tidelands legislation; Senators Daniel of Texas and Holland of Florida introduce bills. Oil & Gas J 51:57-8 Ja 19 '53
Tidelands oil; National petroleum council's study. Bsns W p77-8 Je 27 '53
Tidelands outlook; tempered optimism. B. F. Linz. map Oil & Gas J 52:62-4 Je 8 '53
Tidelands problems; Congress involved in wrangle over oil development. B. F. Linz. Oil & Gas J 52:146 My 25 '53
Tidelands proposal; Brownell suggests substitute for quitclaim bill; would give states oil-development job without title to lands. B. F. Linz. Oil & Gas J 51:75 Mr 9 '53
Tidelands roadblock. Oil & Gas J 51:32-3 D 29 '52
Tidelands testimony. Oil & Gas J 51:119-20 F 23 '53

See also
Petroleum—Well drilling, Subaqueous

Transportation

Genoa gains stature as transit center. World Oil 136:258 Ja '53
Government should enforce laws, not run transporters' businesses. J. S. Burchmore. Nat Pet N 44:61-2 N 12 '52
How freedom of competition has cut oil industry's transportation costs. B. B. Jennings. Nat Pet N 44:93+ N 26 '52
Ice breakers ready to keep oil moving on Illinois waterway. D. J. Warren. il Nat Pet N 45:62-4 Ja 14 '53
New waterways queen pushes oil from Gulf to jobber's terminals. il Nat Pet N 44:21 D 3 '52
Oil hauls on inland waterways grow as efficiency and speed increase. M. C. Dupree. il Nat Pet N 45:43-5 Ap 29 '53
Traffic jam hampers movement of oil on crowded Gulf Intracoastal canal. D. J. Warren. il map Nat Pet N 44:58-9 S 24 '52
Transportation playing big role in industry operations. C. R. Musgrave. il World Oil 135:86-9 D '52
Use of truck tank vehicles booms in past 14 years. J. E. Boice. Nat Pet N 45:41-2 Ap 29 '53

See also
Petroleum pipe lines
Petroleum shipping terminals
Tank barges
Tank cars
Tank ships
Tank trucks

Unit operation of pools

Scurry county unitization plan. World Oil 135:124+ O '52
Scurry unit approved. Oil & Gas J 51:74 F 9 '53
Scurry unit supported. Oil & Gas J 51:74 N 24 '52
Unit agreements and methods of participation. E. B. Miller. Oil & Gas J 52:184+ My 25 '53
Unitization problem; abstract. E. B. Miller. Oil & Gas J 51:70-1 Mr 9 '53
Unitized water flood shows promise; project in Payton pool, Texas. N. P. Whaley. il map Oil & Gas J 51:112+ D 15 '52

Water flooding

See Petroleum—Production methods

Water problem

Analyses of formation brines in Kansas. C. G. Rall and J. Wright. bibliog pl U S Bur Mines Rep of Invest 4974:1-40 '53
Elk Hills problem; high-pressure water driving oil out of field. Oil & Gas J 51:45 Mr 2 '53
Increasing ultimate recovery in east Texas' Kilgore townsite area. C. E. Wright. il map diag Oil & Gas J 52:109-12 My 11 '53
Little bugs, big problems; causes and effects of the presence of sulfate reducing bacteria in oil field waters. O. B. Williams. il World Oil 136:170+ Je '53
New production tool; microscope analysis as method of determining origin of water in oil formations. D. H. Stormont. Oil & Gas J 52:147 Je 22 '53
Sweet-well corrosion. H. E. Greenwell. Oil & Gas J 51:63-4 Mr 30 '53

Wax content

Fluid catalytic cracking wax distillates from Middle East crudes; flow diags pl Inst Pet J 38:936-63 N '52
How paraffin content effects quality of motor fuels from Platforming. V. Haensel and G. R. Donaldson. Pet Processing 8:236-9 F '53
Petroleum waxes dominate field. B. H. Clary. Oil & Gas J 51:103 Ja 12 '53
Wax fractionation; wax manufacturing; Texaco development corp. flow diags Pet Refiner 31:206-7 S '52

Well blasting

Plug for liquid nitro. Oil & Gas J 52:67-8 Je 8 '53

Well casing

Bullet v. jet charge; special steel piercing methods appraised. A. Williman and W. P. Wallace. il diags Iron Age 170:96-8 O 30 '52
Continuous heat treatment process produces high strength oil well casing. F. H. Bremmer and F. J. Zehnder. il diags Iron & Steel Eng 30:55-62; Discussion. 62-4 Ja '53
Dual completions pay off in Illinois. F. H. Hunter. diags World Oil 136:163-4+ Mr '53
How to identify casing in mixed strings. il World Oil 136:144+ Ap '53
New insulating union for corrosion control. K. B. Shearon. il World Oil 135:269 N '52
Radiant gas-fired processing equipment makes superior quality oil well casing. il Am Gas J 177:17+ N '52
Saving 2800 feet of casing per well. J. E. Kastrop. il diag World Oil 135:243-4 O '52
Use of tubing and casing as drill pipe. W. F. Bates. diag Oil & Gas J 51:120-4+ N 24 '52
Various methods of high pressure testing oil country tubular material. H. G. Texter. il diags Pet Eng 25:B45-8+ Mr '53

Well cementing and plugging

Effect of mud-treating chemicals on oil-well cements. F. M. Anderson. Oil & Gas J 51:283-4+ S 29 '52
Equipment, materials, tools for cementing deep wells. P. Montgomery. bibliog il Pet Eng 25:B40+ Ja '53
Four-way perforating aids squeeze cementing. J. E. Kastrop. il diag World Oil 136:222+ Ap '53
Gulf coast vs. California cementing practice. V. R. Young. Oil & Gas J 51:137 S 22 '52
New chemical product removes mud cake. Z. V. Morgan. il World Oil 135:168+ D '52
New developments in the use of bentonite in cements. B. E. Morgan and G. K. Dumbauld. bibliog Oil & Gas J 51:131-2+ Ap 20 '53

PETROLEUM—Well cementing and plugging —*Continued*

New material for cementing wells. C. D. Saunders and B. D. Brown. bibliog il Pet Eng 24:B80-4 O '52

Plastic squeeze. J. D. Benefield and J. C. McCormick. map diags Pet Eng 24:B55-6+ O '52

Requirements of casing cement for segregating fluid-bearing formations. R. C. Clark, jr. diag Oil & Gas J 51:173 Ap 20 '53

Well drilling

Better slush pump performance is possible. K. N. Mills. Pet Eng 25:B81-2+ Ja '53

Bore-hole key seats found by series of caliper surveys. J. A. Kornfeld. diag Oil & Gas J 52:117 My 11 '53

Check your hydraulic system to cut your drilling costs. R. G. Hamaker. World Oil 136:128+ Mr '53

Completions and footage. World Oil 136:132-4+ F 15 '53

Compounded power pumps speed drilling. il plans World Oil 136:111-13+ Mr '53

Crooked holes. A. Lubinski. Pet Eng 25:B56 Ja '53

Current drilling practices in west Texas. D. Johnston and W. R. Johnston. il Pet Eng 25:B73+ Ap '53; World Oil 136:141-3+ Ap; 180+ My '53; Same cond. Oil & Gas J 51:337-8+ Mr 23 '53

Cutoff technique reduces time requirements fifty per cent. R. D. Meyers. il diags World Oil 136:124 F '53

Deep drilling in Wilshire Ellenburger field. R. F. Carlson. il map Oil & Gas J 51:183-4+ S 29 '52

Deepest active test in California seeks record. W. Rintoul. il Pet Eng 25:B47-50 Ja '53

Deepest oil field. il Oil & Gas J 51:56-7 Mr 30 '53

Depth record broken; Shell well in southern Louisiana. il Oil & Gas J 51:161-2 Mr 23 '53

Depth, the third dimension frontier; with tabulated description of wells in the U.S. drilled below 15 feet. E. Adams. il diag Pet Eng 25:B9-10+ Ja '53

Drill-pipe rejects show good service life. H. G. Texter. il Pet Eng 24:B78+ D '52; Same cond. Oil & Gas J 51:100-2+ N 10 '52

Drilling a science; evolution of drilling through the years. il Oil & Gas J 51:136-9 D 15 '52

Drilling and completing in East Oconee field. J. A. Kornfeld. maps Oil & Gas J 51:98+ Ja 12 '53

Drilling depth records. World Oil 136:146+ F 15 '53

Drilling forecast. W. L. Baker and C. W. Smith. World Oil 136:129-30 F 15 '53

Drilling in granite; Jacob Beck one Sancrant now in its thirteenth year of off-and-on drilling. T. Armstrong. il Oil & Gas J 51:146 S 29 '52

Drilling operations continue the year round in Canada. V. H. Hunter. il World Oil 136:160+ My '53

Drilling problems in the Williston basin. T. Dougherty. il World Oil 136:148+ Ap '53

Drilling process curve; Shell oil co. well number 34-26-G, Dawson county, Mont. Oil & Gas J 51:141 O 27 '52

Drilling 75 degree dips in Canada. J. Menneer. il map diag Pet Eng 25:B58+ Ja '53

Drilling shot holes with air. H. A. Winter, jr. il Pet Eng 25:B76+ My '53

Drilling! special section. il maps diag Oil & Gas J 51:161-76+ S 29 '52

Dual completions, pro and con. diags Oil & Gas J 51:86 Ja 5 '53

Efficiency curbs Canadian drilling costs. R. L. Binning and B. H. Corey. il World Oil 136:286+ F 15 '53

Eolian sand control. R. C. Kerr and J. O. Nigra. il diags Am Assn Pet Geologists Bul 36:1541-73 bibliog(p1572-3) Ag '52

Exploration drilling in western Canada. D. K. Seaman. il Oil & Gas J 52:81+ Je 1 '53

Exploratory and development drilling, 1952; tabulations. Oil & Gas J 51:356+ Ja 26 '53

First quarter completions show drop. J. C. McCaslin. Oil & Gas J 51:321 Ap 27 '53

Gas-drilled wells yield more oil. N. C. Wells. il World Oil 135:139-40+ N '52

Gas-drilling boost. P. Wright and E. Bruno. Oil & Gas J 52:81 Je 15 '53

Geologist thinks about deep drilling. G. F. Shepherd. Pet Eng 25:B5-8 Ja '53

How they're whipping Williston's winter. L. W. Sveen. il World Oil 136:120-2 F '53

How to cope with crooked-hole problems. G. Burgess. Oil & Gas J 51:111-12 N 3 '52

How to cut drill costs. D. H. Stormont. Oil & Gas J 52:69-70 Je 8 '53

How to do it! drilling hints. il Published in monthly numbers of World oil

How to have better workover operations. J. L. Moore. il diags Pet Eng 25:B7-10 Ap '53

How to increase drilling line service. J. N. Kemple. World Oil 135:160+ D '52

How to select and install braking equipment for your drawworks. A. Fredhold. World Oil 136:135-6+ Ja '53

How to spool wire line for maximum service; interview with F. L. Lebus. W. Rose. il Oil & Gas J 51:215+ S 29 '52

How wells are drilled in permafrost. R. C. Jensen. il map World Oil 135:152+ D '52

Hughes laboratory includes field-size drilling rig. il Oil & Gas J 51:145+ N 24 '52; Pet Eng 24:E6-8 D '52

Imperial uses directional drilling at Joseph Lake. il Oil & Gas J 51:93 D 29 '52

Improved magnetic tool speeds fishing technique. J. H. Kirby, 2d. il World Oil 135:135-6 N '52

Improved tools and methods keep drilling costs down. H. B. Woods. il Oil & Gas J 51:90-2 O 6 '52

Know your rope fittings. W. C. Richards. il Oil & Gas J 51:153 D 1; 131 D 8; 145 D 15 '52

Lea county leads Permian basin activity. J. A. Kornfeld. il map Oil & Gas J 51:61-2+ Mr 2 '53

Look at drilling progress. J. Menneer. Pet Eng 25:B6+ My '53

Magnolia makes an unusual completion in Wilcox. J. E. Kastrop. il diags World Oil 136:176+ Je '53

New Alabama drill log. Oil & Gas J 51:205 F 23 '53

New development; circulating artesian water for drilling cavernous limestones; Key Largo in the south Florida basin. J. A. Kornfeld. il Oil & Gas J 52:258+ Je 22 '53

New drilling-analysis service aids operators in Rocky Mountain area. E. A. Polumbus, jr. map Oil & Gas J 51:193+ S 29 '52

New nitrogen impact jar eliminates jarring action. il World Oil 136:124-6+ Mr '53

New straight hole drilling tools in use in west Texas. H. M. Rollins and W. S. Bachman. il Pet Eng 24:B90+ O '52

New tools for getting oil out. il Bsns W p 104-8 Je 27 '53

New vacuum-type degasser reduces deep drilling hazards. R. W. Erwin. il World Oil 136:125+ Je '53

1952 exploratory drilling. F. H. Lahee. maps Oil & Gas J 51:138+ Mr 30 '53

Ohio's slim hole rig cuts exploratory drilling costs. G. Burgess and H. D. Hoopman. il World Oil 136:107-10+ Je '53; Same. Pet Eng (Ref annual) 25:B71-4 Jl 15 '53

Oil that won't come out; Spraberry area. Bsns W p 112+ D 13 '52

Operations in the Leduc field today. J. Menneer. il map diags Pet Eng 25:B47-50+ F '53

Permian basin hot spot of U.S. drilling activity. C. W. Smith. World Oil 135:114 O '52

Ready mix concrete invades California desert; navy's Elk Hills reservation. il Concrete 61:40 F '53

Review and forecast. J. C. Casper and others. Oil & Gas J 51:190-201 Ja 26 '53

Rigs in operation. World Oil 136:140-1 F 15 '53

Role of wire rope in deep drilling. C. M. Zerr. il Pet Eng 24:B99-102+ N '52

Rotary oil rigs invade Pennsylvania. il Diesel Power 31:39 Mr '53

Rotary-rig survey. D. M. Duff. Oil & Gas J 51:105-6 F 16 '53

Safety saves money in drilling. K. R. Welsh. World Oil 136:140+ F '53

PETROLEUM—Well drilling—*Continued*
Semi-automatic power-operated drilling machinery. M. E. True. il diag Pet Eng 24: B42+ O '52
Shell 1-A-1 Andrews opens Ellenburger field. J. A. Kornfeld. Oil & Gas J 51:177 F 16 '53
Socony reduces drilling time in Guario by directional drilling. F. A. Maretich and S. K. Wilkie. il diag Oil & Gas J 51: 172-3+ D 22 '52
Special drilling mounds solve inundation problems. J. A. Kornfeld. il diag Oil & Gas J 51:69+ Ja 5 '53
Straight-hole drilling along the Rocky Mountain front. J. A. Kornfeld. il maps Oil & Gas J 51:54-5+ D 29 '52
Straight-hole drilling in west Texas. W. S. Bachman and H. M. Rollins. il Oil & Gas J 51:130-2+ D 1 '52
Ten rigs active in Strawn reef search in Schleicher county. J. A. Kornfeld. maps Oil & Gas J 51:124-5+ O 20 '52
Tests show power slips will cut trip costs. il World Oil 135:200 O '52
Use of tubing and casing as drill pipe. W. F. Bates. diag Oil & Gas J 51:120-4+ N 24 '52
Well completions; how to find the oil-water and gas-oil contacts in a reservoir. J. A. Kornfeld. diags Oil & Gas J 51:111-12+ O 27 '52
Wells completed. World Oil 136:144 F 15 '53
What about compressed air? removing well cuttings from a rotary drilled bore-hole. L. K. Shallenberger. il diag World Oil 136: 155-6+ Ap '53
What the service company contributes to deep drilling. W. C. Erwin. il diag Pet Eng 25:B75-6 Ja '53
See also
Derricks, Oil well
Drills, Oil Well
Petroleum—Mud fluids

Accounting

Cost accounting for drilling contractors. F. H. Rousey. World Oil 135:153+ N '52
Mechanized accounting aids major drilling contractor. J. A. Kornfeld. il Oil & Gas J 51:76-7 F 2 '53

Contracts

Contract drilling accounts for 91 percent of U.S. wells. World Oil 136:142 F 15 '53
Daily progress record aids contractor. J. A. Kornfeld. bibliog diag Oil & Gas J 51:114-17 Ap 6 '53
Drilling contractor can increase efficiency. il Pet Eng 25:B69-70 Ap '53
What the drilling contractor offers to the oil industry. A. H. Bell. Pet Eng (Ref annual) 25:B91+ Jl 15 '53; Same cond. Oil & Gas J 52:76-7 Je 29 '53

Cost

What price drilling contracts? tabulation made from actual contracts made during the past 12 months. Oil & Gas J 51:174-6 S 29 '52

Sampling

Determination of the transverse permeabilities of large core samples from petroleum reservoirs. R. E. Collins. diags J Ap Phys 23:681-4 Je '52
Improved bulk-volume cell speeds porosity determinations. H. C. Hamontre and C. G. Rall. diags Oil & Gas J 51:94-6 Ja 19 '53

Study and teaching

Drilling practice course aids petroleum industry. W. R. Mays. il Pet Eng 25:E2+ Ja '53

Well drilling, Subaqueous

All-welded drill and work-over barge commissioned. il Welding J 32:549-50 Je '53
Barge Blind Pass fitted for deep Gulf Coast drilling. il Pet Eng 24:B 120+ N '52
Built-in jacks position new barge. il Oil & Gas J 52:176-7 Je 22 '53
Diesel-electric drilling barge, G.P.2. plans diag Engineer 194:425-6 S 26 '52; il Engineering 174:583-4 O 31 '52
Drilling off Borneo; Royal Dutch-Shell readies platform for first major test in South China sea. D. M. Duff. il map Oil & Gas J 51: 86 N 10 '52
Good-weight distribution features new work-over barge. il Oil & Gas J 51:143+ Ap 20 '53
Inland-water drilling on the Texas Gulf coast. C. G. Glasscock, jr. il Oil & Gas J 52:174-5+ Je 22 '53
Integrated drilling barge has maximum flexibility. C. F. Albright and P. L. McLaughlin. il plans World Oil 135:139-42+ D '52
Is this the answer to offshore operations? new dock-barge with built-in jacks. il World Oil 136:116 Je '53
Luxury and efficiency afloat; the Superior oil company's drilling barge, W. M. Keck, sr. P. L. McLaughlin. il World Oil 136:164+ Ap '53
Marine operations in west Texas. il map diags World Oil 135:118+ O '52
Mustang field; Mustang Island multi-zone field is in Corpus Christi bay, Texas. G. V. Ricks and J. M. David. il maps diags Pet Eng 25:A41-8 Ja '53
National Supply equipment on drill barge that dug four-mile hole. il Marine Eng 58: 135 Je '53
New design barge to drill in Lake Maracaibo. H. Weil. il Pet Eng 25:B40+ Mr '53
New drilling barge; now operating off Texas Gulf coast. il Oil & Gas J 51:90 D 29 '52
New techniques await resumption of offshore drilling. A. Gibbon. diags World Oil 135: 166+ N '52
Offshore core drilling. D. H. Stormont. il Oil & Gas J 52:98-9 My 11 '53
Oil drilling barge. il Elec J 151:421-2 Ag 7 '53
Operators solving offshore problems in Oklahoma field. H. E. Bale. il World Oil 135: 148-50 N '52
Penrod's rig 44. il Oil & Gas J 51:128-9 N 24 '52
Piling platforms solve drilling in coastal swamp. J. A. Kornfeld. il maps plan Oil & Gas J 51:210+ S 29 '52
Self-contained barge; Shell acquires new Diesel-electric unit to use in Maracaibo drilling. il Oil & Gas J 51:75 D 1 '52
Venezuela's fabulous Lake Maracaibo. il Pet Eng 24:B 108+ O '52
World's largest drilling barge. F. L. Resen. il Oil & Gas J 51:98-9+ F 9 '53
YF barge outfitted for South America. il Pet Eng 24:B86+ O '52
See also
Petroleum—Tideland development

Well liners

ABC's of sand exclusion. R. Sneddon. bibliog il Pet Eng 24:B107+ N '52

Well logging

Anadarko Basin drill log. Oil & Gas J 51: 143 O 6; 123-4 Ja 12; 143-4 F 9 '53
Application of radiation logs in oil fields. P. Charrin and J. H. Russell. diags Pet Eng 25:B59-60+ Ap '53
Denver basin drill log. Oil & Gas J 51:103 D 29 '52
Differential-lateral curve. L. de Witte. diags Oil & Gas J 51:100-2+ F 9 '53
Digital computation of resistivity-departure curves. L. de Witte. il diag Oil & Gas J 51:74-5 F 2 '53
Effect of wettability on the electrical resistivity of sand. G. V. Keller. bibliog diags Oil & Gas J 51:62-5 Ja 5 '53
Electric logging. R. I. Martin. Oil & Gas J 52:139 Je 8; 155 Je 15; 111 Je 29 '53
Electrical conduction in fluid-saturated rocks. B. F. Howell, jr. diags World Oil 136:113-14+ F; 142+ Mr '53
Electrical well logging system; patent. diag Electronics 26:200+ Ap '53
Guesswork is removed in flood evaluations; radioactivity logging in old wells proves useful tool in evaluating water-flood prospects. N. J. Mellies and C. W. Clark. maps diags World Oil 136:216+ My '53
Gulf Coast drill log. Oil & Gas J 51:347-8 D 22 '52
Hole diameter influence neutron derived porosity. C. B. Scotty and E. F. Egan. World Oil 136:172+ Ja '53
Microlog limitation; abstract. R. W. Garrett, jr. Oil & Gas J 51:77 N 10 '52

PETROLEUM—Well logging—*Continued*

Resistivities of water from subsurface formations. M. L. Ayers and others. maps Pet Eng 24:B36+ D '52
San Juan Basin drill log. Oil & Gas J 51:147 Ap 13 '53
Simultaneous log of radioactivity curves cuts standby time in half. G. Swift and C. C. Roberts. il diags World Oil 136:122+ Ja '53
Texas Panhandle drill log. Oil & Gas J 51: 129 Ap 6 '53
Water flood evaluations aided by electric log. M. Cook. diag World Oil 135:206+ N '52

See also
Schlumberger well surveying corporation

Well packers

Gravel-packing techniques on Gulf coast. C. Curry. bibliog diags Oil & Gas J 52:301-2+ Je 22 '53
Inverted-type packer solves salt water injection problem. G. S. Flanders. diag World Oil 136:186-7 Ja '53
Packer modification solves dual completion problem. C. L. Kirkman. diags World Oil 135:228 D '52

Well pressure

Geological aspects of abnormal reservoir pressures in Gulf Coast Louisiana. G. Dickinson. maps diags Am Assn Pet Geologists Bul 37:410-32 bibliog(p431-2) F '53
Subsurface pressures tell story. C. C. Olson. il World Oil 136:155-8+ F '53

Well spacing

Oil that won't come out; Spraberry area. Bsns W p 112+ D 13 '52
Spacing order set; Culberson registers dissent in 80-acre Spraberry ruling. Oil & Gas J 51:32 Ja 5 '53
Spraberry spacing report. R. F. Carlson. map Oil & Gas J 51:102-6+ O 20 '52
Spraberry spacing set. Oil & Gas J 51:147 D 22 '52
Trend hearing awaited; future of Spraberry may be decided. R. F. Carlson. Oil & Gas J 51:81 D 8 '52
Wider spacing asked by Spraberry operators. R. F. Carlson. map Oil & Gas J 51:72-3 S 22 '52

Well temperature

Temperature surveys to locate zone of lost circulation. W. C. Goins, jr. and D. D. Dawson, jr. Oil & Gas J 52:170-1+ Je 22 '53

Well testing

Drill-stem testing in the Rocky Mountain region. J. L. Fusselman. il Oil & Gas J 52:102-4+ Je 15 '53
How to determine oil-sand productivity from drill-stem test. Oil & Gas J 51:319 S 29 '52

Well tubing

Dual completion takes two full size tubing strings. R. W. Reiss and J. E. Kastrop. il diags World Oil 136:162+ F '53
Mud-stuck tubing recovered by string-shot backoff method. F. Scott, jr. World Oil 136: 200+ Ap '53
New correlation simplifies pressure gradient calculation in tubing. F. H. Poettmann and P. G. Carpenter. World Oil 136:161-4+ Je '53
New insulating union for corrosion control. K. B. Shearon. il World Oil 135:269 N '52
Resin tubing used for salt water disposal. T. D. Gardner. il Pet Eng 25:B64+ Mr '53
Use of existing tubing cuts workover costs. E. O. Stewart and H. Priesmeyer. il World Oil 136:186+ Je '53
Use of tubing and casing as drill pipe. W. F. Bates. diag Oil & Gas J 51:120-4+ N 24 '52
Various methods of high pressure testing oil country tubular material. H. G. Texter. il diags Pet Eng 25:B45-8+ Mr '53

Alabama

Fracture-controlled production in Gilbertown field, Alabama. J. Braunstein. maps diags Am Assn Pet Geologists Bul 37:245-9; Discussion. 314-30 F '53
New Alabama drill log. Oil & Gas J 51:205 F 23 '53

Alaska

How wells are drilled in permafrost. R. C. Jensen. il map World Oil 135:152+ D '52
Million-acre block to be tested. T. A. Armstrong. il maps Oil & Gas J 52:144-5 Je 22 '53
Navy to quit Alaska. B. F. Linz. Oil & Gas J 51:87 Mr 16 '53
Operating problems in oil exploration in the Arctic. K. L. Vonder Ahe. il Pet Eng 25: B 12+ F '53
Operation Alaska. R. H. Meade. il World Oil 136:239-41 Ja '53
Search for oil pushed in the land of icebergs; Phillips petroleum co. to explore Alaskan area. map World Oil 136:290+ Ap '53

Alberta

Alberta oil sands. D. S. Pasternack. bibliog il maps Pet Eng 25:A58+ F '53
Athabasca forecast. Oil & Gas J 52:151 Je 22 '53
Basal lower cretaceous accumulations in Alberta with special reference to the Campbell pool. P. Klaui. maps Pet Eng 25:B6-10 F '53
Bituminous sands of Alberta. A. A. Peebles. il maps diags Engineering 175:229-31, 260 F 20-27 '53
Interpretation of seismic data in locating reefs in Alberta. P. I. Bediz. map diag World Oil 136:86+ F '53
Outlook in Alberta. map Oil & Gas J 51:61-2 D 1 '52
Tailing disposal problems of Alberta tar-sands; with cost data. L. E. Djingheuzian. bibliog il Can Min J 74:69-75 My '53

Arkansas

Louisiana-Arkansas region may yield additional oil. T. H. Philpott. maps diags World Oil 135:108+ N '52

Brazil

Geology and oil fields of Brazil. E. F. Taylor. bibliog maps diag Am Assn Pet Geologists Bul 36:1613-26 Ag '52

California

Eocene search in southern Joaquin valley. D. H. Stormont. map diag Oil & Gas J 51:148-9+ Mr 30 '53
Fractured shale reservoirs of California. L. J. Regan, jr. maps diags Am Assn Pet Geologists Bul 37:201-16; Discussion. 314-30 F '53
Guadalupe prospects. D. H. Stormont. map Oil & Gas J 51:125 F 23 '53
Water-flood outlook, California fields. D. H. Stormont. Oil & Gas J 51:126 F 23 '53

Canada

Principal western Canada oil fields, 1952; listed in the order of their discovery dates. World Oil 135:290+ D '52
Reefal oil reservoirs in western Canada. R. Pot. map Pet Eng 25:B61-2+ F '53

Colorado

Denver-Julesburg Basin drill log. Oil & Gas J 52:157 Je 15 '53
Denver-Julesburg having biggest year. J. C. McCaslin. map Oil & Gas J 51:200+ Ap 20 '53
Seismic problems in Denver-Julesburg basin. J. A. Kornfeld. bibliog il map Oil & Gas J 51:152-4+ Mr 30 '53
What about southeastern Colorado? J. C. Maher. maps diags World Oil 135:101-2+ N '52

Cuba

Cuban exploration travels south. A. R. de la Roche. map World Oil 136:243-6 Je '53

Florida

Florida oil, a half-century search. map Oil & Gas J 52:262-3 Je 22 '53
Southernmost province being tested. P. C. Ingalls. map Oil & Gas J 51:199 F 16 '53

Gulf Coast region

Fracture porosity in Gulf coast. M. A. Hanna. il maps diags Am Assn Pet Geologists Bul 37:266-81; Discussion. 314-30 F '53

PETROLEUM—Gulf Coast region—*Continued*

Offshore problem still unsolved. P. C. Ingalls. Oil & Gas J 51:161 Ap 6 '53

Salt domes still reign in Gulf coast. P. C. Ingalls. map Oil & Gas J 52:357 Je 22 '53

Illinois

What are the opportunities in the Illinois basin? W. E. Brubeck. map diags World Oil 136:111-12+ My '53

Israel

Oil out of Israel. Bsns W p 158 Jl 25 '53

Oil prospects of Israel. M. W. Ball and D. Ball. maps diags Am Assn Pet Geologists Bul 37:1-113 bibliog(p 109-11) Ja '53

Italy

Italy has four favorable areas for oil and gas search. W. F. Hoover. map Oil & Gas J 51:381-3+ Ja 26 '53

Kansas

Analyses of formation brines in Kansas. C. G. Rall and J. Wright. bibliog pl U S Bur Mines Rep of Invest 4974:1-40 '53

Oil production from fractured pre-Cambrian basement rocks in central Kansas. R. F. Walters. bibliog il map diags Am Assn Pet Geologists Bul 37:300-13; Discussion. 314-30 F '53

Kentucky

Can western Kentucky become an active oil producing area? W. W. Hagan. map World Oil 136:93-4+ Mr '53

Louisiana

Fairview, Louisiana presents healthy economic picture. R. J. Moffatt. maps diags Oil & Gas J 51:108-10 F 9 '53

Geological aspects of abnormal reservoir pressures in Gulf Coast Louisiana. G. Dickinson. maps diags Am Assn Pet Geologists Bul 37:410-32 bibliog(p431-2) F '53

Gulf Coast drill log. Oil & Gas J 51:347-8 D 22 '52

Jefferson Island salt dome, Iberia and Vermilion parishes, Louisiana. J. B. Wharton, jr. maps diags Am Assn Pet Geologists Bul 37:433-43 F '53

Louisiana-Arkansas region may yield additional oil. T. H. Philpott. maps diags World Oil 135:108+ N '52

New deepest producer promised; Weeks Island field. P. C. Ingalls. map Oil & Gas J 51:155 Mr 9 '53

Manitoba

Production going up in southwest Manitoba. L. F. Frantz. map World Oil 135:334+ D '52

Michigan

Oil production from Traverse group of southwestern Michigan. D. W. Davis. Am Assn Pet Geologists Bul 36:1642-4 Ag '52

Mid-continent region

Anadarko basin most active rank wildcat area in the Mid-continent region. J. C. McCaslin. map Oil & Gas J 52:168-70 My 11 '53

Near East

Another oil strike in the Middle East. Fortune 47:49 My '53

Geological conditions of oil occurrence in Middle East fields. N. E. Baker and F. R. S. Henson. maps diags Am Assn Pet Geologists Bul 36:1885-901 O '52

Nebraska

Denver basin drill log. Oil & Gas J 51:103 D 29 '52

Denver-Julesburg having biggest year. J. C. McCaslin. map Oil & Gas J 51:200+ Ap 20 '53

Nebraska's Salina base. P. C. Ingalls. map Oil & Gas J 51:233 F 23 '53

Seismic problems in Denver-Julesburg basin. J. A. Kornfeld. bibliog il map Oil & Gas J 51:152-4+ Mr 30 '53

New Mexico

Deep oil between Pegasus and Denton. P. C. Ingalls. map Oil & Gas J 51:121 D 29 '52

New Mexico Devonian oil steps out. P. C. Ingalls. map Oil & Gas J 51:199 Ap 20 '53

Paradoxical petroleum province. P. C. Ingalls. map Oil & Gas J 51:163 N 24 '52

Permian basin eyes on New Mexico. P. C. Ingalls. map Oil & Gas J 51:153 D 8 '52

Petroleum possibilities in Eddy and Chaves counties, New Mexico. P. D. Helmig. bibliog map diag Oil & Gas J 51:127-30+ O 20 '52

San Juan Basin drill log. Oil & Gas J 51:147 Ap 13 '53

Wildcats check future province. P. C. Ingalls. map Oil & Gas J 51:161 Ja 19 '53

World oil's 1952 oil map of west Texas and southeastern New Mexico. World Oil 135: supp O '52

North America

Williston basin, new province for oil exploration. T. R. Barnes. maps diags Am Assn Pet Geologists Bul 37:340-54 F '53

North Dakota

Amerada hits again; fifth oil pool opened. map Oil & Gas J 51:85 N 10 '52

Williston wildcatting to increase. P. C. Ingalls. map Oil & Gas J 51:173 Ap 13 '53

Nova Scotia

Exploration in Nova Scotia. R. A. Pohly. maps Oil & Gas J 51:118+ O 6 '52

Oklahoma

Anadarko Basin drill log. Oil & Gas J 51: 143 O 6; 123-4 Ja 12; 143-4 F 9 '53

Beaver county, Okla.; Greenough pool. J. R. Kyle. il map diag Pet Eng 24:B48+ N '52

Coal county's capabilities confirmed. P. C. Ingalls. map Oil & Gas J 51:177 D 15 '52

Forty-year-old Healdton is still a lively pool. J. C. McCaslin. map Oil & Gas J 51:395-7 Mr 23 '53

Millions of barrels more oil for Healdton field. C. H. Riggs and J. E. Wey. bibliog flow diag map Oil & Gas J 52:96-100+ Je 15 '53

Odd geologic structures of southern Oklahoma. C. W. Tomlinson. il maps diags Am Assn Pet Geologists Bul 36:1820-40 S '52; Same. World Oil 135:103-4+ D '52; 136:90-2+ Ja '53

Oklahoma's red beds, then and now. P. C. Ingalls. Oil & Gas J 51:367 O 13 '52

Petroleum-engineering study of the Quapaw pool, Osage county, Okla. J. A. West. bibliog 27pls U S Bur Mines Rep of Invest 4913:1-39 '52

Springer search still spreading. P. C. Ingalls. map Oil & Gas J 52:163 Je 8 '53

Tricounty area in Oklahoma scores dozen new discoveries. J. C. McCaslin. map Oil & Gas J 52:164-5 Je 8 '53

What are the possibilities in Beaver county, Oklahoma? W. H. Grimes. maps World Oil 136:84+ Je '53

Peru

Peru opens new oil lands. map Bsns W p 146-8 My 23 '53

Queensland

Oil sands found. Oil & Gas J 51:108-9 F 16 '53

Rocky Mountain region

Denver basin's opportunities expand. P. C. Ingalls. map Oil & Gas J 52:167 My 11 '53

Saskatchewan

New discoveries spur Saskatchewan exploration. M. Kamen-Kaye. il maps diag World Oil 135:326-8+ D '52

Southeastern states

Exploration activity in the Southeastern states. R. B. Baum. maps diags Oil & Gas J 51:183-4+ F 23 '53

Texas

Analyses of crude oils from some west Texas fields. E. L. Garton and C. M. McKinney. bibliog(24 titles) pl U S Bur Mines Rep of Invest 4959:1-55 '53

Can Ellenburger be subdivided? V. E. Barnes. Pet Eng 25:B 104+ My '53

Conserving oil. Bsns W p26 Ap 4 '53

Deep oil between Pegasus and Denton. P. C. Ingalls. map Oil & Gas J 51:121 D 29 '52

PETROLEUM—Texas—*Continued*

Discoveries in Panhandle back up geologic theory. F. R. Haeberle. map diag World Oil 135:116+ D '52

Fracturing in Spraberry reservoir, west Texas. W. M. Wilkinson. il maps diag Am Assn Pet Geologists Bul 37:250-65; Discussion. 314-30 F '53

Horseshoe atoll still going strong. P. C. Ingalls. map Oil & Gas J 51:123 Mr 2 '53

Nolan county, Texas, offers promising prospects. B. F. Hoffacker, jr. map Oil & Gas J 51:117-18+ F 9 '53

Oil that won't come out; Spraberry area. Bsns W p 112+ D 13 '52

Paradoxical petroleum province. P. C. Ingalls. map Oil & Gas J 51:163 N 24 '52

Petroleum-engineering study of K.M.A. reservoir, southwestern part K.M.A. oil field, Wichita and Archer counties, Tex. R. P. Dobyns and others. bibliog 45pls U S Bur Mines Rep of Invest 4892:1-88 '52

Quinduno field in Anadarko basin. C. C. Hemsell. maps diags Pet Eng 25:B69+ My '53

Regional subsurface geology of the Midland basin. G. F. Warn and others. bibliog diag Oil & Gas J 51:113-14+ O 20 '52

Sand studies keep Texas area active. P. C. Ingalls. map Oil & Gas J 51:453 N 17 '52

Second Cambrian sand discovery looms in west Texas border county. C. Hoot. map Oil & Gas J 52:188 Je 15 '53

Seismic techniques in west Texas. P. C. Ingalls. map Oil & Gas J 51:169 F 9 '53

Spraberry reservoir of west Texas. J. W. Marshall. map Am Assn Pet Geologists Bul 36:2189-91 N '52

Spraberry structural conditions. G. F. Warn. bibliog(36 titles) maps plan World Oil 136: 83-6+ Mr; 100+ Ap '53

Texas Panhandle drill log. Oil & Gas J 51: 129 Ap 6 '53

Three Texans rule oil in name of conservation. Bsns W p 104-8 F 21 '53

Wellman field, Terry county, Texas. K. C. Anderson. maps diags Am Assn Pet Geologists Bul 37:509-21 Mr '53

Wellman reef; two million barrels in two years. J. A. Kornfeld. maps diag Oil & Gas J 51:135-8+ O 20 '52

West Texas' Magutex field shapes up. R. F. Carlson. il map Oil & Gas J 51:163-4+ Ap 6 '53

World oil's 1952 oil map of west Texas and southeastern New Mexico. World Oil 135: supp O '52

United States

Composition of United States crude oils. H. M. Smith. bibliog map Ind & Eng Chem 44:2577-85 N '52

Highlights on 1952's oil discoveries. maps Oil & Gas J 51:318-19+ Ja 26 '53

U.S. pool maps; principal oil and gas areas. Oil & Gas J 51:103-18 Mr 30 '53

What's the quick dope on future U.S. drilling areas? map Oil & Gas J 51:168-9 S 29 '52

Utah

Review of the geology and activities in the Uinta basin. A. M. Current. fold maps [in pocket] Colorado School of Mines [Golden] Quarterly 48 no 3:1-36 '53 (pa 50c)

Scattered Uinta wildcats test oil. P. C. Ingalls. map Oil & Gas J 51:195 N 10 '52

Venezuela

Case history of Quiriquire field, Venezuela. H. D. Borger. il maps diags Am Assn Pet Geologists Bul 36:2291-330 D '52

West Virginia

Lithologic factors affecting prospects for early paleozoic oil and gas in West Virginia. O. L. Haught. map Am Assn Pet Geologists Bul 37:553-60 Mr '53

Wyoming

Frontier formation, southwest Powder River basin, Wyo. D. Towse. bibliog maps diags Am Assn Pet Geologists Bul 36:1962-2010 O '52

Gebo field, Hot Springs county, Wyoming. E. C. Mees and G. F. Bowers. map Oil & Gas J 51:125-7 N 24 '52

Green River basin interest heightens. P. C. Ingalls. map Oil & Gas J 52:141 Je 29 '53

Seismic problems in Denver-Julesburg basin. J. A. Kornfeld. bibliog il map Oil & Gas J 51:152-4+ Mr 30 '53

Worland field; Big Horn and Washakie counties, Wyoming. J. S. Wold. map Oil & Gas J 51:112-14 D 8 '52

PETROLEUM administration for defense

Oil achievements cited. Oil & Gas J 51:61-2 Ja 12 '53

Oil industry guarantee needed again to insure independent life of PAD. A. R. Patla. Nat Pet N 45:10 Ap 29 '53

PAD sees record year. Oil & Gas J 51:60 Ja 19 '53

PAD shuts down marketing division but no quick death for agency seen. Nat Pet N 45:18 F 11 '53

PAD's foreign program calls for expanded activity. J. E. Brantly. World Oil 136:278+ F 15 '53

Why a PAD order number two; and how long? emergency regulation affecting gas companies. H. B. Noyes. Pub Util 50:673-9 N 6 '52

PETROLEUM association of America, Independent. See Independent petroleum association of America

PETROLEUM chemicals

Acetylene joins petrochemicals. diag Chem Eng 60:206 Mr '53

Aliphatic building blocks for petrochemical textiles. P. W. Sherwood. bibliog il Pet Processing 7:1633-8, 1804-7+ N-D '52

Ammonia, urea from new petrochemical plant. Pet Eng 25:C47 My '53

Beside the coke ovens; Semet-Solvay wax-like polyethylene and synthetic benzene. Chem W 71:62+ D 20 '52

Booming offspring of oil. map Can Chem Process 37:8+ My '53

Britain's I.C.I. operates four petrochemical plants at Wilton. flow diag il Oil & Gas J 51:325-6 D 22 '52

B-A Shawinigan petrochemical plant. il Can Chem Process 37:26+ Jl '53

Canadian petrochemical industry may face marketing problems. For Comm W 49:11 Ap 6 '53

Celanese corp., Bishop, Tex. F. L. Resen. flow diag il Oil & Gas J 51:120-1+ S 22 '52

Celanese dedicates Pampa plant. il Pet Refiner 32:133-4 Je '53

Chemical trek; the industry is moving to the oil fields. J. V. Sherman. Barron's 32:9-10 D 1 '52

Chemicals from gas. F. H. Dotterweich. flow chart Am Gas J 178:23-6 Ja '53

Commercial solvents corp., Sterlington, La. F. L. Resen. flow diag il Oil & Gas J 51: 298+ S 29 '52

Deep extraction at Tuscola. D. J. Stark. bibliog diags Pet Refiner 32:139-42 Je '53

Designed to operate at 20° below zero; Shell oil co. of Canada's new petrochemical plant. G. S. Williamson. il Pet Processing 8:900-1 Je '53

Du Pont story; research. V. B. Guthrie. il map Pet Processing 8:92-4 Ja '53

Expansion goals 99.7 per cent filled; with tabulated information on petrochemical projects undertaken by 81 companies; data showing certified dollar values and plant statuses. Pet Processing 7:1793-800 D '52

Extracts from Paley commission report on coal and petroleum chemicals and products made therefrom. India Rubber World 126: 777-81; 127:70-3+, 226-8+, 511-13 S-N '52, Ja '53

Gas in the fast-growing chemical industry. G. R. Walton. Am Gas Assn Proc 1952:252-8

Grace Chemical venture based on these processes; Texaco's partial oxidation, Casale ammonia, Pechiney urea. Pet Refiner 32:146 My '53

Growth of petrochemicals; utility and price demands must be met. Chem Age (Lond) 67:841-2 D 20 '52

Gulf oil corp. enlarging chemical interests. il Oil & Gas J 51:150 N 10 '52

How to make phenol. J. M. Weiss. il diags Oil & Gas J 51:146+ F 23 '53

PETROLEUM chemicals—*Continued*

Imperial chemical industries' petroleum chemicals group. il Chem Age (Lond) 67: 523-6 O 18 '52

Imperial chemical industries, Wilton works. V. S. Swaminathan. il Pet Eng 24:C27+ O '52

Increased profits by upgrading raw materials. J. S. Swearingen. il Oil & Gas J 51:129+ D 1 '52

Joint symposium on petroleum chemicals in United Kingdom, London, March 2. Chem & Eng N 31:1084+ Mr 16 '53

Liquefied petroleum gas as chemical raw material. B. R. Carney and R. E. Meyer. bibliog Oil & Gas J 51:117-18+ D 15 '52

More oil companies prepare to join in manufacture of petroleum-derived chemicals. G. Weber. Oil & Gas J 51:264-5+ Ja 26 '53

Naphthalene and nitrogen; new volume source for petrochemicals? O. V. Tracy. Pet Processing 8:250-2 F '53; Same abr. Oil & Gas J 51:70-2+ Ja 5 '53

Neches butane products co. is expanding capacity. F. L. Resen. flow chart il Oil & Gas J 51:149-50 N 10 '52

New $8,000,000 plant in Houston to make acrylate. F. L. Resen. il Oil & Gas J 51: 92-3+ My 4 '53

New Hydroforming unit produces petrochemicals and AvGas. J. J. Swift and others. il diags Pet Refiner 32:105-9 F '53

New 1953 petrochemical directory; survey lists 143 firms in petrochemicals, with 271 plants operating, building or planned. il Pet Processing 8:713-22 My '53

New petrochem plant at Berre, France. il Oil & Gas J 51:76+ Ap 6 '53

New sources for petroleum and petrochemicals. P. F. Swanson and N. R. Adams. Can Chem Process 36:30-1 D '52

Oil and petrochemicals. G. Egloff. Comm & Fin Chr 177:1863+ Ap 30 '53

Oronite chemical co. is pioneer and one of largest producers of raw synthetic detergents. D. H. Stormont. flow diag il Oil & Gas J 51:106-7+ F 9 '53

Oxo process in the U.S. for petrochemicals from olefins. P. W. Sherwood. bibliog il diag Pet Processing 8:241-8 F '53

Petrochem report; Grace Chemical will make ammonia, urea. il diag Oil & Gas J 52:246-7 My 25 '53

Petrochemical boom in Canada. G. Weber. map Oil & Gas J 52:76-8 Je 15 '53

Petrochemical capacities hit new highs; with tabulated survey of operations in 1953. A. L. Foster. il Pet Eng 25:C69-70+ Ap '53

Petrochemical industry looks to liquefied petroleum gas. B. R. Carney and R. E. Meyer. Pet Refiner 32:123-7 Ap '53

Petrochemical outlook. H. D. Ralph. il Oil & Gas J 51:67-8 D 8 '52

Petrochemical picture in Great Britain. Can Chem Process 37:54+ Je 1 '53

Petrochemical processes. flow diags Pet Refiner 31:238-9+ S '52

Petrochemicals at International petroleum exposition, Tulsa, May 14-23. Pet Processing 8:393 Mr '53

Petrochemicals expanding 14 per cent annually. J. H. Boyd and C. A. Rackus. il Pet Eng 25:C3-8 Ap '53

Petrochemicals unlimited. G. Egloff. Oil & Gas J 51:124+ Ap 13 '53; Same. Pet Eng 25:C5-8+ My '53

Petrochemistry; how pipe lines serve burgeoning new industry. F. L. Resen. maps diag Oil & Gas J 51:195-7 O 13 '52

Petroleum chemistry. E. C. Hughes. Science 116:sup3 N 7 '52

Phillips synthesize pyridines; petrochemical plant opens new source of supply. J. M. Folz and others. flow diag il Pet Processing 7:1802-3 D '52

Phthalic acids; petrochemicals of the future. P. W. Sherwood. bibliog il diag Pet Refiner 32:113-17 Mr; 155-8 Ap '53

Physical properties of important petrochemical materials; tabulation. Oil & Gas J 51: 173 O 20 '52

Platreater boosts recovery of aromatics. il Oil & Gas J 52:124-5+ My 11 '53

Rising process center; Texas' Golden Triangle. F. L. Resen. map Oil & Gas J 51:75 D 8 '52

Shell's petrochemical plant, a Canadian first. il Can Chem Process 37:34-5 My '53

Story of Phillips Petroleum's petrochemical expansion. J. C. Reidel. flow diags il Oil & Gas J 51:82-6+ Ja 12 '53

Styrene, another promising petrochemical. P. W. Sherwood. bibliog il Pet Processing 8: 724-6+, 902-6 My-Je '53

Success story; plenteous raw materials, assured and expanding market, right price. M. Buck. Oil & Gas J 51:83-4 Ja 19 '53

Texas Eastman co., Longview, Tex. G. Weber. il diag Oil & Gas J 51:118-19 N 24 '52

Texas petrochemical plant dedicated by Celanese. il Chem & Eng N 31:2072-3 My 18 '53

Understanding the chemistry of petrochemical reactions. L. F. Hatch. Pet Refiner 32: 143-5 My; 105-7 Je '53

Use of oxygen in the petrochemical industry. P. W. Sherwood. bibliog il Pet Refiner 32: 90-4 Je; 141-4 Jl '53

Vinyl-type monomers from petrochemicals. C. E. Schildknecht. Oil & Gas J 52:84+ Je 29 '53

Where petrochemicals come from; list of some obtainable by direct extraction from petroleum. Oil & Gas J 51:174-5 O 20 '52

Dictionaries

Do you know these words? B. H. Weil. il Pet Processing 8:553-4, 728, 1051, 1192, 1354, 1545 Ap-My, Jl-O '53 (to be cont)

PETROLEUM coke

Continuous contact coking; Lummus co. flow diag Pet Refiner 31:144-5 S '52

Cost of coking plants. W. L. Nelson. bibliog Oil & Gas J 51:141 Ja 19 '53

Delayed coking; Foster Wheeler corp. flow diag Pet Refiner 31:148-9 S '52

Delayed coking gives needed flexibility in British American's new Edmonton plant. W. J. Godsman. flow diag il Oil & Gas J 52:119-21 My 11 '53

Delayed coking; M. W. Kellogg co. flow diag Pet Refiner 31:148-9 S '52

New idea in coking. J. C. Reidel. Oil & Gas J 52:64 Je 8 '53

Outlook for coking. G. Weber. il Oil & Gas J 51:172-4 Mr 23 '53

Removal of sulfur from petroleum coke. bibliog flow diags il diag Colorado School of Mines (Golden) Quarterly 47 no 3:1-37 '52 (pa 50c)

Resin-petroleum coke material beats corrosion; Chemplas. il Can Chem Process 36: 80 N '52

Sulfur content of petroleum coke. W. L. Nelson. bibliog Oil & Gas J 51:125-6 Mr 9 '53

PETROLEUM distillation

Applied distillation. K. E. Coulter. bibliog flow sheets diags Pet Refiner 31:95-103 Ag; 145-50 O; 156-8 N; 137-8 D '52

Applying statistical quality control to crude oil distillation. A. C. Dorenfeld and others. diag Pet Refiner 31:147-50 D '52

Catalytic cracking techniques in review. M. Sittig. flow diags diags Pet Refiner 31: 263-316 bibliog(545 refs, p312-16) S '52

Combination cracking; Lummus co. flow diag Pet Refiner 31:140-1 S '52

Combination processing; British American unveils new type of thermal catalytic cracking integration. G. Weber. flow diag il Oil & Gas J 51:174-5 O 13 '52

Control of physical structure of silica-alumina catalyst. K. D. Ashley and W. B. Innes. bibliog il Ind & Eng Chem 44:2857-63 D '52

Correlation of petroleum oil distillations. J. O. Francis and M. Van Winkle. bibliog Pet Eng 25:C26+ Ap '53

Crude distillation for maximum cracking feed; Stone & Webster-Badger. flow diag Pet Refiner 31:180-1 S '52

Crude distillation for maximum lubes; Foster Wheeler corp. flow diag Pet Refiner 31:180-1 S '52

Determination of aromatic and naphthene rings in aromatics from petroleum fractions. C. C. Martin and A. Sankin. bibliog Anal Chem 25:206-14 F '53

Determination of oil carryover in steam distillation. D. K. Knight and D. Rowe. Oil & Gas J 52:105 Je 29 '53

PETROLEUM distillation—*Continued*

Distribution of nitrogen in petroleum according to basicity. F. P. Richter and others. bibliog Ind & Eng Chem 44:2601-5 N '52
Economic evaluation of vacuum flashing, delayed coking, and solvent decarbonizing. N. R. Adams and W. J. Price. Oil & Gas J 51:300-2 Mr 23 '53
Effect of charge-stock viscosity of cracking yields. W. L. Nelson. Oil & Gas J 51:167 Ap 20 '53
Equilibrium flash vaporization of petroleum fractions at reduced pressures. K. K. Okamoto and M. van Winkle. bibliog flow diag diag Ind & Eng Chem 45:429-39 F '53
Extreme flexibility features operation of Sohio's plants. G. L. Farrar. il map Oil & Gas J 51:58-60 Mr 2 '53
Fast spectrographic method for metal impurities in cracking feed. Pet Processing 8:101-2 Ja '53
Fluid catalytic cracking wax distillates from Middle East crudes. flow diags pl Inst Pet J 38:936-63 N '52
Froth and foam, the bases for tower sizing. F. A. Zenz. bibliog diags Pet Refiner 32:150-4 Ja '53
Here's the story about the new turbogrid distillation trays. il diags Pet Refiner 31:105-8 N '52
Here's what you need to know about multicomponent distillation. M. Van Winkle. bibliog diags Oil & Gas J 51:182-201 Mr 23 '53
How Michigan refiner cuts operating losses. flow chart il Oil & Gas J 51:112+ F 9 '53
How present operations compare with design basis at Carter's Billings plant. flow diags il Oil & Gas J 51:124-6+ Ap 20 '53
How surface tension affects flooding in packed columns. W. M. Newton and others. bibliog diag Pet Refiner 31:141-3 O '52
Mechanism of occurrence of metals in petroleum distillates. R. A. Woodle and W. B. Chandler, jr. diag Ind & Eng Chem 44:2591-6 N '52
New Antwerp refinery designed to process Middle East crude for prime fuel products. flow diag il Oil & Gas J 51:115-16+ Ja 19 '53
Nitrogen compounds in domestic heating oil distillates. R. W. Sauer, F. W. Melpolder and R. A. Brown. Ind & Eng Chem 44:2606-9 N '52
Reactions of hydrocarbons over cracking catalysts. E. M. Gladrow, R. W. Krebs and C. N. Kimberlin, jr. bibliog diags Ind & Eng Chem 45:142-7 Ja '53
Relationship between all common vaporization or distillation curves. W. L. Nelson. Oil & Gas J 51:149-50 Mr 16 '53
Spiral flow for better distillation. il diags Pet Processing 8:556-9 Ap '53
Summary of thermal cracking yields. W. L. Nelson. Oil & Gas J 51:187-8 O 20 '52
Synthetic fluid cracking catalysts. C. O. Brown and R. B. Wainwright. Pet Eng (Ref annual) 25:C37-8+ Jl 15 '53; Same abr. Chem Eng 59:148-9+ N '52; Same cond. Oil & Gas J 51:133-7 D 1 '52
Testing powdered cracking catalysts. P. H. Johnson and C. P. Stark. bibliog flow diag il diags Ind & Eng Chem 45:849-55 Ap '53
Thermal cracking; Universal oil products co. flow diag Pet Refiner 31:140-1 S '52
Unusual processing at Sun's Toledo refinery. G. L. Farrar. flow diag il diag Oil & Gas J 51:120-3 D 15 '52
Using radioactivity in the refinery. G. C. Gester, jr. and others. bibliog flow diag diags Pet Processing 8:550-2 Ap '53

See also
Houdry process
Oil shales—Distillation
Petroleum refining

Residuum

Determination of asphalt content of a lube crude oil residuum. F. J. Higgins. il Pet Eng 25:C65-6 Ap '53
Propane deasphalting of residua. J. G. Ditman and F. T. Mertens. il diag Pet Processing 7:1628-32 N '52
Where residuals are heading. Pet Processing 8:521-4 Ap '53

Tables, calculations, etc.

Direct nomographic method for solving flash equilibrium equations. P. M. Reilly. Pet Refiner 32:119-22 Mr '53
Enthalpy of petroleum fractions; new charts and recent experimental data. C. R. Bauer and J. F. Middleton. bibliog Pet Refiner 32:111-13 Ja '53
Fractionation calculations for existing columns. H. E. Rea, jr. and D. N. Hanson. diag Pet Refiner 31:139-43 N '52
Fractionator vapor load. R. H. Schatz and B. Williams. diag Pet Eng 25:C61-2 Ap '53
Relationship between Saybolt and true-boiling point curves. W. L. Nelson. Oil & Gas J 51:101 D 29 '52

PETROLEUM electric power association

Annual meeting, 24th, Tulsa, Oct. 1-3. Oil & Gas J 51:177 O 13 '52

PETROLEUM engineering

Electronic calculator used for reservoir engineering and research. W. A. Bruce and R. N. Bonner. il diags Pet Eng 24:B66+ D '52
Eolian sand control. R. C. Kerr and J. O. Nigra. il diags Am Assn Pet Geologists Bul 36:1541-73 bibliog(p 1572-3) Ag '52
How to reduce lease operating expenses by methods studies. R. C. Filson. diags World Oil 136:60-1+ F '53
Petroleum-engineering file on punched cards. R. K. Guthrie and others. il diags Oil & Gas J 51:62-4+ F 2 '53
Petroleum-engineering study of gas injection in the Cabin Creek field, Kanawha and Boone counties, W.Va. J. N. Magee and S. S. Taylor. bibliog 16pls U S Bur Mines Rep of Invest 4899:1-24 '52
Petroleum-engineering study of K.M.A. reservoir, southwestern part K.M.A. oil field, Wichita and Archer counties, Tex. R. P. Dobyns and others. bibliog 45pls U S Bur Mines Rep of Invest 4892:1-88 '52
Petroleum-engineering study of the Quapaw pool, Osage county, Okla. J. A. West. bibliog 27pls U S Bur Mines Rep of Invest 4913:1-39 '52
Running and pulling pipe under pressure. W. L. Long. il diag World Oil 136:111-12+ F '53

See also
Petroleum—Production methods
Petroleum—Prospecting
Petroleum—Pumping
Petroleum—Well drilling
Petroleum distillation
Petroleum pipe lines
Petroleum refineries—Equipment
Petroleum refining
Water supply for petroleum industry

Power

Closed steam system on drilling rigs cuts boiler maintenance, fuel needs. G. L. Daggs. il diag World Oil 136:132-4 Ja '53
Compounded power pumps speed drilling. il plans World Oil 136:111-13+ Mr '53
Diesel-electric rig; Standard of California. il diags Pet Eng 24:B74+ O '52
Drilling-equipment report; how hole is made on Gulf coast. W. F. Rose. il Oil & Gas J 51:177-8+ S 29 '52
How to unitize preheater. il World Oil 135:169-70 N '52
Operation of power slush pumps in compound. T. Pennington. Oil & Gas J 51:116 D 8 '52
Performance of power pumps in 700 hydraulic horsepower class. E. C. Hellums. bibliog Oil & Gas J 51:169-70+ O 20 '52; Same. Pet Eng 25:B64-6 Ja '53
Torque converters supply flexibility and economy. M. L. Cooper. il diags World Oil 135:154-5+ N '52

See also
Electricity in the petroleum industry
Petroleum—Pumping, Electric
Petroleum pipe lines—Pumping stations, Electric

Safety measures

More regulations, or better safety training? D. H. Stormont. il Oil & Gas J 51:230+ S 29 '52

PETROLEUM engineering—Safety measures— *Continued*

Safety must be sold, as well as engineered. J. H. McKenzie. Oil & Gas J 51:338-9 S 29 '52

See also Petroleum industry and trade—Safety measures

Tables, calculations, etc.

Electronic age in computing; how new engineering robots are revolutionizing tedious and time-consuming computations in the oil industry. flow plan il diags Oil & Gas J 51:57-80 F 2 '53

Equations of state. R. F. Nielsen. Oil & Gas J 51:405 Ja 26; 97 F 2; 135 F 9 '53

Flow through cavities in porous media. A. E. Scheidegger. bibliog Pet Eng 25:B 121-2+ My '53

How to calculate relative permeability of Bradford sand from capillary pressure data. M. E. Hassan and R. F. Nielsen. bibliog Pet Eng 25:B61-2 Mr '53

Learning how to use dimensional analysis. I. H. Silberberg and J. J. McKetta, jr. bibliog diags Pet Refiner 32:179-83 Ap; 147-50 My; 101-3 Je; 129-33 Jl '53

New brains for oil; electronic punched-card computers. K. B. Barnes. il Oil & Gas J 51:138-40 D 22 '52

Petroleum engineer's continuous tables. Published in monthly numbers of Petroleum engineer

Practical treatment of nonsteady-state flow problems in reservoir systems. A. T. Chatas. bibliog Pet Eng 25:B42+ My; B38+ Je '53

Use of high-speed computing machines for oil-production problems. W. A. Bruce. bibliog diag Oil & Gas J 51:260-1+ N 17 '52

Terminology

What do you know? some gems in petroleum language. R. Sneddon. Pet Eng 25:A62+ Ap '53

PETROLEUM engineers

How to meet the engineering shortage; interview with Dr E. N. Kemler. il Oil & Gas J 51:102-5+ Ja 19 '53

What management expects of engineers. F. Lindeman, jr. World Oil 136:64+ Mr '53; Same abr. Oil & Gas J 51:106-8 Ja 19 '53

PETROLEUM equipment industries

What the service company contributes to deep drilling. W. C. Erwin. il diag Pet Eng 25:B75-6 Ja '53

See also National association of oil equipment jobbers; Schlumberger well surveying corporation

PETROLEUM geologists. See Geologists, Petroleum

PETROLEUM geologists, American association of. See American association of petroleum geologists

PETROLEUM industry and trade

Buyer's market ahead! transition will not be serious or last long. Nat Pet N 44:24-5 D 3 '52

Competition, plus cooperation, in petroleum industry. J. G. Pew. Comm & Fin Chr 177:1432-3 Ap 2 '53

Domestic producers look glum. Bsns W p34 Mr 21 '53

'53 forecast; plenty of oil, warm competition. R. E. Bjorkback. Nat Pet N 45:41-2 My 6 '53

Global oil and trouble grow together. C. H. Zondag. World Oil 136:237-8 Ja; 239-40+ F 1 '53

How to present property appraisal data. R. I. Bradley. World Oil 136:68+ Ja '53

Impact of petroleum on our civilization. G. Egloff. Midwest Eng 5:3-4+ Mr '53

Industry faces numerous problems in '53; statements by oil men. Nat Pet N 45:31-4 Ja 7 '53

Industry leaders look at what's ahead. B. K. Brown and others. Oil & Gas J 51:223-4+ Ja 26 '53

Industry previews and reviews. Automotive Ind 108:52 Ja 15 '53

1953 outlook bright despite tough problems. Nat Pet N 44:12-15 D 31 '52

Oil expansion still soaring. il Chem Eng 60:207 Mr '53

Oil headlines of 1952. Oil & Gas J 51:366-7+ Ja 26 '53

Oil in next quarter-century. T. S. Petersen. Comm & Fin Chr 176:1817+ N 13 '52

Oil policy endorsed; A.P.I. outlines its attitude. Oil & Gas J 51:98 F 16 '53

Optics in the oil industry. P. D. Foote. il Opt Soc Am J 42:886-97 D '52

Outlook for 1953; major-company executives see little difficulty in meeting all oil demands this year. Oil & Gas J 51:34-5 Ja 5 '53

Outlook for petroleum industry. L. A. de Mandy. Comm & Fin Chr 176:2334 D 18 '52

Over regulation threatens private oil industry. P. C. Spencer. Comm & Fin Chr 176:1540-1 O 23 '52

Petroleum; a global industry. il maps Oil & Gas J 51:156-65 D 22 '52

Petroleum; C&EN annual review. R. W. Thomas and P. M. Arnold. il Chem & Eng N 31:32-4 Ja 5 '53

Probers examine world oil conditions and come up with praise for industry. Nat Pet N 45:17-19 F 25 '53

Round-up of world oil activities. E. Adams. il Pet Eng 25:A39-48 Mr '53

Taking the long view. M. E. Spaght. Oil Paint & Drug Rep 164:47 O 12 '53

Vertical integration in the oil industry. J. S. Cross. Harvard Bsns R 31:69-81 Jl '53

Washington award meeting. Chem & Eng N 31:868-9 Mr 2 '53

What is oil's role in the MSA program? interview with Cornelius J. Dwyer. World Oil 135:75-6+ D '52

What oil can expect from Eisenhower. B. F. Linz. Oil & Gas J 51:68-9 N 10 '52

What's ahead in '53? oil company executives optimistic. Pet Refiner 32:63-4+ Ja '53

What's ahead in '53? opinions of oil executives. World Oil 136:59-61 Ja '53

World of oil; short news items on foreign operations. D. Kliewer. il World Oil 136:252+ F '53

See also

American petroleum institute
Burmah oil company, limited
Gasoline industry
National petroleum association
Oil companies
Oil fuel industry
Petroleum supply
Phillips petroleum company
Royal Dutch-Shell group
Sinclair oil corporation
Standard oil company (New Jersey)

Accidents

Industry safety record is the best in history. World Oil 136:59 Je '53

Need for safety programs spotlighted. World Oil 135:85-6 N '52

Safe operations; a challenge to the geophysical industry. B. W. Sorge. Pet Eng 24:B 107-10+ S '52; Same. World Oil 135:160+ O '52

Accounting

Calculation of crude-oil run tickets by electronics. H. M. Spinning. Oil & Gas J 51:70-1+ F 2 '53

Trust accounting procedure in oil and gas interests. C. W. Breeding. Trusts & Estates 91:938-42 D '52

See also

Petroleum—Prospecting—Tax problems

Costs

Oil finding cost up 49 per cent. H. J. Struth. Pet Eng 25:A69+ My '53

Pumping well service costs cut by corrosion control. B. W. Bradley. bibliog World Oil 135:214+ D '52

Short cut to gasoline and cycling-plant costs. E. W. Kilgren and C. S. Miller, jr. Oil & Gas J 51:144-52+ Ap 27 '53

What new oil costs; study of 32 companies. Oil & Gas J 51:76 O 20 '52

Equipment and supplies

All-plastic tank battery. il Oil & Gas J 51:161 Ap 20 '53

Aluminum courts oil, gas markets. R. L. Hatschek. il Iron Age 171:102 Je 18 '53

PETROLEUM industry and trade—Equipment and supplies—*Continued*

Automatic welding of tool joints made practical. il Oil & Gas J 51:110-11 D 8 '52

Better equipment is better business. il Oil & Gas J 52:234-7 My 18 '53

Brine corrosion of steel vessels. C. O. Smith. diags World Oil 136:206+ My '53; Same. Pet Eng (Ref annual) 25:B62+ Jl 15 '53; Same cond. Oil & Gas J 51:230+ Ap 27 '53

Combating corrosion in oil and gas wells; compiled from papers, reports and discussions at National association of corrosion engineers annual meeting, Chicago. Oil & Gas J 51:106-9+ Ap 13 '53

Don't let corrosion eat up your profits. D. H. Carpenter. il World Oil 136:172-4 F '53

Electronic age in computing; how new engineering robots are revolutionizing tedious and time-consuming computations in the oil industry. flow plan il diags Oil & Gas J 51:57-80 F 2 '53

Equipment-conscious oil industry prepares for continued expansion on all fronts. J. C. Casper. Oil & Gas J 52:238-45 My 18 '53

Field testing can prevent flange leaks. M. R. Jones and F. N. Baldwin, jr. il diags World Oil 136:201-3 My '53

Here's a new method of inhibiting corrosive wells. J. R. Marshall. diags Oil & Gas J 51: 105 D 8 '52

Here's how to rig a unitized trap. W. L. Broussard. il diags World Oil 136:174+ Ap '53

Hot wire tool locates lost circulation. R. A. Henderson. il diag World Oil 135:187-8 O '52

How corrosion costs cut in sour wells. J. A. Caldwell. World Oil 135:200+ N '52

How to double a kelly's useful life; new welding method. R. B. Tuttle. il diags Oil & Gas J 51:148-50 O 20 '52

How to maintain your weight indicator; illustrated instructions. diag World Oil 135: 194+ O '52

Hydraulic units in the oil field. E. L. Phillips. diags Oil & Gas J 51:95-6 Mr 9 '53

It pays to be gentle with rotary hose. H. Barnard. il Oil & Gas J 51:147 My 4 '53

Jetting sump used as transfer pump. il diag World Oil 135:278 O '52

Lightweight plastic pipe is meeting specialized needs. G. M. Wilson. il World Oil 135: 270+ N '52

Mechanical aspects of corrosion inhibitor injection. D. J. Elliott. il diags World Oil 135: 190-2+ N '52

Mechanical rathole saves money, hours of work at each location. il Oil & Gas J 51: 91+ D 29 '52

New drilling equipment. C. H. Alcorn. il diag World Oil 136:152+ F 15 '53

New equipment. il Published in monthly numbers of World oil

Oil well corrosion control. E. N. Frisius. Pet Eng 25:B50+ Ap '53

Plastic pipe invades oil fields. il Pet Eng 24:B 105-6 O '52

Plastic pipe serving as surface flow lines in Alberta oil fields. il Oil & Gas J 51:131 F 9 '53

Portable heater can serve many uses on rig floor. il World Oil 136:140 Mr '53

Racks designed for fast rigging. il World Oil 135:192 O '52

Reinforced plastics in wider field use. G. Weber. il Oil & Gas J 51:85 Mr 2 '53

Research trailer equipped with engineering facilities, living quarters. il Oil & Gas J 51:132 F 9 '53

Shop-made pump aids operators. il World Oil 136:179+ Ja '53

Some answers to oil field scale and corrosion. E. N. Frisius. il World Oil 136:191-2+ Je '53

South Louisiana operators wage fight on four types of corrosion. J. T. Martin. Oil & Gas J 52:308-14+ Je 22 '53

Steel for oil to be sufficient. World Oil 136:77-8 F 15 '53

Too little, too late, or why cut off good rope. C. M. Zerr. il Pet Eng 25:B93-4+ My '53

Unitized pipe rack quickly erected, easily transported. W. F. Rose. il diag Oil & Gas J 51:204+ S 29 '52

What's the outlook for oil-country tubular goods? R. C. Zell. Oil & Gas J 51:262-3+ N 17 '52; Same. Am Pet Inst Proc 32(4): 15-20; Discussion. 20-1 '52

Winter's just around the corner, so get your equipment ready now! il Oil & Gas J 51: 151-2+ N 10 '52

See also

Derricks, Oil well
Drills, Oil Well
Motor trucks in the petroleum industry
Petroleum—Well casing
Petroleum engineering—Power
Petroleum equipment industries
Petroleum industry and trade—Exhibitions

Exhibitions

Directory of exhibitor personnel, International petroleum exposition; booth locations, Tulsa addresses. Pet Eng 25:supp 1-23, E 14-15+ My '53

Directory of exhibitors and exhibits; floor plan and list of exhibitors at the 30th anniversary International petroleum exposition, Tulsa, May 14-23. il Oil & Gas J 52:256+, supp My 18 '53; World Oil 136: 302-6+ My '53

Huge show under way. il Oil & Gas J 52: 208-14 My 18; 126-42 My 25 '53

Oil industry shows its muscles in Tulsa; International petroleum exposition. il Bsns W p32-4 My 23 '53

Rare sights await visitor at 30th International petroleum show; with schedule of events. Pet Eng 25:A59-62+ My '53

Story of geology; Hall of science at the International petroleum exposition. P. C. Ingalls. Oil & Gas J 52:483 My 18 '53

This is the oil show. il World Oil 136:42-4 Je '53

Tulsa is ready for the oil show. il World Oil 136:81-3 My '53

Tulsa is ready to house 25,000 visitors to IPE. B. A. Myers. World Oil 136:295+ F 15 '53

Finance

Future looks good say company reports. E. Adams. il Pet Eng 25:A95+ My '53

Investments in oil industry; five types analyzed for trust suitability. R. M. Huff and T. H. Hammett. il Trusts & Estates 91: 908-12 D '52

1953 expenditures to total $4 billion. K. B. Barnes. il Oil & Gas J 51:168-70 Ja 26 '53

Notes for oil operators who need a loan. B. A. Cunningham, jr. Pet Eng 25:A43-6 Ap '53

Fires and fire protection

Chemical weed killers aid good housekeeping. C. W. Scamman. il map Pet Eng 25: A59-60+ Mr '53

Dry chemical for oil well fires. Safety Maint & Prod 106:56 Jl '53

Fading menaces in the oil industry. G. F. Prussing. il Nat Safety N 68:20-2+ S '53

Fire safety in petroleum operations. M. W. Braidech. Pet Eng 24:A72+ O '52

Industry should boast of great fire record. F. G. Wilson. il Pet Refiner 32:209-10+ My '53

See also

Petroleum pipe lines—Pumping stations—Fires and fire protection
Petroleum refineries—Fires and fire protection

Insurance aspects

Compensation laws under fire; drilling contractors fight higher insurance rates in Texas. A. Reese. World Oil 136:55-7+ F '53; Same cond. Pet Refiner 32:75-6+ F '53

International aspects

Dollar allocations cut for American suppliers of oil into France. Oil & Gas J 51:82 Mr 9 '53

Global oil and trouble grow together. C. H. Zondag. World Oil 136:237-8 Ja '53

Oil companies enter pact to furnish foreign data. Oil Paint & Drug Rep 164:7 Jl 27 '53

Oil industry heads into a new kind of market. Bsns W p70-2+ Je 27 '53

Oil vs. politics. M. W. Ball. World Oil 136: 67-9 F '53

PETROLEUM industry and trade—International aspects—*Continued*

Price effects abroad. Oil & Gas J 52:142 Je 22 '53

Resources enigma; nations must reach agreements to relieve serious problem posed by oversupply of crude. J. T. Duce. Oil & Gas J 51:66-7 Ja 19 '53

That sinister oil cartel. Fortune 46:113-14 O '52

Troubled oil; new storm brewing over rising imports. R. M. Bleiberg. Barron's 33:5 F 16 '53

Will the growth of Middle East oil revive international compact talk? R. L. Dudley and R. E. Spann. World Oil 136:80-2+ F 15 '53; Same. Pet Refiner 32:77-8+ Mr '53

Will world crude prices take drop? R. E. Spann. Pet Refiner 32:184+ Je '53

See also

Petroleum industry and trade—Trust investigation

Petroleum industry and trade—Iran

Maps

Phillips' new map room is unique. il Oil & Gas J 51:118 Ap 6 '53

Public relations

Case history of a good public relations job. Pet Eng 25:D27-8 Ap '53

Contractor and the landowner. C. A. Lingo. Pet Eng 25:D36+ Ap '53

How Chevron helps kids drill for oil; model kits supplied to schools. A. McNay. il Sales Management 69:134+ O 15 '52

Marketers sweep Go-Devil awards. Nat Pet N 44:27-8 D 24 '52

OIIC seeks to spur jobber activity; district group OK's campaign tools. il Nat Pet N 45:59-61 F 25 '53

OIIC wants more jobber support; notes progress made in past year. F. Breese. Nat Pet N 44:26-7 N 12 '52

Oil's progress outlined; 5th annual Oil progress week, Oct. 12-18. il Oil & Gas J 51:77-8 O 20 '52; Nat Pet N 44:27-9 O 22 '52

Outlook is improving; surveys show O.I.I.C. is moving ahead in gaining public understanding of oil. Oil & Gas J 51:245 N 17 '52

Public relations are needed to educate the consumer. S. K. Smith. Nat Pet N 45:26 F 25 '53

7,000 hear jobber's story of oil progress; Noel, Mo., grass roots celebration of Oil progress week. L. Castle. il Nat Pet N 44:33-5 O 15 '52

Spreading oil on troubled public relations. Pub Util 51:51-2 Ja 1 '53

Radio communication

Cost-cutting radio: Dowell finds two-way fm units in stations, trucks, and cars provide cheaper, more efficient operations. C. M. Davis. il map Oil & Gas J 51:36-7 Mr 2 '53

Microwave milestone; Transcontinental formally accepts 1,840-mile system from General Electric. Oil & Gas J 51:67 Ja 19 '53

Microwave on a 1000-mile pipe line system. P. J. Brewster. il diag Pet Eng 25:D77+ My '53

Microwaves serve pipeline communications needs; Mid-Valley pipeline co. C. B. Lester and C. A. Compton. il map diag Elec World 138:98-100 O 6 '52

Payout in one year indicated for refinery's small radio network. G. Weber. il Oil & Gas J 51:123+ Ja 19 '53

Petroleum radio service continues uptrend. Electronics 26:6+ Ja '53

Story of Platte pipe line; communication facilities. A. R. Heidebrecht. il Oil & Gas J 51:119+ D 1 '52; Same. Pet Eng D31+ D '52

Two-way radio communication speeds valve replacements on main line. W. J. Giddings. map Oil & Gas J 51:269 O 13 '52

Regulation

See also

Petroleum—Unit operation of pools

Safety measures

Be safe though small. G. Oliver. World Oil 136:140+ Ja '53

Boats for drilling personnel fitted with warning devices as a guard against explosions. il Oil & Gas J 52:127 Je 8 '53

Job talk promotes safety; panel discussion at the 8th annual drilling industry safety clinic. World Oil 136:118-20+ Je '53

Let's talk about safety! F. G. Wilson. World Oil 136:60-1 Mr '53

Safe operations; a challenge to the geophysical industry. B. W. Sorge. Pet Eng 24:B 107-10+ S '52; Same. World Oil 135:160+ O '52

Safety saves money in drilling. K. R. Welsh. World Oil 136:140+ F '53

Shell adopts color scheme for rigs. Oil & Gas J 51:94 D 29 '52

What oil companies want in safety. A. E. Chester. il Oil & Gas J 51:94-5+ My 4 '53

What the oil companies want in safety from the drilling contractor. A. E. Chester. Oil & Gas J 51:80 Ap 13 '53

Securities

Bulls still love them. Bsns W p 121-2 My 2 '53

Funds accelerate buying of oils. H. A. Long. Comm & Fin Chr 177:673+ F 12 '53

Investment audit of Standard Oil of New Jersey. S. Devlin. Mag of Wall St 91:472-4+ Ja 24 '53

Oil industry in a changing economy; with comparative earnings and dividend records and statistics of leading companies. G. L. Merton. Mag of Wall St 92:96-9+ Ap 18 '53

Oils; slower growth trend cools investor interest. E. N. Morse. Barron's 32:9 N 10 '52

Petroleum; strong growth factors inherent in current balance. H. Bassett. il Trusts & Estates 92:200-3 Mr '53

Prairie petroleum view from the $2 window. I. U. Cobleigh. Comm & Fin Chr 177:2744 Je 25 '53

Rally finds oils losing star position. Bsns W p74 D 6 '52

Statistics

Annual census of the rotary-drilling industry. maps Oil & Gas J 51:170-1 S 29 '52

Annual review and forecast. Oil & Gas J 51:189-220 Ja 26 '53

Exports and imports. World Oil 136:66-7 F 15 '53

Facts and figures of the drilling industry. K. B. Barnes. Oil & Gas J 51:162-6 S 29 '52

Free-world demand nears 12,000,000 bbl. daily. Oil & Gas J 51:187-8 D 22 '52

Industry licks materials shortages; chalks up record operations in 1952. Nat Pet N 45:8-9 Ja 7 '53

PAD forecast sees 4.2 per cent demand hike for all oils. Nat Pet N 45:15-16 Ja 21 '53

Petroleum and products, Nov.-Dec. 1951-Jan.-Nov. 1952. Survey of Cur Bsns 33:S35-6 Ja '53 [cont monthly]

Petroleum demand. L. J. Logan. World Oil 136:54+ F 15 '53

Record year in oil; A.P.I. year-end report. Oil & Gas J 51:142 D 22 '52

Salient annual statistics of the United States; tabulation. World Oil 136:52-3 F 15 '53

U.S. forecasts 3.8 per cent rise in demand for all oils. Nat Pet N 45:29 Ja 7 '53

What the company reports show; with tabulations, domestic refinery runs and crude oil production of U.S. companies in 1952; domestic crude oil production of U.S. companies in 1952 and wells and acreage held at end of year; number of wells completed in 1952 by U.S. companies. L. J. Logan. World Oil 136:86-8+ My '53

World crude oil production, by countries, by years, 1856-1952; tabulations. World Oil 136: 270+ F 15 '53

World crude production continues steady climb. World Oil 136:266-8+ F 15 '53

World production rises 4.8 per cent in 1952. D. M. Duff. Oil & Gas J 51:176-8 D 22 '52

World supply and demand increases 4.8 percent. World Oil 136:261-2 F 15 '53

PETROLEUM industry and trade—*Continued*

Taxation

Income tax encourages oil payments. E. E. Tomlins. World Oil 136:55-7 Mr '53

You can save money on taxes. H. O. Reyburn. World Oil 136:64+ Ja '53

See also

Petroleum—Prospecting—Tax problems

Telephone

Communications evolution; scattered operations of Union of California are linked by effective automatic telephone system. R. Sneddon. il Pet Eng 25:A82+ F '53

Trust investigation

Aim of the cartel case. B. F. Linz. Oil & Gas J 51:81 N 10 '52

Aramco marketing policies now seen main target of Department of justice cartel barrage. Nat Pet N 44:32-3 N 5 '52

Bad news for oil; Administration's decision to press cartel charges against oil companies. Bsns W p29 Ap 18 '53

Battle over site of cartel hearing delays probe action until Oct. 15. Nat Pet N 44:24-5 O 8 '52

Britain's no on releasing records deals blow to Department of justice in cartel probe. Nat Pet N 44:30 D 17 '52

Cartel case appealed; companies ask Supreme court to review question of change of venue. B. F. Linz. Oil & Gas J 51:75-6 N 3 '52

Cartel case opens. Oil & Gas J 51:78 O 6 '52

Cartel deal rejected. B. F Linz. Oil & Gas J 51:56-7 Ja 19 '53

Cartel probe deferred. Oil & Gas J 51:143-4 D 22 '52

Cartel probe delayed to Jan. 28; oil companies balk at U.S. deal. Nat Pet N 45:24 Ja 14 '53

Cartel probe ends. Oil & Gas J 51:79 My 4 '53

Civil suit planned; antitrust complaint will be filed against companies involved in FTC cartel charges. B. F. Linz. Oil & Gas J 51:86 Ap 13 '53

Comity and the oil companies. Economist 165:556-7 N 22 '52

Companies lose round; Appellate court denies request to move grand jury probe out of Washington. B. F. Linz. Oil & Gas J 51:77-8 O 27 '52

Companies spring surprise cartel move; getting records own task, U.S. admits. Nat Pet N 45:24 Ja 7 '53

Congress cartel probes mark time. Nat Pet N 44:38 N 26 '52

Court grants Department of justice motion to postpone grand jury probe in cartel case. Nat Pet N 45:20 Ja 28 '53

Court ruling contested; five firms accused of forming oil cartel appeal Kirkland decision. B. F. Linz. Oil & Gas J 51:87 O 20 '52

FTC seeks support; Spingarn flays campaign of misrepresentation against oil-cartel report. Oil & Gas J 51:38-9 Ja 5 '53

Fight to block oil cartel hearing in Capital taken to Supreme court. Nat Pet N 44:20 O 29 '52

Fight to shift site of cartel hearing likely to reach high court. Nat Pet N 44:19-20 O 22 '52

House probers learn FTC put pressure on Senate for cartel investigation. Nat Pet N 45:18 Mr 11 '53

In answer to FTC's armchair adventurers. J. T. Duce. Nat Pet N 44:40-2 O 1 '52

Investigation put off; judge grants 90-day delay of grand jury proceedings in oil cartel case. B. F. Linz. Oil & Gas J 51:34-5 F 2 '53

Investigation stalled. Oil & Gas J 51:171-2 O 13 '52

Lawmakers weighing own investigation of U.S. actions in oil cartel case. Nat Pet N 45:30 Ja 21 '53

No clear-cut victory for either side so far in cartel proceedings. Nat Pet N 44:27-8 N 12 '52

Oil attack disavowed. Oil & Gas J 51:179 Ja 26 '53

Oil case resumed. Oil & Gas J 51:74 D 8 '52

Oil companies, Department of justice to clash in court over getting foreign cartel records. Nat Pet N 44:28-9 D 10 '52

Oil companies warn of threat to U.S. in seeking new site for cartel case; Brown rips cartel report bungling. Nat Pet N 44:36-7 O 15 '52

Oil's attackers meet; oil cartel investigation. Oil & Gas J 51:83 N 24 '52

Past decisions by courts show Department of justice on thin ice in oil cartel case. A. R. Patla. Nat Pet N 44:11 O 1 '52

Petroleum policy must be revamped, US told. Oil Paint & Drug Rep 162:3+ D 8 '52

Six oil companies still resisting cartel subpoenas; case marks time. Nat Pet N 44:21 S 24 '52

Sparkman, FTC huddle on cartel hearings. Nat Pet N 44:36 N 19 '52

Subpoenas limited in grand jury investigation of FTC's cartel accusations. B. F. Linz. Oil & Gas J 51:248-9 N 17 '52

Texaco washes hands of Department of justice deal; ruling on motions set for Oct. 1. Nat Pet N 44:37-8 O 1 '52

Trust busters' last battle. Bsns W p29 Ja 17 '53

U.S. Chamber voices protest at probe of oil cartel. Nat Pet N 44:20 D 3 '52

U.S. to pursue oil cartel question. Nat Pet N 45:37 Ap 15 '53

What's behind cartel charges? C. H. Zondag. World Oil 135:78+ N '52

See also

Petroleum industry and trade—United States—Anti-trust suit

War problems

See also

Petroleum administration for defense

Alaska

Phillips enters Alaska; will drill 12 tests on million-acre lease block. B. F. Linz. Oil & Gas J 51:94 F 16 '53

Alberta

Alberta, 1947-1952; chart. World Oil 135:309 D '52

Canadian D3 play is developing fast. G. M. Wilson. il map World Oil 136:286-7 My '53

Deep well pumping in Canada. G. R. Manson and H. G. Bagnall. Pet Eng 25:B40+ F '53

Operations in the Leduc field today. J. Menneer. il map diags Pet Eng 25:B47-50+ F '53

Reef area promising; Canadians optimistic over prospects of trend lying south of Leduc. H. D. Ralph. map Oil & Gas J 51:73-4 O 6 '52

Tests prove discovery at Sturgeon lake. G. M. Wilson. map World Oil 136:246+ F '53

Algeria

Oil in Algeria. J. B. Eby. il map World Oil 135:317-18+ N '52

Arabia

Big field named. Oil & Gas J 51:86 D 8 '52

Field processing of Arabian crude oil. R. A. Boettcher. flow diags il Oil & Gas J 51:165-9+ D 22 '52

Neutral zone strike; Saudi Arabia-Kuwait neutral zone. Oil & Gas J 51:77+ Mr 30 '53

Oil company sanitation engineers change Arabia's age-old conditions. il Eng N 150:80+ Ap 16 '53

Saudi Arabia; transportation in oil operations. E. J. Zinszer. il Pet Eng 24:A60+ N '52

Second well started. Oil & Gas J 51:85 My 4 '53

Uthmaniyah producing. Oil & Gas J 51:176 Mr 23 '53

See also

Arabian American oil company

PETROLEUM industry and trade—*Continued*

Argentina

Argentine output up 17.6 per cent during period from 1946 through 1951. Oil & Gas J 51:76 D 1 '52

Is Argentina calling for private capital? World Oil 136:80 My '53

Australia

Australia is beating the bushes for oil. J. L. Marshall. il map World Oil 136:282+ Ap '53

Is there any oil in the fifth continent? E. G. Nottes. bibliog il map Pet Eng 25: A48+ Ap '53

Austria

Austrian oil a victim of tensions. G. G. Rosu. World Oil 136:242+ Ja '53

Borneo, British

Drilling off Borneo; Royal Dutch-Shell readies platform for first major test in South China sea. D. M. Duff. il map Oil & Gas J 51:86 N 10 '52

Brazil

Joint government-industry petroleum setup discussed by Congress. F. Leal. il maps Oil & Gas J 51:85-6 D 29 '52

California

Does deep production pay? W. T. Rintoul. il Pet Eng 25:B91-2 Ja '53

Does oil withdrawal cause earthquakes? remedial measures to overcome subsidence in California may increase recovery. R. Sneddon. il map plan Pet Eng 24:A59-60+ O '52

Earthquake damage in Kern county. W. T. Rintoul. il Pet Eng 25:A74+ F '53

Heavy-crude dilemma. D. H. Stormont. Oil & Gas J 51:69-70 Ap 6 '53

Imports boost slated. R. G. Follis. Oil & Gas J 51:108 Ap 20 '53

Long Beach's oil; how to get it? D. H. Stormont. map Oil & Gas J 52:42-3 Je 29 '53

Oversupply feared. D. H. Stormont. Oil & Gas J 52:143 Je 22 '53

Pilot flood approved in Wilmington field. D. H. Stormont. il Oil & Gas J 51:82+ O 27 '52

Richfield innovations at Wilmington field. D. H. Stormont. il diag Oil & Gas J 51: 104-5+ O 6 '52

Shell hikes output; displaces Standard as firm with biggest company-operated crude production in California. D. H. Stormont. Oil & Gas J 51:107-8 Ap 20 '53

Stay-at-home rig on outskirts of Los Angeles. D. H. Stormont. il Oil & Gas J 51: 107 O 27 '52

Strikes prove prolific. D. H. Stormont. Oil & Gas J 51:40 D 29 '52

Canada

Br-r-r-rother, it's cold outside! prospecting in Canada's muskegs. J. Joseph. il World Oil 136:286-8 Ap '53

Building for Canada's oil. S. M. Blair. Comm & Fin Chr 177:4+ sec 2 Je 25 '53

Canada in 1952. G. M. Wilson. il map World Oil 135:283-8 D '52

Canada looks ahead. F. K. Beach. map Pet Eng 25:A53+ F '53

Canada sets records for 1952. L. F. Frantz. il Pet Eng 25:B57-8 F '53

Canada's oil plans. H. D. Ralph. Oil & Gas J 51:74-5 S 22 '52

Canadian exploration activity is widespread. J. F. Caley. il map Oil & Gas J 51:207-8+ D 22 '52

Canadian oil industry continues to expand. E. C. Manning. Pet Eng 25:A72-3 F '53

Canadian oil panorama. J. Menner. il maps Pet Eng 24:A45-50+ O '52

Canadian refineries are moving toward meeting record domestic demand. G. Weber. il Oil & Gas J 51:218-20+ D 22 '52

Discovery forecast. W. D. M. Mackenzie. Oil & Gas J 51:61 Ja 19 '53

Drilling operations continue the year round in Canada. V. H. Hunter. il World Oil 136:160+ My '53

Efficiency curbs Canadian drilling costs. R. L. Binning and B. H. Corey. il World Oil 136:286+ F 15 '53

Heavy crude; it's a small but coming contender in Canada's oil boom. B. Ravits. Barron's 32:9-10 O 13 '52

How to enter oil business in Canada. D. C. Langford. il World Oil 135:312-14+ D '52

How to get Canadian oil and gas leases. I. S. Burn. il maps diag World Oil 135: 318+ D '52

New look at Canada. H. D. Ralph. map Oil & Gas J 51:148-9 S 29 '52

New refinery on stream. E. A. Smith and F. J. Maslyk. il diag Can Chem Process 36:44+ S '52

Oil production and transportation. S. M. Blair and I. G. Wahn. maps Pet Eng 25:D29-30+ F '53; Same. Am Pet Inst Proc 32(5):53-61 '52

Operation deep freeze; low temperatures rugged terrain make work in western Canada difficult. il Oil & Gas J 51:83-4 F 2 '53

Petrofina in Canada; Canadian fina refineries ltd. Can Chem Process 37:16 Ag '53

Petroleum refining capacity in Canada. Can Chem Process 37:28 Je 1 '53

Pipeline to profits. Can Chem Process 37:12+ My '53

Prairie oil and chemicals. Economist 166: 534+ F 21 '53

Prairie petroleum view from the $2 window. I. U. Cobleigh. Comm & Fin Chr 177:2744 Je 25 '53

$750,000 a day shapes Canadian oil future. R. H. C. Harrison. il World Oil 135:308+ D '52

Some northern lights on oil development. R. A. Hemstock. il map diag Pet Eng 25:A41-4 F '53

Texas being nudged by West as Southwestern oil supplier. Can Chem Process 37:13-14 Mr '53

Chile

Chile. maps Pet Eng 25:A53 Mr '53

Colombia

Colombia; the gem of the future? V. Oppenheim. bibliog map World Oil 135:331-2+ O '52

New Totumal well. Oil & Gas J 51:110 F 16 '53

Costa Rica

First air survey made for Costa Rica. il maps Pet Eng 24:B 12+ O '52

Europe

Capacity building up; European refinery expansion progressing. Oil & Gas J 52:52-3 Je 29 '53

Western Europe opens arms to private U.S. investments. World Oil 136:242 F '53

What's the petroleum refining picture in Europe today? O. E. Bransky. il Oil & Gas J 51:80-2 D 29 '52

Florida

Florida, sunniland for oil. I. U. Cobleigh. Comm & Fin Chr 178:7 Jl 2 '53

Is there oil in Florida? E. C. Darbois. Comm & Fin Chr 178:263 Jl 23 '53

New development; circulating artesian water for drilling cavernous limestones; Key Largo in the south Florida basin. J. A. Kornfeld. il Oil & Gas J 52:258+ Je 22 '53

France

French petroleum industry. Chem Age (Lond) 67:503-4 O 11 '52

Germany

Germany's hydrogenation industry today. P. W. Sherwood. bibliog flow sheet il Pet Refiner 31:93-8 N '52

Increasing oil activities in Germany. A. M. Stahmer. il maps Pet Eng 25:B7-10 Mr '53

35 per cent increase in German oil processing. Chem & Eng N 31:354-5 Ja 26 '53

Western Germany's production up 25 per cent. A. M. Stahmer. il map Oil & Gas J 51:200+ D 22 '52

Great Britain

Grangemouth produces high-grade motor fuel. il Oil & Gas J 51:68+ D 29 '52

Refinery rewards. Economist 166:902 Mr 28 '53

PETROLEUM industry and trade—*Continued*

Gulf Coast region

Gulf Coast operators, manufacturing suppliers and universities contribute to expanded research. C. M. Davis. il Oil & Gas J 52:265-8 Je 22 '53
How drilling mud affects Wilcox drilling and completions. A. Barry and others. il Oil & Gas J 51:273-5 S 29 '52
Offshore exploration on the Gulf coast. S. M. Peña. il Oil & Gas J 52:172-3 Je 22 '53
Oil from the tidelands. il Manuf Rec 122: 36-7 Jl '53
Picture-touring U.S. oil's liveliest domain. Oil & Gas J 52:159-69 Je 22 '53
When the big winds blow; Weather Bureau hurricane service. A. Reese and R. E. Spann. il map diag Pet Refiner 32:72-4+ Je; 211-12+ Jl '53; World Oil 136:48-52 Je; 137:68-70 Jl '53

Hungary

Report from Hungary. Oil & Gas J 52:79 Je 8 '53

India

Oil refineries near Bombay. Engineer 194: 364 S 12 '52

Indonesia

Guarantees asked; Royal Dutch-Shell wary on resuming Indonesian work. Oil & Gas J 51:88 My 4 '53
So this is Indonesia. R. E. Spann. il World Oil 135:336-9 O '52

Iran

Aden case argued; Iran sure of victory; new plan. Oil & Gas J 51:150-1 D 22 '52
British win Aden case. D. M. Duff. Oil & Gas J 51:68-9 Ja 19 '53
Dissension in Iran; supervisory council of government firm breaks up over assignment of British-trained Iranian as Abadan manager. Oil & Gas J 51:46 Ja 5 '53
Hope for settlement; British and American officials show guarded optimism. D. M. Duff. Oil & Gas J 51:70 Ja 12 '53
International law for the Rose Mary. Economist 166:134 Ja 17 '53
Iran breaks relations. Oil & Gas J 51:92 O 20 '52
Iran does about-face. D. M. Duff. Oil & Gas J 51:180 O 13 '52
Iran marks time. D. M. Duff. Oil & Gas J 51:94 F 9 '53
Iran offers bargain. D. M. Duff. Oil & Gas J 51:85 My 4 '53
Iran sells to Japan. D. M. Duff. Oil & Gas J 51:114 Ap 20 '53
Iran supplies some answers. World Oil 136:72 Je '53
Iranian break final. Oil & Gas J 51:87-8 O 27 '52
Iranian oil moving. Oil & Gas J 51:176-7 Mr 23; 137 Ap 27 '53
Iranian shipments low. D. M. Duff. Oil & Gas J 52:76 Je 8 '53
Iranian terms studied. Oil & Gas J 51:83 O 6 '52
Italian tanker docks at port near Venice; Anglo-Iranian obtains court order impounding cargo of Iranian fuel oil. Oil & Gas J 51:134 F 23 '53
Latest efforts fail to settle Iran issues. World Oil 135:335 O '52
Negotiations over; Britain, U.S. to abandon efforts for Iranian pact. Oil & Gas J 51: 87 N 10 '52
New policy on Iran; State department announces hands-off attitude toward purchase of nationalized oil; Iranian move disliked. Oil & Gas J 51:86+ D 15 '52
New proposal readied; United States prepares to make another offer to arbitrate Britain's claims. Oil & Gas J 51:42+ D 29 '52
Oil moves from Iran. Oil & Gas J 51:183-4 Ja 26 '53
Report on Iran. Oil & Gas J 51:155-7 S 29 '52
Riot in Iran; Mossadegh victory deemed blow to oil settlement. Oil & Gas J 51:84 Mr 9 '53
Settlement still remote. D. M. Duff. Oil & Gas J 51:86+ S 22 '52
State department, five U.S. firms discussing Iranian settlement. il World Oil 136:85-6 F 15 '53; Same. Pet Refiner 32:84+ Mr '53
Tankers head for Abadan; two more Italian ships will attempt movement of Iranian crude. Oil & Gas J 51:108 F 16 '53
U.S. policy awaited. D. M. Duff. Oil & Gas J 51:47-8 F 2 '53
See also
Anglo-Iranian oil company, ltd.

Iraq

Ain Zalah producing. map Oil & Gas J 51:86 D 8 '52

Italy

Italian surplus. D. M. Duff. Oil & Gas J 51:93 Ap 13 '53
Italy's new Condor refinery will operate on Middle East crude oil. il Oil & Gas J 51: 88-9 D 29 '52

Japan

Damaged plant sought; Shell, Mitsubishi Petroleum compete with Japanese firms to buy former Japanese navy refinery at Yokkaichi. Oil & Gas J 51:95 O 20 '52
Japan. L. W. Stach. il Pet Eng 25:A55+ Mr '53

Kansas

Water flooding, Fankhauser unit Greenwood county, Kansas. J. D. Walters. maps Pet Eng (Ref annual) 25:B38+ Jl 15 '53; Same abr. Oil & Gas J 51:96-7+ My 4 '53
Water flooding in Kansas' Golden Lane. il map Oil & Gas J 51:104-10 N 3 '52
Water floods pay off in Greenwood county, Kan. K. B. Barnes. il Oil & Gas J 51: 83-4 O 20 '52

Kentucky

Flood popularity up in the Kentucky area. Oil & Gas J 52:51 Je 29 '53

Kuwait

Neutral zone strike; Saudi Arabia-Kuwait neutral zone. Oil & Gas J 51:77+ Mr 30 '53

Louisiana

Bayou Choctaw salt dome producing 3,000 bbl. daily, after 22 years. D. D. Utterback. il diag Oil & Gas J 52:277-81 Je 22 '53
Deepest oil field. il Oil & Gas J 51:56-7 Mr 30 '53
57 million pounds of explosives; seismograph crew in Terrebonne parish, Louisiana. D. Kliewer. il World Oil 136:45-7 Je '53
Louisiana offshore production. F. L. Resen. il map Oil & Gas J 52:222-4+ Je 22 '53
Oil industry's progress in Louisiana. H. J. Voorhies. il maps Elec Eng 72:104-7 F '53
Piling platforms solve drilling in coastal swamp. J. A. Kornfeld. il maps plan Oil & Gas J 51:210+ S 29 '52

Mexico

Imports for Mexico? Oil & Gas J 51:87-8 N 24 '52
Modern refining in Mexico. D. P. Thornton, jr. il maps diags Pet Processing 8:217-26, 373-6, 544-9, 710-12, 874-7 F-Je '53
New discoveries point up significance of Ezequiel Ordóñez. A. Morán. map Oil & Gas J 51:111-12 Ja 12 '53
What does Pemex' new discovery mean? map World Oil 135:346+ O '52

Montana

Drilling problems in the Williston basin. T. Dougherty. il World Oil 136:148+ Ap '53
East Poplar expanding swiftly; may cover 8,000 acres. J. A. Kornfeld. il diag Oil & Gas J 51:102-4+ D 15 '52
How they're whipping Williston's winter. L. W. Sveen. il World Oil 136:120-2 F '53

Morocco

Morocco, a country on the threshold of greater wealth. J. B. Eby. il maps diags World Oil 136:235-8 F '53

Near East

Royalty pacts increase oil flow in Middle East. R. E. Spann. World Oil 135:330 N '52
What our readers say about Middle-East oil. World Oil 136:61 Ap '53

PETROLEUM industry and trade—*Continued*

Netherlands

Schoonebeen slump, output of western Europe's biggest field due to fall off. Oil & Gas J 51:69 Ja 19 '53

New Mexico

First-class prospects in Permian basin are getting harder to find. H. L. Swords. Oil & Gas J 51:109-10 Ja 12 '53

How the New Mexico oil and gas engineering committee performs its functions. R. F. Carlson. Oil & Gas J 52:81-2 Je 29 '53

Lea county leads Permian basin activity. J. A. Kornfeld. il map Oil & Gas J 51:61-2+ Mr 2 '53

West Texas, New Mexico section. il maps diags World Oil 135:101-2+ O '52

North Dakota

Drilling problems in the Williston basin. T. Dougherty. il World Oil 136:148+ Ap '53

How they're whipping Williston's winter. L. W. Sveen. il World Oil 136:120-2 F '53

North Dakota outlook. Oil & Gas J 51:65 Ja 12 '53

Oil; Williston boom calms down. K. W. Bennett. il Iron Age 171:67-8 My 28 '53

Oklahoma

Acidizing made the Ringwood pool. H. E. Lillibridge. map Pet Eng 24:B57+ N '52

Drilling and completing in East Oconee field. J. A. Kornfeld. maps Oil & Gas J 51:98+ Ja 12 '53

Kingdoms of oil; Osage county, Okla. C. F. Mantooth. il World Oil 136:247-8+ Je '53

Operators solving offshore problems in Oklahoma field. H. E. Bale. il World Oil 135:148-50 N '52

Revived activity at Oklahoma City. J. C. McCaslin. map Oil & Gas J 51:333 S 29 '52

Water flooding in Nowata county, Oklahoma oil fields. J. P. Powell and J. L. Eakin. bibliog 16pls U S Bur Mines Rep of Invest 4896:1-49 '52

Pacific coast

Pacific Northwest shaping up as important refining center. G. M. Wilson. Pet Refiner 32:87-8 Ap '53

West coast becoming broader market. World Oil 135:68 N '52

Pakistan

Production rate in Pakistan indicates increase for 1952. World Oil 135:336 N '52

Peru

Concession headache; Peruvian government trying to unravel confused situation. Oil & Gas J 51:90 D 15 '52

Concessions offered. Oil & Gas J 51:88-9 O 27 '52

Concessions unraveled; Peruvian government completes auction of 110 parcels. Oil & Gas J 51:83 Mr 9 '53

Ganso Azul sold; Texas Gulf Producing acquires majority interest. map Oil & Gas J 51:117 Ap 20 '53

Peru perks up; applications for concessions mount after new law eases restrictions. J. E. Rassmuss. il map World Oil 136:275-7+ Ap '53

Peruvian tract sought; application for Santiago basin concession by The Texas co. D. M. Duff. Oil & Gas J 51:138 Ap 27 '53

Rush for concessions. Oil & Gas J 51:253 N 17 '52

There's oil in Peru's Montana. J. E. Rasmuss. bibliog il World Oil 136:288-9+ My '53

This is Talara; Peru's leading oil town. il World Oil 136:281-3 My '53

Rocky Mountain region

New drilling-analysis service aids operators in Rocky Mountain area. E. A. Polumbus, jr. map Oil & Gas J 51:193+ S 29 '52

Russia

Can Russia produce 600 million barrels of oil annually by 1955? M. N. Jurin. map World Oil 136:236+ Mr '53

Russia raises goal. Oil & Gas J 51:89 O 27 '52

Russian oil report. Oil & Gas J 51:135 F 23 '53

Somaliland, Italian

Concession shared; Amerada, Conoco, Ohio each acquire one-sixth of Sinclair concession in Italian Somaliland. Oil & Gas J 51:93 O 20 '52

Somali terms revealed; Sinclair Somal granted right to explore. D. M. Duff. map Oil & Gas J 51:252 N 17 '52

Sumatra

How Minas crude is produced. il map Oil & Gas J 51:50-1+ D 29 '52

Sweden

Sweden raises oil consumption, is chief per capita user in Europe. For Comm W 50:11+ Jl 27 '53

Swedish underground storage method proves successful. il World Oil 136:240 Mr '53

Texas

Before 40,000, after 105,000 barrels monthly; hydraulic formation fracturing of the Olmos sands at Big Foot field, Texas. J. C. McCaslin. il maps Oil & Gas J 51:70-1 Mr 2 '53

Big flood planned; San Andres reservoir of Goldsmith field. Oil & Gas J 51:81 O 20 '52

Can the industry recover hidden Spraberry hoard? C. J. Deegan. diags World Oil 135:73-5 N '52

Companies answering Texas commission call crude, product stocks excessive. Nat Pet N 45:22+ F 18 '53

Current drilling practices in west Texas. D. Johnston and W. R. Johnson. il World Oil 136:141-3+ Ap; 180+ My '53; Same. Pet Eng 25:B73+ Ap '53; Same cond. Oil & Gas J 51:337-8+ Mr 23 '53

Deep drilling in Wilshire Ellenburger field. R. F. Carlson. il map Oil & Gas J 51:183-4+ S 29 '52

Fast drilling in east Texas basin. J. A. Kornfeld. Oil & Gas J 51:137 Ja 19 '53

First-class prospects in Permian basin are getting harder to find. H. L. Swords. Oil & Gas J 51:109-10 Ja 12 '53

Gulf sets new west Texas depth record. C. Hoot. il map Oil & Gas J 52:485+ My 18 '53

Imports hearing set. Oil & Gas J 51:31 Ja 5 '53

Inland-water drilling on the Texas Gulf coast. C. G. Glasscock, jr. il Oil & Gas J 52:174-5+ Je 22 '53

Look at gas-injection projects in west Texas. P. E. Fletcher. Oil & Gas J 52:230-1+ My 25 '53

Midland Farms, Texas, reaches major-field status. J. A. Kornfeld. il map diags Oil & Gas J 52:88-91 Je 1 '53

Mustang field; Mustang Island multi-zone field is in Corpus Christi bay, Texas. G. V. Ricks and J. M. David. il maps diags Pet Eng 25:A41-8 Ja '53

Network of pipe lines serves Old Ocean field. W. F. Rose. il Oil & Gas J 51:186-8 O 13 '52

Permian basin blues. H. D. Ralph. il Oil & Gas J 51:74-5 Ap 13 '53

Prolific limestone reef production in Good field, Borden county, Texas. H. J. Brady. maps Oil & Gas J 51:67-9+ Mr 2 '53

Rising process center; Texas' Golden Triangle. F. L. Resen. map Oil & Gas J 51:75 D 8 '52

Salt water disposal in east Texas. W. S. Morris. il Pet Eng 24:B63-8 O '52

Scurry unit approved. Oil & Gas J 51:74 F 9 '53

Scurry unit set; biggest hurdle to operation of the world's largest water flood cleared. il map Oil & Gas J 51:68-9 O 27 '52

Special drilling mounds solve inundation problems. J. A. Kornfeld. il diag Oil & Gas J 51:69+ Ja 5 '53

Spraberry spacing report. R. F. Carlson. map Oil & Gas J 51:102-6+ O 20 '52

Spraberry spacing set. Oil & Gas J 51:147 D 22 '52

PETROLEUM industry and trade—Texas—*Continued*

Swan lake viewed as discovery of major importance. E. F. Bowers and R. H. Denman. il maps Oil & Gas J 52:208+ Je 22 '53

Ten rigs active in Strawn reef search in Schleicher county. J. A. Kornfeld. maps Oil & Gas J 51:124-5+ O 20 '52

Texas now has more than 33,000 leases. C. D. Lockwood. il Oil & Gas J 52:184-5+ Je 22 '53

Trend hearing awaited; future of Spraberry may be decided. R. F. Carlson. Oil & Gas J 51:81 D 8 '52

Unitized water flood shows promise; project in Payton pool, Texas. N. P. Whaley. il map Oil & Gas J 51:112+ D 15 '52

Water-flood offer to nonsigners of the Scurry area canyon reef operators committee unit-operation plan. T. A. Armstrong. map Oil & Gas J 52:82-3 My 11 '53

West Texas, New Mexico section. il maps diags World Oil 135:101-2+ O '52

Wider spacing asked by Spraberry operators. R. F. Carlson. map Oil & Gas J 51:72-3 S 22 '52

See also

Petroleum laws and regulations—Texas

Trinidad

Processing improved; Trinidad Leaseholds. Oil & Gas J 51:46 Ja 5 '53

Search for new productive areas is intensified in Trinidad. il map diag Oil & Gas J 51:174-5+ D 22 '52

Turkey

Door's open in Turkey. C. E. Tasman. il map World Oil 136:233-5 Mr '53

Turkey seeks oil aid. il Oil & Gas J 51:89-91 D 15 '52

United States

Competition is becoming stiffer; supply now exceeds demand. L. J. Logan. World Oil 136:66+ F '53

Election improves Washington attitude on oil. Nat Pet N 44:18-20 N 12 '52

Flyer in oil. il Fortune 47:138-40+ Ap '53

Future looks good say company reports. E. Adams. il Pet Eng 25:A95+ My '53

Impact of oil on our economy. G. Egloff. Pet Eng (Ref annual) 25:E2-4+ Jl 15 '53; Same cond. Oil & Gas J 52:246-8 My 18 '53

Many problems involved in providing the oil stand-by capacity needed for defense purposes. P. C. Spencer. Nat Pet N 45:17-18 Ap 22 '53

Offshore development to be speeded up; Eisenhower signs tidelands bill. L. J. Logan. World Oil 136:53-4 Je '53

Petroleum defense cushion is called threat to industry. Oil Paint & Drug Rep 164:7+ S 21 '53

Sinews of industry. R. G. Runlop. World Oil 136:52+ Ap '53

Standby capacity; abstract. L. F. McCollum. Oil & Gas J 51:80+ My 4 '53

U.S. oil outlook; how coal fits in. E. Ayres. Coal Age 58:70-3 Ag '53

What spurs oil progress? E. Adams. bibliog il diag Pet Eng 24:B7-10 O '52

Anti-trust suit

Cartel action becomes civil case. Nat Pet N 45:21 Ap 29 '53

Cartel answers filed. D. M. Duff. Oil & Gas J 52:83 Je 15 '53

Cartel case moved. B. F. Linz. Oil & Gas J 52:72-3 Je 8 '53

Civil oil cartel complaint charges five majors with antitrust violations. Nat Pet N 45:23-4 Ap 22 '53

Civil suit filed. Oil & Gas J 51:133-5 Ap 27 '53

Civil suit outlined; Justice department will file against oil firms in cartel case. Oil & Gas J 51:111 Ap 20 '53

Oil cartel suit names five major companies. Oil Paint & Drug Rep 163:5+ Ap 27 '53

Imports problem

Answers to imports. R. G. Dunlop. Oil & Gas J 51:58-9 Mr 30 '53

Battle over oil imports rages on. Nat Pet N 45:21-3 Ap 22 '53

Coal's ills not due to imports. E. Holman. Oil & Gas J 51:125-6 Ap 27 '53

Congressional battle over oil imports to open with hearings on quota bill. Nat Pet N 45:36 Ap 1 '53

Ellis urges jobbers to fight plans to curb oil imports by legislation. Nat Pet N 45:38-9 Ap 15 '53

Import quotas opposed. Oil & Gas J 52:88+ My 11 '53

Imports controversy; its pros and cons. G. M. Green, jr. Nat Pet N 45:29-37 Mr 18 '53

Imports-quotas plea; independents appeal for restrictions on crude shipments from abroad. B. F. Linz. Oil & Gas J 52:223-4 My 18 '53

Imports showdown. Oil & Gas J 51:98-9 Ap 20 '53

Imports vs. American control of oil resources. R. E. Spann. World Oil 136:84-5 My '53

Independent marketers and majors go to bat against import curbs. Nat Pet N 45:36-7 My 20 '53

Lawmakers start hearings on imports; Eisenhower said to favor status quo. Nat Pet N 45:22 Ap 29 '53

Oil hopeful imports controversy may be settled within industry. Nat Pet N 45:17 Ap 8 '53

Oil import curb fight pressed without letup. Oil Paint & Drug Rep 163:4+ My 18 '53

Showdown on oil imports restrictions sidetracked by profits tax hearings. Nat Pet N 45:19 My 27 '53

Simpson bill backers fire first shots in oil industry's battle over imports. Nat Pet N 45:19 My 13 '53

U.S. opposes curbs on imports now; wants study of foreign trade first. Nat Pet N 45:40 My 6 '53

Uruguay

Uruguay. I. A. D. Levrero. il map Pet Eng 24:E2 O '52

Utah

Trial date set in Utah antitrust case. Nat Pet N 45:20 Mr 11 '53

Venezuela

Clouds over Venezuela. Bsns W p 140 D 13 '52

Creole report. Oil & Gas J 51:88 Ap 13 '53

Deep well testing. Oil & Gas J 52:227-8 My 18 '53

Expansion at Amuay Bay. Oil & Gas J 51:180-1 O 13 '52

Giant Venezuela pressure maintenance program planned. il World Oil 136:278+ Ap '53

How Richmond handles heavy-oil production in Venezuela's Boscan field. R. A. Armstrong. il map diag Oil & Gas J 51:170-1+ D 22 '52

I saw American enterprise and oil helping build a nation. J. L. Jones. il World Oil 136:242-3+ Mr '53

Imports-cut alarm; quota now proposed causes concern in Venezuela. D. M. Duff. Oil & Gas J 52:91 My 11 '53

Now it's Venezuela oil under fire. Nat Pet N 44:25 O 8 '52

Oil threat develops. D. M. Duff. Oil & Gas J 51:83 D 8 '52

Overwater plant; Creole pressure maintenance facilities in Lake Maracaibo. il Oil & Gas J 51:89 F 9 '53

Probers study Venezuela oil marketing. Nat Pet N 44:37 O 15 '52

Quotas frighten Latin Americans. Bsns W p 157 My 16 '53

Socony reduces drilling time in Guario by directional drilling. F. A. Maretich and S. K. Wilkie. il diag Oil & Gas J 51:172-3+ D 22 '52

Venezuela's fabulous Lake Maracaibo. il Pet Eng 24:B 108+ O '52

West Virginia

Petroleum-engineering study of gas injection in the Cabin Creek field, Kanawha and Boone counties, W. Va. J. N. Magee and S. S. Taylor. bibliog 16pls U S Bur Mines Rep of Invest 4899:1-24 '52

PETROLEUM industry and trade—*Continued*

Western states

Lid is off the Williston basin! J. Menneer. il maps diags Pet Eng 24:B75-6+ N '52

Marketers sweep Go-Devil awards. Nat Pet N 44:27-8 D 24 '52

Anti-trust suit

U.S. antitrust case against majors to wait for new administration policy. F. Breese. Nat Pet N 44:34 N 12 '52

West Coast antitrust case still mired in details. Nat Pet N 45:24-5 Ap 22 '53

Wyoming

Straight-hole drilling along the Rocky Mountain front. J. A. Kornfeld. il maps Oil & Gas J 51:54-5+ D 29 '52

Yugoslavia

Yugoslav report. Oil & Gas J 51:44 Ja 5 '53

PETROLEUM laboratories

Conoco expands research. il Pet Eng 24:E2-3 D '52; Oil & Gas J 51:63-4 D 1 '52

Expansion in four steps; Continental oil co.'s laboratories. il Chem W 72:24+ Ja 10 '53; Chem & Eng N 31:440-1 F 2 '53

Hughes laboratory includes field-size drilling rig. il Oil & Gas J 51:145+ N 24 '52; Pet Eng 24:E6-8 D '52

Make your laboratory more efficient. F. L. Resen. il diags Oil & Gas J 51:392+ Ja 26 '53

Stanolind oil and gas co.'s research center now one-quarter complete. il (p47) Manuf Rec 121:43 O '52

PETROLEUM laws and regulations

FTC charges answered; Compact offers memo to Congress defending conservation practices of state agencies. Oil & Gas J 51:81 D 15 '52

Laws hamstring business. B. Smith. Nat Pet N 45:18-19 Ap 22 '53

Legislative outlook. L. D. Jones. World Oil 136:88+ F 15 '53

Nationalization endorsed; oil dealt major blow by U.N. approval of Bolivia-Uruguay resolution. D. M. Duff. Oil & Gas J 51:149 D 22 '52

Review of top oil industry court cases. Nat Pet N 44:16-17 D 31 '52

Alberta

Oil and gas conservation in the province of Alberta; aims and accomplishments. G. W. Govier. Pet Eng 25:B68+ F '53

Brazil

Brazilian talk softer; amendments to bill setting up government oil monopoly. Oil & Gas J 52:227 My 18 '53

Monopoly in Brazil. World Oil 135:340 O '52

New oil law; Brazil's industry near to becoming a state monopoly. Oil & Gas J 51:157 S 29 '52

California

Conservation lethargy. D. H. Stormont. Oil & Gas J 51:45 Mr 2 '53

Colombia

Oil-law approval asked; Colombia asks its congress to endorse emergency-period decrees. Oil & Gas J 51:91 D 15 '52

Egypt

New oil law passed. D. M. Duff. Oil & Gas J 52:226-7 My 18 '53

Israel

Israel enacts new law to regulate petroleum concession operations. For Comm W 48:14 D 8 '52

Italy

State monopoly created. map Oil & Gas J 52:89-90 Je 15 '53

New Mexico

Know-how; New Mexico's oil and gas conservation procedures. R. F. Carlson. Oil & Gas J 52:84-8+ Je 8 '53

Texas

How Texas railroad commission operates; its rules, regulations. R. F. Carlson. Oil & Gas 51:94-8+ N 24 '52; 93-4+ Ja 12; 110+ Ja 19; 121 F 9; 120 F 16 '53

Spraberry order void. Oil & Gas J 52:78-80 Je 15 '53

Spraberry shut in. T. A. Armstrong. il map Oil & Gas J 51:60-1 Ap 6 '53

Spraberry suit opens. Oil & Gas J 51:129 Ap 27 '53

United States

Bill to exempt local oil marketers from wage-hour rules introduced; list of measures with more or less direct application to petroleum. Nat Pet N 45:21-3 Ja 14 '53

Development bill; states would have no part in U.S. area of tidelands. Oil & Gas J 52:149-50 Je 22 '53

Down to earth survey of the tidelands oil companies. L. A. Lukens. Mag of Wall St 92:390-1+ Je 27 '53

Offshore bill passed. B. F. Linz. Oil & Gas J 52:49 Je 29 '53

Off-shore oil; federal strangle-hold over tidelands may be broken. E. N. Morse. Barron's 33:11-12 Ja 19 '53

Oil industry under Congress eyeglass as lawmakers tackle pile of new bills. Nat Pet N 45:21-2 Ja 7 '53

Submerged lands suit dismissal asked by Department of justice. Oil Paint & Drug Rep 164:3 S 14 '53

Tidelands bill passed following bitter fight. Oil Paint & Drug Rep 163:3+ My 11 '53

Tidelands bill passes. B. F. Linz. Oil & Gas J 52:88 My 11 '53

Tidelands bill signed. B. F. Linz. Oil & Gas J 52:58 Je 1 '53

Tidelands legislation; Senators Daniel of Texas and Holland of Florida introduce bills. Oil & Gas J 51:57-8 Ja 19 '53

Tidelands roadblock. Oil & Gas J 51:32-3 D 29 '52

Tidelands testimony. Oil & Gas J 51:119-20 F 23 '53

What new administration has on tap for oil. Nat Pet N 45:33-4 F 4 '53

What oil men may expect from new Congress. G. M. Green, jr. Nat Pet N 44:9-11 D 31 '52

PETROLEUM patents. See Petroleum refining—Patents

PETROLEUM pipe lines

Big new pipe lines will revamp oil supply pattern across Nation. Nat Pet N 44:22-3 D 3 '52

Buckeye pipe line company 67 years old and still growing. il map World Oil 136:220-1 Je '53

Continued increased petroleum demands present a challenge to pipe lines. L. F. Kahle. il Oil & Gas J 51:198-200 O 13 '52

Crude line revived; West Coast project. Oil & Gas J 52:65 Je 8 '53

Crude, products and gas lines planned in 1953. A. L. Given. World Oil 136:238+ F 15 '53

Engineering highlights of 1952; pipeline progress. C. A. Scarlott. il Westinghouse Eng 13:32-3 Ja '53

Expansion projects total more than 30,000 miles. P. Reed. Oil & Gas J 51:297+ Ja 26 '53

How to do it! pipe line hints. il Published in monthly numbers of World oil

Humble's pipe line network serves Texas and New Mexico. il map World Oil 136:214-15 F '53

Line pipe allocated. Oil & Gas J 51:100-1 F 16 '53

Microwaves serve pipeline communications needs; Mid-Valley pipeline co. C. B. Lester and C. A. Compton. il map diag Elec World 138:98-100 O 6 '52

New concept in river crossings; flexible crossing for Atchafalaya floodway. P. H. Timothy. maps plan Oil & Gas J 51:277+ O 13 '52

New crude oil line in operation; Rancho pipe line company system. F. H. Love. il diag Pet Eng 25:D3-6 Ap '53

New pipe line from Permian basin; West Texas Gulf system. F. H. Love. il Pet Eng 25:D52+ My '53

PETROLEUM pipe lines—*Continued*

North America's largest crude oil line is now in operation; West Texas Gulf's 26-inch carrier. il map World Oil 136:256-8 My '53

Official opening set; West Texas-Gulf to dedicate huge 26-in. crude carrier. F. L. Resen. il Oil & Gas J 52:83 My 11 '53

Oil industry tries out aluminum for pipe lines. Welding J 32:740-1 Ag '53

PAD spurs $395 million in pipelines. Eng N 149:106 D 11 '52

Pipe line construction. M. Dennard. Published in monthly numbers of World oil

Pipe line construction seen setting record in 1953 with 10,000 miles. Nat Pet N 45:40 My 20 '53

Pipe-line movement of crude oil; how Texas railroad commission operates; its rules, regulations. R. F. Carlson. Oil & Gas J 51:110+ Ja 19 '53

Pipe line outlook. Pet Eng 25:D 12+ Ja '53

Pipe-line suit filed; guaranteed-tender contract proposed by U.S. Pipe Line. Oil & Gas J 51:74 D 8 '52

Pipelines great underground highway. C. A. Scarlott. il Westinghouse Eng 13:146-51 S '53

Platte pipe line communications and controls systems. M. L. Long. il diag Oil & Gas J 51:91-2+ Ap 6 '53

Rancho line dedicated. F. L. Resen. il map Oil & Gas J 51:106-7 Ap 20 '53

Rancho pipe line traverses variety of terrain. P. Reed. il Oil & Gas J 51:154-5 Ap 20 '53

Reclaiming operation provides needed pipe. C. F. Mack. il Pet Eng 25:D28+ Mr '53

Rules of thumb for the pipeliner's notebook. World Oil 136:216 F '53

Service Pipe Line completes Big Inch expansion program. il map World Oil 136: 210-11 Mr '53

Shell pipe lines crisscross seven states. il map World Oil 136:216-17 Ja '53

Sinclair's Big-Inch contender for year's river-crossingest line. P. Reed. il Oil & Gas J 52:160+ My 25 '53

Story of Platte pipe line. flow diag il maps Oil & Gas J 51:87-90+ D 1 '52; Same. Pet Eng 24:D3-6+ D '52

See also
Petroleum products
pipe lines

Construction

Big pipeline pierces Canadian Rockies. H. W. Richardson. il map Constr Methods 34:62-6+ O '52

Canada's longest products system. L. O. Rowland. il map Pet Eng 25:D3-6+ Ja '53

Creole's Big-Incher being laid backward. J. H. Williams and C. P. Williams. il Oil & Gas J 51:79+ D 29 '52

Developments and trends in pipelining. F. H. Love. bibliog il Pet Eng 25:D3-6+ My '53

Iraq oil pipe-lines. V. S. Swaminathan. il map Engineer 196:234-8 Ag 21 '53

Laying the Middle East's newest Big-Inch line. R. Finnie. il map Oil & Gas J 51:52-3+ D 29 '52

Marine pipeline threaded under road and out to sea in only 13 hours. il Constr Methods 35:108-9 O '53

Mountainous terrain poses tough hydraulic problems for Trans Mountain. P. Reed. Oil & Gas J 51:98-9+ Ap 13 '53

One-time inch-by-inch becomes mile-by-mile line as barriers are hurdled; Trans Mountain's Canadian line. P. Reed. il Oil & Gas J 51:272-3+ O 13 '52

Pipelining across the Canadian Rockies. D. L. Roberts. il Pet Eng 25:D5-8+ F '53

River crossing laid as emergency measure. F. H. Love. il Pet Eng 25:D23+ Mr '53

Route of Trans Mountain; big country, but little space for pipe line. R. F. Hamilton. il Oil & Gas J 51:342-3 O 13 '52

Shell crosses the Elbe. il Oil & Gas J 51:82 O 6 '52

Story of Platte pipe line; details of design and construction. M. M. Lee. il Oil & Gas J 51:109+ D 1 '52; Same. Pet Eng 24:D5-6+ D '52

Trans Mountain, major Canadian oil outlet. il map Pet Eng 24:D41+ N '52

Underwater line laid in record time across Durban harbor in South Africa. il Oil & Gas J 51:113 Ja 12 '53

Welding specification and the contractor. R. C. Plummer. flow chart il Pet Eng 25: D35-7 Mr '53

Contractors

State laws and regulations affecting pipe line contractors. R. A. Gump. Pet Eng 25:D40+ Mr '53

Finance

Line on Canadian pipes. I. U. Cobleigh. Comm & Fin Chr 176:1918 N 20 '52

There's profit in pipelines. Bsns W p66-7 D 6 '52

Gathering lines

Ashland renovates gathering system. R. Laughner. il diag Oil & Gas J 51:264-6 O 13 '52

Electric heaters increase oil production. H. H. Douglas. il Elec West 109:93 O '52

What you should know when planning a gathering system. C. O. Nielson. diag World Oil 135:267-8 N '52

Maps

Permian basin. Oil & Gas J 51:supp O 20 '52

Protection

How corrosion was licked on Las Mercedes pipe line. E. G. Molnar. map Oil & Gas J 51:236+ D 22 '52

Pumping stations

Automatic booster station on the Borger-Denver products pipe line. G. P. Jennings and M. E. Worlow. il diag Oil & Gas J 52:113-14+ Je 15 '53

Controls for pipe-line engines. C. B. Lester. il diags Oil & Gas J 51:212+ O 13 '52

Diesel boosts station's capacity; Gulf refining company's State line station. Pet Eng 25:D42 F '53

Gas turbines for pipelines. T. J. Putz. il diags Westinghouse Eng 13:152-5 S '53

How pressure surges cut pump efficiency. J. H. Dawson and E. Fitch, jr. diags World Oil 135:264-6 N '52

Instrument application in products pipe line industry; pumping rates synchronized by means of pneumatic controls. H. R. Hoyt. diags Pet Eng 24:D53-6 N '52

Junction station converts to Diesel power. S. D. Taber and F. E. Sesler. il diag Oil & Gas J 51:315+ O 13 '52

More pipeline power for greater throughput; new pumping unit on Gulf's Tulsa-Lima pipeline. il Diesel Power 31:38-40 F '53

New developments in remote control of pumping stations. M. Hyde. il diags Oil & Gas J 51:202-3+ O 13 '52

New pipe-line station; Union's Junction station. il Oil & Gas J 51:139 D 1 '52

Portable pumping units pinch hit during station overhauling. J. D. Jones. il Oil & Gas J 51:334-5+ O 13 '52

Revamped station has interesting features. R. Sneddon. il Pet Eng 25:D42+ My '53

Semiautomatic field pump station. J. R. Dean. plan diags Oil & Gas J 51:267+ O 13 '52

Teletype controls provide efficiency and convenience; National cooperative refinery association's products pipe line. C. H. Hohnadel. il diag World Oil 135:276+ N '52

10,890 hp for pipe line expansion; dual-fuel engines. il Diesel Power 30:55 D '52

Unattended booster pump station boosts flow 12,000 bbl. per day for Aramco. R. J. Park and V. M. Liss. map plans Oil & Gas J 51:207-8+ O 13 '52

Fires and fire protection

Taking the terror out of fire; how Ashland refining company protects Kenova oil pumping station. R. James. il Comp Air Mag 58:278-9 O '53

Pumping stations, Electric

Advanced control system features Trans-Northern pipe line. P. Reed. il map diag Oil & Gas J 51:226+ D 22 '52

Electricity's contribution to modern pipelining. M. Hyde. il Westinghouse Eng 13: 154-61 S '53

Largest-diameter, biggest-capacity crude line; West Texas Gulf pipe line co. P. Reed. il map Oil & Gas J 52:107-8+ My 11 '53

PETROLEUM pipe lines—Pumping stations, Electric—*Continued*

Microwave control of pump station raises line capacity at minimum cost. J. R. Ellis. il Oil & Gas J 51:258-9+ N 17 '52; Same. Am Pet Inst Proc 32(5):29-34 '52; Same cond. Nat Pet N 44:64-5 N 12 '52

New flow system insures against excessive electric power charges. W. W. Holt, jr. diags Oil & Gas J 51:246-7 O 13 '52

Rancho's three pump stations built for initial capacity of 208,000 bbl. daily. P. Reed. il plan diag Oil & Gas J 51:156-7+ Ap 20 '53

Story of Platte pipe line; design and construction of pump stations. F. Marts. flow diag il Oil & Gas J 51:100+ D 1 '52; Same. Pet Eng 24:D 11+ D '52

Story of Platte pipe line; its electrical design and construction. A. R. Heidebrecht. il Oil & Gas J 51:112+ D 1 '52; Same. Pet Eng 24:D28+ D '52

Ten year's experience with a completely electrified products pipe line. F. Armstrong and R. S. Cannon. Elec Eng 72:140-2 F '53

U.S. most powerful crude oil line pump station; Wortham (Texas) pump station on West Texas gulf pipe line company's line. il World Oil 136:258+ My '53

Statistics

International survey of pipe lines. P. Reed. Oil & Gas J 51:317-18 D 22 '52

U.S. pipe lines to have 13,910 added miles. D. M. Taylor. World Oil 136:235-6 F 15 '53

Terminals

Fighting corrosion at a Gulf Coast terminus by metalizing parts with zinc. F. L. Resen. il diag Oil & Gas J 52:273-4 Je 22 '53

How to compute tank sizes for products terminals. R. B. Rodgers and S. Hallberg. World Oil 135:257-8 N '52

Arabia

Unattended booster pump station boosts flow 12,000 bbl. per day for Aramco. R. J. Park and V. M. Liss. map plans Oil & Gas J 51:207-8+ O 13 '52

Canada

Advanced control system features Trans-Northern pipe line. P. Reed. il map diag Oil & Gas J 51:226+ D 22 '52

Big crude line set. G. Weber. map Oil & Gas J 51:66 D 8 '52

Big pipeline pierces Canadian Rockies. H. W. Richardson. il map Constr Methods 34:62-6+ O '52

Building for Canada's oil. S. M. Blair. Comm & Fin Chr 177:4+ sec 2 Je 25 '53

Call answered for more Canadian pipe lines. B. Shiels. il map World Oil 135:252-4+ D '52

Canada's longest products system. L. O. Rowland. il map Pet Eng 25:D3-6+ Ja '53

Line work pushed. Oil & Gas J 51:75 S 22 '52

Mountainous terrain poses tough hydraulic problems for Trans Mountain. P. Reed. Oil & Gas J 51:98-9+ Ap 13 '53

Oil production and transportation. S. M. Blair and I. G. Wahn. maps Pet Eng 25: D29-30+ F '53; Same. Am Pet Inst Proc 32(5):53-61 '52

One-time inch-by-inch becomes mile-by-mile line as barriers are hurdled; Trans Mountain's Canadian line. P. Reed. il Oil & Gas J 51:272-3+ O 13 '52

Petroleum pipeline joins Montreal, Ottawa, Hamilton. il map Can Chem Process 36:74-5 N '52

Pipelining across the Canadian Rockies. D. L. Roberts. il Pet Eng 25:D5-8+ F '53

Route of Trans Mountain; big country, but little space for pipe line. R. F. Hamilton. il Oil & Gas J 51:342-3 O 13 '52

Trans Mountain, major Canadian oil outlet. il map Pet Eng 24:D41+ N '52

Trans Mountain plans extension into U.S. map World Oil 136:222 Ja '53

Colombia

Colombia announces new petroleum pipe line policies and regulations. For Comm W 48: 8-9 D 1 '52

Congo, Belgian

Belgian Congo gets new products line. il map Oil & Gas J 51:78+ D 29 '52

France

Havre-Paris pipeline now in operation. For Comm W 50:26 Jl 20 '53

New French Le Havre-Paris products line completed. J. B. Capdeville. il map Oil & Gas J 51:197-8+ D 22 '52

Germany

Shell crosses the Elbe. il Oil & Gas J 51:82 O 6 '52

Iraq

Iraq oil pipe-lines. V. S. Swaminathan. il map Engineer 196:234-8 Ag 21 '53

Mexico

Mexico speeds work on crude, gas lines. il World Oil 135:321-2 N '52

Near East

Laying the Middle East's newest Big-Inch line. R. Finnie. il map Oil & Gas J 51:52-3+ D 29 '52

Venezuela

Creole line completed. il map Oil & Gas J 51:90 F 9 '53

Creole's Big-Incher being laid backward. J. H. Williams and C. P. Williams. il Oil & Gas J 51:79+ D 29 '52

How corrosion was licked on Las Mercedes pipe line. E. G. Molnar. map Oil & Gas J 51:236+ D 22 '52

PETROLEUM pitch. See Pitch

PETROLEUM products

Dielectric properties of certain petroleum oils. R. Irving and C. N. Thompson. bibliog Chem & Ind p975-80 O 4 '52

Firm products markets this winter would lay good foundation for better crude prices. Oil & Gas J 51:276+ Ja 26 '53

Impact of petroleum on our civilization. G. Egloff. Midwest Eng 5:3-4+ Mr '53

Oil and petrochemicals. G. Egloff. Comm & Fin Chr 177:1863+ Ap 30 '53

Oil products from heavy Canadian crudes; Wilrich petroleums, limited. G. A. Richardson. il Pet Eng 25:C40-2 F '53

Petroleum; C&EN annual review. R. W. Thomas and P. M. Arnold. il Chem & Eng N 31:32-4 Ja 5 '53

Petroleum products. W. E. Kuhn. Oil & Gas J 52:135 Je 8 '53

See also

Butadiene
Cresol
Gasoline
Hydrocarbons
Kerosene
Liquefied petroleum gas
Lubricating greases
Lubricating oils
Naphtha
Oil fuel
Paraffin
Petroleum chemicals
Petroleum distillation
Toluene

Analysis

Infrared for process control. D. E. Berger. il Pet Processing 8:887-9 Je '53; Same abr. Oil & Gas J 51:136-8+ Ap 20 '53; Same abr. Pet Eng 25:C26+ My '53

Quantitative isolation of fatty acids in petroleum oils. L. R. Dickson and R. R. Jay. Pet Eng 25:C45-6 Mr '53

Review of analytical chemistry; petroleum. H. Levin. Anal Chem 25:47-54 bibliog(182 ref, p52-4) Ja '53

Prices

OPS weighs hike in product ceilings to meet higher costs on West coast. Nat Pet N 44:29-30 N 5 '52

Petroleum derivatives; 1952 market trends. Oil Paint & Drug Rep 163:53-4 sec 2 Ja 26 '53

Specifications

Petroleum products. W. E. Kuhn. Oil & Gas J 52:139 My 11; 261 My 25 '53

Standards

Report of ISO committee on petroleum products. Standardization 23:284-5 S '52

Statistics

Oil-using units continue rapid growth. World Oil 136:76 F 15 '53

PETROLEUM products—Statistics—*Continued*

Petroleum and products, Nov.-Dec. 1951-Jan.-Nov. 1952. Survey of Cur Bsns 33:S35-6 Ja '53 [cont monthly]

Petroleum demand. L. J. Logan. World Oil 136:54+ F 15 '53

Petroleum derivatives. Published in weekly numbers of Oil, paint and drug reporter

Petroleum summary; 1951; tabulation. Oil Paint & Drug Rep 163:69 F 23 '53

Secondary stocks up. Oil & Gas J 51:41 Mr 2 '53

Stocks of oils. World Oil 136:74-5 F 15 '53

Storage

Tank construction for products storage. L. J. Cogan. il Pet Eng 24:A76-8 D '52

Testing

ASTM manual on measurement and sampling of petroleum and petroleum products. 2d ed 133p pa $1.50 Am. soc. for testing materials, 1916 Race st, Philadelphia 3 '53

Automatic flash-point instrument. R. B. Jacobs. flow diag il diag Oil & Gas J 51:124+ N 10 '52

Flash points in a flash. il diag Chem Eng 60:220+ F '53

Microdetermination of flash point on petroleum products. P. McCutchan and D. A. Young. bibliog diags Anal Chem 24:1974-6 D '52

Proposed method of test for bromine number of petroleum distillates. diag Am Soc T M Proc 50:276-83 '50

Proposed method of test for reduced pressure distillation of petroleum products. diags Am Soc T M Proc 50:299-310 '50

Transportation

Gulf intracoastal waterway needs new look to handle oil volume. D. J. Warren. il Nat Pet N 45:63-4 Mr 25 '53

Tanker tonnage keeps pace with soaring world demand for petroleum products. J. J. Winterbottom. il Oil & Gas J 51:190+ D 22 '52

See also
Petroleum products
pipe lines
Tank barges

PETROLEUM products pipe lines

A.P.I. products pipe line conference, Kansas City. Oil & Gas J 51:122-3 Ap 27 '53

Automatic TEL blending of gasoline for delivery into products pipe line. H. R. Hoyt. il diag Oil & Gas J 51:241+ O 13 '52

Belgian Congo gets new products line. il map Oil & Gas J 51:78+ D 29 '52

Buckeye builds northeast products line. A. J. Helmbrecht. il map Oil & Gas J 52:98-9 Je 8 '53

Canada's longest products system. L. O. Rowland. il map Pet Eng 25:D3-6+ Ja '53

Crude, products and gas lines planned in 1953. A. L. Given. World Oil 136:238+ F 15 '53

Electrical pressure gages give Plantation trouble-free service. W. W. Holt, jr. diag Oil & Gas J 52:88+ Je 29 '53

Imperial's Sarnia-Toronto products pipe line; unusual ditching and water crossing feature new carrier. il map diags Oil & Gas J 51:116-18 My 4 '53

New French Le Havre-Paris products line completed. J. B. Capdeville. il map Oil & Gas J 51:197-8+ D 22 '52

New installations increase efficiency of Sun Pipe Line's products system. P. Reed. il map Oil & Gas J 52:76-7+ Je 1 '53

Oil products moved by radioactive tracers. R. K. Bond. il Elec West 109:88-9 O '52

Pipe-line control; abstract. H. A. Altorfer. Oil & Gas J 51:143 S 29 '52

Products recovery system; specially designed trap, built by Plantation and Southeastern. W. P. Sterne. il plan Oil & Gas J 51:129 O 27 '52

Progress in pipe lines. S. S. Smith. diags World Oil 136:201-6+ F '53; Same, without diags Pet Eng 25:D 14+ Mr '53

Radioactive tracers to mark interfaces and measure intermixing in pipelines. D. E. Hull and J. W. Kent. Ind & Eng Chem 44:2745-50 N '52

Radioisotope tracer successful in products-pipe-line application. G. Weber. il Oil & Gas J 51:115-16+ N 10 '52

Relay tanks utilized on products pipe-line system. R. D. Jackson. il Oil & Gas J 51:338-9 O 13 '52

Socony-Vacuum reconditions line over ditch without interrupting service; Augusta-Kansas City, Kans. J. A. Rupf. il map Oil & Gas J 51:112-15 N 24 '52

PETROLEUM refineries

Anglo-Iranian oil co. building 60,000-bbl. refinery at Kwinana, Australia. Oil & Gas J 51:345 D 22 '52

Applying graphical methods to square footing designs; procedure in design of stack and tower foundations. C. H. Fork. plans diags Pet Refiner 31:145-50 N '52

Autofiner at Llandarcy. V. S. Swaminathan. il Pet Eng 25:C21 Mr '53

Big refinery planned; first major new plant in Puget Sound area to operate on Canadian crude oil. D. H. Stormont. maps Oil & Gas J 51:79-80 N 10 '52

Canadian refineries are moving toward meeting record domestic demand. G. Weber. il Oil & Gas J 51:218-20+ D 22 '52

Construction of Aden oil refinery. il(p496) Engineering 175:490 Ap 17 '53

Coryton oil refinery of the Vacuum oil co. il Engineering 174:334 S 12 '52

Design of rectangular footings. C. H. Fork. diags Pet Refiner 32:110-11 F '53

Extreme flexibility features operation of Sohio's plants. G. L. Farrar. il map Oil & Gas J 51:58-60 Mr 2 '53

General Petroleum plans Northwest refinery. il maps Nat Pet N 44:29-30 N 12 '52

Grangemouth produces high-grade motor fuel. il Oil & Gas J 51:69+ D 29 '52

How four oil refineries use water. R. N. Simonsen. plans Sewage & Ind Wastes 24:1372-7 N '52

How Texas railroad commission operates; its rules, regulations; refineries and natural-gasoline plants. R. F. Carlson. Oil & Gas J 51:121 F 9 '53

Italy's new Condor refinery will operate on Middle East crude oil. il Oil & Gas J 51:88-9 D 29 '52

Kent refinery operating in England. D. M. Duff. il Oil & Gas J 51:80+ Mr 9 '53

Moose Jaw refinery serves two provinces. H. C. Plummer. flow chart il Pet Eng 25:C 18-19 Mr '53

New facilities to add 150,000 bbl. daily; active refinery-building projects; tabulation. Oil & Gas J 51:333-6 Mr 23 '53

New petroleum plant at Berre, France. il Oil & Gas J 51:76+ Ap 6 '53

New refinery on stream. E. A. Smith and F. J. Maslyk. il diag Can Chem Process 36:44+ S '52

New refinery on stream at Trecate in northern Italy. D. M. Duff. il Oil & Gas J 51:42+ Ja 5 '53

Northwest's first refinery; General Petroleum's plant near Ferndale, Wash. Bsns W p33 N 15 '52

Oil refineries near Bombay. Engineer 194:364 S 12 '52

Oil refineries of 1952. il Engineer 195:69-71, pl 3-4 Ja 9 '53

Pacific Northwest shaping up as important refining center. G. M. Wilson. Pet Refiner 32:87-8 Ap '53

Payout in one year indicated for refinery's small radio network. G. Weber. il Oil & Gas J 51:123+ Ja 19 '53

Refinery and other plant construction; tabulated information. Published in monthly numbers of Petroleum refiner

Refinery expansion in eastern hemisphere. V. S. Swaminathan. il Pet Eng 25:C9-10+ Mr '53

Refining capacity undergoing substantial expansion. R. B. Tuttle. Oil & Gas J 51:308-10+ Ja 26 '53

Rising process center; Texas' Golden Triangle. F. L. Resen. map Oil & Gas J 51:75 D 8 '52

Trends in processing. G. Weber. Oil & Gas J 51:169-70 Mr 23 '53

Two erection practices speed refinery completion. A. McCone. il Pet Refiner 32:114-15 Ja '53

PETROLEUM refineries—*Continued*

Water supplies for oil refineries; abstract. M. Benger. Chem Age (Lond) 68:285-6 F 14 '53; Same. Chem & Ind p 170-1 F 21 '53

Accounting

Exchange agreements for refined petroleum products. J. C. Bumgarner. N A C A Bul 34:526-34 D '52

Plant accounting records for an oil refinery. S. E. Marquart. N A C A Bul 34: 545-57 D '52

Control equipment

Accuracy in sizing control valves. R. A. Rockwell. Pet Processing 7:1792 D '52

Case of the graphic panel. R. L. Nichols. il Pet Eng 25:C 11-14 My '53

Control station centralized. il Pet Refiner 32: 104 Je '53

How many instruments? T. A. Mangelsdorf. Oil & Gas J 51:79-80 F 9 '53

How to instrument a fluid cat cracking unit. D. J. Bergman. il diag Pet Refiner 32:185-8 Ap '53

Instrument tests easy on graphic panel. R. L. Patton. il diag Pet Processing 8:97 Ja '53

Instrumentation handbook. flow diag diags Pet Refiner 31:97-130 D '52

Instrumentation outlook; symposium on instrumentation for the process industries. Oil & Gas J 51:77-9 F 9 '53

Instrumentation vital to processing; panel discussion on Frontiers of instrumentation. bibliog Pet Processing 7:1433-4 O '52

Making good use of pressure-actuated switches in continuous slurry makeup control. W. B. Simon. diags Oil & Gas J 51:313 S 29 '52

Monitoring of process variables. A. F. Sperry. il diag Pet Refiner 32:128-32 Mr '53

New control tools. G. Weber. Oil & Gas J 51: 74-5 Mr 16 '53

One approach to automatic process control diags Pet Processing 8:72-5 Ja '53

Progress in instrumentation; monitoring of process variables. A. F. Sperry. il diags Oil & Gas J 51:96-9+ Mr 16 '53

Push-button barrel handling; Richmond refinery of Standard oil co. of California. D. H. Stormont. il Oil & Gas J 51:52-3 Ja 5 '53

Solution concentration controller. P. Hart and R. C. King. diag Oil & Gas J 51:169 Ap 20 '53

Trends in refinery instrumentation. S. D. Ross and others. bibliog il diags Pet Eng 24:C23-6+ Jl; C 18+ Ag; C20+ S; C39-40+ O; C41-4 N '52; 25:C37-41 Ja; C21+ F; C5-8 Mr; C44-6+ Ap '53

Corrosion

Acidproof cement lining halts corrosion in vacuum flasher column. D. H. Stormont. il Oil & Gas J 51:255-7 Mr 23 '53

Cathodic protection licks corrosion. L. C. Werkin. bibliog il Pet Refiner 31:122-4 O '52

Corrosion case history. Oil & Gas J 51:193 Mr 30 '53

Economic factors of atmospheric corrosion versus protection. C. C. Harvey. Pet Refiner 32:122-4 Je '53

Mitigating corrosion in processing equipment. G. L. Farrar. diags Oil & Gas J 51:101+ My 4 '53

Reduce corrosion costs with organic inhibitors. C. C. Hulbert and J. A. Rippetoe, jr. Pet Refiner 32:113-18 Je '53

War against corrosion; preventing hydrogen attack on steel. W. A. Bonner and others. bibliog il diags Pet Processing 8:686-90, 878-83 My-Je '53; Same cond. flow diag Oil & Gas J 52:100+ Je 8 '53

Your corrosion engineer. F. L. LaQue. il Pet Processing 8:230-3 F '53

Costs

Cost of coking plants. W. L. Nelson. bibliog Oil & Gas J 51:141 Ja 19 '53

Houdriforming economics; effect of feedstock boiling range and reforming severity. H. D. Noll and others. Pet Refiner 32:113-16 My '53; Same. Pet Eng (Ref annual) 25:C 15-16+ Jl 15 '53

Itemized cost indexes. W. L. Nelson. Oil & Gas J 51:87 Ja 5; 127 Ap 6 '53

Penalty for sourness in a crude oil. W. L. Nelson. Oil & Gas J 51:403 Ja 26 '53

Design

How present operations compare with design basis at Carter's Billings plant. flow diags il Oil & Gas J 51:124-6+ Ap 20 '53

Directories

Report on United States operating refineries; where they are, their capacities, and types of processes. Oil & Gas J 51:313-14+ Mr 23 '53

Electric equipment

Activities of the electrical equipment subcommittee, Refining division of the American petroleum institute. L. M. Goldsmith. Elec Eng 72:407-9 My '53; Same cond. Pet Processing 8:527-9 Ap '53

Are you lubricating motors properly? F. H. Walker, jr. and W. J. O'Meara. diag Pet Refiner 32:127-31 My '53; Same. Pet Eng (Ref annual) 25:C28+ Jl 15 '53; Same cond. Oil & Gas J 52:172+ My 25 '53; Abstract. Pet Processing 8:693 My '53

Coryton oil refinery. il Elec R (Lond) 152: 731-7 Ap 3 '53

Design and application of explosion-proof equipment. R. P. Northup. il diags Pet Refiner 32:123-6 My '53

Electric system reliability required in petroleum refining. E. R. Felton. diag Elec Eng 72:522-4 Je '53

Electrical installations. B. Z. Segall. il diags Oil & Gas J 51:185 O 20; 139 O 27; 133 N 3; 165 N 10; 423 N 17; 141 N 24; 147 D 1; 125 D 8; 143 D 15; 351 D 22; 99 D 29 '52

Electrical treater solves problem of desludging cracked gasolines. D. H. Stormont. flow diag il diags Oil & Gas J 51:125-6 O 27 '52

Electricity and oil refining; abstract. S. York. Elec J 150:1064 Mr 27 '53

Switchgear maintenance in petroleum refineries. H. B. Wortman. il Oil & Gas J 52:105-6+ Je 8 '53

Employees

Creole job-training program objectives. H. C. Bobertz and J. Green, jr. il Oil & Gas J 51:270-1+ D 22 '52

Health of the petroleum refinery worker. C. Lanardonne. Ind Med 22:25-7 Ja '53

History of the Bayway refinery medical department. T. F. Nevins, jr. il Ind Med 21:549-50 N '52

How to train an instrument man. J. A. Parker. il Oil & Gas J 51:129-31 S 22 '52

Industry accepts vocational guidance responsibility. E. J. Benge. Pet Refiner 31:69+ O '52

New approach to handling your mentally ill workers. G. Gordon. Pet Processing 8:890-1 Je '53

Personnel management, a major problem; Western petroleum refiners association regional meeting, Beaumont, Feb. 12-13; abstracts of four papers. Pet Eng 25:C41-2 Mr '53

Present and future sanitation in the petroleum industry. L. A. Lafferriere. Ind Med 22: 27-8 Ja '53

Supervisory selection backwards; Cities service refining corporation gives training to every employee in your plant, then picks the best trainees. W. E. Bennett. il Factory Management 110:126-9 N '52

Wages and salaries, how to administer them. D. Tver. Pet Refiner 31:104-5 O '52

Equipment

Alloy steels for oil refining. Oil & Gas J 51: 95 F 2; 141 F 9; 173 F 16; 199 F 23 '53

Analyze cooling tower performance by this method. D. R. Baker and L. T. Mart. Pet Refiner 31:97-103 O '52

Aromatics recovery by hydroforming and phenol extraction. J. J. Swift and others. flow diag il diag Pet Processing 8:81-7 Ja '53

Automatic computers save money and technical manpower. W. M. Harp. il Pet Refiner 32:159-61 Ap '53

PETROLEUM refineries—Equipment—*Continued*

Automatic drum filler cuts costs. B. MacDonald. flow diag il diag Pet Eng 25:C33+ Mr '53

Bayway to modernize; installation of Hydrofining unit. G. Weber. flow diag Oil & Gas J 51:171 Ja 26 '53

Better barrel filling; Standard oil co. of California Richmond refinery. D. H. Stormont. il Oil & Gas J 52:78-9 Je 1 '53

Better pump cheaper bromination. F. Breese. diag Pet Processing 7:1785 D '52

Building refinery process units. M. Mattozzi. Oil & Gas J 51:304-5+ Mr 23; 180+ Mr 30; 100+ Ap 6; 102+ Ap 13 '53

Cat cracking capacity increased by unusual methods; Humble oil & refining co. il Pet Refiner 32:135-7 F '53

Changes and expansion boost yields; Onyx refining co. A. L. Foster. il diag Pet Eng 25:C28-30 Ja '53

Clad steel in petroleum equipment. A. Hoersch, jr. diags Pet Processing 8:700-3 My '53

Cleaner salvages equipment. il Pet Eng 24: C24 O '52

Corrosion control in cooling water systems. W. A. Tanzola. il Pet Eng 25:C57-60 Ap '53

Design, maintenance, operation of Cit-Con's cooling tower. B. H. Mylius. il Oil & Gas J 52:298+ Je 22 '53

Determination of orifice meter coefficients. Hu Shao Chio. bibliog diags Pet Eng 24: C5-8+ O '52

Don't let heat go up your flue; burning carbon monoxide in cracking unit flue gas; oxidation catalyst method. W. C. Uhl. flow diag il Pet Processing 7:1444-6 O '52

Double-duty gas plant; gas recovery unit serves old and new cat cracker; Union oil co. of California. A. E. Kelley and H. F. Poll. flow diags il Pet Processing 8:55-9 Ja '53; Same. diags Oil & Gas J 51:161-2+ F 23 '53

Ductile cast iron; where can it be used in process equipment? il Pet Processing 8: 234-5 F '53

Duval's new skimming plant now in full operation. F. L. Resen. flow sheet il Oil & Gas J 51:116-17 O 27 '52

Economics of the air-cooled heat exchanger. J. C. Chase and H. E. Degler. flow diag il map Pet Eng 25:C42-4+ Ja '53

Engineering compressed air systems. L. J. Murphy. plans diags Pet Refiner 31:139-43 D '52

Engineering contractor and how he functions in building the oil and gas processing industry. J. C. Reidel. il Oil & Gas J 51:278-9+ Mr 23 '53

Fans and blowers. M. Van Winkle. diags Oil & Gas J 51:109 S 1; 127 S 8; 131 S 15; 133 S 22; 307 S 29; 133 O 6; 181 O 20; 135 O 27; 129 N 3; 159 N 10; 419 N 17; 133 N 24 '52

Feasibility of using chromium and chromium-nickel steels. W. L. Nelson. Oil & Gas J 52:267 My 25 '53

First commercial catforming unit on stream at McBride refinery. C. S. Faulkner and others. flow diag il Oil & Gas J 51:116-17+ N 24 '52

First complete Udex benzene-toluene-xylene plant makes nitration-grade products. D. P. Thornton, jr. flow diag il Pet Processing 8: 384-7 Mr '53

Greater heat recovery from catalytic flue gas; new catalytic oxidation unit. G. Weber. flow diag il diag Oil & Gas J 51: 346-7+ O 13 '52

Heat transfer and fouling of fluidized beds. H. L. Olin and O. C. Dean. diags Pet Eng 25:C23-4+ Mr '53

Heating tube failures, cause and prevention. J. J. B. Rutherford. bibliog il Pet Processing 8:62-9 Ja '53; Same cond. Oil & Gas J 51:97 Mr 2; 119 Mr 9; 155-6 Mr 16; 189 Mr 30; 123-4 Ap 6; 145 Ap 13; 165 Ap 20 '53

Here is a successful skimming basin design. il Pet Refiner 32:176 Ap '53

Here's the story about the new turbogrid distillation trays. il diags Pet Refiner 31: 105-8 N '52

How serious is graphitization? R. J. Fiorentino and A. M. Hall. bibliog il Pet Refiner 32:132-6 My '53; diags Same cond. Oil & Gas J 52:110+ Je 8 '53

How to apply method of slope deflection to thermal stress analysis of piping. E. A. Picardi. diags Pet Processing 8:368-72 Mr '53

How to design compressor accessories. L. J. Murphy. il diags Pet Refiner 32:137-40 Mr '53

How to save those critical alloys; recommendations on conserving needed metals by API interim advisory group. Pet Processing 7:1776-7 D '52

How to select compressors. L. J. Murphy. il Pet Refiner 32:115-18 F '53

HF alkylation unit revamp contributes to scrap drive. H. K. Wheeler, jr. and R. H. Judice. flow diag il Pet Eng 24:C5-8+ D '52

Hyperforming; newest development in reforming. C. Berg. flow sheet il diags Pet Refiner 31:131-6 D '52

Improvement of catalysts and catalyst supports. C. H. Riesz and others. diag Pet Eng 24:C 17-18+ D '52

In refining; steam-heated pipe line handles heavy vacuum flash bottoms. G. Weber. diags Oil & Gas J 51:194-5 O 13 '52

Infrared for process control. D. E. Berger. il Pet Processing 8:887-9 Je '53; Same abr. Oil & Gas J 51:136-8+ Ap 20 '53; Same abr. Pet Eng 25:C26+ My '53

Inside story of a Houdriflow cat-cracker. diag Pet Eng 25:C42 Ap '53

Instrumentation at Coryton refinery; water treatment plant approaches completion. Chem Age (Lond) 67:794 D 13 '52

Is your piping system right? W. M. Jackson. il Pet Processing 8:868-73 Je '53

Jetty for Shell Haven oil refinery. il Engineering 174:705 N 28 '52

Low-temperature insulation for refinery service. W. L. Martin. bibliog A S M E Trans 75:459-64 Ap '53; Same cond. Oil & Gas J 51:99-103 N 3 '52; Discussion. A S M E Trans 75:464-6 Ap '53

Lube-oil processing and instrumentation. E. W. Midlam and J. D. Dorsey. il diags Instruments 25:1568-70+ N '52

Many important units go into making of a modern refinery. il Oil & Gas J 52:102-3 Je 1 '53

Mechanical engineers implement oil industry. A. L. Foster. Pet Eng 24:C3-4 D '52

Modern bubble-tray construction. H. C. Glitsch and R. W. Fowler. diag Oil & Gas J 51:135 Ja 19; 397 Ja 26 '53

Modernized motor oil facilities; Whiting refinery. H. F. Nolting and R. B. Selund. flow diags il Pet Processing 8:76-80 Ja '53

Moose Jaw, Canada, refinery expansion. C. F. Tears and C. F. Tears, jr. il Pet Eng 25: C5-6+ F '53

New Antwerp refinery designed to process Middle East crude for prime fuel products. flow diag il Oil & Gas J 51:115-16+ Ja 19 '53

New approach to tray design. A. C. Eld. diags Pet Refiner 32:157-61 My '53

New bubble tray design. diags Pet Processing 7:1447 O '52

New gas lift for solids; Hyperflow. il diag Chem Eng 60:138+ My '53

New procedures in industrial thermal-insulation application. C. J. Kuhasz and E. C. Shuman. diags Oil & Gas J 51:90-8 N 3 '52

New units on stream; Shell operating integrated Platformer-aromatics plant. il Oil & Gas J 52:222 My 18 '53

New use for radioactive tracers; measuring catalyst flow rates in cat crackers. D. E. Hull and R. R. Bowles. il diag Oil & Gas J 51:295-6+ Mr 23 '53

Newest TCC packaged unit on stream. A. L. Foster. flow chart il Pet Eng 25:C53-5 Ap '53

Ontario's new refinery officially on stream. E. A. Smith and F. J. Maslyk. il Oil & Gas J 51:98-100+ S 22 '52; diag Pet Eng 24: C55+ O '52; Pet Processing 7:1448-51 O '52

Permanent shaft acts as temporary pedestal; refinery expansion job for Standard oil co. of Texas. il Constr Methods 35:136-7+ Ap '53

PETROLEUM refineries—Equipment—*Continued*

Petroleum refining and chemical plant; Foster Wheeler world-wide projects. il Chem Age (Lond) 68:311-15 F 21 '53

Phillips' Borger refinery throughput capacity now rated at 80,000 bbl. per day. J. C. Reidel. il diag Oil & Gas J 51:116-19 S 22 '52

Platreater boosts recovery of aromatics. il Oil & Gas J 52:124-5+ My 11 '53

Reactor blisters pictured using radioactive iridium. F. L. Resen. il Oil & Gas J 52:65 Je 1 '53

Recent experience in examination of high-temperature catalytic-cracking pressure equipment. D. B. Rossheim and others. flow diag il diags A S M E Trans 74:1099-122 O '52; Excerpts. Pet Processing 5:1385-8 D '51; Discussion. A S M E Trans 74:1122-31 O '52

Refinery as a chemical factory. A. L. Foster. il Pet Eng 25:C3-4 Mr '53

Relative costs of alternate types of reactor vessel construction. I. E. Boberg and W. R. Fickett. diags Pet Processing 8:690-2 My '53

Revamped cyclone system features Humble's cat cracker expansion. F. L. Resen. il diags Oil & Gas J 52:220+ My 25 '53

Revised plant makes new one; refinery for Bay petroleum corp. A. L. Foster. il Pet Eng 25:C34-6 F '53

Self-retaining mineral wool boards. il Pet Eng 24:C35-6 O '52

Shock absorber for refinery catalyst-line counterweight. il Oil & Gas J 51:132 My 4 '53

Simplified fluid cat. G. Weber. flow diag Oil & Gas J 51:167-8 Mr 23 '53

Skid-mounted poly unit installed at Inland refining co. plant. F. L. Resen. flow plan il Oil & Gas J 51:99-100 Ja 19 '53

Stainless steels in petroleum refining. W. L. Nelson. Oil & Gas J 51:99 F 2 '53

Thermal insulation for industrial requirements. R. Thomas. diags Pet Refiner 31: 87-90 Ja; 117-21 F; 143-8 Mr; 113-16 Je; 145-9 Jl; 113-16 Ag; 115-21 O; 151-5 N '52; 32:107-10 Ja; 97-8 F '53

Thermal stresses in piping systems. W. E. Wilbur. diags Pet Refiner 32:143-8 Mr; 163-8 Ap; 174-8 My '53

T/C leads serve as an intercom. U. J. Krue and R. C. Patton. Pet Processing 7:1473+ O '52

To help you design fractionators. R. R. White. bibliog diags Pet Processing 8:357-62, 539-43, 704-9, 892-6 Mr-Je '53

Tops in what's new! 1952. Pet Processing 8:60-1 Ja '53

Trinidad Point-a-Pierre refinery. V. S. Swaminathan. il Pet Eng 25:C32+ Ap '53

Trinidad refinery completes its modernization. il Oil & Gas J 51:87-8 Ja 19 '53

Tube-bundle board. G. L. Farrar. il Oil & Gas J 51:113 Mr 9 '53

Unusual processing at Sun's Toledo refinery. G. L. Farrar. flow diag il diag Oil & Gas J 51:120-3 D 15 '52

Using radioactivity in the refinery. G. C. Gester, jr. and others. bibliog flow diag diags Pet Processing 8:550-2 Ap '53

Vacuum unit produces exceptionally clean gas oil. il diag Oil & Gas J 51:113-15 F 9 '53

Vacuum's new lube plant on last lap of construction. E. Symonds. flow diag il Oil & Gas J 51:259+ D 22 '52

Vickers Petroleum ups throughput with new package T.C.C. unit. flow chart il Oil & Gas J 51:120+ Mr 16 '53; Same. Pet Refiner 32:118 Mr '53

Experimental plants

Let the theoretical chemist reduce your pilot plant studies; ACS Division of petroleum chemistry meeting, Los Angeles. Chem & Eng N 31:1297-9 Mr 30 '53

Fires and fire protection

CO_2 extinguishers placed at strategic points in refinery. il Oil & Gas J 51:145 Mr 16 '53

Foam for use in fighting refinery fires is sped to scene by specially equipped trucks. F. L. Resen. il Oil & Gas J 51:189 F 23 '53

Giving refinery fires the air; Socony's air agitation method. il Bsns W p68-9 N 29 '52

Improved methods for fireproofing structures. C. J. Kuhasz. il diags Pet Processing 7: 1616-19 N '52

Know-how and enthusiasm aid Pan American fire fighters. il plan Pet Refiner 32:226+ Ap '53

New fire hazard? abstract. G. F. Prussing. Oil & Gas J 51:41-2 F 2 '53

Shell combats fires with less manpower and equipment; illustrations with text. Pet Refiner 32:103-4 F '53

Flare stacks

Flare stacks of unusual design. il diags Engineer 195:711-12 My 15 '53; Engineering 175: 592, 598-9 My 8 '53; Elec J 150:1640 My 8 '53; Pet Processing 8:884-6 Je '53

New type refinery flare stack burns without smoke. il Pet Processing 7:1790 D '52

Recent progress in refinery flare stack design. Chem Age (Lond) 67:791-3 D 13 '52

Troublesome smoke at Bayway plant is eliminated by atomized spray. il Oil & Gas J 51:130 N 24 '52

Flood damage

Plants damaged; unprecedented flood hit British, Dutch refineries. il Oil & Gas J 51:109 F 16 '53

Maintenance and repair

Area versus centralized maintenance. H. A. Fohl. il Pet Refiner 32:109-12 Je '53

Chemical cleaning is a versatile tool. T. N. Griwold and J. O. Thoen. il diags Oil & Gas J 51:236+ Mr 23 '53

Chemical cleaning of refining equipment. G. L. Farrar. bibliog il diags Oil & Gas J 51:211-12+ Mr 23 '53

Clean out plugged catalyst with novel device. W. Rolf and D. W. Caswell. diag Pet Refiner 31:127 N '52

Cleaning burners. Oil & Gas J 51:116 Ja 12 '53

Eliminate compressor operating problems. L. J. Murphy. il diags Pet Refiner 32:173-5 Ap '53

Fresh look at maintenance. R. E. Redfield and V. J. Loyd. il Oil & Gas J 51:202-4 Mr 23 '53

Good heat-exchanger maintenance pays off. J. S. Connors. Oil & Gas J 51:105-6 Ja 12 '53

How Magnolia operates its maintenance priority system. F. L. Resen. il Oil & Gas J 51:207-9+ Mr 23 '53

How to combat erosion in fluid cat crackers. J. S. Clarke. il diags Oil & Gas J 51:262-4+ Mr 23 '53

In-place tube cleaning pays. il diag Pet Processing 8:228-9 F '53

Jig and weld positioner speed salvage jobs. il diags Pet Processing 8:395-6 Mr '53

Maintenance is a major challenge at this Indonesian refinery. il Oil & Gas J 51:274-6 D 22 '52

Maintenance of refining units during operation. R. W. Mecklin and others. il Pet Refiner 32:133-6 Mr '53

Maintenance trend; 4th plant-maintenance conference, Cleveland. Oil & Gas J 51:39-40 F 2 '53

Mobile equipment, key to Humble's maintenance program. F. L. Resen. il Oil & Gas J 51:258-60 Mr 23 '53

New jet exchanger cleaning method. A. L. Foster. il diag Pet Eng 24:C32-3+ D '52

New unit really cleans tube bundles. R. T. Effinger and G. T. Holt. il Oil & Gas J 51:111-12+ N 10 '52

On-stream maintenance, what and how? J. O. Thoen and L. G. Foster. il Oil & Gas J 51:295-6+ S 29 '52; Same. Pet Eng 25:C26+ F '53

Spare parts; how to keep track of them. J. P. Devine. Oil & Gas J 51:250-1 Mr 23 '53

Techniques for cat unit turnarounds. J. G. Traxler and K. T. Beavers. il Pet Refiner 32:112-14 F '53

Tooling for refinery maintenance. H. S. Selindh. il Pet Refiner 32:125-8 Ja '53

PETROLEUM refineries—Maintenance and repair—*Continued*

Turnaround plans save man hours at Pan American. il plan Pet Refiner 32:169-72 Ap '53

What price spares in a refinery? J. E. Bell. Oil & Gas J 51:244+ Mr 23 '53

Management

Let supervisors participate. F. E. Mathews. Pet Refiner 32:217-18 My '53

Painting

Refinery doesn't have to look dingy; Phillips petroleum co. focal-point painting. il Bsns W p50-1 Je 20 '53

Power

Better petrol with the aid of electricity; refinery at Coryton, Essex. il Electrician 149:760 S 12 '52

Electric power for refineries. R. F. Lawrence and H. B. Thacker. diags Pet Processing 8:364-7 Mr '53

How Tide Water Associated instruments waste-heat steam-generator system. L. L. Benthall. diag Oil & Gas J 51:110-11 Mr 9 '53

Quality control

Applying statistical quality control to crude oil distillation. A. C. Dorenfeld and others. diag Pet Refiner 31:147-50 D '52

Effect of multitesting on refinery production costs. M. R. Morrow and C. T. Shewell. bibliog Ind & Eng Chem 45:240-6 Ja '53

Statistical quality control; applications and limitations. L. J. McGovern. Pet Refiner 32:121-4 F '53

Safety measures

Design and application of explosion-proof equipment. R. P. Northup. il diags Pet Refiner 32:123-6 My '53

Eternal vigilance outwits refinery hazards; Ashland oil & refining co. il Mill & Factory 53:114-16 O '53

Happy workers seek safety. W. J. Rodgers. Pet Refiner 32:234+ Ap '53

Novel warning tags score a hit. R. R. Proctor. il Pet Processing 8:401 Mr '53

Safety on display; Sun oil company, Marcus Hook refinery. W. Boon. il Nat Safety N 68:118-19+ O '53

Three steps to refinery safety. F. J. Sluze. il Safety Maint & Prod 106:62-4+ Jl '53

See also

Petroleum refineries
—Fires and fire protection

Statistics

International survey of oil refineries. R. B. Tuttle. Oil & Gas J 51:303+ D 22 '52

Petroleum refineries, including cracking plants, in the United States, Jan. 1, 1952. J. G. Kirby. U S Bur Mines Information Circ 7646:1-12 '52

Refineries begin 1953 production with 7,221,000 record crude run. Nat Pet N 45:8-9 Ja 14 '53

Refinery operations. World Oil 136:210-11 F 15 '53

Refinery output hits new peak in 1952. Oil & Gas J 51:217-18 Ja 26 '53

Report on Canadian operating refineries. Oil & Gas J 51:331-2 Mr 23 '53

Shutdown plants in the United States. Oil & Gas J 51:330 Mr 23 '53

Survey reveals 323 refineries operating in U.S. Oil & Gas J 51:312 Mr 23 '53

385,821 b/d new capacity in '53. Pet Processing 8:53-4 Ja '53

Waste

Analysis of sulfuric acid and acid sludges from petroleum processes. F. T. Weiss and others. bibliog Anal Chem 25:277-84 F '53

Critical review of the literature of 1952 on sewage, waste treatment, and water pollution; oil refineries. Sewage & Ind Wastes 25:638-40 Je '53

Cut phenols in waste by 99.9 per cent. J. A. Biehl. flow diag Pet Processing 7:1435-7 O '52

Determination of pyridine and pyridine-base compounds in river water and industrial wastes. R. C. Kroner, M. B. Ettinger and W. A. Moore. bibliog Anal Chem 24:1877-81 D '52

How to plan a waste-disposal program in urban areas. F. C. Moriarty and M. M. Fisher. bibliog diags Oil & Gas J 51:296-7+ N 17 '52

Production of ammonium sulfate from refinery waste. E. D. Fox. flow diag il Oil & Gas J 51:113-15+ O 6 '52; Same abr. Pet Refiner 31:123-6 N '52

Rational approach to industrial waste disposal problems. R. N. Giles. bibliog Sewage & Ind Wastes 24:1495-501 D '52

Waste control at oil refineries. R. F. Weston. bibliog(32 ref) flow diags il diags Chem Eng Prog 48:459-67 S '52

Water pollution problem, get ready to tackle it! M. Nord. bibliog il Pet Refiner 31:125-30 O '52

PETROLEUM refining

Better caustic utilization within a modern refinery treating plant. A. V. Sierra. flow diags il Oil & Gas J 52:252+ Je 22 '53

Catalysis in command of refining. A. L. Foster. il Pet Eng 24:C3-4 O '52

Catalyst poisons, and what to do about them; panel discussion. Pet Refiner 32:125-7 F '53

Chromatographic techniques for petroleum. H. Weil. bibliog Can Chem Process 37:92+ Mr; 72+ Je 1 '53

Cresylic acids in petroleum naphthas; assay recovery and characterization. S. G. Gallo, C. S. Carlson and F. A. Biribauer. bibliog Ind & Eng Chem 44:2610-15 N '52

Delayed coking gives needed flexibility in British American's new Edmonton plant. W. J. Godsman. flow diag il Oil & Gas J 52:119-21 My 11 '53

Determination of trace metals in petroleum fractions. J. H. Karchmer and E. L. Gunn. bibliog Anal Chem 24:1733-41 N '52

First Platreater on stream at Roosevelt Oil. il Pet Eng 25:C20-1 My '53; Pet Refiner 32:142 My '53

Fluidized-solids technique in the petroleum industry. R. C. Gunness. il diags Chem Eng Prog 49:113-19 Mr '53

Isomerization of saturated hydrocarbons in presence of hydrogenation-cracking catalysts. F. G. Ciapetta and J. B. Hunter. bibliog diag Ind & Eng Chem 45:147-65 Ja '53

Jet fuel and the refiner. W. F. Krause. Pet Eng 24:C9-10 N '52; Same cond. Oil & Gas J 51:93-4 O 6 '52; Same cond. Pet Processing 7:1428-9 O '52

Mechanical engineers implement oil industry. A. L. Foster. Pet Eng 24:C3-4 D '52

Modern refining in Mexico. D. P. Thornton, jr. il maps diags Pet Processing 8:217-26, 373-6, 544-9, 710-12, 874-7 F-Je '53

New reforming process; Sinclair announces catalytic process using platinum. G. Weber. Oil & Gas J 51:131 Ap 27 '53

1952 process issue. bibliog flow diags diags Pet Refiner 31:97-316 S '52

Oil products from heavy Canadian crudes; Wilrich petroleums, limited. G. A. Richardson. il Pet Eng 25:C40-2 F '53

Optics in petroleum processing. P. D. Foote. il Pet Processing 8:694-9 My '53

Petrochemicals unlimited. G. Egloff. Oil & Gas J 51:124+ Ap 13 '53; Same. Pet Eng 25:C5-8+ My '53

Refining progress directed along three fronts. G. Weber. Oil & Gas J 51:246+ Ja 26 '53

Refining with adsorbents. V. A. Kalichevsky and K. A. Kobe. flow chart diags Pet Refiner 32:95-100 bibliog(197 ref, p99-100) Je; 119-22 Jl; 135-7 Ag; 215-18 S; 141-4 O '53

Three new refining processes; continuous lube oil decolorizing and two catalytic desulfurizing methods. flow diag diags Pet Processing 8:683-6 My '53

Tools make processes possible. A. L. Foster. Pet Eng 25:C3-4 My '53

See also

Gasoline—Manufacture
Lubricating oils—Manufacture
Petroleum distillation

Bibliography

New science and technology abstracts. Published in monthly numbers of Petroleum refiner

PETROLEUM refining—*Continued*

By-products

See also
Petroleum coke

Patents

Houdry sues Socony-Vacuum on cat-cracking patents. Pet Eng 25:C81 Ap '53
New patents affecting petroleum refining. H. Heinemann, comp. Published in monthly numbers of Petroleum refiner
Petroleum processing patents. P. J. Gaylor. Published in monthly numbers of Petroleum processing
Socony-Vacuum sued;' Houdry wants damages for alleged patent infringement involved in licensing Air-Lift T.C.C. Oil & Gas J 51:66-7 Mr 9 '53

Salt removal

Chemical desalting; Tretolite co., Visco products co., inc. flow diags Pet Refiner 31:218-19 S '52

Sulfur removal

Autofining; Anglo-Iranian oil co. flow diag Pet Refiner 31:226-7 S '52
Autofining on a commercial scale; test at Llandarcy. il diag Chem Age (Lond) 68: 483-5 Mr 28 '53; Excerpt. Oil & Gas J 52: 102 My 11 '53
Cobalt molybdate desulfurization; Union oil company of California. flow diag Pet Refiner 31:226-7 S '52
Copper sweetening; Phillips petroleum co. flow diag Pet Refiner 31:210-11 S '52
Cyclic sulfides in a petroleum distillate. R. H. Brown and S. Meyerson. bibliog Ind & Eng Chem 44:2620-3 N '52
Doctor treating; Lummus co. flow diag Pet Refiner 31:210-11 S '52
Gray catalytic desulfurization; Texaco development corp.; phosphate desulfurization; Shell development co. flow diags Pet Refiner 31:230-1 S '52
New Shell hydrodesulfurization process. H. Hoog and others. bibliog flow diag Pet Refiner 32:137-41 My '53; Excerpt. Oil & Gas J 52:92+ Je 8 '53
Removal of sulfur compounds. F. H. Dotterweich. Pet Eng 24:C51-3 O '52
Sulphuric acid in an enclosed system; use of sulphur derived from crude petroleum. J. L. Edgar. Chem Age (Lond) 67:797-9 D 13 '52

Tables, calculations, etc.

Correlating total pressures of binary systems. R. Gilmont and others. bibliog Pet Refiner 32:167-72 My '53
Evaluation of radiant heat absorption rates in tubular heaters. L. A. Mekler and R. S. Fairall. diags Pet Refiner 31:101-7 Je; 128-32 N; 151-5 D '52
Improve polyform operations with these correlations. R. C. Teitsworth. flow diag Pet Refiner 32:91-4 F '53

Vapor recovery

Double-duty gas plant; gas recovery unit serves old and new cat cracker; Union oil co. of California. A. E. Kelley and H. F. Poll. flow diags il Pet Processing 8:55-9 Ja '53; Same. diags Oil & Gas J 51:161-2+ F 23 '53

Wax removal

Propane dewaxing; M. W. Kellogg co. flow diag Pet Refiner 31:198-9 S '52
Solvent dewaxing; Texaco development corp. flow diag Pet Refiner 31:202-3 S '52
Urea serves as complexing reagent to remove paraffinic hydrocarbons; patent. diag Pet Processing 8:105 Ja '53

PETROLEUM research

Electronic calculator used for reservoir engineering and research. W. A. Bruce and R. N. Bonner. il diags Pet Eng 24:B66+ D '52
Evolution of petroleum. J. G. McNab, P. V. Smith, jr. and R. L. Betts. bibliog Ind & Eng Chem 44:2556-63 N '52
Factors that influence gravity drainage. R. V. Higgins. bibliog il diags Pet Eng 25: B83-4+ My '53
Gulf Coast operators, manufacturing suppliers and universities contribute to expanded research. C. M. Davis. il Oil & Gas J 52:265-8 Je 22 '53
How micro-organisms can aid search for oil. W. Schwartz and A. Mueller. bibliog World Oil 136:95-6 Mr '53
Oil discovery and recovery methods advance; Magnolia field research laboratories investigate recent deposits in Gulf of Mexico. J. Menneer. il Pet Eng 25:B71+ Mr '53
Optics in petroleum processing. P. D. Foote. il Pet Processing 8:694-9 My '53
Pay-off in good will; Sinclair's inventors plan. Chem W 72:34 F 14 '53
Petroleum and natural-gas research program, Bureau of mines, fiscal year, 1951. R. A. Cattell and others. bibliog 14pls U S Bur Mines Information Circ 7643:1-46 '52
Petroleum and natural gas research program, Bureau of mines, fiscal year 1952. R. A. Cattell and others. bibliog(66 titles) 13pls U S Bur Mines Information Circ 7659:1-46 '53
Project 44 in the cards; IBM technique in handling fundamental hydrocarbon data. V. B. Guthrie. il Pet Processing 7:1769-71 D '52
Thermodynamic properties of hydrocarbons and related compounds. K. S. Pitzer and R. R. Brattain. bibliog Oil & Gas J 51: 352-6 N 17 '52; Same. Am Pet Inst Proc 32(1): 176-80 '52

See also
Petroleum laboratories

PETROLEUM shipping terminals

Automatic tank gaging facilitates terminal operations installation at Esso's Wilmington, N.C., terminal cuts time, labor. C. C. Roberts. il diag Oil & Gas J 51:144+ N 10 '52
Eastham oil dock. il plans diags Engineer 194:825-8, 857-60 D 19-26 '52
15-barge tows unload fast at river terminal. D. J. Warren. il Nat Pet N 44:90-2 N 26 '52
How Bahrein Petroleum combats sea-water corrosion at Persian Gulf installations. R. L. Davis and R. F. Heinzerling. il diags Oil & Gas J 51:264+ D 22 '52
New tanker-loading terminal. D. H. Stormont. il Oil & Gas J 51:120-1 O 27 '52
New terminal ends distribution bottlenecks. J. Barton. il Nat Pet N 44:54-8 O 29 '52
Oil builds new plants on waterways as low-cost transportation beckons. D. J. Warren. il Nat Pet N 45:58 My 13 '53
Oil terminal at Canvey island. Engineer 194: 793 D 12 '52; Engineering 174:801 D 19 '52
Oil terminal at Port Kembla, N.S.W. Engineer 194:464 O 3 '52
Submarine-line terminal is opened for business; Ventura, Calif. J. Joseph. il World Oil 135:260-1 N '52

PETROLEUM storage

Economics of reducing crude-oil vaporization losses; cooling the oil prior to sending it to storage. I. A. El-dib and R. L. Huntington. diag Oil & Gas J 51:90-2+ Mr 9 '53
Oil; storage tank capacity grows. Iron Age 170:84-5 D 18 '52
Storage forecast. B. F. Linz. Oil & Gas J 51:74 D 15 '52
Swedish underground storage method proves successful. il World Oil 136:240 Mr '53

PETROLEUM supply

Distribution of the oil reserves of the world. G. M. Lees and D. C. Ion. Inst Pet J 38:919-28; Discussion. 928-35 N '52
Factors of sedimentary basin development that control oil occurence. L. G. Weeks. maps diags Am Assn Pet Geologists Bul 36: 2071-124 N '52
Free-world production 11¼ million barrels. D. M. Duff. Oil & Gas J 51:215-16 Ja 26 '53
International survey of oil fields. Oil & Gas J 51:278-9+ D 22 '52
No imports needed? I.P.A.A. report. Oil & Gas J 51:70-1 N 3 '52
Oil men see ample supplies in next 15 years. Chem & Eng N 30:4946-7 N 24 '52
Politics threaten world oil adequacy. W. L. Baker and D. Kliewer. map World Oil 136:90+ Ap '53

PETROLEUM supply—*Continued*

Resources plentiful. Oil & Gas J 51:68 N 3 '52

Significance of the Williston basin. S. F. Bowlby. Am Pet Inst Proc 32(4):32-4 '52; Same abr. Oil & Gas J 51:317+ N 17 '52; Discussion. Am Pet Inst Proc 32(4):34-5 '52

Toward a philosophy of oil-finding. W. E. Pratt. Am Assn Pet Geologists Bul 36:2231-6 D '52

Where will tomorrow's oil come from? E. V. Murphee. map Oil & Gas J 51:119-24 N 3 '52

Williston Basin's oil fields. P. C. Ingalls. map Oil & Gas J 51:423 Ja 26 '53

World backlog up 14 per cent. D. M. Duff. Oil & Gas J 51:180+ D 22 '52

World crude reserves increase 13.5 billion barrels. World Oil 136:264-5 F 15 '53

World supply and demand increases 4.8 percent. World Oil 136:261-2 F 15 '53

Canada

Canada's expanding oil potential. D. C. Langford and J. U. Streeter. Pet Eng 25: A45-6+ F '53

United States

API given optimistic picture of oil supply. Oil Paint & Drug Rep 162:4+ N 17 '52

Demand for oil to rise next year but rate of increase to slow down. Nat Pet N 44: 8+ N 12 '52

Gain of six per cent seen in crude imports. D. M. Duff. diags Oil & Gas J 51:213-14 Ja 26 '53

Meeting future petroleum demands. J. E. Swearingen and J. W. Boatwright. Oil & Gas J 51:328-32+ N 17 '52; Same. Pet Processing 7:1606-15 N '52; Same. Am Pet Inst Proc 32(3):15-32 '52; Same abr. Pet Refiner 31:79-80+ N '52; Same cond. Nat Pet N 44:51-5+ N 12 '52; Discussion. Am Pet Inst Proc 32(3):32-3 '52

More U.S. crude needed in '53; with table, U.S. Bureau of mines 1953 forecast of supply and demand. World Oil 136:50 F '53

New-oil areas. P. C. Ingalls. Oil & Gas J 51: 155 Ja 12 '53

New production record; 6¼ million barrels. P. C. Ingalls. Oil & Gas J 51:202-3 Ja 26 '53

New year starts with high reserve. P. C. Ingalls. Oil & Gas J 51:111 Ja 5 '53

1952's new reserves fall short of '51 peak. Pet Refiner 32:90+ Ap '53; Same, with additional tables. World Oil 136:66-7+ Ap '53

Petroleum reserves up, but year's supply lags. World Oil 136:200-2 F 15 '53

Petroleum; seven-million barrels a day aren't enough. il Bsns W p88-90+ N 22 '52

Producing depth records fall in ten areas. World Oil 136:204-5 F 15 '53

Producing oil wells; with table, active producing crude oil and condensate wells in U.S., methods of producing, and average output per well, by states and districts, at end of 1951 and 1952. World Oil 136:208-9 F 15 '53

Production and proved remaining reserves, by fields. Oil & Gas J 51:289-91+ Ja 26 '53

Reserves up despite record withdrawals. P. C. Ingalls. Oil & Gas J 51:204-6 Ja 26 '53

U.S. needs forecast as 7,647,000 bbl. daily. J. C. Casper. Oil & Gas J 51:210-12 Ja 26 '53

Where's the Anadarko Basin oil? P. C. Ingalls. map Oil & Gas J 51:125 F 2 '53

See also

Oil reserves (United States navy)

PETROLEUM waste

Automatic brine-disposal plant small but efficient. D. H. Stormont. il Oil & Gas J 51: 114 Ja 12 '53

Brine injection gaining. D. H. Stormont. il Oil & Gas J 51:76-7 S 22 '52

How to design a radial flow settling basin. H. H. Elliston. diag World Oil 136:182-3 Mr '53

Resin tubing used for salt water disposal. T. D. Gardner. il Pet Eng 25:B64+ Mr '53

Salt water disposal in east Texas. W. S. Morris. il Pet Eng 24:B63-8 O '52

28,000 barrels of brine disposed daily in six wells at Loudon. J. F. Armstrong. il map World Oil 136:164+ Ja '53

See also

Petroleum refineries
—Waste

PETROLEUM waxes

See also

Paraffin

Testing

Needle penetration of petroleum waxes; TAPPI suggested method T 639 sm-53. diags Tappi 36:sup 179A-80A Ag '53

PETROLEUM workers

ABC's of supervision. Oil & Gas J 51:121-8+ F 16 '53

American congress of labor medicine petroleum industry session, 2d, Rio de Janeiro, Sept. 20-28, 1952. Ind Med 22:24-8 Ja '53

How do you rate as a drilling supervisor? sample test for self-appraisal. il Oil & Gas J 51:172-3 S 29 '52

How Sohio trains its exploration personnel. M. W. Sherwin. Oil & Gas J 51:109-10 My 4 '53

How to train supervisors. F. H. Willibrand. Oil & Gas J 51:321-2+ N 17 '52

Industrywide bargaining urged. O. A. Knight. Nat Pet N 45:25 Ap 22 '53

Is seismology the career for you? R. J. Foster. il World Oil 135:112+ D '52

1953 wages, 1948 prices; costs continue to soar; price tags unchanged. B. F. Linz. Oil & Gas J 51:285-6 Ja 26 '53

Oil pioneers named. T. A. Armstrong. Oil & Gas J 51:124-5 Ap 27 '53

Petroleum technical school at Prabumulih trains Indonesians for specific occupations. il Oil & Gas J 51:329-30 D 22 '52

Rocking chair blues; they hold no terror for workers in the Mid-Continent area. A. Gibbon. il World Oil 135:84-5 D '52

Wage chronology; Sinclair oil companies, 1941-52. M. R. Robbins. Mo Labor R 75: 535-44 N '52

See also

Petroleum refineries
—Employees

Women in the petroleum industry

Texas

Why are compensation costs higher? Texas employers rally behind legislation. A. Reese. Pet Refiner 32:75-6+ F '53

Venezuela

Labor dispute looms. Oil & Gas J 52:77+ Je 8 '53

PETROSELINIC acid

Higher aliphatic compounds; a synthesis of tariric and petroselinic acids. P. B. Lumb and J. C. Smith. Chem Soc J p5032-5 D '52

Seed fat of myrrhis odorata; contributions to the chemistry of petroselinic acid. G. R. Clemo and R. Stevens. Chem Soc J p4684-5 D '52

PFIZER, Charles, and company

Charles Pfizer is building for another era of expansion; with financial data, 1941-51. W. I. La Tourette. Barron's 32:13-15 O 13 '52

Five medium priced growth stocks; with comparative balance sheet items. Mag of Wall St 91:75 O 18 '52

Five outstanding investments for the future; with comparative balance sheet items. Mag of Wall St 92:332 Je 13 '53

PHAEANTHINE

Fission of phaeanthine and bebeerine dimethyl ether with sodium in liquid ammonia. D. A. A. Kidd and J. Walker. bibliog Chem & Ind p243-4 Mr 14 '53

PHANTASTRON (delay circuit)

Wide-band data transmitter. D. J. Gray and others. bibliog diags Electronics 26:168-70 S '53

PHARMACEUTICAL association, American. See American pharmaceutical association

PHARMACEUTICAL laboratories

Merck adds to New Jersey research facilities. il plan Chem & Eng N 31:2080+ My 18 '53

Research lab for TB and virus study opened by Merrell. il Chem & Eng N 30:5062 D 1 '52

PHARMACEUTICAL manufacturers association, American. See American pharmaceutical manufacturers association

PHARMACEUTICAL research

Danish research contributes to Canadian pharmaceutical industry. il Can Chem Process 37:46+ F '53

Drug houses of Australia, ltd. il Chem & Ind p80 Ja 24 '53

Four worlds to conquer; antibiotic research. Chem W 71:28+ D 8 '52

How research is changing the hypertension drug picture. Chem W 71:22+ D 27 '52

Pharmaceuticals expansion includes new products and facilities at the British Drug Houses. il Can Chem Process 37:32+ Mr '53

Research, key to pharmaceuticals; research laboratories, Parke, Davis and co. L. R. Schroeder. il Can Chem Process 37:100+ My '53

Suspension bath for the study of isolated tissues in the presence of surface active agents. J. P. Green and others. diag R Sci Instr 24:183-4 F '53

Triple play in drugs; Regitine, cortisone synthesis, phosphorylated hesperidin. Chem W 71:29-30 O 25 '52

PHARMACOLOGY

Experimental pharmacology and measurement of the subjective responses. H. K. Beecher. bibliog Science 116:157-62 Ag 15 '52; Discussion. J. D. Hardy and others. 117:164-5 F 13 '53

PHARMACY schools and education

Engineering science; new subject in University of London honours degree in pharmacy. D. Train. Chem Age (Lond) 68:176 Ja 24 '53

PHASE adjusters

Automatic phase angle and voltage control of unattended Marcus Hook substation; abstract. W. A. Derr and others. diag Elec Eng 72:164 F '53

Low-cost variable phase shifter. S. Wald. diags Electronics 25:168+ D '52

Rotary linear microwave phase shifters. M. Simpson and A. Sawelson. diags Tele-Tech 11:44-7+ D '52

Squeeze-section phase shifter for microwave measurements. J. J. Brady and others. diags R Sci Instr 23:601-4 N '52

Wide-band waveguide phase-shifter. G. J. Halford. diag Inst E E Proc 100 pt 3:117-24; Discussion. 140-2 My '53

PHASE indicators

Phase detector uses gated beam tube. F. S. Holman, jr. diags Electronics 26:180-1 Ag '53

Phase indicator for color television. K. Schlesinger and L. W. Nero. il diags Electronics 25:112-14 O '52

Phase shift by cro; reference sheet. J. F. Sodaro. diags Electronics 26:192, 194 My '53

PHASE meters

Audio impedance and phase-angle meter. J. E. Hansen. diags Electronics 26:172-3 Je '53

Phase shift measurement system. E. S. Katz. diags Tele-Tech 11:39+ N '52

Simplified phasing equipment. M. J. McGonegle. il Elec World 138:122 N 3 '52

Simplified vectorscope measures phase. W. L. Firestone and R. A. Richardson. il diags Electronics 26:180-2 S '53

PHASE rule and equilibrium

Abstracts of papers published in Phase-equilibria. Chem Eng Prog 48:476-7 S '52

Attainment of equilibrium in gas-metal reactions. N. A. Gokcen. bibliog J Metals 5: Trans 191-4 F '53

D-Fructose-water phase diagram. F. E. Young, F. T. Jones and H. J. Lewis. bibliog J Phys Chem 56:1093-6 D '52

Direct nomographic method for solving flash equilibrium equations. P. M. Reilly. Pet Refiner 32:119-22 Mr '53

Electric analog for phase equilibria. R. F. Nielsen. diags Oil & Gas J 51:97 D 29 '52

Equilibria in aqueous systems containing Sr^{2+}, K^+, Na^+ and Cl^-. G. O. Assarsson. bibliog J Phys Chem 57:207-10 F '53

Equilibrium flash vaporization of petroleum fractions at reduced pressures. K. K. Okamoto and M. van Winkle. bibliog flow diag diag Ind & Eng Chem 45:429-39 F '53

Equilibrium measurements in the Mo-C-H system. L. C. Browning and P. H. Emmett. bibliog Am Chem Soc J 74:4773-4 O 5 '52

Equilibrium of solid α-silver-zinc alloys with zinc vapor. G. Scatchard and R. A. Westlund, jr. bibliog diags Am Chem Soc J 75:4189-93 S 5 '53

Equilibrium studies of the silver sodium-hydrogen system on Dowex 50. O. D. Bonner and V. Rhett. J Phys Chem 57:254-6 F '53

Experimental determination of solubilities. H. K. Zimmerman, jr. diags Chem R 51: 25-65 bibliog(245 ref, p60-5) Ag '52

Fluoride model systems; the binary systems CaF_2-BeF_2, MgF_2-BeF_2, and LiF-MgF_2. W. E. Counts and others. bibliog Am Cer Soc J 36:12-17 Ja 1 '53

Fluoride model systems; the system NaF-BeF_2 and the polymorphism of Na_2BeF_4 and BeF_2. D. M. Roy and others. Am Cer Soc J 36:185-90 Je 1 '53

Fluoride models for oxide systems of dielectric interest; the systems KF-MgF_2 and AgF-ZnF_2. R. C. DeVries and R. Roy. bibliog Am. Chem Soc J 75:2479-84 My 20 '53

Improved method for the determination of vapour-liquid equilibrium data. S. A. J. Ablewhite and others. bibliog diag Chem & Ind p 1146-7 N 22 '52

Liquid-liquid equilibrium data for the system carbon tetrachloride-acetone-water. R. H. Buchanan. Ind & Eng Chem 44:2449-50 O '52

Liquid-vapor equilibrium relations in binary systems; propane-hydrogen sulfide system. W. B. Kay and G. M. Rambosek. bibliog diags Ind & Eng Chem 45:221-6 Ja '53

Liquid-vapor equilibrium relations in ethane-hydrogen sulfide system. W. B. Kay and D. B. Brice. bibliog Ind & Eng Chem 45: 615-18 Mr '53

Magnesium-cadmium alloys; the cadmium-rich alloys; some lattice parameters and phase relationships between 25 and 300°; structure of the $MgCd_3$ superlattice; Schottky defects and the anomalous entropy. D. A. Edwards, W. E. Wallace and R. S. Craig. bibliog Am Chem Soc J 74:5256-61 N 5 '52

Melting-point diagrams for binary triglyceride systems. R. Kerridge. Chem Soc J p4577-9 D '52

Phase behavior of the hydrogen-propane system. W. L. Burriss and others. bibliog Ind & Eng Chem 45:210-13 Ja '53

Phase equilibria in polymer-solvent systems. A. R. Shultz and P. J. Flory. bibliog diag Am Chem Soc J 74:4760-7 O 5 '52

Phase equilibria in polymer-solvent systems; thermodynamic interaction parameters from critical miscibility data. A. R. Shultz and P. J. Flory. bibliog Am Chem Soc J 75:3888-92 Ag 20 '53

Phase equilibria in sulphonic acid-water systems. D. Taylor and G. C. Vincent. Chem Soc J p3218-24 Ag '52

Phase equilibrium in the system calcite-aragonite. J. C. Jamieson. bibliog diag J Chem Phys 21:1385-90 Ag '53

Phase equilibrium investigation of the Na_2O-P_2O_5-SiO_2 ternary system. E. T. Turkdogan and W. R. Maddocks. 3 pls diags Iron & Steel Inst J 172:1-15 S '52

Phase-equilibrium properties of system carbon dioxide-hydrogen sulfide. J. A. Bierlein and W. B. Kay. bibliog Ind & Eng Chem 45:618-24 Mr '53

Phase relationships in the pyridine series. R. J. L. Andon and J. D. Cox. diags Chem Soc J p4601-8 D '52

Phase rule studies in anhydrous aluminum bromide. J. J. Burbage and A. B. Garrett. bibliog diags J Phys Chem 56:730-3 Je '52

Phase study of the PbO-$PbBr_2$ system by X-ray diffraction. F. W. Lamb and L. M. Niebylski. bibliog diags Am Chem Soc J 75:511-18 F 5 '53

Phase transitions in antiferroelectric $PbHfO_3$. G. Shirane and R. Pepinsky. bibliog Phys R 91:812-15 Ag 15 '53

Phase transitions of the barium dicalcium n-butyrate. S. Kondo and T. Oda. J Chem Phys 20:1659 O '52

PHASE rule and equilibrium—*Continued*

Reconnaissance of liquidus relations in the system $K_2O{\cdot}2SiO_2$—FeO—SiO_2. E. Roedder. diags Am J Sci Bowen vol p435-56 '52

Second-order transitions and critical phenomena. R. L. Scott. bibliog J Chem Phys 21:209-11 F '53

Sensitive method for determination of vapor composition. K. M. Sancier. diags Anal Chem 24:1563-6 O '52

Solid phases in the system Ag_2HgI_4-Cu_2HgI_4. L. Suchow and P. H. Keck. bibliog Am Chem Soc J 75:518-22 F 5 '53

Solid state phase changes in long chain compounds. J. D. Hoffman and B. F. Decker. bibliog diags J Phys Chem 57:520-9 My '53

Solubility characteristics of some binary liquid mixtures. D. N. Campbell and J. B. Hickman. bibliog Am Chem Soc J 75:2879-81 Je 20 '53

Study of a system involving equilibrium between inner sphere and outer sphere complex ions; $Co(NH_3)_5H_2O^{+++}$ and $SO_4^{=}$. T. Taube and F. A. Posey. bibliog Am Chem Soc J 75:1463-7 Mr 20 '53

System $Al_2(SO_4)_3$-H_2SO_4-H_2O. D. Taylor and H. Bassett. Chem Soc J p4431-42 N '52

System benzene-hydrogen bromide-aluminium bromide. D. D. Eley and P. J. King. diags Chem Soc J p2517-22, 4972-6 Jl, D '52

System cobaltous chloride-water-*t*-butyl alcohol at 25°. L. I. Katzin and J. R. Ferraro. bibliog Am Chem Soc J 75:3825-7 Ag 5 '53

System $Cr_2(SO_4)_3$-H_2SO_4-H_2O. D. Taylor. Chem Soc J p2502-3 Ag '53

System InAs-InSb. C. Shih and E. A. Peretti. Am Chem Soc J 75:608-9 F 5 '53

System $MnSO_4$-H_2SO_4-H_2O. D. Taylor. Chem Soc J p2370-5 Je '52

System NaCl-H_2O at supercritical temperatures and pressures. C. S. Copeland and others. bibliog diags J Chem Phys 21:12-16 Ja '53

System water-dioxane-hydrogen chloride. R. A. Robinson. Am Chem Soc J 74:6125 D 5 '52

Ternary system; isopropyl ether-HCl-H_2O. D. E. Campbell, A. H. Laurene and H. M. Clark. bibliog Am Chem Soc J 74:6193-6 D 20 '52

Ternary system $NaVO_3$-Na_2SO_4-H_2O. R. Trujillo and E. Tejera. Am Chem Soc J 75:741 F 5 '53

Ternary systems ferrous chloride-hydrogen chloride-water, ferric chloride-ferrous chloride-water. F. A. Schimmel. bibliog Am Chem Soc J 74:4689-91 S 20 '52

Thermal analysis of the system hydrazine-methanol and hydrazine-ethanol. J. M. Corcoran, H. W. Kruse and S. Skolnik. bibliog J Phys Chem 57:435-7 Ap '53

Uranium oxide phase equilibrium systems. W. A. Lambertson and M. H. Mueller. bibliog il Am Cer Soc J 36:329-34 O 1 '53

Use of free energy data in the construction of phase diagrams. W. J. Knapp. bibliog Am Cer Soc J 36:43-7 F 1 '53

Vapor-liquid equilibria at 760 mm. pressure; 2-propanol-methanol, 2-propanol-ethyl alcohol, 2-propanol-propanol, and 2-propanol-2-butyl alcohol systems. L. H. Ballard and M. Van Winkle. bibliog Ind & Eng Chem 44:2450-3 O '52

Vapor-liquid equilibria for binary hydrocarbon-water systems. R. Kobayashi and D. L. Katz. bibliog(35 ref) flow sheet diags Ind & Eng Chem 45:440-51 F '53

Vapor-liquid equilibria in He^3–He^4 solutions. J. C. Morrow. Phys R 89:1034-7 Mr 1 '53

See also

Critical point

PHASEOLUS. See Beans

PHELPS, Andrew Henry, 1888-

Portrait. Fortune 47:99 Mr '53

PHELPS, Earle Bernard, 1876-1953

Sketch. Sewage & Ind Wastes 25:766 Jl '53; por Water & Sewage Works 100:293 Jl '53

PHENACYL bromide. See Bromoacetophenone

PHENACYL chloride. See Chloroacetophenone

PHENANTHRENE

Approaches to the total synthesis of adrenal steroids; a new method for the attachment of ring D. L. H. Sarett and others. bibliog Am Chem Soc J 75:2112-18 My 5 '53

Approaches to the total synthesis of adrenal steroids; 2,4b-dimethyl-7-ethylenedioxy- 1,2,3,4,4aα,4b,5,6,7,8,10,10aβ- dodecahydrophenanthrene-4β-ol-1-one and related compounds. R. M. Lukes and others. Am Chem Soc J 75:1707-12 Ap 5 '53

Approaches to the total synthesis of adrenal steroids; 4b-methyl-7-ethylenedioxy-1,2,3,4,4aα,4b,5,6,7,8,10,10aβ-dodecahydrophenanthrene-4β-ol-1-one and related tricyclic derivatives. G. I. Poos and others. bibliog Am Chem Soc J 75:422-9 Ja 20 '53

Aromatic cyclodehydration; 3-hydroxy-9-(*p*-hydroxyphenyl)-10-ethylphenanthrene, an estrogen analog. C. K. Bradsher and W. J. Jackson, jr. Am Chem Soc J 74:4880-3 O 5 '52

Determination of double-bond character in cyclic systems; the 9,10-bond of phenanthrene. I. M. Hunsberger, R. Ketcham and H. S. Gutowsky. bibliog Am Chem Soc J 74:4839-45 O 5 '52

2,2′-Diphenic acid from phenanthrene. W. F. O'Connor and E. J. Moriconi. bibliog flow sheet il Ind & Eng Chem 45:277-81 F '53

Polarized fluorescence of molecules of some single organic crystals. S. C. Ganguly and N. K. Choudhury. bibliog il J Chem Phys 21:554-7 Mr '53

Structures of some 2-methoxy-8-keto-4a-methylperhydrophenanthrenes and related compounds. W. B. Renfrow and J. W. Cornforth. bibliog Am Chem Soc J 75:1347-50 Mr 20 '53

Synthesis of phenanthrenes; a mechanism for the cyclization of β-arylethylcyclohexanols. R. A. Barnes. bibliog Am Chem Soc J 75:3004-8 Je 20 '53

Synthesis of phenanthrenes; 8-chloro-4a-methyl-1,2,3,4,4a,9,10,10a-octahydrophenanthrene. R. A. Barnes and M. D. Konort. bibliog Am Chem Soc J 75:303-5 Ja 20 '53

Synthesis of phenanthrenes; 5-hydroxy-8-keto-4a-methylperhydrophenanthrene. R. A. Barnes and A. H. Sherman. bibliog Am Chem Soc J 75:3013-15 Je 20 '53

Synthetic estrogens; derivatives of 1-phenylphenanthrene. R. E. Juday. bibliog Am Chem Soc J 75:3008-13 Je 20 '53

Vapour pressure and lattice energy of some aromatic ring compounds. R. S. Bradley and T. G. Cleasby. Chem Soc J p 1690-2 Je '53

PHENANTHRIDINE

Improved preparation of phenanthridine. D. W. Ockenden and K. Schofield. Chem Soc J p717 F '53

New synthesis of phenanthridine. E. C. Taylor, jr. and A. E. Martin. bibliog Am Chem Soc J 74:6295 D 20 '52

Nitration of phenanthridine. A. G. Caldwell and L. P. Walls. Chem Soc J p2156-64 Je '52

Potential trypanocides of the *N*-heterocyclic series; compounds derived from phenanthridine-9-aldehydes. A. G. Caldwell. Chem Soc J p2035-41 Je '52

Synthesis of 1-ethyl-9 : 10-dihydro-10-methyl-6 : 7-methylenedioxyphenanthridine. R. B. Kelly, W. I. Taylor and K. Wiesner. Chem Soc J p2094-6 Jl '53

Trypanocides of the phenanthridine series; the effect of changing the quaternary grouping in dimidium bromide. T. I. Watkins. Chem Soc J p3059-64 Ag '52

PHENANTHRIDONE

Internuclear cyclisation; the synthesis of some nitro-*N*-methylphenanthridones. R. A. Heacock and D. H. Hey. Chem Soc J p3-8 Ja '53

PHENANTHROLINE

Spectrophotometric studies of empirical formulas of complex ions. A. E. Harvey, jr. and D. L. Manning. bibliog Am Chem Soc J 74:4744-6 O 5 '52

PHENAZINE

Polarographic reduction of pyridine, quinoline, and phenazine. R. C. Kaye and H. I. Stonehill. Chem Soc J p3240-3 Ag '52

PHENETHYLAMINE

Rearrangements in the reactions of 2-(4-substituted)-phenylethylamines-1-C^{14} with nitrous acid. J. D. Roberts and C. M. Regan. bibliog Am Chem Soc J 75:2069-72 My 5 '53

PHENETHYL bromide. See Bromoethyl benzene

PHENNER, L. E.
They're in the news. H. Woodward. por Sales Management 70:27 F 1 '53

PHENOCRYSTS
Twinning frequency in feldspar phenocrysts from a quartz latite sill at Sierra Blanca, Tex. E. Ingerson. il maps Am J Sci Bowen vol p 189-202 '52

PHENOL
Cleavage of sulfonamides with aqueous hydrobromic acid and phenol. H. R. Snyder and H. C. Geller. bibliog Am Chem Soc J 74:4864-6 O 5 '52
CCDA official reviews markets for three DPA-goal chemicals. Chem & Eng N 31:1318-20 Mr 30 '53
*cyclo*Octatetraene derivatives; condensation of *cyclo*octatetraene with phenol. W. O. Jones. Chem Soc J p2500-1 Ag '53
Phenol extraction; M. W. Kellogg co. flow diag Pet Refiner 31:194-5 S '52
Phenol, shot in the arm; shell molding. Chem W 72:61-4 Ja 17 '53
Reaction of 2,4,6-trimethylstyrene oxide with phenol. C. O. Guss. bibliog Am Chem Soc J 75:3177-9 Jl 5 '53
Resin forming reactions of furfural and phenol. L. H. Brown. bibliog Ind & Eng Chem 44:2673-5 N '52
Some effects of cobalt gamma-radiation on aqueous benzene solutions. T. J. Sworski. bibliog J Chem Phys 20:1817-18 N '52

Manufacture

Hercules dedicates first phenol from air plant, Montreal East, Canada; oxidation-cleavage process. Paint Oil & Chem R 116:16 Je 4 '53
Phenol and acetone via cumene oxidation. il Can Chem Process 37:50+ My '53
Phenol processes. J. M. Weiss. map Chem & Eng N 30:4714-17 N 10 '52; Same abr. il diags Oil & Gas J 51:146+ F 23 '53

PHENOL condensation products
Derivatives of phenols; some problems of structure, stereochemistry and crystal complex formation; abstract. W. Baker. Chem & Ind p 1174 N 29 '52
Structural control of cure of phenolics. H. L. Bender. il diags Mod Plastics 30:136+ F '53

PHENOLPHTHALOL
Phenolphthalol. M. H. Hubacher. Am Chem Soc J 74:5216-17 O 20 '52

PHENOLS
Analytical acetylation; application to coal hydrogenation products. C. W. DeWalt, jr. and R. A. Glenn. bibliog Anal Chem 24:1789-95 N '52
Characterisation of primary aliphatic amines by reaction with *o*-acetoacetylphenol and by paper chromatography. W. Baker, J. B. Harborne and W. D. Ollis. Chem Soc J p3215-17 Ag '52
Chloramines as a source of iodine chloride; the preparation of iodo-phenols, -naphthols, and -aromatic ethers by means of a chloramine and an iodide. B. Jones and E. N. Richardson. Chem Soc J p713-15 F '53
Coal oxidation; comparative studies on phenols. G. R. Yohe and others. bibliog Am Chem Soc J 75:2688-93 Je 5 '53
Colour and constitution; polyphenyls, polyenes, and phenylpolyenes; and the significance of cross-conjugation. M. J. S. Dewar. Chem Soc J p3544-50 S '52
Condensation products of phenols and ketones; dimerides of 4-chloro- and 4-bromo-2-*iso*-propenylphenol. W. Baker and others. Chem Soc J p3796-8 O '52
Cut phenols in waste by 99.9 per cent. J. A. Biehl. flow diag Pet Processing 7:1435-7 O '52
Destruction of phenols by oxidation with ozone. S. J. Niegowski. bibliog Ind & Eng Chem 45:632-4 Mr '53
Dissociation of 3,3′,5,5′-tetranitro-4,4′-dihydroxydiphenyl in methanol. H. Hart and W. J. Detroit. Am Chem Soc J 74:5214-15 O 20 '52
Effect of alkyl substitution on antioxidant properties of phenols. J. I. Wasson and W. M. Smith. bibliog Ind & Eng Chem 45:197-200 Ja '53
Effect of methylation on the light absorption of phenols. A. Burawoy and J. T. Chamberlain. Chem Soc J p2310-16 Je '52
Effect of methylation on the light absorption of phenols; monophenylazophenols. A. Burawoy and J. T. Chamberlain. Chem Soc J p3734-40 O '52
High rolling phenols. Chem Eng 60:268+ Ap '53
Investigations on natural tannins; acidic condensation reactions between phenols and αβ-unsaturated carbonyl compounds. D. W. Clayton and others. Chem Soc J p581-6 F '53
Ionization and dissociation of certain weakly acidic substances in pyridine. E. J. Corey. bibliog Am Chem Soc J 75:1172-4 Mr 5 '53
ortho-Hydroxylation of phenols. J. D. Loudon and J. A. Scott. Chem Soc J p265-73 Ja '53
Problems in the disposal of phenol waste in coke plants. G. E. Muns and C. V. Thompson. flow sheet diags Blast F & Steel Pl 41:761-9 Jl '53; Excerpts. Iron & Steel Eng 30:109-11 Ag '53
Quinone imides; addition of hydrazoic acid and phenols to *p*-quinonedibenzenesulfonimide and its derivatives. R. Adams and D. C. Blomstrom. bibliog Am Chem Soc J 75:3405-8 Jl 20 '53
Reaction of formaldehyde and phenols with wool. K. G. Johnson. bibliog(65 titles) il Textile Res J 23:443-62 Jl '53
Researches on monolayers; the effect of mono- and di-hydric phenols on monolayers of certain aromatic compounds. C. H. Giles and E. L. Neustädter. Chem Soc J p3806-13 O '52
Separation of phenols from coal-tar hydrocarbons by means of glycerol and aqueous triethylene glycol; development of a process. A. P. C. Cumming. flow diags J Ap Chem 3:98-106 Mr '53
Studies in hydrogen-bond formation; detection of the interaction of phenols with amido- and azo-groups, etc., by dielectric-constant measurement. C. H. Giles, T. J. Rose and D. G. M. Vallance. diag Chem Soc J p3799-805 O '52
Synthesis of the polymethylols of phenol. J. H. Freeman. bibliog Am Chem Soc J 74:6257-60 D 20 '52
Synthetic choleretics; phenol derivatives. R. R. Burtner and J. M. Brown. bibliog Am Chem Soc J 75:2334-40 My 20 '53
Thermal cracking of alkyl phenols; mechanism of dealkylation. B. W. Jones and M. B. Neuworth. bibliog diag Ind & Eng Chem 44:2872-6 D '52

Analysis

Analysis of pine heartwood components; abstract of papers by G. Lindstedt and others. diag Paper Ind 34:1020 N '52
Detection and differentiation of 3 : 4- and 2 : 5-dihydroxyphenyl compounds related to tyrosine. C. E. Dalgliesh. Chem Soc J p3943-5 O '52
Determination of phenolic hydroxyl values (semi-micro method). H. Brunner and H. R. Thomas bibliog J Ap Chem 3:49-54 F '53
Determination of phenols by the *p*-nitrosodimethylaniline method. R. H. Hill and L. K. Herndon. bibliog Sewage & Ind Wastes 24:1389-96 N '52; Discussion. I. Nusbaum. 25:311-13 Mr '53
Direct measurement of the absorption spectra of some plant phenols on paper strip chromatograms. A. E. Bradfield and A. E. Flood. Chem Soc J p4740-4 D '52
Identification of phenols by paper partition chromatography. W. Chang, R. L. Hossfeld and W. M. Sandstrom. Am Chem Soc J 74:5766-7 N 20 '52
Oxygen and nitrogen compounds in shale-oil naphtha. R. A. Van Meter and others. bibliog Anal Chem 24:1758-63 N '52
Quantitative determination of methylol phenols by paper chromatography. J. H. Freeman. bibliog Anal Chem 24:2001-2 D '52
Titration of phenols in nonaqueous solvents. J. S. Fritz and R. T. Keen. bibliog Anal Chem 25:179-81 Ja '53

PHENOXATHIIN
Nitration of phenoxathiin and some new amino derivatives. J. F. Nobis, A. J. Blardinelli and D. J. Blaney. bibliog Am Chem Soc J 75:3384-7 Jl 20 '53

PHENOXYACETIC acid
Formation of phenoxyacetic acids from alkoxybenzenes and diazoacetic ester. A. W. Johnson, A. Langemann and J. Murray. Chem Soc J p2136-40 Jl '53

PHENYLACENAPHTHENOL
Studies in the Wagner rearrangement; the dehydration of 2-phenyl-1-acenaphthenol-1-C^{14}. W. A. Bonner and C. J. Collins. bibliog Am Chem Soc J 75:3831-4 Ag 5 '53

PHENYLACETALDEHYDE
Abnormal chichibabin reactions; the condensation of phenylacetaldehyde and homoveratric aldehyde with ammonia. E. L. Eliel, R. T. McBride and S. Kaufmann. bibliog Am Chem Soc J 75:4291-6 S 5 '53

PHENYLACETIC acid
Anodic syntheses; electrolyses of mono-, di-, and tri-phenylacetic acids in non-aqueous solutions. R. P. Linstead, B. R. Shephard and B. C. L. Weedon. Chem Soc J p3624-7 S '52
Cyclodehydration of *o*-phenoxyphenylacetic acids to dihydrodibenz(b,f)oxepinones. M. Kulka and R. H. F. Manske. bibliog Am Chem Soc J 75:1322-4 Mr 20 '53
Preparation of ketones and their enol esters by the base-catalyzed condensation of acids and acid derivatives with anhydrides. G. G. Smith. bibliog Am Chem Soc J 75:1134-7 Mr 5 '53
Salt effects and the temperature coefficients of solubility of benzoic and phenylacetic acids in aqueous solutions. M. A. Paul. bibliog Am Chem Soc J 75:2513-16 My 20 '53
Side-chain sulfonation of phenylalkanoic acids. W. E. Truce and C. E. Olson. Am Chem Soc J 75:1651-3 Ap 5 '53

PHENYLACETONE
Alkylation of phenylacetones. E. M. Schultz and others. bibliog Am Chem Soc J 75:1072-4 Mr 5 '53

PHENYLACETONITRILE
Condensations of cinchoninaldehyde; with phenylacetonitriles. A. P. Phillips. Am Chem Soc J 74:5230-1 O 20 '52
Cyclic derivatives of α,α-disubstituted phenylacetonitriles. N. Sperber and R. Fricano. bibliog Am Chem Soc J 75:2986-8 Je 20 '53

PHENYLALANINE
N,N′-(oxoethylene)-bis-(DL-β-phenylalanine). W. S. Fones. Am Chem Soc J 74:4708-9 S 20 '52

PHENYLANTHRACENE
Studies of the localization theory of organic reactions; the effects of substituents. R. D. Brown. Chem Soc J p2229-33 Je '52

PHENYLAZONAPHTHALENE
Aromatic azo-compounds; oxidation of azonaphthalenes and phenylazonaphthalenes. G. M. Badger and G. E. Lewis. Chem Soc J p2151-5 Jl '53

PHENYLBUTANE
Surface isomerisation; the surface-catalysed racemisation of 2-phenylbutane. A. G. Davies and G. A. H. Elton. Chem Soc J p3298-300 Ag '52

PHENYL butynol
Formic acid rearrangement of 2-phenyl-3-butyn-2-ol. T. Takeshima. bibliog Am Chem Soc J 75:4107-8 Ag 20 '53

PHENYLCAPRONIC acid
Side-chain sulfonation of phenylalkanoic acids. W. E. Truce and C. E. Olson. Am Chem Soc J 75:1651-3 Ap 5 '53

PHENYLCYCLOHEXANEACETIC acid
Synthesis of 1-phenylcyclohexaneacetic acid. E. B. Carton and others. bibliog Am Chem Soc J 74:5126-8 O 20 '52

PHENYL ether
Claisen rearrangement of phenyl allyl ethers, labeled with carbon-14. J. P. Ryan and P. R. O'Connor. bibliog Am Chem Soc J 74:5866-9 D 5 '52
Condition for the creeping of a liquid past a mercury seal. R. S. Jessup. diags J Ap Phys 23:543-5 My '52

PHENYLETHYLAMINE. See Phenethylamine

PHENYL group
Analogs of hexaphenylethane; hexaaryldisilanes containing phenyl and *p*-tolyl groups. H. Gilman and T. C. Wu. bibliog Am Chem Soc J 75:3762-5 Ag 5 '53
Heat of formation of phenyl radical and the related bond dissociation energies. M. Szwarc and D. Williams. J Chem Phys 20:1171-2 Jl '52
Homolytic aromatic substitution; ration of isomerides formed in the phenylation of chlorobenzene; competitive experiments on the phenylation of *p*-dichlorobenzene and 1 : 3 : 5-trichlorobenzene; partial rate factors for chlorobenzene. D. R. Augood, D. H. Hey and G. H. Williams. Chem Soc J p44-50 Ja '53
Kinetics of anionotropic rearrangement; a comparison of the effects of the phenyl, furyl, and thienyl groups on reactivity. E. A. Braude and J. S. Fawcett. Chem Soc J p4158-62 N '52
Natural hypsochromic shifts on phenyl substitution. B. Pullman and others. bibliog J Chem Phys 21:188-9 Ja '53
Racemizing effect of the phenyl substituent of optically active hydrogen 2-phenyl-2-butyl phthalate in methanolytic reaction. H. H. Zeiss. bibliog Am Chem Soc J 75:3154-5 Jl 5 '53
Rearrangement of α-aminoketones during Clemmensen reduction; influence of phenyl substitution. N. J. Leonard, G. Fuller and H. L. Dryden, jr. bibliog Am Chem Soc J 75:3727-30 Ag 5 '53

PHENYL hexanol
Studies in stereochemistry; the preparation, resolution and assignment of configuration to the 4-phenyl-3-hexanol system. D. J. Cram, F. A. Abd Elhafez and H. Weingartner. bibliog Am Chem Soc J 75:2293-7 My 20 '53

PHENYLHYDRAZIDES
α-Chymotrypsin catalyzed synthesis of the phenylhydrazides of certain acylated α-amino acids. W. H. Schuller and C. Niemann. bibliog Am Chem Soc J 74:4630-4 S 20 '52

PHENYLHYDRAZINE
Action of phenylhydrazine on the periodate degradation products of β-D-glucopyranosyl sulfones. E. Blanchfield and T. Dillon. bibliog Am Chem Soc J 75:647-8 F 5 '53
Preparation of 3 : 5-dimethyl-1-phenyl-1 : 2 : 4-triazole. A. A. Komzak and J. B. Polya. bibliog J Ap Chem 2:666-8 N '52
Some applications for its derivatives. Chem Age (Lond) 68:486 Mr 28 '53
Triazoles; unsymmetrical Einhorn-Brunner and related Pellizzari reactions. M. R. Atkinson and J. B. Polya. Chem Soc J p3418-22 S '52

PHENYLHYDRAZONE
Oxidation of phenylhydrazones with perphthalic acid. B. M. Lynch and K. H. Pausacker. Chem Soc J p2517-19 S '53

PHENYLINDOLE
Metalation of indole, N-methylindole and N-phenylindole with *n*-butyllithium. D. A. Shirley and P. A. Roussel. bibliog Am Chem Soc J 75:375-8 Ja 20 '53

PHENYL iodosoacetate. See Iodosobenzene diacetate

PHENYLISOBUTYL group
Rearrangement of the neophyl radical. F. H. Seubold, jr. bibliog Am Chem Soc J 75:2532-3 My 20 '53

PHENYLISOCYANATE
Studies in the furan series; reaction of some substituted 2-furamides with phenyl isocyanate. J. R. Willard and C. S. Hamilton. Am Chem Soc J 75:2270-1 My 5 '53

PHENYLISOOXAZOLONE
3-Phenyl*iso*oxazol-5-one. C. L. Angyal and R. J. W. Le Fèvre. Chem Soc J p2181-4 Jl '53

PHENYLLITHIUM
Reactions of haloalkyl ethers with phenyllithium. L. Summers and M. L. Larson. bibliog Am Chem Soc J 74:4498-500 S 20 '52

PHENYLMAGNESIUM bromide
Reactions of *cis*- and *trans*-1,2-dibenzoylpropenes with hydrogen halides, bromine and phenylmagnesium bromide. P. S. Bailey and S. H. Pomerantz. bibliog Am Chem Soc J 75:281-4 Ja 20 '53

PHENYLMAGNESIUM halides
Action of Grignard reagents on anhydrosugars of ethylene oxide type; the behaviour of 4 : 6-benzylidene 2 : 3-anhydro-α-methyl-D-alloside towards ethyl- and phenyl-magnesium halides. G. N. Richards and L. F. Wiggins. Chem Soc J p2442-6 Ag '53

PHENYLMALONIC acid
C^{14} isotope effect in the decarboxylation of α-naphthyl- and phenylmalonic acids. A. Fry and M. Calvin. bibliog J Phys Chem 56:901-5 O '52

PHENYL pentene
Products of oxidation of an olefin structurally related to GR-S. G. R. Mitchell and J. R. Shelton. bibliog Ind & Eng Chem 45:386-92 F '53

PHENYLPHENANTHRENE
Synthetic estrogens; derivatives of 2-phenylphenanthrene and 1-ethyl-2-benzylnaphthalene. R. E. Juday. bibliog Am Chem Soc J 75:4071-4 Ag 20 '53

PHENYLPIPERIDONE
Syntheses from 4-phenyl-2-piperidone. C. F. Koelsch and R. W. DeNet. Am Chem Soc J 75:3271-2 Jl 5 '53

PHENYLPROPIONIC acid
Side-chain sulfonation of phenylalkanoic acids. W. E. Truce and C. E. Olson. Am Chem Soc J 75:1651-3 Ap 5 '53

PHENYL pyridine
3-Phenylpyridine. H. Rapoport, M. Look and G. J. Kelly. bibliog Am Chem Soc J 74:6293-4 D 20 '52

PHENYLPYRROLIDINE
N-phenylpyrrolidine. C. J. Olsen and A. Furst. Am Chem Soc J 75:3026 Je 20 '53

PHENYLSERINE
β-Phenylserine. W. A. Bolhofer. bibliog Am Chem Soc J 74:5459-61 N 5 '52
β-Phenylserine series. E. D. Bergmann, H. Bendas and C. Resnick. Chem Soc J p2564-71 S '53
Some derivatives of β-phenylserine. D. O. Holland, P. A. Jenkins and J. H. C. Nayler. Chem Soc J p273-80 Ja '53
Stereochemistry of the β-phenylserines; characterization of allophenylserine. K. N. F. Shaw and S. W. Fox. bibliog Am Chem Soc J 75:3417-21 Jl 20 '53
Stereochemistry of the β-phenylserines; improved preparation of allophenylserine. K. N. F. Shaw and S. W. Fox. bibliog diag Am Chem Soc J 75:3421-4 Jl 20 '53

PHENYL sulfides
Synthesis of some tertiary amine derivatives of mixed phenyl alkyl sulfides. M. H. Kim and R. D. Schuetz. Am Chem Soc J 74:5102-4 O 20 '52

PHENYL sulfone
Reaction of *n*-butyllithium with dibenzothiophene-5-dioxide and with diphenyl sulfone. H. Gilman and D. L. Esmay. Am Chem Soc J 75:278-81 Ja 20 '53

PHENYLTHIOPHENEGLYCOLIC acid
3-Substituted thiophenes; alkamine esters of phenyl-3-thienylglycolic acid. E. Campaigne and R. C. Bourgeois. bibliog Am Chem Soc J 75:2702-4 Je 5 '53

PHENYLVALERIC acid
New approach to δ-phenylvaleric acids. P. D. Gardner and others. bibliog Am Chem Soc J 74:5527-9 N 5 '52

PHENYLATION
Homolytic aromatic substitution; competitive experiments on the phenylation of benzene, nitrobenzene, chlorobenzene, and pyridine; partial rate factors for nitrobenzene. D. R. Augood, D. H. Hey and G. H. Williams. diags Chem Soc J p2094-102 Je '52

PHENYLENEDIAMINE
Constitution of products formed from *o*-phenylenediamines and alloxan in neutral solution; Rudy and Cramer's bis-barbiturylidene ether. F. E. King and J. W. Clark-Lewis. Chem Soc J p 172-7 Ja '53
Reaction of methyl iodide with *o*-phenylenediamine; homomorphs of *o*-di-*t*-butylbenzene. H. C. Brown and K. L. Nelson. bibliog diag Am Chem Soc J 75:24-8 Ja 5 '53

PHENYLENE diglycine
Chelate ion exchange resins. H. P. Gregor and others. bibliog Ind & Eng Chem 44:2834-9 D '52

PHEOPHYTIN
Absorption spectra of solutions of pheophytin a in methanol containing acid or base. R. Livingston and others. Am Chem Soc J 75:3025-6 Je 20 '53

PHILADELPHIA
Philadelphia improvements planned to fit city purse. Eng N 149:53-4 N 20 '52
Philadelphia tears down its Chinese wall. il Bsns W p98-100+ F 14 '53
Propose new Penn Center plan. il Eng N 150:41-2 F 12 '53
See also
Airports—Philadelphia
Building—Philadelphia
Electric plants (central stations)—Philadelphia
Electricity supply—Philadelphia
Wages—Philadelphia

Bridges
Bids asked for Delaware River bridge. il Eng N 150:23 Je 11 '53

Industries
New cast of characters for Philadelphia story. Bsns W p 100-2+ Ja 10 '53

Water supply
Water company defends Perkiomen dam site. Eng N 150:52-3 Ja 22 '53

PHILADELPHIA company
Step five of plan approved. Comm & Fin Chr 177:144 Ja 12 '53

PHILADELPHIA electric company
Bonds offered. Comm & Fin Chr 177:2251-2 My 25 '53
Five stocks best suited to resist downtrend; with comparative balance sheet items. Mag of Wall St 91:29 O 4 '52
Preferred stock sold. Comm & Fin Chr 177:2133 My 18 '53

PHILADELPHIA national bank
150th anniversary. Comm & Fin Chr 177:1853 Ap 30 '53

PHILANTHROPY
See also
Foundations, Charitable and educational

PHILCO corporation
Philco; its greatest growth may lie ahead; with financial data, 1942-1952. C. A. Clark, jr. Barron's 32:11-13 O 20 '52

PHILIPP, Lawrence A.
How an inventor and engineer operates; Dr L. A. Philipp combines the two functions as vice president in charge of Kelvinator engineering. pors Steel 131:79-81 N 10 '52

PHILIPPINE ISLANDS
See also
Tobacco industry and trade—Philippine Islands

Bibliography
Checklist of Philippine government documents, 1950. 62p pa 40c Card division, Library of Congress, Washington 25 '53

Commerce
New deal for the Philippines. Bsns W p 145-6 My 2 '53

Commercial policy
Controls on international trade (cont). For Comm W 48:11 D 8 '52
New import control system set up for Philippines by Central bank. For Comm W 50:7 Jl 13 '53
Philippines defines new rules for licensing exchange for imports. For Comm W 50:12 Jl 20 '53

Economic conditions
Economic conditions abroad (cont). For Comm W 48:5 N 10; 5+, 7 N 17; 6 D 8 '52; 49:5 Ja 5; 6 Mr 23 '53

PHILLIPS petroleum company
Debentures offered to stockholders. Comm & Fin Chr 177:2354+ Je 1 '53
Five outstanding investments for the future; with comparative balance sheet items. Mag of Wall St 92:333 Je 13 '53
Security I like best. J. W. Leason. Comm & Fin Chr 177:886 F 26 '53

PHILOSOPHY
Philosophy of an ad man. J. Caples. Adv Agency 46:20+ Ap '53

PHILPOTT dam. See Dams, Concrete

PHLOROGLUCINOL
Usnic acid; *C*-diacetyl derivatives of phloroglucinol and *C*-methylphloroglucinol. F. M. Dean and A. Robertson. Chem Soc J p 1241-9 Ap '53

PHOENIX, Arizona
Phoenix meets the people; Know your city forums. D. Smith. il Pub Works 84:75+ O '53
Streamlined public works organization gets results. A. R. Pierce. il Pub Works 83: 47-9+ N '52

Water supply

Phoenix averts a water famine; with cost data. D. Smith. il Pub Works 84:73-4 F '53

PHONETICS
Auditory tests with synthetic vowels. R. L. Miller. il diag Acoustical Soc Am J 25:114-21 Ja '53
Influence of consonant environment upon the secondary acoustical characteristics of vowels. A. S. House and G. Fairbanks. bibliog Acoustical Soc Am J 25:105-13 Ja '53
Information-bearing elements of speech. G. E. Peterson. il diag Acoustical Soc Am J 24:629-37 N '52
Operational phonetics in reference to linguistic relativity. K. L. Pike. bibliog diags Acoustical Soc Am J 24:618-25 N '52
Phonemes and allophones in speech analysis. W. F. Twaddell. Acoustical Soc Am J 24:607-11 N '52
Phonetic basis for identification of phonemic elements. E. Fischer-Jørgensen. diags Acoustical Soc Am J 24:611-17 N '52
Some experiments on the perception of synthetic sounds. F. S. Cooper and others. il diags Acoustical Soc Am J 24:597-606 N '52
See also
Speech

PHONEVISION. See Television broadcasting—Phonevision

PHONOGRAPH
New developments in phono equalizers. C. P. Boegli. il diags Radio & Tv N 49:54-6+ Ap '53
Phonograph field makes new gains. Electronics 26:10+ F '53
Phonograph-needle drag distortion. Franklin Inst J 255:144-6 F '53
Preamp. bibliog il diags Radio & Tv N 48: 50-2+ N '52
Spring mounting for phonograph chassis. K. Prytz. diag Electronics 26:230+ Ag '53
See also
Radio receiving apparatus—Phonograph combination

Noise reduction

Dynamic noise suppressor. T. B. Couch. diag Radio & Tv N 49:108 Je '53

Pickup

Objective testing of pickups and loudspeakers; abstract. K. R. McLachlan and R. Yorke. diags Electronics 26:204-6+ S '53
Preamp for magnetic pickups. W. Creviston. bibliog il diags Radio & Tv N 48:34-5+ D '52

Turntables

String-belt turntables. A. H. Taylor. il diags Radio & Tv N 49:68-9+ Mr '53

PHONOGRAPH records
EMI records in America. Economist 167:182+ Ap 18 '53
Mail-order melodies. Fortune 47:178 My '53
Phonograph field makes new gains. Electronics 26:10+ F '53
Phonograph needle drag distortion. diags Electronics 26:214+ Ja '53
Piano recordings. Consumers Res Bul 31:16 Ap '53
Quality disc recording with home equipment. J. T. Moore. il diags Radio & Tv N 48: 38-40+ N '52
Record industry; the classics are hot. D. A. Saunders. il Fortune 46:128-31+ D '52
Spinning disks. Bsns W p62 O 25 '52
See also
Talking books

Rating

Phonograph records. W. F. Grueninger. Published in monthly numbers of Consumers' research bulletin

Testing

Calibration of disc recordings by light-pattern measurements. P. E. Axon and W. K. E. Geddes. il diags Inst E E Proc 100 pt 3: 217-27 Jl '53
NBS develops spectroscopic method for studying speech characteristics. il Elec Eng 71:1051-2 N '52

PHOSGENE
Photochemical formation of phosgene. L. Fowler and J. J. Beaver. bibliog Am Chem Soc J 75:4186-8 S 5 '53

PHOSPHANILIC acid. See Aminobenzenephosphonic acid

PHOSPHATASES
Enzymatic phosphorylation of nucleosides by phosphate transfer. G. Brawerman and E. Chargaff. Am Chem Soc J 75:2020-1 Ap 20 '53
Nucleotide synthesis by malt and prostate phosphatases. G. Brawerman and E. Chargaff. Am Chem Soc J 75:4113 Ag 20 '53
Use of bacterial phosphatases in differentiating certain micro-organisms. J. Trammer. Chem & Ind p 126 F 7 '53
Variation in extractability of phosphatase and nitrogen in liver of rats on protein-varied diets. M. H. Ross and others. Franklin Inst J 255:87-9 Ja '53

PHOSPHATE coating
Control of phosphating solutions; ion exchanger a new method for rapid analysis. G. Gabrielson. bibliog Metal Finishing 51: 76-8 Ap '53
Corrosion by retained treatment chemicals on phosphated steel surfaces. S. G. Clarke and E. E. Longhurst. pl diag Iron & Steel Inst J 170:15-18 Ja '52; Discussion. 173: 177-81 F '53
Corrosion of steel under phosphate coatings and protective finishes; Iron and steel institute and British iron and steel research association joint meeting. Engineer 194: 652-3 N 14 '52; Engineering 174:646-7 N 14 '52; Chem Age (Lond) 67:765-8 D 6 '52; Metallurgia 46:305-7 D '52
Drums come clean and rust-inhibited. il Steel 132:84 Mr 23 '53
Industry gets chemically clean steel drums. il plan Iron Age 171:100-1 Ja 15 '53
Phosphate coatings as a basis for painting steel. Iron & Steel Inst J 170:10-15 Ja '52; Discussion. 173:177-81 F '53
Phosphate coatings benefit metal finishing and working. A. G. Gray. il Metal Prog 63:106-9 Ap '53
Phosphate coatings on steel surfaces. H. A. Holden. il Metallurgia 48:71-7+ Ag '53
Production costs lowered with pre-coated coil stock. A. E. Uhleen. il diag Iron Age 170:145-7 D 18 '52
Wear-resisting phosphate coatings on steel. il Engineering 175:57 Ja 9 '53

Testing

Radiometric evaluation of the effectiveness of the chromic acid rinse treatment for phosphated work. S. L. Eisler and J. Doss. il Metal Finishing 50:54-8+ D '52
Stripping phosphate coatings; radiometric evaluation of a new stripping solution. S. L. Eisler and J. Doss. il Metal Finishing 51:58-63 Ag '53
Tentative analytical tests for phosphate coatings on steel. R. S. Preston and others. Iron & Steel Inst J 170:19-20 Ja '52; Discussion. 173:177-81 F '53

PHOSPHATE rock
Distribution of uranium in rich phosphate beds of the phosphoria formation. M. E. Thompson. U S Geol S Bul 988-D:45-67; pa 15c Supt. of doc. '53
Phosphate, 1952. H. F. Dengler. Eng & Min J 154:100-2 F '53

PHOSPHATE rock—*Continued*

Phosphate rock '51 output below record high of 1950. Oil Paint & Drug Rep 162:52 N 17 '52

Potash and phosphate, 1952. T. M. Ware. il map Min Cong J 39:62-5+ F '53

Prevention of dental caries by rock phosphate in the diet of the rat. J. F. McClendon and J. Gershon-Cohen. Science 117:595-6 My 29 '53

Production of fertilizer from phosphate rock by fusion with magnesium and potassium sulfates. G. L. Bridger and D. R. Boylan. bibliog flow sheet il Ind & Eng Chem 45:646-52 Mr '53

Tristage crystallization process for utilizing western ferrophosphorus. L. H. Banning and others. flow sheet J Metals 5:Trans 423-30 Mr '53

Analysis

Method for determination of small amounts of rare earths and thorium in phosphate rocks. C. L. Waring and H. Mela, jr. bibliog Anal Chem 25:432-5 Mr '53

Florida

Hydraulic transportation of solids in Florida phosphate fields. I. S. Tillotson. il Min Cong J 39:41-4 Ja '53

Wet phosphate rock storage and handling at American cyanamid co.'s Brewster, Fla. plant; abstract. G. L. Lyle, jr. plan Rock Prod 56:142-3 Ap '53

Idaho

Phosphatic rocks in the Deer Creek-Wells Canyon area Idaho. W. R. Lowell. il map U S Geol S Bul 982-A:1-52, pl 1-3[in pocket] bibliog(p49-51); pa 45¢ Supt. of doc. '52

Western phosphate mining; growing industry. C. W. Sweetwood. il Min Eng 4:863-5 S '52; Same cond. Rock Prod 55:119 D '52

PHOSPHATES

Chemical phosphates look ahead. Chem Eng 60:196-7 Mr '53

Coenzyme A; pantetheine-2′ and -2′: 4′phosphates and a new method for the synthesis of cyclic phosphates. J. Baddiley and E. M. Thain. Chem Soc J p903-6 Mr '53

Coenzyme function of thiamine pyrophosphate in pentose phosphate metabolism. B. L. Horecker and P. Z. Smyrniotis. bibliog Am Chem Soc J 75:1009-10 F 20 '53

Dealkylation and hydrolysis of alkyl phosphites, phosphates, and phosphonates. W. Gerrard, W. J. Green and R. A. Nutkins. Chem Soc J p4076-8 O '52

Effect of phosphate on the constitution and hardening of portland cement. R. W. Nurse. bibliog il J Ap Chem 2:708-16 D '52

Formation of sulphites, phosphites, and phosphates of alcohols containing an aryl group. W. Gerrard and B. D. Shepherd. Chem Soc J p2069-74 Jl '53

Growing role of phosphates. R. A. Barackman and R. N. Bell. il Food Eng 25:68-70+ Je '53

Hydrolysis of condensed phosphates. J. R. Van Wazer, E. J. Griffith and J. F. McCullough. bibliog Am Chem Soc J 74:4977-8 O 5 '52

Mechanism of the hydrolysis of organic phosphates; *o*-carboxynaphthyl phosphates. J. D. Chanley and E. M. Gindler. bibliog Am Chem Soc J 75:4035-40 Ag 20 '53

New phosphate for soap. F. H. Mackenzie. il Soap & San Chem 28:42-3 N '52

Radioactivity of phosphatic sediments. D. McConnell. bibliog Econ Geol 48:147-8 Mr '53

Reactivation of acetylcholinesterase inhibited by alkylphosphates. I. B. Wilson and E. K. Meislich. Am Chem Soc J 75:4628-9 S 20 '53

Role of tannates and phosphates in the preservation of ancient buried iron objects. T. W. Farrer, L. Biek and F. Wormwell. il J Ap Chem 3:80-4 F '53

Structure and properties of the condensed phosphates; flow birefringence. J. R. Van Wazer, M. Goldstein and E. Farber. bibliog Am Chem Soc J 75:1563-7 Ap 5 '53

Synthesis and properties of linear organopolyphosphates; abstract. H. R. Wright and Zenftman. Chem & Ind p 1101 N 8 '52

Tests for phosphate fertilisers; potentialities of dicalcium phosphate. Chem Age (Lond) 68:139-40 Ja 17 '53

Transition temperatures in some dihydrogen and dideutero phosphates and arsenates and their solid solutions. C. C. Stephenson and others. J Chem Phys 21:1110 Je '53

See also

Monazite

Analysis

Control of phosphating solutions; ion exchanger a new method for rapid analysis. G. Gabrielson. bibliog Metal Finishing 51:76-8 Ap '53

Electrochromatographic separations of calcium and phosphate ions; factors influencing separations. T. R. Sato and others. bibliog il Anal Chem 25:438-46 Mr '53

Microgram and submicrogram determination of phosphate; applications of sealed tube digestion and capillary cell spectrophotometry. F. L. Schaffer, J. Fong and P. L. Kirk. bibliog il diags Anal Chem 25:343-6 F '53

Separation of sugar phosphates by ion exchange with the use of the borate complex. J. X. Khym and W. E. Cohn. bibliog Am Chem Soc J 75:1153-6 Mr 5 '53

Source and distribution of phosphorus pentoxide in triple superphosphate; determination by radioactive phosphoric acid. G. L. Bridger and J. W. Markey. bibliog Ind & Eng Chem 45:418-24 F '53

Manufacture

Enriched and concentrated superphosphates. L. D. Yates and others. bibliog flow sheet il diag Ind & Eng Chem 45:681-90 Mr '53

French prove nitraphosphate process. il diag Chem Eng 59:240+ N '52

Nitric foments a rock revolution. il Chem W 72:32+ Mr 21 '53

Phosphatic fertilisers; economy and recovery of sulphur during manufacture; abstract. E. G. Voiret. Chem Age (Lond) 67:643 N 8 '52

Triple superphosphate production; solid and liquid processes compared. J. J. Porter and J. Frisken. Chem Age (Lond) 68:201-4 Ja 31 '53

PHOSPHATIDES

Agent from *E. coli* causing hemorrhage and regression of an experimental mouse tumor; some nitrogenous components of the phospholipide moiety. M. Ikawa and others. bibliog diag Am Chem Soc J 75:3439-42 Jl 20 '53

Stimulation *in vitro* of phospholipid synthesis in thyroid tissue by thyrotrophic hormone. M. E. Morton and J. R. Schwartz. bibliog Science 117:103-4 Ja 30 '53

Analysis

Agent from E. coli causing hemorrhage and regression of an experimental mouse tumor; the component fatty acids of the phospholipide moiety. M. Ikawa and others. bibliog Am Chem Soc J 75:1035-8 Mr 5 '53

PHOSPHINE

Chemistry of P-B bonding; the phosphinoborines and their polymers. A. B. Burg and R. I. Wagner. bibliog Am Chem Soc J 75:3872-7 Ag 20 '53

Cyanoethylation of aryl phosphines. F. G. Mann and I. T. Millar. Chem Soc J p4453-7 N '52

Di-*n*-alkylphosphine oxides; synthesis. R. H. Williams and L. A. Hamilton. Am Chem Soc J 74:5418-20 N 5 '52

Equilibrium in the exchange of hydrogen between phosphine and water. R. E. Weston, jr. and J. Bigeleisen. bibliog J Chem Phys 20:1400-2 S '52

Preparation and properties of 1-phenyl-1-phospha-2 : 3-6 : 7-dibenzo*cyclo*hepta-2 : 6-diene and its arsenic analogue. F. G. Mann, I. T. Millar and B. B. Smith. Chem Soc J p 1130-4 Ap '53

Some dicarboxylic acids and esters containing the phosphine oxide group. P. W. Morgan and B. C. Herr. bibliog Am Chem Soc J 74:4526-9 S 20 '52

Structure of phosphine. M. H. Sirvetz and R. E. Weston, jr. bibliog J Chem Phys 21:898-902 My '53

Vibrational frequencies of phosphine-*d* and phosphine-d_2. R. E. Weston, jr. and M. H. Sirvetz. bibliog J Chem Phys 20:1820-1 N '52

PHOSPHINIC acid

Phosphinic anhydrides. G. M. Kosolapoff. Am Chem Soc J 74:5520 N 5 '52

Some salts of symmetric phosphinic acids. W. C. Drinkard and G. M. Kosolapoff. Am Chem Soc J 74:5520-1 N 5 '52

PHOSPHINYL chlorides

Kinetic studies in the phosphinyl chloride and phosphorochloridate series. I. Dostrovsky and M. Halmann. Chem Soc J p502-19 F '53

PHOSPHITES

Bromomagnesium salts of dialkyl phosphites as intermediates in the synthesis of substituted hydroxymethyl phosphonic acid esters. O. Gawron and others. bibliog Am Chem Soc J 75:3591-2 Jl 20 '53

Dealkylation and hydrolysis of alkyl phosphites, phosphates, and phosphonates. W. Gerrard, W. J. Green and R. A. Nutkins. Chem Soc J p4076-8 O '52

Formation of sulphites, phosphites, and phosphates of alcohols containing an aryl group. W. Gerrard and B. D. Shepherd. Chem Soc J p2069-74 Jl '53

Nucleotides; ribonucleoside-5′ phosphites; a new method for the preparation of mixed secondary phosphites. N. S. Corby, G. W. Kenner and A. R. Todd. Chem Soc J p3669-75 O '52

Preparation of a *t*-alkyl phosphite. G. M. Kosolapoff. Am Chem Soc J 74:4953 O 5 '52

PHOSPHOLIPIDES. See Phosphatides

PHOSPHOMOLYBDIC acid

Reduction of phosphomolybdic acid by compounds possessing conjugated double bonds. S. Burstein. bibliog Anal Chem 25:422-4 Mr '53

PHOSPHONATES

Dealkylation and hydrolysis of alkyl phosphites, phosphates, and phosphonates. W. Gerrard, W. J. Green and R. A. Nutkins. Chem Soc J p4076-8 O '52

Mercuration of dialkyl phosphonates. R. B. Fox and D. L. Venezky. bibliog Am Chem Soc J 75:3967-9 Ag 20 '53

Some alkyl thiazolephosphonates. N. D. Dawson and A. Burger. bibliog Am Chem Soc J 74:5312-14 N 5 '52

PHOSPHONIC acids

Acid dissociation constants of aromatic phosphonic acids; meta and para substituted compounds. H. H. Jaffé, L. D. Freedman and G. O. Doak. bibliog Am Chem Soc J 75:2209-11 My 5 '53

Chemistry of aliphatic phosphonic acids; alkylation of methanediphosphonic acid. G. M. Kosolapoff. Am Chem Soc J 75:1500-1 Mr 20 '53

Formation of triarylmethylphosphonic acids from triarylmethylphosphonyl dichlorides. D. V. N. Hardy and H. H. Hatt. Chem Soc J p3778-83 O '52

Preparation and determination of apparent dissociation constants of some alkylphosphonic and dialkylphosphonic acids. P. C. Crofts and G. M. Kosolapoff. bibliog Am Chem Soc J 75:3379-83 Jl 20 '53

Preparation of alkyl- and acylphosphonic acids. V. F. Cooke and others. Chem & Ind p351-2 Ap 11 '53

PHOSPHONYL chlorides

Formation of triarylmethylphosphonic acids from triarylmethylphosphonyl dichlorides. D. V. N. Hardy and H. H. Hatt. Chem Soc J p3778-83 O '52

PHOSPHORESCENCE. See Luminescence

PHOSPHORIC acid

Aryl-2-halogenoalkylamines; the reaction of *NN*-di-2′-chloroethyl-2-napthylamine with some phosphoric acid derivatives. W. Davis and W. C. J. Ross. Chem Soc J p4296-300 N '52

Beckmann rearrangements; aldoximes. E. C. Horning and V. L. Stromberg. bibliog Am Chem Soc J 74:5151-2 O 20 '52

Beckmann rearrangements; an investigation of special cases. E. C. Horning, V. L. Stromberg and H. A. Lloyd. bibliog Am Chem Soc J 74:5153-5 O 20 '52

Characteristic infra-red absorption of some organic derivatives of phosphoric acid. M. Halmann and S. Pinchas. Chem Soc J p626-9 F '53

Complexes involving tervalent iron and orthophosphoric acid; experiments with ion-exchange resins. J. E. Salmon. Chem Soc J p2316-23 Je '52

Complexes involving tervalent iron and orthophosphoric acid; ion-exchange studies of solutions containing phosphate and chloride. J. E. Salmon. Chem Soc J p2644-9 S '53

Polyphosphoric acid as a dehydrating agent; identification of the hydrocarbons from mesitylene and aliphatic acids. H. R. Snyder and R. W. Roeske. bibliog Am Chem Soc J 74:5820-2 D 5 '52

Polyphosphoric acid as a reagent in organic chemistry; conversion of aromatic acids and their derivatives to amines. H. R. Snyder, C. T. Elston and D. B. Kellom. Am Chem Soc J 75:2014-15 Ap 20 '53

Rates of hydrolysis of fructose-6-phosphoric acid. S. L. Friess. Am Chem Soc J 74:5521-2 N 5 '52

Studies in polyphosphoric acid cyclizations. J. Koo. bibliog Am Chem Soc J 75:1891-5 Ap 20 '53

Studies on phosphorylation; the reaction between carbodi-imides and acid esters of phosphoric acid; a new method for the preparation of pyrophosphates. H. G. Khorana and A. R. Todd. Chem Soc J p2257-60 Ag '53

Synthetic plant hormones; some esters of phosphoric acid. M. H. Maguire and G. Shaw. Chem Soc J p 1479-82 My '53

Analysis

Separation of quadrivalent and quinquevalent vanadium from phosphoric acid by ion-exchange resins; some observations on the reduction of quinquevalent vanadium by ion-exchange resins. J. E. Salmon and H. R. Tietze. Chem Soc J p2324-6 Je '52

PHOSPHOROCHLORIDATES. See Chlorophosphonates

PHOSPHORS. See Luminescence

PHOSPHORUS

Europe's supply of phosphorus on the increase. Chem & Eng N 31:681 F 16 '53

Fertilizer, phosphorus and allied industries; abstract and discussion. B. Raistrick. Chem & Ind p345 Ap 11 '53

French phosphorus; technical and economic problems. Chem Age (Lond) 68:137 Ja 17 '53

(γ, pn) Reaction in phosphorus. J. Halpern and others. Phys R 88:958 N 15 '52

Phosphorus in pepsin and pepsinogen. G. E. Perlmann. bibliog Am Chem Soc J 74:6308-9 D 20 '52

Preparation and properties of brown phosphorus. F. O. Rice, R. Potocki and K. Gosselin. bibliog Am Chem Soc J 75:2003-4 Ap 20 '53

Total neutron cross sections of gold, chlorine, and phosphorus. S. C. Snowdon and W. D. Whitehead. bibliog Phys R 90:615-18 My 15 '53

Analysis

Colorimetric determination of phosphorus pentoxide in fertilizers using a standard calibration plot. G. L. Bridger, D. R. Boylan and J. W. Markey. bibliog Anal Chem 25:336-8 F '53

Microgram and submicrogram determination of phosphate; applications of sealed tube digestion and capillary cell spectrophotometry. F. L. Schaffer, J. Fong and P. L. Kirk. bibliog il diags Anal Chem 25:343-6 F '53

Isotopes

Atomic mass of P^{31}. K. Ogata and H. Matsuda. Phys R 89:333-4 Ja 1 '53

Beta- and gamma-induced čerenkov radiation in water. M. A. Greenfield and others. Opt Soc Am J 43:42-3 Ja '53

Blood-volume determinations by means of radioisotope-labeled red cells; an experiment in biochemistry. F. Lionetti and B. H. Sweet. J Chem Educ 30:63-6 F '53

Bremsstrahlung from P^{32} betas. M. Goodrich and others. bibliog Phys R 91:1225-8 S 1 '53

Esters containing phosphorus; ethylphosphonic dichloride containing ^{32}P. B. C. Saunders and T. S. Worthy. diags Chem Soc J p2115-17 Jl '53

PHOSPHORUS—Isotopes—*Continued*

Neutrons from the disintegration of phosphorus by deuterons. S. C. Snowdon. bibliog Phys R 87:1022-5 S 15 '52

Phosphorus and photosynthesis; differences in the light and dark incorporation of radiophosphate. M. Goodman, D. F. Bradley and M. Calvin. bibliog diag Am Chem Soc J 75:1962-7 Ap 20 '53

Preparation of macrocrystalline fluorapatite containing radioactive phosphorus. G. V. Elmore and E. O. Huffman. Am Chem Soc J 74:4950 O 5 '52

Preparation of radiohypophosphate ion. T. Moeller and G. H. Quinty. bibliog Am Chem Soc J 74:6122-3 D '52

Production of P^{33} with thermal neutrons. T. Westermark. Phys R 88:573-4 N 1 '52

Short-lived radioisotopes P^{32} and Cl^{32}. N. W. Glass and others. Phys R 90:320 Ap 15 '53

Manufacture

Busting the big time. il Chem W 72:20+ F 7 '53

Tristage crystallization process for utilizing western ferrophosphorus. L. H. Banning and others. flow sheet J Metals 5:Trans 423-30 Mr '53

PHOSPHOROUS acid

Reactions of phenyl esters of phosphorous acid with iodine. J. P. Forsman and D. Lipkin. bibliog Am Chem Soc J 75:3145-8 Jl 5 '53

PHOSPHORUS chlorides

Interaction of phosphorus trichloride with alcohols and with hydroxy-esters. W. Gerrard and others. Chem Soc J p 1920-6 Je '53

Reaction of phosphorus pentachloride with epimeric 2-aminocycloalkanol hydrochlorides. E. E. van Tamelen and R. S. Wilson. bibliog Am Chem Soc J 74:6299-301 D 20 '52

PHOSPHORUS compounds

Crystal structure of tetrachlorophosphonium dichloroiodide. W. F. Zelezny and N. C. Baenziger. Am Chem Soc J 74:6151-2 D 5 '52

Di*iso*propyl phosphorofluoridate. A. H. Ford-Moore, L. J. Lermit and C. Stratford. Chem Soc J p 1776-8 Je '53

Esters containing phosphorus; ethylphosphonic dichloride containing ^{32}P. B. C. Saunders and T. S. Worthy. diags Chem Soc J p2115-17 Jl '53

Exchange reactions in volatile isocyanates and isothiocyanates of silicon, germanium and phosphorus. H. H. Anderson. bibliog Am Chem Soc J 75:1576-8 Ap 5 '53

Formation of organo-phosphorus compounds by the reaction of alkyl chlorides with phosphorus trichloride in the presence of aluminium chloride. A. M. Kinnear and E. A. Perren. Chem Soc J p3437-45 S '52

Infra-red spectra of organo-phosphorus compounds; aliphatic acids and compounds related to natural products. L. J. Bellamy and L. Beecher. Chem Soc J p728-32 Mr '53

Organic chemistry of phosphorus; some new methods for the preparation of alkyl halides. S. R. Landauer and H. N. Rydon. Chem Soc J p2224-34 Ag '53

Organic phosphorus compounds; reactions of methanephosphonyl dichloride with glycols. A. F. McKay, R. O. Braun and G. R. Vavasour. Am Chem Soc J 74:5540-1 N 5 '52

Organometallic and organometalloidal fluorine compounds; trifluoromethyl compounds of phosphorus. F. W. Bennett, H. J. Emeléus and R. N. Haszeldine. Chem Soc J p 1565-71 My '53

Phosphorus in the lubricants field. C. V. Smalheer and T. W. Mastin. bibliog and patent list il Pet Processing 7:1780-4 D '52

Preparation of some organophosphorus compounds. D. Ramaswami and E. R. Kirch. Am Chem Soc J 75:1763 Ap 5 '53

Preparation of some organophosphorus compounds possessing anticholinesterase activity. L. D. Freedman and others. bibliog Am Chem Soc J 75:1379-81 Mr 20 '53

Silicon-containing aromatic phosphorus derivatives. K. C. Frisch and H. Lyons. Am Chem Soc J 75:4078-9 Ag 20 '53

Spectrophotometric study of the phosphorus-interhalogen complexes in carbon tetrachloride and acetonitrile. A. I. Popov and E. H. Schmorr. bibliog Am Chem Soc J 74:4672-4 S 20 '52

Synthesis of N-phosphoryl amino acid esters. S. Li. bibliog Am Chem Soc J 74:5959-61 D 5 '52

Use of phosphite amides in peptide syntheses. G. W. Anderson and others. bibliog Am Chem Soc J 74:5304-6 N 5 '52

See also
Phosphates

Nomenclature

A.C.S. committee on nomenclature, spelling, and pronunciation; organic compounds containing phosphorus. Chem & Eng N 30: 4515-22 O 27 '52

PHOSPHORUS fluoride

Infrared spectra of NF_3 and PF_3. M. K. Wilson and S. R. Polo. bibliog J Chem Phys 20:1716-19 N '52

Infrared spectra of PF_3, POF_3, and PF_5. H. S. Gutowsky and A. D. Liehr. bibliog J Chem Phys 20:1652-3 O '52

PHOSPHORUS halides

Heats of hydrolysis of some halides and oxyhalides of phosphorus. T. Charnley and H. A. Skinner. Chem Soc J p450-2 F '53

PHOSPHORUS in the body

Relationship between inorganic phosphorus and vitamin A in the rat and sheep. E. W. Klosterman and others. bibliog Science 116: 665-6 D 12 '52

PHOSPHORUS oxides

Colorimetric determination of phosphorus pentoxide in fertilizers using a standard calibration plot. G. L. Bridger, D. R. Boylan and J. W. Markey. bibliog Anal Chem 25:336-8 F '53

Source and distribution of phosphorus pentoxide in triple superphosphate; determination by radioactive phosphoric acid. G. L. Bridger and J. W. Markey. bibliog Ind & Eng Chem 45:418-24 F '53

PHOSPHORUS oxychloride. See Phosphoryl chloride

PHOSPHORUS pentachloride

Electrolytic conductance of solutions of phosphorus pentachloride. D. S. Payne. Chem Soc J p 1052-5 Ap '53

PHOSPHORUS pentoxide. See Phosphorus oxides

PHOSPHORUS sulfides

Reaction of cyclohexene with phosphorus pentasulfide. P. Fay and H. P. Lankelma. bibliog Am Chem Soc J 74:4933-5 O 5 '52

PHOSPHORUS tribromide

Reaction between cyclobutylcarbinol and phosphorus tribromide. H. G. Kuivila and W. L. Masterton. bibliog Am Chem Soc J 74:4953-4 O 5 '52

PHOSPHORUS trichloride

Heat of hydrolysis of phosphorus oxychloride and phosphorus trichloride. E. Neale and L. T. D. Williams. Chem Soc J p4535-6 N '52

PHOSPHORYL chloride

Absence of quaternary salt formation between phosphoryl chloride and pyridine. B. M. Zeffert, P. B. Coulter and R. Macy. bibliog Am Chem Soc J 75:751-3 F 5 '53

Formylation of the dimethoxybenzenes using phosphorus oxychloride and N-methylformanilide. A. H. Sommers, R. J. Michaels, jr. and A. W. Weston. bibliog Am Chem Soc J 74:5546 N 5 '52

Heat of hydrolysis of phosphorus oxychloride and phosphorus trichloride. E. Neale and L. T. D. Williams. Chem Soc J p4535-6 N '52

PHOSPHORYL fluoride

Infrared spectra of PF_3, POF_3, and PF_5. H. S. Gutowsky and A. D. Liehr. bibliog J Chem Phys 20:1652-3 O '52

PHOSPHORYL halides

Heats of hydrolysis of some halides and oxyhalides of phosphorus. T. Charnley and H. A. Skinner. Chem Soc J p450-2 F '53

PHOSPHORYLASE

Enzymatic synthesis of 4-amino-5-imidazolecarboxamide riboside from 4-amino-5-imidazolecarboxamide and riboside-1-phosphate. E. D. Korn, F. C. Charalampous and J. M. Buchanan. bibliog Am Chem Soc J 75:3610-11 Jl 20 '53

PHOSPHORYLASE—*Continued*

Primer specificity of potato phosphorylase. D. French and G. M. Wild. bibliog il diags Am Chem Soc J 75:4490-2 S 20 '53

PHOSPHORYLATION

Enzymatic phosphorylation of *l*-aspartate. S. Black and N. M. Gray. bibliog Am Chem Soc J 75:2271-2 My 5 '53

Enzymatic phosphorylation of nucleosides by phosphate transfer. G. Brawerman and E. Chargaff. Am Chem Soc J 75:2020-1 Ap 20 '53

Studies on phosphorylation, the reaction between carbodi-imides and acid esters of phosphoric acid; a new method for the preparation of pyrophosphates. H. G. Khorana and A. R. Todd. Chem Soc J p2257-60 Ag '53

Study of oxidative phosphorylation with oxygen 18-labeled phosphate; abstract. M. Cohn. Science 116:518 N 14 '52

PHOSPHOTUNGSTIC acid

Extent of the photochemical reduction of phosphotungstic acid. L. Chalkley. J Phys Chem 56:1084-6 D '52

PHOTIC field, Theory of

Theory and applications of the photic field. P. Moon and D. E. Spencer. bibliog diags Franklin Inst J 255:33-50, 113-26 Ja-F '53

Theory of the photic field. P. Moon and D. E. Spencer. bibliog Franklin Inst J 255:33-50 Ja '53

PHOTOCELLS. See Photoelectric cells

PHOTOCHEMISTRY

Absorption spectra of free NH and NH_2 radicals produced by the flash photolysis of hydrazine. D. A. Ramsay. bibliog il J Phys Chem 57:415-17 Ap '53

Absorption spectra of free radicals in continuously irradiated photochemical systems. D. A. Ramsay. bibliog diag J Chem Phys 21:165-6 Ja '53

Action of light on diazoaminobenzene dissolved in ethanol. H. C. Freeman and R. J. W. Le Fèvre. Chem Soc J p2932-4 Jl '52

Action of light on tar fractions. C. R. Kinney and M. B. Dell. bibliog diags Ind & Eng Chem 45:809-14 Ap '53

Bromination of hydrocarbons; photochemical and thermal bromination of toluene; bond dissociation energies. H. R. Anderson, jr. and others. bibliog diags J Chem Phys 21:1258-67 Jl '53

Conversion of sunlight into chemical energy available in storage for man's use. L. J. Heidt and A. F. McMillan. diag Science 117:75-6 Ja 23 '53

Dimerization reactions in sunlight. A. Mustafa. Chem R 51:1-23 bibliog(100 refs, p21-3) Ag '52

Electrodeless discharge lamps containing metallic vapors. M. Zelikoff and others. il diag Opt Soc Am J 42:818-19 N '52

Extent of the photochemical reduction of phosphotungstic acid. L. Chalkley. J Phys Chem 56:1084-6 D '52

Gas production in the photolysis of liquid methyl iodide. R. H. Schuler and C. T. Chmiel. bibliog Am Chem Soc J 75:3792-6 Ag 5 '53

Iodine inhibition in the flash photolysis of methyl iodide. N. Davidson and T. Carrington. bibliog Am Chem Soc J 74:6277-9 D 20 '52

Kinetic study of photo-oxidations on the surface of zinc oxide in aqueous suspensions. M. C. Markham and K. J. Laidler. bibliog J Phys Chem 57:363-9 Mr '53

Kinetics of hot hydrogen atoms in the photolysis of the hydrogen halides. H. A. Schwarz, R. R. Williams, jr. and W. H. Hamill. bibliog diags Am Chem Soc J 74:6007-12 D 5 '52

Kinetics of the photochemical exchange between iodine and allyl iodide. D. J. Sibbett and R. M. Noyes. bibliog Am Chem Soc J 75:763-7 F 20 '53

Low-temperature photochromism and its relation to thermochromism. Y. Hirshberg and E. Fischer. diags Chem Soc J p629-36 F '53

Mercury photo-sensitized oxidation of ethane and methane. J. A. Gray. diags Chem Soc J p3150-4 Ag '52

Nernst memorial lecture. J. R. Partington. Chem Soc J p2870-2 S '53

New apparatus for rate studies applied to the photopolymerization of methyl methacrylate. M. A. Naylor and F. W. Billmeyer, jr. bibliog il diag Am Chem Soc J 75:2181-5 My 5 '53

Oxidation of aromatic compounds in aqueous solutions by free radicals produced by photo-excited electron transfer in iron complexes. H. G. C. Bates and N. Uri. bibliog Am Chem Soc J 75:2754-9 Je 5 '53

Oxidation of simple organic substances by sodium metaperiodate in solutions exposed to daylight. F. S. H. Head and G. Hughes. Chem Soc J p2046-52 Je '52

Peroxide- and light-induced reactions of alcohols with olefins. W. H. Urry and others. Am Chem Soc J 75:250-1 Ja 5 '53

Peroxide and light induced reactions of amines with olefins; a one-step synthesis of *d,l*-coniine. W. H. Urry, O. O. Juveland and F. W. Stacey. Am Chem Soc J 74:6155 D 5 '52

Phosphorus and photosynthesis; differences in the light and dark incorporation of radiophosphate. M. Goodman, D. F. Bradley and M. Calvin. bibliog diag Am Chem Soc J 75:1962-7 Ap 20 '53

Photobromination of pentane. M. S. Kharasch and others. J Chem Phys 20:1659-60 O '52

Photochemical addition of benzaldehyde to quinones. R. F. Moore and W. A. Waters. Chem Soc J p238-40 Ja '53

Photochemical decomposition of azomethane. M. H. Jones and E. W. R. Steacie. bibliog J Chem Phys 21:1018-25 Je '53

Photochemical decomposition of benzene. G. E. Gibson and others. bibliog J Chem Phys 21:1000-4 Je '53

Photochemical decomposition of hydrogen peroxide; quantum yields, tracer and fractionation effects. J. P. Hunt and H. Taube. bibliog Am Chem Soc J 74:5999-6002 D 5 '52

Photochemical decomposition of methylamine. J. S. Watson and B. D. Darwent. J Chem Phys 20:1041-2 Je '52

Photochemical enrichment of mercury 202. M. Zelikoff and others. J Chem Phys 21:376 F '53

Photochemical formation of phosgene. L. Fowler and J. J. Beaver. bibliog Am Chem Soc J 75:4186-8 S 5 '53

Photochemical reactions in the gas phase systems; di-*t*-butyl peroxide, peroxide-butadiene and acetone-butadiene. D. H. Volman and W. M. Graven. bibliog Am Chem Soc J 75:3111-16 Jl 5 '53

Photochemical reactions of diazomethane with polyhalomethanes and α-haloesters. W. H. Urry and J. R. Eiszner. bibliog Am Chem Soc J 74:5822-6 D 5 '52

Photochemical studies; liquid acetone-oxygen and liquid acetone-heptane-oxygen. P. E. Frankenburg and W. A. Noyes, jr. bibliog Am Chem Soc J 75:2847-50 Je 20 '53

Photochemical studies; the reactions of methyl radicals with oxygen. R. B. Martin and W. A. Noyes, jr. bibliog Am Chem Soc J 75:4183-5 S 5 '53

Photochemical synthesis of hydrogen peroxide at zinc oxide surfaces. T. R. Rubin and others. bibliog Am Chem Soc J 75:2850-3 Je 20 '53

Photochemistry of ferrous ions in aqueous solution. T. Rigg and J. Weiss. bibliog J Chem Phys 20:1194-9 Ag '52

Photochemistry of iodide ions in aqueous solution. T. Rigg and J. Weiss. Chem Soc J p4198-204 N '52

Photochemistry of selenium; photogalvanic effects with red selenium. R. W. Pittman. diag Chem Soc J p855-60 Mr '53

Photochlorination of methyl chloroformate in the gas phase. J. H. Brandy and D. J. Le Roy. J Chem Phys 21:1049-53 Je '53

Photolysis of acetaldehyde. R. E. Dodd. bibliog J Chem Phys 21:748-9 Ap '53

Photolysis of acetaldehyde. G. O. Pritchard and others. bibliog J Chem Phys 21:748 Ap '53

Photolysis of azoethane. J. L. Weininger and O. K. Rice. bibliog Am Chem Soc J 74:6216-19 D 20 '52

PHOTOCHEMISTRY—*Continued*

Photolysis of crystalline nitrates. P. Doigan and T. W. Davis. bibliog J Phys Chem 56:764-6 Je '52

Photolysis of di-*n*-propyl ketone. C. R. Masson. bibliog Am Chem Soc J 74:4731-5 O 5 '52

Photolysis of glyoxal vapor at wave length 3130 A. J. G. Calvert and G. S. Layne. bibliog Am Chem Soc J 75:856-9 F 20 '53

Photolysis of some mercury dimercaptides. R. J. Kern. bibliog Am Chem Soc J 75:1865-6 Ap 20 '53

Photosensitized oxidation of paraffins. J. A. Gray. J Chem Phys 21:1300-1 Jl '53

Photothermal decomposition of mixed silver and mercurous oxalates. L. Suchow and S. L. Hersh. bibliog J Phys Chem 57:437-9 Ap '53

Phototropy of chlorophyll in fluid solutions. R. Livingston and V. A. Ryan. il diag Am Chem Soc J 75:2176-81 My 5 '53

Quinoxaline *N*-oxides; photochemical decomposition of quinoxaline mono- and di-*N*-oxides. J. K. Landquist. Chem Soc J p2830-3 S '53

Reactions of methyl radicals with the hydrogen isotopes. E. Whittle and E. W. R. Steacie. bibliog J Chem Phys 21:993-9 Je '53

Relation between the absorption spectra and the chemical constitution of dyes; phototropism and *cis-trans* isomerism in aromatic azo compounds. W. R. Brode, J. H. Gould and G. M. Wyman. bibliog Am Chem Soc J 74:4641-6 S 20 '52

Thermal and photochemical decomposition of H_2O_2 vapor in the presence of foreign gases. F. S. Stone and H. S. Taylor. bibliog diag J Chem Phys 20:1339-41 Ag '52

See also

Adsorption
Beer's law
Bleaching
Chlorophyl
Ionization, Gaseous
Photographic chemistry
Photosynthesis
Polymerization
Ultraviolet rays
X rays

PHOTOCHROMISM. See Photochemistry

PHOTOCONDUCTIVITY. See Electric conductivity; Photoelectricity

PHOTOCONDUCTORS. See Electric conductors

PHOTOELASTICITY

Necessary conditions for obtaining a permanent solderless wrapped connection. W. P. Mason and T. F. Osmer. il diag Metal Prog 64:242+ O '53

New business; slab analysis by photograph; Presan corp. il Eng N 149:44 O 16 '52

Photo-elastic research on plates in transverse bending. A. Kuske. bibliog il diags Engineering 175:20-1, 36-9 Ja 2-9 '53

Photoelastic stress analysis solves penstock reinforcement problem. H. J. Kahm. il diags Civil Eng 22:866-7 O '52

Qualitative study of residual stresses in welds by photoelasticity. M. Mark. bibliog il Welding J 32sup374-7 Ag '53

Room temperature photo-elastic technique for three-dimensional problems; abstract. J. H. Lamble and S. E. A. Bayoumi. Engineer 195:465; Discussion. 465-7 Mr 27 '53

Scope and limitations of the photoelastic method of stress analysis. H. T. Jessop. bibliog il diags Roy Aeronautical Soc J 57:125-32 Mr '53; Same cond. Engineering 174:833-4 D 26 '52; Abstract. Aviation W 58:34+ Ja 12 '53; Discussion. Roy Aeronautical Soc J 57:132-40 Mr '53

Stresses in rotating parts. R. L. Lake and A. J. Durelli. il Machine Design 25:128-31 Jl '53

PHOTOELECTRIC cells

Germanium photodiodes read computer tapes. L. Packer and W. J. Wray, jr. il diags Electronics 25:150-1 N '52

Intermittent-feed computer tape reader; five-phototube input system for digital computers reads teleprinter punched tape. B. G. Welby. il diags Electronics 26:115-17 F '53

Light source for phototubes. Electronics 26:202+ Jl '53

New photoelectric devices utilizing carrier injection. K. Lehovec. bibliog diags Inst Radio Eng Proc 40:1407-9 N '52

Photocell amplifier for infra-red spectroscopy. D. A. H. Brown. diag J Sci Instr 29:292-4 S '52

Photoelectric Raman spectrometer with automatic range changing. R. F. Stamm and others. bibliog il diags Opt Soc Am J 43:119-37 F '53

Properties of the M-1740 *p-n* junction photocell. J. N. Shive. bibliog il diags Inst Radio Eng Proc 40:1410-13 N '52

Control uses

Automatic control of tv picture brightness. T. S. Dix, jr. diag Electronics 26:202+ S '53

Autronic eye dims headlights; abstract. D. P. Driftmier. il S A E J 61:101-3 Jl '53

Check street lighting relays with less time and effort. B. Breedlove. il diag Elec World 138:123+ O 20 '52

Code practice keyer. J. R. McDermott. il diags Electronics 26:182-5 Jl '53

Electronic control of oxygen cutting machine head; Metropolitan-Vickers electrical co. il diags Engineering 174:284-5 Ag 29 '52

Fencing of presses; photo-electric types of guards. il diag Electrician 149:551-2 Ag 22 '52

Film runs non-circular-gear shaper. A. Ashburn. il Am Mach 97:149-50 F 2 '53

Non-circular gears generated automatically. E. C. Beaudet. il Iron Age 171:122-3 F 19 '53

Photoelectric cell stabilizes mercury-arc lamp light intensity. Elec Eng 72:169 F '53

Photoelectric headlight dimmer. P. J. Vogelgesang. il diags Radio & Tv N 49:35+ Ja '53

Simple infrared photocell relay. B. N. Watts and L. J. B. Husband. diag R Sci Instr 23:502 S '52

Speed-sensing relay. J. H. Porter. diag Electronics 25:174+ N '52

Street lighting photocell control calibration cabinet. W. N. Lindblad and L. C. Edwards. il diag Illum Eng 48:509-12 O '53

Timothy; robot electronic turtle. J. H. Kubanoff. il diags Radio & Tv N 49:35-8+ Ap '53

Tower operators now see better; photoelectric system; Transmissometer. il diag Aviation W 58:87-8 My 11 '53

Transistor-operated photocell relay. L. E. Garner, jr. il diags Radio & Tv N 49:64-5+ My '53

Industrial applications

Color grading by electronics. N. W. Derosier and others. il diags Food Eng 25:52-3 S '53

Electronic addressing aids publishers. J. M. Carroll. il diag Electronics 26:98-100 F '53

New methods for detecting yarn faults during winding; Linra Photo-Slubber. J. A. Matthew and J. L. Spencer-Smith. il diags Textile Inst J Trans 44:T77-89 Mr '53

Optimum slit height in photographic soundtrack reproducers. W. K. Grimwood and J. R. Horak. bibliog Soc Motion Picture & Tv Eng J 59:379-86; Discussion. 386-7 N '52

Photoelectric printing and engraving machines. J. Markus. il diags Electronics 26:138-45 My '53

Photoelectric scanner for automatic detection and inspection of surface flaws. Mech Eng 74:913-14 N '52

Sorting eggs by shell color. diag Electronics 26:198 Ap '53

Measurement uses

Characterization of warp streaks in woven fabrics; development and use of the Streakmeter. H. F. Hume and others. diags Textile Res J 23:123-9 F '53

Detector monitors vapor concentration; abstract. C. S. Presenz. il diags Electronics 26:198+ Ag '53

Device for examination of thickness of a running thread. S. Kawata and K. Segawa. il Textile Res J 23:643-4 S '53

Industrial tristimulus color matcher. G. P. Bentley. diags Electronics 24:102-3 Ag '51; Same cond. Product Eng Hdbk p I 32-3 '53

Instrumentation studies; study of photoelectric instruments for the measurement of color; reflectance and transmittance. J. A. Van den Akker and others. bibliog il diags Tappi 35:sup 141A-58A N '52

PHOTOELECTRIC cells—Measurement uses— *Continued*

Linear scale velocity meter. R. S. Mackay. il diags Electronics 25:158-61 O '52

Magnetic shaft-position digitizer uses phototubes to measure shaft rotation. A. J. Winter. diags Electronics 26:214+ Ag '53

Measurement of fibre orientation in card webs. G. A. J. Orchard. diag Textile Inst J Trans 44:T380-5 Ag-S '53

Photoelectric correlation meter. M. J. Tucker. bibliog il diags J Sci Instr 29:326-30 O '52

Photoelectric instruments for measurements of color. bibliog Tappi 36:sup 119A-23A; Discussion. J. A. Van den Akker. sup 123A-6A Ag '53

Photoelectric method of timing freely falling particles. E. B. Christiansen and D. H. Barker. bibliog il diags R Sci Instr 23:427-30 Ag '52

Photoelectric width gage for hot-strip steel mills. E. S. Sampson. il diags Electronics 26:114-18 Mr '53

Rate-of-descent indicator speeds aircraft tests. M. V. Barasch. il diag Electronics 26:190-2 Ag '53

Sensitive photoelectric method for measuring the Faraday effect. L. R. Ingersoll and W. L. James. bibliog il diags R Sci Instr 24:23-5 Ja '53

Two new instruments measure rapid voltage fluctuations. M. Fisher, jr. and others. diags Elec World 139:116-18+ F 23 '53

Use of the Spekker photoelectric absorptiometer for the determination of *pH*. T. B. Smith and others. Chem Soc J p3848-54 O '52

See also

Absorptiometer

Photometers, Photoelectric

Multiplier tubes

Betatron monitor and integrator. R. D. England and W. E. Ogle. diags R Sci Instr 24:267-8 Ap '53

Multiplier phototube signal converter. D. A. Kohl. diag Electronics 26:138-9 F '53

Optical feedback for multiplier phototubes. V. H. Seliger. diags Electronics 26:164-6 Ag '53

Photometer and absorption cell attachment for ultramicro-spectrophotometry. R. Craig and others. bibliog il diag R Sci Instr 24:49-52 Ja '53

Spurious pulses from the type 5819 photomultiplier tube. R. J. Lanter and R. W. Corwin. diags R Sci Instr 23:507-8 S '52

Stabilization of photomultiplier tubes. R. Sherr and J. B. Gerhart. diags R Sci Instr 23:770-2 D '52

Scientific applications

Optical position encoder and digit register. H. G. Follingstad and others. bibliog il diags Inst Radio Eng Proc 40:1573-83 N '52

Testing

Use of the flying-spot scanner to study photosensitive surfaces. J. I. Pantchechnikoff and others. bibliog il diags R Sci Instr 23:465-7 S '52

PHOTOELECTRIC effect

Electron scattering and the photoemission from cesium antimonide. L. Apker and others. bibliog diags Opt Soc Am J 43:78-80 F '53

Extension of Makinson's theory of photoelectric emission to a periodic potential. H. B. Huntington. Phys R 89:357-8 Ja 15 '53

Photocurrent, space-charge buildup, and field emission in alkali halide crystals. A. von Hippel and others. bibliog diags Phys R 91:568-79 Ag 1 '53

Photoelectric effect of thin Bi films. D. J. Fourie. Phys R 91:803 Ag 15 '53

Photoelectric emission associated with β-band absorption in alkali iodides. E. Taft and L. Apker. bibliog J Chem Phys 20:1648 O '52

Photoemission from cesium and rubidium tellurides. E. Taft and L. Apker. Opt Soc Am J 43:81-3 F '53

Photoemission from silver into AgCl, KBr, NaCl, and new bands of photosensitivity in AgCl. M. A. Gilleo. bibliog diags Phys R 91:534-42 Ag 1 '53

Photoemission of tungsten in the region of predicted Schottky deviations. E. E. Buder and others. bibliog diag Phys R 91:561-6 Ag 1 '53

Storage of energy in silver activated potassium chloride. C. E. Mandeville and H. O. Albrecht. bibliog Phys R 91:566-7 Ag 1 '53

Transition probability for photoelectric emission from semiconductors. H. B. Huntington and L. Apker. bibliog Phys R 89:352-6 Ja 15 '53

PHOTOELECTRIC photometers. See Photometers, Photoelectric

PHOTOELECTRIC spectrograph. See Spectrograph, Photoelectric

PHOTOELECTRICITY

Photoconductivity apparatus. L. E. Miller and F. A. Hamm. bibliog diags R Sci Instr 24:214-19 Mr '53

Photoconductivity study of activation of barium oxide. H. B. DeVore. diags RCA R 13:453-63 D '52

Photoelectric properties of ionically bombarded silicon. E. F. Kingsbury and R. S. Ohl. il diags Bell System Tech J 31:802-15 Jl '52; Abstract. Wireless Eng 29:311-12 D '52

See also

Joshi effect

Photoelectric cells

PHOTOELECTRONS. See Electrons

PHOTOENGRAVING

Engraver praises new cold top aid. Ed & Pub 86:42 F 14 '53

Photoelectric printing and engraving machines. J. Markus. il diags Electronics 26:144-5 My '53

Small copper tabs control etching. Ed & Pub 86:52 Ja 10 '53

PHOTOFLASH electric lamps. See Electric lamps, Photoflash

PHOTOGRAMMETRY. See Photographic surveying

PHOTOGRAPHIC chemicals

See also

Barium sulfate

PHOTOGRAPHIC chemistry

Mechanism of photographic sensitivity in silver bromide; abstract. J. W. Mitchell. bibliog Chem & Ind p 1220-1 D 13 '52

Photographic development. T. H. James. il diag Sci Am 187:30-3 N '52

See also

Photographic emulsions

PHOTOGRAPHIC emulsions

Adsorption of sensitizing dyes in photographic emulsions. W. West, B. H. Carroll and D. H. Whitcomb. bibliog J Phys Chem 56:1054-67 D '52

Beta- and gamma-induced Čerenkov radiation in water. M. A. Greenfield and others. Opt Soc Am J 43:42-3 Ja '53

Calculation of range-energy relations for alpha-particles in photographic emulsions. M. Bogaardt and B. Koudijs. bibliog Phys R 87:1129-30 S 15 '52

Direct measurement of particle track length in photonuclear emulsion. M. K. Juric and Z. A. Smokovic. diags R Sci Instr 23:564-5 O '52

Electron track recognition in nuclear emulsions. A. Beisler. diags R Sci Instr 23:500-1 S '52

Elementary probability of efficient absorption of a quantum proportional to the volume of a grain. L. Silberstein. Franklin Inst J 255:51-8 Ja '53

Energy spectrum of particles from stars. R. W. Waniek and T. Ohtsuka. Phys R 91:1574-5 S 15 '53

Grain density in nuclear emulsions. L. M. Brown. bibliog Phys R 90:95-7 Ap 1 '53

Grain density in the tracks of 117- and 222-Mev π-mesons in emulsions. A. H. Morrish. Phys R 91:423-4 Jl 15 '53

Interpretation of $O+xp$ type stars in photographic emulsions. C. B. A. McCusker and F. C. Roesler. bibliog Phys R 91:769 Ag 1 '53

Li^9 disintegration in a photographic emulsion. W. F. Fry. diags Phys R 89:325-6 Ja 1 '53

Multiple Coulomb scattering of high energy pions in photographic emulsions. M. Backus and others. bibliog Phys R 88:1431-2 D 15 '52

PHOTOGRAPHIC emulsions—*Continued*

Multiple scattering of fast protons in photographic emulsions. M. J. Berger. bibliog diag Phys R 88:59-70 O 1 '52

Neutron and meson stars induced in the light elements of the emulsion. M. Blau and others. bibliog Phys R 91:949-57 Ag 15 '53

New evidence concerning extreme energy interactions in heavy nuclei. C. B. A. McCusker and F. C. Roesler. bibliog Phys R 91:769-70 Ag 1 '53

Nonuniform track shrinkage in nuclear emulsions. J. R. Horan. Phys R 90:717 My 15 '53

Nuclear emulsion technique. A. Beiser. diags Rs Mod Phys 24:273-311 bibliog(p310-11) O '52

Nuclear interactions of 210-Mev π- mesons in emulsions. A. H. Morrish. bibliog diags Phys R 90:674-7 My 15 '53

Nuclear stars in emulsions. R. W. Waniek and T. Ohtsuka. diag Phys R 89:882 F 15 '53

Photographic sensitizing; pictured flow sheet. Chem Eng 60:274-7 My '53

Production of negative μ-mesons and their behavior in nuclear research emulsions. D. F. Sherman. bibliog il diags Phys R 90:469-72 My 1 '53

Range correction for electron pick-up. W. H. Barkas. bibliog Phys R 89:1019-22 Mr 1 '53

Range distribution of μ-mesons from π-meson decay in photographic emulsion. W. F. Fry and G. R. White. bibliog Phys R 90:207-10 Ap 15 '53

Range-energy relations for alpha-particles and deuterons in the Kodak NTB emulsion. O. Gailar and others. bibliog diags R Sci Instr 24:126-8 F '53

Search for *T*-tracks in photographic plates. P. H. Barrett and others. Phys R 89:656 F 1 '53

Statistical study of the distribution of stars in nuclear emulsions. F. B. Brown, jr. and A. V. Masket. Phys R 88:1204-5 D 1 '52

Study of elastic pion-hydrogen scattering in photographic emulsions. G. Goldhaber. bibliog il Phys R 89:1187-9 Mr 15 '53

T-tracks in nuclear emulsions. M. Blau and E. O. Salant. diag Phys R 88:954-5 N 15 '52

Unusual π-μ decays in photographic emulsions. W. F. Fry. bibliog diags Phys R 91:130-4 Jl 1 '53

PHOTOGRAPHIC lenses. See Lenses, Photographic

PHOTOGRAPHIC optics

Application of wide-angle optics to moderately high-speed motion picture cameras. H. E. Bauer and A. W. Blake. il diags Soc Motion Picture & Tv Eng J 60:38-47; Discussion. 47-8 Ja '53

Color and reflectance of human flesh. Stimson and E. Fee. Soc Motion Picture & Tv Eng J 60:553-8 My '53

Elementary probability of efficient absorption of a quantum proportional to the volume of a grain. L. Silberstein. Franklin Inst J 255:51-8 Ja '53

Estimation of photographic resolving power from visual observations alone. P. G. Powell. diag J Sci Instr 29:313-14 O '52

Radial symmetry in a Schlieren image. R. B. Edmonson and others. il diag Opt Soc Am J 42:984-5 D '52

Subtractive color reproduction; interimage effects. W. T. Hanson, jr. and C. A. Horton. bibliog Opt Soc Am J 42:663-9 S '52

See also

Lenses, Photographic

PHOTOGRAPHIC paper

Analyses of sizes used in photographic papers; abstract. R. Sève. Paper Ind 34:1380 F '53

Drying tunnels for photo paper processing. W. Broemel. il Sheet Metal Worker 44:89 S '53

PHOTOGRAPHIC records

New daylighting survey technique utilizing a photographic recorder and physical brightness meters. W. H. Billhartz and others. bibliog il diags Illum Eng 48:6-10; Discussion. 10-12 Ja '53

See also

Microfilm records

PHOTOGRAPHIC supplies industry

Finance

New focus; camera makers draw bead on 3-D market. F. Henle. Barron's 33:9-10 My 11 '53

PHOTOGRAPHIC surveying

Photogrammetry comes into its own. G. D. Whitmore and M. M. Thompson. il diags Civil Eng 22:726-30 S '52

See also

Mapping, Aerial
Surveying, Aerial

PHOTOGRAPHS

See also

Electric plants (central stations)—Photographs
News photographs

PHOTOGRAPHY

Development of photography; Royal photographic society's centenary exhibition, London. Chem Age (Lond) 68:347-8 F 28 '53

How to get better field photographs from your salesmen. S. L. Smith. Ptr Ink 242:54+ Mr 6 '53

Oxonols derived from azol-5-ones. E. B. Knott. Chem Soc J p2399-401 Je '52

See also

Cameras
Color photography
Microfilms
Moving picture photography
Photographic surveying
Photomicrography
Photostat
Phototelegraphy
Radiography
Slide films
Spectrography

Apparatus and supplies

Metallized butyrate reflectors. il Mod Plastics 30:110-12+ Mr '53

See also

Densitometers
Moving picture photography—Apparatus and supplies
Photography—Films

Developing and developers

ω-(*p*-Amino-N-ethylanilino)-alkanoic acids as photographic developers. M. S. Raasch. bibliog Am Chem Soc J 75:2956-9 Je 20 '53

Bridgamatic developing machine. J. A. Tanney and E. B. Krause. il Soc Motion Picture & Tv Eng J 60:260-7 Mr '53

Further experiments in high-speed processing using turbulent fluids. L. Katz and W. F. Esthimer. il diags Soc Motion Picture & Tv Eng J 60:105-29 F '53

Photographic development. T. H. James. il diag Sci Am 187:30-3 N '52

Siamese twins; packaging of developer powders at the Charles Bruning co. il Mod Packaging 26:112-14 Jl '53

Rating

Promicrol developer for film. Consumers Res Bul 32:15 Ag '53

Exposure

Photographic exposure timers providing compensation for supply-voltage variations. R. J. Hercock and D. M. Neale. bibliog diags Inst E E Proc 99 pt 2:507-15 O '52; Discussion. 100 pt 2:386-8 Ag '53

Photographic sensitivity as a function of exposure time and temperature. M. Biltz. bibliog Opt Soc Am J 42:898-903 D '52

Practical aspects of reciprocity-law failure. J. L. Tupper. Soc Motion Picture & Tv Eng J 60:20-8; Discussion. 28-9 Ja '53

Films

Dimensionally-stable base for photographic films. Engineering 175:653 My 22 '53

See also

Moving picture films

Cleaning

Refrigerant cleans photographic film. Franklin Inst J 255:90 Ja '53

Standards

Case of the one-inch saving. P. Arnold. Standardization 23:414 D '52

PHOTOGRAPHY—*Continued*

High speed

Blasting; machine-gun camera studies of quarry blasting. il Min Eng 4:1041-3 N '52
Camera records position vs. time relationship. il diag Product Eng 24:231 Ap '53
Economics of high-speed photography. A. C. Keller. Soc Motion Picture & Tv Eng J 59:365-8 N '52
Fast camera speeds engine-knock study. Aviation W 57:80 N 3 '52
High-speed camera. Mech Eng 75:228 Mr '53
High-speed photographic techniques for the study of the welding arc. I. L. Stern and J. H. Foster. il Soc Motion Picture & Tv Eng J 60:400-4 Ap '53
High-speed rotating-mirror frame camera. B. Brixner. il diag Soc Motion Picture & Tv Eng J 59:503-11 D '52
Research camera designed for study of self-luminous transient events. il diag Elec Eng 72:179 F '53; Same. R Sci Instr 24:185 F '53
Simple electronic devices for high-speed photography and cinematography. P. Fayolle and P. Naslin. bibliog il diags Soc Motion Picture & Tv Eng J 60:603-26 My '53

See also

Moving picture photography—High speed
Photography of projectiles

Industrial applications

Camera helps fix responsibility for damaged goods. il Factory Management 111:154 F '53
Chemical machining of photosensitive glass. S. D. Stookey. bibliog il Ind & Eng Chem 45:115-18 Ja '53
Method of illumination for the photography of markings on large flat areas of sheet. A. Loro. il diags Metallurgia 48:48-50 Jl '53
More power to your words; camera can provide pictures that make on-the-job teaching graphic and impressive. N. Burch. il Nat Safety N 67:22-3+ F '53
Photographic inspection spots defective brazing. M. A. Slairetam. il Materials & Methods 38:94-5 Ag '53
Photographs improve housekeeping efforts at Ohio rubber plant. Rubber Age 73:663 Ag '53
Photography as a textile tool. M. Siegel. il Mod Textiles Mag 34:32-3+ Ag '53
Photos record plant growth and headaches of chief engineer; Garlock packing company's power plant. S. Elonka. Power 97:103-5 Ag '53
Shortcutting the trip from blueprints to steel; Lumotrace method. il Bsns W p56-8+ Jl 18 '53
Some photographic methods applied to photometry. C. Marsh. il Illum Eng 47:571-4 O '52
Special camera expedites aircraft projects; Consolidated Vultee aircraft corp. C. L. Pogorel. il Automotive Ind 109:52-3 S 15 '53

See also

Moving picture photography—Industrial applications
Photography in industry

Lighting

Method of illumination for the photography of markings on large flat areas of sheet. A. Loro. il diags Metallurgia 48:48-50 Jl '53

See also

Electric lamps, Photoflash
Moving picture photography—Lighting
Photography, Flashlight

Scientific applications

Free surface properties of explosive-driven metal plates. R. G. Shreffler and W. E. Deal. il diags J Ap Phys 24:44-8 Ja '53
Photographic analysis of sprays. J. L. York and H. E. Stubbs. bibliog il diags A S M E Trans 74:1157-61; Discussion. 1161-2 O '52
Pulsed light system for multiple-cell ultracentrifuge rotor. M. Wales and others. diags J Res Nat Bur Stand 50:69-70 F '53
Radar photography; patent. diags Electronics 26:262+ Ag '53

See also

Moving picture photography—Scientific applications
Photography of projectiles

Sensitometry

Photographic sensitivity as a function of exposure time and temperature. M. Biltz. bibliog Opt Soc Am J 42:898-903 D '52
Practical aspects of reciprocity-law failure. J. L. Tupper. Soc Motion Picture & Tv Eng J 60:20-8; Discussion. 28-9 Ja '53
Sensitometry of the positive diazotype process. C. E. Herrick, jr. bibliog Opt Soc Am J 42:904-10 D '52

PHOTOGRAPHY, Aerial

Aerial inventory; TVA survey system. il Chem W 71:51+ O 25 '52
Aerial photographs facilitate surveys of pavement condition. A. R. Legault and H. M. McMaster. il Civil Eng 22:883-5 O '52
Aerial photographs in pipe line construction. G. E. Thayer. il Pet Eng 25:D68 My '53
Aerial pictures of snow markers aid forecasts of stream runoff. T. Henderson. il map Elec World News ed 139:22-3 Ap 13 '53
Aerial view of the earth and how man has changed it, not always for the best; review of Our world from the air, by E. A. Gutkind. J. R. Newman. il Sci Am 188:96-8 Mr '53
Coal-pile survey by aerial photos gives close check of stored amount; illustrations with text. Power 96:111 D '52
Highway studies from aerial photographs. R. D. Miles. il map Pub Works 84:74-6+ S '53
Putting Philadelphia Electric's territory on the map. il Edison Elec Inst Bul 21:16-17 Ja '53
Uncle Sam may have just what you need in ready-made air photography. H. G. Maas. il Oil & Gas J 51:387 Ja 26 '53
Utility fly-films Philadelphia. J. Dragonetti. il Elec World News ed 139:22-3 Ja 5 '53

See also

Mapping, Aerial
Surveying, Aerial

PHOTOGRAPHY, Astronomical. See Astronomical photography

PHOTOGRAPHY, Flashlight

Carlsbad caverns shot called for 2,400 bulbs. J. L. Collings. il Ed & Pub 85:57 N 22 '52
Flash photography; a discussion of flash synchronizers; two electronic flash units. il Consumers Res Bul 30:15-18 N '52
Power packs for flash photography; formed plastic sheet material replaces metal for battery and lamp housings. il Mod Plastics 30:114-15+ N '52

See also

Electric lamps, Photoflash

PHOTOGRAPHY, High speed. See Photography—High speed

PHOTOGRAPHY, Infrared

Improved infrared photography for electrophoresis. G. L. Miller. bibliog il diag Science 116:687-8 D 19 '52

PHOTOGRAPHY, Journalistic

Graflex tells elements of good picture story. J. L. Collings. Ed & Pub 86:58 F 7 '53
Rochester photo meet; NPPA confab May 1-4. J. L. Collings. Ed & Pub 86:28 F 14 '53

See also

News photographs

Study and teaching

Kent State announces its 12th short course. J. L. Collings. Ed & Pub 86:39 Ja 17 '53

PHOTOGRAPHY, Medical

Application of high speed flash tube to photographing the fundus of the eye in color. M. Jacobs and K. N. Ogle. il diags R Sci Instr 24:52-5 Ja '53
Flash lamp for use in ophthalmology; British Thomson-Houston co. il Engineer 195:280 F 20 '53

PHOTOGRAPHY, Night

Techniques for photography of lighted streets. T. Knowles and D. A. Toenjes. bibliog il Illum Eng 48:49-56; Discussion. 56-8 Ja '53

PHOTOGRAPHY, Stereoscopic

Image forming system for tv and film to produce enhanced illusions of depth and roundness. diags Tele-Tech 12:220+ Ag '53

New focus; camera makers draw bead on 3-D market. F. Henle. Barron's 33:9-10 My 11 '53

Stereoscopic art; reprinted from PSA journal, the journal of the Photographic society of America, inc., Nov. and Dec. 1951, Jan. and Feb. 1952. J. A. Norling. bibliog il diags Soc Motion Picture & Tv Eng J 60: 268-308 Mr '53

See also

Moving pictures, Stereoscopic

PHOTOGRAPHY, Submarine

See also

Moving picture photography, Submarine

PHOTOGRAPHY in industry

How to take good pictures for business paper publicity. R. A. Wolters. il Ind Marketing 38:53-6 Ag '53

Learn how to pose your photos so they look unposed. R. Newcomb and M. Sammons. Ind Marketing 37:130+ N '52

Shutterbugs can help you sell. il Sales Management 70:56-9 Ja 1 '53

To get that idea across, say it better with photos. W. B. Worthington. il Factory Management 111:84-6 Ja '53

See also

Lantern slides

Photographic records

Photography—Industrial applications

PHOTOGRAPHY of explosions

Double-flash microsecond silhouette photography. H. E. Edgerton. il diags R Sci Instr 23:532-3 O '52; Abstract. Electronics 26: 204+ My '53

High-speed rotating-mirror frame camera. B. Brixner. il diag Soc Motion Picture & Tv Eng J 59:503-11 D '52

Photographic instrumentation in the study of explosive reactions. M. Sultanoff. bibliog il diags Soc Motion Picture & Tv Eng J 60:145-65 F '53

Use of photography in the underground explosion test program, 1951-1952. R. M. Blunt. il Soc Motion Picture & Tv Eng J 60:405-17 Ap '53

PHOTOGRAPHY of lighting

Photographing fluorescent lighting installations in color; abstract. W. Allphin. Illum Eng 48:487-8 S '53

PHOTOGRAPHY of machinery

How to make good photographs for industrial advertising. il Ind Marketing 37:42-3+ N '52

Magnetic nameplate makes it easier to photograph machines. J. T. Harrington. il Ind Marketing 38:88 S '53

PHOTOGRAPHY of projectiles

Microsecond photography of rocket in flight. E. Barofsky and others. il diags Electronics 26:142-7 Je '53

Simple electronic devices for high-speed photography and cinematography. P. Fayolle and P. Naslin. bibliog il diags Soc Motion Picture & Tv Eng J 60:603-26 My '53

PHOTOGRAPHY of sound

New photographic method of detecting ultrasonic radiation. L. Pétermann. il Acoustical Soc Am J 24:416-17 Jl '52

PHOTOGRAPHY of textiles

Analyzing knitted fabrics with pictures. R. C. Davis and A. Teszler. il diag Mod Textiles Mag 34:46+ Ja '53

PHOTOGRAPHY on glass

New process reproduces photographs in glass. K. Polking. il Cer Ind 60:106 Je '53

PHOTOGRAPHY on textiles

Photographic prints. M. Siegel. il Mod Textiles Mag 34:58-9 Ag '53

PHOTOIONIZATION. See Ionization, Gaseous

PHOTOMECHANICAL processes

Mason and sons printing machine for drawings. il Engineer 195:844 Je 12 '53; Engineering 175:832 Je 26 '53

New camera and allied processes provide special effects with type and pictures. il Inland Ptr 131:65 My '53

Photo-decorating plastics. il Mod Plastics 30:108-9 O '52

Printing becomes electric; process known as XeroX. il Elec West 110:88-9 Mr '53

Quick copier for office use announced by Kodak; Verifax printer. il Marine Eng 58:140+ Je '53

See also

Photoengraving

Photostat

Rotogravure

Xerography

PHOTOMESONS. See Mesons

PHOTOMETERS

Flame photometer for routine biochemical use. R. L. Warren. il diags J Sci Instr 29:284-6 S '52

Flame photometric estimation of the durability of glass. D. L. Rothermel and M. E. Nordberg. il Am Cer Soc Bul 31:324-5 S 15 '52

Increased sensitivity for the Perkin-Elmer flame photometer; use of fine-spray hot-chamber aspiration. C. A. Dubbs. bibliog diags Anal Chem 24:1654-6 O '52

Photometer and absorption cell attachment for ultramicro-spectrophotometry. R. Craig and others. bibliog il diag R Sci Instr 24: 49-52 Ja '53

Rectangular coordinate photometer for large-area luminaires; abstract. J. A. Losh. Illum Eng 48:479-80 S '53

Ultraviolet photometer detects minute gas concentrations. Elec Eng 72:469 My '53; Same. Mech Eng 75:408 My '53

Use of lightmeters. Elec R (Lond) 151:664 S 26 '52

See also

Goniophotometers

Spectrophotometers

PHOTOMETERS, Photoelectric

Design characteristics of a photo-electric brightness meter. K. Freund. il Illum Eng 48:524-6 O '53

Liquid penetration test for measuring the sizing of paper. D. Price and others. il diag Tappi 36:42-6 Ja '53

New daylighting survey technique utilizing a photographic recorder and physical brightness meters. W. H. Billhartz and others. bibliog il diags Illum Eng 48:6-10; Discussion. 10-12 Ja '53

Photoelectric observation of the rate of recombination of iodine atoms. R. Marshall and N. Davidson. bibliog il diags J Chem Phys 21:659-64 Ap '53

Phototubes observe total solar eclipse. F. J. Heyden. il diag Electronics 26:176-9 S '53

Recording photometer provides log response. W. S. Plymale, jr. il diags Electronics 26: 143-5 Mr '53

PHOTOMETERS, X ray

Save time in TEL analyses; X-ray photometer. H. W. Kellogg and others. diags Pet Processing 7:1430-2 O '52

PHOTOMETRY

Contribution of research to progress in the lighting art. J. W. T. Walsh. diag Inst E E Proc 100 pt 2:9-12 F '53; Same. Engineer 194:663-4 N 14 '52

Harmonic synchronous rectification in double-beam photometry. J. J. Oberly. R Sci Instr 24:125-6 F '53

Influence of field of view on measurements of atmospheric transmission. H. S. Stewart and J. A. Curcio. diag Opt Soc Am J 42: 801-5 N '52

Photometric determination of impurities in tin. W. C. Coppins and J. W. Price. bibliog Metallurgia 48:149-56 S '53

Some photographic methods applied to photometry. C. Marsh. il Illum Eng 47:571-4 O '52

Units and standards of measurement employed at the National physical laboratory; light, photometry, colorimetry, and radiometry. Opt Soc Am J 42:858-9 N '52

Use of zonal constants in the calculation of beam flux. T. H. Projector. bibliog diags Illum Eng 48:189-91 Ap '53

Versatile goniometer for projection photometry. T. H. Projector. il Illum Eng 48:192-6 Ap '53

See also

Brightness

Colorimeters and colorimetry

Reflection (optics)

PHOTOMETRY, Astronomical

Optimum location of a photoelectric observatory. J. B. Irwin. bibliog map Science 115:223-6 F 29 '52; Discussion. 115:655-6; 116:572 Je 13, N 21 '52

Phototubes observe total solar eclipse. F. J. Heyden. il diag Electronics 26:176-9 S '53

PHOTOMICROGRAPHY

Examination of refractory specimens in reflected light. R. B. Snow. il Am Cer Soc J 36:299-304 S 1 '53

Nichols tells its sales story with a microphotograph. il Ind Marketing 38:132-3 Ag '53

Photomicrography as a tool for teaching colloid chemistry. E. A. Hauser and H. E. Bergna. bibliog il J Chem Educ 29:618-20 D '52

Photomicrography with the Polaroid-Land camera. E. R. Schwarz. il Mod Textiles Mag 34:35+ Ag '53

PHOTOMULTIPLIERS. See Photoelectric cells—Multiplier tubes

PHOTONEUTRONS. See Neutrons

PHOTONS

Allowed final states for annihilation into three photons. F. G. Fumi and L. Wolfenstein. bibliog Phys R 90:498-9 My 1 '53

Azimuthal distribution of photoelectrons produced by 0.5-Mev polarized photons. F. L. Hereford and J. P. Keuper. bibliog diags Phys R 90:1043-6 Je 15 '53

Consequences of charge independence for nuclear reactions involving photons. M. Gell-Mann and V. L. Telegdi. bibliog Phys R 91:169-74 Jl 1 '53

Energy spectra of cosmic-ray photons and electrons from plastic scintillation counter measurements. C. N. Chou. bibliog diags Phys R 90:473-6 My 1 '53

Inelastic nuclear scattering of photons by Rh^{103}. C. S. del Rio y Sierra and V. L. Telegdi. bibliog Phys R 90:439-42 My 1 '53

Lower limits for interaction times in photon scattering processes. E. Gora. Phys R 88:1212-13 D 1 '52

Momentum transfer and angle of divergence of pairs produced by photons. A. Borsellino. bibliog Phys R 89:1023-5 Mr 1 '53

Photon absorption cross sections in bismuth and tantalum. J. Halpern and others. bibliog Phys R 88:679-80 N 1 '52

Photon-induced reactions. D. C. Peaslee. bibliog Phys R 88:812-16 N 15 '52

Photoproduction of mesons in deuterium. M. Lax and H. Feshbach. bibliog Phys R 88:509-15 N 1 '52

π^0 Production cross section for 430-Mev protons and H and Be. J. Marshall and others. bibliog diags Phys R 88:632-41 N 1 '52

Polarization of the three-photon annihilation radiation. L. Leipuner and others. diag Phys R 91:198-9 Jl 1 '53

Resolution of the photon difference method. J. Goldemberg and L. Katz. Phys R 89:1300-1 Mr 15 '53

Some consequences of invariance under charge conjugation. L. Wolfenstein and D. G. Ravenhall. Phys R 88:279-82 O 15 '52

Surface production of charged mesons by photons on nuclei. S. T. Butler. bibliog Phys R 87:1117-24 S 15 '52

PHOTOÖXIDATION. See Oxidation

PHOTOPERIODISM

Role of darkness in sexual activity of the quail. C. M. Kirkpatrick and A. C. Leopold. bibliog Science 116:280-1 S 12 '52; Discussion. J. Hammond, jr. 117:389-90; Reply. 390-1 Ap 10 '53

PHOTOSENSITIVE glass. See Glass, Photosensitive

PHOTOSTAT

Photocopy substitute for letter-writing, cuts costs. H. W. Smith. Ind Marketing 38:84 S '53

PHOTOSYNTHESIS

Algae symbiosis in oxidation ponds; photosynthetic oxygenation. W. J. Oswald and others. bibliog diag Sewage & Ind Wastes 25:692-705 Je '53

Chlorophyll and photosynthesis. S. Granick. bibliog il Chem & Eng N 31:748-51 F 23 '53

Chlorophyll photosensitized polymerization and free radical intermediates in photosynthesis. N. Uri. Am Chem Soc J 74:5808-9 N 20 '52

Dean Burk honored for one quantum reaction. Chem & Eng N 31:998 Mr 9 '53

Discussion of photosynthesis. S. B. Hendricks. Science 117:370-3 Ap 10 '53

Glyceraldehyde phosphate dehydrogenase of green plants. D. I. Arnon. bibliog Science 116:635-7 D 5 '52

Path of carbon in photosynthesis. M. Calvin. il diags Chem & Eng N 31:1622-5, 1735-8 Ap 20-27 '53

Path of carbon in photosynthesis; kinetic relationships of the intermediates in steady state photosynthesis. A. A. Benson and others. bibliog Am Chem Soc J 74:4477-82 S 20 '52

Photosynthesis; abstract. D. Burk. Chem & Eng N 31:1631-2 Ap 20 '53

Photosynthesis; old problems in new guises; abstract. M. D. Kamen. Science 116:524 N 14 '52

Possible primary quantum conversion act of photosynthesis. M. Calvin and J. A. Barltrop. bibliog Am Chem Soc J 74:6153-4 D 5 '52

Splitting of disulfide linkages appears vital to photosynthesis. Chem & Eng N 30:5152+ D 8 '52

Sunlight and life. Sci Am 188:37-8 F '53

PHOTOTELEGRAPHY

Facsimile telegraph developments and uses described; Intrafax system. Nat Underw (Life ed) 56:4 O 31 '52

Level compensator for telephotograph systems. T. A. Jones and W. A. Phelps. il diags Elec Eng 72:787-91 S '53

Photo-telegraph transmitter-receiver utilizing sub-carrier frequency modulation. R. O. Carter and L. K. Wheeler. il diags Inst E E Proc 99 pt 3:335-43; Discussion. 359-63 N '52

Recent developments in photo-telegraphy and facsimile transmission. J. Bell and others. bibliog il diags Inst E E Proc 99 pt 3:344-59; Discussion. 359-63 N '52

Transmission of pictures by radio. A. W. Cole and J. A. Smale. bibliog il diags Inst E E Proc 99 pt 3:325-34; Discussion. 359-63 N '52

PHOTOTYPESETTING machines

English monophoto being introduced in U.S. il Inland Ptr 130:42-3 Ja '53; Same cond. Ed & Pub 86:53 Ja 10 '53

First book set by Photon, film composing machine; Higonnet-Mayroud invention. L. H. Allen. il Inland Ptr 130:44-5 Mr '53

German photographic typesetter. Inland Ptr 130:72 F '53

New York Fotosetter composing room becomes first all-photo trade composition plant. L. H. Allen. il Inland Ptr 130:46-7 F '53

Photoelectric printing and engraving machines. J. Markus. il diags Electronics 26:138-45 My '53

Punched cards operate new photographic typesetter. diags Product Eng 24:218-19 Ap '53

Typeless typesetting; the last step; Photon. Bsns W p58+ Ja 17 '53

PHTHALALDEHYDE

Phthalaldehydes and related compounds; synthesis of *iso*gladiolic acid. J. J. Brown and G. T. Newbold. Chem Soc J p 1285-9 Ap '53

Phthalaldehydes and related compounds; the preparation of 3-formylopianic acid. J. J. Brown and G. T. Newbold. Chem Soc J p4878-81 D '52

PHTHALALDEHYDIC acid

Heterocyclic nitrogen compounds; the condensation of phthalaldehydic acids and diamines. E. F. M. Stephenson. Chem Soc J p5024-7 D '52

PHTHALATES

Phthalates of 3 : 5 : 5-trimethylhexan-1-ol. D. G. Jones and G. H. Whitfield. Chem Soc J p2795-7 S '53

Vapor pressures of phthalate esters. A. C. Werner. bibliog diags Ind & Eng Chem 44:2736-40 N '52

PHTHALIC acid

Hydrogen-bonding in maleic and phthalic acids. W. H. T. Davison. Chem & Ind p408 Ap 25 '53

PHTHALIC acid—*Continued*

Phthalic acids; petrochemicals of the future. P. W. Sherwood. bibliog il diag Pet Refiner 32:113-17 Mr; 155-8 Ap '53

Analysis

Analysis of phthalic acid esters of cellulose and of polyvinyl alcohol. C. J. Malm, L. B. Genung and W. Kuchmy. bibliog Anal Chem 25:245-9 F '53

PHTHALIC anhydride

Characterization of some alkylbenzenes through their phthalic anhydride derivatives. G. F. Lewenz and K. T. Serijan. bibliog Am Chem Soc J 75:4087-9 Ag 20 '53

Displacements of anionoid substituents in phthalic anhydrides by pyridine and β-picoline. M. P. Balfe, M. Doughty and J. Kenyon. Chem Soc J p2470-2 Ag '53

Phthalic anhydride. J. E. Sayre. Chem & Eng N 30:5138-42 D 8 '52

PHTHALOCYANINES

Phthalocyanines; pigment prodigies. A. Permut. Chem W 71:31-2+ N 29 '52

Polymorphic crystalline modifications of the phthalocyanines. F. W. Karasek and J. C. Decius. Am Chem Soc J 74:4716-17 S 20 '52

PHTHALOYLCARNOSINE

Synthesis of carnosine and related peptides by the phthaloyl method. R. A. Turner. bibliog Am Chem Soc J 75:2388-90 My 20 '53

PHTHIENOIC acid

Infrared spectra of some long-chain 2-alkenoic acids and their bearing on the structure of C_{27}-phthienoic acid. N. K. Freeman. bibliog diag Am Chem Soc J 75:1859-63 Ap 20 '53

PHYCOMYCES

Biosynthesis of carotene in phycomyces. F. Mackinney and others. Am Chem Soc J 75:236-8 Ja 5 '53

PHYLLANTHOL

Triterpenoids; phyllanthol, the first hexacarbocyclic triterpenoid. D. H. R. Barton and P. de Mayo. Chem Soc J p2178-81 Jl '53

PHYSICAL constants

Physical constants and infrared spectra of a homologous series of dialkyl sebacates. W. H. Stahl and H. Pessen. bibliog Am Chem Soc J 74:5487-9 N 5 '52

Some physical properties of diacetone alcohol, mesityl oxide and methyl isobutyl ketone. E. T. J. Fuge, S. T. Bowden and W. J. Jones. bibliog J Phys Chem 56:1013-16 N '52

Synthesis and properties of some alkylsilanes. S. Tannenbaum, S. Kaye and G. F. Lewenz. bibliog Am Chem Soc J 75:3753-7 Ag 5 '53

Synthesis and the physical properties of alkylnaphthalenes. D. G. Anderson, J. C. Smith and R. J. Rallings. Chem Soc J p443-50 F '53

See also

Boiling points
Critical constants
Dielectric constants
Freezing points
Melting points
Osmotic pressure
Refractive index
Specific gravity
Specific heat
Specific volume
Viscosity

PHYSICAL examinations

Follow-up survey of fitness for duty examinations among federal employees. T. Levy and others. Ind Med 21:477-81 O '52

Periodic health examinations. W. L. Cook, jr. A M A Archives Ind Hygiene & Occup Med 7:241-8 Mr '53

Pre-placement examination program for workers assigned to heavy jobs. W. F. Becker. Ind Med 22:8-10 Ja '53; Abstract. Nat Safety N 67:60 My '53

Standard Oil studies executive health. W. Schweisheimer. il Am Bsns 22:12-13 D '52

We can spot the man who'll have an accident; transit profile. il Bus Transportation 32:32-4+ Mr '53

See also

Aviators—Physical examinations
Eye—Examination
Insurance, Life—Medical examinations

PHYSICAL geography

Dynamic basis of geomorphology. A. N. Strahler. bibliog Geol Soc Bul 63:923-38 S '52

See also

Coastal plains
Continents
Drainage (physical geography)
Glaciers
Volcanoes

Missouri

Genetic relations of caves to peneplains and big springs in the Ozarks. J. H. Bretz. bibliog maps diag Am J Sci 251:1-24 Ja '53

PHYSICAL instruments

Nucleonic instruments at the British atomic energy research establishment. D. Taylor. il diags Engineering 175:449-53 Ap 10 '53

See also

Balances
Chemical apparatus
Cyclotron
Electric apparatus and appliances
Electric instruments
Geophysical instruments
Mass spectrometers
Optical instruments
Photometers
Pressure gages
Radio instruments
Scientific apparatus and instruments
Sound—Apparatus
Stroboscopic instruments

Exhibitions

Institute of physics' exhibition of physical instruments and apparatus of value to the transport, shipbuilding and engineering industries, Glasgow, June, 1952. M. W. Thring. il diag J Sci Instr 29:273-6 S '52

Physical society exhibition, London, April 13-17. il Elec J 150:1233-9 Ap 10 '53

Physical society exhibition, London, April 13-17. il diags Wireless Eng 30:124-9 My '53

Physical society's exhibition, 37th, London, April 13-17. il diags Engineer 195:537-40, 568-9, 601-3 Ap 10-24 '53; Engineering 175: 491-2, pl 10, 522-4, pl 11, 554-5 Ap 17-My 1 '53

Physical society's 37th annual exhibition, London, April 13-17. Chem & Ind p398-400 Ap 25 '53

PHYSICAL laboratories

Radiophysics in Australia. A. J. Higgs. Science 117:sup3 Ja 30 '53

See also

Electric laboratories
Great Britain—National physical laboratory, Teddington
Johns Hopkins university—Applied physics laboratory

PHYSICAL measurements

See also

Electric measurements
Magnetic measurements
Photometry
Physical constants
Pressure gages
Pressure measurement
Radio measurements
Sound—Measurement
Temperature—Measurement
Vibration—Measurement
Viscosity—Measurement

PHYSICAL research

See also

Radar research

also Great Britain—National physical laboratory, Teddington

PHYSICAL therapy

Outlook for women as physical therapists. il U S Women's Bur Bul 203-1:1-51 bibliog(p48-51); pa 20c Supt. of doc. '52

PHYSICIANS

General practitioner and preventive medicine; APHA conference report. Pub Health Rep 68:132-4 Ja '53

Market attitudes; research report from the medical field. T. Caplow. Harvard Bsns R 30:105-12 N '52

Medical mobility. Economist 166:792 Mr 21 '53

Physicians' incomes. Ind Med 22:43-4 Ja '53

See also

Advertising—Physicians, Appeal to
Medical advertising

Directories

Directory of medical specialists; holding certification by American boards. 5th ed 1694p $12.95 A. N. Marquis co, 210 E. Ohio st, Chicago 11 '51

PHYSICIANS, Industrial. See Medical service, Industrial

PHYSICIANS' offices

Doctors cooperate; erect a building for their offices, waiting rooms, etc. R. A. Hazell. il Heating-Piping 24:88-9 N '52

PHYSICISTS

Occupational mobility of scientists; a study of chemists, biologists and physicists with Ph.D. degrees. T. R. Shapiro. U S Bur Labor Statistics Bul 1121:1-63; pa 35c Supt. of doc. '53

Physicists in industry. D. Alpert. Westinghouse Eng 13:103-6 My '53

PHYSICS

American physical society summer meeting, Denver, June 30-July 3; with abstracts of papers. Phys R 88:155-77 O 1 '52

Crystals and the future of physics. P. Le Corbeiller. il diags Sci Am 188:50-2+ Ja '53

Proceedings of American physical society New England section meeting, Medford, Mass. May 24; abstracts of papers. Phys R 88:153-4 O 1 '52

Royal society of Canada annual meeting, Quebec, June 2-4. Science 116:469-70 O 31 '52

Some British contributions to experimental physics. A. M. Tyndall. Engineering 174: 487, 547-8 O 10, 24 '52; Abstract. Electrician 149:698 S 5 '52

See also

Atoms
Chemistry, Physical and theoretical
Compressibility
Cosmic rays
Cyclotron
Diffusion
Dynamics
Elasticity
Electric conductivity
Electricity
Electrons
Evaporation
Expansion (heat)
Fluids
Fluorescence
Free energy
Friction
Gases
Geophysics
Heat
Heat transmission
Hydraulics
Hydrodynamics
Ionization, Electrolytic
Ionization, Gaseous
Ions
Light
Liquids
Mathematical physics
Mechanics
Molecules
Neutrons
Optics
Particles
Particles, Elementary
Photoelasticity
Plasticity
Pressure
Quantum theory
Radiation
Radioactivity
Reflection (optics)
Relativity (physics)
Sound
Statistical mechanics
Steam
Strains and stresses
Temperature
Thermodynamics
Thermometers and thermometry
Unified field theory
Velocity
Vibration
Viscosity
Wave mechanics
Weights and measures

Bibliography

Book reviews. R Sci Instr 24:56-69 Ja '53 [cont quarterly]

Study and teaching

Physics experiments to be televised for Cornell students. Elec Eng 71:1035 N '52

PHYSIOLOGICAL apparatus

Dynamometer for the human calf muscles. O. C. J. Lippold and others. diags J Sci Instr 29:365-6 N '52

Large capacity, all-glass dispersion oxygenator and pump. L. C. Clark, jr. and others. bibliog il diags R Sci Instr 23:748-53 D '52

Research vs industrial instrumentation. D. C. Little. il diags Instruments 25:1587-91 N '52

See also

Biological apparatus
Electrophysiology—Apparatus
Heart, Artificial
Hemoglobinometer
Oxygen apparatus
Plethysmographs
Respiratory apparatus

PHYSIOLOGICAL chemistry

Chemistry of heredity. A. E. Mirsky. il Sci Am 188:47-57 F '53

Future of clinical microchemical analysis. D. Glick. bibliog il diags Chem & Eng N 31: 139-42 Ja 12 '53

Review of analytical chemistry; clinical chemistry. R. M. Archibald. Anal Chem 25:2-7 bibliog(131 ref, p6-7) Ja '53

See also

Amino acids
Anesthetics
Bile
Biological chemistry
Blood—Analysis
Carbohydrates
Chemistry, Medical and pharmaceutical
Cholesterol
Enzymes
Histochemistry
Hormones
Immunity
Metabolism
Minerals in the body
Nutrition
Oxidation, Physiological
Poisons
Poisons, Industrial
Proteins
Urine
Vitamins

PHYSIOLOGICAL laboratories

Research vs industrial instrumentation. D. C. Little. il diags Instruments 25:1587-91 N '52

PHYSIOLOGICAL optics. See Optics, Physiological

PHYSIOLOGICAL research

Artificial men; they predict how humans will react; HOMI (human operator, mark 1). il Bsns W p 174-6 N 15 '52

See also

Physiological laboratories

PHYSIOLOGICAL scientists, International union of. See International union of physiological scientists

PHYSIOLOGICAL society, American. See American physiological society

PHYSIOLOGISTS international congress. See International union of physiological scientists

PHYSIOLOGY

See also

Blood
Cells
Diet
Electrophysiology
Fatigue
Fertilization (biology)
Longevity
Metabolism
Muscles
Nervous system
Nutrition
Old age
Radioactivity—Physiological effect
Respiration
Temperature—Physiological effect
Tissues
Weight (physiology)

PHYTOPHARMACY, International congress of. See International congress of phytopharmacy

PIANO

Iron, steel in a piano; tabulation. Iron Age 171:439 Ja 1 '53

Piano recordings. Consumers Res Bul 31:16 Ap '53

PICENE

Polynuclear aromatic hydrocarbons; a new synthesis of picene. D. D. Phillips. bibliog Am Chem Soc J 75:3223-6 Jl 5 '53

PICK, Lewis Andrew, 1890-

Pick leaves engineers with successor unnamed. por Eng N 149:88+ N 13 '52

PICKETING

Go through picket lines; federal judge warns carriers in Montgomery Ward decision. Bsns W p 124-5 Jl 18 '53

Professional picket should be outlawed. C. E. Bonnett. Comm & Fin Chr 177:1443 Ap 2 '53

What about picketing? letters on the subject of whether or not the Taft-Hartley act should be amended to outlaw picketing. Comm & Fin Chr 177:2303+, 2405+, 2511+, 2627+, 2738+; 178:6-7+, 104+ My 28, Je 4, 11, 18, 25, Jl 2, 9 '53

PICKLES

Corn syrup wins place as pickle sweetener. F. W. Fabian and H. Pivnick. Food Eng 25:97-8+ Mr '53

How store lights fade pickles. F. W. Fabian and F. L. Baldwin. Food Eng 25:61+ Je '53

Processed-paced quality control; pickle operations, M. A. Gedney co. D. Wallace. flow sheet(p 174-7) il Food Eng 25:80-2+ Ap '53

Vacuumized dills; H. J. Heinz co.'s new flexible packaging. il Mod Packaging 26: 78-9+ Mr '53

PICKLING (metals)

Acid waste problem put into perspective; problem of steel pickling wastes. Eng N 149:38 D 25 '52

Added unit on pickling machine insures a thorough cleaning of ware. Cer Ind 59:67 D '52

PICKLING (metals)—*Continued*

Continuous recovery process for acid and metal from pickling solutions. R. H. McCormack. diag Metal Prog 64:134+ O '53

Critical review of the literature of 1952 on sewage, waste treatment, and water pollution; pickling. bibliog Sewage & Ind Wastes 25:644-6 Je '53

Heating pickle liquor by submerged combustion; Ozark-Mahoning co. W. I. Weisman. il Steel 131:114+ D 15 '52

Influence of carbon content with diffusion of hydrogen in steel during pickling; hydrogen embrittlement; abstract. S. A. Balezin and D. Ya Solovei. Metal Finishing 51:79-80 S '53

Influence of pickling on subsequent surface treatment such as plating, etc.; surface properties of pickled metals; abstract. R. Petri. Metal Finishing 51:79-80 Ag '53

Inhibitors for metal finishing. R. O. Bailey. il Metal Finishing 51:65-8 S '53

Investigations on pickling inhibitors; abstract. S. A. Balezin and S. K. Novikov. Metal Finishing 51:79 S '53

Layout details for pickling plants; abstract. P. Robert. Metal Finishing 51:78 F '53

New pickling processes for iron and steel; abstract. E. Brauns. Metal Finishing 51:79 Ag '53

Pickle liquor; new process recovers sulfate for reuse by steel mills. Iron Age 171:134 Ap 16 '53

Pickling and bright dipping of copper and copper-rich alloys. E. E. Halls. Metal Finishing 51:68-73 My '53

Pickling, buffing and coloring of aluminum and alloys before anodizing; abstract. R. Erdmann. Metal Finishing 51:83 Ap '53

Pickling lines for steel; a start-stop process made continuous; illustrations with text. Westinghouse Eng 13:64-5 Mr '53

Pickling of stainless and heat resisting steels; abstract. E. Brauns. Metal Finishing 51:83 O '53

Reuse waste pickling liquors. A. G. Gray. diag Steel 132:130+ Ap 27 '53

Rotary coil pickling plant. il diags Iron & Steel Eng 29:128-9 O '52; Same cond. Steel 133:92+ S 28 '53; Abstract. Iron Age 170: 138 O 23 '52

Simple silvery white finish for ferrous metals; abstract. G. Rossi-Landi. Metal Finishing 51:78-9 S '53

Simultaneous pickling and degreasing with the electro-alkaline bath; Derostan process; abstract. T. Skutta. Metal Finishing 51: 78-9 My '53

Statistical control of modern continuous pickling bath lines; abstract. W. Fackert. Metal Finishing 51:79 My '53

PICKUP. See Phonograph—Pickup

PICOLINE

Absorption studies of the vapors of the three isomeric picolines in the near ultraviolet. J. H. Rush and H. Sponer. bibliog il J Chem Phys 20:1847-62 D '52

Addition compounds of chromium(VI) oxide with heterocyclic nitrogen bases; reactions with the lutidines, vinylpyridines, 2,4,6-collidine and α-picoline. H. H. Sisler and others. bibliog Am Chem Soc J 75:446-8 Ja 20 '53

Displacements of anionoid substituents in phthalic anhydrides by pyridine and β-picoline. M. P. Balfe, M. Doughty and J. Kenyon. Chem Soc J p2470-2 Ag '53

meta-Interactions and inductive effects in heterocyclic systems. D. A. Brown and M. J. S. Dewar. Chem Soc J p2406-13 Ag '53

Preparation of nickel(II) thiocyanate complex compounds with picolines and the determination of their heats of formation. A. V. Logan and D. W. Carle. Am Chem Soc J 74:5224-5 O 20 '52

Rate of reaction of phenacyl halides with 4-picoline in benzene solution. D. L. Brebner and L. C. King. bibliog Am Chem Soc J 75:2330-4 My 20 '53

Analysis

Determination of pyridine and pyridine-base compounds in river water and industrial wastes. R. C. Kroner, M. B. Ettinger and W. A. Moore. bibliog Anal Chem 24:1877-81 D '52

PICOLINIC acid

Effect of methyl substitution on the decarboxylation of picolinic acids. N. H. Cantwell and E. V. Brown. bibliog Am Chem Soc J 74:5967-70 D 5 '52

Effect of solvents on the decarboxylation of picolinic acid. N. H. Cantwell and E. V. Brown. bibliog Am Chem Soc J 75:4466-8 S 20 '53

Preparation of isonicotinic and picolinic acids. D. J. Cook and R. S. Yunghans. Am Chem Soc J 74:5515-16 N 5 '52

PICRATES

Analysis

Picrates of alkylpyridines; identification by X-ray diffraction powder patterns. G. J. Janz and R. Solomon. bibliog Anal Chem 25:454-7 Mr '53

PICRIC acid

Acid strength of iodine monochloride, antimony trichloride and picric acid with reference to the bases pyridine and aniline in nitrobenzene. I. M. Kolthoff, D. Stŏcesocá and T. S. Lee. bibliog Am Chem Soc J 75: 1834-9 Ap 20 '53

PICROPODOPHYLLIN

Components of podophyllin; study of intermediates in the synthesis of dehydroanhydropicropodophyllin. A. W. Schrecker and J. L. Hartwell. bibliog Am Chem Soc J 74:5672-6 N 20 '52

Components of podophyllin; the structure of the apopicropodophyllins. A. W. Schrecker and J. L. Hartwell. bibliog Am Chem Soc J 74:5676-83 N 20 '52

PICROTOXIN

Picrotoxin and tutin; methylation and methanolysis. J. C. Benstead and others. Chem Soc J p2292-9 Je '52

PICRYL chloride

Reduction of picryl chloride to 1,3,5-trinitrobenzene. A. H. Blatt and E. W. Tristram. bibliog Am Chem Soc J 74:6273-4 D 20 '52

PICTORIAL computer. See Aeronautic instruments

PICTURE telegraphy. See Phototelegraphy

PICTURE transmission. See Phototelegraphy

PIECE work

Piece work in reforestation in northern Sweden. Pulp & Pa of Can 53:178+ O '52

Putting piece rates in order; Hercules steel products co. il Mod Ind 26:13-14+ Jl '53

Setting piece rates on repeat jobs. L. S. Drake. Personnel 29:512-16 My '53

PIERCE, S. S., company

S. S. Pierce; growing with the quality trade. il Bsns W p 132-4+, cover Je 20 '53

PIERS

Barges that turn into piers; iron-ore shipping station of the Orinoco mining co. J. Hirt. il diag Comp Air Mag 57:312-13 N '52

Big rigs drive 220-ft pipe piles. H. Hunt. il Constr Methods 35:62-6+ F '53

Boston fish pier; a dock, a market, and a storehouse. il Bsns W p84-90 F 14 '53

Flexible pier has 200-ft pipe piles. H. W. Hunt. il Eng N 150:32-4+ Ja 29 '53

Hoboken turns piers over to Port of New York authority. plan Marine Eng 57:63 N '52

Prefabricated steel piers cut construction costs. H. P. Maxton. il Civil Eng 23:306-7 My '53

Reconstruction

Reading rehabilitates tidewater piers. il Ry Age 133:44-6 D 22 '52

Reconstruction of Balloch pier, Loch Lomond. il diags Engineering 174:623 N 14 '52

PIERS (foundations)

Heavy precast members make sturdy tower foundations. L. L. Wise. il Constr Methods 35:60-2 Mr '53

Transmission-line piers built under water without cofferdams. B. C. Gerwick, jr. il diags Civil Eng 23:221-5 Ap '53

See also
Bridges—Foundations and piers

PIERS, Concrete

Pier 57's girders are being cast. il Eng N 149:27 O 30 '52

PIERSON, Reginald Kirshaw, 1891-1948
Rex Pierson, an appreciation and the lessons of his work. A. H. R. Fedden. pors Roy Aeronautical Soc J 57:63-77 F '53

PIERSON, Warren Lee, 1896-
New chairman of the U.S. Council of the International chamber of commerce. por Bsns W p 114 D 20 '52

PIES
Quadruples output of pie fillings; mixer-heat-exchanger assembly; Hanscom baking corp. R. Prince. il Food Eng 25:68 F '53
Selecting and processing apples for top-quality pies. L. Bisno. bibliog il diag Food Eng 24:114-16+ O; 112-14+ N '52

PIEZOELECTRIC crystals. See Crystals, Piezoelectric

PIEZOELECTRICITY
Directional variation of frequency in the infrared spectrum of crystals. L. Couture-Mathieu and others. bibliog diag J Chem Phys 20:1492-3 S '52
Piezoelectric, dielectric, and elastic properties of $ND_4D_2PO_4$ (deuterated ADP). W. P. Mason and B. T. Matthias. bibliog diag Phys R 88:477-9 N 1 '52
Radio progress during 1952. bibliog Inst Radio Eng Proc 41:493-5 Ap '53

See also
Oscillators, Crystal

PIG iron
Blowing Thomas pig iron with pure oxygen; abstract. F. A. Springorum and others. Metal Prog 64:142+ Jl '53
Metal casting methods; ferrous ingots. J. B. McIntyre. bibliog il plan diags Metallurgia 48:21-6 Jl '53
Pig iron capacity is growing. Bsns W p72-3 My 23 '53
Pig iron smelting without metallurgical coke; abstract. W. W. Krebs and D. J. Ram. Metal Prog 63:210-11+ My '53
World production, U.S. imports and exports; U.S. production, output by states, Canadian production and capacity; tabulations. Iron Age 171:426-7 Ja 1 '53

Prices

Average monthly quotations in 1952; tabulations. Steel 132:172 Ja 5 '53
Basic pig iron price composite; malleable composite, number two foundry composite; tabulations. Steel 132:171 Ja 5 '53
Pig iron; composite prices, averages of basic and foundry iron prices in the Valley, Birmingham and Granite city; foundry and malleable prices; tabulations. Iron Age 171:428-9 Ja 1 '53

Statistics

Pig iron and ferroalloys output, by countries; tabulation. Steel 132:160 Ja 5 '53
Pig iron, capacity and production, 1937-1952; tabulation. Steel 132:161 Ja 5 '53

PIGEONS
Concerning the ability of homing pigeons to discriminate patterns of polarized light. K. C. Montgomery and E. G. Heinemann. Science 116:454-6 O 24 '52

PIGMENTS
Alphabetical list of new products developed since Nov. 1951; dyestuffs and pigments. Am Dyestuff Rep 41:795-814 D 8 '52
Effect of pigments on drying properties of conjugated oils; abstract. J. D. von Mikusch and K. Mebes. Paint Oil & Chem R 116:54 Mr 12 '53
Electrophoresis of pigments; abstract. H. Britzinger and others. Paint Oil & Chem R 116:20 F 12 '53
Enzyme treatment of high-solids starch-pigment mixtures. J. E. Wilber. bibliog diags Tappi 36:sup 156A-61A F '53
Evolution of the application of pigment colors to textiles; abstract. C. B. Peake. Am Dyestuff Rep 42:46 Ja 19 '53
Identification of polymorphic forms of crystals by infrared spectroscopy. D. N. Kendall. bibliog diags Anal Chem 25:382-9 Mr '53
Lead pigment makers target of FTC attack. Oil Paint & Drug Rep 163:3+ Ja 19 '53
New developments in paper coating pigments. R. W. Hagemeyer. Paper Ind 35:783-4 O '53
Optical properties of pigment and pigmented films; abstract. R. H. Kienle. Paint Oil & Chem R 116:38+ S 24 '53
Organic compounds of titanium; abstract. A. Thomas. Paint Oil & Chem R 116:21-2 Ap 23 '53
Phthalocyanines; pigment prodigies. A. Permut. Chem W 71:31-2+ N 29 '52
Physical characteristics of white pigments; abstract. W. Hughes. Paint Oil & Chem R 116:19 F 12 '53
Pigmentation of latex paints. L. A. Melsheimer and W. H. Hoback. bibliog il Ind & Eng Chem 45:717-25 Ap '53
Reflectivity of aluminum pigments and paint. G. M. Babcock and F. B. Rethwisch. Paint Oil & Chem R 115:53 N 20 '52; 116:22+ N 19 '53
Study of pigment dispersion; by the New York club. bibliog Paint Oil & Chem R 115:72-4+ D 4 '52; Abstract. Oil Paint & Drug Rep 162:75-6 D 1 '52
Use of Hi-Sil in natural rubber white sidewall compounds. R. F. Wolf and others. il Rubber Age 72:765-9 Mr '53

See also
Carbon black
Carotene
Cyanines
Dyes and dyeing
Lead oxides
Paint
Phthalocyanines
Titanium oxides
Ultramarine
Zinc oxides

Testing

Pigment strength testing; automatic muller method; abstract. F. North. Chem Age (Lond) 68:351 F 28 '53
Pigment strength testing with the automatic muller; abstract. M. T. Hobbs and F. North. Paint Oil & Chem R 116:34-5 Jl 30 '53

PIGMENTS, Biological
Anthochlor pigments of cosmos sulphureus, coreopsis lanceolata and C. saxicola. M. Shimokoriyama and S. Hattori. bibliog Am Chem Soc J 75:1900-4 Ap 20 '53
Chemistry of mould metabolites; isolation and characterisation of a red pigment from coriolus sanguineus (Fr.). G. W. K. Cavill and others. Chem Soc J p525-9 F '53
Colouring matters of the aphididæ. B. R. Brown and others. Chem Soc J p4925-35 D '52
Crystalline organo-iron pigment from a rust fungus (ustilago sphaerogena). J. B. Neilands. bibliog il Am Chem Soc J 74:4846-7 O 5 '52
Effect of ultraviolet radiation on sulfhydryl and disulfide containing amino acids. K. Schocken. bibliog Science 116:544-6 N 14 '52
Formation of a labile pigment in rabbit ova during histochemical demonstration of succinic dehydrogenase. A. G. Foraker and others. bibliog il Science 117:449-51 Ap 24 '53
Terminology of pigment cells. T. B. Fitzpatrick and A. B. Lerner. Science 117:640 Je 5 '53

See also
Carotene
Chlorophyl
Flavonoids

PILE drivers
Avondale builds large pile driver for Creole Petroleum. il Marine Eng 58:50 Ja '53
52ft portable pile driving plant; British steel piling co. il diags Engineer 194:732 N 28 '52
Giant floating driver built for bridge job; illustrations with text. Constr Methods 35:57 O '53
Sandy foundation area compacted by unusual method. il Roads & Sts 96:62 Jl '53; Eng N 150:62 Je 25 '53; Constr Methods 35:156 S '53

PILE fabrics
Low-cost fur from a lab. il Bsns W p 134-6 Ap 4 '53
Manufacture and testing of uncut moquettes. J. Cowburn. bibliog diags Textile Inst J 44: P388-402; Discussion. P402-5 Ag '53
Pile fabrics can be knit on most knitting machines; abstract. J. H. Blore. Textile World 102:109-10 D '52

PILES and pile driving
Big rigs drive 220-ft pipe piles. H. Hunt. il Constr Methods 35:62-6+ F '53

PILES and pile driving—*Continued*
Flexible pier has 200-ft pipe piles. H. W. Hunt. il Eng N 150:32-4+ Ja 29 '53
How to save pile tips when driving butt-down. il Eng N 149:63 O 23 '52
Mystery of the restless substratum. J. H. Thornley. il plan diags Eng N 150:33-4+, cover Mr 19 '53
Piles within cofferdam within cofferdam support bridge piers. il Constr Methods 34:50-1 N '52
Piling platforms solve drilling in coastal swamp. J. A. Kornfeld. il maps plan Oil & Gas J 51:210+ S 29 '52
See also
Concrete piling
Sheet piling

PILLIARD, Ira D.
Ira Pilliard is genius behind Milwaukee craftsmen library. por Inland Ptr 129:49 S '52

PILLOW blocks
Design and construction features of pillow blocks. J. Riddle. il Mill & Factory 53:115-19 Jl '53

PILLSBURY mills, inc.
Debentures oversubscribed. Comm & Fin Chr 176:2273 D 15 '52
Testing the new merger law. Bsns W p29 My 9 '53

PILOCEREINE
Alkaloid studies; the isolation of pilocereine from the cactus lophocereus schottii. C. Djerassi, N. Frick and L. E. Geller. bibliog Am Chem Soc J 75:3632-5 Ag 5 '53

PILOT plants. See Chemical plants—Experimental plants; Petroleum refineries—Experimental plants

PILOTLESS airplanes. See Airplanes, Pilotless

PILOTS and pilotage
Sandy Hook pilots commission new boat. il Marine Eng 58:59 O '53

PIMENTOS
Pimento canning gets a technological boost; Pomona products co. E. D. White. il Food Eng 25:64-6 S '53

PINACOL
Substituted aromatic glycols prepared by electrolytic reduction. M. J. Allen, J. E. Fearn and H. A. Levine. Chem Soc J p2220-3 Je '52

PINACOLONE
Molecular rearrangements; the retropinacolone rearrangement of 2,2-diphenylcycloalkanols. R. E. Lyle, N. B. Martin, jr. and H. L. Fielding. bibliog Am Chem Soc J 75:4089-90 Ag 20 '53

PINACYANOL chloride
Critical concentrations of potassium *n*-alkanecarboxylates as determined by the change in color and spectrum of pinacyanole. S. H. Herzfeld. bibliog J Phys Chem 56:953-9 N '52
Effect of salt on the critical concentrations of potassium *n*-alkanecarboxylates as determined by the change in color of pinacyanole. S. H. Herzfeld. bibliog J Phys Chem 56:959-63 N '52

PINANE
Peroxides from turpentine; pinane hydroperoxide. G. S. Fisher, J. S. Stinson and L. A. Goldblatt. bibliog Am Chem Soc J 75:3675-8 Ag 5 '53
Studies in the terpene series; hydrogenolysis of pinane in a flow type apparatus in the presence of hydrogenation catalysts. V. N. Ipatieff, F. J. Pavlik and H. Pines. diag Am Chem Soc J 75:3179-81 Jl 5 '53

PINE
Analysis of pine heartwood components; abstract of papers by G. Lindstedt and others. diag Paper Ind 34:1020 N '52
Cyclitols present in sugar pine (pinus lambertiana Dougl.) C. E. Ballou and A. B. Anderson. bibliog Am Chem Soc J 75:648-50 F 5 '53
Deterioration losses in stored southern pine pulpwood. R. M. Lindgren. bibliog Tappi 36:260-4 Je '53
Establishing pine plantations for pulpwood production in Australia. J. D. Brooks. Pulp & Pa of Can 53:168+ O '52
Exotic trees in New Zealand. Pulp & Pa of Can 53:138+ D '52
How tree seed is procured. R. S. Carman. Pulp & Pa of Can 54:100-2+ Ja '53
Occurrence of cinnamic acid in sugar pine (pinus lambertiana Dougl.) A. B. Anderson. Am Chem Soc J 74:6099 D 5 '52
Physical properties of slash pine semichemical kraft pulp and of its fully chlorited component. F. C. Keeney. bibliog il Tappi 35:555-63 D '52
Pinitol from sugar pine stump wood. A. B. Anderson. bibliog diags Ind & Eng Chem 45:593-6 Mr '53
Pitch moth infestation in western white pine. J. Walters. Pulp & Pa of Can 54:214-15 Ap '53
Studies in continuous alkaline pulping; pulping of slash pine. W. J. Nolan. diag Tappi 36:406-17 S '53
Study of the components of jack pine groundwood white water with special emphasis on the foam phenomenon. J. W. Green and R. L. Leaf, jr. bibliog il diags Tappi 35:468-80 O '52

Diseases and pests

Response of two species of pine to various levels of nutrient zinc. C. C. Wilson. bibliog Science 117:231-3 F 27 '53

PINEAPPLE juice, Frozen
World's largest plant for freezing pineapple juice. H. D. Jefferson and R. H. Lloyd. flow diag il Refrig Eng 60:1167-71 N '52

PINEAPPLES
Ascorbic acid and physiological breakdown in the fruits of the pineapple. E. V. Miller and A. S. Heilman. Science 116:505-6 N 7 '52
Malayan pineapple output down; '53 prospects better; Cuban pineapple exports drop. For Comm W 49:24 Ap 27 '53
Mexican pineapple production declines. For Comm W 49:15 F 2 '53

PINIC acid
Pinic acid diesters; preparation, properties, and lubricant applications. C. M. Murphy, J. G. O'Rear and W. A. Zisman. bibliog Ind & Eng Chem 45:119-25 Ja '53

PINITOL
Pinitol from sugar pine stump wood. A. B. Anderson. bibliog diags Ind & Eng Chem 45:593-6 Mr '53

PINK, Louis H.
Pink retires as head of Associated hospitals. por East Underw 54:24 Ja 2 '53

PINS, Machinery
Diamond pin locators. E. J. LaBroad. diags Tool Eng 29:45-6 D '52; Same. Am Mach 96:108 D 8 '52
Production cost drops 22 per cent in production of link pins for sealing tools. R. O. Larson and W. A. Meier. il Mill & Factory 53:86 S '53

PINTA
Visual tests adequate in pinta mass survey. Pub Health Rep 68:137-8 Ja '53

PIONEER air lines
Pioneer challenges CAB Martin ruling. Aviation W 58:90-1 Ap 13 '53
Pioneer loses final 2-0-2 subsidy appeal. Aviation W 58:14 My 11 '53
Pioneer will sell Martin 2-0-2s. Aviation W 58:80 Mr 30 '53

PIONS. See Mesons

PIPE (musical instrument)
See also
Pipe tone

PIPE bending
Forming exhaust pipes with timesaving equipment; Maremont automotive products, inc. il Automotive Ind 109:72+ S 1 '53
Gas-fired pipe-bending hearth. il diags Engineering 174:644 N 14 '52
How to bend large tubes easily; illustrated instructions. Power 97:138 Ja '53
Smooth bending of 36-in. pipe now possible. D. Foster. il diags Pet Eng 25:D 17-18 F '53
Transco uses portable machine for 36-in. cold pipe bends. il Gas Age 111:59 Mr 12 '53
See also
Tube bending

PIPE bends
Expansion joints vs. expansion loops. W. J. Steinert. diags Power Eng 57:88-9 S '53
Handy figuring of pipe-bend length. diags Mill & Factory 53:120 Ag '53

PIPE coating

Cement-mortar linings and coatings for steel pipe. R. C. Kennedy. Am Water Works Assn J 45:113-15 F '53

Coatings for steel water pipe. W. H. Cates. bibliog Am Water Works Assn J 45:103-12 F '53

Coatings to protect metal ducts when subjected to corrosive fumes. J. W. McWilliams. Heat & Ven 50:111-12 O '53

Economics of steel service pipe protection; with cost data. C. L. Woody. Am Gas Assn Proc 1952:448-56

Enameled pipe. il Iron Age 171:158-9 F 12 '53

Pipe protection with unbonded coatings. R. Sneddon. il Pet Eng 25:D12+ F '53

Cost

Comparison of plastic tape and hot enamels for protective coatings of pipe. N. P. Peifer. il Gas Age 111:41-3+ My 21 '53

Testing

Developments in tests of coatings for steel pipe. G. E. Burnett and C. B. Masin. il Am Water Works Assn J 44:893-911 O '52

PIPE coverings

Low cost insulation covers parallel pipes. il diag Power Eng 57:80 Jl '53

Manufacture of heat insulating sections for pipes; Fibreglass, ltd. il Engineer 195:512 Ap 3 '53

Mineral wool blocks spaced on ducts for efficient, dependable service. il diags Pet Eng 25:C48-9 F '53; Same. Sheet Metal Worker 44:45-6 F '53

Pipe insulation poured without forms. il Heat & Ven 49:134 N '52

School piping insulated with Ultralite. il Eng N 150:72 Ja 1 '53

PIPE cutting

New method of breaking sewers to make service connections. H. W. Jewell. il Water & Sewage Works 100:252 Je '53

Portable pipe vise speeds threading and cutting. il World Oil 136:190 Ja '53

PIPE fitting

See also

Plumbing

PIPE fittings

Estimating length of pipe with cast iron fittings; reference data. R. Irmiter. diags Heat & Ven 50:158a-158b S '53

Field setup dictates pipe fittings. G. W. Hauck. il diags Power 96:96-8 N '52

Heat radiating area of butt weld and flanged pipe fittings; tabulations; reference data. Heat & Ven 50:154a-154b Jl '53

How to read reducing fittings; data sheet. diags Heating-Piping 25:178 Ja '53

Leak-tight fitting. il Aviation W 58:71 My 4 '53

Package design for economy; pipe fittings and nipples. L. R. Michelsen. Am Gas Assn Mo 35:25-6 Ap '53

See also

Pipe joints

Standards

American standard specifications for short-body cast-iron fittings, three inch to twelve inch, for 250-psi water pressure plus water hammer. diags Am Water Works Assn J 44:1065-74 N '52

Tentative standard specifications for cast-iron pressure fittings. diags Am Water Works Assn J 45:321-48 Mr '53

PIPE flanges

Field testing can prevent flange leaks. M. R. Jones and F. N. Baldwin, jr. il diags World Oil 136:201-3 My '53

How flanges work and why they leak. R. G. Blick. bibliog diags Pet Refiner 32:129-35; Discussion. 135 Ja '53

Pipe-flange facing machine. il Engineering 174:173 Ag 8 '52

Re-face your pipe flanges in place. F. E. Riley. diags Power Eng 57:84-5 S '53

Standards

Tentative standard specifications for steel pipe flanges. diags Am Water Works Assn J 44:969-76 O '52

PIPE handling

Augusta's pipe trailer. S. Anthony. il Water & Sewage Works 100:221 Je '53

Bundling platform. il Blast F & Steel Pl 41:435 Ap '53

Lift cradles coated pipe, gently places it on trailer at Pacific Pipelines' yard. D. H. Stormont. il Oil & Gas J 51:127 Ja 19 '53

Mechanical pipe handler; fewer steps, no backache. il Steel 132:96 Mr 23 '53

New fork-lift truck handles big pipe easily. D. H. Stormont. il Oil & Gas J 51:132 S 22 '52

Vacuum pipe lift. F. L. Resen. il Oil & Gas J 51:137 My 4 '53

PIPE hangers

Here's a method of supporting insulated piping. M. F. Allen. il diag Heating-Piping 24:109 N '52; Discussion. 24:108 D '52

PIPE joints

Carbide segregation in 1¼ Cr-½ Mo steel pipe welded joints. I. A. Rohrig and H. S. Blumberg. il Welding J 32:815-22 S '53

Estimating the weight of joints in cylindrical vessels; reference book sheet. V. Tatarinov. diags Product Eng 23:213, 215 D '52

Expansion joint insulating technique cuts duct maintenance headaches. diag Mill & Factory 52:136 F '53

Five simple rules for copper water tube solder joints. J. S. Coe. il Dom Eng 181:95+ Mr '53; Same. Heating-Piping 25:88-9 My '53

Geared pipe union. Engineer 196:117 Jl 24 '53

High-pressure and high-temperature jointing materials; Metalflex gaskets and Twistele jointing. Engineer 194:844 D 19 '52

High vacuum pipe connectors; joining metal pipes to glass pipes. J. Pollard. diags J Sci Instr 30:25-6 Ja '53

How to join different sizes of pipe at odd angles. J. H. Barnhart. il diags Oil & Gas J 51:105-6 N 10 '52

How to plan and engineer your piping systems using slip expansion joints. A. L. Aicher. il diags Power 97:84-5 F '53

Joint materials for sewer repairs. A. P. Collins. il Sewage & Ind Wastes 25:1115-17 S '53

Know your condenser tube joints. A. Levine. il diags Power Eng 56:66-7, 107-8+ D '52

Know your heat exchanger tube joints. A. Levine. il diags Power Eng 56:86-8 N '52

Magnaflux for quality control of pipe-line welds. G. L. C. Dehn. il diags Welding J 32:721-7 Ag '53

Methods of installing bell joint clamps. M. E. Malone. Am Gas Assn Proc 1952:475-7

Some considerations in the joining of dissimilar metals for high-temperature high-pressure service. O. R. Carpenter and others. il diags Am Soc T M Proc 50:809-57; Discussion. 858-60 '50

Take the bite out of pipe expansion with a good joint. J. Hyler. diags Power 96:128-9 D '52

This method will help you in joining pipe at odd angles. W. R. Hart. il Oil & Gas J 51:121 D 8 '52

Tylox flexible-rubber pipe gaskets give fast, sure seal. il Eng N 150:142 F 5 '53

Welds between dissimilar alloys in full-size steam piping. R. U. Blaser and others. il diags Am Soc T M Proc 50:789-808; Discussion. 858-60 '50

Standards

American standard specifications for mechanical joint for cast iron pressure pipe and fittings. diags Am Water Works Assn J 45:431-42 Ap '53 (reprints 35c)

Testing

Easy ways you can strain-test sulfur-compound pipe jointing. W. J. Eney and others. il Eng N 149:38 O 16 '52

Operating experiences with mechanical joints in high-pressure high-temperature steam piping. E. C. Bailey and others. il diags A S M E Trans 75:97-101 Ja '53

PIPE laying

Air jacks push pipe through embankment; illustrations with text. Constr Methods 35:78-9 Ja '53

Canadian project replete with obstacles. H. C. Plummer. il Pet Eng 24:D 14+ O '52

PIPE laying—*Continued*

El Paso story. C. L. Perkins. il map World Oil 135:239-44+ N '52

Hired hand; farm tractor with a trick transmission set records in making up and breaking out pipe. W. E. Smith, jr. il World Oil 135:254 N '52

Imperial's Sarnia-Toronto products pipe line; unusual ditching and water crossing feature new carrier. il map diags Oil & Gas J 51:116-18 My '53

Labor saving equipment speeds the work. L. M. Bailey. il Pub Works 84:55 Ja '53

Method for trenching in wet unstable soil. A. Rawn. diag Water & Sewage Works 100:282-3 Jl '53

New Orleans floats gas mains into place in marshy section of city. il Gas Age 112:27 S 24 '53

90-mile water pipeline in west Texas. J. O. Smith. il Explosives Eng 31:45-8 Mr '53

PGW drives sleeve for a 30-inch main under busy Philadelphia street. il Am Gas J 178:14-15 F '53

Portland builds a new pipe line. G. B. Arthur. il Pub Works 84:80-1+ Ag '53

Trillion cubic foot gas system; United gas pipe line co. F. H. Love. il map Pet Eng 24:D8-10+ N '52

Trunk sewer built under a railroad. C. B. Spencer. il diag Eng N 150:31-2 F 12 '53

Water main casing jacked under 14 sets of railroad tracks. il Constr Methods 34:92-3+ N '52

Why Minneapolis installed 30 miles of 24-inch belt line. K. W. Person. il map Gas Age 111:33-5+ Ap 9 '53

See also

Gas, Natural—Pipe lines
Petroleum pipe lines—Construction
Pipe lines
Sewerage
Trenching machinery
Water distribution

PIPE laying, Subaqueous

How a submarine water main was laid. A. R. MacPherson. il Pub Works 84:76+ Jl '53

Marine pipeline threaded under road and out to sea in only 13 hours. il Constr Methods 35:108-9 O '53

Natural gas from the Gulf. R. S. Child. Pub Util 51:95-9 Ja 15 '53

Pipe-lines hauled on to river bed by locomotives. il Engineering 174:383 S 19 '52

Simple procedures help divers place sewer outfall. J. H. Gilbert. il diags Constr Methods 35:81+ Mr '53

Underwater line laid in record time across Durban harbor in South Africa. il Oil & Gas J 51:113 Ja 12 '53

Water main tests contractor's ingenuity; installation of water supply main carrying water from Cambridge to Boston. il Eng N 149:44-6 N 13 '52

See also

Pipe lines—River crossing
Pipe lines, Subaqueous

PIPE line contractors association

Annual meeting, 5th, Houston. Oil & Gas J 51:173-4 Ja 26 '53

PIPE lines

Coal pipeline. Bsns W p48+ Ap 4 '53

Coal pipeline. Bsns W p50+ N 22 '52

In refining; steam-heated pipe line handles heavy vacuum flash bottoms. G. Weber. diags Oil & Gas J 51:194-5 O 13 '52

Isotopes trace pigs in pipe lines; a case in point, and a review of other work. K. C. Biederman. map diag Oil & Gas J 51:124-6 D 15 '52

Magnaflux for quality control of pipe-line welds. G. L. C. Dehn. il diags Welding J 32:721-7 Ag '53

Network of pipe lines serves Old Ocean field. W. F. Rose. il Oil & Gas J 51:186-8 O 13 '52

Petrochemistry; how pipe lines serve burgeoning new industry. F. L. Resen. maps diag Oil & Gas J 51:195-7 O 13 '52

Try for new record in '53. A. K. Rannells. Iron Age 171:95 My 21 '53

Water hammer in pipe-lines. L. E. Adams. Engineering 174:148 Ag 1 '52; Discussion. P. Linton. 174:212-13 Ag 15 '52; Reply. 174:380-1 S 19 '52

See also

Aqueducts
Electric conduits
Gas, Natural—Pipe lines
Gas distribution
Petroleum pipe lines
Petroleum products pipe lines
Pipe joints
Pipe laying
Piping (power plants)
Sewer pipes
Sewerage
Underground structures
Water pipes

Bridge crossing

Design of gas piping on bridges. E. G. Watkins. bibliog il diags Am Gas Assn Proc 1952:502-16

Natural-gas pipe line built-in crossing of highway bridge has new features. J. A. Kornfeld. il diags Oil & Gas J 51:163+ O 20 '52

Tennessee gas transmission co. completes second huge bridge across Brazos. W. C. Grant. il Gas Age 111:14-15 Ja 29 '53

Cathodic protection

Cable system design for cathodic protection rectifiers. R. M. Wainwright. Oil & Gas J 51:148+ Ap 20 '53

Cathodic protection. diags Am Gas J Hdbk 177:140-2 O 15 '52

Cathodic protection and high-resistivity soils. H. C. Van Nouhuys. Oil & Gas J 51:150+ Ap 20 '53

Cathodic protection monitor. M. E. Parker. diag Oil & Gas J 52:143 My 11 '53

Cathodic protection parasites. M. E. Parker. Pet Eng 25:D22-6 My '53

Corrosion protection of natural gas main in greater New York. F. E. Kulman. maps plans diags Am Gas Assn Proc 1952:376-92

Does cathodic protection constitute a fire hazard? M. E. Parker. Oil & Gas J 51:129 Mr 9; 157 Mr 16 '53

Economics of corrosion control. A. W. Peabody. Am Gas Assn Proc 1952:284-9; Same cond. Am Gas J 177:27+ N '52

Economics of steel service pipe protection; with cost data. C. L. Woody. Am Gas Assn Proc 1952:448-56

How Bahrein Petroleum combats sea-water corrosion at Persian Gulf installations. R. L. Davis and R. F. Heinzerling. il diags Oil & Gas J 51:264+ D 22 '52

How Montana Power uses cathodic protection for 95 per cent of distribution mains. C. R. Davis. diags Gas Age 111:32-4+ Je 4 '53; Same abr. Am Gas Assn Mo 35:23-5 My '53

How to plan a practical magnesium-anode program. J. N. Hunter, jr. diag Oil & Gas J 51:284+ O 13 '52

Magnesium anode system resurveyed after 2½ years; Chocolate Bayou transmission lines of Pan American gas co. C. E. Sonntag, jr. il Oil & Gas J 51:303-4+ O 13 '52

Pipe line corrosion and cathodic protection. M. E. Parker. diags World Oil 136:210-12 F '53

Practical form for recording pipe-line cathodic protection data. K. D. Wahlquist. Oil & Gas J 51:291+ O 13 '52

Proper anode spacing cuts corrosion protection costs. World Oil 135:262 N '52

Value of test coupons in cathodic protection. M. E. Parker. diags Oil & Gas J 52:126-7 My 11 '53

Cleaning

See Pipes—Cleaning

Communication systems

Electricity's contribution to modern pipelining. M. Hyde. il Westinghouse Eng 13:154-61 S '53

El Paso Natural completes a circle of communication. B. M. Willis. il map World Oil 136:203-6+ Ja '53

Microwave milestone; Transcontinental formally accepts 1,840-mile system from General Electric. Oil & Gas J 51:67 Ja 19 '53

Microwave on a 1000-mile pipe line system. P. J. Brewster. il diag Pet Eng 25:D77+ My '53

PIPE lines—Communication systems—*Cont.*

Microwaves serve pipeline communications needs; Mid-Valley pipeline co. C. B. Lester and C. A. Compton. il map diag Elec World 138:98-100 O 6 '52

Platte pipe line communications and controls systems. M. L. Long. il diag Oil & Gas J 51:91-2+ Ap 6 '53

Story of Platte pipe line; communication facilities. A. R. Heidebrecht. il Oil & Gas J 51:119+ D 1 '52; Same. Pet Eng 24:D31+ D '52

Teletype controls provide efficiency and convenience; National cooperative refinery association's products pipe line. C. H. Hohnadel. il diag World Oil 135:276+ N '52

Tide-Water installs teletypewriters. il Pet Eng 25:D52 F '53

Two-way radio communication speeds valve replacements on main line. W. J. Giddings. map Oil & Gas J 51:269 O 13 '52

Corrosion

Corrosion surface survey; system permits testing without injury to pipe coating. A. F. Schmierer. diags Oil & Gas J 51:281+ O 13 '52

Electrical measurement of corrosion rate. il Pet Eng 25:D20+ Ap '53

Surface-potential surveying of bare underground pipe lines. T. L. Canfield. diag Oil & Gas J 51:330+ O 13 '52

See also

Corrosion and anticorrosives—Underground corrosion
Gas pipes—Corrosion
Pipe lines—Cathodic protection
Pipe lines—Protection

Design

Effect of economic factors on pipe-line design. R. F. Nielsen. Oil & Gas J 51:127 D 8 '52

Story of Platte pipe line; its unusual design features. K. T. Feldman. il Oil & Gas J 51:92+ D 1 '52; Same. Pet Eng 24:D 18+ D '52

Temperature expansion and contraction stresses in buried pipe lines. F. Karge. Pet Eng 24:D42+ O '52

Detection

Practical application of applied geophysics to utility operations. G. M. MacLeod. il Munic Util 91:17-18 Mr '53

Failure

Methods used to repair broken river lines. K. Bentz. il Pet Eng 25:D 15-16 My '53

Location

Aerial photographs in pipe line construction. G. E. Thayer. il Pet Eng 25:D68 My '53

Maintenance and repair

Brush chipper proves its worth in right-of-way maintenance. L. R. Dickinson. il Oil & Gas J 51:340 O 13 '52

Nursemaid two thousand miles of pipeline. il Bsns W p 142-4+ Jl 11 '53

Pipe line maintenance procedure. F. H. Love. map Pet Eng 24:D36+ O '52

Reconditioning 210 miles of 24-year old line. W. A. Johnson. il Oil & Gas J 51:299-300 O 13 '52

Socony-Vacuum reconditions line over ditch without interrupting service, Augusta-Kansas City, Kans. J. A. Rupf. il map Oil & Gas J 51:112-15 N 24 '52

This pipe line repair job saved $500,000. il diags World Oil 135:248-50+ N '52

Multiple fluid lines

See also

Petroleum products pipe lines

Protection

Doulton pipe-line filter units. Engineer 196:261 Ag 28 '53

Pipe-line papers; abstracts. Oil & Gas J 51:153 Ap 20 '53

Thermopile generator produces electricity from a gas flame; El Paso natural gas company is using this method to protect pipe line from corrosion. R. J. Emerson. il map diag World Oil 135:310+ O '52

See also

Petroleum pipe lines—Protection
Pipe coating
Pipe lines—Cathodic protection

River crossing

Crossing a wide, deep river with two pipe lines. J. E. McClinton. il Explosives Eng 31:7-12 Ja '53

Crossing the Providence river. H. H. Johnson and W. L. Griffin. il Pet Eng 25:D26 F '53

Eight lines under the Elbe river; illustrations with text. Pet Eng 25:D 10+ Mr '53

Emergency pipe line suspensions; design and installation procedures. C. A. Swensingsen. diags Gas Age 112:36-9+ Jl 16 '53

Methods used to repair broken river lines. K. Bentz. il Pet Eng 25:D 15-16 My '53

New concept in river crossings; flexible crossing for Atchafalaya floodway. P. H. Timothy. maps plan Oil & Gas J 51:277+ O 13 '52

Old axles, wheels, tires make pipe-lowering winches. il diag Constr Methods 35:105-6+ Ag '53

River crossing laid as emergency measure. F. H. Love. il Pet Eng 25:D23+ Mr '53

Shell crosses the Elbe. il Oil & Gas J 51:82 O 6 '52; Pet Refiner 32:124 Ja '53; Eng N 149:67-8 N 6 '52

See also

Pipe lines—Bridge crossing
Pipe lines, Subaqueous

Tables, calculations, etc.

Pipe line flow calculations. J. W. J. Bercher. Pet Eng 25:D7-8+ Ap '53

Shortcuts for the pipe-line engineer; handy charts that save time and speed computations. Oil & Gas J 51:supp O 13 '52

PIPE lines, Subaqueous

Design of submarine pipe lines for stability. R. C. Ledford. il Pet Eng 25:D70+ My '53

How Bahrein Petroleum combats sea-water corrosion at Persian Gulf installations. R. L. Davis and R. F. Heinzerling. il diags Oil & Gas J 51:264+ D 22 '52

Making a hot tap at 850 psi. under seven ft. of canal water. J. A. Kornfeld. il diags Oil & Gas J 52:211-12 My 25 '53

Submarine pipeline is too high, so jet-action trencher lowers it 17 ft. and weights hold it there at elevation -80. H. T. Perez. il Constr Methods 35:50-3 Ag '53

This pipe line repair job saved $500,000. il diags World Oil 135:248-50+ N '52

See also

Pipe laying, Subaqueous

PIPE lining

Abrasion-resistant linings; cast basalt. il Elec R (Lond) 152:940-2 Ap 24 '53

How a 64-year old sewer was relined. W. P. Schmitz. il Pub Works 84:105 O '53

See also

Cement lined pipe
Water pipes—Lining

PIPE threading

Portable pipe vise speeds threading and cutting. il World Oil 136:190 Ja '53

PIPE threading machines

Tangential pipe-screwing machine. il diags Engineering 174:251 Ag 22 '52

PIPE threads

Standards

Pipe threads; reference book sheet. E. Zook. diags Am Mach 96:177, 179, 181 N 10; 167, 169, 171 N 24 '52

PIPE tone

Dependence of pfeifenton (pipe tone) frequency on pipe length, orifice diameter, and gas discharge pressure. A. B. C. Anderson. bibliog diag Acoustical Soc Am J 24:675-81 N '52

PIPECOLIC acid

Conversion of L-lysine-6-C^{14} to pipecolic acid in the rat. M. Rothstein and L. L. Miller. Am Chem Soc J 75:4371-2 S 5 '53

PIPECOLIC acid—*Continued*

Pipecolic acid in phaseolus vulgaris; evidence on its derivation from lysine. N. Grobbelaar and F. C. Steward. diags Am Chem Soc J 75:4341-3 S 5 '53

Pipecolic acid (piperidine-2́-carboxylic acid, pipecolic acid). D. M. Phillips. Chem & Ind p 127-8 F 7 '53

PIPERAZINE

Derivatives of piperazine; addition of 1-arylpiperazines to α,β-unsaturated nitriles and esters. C. B. Pollard, E. G. Rietz and R. Robbins. bibliog Am Chem Soc J 75:2989-90 Je 20 '53

Some amides of piperazines. C. B. Pollard and B. S. Gray. Am Chem Soc J 75:491 Ja 20 '53

PIPERAZINEDIONE

Glycine peptides; the polymerization of piperazine-2 : 5-dione at 180°. A. B. Meggy. Chem Soc J p851-5 Mr '53

PIPERAZINONES

Leuckart alkylation of 2-piperazinones. P. Ruby and P. L. deBenneville. Am Chem Soc J 75:3027-8 Je 20 '53

PIPERIDINE

Chemistry of indanthrone; the action of piperidine on 3 : 3′-dihalogenoindanthrones and the *N*-methyl derivatives of 3 : 3′-dibromoindanthrone. W. Bradley and H. E. Nursten. Chem Soc J p3027-33 Ag '52

Preparation of 1-acyl-2-dialkylaminoalkylpiperidines. A. H. Sommers and others. bibliog Am Chem Soc J 75:57-60 Ja 5 '53

Preparation of 1-methyl-3-phenyl-3-(γ-dimethylaminopropyl)-piperidine. F. F. Blicke and E. Tsao. Am Chem Soc J 75:4334-5 S 5 '53

PIPERIDONE

Synthesis of some substituted 3-piperidones. N. R. Easton and others. Am Chem Soc J 75:2086-9 My 5 '53

PIPERITOL

Reactions of αβ-unsaturated cyclic aldehydes and ketones; (±)-*cis*- and (±)-*trans*-piperitol. A. K. Macbeth, B. Milligan and J. S. Shannon. Chem Soc J p901-2 Mr '53

Reactions of αβ-unsaturated cyclic aldehydes and ketones; (—)-*cis*- and (+)-*trans*-piperitol from (—)-piperitone. A. K. Macbeth and J. S. Shannon. Chem Soc J p2852-6 Jl '52

PIPERITONE

Reactions of αβ-unsaturated cyclic aldehydes and ketones; (—)-*cis*- and (+)-*trans*-piperitol from (—)-piperitone. A. K. Macbeth and J. S. Shannon. Chem Soc J p2852-6 Jl '52

PIPERYLENE

Diene addition between *trans*-piperylene and citraconic anhydride. W. Huang, H. L. Holmes and L. F. Fieser. Am Chem Soc J 74:5920-1 D 5 '52

PIPES

How to weld pipe. il diags Mill & Factory 51:128-31 D '52

Multitube differential pressure manometer for measuring the average flow of fluids in closed ducts. G. B. Clark. il diags Ill U Eng Exp Sta Bul 410:1-30 '53 (pa 30c)

Pneumatic conveying in horizontal pipes. R. H. Clark and others. bibliog Chem Age (Lond) 67:567-9 O 25 '52

See also

Air pipes
Electric conduits
Gas pipes
Heating pipes
Oil pipes
Petroleum—Well casing
Petroleum pipe lines
Pipe fittings
Pipe joints
Pipe laying
Pipe lines
Piping
Piping (power plants)
Plumbing
Sewer pipes
Steam pipes
Tubes
Water pipes

Cleaning

Benefits of cleaning pipelines in place; Damascus milk co. R. B. Parker and others. bibliog il Food Eng 25:82-6+ Ja '53

Cleaning stainless lines in place; Cornell university experimental milk plant. R. F. Holland and others. il Food Eng 25:75-8 My '53

Radioactive isotope-equipped go-devil cuts costs for Anglo-Iranian. il Oil & Gas J 51:91 Ja 19 '53

See also

Gas pipes—Cleaning
Scrapers, Pipe

Protection

Fighting underground corrosion at the new Fairless works; how piping and other services are protected. W. E. Coleman and H. G. Frostick. diag Heating-Piping 25:85-7 Ap '53

See also

Pipe coating
Pipe lines—Protection

Repair

Pipe leak seal developed for navy uses glass fiber cloth and plastic. W. M. Freeman. Heat & Ven 50:146+ Je '53

Tables, calculations, etc.

Adiabatic flow of evaporating fluids in pipes of uniform bore. D. L. Linning. bibliog il diags Inst Mech Eng Proc (B) 1B no 2: 64-72; Discussion. 72-5 '52

Analysis of data on stock flow in pipes. R. E. Durst and others. bibliog Tappi 35: 529-35 D '52

Design of a square-root-extracting, force-balance, pneumatic transmitter, including derivation of formulas. A. Goldberg. diags A S M E Trans 75:501-6 My '53

Determining weights of piping assemblies; data sheet. J. E. Brock. diags Heating-Piping 24:111-12 D '52

Effect of friction on compression and rarefaction waves of finite amplitude. F. J. Wallace and M. Nassif. diags Engineering 175:674-7, 708-9 My 29-Je 5 '53

Estimating length of pipe with cast iron fittings; reference data. R. Irmiter. diags Heat & Ven 50:158a-158b S '53

Estimating length of pipe with malleable fittings; reference data. R. Irmiter. diags Heat & Ven 50:158a-158b Ag '53

Estimating the weight of joints in cylindrical vessels; reference book sheet. V. Tatarinov. diags Product Eng 23:213, 215 D '52

Flow factor chart for comparing fluid flows. J. D. Constance. Power Eng 57:78 Jl '53

Friction factors for turbulent flow in pipes. E. F. Wilsey. bibliog Am Soc C E Proc 79 [no 197]:1-6 Je '53

Friction loss of molten sulphur in pipe; data sheet. Pulp & Pa of Can 54:143 Je '53

How to apply method of slope deflection to thermal stress analysis of piping. E. A. Picardi. diags Pet Processing 8:368-72 Mr '53

How to figure piping offsets. T. Trail. diags Power Eng 56:72-3 D '52

How to figure velocity and friction head of water in plastic- and rubber-lined and light steel-wall pipelines; maintenance data sheet. Factory Management 111:158+ Ap '53

How to size and install condensate return lines; data sheet. Heating-Piping 25:115-16 Ap '53

Maximum allowable working pressures; selection of pipe sizes; tables; data sheet. G. C. Halzel. Power 96:99 Jl; 119 S; 99 O; 99 N; 119 D '52; 97:99 Ja '53

New wall thickness formula for high pressure, high temperature piping. W. R. Burrows and others. Heating-Piping 25:128-31 Ja '53

Thermal stresses in piping systems. W. E. Wilbur. diags Pet Refiner 32:143-8 Mr; 163-8 Ap; 174-8 My '53

Two methods of calculating the friction in pipe lines. F. E. Giesecke. diag Heating-Piping 24:120-2 D '52

Testing

Various methods of high pressure testing oil country tubular material. H. G. Texter. il diags Pet Eng 25:B45-8+ Mr '53

PIPES, Aluminum

Aluminum pipe. il Bsns W p 132+ My 9 '53

Friction losses in round aluminum ducts. F. W. Hutchinson. bibliog il Heating-Piping 25:119-24 My '53

Oil industry tries out aluminum for pipe lines. Welding J 32:740-1 Ag '53

PIPES, Asbestos cement

Standard allowances for water hammer; asbestos-cement pressure pipe. A. J. Maahs. il diags Am Water Works Assn J 44:984-8 N '52

PIPES, Cast iron

Cast-iron heating pipes for oil tankers. il diag Engineering 175:601 My 8 '53
Ductile iron; new engineering material for water works construction. C. T. Haller. bibliog il Am Water Works Assn J 44:912-22 O '52
Modern facilities incorporated in new Alabama pipe foundry. W. C. Gude. il Foundry 80:110-13+ O '52
New pressure pipe foundry serves West Coast area. il map Foundry 81:98-101 Ja '53

See also

Water pipes, Cast iron

Standards

American standard specifications for cast iron pipe centrifugally cast in metal and sand lined molds, for water or other liquids. diags Am Water Works Assn J 45:189-230 F '53
Revision of American standards for pit cast pipe and cement mortar lining. Am Water Works Assn J 45:404 Ap '53
Tentative standard specifications for cast-iron pressure fittings. diags Am Water Works Assn J 45:321-48 Mr '53

PIPES, Cement

See also

Pipes, Asbestos cement

PIPES, Concrete

Sulfate resistant cement; primary requirement for sulfate resistant concrete pipe. D. G. Miller. Am Concrete Inst J 24:217-24 N '52; Discussion. il 25:224^1-224^{10} pt 2 D '53
Western concrete pipe association 34th annual meeting, Fresno, Calif. March 25-27. Rock Prod 56:200+ Je '53

See also

American concrete pipe association
Sewer pipes, Concrete
Water pipes, Concrete

Manufacture

Carolina pipe industry expands. W. B. Lenhart. il Rock Prod 55:180-1 D '52
Curing pipe with supersaturated steam. il Concrete 61:3-5+ Ag '53
Making concrete pipe acid-resistant. il Concrete 61:30 Jl '53
One man makes pipe; C. E. Sheets concrete pipe manufacturing co. il Constr Methods 35:86 Ap '53
Pipe school accents materials, equipment. il Concrete 61:20+ O '53
Pressure pipe project in Pakistan. F. L. Fitzpatrick. il Rock Prod 56:145-7 My '53
Producing pipe for Seattle water project; United concrete corp. A. R. Macpherson. il Rock Prod 56:157-8 My '53
Vibration practices in pipe, precast, and block manufacture. G. W. Washa. il Am Concrete Inst J 24:945-52 Je '53

PIPES, Copper

Better solder joints; copper water pipe, fittings are easily joined. il Iron Age 171:160+ F 12 '53

PIPES, Fiber

What's ahead for B.F.P.? il Dom Eng 181:178-80+ Ja '53

PIPES, Glass

Glass elbow eliminates sludge pumping guesswork. H. J. Rieping. il Sewage & Ind Wastes 25:737-8 Je '53

PIPES, Nickel

Piping hot caustic soda. il Steel 132:92 Ja 26 '53; Iron Age 171:205 Mr 5 '53

PIPES, Plastic

Have you tried non-metallic pipe? R. H. Wilcox. il Mill & Factory 53:90-3 S '53
Here to stay, plastic piping. Pet Processing 8:12 Ja '53
Lightweight plastic pipe is meeting specialized needs. G. M. Wilson. il World Oil 135:270+ N '52
Materials for chemical handling equipment. L. R. Honnaker and M. L. Monack. il Am Water Works Assn J 45:473-5 My '53
Move over, steel; plastics for corrosion-resistant pumps and valves. Bsns W p 141 Je 13 '53
National Tube tries plastic. J. B. Delaney. il Iron Age 171:77 Mr 26 '53
New type drainage pipe Alkathene used for nylon works. il Chem Age (Lond) 67:836 D 20 '52
Pipe; plastics stir steel firms' interest. W. V. Packard. Iron Age 171:69-70 Mr 12 '53
Plastic ducting. H. J. Stark. il Machine Design 25:172 Jl '53
Plastic pipe finds new users. il Iron Age 171:78 My 14 '53
Plastic pipe for cannery effluent irrigation. il Water & Sewage Works 100:287 Jl '53
Plastic pipe; growing uses. Steel 132:76 My 11 '53
Plastic pipe invades oil fields. il Pet Eng 24:B 105-6 O '52
Plastic pipe; polyvinyl chloride extruded to shape has big potential. il Iron Age 170:184-5 D 11 '52
Plastic pipe research. W. D. Tiedeman. Heat & Ven 50:134+ Mr '53
Plastic pipe serving as surface flow lines in Alberta oil fields. il Oil & Gas J 51:131 F 9 '53
Plastic pipe used for underground conduits for power lines. il Elec Eng 71:998 N '52; Mod Plastics 30:94 D '52
Plastic pipe; what's its future? il Eng N 150:37-8+ My 7 '53
Plastic piping. Mech Eng 75:237-8 Mr '53
Resin tubing used for salt water disposal. T. D. Gardner. il Pet Eng 25:B64+ Mr '53
Seven kinds of plastic pipe; their properties and uses. P. O'Keefe. il Materials & Methods 37:103-7 Mr '53
Tanks for everything. il Mod Plastics 30:100-3 F '53

See also

Gas pipes, Plastic
Water pipes, Plastic

PIPES, Steel

Arc welding of low-chromium-molybdenum steel pipe. J. Bland. bibliog il Welding J 32:803-14 S '53
Butweld steel pipe; prices, 1933-1952; tabulation. Iron Age 171:410 Ja 1 '53
Coating process improved. il Steel 132:130+ F 9 '53
Drill pipe rejects show good service life. H. G. Texter. il Pet Eng 24:B78+ D '52; Same cond. Oil & Gas J 51:100-2+ N 10 '52
Heat transfer to molten lead-bismuth eutectic in turbulent pipe flow. H. A. Johnson and others. bibliog diags A S M E Trans 75:1191-8 Ag '53
Microbiological corrosion of buried steel pipe; abstract. F. E. Kulman. Am Water Works Assn J 45:sup62+ Ap '53
New method of reclaiming old pipe. R. L. Bullock. il diags Oil & Gas J 51:294-5+ O 13 '52
Pipe nickel plated fast for AEC. W. V. Packard. il Iron Age 171:82 My 14 '53
Welding stainless steel pipe. N. N. Wolpert. Heat & Ven 50:116-17 F '53
What's the outlook for oil-country tubular goods? R. C. Zell. Oil & Gas J 51:262-3+ N 17 '52; Same. Am Pet Inst Proc 32(4):15-20; Discussion. 20-1 '52

See also

Tubes, Steel
Water pipes, Steel

Manufacture

Continuous heat treatment process produces high strength oil well casing. F. H. Bremmer and F. J. Zehnder. il diags Iron & Steel Eng 30:55-62; Discussion. 62-4 Ja '53
Large-diameter line pipe. W. C. Hoppe. diags Mech Eng 75:114-16 F '53; Abstract. il Iron Age 170:118-21 S 25 '52
Lubrication; continuous forging under high heat, pressure a problem. Iron Age 170:178 N 13 '52
Pipe-fabrication works of Stewarts and Lloyds of India, ltd. il plan Engineering 174:267-9, 272 Ag 29 '52
Radiant gas-fired processing equipment makes superior quality oil well casing. il Am Gas J 177:17+ N '52
Unusual heat treating operation boosts output of pipe. il diag Iron Age 170:192-3 D 4 '52

PIPES, Steel—Manufacture—*Continued*

Watch charm mill specializes on small diameter buttweld pipe; Sharon tube co. J. D. Knox. il Steel 131:90+ D 1 '52

Youngstown sheet and tube company increases service to the Midwest; pipe mills. C. Longenecker. il Blast F & Steel Pl 41: 916-18 Ag '53

Testing

Automatic pipe tester cuts inspection costs. J. B. Delaney. il Iron Age 171:104-5 Ja 8 '53

Effect of stresses on strength of circumferentially welded cylinders. L. J. Privoznik. il diags Welding J 31:sup587-95 D '52

Industry spurs pipeline tests. Am Gas Assn Mo 35:9+ S '53

Thermal shock and other comparison tests of austenitic and ferritic steels for main steam piping; a summary report. W. C. Stewart and W. G. Schreitz. bibliog il diags A S M E Trans 75:1051-67; Discussion. 1068-72 Ag '53

Welding characteristics of open hearth and Bessemer seamless steel pipe. A. B. Wilder and others. bibliog il diags Am Soc T M Proc 50:763-80; Discussion. 781-8 '50

PIPES, Vitrified clay

Clay pipe for warm air ducts. Brick & Clay Rec 123:83 S '53

Cuts pipe drying by five days; steel grating floors. A. P. Potts and F. S. Trumbower. il Brick & Clay Rec 122:78 Ap '53

Horizontal extrusion at Pine Hall. il Brick & Clay Rec 122:57 Je '53

Vitrified clay flue liners used in unusual venting system; Allen-Bradley co. il Brick & Clay Rec 123:48 O '53; Heating-Piping 25:82 O '53

We choose clay pipe; illustrations with text. Brick & Clay Rec 122:62-3 Mr '53

See also

Sewer pipes, Vitrified clay

PIPES, Wood

Power company speedily removes wood-stave pipe, builds new line. il Eng N 150:41 F 5 '53

PIPETS

New automatic pipetting system. Franklin Inst J 255:269 Mr '53

Simplified Hempel pipette for use with the manometric Van Slyke apparatus. R. W. Green. diag Chem & Ind p 103-4 Ja 31 '53

Vacuum-operated automatic pipet. W. R. Holt. diags Anal Chem 24:1870 N '52

PIPING

Ceramic product with special joints offers fast, easy installation of pipe lines. il Mill & Factory 52:148 Je '53

Chuquicamata sulphide plant; piping. J. P. Manning, jr. Min Eng 4:1200-3 D '52

Factory service lines go underground; Lily-Tulip cup corporation's new plant in Springfield, Mo. il plan diag Eng N 149: 30-2+ D 25 '52

Here's a method of supporting insulated piping. M. F. Allen. il diag Heating-Piping 24:109 N '52; Discussion. 24:108 D '52

How to lay out piping for industrial vacuum cleaning. A. M. Brown. il plans Heating-Piping 24:81-3 D '52

Is your piping system right? W. M. Jackson. il Pet Processing 8:868-73 Je '53

Methods of making piping flexibility analyses. A. McCutchan and W. P. Gregory. diags Heating-Piping 25:92-7 Mr '53

Methods of making piping flexibility analyses; series of articles analyzed and compared. S. Crocker and A. McCutchan. diags Heating-Piping 25:87-90 Jl '53

Piping changes improve plant efficiency, safety. C. T. Baker. diags Heating-Piping 25:172-4 Ja '53

Piping coolant to grinders. il diags Heating-Piping 25:88-9 Je '53

Piping radiological labs. W. W. McIntosh. il Heating-Piping 25:73-9 O '53

Remote control of piping processes aids plant safety; Du Pont co. il Heating-Piping 25:97 My '53

Service hot water piping with hot water as source of heat; detail sheet. diags Heat & Ven 50:9-10 F '53

Service hot water piping with steam as source of heat; detail sheet. diags Heat & Ven 50:9-10 Ja '53

Service hot water piping with water supply at two temperatures; detail sheet. diags Heat & Ven 50:9-10 Ap '53

Sizing control valves. R. A. Rockwell. il Heating-Piping 24:98-9 N '52; Same. Paper Ind 34:1242-3 Ja '53

Space of pipe supports; tabulations; reference data. Heat & Ven 50:166b O '53

Speeds whey handling; Lake-to-lake dairy cooperative. flow diag il Food Eng 25:96+ Mr '53

Steam unit heaters piping for horizontal and vertical units; detail sheet. diags Heat & Ven 50:9-10 My '53

Techniques for evaluation of noise-reducing piping components. D. B. Callaway and others. diags Acoustical Soc Am J 24:725-30 N '52

Thrift; new type of pipe and fittings. C. O. Brown. il diags Ind & Eng Chem 44:sup85A-6A+ O '52

You can't shut down some piping systems. J. H. Shaw. il Heating-Piping 24:104-5 D '52

See also

Oil pipes

Ships—Piping

Electric analogies

Nonlinear electrical analogy for pipe networks. M. S. McIlroy. il diag Am Soc C E Proc 78[no 139]:1-11 Jl '52

Estimates

Estimating data for piping labor costs. L. L. Mrachek. diags Tappi 35:sup34A+ O '52

Pipe cost estimation; reprinted from Chemical engineering, Jan. 1950. R. A. Dickson. Tappi 35:sup8A+ O '52

Process piping shutdowns. A. C. Kirkwood. diags Heating-Piping 24:104-6+ N '52

Welding

Heliarc welding helps fabricate nickel pipe. il Welding J 32:743 Ag '53

Inert-arc welding technique for eliminating backing rings in piping. R. A. Mueller and W. B. Root. il diags Welding J 32:205-14; Discussion. 214-16 Mr '53

Look inside your local dairy for remodeling business; trend to permanent welded lines. il Dom Eng 181:120-1+ Ja '53

Welding design for high-pressure gas compressor bottles. C. Wurgler. diags Welding J 32:612-13 Jl '53

PIPING (power plants)

Basic power plant figuring; physical characteristics of Schedule 160 pipe. W. H. Engelman. Power Eng 56:76-9 N '52

Creep properties of steels for power plants. A. E. Johnson and N. E. Frost. Engineering 175:25-8, 58-60, 249-50 Ja 2-9, F 20 '53; Discussion. J. H. M. Draper and G. Gosling. 175:755 Je 12 '53; Reply. 175:820 Je 26 '53

Double or nothing; valves and piping. B. Dopp. diag Heating-Piping 25:108-9 Je '53

Dual steam inlets on turbines pose a piping problem. W. H. Goetz. diags Heating-Piping 25:83 Je '53

Field setup dictates pipe fittings. G. W. Hauck. il diags Power 96:96-8 N '52

For tough jobs, foil-covered pipe insulation; foamglas wrapped in aluminum. il Power Eng 57:67 S '53

How to plan and engineer your piping systems using slip expansion joints. A. L. Aicher. il diags Power 97:84-5 F '53

How to size and install condensate return lines; data sheet. Heating-Piping 25:115-16 Ap '53

How to size piping and valves for flashing mixtures. W. F. Allen, jr. bibliog il Power Eng 56:60-1+ My; 83-5 Je; 85 Ag '52; 57: 94 O '53

It looked so simple; a piping problem and how it was solved. B. Dopp. diag Heating-Piping 25:118-21 Jl '53; Discussion. 25:100-2 Ag; 115 S; 102 D '53

Maximum allowable working pressures; selection of pipe sizes; tables; data sheet. G. C. Halzel. Power 96:99 Jl; 119 S; 99 O; 99 N; 119 D '52; 97:99 Ja '53

PIPING (power plants)—*Continued*

New wall thickness formula for high pressure, high temperature piping. W. R. Burrows and others. Heating-Piping 25:128-31 Ja '53

Operating experiences with mechanical joints in high-pressure high-temperature steam piping. E. C. Bailey and others. il diags A S M E Trans 75:97-101 Ja '53

Pipe line that led to the court house. C. T. Baker. diags Heating-Piping 25:102-4 F '53

Piping records of past tell us what not to do. C. T. Baker. diags Heating-Piping 25:118-19 Ap '53

Plan piping headers for ease of operation. G. W. Hauck. il diag Heating-Piping 25:94-6 Ag '53

Renovation roundup; fluid services. diags Power 97:92+ Mid-S '53

Save high-pressure high-temperature piping dollars. H. de Soto. diags Power Eng 57:94 My '53

Steam piping and valves for 1100 F service. F. A. Ritchings and S. Crocker. bibliog(32 titles) Heating-Piping 25:84-8 Ag; 82-8 S '53; Discussion. 25:84-90+ O '53

Take the bite out of pipe expansion with a good joint. J. Hyler. diags Power 96:128-9 D '52

Thermal shock and other comparison tests of austenitic and ferritic steels for main steam piping; a summary report. W. C. Stewart and W. G. Schreitz. bibliog il diags A S M E Trans 75:1051-67; Discussion. 1068-72 Ag '53

Tables, calculations, etc.

Hydraulic conversion factors for special pipes; data sheet. S. Lenox. Power 97:101 Ap '53

Testing

How model tests cut piping design and fabrication costs. J. F. O'Rourke. il diags Power 97:90-2 S '53

Welding

Carbide segregation in 1¼ Cr-½ Mo steel pipe welded joints. I. A. Rohrig and H. S. Blumberg. il Welding J 32:815-22 S '53

Inert gas doubly shields improved pipe welds; K-weld process. il diags Power 97:94-7 Ag '53

Some considerations in the joining of dissimilar metals for high-temperature high-pressure service. O. R. Carpenter and others. il diags Am Soc T M Proc 50:809-57; Discussion. 858-60 '50

Welds between dissimilar alloys in full-size steam piping. R. U. Blaser and others. il diags Am Soc T M Proc 50:789-808; Discussion. 858-60 '50

PIPING (refrigerating plants)

Refrigerant piping for air conditioning systems. S. C. Deitrick. diags Heat & Ven 50:95-110 Mr '53

Suction gas superheaters for Freon-12 systems. diags Heat & Ven 50:82-4 Mr; 127-8 Ap '53

Suction gas superheaters in refrigerant circuit; detail sheet. diags Heat & Ven 50:9-10 Mr '53

PISA

Campanile

Leaning tower of Pisa. C. B. Spencer. il diag Eng N 150:40-1+ Ap 2 '53; Abstract. Midwest Eng 5:19-20 Ap '53

PISTOLS

See also
Revolvers

PISTON gage. See Pressure gages

PISTON pins

Effects of piston pin offset. P. M. Heldt. il diags Automotive Ind 108:28-31+ Mr 1 '53; Discussion. J. B. Fisher. 108:148 My 15 '53

PISTON rings

Engineering piston-ring expanders for maximum performance and life. D. W. Hamm and K. J. Nisper. diags S A E J 60:64-8; Discussion. 69 D '52

How we cut high costs of broken piston rings; Indianapolis railways, inc. G. Prather. il diags Bus Transportation 32:51-3 Je '53

Piston and ring setups for new car engines. J. Geschelin. Automotive Ind 108:65+ Ja 1 '53

Manufacture

Advanced methods for making steel piston rings; Diesel equipment division, General motors corp. J. Geschelin. il Automotive Ind 109:64-5 S 1 '53

Standards

Proposed standard piston rings. Diesel Power 31:98-9 Jl '53

PISTONS

Approximate formula for the radiation resistance of a piston set in an infinite wall. E. M. J. Herrey. Acoustical Soc Am J 25:154-5 Ja '53

Cast-in inserts end groove wear troubles; report of round table. diags S A E J 61:34-5 O '53

Coat skirts with aluminum. N. P. Harvey. il Power 96:111 N '52

Contributions to hydraulic control; lateral forces on hydraulic pistons. J. F. Blackburn. diags A S M E Trans 75:1175-80 Ag '53

Engine piston drives road breaker tool. il diags Product Eng 23:138-9 D '52

GM 71 cylinder liner and piston fits. il diags Diesel Power 31:66-7 Mr '53

Leaky pistons; no short cut will work. Consumers Res Bul 31:25-6 Mr '53

New piston holds clearance at all operating temperatures. il Automotive Ind 107:74+ N 15 '52

One piece molded elastic piston seal. il diags Product Eng 23:210 O '52

Piston and ring setups for new car engines. J. Geschelin. Automotive Ind 108:65+ Ja 1 '53

Piston design. il diags Automobile Eng 43:223-34 Je '53

Reconditioning piston carriers. il Ry Loco & Cars 127:89-90 Ap '53

Why is Diesel piston worn? il Power 97:134-5 Je '53

Manufacture

Automatically balanced; machine weighs pistons and automatically removes the right amount. Steel 131:123+ S 15 '52; Mach 59:240-1 O '52; Automotive Ind 107:79 N 1 '52; Machine Design 24:130-2 N '52

Clamp for piston assembly. Steel 131:316+ O 13 '52

Connecting rod and piston automation; Ford Cleveland engine plant. J. Geschelin. il Automotive Ind 108:64-7+ Ap 1 '53

Special machine grinds tapered ellipse on pistons. il Automotive Ind 107:72 O 1 '52

PITCH

In refining; steam-heated pipe line handles heavy vacuum flash bottoms. G. Weber. diags Oil & Gas J 51:194-5 O 13 '52

Petroleum pitch an excellent boiler fuel. E. J. Miller. il diags Power Eng 57:74-5+ Je '53

Protective seal coating with coal tar pitch emulsion. C. M. Upham. il Roads & Sts 96:118-19+ My '53

Pumping, transmission and burning of tar and pitch. W. A. Pond. Iron & Steel Eng 30:94-7; Discussion. 98-9 Jl '53

See also
Paper making—Pitch problem

PITCH moths

Pitch moth infestation in western white pine. J. Walters. Pulp & Pa of Can 54:214-15 Ap '53

PITCHBLENDE. See Uraninite

PITKIN, Walter Boughton, 1873-1953

Pitkin had formula for writing success. D. Bentel. Ed & Pub 86:57 Ja 31 '53

PITKIN, Wolcott H. 1881-1952

Sketch. por Elec Com 29:321 D '52

PITOT tubes

Experiments with large pitot tubes in a narrow supersonic wake. N. H. Johannesen and W. A. Mair. J Aeronautical Sci 19:785-7 N '52

Pitot-Venturi flow element water service report. H. W. Stoll. il diags A S M E Trans 75:969-74 Jl '53

Water-cooled pitot tube for hot gases. J. A. Leys. il diags Iron & Steel Inst J 174:228 Jl '53

PITTSBURGH
Pittsburgh's answer to the high cost of squalor. il map Bsns W p70-2+ Ap 11 '53

Lighting

Pittsburgh lights up on installment plan. il Bsns W p 128-30 Jl 11 '53

Sewerage

Studies show how to drop sewage 90 ft vertically to tunnel interceptors. L. M. Laushey. il diags Eng N 150:38-9+ Mr 5 '53

Streets

Travel by spider web. map Bsns W p94+ Ap 18 '53

Water supply

Survey advises authority for city's water supply. Eng N 149:44-5 O 30 '52
Water authority. Bsns W p 110 N 15 '52

PITTSBURGH coke and chemical company
Common stock offered. Comm & Fin Chr 177:1371 Mr 30 '53
Five attractive stocks for capital gains; with comparative balance sheet items. Mag of Wall St 91:470 Ja 24 '53
Pittsburgh Coke & Chemical in sharp earnings comeback. Barron's 33:27 Ap 13 '53
$20,000,000 expansion broadens horizon. il Blast F & Steel Pl 40:1347-8 N '52

PITTSBURGH, Fort Wayne and Chicago railway
Good yields in guaranteed rails. R. Carleson. Mag of Wall St 92:114 Ap 18 '53

PITTSBURGH metallurgical company
Security I like best. H. S. Munroe, jr. Comm & Fin Chr 176:2014+ N 27 '52

PITTSBURGH parking authority
Parking authority under fire in court. il Eng N 149:47 N 20 '52

PITTSBURGH plate glass company
Five outstanding investments for the future; with comparative balance sheet items. Mag of Wall St 92:333 Je 13 '53

PITTSBURGH steel company
How firms plan for profits. A. C. Adams. Iron Age 171:70-1 F 26 '53
Pittsburgh Steel branches out for steady growing. il Bsns W p76-80+ Jl 25 '53

PITTSBURGH symphony orchestra
Mill towns hear a concert when union backs orchestra. il Bsns W p 147 D 13 '52

PITTSFIELD, Massachusetts
Adventure in democracy; Workshop for world understanding. H. R. Sass. Gen Elec R 56:30-1 My '53

PITTSTON company
New stock. Comm & Fin Chr 177:2787 Je 29 '53

PITUITARY body
Potential chemical pituitary inhibitors of the polyarylethylene series. N. D. Xuong and N. P. Buu-Hoï. Chem Soc J p3741-4 O '52

PITZELE, Merlyn Stuart, 1911-
Pitzele phenomenon. por Fortune 47:77 Mr '53

PIVALOYL chloride
Reaction between aromatic compounds and derivatives of tertiary acids; the production of *p-tert.*-butylphenyl and *iso*but-1-enyl *tert.*-butyl ketones from pivaloyl chloride. M. E. Grundy, W. Hsü and E. Rothstein. Chem Soc J p4136-8 N '52

PIVOTS
Flexure pivots; design formulas and charts. A. G. Thorp, 2d. il diags Product Eng 24:192-200 F '53

PLACENTA
Cells with metachromatic cytoplasmic granules in the stroma of human chorionic villi. J. S. Latta and C. R. Beber. bibliog il Science 117:498-9 My 8 '53
Extraction of adrenal cortex hormone activity from placental tissue. R. H. Johnson and W. J. Haines. bibliog Science 116:456-7 O 24 '52

PLAGIOCLASE
Angle between the α-axis and the trace of the rhombic section on the (010)-pinacoid in the plagioclases. G. Tunell. diag Am J Sci Bowen vol p547-51 '52
Relations between composition and indices of refraction in natural plagioclase. F. Chayes. bibliog Am J Sci Bowen vol p85-105 '52
Selected petrogenic relationships of plagioclase. R. C. Emmons, ed. (Memoir 52) 142p. 15pls Geologic soc. of America, 419 W. 117th st, New York 27 '53 ($2)
Thermochemistry of plagioclase and alkali feldspars. F. C. Kracek and K. J. Neuvonen. Am J Sci Bowen vol p293-318 bibliog(p316-18) '52
See also
Anorthite

PLAGUE
Two studies of plague. Pub Health Rep 67:1133-4 N '52

PLANETARIUMS
Amateur scientist; how a group of amateurs helped to build a planetarium. A. G. Ingalls. il diags Sci Am 188:106-8+ Mr '53
Coast shipyard helps stargazers; illustrations with text. Iron Age 170:41 N 27 '52
Heavens on earth; hemispherical dome molded of resin impregnated fibrous glass. il Mod Plastics 30:166 D '52
Museum and planetarium built on old dam; Science park, Boston. il Eng N 150:31, cover Mr 12 '53

PLANETS
Visibility of stars and planets during twilight. R. Tousey and M. J. Koomen. Opt Soc Am J 43:177-83 Mr '53
See also
Jupiter (planet)
Mars (planet)

PLANING
Planing, shaping and slotting; reference sheet. Tool Eng 30:85-6 Je '53

PLANING machines
Cleveland rotary planer designed for rapid milling of structural members. il Mach 59:216 My '53
Eight different machining operations on planer with single setup. il Am Mach 96:208 N 10 '52; Tool Eng 29:98 N '52; Mach 59:218 D '52; Steel 131:138+ N 17 '52; Automotive Ind 107:57 D 15 '52
1953 American Machinist production preview. il Am Mach 97:158-9 Ja 19 '53
What's ahead the next ten years in machining; planing and shaping. Am Mach 96:E 18-19 Mid-N '52

PLANK, Harvey H. 1892-
Named vice president and general manager of Delaware Power & Light. por Elec World 139:242 My 18 '53

PLANKTON
Plankton terminology. H. A. Cole. bibliog Science 116:713 D 26 '52

PLANNING
Flexibility; careful planning gives best return on space, equipment; Ryan aeronautical co. Iron Age 171:260+ My 7 '53
From analysis to action; how Ferro enamel corporation did its planning. C. D. Clawson. Dun's R 60:26-7+ D '52
How management can use timestudy. P. Carroll. Advanced Management 17:2-5 Ag '52
Long-term planning. M. M. Cresap, jr. Advanced Management 18:34-6 Ja '53; Same. N A C A Bul 34:599-606 Ja '53
Product planning. C. H. Kline. Advanced Management 18:10-14 Mr '53
Production planning by business days. J. E. Cotter. Mill & Factory 53:138-40 O '53
Ten years' progress in management; production planning and control. E. H. MacNiece. A S M E Trans 75:664-7 My '53
See also
Advertising—Planning
Production and sales, Coordination of
Schedules

PLANNING boards, State. See State planning boards

PLANT cells and tissues
Tissue derived from the pollen of ginkgo biloba. W. R. Tulecke. il Science 117:599-600 My 29 '53
Wood structure. S. Williams. il Sci Am 188:64-7 Ja '53
See also
Galls (botany)

PLANT growth
Naturally occurring antiauxin. R. H. Roberts. il Science 117:456-7 Ap 24 '53
Plants flourish on frit. il diag Chem Eng 60:228 F '53
See also
Growth inhibiting substances
Plants, Effect of light on

PLANT lice

Colouring matters of the aphididæ. B. R. Brown and others. Chem Soc J p4925-35 D '52

Green peach aphid on tobacco in the Dominican Republic. E. G. Beinhart. bibliog Science 116:713-14 D 26 '52

PLANT propagation

Growth and regeneration in hevea seedlings. T. J. Muzik. diags Science 117:555-6 My 22 '53

PLANTEOSE

Constitution of planteose. D. French and others. bibliog Am Chem Soc J 75:709-12 F 5 '53

PLANTS

Following a cold trail; to discover plant relationships, botanists work over old clues. E. C. Crocker. bibliog il Tech R 55:199-202+ F '53

See also

Botany
Grafting
Poisonous plants
Rubber plants and planting
Weeds

Boron content

Fluorescence in ultraviolet light in the study of boron deficiency in celery. A. R. Spurr. bibliog il Science 116:421-3 O 17 '52

Chemical analysis

Amino-acids and peptides; the nitrogenous constituents of some marine algae. D. M. Channing and G. T. Young. Chem Soc J p2481-91 Ag '53

Application of line-width method of spectrogram evaluation to spectrochemical analysis of plant products. R. T. O'Connor and D. C. Heinzelman. bibliog Anal Chem 24:1667-9 O '52

Chemistry of subterranean clover; synthesis and reduction of *iso*flavones related to genistein and formononetin. R. B. Bradbury and D. E. White. Chem Soc J p871-6 Mr '53

Cross and Bevan cellulose of posidonia australis. D. J. Bell. Chem Soc J p3649-50 S '52

Determination of fluorine in plant materials. L. F. Remmert and others. bibliog Anal Chem 25:450-3 Mr '53

Flame photometric determination of calcium, strontium, and barium in a mixture. O. N. Hinsvark, S. H. Wittwer and H. M. Sell. Anal Chem 25:320-2 F '53

Glycosides of the seeds of strophanthus amboensis E. and Pax. M. R. Salmon, R. Foppiano and W. G. Bywater. bibliog Am Chem Soc J 74:4536-7 S 20 '52

Glycosides of the seeds of strophanthus schuchardti Pax. R. Foppiano, M. R. Salmon and W. G. Bywater. bibliog Am Chem Soc J 74:4537-8 S 20 '52

Non-saponifiable constituents of Spanish broom. O. C. Musgrave, J. Stark and F. S. Spring. Chem Soc J p4393-7 N '52

Preliminary study of the main polysaccharide of lupinus termis seeds. W. Tadros and M. Kamel. Chem Soc J p4532-3 N '52

See also

Cellulose—Analysis
Lignin—Analysis
Tobacco—Analysis

Diseases and pests

Eelworm problem; biological aspects. B. G. Peters; W. Heeley; A. W. Johnson. Chem & Ind p994-9 O 11 '52

See also

Galls (botany)
Plant cells and tissues
Rusts (botany)
Tobacco mosaic virus

Iron content

Chelates as sources of iron for plants growing in the field. I. Stewart and C. D. Leonard. bibliog il Science 116:564-6 N 21 '52

Respiration

Effect of carbon monoxide on respiration in the sweet potato, ipomoea batatas Lan. G. C. Webster. bibliog Science 117:530-1 My 15 '53

Effect of triphenyltetrazolium chloride on oat embryo respiration. G. O. Throneberry and F. G. Smith. bibliog Science 117:13-15 Ja 2 '53

Selenium content

Effect of uranium-vanadium deposits on the vegetation of the Colorado plateau. H. L. Cannon. Am J Sci 250:735-70, pl 1 bibliog(57 titles, p767-70) O '52

Sodium content

Sodium as a plant food; abstract and discussion. J. J. Lehr. Chem & Ind p34 Ja 10 '53

Trace elements

Plants flourish on frit. il diag Chem Eng 60: 228 F '53

Trace elements for plant growth incorporated in glass matrix. diag Can Chem Process 37:73 My '53

Transpiration

Part played by chlorophyll in plant transpiration studied by a new method; hygrophotography. J. Sivadjian. bibliog il Science 117:606-7 My 29 '53

Uranium content

Effect of uranium-vanadium deposits on the vegetation of the Colorado plateau. H. L. Cannon. Am J Sci 250:735-70, pl 1 bibliog(57 titles, p767-70) O '52

Water absorption

Rise of water in plants. V. A. Greulach. il Sci Am 187:78-80+ O '52

Zinc content

Response of two species of pine to various levels of nutrient zinc. C. C. Wilson. bibliog Science 117:231-3 F 27 '53

PLANTS, Effect of light on

Effect of indoleacetic acid and amount of solar radiation on heterosis in the snapdragon (antirrhinum majus L.). J. B. Gartner and others. Science 117:593-5 My 29 '53

Root illumination and flowering. H. J. Fuller and S. L. Wilson. bibliog il Science 116: 688-9 D 19 '52

PLANTS, Effect of radioactivity on

Effect of gamma irradiation on the ascorbic acid content of green plants. A. R. Cooke. bibliog Science 117:588-9 My 29 '53

Effect of uranium-vanadium deposits on the vegetation of the Colorado plateau. H. L. Cannon. Am J Sci 250:735-70, pl 1 bibliog(57 titles, p767-70) O '52

PLANTS, Flowering of

Root illumination and flowering. H. J. Fuller and S. L. Wilson. bibliog il Science 116:688-9 D 19 '52

PLASKON

Fire extinguisher housed in urea. il Mod Plastics 30:95 O '52

PLASMA. See Blood

PLASMALOGEN

Plasmalogens; a synthesis of 2-aminoethyl 2 : 3-*O*-hexadecylideneglycerophosphate. M. J. Egerton and T. Malkin. Chem Soc J p2800-2 S '53

PLASTER and plastering

Further studies of the thermal characteristics of plaster panels. L. F. Schutrum and C. M. Humphreys. il diag Heating-Piping 25:122-5 Je '53

Hydration of gypsum plaster. W. A. Cunningham, R. M. Dunham and L. L. Antes. bibliog il Ind & Eng Chem 44:2402-8 O '52

New facts about blister failures in plaster. il Am Bld 74:290-1 O '52

Self-furring metal lath simplifies plaster application. il diags Am Bld 74:234+ S '52

PLASTER casts

Improved plaster tooling; plaster of Paris castings impregnated with resin; Plaspreg. J. Starr. il Tool Eng 30:68-9 F '53

PLASTER of paris

Furan resin impregnants for plaster; Plaspreg. J. Starr. il Materials & Methods 38: 140+ Jl '53

How to recognize and cure plaster mold defects. G. M. Thoman. il Cer Ind 61:62-3+ Ag; 76+ S '53

PLASTIC adhesive tape. See Adhesive tape, Plastic

PLASTIC bathtubs. See Bathtubs, Plastic

PLASTIC boats. See Boats, Plastic

PLASTIC cams. See Cams, Plastic

PLASTIC coated gloves. See Gloves, Plastic coated

PLASTIC coating

Aerosol safety plug for Sprey, an aerosol plastic coating. il Mod Packaging 26:110-11 Mr '53

Automatic core-dipper applies strippable plastic coatings. il Electronics 25:218 D '52

Cold-dip plastic coating simplifies corrosion protection. Iron Age 171:117 Ja 29 '53

Comparison of plastic tape and hot enamels for protective coatings of pipe. N. P. Peifer. il Gas Age 111:41-3+ My 21 '53

Ford seat cushions are noiseless; coating of vinyl plastisol on tension wires in cushions replaces jute wrapping. il Mod Plastics 30:78-9 Ja '53

Formulation of industrial coatings with vinyl resins. E. J. Bromstead and others. bibliog Paint Oil & Chem R 115:22-4+ O 23 '52

Furniture uses boost sheetings, coated fabrics. Mod Textiles Mag 34:36 Je '53

Modifications of technique add versatility to vinyl coatings. T. J. Kerr. diag Textile World 102:147+ D '52

New vinyl coating technique offers many advantages. il Materials & Methods 37:217 Je '53

Newly-developed, liquid plastic coating makes better blades for cooling-tower fans. il Mill & Factory 52:147-8 Je '53

Nodular iron, plywood, hot dip coating make better fans. S. H. Fedan. il Materials & Methods 37:106-9 Je '53

Packing the Princess flying boats for storage. Engineering 175:203 F 13 '53

Plastic protection added for parts in storage. W. B. Lewellen. Elec World 139:120+ Mr 9 '53

Polyester protects cosmotron. il Mod Plastics 30:168 Ap '53

Polyvinyl butyraldehyde sprayed on plane canopy for protection. il Mod Plastics 30:174 S '52

Reduction of losses due to corrosion possible through use of plastic coatings; abstract. R. R. Kelly. Paper Ind 34:869-70 O '52

Resin-base single-coat finish resists corrosion. Materials & Methods 36:152 N '52

Sprayed plastics find new uses in building. il House & Home 2:112-13 S '52

Station gets plastic raincoat. il Nat Pet N 44:91 O 15 '52

Steel containers may be adapted to many services. T. W. Rodes. Ind & Eng Chem 44:sup 115A-16A+ D '52

Treatment of galvanized iron with vinyl resin coating. Rubber Age 72:777 Mr '53

See also

Paper coating, Plastic

PLASTIC containers. See Containers, Plastic

PLASTIC dies. See Dies, Plastic

PLASTIC file cabinets. See File cabinets, Plastic

PLASTIC films

Air-cushion pack; heat-sealed polyethylene bag for Fireside marshmallows. il Mod Packaging 26:100-1 Jl '53

Bagging a new market; fruit-juice film container. il Chem W 72:58-9 Mr 28 '53

Battle of the films. J. M. Cowan. Tappi 36:sup 118A-21A Ja '53

Characteristics and applications of new plastic films; abstract. C. M. Woodcock. Mod Packaging 26:141 Je '53

Cloth-patterned vinyl film. il Mod Plastics 30:152 Ja '53

Electron microscope study of plasticized latices. E. B. Bradford. il J Ap Phys 23:609-12 Je '52

Film-wrapped lemons. il Mod Packaging 26:98-101 Mr '53

Films for pre-packaged poultry. A. F. Kish. il Mod Packaging 26:130-4+ Jl '53

Films for produce. H. A. Schomer. il Mod Packaging 26:191-6 Ap '53

Finishing machine does five jobs; color printing, production of a new wipe-shading effect, coating or lacquering, and color tipping of embossed stock. il diags Mod Plastics 30:133-4 N '52

Flip-over bag. il Mod Packaging 26:142-3+ Ap '53

Getting the best from plastisols; slush molding operations. il Mod Plastics 30:116-18 N '52

Migration of plasticizers from vinyl film. B. Coe. Rubber Age 72:220-2 N '52

New status of the film liner. il Mod Packaging 27:144-7+ O '53

New surface-treating process for polyethylene film; Cheslene TF. Rubber Age 73:798 S '53

Orange juice in a bag; package for single fountain servings of frozen concentrate. il Mod Packaging 26:110-13+ S '52

Packaged barbecue; frankfurters with sauce in transparent pouch. il Mod Packaging 26:91 O '52

Plastic meat casing. il Mod Packaging 26:114-16 Mr '53

Processing polyethylene into thin film. il Can Chem Process 37:48 Ap '53

Quenched fluorothene film. B. H. Maddock. diags Mod Plastics 30:116+ F '53

℞ for convenience; troubles with a saturating resin for casts are solved with a bag-in-a-can. il diags Mod Packaging 26:90-1+ Jl '53

Spray-on surgical bandages. Comp Air Mag 58:229 Ag '53

Terylene film. Elec R (Lond) 152:10 Ja 2 '53

Terylene polyester film to be released. Chem Age (Lond) 68:8 Ja 3 '53

Two-component mixer; elastic dental-impression materials. il Mod Packaging 26:129 Ap '53

Vacuum-packed hosiery; Gotham's new plastic-film pouch. il Mod Packaging 26:82-3 F '53

Vacuumized dills; H. J. Heinz co.'s new flexible packaging. il Mod Packaging 26:78-9+ Mr '53

Vinyl film and sheeting conference of the Society of the plastics industry. Mod Plastics 30:98-9+ F '53

Where do we stand on plastic textiles? J. Campbell. il Mod Textiles Mag 34:34-6 Je '53

Permeability

Apparatus for measuring gas permeability of sheet materials. D. W. Brubaker and K. Kammermeyer. bibliog il diag Anal Chem 25:424-6 Mr '53

Testing

Cold brittleness of polyethylene. M. M. Renfrew and A. J. Freeman. il Mod Packaging 26:121-3+ Ag '53

Testing film bags for leaks. K. H. Hu and A. I. Nelson. bibliog il diag Mod Packaging 26:124-5+ Ag '53

PLASTIC foam. See Plastic materials, Cellular

PLASTIC industries

Contributions of engineering to the plastics industry. F. C. McGrew. Midwest Eng 5:7-9+ Ap '53

Expanded plastics belong to these types. il Chem W 71:32+ D 20 '52

Injection plant destroyed by fire. W. R. McLain. il plans Mod Plastics 30:86-8+ Mr '53

Large molded parts; big promise in plastics. il Bsns W p48+ Ja 3 '53

Plastics; C&EN annual review. E. E. McSweeney. il Chem & Eng N 31:37-8 Ja 5 '53

Plastics drive a deeper wedge. il Iron Age 170:74-5 N 20 '52

Plastics industry trends. Mod Plastics 30:55-6 Ja '53

Plastics invade structural materials' field. F. K. Schoenfeld. Comm & Fin Chr 177:1311+ Mr 26 '53

Plastics; machinery market booms. H. R. Simonds. il Iron Age 171:107-9 Ja 29; 143-6 F 12 '53

Plastics; new, better, and bigger. Chem W 71:48+ D 27 '52

Plastics on the move. il Chem Eng 60:370 Ap '53

Plastics production climbs to new high in 1952. Materials & Methods 37:11 F '53

PLASTIC industries—*Continued*

Plastics rebound; last year's slump forgotten as producers shoot for new records. J. V. Sherman. Barron's 33:9-10 F 2 '53

Plastiscope; news and interpretations of the news. R. L. Van Boskirk. Published in monthly numbers of Modern plastics

Reinforced plastics production up 40 per cent in 1952. il Materials & Methods 37:9 F '53

Year 1952 in review. il Mod Plastics 30:111-12+ bibliog(404 titles, p 188+) Ja '53

See also

Plastics engineering

Society of the plastics industry

Exhibitions

British plastics exhibition. il Automobile Eng 43:283-5 Jl '53

British plastics exhibition, London, June 8-18. il Engineering 175:747, 784, 788-9 Je 12-19 '53

Electro-plastics; electrical aspects of the British plastics exhibition. il Elec R (Lond) 152:1307-12 Je 5 '53

Plastics exhibition, London, June 8-17. Elec J 150:2129-30 Je 12 '53

Sales volume high at German plastics fair. For Comm W 49:12 Ja 12 '53

Statistics

Plastics, resins output dipped slightly in '52. Oil Paint & Drug Rep 163:5 Je 29 '53

Canada

Canada's expanding plastics industry; need for protection of the home market. Chem Age (Lond) 68:319-20 F 21 '53

Canadian plastics industry shows rapid growth; capacity expanding. For Comm W 49:23+ My 4 '53

One of our fastest growing industries. Can Chem Process 37:12+ Ap '53

Primary plastics. Can Chem Process 37:16+ Je 20 '53

Germany

German plastics exhibition, Dusseldorf. Oct. 11-19, 1952. Mod Plastics 30:162 Ja '53

West German plastics exhibition; new developments on show. Chem Age (Lond) 67:837 D 20 '52

United States

Extracts from Paley commission report on coal and petroleum chemicals and products made therefrom. India Rubber World 126:777-81; 127:70-3+, 226-8+, 511-13 S-N '52, Ja '53

PLASTIC lenses. See Lenses, Plastic

PLASTIC materials

Acrylic respirator shell. il Mod Plastics 30:176 Ap '53

American chemical society Plastics division meeting symposium; abstracts of papers. India Rubber World 127:84-5 O '52

American society of mechanical engineers Rubber and plastics division annual meeting, New York, Dec. 4-5; abstracts of papers. India Rubber World 127:523-4 Ja '53; Rubber Age 72:502-3 Ja '53

Application trends in 1952. il Mod Plastics 30:69-74 Ja '53

B&O tugboat gets new plastic deck covering; Celastic. il Marine Eng 58:69 O '53

Batteries improved with plastics. il Mod Plastics 30:73-9+ Mr '53

British plastics convention, London, June 8-18; abstracts of papers of electrical interest. Elec R (Lond) 152:1045-8 My 8 '53

Chemical engineering materials of construction; plastics since 1949. G. M. Kline and R. B. Seymour. il Ind & Eng Chem 44:2339-43 bibliog(196 ref, p2342-3) O '52

Christmas canes made from cellulose acetate tube and solid rod. il Mod Plastics 30:196 N '52

Contributions of engineering to the plastics industry. F. C. McGrew. Midwest Eng 5:7-9+ Ap '53

Data charts for plastics; physical, thermal, electrical and chemical properties. Machine Design 25:170-6 O '53

Developments in acrylic plastics. W. T. Reedy. Can Chem Process 37:68+ Ap '53

Engineering progress in 1952. il diags Mod Plastics 30:87-90+ Ja '53

Evaluation of plastics for liquid rocket propellant applications. P. M. Terlizzi and A. E. Lenehan. il diags Mod Plastics 30:140+ F '53

Featherweight plastic foil restores lost circulation; Jelflake. G. F. Williams. il Oil & Gas J 51:279+ S 29 '52

First all plastic refrigerator food chamber now in production. il Refrig Eng 60:1306 D '52

Flexible vinyl tube. il Mod Packaging 27:114-17 O '53

Fluorocarbon plastics. Chem Eng 60:264 My '53

Fluorocarbon plastics. P. O'Keefe. il Materials & Methods 37:110-14 Ap '53

Fluorocarbon plastics; tabulation; engineering file facts. Materials & Methods 37:133 Ap '53

Fluorocarbons face fame and fortune; specific applications. il Mod Plastics 30:79-87+ D '52

Future of plastics in engineering. J. E. Gordon. Engineer 194:733-4 N 28 '52; Same. Engineering 174:701-2, 770 N 28, D 12 '52

Materials supply and demand. Mod Plastics 30:57-68 Ja '53

Metallising of glass, ceramic and plastic surfaces. R. J. Heritage and J. R. Balmer. bibliog il Metallurgia 47:171-4 Ap '53; Same. Metal Finishing 51:75-8+ Ag '53

Methyl methacrylate plastics; engineering file facts. Materials & Methods 37:123 Je '53

Midget punch kit for bookbinding by hand. il Mod Plastics 30:193 N '52

Move over, steel; plastics for corrosion-resistant pumps and valves. Bsns W p 141 Je 13 '53

New demands lead to new directions in engineering materials. T. C. DuMond. Materials & Methods 37:88-90 Je '53

On stage with plastics; for structural units, set props, and other equipment. il Mod Plastics 30:94-7+ S '52

Plaster cores formed in plastic corebox. G. C. Close. il Foundry 81:132+ F '53

Plastic lithification of sands *in situ*. W. E. Brown and H. W. Patnode. il diag Am Assn Pet Geologists Bul 37:152-7 Ja '53

Plastic material used as basis of day-night road signs. il Roads & Eng Constr 90:90+ D '52

Plastic patterns offer advantages in investment casting. R. S. Banister. il Foundry 81:120-3 S '53

Plastic pipe patches. il Mod Plastics 30:96 O '52

Plastic roof developed for crude oil tanks. Nat Pet N 45:54 My 6 '53

Plastic squeeze. J. D. Benefield and J. C. McCormick. map diags Pet Eng 24:B55-6+ O '52

Plasticity grading of fluorothenes. F. D. Dexter. bibliog diag Mod Plastics 30:125-6+ Ap '53

Plastics equipment reference sheet. R. B. Seymour and R. H. Steiner. Published in monthly numbers of Chemical engineering progress

Plastics foresee no let-up. Chem Eng 60:204 Mr '53

Plastics have sharpened competition for materials and equipment used in the materials handling field. T. W. Rodes. il Ind & Eng Chem 45:sup 125A-6A+ Ap '53

Plastics in anticorrosive applications. J. L. Huscher. il Chem & Eng N 31:860-3 Mr 2 '53

Plastics in chemical plant; recent German work. Chem Age (Lond) 67:633-4 N 8 '52

Plastics in the service of the general post office; abstract. A. A. New. Chem & Ind p 1197-8 D 6 '52

Plastics invasion. Can Chem Process 36:78-9 O '52

Plastics moldings will get still larger. Materials & Methods 37:7-8 Je '53

Plastics move into filters. Steel 132:134+ Je 15 '53

Plastics; new materials not replacements. S. C. Jensen. il Eng N 150:103+ My 28 '53

Plastics products. il Published in monthly numbers of Modern plastics

Plastics' properties guide. Can Chem Process 36:66+ S '52

PLASTIC materials—*Continued*

Plastics prove fertile field for chemical market researchers. Chem & Eng N 30:5365 D 22 '52

Plastiscope; news and interpretations of the news. R. L. Van Boskirk. Published in monthly numbers of Modern plastics

Preparation and properties of some ether and ester derivatives of hydroxyethylcellulose. S. G. Cohen and others. bibliog Ind & Eng Chem 45:200-3 Ja '53

Primaton; thermosetting plastic make-ready. W. P. Jaspert. il Inland Ptr 129:71 S '52

Properties and applications of some common plastics; engineering file facts. Materials & Methods 37:139, 141 F '53

Properties of 17 popular modern rigid plastics. Product Eng Hdbk p C20-1 '53

Resins and plastics in 1952. A. F. Cadenhead. Can Chem Process 37:74+ Ap '53

Rubber-base plastic. Steel 132:179 Je 1 '53

Safety on the United States. Mod Plastics 30:164+ S '52

Society of plastics engineers 9th annual technical conference, Boston, Jan. 21-23; abstracts of papers. Mod Plastics 30:126+ F '53

Society of plastics engineers 9th national technical conference, Boston, Jan. 21-23; program and abstracts of papers. India Rubber World 127:376-7+, 519-20, 656-7+ D '52-F '53

Society of the plastics industry meeting, New York, Dec. 4-5. Chem & Eng N 30:5256 D 15 '52

Status of plastics in industry today. W. Schack. il Product Eng 23:128-33 O '52

Styling with plastics. C. W. Sundberg and M. Ferar. il Machine Design 25:155-6 Je '53

Things to come, future developments in the plastics industry; symposium. H. M. Day and others. India Rubber World 128:69-70 Ap '53

Vacuum metallizing of plastics. J. G. Seiter. il India Rubber World 128:493-6 Jl '53

What's ahead the next ten years in materials and components; plastics. Am Mach 96:A 11 Mid-N '52

Year 1952 in review. il Mod Plastics 30:111-12+ bibliog(404 titles, p 188+) Ja '53

See also

Airplanes—Materials—Plastics
Automobiles—Materials—Plastics
Casein
Cellulose acetate
Cellulose acetate butyrate
Cement
Clay
Color in plastic materials
Electric circuits—Plastics embedment
Ethyl cellulose
Extrusion process (plastics)
Gums and resins
Melamine resins
Methacrylates
Molded products
Molding
Paper, Laminated
Perspex
Plastic coating
Plastic films
Plasticizers
Plastics engineering
Plastigels
Polyethylene
Printing on plastics
Resinous products
Rubber
Rubber, Artificial
Saran
Silicones
Styrene (and polymers)
Teflon
Vinyl chloride

Bibliography

Plastics digest. Published in monthly numbers of Modern plastics

Year 1952 in review. Mod Plastics 30:188+ Ja '53

Coloring

See Color in plastic materials

Crazing

Effects of biaxial stretch-forming on tensile and crazing properties of polymethyl methacrylate sheets. B. M. Axilrod and others. bibliog il diag Mod Plastics 30:117-18+ D '52

Stress-crazing of plastics. J. A. Sauer and C. C. Hsiao. bibliog il A S M E Trans 75:895-901 Jl '53; Same. India Rubber World 128:355-60 Je '53; Discussion. A S M E Trans 75:901-2 Jl '53

Cutting

Automatic machining of laminates; Synthane corp. il diag Mod Plastics 30:119+ O '52

Electric properties

Breakdown of some plastics under pressure. H. D. Parbrook. J Sci Instr 30:26-7 Ja '53

Effect of humidity upon the insulation resistance of alkyd molding compounds. M. H. Bigelow and P. E. Nowicki. il Electrochem Soc J 100:60-2 F '53

Electro-plastics; electrical aspects of the British plastics exhibition. il Elec R (Lond) 152:1307-12 Je 5 '53

Plastic electrets. H. H. Wieder and S. Kaufman. bibliog diags J Ap Phys 24:156-61 F '53

Plastic electrets and their applications. H. H. Wieder and S. Kaufman. bibliog diags Elec Eng 72:511-14 Je '53

Finishing

Evaluation of finishes for glass fibers. G. A. Clark. Mod Plastics 30:142+ N '52

Finishing machine does five jobs; color printing, production of a new wipe-shading effect, coating or lacquering, and color tipping of embossed stock. il diags Mod Plastics 30:133-4 N '52

Volan (114) finish; methacrylato chromic chloride. J. V. P. Torrey. Mod Plastics 30:154 N '52

Fire hazards

What plastics mean to fire underwriter. M. M. Braidech. Nat Underw 56:14 D 4 '52

Fire resistance

Flame retardant thermoplastics; method involving the use of chlorinated paraffin-wax. G. F. Rugar. Mod Plastics 30:148-9 Ja '53

Glass reinforcement

Bath tubs of reinforced plastics. il Mod Plastics 30:96-7 F '53

Four ways of building plastic boats. J. B. Alfers. il diags Mod Plastics 30:102-6 N '52

GM showing plastic sport cars. R. D. Raddant. Iron Age 171:54+ Ja 15 '53

Glass fabric for plastic assemblies. Aviation W 57:26 D 22 '52

Glass fibre in plastics. A. M. Dobson. Automobile Eng 42:543-4 D '52

Glass fiber; polyester molding materials; abstract. A. G. H. Dietz. Automotive Ind 108:55+ Ap 1 '53

Glass fiber reinforced plastics; drawings with text. Product Eng Hdbk p C2-5 '53

Glass-polyester switch insulation; Glastic. il Materials & Methods 37:114 My '53

Glass reinforced alkyd gives superior product and saves 22 per cent of breakage previously experienced. il Mill & Factory 53:139 Jl '53

How glass-plastic wing is fabricated. I. Stone. il diags Aviation W 58:50-4 Je 1 '53

How to select glass fabrics for plastics reinforcement. L. M. Calhoun and others. il Mod Plastics 30:84-7+ F '53

Hurricane panels. il Mod Plastics 30:178 F '53

Miniature blower scrolls molded from alkyd plastic. il Machine Design 25:142 Mr '53

New materials in air picture. Aviation W 58:104+ Mr 2 '53

New uses for fibrous glass. il Bsns W p 114+ Ap 11 '53

Plastic car bodies; based on papers by E. S. Ebers and others. il S A E J 61:65-8 My '53

Plastic plates solve sewage plant corrosion problem; Dallas, Texas treatment plant. C. V. Ing, jr. il Water & Sewage Works 100:40-1 Ja '53

Plastic radomes pass the beam but shield the radar; based on the papers by W. Garcia and others. il diags S A E J 61:27-31 Ap '53

Plastics and the new car. il Can Chem Process 37:36+ Mr '53; Steel 132:79-80 F 16 '53

Reinforced plastic mouldings; Turner Atherton machine. il Elec R (Lond) 151:1345-6 D 19 '52

Reinforced plastics in wider field use. G. Weber. il Oil & Gas J 51:85 Mr 2 '53

Reinforcing reinforced plastics; special fibrous glass cable. E. F. Bushman. il Mod Plastics 30:98-9 D '52

PLASTIC materials — Glass reinforcement —*Continued*

What glass fiber-filled molding resins have to offer. K. Rose. il Materials & Methods 37:87-9 Ja '53

Will glass fibers do it? il Mod Ind 25:105-6 Mr '53

Joining

Adhesives for reinforced plastics. H. A. Perry. diags Product Eng 24:288+ Ap '53

Teflon joined by fusion bonding. H. G. Henry. il diag Materials & Methods 38:114-15 O '53

Joining to metal

Metal-clad laminates used in printed circuitry. N. A. Skow. Machine Design 25:284+ S '53

Method of bonding plastic to steel or aluminum. Mach 60:213 O '53

New vinyl-metal sheet resists corrosion and abrasion and can be formed. P. O'Keefe. il Materials & Methods 38:94-5 S '53

Some recent progress in measuring adhesion of films to metal plates. H. F. Mark. Tappi 36:sup 16A+ Je '53

Manufacture

Analyst in the plastics industry. J. Haslam. bibliog Chem Age (Lond) 67:665-70 N 15 '52

Chemicals from coal. Can Chem Process 37:60+ Mr '53

Lower cost acrylics from Rohm & Haas process. il Chem & Eng N 31:560+ F 9 '53

Patents

U.S. plastics patents. Published in monthly numbers of Modern plastics

Plating

Architectural letters in metallised plastic. D. McPherson. il Metallurgia 46:249-50 N '52

High vacuum creates miracle in plating. il Elec West 109:100 O '52

High vacuum metallizing. A. H. Hartman. il plan Mod Plastics 30:115-16+ O '52

Metallized butyrate reflectors. il Mod Plastics 30:110-12+ Mr '53

Output of metallized plastics continues sharp upward swing. H. Narcus. Chem & Eng N 31:424-5 F 2 '53

Prices

Prices of alloys and plastics. W. L. Nelson. Oil & Gas J 52:327 Je 22 '53

Reinforcement

Adhesives for reinforced plastics. H. A. Perry. diags Product Eng 24:288+ Ap '53

Aircraft designer analyzes reinforced plastics. N. C. Parrish. diags Automotive Ind 108:38-40+ Mr 1 '53

Coming out party. il Chem W 72:65-6 Mr 7 '53

Reinforced plastics boom with better techniques. il Chem & Eng N 31:866-7 Mr 2 '53

Reinforced plastics production up 40 per cent in 1952. il Materials & Methods 37:9 F '53

Reinforced plastics sales leap upward. il Steel 132:68-9 Mr 2 '53

Reinforced plastics; they run the gamut from armored vests to fishing rods. Barron's 32:11-12 D 1 '52

Reinforced polyester plastics. R. B. Seymour and R. H. Steiner. il Chem Eng 59:278+ D '52

Society of the plastics industry Reinforced plastics conference, Washington; with abstracts of papers. Automotive Ind 108:52-5+ Ap 1 '53; Materials & Methods 37:8+ Ap '53

Society of the plastics industry Reinforced plastics division 8th annual technical and management conference, Washington, Feb. 18-20. India Rubber World 128:69 Ap '53

S.P.I. Reinforced plastics division 8th annual technical session and exhibit, Washington, Feb. 18-20; program. Mod Plastics 30:83+ F '53

Storage

Storage room for laminated acrylic; dehumidifier supplies ultra-dry air. F. M. Johnson. flow diag il Mod Plastics 30:111+ D '52

Strength

Effects of biaxial stretch-forming on tensile and crazing properties of polymethyl methacrylate sheets. B. M. Axilrod and others. bibliog il diag Mod Plastics 30:117-18+ D '52

Impact strength of plastics. W. Schack. diag Machine Design 24:159-60 N '52

Mechanical properties of plastics; the interpretation of mechanical tests. C. G. Evans and H. W. Hall. il diags Chem & Ind p229-34 Mr 14 '53

Temperature effect

Effects of elevated temperatures on strength of thermosetting plastic laminates. N. Fried and others. bibliog il Am Soc T M Proc 50:1383-98 '50

High temperature properties of Stypol 16B glass cloth laminates. F. G. Singleton. Mod Plastics 30:152 N '52

Measurement of heating capacities of injection molding machines. C. E. Beyer and R. B. Dahl. diag Mod Plastics 30:124+ S '52

Testing

ASTM committee D-20 on plastics annual meeting, Atlantic City; abstracts of reports. India Rubber World 128:634-5 Ag '53

ASTM committee D-20 on plastics spring meeting, Pocono Manor, Pa. March 23-25. India Rubber World 128:211-12 My '53

Crack detection. il Mod Plastics 30:184 O '52

Mechanical properties of plastics; symposium discussion. Chem & Ind p 1255-9 D 27 '52

Mechanical properties of plastics; the interpretation of mechanical tests. C. G. Evans and H. W. Hall. Chem & Ind p229-34 Mr 14 '53

Modification of Atlas twin-arc Weather-Ometer. J. W. Tamblyn and G. M. Armstrong. bibliog il Anal Chem 25:460-5 Mr '53

Physical evaluation of small samples of plastics. K. H. C. Bessant and others. bibliog il diags J Ap Chem 2:501-10 S '52

Report on the Shore type A durometer for hardness testing of vinyl plastics. E. F. Smith. diags India Rubber World 127:515-18 Ja '53

Tensile properties of some aircraft structural materials at various rates of loading. R. F. Klinger. il diags Am Soc T M Proc 50:1035-50; Discussion. 1051-3 '50

Test methods for plastics; Packaging institute proposes five procedures adapted from ASTM. Mod Packaging 26:137-40+ O '52

Water absorption

Effect of moisture absorption; abstract. J. M. Stevens. Automotive Ind 108:98+ Ap 1 '53

PLASTIC materials, Cellular

Foam plastic adds strength to aircraft structures. il Product Eng 23:199 N '52

Foam plastic is lightweight stiffener. il Aviation W 57:35-6+ O 27 '52

Hot food for fighters; army food container, insulated with shredded urea foam. il Mod Plastics 30:87-8 S '52

Lightweight foamed plastic strengthens aircraft components; Lockfoam. il Automotive Ind 108:41+ Mr 1 '53

Lockfoam filled-in-place structures. J. M. Gerschler. il S A E J 61:24-8 F '53

Lockfoam; multi-purpose liquid plastic. Rubber Age 73:80 Ap '53

New foam plastics cast to desired shape. J. Starr. il Materials & Methods 37:108-9 F '53

Plastic foam replaces ribs in airplane control surfaces. il Automotive Ind 107:92 D 1 '52

Properties and characteristics of foamed plastic materials. H. J. Stark. Product Eng 24:166-70 Ap '53

Story of expanded plastics. J. D. Nelson. il diags Gen Elec R 56:52-5+ S '53

Three new foams; Armofoam, Lockfoam and Colfoam. il Mod Plastics 30:85-7 Ap '53

Vinyl plastics sponges. K. Rose. il Materials & Methods 37:104-5 Je '53

PLASTIC materials, Decorative

Beauty sealed in vinyl laminates. il Mod Plastics 30:88-9 Ap '53

PLASTIC materials, Decorative—*Continued*

Decorating and marking of plastic products. A. N. Skeels. il India Rubber World 127: 803-5 Mr '53

PLASTIC materials, Effect of heat on. See Plastic materials—Temperature effect

PLASTIC materials, Expanded. See Plastic materials, Cellular

PLASTIC materials, Laminated

Beauty sealed in vinyl laminates. il Mod Plastics 30:88-9 Ap '53

Curved panels hug flat surfaces. il Mod Plastics 30:169 Mr '53

Laminated plastics improve precision bearing performance. H. Widdop. il diags Materials & Methods 36:99-101 D '52

New Polyplastex laminates. il India Rubber World 127:384 D '52

Nylon-phenolic terminal-board material. D. L. Matson. diags Mod Plastics 30:137-8+ N '52

Postforming thermosetting laminated plastics (cont). W. I. Beach. il diags Mach 58:171-7 D '51; 172-9 My; 59:180-2 S; 169-73 D '52

Proposed test method for determining the effect of sizes on glass fibers for reinforced plastic laminates. J. G. Mohr and H. A. Fox. il diags Glass Ind 34:363-4+ Jl '53

Glass reinforcement

Effect of preloading and fatigue on mechanical properties of glass-cloth plastic laminates. A. D. Freas. A S M E Trans 75:621-33 My '53

Effect of temperature on the creep and recovery of a melamine-glass fabric laminate. W. J. Worley and W. N. Findley. bibliog diags Am Soc T M Proc 50:1399-413 '50

Evaluation of finishes for glass fibers. G. A. Clark. Mod Plastics 30:142+ N '52

Glass fiber laminations in cruiser's hull. il Materials & Methods 38:133 O '53

Glass-reinforced plastics; resins and reinforcements, molding techniques, properties, part design, applications. P. O'Keefe. il diags Materials & Methods 37:119-34 F '53 (reprints 25c)

High temperature properties of Stypol 16B-glass cloth laminates. F. G. Singleton. Mod Plastics 30:152 N '52

Low-pressure laminates. R. King. il diags Machine Design 25:112-22 Mr '53

Low-pressure lamination of silicone resins. K. R. Hoffman. il Mod Plastics 30:146+ N '52

Mechanical properties of glass-cloth plastic laminates as related to direction of stress and construction of laminate. F. Werren. bibliog il A S M E Trans 75:613-19 My '53

Reinforced plastics in a revolutionary loudspeaker. il Mod Plastics 30:96-7 D '52

Reinforced plastics in aircraft design; abstract. W. G. Ramke. Automotive Ind 108: 92+ Ap 1 '53

Ship and plane testing models; production techniques, using polyester-glass. il Mod Plastics 30:125-6+ N '52

Vinyl silicone resin treatment of glass fibers. M. H. Jellinek. Mod Plastics 30:150+ N '52

Volan (114) finish; methacrylato chromic chloride. J. V. P. Torrey. Mod Plastics 30: 154 N '52

Manufacture

Automatic machining of laminates; Synthane corp. il diag Mod Plastics 30:119+ O '52

Low-pressure laminates. R. King. il diags Machine Design 25:112-22 Mr '53

Strength

Effect of moisture absorption; abstract. J. M. Stevens. Automotive Ind 108:98+ Ap 1 '53

Effects of elevated temperatures on strength of thermosetting plastic laminates. N. Fried and others. bibliog il Am Soc T M Proc 50:1383-98 '50

Testing

Effects of elevated temperatures on strength of thermosetting plastic laminates. N. Fried and others. bibliog il Am Soc T M Proc 50:1383-98 '50

Newer laminated plastic insulating materials. A. N. Hawthorn and S. W. Messent. Engineer 195:436-7 Mr 20 '53

PLASTIC materials, Porous

Porvic process; method for making thermoplastics microporous. il Chem Age (Lond) 68:411-13 Mr 14 '53; Engineer 195:386-7 Mr 13 '53; Engineering 175:373 Mr 20 '53; Elec J 150:878 Mr 13 '53

PLASTIC materials, Translucent

Bubble lamps fashioned of hard-drawn steel wire and translucent white vinyl. il Mod Plastics 30:190 N '52

Color-identity dropper stoppers of translucent polyethylene for Higgins ink. il Mod Packaging 26:92-4+ O '52

Report on translucent structural panels. il diags Am Bld 75:232-8 F '53

Save on sunlighting maintenance. il Safety Maint & Prod 106:40 O '53

Translucent door; resin-impregnated wood covered with sheets of translucent reinforced plastic glass. il Mod Plastics 30:162 D '52

PLASTIC materials, Transparent

Battle of the films. J. M. Cowan. Tappi 36: sup 118A-21A Ja '53

Bus-bar barriers from clear acrylic sheets. il Mod Plastics 30:181 O '52

Cast transparent plastic sheet. il Arch Rec 112:183 D '52

Delicate parts embedded in compression molded, clear plastics. T. Harris. il Materials & Methods 36:108-9 N '52

Economics of plastics sheet forming, 1952; acrylics. il Mod Plastics 30:81-3+ S '52

Glazing of aircraft. E. W. Russell. il diags Mod Plastics 30:119-20+ Mr '53

Golf balls in contoured plastic; U.S. rubber co. il Mod Packaging 26:120-1 Je '53

New transparent plastics for aircraft enclosures; abstract. G. E. Hughes. S A E J 61:38 Ja '53

Optical plastics come of age. il Safety Maint & Prod 104:31-2+ N '52

Plexiglas craze-resistance raised. G. L. Christian. Aviation W 58:53-4 Ja 19 '53

Transmission of microwaves through Plexiglas windows. il Electronics 26:226+ Mr '53

Heat transmission

Heat loss through acrylic glazing. diag Mod Plastics 30:126+ Mr '53

Heat loss through Plexiglas. Heat & Ven 50: 86-7 My '53

Testing

Accuracy of extrapolated creep-test relations for plexiglas subjected to various stresses. J. Marin and Y. Pao. bibliog A S M E Trans 74:1231-40 O '52

PLASTIC models. See Models, Plastic

PLASTIC paint

Plastic or mastic coverings for exterior walls of houses. F. L. Browne. Paint Oil & Chem R 116:36-7 Ag 13 '53

Plastic or mastic paints for houses. Consumers Res Bul 32:22-4 Ag '53

PLASTIC pipes. See Pipes, Plastic

PLASTIC printing plates. See Printing plates, Plastic

PLASTIC sheeting

Battery case fabricated from thick copolymer sheet. il Mod Plastics 30:173 O '52

British thermoplastic sheet. A. K. Astbury. il Mod Plastics 30:90-2 Ap '53

Cast phenolic dies for sheet forming. il Mod Plastics 30:97-9 O '52

Cast transparent plastic sheet. il Arch Rec 112:183 D '52

Chicago molded products develops polystyrene-rubber rigid sheet. Rubber Age 73: 814 S '53

Economics of plastics sheet forming, 1952. il Mod Plastics 29:71-8+ Jl; 84-7+ Ag; 30:81-3+ S '52

Formed sheet in form writer. il Mod Plastics 30:188 N '52

Furniture uses boost sheetings, coated fabrics. Mod Textiles Mag 34:36 Je '53

How to cut costs by vacuum-forming extruded plastic sheet. D. Woodruff, jr. il Am Mach 97:153-8 S 14 '53

New plastic lends self to vacuum forming; Campco S-300. il Refrig Eng 61:994 S '53

Pilot set-up for vacuum forming. il Mod Plastics 30:95 D '52

PLASTIC sheeting—*Continued*

Plastic sheet produces glossy finish on vacuum formed parts. il Materials & Methods 38:159 O '53

Polyvinyl-chloride sheet in rigid form. Engineering 174:167 Ag 8 '52

Power packs for flash photography; formed plastic sheet material replaces metal for battery and lamp housings. il Mod Plastics 30:114-15+ N '52

Vacuum forming grows; method of forming thermoplastic sheets. Steel 132:145 My 4 '53

Vinyl film and sheeting conference of the Society of the plastics industry. Mod Plastics 30:98-9+ F '53

Testing

Effects of moderate biaxial stretch-forming on tensile and crazing properties of acrylic plastic glazing. B. M. Axilrod and others. bibliog il diag J Res Nat Bur Stand 49: 331-42 N '52; Same cond. Mod Plastics 30: 117-18+ D '52

PLASTIC tableware. See Tableware, Plastic

PLASTIC tanks. See Tanks, Plastic

PLASTIC tarpaulins. See Tarpaulins, Plastic

PLASTIC tubes. See Tubes, Plastic

PLASTIC tumblers. See Tumblers, Plastic

PLASTICITY

Effect of compressive reinforcement on the plastic flow of reinforced concrete beams. G. W. Washa and P. G. Fluck. il diags Am Concrete Inst J 24:89-108 O '52; Discussion. 25:108^1-108^8 pt 2 D '53

Evaluation of plastic analysis as applied to structural design. B. G. Johnston and others. bibliog(33 titles) il diags Welding J 32:sup224-39 My '53

Flow characteristics of fire-clay refractories at high temperatures. P. G. Herold and C. Knudsen. bibliog diag Am Cer Soc J 35: 220-5 S 1 '52

Inelastic instability and incremental theories of plasticity. E. T. Onat and D. C. Drucker. bibliog diags J Aeronautical Sci 20:181-6 Mr '53

On the foot-hills of the plastic range. H. W. Swift. Engineering 174:383-4, 420-1, 450 S 19-O 3 '52

Partially plastic rotating discs. M. Zaid. bibliog diag J Aeronautical Sci 19:697-704 O '52

Plastic buckling of a rectangular plate under edge thrusts. G. H. Handelman and W. Prager. bibliog U S Nat Advisory Com for Aeronautics 1949:479-506 '51

Plastic flow in a lead extrusion. C. T. Yang and E. G. Thomsen. bibliog il diags A S M E Trans 75:575-9 My '53

Plastic flow paths in an extruder worm. L. F. Street. diags Mod Plastics 30:130+ Ap '53

Plastic strength and deflections of continuous beams. K. E. Knudsen and others. bibliog(22 titles) diags Welding J 32:sup240-55 My '53

Plasticity grading of fluorothenes. F. D. Dexter. bibliog diag Mod Plastics 30:125-6+ Ap '53

Plasticity of silicon and germanium. F. Seitz. bibliog Phys R 88:722-4 N 15 '52

Stress and plastic strain relations of a magnesium alloy. A. E. Johnson and N. E. Frost. diag Engineer 194:713-19 N 28 '52

Validity of assumptions made in theories of plastic flow for metals. J. Marin and L. W. Hu. bibliog il diags A S M E Trans 75:1181-6; Discussion. 1186-90 Ag '53

What causes molding green strength? C. A. Sanders. il Foundry 80:108-9+ O '52

See also

Creep of materials

Deformation (mechanics)

PLASTICIZERS

Citric acid ester plasticizers. F. J. Prescott and G. O. Cragwell. bibliog Mod Plastics 30:134+ O '52

Electron microscope study of plasticized latices. E. B. Bradford. il J Ap Phys 23: 609-12 Je '52

Evaluation of plasticizer performance in vinyl resins. T. C. Patton. bibliog India Rubber World 127:371-4 D '52

Externally plasticized latices in paints. R. B. Green. Ind & Eng Chem 45:726-8 Ap '53

Extrusion plasticity of a butadiene-acrylonitrile rubber; effect of amide-type compounds. A. W. Campbell and P. F. Tryon. bibliog Ind & Eng Chem 45:125-30 Ja '53

Liquid polymers of acrylic esters. C. E. Rehberg and J. Siciliano. bibliog Ind & Eng Chem 44:2864-6 D '52

New plasticizers made by hydrogen peroxide process. Chem Eng 60:134+ My '53

Plasticizer drip considered at Underwriters' conference. Rubber Age 72:501 Ja '53

Plasticizers for elastomers. M. A. Pollack. India Rubber World 127:497-502+ Ja '53

Plasticizers for nitrocellulose lacquers; abstract. A. Kraus. Paint Oil & Chem R 116: 54 Mr 12 '53

Plasticizers for polyvinyl compounds. H. Jones and A. Hill. Paint Oil & Chem R 115: 11+ N 20 '52

Plasticizers set new records; with tables. H. Avery. Mod Plastics 30:84-6+ S '52

Plasticizing a synthetic latex. R. E. Dillon, E. B. Bradford and R. D. Andrews, jr. bibliog il diags Ind & Eng Chem 45:728-35 Ap '53

Bibliography

Rubber division library bibliography; processing of GR-S involving use of plasticizers. 11 l Rubber division lib, Univ. of Akron, Akron 4, Ohio '52

Physiological effect

Studies on the toxicity and skin effects of compounds used in the rubber and plastics industries; plasticizers. F. S. Mallette and E. von Haam. A M A Archives Ind Hygiene & Occup Med 6:231-6 S '52

Testing

Migration of plasticizers from vinyl film. B. Coe. Rubber Age 72:220-2 N '52

PLASTICS engineering

Engineering progress in 1952. il diags Mod Plastics 30:87-90+ Ja '53

New machinery and equipment. Published in monthly numbers of Modern plastics

PLASTICS research

See also

Airplanes—Materials
—Plastics

PLASTIGELS

Metallic soaps as gelling agents for plastigels. K. Parker and L. Tritsch. il Mod Plastics 30:129-30+ F '53

Modeling plastisol; Pyrocon. il Mod Plastics 30:181 F '53

Vinyl resins gelled or foamed. il Chem Eng 59:232+ D '52

PLASTISOLS

Compounding plastisols for specific applications. C. A. Clark and H. E. Connors. bibliog il Rubber Age 72:343-9 D '52

Geon plastisol compounds for cold-dipping applications. Rubber Age 72:76 O '52

New method for on-the-spot cable splicing. Rubber Age 73:369 Je '53

PLASTOMETERS

Simple compression plastometer. E. F. Linhorst. il India Rubber World 128:626 Ag '53

Two extrusion plastometers for use with polyvinyl chloride. R. Hayes. diags Chem & Ind p 1069-72 N 1 '52

Use of the Mooney plastometer to disclose structural effects in high polymers. D. S. Fensom. bibliog Rubber Age 73:795-8 S '53

See also

Consistometers

PLATE glass

Correlation between the degree of hardening and the thickness of flat glass; abstract. G. M. Bartenev and V. I. Rozanova. diags Glass Ind 34:545-6 O '53

Interference films on glass; some observations during acid leaching of X-ray plate glass. S. Anderson and D. D. Kimpton. Am Cer Soc J 36:175-9 Je 1 '53

Stress-optical coefficient of plate glass. R. M. Waxler. diags Glass Ind 34:258-9+ My '53

PLATES

Axially symmetric vibrations of a finite isotropic disk. R. R. Aggarwal. bibliog Acoustical Soc Am J 24:463-7, 663-6 S-N '52

Buckling stresses for flat plates and sections. E. Z. Stowell and others. bibliog(65 titles) il diags Am Soc C E Proc 77 [no 77]:1-31 Jl '51; Discussion. 78 no[D-77]:1-3 D '52

Deformations and stresses in symmetrically loaded circular plates of varying thickness. D. C. Boston. diags Roy Aeronautical Soc J 57:449-54 Jl '53

Experimental study of natural vibrations of cantilevered triangular plates. P. N. Gustafson and others. bibliog il diags J Aeronautical Sci 20:331-7 My '53

Photo-elastic research on plates in transverse bending. A. Kuske. bibliog il diags Engineering 175:20-1, 36-9 Ja 2-9 '53

Shock-wave effects on the laminar skin friction of an insulated flat plate at hypersonic speeds. T. Li and H. T. Nagamatsu. bibliog J Aeronautical Sci 20:345-55 My '53

PLATFORMING process. See Gasoline—Manufacture

PLATHYMENIA reticulata

Chemistry of extractives from hardwoods; the isolation of a diterpene ester (methyl vinhaticoate), and of 6 : 7 : 3′ : 4′-tetrahydroxyflavanone (plathymenin), and 2 : 4 : 5 : 3′ : 4′-pentahydroxychalkone (*neo*plathymenin), from plathymenia reticulata. F. E. King, T. J. King and K. G. Neill. Chem Soc J p 1055-9 Ap '53

PLATING

High quality plating in a vacuum. flow diag il Mill & Factory 52:96-7 Mr '53

See also

Brass plating
Chromium plating
Copper plating
Electroplating
Nickel plating
Plastic materials—Plating
Silver plating
Zinc plating

PLATING barrels

Completely submerged plating barrel. il Metal Finishing 51:95-6 Mr '53

PLATING machinery

Modern plating equipment is designed for any shop. J. E. Hyler. il Iron Age 171:128-32 F 19 '53

Small parts barrel through plating; cold heading department of the Ford motor co.'s River Rouge plant. H. Chase. il Steel 132:88-90 F 23 '53

PLATING shops

Suppression of noise and vibration in plating shops; abstract. Metal Finishing 51:110 Je '53

Equipment

Arrow plating doubles facilities; illustrations with text. Metal Finishing 51:69-71 Ap '53

Efficient fume removal; Winters and Crampton plating plant. il Metal Finishing 51:73-4 F '53

Modern plating equipment is designed for any shop. J. E. Hyler. il Iron Age 171:95-100 Ja 22; 120-4 Ja 29; 156-61 F 5; 128-32 F 19 '53

New plating plant for Union Switch & Signal. il diag Metal Finishing 51:61-4 S '53

150 per cent increase in plating output; Ford motor co. il Factory Management 110:133 O '52

Problem-solvers for production planning; setting up a new plating room. P. Harris. Factory Management 111:102-3 S '53

Small plants can produce good work; Plating, inc. F. M. Burt. il Metal Finishing 51:64-5 Ag '53

Small plating plants; how to save nickel solution; General Motors' Pontiac division. diags Iron Age 171:117 Ap 16 '53

PLATINUM

Activity of solid catalysts. W. B. Argo and J. M. Smith. bibliog flow diag diag Ind & Eng Chem 45:298-302 F '53

Effect of inductance on fine transfer between platinum contacts. J. Warham. bibliog il diags Inst E E Proc 100 pt 1:163-8 Jl '53

Effect of pre-polarization of a platinum anode on the current obtained in the controlled potential oxidation of iron and of arsenic. B. B. Baker and W. M. MacNevin. Am Chem Soc J 75:1476-7 Mr 20 '53

Hydrogen overvoltage on bright platinum. S. Schuldiner. bibliog il Electrochem Soc J 99:488-94 D '52

Preparation and properties of a platinized charcoal catalyst with some observations on the behavior of inhibitors. R. Baltzly. bibliog Am Chem Soc J 74:4586-9 S 20 '52

Reversibility of the adsorption of catalyst poisons; the revival of poisoned catalysts by simple washing. E. B. Maxted and G. T. Ball. Chem Soc J p4284-8 N '52

Total fast neutron cross sections of Co, Ga, Se, Cd, Te, Pt, Au, Hg, and Th. M. Walt and others. Phys R 89:1271-2 Mr 15 '53

Analysis

Microgravimetric methods for platinum; a comparative study. A. P. Blackmore and others. bibliog Anal Chem 24:1815-19 N '52

Isotopes

Angular moments of the excited states of Pt^{196}. R. M. Steffen. bibliog diag Phys R 89:665 F 1 '53

Radioactivity of Pt^{191} and Pt^{193m}. J. B. Swan and others. Phys R 90:257-8 Ap 15 '53

Prices

Nonferrous prices; tabulation. Steel 132:173 Ja 5 '53

PLATINUM chlorides

Nature of the co-ordinate link; a comparison of equilibria between *cis*- and *trans*-$(MEt_3)_2PtCl_2$, where M=P, As, and Sb. J. Chatt and R. G. Wilkins. Chem Soc J p4300-6 N '52

PLATINUM compounds

Chemistry of the platinum metals; fluoropalladates and fluoroplatinates. A. G. Sharpe. Chem Soc J p 197-9 Ja '53

Nature of the co-ordinate link; geometrical isomerism and simple reactions of ethylthio-bridged complexes of platinum(II) and of palladium(II). J. Chatt and F. A. Hart. Chem Soc J p2363-71 Ag '53

Olefin co-ordination compounds; compounds with two double bonds attached to one platinum atom. J. Chatt and R. G. Wilkins. diags Chem Soc J p2622-6 Jl '52

Organoplatinum compounds. H. Gilman, M. Lichtenwalter and R. A. Benkeser. bibliog Am Chem Soc J 75:2063-5 My 5 '53

Stereoisomerism of complex inorganic compounds; the stereoisomers of dichlorobis-(ethylenediamine-platinum(IV) salts. L. F. Heneghan and J. C. Bailar, jr. Am Chem Soc J 75:1840-1 Ap 20 '53

PLATINUM metals

Chemistry of the platinum metals; fluoropalladates and fluoroplatinates. A. G. Sharpe. Chem Soc J p 197-9 Ja '53

Platinum group metals, 1952. J. E. Bell. Eng & Min J 154:93 F '53

See also

Iridium
Osmium
Palladium
Rhenium
Rhodium
Ruthenium

Analysis

Inorganic chromatography on cellulose; the quantitative separation of rhodium, palladium, iridium and platinum; abstract. D. B. Rees-Evans and R. A. Wells. Chem & Ind p 171 F 21 '53

PLATTE river

Nebraskans gird for new battle over Platte River diversion scheme. map Eng N 150:22 Ja 29 '53

PLAYAS

Can wind move rocks on racetrack playa? J. S. Shelton. Science 117:438-9 Ap 17 '53

PLAYGROUNDS

Approve final plan for disputed U.N. playground. il plan Arch Rec 112:22+ O '52

Playground equipment needs maintenance to assure safety. N. R. Miller. il Pub Works 84:134 Je '53

PLEATED fabrics

Fabric behavior in dry cleaning; permanent pleats. A. E. Johnson. il Mod Textiles Mag 33:63-4+ N '52

PLESSEY company, limited

Statement by the chairman at 28th annual general meeting. A. G. Clark. Economist 165:790 D 13 '52

PLETHYSMOGRAPHS

Sensitive direct-writing plethysmograph. T. Winsor. bibliog(27 titles) il diags Elec Eng 72:619-23 Jl '53

PLEXIGLAS. See Plastic materials, Transparent

PLOWS

Modern plowman. Comp Air Mag 58:285 O '53

Tractor plows effective in fighting southern forest fires. Paper Tr J 137:45 Jl 10 '53

PLUGS, Fusible. See Fusible plugs

PLUMBING

Automatic flushing systems. il diags Dom Eng 181:80-1+ Je '53

Lavatory connections; detail sheet. diags Heat & Ven 50:9-10 Ag '53

Refresher course in plumbing. il diags Dom Eng 181:88-91+ F '53

Secrets of a project plumber; John E. Higgins. il Dom Eng 182:104-7 S '53

Standards bureau evolves answer to plumbing stack design problem. Eng N 149:48 O 30 '52

Techniques for evaluation of noise-reducing piping components. D. B. Callaway and others. diags Acoustical Soc Am J 24:725-30 N '52

See also

Drinking water systems
Heating
Hot water supply
Lavatories
Pipes
Plumbing fixtures
Plumbing shops
Plumbing trade
Sanitary engineering
Sewerage
Solder and soldering

Ventilation

Plumbing codes. diags Dom Eng 182:102-3 Jl '53

PLUMBING fixtures

Plumbing fixtures for industrial plants. W. C. Knight. il diags Heat & Ven 50:99-109 F '53

Refresher course in plumbing fixture arrangement. plans diags Dom Eng 181:106-8 Ap '53

See also

Water closets

PLUMBING laws and regulations

According to law; review of legal decisions which will help plumbing and heating contractors to avoid law suits (cont). Dom Eng 182:189+ Jl; 141+ Ag; 95+ S; 114+ O '53

Health official puts in a plug for plumbing codes. R. R. Cross. il Dom Eng 181:86-7 F '53

Illinois contractor rips license law decision! J. J. Calnan. Dom Eng 182:101+ O '53

Master plumbers eliminated in revised Phoenix code. Eng N 150:63 Mr 26 '53

Plumbing code in municipal sanitation; guided discussion. Munic Util 90:71-2+ N '52

Plumbing codes. diags Dom Eng 182:102-3 Jl '53

Savings of $150 per house achieved in cities using National plumbing code. House & Home 2:61 S '52

PLUMBING shops

He sells 'em, Texas style; W. H. Kuhn & sons. il Dom Eng 182:84-5+ O '53

Prominent location cuts advertising costs; William A. Fluhr co. A. Stout. il Sheet Metal Worker 44:41+ F '53

Small parts pay the overhead! C & N plumbing co. of Phoenix uses super market methods. il Dom Eng 181:90 Ap '53

Waco plumbing firms hit hard by big tornado! il Dom Eng 181:78-9+ Je '53

Equipment

Electronic secretary takes phone messages; J. S. Martin co. Sheet Metal Worker 44:50+ My '53

Let machines and tools do the job! il Dom Eng 181:104-6 My; 182:106-7+ O '53

Management

Bill Sebera successful contractor, humanitarian; contractor-of-the-month. il Dom Eng 181:100-5+ F '53

Collect your money, but keep the customer too; collection letters. Dom Eng 181:86-7 Mr; 86-7+ Ap '53

Cost control starts with good management at Cashmans! il Dom Eng 181:104-5+ Ap '53

Idea file for job, office, shop; illustrations with text. Dom Eng 182:91 O '53

Ideas for management. Dom Eng 182:90-1+ Ag; 108-10+ S '53

Plan pays off; Chicago plumbing contractors case studies. il Dom Eng 181:96-100 Mr; 88-9+ Ap '53

Sales quotas, are they the answer to your selling problems? il Dom Eng 181:88-91 Mr '53

Records

Customer control at his fingertips! Snodgrass & Smith. il Dom Eng 181:85+ Ap '53

Tally-up once a month to check the profit leaks. Dom Eng 182:100-1+ Ag '53

Showrooms

Put life in your displays to sell more appliances! Boyker's plumbing and heating. il Dom Eng 182:98-100 Jl '53

PLUMBING supplies industry

American institute of plumbing and heating supply associations, inc. annual meeting, 1st, Atlantic City, Oct. 19-22. Dom Eng 180:122+ D '52

Rolling showroom; Peerless plumbers supply co. il Dom Eng 181:93+ Je '53

Directories

Modernization sales aids; directory. il Dom Eng 180:241-8+ N; 118-20+ D '52

PLUMBING trade

Central supply association spring meeting, Chicago. Dom Eng 181:97 Je '53

How does a million dollar a year contractor get that way? John J. Calnan. il Dom Eng 181:105+ F '53

Husband-wife team went to night school, upped daytime sales; Les Tarr plumbing co. il Dom Eng 182:88-90+ O '53

Is price cutting on the way out? Dom Eng 182:98-9 O '53

It's movietime for plumbing contractors. il Dom Eng 181:104-5 Mr '53

Operation tornado! il Dom Eng 182:120-1+ O '53

Plumbing and heating wholesalers of New England 62d annual meeting, Bretton Woods, N. H. June 14-16. Dom Eng 182:105+ Ag '53

Review of mechanic's lien provisions. Dom Eng 181:195 My '53

Sales promotion clinic, for water connected appliances. J. M. Wicht; T. F. Elrod. Dom Eng 181:101+ Mr '53

Solution to some sales problems. J. M. Dumser. Dom Eng 181:241-2 Je '53

Their beat is the industrial district; Bailey the plumber, inc. il Dom Eng 181:102-3+ Mr '53

They sell up to bid low; Neis co. il Dom Eng 182:102-5+ O '53

What the freezer-food plan means to plumbing dealers. L. J. Sorensen. Dom Eng 181:111+ Ja '53

What's ahead for 1953. il Dom Eng 181:83-92 Ja '53

When is a valid contract not valid? Dom Eng 181:68 F '53

Your stake in air conditioning. il Dom Eng 181:86+ Je '53

See also

Plumbing shops
Women as plumbers

Accidents

Injuries and accident causes in plumbing operations. F. S. McElroy and others. U S Bur Labor Statistics Bul 1079:1-34; pa 25c Supt. of doc. '52

Advertising

Case for multiple listings; they shop by phone! Dom Eng 182:110+ O '53

Flood co. keeps 'em coming. il Dom Eng 182:90-2+ Jl '53

Here are the tools to help you get fair prices. Dom Eng 182:81-3 S '53

Look at your signs, your customers do. il Dom Eng 182:118+ O '53

PLUMBING trade—*Continued*

Farm market

Let's go to the fair. il Dom Eng 182:97+ Jl '53

Sales assist for water systems dealers. Dom Eng 181:92-3 My '53

Spring tonic for rural sales. il Dom Eng 181:96+ Ap '53

Survey report; Bay County farms. Dom Eng 180:120-1 N '52

There's a new look in your water systems future! H. C. Angster. il Dom Eng 181:92-3 Ap '53

Use the air waves to push water systems! G. E. Trisler. Dom Eng 182:157+ S '53

Water system sales up 11 percent! Dom Eng 182:138 O '53

Why push water systems? M. B. MacNeille. Dom Eng 181:93+ My '53

Finance

Financing; key to modernization sales. il Dom Eng 180:177-88+ N; 102+ D '52

How are you fixed for working capital? Dom Eng 182:100-1+ S '53

Insurance requirements

Insurance plans for defective fixture replacement; interview with P. J. Brown and G. Rapp. Dom Eng 182:80-3 O '53

Public relations

Bill Sebera successful contractor, humanitarian; contractor-of-the-month. il Dom Eng 181:100-5+ F '53

Put yourself in your customers' shoes! W. J. Readey. il Dom Eng 181:100-3 My '53

Remodeling

Bay City story; survey of the plumbing, heating and appliance needs. il Dom Eng 180:91-121+ N '52

Bay City tells all; remodeling spree to open huge new markets. G. L. Milne. Sales Management 70:70+ F 1 '53

From a leaky faucet to $1,000. Dom Eng 182:89+ Ag '53

From water heater king to remodeling champ; Morlan plumbing and appliance co. il Dom Eng 180:168-72+ N '52

He lets customers sell themselves, well almost! L. M. Hamm's. il plan Dom Eng 182:96-8+ S '53

Hospital goes modern; Bay City's Mercy hospital. il Dom Eng 181:92-5+ F '53

How many of these houses are there in your town? C. L. Allen. Dom Eng 180:88-90 D '52

Krager does it with tile; U.S. tile and plumbing co. il Dom Eng 180:91-3+ D '52

Let's look into your town; remodeling needs. P. B. B. Andrews. Dom Eng 180:122-4+ N '52

Look inside your local dairy for remodeling business; trend to permanent welded lines. il Dom Eng 181:120-1+ Ja '53

Maler helps the do-it-yourself remodeler, up to a point! il Dom Eng 180:212-15+ N '52

Movies are better than ever! film based on Domestic engineering's remodeling survey in Bay City, Mich. il Dom Eng 181:82-6 My '53

Plan pays off; Chicago plumbing contractors case studies. il Dom Eng 181:96-100 Mr; 88-9+ Ap '53

Price squeeze is attacked at industry meetings. Dom Eng 182:80-1 Ag '53

Pump to the rescue; new submersible sewage ejector solves a difficult pumping problem on a theatre remodeling job. il diag Dom Eng 181:116 Ja '53

Remodeling sales kit is now ready. il Dom Eng 181:78-9+ Mr; 80-4 Ap '53

Sales kit in action! Milwaukee contractor uses part of the modernization sales kit. il Dom Eng 182:80-4 Jl '53

Sales tip; try a remodeling sales party. il Dom Eng 181:90-2 Je '53

Selling kitchens isn't so tough. M. Chafetz. il Dom Eng 181:98-9 My '53

She'll buy this dream! il Dom Eng 181:106-7, 110+ F '53

Start with any fixture and sell up to a complete bath! Harry E. Waters plumbing co. il Dom Eng 181:103+ Ap '53

They deal in ones to make a million! T. D. Gustafson & co. R. Gustafson. il Dom Eng 182:92-5+ Ag; 99+ S '53

Watch the kid population in your town; new and remodeled schools in your future; Lewis plumbing and heating co. il Dom Eng 181:82-5 Je '53

When Beck knocks they open the door! il Dom Eng 182:84-7+ S '53

When it comes to remodeling they're never too new! il Dom Eng 180:132-3 D '52

Where do we go from here? il map Dom Eng 180:258+ N '52

You can sell remodeling, in 1953, as it's never been sold before. C. L. Staples. il Dom Eng 181:91+ F '53

Salesmen

Take the ice out of price! Dom Eng 182:88-9+ S '53

PLUMS

Isolation and identification of quercetin and some quercetin glycosides from plums (prunus salicina). B. L. Williams and S. H. Wender. Am Chem Soc J 75:4363-4 S 5 '53

PLUSH

How to knit plush fabrics of man-made fibers. D. Singer. il diags Mod Textiles Mag 34:54-5+ Je '53

PLUTONIUM

Disproportionation equilibria and rates in perchloric and hydrochloric acid solutions of plutonium; influence of α-particles. R. E. Connick and W. H. McVey. bibliog Am Chem Soc J 75:474-9 Ja 20 '53

Equilibria and reaction rates in the disproportionation of Pu(IV). S. W. Rabideau. bibliog Am Chem Soc J 75:798-801 F 20 '53

Infrared spectra and structure of uranyl and transuranium (*V*) and (*VI*) ions in aqueous perchloric acid solution. L. H. Jones and R. A. Penneman. bibliog J Chem Phys 21:542-4 Mr '53

Magnetochemistry of the heaviest elements; sodium plutonyl acetate. J. K. Dawson. Chem Soc J p2705-7 Jl '52

Isotopes

Alpha-spectra of Pu^{239} and Pu^{240}. F. Asaro and I. Perlman. bibliog diag Phys R 88:828-31 N 15 '52

β—half-life of Pu^{241}. D. R. MacKenzie and others. Phys R 90:327-8 Ap 15 '53

Beta-spectra of Pu^{239}, Pu^{240}, and Pu^{241}. M. S. Freedman and others. bibliog Phys R 88:1155-8 D 1 '52

Fission neutron spectrum of Pu^{239}. N. Nereson. Phys R 88:823-4 N 15 '52

Isotope shift in the plutonium spectrum. J. G. Conway and M. Fred. Opt Soc Am J 43:216 Mr '53

Radiations of Pu^{243}. D. W. Engelkemeir and others. bibliog diag Phys R 90:6-10 Ap 1 '53

Soft radiation from Pu^{239}. H. I. Israel. Phys R 88:682-3 N 1 '52

Physiological effect

Industrial medicine in plutonium production. il Ind Med 22:63-4 F '53

PLUTONIUM compounds

Magnetochemistry of the heaviest elements; sodium plutonyl acetate. J. K. Dawson. Chem Soc J p2705-7 Jl '52

PLUTONIUM oxides

Interpretation of the visible and near-infrared spectra of NpO_2^{+} and PuO_2^{++} ions. D. M. Gruen. bibliog J Chem Phys 20:1818-19 N '52

PLYWOOD

For a wooden wedding; demand for plywood adhesives. il Chem W 72:69-70+ Ja 17 '53

New hardboard process; plywood waste is put to use in semi-dry process. il Chem Eng 60:138+ Ja '53

Nodular iron, plywood, hot dip coating make better fans. S. H. Fedan. il Materials & Methods 37:106-9 Je '53

Plywood girders and glued laminated beams; with time-saver standards. S. Howard. diags Arch Rec 113:183, 185 Ja '53

PLYWOOD—*Continued*

Plywood makers have plenty of headaches. F. Henle. Barron's 33:11-12 F 2 '53

Resins extend the forests; plywood, laminated timbers, and conversion of wood waste offer increasing markets for plastics. R. D. Behm. il Mod Plastics 30:100-4+ O '52

History

Plywood is engineered wood. T. D. Perry. bibliog il diags Mech Eng 74:787-96 O '52; Discussion. 75:247-8 Mr '53

Manufacture

Plywood factory. H. Richards. il diag Elec R (Lond) 152:341-4 F 13 '53

PNEUMATIC control

Advantages and disadvantages of single-seated and double-seated control valves. R. H. Munch. il diag Ind & Eng Chem 45: sup87A-8A+ F '53

Air and ideas make spotwelder automatic; Stewart-Warner corp. R. P. Roberts. il diag Am Mach 96:104-5 D 22 '52

Air chuck setup cuts machining time, improves quality. D. E. Harris. il Iron Age 170:107 O 23 '52

Air-operated doors protect shaft crews; Kennecott copper corp. plan diag Eng & Min J 154:112 Ja '53

Air power helps run logging donkeys. il Comp Air Mag 58:52 F '53

Air valves. il Steel 132:49 Ja 19 '53

Clean, constant air for instruments. D. J. Pearse. diags Mill & Factory 53:127-8 S '53

Compressed air does the heavy work in the operation of dragline. il Brick & Clay Rec 122:35-8 F '53

Hannifin press air valve. il Tool Eng 30:129 My '53

High-pressure pneumatic controller. diag Machine Design 25:174 My '53

High-pressure pneumatics; design considerations for maximum efficiency in energy storage. J. L. Dooley. il diag Machine Design 25:237-42 Ap '53

Improved flow control with long lines. W. E. Vannah and A. R. Catherton. bibliog diags Instruments 25:1733-7 D '52

Instrument application in products pipe line industry; pumping rates synchronized by means of pneumatic controls. H. R. Hoyt. diags Pet Eng 24:D53-6 N '52

Instrumentation handbook; control valve design and use. D. E. Hostedler. diag Pet Refiner 31:116-20 D '52

Keep air clean for your controls. diags Power Eng 57:84-5+ Je '53

Pilot operated air control systems. H. L. Stewart. diags Product Eng 24:214-20 My '53

Pneumatic operating mechanisms for power circuit breakers. R. C. Van Sickle and others. il Elec Eng 72:143 F '53

Pneumatic tide generator. diags Comp Air Mag 58:24 Ja '53

Pressure rate alarms. P. Hart and R. C. King. diag Oil & Gas J 51:141 My 4 '53

Sensitive pressure controller for high-pressure service. P. L. Golden and A. F. Headrick. diag A S M E Trans 75:329 Ap '53

Solution concentration controller. P. Hart and R. C. King. diag Oil & Gas J 51:169 Ap 20 '53

Steering booster promotes safe driving; Air-O-Matic power steer booster. diags Comp Air Mag 58:287 O '53

See also

Electropneumatic control

Hydropneumatic control

PNEUMATIC conveying

Air conditioned chemical conveyor solves water treatment problem. F. L. Andreoli. il Water & Sewage Works 100:227-8 Je '53

Bulk-handling dry ingredients. W. G. Hoskins. il diags Food Eng 25:94-100 My '53

Discharging flour by compressed air. il Engineering 174:742 D 5 '52

Flour mill conveying system. il Engineer 194: 230 Ag 15 '52

From bags to process by air. E. T. Slackford. il diag Food Eng 25:69+ Ap '53

Investigate pneumatic conveyors for handling bulk chemicals. G. N. Havens. il diags Pub Works 83:50-1+ N '52

Mechanical messenger at Cudahy cuts delivery time. Am Bsns 22:34 O '52

New air tube system speeds order handling. Am Bsns 23:34 Ja '53; Same cond. il Heating-Piping 25:103 My '53

New feeder for loose solids; patent. diags Chem Eng 60:374 Ap '53

New starch-handling system saves $61 in starch every 24 hrs.; Avondale mills. R. B. Pressley. il diag Textile World 103:138-41 S '53

Pneumatic cement handling. Comp Air Mag 58:54 F '53

Pneumatic conveyers speed small-parts delivery; Burroughs adding machine co. il Iron Age 171:217 My 7 '53

Pneumatic conveying in horizontal pipes. R. H. Clark and others. bibliog Chem Age (Lond) 67:567-9 O 25 '52

Pneumatic conveyors in pulp and paper mills. H. A. Stoess, jr. flow diag il diags Tappi 35:433-8 O '52

Pneumatic conveyors simplify Studebaker's chip handling. O. H. Klausmeyer and W. C. Tiedge. il diags Am Mach 97:117-21 S 28 '53

Pushbutton system cuts handling; Duquesne brewing co. A. V. Gemmill. il diag Food Eng 25:80-2+ My '53

Radioactive cobalt; tracer on carriers helps spot jams in pneumatic tubes. il Iron Age 171:156-7 Mr 26 '53; Comp Air Mag 58: 199 Jl '53; Mill & Factory 53:140 Jl '53

PNEUMATIC gages. See Gages, Pneumatic

PNEUMATIC machinery

Air controls overweight in packaging. diag Comp Air Mag 58:230 Ag '53

Air cylinder and ramp for rolls from winder to header. diags Pulp & Pa of Can 53:125 O '52

Air equipment mounts rims and tires quickly. diag Comp Air Mag 58:288 O '53

Air makes a blue shirt blue; pneumatic roll loading. W. H. Ridley. il diags Comp Air Mag 58:272-4 O '53

Air press assembles tiny switches; Micro division, Minneapolis-Honeywell regulator co. P. R. Enzler. il diags Am Mach 97: 142-3 F 16 '53

Annual handbook of product design for 1953; hydraulic and pneumatic equipment. diags Product Eng Hdbk p J 1-31+ '53

Anthracite mechanical mining investigations; preliminary testing of Brieden pneumatic packing machine. C. A. Landsidle and others. 5pls U S Bur Mines Rep of Invest 4978:1-13 bibliog(33 titles, p 12-13) '53

Both ends of tubing finished simultaneously; Pines air-operated, end-finishing machines. il Mach 59:209 My '53

Compressed air steps up production at Ryan aeronautical co. il Steel 131:76-7 O 27 '52

Digging 40 feet of rock to get two feet of coal. T. Slager. il Comp Air Mag 58:218-20 Ag '53

Easy tire mounting; pneumatic tire and rim mounting machine. il diag Safety Maint & Prod 105:22 My '53

Forging hammer of new type. il Comp Air Mag 58:12-14 Ja '53

Granby adopts air trammers; cuts drifting labor costs 26 per cent. D. W. Pringle. il Eng & Min J 154:72-4 Ag '53

Latest features of the Pneumatractor. il diag Automotive Ind 108:54-5 My 15 '53

Making beds for iron horses. C. H. Vivian. il diags Comp Air Mag 58:236-41 S '53

Paul Bunyan has a rival; Berger-Rees air tongs. il diags Comp Air Mag 58:283 O '53

Pneumatic debarker; Andersson debarker. il Paper Tr J 136:34 Ja 23 '53

Pneumatic power units; Gildersleeve design and tool co. il Engineer 195:292-3 F 20 '53; Engineering 175:254 F 20 '53

Pneumatic press develops 70,000 pounds pressure. il Comp Air Mag 58:284 O '53

Pneumatic rollers cut costs and time on earthfill dams. G. E. Bertram. il diag Eng N 150:30-2 Ap 2 '53

Pneumatic system solves dough-dusting problem. Comp Air Mag 58:173 Je '53

Pneumatic weighing in continuous batching process. D. W. Glover. il diags Instruments 26:118-20 Ja '53

PNEUMATIC machinery—*Continued*

Underground receiver at Rödsand provides steady mine air supply. C. C. Austin. il diag Eng & Min J 154:92-3 Ag '53

What's ahead the next ten years in materials and components; hydraulics and pneumatics. Am Mach 96:A 19-20 Mid-N '52

Standards

JIC pneumatic standards; reference book sheet. diag Am Mach 94:125, 127, 129 D 25 '50; 95:125, 127 Ja 8 '51; Same. Machine Design 23:199-205 Ap '51; Same. Product Eng Hdbk p J7-15 '53; Same abr. Tool Eng 26:50-1 Je; 27:51-2 Jl; 50-1 Ag; 58 S '51

PNEUMATIC tools

Air-powered saw cuts anywhere, even under water. J. M. Connolly. il Eng N 149:121+ D 18 '52; Same. Constr Methods 35:121-2+ Ja '53

Air tools learn new tricks. il Bsns W p 110+ Ap 25 '53

Air tools speed tight schedule; stone bridge piers get reinforced concrete support. il Constr Methods 34:57-9 O '52

Broad Street station passes. C. H. Vivian. il Comp Air Mag 58:104-10 Ap '53

Concrete fills new roles; Livesay window co. il Comp Air Mag 58:50 F '53

Delving into the past with modern tools. C. R. Steen. il diag Comp Air Mag 58:100-3 Ap '53

Drives twenty nails a minute; Fox Nailer. il Comp Air Mag 58:25 Ja '53

Five air-operated gadgets used in car shops. il Ry Loco & Cars 127:99 S '53

How compressed air serves the aircraft industry. E. C. Powers. il Aero Digest 66:26-7 Je '53

How multiple nut runners save time in assembly of Ford differentials. il Automotive Ind 107:57+ O 1 '52

Impactools cut tank erection costs. il Comp Air Mag 58:275 O '53

Jap pillbox resists American air tools. il Comp Air Mag 58:257 S '53

Keeping your car on the road. R. J. Nemmers. il diags Comp Air Mag 58:266-71 O '53

Mapping the sea bottom. Comp Air Mag 58:142-3 My '53

Right portable tool means increased production. il Steel 132:183-4+ Je 1 '53

Striking savings made with large Impactool. il Comp Air Mag 58:242-3 S '53

What's ahead the next ten years in tools and tooling; portable tools. Am Mach 96:C7-8 Mid-N '52

Manufacture

Cost-cutting method of hardening small parts; Keller tool co. C. C. Dierdorf. il Mach 59:158-60 Ja '53

Multi-spindle automatics boost short run production; Independent pneumatic tool co. J. P. Bank. il Iron Age 171:142-4 F 26 '53

Testing

Who's at fault, the man or the air tool? R. Galloway. il Factory Management 110:113-16 O '52

PNEUMATIC transmission

Air, key to small plant automation. A. H. Allen. il Iron Age 171:108-12 Ja 15 '53

Pneumatic systems in machine design and control. H. C. Town. diags Mach 59:161-7 Ja '53

Pneumatics threaten hydraulic supremacy in aircraft design. il Product Eng 24:199 Ja '53

PNEUMATIC weighing. See Weighing

PNEUMATICS

See also

Fans, Mechanical

PNEUMOCOCCI

Infrared spectra of pneumococcal polysaccharides. H. J. R. Stevenson and S. Levine. Science 116:705-6 D 26 '52

Structural studies on the specific polysaccharide of pneumococcus Type II. P. W. Kent. bibliog Chem & Ind p 1176-7 N 29 '52

Type II pneumococcus specific polysaccharide; abstract and discussion. K. Butler and M. Stacey. Chem & Ind p37-8 Ja 10 '53

PNEUMOCONIOSIS. See Lungs—Dust diseases

PODOPHYLLIN

Components of podophyllin; absorption spectra and reaction with iodine of the dihydro-β-naphthoic acids. A. W. Schrecker, G. Y. Greenberg and J. L. Hartwell. bibliog Am Chem Soc J 74:5669-71 N 20 '52

Components of podophyllin; isolation of two new compounds from podophyllum emodi Wall. M. V. Nadkarni and others. bibliog Am Chem Soc J 75:1308-12 Mr 20 '53

Components of podophyllin; relation of α-peltatin to β-peltatin. J. L. Hartwell, A. W. Schrecker and G. Y. Greenberg. bibliog Am Chem Soc J 74:6285-7 D 20 '52

Components of podophyllin; study of intermediates in the synthesis of dehydroanhydropicropodophyllin. A. W. Schrecker and J. L. Hartwell. bibliog Am Chem Soc J 74:5672-6 N 20 '52

Components of podophyllin; the structure of the apopicropodophyllins. A. W. Schrecker and J. L. Hartwell. bibliog Am Chem Soc J 74:5676-83 N 20 '52

PODOPHYLLOTOXIN

Podophyllotoxin from juniperus species; savinin. J. L. Hartwell and others. bibliog Am Chem Soc J 75:235-6 Ja 5 '53

Podophyllotoxin studies; a synthesis of the carbon-oxygen skeleton. G. N. Walker. bibliog Am Chem Soc J 75:3390-3 Jl 20 '53

Podophyllotoxin studies; reductive methods in the synthesis of tetralin lactones from α-tetralone derivatives. G. N. Walker. Am Chem Soc J 75:3393-7 Jl 20 '53

Structure of silicicolin. J. L. Hartwell, A. W. Schrecker and J. M. Johnson. Am Chem Soc J 75:2138-40 My 5 '53

POETRY

Bibliography

Granger's index to poetry. R. J. Dixon, ed. 4th ed rev & enl 1832p Columbia univ. press 2960 Broadway, New York 27 '53 ($35)

POIDOMETERS

Poidometer for control of granular material. P. Hart and R. C. King. diag Oil & Gas J 51:131 Mr 9 '53

POINCARÉ'S formula

Derivation of the mass-energy relation. H. E. Ives. Opt Soc Am J 42:540-3 Ag '52

POINT four. See Investments, Foreign—United States

POISON ivy

What causes the itch in poison ivy? abstract. C. Dawson. Franklin Inst J 255:266-7 Mr '53

POISONOUS plants

Three of these plants are your enemies poison ivy, poison oak, poison sumac. R. P. Whitney. il Safety Maint & Prod 106:18-20+ Jl '53

POISONS

Many cases of poisoning are unnecessary Consumers Res Bul 31:20 Je '53

Pesticides formulation, relation to safety in use; abstract. W. J. Hayes, jr. and G. W. Pearce. Nat Safety N 68:136 O '53

Physical toxicity of chemicals; a systematic treatment of physical toxicity in aqueous solutions; 269 compounds listed. J. C. McGowan. bibliog J Ap Chem 2:651-8 N '52

Relative toxicity of lanthanum, tantalum, and thorium compounds in the developing chick embryo. L. J. Machlin and others. bibliog A M A Archives Ind Hygiene & Occup Med 6:441-4 N '52

Silver cleaners. Consumers Res Bul 30:19-20 D '52

See also

Arsenic
Arsine
Beryllium poisoning
Carbon monoxide poisoning
Carbon tetrachloride poisoning
Cicutoxin
Curare
DDT—Physiological effect
Dichlorophenoxyacetic acid
Enanthotoxin
Fish poisons
Fluorides—Physiological effect
Food poisoning
Gases, Asphyxiating and poisonous
Hydrocyanic acid
Insecticides
Lead poisoning
Pentachlorophenol
Pyrethrins
Radioactivity—Physiological effect
Trichloroethylene

POISONS—*Continued*

Testing

Short-term intraperitoneal toxicity tests. D. W. Fassett and R. L. Roudabush. A M A Archives Ind Hygiene & Occup Med 6:525-9 D '52

POISONS, Industrial

Amyl acetate; hazards and precautions; data sheet. il Nat Safety N 68:30-1+ Ag '53

Chemical hazards in glass and ceramics industries. J. A. Houghton. Glass Ind 34:369-71+ Jl '53

Experience accumulated in three years of an occupational medical clinic. H. L. Hardy. Ind Med 21:424-6 S '52

Health; more care is needed. G. G. Carr. il Iron Age 170:21-2 D 25 '52

How safe are safety solvents? M. Z. Poliakoff. bibliog il Nat Safety N 67:28-9+ F '53

Soap with protective coloration; soap used by ordnance workers colors skin if dangerous residue is present. il Safety Maint & Prod 104:104-6 O '52

Studies on the toxicity and skin effects of compounds used in the rubber and plastics industries. F. S. Mallette and E. von Haam. il A M A Archives Ind Hygiene & Occup Med 5:311-17; 6:231-42 Ap, S '52

Xylene and toluene; hazards and precautions; data sheet. il Nat Safety N 68:38-9+ Ag '53

See also

Arsine
Beryllium poisoning
Cadmium poisoning
Carbon tetrachloride poisoning
Chromium poisoning
Lead poisoning
Mercury poisoning
Methyl chloride poisoning
Nitropropane
Selenium poisoning
Sulfuric acid
Trichloroethylene

POISSON-BOLTZMANN equation

Solution of the Poisson-Boltzmann equation with application to the theory of thermal explosions. P. L. Chambré. bibliog J Chem Phys 20:1795-7 N '52

POISSON'S ratio

New tests on steel suggest error in Poisson's ratio. W. D. Manley. il Iron Age 171:148-50 Ap 23 '53

POLAND

See also

Chemical industries—Poland

Economic conditions

Half-way stage in Poland's plan. Economist 166:883-4 Mr 28 '53

Politics and government

Next stage in Poland. Economist 165:828+ D 20 '52

POLAR regions

See also

Airlines—Transpolar lines

POLARITY

Bond energies and polarities. M. L. Huggins. bibliog Am Chem Soc J 75:4123-6 S 5 '53

General nature of the proportionality of polar effects of substituent groups in organic chemistry. R. W. Taft, jr. bibliog Am Chem Soc J 75:4231-8 S 5 '53

Mechanism of aromatic side-chain reactions, with special reference to the polar effects of substituents; mesomeric effects of elements of the oxygen group. J. W. Baker, G. F. C. Barrett and W. T. Tweed. Chem Soc J p2831-9 Jl '52

Polarities and ultra-violet spectra of phenyl *p*-tolyl azoxysulphone and its dialkylamino-derivatives. H. C. Freeman and others. Chem Soc J p3384-9 S '52

Reaction field and dielectric constant of polar liquids. D. G. Frood and A. J. Dekker. bibliog diag J Chem Phys 20:1030-3 Je '52

POLARIZATION (electricity)

Measurement of the corrosion rate of a metal from its polarizing characteristics. W. J. Schwerdtfeger and O. N. McDorman. Electrochem Soc J 99:407-13 O '52

Soil corrosion rate measured electrically. W. J. Schwerdtfeger and O. N. McDorman. il Am Gas J 178:16-17 Mr '53; Same. Oil & Gas J 51:101 F 2 '53; Same. Pet Eng 25:D20+ Ap '53; Same cond. Heat & Ven 50:115 F '53; Same cond. Product Eng 24:203 F '53

POLARIZATION (light)

Calculation of the polarization of a sunlit sky composed of pure air molecules. A. Hammad. Opt Soc Am J 43:184-7 Mr '53

Concerning the ability of homing pigeons to discriminate patterns of polarized light. K. C. Montgomery and E. G. Heinemann. Science 116:454-6 O 24 '52

Correlation of polarized light extinctions with crystal orientation in 70 nickel-30 copper alloy. H. C. Vacher. bibliog il J Res Nat Bur Stand 49:149-53 S '52

Fifty-million goggles in a garage. il Bsns W p 108-10 Mr 21 '53

Metallography of uranium; abstract. B. W. Mott and H. R. Haines. Metal Prog 63:192+ F '53

NBS uses polarized light to study grain orientation in alloys. Iron Age 171:196-7 Mr 5 '53; Franklin Inst J 255:335-7 Ap '53; Steel 132:115-16 My 4 '53

Polarized fluorescence of molecules of some single organic crystals. S. C. Ganguly and N. K. Choudhury. bibliog il J Chem Phys 21:554-7 Mr '53

Polarized light; a research tool. A. O. Bergholm. il Franklin Inst J 255:242-4 Mr '53

See also

Kerr effect
Photoelasticity

POLARIZATION (sound)

Polarization of acoustic waves in cubic crystals. A. E. Fein and C. S. Smith. J Ap Phys 23:1212-13 N '52

POLARIZATION, Dielectric

Dielectric polarization and self-ionization in carboxylic acids. F. E. Harris and B. J. Alder. bibliog J Chem Phys 21:1306-7 Jl '53

Dielectric polarization in polar substances. F. E. Harris and B. J. Alder. bibliog J Chem Phys 21:1031-8 Je '53

Dielectric polarisation of solutions; the polarisations and apparent dipole moments of various primary, secondary, and tertiary amines in solutions in non-polar solvents and in the liquid state. E. G. Cowley. Chem Soc J p3557-70 S '52

Dielectric properties of certain petroleum oils. R. Irving and C. N. Thompson. bibliog Chem & Ind p975-80 O 4 '52

Dipoles on a lattice; the spherical model. M. Lax. bibliog J Chem Phys 20:1351-9 S '52

Exalted distortion polarizations of some colored hydrocarbons. E. D. Bergmann, E. Fischer and J. H. Jaffe. bibliog Am Chem Soc J 75:3230-3 Jl 5 '53

Intermolecular potentials from dielectric polarization in polar gases. F. E. Harris and B. J. Alder. bibliog diags J Chem Phys 21:1351-7 Ag '53

Molecular polarisation and molecular interaction; the apparent dipole moments of mesidine, aminodurene, and methylmesidine in benzene and dioxan solutions. J. W. Smith. Chem Soc J p 109-13 Ja '53

Multiple scattering of neutrons; scattering by spin-dependent forces and polarization phenomena. O. Halpern. bibliog Phys R 88:232-5 O 15 '52

Polarizability and configuration of *n*-paraffins. R. S. Stein. bibliog J Chem Phys 21:1193-8 Jl '53

Polarization in liquid dielectrics. G. Jaffé and C. Z. LeMay. bibliog diag J Chem Phys 21:920-8 My '53

POLARIZATION, Electrolytic

Anodic behavior of antimony. S. E. S. El Wakkad and A. Hickling. bibliog J Phys Chem 57:203-6 F '53

Anodic polarization of passive and non-passive chromium-iron alloys. H. H. Uhlig and G. E. Woodside. bibliog diag J Phys Chem 57:280-3 Mr '53

Cathode polarization potential during the electrodeposition of copper; effect of the cathode base upon the cathode polarization potential and the crystal structure of the deposit. L. L. Shreir and J. W. Smith. bibliog il Electrochem Soc J 99:450-6 N '52

POLARIZATION, Electrolytic—*Continued*

Charging processes on anodic polarization of titanium. C. D. Hall, jr. and N. Hackerman. bibliog J Phys Chem 57:262-8 Mr '53

Effect of pre-polarization of a platinum anode on the current obtained in the controlled potential oxidation of iron and of arsenic. B. B. Baker and W. M. MacNevin. Am Chem Soc J 75:1476-7 Mr 20 '53

Electric polarizability of polar ions. K. J. Mysels. bibliog diags J Chem Phys 21:201-5 F '53

Electrochemical behavior of aluminum; in buffered and alkaline solutions of potassium ferricyanide and in sodium hydroxide. J. V. Petrocelli. Electrochem Soc J 99:513-19 D '52

Polarization in electrolytic solutions; measurements. G. Jaffé and J. A. Rider. bibliog diags J Chem Phys 20:1077-87 Jl '52

Polarization in electrolytic solutions; theory. H. Chang and G. Jaffé. bibliog J Chem Phys 20:1071-7 Jl '52

Polarizing effect of trace amounts of antimony(III) on the electrolytic oxidation of arsenic in acid solution. B. B. Baker and W. M. MacNevin. bibliog Am Chem Soc J 75:1473-5 Mr 20 '53

Polarographic method for the indirect determination of polarization curves for oxygen reduction on various metals; chromium, molybdenum, tantalum, titanium, tungsten, and zirconium. P. Delahay and L. J. Stagg. Electrochem Soc J 99:546-8 D '52

Primary current distribution around capillary tips used in the measurement of electrolytic polarization. S. Barnartt. bibliog diag Electrochem Soc J 99:549-53 D '52; Discussion. 100:295-6 Je '53

POLARIZATION of particles

Electric scattering of the polarizable deuteron. B. J. Malenka and others. bibliog Phys R 91:1165-7 S 1 '53

Fourth-order vacuum polarization. M. Baranger and others. bibliog diags Phys R 88:680 N 1 '52

High energy proton-proton scattering and associated polarization effects. L. J. B. Goldfarb and D. Feldman. bibliog Phys R 88:1099-109 D 1 '52

Nucleon polarization in pion proton scattering. E. Fermi. Phys R 91:947-8 Ag 15 '53

Polarizability of the deuteron. N. F. Ramsey and others. bibliog Phys R 91:1162-4 S 1 '53

Polarization effects in nucleon-nucleon scattering. D. R. Swanson. bibliog diag Phys R 89:749-52 F 15 '53

Polarization of sodium atoms. W. B. Hawkins and R. H. Dicke. bibliog diags Phys R 91:1008-9 Ag 15 '53

Production of polarized particles in nuclear reactions. A. Simon and T. A. Welton. bibliog Phys R 90:1036-43 Je 15 '53

Quantum theory of the polarizability of an idealized crystal. D. L. Dexter and W. R. Heller. bibliog Phys R 91:273-8 Jl 15 '53

Theory of polarized particles in nuclear reactions. A. Simon. Phys R 90:991 Je 1 '53

POLARIZATION of rays

Angular and direction-polarization correlation for Co^{60}, Cs^{134}, and Sb^{124}. R. M. Kloepper and others. bibliog il Phys R 88:695-8 N 15 '52

Direction and polarization correlations of successive gamma-rays. J. J. Kraushaar and M. Goldhaber. bibliog diags Phys R 89:1081-9 Mr 1 '53

Explicit γ-γ angular correlations; polarization correlations. S. P. Lloyd. bibliog Phys R 88:906-8 N 15 '52

Penetration and diffusion of hard X-rays; polarization effects. L. V. Spencer and C. Wolff. bibliog diag Phys R 90:510-14 My 15 '53

Polarization correlations of the gamma-rays of Cs^{134} and of annihilation radiation. B. L. Robinson and L. Madansky. bibliog il diags Phys R 88:1065-9 D 1 '52

Polarization dependence of the integrated bremsstrahlung cross section. R. L. Gluckstern and M. H. Hull, jr. bibliog Phys R 90:1030-5 Je 15 '53

Polarization of bremsstrahlung radiation. R. L. Gluckstern and others. bibliog Phys R 90:1026-9 Je 15 '53

Polarization of the O^{16} gamma-rays. L. W. Fagg and S. S. Hanna. bibliog Phys R 88:1205-6 D 1 '52

Polarized γ-rays from nuclei aligned at low temperatures. G. R. Bishop and others. bibliog Phys R 88:1432-3 D 15 '52

POLAROGRAPH

High sensitivity recording polarograph. M. T. Kelley and H. H. Miller. bibliog diags Anal Chem 24:1895-9 D '52

POLAROGRAPHIC analysis

Determination of osmium; application of polarographic kinetic hydrogen peroxide current. I. M. Kolthoff and E. P. Parry. Anal Chem 25:188-9 Ja '53

Determination of the b.o.d. of sewage and industrial wastes with the polarograph. A. W. Busch and C. N. Sawyer. bibliog Anal Chem 24:1887-91 D '52

Elemental sulfur in crude oil. B. H. Eccleston, M. Morrison and H. M. Smith. bibliog diag Anal Chem 24:1745-8 N '52

Extension of sensitivity of polarographic analysis with rotating amalgam electrodes. W. D. Cooke. bibliog diag Anal Chem 25:215-18 F '53

New technique for polarography of water-insoluble compounds. G. E. O. Proske. bibliog Anal Chem 24:1834-6 N '52

Polarographic analysis of the serum albumin-mercury and zinc complexes. H. A. Saroff and H. J. Mark. bibliog Am Chem Soc J 75:1420-6 Mr 20 '53

Polarographic analysis using flowing samples; continuous automatic measurement of sulfur dioxide in corn steep liquor. L. D. Wilson and R. J. Smith. diags Anal Chem 25:334-6 F '53

Polarographic analysis using flowing samples; effect of cell design and flow rate on diffusion current. L. D. Wilson and R. J. Smith. bibliog diags Anal Chem 25:218-20 F '53

Polarographic determination of nickel in aluminum alloys. E. C. Mills and S. E. Hermon. Metallurgia 46:259-62 N '52

Polarographic determination of reducible sulphur in paper. L. Gordon and others. diags Tappi 36:204-6 My '53

Polarographic method for the indirect determination of polarization curves for oxygen reduction on various metals; chromium, molybdenum, tantalum, titanium, tungsten, and zirconium. P. Delahay and L. J. Stagg. Electrochem Soc J 99:546-8 D '52

Polarographic studies of some organochlorosilanes. E. A. Abrahamson, jr. and C. A. Reynolds. Anal Chem 24:1827-9 N '52

Qualitative analysis with a polarographic oscilloscope; abstract. J. Heyrovsky. Chem Age (Lond) 67:498 O 11 '52

Versene complexes. R. L. Pecsok. bibliog J Chem Educ 29:597-9 D '52

Voltammetry of iodine and iodide at rotated platinum wire electrodes. I. M. Kolthoff and J. Jordan. Am Chem Soc J 75:1571-5 Ap 5 '53

POLAROGRAPHY

Anodic polarography; catechol. C. M. Wheeler, jr. and R. P. Vigneault. Am Chem Soc J 74:5232-3 O 20 '52

Application of the cathode-ray oscilloscope to polarographic phenomena; adsorption-desorption relationships exhibited by alcohols at aqueous saline solution-mercury interfaces. J. W. Loveland and P. J. Elving. bibliog il diag J Phys Chem 56:935-48 N '52

Behavior of 1,2-diketones at the dropping mercury electrode. N. J. Leonard, H. A. Laitinen and E. H. Mottus. bibliog Am Chem Soc J 75:3300-3 Jl 20 '53

Cathode-ray oscilloscopic investigation of phenomena at polarizable mercury electrodes. J. W. Loveland and P. J. Elving. il diags Chem R 51:67-117 bibliog(80 ref, p 115-17) Ag '52

Chemistry of bivalent germanium compounds; the polarographic behaviour of bivalent germanium. D. A. Everest. Chem Soc J p660-2 F '53

Electrochemical phenomena at a rotating mercury electrode; reduction of metal ions. T. S. Lee. bibliog diag Am Chem Soc J 74:5001-8 O 20 '52

Electrodeposition behavior of cadmium and of thallium at mercury cathodes. L. B. Rogers and C. Merritt, jr. diag Electrochem Soc J 100:131-5 Mr '53

POLAROGRAPHY—*Continued*

Measurement of disproportionation rates at the dropping mercury electrode. E. F. Orlemann and D. M. H. Kern. bibliog Am Chem Soc J 75:3058-63 Jl 5 '53

Millicoulometer method for the determination of polarographic *n*-values. T. De Vries and J. L. Kroon. il diag Am Chem Soc J 75: 2484-6 My 20 '53

Millicoulometry; the anomalous wave in polarograms of solutions of high ionic strength. L. Meites. bibliog Am Chem Soc J 75:3809-12 Ag 5 '53

Non-additivity of polarographic diffusion currents with mixtures of certain reducible species. S. L. Miller and E. F. Orlemann. Am Chem Soc J 75:2001-3 Ap 20 '53

Oscillographic polarographic waves for the reversible deposition of metals on solid electrodes. T. Berzins and P. Delahay. bibliog diag Am Chem Soc J 75:555-9 F 5 '53

Polarographic behavior of organic compounds; carbon-halogen bond fission in system acid-anion-ester; estimation of acid half-wave potentials. I. Rosenthal, C. Tang and P. J. Elving. bibliog Am Chem Soc J 74:6112-13 D 5 '52

Polarographic behavior of organic compounds; chloroacetic acids and their ethyl esters; *p*H-independence of carbon-halogen bond fission; wave splitting due to buffer interaction. P. J. Elving and C. Tang. bibliog Am Chem Soc J 74:6109-12 D 5 '52

Polarographic characteristics of vanadium complexed with ethylenediamine tetraacetic acid. R. L. Pecsok and R. S. Juvet, jr. bibliog Am Chem Soc J 75:1202-5 Mr 5 '53

Polarographic chemistry of ferrocene, ruthenocene and the metal hydrocarbon ions. J. A. Page and G. Wilkinson. Am Chem Soc J 74:6149-50 D 5 '52

Polarographic current-time relation during individual drop life. J. J. Lingane. bibliog diag Am Chem Soc J 75:788-93 F 20 '53

Polarographic examination of diazotized amines; additional coulometric data. E. R. Atkinson, C. E. Garland and A. F. Butler. Am Chem Soc J 75:983-4 F 20 '53

Polarographic, potentiometric and spectrophotometric study of lead nitrate complexes. H. M. Hershenson, M. E. Smith and D. N. Hume. bibliog Am Chem Soc J 75:507-11 F 5 '53

Polarographic studies in acetonitrile; behavior of inorganic salts. S. Wawzonek and M. E. Runner. bibliog Electrochem Soc J 99:457-9 N '52

Polarographic studies on the oxidation and hydrolysis of sodium borohydride. R. L. Pecsok. bibliog Am Chem Soc J 75:2862-4 Je 20 '53

Polarographic study of several *cis* and *trans* coördination compounds of cobalt. H. F. Holtzclaw, jr. and D. P. Sheetz. bibliog Am Chem Soc J 75:3053-8 Jl 5 '53

Polarographic study of thallium pyrophosphate complexes. P. Senise and P. Delahay. bibliog Am Chem Soc J 74:6128-30 D 5 '52

Polarographic study of the effect of gelatin on the kinetics of irreversible electrode processes. J. E. Strassner and P. Delahay. bibliog Am Chem Soc J 74:6232-5 D 20 '52

Polarographic study of the hydrazine complexes of zinc. R. L. Rebertus, H. A. Laitinen and J. C. Bailar, jr. bibliog Am Chem Soc J 75:3051-3 Jl 5 '53

Polarographic study of the influence of temperature on the rate of oxygen consumption by iron, lead, and zinc. P. Delahay and others. bibliog Electrochem Soc J 99: 414-16 O '52

Polarographic study of the zinc thiocyanate complexes. R. E. Frank and D. N. Hume. bibliog Am Chem Soc J 75:1736-8 Ap 5 '53

Polarography in liquid ammonia; the polarography of lead, cadmium, zinc, nickel, cobalt, chromium and aluminum ions. A. D. McElroy and H. A. Laitinen. bibliog J Phys Chem 57:564-7 Je '53

Polarography of *p*-chlorobenzophenone and xanthone. R. A. Day, jr. and R. E. Biggers. Am Chem Soc J 75:738-9 F 5 '53

Polarography of glutathione. W. Stricks and I. M. Kolthoff. bibliog Am Chem Soc J 74: 4646-53 S 20 '52

Polarography of nitroprusside; equilibrium constant of the reaction between nitroprusside and hydroxyl ions. I. M. Kolthoff and P. E. Toren. Am Chem Soc J 75:1197-201 Mr 5 '53

Polarography of tripositive antimony and arsenic; cathodic reduction of antimonous in strong hydrochloric acid and anodic oxidation of arsenite and stibnite in strong sodium hydroxide. G. P. Haight, jr. bibliog Am Chem Soc J 75:3848-51 Ag 5 '53

Polarography of tungsten(VI); catalytic reduction of perchlorate. H. A. Laitinen and W. A. Ziegler. bibliog Am Chem Soc J 75: 3045-8 Jl 5 '53

Polarography of tungsten(VI) in hydrochloric acid; mechanism of the tungsten(V)-tungsten(III) wave. H. A. Laitinen, K. B. Oldham and W. A. Ziegler. bibliog Am Chem Soc J 75:3048-50 Jl 5 '53

Reactions of fatty materials with oxygen; polarographic and infrared spectrophotometric investigation of peroxides from autoxidized methyl oleate. D. Swern and others. bibliog Am Chem Soc J 75:3135-7 Jl 5 '53

Studies on bond type in certain cobalt complexes; the polarographic reduction of some cobalt inner-complex compounds. J. R. Urwin and B. West. Chem Soc J p4727-9 D '52

Theory of a certain type of irreversible polarographic wave. P. Kivalo. bibliog Am Chem Soc J 75:3286-7 Jl 5 '53

Theory of alternating polarographic currents; case of reversible waves. P. Delahay and T. J. Adams. bibliog diags Am Chem Soc J 74:5740-4 N 20 '52

Theory of irreversible waves in oscillographic polarography. P. Delahay. bibliog Am Chem Soc J 75:1190-6 Mr 5 '53

Unified theory of polarographic waves. P. Delahay. bibliog Am Chem Soc J 75:1430-5 Mr 20 '53

Urea formaldehyde kinetic studies; polarographic studies in dilute solution. L. E. Smythe. Am Chem Soc J 75:574-6 F 5 '53

Use and limitations of heterogeneous rate constants in polarographic kinetics. D. M. H. Kern. bibliog Am Chem Soc J 75:2473-6 My 20 '53

Verification of a theory of irreversible polarographic waves. P. Kivalo, K. B. Oldham and H. A. Laitinen. bibliog Am Chem Soc J 75:4148-52 S 5 '53

POLAROID

Advertising

Why Polaroid now splits 50-50 for every kind of promotion. B. G. Priestley. il Sales Management 70:76+ F 15 '53

POLE setting

How poles are set quicker with a hinged derrick. il Elec West 110:79 Mr '53

Soil stabilizing permits sand augering. il Elec West 110:82-3 My '53

POLES

See also

Electric lines—Poles and towers

Standards

Review of American standard fiber stresses of wood poles. G. Q. Lumsden and R. H. Colley. il Standardization 24:114-17+ Ap '53

POLICE

Hits "honest graft" by police departments; evil widespread. A. B. Bielaski. East Underw 53:25 N 14 '52; Same. Weekly Underw 168:16+ Ja 3 '53

POLIOMYELITIS. See Infantile paralysis

POLISHING

Abrasive belts speed production. D. Olton. il Am Mach 97:101-3 Mr 2; 136-9 Mr 16; 106-10 Mr 30 '53

Buffing and coloring; abstract. W. Burkhart. Metal Finishing 51:84 Mr '53

Faster stainless polishing. il Steel 131:292+ O 13 '52

New automatic immersion polishing process; centrifuged abrasive polishing particles; abstract. G. Hermes. Metal Finishing 51:80 F '53

Pickling, buffing and coloring of aluminum and alloys before anodizing; abstract. R. Erdmann. Metal Finishing 51:83 Ap '53

POLISHING—*Continued*

Principles of inside polishing and buffing. E. F. Doyle. il diags Metal Finishing 51:97-8+ Je '53

Recommended techniques for polishing titanium for metallographic examination. R. Osadchuk and others. Metal Prog 64:129-31+ O '53

Surface improvement by burnishing; abstract. H. Koenig. Tool Eng 31:141 O '53

What's ahead the next ten years in finishing. Am Mach 96:H6 Mid-N '52

See also

Tumbling barrels

POLISHING, Electrolytic

Comparative investigations on electropolishing efficiencies of a phosphoric-sulfuric acid electrolyte and acetic-perchloric acid electrolytes; abstract. J. Heyes. Metal Finishing 50:71-2 D '52

Electropolishing of brass; abstract. J. Daurat. Metal Finishing 50:72 D '52; 51:70 Jl '53

Electropolishing of pure aluminum by repeated Eloxal anodizing and dissolving of the Eloxal coating; abstract. R. Lattey. Metal Finishing 51:84 Mr '53

Electropolishing techniques for non-ferrous and ferrous metals; abstract. L. Meunier. Metal Finishing 51:82-3 O '53

Relation of surface improvement by electropolishing to mechanical properties; abstract. J. Heyes. Metal Finishing 51:101 Ja '53

Technical requirements for electropolishing; abstract. L. Meunier. Metal Finishing 51:70-1 Jl '53

POLISHING machines

Convert to belts for lower polishing costs. J. J. Durnan. il Iron Age 171:133-5 F 12 '53

Horizontal, multi-purpose polishing machine. il Metal Finishing 51:83-4 Jl '53

Machine burnishes axles. Steel 132:139-40 My 18 '53

Practical hint for the polisher. il Metal Finishing 51:109 Je '53

POLISHING materials

Copper Brite cleans up. Fortune 47:193 Mr '53

Diamond-lapping and polishing compound; Hyprez. il Engineering 175:446 Ap 3 '53

Water-soluble pastes for diamond powder. R. S. Young, D. A. Benfield and G. B. Dauncey. Ind & Eng Chem 45:402-4 F '53

See also

Furniture polish
Shoe polish
Silver polish
Waxes

POLITICAL advertising

In re; the selling of ideas. Aesop Glim. il Ptr Ink 241:100 N 7 '52

Liberal magazines open up on job that advertising did for G.O.P. T. M. Jones. il Ptr Ink 241:38+ D 26 '52

POLITICAL campaigns

Polls

Decline and fall of the Literary digest. D. B. Arnold. Adv Agency 45:108-9 N '52

POLITICAL conventions

See also

Television broadcasting—Political conventions

POLITICAL education

Management note; how to keep employes politically informed. R. Newcomb and M. Sammons. Ind Marketing 38:65+ Ja '53

POLITICAL parties

Europe

Liberals of Europe. Economist 166:27-8 Ja 3 '53

France

See also

Communist party (France)

Germany

British law and the Nazis. Economist 166:554-5 F 28 '53

Dr Adenauer and the parties. Economist 167:644-6 Je 6 '53

German liberals veer to nationalism. Economist 165:631 N 29 '52

Heirs of Schumacher; conference of the German Social Democratic party. Economist 165:34+ O 4 '52

Where are the neo-Nazis? Economist 166:213-14 Ja 24 '53

Great Britain

See also

Conservative party (Great Britain)
Labor party (Great Britain)

India

See also

Communist party (India)

Indonesia

Men around Sjahrir. Economist 166:32 Ja 3 '53

Italy

Eve of poll in Italy. Economist 167:672 Je 6 '53

Fascism in Italy. Economist 166:426-7 F 14 '53

Italy's Scylla and Charybdis. Economist 167:743-4 Je 13 '53

Operation Nenni. Economist 167:911-12 Je 27 '53

Untidy triangle in Italy; general elections, June 7. Economist 167:451-2 My 16 '53

United States

Where are the radicals? Fortune 46:115+ O '52

See also

Republican party

POLITICAL science

See also

Administration, Public
Civil service
Commercial policy
Democracy
Economic policy
Government regulation of industry
Industry and state
Liberalism
Municipal government
Railroads and state
Science and state
State governments
Taxation

Dictionaries

Dictionary of civics and government. M. Tallman. 291p bibliog(p289-91) $5 Philosophical library, 15 E. 40th st, New York '53

POLITICS, Practical

See also

Business—Political aspects
Voting

POLLEN

Electron microscopy of ultrathin frozen sections of pollen grains. H. Fernández-Morán and A. O. Dahl. bibliog il Science 116:465-7 O 31 '52

Pollen counts and the hay fever problem. N. Dingle. Science 117:64-5 Ja 16 '53

Tissue derived from the pollen of ginkgo biloba. W. R. Tulecke. il Science 117:599-600 My 29 '53

POLLEN, Fossil

New exploration tool; fossil pollen and spores used in new approach to determining age of rock formations. T. A. Armstrong. il Oil & Gas J 51:64-5 Mr 9 '53

Palynology conference, 1st, New Haven, Feb. 21. Science 117:622-3 Je 5 '53

POLLOCK, Jacob, 1857-

95 years old, Jacob Pollock works in his printing shop every day. por Inland Ptr 130:50 O '52

POLONIUM

Calorimetric determination of the half-life of polonium. D. C. Ginnings and others. diag J Res Nat Bur Stand 50:75-9 F '53

Reactor-produced polonium now available for purchase. Franklin Inst J 254:445 N '52

POLYENES

Colour and constitution; polyphenyls, polyenes, and phenylpolyenes; and the significance of cross-conjugation. M. J. S. Dewar. Chem Soc J p3544-50 S '52

Cyclic conjugated polyenes; the attempted synthesis of dehydroindeno(5′ : 6′-1 : 2)*cyclo*heptatriene. A. D. Campbell and S. N. Slater. Chem Soc J p4353-7 N '52

POLYENES—*Continued*

Polyene acids; a new (*cis-trans-*)isomer of sorbic acid and its relation to hexenolactones. U. Eisner, J. A. Elvidge and R. P. Linstead. Chem Soc J p 1372-9 My '53

Polyene acids; catalytic semi-hydrogenation of the three isomeric muconic acids and confirmation of their configurations. J. A. Elvidge, R. P. Linstead and J. F. Smith. Chem Soc J p708-11 F '53

Polyene acids; half methyl esters and amides of the muconic acids. J. A. Elvidge, R. P. Linstead and P. Sims. Chem Soc J p 1793-9 Je '53

Studies in the polyene series; acetylenic alcohols from methoxyacetone, and their conversion into unsaturated aldehydes. R. Ahmad and B. C. L. Weedon. Chem Soc J p2125-9 Jl '53

Studies in the polyene series; C_{23}, C_{25} and C_{43} ketones derived from retinene. J. C. Hamlet, H. B. Henbest and V. Thaller. Chem Soc J p658-60 F '53

Studies in the polyene series; the preparation and rearrangement of some dialkenylmethanols. K. R. Bharucha and B. C. L. Weedon. Chem Soc J p 1584-92 My '53

Studies in the polyene series; the preparation of oct-4-ene-2 : 7-dione and octa-3 : 5-diene-2 : 7-dione, intermediates for the synthesis of carotenoids; the anionotropic rearrangement of some hexa-2 : 5-diene-1 : 4-diols. R. Ahmad and others. Chem Soc J p4089-98 N '52

Studies in the polyene series; the structure and synthesis of vitamin A_2 and related compounds. K. R. Farrar and others. Chem Soc J p2657-68 Jl '52

Studies in the polyene series; the synthesis of *o*-tolyl and mesityl analogues of vitamin A acid. K. R. Bharucha and B. C. L. Weedon. diags Chem Soc J p 1571-7 My '53

Studies in the polyene series; the synthesis of two pentaene esters related to vitamin A. K. R. Bharucha and B. C. L. Weedon. Chem Soc J p 1578-84 My '53

Synthesis of polyenes; prototropic rearrangements in β-ionols and related compounds. W. Oroshnik, A. D. Mebane and G. Karmas. bibliog Am Chem Soc J 75:1050-8 Mr 5 '53

POLYETHYLENE

Acids in a box. il Mod Plastics 30:151 Ja '53

Air-cushion pack; heat-sealed polyethylene bag for Fireside marshmallows. il Mod Packaging 26:100-1 Jl '53

Bakelite sees big future and digs in. Bsns W p41-2+ My 9 '53

Chain branching accounts for differences among polyethylenes. il Chem & Eng N 31:1299 Mr 30 '53

Chlorosulfonated polyethylene hailed as engineering materials. R. T. Currin. il Chem & Eng N 31:1407-8 Ap 6 '53

Chlorosulfonated polyethylene; Hypalon. R. E. Brooks and others. India Rubber World 127:791-3; 128:54-8, 348-50 Mr-Ap, Je '53

Conductivity change in polyethylene during γ-irradiation. S. Mayburg and W. L. Lawrence. diags J Ap Phys 23:1006-11 S '52

Double-wall poly jars; Aziza eye cosmetics, inc. il Mod Packaging 26:105 Je '53

Flip-over bag. il Mod Packaging 26:142-3+ Ap '53

Foamed polyethylene dielectric. il Electronics 26:206+ Ag '53

High flying poly. Chem W 72:17 Mr 21 '53

Modern Textiles handbook; polyethylene. L. Mauer and H. Wechsler. Mod Textiles Mag 34:83 Ap '53

New status of the film liner. il Mod Packaging 27:144-7+ O '53

New surface-treating process for polyethylene film; Cheslene TF. Rubber Age 73:798 S '53

Pinching bag; polyethylene-film tube holds stack as cups are withdrawn one at a time. il Mod Packaging 27:96-8 S '53

Polyethylene extrusion equipment and its application in the packaging industry. Tappi 36:sup 116A+ F '53

Polyethylene packs a fresh punch. Mod Ind 25:103-4 Je '53

Polyethylene report. G. Weber. Oil & Gas J 52:218 My 18 '53

Polyethylene shippers gaining favor in chemical industry. il Mod Packaging 27:133-5 O '53

Polyethylene strides ahead with capacity due to quadruple. il Chem & Eng N 31:1984 My 11 '53

Polyethylene; the corrosion resistance. J. L. Huscher. il Chem Eng 59:260+ O '52

Polyethylene to be toughened by electron bombardment. il Materials & Methods 38:6 Jl '53

Polythene in processing, fabricating, retailing. Can Chem Process 37:84 Mr '53

Polythene replaces asphalt. il Can Chem Process 37:66 F '53

Processing polyethylene into thin film. il Can Chem Process 37:48 Ap '53

Properties and applications of polyethylene. H. F. Robertson. bibliog il India Rubber World 127:80-4 O '52

Spirally spun polyethylene. il Mod Plastics 30:89 Mr '53

Square for acids; box-shaped polyethylene carboy. il Mod Packaging 26:113 Ja '53

Stopette spray deodorant; nominated for packaging's Hall of fame. il Mod Packaging 26:136-41+, cover Ap '53

Structure-property relationships in polyethylene terephthalate co-polyesters. O. B. Edgar and E. Ellery. pl Chem Soc J p2633-43 Jl '52

Testing

Cold brittleness of polyethylene. M. M. Renfrew and A. J. Freeman. il Mod Packaging 26:121-3+ Ag '53

Weathering and crack resistance of black polyethylene for wire and cable. W. A. Haine and others. bibliog il diag Elec Eng 71:1113-17 D '52

POLYETHYLENE glycol 400

Improved protective colloid for use with dichlorofluorescein adsorption indicator. R. B. Dean and others. Anal Chem 24:1638-9 O '52

POLYGONS

Assembled polygon for the calibration of angle blocks. C. E. Haven and A. G. Strang. il J Res Nat Bur Stand 50:45-50 Ja '53

POLYMER corporation

Polymer makes rubber and money. Can Chem Process 36:10 S '52

POLYMERIZATION

Acid dissociation of the aquoscandium ions. M. Kilpatrick and L. Pokras. bibliog Electrochem Soc J 100:85-92 F '53

Action of oxidizing agents on salts of nitroalkanes; oxidative dimerization. H. Shechter and R. B. Kaplan. bibliog Am Chem Soc J 75:3980-3 Ag 20 '53

β-Ray initiation of polymerization of styrene and methyl methacrylate. W. H. Seitzer, R. H. Goeckermann and A. V. Tobolsky. Am Chem Soc J 75:755-6 F 5 '53

Chain transfer in the polymerization of styrene; compounds containing halogens, oxygen and nitrogen. R. A. Gregg and F. R. Mayo. bibliog Am Chem Soc J 75:3530-3 Jl 20 '53

Chlorophyll photosensitized polymerization and free radical intermediates in photosynthesis. N. Uri. Am Chem Soc J 74:5808-9 N 20 '52

Continuous emulsion polymerization in a tubular reactor. M. Feldon and others. bibliog diag India Rubber World 128:51-3+ Ap '53

Copolymerization behavior of ionizable monomers. T. Alfrey, jr., C. G. Overberger and S. H. Pinner. bibliog Am Chem Soc J 75:4221-3 S 5 '53

Copolymerization of anthracene with 1,3-butadiene. C. S. Marvel and W. S. Anderson. bibliog Am Chem Soc J 75:4600-1 S 20 '53

Copolymerization of benzene with vinyl acetate. W. H. Stockmayer and L. H. Peebles, jr. bibliog Am Chem Soc J 75:2278-9 My 5 '53

Copolymerization of butadiene and alphamethylstyrene in emulsion at 12.8°. J. W. L. Fordham and H. L. Williams. bibliog J Phys Chem 57:346-9 Mr '53

Diazonium fluoborates as initiators of vinyl polymerization. C. S. Marvel and others. Am Chem Soc J 75:3846-8 Ag 5 '53

POLYMERIZATION—*Continued*

Diluent reduces catalyst deactivation in slurry polymerization of light olefins; patent. diag Pet Processing 8:573+ Ap '53

Dimerization in NaF. P. Kusch. J Chem Phys 21:1424 Ag '53

Dimerization reactions in sunlight. A. Mustafa. Chem R 51:1-23 bibliog(100 ref, p21-3) Ag '52

Dimerized cyclopentadienones from esters of allethrolone. F. B. LaForge, N. Green and M. S. Schechter. bibliog Am Chem Soc J 74:5392-4 N 5 '52

Distribution of alpha ray energy in radiation chemistry. S. C. Lind. J Phys Chem 56: 920 O '52

Effect of associated salts on the polymerization of butadiene by organo-sodium reagents. A. A. Morton and others. bibliog Ind & Eng Chem 44:2876-82 D '52

Effect of comonomer on the microstructure of butadiene copolymers. F. C. Foster and J. L. Binder. bibliog Am Chem Soc J 75: 2910-13 Je 20 '53

Effect of the degree of polymerization on the serimetric properties of regenerated cellulose fibers. J. R. Coley. Textile Res J 23: 34-6 Ja '53

Effect of water on the induction period of the polymerization of methyl methacrylate. I. C. Schoonover and others. bibliog J Res Nat Bur Stand 49:359-64 D '52

Extent of dimerization of sulfur monoxide. E. A. Evans, A. B. Scott and J. L. Huston. bibliog diag Am Chem Soc J 74:5525-7 N 5 '52

High molecular weight polymers from propylene and 1-butene. C. M. Fontana and others. bibliog diags Ind & Eng Chem 44: 2955-62 D '52

Hydroperoxides as initiators for the polymerisation of styrene. W. Cooper. Chem Soc J p 1267-71 Ap '53

Ionic polymerization; copolymerization of styrene, *p*-chlorostyrene and α-methylstyrene with meta and para substituted styrenes catalyzed by stannic chloride. C. G. Overberger and others. bibliog Am Chem Soc J 74:4848-53 O 5 '52

Kinetics of catalytic polymerizations; molecular-weight distribution in polar polymerizations. D. O. Jordan and A. R. Mathieson. Chem Soc J p2358-62 Je '52

Kinetics of catalytic polymerizations; the kinetics and mechanism of the polymerization of α-methylstyrene catalyzed by aluminium chloride. D. O. Jordan and A. R. Mathieson. Chem Soc J p2354-8 Je '52

Kinetics of catalytic polymerizations; the molecular-weight distribution of poly-(α-methylstyrene) prepared by the aluminium chloride-catalyzed polymerization. D. O. Jordan and A. R. Mathieson. Chem Soc J p2363-6 Je '52

Kinetics of ionic polymerisations; the side-chain effect in the vinyl ethers. D. D. Eley and J. Saunders. Chem Soc J p4167-73 N '52

Liquid-phase reactions at high pressures; the polymerisation of 1 : 2-dichloroethylene. K. E. Weale. Chem Soc J p2223-4 Je '52

Liquid polymers of acrylic esters. C. E. Rehberg and J. Siciliano. bibliog Ind & Eng Chem 44:2864-6 D '52

Low-temperature polymerisation of isobutene; the end-group problem. M. S. Flett and P. H. Plesch. Chem Soc J p3355-8 S '52

Magnetic study of polymerization retardation. J. L. Ihrig and H. N. Alyea. bibliog diag Am Chem Soc J 75:2917-21 Je 20 '53

Mechanism of initiation of emulsion polymerization by persulfate. I. M. Kolthoff, E. J. Meehan and E. M. Carr. Am Chem Soc J 75:1439-41 Mr 20 '53

Mercury-photosensitised reactions of tetrafluoroethylene. B. Atkinson. diag Chem Soc J p2684-94 Jl '52

Modified distribution functions for ethylene oxide-type polymerizations. L. Gold. J Chem Phys 20:1651-2 O '52

Molecular size distribution in the copolymerization of N-carboxyamino acid anhydrides. L. Gold. bibliog J Chem Phys 21:1190-2 Jl '53

New apparatus for rate studies applied to the photopolymerization of methyl methacrylate. M. A. Naylor and F. W. Billmeyer, jr. bibliog il diag Am Chem Soc J 75:2181-5 My 5 '53

Particle growth in the aqueous polymerization of vinyl acetate. W. J. Priest. bibliog J Phys Chem 56:1077-82 D '52

Physical properties of sodium-catalyzed polymers. M. H. Reich, R. E. Schneider and W. K. Taft. bibliog Ind & Eng Chem 44: 2914-22 D '52

Polymerizability of methyl α-*tert.*-butylacrylate. J. W. C. Crawford. Chem Soc J p2658-61 S '53

Polymerization; a comparison of the action of organosodium reagents and of the Alfin catalyst on styrene. A. A. Morton and E. Grovenstein, jr. bibliog Am Chem Soc J 74:5434-6 N 5 '52

Polymerization and copolymerization reactions with Alfin catalysts in relation to masterbatch preparation. R. A. Stewart and H. L. Williams. bibliog Ind & Eng Chem 45:173-82 Ja '53

Polymerization of allyl compounds; the polymerization of allyl-1-d_2 acetate and the mechanism of its chain termination. P. D. Bartlett and F. A. Tate. bibliog diag Am Chem Soc J 75:91-5 Ja 5 '53

Polymerization of α-dideuteroallyl acetate; isotope effects in hydrogen transfer; abstract. P. D. Bartlett and F. A. Tate. Science 116:516 N 14 '52

Polymerization of esters of cinnamic acid. C. S. Marvel and G. H. McCain. bibliog Am Chem Soc J 75:3272-3 Jl 5 '53

Polymerization of 6-hexanolactam. A. B. Meggy. Chem Soc J p796-8 Mr '53

Polymerisation of α-methylstyrene catalysed by stannic chloride in ethyl chloride solution. F. S. Dainton and R. H. Tomlinson. Chem Soc J p 151-60 Ja '53

Polymerization of polysilicic acid derived from 3.3 ratio sodium silicate. R. K. Iler. bibliog J Phys Chem 57:604-7 Je '53

Polymerization of silicic acid; catalytic effect of fluoride. R. K. Iler. bibliog J Phys Chem 56:680-3 Je '52

Polymerization of silicic acid; retarding effect of chromate ion. R. K. Iler. J Phys Chem 56:678-9 Je '52

Polymerisation of styrene by titanic chloride. P. H. Plesch. diag Chem Soc J p 1653-66 Je '53

Polymerization of vinyl monomers in aqueous solution by diazonium salts. W. Cooper. Chem & Ind p407-8 Ap 25 '53

Polymerization-stopping agents. G. J. Antlfinger and C. H. Lufter. bibliog Ind & Eng Chem 45:182-6 Ja '53

Polymerization; the reactions of amylsodium with α- and β-methylstyrenes. A. A. Morton and E. Grovenstein, jr. bibliog Am Chem Soc J 74:5437-40 N 5 '52

Preparation and polymerization of *p*-alkylstyrenes; effect of structure on the transition temperatures of the polymers. C. G. Overberger and others. bibliog Am Chem Soc J 75:3326-30 Jl 20 '53

Studies on the gamma-radiation induced polymerization of acrylonitrile. I. A. Berstein and others. bibliog J Chem Phys 21:1303-4 Jl '53

Suggested reaction mechanism for the copolymerization of ethylene and carbon monoxide. W. G. Barb. bibliog Am Chem Soc J 75:224-6 Ja 5 '53

Suspension polymerization of styrene. W. S. Kaghan and R. N. Shreve. bibliog il diag Ind & Eng Chem 45:292-7 F '53

Synthesis and polymerization of some fluorinated styrenes. M. Prober. bibliog Am Chem Soc J 75:968-73 F 20 '53

Thermal dimerization of butadiene, and the equilibrium between butadiene and vinylcyclohexene. N. E. Duncan and G. J. Janz. bibliog J Chem Phys 20:1644-5 O '52

Trimerization of nitriles at high pressures. T. L. Cairns, A. W. Larchar and B. C. McKusick. bibliog Am Chem Soc J 74:5633-6 N 20 '52

Urea-formaldehyde and melamine-formaldehyde condensations; mechanisms. H. P. Wohnsiedler. bibliog il Ind & Eng Chem 44: 2679-86 N '52

POLYMERIZATION—*Continued*

Vapor phase association of trifluoroacetic acid. R. E. Lundin, F. E. Harris and L. K. Nash. bibliog Am Chem Soc J 74:4654-6 S 20 '52

Vinyl chloride polymerization procedure. S. G. Bankoff and R. N. Shreve. bibliog il Ind & Eng Chem 45:270-6 F '53

Wet steam upgrades fish oil. il Chem Eng 60:122 My '53

POLYMERS

ACS Division of polymer chemistry national meeting, Los Angeles. Chem & Eng N 31: 1299-300 Mr 30 '53

American physical society Division of high-polymer physics meeting, 11th, Chapel Hill, N.C. March 26-28; abstracts of papers. Rubber Age 72:762-4 Mr '53

Attempts to resolve racemic amines by means of optically active, acidic synthetic polymers. J. F. Bunnett and J. L. Marks. bibliog Am Chem Soc J 74:5893-7 D 5 '52

Chemical interactions of amino compounds and sugars; the repeating unit in browning polymers. M. L. Wolfrom and others. Am Chem Soc J 75:1013 F 20 '53

Chemistry of P-B bonding; the phosphinoborines and their polymers. A. B. Burg and R. I. Wagner. bibliog Am Chem Soc J 75:3872-7 Ag 20 '53

Comparison of the effects of several solubilized C_6-hydrocarbons on the viscosity of a polysoap solution. U. P. Strauss and L. H. Layton. bibliog J Phys Chem 57:352-4 Mr '53

Cross-linked polymers; factors influencing the efficiency of cross-linking in copolymers of methyl methacrylate and glycol dimethacrylates. S. Loshaek and T. G. Fox. bibliog Am Chem Soc J 75:3544-50 Jl 20 '53

Distribution of segments in a coiling polymer molecule. P. Debye and F. Bueche. J Chem Phys 20:1337-8 Ag '52

Effect of moisture on compressibility of natural high polymers. C. E. Weir. bibliog J Res Nat Bur Stand 49:135-9 S '52

Effect of orientation on the ultimate strength of linear high polymers. C. C. Hsiao. J Ap Phys 23:1189-90 O '52

Effects of chemical heterogeneity in copolymers on some physical properties. L. E. Nielsen. bibliog Am Chem Soc J 75:1435-9 Mr 20 '53

Effects of interactions in real polymer chains. F. Bueche. bibliog diag J Chem Phys 21: 205-8 F '53

Electron exchange polymers; countercurrent applications. H. G. Cassidy, M. Ezrin and I. H. Updegraff. il Am Chem Soc J 75:1615-17 Ap 5 '53

Emulsion polymers for paints. H. Naidus. bibliog Ind & Eng Chem 45:712-17 Ap '53

Excluded volume effect in polymer chains and the analogous random walk problem. R. J. Rubin. bibliog J Chem Phys 20:1940-5 D '52

Excluded volume of polymer chains. J. J. Hermans and others. bibliog J Chem Phys 20:1360-8 S '52

Fibre architecture with special reference to molecular constitution. S. J. Allen. bibliog(27 ref) diags Textile Inst J 44:P286-304; Discussion. P304-6 Ag '53

Freeze-thaw studies of latex paint polymers. F. A. Digioia and R. E. Nelson. bibliog Ind & Eng Chem 45:745-8 Ap '53

High molecular weight polymers from propylene and 1-butene. C. M. Fontana and others. bibliog diags Ind & Eng Chem 44: 2955-62 D '52

Ideal copolymers and the second-order transitions of synthetic rubbers; non-crystalline copolymers. M. Gordon and J. S. Taylor. bibliog J Ap Chem 2:493-500 S '52

Instrumentation for continuously recording viscosity of resins and polymers in large reactors, by the Chicago club. bibliog diags Paint Oil & Chem R 115:80-1+ D 4 '52; Abstract. Oil Paint & Drug Rep 162:78-80 N 24 '52

Linear polymetaphosphates; quarternary ammonium salts. R. K. Iler. bibliog J Phys Chem 56:1086-9 D '52

Measurement of ordinary diffusion coefficients of polymers. F. T. Wall and C. W. Childers. bibliog Am Chem Soc J 75:3550-2 Jl 20 '53

Measurement of self-diffusion in solid polymers. F. Bueche and others. bibliog J Chem Phys 20:1956-8 D '52

Mechanical properties of high polymers. P. C. Scherer and J. E. Johnson. Mod Textiles Mag 34:51-2+ Je; 63+ Ag '53

Mixed ethylcellulose-butylhydroxyethylcellulose films. H. C. Haas, L. C. Farney and C. Valle, jr. bibliog Ind & Eng Chem 45:564-6 Mr '53

Modified Bourdon gage for measuring pressure in polymer processing equipment. J. F. Carley. diags Ind & Eng Chem 45:858-60 Ap '53

Molecular theory of stress relaxation in polymeric media. K. W. Scott and R. S. Stein. bibliog diags J Chem Phys 21:1281-6 Jl '53

New polymers authorized by Office of synthetic rubber, Reconstruction finance corporation. Rubber Age 72:658-9, 794-5; 73: 686 F-Mr, Ag '53

Permeation through and sorption of organic vapors by high polymers. J. A. Cutler and A. D. McLaren. bibliog Tappi 36:423-5 S '53

Phase equilibria in polymer-solvent systems; thermodynamic interaction parameters from critical miscibility data. A. R. Shultz and P. J. Flory. bibliog Am Chem Soc J 75: 3888-92 Ag 20 '53

Phase equilibrium in polymer-solvent systems. A. R. Shultz and P. J. Flory. bibliog diag Am Chem Soc J 74:4760-7 O 5 '52

Reactions of vinyltrichlorosilane and vinyltriethoxysilane. G. H. Wagner and others. bibliog Ind & Eng Chem 45:367-74 F '53

Recording stress relaxometer. J. R. McLoughlin. bibliog il diags R Sci Instr 23: 459-62 S '52

Simple calculation of dielectric loss from dielectric dispersion for polar polymers. P. Ehrlich. bibliog J Res Nat Bur Stand 50:19-20 Ja '53

Some factors affecting the solubility of polymers. P. A. Small. bibliog J Ap Chem 3:71-80 F '53

Specific heat of synthetic high polymers; polyhexamethylene adipamide and sebacamide. R. C. Wilhoit and M. Dole. bibliog J Phys Chem 57:14-21 Ja '53

Statistical mechanics of dilute polymer solutions; variation of the osmotic second coefficient with molecular weight. W. R. Krigbaum and P. J. Flory. bibliog diags Am Chem Soc J 75:1775-84 Ap 20 '53

Statistical mechanics of polymer adsorption. H. L. Frisch and others. J Chem Phys 21: 365-6 F '53

Structure of the polymers of α-haloacrylates. C. S. Marvel and others. bibliog Am Chem Soc J 75:2326-30 My 20 '53

Studies in Newtonian flow; viscosity *vs* molecular weight in liquids; viscosity *vs* concentration in polymer solutions. A. K. Doolittle. J Ap Phys 23:418-26 Ap '52

Super-sensitive thermo- and vapor-sensing elements and their useful temperature range. H. A. Pohl. R Sci Instr 23:770 D '52

Synthesis and applicability of block and graft copolymers. H. F. Mark. bibliog Textile Res J 23:294-8 My '53

Synthetic polymer fibres. B. P. Ridge. bibliog Textile Inst J 44:P48-65 F '53

Technical developments leading to present man-made fibers. J. B. Quig. bibliog diags Textile Res J 23:280-8 My '53

Theory of the linear viscoelastic properties of dilute solutions of coiling polymers. P. E. Rouse, jr. bibliog J Chem Phys 21: 1272-80 Jl '53

Third virial coefficient in polymer solutions. W. H. Stockmayer and E. F. Casassa. bibliog J Chem Phys 20:1560-6 O '52

Viscosity-concentration law parameters for polystyrene in benzene. D. Cleverdon, D. Laker and P. G. Smith. bibliog J Ap Chem 3:15-19 Ja '53

Viscosity, self-diffusion, and allied effects in solid polymers. F. Bueche. bibliog J Chem Phys 20:1959-64 D '52

Volume effect in polymer chains. T. B. Grimley. J Chem Phys 21:185-6 Ja '53

POLYMERS—*Continued*

X-ray studies of crystalline and amorphous order in high polymers. S. Krimm. bibliog J Phys Chem 57:22-5 Ja '53

See also

Cellulose
Cellulose acetate
Gasoline
Molded products
Nylon
Plastic materials
Polyethylene
Polysaccharides
Rayon
Resinous products
Rubber—Chemistry
Rubber, Artificial
Silicones
Styrene (and polymers)
Teflon

Analysis

Polymer degradation studies by absorption and mass spectrometry. B. G. Achhammer. bibliog Anal Chem 24:1925-30 D '52

Review of analytical chemistry; coatings. R. W. Stafford and J. F. Shay. Anal Chem 25:8-11 bibliog(138 ref, p 10-11) Ja '53

POLYMETHINE dyes. See Dyes and dyeing—Chemistry

POLYMETHYLENES. See Cycloparaffins

POLYMORPHISM

Fluoride model systems; the system NaF-BeF_2 and the polymorphism of Na_2BeF_4 and BeF_2. D. M. Roy and others. Am Cer Soc J 36:185-90 Je 1 '53

Investigation of polymorphism and isomerism in cytidine phosphates. R. J. C. Harris and others. Chem Soc J p489-94 F '53

Polymorphic behavior of 2-undecyl- and 2-heptadecylbenzothiazoles in organic solvents. P. L. DuBrow, C. W. Hoerr and H. J. Harwood. bibliog Am Chem Soc J 74:6241-5 D 20 '52

Polymorphic crystalline modifications of the phthalocyanines. F. W. Karasek and J. C. Decius. Am Chem Soc J 74:4716-17 S 20 '52

Polymorphism of solid acetic acid in the acetic acid-benzene system. W. Tan, K. A. Krieger and J. G. Miller. bibliog Am Chem Soc J 74:6181-3 D 20 '52

Polymorphism of 1-stearyl- and 1-palmityl-diacetin, -dibutyrin, -dicaproin and 1-stearyldipropionin. F. L. Jackson and E. S. Lutton. bibliog Am Chem Soc J 74:4827-9 O 5 '52

Polymorphs of alumina and gallia. R. Roy, V. G. Hill and E. F. Osborn. bibliog Ind & Eng Chem 45:819-20 Ap '53

Relation of crystal habit to the polymorphic behavior of long-chain paraffin hydrocarbons. B. J. Fontana. bibliog il J Phys Chem 57:222-6 F '53

POLYPORENIC acid

Chemistry of the triterpenes. R. G. Curtis and others. Chem Soc J p457-75 F '53

POLYPORENIC acid C

Chemistry of the triterpenes and related compounds; elucidation of the structure of polyporenic acid C. A. Bowers and others. Chem Soc J p2548-60 S '53

POLYPORUS

Constitution of a glucosan from the fungus polyporus betulinus. R. B. Duff. Chem Soc J p2592-4 Jl '52

POLYSACCHARIDES

Acetobrominolysis of di- and polysaccharide acetates. A. Jeanes, C. A. Wilham and G. E. Hilbert. bibliog Am Chem Soc J 75:3667-73 Ag 5 '53

Acetylation of amylaceous polysaccharides. A. Jeanes and R. W. Jones. bibliog Am Chem Soc J 74:6116-18 D 5 '52

Bacterial polysaccharides; abstract. M. Stacey. Chem & Ind p318 Ap 4 '53

Condensation of long-chain fatty acids with polysaccharides and proteins. A. S. Jones, M. A. G. Kaye and M. Stacey. Chem Soc J p5016-20 D '52

Ester and lactone linkages in acidic polysaccharides. M. A. G. Kaye and P. W. Kent. Chem Soc J p79-83 Ja '53

Infrared spectra of pneumococcal polysaccharides. H. J. R. Stevenson and S. Levine. Science 116:705-6 D 26 '52

Investigation of the polysaccharide components of certain fresh-water algæ. L. Hough, J. K. N. Jones and W. H. Wadman. Chem Soc J p3393-9 S '52

Mannose-containing polysaccharides; the galactomannan of fenugreek seed (trigonella fœnum-græcum). P. Andrews, L. Hough and J. K. N. Jones. Chem Soc J p2744-50 Jl '52

Mannose-containing polysaccharides; the polysaccharides in the seeds of iris ochroleuca and I. sibirica. P. Andrews, L. Hough and J. K. N. Jones. Chem Soc J p 1186-92 Ap '53

Metachromatic effects of anionic polysaccharides and detergents. A. Levine and M. Schubert. bibliog Am Chem Soc J 74:5702-6 N 20 '52

New procedure for the determination of the fine structure of polysaccharides. M. Abdel-Akher and others. Am Chem Soc J 74:4970-1 O 5 '52

Occurrence of L-fucose in soil, peat, and in a polysaccharide synthesized by soil bacteria. R. B. Duff. Chem & Ind p 1104-5 N 8 '52

Oxidation of disaccharide alcohols by acetobacter suboxydans. D. French and others. bibliog Science 117:100 Ja 30 '53

Physicochemical study of a water-soluble polysaccharide from Douglas-fir (pseudotsuga taxifolia). J. O. Thompson and others. bibliog il Tappi 36:319-24 Jl '53

Polysaccharide of penicillium islandicum Sopp. J. Baddiley, J. G. Buchanan and E. M. Thain. Chem Soc J p 1944-6 Je '53

Preliminary study of the main polysaccharide of lupinus termis seeds. W. Tadros and M. Kamel. Chem Soc J p4532-3 N '52

Preparation and properties of serum and plasma proteins; separation from human plasma of polysaccharides, peptides and proteins of low molecular weight; crystallization of an acid glycoprotein. K. Schmid. bibliog il Am Chem Soc J 75:60-8 Ja 5 '53

Protozoal polysaccharides. G. Forsyth, E. L. Hirst and A. E. Oxford. Chem Soc J p2030-3, 2132-5 Jl '53

Structural studies on the specific polysaccharide of pneumococcus Type II. P. W. Kent. bibliog Chem & Ind p 1176-7 N 29 '52

Sulfated nitrogenous polysaccharides and their anticoagulant activity. M. L. Wolfrom, T. M. Shen and C. G. Summers. Am Chem Soc J 75:1519 Mr 20 '53

Type II pneumococcus specific polysaccharide; abstract and discussion. K. Butler and M. Stacey. Chem & Ind p37-8 Ja 10 '53

See also

Oligosaccharides

Analysis

Constitution of the polysaccharide from tamarind seed. E. V. White and P. S. Rao. bibliog Am Chem Soc J 75:2617-19 Je 5 '53

Differentiation of carbohydrates by anthrone reaction rate and color intensity. L. H. Koehler. bibliog Anal Chem 24:1576-9 O '52

POLYSTICTIN

Chemistry of mould metabolites; isolation and characterisation of a red pigment from coriolus sanguineus (Fr.). G. W. K. Cavill and others. Chem Soc J p525-9 F '53

POLYTETRAFLUOROETHYLENE. See Teflon

PONTOONS

Aluminum passenger-landing pontoons. il Metallurgia 48:91 Ag '53

POOLE, Fenn Eugene, 1906-1952

Sketch. R. A. McFarland. por A M A Archives Ind Hygiene & Occup Med 6:450-1 N '52

POOR, Fred Arthur, 1870-1953

Sketch. por Ry Age 135:106 S 7 '53

POOR relief

Public assistance percentage drops. Spectator 161:31 Je '53

POPCORN

Cracker Jack; nominated for packaging's Hall of fame. il Mod Packaging 26:98-104+ O '52

Engineers keep price at five cents; Cracker Jack co. W. R. Holtz. il Food Eng 25:59-61 Ja '53

POPULATION

Short-cut methods of forecasting city population. R. C. Schmitt and A. H. Crosetti. bibliog J Marketing 17:417-24 Ap '53

See also

Birth rate

Immigration and emigration

Metropolitan districts

Statistics

Estimated population of the U.S. by states as of July 1, 1951; projections of the number of households and families, 1955 and 1960; population of the United States, by age, 1950; tabulations. Automotive Ind 108:325 Mr 15 '53

Forecasting of population by census tracts in an urban area. R. P. Wolff. maps Land Econ 28:379-83 N '52

Population growth and markets. L. J. Atkinson. Survey of Cur Bsns 33:19-22 Ap '53

Recent statistics of economically active population. Int Labour R Stat Sup 66:103-6 N-D '52

Ten-year trends in population and housing. Sales Management 69:132+ N 10 '52

See also

Birth rate

Canada

Canadian census bureau's case for population density areas. Sales Management 69:176+ N 10 '52

25 million by 1975? Can Chem Process 37:14+ S '53

Europe

International migration and European population trends. J. Isaac. Int Labour R 66:185-206 S '52

London

London's population. map Economist 167:657 Je 6 '53

Michigan

Intrastate migration in Michigan; 1935-1940. A. H. Hawley. (Mich. governmental studies no. 25) 199p pa $1.50 Univ. of Michigan press, 311 Maynard st, Ann Arbor, Mich. '53

Puerto Rico

Puerto Rico; a crowded island. K. Davis. Ann Am Acad 285:116-22 Ja '53

Russia

Russian births. Sci Am 187:44+ O '52

United States

Are you talking to your prospects as if they lived in 1900? R. R. Reed. Adv Agency 46:52-4+ Mr '53

Changed American market. map Bsns W p74-6+ Jl 4 '53

Our growing suburbs; with table showing changes between 1940 and 1950 in leading metropolitan areas. Life Ins Courant 58:61 My '53

Population growth and its effect on future power development. A. W. Kramer. map Power Eng 57:66-9 Ja '53

Potential markets for bolstering our economy; conclusions based on 1950 census of population. M. Smith. map Mag of Wall St 91:111-13+ N '52

PORCELAIN

Ceramic touch for doors; porcelain door accessories, known as Decor knobs. il Am Cer Soc Bul 32:254 Jl 15 '53

Opportunity knocked on their door; Yale & Towne manufacturing co. il Cer Ind 61:65 Ag '53

Standard refractory tubes in recrystallised alumina, mullite and aluminous porcelain. Metallurgia 47:321-2 Je '53

PORCELAIN enamel institute

Annual meeting, Oct. 22-24. Cer Ind 59:68-9+ D '52

Annual meeting, Columbus, Ohio, Sept. 16. Cer Ind 61:132 O '53

Annual shop practice forum, 15th, Columbus, Ohio, Sept. 16-18. Am Cer Soc Bul 32:357 O 15 '53

Forum hears progress in ceramic coatings and aluminum enamels. Cer Ind 59:118-19+ O '52

Meeting, Champaign, Ill.; abstracts of papers. Iron Age 170:104-7 O 2 '52

PORCHES

How to bring a porch inside without losing the outside. il Am Bld 74:164 D '52

PORK

Venezuela tightens import of U.S. pork. For Comm W 49:8 My 25 '53

POROSITY

Compression strength of porous sintered alumina and zirconia; ninth communication to ceramography. E. Ryshkewitch. il Am Cer Soc J 36:65-8 F 1 '53

Computation of pore sizes from physical adsorption data. C. Pierce. bibliog J Phys Chem 57:149-52 F '53

Development of porosity during diffusion in substitutional solid solutions. R. W. Balluffi and B. H. Alexander. il J Ap Phys 23:1237-44 N '52

Internal porosity and inverse segregation in white cast iron. W. B. Sobers. bibliog il diags Foundry 81:128-31+ Je '53

Porosity in mild steel weld metal; review of the literature. D. Warren and R. D. Stout. bibliog(39 titles) Welding J 31:sup381-6 Ag '52; Discussion. 31:sup586+ D '52

Porosity in the welding of carbon steel. G. W. Oyler and R. D. Stout. il Welding J 32:sup454-60 S '53

Porosity of anodized films; abstract. O. Kubaschewski and A. von Krusenstjern. Metal Finishing 51:83-4 Ap '53

Porosity of paint films; water vapor adsorption and permeability. S. Eckhaus, I. Wolock and B. L. Harris. Ind & Eng Chem 45:426-8 F '53

Surface area analysis by means of gas flow methods. G. Kraus, J. W. Ross and L. A. Girifalco. bibliog diags J Phys Chem 57:330-6 Mr '53

See also

Permeability

Porous materials

Measurement

Casting porosity checked. Steel 131:111 N 10 '52; Machine Design 24:253+ D '52

Determining porosity of refractory brick. T. Yoshii and Y. Murakami. diag Rock Prod 55:78 N '52

Hole diameter influences neutron derived porosity. C. B. Scotty and E. F. Egan. World Oil 136:172+ Ja '53

Improved bulk-volume cell speeds porosity determinations. H. C. Hamontre and C. G. Rall. diags Oil & Gas J 51:94-6 Ja 19 '53

Porosity measured; new test measures metal casting leakage rates as low as 10^{-8}. Iron Age 170:224-5 N 6 '52

POROUS materials

Electrical properties of porous semiconductors. E. B. Hensley. diags J Ap Phys 23:1122-9 O '52

See also

Permeability

Plastic materials, Porous

PORPHOBILINOGEN

Porphobilinogen, a monopyrrole. S. Granick and L. Bogorad. Am Chem Soc J 75:3610 Jl 20 '53

PORPHYRINS

General route to ββ'-substituted pyrrole intermediates for porphyrin synthesis. S. F. MacDonald. Chem Soc J p4176-84 N '52

New methods for porphyrin synthesis. A. H. Corwin and V. L. Sydow. bibliog Am Chem Soc J 75:4484-6 S 20 '53

Preparation of deuteroporphyrin IX dimethyl ester. T. C. Chu and E. J. Chu. bibliog Am Chem Soc J 74:6276-7 D 20 '52

Simultaneous dissociation of two protons; the acid-base equilibria of porphyrins. R. I. Walter. bibliog Am Chem Soc J 75:3860-2 Ag 5 '53

Stepwise porphyrin synthesis. A. H. Corwin and E. C. Coolidge. bibliog Am Chem Soc J 74:5196-7 O 20 '52

Syntheses of pyrroles, a porphyrin, and the maleinimide related to the uroporphyrins. S. F. MacDonald. Chem Soc J p4184-90 N '52

See also

Coproporphyrins

PORPHYRINS—*Continued*

Analysis

Detection of some unknown porphyrin products related to deuteroporphyrin IX by paper chromatography. T. C. Chu and E. J.-H. Chu. bibliog Am Chem Soc J 75:3021-3 Je 20 '53

PORPOISES

Navigation of porpoises. Sci Am 188:60 My '53

Porpoise sounds as sonar signals. W. N. Kellogg and others. bibliog il Science 117: 239-43 Mr 6 '53

Ultrasonic porpoise communications. H. N. Morris and others. il diags Electronics 26: 208+ Ag '53

PORRO, Cesare, 1865-1940

Memorial. T. S. Harrison. bibliog por Am Assn Pet Geologists Bul 36:1681-6 Ag '52

PORT of New York authority

Birth of a bond syndicate. il Bsns W p32 D 20 '52

Hoboken turns piers over to Port of New York authority. plan Marine Eng 57:63 N '52

PNYA predicts mass copter-commuting. Aviation W 57:87-8 D 8 '52

Tennis courts go up in price as town fights bi-state agency. il Eng N 150:46-8 Je 25 '53

$35 million bonds sold in uneasy market. il Eng N 149:100-2 D 18 '52

Bus terminal

Electric system in the New York Port Authority bus terminal. W. Henschel and H. W. Wenson, jr. diags Elec Eng 71: 979-84 N '52

PORTABLE buildings. See Buildings, Portable

PORTLAND, Oregon

Redevelopment may come despite bond defeat. Eng N 149:52+ D 11 '52

See also

Wages—Portland, Oregon

Harbor

Flexible pier has 200-ft pipe piles. H. W. Hunt. il Eng N 150:32-4+ Ja 29 '53

New ship repair setup. il Bsns W p 166 Je 6 '53

Sewerage

Portland sewage treatment plant. J. W. Cunningham. flow diag il Sewage & Ind Wastes 25:1015-22 S '53

Streets

Parking meters pay the bill. G. B. Arthur. il Pub Works 83:57-9+ D '52

Water supply

Planning gave Portland a great water system. G. B. Arthur. il Pub Works 84:60-1+ Ja '53

Portland builds a new pipe line. G. B. Arthur. il Pub Works 84:80-1+ Ag '53

PORTLAND cement association

Names Barnes to head new Montana office. Concrete 60:12-13 N '52

Portland cement association given high honors for industrial safety. il Concrete 61: 34 Ja '53

PORTLAND general electric company

PGE renews bid for permission to build Pelton dam. Elec World News ed 139:9 F 16 '53

PORTS

Industrial boom spurs port improvements. S. Fish. il Manuf Rec 122:40-1 Ag '53

Port activity. il Manuf Rec 122:41-4 S; 42-5 O '53

Ports in a storm; seven claim to hold second place behind New York. Bsns W p84+ N 22 '52

Virginia ports authority pushes development program. Manuf Rec 122:37-8 Ap '53

See also

Free ports and zones

Harbors

Portland, Oregon—Harbor

PORTUGAL

Colonies

Portuguese government exercises control over Mozambique insurance operations. Weekly Underw 168:580+ F 28 '53

Economic conditions

Economic conditions abroad (cont). For Comm W 49:6 F 23 '53

Economic policy

Portugal's program stresses electric energy, transport; six-year development plan. For Comm W 48:7 O 13 '52

POSIDONIA

Cross and Bevan cellulose of posidonia australis. D. J. Bell. Chem Soc J p3649-50 S '52

POSITIONERS, Welding

Adjustable balanced positioner for welding; Twinner-Aronson universal positioner. il Engineering 175:702 My 29 '53

Jig and weld positioner speed salvage jobs. il diags Pet Processing 8:395-6 Mr '53

25-ton welding positioner. il Engineer 194: 171 Ag 1 '52

Welding fixture. N. A. Benson. diag Tool Eng 30:43 Je '53

POSITIONING equipment

Automatic lathe stops at fixed position. il diags Machine Design 25:160 Ag '53

Pushbutton control shifting for contoured skin panels; Temco aircraft corp. R. McCulloch. il Light Metal Age 10:14-15+ O '52

Remote hydraulic positioning control. il Product Eng 23:230 N '52

Remote rotational positioning. C. S. Allen and H. Shapiro. il diags Machine Design 25: 243-7 Ap '53

Tangyes hydraulic positioning jacks. il Engineering 176:128 Jl 24 '53

What's ahead the next ten years in tools and tooling; setup accessories. Am Mach 96:C 10 Mid-N '52

POSITRONIUM

Quenching of *ortho*-positronium decay by a magnetic field. J. Wheatley and D. Halliday. Phys R 88:424 O 15 '52

POSITRONIUM chloride

Existence of positronium chloride. L. Simons. bibliog Phys R 90:165-6 Ap 1 '53

POSITRONS

Canonical transformation for an electron-positron field coupled to a time-independent electromagnetic field. H. E. Moses. Phys R 89:115-22 Ja 1 '53

Direct comparison of *m/e* for the positron and the electron. L. A. Page and others. bibliog diag Phys R 89:1273-7 Mr 15 '53

Electron-positron annihilation in flight. S. A. Colgate and F. C. Gilbert. diag Phys R 89:790-2 F 15 '53

Energy spectrum of positrons from the decay of the μ-meson. H. J. Bramson and others. bibliog Phys R 88:304-8 O 15 '52

Spectrometer measurement on the high energy positrons of sodium 22. B. T. Wright. Phys R 90:159-60 Ap 1 '53

Thermalization of positrons in metals. R. L. Garwin. Phys R 91:1571-2 S 15 '53

Time distribution of positron annihilation in liquids and solids. R. E. Bell and R. L. Graham. bibliog diags Phys R 90:644-54 My 15 '53

See also

Positronium

Scattering

Backscattering of positrons and electrons. H. H. Seliger. bibliog diags Phys R 88: 408-12 O 15 '52

Coulomb scattering of relativistic electrons and positrons by nuclei. H. Feshbach. bibliog Phys R 88:295-7 O 15 '52

Positron-electron scattering at 1.3 Mev. H. A. Howe and K. R. MacKenzie. bibliog diag Phys R 90:678-82 My 15 '53

POST offices

Equipment

See also

Mail handling

POST offices, Traveling. See Postal service, Highway

POSTAL buses. See Postal service, Highway

POSTAL cars

Head-end units from old passenger cars; Great northern railway. il Ry Age 133:66-7 N 10 '52; Same. Ry Mech & Elec Eng 126: 66-7 D '52

POSTAL life insurance company

1952 record year for Postal Life; Wolff leads general agents, Ross big writer. Weekly Underw 168:356-7 Ja 31 '53

Reports record year for 1952. East Underw 54:15 F 6 '53

POSTAL rates

Postal users pay for non-postal service? H. Hagen. Brick & Clay Rec 123:85 O '53

These second class postal rates. Brick & Clay Rec 123:81+ Ag '53

POSTAL savings banks

Postal savings system, assets and depositors' balances, yearly, 1943-1950; monthly, Sept. 1951-Nov. 1952. Fed Res Bul 39:24 Ja '53 [cont monthly]

POSTAL service

Mail transport study started. Ry Age 135: 13-14 Jl 13 '53

See also

Mail handling
Postal cars

Money orders

Postal business, Nov.-Dec. 1951-Jan.-Nov. 1952. Survey of Cur Bsns 33:S8 Ja '53 [cont monthly]

United States

Postman rings once; Mr Summerfield has yet to deliver on a Republican promise. J. C. Perham and J. C. W. Schaie. Barron's 33:5-6 Ap 13 '53

Revamping from below. il Bsns W p 102-3 Je 27 '53

See also

Air mail service
Railway mail service

POSTAL service, Highway

Mail goes through by HPO bus; illustrations with text. Bus Transportation 32:38-9 Ja '53

Post office department looks to highway carriers. il Bus Transportation 32:92 Ag '53

POSTERS

Art of advertising outdoors. H. Stebbins. il Ptr Ink 241:79-81+ D 5 '52

Posters carry double sales wallop; Columbia gas system, inc. il Am Gas Assn Mo 35: 16-17 Jl-Ag '53

See also

Billboards

POSTURE

Relax and produce more. il Mod Ind 25:42-3 Mr '53

Teaching people to sit comfortably. E. Whitmore. il Am Bsns 23:30-1 Ag '53

Why proper seating means more production and better morale. E. Whitmore. il Am Bsns 23:23-4 Ag '53

POTASH

More power for potash mines through better distribution. A. B. Chafetz. il Eng & Min J 153:92-6 D '52

Potash and phosphate, 1952. T. M. Ware. il map Min Cong J 39:62-5+ F '53

Potash symposium; abstracts of papers. G. E. Atwood and others. Rock Prod 56:143-4+ Ap '53

Bibliography

Bibliography of literature on potash as a plant nutrient; reviewed July 1941 through September 1941. 99p American potash institute, 1102 Sixteenth st, N.W., Washington 6, D.C. '52

POTASH feldspar. See Feldspar

POTASH industry and trade

Non-metallics. A. B. Chafetz. il Eng & Min J 154:160-1 Jl '53

Potash deliveries hit peak during 1952-53. Oil Paint & Drug Rep 164:5 Ag 24 '53

Potash deliveries hit peak in '52. Oil Paint & Drug Rep 163:3 Mr 23 '53

Potash import policy rebuke is seen due. Oil Paint & Drug Rep 163:3+ Je 15 '53

Potash makers seek government aid to halt influx of red material. Oil Paint & Drug Rep 163:3+ Ap 27 '53

Potash, 1952. G. T. Harley. Eng & Min J 154:103-4 F '53

Potash probers attack State dept. for allowing Communist imports. Oil Paint & Drug Rep 164:3+ Ag 17 '53

POTASSIUM

Equilibria in aqueous systems containing Sr^{2+}, K^+, Na^+ and Cl^-. G. O. Assarsson. bibliog J Phys Chem 57:207-10 F '53

Model of metal-ammonia solutions, with reference to electron spin resonance experiments. J. Kaplan and C. Kittel. bibliog diag J Chem Phys 21:1429-33 S '53

Paramagnetic resonance absorption in solutions of K in liquid NH_3. C. A. Hutchison, jr. and R. C. Pastor. bibliog Rs Mod Phys 25:285-90 Ja '53

Paramagnetic resonance absorption in solutions of potassium in liquid ammonia. C. A. Hutchison, jr. bibliog diags J Phys Chem 57:546-53 Je '53

Potassium salts output at high point in 1952. Oil Paint & Drug Rep 164:7+ Jl 27 '53

Transition probabilities in sharp and diffuse series of potassium. D. S. Villars. bibliog Opt Soc Am J 42:552-8 Ag '52

Analysis

Flame photometer for routine biochemical use. R. L. Warren. il diags J Sci Instr 29: 284-6 S '52

Study of three suggested reagents for the detection of potassium; abstract. R. J. Winterton. Chem Age (Lond) 67:563 O 25 '52

Isotopes

Branching ratio of potassium 40. R. D. Russell and others. bibliog Phys R 91:1223-4 S 1 '53

Decay of K^{42}. B. Kahn and W. S. Lyon. Phys R 91:1212-13 S 1 '53

Determination of $g^J(^2S_{1/2})$ of potassium in terms of the proton gyromagnetic ratio. P. Franken and S. Koenig. bibliog Phys R 88:199-201 O 15 '52

Excited states of K^{40}. W. W. Buechner and others. bibliog Phys R 91:1502-4 S 15 '53

Investigation of the beta-spectra of Be^{10}, K^{40}, Tc^{99}, and Cl^{36}. L. Feldman and C. S. Wu. bibliog il diag Phys R 87:1091-9 S 15 '52

K^{40} radioactive decay; its branching ratio and its use in geological age determinations. A. K. Mousuf. Phys R 88:150-1 O 1 '52

Liquid argon ionization chamber measurement of the shape of the beta-ray spectrum of K^{40}. J. H. Marshall. bibliog diags Phys R 91:905-9 Ag 15 '53

Mass of K^{40}. W. H. Johnson, jr. Phys R 88: 1213 D 1 '52

POTASSIUM acetate

Use of iodine and potassium acetate in the dehydrogenation of tetrahydro*iso*quinoline; the synthesis of 7-nitro*iso*quinoline. M. D. Potter and E. P. Taylor. Chem Soc J p 1320-1 Ap '53

POTASSIUM alloys

Diffraction of X-rays by liquid alloys of sodium and potassium. N. S. Gingrich and R. E. Henderson. bibliog J Chem Phys 20: 1117-20 Jl '52

See also

Sodium potassium alloys

POTASSIUM aluminum silicate

Thermodynamic properties of sodium-aluminum and potassium-aluminum silicates. K. K. Kelley and others. bibliog 4pls U S Bur Mines Rep of Invest 4955:1-21 '53

POTASSIUM amide

Evidence for α- and β-elimination from deutero alkyl halides with potassium amide. D. G. Hill and others. bibliog Am Chem Soc J 74:5599-602 N 20 '52

Mechanism of the exchange of hydrogen gas with solutions of potassium amide in liquid ammonia. W. K. Wilmarth and J. C. Dayton. Am Chem Soc J 75:4553-6 S 20 '53

Rearrangement in the reaction of chlorobenzene-1-C^{14} with potassium amide. J. D. Roberts and others. bibliog Am Chem Soc J 75:3290-1 Jl 5 '53

POTASSIUM borohydride

Reactions of diborane with alkali metal hydrides and their addition compounds; new syntheses of borohydrides; sodium and potassium borohydrides. H. I. Schlesinger and others. bibliog diags Am Chem Soc J 75:199-204 Ja 5 '53

POTASSIUM bromate

Potentiometric study of the reduction by potassium iodide of potassium bromate in sulphuric and hydrochloric acid solutions. H. T. S. Britton and H. G. Britton. Chem Soc J p3887-92 O '52

POTASSIUM bromide

Band width of the *F* band in KBr at 78°K. I. L. Mador and others. Phys R 91:1277 S 1 '53

Color centers and trapped charge in KCl and KBr. D. Dutton and R. Maurer. bibliog diag Phys R 90:126-30 Ap 1 '53

Conductance at 25° of lithium chloride, sodium and potassium bromides and potassium iodide in methanol, and of lithium chloride, sodium bromide and potassium iodide in water. R. E. Jervis and others. bibliog Am Chem Soc J 75:2855-8 Je 20 '53

Molecular beam investigation of rotational transitions; the rotational levels of KBr and their hyperfine structure. B. P. Fabricand and others. bibliog Phys R 91:1403-8 S 15 '53

Photoemission from silver into AgCl, KBr, NaCl, and new bands of photosensitivity in AgCl. M. A. Gilleo. bibliog diags Phys R 91:534-42 Ag 1 '53

Precision measurements of the enthalpy of KBr and KI at high temperatures. C. B. Cooper. bibliog J Chem Phys 21:777-8 My '53

Refractive index of potassium bromide for infrared radiant energy. R. E. Stephens and others. bibliog Opt Soc Am J 43:110-12 F '53

Refractivity of potassium bromide for visible wavelengths. R. J. Spindler and W. S. Rodney. bibliog il J Res Nat Bur Stand 49:253-62 O '52

POTASSIUM chlorate

Progress in the electrolytic manufacture of chlorates and perchlorates in the United States and Canada since 1902. W. Wallace. Electrochem Soc J 99:sup309C-10C N '52

POTASSIUM chloride

Color centers and trapped charge in KCl and KBr. D. Dutton and R. Maurer. bibliog diag Phys R 90:126-30 Ap 1 '53

Conductivity of potassium chloride in mixed solvents. J. Daly and C. G. Smith. diags Chem Soc J p2779-84 S '53

Determinations of electrokinetic charge and potential by the sedimentation method; pyrex glass in aqueous potassium chloride solutions. G. A. H. Elton and F. G. Hirschler. Chem Soc J p2953-5 Ag '52

Effect of potassium chloride on the equilibrium between ethylenediaminetetraacetate and calcium ions. F. F. Carini and A. E. Martell. bibliog Am Chem Soc J 74:5745-8 N 20 '52

Electron traps in the thallium-activated potassium chloride phosphor. P. D. Johnson and F. E. Williams. bibliog diags J Chem Phys 21:125-30 Ja '53

F-center wave functions and electronic *g*-values in KCl crystals. A. H. Kahn and C. Kittel. bibliog Phys R 89:315 Ja 1 '53

Heat capacity of KCl below 4°K. P. H. Keesom and N. Pearlman. bibliog Phys R 91:1354-5 S 15 '53

High field conductance of copper sulfate relative to potassium chloride at 25°. D. Berg and A. Patterson, jr. Am Chem Soc J 74:4704-5 S 20 '52

Magnetic susceptibility of colored potassium chloride from 1°K to 300°K. C. V. Heer and C. Rauch. bibliog Phys R 90:530-1 My 15 '53

Molecular beam investigation of rotational transitions; the rotational levels of KCl and their hyperfine structure. C. A. Lee and others. bibliog diags Phys R 91:1395-403 S 15 '53

Storage of energy in silver activated potassium chloride. C. E. Mandeville and H. O. Albrecht. bibliog Phys R 91:566-7 Ag 1 '53

POTASSIUM chloriridate. See Potassium iridium chloride

POTASSIUM chloromercurate

Nuclear magnetic resonance experiment on a four-proton system in a single crystal of $K_2HgCl_4 \cdot H_2O$. J. Itoh and others. diags J Chem Phys 20:1503-4 S '52; Correction. 21:190 Ja '53

POTASSIUM chromates

Complex ions of chromium; *trans-cis* isomerization of potassium dioxalatodiaquochromate (III). R. E. Hamm. bibliog Am Chem Soc J 75:609-11 F 5 '53

POTASSIUM cobaltinitrite

X-ray and electron-microscope examination of potassium cobaltinitrite precipitates; abstract. J. W. Robinson. Chem Age (Lond) 67:495-6 O 11 '52

POTASSIUM compounds

Critical concentrations of potassium *n*-alkanecarboxylates as determined by the change in color and spectrum of pinacyanole. S. H. Herzfeld. bibliog J Phys Chem 56:953-9 N '52

Effect of salt on the critical concentrations of potassium *n*-alkanecarboxylates as determined by the change in color of pinacyanole. S. H. Herzfeld. bibliog J Phys Chem 56:959-63 N '52

Interpretation of the refractive index measurements on the ternary system RbCl-RbBr-KBr-KCl. J. E. Ricci. diags Am Chem Soc J 74:5788-90 N 20 '52

Potassium salts output reached new high in '52. Oil Paint & Drug Rep 164:43 O 12 '53

Preparation and some properties of potassium hydroxopentacyanocobaltate(III). L. C. Smith, J. Kleinberg and E. Griswold. bibliog Am Chem Soc J 75:449-51 Ja 20 '53

Vat dyeing acrylonitrile polymers; ionizable potassium compounds used; patent. Am Dyestuff Rep 41:770 N 24 '52

POTASSIUM cyanide

Estimation of fructose by the cyanohydrin reaction. R. D. Coombs, 3d, A. R. Reid and C. B. Purves. Anal Chem 25:511-12 Mr '53

Failure of cyanide to inhibit β-amylase. M. Nakamura. bibliog Science 117:629-31 Je 5 '53

Simplified analytical procedure for potassium cyanide baths; abstract. W. Savelsberg. Metal Finishing 50:84 N '52

POTASSIUM cyanomanganate

Reduction of potassium hexacyanomanganate (III) by potassium in liquid ammonia. V. J. Christensen, J. Kleinberg and A. W. Davidson. bibliog diag Am Chem Soc J 75:2495-7 My 20 '53

POTASSIUM dichromate

Influence of potassium dichromate on stainless steel in deaerated sulphuric acid. I. D. G. Berwick. Chem & Ind p408-9 Ap 25 '53

Reaction of amine oxides with aqueous potassium dichromate. P. J. Scheuer, W. I. Kimoto and K. Ohinata. bibliog Am Chem Soc J 75:3029-30 Je 20 '53

POTASSIUM dihydrogen phosphate. See Potassium phosphates

POTASSIUM ferricyanide

Electrochemical behavior of aluminum; in buffered and alkaline solutions of potassium ferricyanide and in sodium hydroxide. J. V. Petrocelli. Electrochem Soc J 99:513-19 D '52

POTASSIUM ferrocyanide

Kinetics of the reaction of potassium ferrocyanide and nitrosobenzene; the catalytic action of mercuric ions and ultra-violet light. S. Ašperger, I. Murati and O. Čupahin. Chem Soc J p 1041-6 Ap '53

POTASSIUM fluoride

Complex fluorides; the structural chemistry of some complex fluorides of potassium, rubidium, cæsium, ammonium, and thallium. B. Cox and A. G. Sharpe. Chem Soc J p 1783-4 Je '53

POTASSIUM hydroxide

Alkaline cleavage of tetrasubstituted silanes. H. Gilman, A. G. Brook and L. S. Miller. bibliog Am Chem Soc J 75:4531-4 S 20 '53

Gas absorption; absorption of carbon dioxide from air by sodium and potassium hydroxides. H. A. Blum, L. F. Stutzman and W. S. Dodds. bibliog flow sheets Ind & Eng Chem 44:2969-74 D '52

POTASSIUM hydroxylamine disulfonate
Anisotropy in the paramagnetic resonance spectrum of peroxylamine disulfonate ion. S. I. Weissman and D. Banfill. bibliog Am Chem Soc J 75:2534 My 20 '53

POTASSIUM iodide
Conductance at 25° of lithium chloride, sodium and potassium bromides and potassium iodide in methanol, and of lithium chloride, sodium bromide and potassium iodide in water. R. E. Jervis and others. bibliog Am Chem Soc J 75:2855-8 Je 20 '53
Exchange reaction between substituted benzyl iodides and potassium iodide; benzyl iodide. P. Stillson and M. Kahn. bibliog Am Chem Soc J 75:3579-81 Jl 20 '53
Modified short iodide method for the determination of copper in ores and concentrator products to allow recovery of the reagents. R. G. W. Willcocks. J Ap Chem 2:608-12 O '52
Potentiometric study of the reduction by potassium iodide of potassium bromate in sulphuric and hydrochloric acid solutions. H. T. S. Britton and H. G. Britton. Chem Soc J p3887-92 O '52
Potentiometric titration of iodic acid with potassium iodide in sulphuric and hydrochloric acid solutions. H. T. S. Britton, R. E. Cockaday and J. K. Foreman. Chem Soc J p3877-9 O '52
Precision measurements of the enthalpy of KBr and KI at high temperatures. C. B. Cooper. bibliog J Chem Phys 21:777-8 My '53
Production of iodine from solutions of potassium iodide irradiated with hard X-rays. E. R. Johnson. J Chem Phys 21:1417-18 Ag '53
Some optical properties of potassium iodide-thallium phosphors. P. H. Yuster and C. J. Delbecq. bibliog diag J Chem Phys 21:892-8 My '53

Analysis

Determination of thallium by radioactivation; application to potassium iodide. C. J. Delbecq, L. E. Glendenin and P. H. Yuster. bibliog Anal Chem 25:350-1 F '53

POTASSIUM iridium chloride
Intermediate compounds formed when horseradish peroxidase reacts with potassium molybdicyanide and potassium chloriridate. P. George. bibliog Science 117:220-1 F 27 '53

POTASSIUM laurate
X-ray study of potassium laurate solutions. D. E. Andersen and G. B. Carpenter. bibliog Am Chem Soc J 75:850-6 F 20 '53

POTASSIUM molybdate
Aqueous solubility relations of potassium molybdate, and aqueous ternary isotherms at 25° with KOH, KNO_3 and KLO_3. J. E. Ricci and F. J. Loprest. Am Chem Soc J 75:1224-6 Mr 5 '53

POTASSIUM molybdicyanide
Intermediate compounds formed when horseradish peroxidase reacts with potassium molybdicyanide and potassium chloriridate. P. George. bibliog Science 117:220-1 F 27 '53

POTASSIUM nitrate
Inorganic corrosion inhibitors in acid solution. C. V. King and others. bibliog Electrochem Soc J 99:423-6 O '52

Manufacture

Purification of potassium nitrate process liquors; comparison between the filtration, froth flotation and sedimentation of insolubles. S. A. Chodkiewicz. J Ap Chem 2:639-41 N '52

POTASSIUM nitrosodisulfonate. See Fremy's salt

POTASSIUM oxides
Heat capacities at low temperatures and entropies at 298.16°K. of sodium superoxide, potassium superoxide and sodium peroxide. S. S. Todd. Am Chem Soc J 75:1229-31 Mr 5 '53
Influence of Al_2O_3, ZnO, and K_2O on the opacity of fluoride-opacified glasses. R. J. Callow. Am Cer Soc J 35:120-2 My 1 '52; Excerpts. Glass Ind 33:661+ D '52
Reconnaissance of liquidus relations in the system $K_2O{\cdot}2SiO_2$—FeO—SiO_2. E. Roedder. diags Am J Sci Bowen vol p435-56 '52

POTASSIUM perchlorate
Infra-red spectrum of crystalline potassium perchlorate; reassignment of the lower fundamental frequencies of the perchlorate ion. H. Cohn. Chem Soc J p4282-4 N '52
Thermal decomposition of potassium perchlorate. L. L. Bircumshaw and T. R. Phillips. diag Chem Soc J p703-7 F '53

POTASSIUM permanganate
Improved permanganate time test for control of ethyl alcohol quality. F. T. Weiss and E. D. Peters. diag Anal Chem 24:1658-60 O '52
Stages in oxidations of organic compounds by potassium permanganate; the permanganate-manganate stage; the manganic-manganous stage. A. Y. Drummond and W. A. Waters. Chem Soc J p435-43 F '53

POTASSIUM phosphates
Characterization of nonorthophosphate P^{32} in neutron-irradiated potassium dihydrogen phosphate. J. W. Borland, A. J. MacKenzie and W. L. Hill. bibliog Ind & Eng Chem 44:2726-8 N '52
Domain structure of Rochelle salt and KH_2PO_4. T. Mitsui and J. Furuichi. bibliog il diags Phys R 90:193-202 Ap 15 '53
Potassium metaphosphate; molecular weight, viscosity behavior and rate of hydrolysis of non-cross-linked polymer. R. Pfanstiel and R. K. Iler. bibliog Am Chem Soc J 74:6059-64 D 5 '52

POTASSIUM phthalate
Thermal stability of potassium acid phthalate. E. R. Caley and R. H. Brundin. bibliog Anal Chem 25:142-5 Ja '53

POTASSIUM pyrosulfate
Physico-chemical studies on dusts; accuracy of chemical estimation of free silica in rocks and mineral dusts. W. M. Cumming, P. B. Dempster and P. D. Ritchie. bibliog J Ap Chem 2:658-63 N '52

POTASSIUM ruthenium fluoride
New fluorine compounds of ruthenium; ruthenium trifluoride and potassium ruthenium fluoride. E. E. Aynsley and others. Chem & Ind p 1002 O 11 '52

POTASSIUM silicates
Streaming potential measurements and the adhesion of phosphors on cathode ray screens. J. F. Hazel and G. L. Schnable. bibliog diags Electrochem Soc J 100:65-71 F '53
See also
Leucite

POTASSIUM sodium tartrate
Domain structure of Rochelle salt and KH_2PO_4. T. Mitsui and J. Furuichi. bibliog il diags Phys R 90:193-202 Ap 15 '53

POTASSIUM sulfate
Production of fertilizer from phosphate rock by fusion with magnesium and potassium sulfates. G. L. Bridger and D. R. Boylan. bibliog flow sheet il Ind & Eng Chem 45:646-52 Mr '53

POTASSIUM thorium fluoride
Potassium thorium fluorides. W. J. Asker, E. R. Segnit and A. W. Wylie. Chem Soc J p4470-9 N '52

POTASSIUM vanadate
Crystal structure of $KVO_3{\cdot}H_2O$. C. L. Christ and others. diags J Chem Phys 21:1114 Je '53

POTATO chips
Battery of chip packagers lops labor costs; Blue Bird potato chips, inc. il Food Eng 25:50 Je '53
They bet, and won with quality chips; John E. Cain co. J. V. Ziemba. il Food Eng 25:54-6 S '53

POTATO starch
Pasting of potato starch in Corn Industries recording viscometer. A. H. A. de Willigen. bibliog il Anal Chem 25:314-17 F '53

POTATOES
Potato futures give bulls a bad day. il Bsns W p 122-5+ O 25 '52
Potato harvesting machinery. il Engineer 194:512-14 O 17 '52
Potato prices slump; futures volume soars. Barron's 33:27-8 F 23 '53
Social influence of the potato; Peruvian and Irish. R. N. Salaman. il Sci Am 187:50-2+ D '52

POTATOES—*Continued*

Diseases and pests

Eelworm problem; biological aspects; the potato eelworm hatching factor. A. W. Johnson. bibliog Chem & Ind p998-9 O 11 '52

Transportation

Cross country potato race. il Ry Age 135: 101-3 Ag 10 '53

POTATOES, Dried

Better potato dehydrating by slow freezing. R. C. Hall. bibliog il Food Eng 25:90-1+ Mr '53

POTENTIAL, Electric

Application of oxidation-reduction potentials to the control of sewage treatment processes. F. E. Nussberger. bibliog flow diags diag Sewage & Ind Wastes 25:1003-14 S '53

Cathode polarization potential during the electrodeposition of copper; effect of the cathode base upon the cathode polarization potential and the crystal structure of the deposit. L. L. Shreir and J. W. Smith. bibliog il Electrochem Soc J 99:450-6 N '52

Certain explicit relationships between phase shift and scattering potential. N. Levinson. bibliog Phys R 89:755-7 F 15 '53

Chemistry of Ru(VI), -(VII) and -(VIII); reactions, oxidation potentials and spectra. R. E. Connick and C. R. Hurley. bibliog Am Chem Soc J 74:5012-15 O 20 '52

Comparison of Slater's and Peckar's treatments of perturbed periodic potentials. H. Winston. Phys R 89:317-18 Ja 1 '53

Construction of a potential from a phase shift. R. Jost and W. Kohn. bibliog diags Phys R 87:977-92 S 15 '52

Contact potentials. R. H. Müller. Anal Chem 25:sup28A+ Mr '53

Current flow in cylinders. W. R. Smythe. bibliog diags J Ap Phys 24:70-3 Ja '53

Determination of electrokinetic charge and potential by the sedimentation method; silica in some aqueous chloride solutions. C. I. Dublin and G. A. H. Elton. Chem Soc J p 1168-72 Ap '53

Determinations of electrokinetic charge and potential by the sedimentation method. D. P. Benton, G. A. H. Elton and C. I. Dulin. Chem Soc J p2096-101 Jl '53

Determinations of electrokinetic charge and potential by the sedimentation method; pyrex glass in aqueous potassium chloride solutions. G. A. H. Elton and F. G. Hirschler. Chem Soc J p2953-5 Ag '52

Direct comparison of the Kelvin and electron beam methods of contact potential measurement. P. A. Anderson. bibliog diag Phys R 88:655-8 N 1 '52

D-c overpotential testing experience on high-voltage generators; abstract. R. J. Alke. Elec Eng 71:1131 D '52

Effect of stress on metal electrode potentials. R. E. Fryxell and N. H. Nachtrieb. bibliog il diags Electrochem Soc J 99:495-503 D '52

Effect of temperature on the cathode potential during nickel plating. D. R. Turner. bibliog diags Electrochem Soc J 100:15-21 Ja '53

Electric potential produced by two point current sources in a homogeneous conducting sphere. E. Frank. bibliog J Ap Phys 23: 1225-8 N '52

Electrochemical measurements in pyridine; the redox potentials of some quinones. A. K. Gupta. Chem Soc J p3479-83 S '52

Electrochemical measurements in pyridine; the system Cu-Cu$^+$-Cu^{++}. A. K. Gupta. diag Chem Soc J p3473-9 S '52

Electrode potentials in liquid hydrogen fluoride. G. G. Koerber and T. De Vries. bibliog diags Am Chem Soc J 74:5008-11 O 20 '52

Electrokinetic relations in the quartz-acetone system. P. B. Lorenz. bibliog diags J Phys Chem 57:430-4 Ap '53

Electromotive force studies in aqueous solutions of hydrochloric acid and glycerol from 0 to 40°. S. B. Knight, H. D. Crockford and F. W. James. bibliog J Phys Chem 57: 463-6 Ap '53

Equivalent potentials. R. Jost and W. Kohn. bibliog diags Phys R 88:382-5 O 15 '52

Induced thermoelectric potential from radiation damage. A. Andrew and C. R. Davidson. diag Phys R 89:876-7 F 15 '53

Ionic equilibria in aqueous and mixed solvent solutions of silver acetate and silver monochloroacetate. F. H. MacDougall and L. E. Topol. bibliog J Phys Chem 56:1090-3 D '52

Liquid metals; the viscosity of mercury vapor and the potential function for mercury. L. F. Epstein and M. D. Powers. bibliog J Phys Chem 57:336-41 Mr '53

Oxidation potentials of the neptunium(III)-(IV) and the neptunium(V)-(VI) couples in perchloric acid. D. Cohen and J. C. Hindman. bibliog Am Chem Soc J 74:4679-82 S 20 '52

Oxidation-reduction potential of the sexa- and quinquevalent molybdenum system. H. K. El-Shamy and A. M. El-Aggan. Am Chem Soc J 75:1187-90 Mr 5 '53

Phenomenology of electro-osmosis and streaming potential. P. B. Lorenz. bibliog J Phys Chem 56:775-8 Je '52

Post-injection barrier electromotive force of *p-n* junctions. B. R. Gossick. bibliog il Phys R 91:1012-13 Ag 15 '53

Potential distribution for space-charge limited current between a plane accelerating grid and parallel anode. E. G. Ramberg and L. Malter. diag J Ap Phys 23:1333-5 D '52

Principles of copper dyeing of polyacrylonitrile fibers; the controlled redox-potential method. R. H. Blaker. il diags Am Dyestuff Rep 42:76-80 F 2 '53

Properties of freshly formed surfaces; dynamic surface potentials. C. C. Addison and D. Litherland. diag Chem Soc J p 1143-67 Ap '53

Solubility of hydrous germanous oxide and the potential of the germanous oxide-germanic oxide couple. W. L. Jolly and W. M. Latimer. Am Chem Soc J 74:5751-2 N 20 '52

Stability constants of the stannous bromide complexes from 0 to 45° from electromotive force measurements. C. E. Vanderzee. bibliog Am Chem Soc J 74:4806-8 O 5 '52

Standard electrode potential of the iron-ferrous ion couple at 25°. W. A. Patrick and W. E. Thompson. bibliog diag Am Chem Soc J 75:1184-7 Mr 5 '53

Streaming potential measurements and the adhesion of phosphors on cathode ray screens. J. F. Hazel and G. L. Schnable. bibliog diags Electrochem Soc J 100:65-71 F '53

Streaming potentials across glass capillaries for sinusoidal pressure. R. G. Packard. bibliog diags J Chem Phys 21:303-7 F '53

Studies of ionization efficiency; the ionization potentials of some organic molecules. J. D. Morrison and A. J. C. Nicholson. bibliog J Chem Phys 20:1021-3 Je '52

Study of iodide-iodine solutions with the emf centrifuge. D. A. MacInnes and M. O. Dayhoff. bibliog diags J Chem Phys 20: 1034-8 Je '52

Substituted benzidines and related compounds as reagents in analytical chemistry; the oxidation potentials of naphthidine, 3 : 3′-dimethylnaphthidine, and their sulphonic acids. R. Belcher, A. J. Nutten and W. I. Stephen. Chem Soc J p3857-61 O '52

Tables for second born approximation scattering from various potential fields. L. Mower. Phys R 89:947-9 Mr 1 '53

Theory of membrane potential. M. Nagasawa and Y. Kobatake. diags J Phys Chem 56: 1017-24 N '52

Thermodynamics of aqueous 2-propanol-sulfuric acid solutions from electromotive force measurements. W. N. Whitten and J. E. Land. Am Chem Soc J 75:2202-4 My 5 '53

Thermodynamics of ionized water in strontium chloride solutions from electromotive force measurements. H. S. Harned and T. R. Paxton. bibliog J Phys Chem 57:531-5 My '53

Thermogalvanic potentials; the application of thermodynamics to thermogalvanic data. H. Levin and others. bibliog(76 ref) diags Electrochem Soc J 98:388-94; 99:475-82 O '51, D '52

Time dependence of the potential in electrode reactions. W. R. Busing and W. Kauzmann. bibliog diags J Chem Phys 20: 1129-43 Jl '52

POTENTIAL, Electric—*Continued*

Van der Waals' *a* and ionization potential of inert gases. Y. P. Varshni. J Chem Phys 21:1119 Je '53

Work functions and chemical potentials. P. Van Rysselberghe. bibliog J Chem Phys 21:1550-1 S '53

POTENTIAL functions. See Functions, Potential

POTENTIOMETERS

Accuracy of potentiometer linearity measurements. R. McDonald and I. Hogan. Tele-Tech 12:88-90+ Ag '53

Characteristics of precision servo computer potentiometers. D. C. Duncan. diags Tele-Tech 11:52-4+ N '52

Current trends in potentiometers. P. S. Schmidt. il diags Product Eng 23:166-72 O '52

Equipotential plotting, using untreated writing paper. C. T. Murray and D. L. Hollway. diag J Ap Phys 24:110 Ja '53

Holding fixtures for potentiometer units. il Electronics 26:266+ Ap '53

Modification of a fixed-range potentiometer recorder into a variable-range recorder. F. A. Kanda and R. C. Shaver. diags Am Cer Soc J 36:101-4 Mr 1 '53

Reproducibility of electronic potentiometer pyrometers. R. H. Munch. Ind & Eng Chem 44:sup77A-8A+ D '52

Simplified recording potentiometer. il Product Eng 23:210 N '52

POTENTIOMETRIC titration. See Volumetric analysis

POTOMAC electric power company

Bonds and common stock offered. Comm & Fin Chr 177:2397 Je 1 '53

POTSDAM agreement. See Berlin conference, 1945—Potsdam agreement

POTTERIES

Craft ceramist Utopia is potters' paradise in the dunes; Hannell pottery. il Cer Ind 61:72-3 Ag '53

Famous pottery of character; Rowantrees kiln. il Cer Ind 61:76-7 Jl '53

Sketch of a famous pottery; Bennington potteries. A. E. MacSwiggan. Cer Ind 60:143-4+ Ap '53

Small pottery. T. A. Randall. plan diags il Am Cer Soc Bul 32:81-4 Mr 15 '53

Electric equipment

Pottery decorating kiln. il Elec R (Lond) 153:247-8 Jl 31 '53

Equipment

Automatic tank glazing unit sets high production rate; Abingdon potteries. il Cer Ind 59:96-7 D '52

Decorating kiln holds spread to ten degrees. il Cer Ind 59:56 D '52

Father, son, fate partners in stoneware plant; Gainey ceramics co. il Cer Ind 61:72-3 Jl '53

Gas firing in the pottery industry. Engineering 175:533 Ap 24 '53

Mechanization of potting. A. J. Wahl and G. J. Croninger. il Am Cer Soc Bul 32:120-2 Ap 15 '53

New separator doubles slip screening capacity; Sweco separator at Universal Rundle. il Cer Ind 61:91+ O '53

Pip-placing machine for the pottery industry. il Engineering 174:578-9 O 31 '52

72-ft. tunnel kiln anyone can build. B. I. Day. il diags Cer Ind 60:78-9+ My '53; Same. Brick & Clay Rec 123:34-5+ Ag '53

Streamlined production plus modern equipment increase output; Sascha Brastoff products inc. il Cer Ind 61:88-9+ O '53

Vernon kiln adopts new type grinder. il Cer Ind 60:143+ Je '53

Vernon kilns collects dividends from improved handling methods. il Cer Ind 59:102-3+ O '52

Heating and ventilation

Frit dust reclaim ends needless loss. il Cer Ind 59:80 O '52

Modernization ups production 200 per cent; Abingdon potteries. F. S. Lappin. il Mill & Factory 51:118-19 D '52

Management

Production control system; Vernon kilns. L. D. Siessor. Cer Ind 59:86+ N '52

POTTERY

American ceramic society Whitewares division fall meeting, Bedford Springs, Pa.; abstracts of papers. Cer Ind 59:85+ N '52

Black Mountain seminar on pottery. il Cer Ind 59:103-4+ D '52

CI two minute ideas for the whiteware plant operator. il Cer Ind 60:71-3 Ap '53 [cont monthly]

Chinaware defect causes and cures (cont). J. A. Burns. Cer Ind 59:82 N '52; 60:71 Mr; 80 My; 111 Je '53

Coronation china in Great Britain. K. B. Czarnecki. il Am Cer Soc Bul 32:286-7 Ag 15 '53

Expect new plea for higher tariff on imported household chinaware. Cer Ind 60:72 Mr '53

Florida potter looks to Latin America for markets; Poinciana chinaware, inc. il Cer Ind 60:115 Je '53

Sharing secrets brings rewards. F. C. Ball. il Cer Ind 60:76+ Mr '53

See also

Ceramic materials
Ceramics
Clay
Enamel and enameling
Glazes
Kilns
Potteries
Tableware
Tiles

Decoration

Three keys to good hand painting. V. Broomhall. il Cer Ind 60:82 My '53

Exhibitions

South California roundup. J. E. Tufft. il Cer Ind 60:120 Je '53

Manufacture

Application of descriptive color system to china manufacture. W. G. Coulter. il diags Am Cer Soc Bul 31:340-2 S 15 '52

How to develop low temperature bodies to suit your own needs. H. W. Fishkin. Cer Ind 59:93+ N '52

In-built quality key to Franciscan popularity; Franciscan earthenware; Gladding, McBean & co. il Cer Ind 60:66-7+ F '53

New paints may aid process control. Cer Ind 59:87 D '52

Pottery bodies; recipes. Cer Ind 60:144-7 Ja '53

Precision makes possible drain cast whiteware for cigarette lighters; Evans case co. il Cer Ind 61:86-7 O '53

Study of eutectic glasses as fluxes in whiteware bodies. A. S. Watts and others. Am Cer Soc Bul 31:456-61 N 15 '52

What causes hard spots in bisque? Cer Ind 59:83 N '52

Marks

Dictionary of marks; pottery and porcelain. R. M. Kovel and T. H. Kovel. 278p $3 Crown publishers, 419 Fourth av, New York 16 '53

Terminology

Revised report of the nomenclature committee; White wares division. Am Cer Soc Bul 31:261+ Jl 15 '52

Transportation

Economical cushioning; Haeger potteries finds pads and blankets less costly than loose excelsior. il Mod Packaging 27:152-3+ O '53

POTTERY, Danish

Denmark's industrial art. M. K. Morgan. il Am Cer Soc Bul 32:88-90 Mr 15 '53

POTTERY, Swedish

Swedish ceramic study. il Am Cer Soc Bul 32:87-8 Mr 15 '53

POTTERY industry

USPA annual meeting, 74th. Cer Ind 50:156-9 Ja '53

Denmark

Denmark's industrial art. M. K. Morgan. il Am Cer Soc Bul 32:88-90 Mr 15 '53

Great Britain

Coronation china in Great Britain. K. B. Czarnecki. il Am Cer Soc Bul 32:286-7 Ag 15 '53

POTTERY research

Use of native clays in high-grade pottery. G. B. Leach. il Cer Ind 60:86-8 My '53

POUGHKEEPSIE, New York

Sanitary affairs

No more gripes about garbage. il Pub Works 84:57+ F '53

POULTRY

Adrenal hypertrophy in the white leghorn cockerel after treatment with thiouracil and thyroidectomy. D. M. Morris. Science 117: 61-2 Ja 16 '53

Efficient poultry keeping; appliances on view at Olympia. il Elec R (Lond) 151:1179-80 N 28 '52

Influence of X-irradiation and atabrine upon feathering in the chick. C. D. Douglass and others. il Science 117:274 Mr 13 '53

Mode of action of antibiotics in animal nutrition; abstract. M. E. Coates. Chem & Ind p374 Ap 18 '53

See also

Turkeys

Diseases and pests

Salmonella infections in chickens and turkeys; abstract. L. C. Heemstra. Pub Health Rep 67:986-7 O '52

Feeding

Algae (chlorella) as a source of nutrients for the chick. G. F. Combs. Science 116: 453-4 O 24 '52

Factors affecting cereals as a food. J. Duckworth. Chem & Ind p 1139-45 bibliog(134 ref, p 1144-5) N 22 '52

POULTRY, Frozen

Chicken for everybody; Keeshin's five-color waxed wrapper for cut-up frozen fowl. il Mod Packaging 26:103-5 Ja '53

POULTRY as food

Films for pre-packaged poultry. A. F. Kish. il Mod Packaging 26:130-4+ Jl '53

POULTRY brooders, Electric

Home freezer broods chicks at 20 F; infrared lamp provided direct heat. W. Kollmayr. il Elec World 139:140+ Mr 9 '53

Infrared brooder reduces mortality of chicks. W. R. Kollmayr. il Elec World News ed 139:43 Ja 5 '53

POULTRY food

Advertising

12-for-the-price-of-11 deal moves small orders in off season; Stone mountain grit co. C. Davidson. il Ptr Ink 242:75-6 Ja 16 '53

POULTRY hatcheries

Market possibilities for air conditioning; air conditioned chicken hatchery. il Dom Eng 181:97 Ap '53

POULTRY industry and trade

Georgia

Celebrating a new cash crop for Georgia. il Bsns W p 146-8+ My 30 '53

POULTRY processing plants

Better broilers processed better; Swift & co. P. G. Mensing and C. L. Morris. Food Eng 25:76-8+ Ap '53

Poultry; engineered A to Z. D. Ward. il Food Eng 25:92-3 Ag '53

Square, light shipper ups their loads and minimizes handling labor; Queen City poultry co. G. Iannelli. il Food Eng 25:95+ Mr '53

Ties plant to business tides; Fox deluxe foods. H. M. Williams. il plan diag Food Eng 24:84-8 D '52

POWDERED iron. See Iron, Powdered

POWDERED metals. See Metal powders

POWDERED steel. See Steel, Powdered

POWDERED zirconium. See Zirconium, Powdered

POWDERS

Capillary condensation in contact zones between nonporous particles of a powder. I. Higuti and H. Utsugi. diag J Chem Phys 20:1180-1 Jl '52

Induced conductivity in luminescent powders; ac impedance measurements. H. Kallman and others. bibliog Phys R 89:700-7 F 15 '53

Infrared absorption of the flame of a simple double-base powder. H. F. White and others. J Chem Phys 21:1399 Ag '53

Metering of powdered solids in gas-solids mixtures. L. Farbar. bibliog flow diag il diags Ind & Eng Chem 44:2947-55 D '52

Thermoremanent magnetization of fine powders. L. Néel. bibliog Rs Mod Phys 25:293-6 Ja '53

See also

Crushing machinery
Metal powders
Particles

POWELL, Edwin Burnley

Sketch. Mech Eng 75:263 Mr '53

POWER (mechanics)

Romance of power and fuels. J. E. Tobey. Mech Eng 74:812-15 O '52

Statistical year-book of the World power conference; number six; annual statistics for 1948-1950. F. Brown, ed. 163p £1 15s World power conference, 201 Grand bldgs, Trafalgar square, London, W.C. 2 '52

See also

Airplanes—Auxiliary power
Atomic power
Chemical plants—Power
Coal mines and mining—Power
Compressed air
Dynamometers
Electric power
Horsepower
Hydroelectric power
Machinery
Mining engineering—Power
Petroleum engineering—Power
Power factor
Power plants
Power transmission
Pumping stations—Power
Servomechanisms
Ship propulsion
Solar power
Steam
Steel works—Power
Water power
Wind power

POWER cartridge

New British power tool; F. H. Bourner and co. il Elec J 150:2288 Je 26 '53

Supa-Dynamic power driving tool. il diag Engineer 195:904 Je 26 '53; Elec R (Lond) 152:1483 Je 26 '53

POWER cost

How to control costs by kilowatts. D. E. Pierce. Chem Eng 60:195-7 Ja '53

How to cut your power bill. Factory Management 111:107-9 S '53

POWER factor

Case study shows savings through power factor correction. A. R. Waehner. Elec World 139:108-9 F 23 '53

Control of demand and power factor on electric arc furnaces. H. G. Heath. Iron & Steel Eng 29:78-81; Discussion. 81-3 O '52

Measurement of power, factor, and active and reactive power, of balanced *n*-phase *n*-wire systems. J. E. Parton. bibliog(37 titles) diags Inst E E Proc 99 pt 2:620-3 D '52

Permitol capacitors; correction of fluorescent lamp circuit power factor. T. F. Robinson and G. H. Dyer. il diags Elec R (Lond) 151:329-32 Ag 15 '52

Power factor correction of fractional horsepower motors. H. I. Miller. Edison Elec Inst Bul 21:317-18+ Ag '53

Power factor of electric discharge lamps. Illum Eng 48:171 Mr '53

Problem of low power factor air conditioning. R. F. Scott. Edison Elec Inst Bul 21:313-14 Ag '53

POWER factor, Dielectric

Testing and specification of bushings in relation to service conditions; abstracts. H. Barker and H. Davies. diag Engineer 195: 362 Mr 6 '53; Elec R (Lond) 152:513; Discussion. 513-14 Mr 6 '53; Elec J 150:787-8 Mr 6 '53

POWER plants

Basic power plant figuring (cont). W. H. Engelman and J. P. AuWerter. Power Eng 56:76-9 N; 75-7 D '52; 57:77-9 Mr; 74-5 Jl; 100-3 O '53

Big top speeds job during winter months in frigid Alaska; extension to power plant of Ladd air force base. il Constr Methods 35: 80-1+ My '53

Gas turbine in relation to fuel economy. Karrer. diags Engineer 194:274-7 Ag 29 '52

Hot-spring power plant. plan Mech Eng 75: 325 Ap '53

How to figure chimney sway graphically. P. Rogers. diags Power Eng 57:92-3 Ap '53

How to organize your new power plant. D. C. Swift. Power 97:78-81+ Je; 88 Jl; 92-3+ Ag '53

POWER plants—*Continued*

1953 modern plant survey. Power 97:35-58 Mid-S '53

Plant construction schedule. W. V. King. Power 96:78-9 N '52

Population and power; annual forecast, 1953. il map diags Power Eng 57:65-80 Ja '53

Power from hot water. flow diag il diags Engineer 194:719-21 N 28 '52; Engineering 174:660-1, 691-3 N 21-28 '52

Steam and power in the gas industry; abstract. L. J. Clark. Engineering 174:804-5 D 19 '52

Structural support for plant loads. A. G. Hult. il diags Power 97:80-3+ Ja '53

Technical briefs; latest engineering developments for busy power men. Published in monthly numbers of Power

Vibration is a trouble-maker. B. Dopp. Heating-Piping 25:108-10 My '53

See also

Atomic power
Boiler plants
Electric plants
Factories—Electric equipment
Gas turbines
Hydroelectric plants
Steam plants

Costs

Figuring coal costs; charts; data sheet. C. W. Stevens. Power 97:105 Je '53

Industrial power plant construction costs since World war II. T. A. Fearnside and F. C. Cheney. Blast F & Steel Pl 41:420-1+ Ap '53

Industry's experts fight power costs. C. S. Robinson and others. il diag Power 97:100-2+ Mr '53

Modernization has to be sold. diags Power 97:71-5 Ag '53

On-site generator plants study shows aluminum reduction at over-all power cost of $168/kw. il diag Light Metal Age 11:16-17+ Ap '53

Plant costs can be held down; ASME meeting symposium. Elec World 138:93+ D 15 '52

Plant economy starts at the turbo-generator. E. H. Krieg. il Elec World 139:130-2 Ap 20 '53

Diesel engine auxiliaries

Automatic stand-by power units. W. L. Stelter. il diag Diesel Power 31:48-9 Jl '53

Diesel engine plants

Check list stops boners in Diesel power plant. il Power 96:130-1 D '52

Conditioned combustion air jacks Diesel output. W. R. Crooks and E. L. Miller. il diags Power 97:100-2+ F '53

Diesel cuts scrap yard fuel costs; Consumers steel & supply co. il Power 96:80-1 N '52

Diesel improves steam plant efficiency; Howard university. V. H. Warrick. il Diesel Power 31:36-8 Mr '53

Don't forget your Diesel exhaust lines. C. M. Jones. il diags Power 97:110-11 Ag '53

Garnetting plant saves money with Diesel-driven generator. E. H. Helliwell. il Textile World 103:143+ Ja '53

How to keep your Diesels running smoothly. L. J. Murphy. il diag Mill & Factory 53:80-3 Ag '53

Junction station converts to Diesel power. S. D. Taber and F. E. Sesler. il diag Oil & Gas J 51:315+ O 13 '52

Power-house at Maple Lodge sewage disposal works. il Engineer 194:687-8 N 21 '52; Engineering 174:628-9 N 14 '52

Preventive maintenance records; Rural cooperative power association. H. Greiner. il map Diesel Power 31:46-9 Mr '53

Rail-mounted standby power. il Diesel Power 31:60-1 Mr '53

Rockaway sewage treatment works. il Diesel Power 31:36-9 Jl '53

Stand-by power in Mexico. W. J. Granberg. il Diesel Power 31:54-5 Ag '53

Supercharged dual fuel engines at Nassau County sewage works. W. L. Kaehrle. flow diag il diag Water & Sewage Works 99:470-80 N '52; Same cond. Diesel Power 30:40-5 N '52

Employees

How to organize your new power plant; plant personnel make or break station operation and maintenance. D. C. Swift. Power 97:92-3+ Ag '53

Train night watchmen to check boiler water gages. Power Eng 57:78 F '53

Equipment

Anti-swing crane increases safety and accuracy. diags Power Eng 57:81 Mr '53

Automatic controls insure emergency power when needed. diag Automotive Ind 107:45+ D 15 '52

Beet sugar production; modernization of generation and factory electrical equipment. il Elec R (Lond) 151:846-8 O 17 '52; Electrician 149:983-4 O 3 '52; Engineering 174:710 N 28 '52

Bigger and better power plants to meet soaring demand economically. C. R. Earle. il diags Power Eng 57:70-5 Ja '53

Boilers and coal handling; some outstanding installations in 1952. il Elec J 150:613-14 F 20 '53

Chemical plant builds for continuity; Ciba states, ltd. P. Kronowitt. il diag Power 97:98-100+ S '53

Chuquicamata sulphide plant; waste heat power plant. B. F. Koch. flow sheet il diag Min Eng 4:1207-9 D '52

Coal handling. W. G. Hudson. il Power Eng 57:90-1 Ap '53

Creep properties of steels for power plants. A. E. Johnson and N. E. Frost. Engineering 175:25-8, 58-60, 249-50 Ja 2-9, F 20 '53

Developments in steel castings in the heavy power plant industry. F. Buckley. bibliog diags Inst Mech Eng Proc (A) 167 no 2:177-83, pl 1-4; Discussion. 183-9, pl 5-6 '53

Diesel engine directory; manufacturers of engines and plant accessories. Diesel Power 31:47-73 Ja; 53-74 Jl '53

Directory for modernization; modern plant products; power field equipment and the companies that make it. Power 97:107-213 Mid-S '53

Economical ways to modernize small industrial power plants. H. D. Fisher. il Power Eng 57:70-3+ Je '53

Excitation system, 1952 style. S. R. Folger. il diags Power Eng 56:96-8 S; 88-91+ D '52

Excitation systems, 1953 style. S. R. Folger. il diag Power Eng 57:60-1+ Mr '53

Here are storage and handling pointers on lubes. il diags Power 97:89-91 My '53

How to organize your new power plant; 313 items to follow up in designing a new plant. D. C. Swift. Power 97:78-81+ Je '53

Keep air clean for your controls. diags Power Eng 57:84-5+ Je '53

Modernization has to be sold. diags Power 97:71-5 Ag '53

1953 design survey; typical industrial, institutional steam plants; tabulation. Power 97:46-52 Mid-S '53

1952 engineering developments. il Elec Eng 72:19-21 Ja '53

Power engineers abate air pollution. Power Eng 57:110 Je '53

Power expansion at Nekoosa. F. H. Coldwell. il Paper Tr J 136:28+ Ja 23 '53; Same abr. Power 97:86-8 My '53

Power plant labels that last. il Power Eng 57:70 My '53

Renovation roundup. diags Power 97:63-100 Mid-S '53

Research and engineering progress, 1952; power. il Gen Elec R 56:20-6 Ja '53

Showcase of new bulletins. Power 97:251-6+ Mid-S '53

Showcase of new equipment. il diags Power 97:219-50+ Mid-S '53

Small changes lick these conveyor problems. J. Campbell. il diags Power 97:146-7 O '53

Tv, new tool for power engineers. H. de Soto. il diags Power Eng 57:88-9 O '53

Tv sees where you can't look. il diags Power 97:78-83 Ap '53

Using strain gages in the power plant. il diags Power Eng 57:94 Ap '53

Variable-displacement pumps control fluid delivery to meet load needs. F. A. Annett. diags Power 97:112-13+ S '53

Variable-displacement rotary pump; versatile performer in modern plant. F. A. Annett. diags Power 96:114-15+ D '52

POWER plants—Equipment—*Continued*

Water can carry your coal and ash. W. G. Hudson. diags Power Eng 57:92-3+ Jl '53

Wilton works power station. il plan diags Engineer 194:837-41 D 19 '52; Engineering 174:820-1, 824 D 26 '52; Elec J 149:1829-32 D 12 '52; Elec R (Lond) 151:1259-61 D 12 '52

See also

Condensers (steam)
Piping (power plants)

Fires and fire protection

How we teach fire fighting to power engineers; Consolidated Edison co. of New York. W. E. Rossnagel. il plan Power Eng 57:68-70 S '53

Fuel

Coal handling. W. G. Hudson. diags Power Eng 57:90-1 Ap '53

Coal-pile survey by aerial photos gives close check of stored amount; illustrations with text. Power 96:111 D '52

Don't overlook anthracite. A. W. Williams. il Mill & Factory 51:119-22 O '52

Fuel oil sludge solvents. L. W. Fitzpatrick. Power Eng 57:97-8 Ap '53

How to buy coal for the small industrial plant. M. H. Charles. il Power Eng 57:70-2 Ag '53

How we licked sticking coal. M. E. Rule. diags Power Eng 57:73-5 Mr '53

Low-cost power from char? Elec World 138:62-3 D 29 '52

More on fuel oil sampling. P. F. Schmidt. diags Power Eng 57:106+ Je '53

New methods speed large coal stockpiling operations. R. A. Nussmeier. il Power 97:94-5+ Ja '53

Petroleum pitch, an excellent boiler fuel. E. J. Miller. il diags Power Eng 57:74-5+ Je '53

Steam from steel; blast-furnace gas. R. W. Worley and H. J. Bentson. il plans diags Power Eng 57:54-7 Jl '53

Steel plants operating at full capacity require greater power. A. D. Blake. diag Blast F & Steel Pl 41:324-5 Mr '53

Treated coal solves silo problems for A. B. Dick co. F. M. Malmgren. il plan diag Power Eng 57:70-1 Jl '53

What is size consist worth? F. M. Reiter. Power Eng 56:63-5+ D '52

Gas engine plants

Aluminum producers get low-cost radial engine power. diag Power Eng 57:80-1+ Ap '53

Cooling ½ billion heat units per hour; Reynolds metals company's aluminum reduction plant. il Mill & Factory 52:112-13 Mr '53

How to maintain radial engines. il diag Power Eng 57:64-5 My '53

On-site generator plants study shows aluminum reduction at over-all power cost of $168/kw. il diag Light Metal Age 11:16-17+ Ap '53

Gas turbine plants

Application of the gas turbine for recovery of waste heat. W. Gregson. diags Engineering 174:740-1 D 5 '52

Gas turbine power plants more and bigger; tabulation by company and location. L. Schneitter. Elec World 138:100 D 1 '52

Gas-turbine progress report; industrial. L. N. Rowley, jr. and B. G. A. Skrotzki. il diags A S M E Trans 75:211-16 F '53

Gas turbines. L. N. Rowley and B. G. A. Skrotzki. il diags Power 96:79-110 D '52

Gas turbines ready for your plant? il Mod Ind 25:40-6 Je '53

Progress continues on coal-burning gas turbine plant. J. I. Yellott and P. R. Broadley. il diag Power Eng 57:87-9 Je '53

Where industry can use the gas turbine. W. C. Bloomquist and W. B. Wilson. diags Power Eng 57:64-5+ Mr '53

Lighting

Good power plant lighting a must, not a frill. il Power Eng 57:76-7 Ap '53

Modern control-room lighting with luminous ceilings. il diag Power 97:95-7 F '53

Maintenance and repair

Check list stops boners in Diesel power plant. il Power 96:130-1 D '52

Clinic of power engineers apply know-how to solve their city's stubborn air-pollution problems. il Power 97:114-15 F '53

Coatings cut corrosion costs. L. G. Jones. il Power Eng 57:87-9 Jl; 74-5 Ag '53

Coupling maintenance with operation gives ideal plant team; Lachine plant of Northern electric co. F. A. Hinchcliffe. il Power 97:92-5 My '53

Handle, check and store your power plant lubricants properly. C. W. Bell. il diags Power Eng 57:105-6 Ap '53

Hard surfacing. S. Elonka. il diags Power 97:107-22 Mr '53

Inspecting turbine-driven generators. J. B. Swering. il Power Eng 57:84-5 F '53

Lathe tips for the power plant machinist. F. E. Riley. il Power Eng 57:104-5 Je '53

Maintenance welding pays. R. Kembel. il Power 97:105-7 S '53

Pad with neoprene to save critical parts from corrosion and wear. il Power 97:103-5 Ja '53

Photos record plant growth and headaches of chief engineer; Garlock packing company. S. Elonka. il Power 97:103-5 Ag '53

Plan your power plant lubrication with a practical approach. C. W. Bell. il Power Eng 56:85-7+ D '52

Preventive maintenance records; Rural cooperative power association. H. Greiner. il map Diesel Power 31:46-9 Mr '53

Spooks and gremlins in our power plant. A. E. Richards. Power Eng 57:79 F '53

Stop wasting man hours and use power tools. S. Elonka. il Power 97:132-3 O '53

Use your lathe to cut large gaskets and trim washers. F. E. Riley. il Power Eng 57:100 O '53

Models

How model tests cut piping design and fabrication costs. J. F. O'Rourke. il diags Power 97:90-2 S '53

Models save time, money, equipment, manhours in utility design and construction. W. B. Morton. il Elec World 138:92-4 N 3 '52

Painting

Cover that surface, but. S. Elonka. il Power 97:129-31 O '53

Here's low-down on aluminum paint. M. C. Davis. il Power 96:123-5 D '52

How does your power plant paint absorb heat? L. G. Jones. diag Power Eng 57:64-5 F '53

In your power plant painting program, make simple reflection tests. L. G. Jones. il diag Power Eng 56:92+ D '52

What does painting cost? L. G. Jones. il Power Eng 57:90-3 O '53

Piping

See Piping (power plants)

Records

Preventive maintenance records; Rural cooperative power association. H. Greiner. il map Diesel Power 31:46-9 Mr '53

Safety measures

These check points build chlorine safety. H. J. Eichenhofer. il Power 97:112-13 Je '53

POWER plants, Floating

Barges keep south Korea in power. il map Elec World News ed 139:22-4, cover Mr 16 '53

Diesel-electric drilling barge, G.P.2. plans diag Engineer 194:425-6 S 26 '52

Oil drilling barge. il Elec J 151:421-2 Ag 7 '53

POWER plants, Outdoor

See also

Electric plants (central stations)—Outdoor stations

POWER plants, Portable

Mobile emergency power. il Diesel Power 30:56-7 D '52

Rail-mounted standby power. il Diesel Power 31:60-1 Mr '53

POWER plants, Portable—*Continued*
Shut-downs on small municipal stations or individual circuits are reduced by putting power on wheels. J. E. Chapman. il Elec World 139:78-9 Mr 9 '53

POWER steering. See Automobiles—Steering gear

POWER transmission
Annual handbook of product design for 1953; power transmission. il diags Product Eng Hdbk p E 1-31+ '53
Fundamentals of mechanical power transmission. W. A. Williams. diags Mill & Factory 52:123-7 Mr '53
Gear and clutch mechanism for variable operating conditions. W. M. Halliday. diags Mach 59:200-2 F '53
High-capacity gearing. D. W. Botstiber and L. Kingston. bibliog il diags Machine Design 24:129-60 D '52
Mechanical power transmission manual. W. A. Williams. 423p $6 Book division, Conover-Mast publications, 205 E. 42d st, New York 17 '53
Motors and power transmission equipment. il Paper Tr J 137:125-8 S 18 '53
Planned maintenance for a longer life span; power transmission equipment. J. Sparks. il Power 97:114-15 Ja '53
Renovation roundup; mechanical power transmission. diags Power 97:86+ Mid-S '53
Tooth-grip belt and axial-grooved pulley gives positive, synchronized transmission drive. il Factory Management 110:90-2 D '52
Torque chart; designed to figure torque and driving force where fractional horsepower is to be transmitted at very high speed. P. Swain. Power 96:95 N '52
What's ahead the next ten years in materials and components; power-transmission equipment. Am Mach 96:A 17-19 Mid-N '52
See also
Automobiles—Transmission
Bearings
Belting
Chain gear
Clutches
Couplings
Electric distribution
Electric driving
Electric transmission
Gearing
Gearmotors
Hydraulic transmission
Joints, Universal
Machinery
Pneumatic transmission
Power (mechanics)
Pulleys
Servomechanisms
Shafting
Speed variation
Torque converters

POYNTER, Ralph
Putterer, inventor, manufacturer, bantam-size riding tractor. Fortune 47:167 F '53

POZZUOLANA
New material for cementing wells. C. D. Saunders and B. D. Brown. bibliog il Pet Eng 24:B80-4 O '52
Pozzolan cements gaining favor in Mexico. F. Barona de la O. flow sheet il map Rock Prod 56:124-7+ Ag '53

PRAEGER, Emil H. 1892-
Praeger is honored; Metropolitan section of ASCE gives its first award. Eng N 150:64 My 28 '53

PRASEODYMIUM
Ground state hyperfine structure and nuclear magnetic moment of praseodymium. H. Lew. Phys R 89:530 Ja 15 '53
Resistivity of lanthanum, cerium, praseodymium, and neodymium at low temperatures. N. R. James and others. bibliog Phys R 88:1092-8 D 1 '52

Isotopes

Hyperfine structure and nuclear moments of Pr^{141}. H. Lew. bibliog diags Phys R 91:619-30 Ag 1 '53
Nuclear magnetic moment of Pr^{141} from the hyperfine structure of Pr II. P. Brix. bibliog Phys R 89:1245-6 Mr 15 '53

PRATT institute, Brooklyn
When college and industry team up on a design school. il Bsns W p94-6+ N 8 '52

PRECESSION
Relativity precession of the asteroid Icarus. J. J. Gilvarry. Phys R 89:1046 Mr 1 '53

PRECIOUS metals
How precious are the precious metals? J. M. West. Metallurgia 47:288-90 Je '53

Analysis

Precious metal assaying. Chem Age (Lond) 68:235-40 F 7 '53

PRECIPITATION
New reagent for the precipitation of sulphate. R. Belcher and D. Gibbons. Chem Soc J p4216-18 N '52; Abstract. Chem Age (Lond) 67:562 O 25 '52
Precipitation in homogeneous solution; separation and determination of lead. P. J. Elving and W. C. Zook. Anal Chem 25:502-4 Mr '53
Precipitation of basic stannic sulfate from homogeneous solution. H. H. Willard and L. Gordon. Anal Chem 25:170-2 Ja '53
Solid phase nucleation and analytical chemistry; abstract. R. A. Johnson. Chem Age (Lond) 67:496-7 O 11 '52
Technique for handling small precipitates. S. Z. Lewin. il J Chem Educ 29:615 D '52
Thermodynamics of coprecipitation; dilute solid solutions of AgBr in AgCl. F. Vaslow and G. E. Boyd. bibliog Am Chem Soc J 74:4691-5 S 20 '52
X-ray investigation of several contaminated barium sulfate precipitates. C. A. Streuli, H. A. Scheraga and M. L. Nichols. bibliog Anal Chem 25:306-10 F '53
See also
Salting-out

PREFABRICATED bridges. See Bridges, Prefabricated

PREFABRICATED buildings. See Buildings, Prefabricated

PREFABRICATED houses. See Houses, Prefabricated

PREFERRED numbers
Series of preferred numbers recommended by ISO restricts product variety. Steel 130:114-15 Je 23 '52; Machine Design 24:241+ S '52; Standardization 23:283-4 S '52

PREFERRED oil and gas company
Stock offered. Comm & Fin Chr 176:1866-7 N 17 '52

PREFERRED stocks. See Stocks, Preferred

PREGNANCY
Unusual reproductive phenomena in rodents. F. L. Evans. bibliog Science 117:159-60 F 13 '53

PREGNANDIONE
Steroids; a ten step conversion of progesterone to cortisone; the differential reduction of pregnane-3-20-diones with sodium borohydride. O. Mancera and others. bibliog Am Chem Soc J 75:1286-90 Mr 20 '53

PREGNANE
Degradation of 12-ketosapogenins to pregnane derivatives. J. A. Moore and E. L. Wittle. bibliog Am Chem Soc J 74:6287-8 D 20 '52

PREGNENEDIOLDIONE. See Dihydroxyprogesterone

PREGNENONE
Δ^5-Pregnen-20-one. M. A. Daus and H. Hirschmann. bibliog Am Chem Soc J 75:3840-1 Ag 5 '53

PREMIUMS (merchandizing)
In-pack premium; Soilax puts quality items right in or on packages. il Mod Packaging 26:110-11 D '52
Premiums and retail sales. K. Groesbeck. Adv Agency 46:98 Mr '53

PRENTIS, Henning Webb, 1884-
Portrait. Fortune 47:97 Mr '53

PREPACKAGING
Films for pre-packaged poultry. A. F. Kish. il Mod Packaging 26:130-4+ Jl '53
More about shoppers and their desire to feel. E. B. Weiss. Ptr Ink 242:40 Ja 9 '53
More pre-packaging to come. F. Gianninoto. il Ptr Ink 242:104+ Mr 20 '53
Packaged before it's filled; pre-packaged wafer sandwich. il Mod Packaging 26:80-2 Mr '53
Pre-packaged furniture lowers costs, boosts sales, puts chrome dinette sets in gift class. il Mod Packaging 26:127 N '52
See also
Fruit—Prepackaging
Meat—Prepackaging
Vegetables—Prepackaging

PREPAREDNESS, Military. See United States—Defenses

PRESCOTT, Robert William, 1913-
Businessmen in the news. por Fortune 47:50 My '53

PRESIDENTIAL campaign, 1952

Captive candidate; Mr Stevenson inherits some big intellectual fallacies. Barron's 32:1 O 20 '52

Fifth wheel; Mr. Truman's unprecedented campaigning. F. Morley. Barron's 32:5 O 6 '52

Television and the election. A. Campbell and others. Sci Am 188:46-8 My '53

PRESIDENTIAL campaigns

Bringing the candidate to the people is a full time job for the man who keeps the special rolling. il Bsns W p78-82+ N 1 '52

We need a Federal tirade commission. W. Weir. Ptr Ink 241:98 O 24 '52

Polls

Election night; test for polls and robot brains. il Bsns W p30-2 N 1 '52

Poll-takers' missing link. R. A. Baker. Ptr Ink 241:39 N 14 '52

Polls won't be wrong; they just aren't saying. E. Knoll. Ed & Pub 85:66 N 1 '52

Pollsters; the voters still elude them. Bsns W p43-4 N 15 '52

PRESIDENTS (United States)

Urgent job for the president-elect. Fortune 46:99-100 N '52

What this country needs today is two presidents. A. Wilson. Comm & Fin Chr 177:687 F 12 '53

Election

Electoral college provides good arguments for anyone reluctant to settle a misplaced bet. F. Morley. Barron's 32:3 N 3 '52

Three press services plot fast election vote tabulations. R. Erwin. Ed & Pub 85:9+ O 4 '52

Inauguration

Ike's inauguration day attracts big news plans. Ed & Pub 86:12 Ja 10 '53

Mr Six sees an inauguration of the new President. il Bsns W p30-2 Ja 31 '53

Newspaper sales up on tved inaugural. Ed & Pub 86:9 Ja 24 '53

Television coverage of the presidential inauguration. E. C. Wilbur and H. L. Grelck. il plans diags RCA R 14:259-68 Je '53

Bibliography

Presidential inaugurations; a supplementary list of references, 1949-1952. 18p pa 25c Library of Congress, Card division, Washington 25, D.C. '52

Insurance aspects

Reviews insurance activities for Ike's inauguration. Nat Underw 57:11 Ja 29 '53

PRESIDENT'S conference on occupational safety

President's conference to continue job safety efforts. Nat Safety N 68:66 Ag '53

PRESS

See also

Journalism
Newspapers
Periodicals
Publicity

PRESS agents, Government

Federal press agent defends news function. W. P. Kelly. Ed & Pub 86:48 Ja 24 '53

PRESS associations

See also

Associated press

PRESS brakes. See Sheet metal working machinery

PRESS clubs

Atlanta club is run by and for the ladies. Y. Gwin. Ed & Pub 85:62 N 8 '52

Chicago club in fourth year; space in hotel. il Ed & Pub 85:40 D 6 '52

Club instituted Canada awards for newsmen. Ed & Pub 86:34 F 21 '53

Five Maine men get idea and bowl 'em over. Ed & Pub 85:67 N 1 '52

Fresh income aids comeback in Baltimore. B. Terrill. Ed & Pub 85:46 N 29 '52

Greater Los Angeles club prospers in sixth year. F. C. Coonradt. Ed & Pub 86:36 Ja 10 '53

Guild support all that keeps sheriff away: Press club of Cleveland. C. Patterson. Ed & Pub 86:51 Ja 24 '53

New era begun in 48th year of Seattle club. D. Coughlin. Ed & Pub 86:32 Ja 3 '53

12 pioneers wanted place to socialize. S. Padlibsky. il Ed & Pub 85:42 O 25 '52

Two-year-old in Dallas sees deficits fading. F. Pass. Ed & Pub 85:44 N 15 '52

PRESS conferences

Breach of the peace, if this were England. P. Webb. Ed & Pub 86:11 Ja 10 '53

Dewey defends press relations. Ed & Pub 86:7 Ja 3 '53

Editors hit Dewey's conference technique. J. Walker. Ed & Pub 85:12+ S 27 '52

Hagerty aims to improve White House news system. J. Walker. Ed & Pub 86:7-8+ Ja 24 '53

His congressman casts a big vote for Hagerty. L. W. O'Brien. Ed & Pub 85:14 D 27 '52

Ike meets the press for one-half hour. J. J. Butler. il Ed & Pub 86:11+ F 21 '53

Pennsylvania governor's name is Fine, his PR is bad. Ed & Pub 85:30 D 20 '52

Press conference pooling system strongly opposed. Ed & Pub 86:7+ Ja 17 '53

10 Downing st. press relations non-existent. D. Willens. Ed & Pub 85:39 D 27 '52

PRESS photographers association, National. See National press photographers association

PRESS relations. See Publicity

PRESSED steel car company

Security I like best. H. Oetjen. Comm & Fin Chr 176:2114+ D 4 '52

PRESSED steel company, limited

Statement by the chairman. A. Pam. Economist 167:700-1 Je 6 '53

PRESSES

Accessories for OBI presses; reference book sheet. diags Am Mach 96:179 O 13 '52

Aero industry eager to christen monster presses; report of panel on large forgings and castings. S A E J 61:49-54 O '53

Air force's heavy press program holds promise for construction. il Eng N 149:21-2 N 27 '52

Back in the news; Telenar press. Bsns W p46+ Je 20 '53

Briquetting press has double compression stroke. il diags Machine Design 25:137-8 Ja '53

Colonial transfer press built to insert and automatically gage valve guides. il Mach 59:211 N '52

Edwards geared inclinable press. il Engineer 196:206 Ag 14 '53; Engineering 176:256 Ag 21 '53

Experts analyze heavy press problems. I. Stone. il plan diags Aviation W 58:20-1+ Ja 5 '53

450 ton double action straight side press. il Automotive Ind 107:79 O 1 '52

Hand-operated double-action press sets copper contacts. H. Gifford. diag Am Mach 97:132 Ag 17 '53

Heavy presses are set by novel methods. il Constr Methods 35:56-8 Mr '53

Heavy presses step up aircraft output. il Machine Design 24:244 O '52; Mech Eng 74:912-13 N '52

Huge mechanical press speeds production of steel cartridge cases. H. G. Hron. il Mach 59:151-7 Ja '53

Huge press produces board by continuous process. il Machine Design 25:132-3 S '53

Long feed unit for presses. il Engineer 196:110-11 Jl 24 '53; Engineering 176:278-9 Ag 28 '53

Longren-Peterson stretch-form press developed for use in aircraft plants. il Mach 59:218-19 Je '53

Metal stampers discuss advances in presses, safety, die life. il Am Mach 97:197 Ap 13 '53

Multiple-ram assembly press automatically inspects work. il Am Mach 96:202 N 10 '52

New method for building huge presses. il Machine Design 25:225 F '53

1953 American Machinist production preview. il Am Mach 97:210-19 Ja 19 '53

No rail distortion; side rail press. il Steel 132:142+ Ap 27 '53

100-ton horizontal press; Bronx engineering co. il Engineer 194:667 N 14 '52

Planting of AF's press giants begins. I. Stone. il Aviation W 58:29-30 Ja 19 '53

Pneumatic press develops 70,000 pounds pressure. il Comp Air Mag 58:284 O '53

PRESSES—*Continued*

Power press attachment. il Engineer 195:907 Je 26 '53

Power press with press-brake attachment. il Engineering 176:124 Jl 24 '53

Press plant; Chrysler corp. il Automobile Eng 42:527-8 D '52

Press tierods take planning. H. Gifford. diags Am Mach 97:162-3 S 14 '53

Press unloader handles diversified stampings. H. Sahlin. il diags Tool Eng 30:63-5 Mr '53

Seventeen heavy presses to speed air force production. Tool Eng 29:90 N '52

Special screw feeds plastic in molding press. il Machine Design 25:141 Mr '53

35,000-ton press; E. W. Bliss co. Metal Prog 63:186+ Mr '53

Two-way press. Bsns W p54 F 7 '53

USAF heavy-press program takes on firmer shape. Am Mach 96:158-9 D 8 '52

What's ahead the next ten years in presswork and forging. Am Mach 96:D-D 11 Mid-N '52

See also

Baling presses
Dies
Extrusion machines
Forging machinery
Hydraulic presses
Molding machines (for plastics)
Printing presses
Punching machinery

Bibliography

Six-year bibliography of press-working articles in American machinist. Am Mach 96:D50+ Mid-N '52

Control

Gages control tierod tension, eliminate overloading on setup. H. George. diag Am Mach 97:189 O 12 '53

Safety devices

Die guards. A. E. Blank. il Safety Maint & Prod 105:18-19+ F '53

Electrostatic field acts as safety device. Iron Age 170:133 N 20 '52

Fencing of presses; photo-electric types of guards. il diag Electrician 149:551-2 Ag 22 '52

Keep out of no hands land. il Safety Maint & Prod 105:39-40+ Mr '53

Press safety control uses radioactive wristband. M. E. Simonton and J. Yeiser. il diags Electronics 26:114-15 Ja '53

Radioactive press guards. J. H. Heacock. il diag Nat Safety N 68:32-3 Ag '53

Safety first for presses. R. T. Kimmel. il diags Tool Eng 30:69-78 Ja '53

Stamp out your press hazards. J. C. Brenner. il Safety Maint & Prod 105:32-4+ Ja '53

Standards

JIC standardizes mechanical presses. Tool Eng 29:61 N '52

PRESSES, Forging. See Forging machinery

PRESSURE

Analysis of the pressure dependence of the dielectric constant of polar liquids. I. S. Jacobs and A. W. Lawson. bibliog J Chem Phys 20:1161-4 Jl '52

Application of high pressure in geophysics; experimental rock deformation. J. Handin. bibliog il diags A S M E Trans 75:315-24 Ap '53

Automatic recording of the pressure-area, pressure-time, and area-time characteristics of monomolecular films. P. A. Anderson and A. A. Evett. plan diags R Sci Instr 23:485-8 S '52

Blocked capillary method for determining melting pressures; the melting curve of helium from 1.5° to 4°K. C. A. Swenson. bibliog il diags Phys R 89:538-44 F 1 '53

Calculation of the temperature and pressure coefficients of conductivity and the ultrasonic effect in dilute electrolytes from Onsager's theory. S. Barnartt. bibliog diags J Chem Phys 21:908-11 My '53

Design and application of controlled-volume pumps for high pressure in the range of 10,000 to 30,000 psi. D. H. Jones. bibliog il diags A S M E Trans 75:361-7 Ap '53

Effect of pressure on diffusion in aqueous and alcoholic salt solutions. R. B. Cuddeback and H. G. Drickamer. J Chem Phys 21:597-601 Ap '53

Effect of pressure on diffusion in CS_2 organic mixtures. R. C. Koeller and H. G. Drickamer. bibliog J Chem Phys 21:575-88 Ap '53

Effect of pressure on diffusion in liquid sulfur. D. R. Cova and H. G. Drickamer. diag J Chem Phys 21:1364-5 Ag '53

Effect of pressure on diffusion in the system CCl_4-SnI_4. E. P. Doane and H. G. Drickamer. bibliog J Chem Phys 21:1359-61 Ag '53

Effect of pressure on diffusion in water and in sulfate solutions. R. B. Cuddeback and others. bibliog J Chem Phys 21:589-97 Ap '53

Effect of pressure on self-diffusion in carbon disulfide. R. C. Koeller and H. G. Drickamer. bibliog diags J Chem Phys 21:267-73 F '53

Effect of pressure on the melting point of Teflon tetrafluoroethylene resin. P. L. McGeer and H. C. Duus. J Chem Phys 20:1813-14 N '52

Effects of internal roughness on pressure drop and heat transfer of integral finned tubes. V. R. S. Arni and J. E. Myers. bibliog il diag Refrig Eng 61:757-9+ Jl '53

General relation between the density virial coefficients. W. E. Putnam and J. E. Kilpatrick. J Chem Phys 21:951 My '53

High-pressure instrumentation. P. W. Bridgman. Mech Eng 75:111-13 F '53

High-pressure research in Chemical engineering department of Yale university. B. F. Dodge. bibliog il diags A S M E Trans 75:331-43 Ap '53

How to seal rotating shafts against high pressures. W. Coopey. diags Chem Eng 58:116-17 Jl '51; Same cond. Product Eng Hdbk p J26 '53

Limiting thickness of an electrolyzed gas film capable of sustaining a given negative pressure. L. J. Briggs. diags J Chem Phys 21:779-81 My '53

Multistage sealing for rotating shafts operating at elevated pressures and temperatures. A. F. Saxon. il diags Machine Design 25:170-2 Mr '53

Nondestructive differential-pressure test for thin shells. J. C. New. diag Machine Design 24:314+ D '52

Nondimensional correlation of flame propagation at subatmospheric pressures. R. E. Cullen. bibliog il diag A S M E Trans 75:43-7; Discussion. 48-9 Ja '53

Possible explanation of Briggs' limiting negative pressure data. V. J. Berry and E. W. Hough. bibliog J Ap Phys 23:931 Ag '52

Pressure distributions on the blade of an axial-flow propeller pump. D. A. Morelli and R. D. Bowerman. bibliog il diags A S M E Trans 75:1007-13 Ag '53

Pressure drop in blast furnace and in cupola. S. Ergun. bibliog diag Ind & Eng Chem 45:477-85 F '53

Pressure losses in four-inch diameter galvanized metal duct and fittings. H. G. Conn and others. diags Heating-Piping 25:201-5 Ja '53; Abstract. Heat & Ven 50:166+ Ap '53

Pressure rate alarms. P. Hart and R. C. King. diag Oil & Gas J 51:141 My 4 '53

Seals to minimize leakage at higher pressure. B. A. Niemeier. bibliog il diags A S M E Trans 75:369-79 Ap '53

Second-sound velocity below 1°K as a function of pressure. V. Mayper, jr. and M. A. Herlin. bibliog Phys R 89:523-4 Ja 15 '53

Self-diffusion in solid sodium; the effect of pressure. N. H. Nachtrieb and others. bibliog J Chem Phys 20:1189-94 Ag '52

Static-dynamic load machine for high pressure. E. T. Fleischhauer and E. G. Dorsey, jr. il diag A S M E Trans 75:381-3 Ap '53

Static pressure losses in duct elements; reference data. diags Heat & Ven 50:160a-160b Ja; 174a-174b F '53

Swelling pressures in the coke oven. diags Blast F & Steel Pl 40:1319-24 N '52

Techniques and equipment for generation of dynamic high pressures. E. J. Mickevicz. il diags A S M E Trans 75:325-7 Ap '53

PRESSURE—*Continued*

Transitions and phases of polytetrafluoroethylene (Teflon). C. E. Weir. bibliog J Res Nat Bur Stand 50:95-7 F '53

See also

Blood pressure
Compressed air
Compressibility
Compressors
Earth pressure
Equation of state
Gases, Compressed
Osmotic pressure
Phase rule and equilibrium
Spectrum—Pressure effect
Vacuum
Vapor pressure
Wind pressure

PRESSURE gages

Chrome-moly steel tubing cuts Bourdon tube rejects. il Product Eng 24:139 Mr '53
Electrical pressure gages give Plantation trouble-free service. W. W. Holt, jr. diag Oil & Gas J 52:88+ Je 29 '53
Gauge for indicating pressure transients in a combustion chamber. H. D. Warshaw. bibliog il diags R Sci Instr 23:493-6 S '52
High-pressure wire gage using gold-chrome wire. H. E. Darling and D. H. Newhall. il diag A S M E Trans 75:311-14 Ap '53
Material selection factor significant in Bourdon tubes. J. B. Giacobbe and A. M. Bounds. il J Metals 4:1147-8 N '52
Modified Bourdon gage for measuring pressure in polymer processing equipment. J. F. Carley. diags Ind & Eng Chem 45:858-60 Ap '53
Piston gage as a precise pressure-measuring instrument. D. P. Johnson and D. H. Newhall. bibliog diags A S M E Trans 75:301-10 Ap '53
Pressure gage for injection molding. F. E. Towsley and C. E. Beyer. il diags Mod Plastics 30:109-10+ Ap '53
Pressure gage isolator confines corrosives. il Chem Eng 59:182 O '52
Pressure measurements. diags Can Chem Process 37:106 My '53
Pressure sensing calculations for aircraft and guided missiles. J. D. Humphreys. il diags Tele-Tech 12:82-3+ Ap '53
Sensitive to pressures; Press-I-Cell. il Iron Age 170:199 D 4 '52; Pet Processing 7:1841 D '52; Tool Eng 30:122 Ja '53; Aviation W 57:58 D 22 '52
Strain gage accelerometers and pressure transmitters. G. O. Haglund. il diags Product Eng Hdbk p I 22-5 '53
Temperature-stable, capacitance pressure gauges. D. C. Pressey. bibliog diags J Sci Instr 30:20-4 Ja '53
Trends in refinery instrumentation; selection, installation, and maintenance of pressure gages. S. D. Ross and W. W. Drake. bibliog il diags Pet Eng 25:C44-6+ Ap '53

See also

Anemoclinometer
Anemometers
Indicators (for internal combustion engines)
Manometers
Vacuum gages

Testing

Dynamic calibration of Mullen tester gauges. N. G. M. Tuck and others. bibliog diags Pulp & Pa of Can 54:102-5 Ap '53

PRESSURE measurement

Accurate wire resistance method for the measurement of pulsating pressures. N. Gross and P. H. R. Lane. il diags J Sci Instr 30:1-2 Ja '53
Automatic recording of the pressure-area, pressure-time, and area-time characteristics of monomolecular films. P. A. Anderson and A. A. Evett. plan diags R Sci Instr 23:485-8 S '52
Engine cylinder pressure measurements. J. D. McCullough. il diags S A E J 61:72-7 Jl '53
Flow and fan; principles of moving air through ducts; losses in straight uniform ducts. C. H. Berry. diags Heat & Ven 50:87-94 Mr '53
Flow and fan; principles of moving air through ducts; pressure and loss calculations. C. H. Berry. Heat & Ven 50:93-8 F '53
Flush diaphragm pressure pickup. il Product Eng 23:219 D '52
Foil strain gauges for torque and pressure measurement. Engineering 175:119 Ja 23 '53
Force balance pressure transmitters used to detect column flooding. G. W. Swinney. diags Oil & Gas J 51:108-10 O 27 '52; Same. Pet Processing 7:1469-71 O '52
High-pressure instrumentation. P. W. Bridgman. Mech Eng 75:111-13 F '53
Hydrostatic pressures under a canal measured accurately. P. H. S. Follett. il diag Civil Eng 23:248-9 Ap '53
Instrumentation for axial-flow-compressor research. C. A. Meyer and R. P. Benedict. bibliog il diags A S M E Trans 74:1327-36 N '52
Instrumentation handbook; pressure measurement and control. P. Hart and R. C. King. diags Pet Refiner 31:107-10 D '52
Measurement of fluidization quality. W. W. Shuster and P. Kisliak. bibliog diags Chem Eng Prog 48:455-8 S '52
Measuring pressures electronically. R. M. Shuffler. il diags Pet Eng 25:D96-8 My '53
Pressure measurements. diags Can Chem Process 37:88-9 Ap; 104+ My; 70-1 Je 1 '53
Pressure recorder for rocket motor studies. J. Alman. il diags Electronics 26:146-7 My '53
PVT relations of nitrogen and ethylene mixtures at high pressure. W. P. Hagenbach and E. W. Comings. bibliog il diags Ind & Eng Chem 45:606-9 Mr '53
Rocket test aid measures pressures. il Aviation W 57:83 N 10 '52
Some simple aids in the hydrothermal investigation of mineral systems. R. Roy and E. F. Osborn. bibliog diags Econ Geol 47:717-21 N '52
Strain gage transducers for measurement and control. R. J. Fyffe and A. Arobone. il diags Product Eng 23:130-6 N '52
Transient pressure recording with a high-speed interferometer camera. W. E. Buck. il diags Soc Motion Picture & Tv Eng J 59:369-77; Discussion. 377-8 N '52

See also

Draft gages
Manometers
Petroleum—Well pressure
Pressure gages

PRESSURE regulation

How to regulate process-water pressure. il diags Power 97:154-6 O '53

PRESSURE regulators

Appliance type regulators. F. H. Bunnell. il Am Gas Assn Mo 35:13-14+ O '53
Bailey reducing valves. diag Engineer 195:294 F 20 '53; Engineering 175:320 Mr 6 '53
Combined flame failure and gas pressure cut-off device. il diag Engineer 194:190-1 Ag 8 '52; Engineering 174:220-1 Ag 15 '52
Control of outlet regulators on Tennessee natural gas lines. D. H. Woods. map Oil & Gas J 51:125 N 3 '52
Flame-failure control for oil burners. il Engineering 174:187 Ag 8 '52
How southern California companies protect low pressure distribution systems. G. G. Dye. diags Gas Age 110:27-30+ D 4 '52
Hymatic filter and reducing valve for compressed-air lines. il diag Engineering 175:477 Ap 10 '53
Instrument for controlling compressed air supplies. il diag Engineer 195:605-6 Ap 24 '53
Instrumentation handbook; pressure measurement and control. P. Hart and R. C. King. diags Pet Refiner 31:107-10 D '52
Medium and high pressure regulator settings. W. P. Dick. diags Am Gas Assn Proc 1952:489-502
New flow system insures against excessive electric power charges. W. W. Holt, jr. diags Oil & Gas J 51:246-7 O 13 '52
Pressure-sensing control. Steel 132:191 My 25 '53
Sensitive pressure controller for high-pressure service. P. L. Golden and A. F. Headrick. diag A S M E Trans 75:329 Ap '53
Single unit bellows for differential pressures. il Product Eng 23:212 O '52
Small self-acting gas pressure regulators. H. R. Ronnebeck. il Engineer 194:309-12 S 5 '52

See also

Gas governors

PRESSURE vessels

Alloy steels for oil refining; pressure-vessel alloys. Oil & Gas J 51:173 F 16 '53

PRESSURE vessels—*Continued*

Aluminum tanks and pressure vessels. E. V. Sharpnack. diags Product Eng 24:183-5 Ap '53

Factors affecting resistance of pressure vessel steels to repeated overloading. J. H. Gross and others. il diags Welding J 32: sup23-30 Ja '53

Gaskets for high-pressure vessels. A. R. Freeman. diags Mech Eng 74:969-72 D '52

How serious is graphitization? R. J. Fiorentino and A. M. Hall. bibliog il Pet Refiner 32:132-6 My '53; diags Same cond. Oil & Gas J 52:110+ Je 8 '53

Influence of residual stress on behavior of thick-wall closed-end cylinders. J. H. Faupel and A. R. Furbeck. bibliog il diags A S M E Trans 75:345-54 Ap '53

Pressure vessel research committee launches the second phase of its program. Welding J 32:sup431+ S '53

Recent experience in examination of high-temperature catalytic-cracking pressure equipment. D. B. Rossheim and others. flow diag il diags A S M E Trans 74:1099-122 O '52; Excerpts. Pet Processing 6:1385-8 D '51; Discussion. A S M E Trans 74: 1122-31 O '52

Relative costs of alternate types of reactor vessel construction. I. E. Boberg and W. R. Fickett. diags Pet Processing 8:690-2 My '53

Seals to minimize leakage at higher pressure. B. A. Niemeier. bibliog il diags A S M E Trans 75:369-79 Ap '53

Shaking of high pressure vessels according to the resonance principle. A. Björkman. bibliog il diags Ind & Eng Chem 44:2459-63 O '52

Transition from ductile to brittle behavior in pressure vessel steels. T. N. Armstrong and others. il Welding J 31:sup 371-80 bibliog(97 titles, p379-80) Ag '52; Abstract. Metal Prog 63:202+ Ap '53; Discussion. Welding J 31:sup623-4 D '52

Use of structural quality steel in pressure vessels I. E. Boberg. Welding J 32:sup413-16 Ag '53

See also

Air compressors
Air receivers
Autoclaves
Boilers
Caissons
Digesters (paper making)
Dust collectors
Evaporators
Gas, Natural—Storage

Design

Distribution of mechanical and thermal stresses in multilayer cylinders. R. A. Strub. bibliog il diags A S M E Trans 75:73-9; Discussion. 79-82 Ja '53

New approach to the design of high pressure cylinders; abstract. Product Eng 24:273-4+ Mr '53

New-type code chart for the design of vessels under external pressure. E. O. Bergman. bibliog A S M E Trans 74:1217-22; Discussion. 1222-4 O '52

Procedure for determining the allowable out-of-roundness for vessels under external pressure. M. Holt. A S M E Trans 74:1225-7; Discussion. 1227-30 O '52

Report on the design of pressure vessel heads. bibliog il diags Welding J 32:sup31-52 Ja '53

Stress concentrations in steel under cyclic load with particular reference to pressure vessels. E. Orowan. bibliog diags Welding J 31:sup273-82 Je '52; Discussion. 31:sup 502-4; 32:sup222-3+ O '52, My '53

Stresses in a pressure vessel with a hemispherical head. G. W. Watts and H. A. Lang. bibliog diag A S M E Trans 75:83-9; Discussion. 89-90 Ja '53

Failures

Wrong piping, operation add to implosion hazards. Heating-Piping 25:116-17 Jl '53

Manufacture

Flame hardening of large diameter thin-wall cylindrical shells. G. A. Weber. il diags Welding J 32:37-43 Ja '53

Preheating and postheating of pressure vessel steels. R. D. Stout. bibliog(60 titles) il Welding J 32:sup 14-22 Ja '53; Excerpts. Metal Prog 64:295-6+ O '53

Pressure chamber withstands 17,600 psi. il Iron Age 170:158-9 N 13 '52

Safety measures

Arc vented vessels safe? il Heating-Piping 24:86-7 N '52

Bursting disc design and application in the chemical industry. D. J. Breeze. il diag Engineer 195:129-30 Ja 23 '53

Rupture-disk design evaluation and bursting tests. G. R. Prescott. il diags A S M E Trans 75:355-9 Ap '53

When you design a rupture disk. diag Chem Eng 59:334+ D '52

Standards

Proposed revisions and addenda to boiler and pressure vessel code. Mech Eng 74:934 N '52

Testing

Hydrostatic and hammer tests applied to pressure vessels. Welding J 32:sup303-4 Je '53

Influence of corrosion on the cracking of pressure vessels. H. R. Copson. bibliog (101 titles) il Welding J 32:sup75-91 F '53

Ultrasonic inspection of welded pressure vessels; Barnsley works. il diags Engineer 196:199-202 Ag 14 '53

PRESTRESSED concrete. See Concrete—Prestressing

PRETZELS

New life for pretzels; cellophane overwraps and bags. il Mod Packaging 27:95 S '53

PREUSS sandstone

Marine origin of Preuss sandstone of Idaho, Wyoming, and Utah. R. W. Imlay. bibliog maps Am Assn Pet Geologists Bul 36:1735-53 S '52

PREVENTIVE medicine. See Medicine, Preventive

PRICE, George M. 1864-

Industrial medicine's Hall of fame. R. T. Legge. por Ind Med 22:37-8 Ja '53

PRICE, Gwilym Alexander, 1895-

Portrait. Fortune 46:120 D '52

PRICE cutting

Is price cutting on the way out? Dom Eng 182:98-9 O '53

Problem child for all marketers; the discount house. A. H. Center. il Ptr Ink 241:58+ D 12 '52

See also

Gasoline—Price cutting
Price fixing, Resale
Special sales

PRICE discrimination

Definition of good faith sought in Detroit case. Nat Pet N 45:35 F 18 '53

FTC does not regard all price discrimination as unlawful. Chem & Eng N 31:764 F 23 '53

See also

Discount, Trade

Patman law

FTC loses case vs. buyer under Robinson-Patman. Bsns W p60 Je 13 '53

FTC quantity discount ruling upheld by court. Oil Paint & Drug Rep 162:5+ D 8 '52

Price discrimination not fault of buyers. Oil Paint & Drug Rep 163:5+ Je 15 '53

Quantity-limit rule and the rubber tire industry. W. W. Leigh. bibliog J Marketing 17:136-55 O '52

Soap pricing charges set for FTC dismissal. Oil Paint & Drug Rep 164:5+ Jl 6 '53

PRICE-earnings ratios. See Stocks—Price earnings ratios

PRICE fixing

Forfeit fair trade when you own stores? J. Shoenfeld. Sales Management 69:46-8 N 20 '52

Squeeze on citrus growers. Bsns W p90 Ja 10 '53

Steel drum producers fix prices, FTC claims. Oil Paint & Drug Rep 163:3+ F 2 '53

PRICE fixing, Resale

Can he kill fair trade again? J. Schwegmann, jr. sued by Lilly. il Sales Management 69: 52-4+ N 1 '52

Fair trade binding only if voluntary; Jersey court ruling. Oil Paint & Drug Rep 163:63 Mr 9 '53

PRICE fixing, Resale—*Continued*

Fair trade pricing; a reappraisal. E. R. Corey. Harvard Bsns R 30:47-62 S '52

Show-down on fair trade. il Chem W 71:64 O 25 '52

PRICE policies

Battle ahead on pricing policies. Steel 131:65 D 8 '52

Cigarette industry's price policies. E. T. Grether. J Bsns 25:264-6 O '52

Cost factors in price-making. H. C. Greer. Harvard Bsns R 30:33-45 Jl; 127-36 S '52

Pick your line-leaders when you have a sale! Ekco kitchen tools. J. G. Brooks and M. B. Cossman. il Sales Management 70:88+ F 15 '53

Revival of freight absorption in basic materials. S. Fish. Manuf Rec 122:32-3 S '53

Simplifying industrial pricing. Bsns W p54+ Je 13 '53

What is the correct approach in dealing with escalation and progress payments? G. H. Cole. Edison Elec Inst Bul 21:189-92+ Je '53

Zinc price shift; basing point system is on the way out. Bsns W p32 Jl 25 '53

See also

Discount, Trade

Price fixing, Resale

PRICE policies, Retail

See also

Price cutting

Special sales

PRICES

Commodities and stocks; raw material declines may be bullish for equities. A. Gaubis. Barron's 33:11+ Mr 9 '53

New daily index of spot market prices. P. A. Don Vito. Mo Labor R 75:301-3 S '52

1953 selling prices; check of 1152 businessmen reveals that they're giving increased attention to prices. il Steel 132:37-8 Ja 26 '53

Russian bear in commodities. Economist 167:109-10 Ap 11 '53

World slump in commodity prices; with charts. V. L. Horoth. Mag of Wall St 91:701-3+ Mr 21 '53

See also

Advertising—Rates

Cost of living

Electric rates

Gas rates

Index numbers (economics)

Money

Public utilities—Rates

Railroads—Rates

Stocks—Price indexes and averages

Wages

Price fixing

also subdivision Prices under various subjects, e.g.

Coffee

Farm produce

Stocks

Wheat

Economic aspects

British and American policies in commodity pricing. P. Einzig. Comm & Fin Chr 178:274 Jl 23 '53

Employment, prices, and monopolistic competition. H. Brems. diags R Econ & Stat 34:314-25 N '52

See also

Inflation (finance)

Regulation

Attitude of Reserve board on standby controls. Comm & Fin Chr 177:1560 Ap 9 '53

Ceiling price regulations, 154-177 (cont). Mo Labor R 75:300, 647-8 S, D '52

Chopping controls to size. Bsns W p28-9 F 21 '53

Controls for the future. Bsns W p 148 Ja 10 '53

Cost factors in price-making; under government regulation. H. C. Greer. Harvard Bsns R 30:127-36 S '52

Cottonseed products buying program terms are fixed. Oil Paint & Drug Rep 164:5+ Jl 13 '53

End of controls; what of wages? W. T. Wilson. Mag of Wall St 91:624-6+ Mr 7 '53

How income-tax sanctions have been applied in wage and price control violations. J. P. Goedert. J Account 95:352-4 Mr '53

Lessons of price and wage controls. A. M. Ross. Comm & Fin Chr 177:14+ Ja 1 '53

Oil price controls likely to remain but in what form is big question. G. M. Green, jr. Nat Pet N 44:36-8 N 26 '52

Price control study being made for President; new policy seen. Oil Paint & Drug Rep 162:3+ D 1 '52

Price controls end. Steel 132:49 Mr 23 '53

Prices; decontrol doesn't signal inflation; purchasing agents quizzed in survey. Iron Age 171:57-8 F 19 '53

Song of the sirens; plea for compromise controls is phony. Barron's 32:1 D 8 '52

Time to kill controls? Bsns W p72-3 Ja 3 '53

You can't eat government controls or beef rollback orders! A. F. Schoeppel. Comm & Fin Chr 177:195+ Ja 15 '53

See also

Farm produce—Prices

United States—Price stabilization, Office of

Denmark

Denmark revises its price-control law. For Comm W 49:6 F 2 '53

Great Britain

U.K. ends price control on manufactures. For Comm W 49:6 My 25 '53

Israel

Israel tries decontrol. Economist 166:495-6 F 21 '53

Statistics

Commodity prices; Nov.-Dec. 1951-Jan.-Nov. 1952. Survey of Cur Bsns 33:S5-6 Ja '53 [cont monthly]

Current price developments. Survey of Cur Bsns 32:3-5 O '52

See also

Index numbers (economics)

Great Britain

Search for commodity stability. Economist 165:841-2 D 20 '52

Russia

Russian sales; recent price-cuts. Economist 167:589-90 My 30 '53

Shopping under Malenkov. Economist 167:160-1 Ap 18 '53

United States

As lower prices level down our economy what can we expect? T. L. Godey. Mag of Wall St 92:204-6 My 16 '53

How to talk about 1953. Bsns W p 176+ D 6 '52

Long, slow slide downhill. Bsns W p 172+ Je 20 '53

Markets speed decontrol; drop in commodity prices. Bsns W p93-4 F 7 '53

Study of commodity prices in war and peace. T. L. Godey. il Mag of Wall St 92:382-3+ Je 27 '53

Wage policies since World war II; movements of wages and prices. S. H. Slichter. bibliog Comm & Fin Chr 176:2122+ D 4 '52; Discussion. N. I. Stone. 177:894 F 26 '53

What are prices up to? Bsns W p25-6 Jl 25 '53

PRICES, Wholesale

Commodities wobble again. Bsns W p 112+ N 1 '52

Shall we have global parity prices? M. Palyi. Comm & Fin Chr 176:2325+ D 18 '52

Statistics

Price developments in 1952; with graphs. Survey of Cur Bsns 33:11-12 F '53

Price movements in principal countries, 1941-1951; monthly, Nov. 1951-Nov. 1952. Fed Res Bul 39:84 Ja '53 [cont monthly]

Wholesale price indexes, 1948-1952; tabulation. Steel 132:193 Ja 5 '53

Wholesale prices, by groups of commodities, 1947-1951; monthly, Nov. 1951-Nov. 1952. Fed Res Bul 39:61 Ja '53 [cont monthly]

Wholesale prices, 1950; including index numbers of various commodities. J. F. Bird and B. M. Frye. U S Bur Labor Statistics Bul 1083:1-65; pa 35c Supt. of doc. '52

Wholesale prices, 1951 and 1952. M. H. Kirsten and B. M. Frye. U S Bur Labor Statistics Bul 1143:1-55; pa 30c Supt. of doc. '53

United States

Long-term outlook for commodity prices. J. Backman. Comm & Fin Chr 177:673+ F 12 '53

PRIMARY network units. See Electric distribution—Primary network units

PRIME movers. See Diesel engines; Gas turbines; Internal combustion engines; Steam engines; Steam turbines

PRINCE, Gilbert Hudson, 1888-1952
Sketch. Pulp & Pa of Can 53:162 N '52

PRINCETON, New Jersey

Streets

Problems of subdivisions, zoning and private streets. I. R. Riker. il Pub Works 84:61-2+ Mr '53

PRINCIPLES of war. See War, Principles of

PRINS reaction

Olefin-aldehyde condensation. E. Arundale and L. A. Mikeska. Chem R 51:505-55 bibliog(p550-5) D '52

PRINTERS

Hands that set type help God; preacher printers. Ed & Pub 86:44 F 14 '53

95 years old, Jacob Pollock works in his printing shop every day. Inland Ptr 130:50 O '52

Six new pacts are signed in New York city. Ed & Pub 85:13 N 29 '52

Union wages and hours; printing industry, July 1, 1951. J. F. Laciskey. U S Bur Labor Statistics Bul 1062:1-43; pa 25c Supt. of doc. '52

Union wages and hours; printing industry, July 1, 1952. J. F. Laciskey. U S Bur Labor Statistics Bul 1134:1-35; pa 20c Supt. of doc. '53

Wage chronology; New York city printing. Mo Labor R 75:637-8 D '52

Wage chronology; San Francisco printing, 1939-51. M. W. Robbins. Mo Labor R 75:289-98 S '52

See also

Beers, Fred C.
Deviny, John J.
Giesey, Paul O.
Reeves, Ernest N.
Mann, Philip

also International association of printing house craftsmen; International typographic composition association; International typographical union

PRINTERS' rollers. See Rollers, Printers'

PRINTING

What printing process for what job. C. F. King. Tappi 35:sup 113A-15A D '52

See also

Book industry and trade
Calendars
Covers (printing)
Ink
Letterheads
Newspapers—Printing
Newsprint paper
Packaging materials—Printing
Paper
Paper—Printing properties
Paper boxes—Printing
Periodicals—Typography
Photography
Photomechanical processes
Posters
Printers
Printing offices
Printing presses
Printing trade
Publishing
Rotogravure
Silk screen printing
Textile printing

Bibliography

Maryland imprints, 1801-1810. R. P. Bristol. 310p $7.50 Univ. of Virginia press, Charlottesville, Va. '53

Design

Basic laws are ignored. J. L. Frazier. diags Inland Ptr 130:53-4 Mr '53

Johannes Troyer's ornaments are modern design. L. H. Allen. il Inland Ptr 129:41 S '52

New camera and allied processes provide special effects with type and pictures. il Inland Ptr 131:65 My '53

Typography and design need a lift. S. Malkoff. Inland Ptr 131:42-3 My '53

Who should lay out, and how. J. L. Frazier. Inland Ptr 130:46-7 Ja '53

See also

Printing—Specimens

Exhibitions

Society of typographic arts 26th annual exhibition of design, Chicago, March 28-May 3; 12 award winners. Inland Ptr 130:40-1 Mr '53

History

See also

Silk screen printing

Private presses

Elmer Gleason and the Stratford press. P. K. Thomajan. il Inland Ptr 130:40-2 F '53

Frank Altschul and the Overbrook press. P. K. Thomajan. il Inland Ptr 131:43-5+ Je '53

John Fass and the Hammer Creek press. P. K. Thomajan. il Inland Ptr 130:42-3 N '52

Prize contests

Cover contest winning designs announced. il Inland Ptr 130:30-2 Mr '53

Society of typographic arts 26th annual exhibition of design, Chicago, March 28-May 3; 12 award winners. Inland Ptr 130:40-1 Mr '53

Specimens

Specimen review. J. L. Frazier. il Published in monthly numbers of Inland printer

Study and teaching

Carnegie's printing department has good demand for graduates. Inland Ptr 130:43 Ja '53

Typography

Typographic scoreboard. J. L. Frazier. il Published in monthly numbers of Inland printer

PRINTING, Offset

Jersey shop does wet-dry offset, letterpress, embossing on one press. L. H. Allen. il diag Inland Ptr 131:40-1 Ap '53

LTF research study of tone control arouses interest. C. F. King. il Inland Ptr 130:57-60 F '53

Measurement of paper properties important in offset printing. G. C. Wheeler. Tappi 36:sup 112A-14A; Discussion. 114A-15A Ja '53

Nature of job and speed factor determine process. C. F. King. il Inland Ptr 130:62-3+ N '52

Offset. C. F. King. Published in monthly numbers of Inland printer

Plate failure? check rollers as possible cause. C. F. King. il Inland Ptr 129:54-5+ S '52

Standard presses for wet and dry offset. il Paper Tr J 135:34 D 5 '52

See also

Paper—Printing properties

PRINTING, Practical

All problems not yet licked in printing of enamels. C. F. King. Inland Ptr 131:59-61+ Je '53

Flexographic (aniline) process growing rapidly. R. Dietz. il Inland Ptr 130:35-7 F '53

What price bulletins? C. M. Lewis. Special Lib 44:111-12 Mr '53

See also

Color printing
Ink
Letterheads
Newspapers—Printing
Paper—Printing properties
Printing plates
Printing presses
Printing trade
Type and type founding
Typesetting

Estimates

Here are some aids in making quick estimates. P. R. Russell. Inland Ptr 130:39-40 N '52

Job work

Planning and system for handling forms will cut press down time. E. St John. Inland Ptr 130:42-3 Mr '53

Layout

Basic lessons in printing layout, by R. R. Karch. Review, by R. Ellard. Ed & Pub 85:38 O 4 '52

Typographic clinic. S. Malkoff. il Inland Ptr 130:61 F '53

Who should lay out, and how. J. L. Frazier. Inland Ptr 130:46-7 Ja '53

Make-ready

See Printing, Practical—Presswork

PRINTING, Practical—*Continued*

Presswork

Pressroom. E. St John. Published in monthly numbers of Inland printer

Primation; thermosetting plastic make-ready. W. P. Jaspert. il Inland Ptr 129:71 S '52

Study and teaching

Oklahoma school training printers. Ed & Pub 86:54 Ja 10 '53

See also

Carnegie institute of technology—School of printing management

Style manuals

Bibliography

Bibliographical style manuals; a guide to their use in documentation and research. M. R. Kinney. 21p pa 60c Assn. of college and reference libraries, c/o Univ. of Illinois library, Chicago undergraduate division, Chicago 11 '53

Printing and graphic arts, a list of references. Special Lib 44:112 Mr '53

PRINTING associations

See also International typographic composition association

PRINTING industry of America

Annual convention, 66th, St Louis, Oct. 13-16. Inland Ptr 129:74-5 S '52

Financial conference for executives, New York, Sept. 8-9. Inland Ptr 130:76+ O '52

PRINTING libraries

Ira Pilliard is genius behind Milwaukee craftsmen library. Inland Ptr 129:49 S '52

See also

Graphic arts center (proposed)

PRINTING machinery

See also

Duplicating machines

Phototypesetting machines

Rollers, Printers'

PRINTING offices

Complete service to buyers of printing aim of Colwell press, inc. H. Annis. il plans Inland Ptr 130:42-5 O '52

Here's one printer who makes good impressions; Western printing and lithographing co. modernized lobby. L. Stemp. il Inland Ptr 130:46-7 N '52

Job and newspaper printing combined in Nebraska's newest, largest plant. il plans Inland Ptr 131:38-40 My '53

New St Louis printing plant is model of production flow technique. W. H. Sayers. il plan Inland Ptr 129:46-8 S '52

Air conditioning

Air conditioning problems in lithographic plants. C. F. King. Inland Ptr 130:48-9+ Mr '53

Rand McNally uses new method for delivering air to press rooms. F. F. Stevenson. il diag Heating-Piping 25:77-9 S '53

Temperature is sometimes controlling factor. C. F. King. Inland Ptr 130:60-1+ O '52

What's right air movement in offset press rooms? F. F. Stevenson. il Heating-Piping 25:102-3 Ap '53

Employees

Employment outlook in printing occupations. il map U S Bur Labor Statistics Bul 1126: 299-330; pa 25c Supt. of doc. '53

New cost-of-living index creates problems. H. Unterberger. Inland Ptr 131:42-3 Ap '53

Small printer can provide fringe benefits. P. R. Russell. Inland Ptr 130:38-9 F '53

See also

Printers

Equipment

Mountain printing plant serves Oil City. A. E. Mowrey. il Inland Ptr 130:46-8 D '52

Lighting

Correct lighting is important to offset pressroom. C. F. King. Inland Ptr 130:55-6+ Ja '53

Management

How to be a better printing plant executive. J. A. Patton. Inland Ptr 130:35-7 O '52

New Mexico plant adds offset to get new accounts, hold old. F. Coates. il plan Inland Ptr 131:37-9 Je '53

Planning and system for handling forms will cut press down time. E. St John. Inland Ptr 130:42-3 Mr '53

Six controls for high costs. D. Markstein. il Inland Ptr 131:35-6 Je '53

Specification sheet important factor in production. P. R. Russell. diag Inland Ptr 130: 44-5+ D '52

Work simplication. L. Stemp. flow diags il diags Inland Ptr 131:33-5 My; 40-2 Je; 33-5 Jl; 48-50 Ag; 132:42-4 O '53 (to be cont)

See also

Carnegie institute of technology—School of printing management

Records

Management controls for printers. J. G. Gerken. Inland Ptr 129:37-40 S; 46-7 O '52

Safety measures

Printers, by reducing accidents, can lower base insurance rates. L. H. Allen. Inland Ptr 130:50 N '52

Safety in the composing room. L. Stemp. il diag Inland Ptr 130:34-6 Mr '53

PRINTING offices, Portable

Compact print shop in trailer. il Inland Ptr 130:43 F '53

PRINTING on metal

Rheem steel drums coated and lithographed before forming. G. C. Close. il Mach 59: 182-5 Ap '53

PRINTING on plastics

Decorating and marking of plastic products. A. N. Skeels. il India Rubber World 127: 803-5 Mr '53

Finishing machine does five jobs; color printing, production of a new wipe-shading effect, coating or lacquering, and color tipping of embossed stock. il diags Mod Plastics 30:133-4 N '52

In three dimensions; lithographic printing on vinyl sheet. il Mod Plastics 30:154 Ja '53

Photo-decorating plastics. il Mod Plastics 30: 108-9 O '52

PRINTING, packaging and allied trades research association

Printing and packaging research. Chem Age (Lond) 67:789-90 D 13 '52

PRINTING plates

Printing plates for today's production demands. R. H. Schwarz. Tappi 36:sup 157A-9A Je '53

System for making albumin plates is too complex. C. F. King. Inland Ptr 131:62-3 My '53

PRINTING plates, Plastic

Leasing; key to introduction of Fairchild's Scan-a-graver. C. A. Harrison. il Sales Management 69:24-5 N 20 '52

Multi-edition daily printing plastics direct. il Ed & Pub 85:58 S 20 '52

PRINTING presses

Highspeed offset-letterpress color system developed in Australia. Ed & Pub 86:49-50 Ja 10 '53

Jersey shop does wet-dry offset, letterpress, embossing on one press. L. H. Allen. il diag Inland Ptr 131:40-1 Ap '53

New rotary press for high-speed printing. il Inland Ptr 131:71 Ap '53

Standard presses for wet and dry offset. il Paper Tr J 135:34 D 5 '52

PRINTING research

LTF research study of tone control arouses interest. C. F. King. il Inland Ptr 130:57-60 F '53

Printing and packaging research. Chem Age (Lond) 67:789-90 D 13 '52

See also

Lithographic technical foundation

PRINTING supplies industry

Directories

Inland Printer's annual directory of equipment and supplies. Inland Ptr 130:91-135 D '52

PRINTING trade

New PIA ratios provide guide to better printing management. Inland Ptr 130:41 D '52

Printing and lithographic trade customs; Graphic arts association of Michigan. Inland Ptr 131:62 Ap '53

What's ahead for '53? L. H. Allen. Inland Ptr 130:27-31 Ja '53

See also

Printers

Printing industry of America, inc.

Accounting

Management controls for printers. J. G. Gerken. Inland Ptr 130:46-7 O '52

Printers must examine books at year's end as guide to better profitability. A. C. Kiechlin. Inland Ptr 130:39-41 D '52

Advertising

Campaigns for promoting printing to buyers should be sponsored by industry groups. F. Rundell. Inland Ptr 129:68-9+ S '52

Printers and lithographers' self-advertising award winners. il Inland Ptr 130:52-3 N '52

Printer's house organ gets customer acceptance. L. H. Allen. il Inland Ptr 130:42-3 D '52

Wetzel plan for effective printing plant advertising. D. Markstein. il Inland Ptr 130:38-9 Ja '53

See also

Printing week

Advertising service

Mr Printer, you need an advertising man. R. A. Stevens. il Inland Ptr 130:38-9 Mr '53

Motels are good prospects. M. E. Gerlach. il Inland Ptr 131:36-7+ My '53

Sell better printing by comparison and suggestion. P. R. Russell. Inland Ptr 130:29+ Mr '53

Use telephone in dull periods for more sales. F. V. Faulhaber. Inland Ptr 131:68 My '53

Estimates

See Printing, Practical—Estimates

Finance

How much profit from a year's operation? L. H. Allen. Inland Ptr 130:33 Mr '53

History

Bowne & co., founded in 1775, is oldest Gotham printing plant. L. H. Allen. il Inland Ptr 129:53 S '52

Purchasing

Ample working capital is rudder steering printing industry through equipment buying. R. H. Matson. Credit & Fin Management 54:12-13+ D '52

Salesmen

Do a better job of selling. S. M. Burt. Inland Ptr 130:40-1+ O '52

Here are some sales aids for live printing salesmen. P. R. Russell. Inland Ptr 130:48-9 N '52

Let's do some competitive selling. D. Markstein. Inland Ptr 131:38-9 Ap '53

Some old truisms need to be taken with grain of salt by young printing salesmen. F. Rundell. Inland Ptr 130:78-9 N '52

Ways to sell printing. O. Arbogust. Inland Ptr 130:39 F; 43 Mr; 131:39 Ap; 69 My; 50 Je '53

Taxation

Printer and his income tax. B. L. Gough. Inland Ptr 130:44-5+ N '52

Yearbooks

Printing year book and almanac, 1952-1953. 14th ed 275p pa $2 Walden, sons & Mott, 93 Worth st, New York 13 '52

Rochester, New York

Scanning the scene through the eyes of JL. J. L. Frazier. Inland Ptr 130:68 N '52

PRINTING week

Printing week observance planned. Inland Ptr 130:32-3 Ja '53

Varied events highlights printing week activities. il Inland Ptr 130:48-9+ F '53

PRIOLEAU, Horry Frost, 1898-

Businessmen in the news. por Fortune 47:54 F '53

PRIORITIES and allocations, Industrial

Chopping controls to size. Bsns W p28-9 F 21 '53

DMS shapes up. Steel 132:49 Mr 30 '53

Final control on materials, stockpiling sought for ODM by President Eisenhower. Nat Pet N 45:18 Ap 8 '53

Freer market for metals. il Steel 132:67-8 Mr 16 '53

Heir to CMP; Defense materials system. Bsns W p 120 Ap 18 '53

New control system to replace plan governing manufacturing materials. Tool Eng 30:109 Je '53

Priorities and allocations; effect on municipal engineering. G. Guetzkow. Pub Works 84:76-8 Ja '53

See also

National production authority—Defense materials system

PRISMS

Short history of spectroscopy; the theory of the prism. T. W. Chalmers. diags Engineer 196:226-7 Ag 21 '53

Variable prism unit for range finders. H. Asher. diag J Sci Instr 29:402-3 D '52

PRISONERS

Alternatives to the death penalty. A. L. Wood. Ann Am Acad 284:63-72 N '52

PRISONERS of war

Cat and mouse truce; Korea. Economist 167:284-5 My 2 '53

PRISONS

Houston's law enforcement center; police administration, corporation courts and jail building. il plans diag Arch Rec 112:124-9 S '52

Overflowing prisons. Economist 165:883 D 27 '52

Heating and ventilation

Heating and ventilating prisons. W. R. Rinehart. plans diags Heat & Ven 50:97-108 Je '53

PRIVACY, Right of

Right of privacy. G. H. Weil. Ptr Ink 241:110-13 O 17 '52

Right of privacy as to dogs and people. A. W. Gray. Ed & Pub 85:54 N 1 '52

PRIVATE presses. See Printing—Private presses

PRIVATE property. See Property

PRIVILEGED communications

Judge upholds Alabama law on confidences. Ed & Pub 85:56 D 13 '52

PRIZE contests

Brand Names contests catch on. F. C. Sturtevant. il Nat Pet N 44:43-4 O 15 '52

Contest stimulates kitchen modernization interest. R. A. Shank. il Elec World 138:142 O 20 '52

Hood-winking the pollsters; naming of New York's Ad Lib restaurant. E. Graham, jr. Adv Agency 46:75-6 Mr '53

Inter-region lighting contest, My most interesting job. Illum Eng 47:579-88 N '52

Mrs America to cook with gas in '54; American gas association and Better Living magazine will conduct contest. il Am Gas Assn Mo 35:12-13+ S '53; Same cond. Gas Age 112:26+ S 24 '53

Pointers in entering lighting competitions. J. O. Kraehenbuehl. Illum Eng 48:92-4 F '53

Traffic improvement sought in General Motors contest. Nat Safety N 66:54+ D '52; Same abr. Eng N 149:28 N 20 '52

Treasure hunt stirs point-of-purchase push for California wines. E. A. Rossi. il Sales Management 69:30-2+ D 15 '52

Winners announced for electrical contractors lighting contest. Illum Eng 48:sup 14A+ S '53

See also

Advertising—Prize contests

Employees' contests

Newspapers—Prize contests

PROBABILITIES

Delay curves for calls served at random. J. Riordan. bibliog Bell System Tech J 32:100-19 Ja '53

PROBABILITIES—*Continued*

Experimental study of speech-wave probability distributions. W. B. Davenport, jr. bibliog diags Acoustical Soc Am J 24:390-9 Jl '52

Markoff random processes and the statistical mechanics of time-dependent phenomena. M. S. Green. J Chem Phys 20:1281-95 Ag '52

Solutions of some problems concerning long random coils. C. A. Hollingsworth. bibliog diags J Chem Phys 20:1580-90 O '52

See also

Sampling (statistical methods)

PROBATE law

Modern probate code; Indiana's new law. J. A. Alexander. Trusts & Estates 92:353-4 My '53

Outside the probate code; probate law provisions may lurk elsewhere. S. M. Farrand. Trusts & Estates 91:730-2 O '52

Bibliography

Trust and probate literature, 1951-52; ABA committee report. Trusts & Estates 91:776-82 O '52

PROBLEM of three bodies

Exchange scattering in a three-body problem. H. E. Moses. Phys R 91:185-92 Jl 1 '53

Three-body scattering problems. A. Dalgarno. Phys R 91:198 Jl 1 '53

Three-nucleon interactions in Yukawa theory. G. Wentzel. bibliog diags Phys R 89:684-8 F 15 '53

PROCAINE

Influence of procaine penicillin on the efficiency of food utilization by pigs. K. L. Robinson and others. Chem & Ind p 18-19 Ja 3 '53

Substrate competition between procaine and succinylcholine diiodide for plasma cholinesterase. F. F. Foldes and others. bibliog il Science 117:383-6 Ap 10 '53

PROCESS serving

New York court upholds statute allowing service of process on unauthorized insurance companies. Weekly Underw 167:1335 N 15 '52

PROCHAZKA, Otto W.

Czech and double-check Prochazka. S. H. Margolis and M. Silverstein. por Ptr Ink 242:46+ F 27 '53

PROCTER and Gamble company

New P&G research laboratory. il Soap & San Chem 28:46-7+ O '52

PRODUCE terminals

Tilt-up walls have own columns, beams; St Louis produce market. il diags Arch Rec 113:169-72 Ja '53

PRODUCE trade

Chicago

Chicago wholesale fresh fruit and vegetable market. J. D. Butterworth. J Marketing 17:291-4 Ja '53

PRODUCERS council

Sometimes you sell more when you cut out the commercial; Producers Council selling of building materials. J. Schoenfeld. Sales Management 70:50+ Mr 15 '53

PRODUCT planning departments

Product planning. C. H. Kline. Advanced Management 18:10-14 Mr '53

PRODUCTION

Business after the defense boom. Fortune 46:112-17+ D '52

Can we get America to live one-third better? W. W. Williams. Comm & Fin Chr 178:358+ Jl 30 '53

Declining world production. Economist 165:239 O 25 '52

Dynamic behavior of linear production systems. D. P. Campbell. flow diags Mech Eng 75:279-83 Ap '53

Firming production bogs; four-pronged analysis picks out production soft spots. Steel 132:166+ Ap 20 '53

Industrial production on downtrend in U.K. For Comm W 49:3 My 11 '53

Industry, American and European plan; report of study made at request of European textile firm. R. W. Jacoby. il Dun's R 60:28-9+ S '52

Industry must boost man-hour production. Cer Ind 61:46-7 Ag '53

Institution of production engineers biennial conference, Harrogate, June 25-28. Elec J 151:51 Jl 3 '53

Know-how, our Maginot line. A. M. Zarem. Chem & Eng N 30:4718-19 N 10 '52

Lower-cost production for today's and tomorrow's needs. H. T. Hallowell, jr. and others. Factory Management 111:52-66 My '53

Missing $5 billion. Fortune 47:30+ F '53

Production and industrial engineering; D.S.I.R. report on conditions in U.S.A. and Canada. Elec J 150:109 Ja 9 '53

Production and productivity in electric lamp manufacture. S. R. Eade. il diags Engineer 194:259-62 Ag 22 '52

Productivity-wage relationship. Comm & Fin Chr 177:1451 Ap 2 '53

Productivity; who gets the benefits? G. G. Carr. Iron Age 170:99-100 D 11 '52

Sales or production, which is best background for a top executive? Ind Marketing 38:52-4+ Ja '53

Surge in durables. Fortune 47:24+ Mr '53

Too much for inventory. Fortune 46:25-6 D '52

Trends in industrial output. Survey of Cur Bsns 33:7-8+ My '53

Upping production, how? Chem Eng 59:339-40+ D '52

Wages and productivity. J. Backman. il Dun's R 61:23-4+ Ja '53

See also

Economics
Efficiency, Industrial
Factory management
Labor productivity
Manufactures
Orders, Unfilled
Planning

Statistics

America's industrial inventory; with statistical tabulation of the annual rated capacity of many industries. J. A. Waring, jr. Dun's R 61:38-40+ F '53

Business indexes; industrial production, construction contracts, employment and payrolls etc.; index totals 1919-1951, monthly March 1951-December 1952. Fed Res Bul 39:47 Ja '53 [cont monthly]

Federal reserve index of industrial production, 1935-1952; tabulation. Iron Age 171:443 Ja 1 '53

Gerschenkron hypothesis of index number bias. I. O. Scott, jr. R Econ & Stat 34:386-7 N '52

Gross national product, national income, and personal income; annual totals for selected years, 1929-1951; adjusted annual rates by quarters, 1951-1952. Fed Res Bul 39:62-3 Ja '53 [cont monthly]

Indexes of industrial production, 1948-1952; chart and tabulations. Automotive Ind 108:327 Mr 15 '53

Indexes of industrial production, 1948-1952; tabulations. Steel 132:193 Ja 5 '53

Indications of current business activity; statistical tabulations covering production and other figures for the latest week or month available. Published in weekly Thursday numbers of Commercial and financial chronicle

Industrial production, by industries, Nov.-Dec. 1951; Jan.-Nov. 1952. Fed Res Bul 39:48-51 Ja '53 [cont monthly]

Industrial production, 1952; with charts and tables. Survey of Cur Bsns 33:12-14 F '53

Industry-by-industry survey of production gains and losses by industries; with tables for Sept. and Oct. 1952. W. Gates. Mag of Wall St 91:226-7+ N 29 '52

National income and product in 1952; with tables, 1950-1952. Survey of Cur Bsns 33:4-10 F '53

National income and product of the United States, 1952; with detailed tables, 1929-1952. Survey of Cur Bsns 33:6-32 Jl '53

Production trends in individual industries; second half of 1952, January-May 1953. J. C. Clifford. Mag of Wall St 92:491-3+ Jl 25 '53

Review of national income and product in the third quarter. Survey of Cur Bsns 32:3-6+ N '52

Review of national income and product in the first quarter. Survey of Cur Bsns 33:2-7 My '53

PRODUCTION—Statistics—*Continued*
Review of national income and product in the second quarter. Survey of Cur Bsns 33: 3-6+ Ag '53
Updated index; FRB revamping its index of industrial production. Bsns W p34 N 1 '52
See also
Input-output data

PRODUCTION acceleration insurance program
PAIP sets the stage for defense expansion. Steel 132:43 Ja 12 '53

PRODUCTION and sales, Coordination of
Production planning by business days. J. E. Cotter. Mill & Factory 53:138-40 O '53
Survey shows how to coordinate production, sales. il Mod Ind 25:46-9 Ja '53

PRODUCTION control
How good is your production control? E. J. Lamberti. Factory Management 111:106-7 Mr '53
How we doubled lot size, and cut indirect labor costs; International resistance co. W. C. Cooling. il Factory Management 111:114-15 Ap '53
Operational controls. D. C. Wright. Welding J 32:328-31 Ap '53
Production control fundamentals. C. L. Wallace. Factory Management 110:136-41 N '52
Production control is the best place to train college grads; Aeroquip corp. M. Betley. Factory Management 111:296+ O '53
Production control of printed resistors. W. H. Hannahs and J. W. Eng. il Electronics 25: 106-9 O '52
Production control; panel discussion. S A E J 61:69-70 Ag '53
Production control tool; X-ray diffraction is proving a powerful analytical tool in the chemical and related fields. J. S. Buhler. il diags Can Chem Process 37:66-7 Ag '53
Production department schedules and controls orders. T. Friedl. Textile World 103: 93-5+ Je '53
Ten years' progress in management; production planning and control. E. H. MacNiece. A S M E Trans 75:664-7 My '53
Ultra-fast communication is key to effective centralized production control. C. W. Boyce. il Factory Management 111:94-5 Ja '53
See also
Factories—Records
Factory management
Production and sales, Coordination of
Schedules

PRODUCTION standards
Statistical work measurement control. R. N. Lehrer. Advanced Management 17:10-11 Ag '52

PRODUCTIVITY wage. See Wage payment plans

PRODUCTS, Diversified
Diversity characterizes Knoxville plant; Southern cast stone co. il Concrete 61:7-10 S '53
Product-line management; many multiproduct firms find this concept of marketing helps. Mod Ind 24:63-4+ D '52
See also
Diversification in industry

PRODUCTS, Improved
Product planning. C. H. Kline. Advanced Management 18:10-14 Mr '53
Redesign for economy; Hydraguide power steering gear. C. Holt. il diags Machine Design 25:164-7 Je '53
Using new materials in design lowers production costs; Hydraguide. il diags Product Eng 24:154-7 Ap '53
Will Snag-Pruf unzip competitors' markets? E. M. Kelley. il Sales Management 69:40+ N 1 '52

PRODUCTS, New
Are new products worth the trouble? Bsns W p 102-4 F 28 '53
Danger; new products in a jet age. Bsns W p46 Ja 31 '53
Dangerous new products cost manufacturers million. Product Eng 24:200-1 Ja '53
Developing new products. P. R. Marvin. Machine Design 25:114-19 S '53
DoAll shows 'em with visual catalog. il Sales Management 69:33 N 20 '52
Fine points in a product development program. G. Kendall. il Product Eng 24:129-35 Ja '53
Heyday is dawning for innovations. Bsns W p52 My 30 '53
How du Pont assured a market for Orlon before making it. M. Reinsberg. il Ind Marketing 37:46-8+ S '52
How Feinberg brought Freewax to big city; insect-killing floor wax. il Bsns W p62-4+ N 1 '52
Is your new product safe? J. V. Grimaldi. Mech Eng 75:122-4+ F '53
Making new products out of old; E. F. Houghton & co. il Bsns W p43-4+ N 1 '52
Management grapples legalities, sales punch to find new product names. Ind Marketing 37:56-7+ S '52
Market survey of new products. G. D. Bieber. Chem Eng Prog 48:647-9 D '52
Marketing new chemical products. W. Alderson. il Chem & Eng N 30:5143-5 D 8 '52
New product news. Published in monthly numbers of Modern industry
New products; odds are you fail. E. C. Kellogg. Iron Age 171:95-6 F 5 '53
Predetermined time values; first aid in planning new products; Birtman electric co. J. E. Allen. il Factory Management 111: 145-7 Ap '53
Product called Sno-Gel; today's hottest news in refrigeration. E. Gidlow. il Sales Management 69:30-2+ O 1 '52
Product development takes teamwork; Parke, Davis & co. il diag Mod Ind 25:59-60+ Ap '53
Product that sells. il Fortune 47:110-12+ Mr '53
Products and processes. il Published in monthly numbers of Fortune
Sales development. D. K. Ballman. Chem & Eng N 30:5244-7 D 15 '52
Sketch-the-product coupon offer finds new product applications; Elastic stop nut corp. of America. C. Downes. il Ind Marketing 37:158+ N '52
Stop-and-go campaign hits snag then gets results for Nopco. P. E. Moreton. il Ind Marketing 37:136+ D '52
That new product; how and by whom a new development chemical product should be introduced. J. V. Miller. Soap & San Chem 29:126-7+ Ja '53
What is a good project for a chemical company? S. T. Ellis; W. H. McLean. Chem & Eng N 31:2061-5 My 18 '53
What share of the market a new soap product can expect. K. Groesbeck. Adv Agency 46:73 Ja '53
See also
Diversification in industry

Advertising

Introducing a new baby product locally. K. Groesbeck. Adv Agency 46:100 Ja '53
Reorganization paves way for aggressive advertising and selling by old company; Waterman co. sapphire-point pen. N. Keine. il Ptr Ink 241:42 N 14 '52

PROFESSIONAL associations
Professional societies, a tool for executive development. T. M. Linville. Advanced Management 18:31-3 Ja '53
See also
Nurses associations

PROFESSIONAL education
See also
Chemical education
Engineering education
Medical education
Scientific education

PROFESSIONAL ethics
Code of ethics for the psychologist. H. Seashore. Personnel 30:35-8 Jl '53
Daniel W. Mead prizes awarded for essays on ethics. Civil Eng 22:1044 D '52
See also
Accounting ethics
Newspaper ethics

PROFESSIONAL workers
Collective bargaining for professional employees. P. M. Wentworth. Civil Eng 23: 115-16 F '53

PROFESSIONAL workers—*Continued*

Management and the professional employee. P. F. Drucker. Harvard Bsns R 30:84-90 My '52; Excerpts. Management R 41:566-8 S '52; Abstracts. Chem Eng 59:294-5 N '52; Chem W 72:26+ Mr 28 '53

National manpower council; summary of statement on scientific and professional manpower. Science 117:617-22 Je 5 '53

Professional man. C. O. Brown. Ind & Eng Chem 45:sup23A-4A F '53 [cont monthly]

Scientific personnel in the USSR. D. Shimkin. Science 116:512-13 N 7 '52

Wanted; more brains. Bsns W p 160 My 30 '53

See also

Accountants
Architects
Chemists
Engineers
Librarians, Special
Nurses and nursing
Physicians
Research workers
Teachers

PROFESSIONS

See also

Advertising as a profession
Engineers
Occupations

PROFILING machines

Checking the accuracy of a vertical profiler. H. A. Roy. diags Mach 59:192-3 F '53

PROFIT

Basic changes in profits margins; trend since 1950; with tables. W. Gates. Mag of Wall St 91:693-5+ Mr 21 '53

Efficiency in management translated into profits; with profit and efficiency comparisons of 74 leading companies. H. Wingate. Mag of Wall St 91:170-2+ N 15 '52

Fair profits for investment bankers. M. Griswold. Comm & Fin Chr 177:1862+ Ap 30 '53

Industry's profits; overstated 44 per cent. Steel 131:67 D 8 '52

Nine ways to insure profits in a buyers' market. J. E. Jump. Adv Agency 46:86-7 Ap '53

Pattern of profits. Economist 167:239-41 Ap 25 '53

Product group profit reporting for materials wholesalers. W. A. Lewis. N A C A Bul 34:783-90 F '53

Profit analysis for the magnet wire industry. G. L. Faulkner. N A C A Bul 34:35-47 S '52

Profit margins in a buyers' market. T. D. Sears. Comm & Fin Chr 178:345+ Jl 30 '53

Profits and dividends (quarterly), Nov.-Dec. 1951-Jan.-Nov. 1952. Survey of Cur Bsns 33:S 18 Ja '53 [cont monthly]

Profits; industry overestimates net. Iron Age 170:104-5 D 11 '52

Profits off the boil; analysis of third quarter figures. Economist 165:317-19 N 1 '52

Profits on the ebb. Economist 166:226-8 Ja 24 '53

Rise in profits. R. M. Bleiberg. Barron's 33:5 Jl 27 '53

Turn in profits; a long decline ended in the third quarter. R. M. Bleiberg. Barron's 32:5 O 27 '52

What are profits? D. Knowlton. Dun's R 60:29+ N '52

See also

Excess profits tax

Statistics

See Corporations—Finance—Statistics

PROFIT sharing

Christmas four times a year; Logren Aircraft of Torrance, Calif. Fortune 46:163 D '52

Fight Marxism by giving employees stake in profits! T. D. Brophy. Comm & Fin Chr 177:198+ Ja 15 '53

Incentive to production; deferred profit sharing. R. P. Ettinger. Personnel J 31:284-7 Ja '53

Insured profit sharing, pension planning. D. B. Maduro. Nat Underw (Life ed) 57:24 F 6 '53

Is profit sharing the answer to greater production? Sheaffer Pen. W. A. Sheaffer, 2d. Am Bsns 23:30+ O '53

Is sharing profits the answer? W. H. Conant. il Am Bsns 23:12-13+ Mr '53; Discussion. W. H. Wheeler, jr. 23:2-3 Ap '53

Labor; profit split pays two ways; profit sharing plan at Bath plant helps both management and labor. R. M. Lorz. Iron Age 171:41 Ja 15 '53

Motorola's imaginative plan keeps workers sold on profit sharing. K. M. Piper. il Factory Management 111:87-9 Ja '53

Partnership pension plans; drafting suggestions in anticipation of Jenkins-Keogh law. E. R. Finch, jr. Trusts & Estates 92:496-7 Jl '53

Printers' Ink awards dinner; medal winners urge advertising to push social and economic gains; Brophy wants profits of enterprise widely distributed; Sterling stresses research. Ptr Ink 242:40-2 Ja 16 '53

Profit sharing. R. W. Babson. Comm & Fin Chr 178:269 Jl 23 '53

Profit-sharing doubles production; Commercial steel treating corp. D. G. Baird. il Mill & Factory 52:133-6 My '53

Profit sharing in heating work; Greer Automatic Heating. Sheet Metal Worker 44:54 D '52

Profit-sharing plans. Burroughs Clearing House 37:11 F '53

Stacking up money for pensions; profit-sharing plans. H. Rice. Comm & Fin Chr 177:2630+ Je 18 '53

See also

Employees as stockholders

PROFIT sharing trusts. See Employees' trusts

PROFITEERING

Shades of Marx! private trading still lubricates the Soviet machine. P. Wohl. Barron's 33:5 Jl 20 '53

PROGESTERONE

Microbiological transformations of steroids, introduction of oxygen at carbon-11 of progesterone. D. H. Peterson and others. bibliog Am Chem Soc J 74:5933-6 D 5 '52

Preparation of the 3-ethylenedioxy derivatives of 11-ketoprogesterone, dehydrocorticosterrone acetate and cortisone acetate. J. M. Constantin, A. C. Haven, jr. and L. H. Sarett. bibliog Am Chem Soc J 75:1716-18 Ap 5 '53

Steroids; a ten step conversion of progesterone to cortisone; the differential reduction of pregnane-3,20-diones with sodium borohydride. O. Mancera and others. bibliog Am Chem Soc J 75:1286-90 Mr 20 '53

Steroids; synthesis of 11α,17α-dihydroxyprogesterone and of 11α,17α, 21-trihydroxyprogesterone, the 11-epimer of Kendall's Compound F. J. Romo and others. bibliog Am Chem Soc J 75:1277-82 Mr 20 '53

Synthesis of progesterone labeled in position 4. G. I. Fujimoto and J. Prager. bibliog Am Chem Soc J 75:3259-61 Jl 5 '53

PROGRESS

In just 15 years. N. G. Meyer. Ptr Ink 242:130 Mr 27 '53

PROJECTILES

Interferometric analysis of airflow about projectiles in free flight. F. D. Bennett and others. bibliog il diags J Ap Phys 23:453-69 Ap '52

Vertical entry of missiles into water. A. May. il J Ap Phys 23:1362-72 D '52

Testing

Windtunnel is a firing range. il Aviation W 57:35 O 20 '52

PROJECTION apparatus

Amateur scientist; how a group of amateurs helped to build a planetarium. A. G. Ingalls. il diags Sci Am 188:104-8+ Mr '53

Hilger and Watts two precision projectors. il Engineer 196:252 Ag 21 '53

Surface-finish projector; Techne (Cambridge), limited. il diag Engineering 175:72 Ja 16 '53

See also

Slide films—Projectors
Television projection

PROLINE

Synthesis of the diethylacetal of glutamic-γ-semialdehyde. N. Good and H. K. Mitchell. Am Chem Soc J 74:4952-3 O 5 '52

PROMISSORY notes

See also

Commercial paper

PROOFREADING

Proofroom. H. D. Bump. Published in monthly numbers of Inland printer

Tells how to use points and picas in mark-up. W. K. Schori. Inland Ptr 130:64 N '52

PROPAGANDA

Free world and eastern Europe; American propaganda for liberation. Economist 165:313-14 N 1 '52

Party line; liberal press. J. Chamberlain. Barron's 33:5 Je 29 '53

Propaganda; industry wages own war; collects, ships magazines and literature to let world know America. il Iron Age 171:75 Mr 12 '53

See also

Radio broadcasting—Propaganda

Television broadcasting—Propaganda

PROPAGANDA, Russian

Stalin's Moslem empire. Economist 165:363-4 N 8 '52

PROPANE

Design and operation of dehydrators for volatile hydrocarbons. L. Boyd. flow plan Oil & Gas J 51:106-7 D 8 '52

Effect of high-frequency sound waves on an air-propane flame. C. J. Kippenhan and H. O. Croft. bibliog il diags A S M E Trans 74:1151-4; Discussion. 1154-5 O '52

Elastic scattering and neutralization of low velocity hydrogen ions in ethane and propane. J. H. Simons and S. A. McAllister. bibliog J Chem Phys 20:1431-6 S '52

Flexible standby for Washington Gas Light includes new high-pressure storage plant. B. C. White. il Am Gas J 177:14-15+ D '52; Same. Pet Eng 24:D50+ D '52

How to control propane leaks. il Safety Maint & Prod 105:67-70 F '53

Isobaric heat capacity of propane over a wide range of temperature and pressure. J. H. Seifarth and J. Joffe. bibliog Ind & Eng Chem 44:2894-7 D '52

LP plants have future use in utility systems. J. L. Turnan. il diag Am Gas J 179:16-17+ S '53

Liquid-vapor equilibrium relations in binary systems; propane-hydrogen sulfide system. W. B. Kay and G. M. Rambosek. bibliog diags Ind & Eng Chem 45:221-6 Ja '53

Phase behavior of the hydrogen-propane system. W. L. Burriss and others. bibliog Ind & Eng Chem 45:210-13 Ja '53

Phillips prepares Illinois cavern for propane storage. il Pet Eng 24:E5 D '52

Process design and operation of multicomponent hydrocarbon stripping. R. H. Parekh. flow diag Pet Refiner 31:99-103 N '52

Propane deasphalting; M. W. Kellogg co. flow diag Pet Refiner 31:198-9 S '52

Propane deasphalting of residua. J. G. Ditman and F. T. Mertens. il diag Pet Processing 7:1628-32 N '52

Propane dewaxing; M. W. Kellogg co. flow diag Pet Refiner 31:198-9 S '52

Pyrolysis of propane and butanes at elevated pressure. H. J. Hepp and F. E. Frey. bibliog diag Ind & Eng Chem 45:410-15 F '53

Reaction of Cd($^3P_1$) with propane at low conversion. P. Agius and B. D. Darwent. bibliog J Chem Phys 20:1679-83 N '52

Solubilities and structures in aqueous aliphatic hydrocarbon solutions. W. F. Claussen and M. F. Polglase. bibliog diag Am Chem Soc J 74:4817-19 O 5 '52

Stretching the St Louis gas supply; Laclede company increases propane-air system to supplement natural gas. L. M. Liberman. il map Comp Air Mag 58:34-9 F '53

Thermodynamics of combustion gases; temperatures of methane-air and propane-air flames at atmospheric pressure. R. W. Smith, jr. and others. bibliog U S Bur Mines Rep of Invest 4938:1-3 '53

Thermodynamics of combustion gases; temperatures of methane-air, propane-air, and ethylene-air flames. R. W. Smith, jr. and others. bibliog U S Bur Mines Rep of Invest 4983:1-21 '53

Vapor-liquid equilibria for binary hydrocarbon-water systems. R. Kobayashi and D. L. Katz. bibliog(35 ref) flow sheet diags Ind & Eng Chem 45:440-51 F '53

PROPANEDIOL. See Propylene glycol

PROPANOL. See Propyl alcohol

PROPELLANTS

Evaluation of plastics for liquid rocket propellant applications. P. M. Terlizzi and A. E. Lenehan. il diags Mod Plastics 30:140+ F '53

Liquid propellant rocket motors. B. R. Diplock and others. il plan diags Roy Aeronautical Soc J 57:19-28 Ja '53

See also

Nitroguanidine

PROPELLERS

Controllable pitch propeller takes a beating. il Marine Eng 58:54 Jl '53

Dalzell tug tests de Schelde propeller. il Marine Eng 58:68+ Je '53

Effect of pitch and blade width on propeller performance; abstracts. R. W. L. Gawn. Engineer 194:557-8 O 24 '52; Engineering 174:734 D 5 '52; Discussion. Engineer 194:558-9 O 24 '52; Engineering 174:734-5 D 5 '52

Effect of radial-pitch variation on the performance of a marine propeller; abstracts. L. C. Burrill and C. S. Yang. Engineering 175:628 My 15 '53; Engineer 195:558 Ap 17 '53; Discussion. Engineering 175:628-9 My 15 '53; Engineer 195:558-9 Ap 17 '53

Experimental and theoretical investigation of propeller shaft failures; abstract. N. H. Jasper and L. A. Rupp. Marine Eng 58:63; Discussion. 63-4 F '53

General Dynamics enters controllable-pitch propeller field. il Marine Eng 58:51-2 Jl '53

How to find the pitch of a propeller. diags Marine Eng 58:63-5 Ap '53

Moderately loaded propellers with a finite number of blades and an arbitrary distribution of circulation; abstract and discussion. H. W. Lerbs. Marine Eng 58:55-7 Ja '53

Novoston alloy for ships' propellers. Engineering 175:326 Mr 13 '53

Propellers now made of nickel-aluminum bronze. T. H. Addie. Marine Eng 58:79-80 O '53

What is the controllable-pitch propeller? H. A. Doell. il diags Marine Eng 58:71-6 Ag '53

PROPELLERS, Airplane. See Airplane propellers

PROPENYLBENZENE

cis- and *trans-*propenylbenzene and their azeotropes with *n*-decane. R. Y. Mixer and others. Am Chem Soc J 75:4094-6 Ag 20 '53

PROPERTY

Property rights are human rights. B. H. Hazen. Comm & Fin Chr 176:1734 N 6 '52

See also

Joint tenancy

PROPIOLACTONE

Reaction of propiolactone with aniline derivatives. C. D. Hurd and S. Hayao. Am Chem Soc J 74:5889-93 D 5 '52

Reaction of propiolactone with indoles and pyrrole. J. Harley-Mason. Chem Soc J p2433 Je '52

PROPIONALDEHYDE

β-Fattyalkylaminopropionaldehydes. K. R. Eilar and O. A. Moe. Am Chem Soc J 75:3841-2 Ag 5 '53

PROPIONIC acid

Condensation of oxalic esters with esters of β-alanine and N-substituted β-aminopropionic acids; synthesis of some derivatives of 2,3-dioxopyrrolidine and 2-oxo-3-methoxy-3-pyrroline. P. L. Southwick and R. T. Crouch. bibliog Am Chem Soc J 75:3413-17 Jl 20 '53

Microbiological synthesis of vitamin B_{12} by propionic acid bacteria. A. Leviton and R. E. Hargrove. bibliog Ind & Eng Chem 44:2651-5 N '52

Synthesis in the santonin series. G. R. Clemo and F. J. McQuillin. Chem Soc J p3839-44 O '52

Synthesis in the santonin series; some oxidation products of α-(2-keto-4-methyl*cyclo*hexyl)propionic acid. G. R. Clemo and F. J. McQuillin. Chem Soc J p3835-9 O '52

PROPIONIC anhydride
Condensation of trisodium tricarballylate with propionic anhydride. N. B. Mehta and W. E. McEwen. bibliog Am Chem Soc J 75:240-2 Ja 5 '53

PROPIONITRILE
Reaction of cyanogen and related nitriles with 1,3-dienes; propionitrile and butadiene. G. J. Janz and R. E. Myers. bibliog Am Chem Soc J 75:1910-12 Ap 20 '53

PROPORTIONING equipment
Continuous proportioning catalyst of the automatic plant. L. Lowy. il diags Food Eng 25:72-6+ Jl '53
Howard Proportionometer high-pressure pump for automatic output regulation. il diags Engineering 176:26-7 Jl 3 '53
Proportioning. L. Lowy. Food Eng 25:163-4+ O '53
Proportioning pumps deliver controlled drops or gpm. F. A. Annett. il diags Power 97:116-17+ Jl; 116-17 Ag '53

PROPRIETARY medicines. See Medicines, Proprietary

PROPYL alcohol
High frequency dispersion in *n*-propanol. R. H. Cole and D. W. Davidson. J Chem Phys 20:1389-91 S '52
Molecular interaction between *n*-propyl alcohol and iron or iron oxides. E. H. Loeser, W. D. Harkins and S. B. Twiss. bibliog J Phys Chem 57:591-7 Je '53
n-Propyl and *iso*propyl acetals of glyoxal; reaction of commercial aqueous glyoxal solutions with propan-1- and -2-ols. B. Duval, R. H. Hall and B. K. Howe. bibliog J Ap Chem 2:546-50 S '52
Ternary solubility data for systems involving 1-propanol and water. J. F. McCants, J. H. Jones and W. H. Hopson. bibliog Ind & Eng Chem 45:454-6 F '53
Thermodynamics of aqueous 2-propanol-sulfuric acid solutions from electromotive force measurements. W. N. Whitten and J. E. Land. Am Chem Soc J 75:2202-4 My 5 '53
Vapor-liquid equilibria at 760 mm. pressure; 2-propanol-methanol, 2-propanol-ethyl alcohol, 2-propanol-propanol, and 2-propanol-2-butyl alcohol systems. L. H. Ballard and M. Van Winkle. bibliog Ind & Eng Chem 44:2450-3 O '52

PROPYL benzene
High pressure thermal reactions of propyl- and isopropylbenzene, *p*-cymene and *s*-butylbenzene; isomerization of alkyl groups. V. N. Ipatieff and others. Am Chem Soc J 75:3323-6 Jl 20 '53

PROPYL bromide
Kinetics of the decompositions of ethyl, isopropyl and *n*-propyl bromides. A. T. Blades and G. W. Murphy. bibliog Am Chem Soc J 74:6219-21 D 20 '52

PROPYLMAGNESIUM iodide
Reactions of perfluorinated propylmagnesium iodide. A. L. Henne and W. C. Francis. bibliog Am Chem Soc J 75:992-4 F 20 '53

PROPYLENE
High molecular weight polymers from propylene and 1-butene. C. M. Fontana and others. bibliog diags Ind & Eng Chem 44:2955-62 D '52
Hyperconjugation; charge distributions in propylene and some methylbenzenes. V. A. Crawford. Chem Soc J p2058-61 Jl '53
Kinetics of the catalytic vapor-phase addition of hydrogen chloride to propylene. L. E. Swabb, jr. and H. E. Hoelscher. bibliog plan Chem Eng Prog 48:564-9 N '52
Oxidation of ethylene and propylene in the gas phase. J. H. Burgoyne and R. A. Cox. diag Chem Soc J p876-83 Mr '53

PROPYLENE chloride
Dielectric dispersion in the microwave region of six tetrasubstituted methanes in the solid state. J. G. Powles and others. bibliog diags J Chem Phys 21:136-41 Ja '53
Electron diffraction investigation of the molecular structures of 1,1,1-trichloroethane, 2,2-dichloropropane and 2-chloro-2-methylpropane. J. W. Coutts and R. L. Livingston. bibliog Am Chem Soc J 75:1542-7 Ap 5 '53
Studies on unimolecular chlorohydrocarbon decompositions. K. E. Howlett. Chem Soc J p945-7 Mr '53

PROPYLENE glycol
Case for synthetic lubricants in winter operation of automotive engines. J. A. Miller and H. F. Galindo. S A E J 61:33-5 Ap '53
New antibacterial agents; an alternate synthesis of DL-*threo*-2-dichloroacetamido-1-(4-methylsulfonylphenyl)-1,3-propanediol. C. M. Suter, S. Schalit and R. A. Cutler. bibliog Am Chem Soc J 75:4330-3 S 5 '53
Synthesis of DL-*threo*-and DL-*erythro*-1-(5-nitro-2-thienyl)-2-dichloroacetamido-1,3-propanediols and related compounds. E. C. Hermann and A. Kreuchunas. bibliog Am Chem Soc J 74:5168-72 O 20 '52
Ultraviolet absorption spectra of some *p*-substituted D-*threo*-2-dichloroacetamido-1-phenyl-1,3-propanediols. F. C. Nachod and R. A. Cutler. Am Chem Soc J 74:6291-2 D 20 '52

PROPYLENE oxide
Anomalous susceptibilities of three-membered ring compounds. J. R. Lacher and others. bibliog J Chem Phys 20:1047-8 Je '52

PROPYLENE sulfide
Oxidative ring cleavage reactions of propylene sulfide. J. M. Stewart and H. P. Cordts. bibliog Am Chem Soc J 74:5880-4 D 5 '52

PROSPECT lists
Amana pegs sales appeal to high cost of eating. il Sales Management 69:72+ N 10 '52
Now a soda fountain in every home! ice cream manufacturer in New Orleans. il Sales Management 70:86+ Mr 1 '53
Sale I never forgot; appearances were deceiving. C. D. Hammond. Ptr Ink 242:88 Mr 20 '53
Satisfied customers provide best leads; Amana freezers. C. J. Swan. il Ptr Ink 241:41-3 N 7 '52

Lost customers

Why discard difficult prospects, customers you no longer have? F. V. Faulhaber. Inland Ptr 130:41 N '52

PROSPECTING
Airborne exploration methods. F. W. Hinrichs. il map diags Min Cong J 39:46-9 My '53
Can cross sections of mountain ranges be used as guides to discover new mineralized areas? E. V. Reinhardt. map diags Eng & Min J 153:84-6 D '52
Development of portable Geiger counters. A. H. Lang. bibliog il Can Min J 74:65-7 Ap '53
Diphenylthiocarbazone; Australians are using it to find ore. il Eng & Min J 154:134 O '53
Geochemical prospecting finds widespread application in British Columbia. H. V. Warren and R. E. Delavault. il Min Eng 5:980-1 O '53
Geochemical prospecting for copper at Ray, Ariz. O. M. Clarke, jr. map diags Econ Geol 48:39-45 Ja '53
Geology in the mining industry, 1952. R. M. Foose. il Min Cong J 39:98-100+ F '53
Helicopters for exploration? M. A. Matzkin. il Min Eng 5:876-8 S '53
History of uranium discoveries, Lake Athabasca. A. H. Lang. bibliog il maps Can Min J 74:69-76 Je '53
Mining geology; annual review, 1952. J. D. Forrester. il Min Eng 5:149-50 F '53
New trends in prospecting for uranium ore; St Mary's channel, Saskatchewan. R. G. Hoiles. Can Min J 74:83-6 My '53
Prospecting in Quebec-Labrador iron fields. J. M. Harrison. bibliog il map Can Min J 73:78-82 O '52
Quest for minerals. Comp Air Mag 58:141-2 My '53
Radioactivity as a guide to ore. W. H. Gross. bibliog maps diags Econ Geol 47:722-42 N '52
Role of geologists in the development of the Labrador-Quebec iron ore districts. J. K. Gustafson and A. E. Moss. bibliog il maps diag Min Eng 5:Trans 593-602 Je '53; Same. Can Min J 74:61-8 Je '53
Uranium deposits of the Grants District, New Mexico. C. C. Towle and I. Rapaport. il map Min Eng 4:1037-40 N '52

PROSPECTING—*Continued*

What the uranium prospector should know about radiation. R. J. Wright. Eng & Min J 154:92-5 Ja '53

See also

Petroleum—Prospecting

Electric methods

Earth resistivity in groundwater studies in Illinois. M. B. Buhle. maps Min Eng 5: Trans 395-9 Ap '53

Earth resistivity surveying for sand and gravel deposits; abstract. I. R. Thomas. Rock Prod 56:141-2 Ap '53

Self-potential anomalies due to subsurface water flow at Garimenapenta, Madras State, India. M. B. R. Rao. bibliog maps Min Eng 5:Trans 400-3 Ap '53

See also

Petroleum—Prospecting—Electric methods

Engineering applications

Electrical resistivity method applied to the investigation of construction materials deposits. E. A. Abdun-Nur and D. Wantland. bibliog il diags Am Soc T M Proc 50:1364-78; Discussion. 1379-82 '50

Geophysical methods

Geophysical case history, Fredericktown lead district, Missouri. H. Powers and others. maps diag Min Eng 5:Trans 317-20 Mr '53

Geophysical exploration grows in Japan. il Min Eng 5:468 My '53

Geophysical prospecting. E. E. Maillot. il Min Cong J 39:29-31+ S '53

Geophysics; annual review, 1952. H. R. Joesting. il Min Eng 5:151-5 F '53

Play-back system aids seismic exploration. J. J. Jakosky and J. J. Jakosky, jr. il diags Pet Eng 24:B 112+ O '52

Testing geophysical exploration methods; New Park mining co. R. E. Gilbert. il diags Min Eng 5:50-2 Ja '53

Wavefront charts and raypath plotters. A. W. Musgrave. il diags Colorado School of Mines [Golden] Quarterly 47:1-60 [fold charts in pocket] bibliog(p59-60) O '52 (pa $1)

See also

Petroleum—Prospecting—Geophysical methods

Bibliography

Geophysical abstracts 148, January-March 1952 (numbers 13284-13547). M. C. Rabbitt and S. T. Vesselowsky. U S Geol S Bul 991-A:1-73; pa 25c Supt. of doc. '52

Geophysical abstracts 149, April-June 1952 (numbers 13548-13802). M. C. Rabbitt and S. T. Vesselowsky. U S Geol S Bul 991-B:75-143; pa 25c Supt. of doc. '52

Geophysical abstracts 150, July-September, 1952 (numbers 13803-14003). M. C. Rabbitt and S. T. Vesselowsky. U S Geol S Bul 991-C:145-94; pa 25c Supt. of doc. '52

Geophysical abstracts 151, Oct.-Dec. 1952 (numbers 14004-14183). M. C. Rabbitt and S. T. Vesselowsky. U S Geol S Bul 991-D:195-287; pa 25c Supt. of doc. '53

Engineering applications

Application of geophysical exploration in civil engineering. G. F. Sowers. Min Eng 5: Trans 801-2 Ag '53

PROSPECTORS

Beans and burros. A. A. Richie. il Comp Air Mag 58:166-8 Je '53

Prospector, still the foot soldier of mineral exploration; abstract. M. P. Romney. Min Cong J 38:116 O '52

See also

Steen, Charles

PROSPECTORS and developers association

Annual meeting, Toronto, March 8-11. Can Min J 74:79-81 Ap '53

President, Viola MacMillan. Eng & Min J 154: 126 S '53

PROSPERITY

Background and forces in current prosperity. J. M. Templeton. Comm & Fin Chr 177: 1534+ Ap 9 '53

Factors promoting prosperity. A. H. Johnson. Comm & Fin Chr 177:588-9 F 5 '53

Is prosperity permanent? C. C. Brown. Comm & Fin Chr 176:1913+ N 20 '52

Prospects for prosperity. W. W. Townsend. Comm & Fin Chr 178:347+ Jl 30 '53

So-called prosperity. R. W. Babson. Comm & Fin Chr 177:1110 Mr 12 '53

Uneasy prosperity. R. G. Gettell. Comm & Fin Chr 177:289+ Ja 22 '53

PROTACTINIUM

Isotopes

Thermal neutron capture cross sections of Pa^{231} and Pa^{232}. R. Elson and others. Phys R 90:102 Ap 1 '53

PROTAMINES

Electrophoresis-convection applied to the complexed insulin-protamine system. S. N. Timasheff and J. G. Kirkwood. bibliog Am Chem Soc J 75:3124-6 Jl 5 '53

PROTEASE

Enzymic synthesis of peptide bonds; instances of protease-controlled specificity in the synthesis of acylamino acid anilides and acylpeptide anilides. F. Janssen, M. Winitz and S. W. Fox. bibliog Am Chem Soc J 75:704-7 F 5 '53

PROTEINS

Action of formaldehyde on proteins. R. D. Haworth and others. Chem Soc J p2972-87 Ag '52

Action of nickelammonium hydroxide on proteins in general. J. W. Bell and C. S. Whewell. Soc Dyers & Col J 68:305 Ag '52

Adsorption on proteins and interactions between protein molecules in solution. T. L. Hill. J Chem Phys 21:1395-6 Ag '53

Adsorption on proteins, the grand partition function and first-order phase changes, according to approximate statistical mechanical theories. T. L. Hill. bibliog J Phys Chem 57:324-9 Mr '53

Application of the Bjerrum ion association theory to the binding of anions by proteins. J. A. Schellman. bibliog J Phys Chem 57: 472-5 Ap '53

Binding of simple substances to serum proteins and its effect on apparent antibody-hapten combination constants. D. Pressman and M. Siegel. bibliog diags Am Chem Soc J 75:686-93 F 5 '53

Condensation of long-chain fatty acids with polysaccharides and proteins. A. S. Jones, M. A. G. Kaye and M. Stacey. Chem Soc J p5016-20 D '52

Conference on protein metabolism, 9th, New Brunswick, N.J. Chem & Eng N 31:668+ F 16 '53

Consideration of the hydrodynamic properties of proteins. H. A. Scheraga and L. Mandelkern. bibliog Am Chem Soc J 75:179-84 Ja 5 '53

Cut-off phenomena of protein crystallography. A. D. Booth. bibliog J Chem Phys 20:1907-10 D '52

Determination of the terminal carboxyl residues of peptides and of proteins. V. H. Baptist and H. B. Bull. bibliog Am Chem Soc J 75:1727-9 Ap 5 '53

Distribution of allergic and blocking activity in human serum proteins fractionated by electrophoresis convection. M. H. Loveless and J. R. Cann. bibliog Science 117:105-8 Ja 30 '53

Effect of protein dispersion on freeze-thaw stability of latex emulsion, by the Northwestern club. Paint Oil & Chem R 115:52-4+ D 4 '52; Abstract. Oil Paint & Drug Rep 162:78 N 24 '52

Electrophoretic analysis of protein interaction; explanation of a boundary anomaly in the system bovine serum albumin-methyl orange. J. R. Colvin and D. R. Briggs. bibliog J Phys Chem 56:717-22 Je '52

Elevation of the intrinsic viscosity of peanut protein by treatment with terephthalyl dichloride. G. E. Mann. bibliog Am Chem Soc J 75:3526-9 Jl 20 '53

Estimation of heterogeneity from diffusion measurements. P. A. Charlwood. bibliog J Phys Chem 57:125-8 Ja '53

Experimental hypersensitivity. D. Pressman and L. Korngold. bibliog Science 116:433 O 17 '52

PROTEINS—*Continued*

Hydrolysis of proteins by ion exchange resin catalysis. J. C. Paulson, F. E. Deatherage and E. F. Almy. bibliog Am Chem Soc J 75:2039-41 My 5 '53

Interpretation of infrared dichroism in fibrous protein structures. R. D. B. Fraser. bibliog diags J Chem Phys 21:1511-15 S '53

Milk casein and peanut protein fibres. R. L. Wormell. flow sheet il Textile Inst J 44: P258-68; Discussion. P268-71 Jl '53

Model for the configuration of sulfhydryl groups in proteins. R. E. Benesch and R. Benesch. Am Chem Soc J 75:4367-9 S 5 '53

N-terminal groups of normal human gamma globulin and of myeloma proteins. F. W. Putnam. bibliog Am Chem Soc J 75:2785-6 Je 5 '53

Preparation and properties of serum and plasma proteins; an X-ray study of crystalline human serum albumin preparations. B. W. Low. bibliog il diags Am Chem Soc J 74:4830-4 O 5 '52

Preparation and properties of serum and plasma proteins; separation from human plasma of polysaccharides, peptides and proteins of low molecular weight; crystallization of an acid glycoprotein. K. Schmid. bibliog il Am Chem Soc J 75:60-8 Ja 5 '53

Preparation and properties of some additional carcinogen-protein conjugates. R. M. Peck, G. L. Miller and H. J. Creech. bibliog Am Chem Soc J 75:2364-6 My 20 '53

Reaction of 2,4-dinitrobenzenesulfonic acid with free amino groups of proteins. H. N. Eisen, S. Belman and M. E. Carsten. bibliog Am Chem Soc J 75:4583-5 S 20 '53

Review of biochemistry. K. Rees. Chem Age (Lond) 68:82-5 Ja 10 '53

Some statistical mechanical models of elastic polyelectrolytes and proteins. T. L. Hill. bibliog diags J Chem Phys 20:1259-73 Ag '52

Surface areas of proteins; the mechanism of water sorption. J. M. Seehof, B. Keilin and S. W. Benson. bibliog Am Chem Soc J 75:2427-30 My 20 '53

Surface areas of proteins; vapor phase titrations with polar gases. S. W. Benson and J. M. Seehof. bibliog diag Am Chem Soc J 75:3925-8 Ag 20 '53

Tensile behavior of some protein fibers. G. Susich and W. Zagieboylo. bibliog Textile Res J 23:405-17 Je '53

Viscosity stability of latex paints; effect of unhydrolyzed soybean protein. D. A. Bixler. Ind & Eng Chem 45:739-42 Ap '53

See also

Albumin
Amino acids
Casein
Fibroin
Flavoproteins
Gelatin
Globulins
Insulin
Lipoproteins
Peptides
Tryptophan

Analysis

Determination of coupled aromatic nuclei in an azo protein. C. E. Weill. bibliog Anal Chem 24:1617-18 O '52

Gravimetric estimation of proteins precipitated by trichloroacetic acid. F. L. Hoch and B. L. Vallee. bibliog Anal Chem 25:317-20 F '53

Denaturation

Action of denaturing agents on deoxyribonucleic acid. B. E. Conway and J. A. V. Butler. diags Chem Soc J p3075-82 Ag '52

Kinetic study of the reversible acid denaturation of ferrihemoglobin. J. Steinhardt and E. M. Zaiser. bibliog Am Chem Soc J 75: 1599-605 Ap 5 '53

Kinetics of thermal denaturation of X-rayed egg albumin. H. Fricke. bibliog J Phys Chem 56:789-95 Je '52

Protein denaturation still not fully understood; symposium. il Chem & Eng N 31: 1404-5 Ap 6 '53

PROTEUS

Contractility of bacterial flagellae. G. H. Barlow and J. J. Blum. bibliog Science 116: 572 N 21 '52

PROTOCATECHUIC acid

Reactions of vanillin and its derived compounds; ethers of protocatechuic acid and their ethyl esters. I. A. Pearl and D. L. Beyer. bibliog Am Chem Soc J 75:2630-3 Je 5 '53

PROTOKOSIN

Anthelmintics; kuosso; the structures of protokosin, α-kosin and β-kosin. A. J. Birch and A. R. Todd. Chem Soc J p3102-8 Ag '52

PROTON accelerator

Cosmotron doughnut magnet is 288 shop-made sandwiches. il Am Mach 96:128-31 N 10 '52; Welding J 32:145-7 F '53

Examples of multiple pion production in n-p collisions observed at the cosmotron. W. B. Fowler and others. bibliog il Phys R 91: 758-9 Ag 1 '53

Generator foundation for cosmotron meets unique requirements. J. M. Ruddy. il diags Eng N 150:44-5 Mr 26 '53

Oil-immersed 110-kv 440-kw rectifier unit for resnatron plate supply; abstract. R. P. Featherstone and others. il diag Elec Eng 72:634 Jl '53

Polyester protects cosmotron. il Mod Plastics 30:168 Ap '53

Proton gun sorts elements. Steel 131:132 N 17 '52; Iron Age 170:179-80 D 4 '52

Proton synchrotron at Birmingham university. il plans diags Engineer 195:271-4, 305-7 F 20-27 '53

Synchrocylotron for 450-Mev protons. H. L. Anderson and others. bibliog il diags R Sci Instr 23:707-28 D '52

V^0 particles produced at the cosmotron. W. B. Fowler and others. il Phys R 90:1126-7 Je 15 '53

PROTON acids. See Acids

PROTONS

Absolute determination of resonant energies for the radiative capture of protons by boron, carbon, fluorine, magnesium, and aluminum in the energy range below 500 kev. S. E. Hunt and W. M. Jones. diag Phys R 89:1283-7 Mr 15 '53

α-Energy systematics and proton shells for heavier nuclei. S. Sengupta. bibliog Phys R 87:1136-7 S 15 '52

Angular distribution of protons from vanadium 52. J. S. King and W. C. Parkinson. Phys R 89:1080 Mr 1 '53

Angular distributions of protons and tritons from deuteron-induced reactions on Be^9. H. W. Fulbright and others. bibliog Phys R 88:700-2 N 15 '52

Angular distributions of protons from $Na^{23}(d,p)Na^{24}$. S. Takemoto and others. Phys R 91:1024-5 Ag 15 '53

Angular distributions of protons from the reaction $F^{19}(d,p)F^{20}$. D. A. Bromley and others. bibliog Phys R 89:396-8 Ja 15 '53

Atomic number dependence of neutral meson yield from proton bombardment. R. W. Hales and B. J. Moyer. bibliog diags Phys R 89:1047-53 Mr 1 '53

Calculation of the half-widths of one-body resonances. J. L. Johnson and J. L. McHale. bibliog Phys R 91:87-9 Jl 1 '53

Coulomb and nuclear interactions of cosmic-ray mesons and protons in lead. W. L. Whittemore and R. P. Shutt. bibliog Phys R 88:1312-21 D 15 '52

Coulomb effects in pion scattering by protons under the charge independence hypothesis. L. Van Hove. Phys R 88:1358-60 D 15 '52

Determination of $g_J(^2S_{1/2})$ of potassium in terms of the proton gyromagnetic ratio. P. Franken and S. Koenig. bibliog Phys R 88: 199-201 O 15 '52

Determination of the neutron-proton capture cross section. G. von Dardel and A. W. Waltner. bibliog Phys R 91:1284-5 S 1 '53

Discontinuities in the binding energies of neutrons and protons in light nuclei. M. G. Redlich. Phys R 88:38-9 O 1 '52

Distributions-in-energy for alpha-particles and protons from U^{235} fission. D. L. Hill. diag Phys R 87:1049-51 S 15 '52

Electron capture by protons passing through hydrogen. J. D. Jackson and H. Schiff. bibliog diag Phys R 89:359-65 Ja 15 '53

Electron distribution in molecules; proton and fluorine magnetic resonance shifts in the halomethanes. L. H. Meyer and H. S. Gutowsky. bibliog il J Phys Chem 57:481-6 My '53

PROTONS—*Continued*

Electron distribution in molecules; the proton magnetic spectra of simple organic groups. L. H. Meyer, A. Saika and H. S. Gutowsky. bibliog il Am Chem Soc J 75:4567-73 S 20 '53

Energy loss of hydrogen, helium, nitrogen, and neon ions in gases. P. K. Weyl. bibliog diags Phys R 91:289-96 Jl 15 '53

Energy loss of low energy protons in some gases. J. A. Phillips. bibliog diag Phys R 90:532-7 My 15 '53

Energy loss of protons in metallic foils and mica. D. Kahn. bibliog diag Phys R 90:503-9 My 15 '53

Excitation curves for α particles from B^{11} bombarded with protons. O. Beckman and others. bibliog Phys R 91:606-9 Ag 1 '53

Excitation function for charged π-meson production in hydrogen and carbon by 345- to 380-Mev protons. S. Passman and others. diag Phys R 88:1247-53 D 15 '52

Excitation of heavy nuclei by the electric field of low-energy protons. C. L. McClelland and C. Goodman. bibliog Phys R 91:760-1 Ag 1 '53

Gamma radiation from B^{11} bombarded by protons. T. Huus and R. B. Day. bibliog Phys R 91:599-605 Ag 1 '53

High energy photoproton production by 322-Mev bremsstrahlung. J. W. Rosengren and J. M. Dudley. bibliog Phys R 89:603-5 F 1 '53

Inelastic events induced by 32-Mev protons on helium. J. Benveniste and B. Cork. bibliog diags Phys R 89:422-9 Ja 15 '53

Interaction of 14-Mev neutrons with protons and deuterons. J. C. Allred and others. bibliog diags Phys R 91:90-9 Jl 1 '53

Interaction of 95-Mev protons with D, Li, Be, C, Al, Cu, and Pb nuclei. J. A. Hofmann and K. Strauch. bibliog diags Phys R 90:449-60 My 1 '53

Investigation of proton magnetic resonance line width of sorbed water. T. M. Shaw and R. H. Elsken. bibliog J Chem Phys 21:565-6 Mr '53

Irradiation of parts of individual cells. R. E. Zirkle and W. Bloom. bibliog il diags Science 117:487-93 My 8 '53

Magnetic analysis of the proton groups from the $Na^{23}(d,p)Na^{24}$ reaction. A. Sperduto and W. W. Buechner. bibliog diag Phys R 88:574-9 N 1 '52

Magnetic resonance. K. K. Darrow. il diags Bell System Tech J 32:74-99 Ja '53

Magnetic self-focusing of auroral protons. W. H. Bennett and E. O. Hulburt. Phys R 91:1562 S 15 '53

Mean excitation potentials. D. C. Sachs and J. R. Richardson. bibliog Phys R 89:1163-4 Mr 15 '53

Meson theory of nuclear forces and low energy properties of the neutron-proton system. M. M. Lévy. bibliog diags Phys R 88:725-39 N 15 '52

Neutron energy distribution from the proton bombardment of Li, Be, and C at 375 Mev. W. F. Goodell, jr. and others. bibliog diags Phys R 89:724-7 F 15 '53

Neutron energy distributions from Be, C, and Pb bombarded by 245-Mev protons. B. K. Nelson and others. bibliog diags Phys R 88:1-8 O 1 '52

Neutron-proton scattering using organic crystal scintillation detectors. M. E. Remley and others. bibliog diags Phys R 89:1194-8 Mr 15 '53

Neutrons from the proton bombardment of Be^9. F. Ajzenberg and W. W. Buechner. bibliog diag Phys R 91:674-5 Ag 1 '53

New rigorous lower bound on the range of the triplet neutron-proton interaction. L. L. Foldy. bibliog Phys R 89:1251-4 Mr 15 '53

Nuclear gamma-rays from low energy proton bombardment of sodium, magnesium, and aluminum. H. Casson. bibliog diags Phys R 89:809-20 F 15 '53

Nuclear reactions in the stars; proton-proton chain. E. E. Salpeter. Phys R 88:547-53 N 1 '52

Photoprotons from Mo^{100} and Mo^{92}. W. A. Butler and G. M. Almy. bibliog diag Phys R 91:58-65 Jl 1 '53

Physical analysis of Be and C disintegration induced by 330-Mev protons. W. H. Barkas and H. Tyren. diag Phys R 89:1-3 Ja 1 '53

π^0 Production cross section for 430-Mev protons on H and Be. J. Marshall and others. bibliog diags Phys R 88:632-41 N 1 '52

π^+ to π^- ratio from proton bombardment of deuterium. M. A. Ruderman. Phys R 88:1427 D 15 '52

Pion production ratios by proton bombardment. R. Sagane. diag Phys R 90:1003 Je 1 '53

Production of characteristic X-rays by protons of 1.7-to 3-Mev energy. H. W. Lewis and others. bibliog diag Phys R 91:943-6 Ag 15 '53

Production of charged π-mesons in H, D, C, Cu, and Pb by 381-Mev protons. M. M. Block and others. bibliog diags Phys R 88:1239-47 D 15 '52

Production of π^0 mesons by γ-rays on hydrogen. A. Silverman and M. Stearns. bibliog diag Phys R 88:1225-30 D 15 '52

Production of positive pions by 341-Mev protons on protons. W. F. Cartwright and others. bibliog diags Phys R 91:677-88 Ag 1 '53

Proton and deuteron transfer over hydrogen bridges as cause of conductivity effects. A. Gierer and K. Wirtz. bibliog J Phys Chem 56:914-17 O '52

Proton induced reactions of thorium—fission yield curves. H. A. Tewes and R. A. James. bibliog Phys R 88:860-7 N 15 '52

Proton magnetic resonance line in liquid crystals. R. D. Spence and others. il J Chem Phys 21:380 F '53

Proton-proton reaction and energy production in the sun. E. A. Frieman and L. Motz. bibliog Phys R 89:648-50 F 1 '53

Proton relaxation phenomena in complex ion formation. J. R. Zimmerman. J Chem Phys 21:1605 S '53

Proton transfers in solution. A. Nisonoff and others. bibliog J Chem Phys 20:985-9 Je '52

Range-energy relations of 10- to 250-kev protons and helium ions in various gases. C. J. Cook and others. bibliog diags Phys R 91:1417-22 S 15 '53

Search for V^0 particles produced by 450-Mev protons. R. L. Garwin. bibliog diags Phys R 90:274-8 Ap 15 '53

Simultaneous dissociation of two protons; the acid-base equilibria of porphyrins. R. I. Walter. bibliog Am Chem Soc J 75:3860-2 Ag 5 '53

Statistical fluctuations in ionization by 31.5-Mev protons. G. J. Igo and others. bibliog Phys R 89:879-80 F 15 '53

Test of the charge symmetry hypothesis; positive to negative pion production ratio obtained in bombarding carbon with alpha-particles and protons. H. W. Wilson and W. H. Barkas. diag Phys R 89:758-9 F 15 '53

Thermal neutron-proton capture. S. P. Harris and others. bibliog diag Phys R 91:125-9 Jl 1 '53

Total cross sections of 408-Mev protons for hydrogen and light elements. J. Marshall and others. Phys R 91:767-8 Ag 1 '53

Total *n-p* scattering cross section at 4.75 Mev. E. M. Hafner and others. bibliog diags Phys R 89:204-22 Ja 1 '53

Scattering

Angular dependence of inelastic scattering of protons on Be^9. K. E. Davis. bibliog diag Phys R 88:1433-4 D 15 '52

Differential cross section for elastic *p-p* scattering at 435 Mev. W. E. Mott and others. bibliog diag Phys R 90:712-13 My 15 '53

Differential cross section for the scattering of 9.48-Mev protons by helium. T. M. Putnam. bibliog diags Phys R 87:932-40 S 15 '52

Differential cross-section measurements for the scattering of protons by deuterons. R. J. S. Brown and others. bibliog diags Phys R 88:253-6 O 15 '52

Double scattering of high-energy protons by hydrogen and carbon. C. L. Oxley and others. diag Phys R 91:419-20 Jl 15 '53

Elastic scattering of 9.7-Mev protons by deuterium and by hydrogen. J. C. Allred and others. bibliog Phys R 88:433-8 N 1 '52

PROTONS—Scattering—*Continued*

Elastic scattering of protons and neutrons by deuterons. R. S. Christian and J. L. Gammel. bibliog Phys R 91:100-21 Jl 1 '53

Elastic scattering of protons and neutrons by helium. D. C. Dodder and J. L. Gammel. bibliog Phys R 88:520-5 N 1 '52

Elastic scattering of protons by lithium. W. D. Warters and others. bibliog Phys R 91:917-21 Ag 15 '53

Elastic scattering of 6.5-Mev protons from copper. L. M. Goldman. bibliog diags Phys R 89:349-52 Ja 15 '53

Elastic scattering of protons from helium 4. B. Cork. Phys R 89:78-9 Ja 1 '53

High energy proton-proton scattering and associated polarization effects. L. J. B. Goldfarb and D. Feldman. bibliog Phys R 88:1099-109 D 1 '52

Interpretation of high energy *p—p* scattering. D. R. Swanson. bibliog Phys R 89:740-8 F 15 '53

Multiple scattering of fast protons in photographic emulsions. M. J. Berger. bibliog diag Phys R 88:59-70 O 1 '52

Proton-deuteron scattering at 5.1 Mev and deuteron-proton scattering at 10.2 Mev. K. B. Mather. bibliog Phys R 88:1408-11 D 15 '52

Proton-proton scattering at intermediate energies. A. Martin and L. Verlet. Phys R 89:519-20 Ja 15 '53

Proton-proton scattering at 32.0 Mev. B. Cork. Phys R 90:1129-30 Je 15 '53

Proton-proton scattering for a nucleon isobar model. F. T. Solmitz. bibliog Phys R 89:1295-6 Mr 15 '53

Proton-proton scattering from 1.8 Mev to 4.2 Mev. H. R. Worthington and others. bibliog diags Phys R 90:899-911 Je 1 '53

Proton triton interaction. J. S. McIntosh and others. bibliog Phys R 88:752-9 N 15 '52

Scattering of 31.5-Mev protons from several elements. R. Britten. diags Phys R 88:283-94 O 15 '52

Scattering of protons by protons. H. H. Hall and J. L. Powell. bibliog Phys R 90:912-14 Je 1 '53

PROTOVERATRINE

Isolation of neoprotoveratrine and protoveratrine from veratrum viride Ait. M. W. Klohs and others. bibliog Am Chem Soc J 74:5107-10 O 20 '52

PROTOZOA

Embryologist and the protozoon. P. B. Weisz. il diags Sci Am 188:76-8+ Mr '53

Protozoa as indicators in activated sludge treatment. S. Baines and others. bibliog Sewage & Ind Wastes 25:1023-33 S '53

Utilization of guanine by tetrahymena geleii. M. R. Heinrich, V. C. Dewey and G. W. Kidder. bibliog Am Chem Soc J 75:1741-2 Ap 5 '53

See also
Ciliata

PROTOZOA, Pathogenic

Rapid technique for the diagnosis of intestinal protozoa. A. J. Bucki and W. H. Wells. Science 117:235 F 27 '53

PROTRACTORS

Read line angles quickly with protractor. il Elec World 138:116 D 1 '52

PROVIDENCE, Rhode Island

Providence expressway westbound lanes to open. Eng N 149:45 O 30 '52

PROVIDENCE Washington insurance group

Providence Washington reports excellent progress; annual report. Weekly Underw 168:329 Ja 31 '53

PROVIDENT loan society of New York

Credit by Loanmobile; bus equipped as loan office on wheels serves borough of Queens. il Burroughs Clearing House 37:3-4 D '52

PROVITAMINS

Triterpenoids; the lanosterol analogue of provitamin D_3. D. H. R. Barton and B. R. Thomas. Chem Soc J p 1842-7 Je '53

PROXIES

Suggested proxy shortcuts. W. H. T. Snyder. Trusts & Estates 92:278-9 Ap '53

PRUDENTIAL assurance company, limited

Holborn giant. Economist 167:327-8 My 2 '53

Statement by the chairman. G. L. Barstow. Economist 167:559-60 My 23 '53

PRUDENTIAL insurance company of America

Meeting the problems of decentralization; Prudential's regional home office setup. Nat Underw (Life ed) 57:2+ Ap 17 '53

PRUNES, Dried

Mechanization milestone; Mayfair packing co. il Mod Packaging 26:73-7 Mr '53

PRUNETIN

Chemistry of extractives from hardwoods; the isolation of 5 : 4′-dihydroxy-7-methoxy*iso*flavone (prunetin) from the heartwood of pterocarpus angolensis and a synthesis of 7 : 4′-dihydroxy-5-methoxy*iso*flavone hitherto known as prunusetin. F. E. King and L. Jurd. Chem Soc J p3211-15 Ag '52

PRUNUS yedoensis

Flavonoids of various prunus species; the flavonoids in the wood of prunus yedoensis. M. Hasegawa and T. Shirato. bibliog Am Chem Soc J 74:6114-15 D 5 '52

PSEUDO acids. See Acids

PSEUDOCUMENOL

Aromatization and rearrangement of cyclic ketones; 2,3,5- and 3,4,5-trimethylphenol from isophorone. F. M. Beringer and E. J. Geering. bibliog Am Chem Soc J 75:2633-5 Je 5 '53

PSEUDOMONAS

Production of α-ketoglutarate in glucose oxidation by pseudomonas fluorescens. H. J. Koepsell, F. H. Stodola and E. S. Sharpe. bibliog Am Chem Soc J 74:5142-4 O 20 '52

PSEUDOSANTONIN

Position of the double bond in pseudosantonin. W. G. Dauben and P. D. Hance. bibliog Am Chem Soc J 75:3352-6 Jl 20 '53

PSEUDOTROPINE

Configuration of tropine and pseudotropine. A. Nickon and L. F. Fieser. bibliog Am Chem Soc J 74:5566-70 N 20 '52

Configurations of tropine and of *pseudo*tropine. G. R. Clemo and K. H. Jack. Chem & Ind p 195 F 28 '53

Stereochemistry of the tropane alkaloids; the configuration of tropine and ψ-tropine. G. Fodor and K. Nádor. Chem Soc J p721-3 Mr '53

Stereochemistry of the tropines. B. L. Zenitz and others. bibliog il Am Chem Soc J 74:5564-6 N 20 '52

PSITTACOSIS

Suggests new controls on psittacine birds; abstract. T. S. Drachman. Pub Health Rep 68:265-6 F '53

PSYCHIATRIC hospitals. See Hospitals, Psychiatric

PSYCHIATRIC institute. See Maryland university—Psychiatric institute

PSYCHIATRIC nurses. See Nurses and nursing

PSYCHIATRISTS

Private practice of psychiatry. D. Blain. bibliog Ann Am Acad 286:136-49 Mr '53

Workers in the field of mental health. J. V. Coleman. bibliog Ann Am Acad 286:81-91 Mr '53

PSYCHIATRY

Psychiatry in medical education. S. D. Vestermark. Pub Health Rep 67:1120-3 N '52

PSYCHIATRY, Industrial

Before you call the psychiatrist. Bsns W p89-90+ N 8 '52

Industrial psychiatry. L. C. Giberson. Safety Maint & Prod 106:49-50 Ag '53

Industrial psychiatry; five-year plant experience; du Pont de Nemours. G. Gordon. Ind Med 21:585-8 D '52

Industry begins to see that mental hygiene is as important to good work as physical health. J. W. Irwin. Chem & Eng N 31:2124 My 18 '53

New approach to handling your mentally ill workers. G. Gordon. Pet Processing 8:890-1 Je '53

Personality problems. Safety Maint & Prod 105:53 Je '53

PSYCHOANALYSIS

Private practice of psychiatry D. Blain. bibliog Ann Am Acad 286:136-49 Mr '53

PSYCHOLOGICAL apparatus

Robot psychologist; electronic computer known as a psychological matrix rotator. il Mech Eng 75:406-7 My '53

PSYCHOLOGICAL research

For psychological research at Yale university. Sci Am 188:44-5 Ap '53

See also

Neuroses, Experimental

PSYCHOLOGICAL tests. See Ability tests

PSYCHOLOGISTS

Code of ethics for the psychologist. H. Seashore. Personnel 30:35-8 Jl '53

PSYCHOLOGY

Psychology for marketing and economics. W. Alderson. bibliog J Marketing 17:119-35 O '52

See also

Ability tests
Advertising—Psychology
Learning, Psychology of
Memory
Mental hygiene
Personality
Personality tests
Sleep

PSYCHOLOGY, Applied

More psychology in selling. R. C. Brewster. Harvard Bsns R 31:91-9 Jl '53

PSYCHOLOGY, Industrial

Applied psychology and machine design. Engineering 174:265-6 Ag 29 '52

Calling in psychologists early. Bsns W p80-2 D 20 '52

Dealing with difficult personalities. E. H. Schell. Advanced Management 18:23-5 Ja '53

Effect of intensive sales training experience upon salesman-candidates. V. W. Eimcke. J Marketing 17:260-6 Ja '53; Discussion. H. C. Cash and W. J. Crissy. 18:169-70 O '53

Effect of psychological handicap in two factory groups; abstract. M. Markowe and L. E. D. Barber. Nat Safety N 66:58+ N '52

Industrial psychology's growing pains. J. H. Gorsuch. Personnel 29:153-7 S '52

Psychopathic personality in industry. E. A. Corona. Personnel 29:467-9 My '53

Tests; psychology sifts out misfits; Armco uses tests to streamline selection of new employees. J. B. Delaney. Iron Age 171:61-2 F 19 '53

Tools for management men. Bsns W p 154-5 D 6 '52

What can industrial psychology do? Bsns W p 120 N 1 '52

What makes people absent? il Mod Ind 25:47-50 Je '53

Why people behave as they do. J. E. Moore. Textile World 103:91-3 O '53

Worker psychology; formula that works. D. Krakauer. Factory Management 111:218+ Ag '53

See also

Ability tests
Accidents, Industrial—Psychological aspects
Employees—Opinion polls
Employees' counselors
Personality tests
Safety devices and measures—Psychological aspects

PSYCHOLOGY, Pathological

Mental health problems affecting social relations. J. R. Ewalt. Ann Am Acad 286:74-80 Mr '53

PSYCHOLOGY, Physiological

See also

Color sense

PSYCHOLOGY of learning. See Learning, Psychology of

PSYCHOSOMATIC medicine. See Medicine, Psychosomatic

PSYCHOTHERAPY

Client-centered psychotherapy. C. R. Rogers. diag Sci Am 187:66-8+ N '52; Discussion. J. Finkelstein. 188:6 F '53

Psychotherapy for schizophrenia. D. D. Jackson. il Sci Am 188:58-63 Ja '53; Discussion. M. Gruenthal. 188:4+; Reply. 6+ Mr '53

PSYCHROMETRIC charts. See Humidity

PSYCHROMETRY. See Humidity

PTERIDINE

Hydropteridines, the formation of 5 : 6 : 7 : 8-tetrahydro-4 : 6-dimethylpteridines. J. H. Lister and G. R. Ramage. Chem Soc J p 2234-8 Ag '53

Pteridine studies; 4 : 6- and 4 : 7-dihydroxypteridine. A. Albert and D. J. Brown. Chem Soc J p74-9 Ja '53

Pteridine studies; the solubility and the stability to hydrolysis of pteridines. A. Albert, D. J. Brown and G. Cheeseman. Chem Soc J p4219-32 N '52

Pteridine synthesis; leucopterin and xanthopterin. A. Albert and H. C. S. Wood. bibliog J Ap Chem 2:591-2 O '52

Pteridines; a new approach to the synthesis of pteridines. E. C. Taylor, jr., J. A. Carbon and D. R. Hoff. bibliog Am Chem Soc J 75:1904-8 Ap 20 '53

Some pteridines related to folic acid; 2-deamino-analogues. D. J. Brown. Chem Soc J p 1644-5 My '53

Studies on pteridines; reductive cleavage of pteridyl side chains. S. Nawa, S. Matsuura and Y. Hirata. Am Chem Soc J 75:4450-1 S 20 '53

Studies on pteridines; synthesis of 6- and 7-hydroxypteridines. S. Matsuura and others. bibliog Am Chem Soc J 75:4446-9 S 20 '53

Use of nitro- and halogeno-ketones in the synthesis of pteridines, including pteroic acid, from 2 : 4 : 5-triamino-6-hydroxypyrimidine. F. E. King and P. C. Spensley. Chem Soc J p2144-52 Je '52

PTERIDONE

Studies on condensed pyrimidine systems; some 8-alkyl-7-pteridones. G. B. Elion and G. H. Hitchings. bibliog Am Chem Soc J 75:4311-14 S 5 '53

PTEROIC acid

Synthesis of pteroic and pteroylglutamic acids. D. I. Weisblat and others. bibliog Am Chem Soc J 75:3625-9 Ag 5 '53

Use of nitro- and halogeno-ketones in the synthesis of pteridines, including pteroic acid, from 2 : 4 : 5-triamino-6-hydroxypyrimidine. F. E. King and P. C. Spensley. Chem Soc J p2144-52 Je '52

PTEROYLGLUTAMIC acid. See Folic acid

PTOLEMY'S geography

Bibliography

Ptolemy's geography; a select bibliography. W. H. Stahl. 86p pa $1.50 New York public library, Fifth av. and 42d st, New York 18 '53

PUBCO development, inc.

Subscription warrants for common stock offered. Comm & Fin Chr 178:151 Jl 13 '53

PUBLIC buildings

Massachusetts hammers out system for construction of public buildings. Eng N 149:24-5 O 30; 24-6 N 6 '52

See also

Municipal centers
School buildings
United States—Armed services—Defense military personnel records center

Electric equipment

Lancaster House; restoration after bomb damage. il Elec R (Lond) 153:345-6 Ag 14 '53

Royal festival hall; electrical installation. J. G. Hunter. il diags Inst E E Proc 100 pt 2:69-81; Discussion. 81-6 Ap '53

Lighting

Re-wiring Lancaster House. il Elec J 151:273-4 Jl 24 '53

Royal festival hall; electrical installation. J. G. Hunter. il diags Inst E E Proc 100 pt 2:74-8 Ap '53

PUBLIC health

Advancing the frontiers of public health. Pub Health Rep 68:134-5 Ja '53

Community health services for an aging population. J. W. Mountin. Pub Health Rep 67:949-53 O '52

Environmental health needs in a dynamic society. M. D. Hollis. map Pub Health Rep 67:903-8 S '52

Health conservation activities of TVA. O. M. Derryberry. il Pub Health Rep 68:327-33 Mr '53

Practice of public health, 1952; topical and selected report of the American public health association and related organizations 80th annual meeting, Cleveland, Oct. 20-24, 1952. Pub Health Rep 68:81-139, 197-280 Ja-F '53

Public health hazards and the analytical chemist; abstract. J. R. Nicholls. Chem & Ind p299-300 Mr 28 '53

PUBLIC health—*Continued*

State of the Nation's public health services; 51st annual conference. L. A. Scheele and others. Pub Health Rep 68:174-90 F '53

See also

Air pollution
Aviation—Public health aspects
City planning
Dental service
Disinfection and disinfectants
Dust removal
Factory sanitation
Food supply
Health centers
Health information foundation
Hospitals
Hygiene, Industrial
Infectious diseases
Influenza
Insurance, Health
Medical service
Milk supply
Mortality
Mosquitoes—Extermination
Nurses and nursing, Industrial
Nutrition
Physical examinations
Rabies
Refuse disposal
Safety devices and measurements
Sanitary engineering
Sanitation
Sewage disposal
Sickness
Smoke prevention
Tuberculosis
Ventilation
Water pollution
Water purification
Water supply
World health organization

also subdivision Sanitary affairs under names of countries, cities, etc., e.g. New York (city)—Sanitary affairs

Finance

Financing local health services. J. W. Mountin. Pub Health Rep 67:944-9 O '52

International aspects

Evolving mechanisms for the production of international health statistics. H. L. Dunn. Am Stat Assn J 47:653-62 D '52

State of the Nation's public health services; report on international staffing. H. V. Hyde. Pub Health Rep 68:188-90 F '53

See also

Quarantine

Statistics

APHA conference report; techniques in health statistics and records management. Pub Health Rep 68:277-80 F '53

Evolving mechanisms for the production of international health statistics. H. L. Dunn. Am Stat Assn J 47:653-62 D '52

Alaska

Tuberculin sensitivity in Alaska. E. S. Weiss. bibliog maps Pub Health Rep 68:23-7 Ja '53

Connecticut

Tuberculosis control in Connecticut. Pub Health Rep 67:1203-13 D '52

Great Britain

National health. Economist 167:142 Ap 18 '53

Manitoba

Problems of public health engineering in Manitoba. L. A. Kay. il Munic Util 91:25-6+ Je '53

Pennsylvania

Industrial health experiences in Pennsylvania. C. Long and others. A M A Archives Ind Hygiene & Occup Med 6:469-86 D '52

Sardinia

DDT in Sardinia. il map Fortune 47:113-20 Mr '53

Sweden

See also

Medical service, Industrial—Sweden

United States

Mental health in the United States. R. H. Dysinger, ed. bibliog Ann Am Acad 286:1-174 Mr '53

US is urged to double health needs spending. Oil Paint & Drug Rep 162:3+ D 22 '52

Western states

Public health in the western states. W. L. Halverson. Pub Health Rep 68:323-6 Mr '53

PUBLIC health administration

APHA conference report; health administration. Pub Health Rep 68:228-33 F '53

Career in public health; Joseph W. Mountin. T. Parran. bibliog Pub Health Rep 67:930-43 O '52

Practical management of the recalcitrant tuberculous patient. C. Northrop and others. Pub Health Rep 67:894-8 S '52

Public health statesmanship. L. A. Scheele. Pub Health Rep 68:1-11 Ja '53

State of the Nation's public health services; 51st annual conference. L. A. Scheele and others. Pub Health Rep 68:174-90 F '53

Statistics in a health department medical care plan. M. Taback and H. Williams. bibliog maps Pub Health Rep 68:157-66 F '53

See also

Medical service—Socialization
Nursing homes
Public health departments

Great Britain

Local public health officer in Great Britain today. A. Daley. Pub Health Rep 67:1096-100 N '52

PUBLIC health association, American. See American public health association

PUBLIC health departments

Health department and poliomyelitis. E. E. Kleinschmidt and others. Pub Health Rep 67:1109-14 N '52

Looking ahead of 1952. P. Q. Peterson. Pub Health Rep 67:1116-19 N '52

Public health training program of New York state. F. B. Amos. Pub Health Rep 68:295-300 Mr '53

PUBLIC health laboratories

Administrative links making us friends. C. J. Gentzkow. Pub Health Rep 68:104-5 Ja '53

Consultation, reference, evaluation in California. H. L. Bodily. Pub Health Rep 68:104 Ja '53

Evaluation of enteric parasitology performed in state laboratories. M. M. Brooke and R. B. Hogan. Pub Health Rep 67:1237-48 D '52

Public health and clinical laboratories in the diagnosis of enteric bacterial infections. E. J. Tiffany. bibliog Pub Health Rep 67:1069-75 N '52

See also

United States—Public health service

PUBLIC health laws

Examination of food handlers; proposed Baltimore ordnance intended to require all food handlers to be medically examined. Safety Maint & Prod 104:70 N '52

International sanitary regulations. K. Stowman. Pub Health Rep 67:972-6 O '52

Provisions of state laws governing local health departments. C. H. Greve. Pub Health Rep 68:31-42 Ja '53

See also

Air pollution—Laws and regulations
Water laws and legislation

PUBLIC health officers

Professional examinations for public health service officers. S. H. Newman. bibliog Pub Health Rep 67:917-22 S '52

Training

Public health training program of New York state. F. B. Amos. Pub Health Rep 68:295-300 Mr '53

PUBLIC health records

Sampling of records. R. E. Patton. bibliog Pub Health Rep 67:1013-19 O '52

PUBLIC health service. See United States—Public health service

PUBLIC health surveys

APHA conference report; use of surveys as yardsticks in public health. Pub Health Rep 68:254-6 F '53

Methodology of a family health study. C. F. Muller and others. Pub Health Rep 67:1149-56 N '52

Sampling and field procedures of the Pittsburgh morbidity survey. D. G. Horvitz. bibliog Pub Health Rep 67:1003-12 O '52

Selective case finding in syphilis control. G. Moore and M. T. Foster. bibliog Pub Health Rep 68:167-72 F '53

Survey approach to morbidity and health data. H. L. Dunn. Pub Health Rep 67:998-1002 O '52

PUBLIC health workers

1950 census findings on health occupations. Pub Health Rep 68:191-3 F '53

See also

Sanitary engineers

PUBLIC housing administration

PHA bows to higher interest rates. Bsns W p56 D 27 '52

PUBLIC lands

FPC's carrier clause upheld; can impose conditions on lines of private company crossing public lands; Idaho power co. vs. Federal power commission. Elec World 138:107 N 17 '52

Public-lands report; Geological survey reports royalties from production on all government lands. Oil & Gas J 52:148 Je 22 '53

See also

Mineral lands
Oil reserves (United States navy)

PUBLIC officials

Businessmen duck jobs in Washington. Bsns W p90-1 D 27 '52

Eisenhower is still naming names. Bsns W p28-30 D 6 '52

Eisenhower shapes a businessman's government. Bsns W p30-2 Ja 17 '53

How ex-office holders are making out. Bsns W p28-9 Mr 28 '53

Little Oscars and civil service. Fortune 47: 77-8 Ja '53

Tapping latent talent; political amateurs enter government. R. W. Johnson. Dun's R 61:1+ Je '53

Directories

Government officials in charge of Canadian public water supplies and sewerage systems. Munic Util 91:10 Ja '53

New executive team in Washington; with title, room number. Bsns W p 162-74 My 2 '53

Officials of improvement districts and reserves in Ontario. Roads & Eng Constr 91: 196 Je '53

PUBLIC opinion

Patents and public opinion. H. R. Mayers. Gen Elec R 55:48-50 N '52

PUBLIC opinion polls

See also

Presidential campaigns—Polls

PUBLIC relations

ACS-AIC symposium on public relations for chemists. Chem & Eng N 31:331-2 Ja 26 '53

Build better public relations through safety. F. G. Wilson. Safety Maint & Prod 105: 13+ Je '53

Building community good will; American aggregates corp.; presentation of a landscaped park to the city of Greenville. Rock Prod 55:96-7 D '52

Callaway helps LaGrange build a better school. M. B. Andrews. il Textile World 103:155+ Je '53

County tax structure clarified by public relations. P. Thomson. Pub Works 84:87 Ag '53

Effective public relations. G. A. Lawrence. Comm & Fin Chr 177:7+ sec 2 Je 25 '53

Employees should be chief target for public relations messages. Chem & Eng N 31:2076+ My 18 '53

Everybody hates a truck driver; true or false? P. Sayward. il Sales Management 70:30-2+ Ja 15 '53

GAMA public relations program extended through 1953. Am Gas J 177:44 D '52; Same. Gas Age 111:33+ Ja 15 '53

Good industrial citizenship must be built. J. W. Irwin. Chem & Eng N 31:1686 Ap 20 '53

Helping run community drives. Bsns W p 105 Jl 25 '53

He's a one-man, community good will movement and a very busy person; Lou Hesse. Ind Marketing 38:100 O '53

How a small-budget PR program can pay off in publicity alone. D. Bland. Ptr Ink 241: 58-60+ O 31 '52

How industry can be a better neighbor. Steel 132:53-60 F 23 '53

How others view you. Chem W 72:7-8 Ja 3 '53

How to build good will with neighbors and employees. R. H. Herrmann. Foundry 81: 111+ Ag '53

Industrial relations. J. W. Irwin. Chem & Eng N 31:1124 Mr 16 '53

Industry tells its story; public relations program of NCPMI. D. Skylar. Brick & Clay Rec 122:80 Mr '53

Information the small stockholder wants from management. W. F. Muenchow. Comm & Fin Chr 178:110-11 Jl 9 '53

Making friends in business, a must. C. Hood. Am Gas Assn Proc 1952:247-50

Mending a company's public fences; American investment co. of Illinois. il Bsns W p41-3 Je 13 '53

Novel idea in community relations; Keystone steel & wire co. F. C. Minaker. il Am Bsns 23:24 Je '53

Plant dedications; Louisville, Ky.; illustrations with text. Mod Ind 24:48-9 O '52

Press relations often a personnel function. R. Simon. Personnel J 31:377-80 Mr '53

Public relations activities of industry. R. B. Semple. Chem & Eng N 30:5352-3 D 22 '52

Public relations down to earth. J. A. R. Pimlott. Harvard Bsns R 31:50-60 S '53

Public relations for industry in underdeveloped countries. W. J. Butler. Harvard Bsns R 30:63-71 S '52

Public relations forum. R. M. Winsborough and others. il Ed & Pub 86:54-67 F 21 '53

Public relations idea book. 349p $5 Printers' Ink pub. co, 205 E. 42d st, New York 17 '53

Putting more life into small-town community relations; plant-recorded radio program. il Mod Ind 25:93-4+ Ap '53

Safety and public relations. E. Landry. Pulp & Pa of Can 54:201+ Ag '53

Small company, big open house feature full week of tours; Brillion iron works. R. Newcomb and M. Sammons. il Ind Marketing 37:116+ D '52

Ten years' progress in management; public relations. A. H. Forster. bibliog A S M E Trans 75:691-5 My '53

Townspeople rally for Waltham. il Mod Ind 25:9-10+ Ap '53

Will a company show help your employee and public relations? K. Taylor. Ptr Ink 241:74+ N 14 '52

Wooing and winning the plant town. il Mod Ind 25:50-3 Ap '53

See also

Advertising, Educational
Advertising, Institutional
Commercial correspondence
Publicity
Visitors

also subdivision Public relations under special headings, e.g.

Banks and banking
Electric utilities
Engineers
Gas companies
Insurance companies
Libraries, Special
Motor bus lines
Paper industry and trade
Petroleum industry and trade
Plumbing trade
Public utilities
Railroads

Bibliography

Selected and annotated bibliography of public relations. W. A. Nielander. (Bibliog. no. 3) rev ed 29p Bur. of Business research, College of business administration, Univ. of Texas, Austin '52

PUBLIC relations clinic. See Libraries, Special—Public relations

PUBLIC schools

St Louis

Bringing reform to St Louis schools. Bsns W p 128-31 D 13 '52

PUBLIC service company of Indiana, inc.

Public utility securities. O. Ely. Comm & Fin Chr 176:2143 D 4 '52

Stock offerings. Comm & Fin Chr 177:2572 Je 15 '53

PUBLIC service company of New Mexico

Preferred stock offered. Comm & Fin Chr 177:1260+ Mr 23 '53

PUBLIC service company of Oklahoma

Bonds offered. Comm & Fin Chr 177:1476 Ap 6 '53

PUBLIC service electric and gas company

Registers with SEC. Comm & Fin Chr 177: 942 Mr 2 '53

Stock offered. Comm & Fin Chr 177:1301 Mr 23 '53

PUBLIC speaking

- Adventures of an amateur public speaker. J. Caples. Adv Agency 46:18+ Ja '53
- Can you make a speech? businessmen join organization known as Toastmasters. W. Norris. Am Bsns 23:18-19+ Ap '53
- How I like to be treated. J. H. Furbay. Sales Management 70:75-6 pt 2 Ja 1 '53
- How to tell a story without muffing it. D. A. Laird. Sales Management 70:76+ Mr 15 '53
- Now anybody can be a good speaker; Teleprompter. il Sales Management 70:16-18 pt 2 Ja 1 '53
- Perfection is death! L. H. Brendel. Ptr Ink 241:56+ N 28 '52
- Speak up Mr Engineer. C. B. Johnston. Pub Works 84:54 Ja '53

PUBLIC utilities

See also

- Airlines
- Carriers
- Corporation law
- Corporations
- Electric utilities
- Gas, Natural—Pipe lines
- Gas companies
- Holding companies
- Motor bus lines
- Motor trucks in freight service
- Petroleum pipe lines
- Public utility districts
- Railroads
- Railroads and state
- Rapid transit
- Telegraph
- Telephone
- Waterworks

Accounting

- Accounting alternatives, and their consequences, in handling charges for depreciation under certificates of necessity. W. H. Harrison, jr. J Account 94:716-18 D '52
- Accounting trends in utility regulation. S. B. Eddy. Pub Util 51:663-70 My 21 '53; Same. Am Gas Assn Mo 35:15-16+ Je '53
- Are fictions of law and accounting confiscatory? W. M. Wherry. Pub Util 51:539-46 Ap 23 '53
- Importance of accounting in utility regulation. B. S. Rodey, jr. Pub Util 51:811-20 Je 18 '53
- Proposed revision of utility accounting system. Am Water Works Assn J 45:1090-100 O '53
- Public utility depreciation. C. W. Smith. Pub Util 50:625-31 O 23 '52
- Public utility's view of why the net-plant balance-sheet concept is wrong. H. C. Hasbrouck. J Account 94:460-7 O '52
- Responsibility of utility management with respect to depreciation. C. H. Ross. Pub Util 50:602-17 O 23 '52

Advertising

- Centennial promotion boosts Pacific Gas & Electric. il Ed & Pub 86:60 F 21 '53; Same. Edison Elec Inst Bul 21:93 Mr '53
- Public utility advertising must perform three major jobs in 1953. P. L. Penfield. Gas Age 111:37+ Ja 15 '53

See also

- Railroads—Advertising

Appliance selling

See also

- Electric utilities—Appliance selling

Costs

- Trending public utility construction cost indices. E. B. Whitman and E. C. North. Pub Util 52:285-90 Ag 27 '53

Employees

- District manager; unsung hero. H. H. Young. Pub Util 52:579-85 O 22 '53
- Strikes in public utility industries. F. A. Hartley, jr. Pub Util 52:20-2 Jl 2 '53
- T-H exemption for utilities proposed by Senator H. A. Smith. Elec World News ed 139:34 My 11 '53

See also

- Gas companies—Employees
- Railroads—Employees

Finance

- Are the public utilities racing hell bent for the poor house or haven't they ever had it so good? C. W. Smith and others. Am Gas J 177:27-8 O '52
- Inflation and regulation. J. P. Randolph. Pub Util 50:860-1 D 4 '52
- Inflation's effect on utilities. C. C. Brown. Comm & Fin Chr 176:2031 N 27 '52
- Listing per share earnings. M. H. Cruthers. Elec World News ed 139:42-3 Mr 2 '53
- Operating revenue, profits, dividends, 1946-1951; quarterly 1951-1952. Fed Res Bul 39:45 Ja '53 [cont monthly]

See also

- Electric utilities—Finance
- Gas companies—Finance
- Public utilities—Rates
- Public utilities—Securities
- Railroads—Finance

Government ownership

- Changing the guard; Eisenhower names Cabinet officers. Pub Util 50:917-19 D 18 '52

Insurance requirements

- Problems of public utilities with excess liability insurance. H. P. Steelwagen. Weekly Underw 167:1705+ D 27 '52

Law

- Are fictions of law and accounting confiscatory? W. M. Wherry. Pub Util 51:539-46 Ap 23 '53
- State legislatures' action on utility laws; review of 1952 actions of state legislatures on proposed laws. B. Jones. Pub Util 50:486-94 O 9 '52

See also

- Gas, Natural—Laws and regulations
- Holding companies—Laws and regulations
- Public utilities—Regulation
- Railroad law

Management

See also

- Railroads—Management

Public relations

- District manager; unsung hero. H. H. Young. Pub Util 52:579-85 O 22 '53
- Public psychology in rate making. F. C. Sullivan. Pub Util 52:12-19 Jl 2 '53
- Public relations for public service. F. C. Sullivan. Pub Util 51:201-9 F 12 '53
- Public relations planning of utility management to give business enterprise greater incentive. D. D. Hoover. Pub Util 50:761-71 N 20 '52
- Utility industry in cartoons. A. B. Marvin. Pub Util 51:88-94 Ja 15 '53; Same. Edison Elec Inst Bul 21:45-8 F '53

See also

- Electric utilities—Public relations
- Motor bus lines—Public relations
- Railroads—Public relations
- Waterworks—Public relations

Radio communication

- Better communications for utilities. R. T. King. Pub Util 50:780-8 N 20 '52

Rates

- Are court decisions changing Pennsylvania rate regulation? C. E. Kenworthey. bibliog Pub Util 52:275-84 Ag 27 '53
- Forgotten factor in fair return. C. Tatham, jr. Pub Util 52:3-11 Jl 2 '53
- Investor's rôle in the regulation of public utilities. C. O'Neil. Pub Util 50:926-8 D 18 '52
- Public psychology in rate making. F. C. Sullivan. Pub Util 52:12-19 Jl 2 '53
- Rate base is here to stay. F. X. Welch. Pub Util 52:635-41 O 22 '53
- Recent significant trends in public utility rate determination. D. F. Houlihan. Pub Util 52:650-60 O 22 '53
- Regulatory lag. W. A. Dougherty. Pub Util 50:631-8 O 23 '52
- Regulatory lag in public utility rate making. H. P. Huls. bibliog Pub Util 50:650-8 O 23 '52
- Should the public participate in the regulatory process? R. Arnebergh. Pub Util 51:210-16 F 12 '53
- Significant trends as to rate base depreciation, and rate of return. S. F. Kosters. Pub Util 52:641-50 O 22 '53

PUBLIC utilities—Rates—*Continued*

Utility rates must recognize dollar depreciation. W. A. Paton and H. C. Greer. Pub Util 51:333-56 Mr 12 '53

See also

Electric rates
Gas, Natural—Rates
Gas rates
Railroads—Rates
Telephone—Rates
Water rates

Regulation

American bar association Public utility law section meeting, San Francisco, Sept. 15-16; addresses on legal, economic, financial, and other problems. Pub Util 50:581-666 O 23 '52

Depreciation and inflation; impact of inflation on the law governing depreciation accounting. G. J. Eder. bibliog Pub Util 50:617-25 O 23 '52

New regionalism in regulatory administration. L. Smith. bibliog Pub Util 51:427-37 Mr 26 '53

Recent law review comments on inflation and regulation. Pub Util 52:172-7 Jl 30 '53

Regulatory lag. W. A. Dougherty. Pub Util 50:631-8 O 23 '52

Regulatory lag in public utility rate making. H. P. Huls. bibliog Pub Util 50:650-8 O 23 '52

Responsibility of utility management with respect to depreciation. C. H. Ross. Pub Util 50:602-17 O 23 '52

Risk of irresponsible investigations. F. G. Dutton. Pub Util 52:146-9 Jl 30 '53

Seventy-five years of public utility regulation in a competitive society. R. M. Besse. Pub Util 52:554-68 O 8 '53

Should the public participate in the regulatory process? R. Arnebergh. Pub Util 51:210-16 F 12 '53

Status of public utility regulation. J. P. Randolph. Pub Util 51:740-6 Je 4 '53

See also

Airlines—Regulation
Gas, Natural—Laws and regulations
Public utilities—Law
Public utilities—Rates
Public utilities commissions

Safety measures

Safety's a top-to-toe obligation. G. J. Ruoff. Am Gas Assn Mo 35:14 My '53

Securities

Banker's views on regulation and rate of return. J. A. Lyles. Pub Util 50:553-6+ O 23 '52

Can the double tax on dividends be eliminated? A. F. Tegen. Pub Util 52:375-6 S 10 '53

Care and feeding of corporate stockholders. D. Parker. Pub Util 50:689-95 N 6 '52

Dividend and appreciation prospects; with table of comparative analysis of companies. S. Devlin. Mag of Wall St 91:539-41+ F 7 '53

Dividend pay-out; today. W. F. Stanley. Pub Util 52:571-8 O 22 '53

Forgotten factor in fair return. C. Tatham, jr. Pub Util 52:3-11 Jl 2 '53

Higher capital costs and the return on the rate base. O. Ely. Pub Util 52:40-1 Jl 2 '53

Investor relations; important aspects of utility management. P. Hallingby, jr. Pub Util 50:547-52 O 23 '52

Life insurance investment in public utilities. H. J. Johnson. Pub Util 52:341-5 S 10 '53

New Dow-Jones series; 20-year statistical record of the utility index's earnings. Barron's 33:13-14 Ja 19 '53

Public utility regulation and the securities market. A. H. Gordon. Pub Util 52:660-6 O 22 '53

Public utility securities offered in 1952 and 1951; tabulation. Pub Util 51:243 F 12 '53

Total value of public utility security offerings, 1951 and 1952; yields to public on long term debt issues publicly offered in 1951 and 1952; charts. Pub Util 51:380-1 Mr 12 '53

Utilities; they expect improvement in regulatory climate H Murphy. Barron's 33:15+ Ja 19 '53

What the investor looks for in utility securities. C. O. Fisher. Pub Util 51:603-10 My 7 '53

See also

Electric utilities—Securities
Railroads—Securities

Taxation

Can the double tax on dividends be eliminated? A. F. Tegen. Pub Util 52:375-6 S 10 '53

How should defense plant tax savings be treated? Pub Util 51:516-18 Ap 9 '53

Utility assessments high, Colorado board finds. A. G. Mott. Elec West 111:133 Jl '53

What should commissions regulating public utilities do about accelerated tax amortization? A. J. G. Priest. Pub Util 52:118-21 Jl 16 '53

See also

Railroads—Taxation

Valuation

Valuation and depreciation related to income tax. M. R. Scharff. Am Soc C E Proc 77 [no69]:1-7 My '51; Discussion. 78[no D-69]:1-3 D '52

War problems

Utility rôle in civil defense. Pub Util 50:806-7 N 20 '52

Colorado

Utility assessments high, Colorado board finds. A. G. Mott. Elec West 111:133 Jl '53

New York (state)

Reorganization of a modern regulatory commission; New York public service commission. B. F. Feinberg. Pub Util 50:539-46 O 23 '52

Pennsylvania

Are court decisions changing Pennsylvania rate regulation? C. E. Kenworthey. bibliog Pub Util 52:275-84 Ag 27 '53

United States

New horizons, challenge to business leadership. H. P. Liversidge. Pub Util 51:69-73 Ja 15 '53

Washington outlook for public utilities, 1953. F. X. Welch. Pub Util 51:3-14 Ja 1 '53

PUBLIC utilities advertising association

Annual meeting, St Louis. Elec World 139:136 My 18 '53

Annual meeting, 32d, St Louis, May 7-8. Am Gas Assn Mo 35:19-20+ Je '53

Annual meeting, 32d, St Louis, May 7-8; prizes awarded in 1953 contest. Gas Age 111:46-7+ Je 4 '53

PUBLIC utility commissions

'54 vote set on PUC change in Colorado. Elec World 139:99 Ap 6 '53

Ohio PUC undergoing change. Elec World News ed 139:42 F 2 '53

Reorganization of a modern regulatory commission; New York public service commission. B. F. Feinberg. Pub Util 50:539-46 O 23 '52

PUBLIC utility districts

Investigation asked; Justice department asked to investigate activities of private utilities blocking sale of Puget sound power & light co. Elec World News ed 138:10 D 22 '52

Kitsap PUD makes changes. Elec World 138:117 D 15 '52

New block to Puget-PUD deal. Elec World 138:117 N 17 '52

One Puget-PUD case dropped. Elec World 139:131 Ja 26 '53

Promoting the Sacramento municipal utility district. C. L. Richey and E. A. Combatalade. Elec World News ed 139:20-1 My 11 '53

PUD in Arkansas voted down. Elec World 138:108 N 17 '52

PUD in Oregon to serve Willamette area. Elec World News ed 139:24 My 25 '53

Puget ready to take best bid. Elec World News ed 139:42 Ja 19 '53

Puget vote favors PUD's; Washington Water Power still wants to buy. Elec World 138:82 N 3 '52

SMUD plans to generate own power. Elec World News ed 139:9 Mr 30 '53

PUBLIC utility districts—*Continued*

Turn of the wheel; private power wins a victory in the Pacific Northwest. R. M. Bleiberg. Barron's 32:3+ D 1 '52

PUBLIC welfare

See also

Day nurseries

Social work

PUBLIC works

Factory regulations for public works. Engineer 194:219 Ag 15 '52

State legislatures face heavy 1953 agenda. Eng N 150:24 Ja 8 '53

Streamlined public works organization gets results; Phoenix, Ariz. A. R. Pierce. il Pub Works 83:47-9+ N '52

See also

Aqueducts

Bridges

Flood control

Highway departments

Hydroelectric plants

Irrigation

Municipal improvement

New York (city)—Public works

Pavements

Public buildings

Refuse disposal

Roads

Sewage disposal

Sewerage

Streets

Costs

Engineering construction in Canada. Roads & Eng Constr 91:190 Je '53

Federal aid

$50 billion in public works if defense orders are cut. H. Dubois. Mag of Wall St 92:263-5+ My 30 '53

Finance

Estimates and costs on public works criticized by congressional group. Eng N 149:27 D 25 '52

$50 billion in public works if defense orders are cut. H. Dubois. Mag of Wall St 92:263-5+ My 30 '53

'54 construction budget hard to cut. Eng N 150:21-3 Ja 15 '53

Financing of subdivision utilities; guided discussion. Munic Util 90:30-3+ N '52

Reclamation and the budget. Pub Util 50:919 D 18 '52

Roll out the barrel; Congress and public works appropriations. J. C. W. Schaie and J. C. Perham. Barron's 33:3 Jl 13 '53

State auditors rap construction policies. Eng N 149:136 O 9 '52

Voters approve $1.3 billion to spur new construction. maps Eng N 149:21-4 N 13 '52

Connecticut

State auditors rap construction policies. Eng N 149:136 O 9 '52

Georgia

Public works for a boom defense area. P. F. Seward. il map Pub Works 84:51-3+ Jl '53

Maryland

Stronger central control urged in Maryland building. Eng N 149:24-5 D 4 '52

South Carolina

Public works for a boom defense area. P. F. Seward. il map Pub Works 84:51-3+ Jl '53

United States

Budget order deals lightly with federal civil works. Eng N 150:43-4 F 19 '53

Congress sees high rate of building through 1960. Eng N 149:21 D 25 '52

Cuts in federal construction mounting. Eng N 150:21-2 My 21 '53

Election shakes up outlook for federal construction. S. Justice. Eng N 149:25 N 13 '52

Federal awards delayed for review. Eng N 150:21-2 F 12 '53

Federal budget cuts falling chiefly on proposed projects. Eng N 150:21-2 Ap 9 '53

House asked to deny funds for 44 army engineer jobs. Eng N 150:21-2 My 28 '53

New Congress to scrutinize federal construction plans. Eng N 150:21-3 Ja 8 '53

New federal construction projects offer best hopes for budget cuts. Eng N 150:28 Mr 19 '53

No stop order on projects. Elec World News ed 139:20 Mr 2 '53

State legislative sessions coming down home stretch; major public works measures adopted. Eng N 150:25-6 Ap 2 '53

PUBLICITY

Bank news roundtable; handy kit of public relations ideas. il Banking 45:37-44+ F '53

Bids for news diet balancing told ad chiefs. C. Watson. Ed & Pub 86:53 Ja 24 '53

How a small-budget PR program can pay off in publicity alone. D. Bland. Ptr Ink 241:58-60+ O 31 '52

How merchandising of publicity creates advertising at local level. il Ptr Ink 242:77 F 27 '53

How Saran managed the debut of its new synthetic fiber; press preview. il Sales Management 69:74+ N 20 '52

How to take good pictures for business paper publicity. R. A. Wolters. il Ind Marketing 38:53-6 Ag '53

If it's really amusing, the editors will print it. H. E. Fry. Ptr Ink 241:107-8 O 17 '52

Mat releases bring publicity for industrial companies. B. Aitchison. il Ind Marketing 38:36+ S '53

Problems of publicity men and editors in the handling of publicity in newspapers. M. Wallis. Ed & Pub 86:15+ Ap 11; 37-8 Ap 18 '53

Six sales functions for industrial publicity. L. Cox. Sales Management 69:66+ N 10 '52

Tell them a story. L. A. Long. Nat Safety N 68:22-3+ Jl '53

Ten ways to get publicity at a trade show. E. Greif. Sales Management 70:45-50 pt 2 Ja 1 '53

Weekly press standards high, publicists told. S. Wilson. Ed & Pub 85:30 S 27 '52

Your press relations. Banking 45:18+ Ap '53 [cont monthly]

See also

Advertising

Public relations

PUBLISHERS' offices

Heating and ventilation

Ventilating and heating publisher's home office. P. Moffet. il diag Heating-Piping 25:102-3 Mr '53

PUBLISHING

If I had my way with publishers. B. A. Evans. Aslib Proc 5:16-20; Discussion. 20-6 F '53

See also

Book industry and trade

House organs

Newspapers

Periodicals

PUBLISHING buildings

Scientists shake building in seismic test; rigid-frame building for Reader's digest in Tokyo. il plan diag Eng N 149:36-7 D 25 '52

See also

Newspaper offices

PUERTO RICANS in the United States

Puerto Ricans start up labor ladder. il Bsns W p 150-2 My 2 '53

PUERTO RICO

Puerto Rico; a study in democratic development. M. Hansen and H. Wells, eds. Ann Am Acad 285:1-166 Ja '53

See also

Irrigation—Puerto Rico

Industries and resources

Puerto Rico's industrial revolution. il Bsns W p78+ N 15 '52

PUGET sound

Puget sound gets bridge controversy. Eng N 149:24 D 11 '52

Report ok's $82-million crossing of Puget sound west of Seattle. maps Eng N 149:26 D 4 '52

PUGET sound power and light company

FPC, public bodies get WWP-Puget merger plan. Elec World 139:88+ My 4 '53

Investigation asked; Justice department asked to investigate activities of private utilities blocking sale of Puget sound power & light co. Elec World News ed 138:10 D 22 '52

Kitsap PUD makes changes. Elec World 138:117 D 15 '52

PUGET sound power and light company—*Cont.*

League formed to combat proposed merger with Washington Water Power. Elec World News ed 139:43 Mr 16 '53

McLaughlin to wait and see what action is taken by Washington state legislature before selling properties. Elec World 139:121 F 23 '53

Merger would up earnings; study of Washington Water Power proposal for purchase of Puget Sound Power & Light. Elec World News ed 138:42 O 27 '52

New block to Puget-PUD deal. Elec World 138:117 N 17 '52

One Puget-PUD case dropped. Elec World 139:131 Ja 26 '53

Proposed merger of Puget Sound-Washington Water Power. O. Ely. Pub Util 51:507-8+ Ap 9 '53

Public utility securities. O. Ely. Comm & Fin Chr 177:115 Ja 8 '53

Puget directors to vote this week on merger with Washington Water Power. F. McLaughlin. Elec World News ed 139:42 Mr 30 '53

Puget ready to take best bid. Elec World News ed 139:42 Ja 19 '53

Puget vote favors PUD's; Washington Water Power still wants to buy. Elec World 138: 82 N 3 '52

Turn of the wheel; private power wins a victory in the Pacific Northwest. R. M. Bleiberg. Barron's 32:3+ D 1 '52

WWP is ready to negotiate a deal on Feb. 28 with stockholders. Elec World News ed 139: 42 F 16 '53

Washington Water Power OKs plan to merge. Elec World 139:127 Mr 23 '53

WWP-Puget plan opposed. Elec World News ed 139:44 My 25 '53

Will Puget go public or private? il Elec World 138:90-1 O 20 '52

PULBROOK, Eustace Ralph, 1881-1953

Sketch. East Underw 54:21 F 6 '53

PULEGOL

Reactions of αβ-unsaturated cyclic aldehydes and ketones; (+)-*trans*-pulegol and a (−)-pulegol from (+)-pulegone. A. K. Macbeth and J. S. Shannon. Chem Soc J p4748-51 D '52

PULEGONE

Reactions of αβ-unsaturated cyclic aldehydes and ketones; (+)-*trans*-pulegol and a (−)-pulegol from (+)-pulegone. A. K. Macbeth and J. S. Shannon. Chem Soc J p4748-51 D '52

PULLEYS

How to figure pulley speeds; nomograph. Mill & Factory 51:132 D '52

How to make a mold for a pulley casting. P. Dwyer. il diags Foundry 80:223-4+ S; 229-30+ O '52

Small pulley block. il Engineer 195:254 F 13 '53

Tooth-grip belt and axial-grooved pulley gives positive, synchronized transmission drive. il Factory Management 110:90-2 D '52

Universal V-belt pulley; Jac universal pulley, ltd. diag Engineering 175:191 F 6 '53

Weld cast iron pulley, prevent plant shutdown. il Constr Methods 34:122-3 D '52

PULP and paper magazine of Canada

Editor does double duty. R. L. Campbell. Pulp & Pa of Can 54:146-7 My '53

1903, a magazine was born to grow with an infant industry. J. N. Stephenson. il Pulp & Pa of Can 54:141-4 My '53

PULPSTONES

Reproduction of the profile of pulpstone surfaces; abstract. S. Johansson and T. Pettersson. il diag Paper Ind 34:1016 N '52

PULSE generators

General purpose short-pulse generator. A. Hershler and A. H. Seidman. bibliog il diag Electronics 26:182-3 Ag '53

High-power square-pulse generator. W. E. Williams, jr. il diags Electronics 25:144-5 O '52

High voltage high speed square wave surge generator. D. H. Goodman and others. diag R Sci Instr 23:766-7 D '52

Pulse generator has wide control range. W. W. Schroeder. il diag Electronics 26:136-7 Mr '53

Pulse method for supplying high-voltage power for electrostatic precipitation; abstract. H. J. White. diag Elec Eng 72:236 Mr '53

Test pulse generator for digital computers. A. A. Gerlach. il diags Electronics 25:158-60 N '52

PULSE techniques (electronics)

Applying pulse magnetrons to radar equipment. C. V. Litton and P. W. Crapuchettes. il Tele-Tech 12:60-2+ S; 102-4 O '53

Behavior of rectangular hysteresis loop magnetic materials under current pulse conditions. E. A. Sands. diags Inst Radio Eng Proc 40:1246-50 O '52

Designing cathode followers for pulse type circuits. H. A. Favors. diags Tele-Tech 12: 80-1 Ag '53

Graphical spectrum analyzer for pulse series. H. P. Raabe. il diags Inst Radio Eng Proc 41:1129-38 S '53

Helical winding slow-wave structures in exponential line pulse transformers. J. Kukel and E. M. Williams. il Inst Radio Eng Proc 41:669 My '53

Magnetic transient recorder for radiation pulses. J. Racker. il diags Tele-Tech 12: 92-4 Je '53

Networks with maximally-flat delay. W. E. Thomson. bibliog diag Wireless Eng 29:256-63 O '52

Pulse averaging circuit; voltmeter-type device. F. E. Boyd and N. W. Guinard. diags Electronics 26:188-9 Ag '53

Pulse-timer shows up short-time relay characteristics. W. F. Bloom. il Elec World 139: 82-3 My 4 '53

Reliable locked-oscillator pulse timer. P. G. Sulzer. bibliog il diags Tele-Tech 12:68-9+ Ap '53

Some transients in the pulse response of point-contact germanium diodes. M. C. Waltz. il diags Inst Radio Eng Proc 40:1483-7 N '52

Unitized pulse circuits speed computer design. H. Kenosian. il diag Electronics 25:156-7 O '52

PULVERIZERS

Carbide tipped hammers cut pulverizing costs. W. E. Fawcett. il Iron Age 170:114-16 N 27 '52

Combustion and fine grinding with the jet mill. G. M. Croft and L. D. Bechtel. il diags Iron & Steel Eng 29:61-8 O '52

Grinding things smaller; fluid energy mills. diags Bsns W p 118-20 D 6 '52

Jet mill grinding. C. Trost. Science 117:sup3 F 6 '53

Small laboratory pulverizer. B. M. Wright. diag Chem & Ind p8-10 Ja 3 '53

See also

Ball mills

PUMICE

Bridge built of precast pumice concrete. il Eng N 150:26 Ap 9 '53

PUMPING

Flow rate controls pumping. diag Chem Eng 60:246+ Ap '53

How to use system-head curves. M. Mann. diags Chem Eng 60:162-4 F '53

Pumping system supplies cement to both ready-mixed concrete and block plants. W. B. Lenhart. il plan Rock Prod 56:189-91 Je '53

What is NPSH? (net positive suction head). D. R. Rankin. il diags Pet Refiner 32:162-5 My '53

See also

Petroleum—Pumping
Pumps
Pumping stations
Sewage pumping

Tables, calculations, etc.

It's easy to determine net positive suction head. D. R. Rankin. diags Pet Refiner 32: 129-32 Je '53

Minimum continuous flow of centrifugal pumps. E. C. Condict. diag Eng & Min J 153:110-12 N '52

PUMPING machinery

Diesels power tanker loading station. M. D. Pugh. il Diesel Power 30:50-1 N '52

How new pumps cut water plant power costs. R. G. Vollendorf. il Pub Works 84:89-90 Ag '53

Modern pump system eliminates needless work; Cushman bakery co. il Mill & Factory 53:133-4 Ag '53

PUMPING machinery—*Continued*

Operation of power slush pumps in compound. T. Pennington. Oil & Gas J 51:116 D 8 '52

See also

Gasoline pumps
Petroleum—Pumping
Pumping stations
Pumps
Sewage pumping

PUMPING machinery, Electric

Electricity and water supply. H. R. Lupton. il Elec J 151:40-4, 341-5 Jl 3, 31 '53

First U.S. reversible pump-turbine unit. Elec West 110:85 Mr '53

Hiwassee 102,000-hp motor, and pump-turbine. il Power Eng 57:59 F '53

Motor drives for water pumps. M. C. Boggis and E. O. Potthoff. Am Water Works Assn J 45:1023-44 O '53

Pump-turbine unit at Hiwassee aids TVA. H. Wiersema. il Elec World News ed 139:36-7 My 11 '53

Record-size pump-turbine to be installed at TVA's Hiwasse project. R. A. Elliot and D. H. Mattern. il map diag Civil Eng 23:172-5 Mr '53

Six pumps deliver 2,100,000 gallons per minute; Tracy pumping plant of the Central Valley project. C. J. Tullo. il Pub Works 83:62-3+ N '52

TVA pump-turbine started; Allis-Chalmers to build Hiwassee dam power system. Steel 131:125 N 24 '52

Tracy pumping plant of the Central Valley project, Calif. il diag Engineering 174:425-6, pl 32, 463-5, pl 38-9 O 3-10 '52

World's largest reversible turbine-pump. il Power 97:150 Ap '53

See also

Mine pumping, Electric
Petroleum—Pumping, Electric
Petroleum pipe lines—Pumping stations, Electric

Control

Electricity and water supply; controlling agents for pumping stations. H. R. Lupton. il Elec J 151:633-6 Ag 28 '53

Pressure surges at large pump installations. J. Parmakian. bibliog il plans diags A S M E Trans 75:995-1004; Discussion. 1004-6 Ag '53

Remote pump and valve controls. L. Paul. Am Water Works Assn J 45:121-8 F '53

PUMPING machinery, Portable

Portable jet-turbine engine suitable for pumping. il Munic Util 91:8 F '53

Portable pumping units pinch hit during station overhauling. J. D. Jones. il Oil & Gas J 51:334-5+ O 13 '52

PUMPING stations

Application of vertical pumps to water works installations. T. M. Niles. diags Am Water Works Assn J 45:1012-22 O '53

Buffalo's water supply illustrates progressive engineering development. F. W. Crane. il Munic Util 91:29-30+ My '53

Control of water pressure on suburban distribution lines; abstract. J. S. Williams. Water & Sewage Works 100:345-6 S '53

Problems in the design and operation of a booster pumping station; Peterborough, Ont. R. L. Dobbin. il Am Water Works Assn J 44:957-60 O '52; Same. Water & Sewage Works 99:491-4 D '52

Pumps and pumping stations; abstract. R. Hazen. Water & Sewage Works 99:452-3 N '52

Stresses in frame of Grand Coulee pumping plant reduced by construction procedure. E. J. Sollid. diags Civil Eng 23:318-19 My '53

See also

Petroleum pipe lines—Pumping stations
Sewage pumping

Electric equipment

All-electric pumping station to increase city's water supply. Elec Eng 72:377 Ap '53; Same. Pub Works 84:67 Je '53

Remote pump and valve controls. L. Paul. Am Water Works Assn J 45:121-8 F '53

Water distribution by electricity; city of Birmingham. il Electrician 149:847-8 S 19 '52

Equipment

Hamilton's new waterworks pumping plant reflects hundred years of progress. J. P. Smallwood. il Munic Util 90:19-21+ S '52; Same. Comp Air Mag 57:304-6 N '52

Selection of pumping equipment. T. M. Niles. diags Am Water Works Assn J 45:170-88 F '53; Same cond. il Munic Util 91:23-30+ F '53

Power

Dual fuel engines for pumping water cut power costs at San Antonio. J. A. Scanlan. il Water & Sewage Works 100:279-81 Jl '53; Same cond. Pub Works 84:65 F '53

Electricity and water supply. H. R. Lupton. il Elec J 150:1041-3, 151:40-4, 341-5, 633-6 Mr 27, Jl 3, 31, Ag 28 '53

PUMPS

Accurate, positive gear metering pump. il Product Eng 23:234 D '52

Air-operated pump for liquid foods. il Food Eng 25:105 Ja '53

Application of vertical pumps to water works installations. T. M. Niles. diags Am Water Works Assn J 45:1012-22 O '53

Barge-mounted pumps drain large drydock. il Constr Methods 35:110 Ag '53

Better pump, cheaper bromination. F. Breese. diag Pet Processing 7:1785 D '52

Better slush pump performance is possible. K. N. Mills. Pet Eng 25:B81-2+ Ja '53

Bring a barrel of your material, we'll tell you if it's pumpable. D. P. Woodlee. il Sales Management 69:52+ D 1 '52

British solids pump uses compressed air and diaphragm valves. il diags Product Eng 23:140-1 D '52

Chamberlain two-stage hydraulic pump. il Engineer 195:907 Je 26 '53; Engineering 176:64 Jl 10 '53

Choose rotary pumps for low-cost, efficient and dependable service. E. M. Richman. il diags Power 96:136-7 D '52

Combination piston-diaphragm pump. il Product Eng 23:165 N '52

Complete characteristic circle diagrams for turbomachinery. W. M. Swanson. bibliog il diags A S M E Trans 75:819-26 Jl '53

Compounded power pumps speed drilling. il plans World Oil 136:111-13+ Mr '53

Condensate pump simplifies air conditioning installation; Weil pump co. il diag Heating-Piping 25:96 My '53

Design and application of controlled-volume pumps for high pressure in the range of 10,000 to 30,000 psi. D. H. Jones. bibliog il diags A S M E Trans 75:361-7 Ap '53

Development of special pumps for liquid metals; their power supply, valves, bearings, and instrumentation. E. F. Brill. Mech Eng 75:369-73 My '53

Do you have inside dope on your rotary pumps? drawings with text. S. Elonka. Power 97:116-17 F '52

Ductile iron, a new design material steps into your plant. il Power 97:122-3 F '53

Electromagnetic pumps for high temperature liquid metal. J. F. Cage, jr. il diag Machine Design 25:178-9+ Mr '53

Follow the formula in selecting a pump. il Oil & Gas J 52:128-9 My 11 '53

Hard facing pump parts; Spray-weld process. il Welding J 32:529 Je '53

How pressure surges cut pump efficiency. J. H. Dawson and E. Fitch, jr. diags World Oil 135:264-6 N '52

How to use rotary pumps; excerpts from sound film; Worthington corp. E. Richman. il Power 97:122-3 My '53

Howard Proportionometer high-pressure pump for automatic output regulation. il diags Engineering 176:26-7 Jl 3 '53

Important considerations in selecting industrial pumps; data sheet. M. Mann. Heating-Piping 25:117-18 S '53

Jetting sump used as transfer pump. il diag World Oil 135:278 O '52

Metering pump assures accurate spraying job. il diag Roads & Sts 96:81 Ap '53

Molten metal pump built. Steel 132:121 F 2 '53

Move over, steel; plastics for corrosion-resistant pumps and valves. Bsns W p 141 Je 13 '53

PUMPS—*Continued*

On the frontier; pump for driving liquid metals into a reactor. il Fortune 47:104-5 My '53

Performance of power pumps in 700 hydraulic horsepower class. E. C. Hellums. bibliog Oil & Gas J 51:169-70+ O 20 '52; Same. Pet Eng 25:B64-6 Ja '53

Piping liquid metal at the Knolls atomic power laboratory. il diag Heating-Piping 25:112-13 Jl '53

Porcelain cylinder liner protects pump for corrosive chemicals. il diags Product Eng 24:166-7 My '53

Pressure distributions on the blade of an axial-flow propeller pump. D. A. Morelli and R. D. Bowerman. bibliog il diags A S M E Trans 75:1007-13 Ag '53

Process design of pumping equipment. R. L. Jacks. Oil & Gas J 51:83-4 D 15 '52

Proportioning pumps deliver controlled drops or gpm. F. A. Annett. il diags Power 97: 116-17+ Jl; 116-17 Ag '53

Pump manufacturers' recommendations for hydraulic oils. C. R. Schmitt. Product Eng Hdbk p J6 '53

Pump mounts standardized; three types are approved to govern machine tool lubricating and coolant pumps. Steel 131:294+ O 13 '52

Pump selection. R. L. Jacks. Oil & Gas J 52:103 Je 29 '53

Pumped storage capacity improves big power system's operation; Etzel power project. il map plan diags Power 97:84-6 Ap '53

Pumping licks more problems; bakers now use versatile mover for jam, jelly, frosting, and batters. il Food Eng 24:79+ N '52

Pumps and valves. il Paper Tr J 137:157-64 S 18 '53

Pumps produce, classify and load sand; illustrations with text. Constr Methods 35:61 O '53

Reduced size, high capacity pump. il Product Eng 24:244 My '53

Rid vertical-pump intake design of guess with model tests. A. Brkich. il diags Power 97: 90-1+ F '53

Rotary pump resists wear. il diags Chem Eng 60:212 F '53

Rubber lining on solids-handling pump. il Eng N 149:124-5 D 18 '52

Ryaland accelerator pump for central-heating systems. il Engineering 176:287 Ag 28 '53

Shop-made pump aids operators. il World Oil 136:179+ Ja '53

Sluicing pumps wash fines out of fill, create impervious core in earthfill dam. il Constr Methods 35:62-4 Ag '53

Small high-pressure pump for pilot-plant service. R. W. Hiteshue and E. L. Clark. diags Mech Eng 75:205-6 Mr '53

Some pointers on proper installation of suction pump. diag Brick & Clay Rec 123:67 S '53

Sonic pump successful; sound waves are used for lifting fluids. D. H. Stormont. il diag Oil & Gas J 51:32-3 F 2 '53

Spindle drag pump. R. A. Strub. il diags Machine Design 25:149-51 Jl '53

Topnotch pump film covering all angles; from Allis-Chalmers moving picture. J. Gammell. il Power 97:114-17 Ap '53

Tough handling problems solved with air pumps; Trunz, Brooklyn, N.Y., meat packer. il diag Food Eng 25:50 F '53

Variable-displacement pumps control fluid delivery to meet load needs. F. A. Annett. diags Power 97:112-13+ S '53

Variable-displacement rotary pump; versatile performer in modern plant. F. A. Annett. diags Power 96:114-15+ D '52

Which is best pumping scheme? Power 96: 148-50+ D '52

See also

Air lifts
Ejectors
Gasoline pumps
Heat pump
Mine pumps
Pumping machinery
Pumps, Centrifugal
Sewage pumps
Vacuum pumps

Bearings

Pivoted-shoe bearings for piston pumps. Machine Design 25:197 O '53

Control

These pumps are switched automatically by demand changes. diag Power Eng 57:80 Jl '53

Design

Clearance design in positive displacement pumps. W. E. Wilson. il diags Machine Design 25:127-30 F '53

Design of large pumping installations for low and medium heads. G. A. Wauchope and H. P. Humphreys. bibliog diags Inst Mech Eng Proc 165 (W.E.P. no 69):229-39 '51; Excerpts. Engineer 192:622-3 N 16 '51; Discussion. il plan Inst Mech Eng Proc 165 (W.E.P. no 69):239-53 '51; Engineer 192: 618-19 N 16 '51

Designing high pressure pumps for controlled volume applications. D. H. Jones. diags Machine Design 25:185-7+ F '53

Maintenance and repair

Guard against pump accidents caused by loss of load. Heating-Piping 25:116 Mr '53

Metal flex-hose connections stop pump bearing strain. il Power Eng 57:85 S '53

Pump maintenance; Allis-Chalmers slidefilm. il Coal Age 58:96-9 Mr '53

Trouble-shooting on pumps. il Mill & Factory 52:120-2 Ja '53

Manufacture

Better tooling gives interchangeability. il Steel 131:98-100 N 10 '52

Big castings require big molds; National supply co.'s Torrance foundry. il Foundry 81:186 O '53

Turret tooling cuts taper on pump wheel. A. Ashburn. il Am Mach 97:172-3 Je 8 '53

PUMPS, Centrifugal

Accumulation of safety factors in centrifugal pump applications. F. R. Forrest. Paper Tr J 135:31-2 D 26 '52; Same. Eng & Min J 154:91 Ja '53

Centrifugal boiler feed pump maintenance. I. J. Karassik. il diags Power Eng 57:98-100 Je; 72-3 Jl; 86-8 Ag; 80-2 S '53

Centrifugal pump calculations. B. J. Lerner and A. J. Barduhn. diags Oil & Gas J 51: 145 D 1; 123 D 8; 141 D 15; 95 D 29 '52

Centrifugal pump maintenance. E. H. Fry. il Min Cong J 39:48-9 Jl '53

Centrifugal pumps; charts predict effects of changes in speed and size of homologous units; data sheet. A. E. Roach. Machine Design 25:183-5 Je '53

Centrifugal pumps for use with corrosive liquids. Metallurgia 47:95 F '53

Centrifugal pumps in steam power stations. R. Pennington. diags Inst Mech Eng Proc (B) 1B no 4:129-40 '52; Same cond. Engineer 193:433-4, 467-9 Mr 28-Ap 4 '52; Discussion. il Inst Mech Eng Proc (B) 1B no 4:140-56 '52

Electricity and water supply; nature of the pumping units. H. R. Lupton. il Elec J 151:40-4 Jl 3 '53

Euler's centrifugal pump theory. D. B. Welbourn. diag Engineer 195:779-80 My 29 '53

Fast figuring of centrifugal pump head; chart. L. J. Murphy. Mill & Factory 52:95 Mr '53

Glandless centrifugal pump. il diag Engineer 194:559-60 O 24 '52; Engineering 174:511 O 17 '52

Goodenough six-inch self-priming trailer pump. il Engineering 175:287 F 27 '53

High-pressure pumps. U. M. Barske. il diags Engineer 195:550-3 Ap 17 '53

How axial thrust is balanced in your centrifugal boiler feed pump. I. J. Karassik. diags Power Eng 56:94-6+ N '52

How to choose the right impeller. J. A. Cable. il diags Chem Eng 59:144-5 N '52; Abstract. Food Eng 25:133 Jl '53

How to figure centrifugal-pump temperature rise; chart. L. J. Murphy. Mill & Factory 52:111 Mr '53

Overhaul that pump at right time. W. E. W. Jones. il diags Power 97:112-13 Ja '53

Planning a preventive maintenance scheme for centrifugal pumps. L. F. Horne. il Pulp & Pa of Can 53:126-7 O '52

PUMPS, Centrifugal—*Continued*

Preventive maintenance of centrifugal pumps. F. B. Applegate. il Pet Eng 25:C32+ My '53; Same abr. Pet Refiner 32:134-5 Ap '53; Same cond. Oil & Gas J 51;187 Mr 30; 121 Ap 6; 139 Ap 13 '53

Pumps and how they work (cont). I. J. Karassik and R. Carter. il diags Paper Ind 34:983-6, 1358-60; 35:337-40, 560-3, 672-4, 794-6 N '52, F, Je, Ag-O '53

Pumps; minimum continuous safe flow of centrifugal pumps. E. C. Condict. Oil & Gas J 51:155 Ag 18; 153 Ag 25 '52; Same. Paper Tr J 135:25+ N 21 '52; Same. Eng & Min J 153:110-12 N '52

Selection of centrifugal pumps. J. A. Cable. il diags Heat & Ven 49:85-96 D '52

Supply and use of hydraulic power at Appleby-Frodingham. L. N. Lloyd. il diags Iron & Steel Inst J 170:271-87 Mr '52; Discussion. 172:87-93 S '52

Today's designs cut process-pump costs. E. G. Hilficker. il Power 97:77 Ap '53

Versatile dross pump-separator gets U.S. showing. il Steel 132:137 Je 15 '53

History

Early development of the centrifugal pump. L. E. Harris. Engineering 175:41-2, 91-2 Je 9-16 '53

Testing

Centrifugal pump test stand reduces testing costs 75 per cent. il Blast F & Steel Pl 41:122 Ja '53

PUMPS, Feed water

Boiler feed pump has run 100,000 hours. il Comp Air Mag 58:231 Ag '53

Centrifugal boiler feed pump maintenance. I. J. Karassik. il diags Power Eng 57:98-100 Je; 72-3 Jl; 86-8 Ag; 80-2 S '53

Centrifugal pumps in steam power stations. R. Pennington. diags Inst Mech Eng Proc (B) 1B no 4:134-40 '52; Same cond. Engineer 193:467-9 Ap 4 '52; Discussion. il Inst Mech Eng Proc (B) 1B no4:140-56 '52

Get acquainted with that hydraulic work horse; reciprocating feed pump. R. K. Grobholz. il diags Power 97:116-17+ Je '53

How axial thrust is balanced in your centrifugal boiler feed pump. I. J. Karassik. diags Power Eng 56:94-6+ N '52

Old feed pumps work like new. E. Duff. il diags Power 97:108 Ja '53

What causes feed-pump vibration? Power 97: 138+ My '53

Testing

Testing a high-pressure pump; Ingersoll-Rand company's Cameron division. G. B. Richardson. il Comp Air Mag 58:62-7 Mr '53

PUMPS, Fuel

Bendix electric fuel pump. il diags Automobile Eng 43:393-4 S '53

Give zing to Diesel-fuel pumps. C. M. Jones. il diags Power 97:118-19 Ap '53

Pesco pumps fly on all U.S. jets. G. L. Christian. il diags Aviation 58:52+ F 23 '53

Roosa-Master; fuel injection pump with ideas. il Diesel Power 30:36-9+ N '52

Simms SPE-6A injection pump for six cylinder Diesel engines. il diags Automobile Eng 43:158-62 Ap '53

Testing

Calibrating fuel injection systems. il Diesel Power 30:64-7 O '52

PUMPS, Submergible

Hydraulic problems encountered in intake structures of vertical wet-pit pumps and methods leading to their solution. W. H. Fraser. plans diags A S M E Trans 75:643-8; Discussion. 648-52 My '53

Pump to the rescue; new submersible sewage ejector solves a difficult pumping problem on a theatre remodeling job. il diag Dom Eng 181:116 Ja '53

Solving pump intake problems with model flume. W. W. Weltmer. il Elec World 138:123 O 20 '52

Studies of submergence requirements of high-specific-speed pumps. H. W. Iversen. diags A S M E Trans 75:635-8; Discussion. plan 639-41 My '53

PUMPS, Turbine

Vertical short-coupled turbine pumps. A. O. Fabrin. il plan diags Am Water Works Assn J 45:1045-59 O '53

PUNCHED card system

Air lines ticket is tab card. il Am Bsns 23: 46 Mr '54

Calculation of crude-oil run tickets by electronics. H. M. Spinning. Oil & Gas J 51: 70-1+ F 2 '53

Chrysler combines record keeping for group insurance and pensions. D. G. Baird. il Am Bsns 22:26+ N '52

Computation of sand volumes from isopach maps. R. K. Guthrie and others. Oil & Gas J 51:65+ F 2 '53

Computing gas volumes from orifice-meter charts integrator data, using a punched-card system. A. C. Buchanan, jr. and H. Skinner. flow plan Oil & Gas J 51:72-3+ F 2 '53; Same. World Oil 136:186+ Mr '53

Dividend checks produced faster with stenciling process. il Am Bsns 23:24 Ap '53

Electronic calculator used for reservoir engineering and research. W. A. Bruce and R. N. Bonner. il diags Pet Eng 24:B66+ D '52

Expedite stockholder records. Am Gas Assn Mo 35:11-12+ Jl-Ag '53

How punch cards help as CPR cuts car hire expense. il Ry Age 135:92-3 S 21 '53

Let punched-cards solve that problem. R. Habermann, jr. and F. J. Maginniss. il diag Gen Elec R 55:8-12 My '52; Same cond. Machine Design 24:302+ D '52

New brains for oil; electronic punched-card computers. K. B. Barnes. il Oil & Gas J 51:138-40 D 22 '52

Petroleum-engineering file on punched cards. R. K. Guthrie and others. il diags Oil & Gas J 51:62-4+ F 2 '53

Processing fire losses. E. T. Kyllo. Nat Underw 56:4 N 6 '52

Project 44 in the cards; IBM technique in handling fundamental hydrocarbon data. V. B. Guthrie. il Pet Processing 7:1769-71 D '52

Punched-card bibliography of infrared spectra. E. C. Creitz. Science 117:sup3 Ap 3 '53

Punched-card controlled aircraft navigation computer. E. H. Fritze. bibliog il diags Inst Radio Eng Proc 41:734-42 Je '53

Punched cards operate new photographic typesetter. diags Product Eng 24:218-19 Ap '53

Wanted; finger-tip facts; punched card accounting proves economical in a small plant. R. G. Brumby. il Steel 132:160+ Ap 20 '53

PUNCHED tape

Perforated-tape reader for feeding input information into digital circuitry. S. Wald. il diag Tele-Tech 12:39+ Jl '53

Punched tape guides milling machine cutters. J. O. McDonough. Electronics 26:135-7 Ap '53

Subscriber toll dialing tape reader; abstract. W. H. Blashfield. diag Elec Eng 72:786 S '53

PUNCHES

Adding sleeve maintains punch alignment. A. Peterson. diags Am Mach 97:116 Ag 31 '53

Cam action dies. il Iron Age 171:146-7 F 26 '53

Carbide punch clamp. W. V. Anderson. diag Tool Eng 30:42 Ja '53

Hole extruding punches; reference book sheet. P. Balsells. diags Am Mach 97:195, 197 O 12 '53

Interchangeable washer punch with knockout. diags Mill & Factory 53:123 Ag '53

Mounting of piercing punches; drawings with text; reference book sheet. P. Balsells. Am Mach 97:189, 191 Mr 16 '53

Piercing die. H. Dahl. diags Tool Eng 30:41 My '53

Tool materials for punches and dies. L. F. Spencer. bibliog il diags Tool Eng 30:35-40 My '53

Standards

Standard punch and die clearances; reference book sheet. J. R. Paquin. diags Am Mach 97:151 Ag 3 '53

PUNCHING

How to determine exact blank diameters. H. Dahl. diags Tool Eng 31:47-8 Ag '53

PUNCHING—*Continued*

Joining sheet metal in a punch press; Williams Metalacing technique. il Engineering 175:781 Je 19 '53

Piercing die for heavy stock. F. Strasser. diags Am Mach 96:120 D 22 '52

Punching, swaging, and blanking in a progressive die. F. Strasser. diags Mach 59:207-8 Ag '53

PUNCHING machinery

Floating die table equalizes press action. G. Karian. il diags Iron Age 170:78-80 D 25 '52

How one new machine doubled a small company's output; Penn electrical co. C. O. Herb. il Mach 59:157-62 F '53

How to figure punching horsepower. Mill & Factory 53:100 O '53

Production punching on press brakes. W. E. Peters. il diags Mach 59:185-91 O; 190-4 N '52

Punch press scheme can save $1 million; hot air ducts on the Scorpion F-89. il Aviation W 58:47-8 Mr 16 '53

Punching die unit designed to facilitate handling deep shells. F. Strasser. diags Mach 59:201 Ap '53

Slipping the induction motor. R. Y. Newton. il diag Gen Elec R 55:41-2+ S '52; Same cond. Machine Design 25:268+ F '53

Wales metal fabricator. il Tool Eng 31:104 Jl '53

See also

Dies

PUNCTUATION

See also

Hyphen

PURCELL, Robert William, 1911-

Businessmen in the news. por Fortune 47:54 My '53

PURCHASE tax. See Sales tax

PURCHASING

Are you sure you can identify your real buyers and prospects? W. Kuswa. Sales Management 70:42+ Mr 1 '53

Buy your way to lower costs. Steel 132:105-12 My 25 '53

Coordinating procurement; case study from the aircraft industry. H. T. Lewis. Harvard Bsns R 31:91-100 S '53

Facts and figures guide our purchase of new equipment; Harris-Seybold co. R. W. Blosser. il Factory Management 111:108-9 Ap '53

How to buy aluminum castings. F. A. Lewis. il Aeronautical Eng R 12:34-40+ Ja '53; Same cond. Automotive Ind 108:179-80+ Ja 15 '52; Same cond. Materials & Methods 37:95-100 Ja '53

Purchasing materials on your own terms. Chem Eng 59:318+ O '52

Purchasing; standardizing coordination in company operations; National standardization conference; abstracts of papers. Standardization 23:370-2 N '52

Review purchasing now; abstract. Management R 41:675-6 O '52

Should you buy tool-design work based on competitive bids? J. J. Kohl. Am Mach 97:134-7 Ap 27 '53

Ten years' progress in management; purchasing. S. F. Heinritz. A S M E Trans 75:680-3 My '53

Today it's important to cultivate suppliers as well as customers. J. A. Cairns. Ptr Ink 242:29-31 Ja 30 '53

What makes production procurement click! report of panel on production procurement. S A E J 61:42-4 O '53

See also

Airplane factories—Purchasing
Coal purchasing
Consumers
Consumption (economics)
Electric utilities—Purchasing
Instalment plan
Machinery, Replacement of
Merchandizing
Purchasing agents
Purchasing departments
Railroads—Purchasing
Retail trade—Purchasing
Warranty
Waterworks—Purchasing

Reciprocal purchasing

Is reciprocal buying and selling good business? W. H. Conant. Am Bsns 23:14-15+ My '53

Study and teaching

Illinois institute of technology offers full course for prospective purchasing men. K. W. Bennett. Iron Age 171:71 Je 25 '53

Treatment of salesmen

Buyers and sellers rate each other. R. H. Herrmann. Foundry 81:180-1+ S '53

Buyers I dislike! R. B. Helser. Sales Management 70:105-6 F 15 '53

PURCHASING, Government

Are you using visuals to sell to government? J. Shoenfeld. Sales Management 70:38+ F 1 '53

Buy American backfires. Bsns W p34 Ap 25 '53

Centralize military buying? M. Fiebert. Tele-Tech 11:51 N '52

Defense department lays down new policy on procurement. R. Kyes. Am Mach 97:203 My 11 '53

Impact of wasteful military procurement. R. M. Kyes. Comm & Fin Chr 178:112-13 Jl 9 '53

Step-up in off-shore procurement bolsters European industry, dollar reserves. Am Mach 97:202 My 11 '53

Threat to Walsh-Healey act. Bsns W p 135 Mr 7 '53

U.S. military aircraft procurement program. il maps Aero Digest 65:18-22 O '52

See also

Contracts, Government
Paper, Government
United States—Defense, Department of—Standardization and cataloging program

PURCHASING, Household

Analysis of purchase rates by city size. A. G. Auble and H. Boyd. J Marketing 17:411-16 Ap '53

PURCHASING, Municipal

Purchasing equipment and materials. Water & Sewage Works 99:524 D '52

PURCHASING agents

Buyers and sellers rate each other. R. H. Herrmann. Foundry 81:180-1+ S '53

Buyers I dislike! R. B. Helser. Sales Management 70:105-6 F 15 '53

National association of purchasing agents' business survey committee, monthly report (cont). Comm & Fin Chr 176:1739 N 6 '52

Purchasing agents classify salesmen. Sales Management 69:60 N 10 '52

PURCHASING departments

Purchasing department's role in cost reduction; abstract. C. M. McVicar. Management R 41:695-6 O '52

PURCHASING research

Purchasing; research gets staff status in broad program of U.S. Steel. J. B. Delaney. Iron Age 170:95-6 D 11 '52

PURDON, Roger

Purdon, the monotheist; advertising invariably the result of teamwork. S. H. Margolis and M. Silverstein. Ptr Ink 242:38+ Mr 27 '53

PURDUE university

Research activities, 1951-52; engineering schools and departments. Purdue Univ Eng Exp Sta, Research Ser 119:1-123 '53

PURE oil company

Pure Oil; financial data. D. Kolb. Barron's 33:17-20 Mr 23 '53

PURINE

Introduction of isotopic hydrogen into purine ring systems by catalytic exchange. M. L. Eidinoff and J. E. Knoll. Am Chem Soc J 75:1992-3 Ap 20 '53

Purines; the synthesis of certain purines and the cyclization of several substituted 4,5-diaminopyrimidines. R. K. Robins and others. bibliog Am Chem Soc J 75:263-6 Ja 20 '53

PURITAN chemical company

Puritan Chemical grows with the South. il Soap & San Chem 28:160-1+ D '52

PURKINJE effect

Correction of low intensity luminance functions for the Purkinje effect. C. S. Bridgman. bibliog Opt Soc Am J 42:832-6 N '52

Measurement of accommodation in dim light and in darkness by means of the Purkinje images. M. Koomen and others. il Opt Soc Am J 43:27-31 Ja '53

PUROMYCIN. See Antibiotic substances

PURPUROGALLIN

Purpurogallin; further studies on the oxidation products of purpurogallin and purpurogallincarboxylic acid. W. D. Crow, R. D. Haworth and P. R. Jefferies. Chem Soc J p3705-13 O '52

PUSHCARTS

Can pushcart chaos be curbed? il Bsns W p94+ Ap 4 '53

PUTERBAUGH, Jay G.

Half-century club; careers epitomizing contributions to coal-mining progress. por (p 100) Coal Age 58:101-2 Ja '53

PUTNAM, Roger Lowell, 1893-

Economic stabilizer. Fortune 47:75 Ja '53

PUTNAM, Warner C.

Meet Put; the hat salesman who's in love with South Dakota. pors Sales Management 70:28-9 Mr 1 '53

PUTRESCINE

Putrescine as a growth requirement for neisseria. W. H. Martin, jr. and others. Science 116:483-4 O 31 '52

PYCNOMETERS

Proposed method of test for measurement of density of knock test standard normal heptane and *iso*octane by the pycnometer. il diags Am Soc T M Proc 50:289-94 '50

PYRAMIDS

Lateral area of right cones and pyramids; reference book sheet. S. H. Heller, jr. diags Product Eng 24:205 Ja '53

PYRAN

Some adsorption colors and their significance for thermochromic and tautomeric effects; experiments with anthrone derivatives, nitrotoluenes, spiropyrans and xanthhydrols. A. Schönberg, A. Mustafa and W. Asker. bibliog Am Chem Soc J 74:5640-3 N 20 '52

PYRANOSES. See Sugars

PYRANOSIDES

Studies of trifluoroacetic acid; the synthesis of 2-benzoyl 4 : 6-benzylidene methyl-α-D-glucopyranoside and its conversion into the isomeric 3-benzoate by an acyl migration. E. J. Bourne, A. J. Huggard and J. C. Tatlow. Chem Soc J p735-41 Mr '53

Synthesis of 2-naphthyl β-D-glucopyruronoside and 2-naphthyl β-D-glucofururonolactone and their behavior toward β-D-glucuronidase. K. Tsou and A. M. Seligman. bibliog Am Chem Soc J 74:5605-8 N 20 '52

Synthesis of phenyl β-D-glucopyruronoside. K. Tsou and A. M. Seligman. bibliog Am Chem Soc J 75:1042-4 Mr 5 '53

PYRANTHRONE

Photoconductivity of violanthrone. H. Akamatu and H. Inokuchi. J Chem Phys 20:1481-3 S '52

PYRAZINE

Pyrazine derivatives, and aspergillic acid. J. J. Gallagher and others. Chem Soc J p4870-4 D '52

Analysis

Analysis of pyrazine; methods for assay and impurities. W. Seaman, J. T. Woods and W. Leibmann. Anal Chem 24:1949-52 D '52

PYRAZINEDICARBOXYLIC acid

Esters of pyrazinoic and pyrazine-2,3-dicarboxylic acids. I. A. Solomons and P. E. Spoerri. bibliog Am Chem Soc J 75:679-81 F 5 '53

PYRAZINOIC acid

Esters of pyrazinoic and pyrazine-2,3-dicarboxylic acids. I. A. Solomons and P. E. Spoerri. bibliog Am Chem Soc J 75:679-81 F 5 '53

PYRAZOLE

New methods of synthesis of β-aminoethylpyrazoles. R. G. Jones and M. J. Mann. bibliog Am Chem Soc J 75:4048-52 Ag 20 '53

Studies in the pyrazole series; halogenation of the 1-guanylpyrazoles. F. L. Scott and J. Reilly. bibliog Am Chem Soc J 74:4562-6 S 20 '52

Studies in the pyrazole series; substituted guanidines. F. L. Scott, D. G. O'Donovan and J. Reilly. bibliog Am Chem Soc J 75:4053-4 Ag 20 '53

Studies in the pyrazole series; the 1-nitroguanyl type. F. L. Scott, M. T. Kennedy and J. Reilly. bibliog Am Chem Soc J 75:1294-7 Mr 20 '53

PYRENE

Diffuse spots of pyrene at higher temperatures. M. N. Dutt. J Chem Phys 21:380-1 F '53

Polarized fluorescence of molecules of some single organic crystals. S. C. Ganguly and N. K. Choudhury. bibliog il J Chem Phys 21:554-7 Mr '53

Polycyclic aromatic hydrocarbons as starting materials for the synthesis of dyestuffs. T. Holbro. J Ap Chem 3:1-9 Ja '53

Vapour pressure and lattice energy of some aromatic ring compounds. R. S. Bradley and T. G. Cleasby. Chem Soc J p 1690-2 Je '53

PYRETHRINS

Some new pyrethrin-type esters. Y. Chen and W. F. Barthel. bibliog Am Chem Soc J 75:4287-9 S 5 '53

PYRETHRUM

Constituents of pyrethrum flowers; synthetic *dl-cis*-cinerolone and other cyclopentenolones. M. S. Schechter, N. Green and F. B. LaForge. bibliog Am Chem Soc J 74:4902-6 O 5 '52

Testing

Pyrethrum storage tests. Soap & San Chem 28:163 O '52

PYREX

Determinations of electrokinetic charge and potential by the sedimentation method; pyrex glass in aqueous potassium chloride solutions. G. A. H. Elton and F. G. Hirschler. Chem Soc J p2953-5 Ag '52

Electron diffraction study of some glasses. G. O. McClurg. bibliog J Chem Phys 20:1398-400 S '52

PYRIDAZINE

Pyridazinemonocarboxylic acids and derivatives. W. J. Leanza, H. J. Becker and E. F. Rogers. bibliog Am Chem Soc J 75:4086-7 Ag 20 '53

PYRIDAZONE

Pyridazine derivatives; some amebacidal 3-pyridazones. E. A. Steck, R. P. Brundage and L. T. Fletcher. bibliog Am Chem Soc J 75:1117-19 Mr 5 '53

PYRIDINDOLE

Studies on carboline anhydronium bases. B. Witkop. bibliog Am Chem Soc J 75:3361-70 Jl 20 '53

PYRIDINE

Absence of quaternary salt formation between phosphoryl chloride and pyridine. B. M. Zeffert, P. B. Coulter and R. Macy. bibliog Am Chem Soc J 75:751-3 F 5 '53

Acid strength of iodine monochloride, antimony trichloride and picric acid with reference to the bases pyridine and aniline in nitrobenzene. I. M. Kolthoff, D. Stőcesocá and T. S. Lee. bibliog Am Chem Soc J 75:1834-9 Ap 20 '53

β-Acylethylation with ketonic Mannich bases; the synthesis of some diketones, ketonic sulfides, nitroketones and pyridines. N. S. Gill and others. bibliog Am Chem Soc J 74:4923-8 O 5 '52

Behavior of iodine species in pyridine and quinoline. J. Kleinberg and others. bibliog Am Chem Soc J 75:442-5 Ja 20 '53

Displacements of anionoid substituents in phthalic anhydrides by pyridine and β-picoline. M. P. Balfe, M. Doughty and J. Kenyon. Chem Soc J p2470-2 Ag '53

Distribution of the subgroup VII elements between pyridine and 4*N* NaOH. W. Goishi and W. F. Libby. bibliog Am Chem Soc J 74:6109 D 5 '52

Electric moments of some derivatives of cinnoline, pyridine and quinoline. M. T. Rogers and T. W. Campbell. bibliog Am Chem Soc J 75:1209-10 Mr 5 '53

Electrochemical measurements in pyridine; the redox potentials of some quinones. A. K. Gupta. Chem Soc J p3479-83 S '52

Electrochemical measurements in pyridine; the system $Cu\text{-}Cu^{+}\text{-}Cu^{++}$. A. K. Gupta. diag Chem Soc J p3473-9 S '52

PYRIDINE—*Continued*

Emmert reaction in the synthesis of alkyl- and cycloalkylpyridines. H. L. Lochte, P. F. Kruse, jr. and E. N. Wheeler. bibliog Am Chem Soc J 75:4477-81 S 20 '53

Hydrolysis of acetic anhydride; catalysis by pyridine. S. L. Bafna and V. Gold. Chem Soc J p 1406-9 My '53

Improved synthesis of pyridine-2-aldehyde. E. P. Hart. Chem Soc J p4540 N '52

Ionization and dissociation of certain weakly acidic substances in pyridine. E. J. Corey. bibliog Am Chem Soc J 75:1172-4 Mr 5 '53

Magnetic susceptibilities of hydrogenated pyridine and quinoline solutions of cupric and nickelous acetate and salicylaldehyde. W. K. Wilmarth, M. K. Barsh and S. S. Dharmatti. Am Chem Soc J 74:5035-7 O 20 '52

Mechanism of the decarboxylation of α,β- and β,γ-unsaturated malonic acid derivatives and the course of decarboxylative condensation reactions in pyridine. E. J. Corey. bibliog Am Chem Soc J 74:5897-905 D 5 '52

Microwave investigation of pyridine. B. Bak and J. Rastrup-Andersen. J Chem Phys 21:1305-6 Jl '53

Model reactions of phosphorus-containing enzyme inactivators; interaction of imidazole, pyridine and some of their derivatives with dialkyl halogeno-phosphates. T. Wagner-Jauregg and B. E. Hackley, jr. bibliog Am Chem Soc J 75:2125-30 My 5 '53

Phase relationships in the pyridine series. R. J. L. Andon and J. D. Cox. diags Chem Soc J p4601-8 D '52

Polarographic reduction of pyridine, quinoline, and phenazine. R. C. Kaye and H. I. Stonehill. Chem Soc J p3240-3 Ag '52

Reaction of cholesteryl *p*-toluenesulfonate and cholesteryl halides with pyridine type bases. L. C. King and B. M. Regan. bibliog Am Chem Soc J 74:5617-18 N 20 '52

Reaction of methanesulfonyl chloride with alcohols in the presence of pyridine. C. R. Noller and others. bibliog Am Chem Soc J 75:3851-2 Ag 5 '53

Reaction sequences in alcohol-boron trichloride-pyridine systems. M. F. Lappert. Chem Soc J p667-73 F '53

Some disubstituted pyridines related to 2,6-lutidine. R. A. Barnes and H. M. Fales. Am Chem Soc J 75:3830-1 Ag 5 '53

Stability constants for some metal chelates of pyridine-2-azo-*p*-dimethylaniline. I. M. Klotz and W.-C. Loh Ming. bibliog Am Chem Soc J 75:4159-62 S 5 '53

Synthesis of 2,2′- and 4,4′-polymethylenebipyridines. L. M. Jampolsky and others. bibliog Am Chem Soc J 74:5222-4 O 20 '52

Synthetic pyridine grows up. Chem W 72:30+ Ja 31 '53

System pyridine-pyrrole and hydrogen bonding. R. H. Linnell. bibliog J Chem Phys 21:179-80 Ja '53

Theoretical considerations concerning Hammett's equation; σ-values for pyridine and other aza-substituted hydrocarbons. H. H. Jaffé. J Chem Phys 20:1554-5 O '52

Thieno[3,2-b]pyridine; the preparation and properties of an S-isosteric 8-hydroxyquinoline. J. T. Sheehan and G. J. Leitner. bibliog Am Chem Soc J 74:5501-3 N 5 '52

Thieno[3,2-b]pyridine; the preparation of some dialkylaminoalkyl derivatives of an S-isosteric 8-aminoquinoline. J. T. Sheehan. bibliog Am Chem Soc J 74:5504-5 N 5 '52

Vibrational spectra of pyridine and pyridine-d_5. L. Corrsin and others. bibliog J Chem Phys 21:1170-6 Jl '53

See also

Alkyl pyridine picrates

Analysis

Analysis of pyridine bases from coal tar by infra-red absorption spectroscopy. A. B. Densham, D. J. Langston and G. Gough. Chem Soc J p2433-5 Je '52

Determination of pyridine and pyridine-base compounds in river water and industrial wastes. R. C. Kroner, M. B. Ettinger and W. A. Moore. bibliog Anal Chem 24:1877-81 D '52

Oxygen and nitrogen compounds in shale-oil naphtha. R. A. Van Meter and others. bibliog Anal Chem 24:1758-63 N '52

PYRIDINE compounds

Complex ions of zinc and pyridine. C. J. Nyman. bibliog Am Chem Soc J 75:3575-6 Jl 20 '53

New pyridine complexes of tellurium tetrafluoride. E. E. Aynsley and G. Hetherington. Chem Soc J p2802-3 S '53

PYRIDINIUM bromides

Antitubercular studies; derivatives of 1-(4-nitrophenacyl)-4-alkylpyridium bromides. P. Truitt, J. R. Buttram and R. Herd. Am Chem Soc J 74:5448-9 N 5 '52

Reductions of 1-(4-nitrophenacyl)-4-(1-hexyl)-pyridinium bromide. P. Truitt, B. Hall and B. Arnwine. Am Chem Soc J 74:4552-4 S 20 '52

PYRIDINIUM chloride

Some reactions of cinnamoylpyridinium chloride. H. E. Baumgarten. bibliog Am Chem Soc J 75:1239-40 Mr 5 '53

PYRIDINIUM sulfates

Pyridinium sulfates derived from cholesterol and lanostadienol. M. J. Birchenough and H. Burton. Chem Soc J p2443-4 Je '52

PYRIDONE

Quinolizinium compounds by cyclization of pyridones from methyl coumalate and β-phenylethylamines. R. H. Wiley, N. R. Smith and L. H. Knabeschuh. bibliog Am Chem Soc J 75:4482-4 S 20 '53

Structure of the 2-pyridone and α-bromoacrylic acid adduct and its derivatives. R. Adams and I. J. Pachter. bibliog Am Chem Soc J 74:4906-9 O 5 '52

PYRIDOXAL

Competitive action of isonicotinic acid hydrazide and pyridoxal in the amino acid decarboxylation of escherichia coli. M. Yoneda and N. Asano. bibliog Science 117:277-9 Mr 13 '53

Reversible catalytic cleavage of hydroxyamino acids by pyridoxal and metal salts. D. E. Metzler, J. B. Longenecker and E. E. Snell. bibliog Am Chem Soc J 75:2786-7 Je 5 '53

PYRIDOXAMINE

Microbiological activity of pyridoxylamines. J. C. Rabinowitz and E. E. Snell. Am Chem Soc J 75:998-9 F 20 '53

PYRIDOXINE

Synthesis of analogues of pyridoxine. Mrs H. Davoll and F. B. Kipping. Chem Soc J p 1395-8 My '53

Synthetical experiments in the B group of vitamins; a synthesis of pyridoxine. A. Cohen, J. W. Haworth and E. G. Hughes. Chem Soc J p4374-83 N '52

Synthetical experiments in the B group of vitamins; novel derivatives of pyridoxine. A. Cohen and E. G. Hughes. Chem Soc J p4384-6 N '52

PYRIDOXINE, Analogs of

Synthetical experiments in the B group of vitamins; synthesis of the pyridoxine analogue, 2-benzyl-3-hydroxy-4 : 5-bishydroxymethylpyridine. A. Cohen and J. A. Silk. Chem Soc J p4386-90 N '52

PYRIDYL compounds

Optically active forms of 1-methyl-2-2′-pyridylethylamine. N. B. Chapman and J. F. A. Williams. Chem Soc J p2797-9 S '53

Some pyridylhydantoins. P. C. Teague, A. R. Ballentine and G. L. Rushton. bibliog Am Chem Soc J 75:3429-30 Jl 20 '53

Use of sodamide in preparation of 2- and 3-pyridylmethylcarbinols. A. J. Nunn and K. Schofield. Chem Soc J p716-17 F '53

PYRIMIDINE

Adsorption by pyrimidines of plane polarized ultraviolet light. L. E. Lyons. bibliog J Chem Phys 20:1814 N '52

2-Cyanoamino-4 : 6-dimethylpyrimidine and complexes formed by pyrimidines with urea and related compounds. S. Birtwell. Chem Soc J p 1725-30 Je '53

Glyoxalinopyrimidines; the cyclisation of some 4-2′-chloroethylaminopyrimidines. G. R. Ramage and G. Trappe. Chem Soc J p4410-16 N '52

Inhibition of tobacco mosaic virus biosynthesis by 2-thiopyrimidines. F. L. Mercer and others. bibliog Science 117:558-9 My 22 '53

PYRIMIDINE—*Continued*

Nucleotides; pyrimidine deoxyribonucleoside diphosphates. C. A. Dekker, A. M. Michelson and A. R. Todd. Chem Soc J p947-51 Mr '53

Preparation and characterization by alkaline methanolysis of 5,5-diethyl-4-(tetraacetyl-β-D-glucosyloxy)-2,6(1,5)-pyrimidinedione. J. A. Snyder and K. P. Link. bibliog Am Chem Soc J 75:1881-3 Ap 20 '53

Pyrimidine. N. Whittaker. Chem Soc J p 1646 My '53

Pyrimidines; experiments on the synthesis of pyrimidine and 4 : 6-dimethylpyrimidine. M. P. V. Boarland, J. F. W. McOmie and R. N. Timms. Chem Soc J p4691-5 D '52

Pyrimidines; the synthesis of 5-amino-4-hydroxypyrimidine, a new isomer of cytosine. M. P. V. Boarland and J. F. W. McOmie. Chem Soc J p4942-5 D '52

Pyrimidines; the ultra-violet absorption spectra of some substituted pyrimidines. M. P. V. Boarland and J. F. W. McOmie. Chem Soc J p3716-28 O '52

2-Pyrimidinethiols. R. A. Mathes. Am Chem Soc J 75:1747-8 Ap 5 '53

Reactions of orthoesters with ureas; a new synthesis of pyrimidines. C. W. Whitehead. bibliog Am Chem Soc J 75:671-5 F 5 '53

Simple pyrimidines; spectroscopic studies. D. J. Brown and L. N. Short. Chem Soc J p331-7 Ja '53

Some substituted 3,4-dihydropyrido[2,3-d]-pyrimidines. P. J. Vanderhorst and C. S. Hamilton. bibliog Am Chem Soc J 75:656-7 F 5 '53

Studies on condensed pyrimidine systems; some 8-alkyl-7-pteridones. G. E. Elion and G. H. Hitchings. bibliog Am Chem Soc J 75:4311-14 S 5 '53

Studies on condensed pyrimidine systems; some 1,3-oxazolo(5,4-d)pyrimidines. E. A. Falco and others. bibliog Am Chem Soc J 74:4897-902 O 5 '52

Synthesis of potential antibacterial agents; a pyrimidine analogue of chaulmoogric acid. T. D. Heyes and J. C. Roberts. Chem Soc J p4935-7 D '52

See also

Diaminopyrimidine

PYRIMIDONE

Ultraviolet spectra and structures of the pyrido[1,2-a]pyrimidones. R. Adams and I. J. Pachter. bibliog Am Chem Soc J 74:5491-7 N 5 '52

PYRITE

Adsorption of calcium and sodium on pyrite. A. M. Gaudin and W. D. Charles. bibliog Min Eng 5:Trans 195-200 F '53

PYRITES

Efficiency of a pyrites roaster; abstract. L. Broman. diag Paper Ind 35:252-3 My '53

Pyrites roasting in Nichols-Freeman roaster; abstract. L. Brown. Paper Tr J 136:18 Mr 27 '53

Sulphur and pyrites in Canada; abstract. T. H. Jones. Pulp & Pa of Can 53:108 D '52

PYROGALLOL

ortho-Hydroxylation of phenols; derivatives of pyrogallol. J. D. Loudon and J. A. Scott. Chem Soc J p269-73 Ja '53

PYROLYSIS

Action of heat on S-crotylthiosalicyclic acid and related compounds. J. C. Petropoulos, M. A. McCall and D. S. Tarbell. bibliog Am Chem Soc J 75:1130-4 Mr 5 '53

Allylbenzene compounds; pyrolysis of methyl 2-allyloxy-3 : 4-dimethoxybenzoate. M. Michael, D. E. White and M. C. Woods. Chem Soc J p4589-90 D '52

Azidocarbonyl compounds; the preparation and pyrolysis of certain ortho-substituted phenacyl azides. J. H. Boyer and D. Straw. bibliog Am Chem Soc J 75:2683-4 Je 5 '53

Azidocarbonyl compounds; the pyrolysis of α-azidocarbonyl compounds. J. H. Boyer and D. Straw. bibliog Am Chem Soc J 75:1642-4 Ap 5 '53

Behavior of nylon Oxford cloth 41 on pyrolysis. T. Hasselstrom and others. bibliog Textile Res J 22:742-8 N '52

Correlating ethane pyrolysis data. R. A. Carpenter and F. C. Fowler. bibliog Pet Refiner 32:153-4 Ap '53

Fractionation of the carbon isotopes in decarboxylation reactions; the mechanism of the pyrolysis of barium adipate. J. Bigeleisen, A. A. Bothner-By and L. Friedman. bibliog Am Chem Soc J 75:2908-10 Je 20 '53

Low temperature pyrolysis of boron trifluoride-Mannich base complexes; 2-nitro-1-alkenes. W. D. Emmons and others. Am Chem Soc J 75:1993-4 Ap 20 '53

Mechanism of acetone pyrolysis. J. R. McNesby and others. J Chem Phys 21:956 My '53

Pyrogenetic formation of ketones. R. I. Reed. bibliog J Chem Phys 21:377-8 F '53

Pyrolyses of the salts of the perfluoro carboxylic acids. J. D. LaZerte and others. bibliog Am Chem Soc J 75:4525-8 S 20 '53

Pyrolysis of aryl glycolic acids; the thermochromic product derived from anisilic acid. H. H. Wasserman, T. Liu and E. R. Wasserman. bibliog Am Chem Soc J 75:2056-8 My 5 '53

Pyrolysis of cadmium dimethyl. C. A. Heller, jr. and H. A. Taylor. bibliog J Phys Chem 57:226-9 F '53

Pyrolysis of poly-(*sec.*-butyl α-chloroacrylate). J. W. C. Crawford and D. Plant. Chem Soc J p4492-5 N '52

Pyrolysis of propane and butanes at elevated pressure. H. J. Hepp and F. E. Frey. bibliog diag Ind & Eng Chem 45:410-15 F '53

Pyrolysis of the addition product of diphenyldiazomethane and 1,4-naphthoquinone. A. R. Bader and M. G. Ettlinger. bibliog Am Chem Soc J 75:730-4 F 5 '53

Researches in the menthone series; pyrolysis of (—)-menthyl acetate. N. L. McNiven and J. Read. Chem Soc J p2067-9 Je '52

Stereospecificity in thermal elimination reactions; the pyrolysis of (—)-menthyl benzoate. D. H. R. Barton, A. J. Head and R. J. Williams. diag Chem Soc J p 1715-19 Je '53

Thermochemistry and pyrolysis of bishydroxymethyl peroxide. A. D. Jenkins and D. W. G. Style. Chem Soc J p2337-40 Ag '53

PYROMETERS and pyrometry

Hand pyrometers provide fast, accurate temperature checks. J. R. Thrower, jr. il Mill & Factory 53:96-9 O '53

Log pyrometer readings and end Diesel mysteries. C. M. Jones. il diags Power 97:118-19 Je '53

Reproducibility of electronic potentiometer pyrometers. R. H. Munch. Ind & Eng Chem 44:sup77A-8A+ D '52

Simplified brightness temperature pyrometer using photoconductive cell. E. C. Pyatt. diag J Sci Instr 29:414-15 D '52

See also

Pyrometric cones

Temperature—Measurement

Thermocouples

PYROMETRIC cones

Comparison of gas-fired pyrometric cone equivalent furnaces. H. F. Smalley and R. B. Sosman. bibliog il diags Am Cer Soc Bul 32:5-11 Ja 15 '53

PYRONE

2-Hydroxymethyl-5-hydroxy-6-acetyl-4-pyrone. L. L. Woods. Am Chem Soc J 75:3608-9 Jl 20 '53

2-Pyrones; new derivatives of isodehydroacetic acid. R. H. Wiley and others. bibliog Am Chem Soc J 75:3715-17 Ag 5 '53

PYROPHOSPHATASES

Lack of effect of 2-desoxy-D-glucose on rat liver adenosinetriphosphatase and pyrophosphatase. M. H. Ross and J. G. Archer. Franklin Inst J 255:161-2 F '53

PYROPHOSPHATES

Coenzyme function of thiamine pyrophosphate in pentose phosphate metabolism. B. L. Horecker and P. Z. Smyrniotis. bibliog Am Chem Soc J 75:1009-10 F 20 '53

Studies on phosphorylation; the reaction between carbodi-imides and acid esters of phosphoric acid; a new method for the preparation of pyrophosphates. H. G. Khorana and A. R. Todd. Chem Soc J p2257-60 Ag '53

PYROPHOSPHATES—*Continued*
Thiamine pyrophosphate, a coenzyme of transketolase. E. Racker, G. de la Haba and I. G. Leder. Am Chem Soc J 75:1010-11 F 20 '53

PYROPHOSPHORUS acid
Tetraethyl pyrophosphite as a reagent for peptide syntheses. G. W. Anderson, J. Blodinger and A. D. Welcher. bibliog Am Chem Soc J 74:5309-12 N 5 '52

PYROPHYLLITE
Pyrophyllite in refractory enamels. G. J. Bishop, 3d. il Am Cer Soc Bul 31:493-6 D 15 '52

PYROSULFURIC acid
Vapour pressure of the system sulphuric acid-disulphuric acid. J. C. D. Brand and A. Rutherford. diag Chem Soc J p3916-22 O '52

PYROTECHNICS. See Fireworks

PYROXENES
Orthopyroxenes of the Bushveld type, ion substitutions and changes in unit cell dimensions. H. H. Hess. bibliog Am J Sci Bowen vol p 173-87 '52

PYRRHOTITE
Electrolytic process with promise; pure malleable iron from waste pyrrhotite; with cost data. E. Konrad. il diag Chem Eng 60:189-92 Ap '53
Sulphur process by Mines branch, Ottawa uses iron sulphide sources. A. F. G. Cadenhead. Can Chem Process 37:106 S '53

PYRROLE
Anomalous displacements in the pyrrole series. A. H. Corwin and G. G. Kleinspehn. bibliog Am Chem Soc J 75:2089-95 My 5 '53
Complexity of the N-H stretching vibration band in pyrrole and indole. N. Fuson and M.-L. Josien. J Chem Phys 20:1043 Je '52
Dipole moment of pyrrole measured in the dissolved and in the gaseous state. A. D. Buckingham, B. Harris and R. J. W. Le Fèvre. diag Chem Soc J p 1626-7 My '53
Evidence for a completely planar structure of pyrrole from its microwave spectrum. W. S. Wilcox and J. H. Goldstein. J Chem Phys 20:1656-7 O '52
General route to ββ′-substituted pyrrole intermediates for porphyrin synthesis. S. F. MacDonald. Chem Soc J p4176-84 N '52
Infrared spectrum of pyrrole and the hydrogen bond. P. Tuomikoski. bibliog J Chem Phys 20:1054-5 Je '52
Reaction of propiolactone with indoles and pyrrole. J. Harley-Mason. Chem Soc J p2433 Je '52
Studies in the azole series; the interaction of α-amino-nitriles and alky or aryl *iso*cyanates. A. H. Cook and G. D. Hunter. Chem Soc J p3789-96 O '52
Syntheses of pyrroles, a porphyrin, and the maleinimide related to the uroporphyrins. S. F. MacDonald. Chem Soc J p4184-90 N '52
System pyridine-pyrrole and hydrogen bonding. R. H. Linnell. bibliog J Chem Phys 21:179-80 Ja '53
Ultra-violet absorption spectra of some pyrroles. G. H. Cookson. Chem Soc J p2789-95 S '53

PYRROLECARBOXYLIC acid
Vapour pressure and lattice energy of hydrogen-bonded crystals; 2-thenoic, 2-furoic, and pyrrole-2-carboxylic acids. R. S. Bradley and A. D. Care. diag Chem Soc J p 1688-90 Je '53

PYRROLE ethylamine
β-2-Pyrrole-ethylamine. W. Herz. bibliog Am Chem Soc J 75:483 Ja 20 '53

PYRROLIDINE
Aryl-2-halogenoalkylamines; the preparation of some derivatives of 1-aryl-3 : 4-dihalogenopyrrolidines and 1 : 4-bisarylamino-2 : 3-dihalogenobutanes. J. J. Roberts and W. C. J. Ross. Chem Soc J p4288-95 N '52
Compounds containing the pyrrolidine ring; analogs of sympathomimetic amines. R. V. Heinzelman and B. D. Aspergren. bibliog Am Chem Soc J 75:3409-13 Jl 20 '53
Hypotensive agents; dialkylaminoalkyl pyrrolidine derivatives. L. M. Rice, C. H. Grogan and E. E. Reid. Am Chem Soc J 75:2261-2 My 5 '53
Synthesis of 2-imino-3-phenyl- and -3 : 3-diphenylpyrrolidines. F. E. King, K. G. Latham and M. W. Partridge. Chem Soc J p4268-71 N '52
Synthetic analgesics and related compounds; 2-imino-3 : 3-diphenylpyrrolidines. W. Wilson. Chem Soc J p3524-9 S '52

PYRROLIDINETRIONE
Structure of pyrrolidinetriones and oxazolidinediones. G. S. Skinner and C. B. Miller, jr. bibliog Am Chem Soc J 75:977-9 F 20 '53

PYRROLIDONE
Condensation product of pyrrolidonecarboxylic acid and formaldehyde. J. B. Stark and A. E. Goodban. Am Chem Soc J 74:4966-7 O 5 '52
See also
Vinyl pyrrolidone

PYRROQUINOLONE
Conversion of tetrahydroharman alkaloids into derivatives of linear pyrroquinolones. B. Witkop and S. Goodwin. bibliog Am Chem Soc J 75:3371-6 Jl 20 '53

PYRUVATES
Incorporation of labeled carbon dioxide into pyruvate and α-ketoglutarate. M. Goldberg and D. R. Sanadi. Am Chem Soc J 74:4972-3 O 5 '52
Mechanism of enzymatic oxidative decarboxylation of pyruvate. L. J. Reed and B. G. DeBusk. bibliog Am Chem Soc J 75:1261-2 Mr 5 '53

PYRYLIUM compounds
Formation and kinetics of formation of substituted mercaptopyrylium salts. F. J. Ozog, V. Comte and L. C. King. bibliog Am Chem Soc J 74:6225-8 D 20 '52

Q

Q meter. See Radio instruments

QUADRUPOLE moment. See Electric moment

QUAILS
Role of darkness in sexual activity of the quail. C. M. Kirkpatrick and A. C. Leopold. bibliog Science 116:280-1 S 12 '52; Discussion. J. Hammond, jr. 117:389-90; Reply. 390-1 Ap 10 '53

QUALITY control. See Carpet factories—Quality control; Chemical plants—Quality control; Factory management—Quality control; Glass factories—Quality control; Paper board mills—Quality control; Paper mills—Quality control; Petroleum refineries—Quality control; Steel works—Quality control

QUALITY of products
Does best product get most sales? J. A. Kiss. Sales Management 69:58 N 1 '52
How to tell quality in Teflon. I. D. Press. il Materials & Methods 38:64-6 Jl '53
Natural rubber quality. W. J. Sears. India Rubber World 127:99 O '52
Quality control in component manufacturing. Tele-Tech 12:112+ Ap '53
See also
Advertising copy—Quality appeal
Factory management—Quality control

QUANTITIES (in production)
Another quick way to compute economic lot sizes. S. Langner. Factory Management 111:123 Je '53
Economic lot-size and inventory control. W. V. Clark, jr. and W. E. Ritchie. N A C A Bul 34:772-82 F '53
Economic lot sizes; reference book sheet. V. G. Hotchkiss. Am Mach 97:125, 127 Ag 31 '53
Faster way to figure economic lot sizes. R. Galloway. il Factory Management 111:145 Mr '53

QUANTITY-limit rule. See Tire industry and trade—Regulation

QUANTUM electrodynamics
Current density in quantum electrodynamics. H. C. Corben. Phys R 88:677 N 1 '52
Fourth-order radiative corrections to atomic energy levels. J. Weneser and others. bibliog diags Phys R 91:1257-62 S 1 '53

QUANTUM electrodynamics—*Continued*

Nonperturbation approach to quantum electrodynamics. S. F. Edwards. bibliog Phys R 90:284-91 Ap 15 '53

Relativistic configuration space formulation of the multi-electron problem. M. Günther. Phys R 88:1411-21 D 15 '52

Some consequences of invariance under charge conjugation. L. Wolfenstein and D. G. Ravenhall. Phys R 88:279-82 O 15 '52

Space, field, and ether in contemporary physics. A. W. Stern. bibliog Science 116:493-6 N 7 '52

Theory of quantized fields. J. Schwinger. bibliog Phys R 82:914-27; 91:713-40 Je 15 '51, Ag 1 '53

Transistors; theory and application; energy levels in transistor electronics. A. Coblenz and H. L. Owens. diag Electronics 26:138-41 Ap '53

QUANTUM theory

Absolute quantum yields of the fluorescence of chlorophyll solutions. L. S. Forster and R. Livingston. bibliog diag J Chem Phys 20:1315-20 Ag '52

Application of perturbation theory to the *F* and *G* matrix method of calculating molecular vibration frequencies. P. W. Higgs. J Chem Phys 21:1131-4 Jl '53

Bohm's interpretation of the quantum theory in terms of hidden variables. J. B. Keller. Phys R 89:1040-1 Mr 1 '53

Bound states and the interaction representation. S. T. Ma. Phys R 88:1211 D 1 '52

Casual interpretation of quantum mechanics. S. T. Epstein. Phys R 89:319; 91:985 Ja 1, Ag 15 '53; Reply. D. Bohm. 89:319-20 Ja 1 '53

Classical and quantum field theories in the Lagrangian formalism. P. G. Bergmann and R. Schiller. bibliog Phys R 89:4-16 Ja 1 '53

Conservation of quanta for nonlocal fields. C. Gregory. Phys R 89:1199 Mr 15 '53

Construction of potentials in quantum field theory. K. A. Brueckner and K. M. Watson. bibliog Phys R 90:699-708 My 15 '53; Reply. A. Klein. 91:1285 S 1 '53

Energy levels of light nuclei. A. Ajzenberg and T. Lauritsen. diags Rs Mod Phys 24:321-402 bibliog(p396-402) O '52

Field theory. F. J. Dyson. il diag Sci Am 188:57-62+ Ap '53

Generalized method of field quantization. H. S. Green. bibliog Phys R 90:270-3 Ap 15 '53

Interaction between classical electron and quantized electromagnetic field. I. R. Senitzky. bibliog Phys R 91:1309-11 S 15 '53

Number of Feynman diagrams. R. J. Riddell, jr. bibliog Phys R 91:1243-8 S 1 '53

Possible primary quantum conversion act of photosynthesis. M. Calvin and J. A. Barltrop. bibliog Am Chem Soc J 74:6153-4 D 5 '52

Primitive quantization in the relativistic two-body problem. J. L. Synge. bibliog Phys R 89:467-71 Ja 15 '53

Proof that probability density approaches ψ^2 in causal interpretation of the quantum theory. D. Bohm. Phys R 89:458-66 Ja 15 '53

Quantum corrections to classical nonlinear meson theory. D. R. Yennie. bibliog diags Phys R 88:527-36 N 1 '52

Quantum field theory in the light of distribution analysis. W. Güttinger. bibliog Phys R 89:1004-19 Mr 1 '53

Quantum theory of a damped electrical oscillator and noise. J. Weber. bibliog diags Phys R 90:977-82 Je 1 '53

Quantum theory of spectral line broadening. S. Bloom and H. Margenau. bibliog Phys R 90:791-4 Je 1 '53

Quantum theory of the polarizability of an idealized crystal. D. L. Dexter and W. R. Heller. bibliog Phys R 91:273-8 Jl 15 '53

Relativistic statistical thermodynamics. A. E. Scheidegger and R. V. Krotkov. bibliog Phys R 89:1096-100 Mr 1 '53

See also

Photoelectric effect
Relativity (physics)
Statistical mechanics
Thermodynamics
Wave mechanics

QUARANTINE

International sanitary regulations. K. Stowman. Pub Health Rep 67:972-6 O '52

QUARRIES and quarrying

How producers use millisecond delay blasting. B. Nordberg. il diags Rock Prod 56:134-46 Ja; 104-7+ F '53

Jet piercing blast holes in granite; Consolidated quarries corp. J. R. Thoenen and G. D. Germain. il Rock Prod 56:132-5 Ap '53

Produce chemical stone and highway materials as by-product; McDonough bros., inc. W. B. Lenhart. flow sheet il Rock Prod 56:88-9+ S '53

Sink deep hole at low cost with rotary drill; Virginia limestone corp. D. O. Duncan. il Rock Prod 56:87-8+ F '53

Sound business practices build profitable agstone sales; Riddle quarries. T. Brown. il Rock Prod 55:70-1+ N '52

Stripping overburden to depth of 120 ft.; Otis quarry of Concrete materials and construction co. il Rock Prod 56:112 S '53

Three-in-one tunnel blast in a Wisconsin quarry. J. C. Richards, jr. il plan Explosives Eng 30:156-9 S '52

Equipment

Chalk crushing and screening plant. il Engineer 195:115 Ja 16 '53; diags Engineering 175:94-5 Ja 16 '53; Elec R (Lond) 152:619-20 Mr 20 '53

Experimental stone-crushing plant; Underwood quarry. F. G. Taylor. flow diag il Engineering 176:281-3 Ag 28 '53

Quarry maintenance; Davidson granite co. J. D. Davidson. il Welding J 32:992-6 O '53

Safety measures

Bureau of mines safety awards. Rock Prod 56:218+ Ag '53

Fifteen years without a lost-time accident; National gypsum co., National City, Mich. quarry. B. Nordberg. il Rock Prod 56:106+ S '53

Miners and quarrymen honored at safety award ceremonies. Explosives Eng 31:13-17 Ja '53

National safety council 40th annual congress, Cement and quarry section, Chicago, Oct. 20-24; with abstracts of papers. Rock Prod 55:109-11 D '52

QUARTERLY review of biology

Editorial prerogatives. K. H. L. Key and others. Science 116:693-5; 117:484-6 D 19 '52, My 1 '53

QUARTZ

Comparison of gamma-ray reflections from the (550) and (310) planes of quartz. H. C. Hoyt and others. Phys R 90:169-70 Ap 1 '53

Elastic wave propagation in solid media. R. A. Mapleton. bibliog diags J Ap Phys 23:1346-54 D '52

Electrokinetic relations in the quartz-acetone system. P. B. Lorenz. bibliog diags J Phys Chem 57:430-4 Ap '53

Formation and growth of quartz in sodium fluoride solutions under isothermal conditions. J. F. Corwin and others. bibliog Am Chem Soc J 75:1581-3 Ap 5 '53

Hydrothermal synthesis. G. W. Morey. bibliog diags Am Cer Soc J 36:279-85 S 1 '53

Hydrothermal synthesis of quartz crystals. A. C. Walker. bibliog il diags Am Cer Soc J 36:250-6 Ag 1 '53

Improvements in design and construction of quartz helix balances. F. M. Ernsberger and C. M. Drew. bibliog il R Sci Instr 24:117-21 F '53

Japanese twins of quartz. S. Kozu. bibliog il diags Am J Sci Bowen vol p281-92 '52

Kinetics of reaction between ammonia and oxygen in a quartz vessel. H. Wise and M. F. Frech. J Chem Phys 21:948-9 My '53

Lattice expansion of quartz due to fast neutron bombardment. M. Wittels. il Phys R 89:656-7 F 1 '53

Loading of quartz oscillator plates. L. T. Sogn and P. A. Simpson. diags J Res Nat Bur Stand 49:325-30 N '52

Mechanism of the hydrothermal transformation of silica glass to quartz under isothermal conditions. J. F. Corwin and others. bibliog Am Chem Soc J 75:3933-4 Ag 20 '53

QUARTZ—*Continued*

Permeation of water and isoöctane through plugs of microscopic particles of crushed quartz. R. T. Johansen and others. bibliog diag J Phys Chem 57:40-5 Ja '53

Properties of synthetic quartz crystals and their growing technique. D. R. Hale. diag Electronics 26:238+ Ap '53

Reference data for orienting quartz plates by X-ray diffraction. C. Barclay and L. T. Sogn. diags U S Nat Bur Stand Circ 543: 1-7; pa 15c Supt. of doc. '53

Significance of variation in the high-low inversion of quartz. M. L. Keith and O. F. Tuttle. bibliog pl diags Am J Sci Bowen vol p203-80 '52

Study of the structure of quartz, cristobalite, and vitreous silica by reflection in infrared. I. Šimon and H. O. McMahon. bibliog diags J Chem Phys 21:23-30 Ja '53

Thermoluminescence of quartz and fused quartz colored by X-ray irradiation. R. Yokota. Phys R 91:1013-14 Ag 15 '53

Twinning frequency in feldspar phenocrysts from a quartz latite sill at Sierra Blanca, Tex. E. Ingerson. il maps Am J Sci Bowen vol p 189-202 '52

See also

Crystals, Piezoelectric

Silica

Analysis

See Silica—Analysis

QUARTZ, Fused. See Silica, Fused

QUATERNARY ammonium compounds. See Ammonium compounds

QUATERNARY period. See Geology, Stratigraphic—Quaternary

QUEBEC (province)

Quebec. J. H. Fountain. Special Lib 44:145 Ap '53

Quebec is rediscovered: new wealth builds a boom. A. G. Mezerik. il map Sales Management 70:60-2+ F 15 '53

See also

Gold mines and mining—Quebec (province)

Hydroelectric plants—Quebec (province)

Iron mines and mining—Quebec (province)

Iron ores—Quebec (province)

Mines and mineral resources—Quebec (province)

Roads—Quebec (province)

Industries and resources

Essen on the Arctic? A. F. G. Cadenhead. map Can Chem Process 37:14+ Mr '53

Quebec; clue to Canada's future! C. S. Eaton. Comm & Fin Chr 176:2228 D 11 '52

Sanitary affairs

Water and sewerage works in Quebec. T. J. Lafreniere. Munic Util 91:21+ Mr '53

QUEBEC, north shore and Labrador railway

Unique communication system. Can Min J 74:68 Je '53

QUEBRACHITOL

Structure of (+)-bornesitol. A. B. Foster and M. Stacey. bibliog Chem & Ind p279 Mr 21 '53

QUENCHING

Acceptors produced in germanium by quenching from high temperatures. C. Goldberg. diag Phys R 88:920-4 N 15 '52

Effect of quench ageing on strain ageing in iron. A. H. Cottrell and G. M. Leak. bibliog Iron & Steel Inst J 172:301-6 N '52; Discussion. 174:344-7 Ag '53

Gleason rolling quench machine provides automatic straightening. il Am Mach 96:188 N 24 '52; Mach 59:210-11 D '52; Machine Design 25:140 Ja '53

Metal treating unit provides automatic draw-quenching. il Materials & Methods 38:184+ O '53

Quench-ageing of iron. A. L. Tsou and others. bibliog 2pls Iron & Steel Inst J 172:163-71 O '52; Excerpts. Metal Prog 63:198+ Je '53; Discussion. Iron & Steel Inst J 174:344-7 Ag '53

Water in molten salt increases quenching power lowers operating temperature. E. N. Case and A. M. White. il Metal Prog 64:122-4 O '53

See also

Steel, Quenching of

QUENCHING of fluorescence. See Fluorescence—Quenching

QUERCETIN

3,4-Dihydroxyphenylacetic acid; a metabolite of quercetin. C. W. Murray and others. Am Chem Soc J 75:3289 Jl 5 '53

Isolation and identification of quercetin and isoquercitrin from black currants (ribes nigrum). B. L. Williams, C. H. Ice and S. H. Wender. Am Chem Soc J 74:4566-7 S 20 '52

Isolation and identification of quercetin and some quercetin glycosides from plums (prunus salicina). B. L. Williams and S. H. Wender. Am Chem Soc J 75:4363-4 S 5 '53

Analysis

Isolation and identification of kaempferol and quercetin from strawberries (fragaria chiloensis). B. L. Williams and S. H. Wender. bibliog Am Chem Soc J 74:5919-20 D 5 '52

Quercetin and its glycosides in leaves of vaccinium myrtillus. C. H. Ice and S. H. Wender. bibliog Am Chem Soc J 75:50-2 Ja 5 '53

QUESTIONNAIRES

Cover letter. N. B. Sigband. J Marketing 17: 424-8 Ap '53

Order bias in a mail survey; credit rating by occupations. R. Ferber. J Marketing 17: 171-8 O '52

Southern Pacific Shasta Daylight quiz reveals why passengers used trains. il Ry Age 135: 88-90 Jl 13 '53

Ten ways to improve returns on mailed questionnaires. K. M. Davee. il Ind Marketing 37:81+ O '52

See also

Business—Reports to government

QUICK (periodical)

What makes Quick click? il Sales Management 70:117-18+ Ja 15 '53

QUICKLIME. See Lime

QUILL, Michael Joseph, 1905-

New York's bus drivers get stalled. Fortune 47:78 Mr '53

QUILLERS. See Winding machines

QUINALDINE

Benzoylation of quinaldine oxide. I. J. Pachter. Am Chem Soc J 75:3026-7 Je 20 '53

ω-Halogenomethyl-pyridines, -quinolines, and -*iso*quinolines; the mechanism of halogenation of quinaldines. B. R. Brown and others. Chem Soc J p 1369-72 My '53

QUINALDINOYL chloride

Quinaldinoyl chloride. D. L. Hammick and A. M. Roe. Chem Soc J p4545-6 N '52

QUINAZOLINE

Quinazolines; a study of the infrared spectra of certain quinazoline derivatives. H. Culbertson, J. C. Decius and B. E. Christensen. bibliog Am Chem Soc J 74:4834-8 O 5 '52

QUINN, Alfred O.

Photogrammetry society elects head. por Eng N 150:58 Ja 29 '53

QUINOL

New twin micro-calorimeter, and the heat of transformation of α- into β-quinol. D. F. Evans and R. E. Richards. diag Chem Soc J p3932-6 O '52

Retardation of benzaldehyde autoxidation; a kinetic study of the actions of 3 : 5 : 3′ : 5′-tetramethyl-4 : 4′-diphenoquinone and the corresponding quinol. J. R. Dunn, W. A. Waters and C. Wickham-Jones. Chem Soc J p2427-31 Je '52

QUINOLINE

Behavior of iodine species in pyridine and quinoline. J. Kleinberg and others. bibliog Am Chem Soc J 75:442-5 Ja 20 '53

Conversion of ortho-parahydrogen by cuprous acetate in quinoline. W. K. Wilmarth and M. K. Barsh. bibliog Am Chem Soc J 75: 2237-42 My 5 '53

QUINOLINE—*Continued*

Electric moments of some derivatives of cinnoline, pyridine and quinoline. M. T. Rogers and T. W. Campbell. bibliog Am Chem Soc J 75:1209-10 Mr 5 '53

Interaction of quinolines with aldehydes and ketones. F. Bell. Chem Soc J p348-9 Ja '53

Intermolecular carbon isotope effect in the decarboxylation of normal malonic acid in quinoline solution. P. E. Yankwich and R. L. Belford. bibliog Am Chem Soc J 75:4178-82 S 5 '53

Magnetic susceptibilities of hydrogenated pyridine and quinoline solutions of cupric and nickelous acetate and salicylaldehyde. W. K. Wilmarth, M. K. Barsh and S. S. Dharmatti. Am Chem Soc J 74:5035-7 O 20 '52

Polarographic reduction of pyridine, quinoline, and phenazine. R. C. Kaye and H. I. Stonehill. Chem Soc J p3240-3 Ag '52

2,2,4-Trimethyl-1,2-dihydroquinoline. D. Craig and E. C. Gregg, jr. Am Chem Soc J 75:2252 My 5 '53

QUINOLINIUM compounds

Sodium borohydride reduction of N-alkyl-3,4-dihydroisoquinolinium iodides. W. M. Whaley and C. N. Robinson. bibliog Am Chem Soc J 75:2008-9 Ap 20 '53

QUINOLINOL

Amebacidal agents; 5-acyl- and 5-alkyl-7-dialkylaminomethyl-8-quinolinols. W. H. Edgerton and J. H. Burckhalter. Am Chem Soc J 74:5209-10 O 20 '52

Chelating properties of 8-quinolinol Mannich bases. J. P. Phillips and Q. Fernando. bibliog Am Chem Soc J 75:3768-9 Ag 5 '53

Chemistry of thorium; some observations on the 8-quinolinol chelates of thorium. T. Moeller and M. V. Ramaniah. bibliog Am Chem Soc J 75:3946-9 Ag 20 '53

Distribution of 8-quinolinol between water and chloroform as a function of *p*H. T. Moeller and F. L. Pundsack. Am Chem Soc J 75:2258-9 My 5 '53

Indophenols of 8-quinolinols. J. P. Phillips, J. F. Emery and Q. Fernando. bibliog Am Chem Soc J 74:5542-4 N 5 '52

Quinolines; 8-(3-dimethylamino-1-methylpropylamino)-6-quinolinol and 8-(4-diethylamino-1-methylbutylamino)-6-quinolinol. E. A. Steck and W. Boehme. bibliog Am Chem Soc J 74:4511-12 S 20 '52

Reaction of aldehydes and aromatic amines with 8-quinolinol. J. P. Phillips, R. Keown and Q. Fernando. Am Chem Soc J 75:4306-7 S 5 '53

Spectrophotometric determination of aluminum in thorium; extraction of aluminum with 8-quinolinol in chloroform. D. W. Margerum, W. Sprain and C. V. Banks. bibliog Anal Chem 25:249-52 F '53

5-Thiocyano-8-quinolinol. Q. Fernando, J. F. Emery and J. P. Phillips. bibliog Am Chem Soc J 75:1983-5 Ap 20 '53

QUINOLIZIDINE compounds

Quinolizidine derivatives; a study of the reductive cyclization of some γ-(2-pyridyl)-butyronitriles. V. Boekelheide and others. bibliog Am Chem Soc J 75:3243-8 Jl 5 '53

QUINOLIZINIUM compounds

Quinolizinium compounds by cyclization of pyridones from methyl coumalate and β-phenylethylamines. R. H. Wiley, N. R. Smith and L. H. Knabeschuh. bibliog Am Chem Soc J 75:4482-4 S 20 '53

QUINONE

Experiments with derivatives of quinone imides. A. Mustafa and M. Kamel. bibliog Am Chem Soc J 75:2939-41 Je 20 '53

Interaction of dienophiles with aromatic substances. L. J. Andrews and R. M. Keefer. bibliog Am Chem Soc J 75:3776-9 Ag 5 '53

Quinone-hydroquinone exchange reactions; duroquinone and durohydroquinone exchange in buffered methanol solution. A. A. Bothner-By. bibliog diag Am Chem Soc J 75:728-30 F 5 '53

Quinone imides; addition of active methylene compounds to 1,4-naphthoquinonedibenzenesulfonimide. R. Adams and W. Moje. bibliog Am Chem Soc J 74:5557-60 N 20 '52

Quinone imides; addition of active methylene compounds to *p*-quinonedibenzenesulfonimide and its derivatives. R. Adams and D. C. Blomstrom. bibliog Am Chem Soc J 75:3403-5 Jl 20 '53

Quinone imides; addition of hydrazoic acid and phenols to *p*-quinonedibenzenesulfonimide and its derivatives. R. Adams and D. C. Blomstrom. bibliog Am Chem Soc J 75:3405-8 Jl 20 '53

Quinone imides; addition of hydrogen cyanide to 1,4-naphthoquinonedibenzenesulfonamide. R. Adams and W. Moje. Am Chem Soc J 74:5562-3 N 20 '52

Quinone imides; addition of mercaptans to *p*-quinonedibenzenesulfonimide. R. Adams, E. F. Elslager and T. E. Young. bibliog Am Chem Soc J 75:663-6 F 5 '53

Quinone imides; addition reactions of *p*-quinonedibenzimide and related compounds. R. Adams and D. S. Acker. bibliog Am Chem Soc J 74:5872-6 D 5 '52

Quinone imides; addition reactions of substituted *p*-quinonedibenzenesulfonimides. R. Adams and T. E. Young. bibliog Am Chem Soc J 75:3235-9 Jl 5 '53

Quinone imides; additions to 1,4-naphthoquinonedibenzenesulfonimide. R. Adams and W. Moje. bibliog Am Chem Soc J 74:5560-2 N 20 '52

Quinone imides; adducts of *p*-quinonebis-(dimethylaminosulfonimides) and their hydrolysis products. R. Adams and P. R. Shafer. bibliog Am Chem Soc J 75:667-70 F 5 '53

Quinone imides; *o*-quinonemonoimides. R. Adams and J. M. Stewart. bibliog Am Chem Soc J 74:5876-80 D 5 '52

Quinone imides; the reaction of primary aromatic amines with 2,3,5,6-tetrachloro-*p*-quinonedibenzenesulfonimide. R. Adams and B. H. Braun. bibliog Am Chem Soc J 74:5869-71 D 5 '52

Quinones; the addition of mercapto-acids to benzoquinones and 1 : 4-naphthaquinone. A. Blackhall and R. H. Thomson. Chem Soc J p 1138-43 Ap '53

Reactions with *p*-quinone imides. A. Mustafa and M. Kamel. Science 117:234-5 F 27 '53

Roles of the amino and hydroxyl groups of collagen in its reactions with formaldehyde, tannic acid and quinone. R. W. Green. bibliog Am Chem Soc J 75:2729-32 Je 5 '53

QUINONES

Addition reactions of quinones; the reaction of cysteine and thiourea and its derivatives with some quinones. H. Burton and S. B. David. Chem Soc J p2193-6 Je '52

Addition reactions of quinones; the so-called uncatalysed addition of acetyl chloride to benzoquinone and tolu-2 : 5-quinone. H. Burton and P. F. G. Praill. Chem Soc J p2546-8 Jl '52

Electrochemical measurements in pyridine; the redox potentials of some quinones. A. K. Gupta. Chem Soc J p3479-83 S '52

Experiments with 1,2-benzophenazine-3,4-quinone; thermochromic effects based on lactam-lactim tautomerism. A. Schönberg, A. Mustafa and S. M. A. D. Zayed. bibliog Am Chem Soc J 75:4302-4 S 5 '53

Fermentation products of wheat germ; identification of methoxy- and 2 : 6-dimethoxy-*p*-benzoquinone; infra-red absorption of some quinones and 1 : 2-dicarbonyl compounds. D. J. Cosgrove and others. Chem Soc J p4821-3 D '52

Infrared spectroscopic study of the carbonyl stretching frequency in a group of *ortho* and *para* quinones. M. Josien and others. bibliog J Chem Phys 21:331-40 F '53

Metabolic degradation in the mouse of 1,2,5,6-dibenzanthracene-9,10-C^{14}; some quinone metabolites retaining the intact ring system. C. Heidelberger, H. I. Hadler and G. Wolf. bibliog Am Chem Soc J 75:1303-8 Mr 20 '53

Photochemical addition of benzaldehyde to quinones. R. F. Moore and W. A. Waters. Chem Soc J p238-40 Ja '53

Preparation of substituted quinones by a new oxidizing agent. A. G. Brook. Chem Soc J p5040-1 D '52

Properties and reactions of free alkyl radicals in solution; a study of the reactions of the 2-cyano-2-propyl radical with quinones. F. J. Lopez Aparicio and W. A. Waters. Chem Soc J p4666-74 D '52

Quinones; chloroalkylation. R. H. Thomson. Chem Soc J p 1196-9 Ap '53

QUINONES—*Continued*

Retardation of benzaldehyde autoxidation; a kinetic study of the actions of 3 : 5 : 3′ : 5′-tetramethyl-4 : 4′-diphenoquinone and the corresponding quinol. J. R. Dunn, W. A. Waters and C. Wickham-Jones. Chem Soc J p2427-31 Je '52

Retardation of benzaldehyde autoxidation; isolation of chain-termination products from 3 : 5 : 3′ : 5′-tetramethyl-4 : 4′-diphenoquinone. R. F. Moore and W. A. Waters. Chem Soc J p2432 Je '52

Some decompositions of triphenylphenylazomethane in presence of quinones. A. J. Betterton and W. A. Waters. Chem Soc J p329-31 Ja '53

Some extensions of the synthesis of hydroxyindoles from *p*-benzoquinones. R. J. S. Beer, H. F. Davenport and A. Robertson. Chem Soc J p 1262-4 Ap '53

Stability of semiquinones. N. S. Hush. J Chem Phys 20:1343-4 Ag '52

Studies in the diphenoquinone series. W. J. Detroit and H. Hart. bibliog Am Chem Soc J 74:5215-16 O 20 '52

QUINOXALINE

Quinoxaline *N*-oxides; oxides of *py*-substituted quinoxalines. J. K. Landquist and G. J. Stacey. Chem Soc J p2822-30 S '53

Quinoxaline *N*-oxides; photochemical decomposition of quinoxaline mono- and di-*N*-oxides. J. K. Landquist. Chem Soc J p2830-3 S '53

Quinoxaline *N*-oxides; the oxidation of quinoxaline and its *Bz*-substituted derivatives. J. K. Landquist. Chem Soc J p2816-21 S '53

Quinoxaline studies; synthesis of 2-hydroxy-3,5-dimethylquinoxaline and 2-hydroxy-3,8-dimethylquinoxaline. G. Kyryacos and H. P. Schultz. Am Chem Soc J 75:3597-8 Jl 20 '53

R

RH factor. See Blood groups

RABBITS

Infect Australian rabbits with myxoma virus. F. M. Burnet. Pub Health Rep 68:100-1 Ja '53

Snail intermediate host of the rabbit parasite hasstilesia tricolor (trematoda; brachylaemidae). W. B. Rowan. bibliog Science 117:559-60 My 22 '53

RABIES

Epidemiology of rabies; abstract. R. Fagan. Pub Health Rep 67:984-5 O '52

Hen's egg playing important role in fight against rabies. Franklin Inst J 254:353-4 O '52

Will vaccination of dogs control rabies? abstract. A. Zeissig. Pub Health Rep 67:985-6 O '52

RACAH coefficients. See Wave mechanics

RACE discrimination

Employment and education fair in science. J. F. Codington. Science 117:567-8 My 22 '53

No discrimination in premium rates because of color. East Underw 54:1 Je 5 '53

Rejection of life application because of race; State life fund of the state of Wisconsin. L. A. Burke. Spectator 161:81-3 My '53

See also

Discrimination in employment

Negroes—Employment

RACE problems

See also

South Africa—Race problems

RACEMIZATION

Dehydration and racemisation of *N*-acyl-L-aspartic acids by acetic anhydride. C. C. Barker. Chem Soc J p453-6 F '53

Mechanisms of racemization of camphene-$8\text{-}C^{14}$. J. D. Roberts and J. A. Yancey. bibliog Am Chem Soc J 75:3165-8 Jl 5 '53

Racemization in the camphene hydrochloride-isobornyl chloride rearrangement. W. R. Vaughan and R. Perry, jr. bibliog Am Chem Soc J 75:3168-72 Jl 5 '53

Racemization of an optically active olefin during catalytic hydrogenation. D. J. Cram. Am Chem Soc J 74:5518 N 5 '52

Racemization of $d(+)$-3-methylhexane. H. E. Heller. bibliog Am Chem Soc J 74:4858-61 O 5 '52

Racemizing effect of the phenyl substituent of optically active hydrogen 2-phenyl-2-butyl phthalate in methanolytic reaction. H. H. Zeiss. bibliog Am Chem Soc J 75:3154-5 Jl 5 '53

Reaction of alkanes with hydrogen and deuterium; racemization and exchange. R. L. Burwell, jr. and W. S. Briggs. bibliog Am Chem Soc J 74:5096-102 O 20 '52

Reductions with aluminium alkoxides; the kinetics of the racemization of optically active alkoxides by their corresponding ketones. L. M. Jackman and A. K. Macbeth. diag Chem Soc J p3252-60 Ag '52

Surface isomerisation; the surface-catalysed racemisation of 2-phenylbutane. A. G. Davies and G. A. H. Elton. Chem Soc J p3298-300 Ag '52

RACES of man

Bioserological methods of human classification. N. Lahovary. map Science 117:259-69 Mr 13 '53

RACING

See also

Airplane races

Automobile racing

RACKS

Custom-tailored racks cut damage to coated parts; Ryan aeronautical co. il Cer Ind 61:63 S '53

Easy-to-reach storage racks and trays for movement of auto radio tuner units. il Electronics 26:228+ Ja '53

Proper care of small parts saves money. J. E. Hyler. il Mill & Factory 52:100-4 Ap '53

Racking; prerequisite to good chemical finishing of aluminum. W. W. Moss and B. Jones. il Light Metal Age 10:16+ Ag; 16+ O '52

Unitized pipe rack quickly erected, easily transported. W. F. Rose. il diag Oil & Gas J 51:204+ S 29 '52

See also

Tool racks

RADAR

Applying pulse magnetrons to radar equipment. C. V. Litton and P. W. Crapuchettes. il Tele-Tech 12:60-2+ S '53 (to be cont)

Breaks in electric power lines located rapidly with radar. Iron Age 171:128 Ja 29 '53

Correlation versus linear transforms. M. J. E. Golay. Inst Radio Eng Proc 41:268-71 F '53; Discussion. 41:1187 S '53

Detection of a sine wave in the presence of noise by the use of a nonlinear filter. T. G. Slattery. bibliog diag Inst Radio Eng Proc 40:1232-6 O '52

Direct-reading oscilloscope for 100-kv pulses. R. C. Hergenrother and H. G. Rudenberg. il diags Inst Radio Eng Proc 41:896-901 Jl '53

Grid magnetron delivers modulated uhf output. P. L. Spencer. il diags Electronics 26:148-53 My '53

Instrument electronics. M. H. Aronson. diags Instruments 26:110-12 Ja '53

Microwave interferometer; employs Doppler radar technique to provide continuous record for ballistic measurements. H. C. Hanks, jr. il diags Tele-Tech 12:86-8+ F '53

Radar checks speed of Cincinnati motorists; abstract. J. Hearn. il S A E J 61:100-1 Jl '53

Radar photography; patent. diags Electronics 26:262+ Ag '53

Trouble shooting the electronic way; radar-type transmission line fault locator. R. L. Brinton. il Elec West 110:86-7 Mr '53

Use of dielectric lenses in reflection measurements. J. R. Mentzer. il diags Inst Radio Eng Proc 41:252-6 F '53

See also

Graphechon

Radar aids to aviation

Radar aids to navigation

Antenna and scanning mechanism

Album of antennas; illustrations with text. Gen Elec R 56:44-8 My '53

RADAR—Antenna and scanning mechanism—*Continued*

Effective number of pulses per beamwidth for a scanning radar. L. V. Blake. diags Inst Radio Eng Proc 41:770-4 Je '53

Filling transformers for radar antenna stabilizers with nitrogen. il Electronics 26:280-2 Jl '53

Moulded plastic radar scanners and stressed components. il Engineering 175:28-9 Ja 2 '53

Radar antenna lens made from square tubing. il Electronics 26:262 Ap '53

Stainless tubing in radar screens. il Materials & Methods 38:116-18 O '53

Wide-angle scan radar antenna. H. N. Chait. bibliog il diags Electronics 26:128-32 Ja '53

Meteorological use

Automatic radar sonde. il Elec J 151:651-2 Ag 28 '53

Electronic weather prediction urged to cut loss from storms. H. T. Orville. Elec Eng 72:375 Ap '53

Rainfall studies using rain-gage networks and radar. H. E. Hudson, jr. and others. bibliog il maps diags Am Soc C E Proc 79 [no 178]:1-26 Mr '53

Scattering of radio waves by meteorological particles. N. R. Labrum. bibliog diag J Ap Phys 23:1324-30 D '52

Some experiments on centimeter-wavelength scattering by small obstacles. N. R. Labrum. bibliog diags J Ap Phys 23:1320-3 D '52

Storm detector radar tracked recent Worcester, Mass. tornado. diag Elec Eng 72:757 Ag '53

When the big winds blow; Weather Bureau hurricane service. A. Reese and R. E. Spann. il map diag Pet Refiner 32:72-4+ Je; 211-12 Jl '53; World Oil 136:48-52 Je; 137:68-70 Jl '53

Military use

Echo box provides target for radar training. R. A. Latimer. il Electronics 26:196+ F '53

Flying lab services radar sights. il Electronics 26:16 Ap '53

New push on air defense. il Bsns W p 182+ Ap 18 '53

Radar-controlled anti-aircraft gun. diag Electronics 26:196+ My '53

Ultrasonic radar trainer used in training crews by air force. Elec Eng 72:658-9 Jl '53

Study and teaching

Computer simulates moving radar targets. W. B. Birtley. il diags Electronics 26:137-9 S '53

Testing

High-powered microwave dummy loads. T. N. Anderson. il diags Tele-Tech 12:92-4+ My '53

RADAR aids to aviation

Air navigation development board to try poor man's GCA. P. Klass. il Aviation W 57:59-60+ D 8 '52

Avionics plays key role in air power. P. Klass. il Aviation W 58:118-19+ Mr 2 '53

CAA says radar needs saucer filter. Aviation W 57:14 D 29 '52

GCA radar save. P. Klass. Aviation W 57:38+ D 1 '52

High quality radar picture display unit provides tv pictures of airport surveillance radar information. R. T. Petruzzelli. il diags Tele-Tech 12:54-7+ Ja '53

Radar breaks bad-weather jams at Washington national airport. R. Hotz. il Aviation W 58:14-16 Mr 16 '53

Radar method of calibrating airspeed installations on airplanes in maneuvers at high altitudes and at transonic and supersonic speeds. J. A. Zalovcik. diags U S Nat Advisory Com for Aeronautics 1950:661-7 '51

Radar orders fly W-3A autopilot. P. Klass. il Aviation W 57:46+ O 13 '52

Radio progress during 1952; navigation aids. bibliog il Inst Radio Eng Proc 41:476-80 Ap '53

Remotes extend airways vhf range. Electronics 26:22+ Mr '53

Training apparatus for air-traffic control by radar. il diags Engineering 175:572-3 My 1 '53

U.S. tests EKCO on copters. il Aviation W 58:18 Mr 23 '53

See also
Radar apparatus on aircraft

RADAR aids to navigation

Automatic pilot speeds river barges. il Electronics 26:20 F '53

Fjord-to-fjord technique sells radar in Norway; seagoing salesroom. il Ptr Ink 241:33 N 28 '52

Kelvin and Hughes improved marine radar set. il Engineer 196:248-9 Ag 21 '53; Engineering 176:236-7 Ag 21 '53

Radar protects fishing fleets. R. Frank. il Radio & Tv N 50:35+ Jl '53

Radio progress during 1952; navigation aids. bibliog il Inst Radio Eng Proc 41:476-80 Ap '53

San Francisco expands harbor radar tests. Marine Eng 58:78 F '53

Shore-based radar for harbor surveillance; installations in ports of Long Beach, Liverpool, Boston, and New York. E. J. Isbister and W. R. Griswold. il maps Elec Eng 71:1072-7 D '52

Would avert ship collisions by communication devices. Marine Eng 58:80 O '53

RADAR apparatus on aircraft

Plastic radomes pass the beam but shield the radar; based on the papers by W. Garcia and others. il diags S A E J 61:27-31 Ap '53

Quality factor for radar cathode-ray tube presentations. A. F. Bischoff. bibliog Tele-Tech 12:88-90+ Mr '53

Radar plumbing can be lightened; Farranti cuts the size and weight of waveguides in half. P. Klass. il Aviation W 57:56 O 27 '52

RADAR receiving apparatus

High quality radar picture display unit provides tv pictures of airport surveillance radar information. R. T. Petruzzelli. il diags Tele-Tech 12:54-7+ Ja '53

Microstrip brings the size down; technique of fabricating radar wave guides and components. il diag Aviation W 58:46-7 F 2 '53

Moving target indicator in pulse radar systems and the Doppler myth. J. F. Bachman. il diags Tele-Tech 12:86-8+ Ap '53; Discussion. M. Pleasure. 12:76+; Reply. 152-3 Je '53

Noise

Detection of a sine wave in the presence of noise by the use of a nonlinear filter. T. G. Slattery. bibliog diag Inst Radio Eng Proc 40:1232-6 O '52

Second detector s/n improvement. L. S. Schwartz. diags Tele-Tech 11:56+ O '52

RADAR research

Electronic components in Great Britain. G. W. A. Dummer. flow chart il Elec Eng 72:167-9 F '53

RADCLIFFE college

Talent without tears; a Radcliffe experiment expands. B. Lefferts. Barron's 33:7 Mr 9 '53

RADFORD, Arthur William, 1896-

New joint chiefs. Bsns W p28-9 My 16 '53

RADIAC instrumentation. See Radioactivity—Measurement

RADIANT heating. See Electric heating—Panel system; Heating—Panel system; Hot water heating—Panel system

RADIATION

Action of ionizing radiations and of radiomimetic substances on deoxyribonucleic acid; physicochemical measurements of the action of bischloroethylmethylamine. J. A. V. Butler, L. Gilbert and D. W. F. James. Chem Soc J p3268-73 Ag '52

Bremsstrahlung at high energies. H. A. Bethe and others. bibliog Phys R 91:417-18 Jl 15 '53

Bremsstrahlung cross section of 60-Mev electrons in lead. C. D. Curtis. bibliog diag Phys R 89:123-30 Ja 1 '53

Bremsstrahlung from P^{32} betas. M. Goodrich and others. bibliog Phys R 91:1225-8 S 1 '53

RADIATION—*Continued*

Chemical actions of ionising radiations in solutions; the action of X-rays on ammonia in aqueous solution. T. Rigg, G. Scholes and J. Weiss. Chem Soc J p3034-8 Ag '52

Decay of resonance radiation by spontaneous emission. E. J. Hellund. bibliog Phys R 89:919-22 Mr 1 '53

Derivation of the mass-energy relation. H. E. Ives. Opt Soc Am J 42:540-3 Ag '52

Eleven-Mev thick target bremsstrahlung. J. W. Motz and others. bibliog diag Phys R 89:968-71 Mr 1 '53

Energy loss of a fast charged particle by Čerenkov radiation. R. M. Sternheimer. bibliog Phys R 91:256-65 Jl 15 '53

Experimental energy and angular distributions of inner bremsstrahlung. T. B. Novey. bibliog diags Phys R 89:672-8 F 15 '53

Geometrical correction in angular correlation measurements. E. L. Church and J. J. Kraushaar. Phys R 88:419-20 O 15 '52

High energy photoproton production by 322-Mev bremsstrahlung. J. W. Rosengren and J. M. Dudley. bibliog Phys R 89:603-5 F 1 '53

Hot atom chemistry of the alkyl bromides; absence of effects due to high radiation density; isotope separation in solids. F. S. Rowland and W. F. Libby. bibliog J Chem Phys 21:1495-9 S '53

Inner bremsstrahlung and the magnetic moment of the neutrino. E. J. Hellund. bibliog Phys R 90:721 My 15 '53

Inner bremsstrahlung and the magnetic moment of the neutrino. J. Weneser. Phys R 91:1025-6 Ag 15 '53

Inner bremsstrahlung associated with *K* capture in A^{37}. C. E. Anderson and others. bibliog Phys R 90:606-8 My 15 '53

Inner bremsstrahlung in μ-meson decay. A. Lenard. bibliog Phys R 90:968-73 Je 1 '53

Magnetic lens spectrometer measurements of the radiations from light nuclear reactions. R. G. Thomas and T. Lauritsen. bibliog diags Phys R 88:969-86 D 1 '52

Natural line shape. F. Low. diags Phys R 88:53-7 O 1 '52

Optical studies of injected carriers; recombination radiation in germanium. R. Newman. Phys R 91:1313-14 S 15 '53

Polarization dependence of the integrated bremsstrahlung cross section. R. L. Gluckstern and M. H. Hull, jr. bibliog Phys R 90:1030-5 Je 15 '53

Polarization of bremsstrahlung radiation. R. L. Gluckstern and others. bibliog Phys R 90:1026-9 Je 15 '53

Production of sodium airglow excitation by imprisonment of resonance radiation. A. Foderaro and T. M. Donahue. Phys R 91:1561 S 15 '53

Quenching of *ortho*-positronium decay by a magnetic field. J. Wheatley and D. Halliday. Phys R 88:424 O 15 '52

Radiation by electrons in large orbits. D. R. Corson. bibliog il diag Phys R 90:748-52 Je 1 '53

Radiation damage and rate processes. J. W. Marx. bibliog Phys R 91:1564-5 S 15 '53

Radiation decomposition of organic molecules. J. B. Birks. bibliog J Chem Phys 20:1655-6 O '52

Radiation decomposition of some C^{14}-labeled compounds. B. M. Tolbert and others. bibliog Am Chem Soc J 75:1867-8 Ap 20 '53

Radiation exposure in the United States. D. W. Moeller and others. bibliog il diags Pub Health Rep 68:57-65 Ja '53

Radiation of a high energy electron in a constant magnetic field. M. Neuman. bibliog Phys R 90:682-9 My 15 '53

Radiation pressure and dispersion. E. J. Post. Acoustical Soc Am J 25:55-60 bibliog(46 titles, p59-60) Ja '53

Radiations of Ce^{143}. W. H. Burgus. bibliog diag Phys R 88:1129-32 D 1 '52

Sterilization by radiations; abstract and discussion. M. Ingram. Chem & Ind p348-9 Ap 11 '53

Theory of multipole radiation. J. B. French and Y. Shimamoto. Phys R 91:898-9 Ag 15 '53

Time distribution of positron annihilation in liquids and solids. R. E. Bell and R. L. Graham. bibliog diags Phys R 90:644-54 My 15 '53

See also

Absorption of rays
Alpha rays
Beta rays
Coincidence counting
Cosmic rays
Diffraction
Gamma rays
Heat radiation
Infrared rays
Irradiation
Light
Luminescence
Quantum theory
Radioactivity
Radiochemistry
Radiography
Relativity (physics)
Scattering of particles and rays
Solar radiation
Sound
Sound waves
Spectrum
Ultraviolet rays
X rays

Measurement

Magnetic transient recorder for radiation pulses. J. Racker. il diag Tele-Tech 12:92-4 Je '53

Physiological effect

Bilateral lenticular opacities occurring in a technician operating a microwave generator. F. G. Hirsch and J. T. Parker. bibliog il A M A Archives Ind Hygiene & Occup Med 6:512-17 D '52

Evaluation of long-term radiation exposures. D. A. Holaday. bibliog A M A Archives Ind Hygiene & Occup Med 7:211-16 Mr '53

Irradiation of parts of individual cells. R. E. Zirkle and W. Bloom. bibliog il diags Science 117:487-93 My 8 '53

Protection against X-rays and therapy of radiation sickness with β-mercaptoethylamine. Z. M. Bacq and others. bibliog Science 117:633-6 Je 5 '53

Protection

Aeromedical problems for nuclear-propelled aircraft. J. E. Pickering. Aeronautical Eng R 12:69-70 Ap '53

Basic information needed to control radiation. Pub Health Rep 68:210-11 F '53

Concrete for radiation shielding. E. J. Callan. bibliog(29 titles) diags Am Concrete Inst J 25:17-44 S '53

How to design ventilation for radiological hazards. W. W. McIntosh. il diags Heating-Piping 25:90-5 My '53

Laboratory handling of fissionable material; Chalk River project of Atomic energy of Canada, limited. il Can Chem Process 37:90+ Ap '53

Protection of bacteria against radiation effects. H. A. Whitehead. bibliog Science 116:459-60 O 24 '52

Radiant risks. Tech R 55:305-6 Ap '53

Window for protection against high-intensity gamma radiation. Glass Ind 34:435+ Ag '53

RADIATION, Scattering of. See Scattering of particles and rays

RADIATION, Solar. See Solar radiation

RADIATION protection. See Radiation—Protection; Radioactivity—Protection

RADICALS (chemistry)

Absorption spectra of free radicals in continuously irradiated photochemical systems. D. A. Ramsay. bibliog diag J Chem Phys 21:165-6 Ja '53

Addition of free radicals to unsaturated systems; chlorotrifluoroethylene. R. N. Haszeldine and B. R. Steele. Chem Soc J p 1592-600 My '53

Addition of free radicals to unsaturated systems; radical addition to olefins of the type $R·CH:CH_2$. R. N. Haszeldine and B. R. Steele. Chem Soc J p 1199-206 Ap '53

Addition of free radicals to unsaturated systems; the direction of radical addition to 3 : 3 : 3-trifluoropropene. R. N. Hazeldine. Chem Soc J p2504-13 Jl '52

Attack of metals by free radicals and atoms. F. W. Thompson and A. R. Ubbelohde. bibliog J Ap Chem 3:27-36 Ja '53

Detection of free radicals by means of paramagnetic resonance absorption; biradicals. C. A. Hutchison, jr. and others. bibliog J Chem Phys 20:1485-6 S '52

Detection of the HO_2 radical by mass spectrometry. S. N. Foner and R. L. Hudson. diag J Chem Phys 21:1608-9 S '53

RADICALS (chemistry)—*Continued*

Entropy changes in free radical reactions. A. F. Trotman-Dickenson. bibliog J Chem Phys 21:211-14 F '53

Evidence for the existence of radicals in the presence of Lewis acids. J. M. Hirshon, D. M. Gardner and G. K. Fraenkel. bibliog Am Chem Soc J 75:4115 Ag 20 '53

Free radical rearrangements; the free β-methyl-β-α-tolylpropyl (*p*-methylneophyl) radical. W. H. Urry and N. Nicolaides. bibliog Am Chem Soc J 74:5163-8 O 20 '52

Induced decomposition of acetaldehyde by radicals. R. K. Brinton and D. H. Volman. bibliog J Chem Phys 20:1053-4 Je '52

Observations on a class of free radicals derived from aromatic compounds. D. Lipkin and others. bibliog Science 117:534-5 My 15 '53

Paramagnetic resonance absorption of free radicals. T. L. Chu and others. bibliog J Phys Chem 57:504-7 My '53

Reaction of carbon monoxide with free radicals. G. B. Porter and S. W. Benson. Am Chem Soc J 75:2773-4 Je 5 '53

Reactions of free radicals with aldehydes; the reactions of methyl and *t*-butoxy radicals with acetaldehyde and acrolein. D. H. Volman and R. K. Brinton. bibliog J Chem Phys 20:1764-8 N '52

Resonance energies of certain organic free radicals and ions. J. L. Franklin and F. H. Field. bibliog Am Chem Soc J 75:2819-21 Je 20 '53

Small-ring compounds; molecular orbital calculations of properties of some small-ring hydrocarbons and free radicals. J. D. Roberts, A. Streitwieser, jr. and C. M. Regan. bibliog Am Chem Soc J 74:4579-82 S 20 '52

Some current topics in physical chemistry; annual survey. H. Mackle. bibliog Chem Age (Lond) 68:87-96+ Ja 10 '53

Temperature variation of the paramagnetic resonance absorption of two free radicals. L. S. Singer and E. G. Spencer. J Chem Phys 21:939-40 My '53

Theory of radiation chemistry; track effects in radiolysis of water. A. H. Samuel and J. L. Magee. bibliog J Chem Phys 21:1080-7 Je '53

See also

Amino group

RADIO advertising

Amana pegs sales appeal to high cost of eating. il Sales Management 69:72+ N 10 '52

M. E. Blatt company takes to the air. S. I. Abelow. J Retailing 28:155-8+ Winter '52

Now radio can be sold as a medium with a future. R. E. Dunville. Ptr Ink 242:23-4 Ja 2 '53

Radio pushing for sales tests by retailers. Ed & Pub 85:14 O 18 '52

Sale I never forgot; cashed in on jingles. W. S. Mack, jr. Ptr Ink 241:82 N 14 '52

Salesmen's ad requests induce chain reaction; Hoffman Candy focused promotion on ten-cent bar, sell thru cash-and-carry jobbers. J. H. Collins. Sales Management 69:102-3 N 1 '52

Use of air waves to push water systems! G. E. Trisler. Dom Eng 182:157+ S '53

Which serves the advertiser best, film or live tv? panel discussion. R. H. Wight. Ptr Ink 241:27-9 O 31 '52

Wiseacres said; there isn't room for another radio station in Los Angeles; station KBIG on Catalina. il map Sales Management 69:78-81 N 20 '52

Home demonstrators

How to present home demonstrators on radio and tv. D. H. McCollum. il Ptr Ink 242:34-5 Ja 30 '53

Jingles

Jingle's place on radio today. G. N. Montgomery. Adv Agency 46:24+ F '53

Prize contests

Station WLW gives away house and cars, to snag off-hour audience. il Bsns W p72+ Jl 18 '53

RADIO aids to aviation

Avonics maker hits profit peak; Collins radio co. S. Altschul. Aviation W 57:75 N 17 '52

Avionics plays key role in air power. P. Klass. il Aviation W 58:118-19+ Mr 2 '53

Bendix receiver has 360 channels. il Aviation W 58:82 My 25 '53

Computer erects its own vor, dme; airborne device provides course, distance data. P. Klass. il diags Aviation W 57:41+ D 15 '52

Eastern uses CAT to track ILS. P. Klass. il diag Aviation W 58:55-6+ Ap 20 '53

Electronic devices in air transport. F. B. Lee. Am Soc C E Proc 79[no 173]:1-10 F '53

Instrument approach system steering computer. W. G. Anderson and E. H. Fritze. il diags Inst Radio Eng Proc 41:219-28 F '53

New TVOR sells under 10,000. il Aviation W 57:42+ N 17 '52

PAA finances Monrovia TVOR. Aviation W 58:50 Ja 5 '53

Pan American finds new use for DME. G. L. Christian. il diags Aviation W 58:57-62+ Je 1 '53

Punched-card controlled aircraft navigation computer. E. H. Fritze. bibliog il diags Inst Radio Eng Proc 41:734-42 Je '53

Radio progress during 1952; navigation aids. bibliog il Inst Radio Eng Proc 41:476-80 Ap '53

Remote vhfs to speed N.Y. traffic. P. Klass. il map Aviation W 58:38+ Ja 26 '53

Simultaneous radiation of odd and even patterns by a linear array. C. B. Watts, jr. il diags Inst Radio Eng Proc 40:1236-9 O '52

Static doesn't bother new adf. S. H. Reiniger. il diag Aviation W 58:66+ My 4 '53

See also

Airlines—Radio communication
Decca navigation system
Direction finding apparatus
Loran system
Radar aids to aviation
Radio apparatus on aircraft
Radio meteorographs

RADIO aids to navigation

Radio aids to navigation. G. L. Ottinger. il maps Elec Eng 72:109-14 F '53

Radio progress during 1952; navigation aids. bibliog il Inst Radio Eng Proc 41:476-80 Ap '53

See also

Decca navigation system
Direction finding apparatus
Loran system
Radar aids to navigation
Radio apparatus on ships
Radio telephone on ships

RADIO amplifiers. See Amplifiers, Vacuum tube

RADIO antennas

Absorption gain and back-scattering cross section of the cylindrical antenna. S. H. Dike and D. D. King. bibliog diags Inst Radio Eng Proc 40:853-60 Jl '52; Discussion. 41:926-34 Jl '53

Aircraft omnidirectional antenna problem for u.h.f navigation systems. A. G. Kandoian. il diags Aeronautical Eng R 12:75-80 My '53

Album of antennas; illustrations with text. Gen Elec R 56:44-8 My '53

Alternative method of solving Hallén's integral equation and its application to antennas near resonance. R. King. J Ap Phys 24:140-7 F '53

Antenna coupler helps the receiver, too! J. J. Glauber. diag Q S T 37:47 Ap '53

Antenna impedance-measuring instrument. J. F. Cline. il diag Inst Radio Eng Proc 40:1686-9 D '52

Automatic multiband mobile antennas and mobile antenna characteristics. A. M. Pichitino. il diags Q S T 37:11-13+ Je '53

Bandswitching the antenna tuner. J. F. Wohlford. il diag Q S T 36:28-9 N '52

Best antenna location is center on car roof. C. G. Landis and S. K. Waldorf. il diags Elec World 139:66-9 My 4 '53

Broomstick boomstick. R. Wagner. diags Radio & Tv N 49:116+ Mr '53

Circular dielectric-disk antenna. E. M. T. Jones and R. A. Folsom, jr. diags Inst Radio Eng Proc 41:798 Je '53

Combining the antenna coupler and low-pass filter. G. Grammer. il diag Q S T 37:17-19+ Mr '53

RADIO antennas—*Continued*

Coupling loop design; nomograph. K. A. Pullen. Tele-Tech 12:67 Ja '53

Cylindrical aerials; new solution of Hallén's integral equation for current. B. Storm. bibliog Wireless Eng 29:174-6 Jl '52; Discussion. R. W. P. King. 30:24 Ja '53

Design procedures for pi-network antenna couplers. L. Storch. diags Inst Radio Eng Proc 37:1427-32 D '49; Discussion. 41:790-3 Je '53

Designing discone antennas. J. J. Nail. diags Electronics 26:167-9 Ag '53

Dr H. C. Pocklington. G. W. O. Howe. Wireless Eng 29:255-6 O '52

80- and 40-meter antenna system for the novice. L. G. McCoy. il diags Q S T 37:29-31 F '53

Electromagnetic back-scattering from cylindrical wires. C. T. Tai. diag J Ap Phys 23:909-16 Ag '52

Experimental study of wave propagation at 850 mc. J. Epstein and D. W. Peterson. bibliog il map diags Inst Radio Eng Proc 41:595-611 My '53

Experimentally determined radiation characteristics of conical and triangular antennas. G. H. Brown and O. M. Woodward, jr. bibliog il diags RCA R 13:425-52 D '52

Field radiated by a ring quasi-array of an infinite number of tangential or radial dipoles. H. L. Knudsen. bibliog diags Inst Radio Eng Proc 41:781-9 Je '53

Flush antenna design made easier. il diag Aviation W 58:62-3 Mr 30 '53

Flush-mounted altimeter slot radiators. L. E. Raburn. bibliog il diags Tele-Tech 12:73-5+ Ap '53

Flush-mounted antennas for military aircraft; illustrations with text. diags Tele-Tech 11:58-9+ O '52

Folded and loaded antennas. W. B. Wrigley. bibliog diags Q S T 37:21-7+ Ap '53

Folded dipoles. G. W. O. Howe. diags Wireless Eng 30:51-3 Mr '53

Ham-band transmitting loops. R. R. Hay. il diag Q S T 36:14+ S '52; Discussion. R. F. Lewis. 37:45+ Je '53

Holes in horns. C. C. Littell, jr. Electronics 26:391-2 Je '53

How to design small boat antennas. E. Robberson. bibliog il diags Electronics 26:146-9 Jl '53

Impedance-measuring apparatus for use with v.h.f. aerials. M. P. Beddoes. bibliog il diags Wireless Eng 30:69-72 Mr '53

Impedance transformation properties of the folded dipole. M. Zakhaim. diags Inst Radio Eng Proc 41:1061-2 Ag '53

Investigating antennas for uhf mobiles. E. F. Harris. il diags Electronics 25:127-9 N '52

Magnetic dipole antenna immersed in a conducting medium. J. R. Wait. bibliog Inst Radio Eng Proc 40:1244-5 O '52

Multi-impedance dipoles. J. D. Avery. il diags Q S T 37:42-3 My '53

Multiple television and frequency-modulation transmitting antenna installation on the Empire State building. J. B. Dearing and others. il diags Inst Radio Eng Proc 41:324-37 Mr '53

New antenna fittings reduce precipitation-static interference. C. De Vore. il diags Tele-Tech 12:77-9+ My '53

New solution for the current and voltage distributions on cylindrical, elliptical, conical or other axisymmetrical antennas. O. Zinke. Inst Radio Eng Proc 41:1048-9 Ag '53

Poor man's dx-getter; ground-plane antenna for 20 meters. E. L. Spight. il Q S T 37:38-9 Mr '53

Practical adjustment of the gamma match. W. H. Davis. il diag Q S T 37:32-4 F '53

Properties of artificial dielectrics comprising arrays of conducting elements. M. M. Z. Kharadly and W. Jackson. bibliog diags Inst E E Proc 100 pt 3:199-212 Jl '53

Qsying the 75-meter mobile antenna. W. W. Varnedoe, jr. il diags Q S T 37:26-7 Jl '53

Radiation characteristics of a turnstile antenna shielded by a section of a metallic tube closed at one end. A. Baños, jr. and others. diags J Ap Phys 23:688-96 Je '52

Radiation conductance of axial and transverse slots in cylinders of elliptical cross section. J. Y. Wong. diags Inst Radio Eng Proc 41:1172-7 S '53

Radiation pattern of an antenna over a circular ground screen. J. E. Storer. diags J Ap Phys 23:588-93 My '52

Radio antennas discussed by PEA group. L. R. Krahe and others. Elec World News ed 139:9 My 11 '53

Simultaneous radiation of odd and even patterns by a linear array. C. B. Watts, jr. il diags Inst Radio Eng Proc 40:1236-9 O '52

Theory of antenna beam shaping. A. S. Dunbar. bibliog il diags J Ap Phys 23:847-53 Ag '52

Theory of electrically short transmitting and receiving antennas. R. King. bibliog J Ap Phys 23:1174-87 O '52

Theory of wave-guide-fed slots radiating into parallel plate regions. H. Gruenberg. diag J Ap Phys 23:733-7 Jl '52; Discussion. L. Lewin. 24:232 F '53

Uhf mobile antennas. E. F. Harris. il diags Electronics 26:181-3 My '53

Uhf surface-wave transmission line. C. E. Sharp and G. Goubau. il diag Inst Radio Eng Proc 41:107-9 Ja '53

Where is your mobile signal going? H. J. Hanson. diag Q S T 36:15+ N '52

Wide-band re-entrant networks. W. D. Fingers. diags Q S T 37:48-9 Ap '53

See also

Radio masts

Television antennas

Bibliography

Radio progress during 1952; antennas, waveguides, and transmission lines. il Inst Radio Eng Proc 41:495-7 Ap '53

Directional antennas

Attenuation of wire helices in dielectric supports. R. W. Peter and others. bibliog diags RCA R 13:558-72 D '52

Calculation of the radiation pattern of an array on an arc. G. von Trentini. diags Inst Radio Eng Proc 41:397-8 Mr '53

Curing braking in rotary beam motors for antenna systems. J. Watt. diag Radio & Tv N 49:111 My '53

Experimental investigation of the corner-reflector antenna. E. F. Harris. diags Inst Radio Eng Proc 41:645-51 My '53

Factors affecting the performance of linear arrays. L. L. Bailin and M. J. Ehrlich. diag Inst Radio Eng Proc 41:235-41 F '53

Helical beam for citizen's radio. E. F. Harris. il diags Electronics 26:134-5 Mr '53

Mutual radiation resistance of aerials and arrays. H. L. Knudsen. bibliog Wireless Eng 29:301-5 N '52

Optimum linear array for a single main beam. D. R. Rhodes. diags Inst Radio Eng Proc 41:793-4 Je '53

Optimum patterns for endfire arrays. R. H. Duhamel. diag Inst Radio Eng Proc 41:652-9 My '53

Power gain of curtain arrays of aerials. P. Hammond. Wireless Eng 30:108-11 My '53

Radiation field of a square, helical beam antenna. H. L. Knudsen. diags J Ap Phys 23:483-91 Ap '52

Six vertical elements on 21 mc. J. D. Riggs. il diags Q S T 37:36-7 My '53

Stagger-tuned loop antennas for wide-band low-frequency reception. D. K. Cheng and R. A. Galbraith. il diags Inst Radio Eng Proc 41:1024-31 Ag '53

Theoretical study of an antenna-reflector problem. W. C. Jakes, jr. diags Inst Radio Eng Proc 41:272-4 F '53

Three-element 14mc. rotary beam antenna. C. A. West. il diags Radio & Tv N 49:66-8+ F '53

Testing

Anechoic chamber for microwaves. A. J. Simmons and W. H. Emerson. il diag Tele-Tech 12:47-9+ Jl '53

RADIO apparatus

Analysis of measurements on magnetic ferrites. C. D. Owens. bibliog il diags Inst Radio Eng Proc 41:359-65 Mr '53

Developmental transistorized equipments. il Tele-Tech 12:75 Ja '53

RADIO apparatus—*Continued*

Manufacture of microstrip; new system of microwave circuitry, developed by Federal telecommunication laboratories; illustrations with text. Elec Com 29:250-9 D '52
Nylon-phenolic terminal-board material. D. L. Matson. diags Mod Plastics 30:137-8+ N '52
Radio progress during 1952. bibliog(1057 titles) il Inst Radio Eng Proc 41:452-507 Ap '53
Rotary linear microwave phase shifters. M. Simpson and A. Sawelson. diags Tele-Tech 11:44-7+ D '52
Single-tone selective signaling system. Elec Eng 72:317 Ap '53
25-watt utility unit; can be used as a crystal oscillator, straight amplifier, or a doubler. G. Anglado. diag Radio & Tv N 49:66 Ja '53
What's new at the 1953 IRE show. il Tele-Tech 12:94-9 Ap '53
Wide-band hybrid ring for uhf. W. V. Tyminski and A. E. Hylas. bibliog il diags Inst Radio Eng Proc 41:81-7 Ja '53

See also

Amplifiers, Vacuum tube
Direction finding apparatus
Microphones
Oscillators
Oscillators, Crystal
Radar
Radio antennas
Radio apparatus industry
Radio circuits
Radio coils
Radio communication
Radio condensers
Radio control
Radio facsimile
Radio generators
Radio instruments
Radio meteorographs
Radio receiving apparatus
Radio transformers
Radio transmitters
Television apparatus
Vacuum tubes
Wavemeters

Bibliography

Abstracts and references. Published in monthly numbers of Wireless engineer; reprinted in Institute of radio engineers proceedings

Exhibitions

National radio and television show, 19th, London. W. E. Miller. il Elec R (Lond) 151: 482-6 S 5 '52
National radio exhibition, 19th, London, Aug. 26-Sept. 6. il diag Wireless Eng 29:275-9 O '52
R.E.C.M.F. 10th annual exhibition, London, April 14-17. il Elec J 150:1309-11 Ap 17 '53; Elec R (Lond) 152:791-5 Ap 10 '53
Radio show opens. il Electrician 149:603-6 Ag 29 '52

Manufacture

Easy-to-reach storage racks and trays for movement of auto radio tuner units. il Electronics 26:228+ Ja '53
Induction soldering setups. il Electronics 26: 260-2 Ja '53
Precut masks speed spraying for tropicalizing. il Electronics 26:266+ My '53
Twisting filament leads. il Electronics 26: 268+ Ap '53

Military use

Captured Communist communications equipment; illustrations with text. Tele-Tech 12:62-4 Ap '53
Electronics for Nato; British-built electronic equipment exhibition, Farnborough. Economist 167:465 My 16 '53
Is complexity of military electronics necessary? R. J. Nordlund. Inst Radio Eng Proc 41:965-7 Ag '53
Military electronic equipment; operational display at R.A.E., Farnborough. Elec J 150: 1725-6 My 15 '53
Signals research and development establishment. Engineering 174:153-4, 189 Ag 1-8 '52
Transistors and the military. I. R. Obenchain, jr. and W. J. Galloway. Inst Radio Eng Proc 40:1287-8 N '52
What the military services expect from engineering management in the electronics industry. D. L. Putt. il Aviation W 58:64-6 Ap 27 '53

See also

Radio communication, Military

Patents

Patent news. Tele-Tech 12:195+ Ap '53
Pertinent patents. diags Electronics 26:158+ F; 164+ Mr; 200+ Ap; 248+ Jl, 246+ Ag; 240+ S '53

Power supply

Axle-driven alternator-rectifier system for caboose power supply. A. H. Hoffer and G. W. Weber. il diags Elec Eng 72:699-703 Ag '53
High-voltage power supply. W. C. Davidon. diag Electronics 26:226+ Ag '53
Improved variable power supply. W. Creviston. il diags Radio & Tv N 49:42+ Ap '53
Power required by a shunt impedance. diags Electronics 26:250+ My '53; Discussion. L. Storch. 26:440-4 S '53
Regulated power-supply blocks. J. H. Bigbee. il diags Electronics 26:176-7 Jl '53

See also

Radio transmitters—Power supply

Testing

Prediction of circuit failures. il diags Commun Eng 13:34-6+ My '53
Quality control in component manufacturing. Tele-Tech 12:112+ Ap '53
Walk-in test room; controlled atmospheric conditions. il Electronics 25:248+ D '52

Tuning

Design of linear-frequency capacitance tuners for shorted transmission line. A. Newton. Electronics 26:246+ Je '53
Graphical design of tuning elements. B. H. Baldridge. Electronics 26:192+ Je '53

See also

Radio receiving apparatus—Tuning

RADIO apparatus industry

Electronics; an integrated, mature and progressive industry. R. W. Galvin. Comm & Fin Chr 177:995+ Mr 5 '53
Everybody's in the act in successful plant-wide contest. E. T. Jones. il Ptr Ink 242: 30-2 Mr 6 '53
Radio and television sets, production; new series; monthly averages for radio sets, 1924-1946; monthly radio and television figures, 1947-1951. Survey of Cur Bsns 32:20 O '52
Radio-tv firms add other lines. Electronics 26: 14 Mr '53
Top management reviews its paychecks; compensation of principal executives in the radio and television industry. Electronics 26: 14 F '53

See also

Collins radio company

Advertising

Druggists sell radios by using right medium. Ed & Pub 85:18 O 4 '52
Emerson tunes-in dailies at national, local levels. D. J. Hopkins. il Ed & Pub 85:16+ O 18 '52

Directories

Directory of representatives serving tv-radio and electronic manufacturing listed alphabetically under states and cities. Tele-Tech 11:149-56+ N '52
Directory of the West Coast electronic manufacturers. Tele-Tech 12:99-102 Ag '53
Directory section of the 1953-1954 Electronics buyers' guide. Electronics 26:D 1-149 Mid-Je '53
Electronic industries directory, 1953. il Tele-Tech 12:195-336 Je '53
Station and studio equipment directory. Tele-Tech 11:113+ O '52

Finance

Financial roundup. Electronics 26:20+ Ja '53

Securities

Radio-tv stock price analysis; price ranges of 120 electronic industries stocks, 1945-1953; with dividends paid and per cent yield. Tele-Tech 12:156-7 F '53

Statistics

Electronigraphs, year-end glance at electronics industry figures; charts. Electronics 26:5-6+ Ja '53

RADIO apparatus industry—Statistics—*Cont.*

Radio and television receivers; charts and tables. Steel 132:187 Ja 5 '53

Statistics of the tv-radio-electronic industries, 1952-1953. Tele-Tech 12:3, 46-8, cover Ja '53

Pacific coast

Impact of electronic research on the development of the West. A. M. Zarem. Tele-Tech 12:60-1+ Ag '53

RADIO apparatus on aircraft

Acoustic firing error indicator. M. C. Eliason and W. G. Hornbostel. il diags Electronics 25:98-101 O '52

Air-cooling nomograph; reference sheet. E. Slusser. Electronics 25:164 N '52

Aircraft omnidirectional antenna problem for u.h.f navigation systems. A. G. Kandoian. il diags Aeronautical Eng R 12:75-80 My '53

Aircraft radio interference measurements. M. M. Newman and others. il diag Elec Eng 72:36-40 Ja '53

Airplane pilots turn on lights. il Elec West 111:97 Ag '53

Electronic reliability in aircraft. A. W. Rebard. il diags Aero Digest 66:64+ F '53

Electronics in aviation. Aviation W 58:32 F 23 '53

Flush antenna design made easier. il diag Aviation W 58:62-3 Mr 30 '53

Flush-mounted altimeter slot radiators. L. E. Raburn. bibliog il diags Tele-Tech 12:73-5+ Ap '53

Flush-mounted antennas for military aircraft; illustrations with text. diags Tele-Tech 11:58-9+ O '52

Flying laboratory tests distance measuring equipment. il Tele-Tech 12:130 My '53

Maintenance problems in new airborne radio equipment. G. H. Scheer, jr. il Tele-Tech 12:88-9+ My '53

Miniature airborne telemetering system. H. M. Hill, jr. il diags Tele-Tech 11:68-72+ D '52

Miniaturization of airborne filter chokes. W. E. Tanner. diag Electronics 26:180-3 Ap '53

New antenna fittings reduce precipitation-static interference. C. De Vore. il diags Tele-Tech 12:77-9+ My '53

Precipitation static is licked. F. Flader. il diags Aero Digest 66:64-6+ Je '53

Raydist helps helicopter to land on a dime. il Tele-Tech 12:140-1 Ap '53

Reliability of airborne electronic components. B. G. Bromberg and R. D. Hill, jr. Inst Radio Eng Proc 41:513-16 Ap '53

Transistors in airborne equipment. O. M. Stuetzer. Inst Radio Eng Proc 40:1529-30 N '52

Vibration test for valves. C. C. Eaglesfield. diags Wireless Eng 30:57-60 Mr '53

RADIO apparatus on ships

Electronics for the yachtsman. H. R. Ashley. il Radio & Tv N 50:67+ Ag '53

See also

Radio telephone on ships

RADIO astronomy

New techniques in radio astronomy. J. D. Kraus and E. Ksiazek. bibliog il diags Electronics 26:148-52 S '53

Radio stars. A. C. B. Lovell. il diags Sci Am 188:17-21 Ja '53

RADIO attenuators

Characteristics of the magnetic attenuator at uhf. F. Reggia and R. W. Beatty. bibliog il diags Inst Radio Eng Proc 41:93-100 Ja '53

Chart for TE_{11} mode piston attenuator; reference sheet. C. M. Allred. Electronics 26:142 Ja '53

Resistance for symmetrical T and H pads. diags Electronics 26:193-4+ F '53

Vacuum-tube T-pad logarithmic attenuator. E. C. Miller. diags Electronics 26:148-9 F '53

RADIO broadcasting

Facing the future in radio and television broadcasting. D. Sarnoff. Comm & Fin Chr 177:1961+ My 7 '53

Graphical aids to broadcasting. A. E. Richmond. diag Electronics 25:195+ O '52

See also

American broadcasting-Paramount theaters, inc.

Columbia broadcasting system

Radio advertising

Radio broadcasting stations

Radio communication—Interference elimination

Television broadcasting

Frequency standards

Increased accuracy WWV and WWVH. Commun Eng 13:35-7 Mr '53

Government news

Soap opera treatment of news sources feared. J. Foster. Ed & Pub 85:42+ D 6 '52

Multiplex system

Announce multiplex radio transmission. Comm & Fin Chr 177:1452 Ap 2 '53

New multiplex system for three-dimensional sound; stereosonic system. A. J. Forman. il diags Tele-Tech 12:92-3+ Ap '53

News

Broadcasters move to gain equal rights. J. Walker. Ed & Pub 85:78 D 13 '52

Political programs

Election night; test for polls and robot brains. il Bsns W p30-2 N 1 '52

Political uses

Broadcasters' ordeal by politics. E. H. James. Fortune 46:105+ N '52

Politics on the air. Economist 166:858 Mr 28 '53

Programs

Novel idea in community relations; Keystone steel & wire co. F. C. Minaker. il Am Bsns 23:24 Je '53

Putting more life into small-town community relations; plant-recorded radio program. il Mod Ind 25:93-4+ Ap '53

Radio and tv network programs. Published in monthly numbers of Advertising agency

Prizes

Station WLW gives away house and cars, to snag off-hour audience. il Bsns W p72+ Jl 18 '53

Propaganda

Free world and eastern Europe. Economist 165:174 O 18 '52

Regulation

See Radio laws and regulations

Safety programs

Radio and tv carry Congress story. il Nat Safety N 66:46+ D '52

Scientific programs

ACS radio program commended at plaque presentation to WNYC. Chem & Eng N 30:4764 N 10 '52

Miseducation of the public in scientific matters; Science for the people. I. T. Jones. Science 117:640-1 Je 5 '53

Social aspects

Science and society. R. J. F. Boyer. Inst Radio Eng Proc 40:1636-7 D '52

Time signals

See Time signals, Radio

Canada

Canadian broadcasting regulations revised. For Comm W 50:25 Jl 20 '53

Europe

Free world and eastern Europe. Economist 165:174 O 18 '52

Germany

Nordwestdeutscher rundfunk (Northwest German radio), Hamburg, Germany. K. R. Boord, comp. il Radio & Tv N 48:59 D '52

Great Britain

Bringing the event to the world; coronation broadcasts. il Elec J 150:1897-9 My 29 '53

Coronation broadcasts. Engineer 195:805+ Je 5 '53

RADIO broadcasting—Great Britain—*Cont.*

Sound and television broadcasts at the coronation. Engineering 175:724 Je 5 '53

India

India installs new radio transmitter. For Comm W 49:20 Je 15 '53

Israel

Kol Zion Lagolah (the voice of Zion). K. R. Boord, comp. Radio & Tv N 49:74+ Mr '53

RADIO broadcasting stations

Barnstaple transmitting station. Engineer 195:23 Ja 2 '53

International short-wave; foreign stations, call letters, time schedules. K. R. Boord, comp. Published in monthly numbers of Radio and television news

WNEW New York; radio's Little David doesn't fear tv. il Fortune 46:132-3+ O '52

Advertising

Mutual's Mister Plus. il Adv Agency 45: 82-3+ N '52

Now radio can be sold as a medium with a future. R. E. Dunville. Ptr Ink 242:23-4 Ja 2 '53

Wiseacres said; there isn't room for another radio station in Los Angeles; station KBIG on Catalina. il map Sales Management 69:78-81 N 20 '52

Employees

See Radio workers

Equipment

Avoidance of crosstalk in large audio distribution systems; master control at Canadian broadcasting corp. R. H. Tanner and G. B. Thompson. il diag Tele-Tech 12:80-1+ Mr '53

Broadcast transmitter remote control system. G. W. Lee. il diag Electronics 26:138-41 Je '53

Cues for broadcasters; practical ways of improving station operation and efficiency (cont). il diags Tele-Tech 11:60-1+ N; 58-9+ D '52; 12:68-9+ Ja; 82-3+ F; 86-7+ Mr; 84-5+ Ap; 90-1+ My; 120-1+ Je; 50-1+ Jl; 94-5+ Ag; 84-5+ S '53

Modern transmitter for a-m broadcasting; station WNEW. A. A. McKenzie. il plan diags Electronics 26:130-6 S '53

Operating remote control broadcast stations. P. Whitney. il diags Tele-Tech 12:72-5+ S '53

Single-channel remote broadcast amplifier. L. A. Wortman. il diags Radio & Tv N 49:62-3+ F '53

See also

Radio transmitters

Finance

Edward J. Noble; his golden touch pans out again. Bsns W p82+ Mr 14 '53

War measures

CONELRAD alert receiver. M. M. Mitchum. il diag Electronics 25:110-11 O '52

CONELRAD; FCC and air force plan controls station operation to prevent use of signals as navigational aid to enemy aircraft. diags Tele-Tech 12:85+ Mr '53

Los Angeles

Wiseacres said; there isn't room for another radio station in Los Angeles; station KBIG on Catalina. il map Sales Management 69:78-81 N 20 '52

RADIO broadcasting studios

Tv-radio center; WCAU's new headquarters in Philadelphia. il plans diags Arch Forum 97:148-51 S '52

Equipment

ABC audio installation. E. P. Vincent and A. C. Angus. il plans Tele-Tech 12:40-2+ Jl '53

Sound-reinforcing system for theater-type studio. L. J. Kleinklaus. il diags Electronics 26:174-5 S '53

RADIO cabinets

See also

Television cabinets

RADIO circuits

Amplitude stability in oscillating systems. N. R. Scott. diag Inst Radio Eng Proc 41: 1031-4 Ag '53

Analysis and performance of locked-oscillator frequency dividers employing nonlinear elements. W. L. Hughes. il diags Inst Radio Eng Proc 41:241-5 F '53

Analysis of vacuum tube and transistor circuits. L. A. Zadeh. diags Inst Radio Eng Proc 41:989-92 Ag '53

Anode-follower derivatives. A. W. Keen. bibliog diags Wireless Eng 30:5-9 Ja '53

Approximation problem in network synthesis. A. D. Bresler. diags Inst Radio Eng Proc 40:1724-8 D '52; Correction. 41:644 My '53

Approximations in network design. W. Saraga. diag Wireless Eng 29:280-1 O '52

Carrier control with self-biased clamp-tube modulator. il diags Q S T 36:41-4 N '52

Clapp oscillator; explanation of the series-tuned Colpitts circuit. R. Cassey. diags Q S T 37:19-21+ F '53

Complementary symmetry transistor circuits. R. D. Lohman. il diags Electronics 26:140-3 S '53

Degenerative pentode equivalent circuit. H. Stockman. diags Inst Radio Eng Proc 41: 801 Je '53

Design boners. J. H. Wyman. il diags Tele-Tech 12:127 Je; 43 Jl '53

Designing cathode followers for pulse type circuits. H. A. Favors. diags Tele-Tech 12:80-1 Ag '53

Double-counter f-m and afc discriminator. J. J. Hupert and others. diags Electronics 25:124-5 D '52

Fixed-length transmission lines as circuit elements. A. A. Meyerhoff and R. Graham, jr. il diags Inst Radio Eng Proc 41:262-8 F '53

Four-terminal networks. O. P. D. Cutteridge. bibliog diags Wireless Eng 30:61-9 Mr '53

Frequency discriminator for narrow-band f-m. E. C. Miller. il diags Electronics 26: 128-9 F ''53

Frequency feedback. H. E. Hollmann. il diags Tele-Tech 12:91-3+ Mr '53

How to design notch networks; with nomograph. C. J. Savant, jr. diags Electronics 26:188-91 My '53

How to design vr tube circuits. R. C. Miles. diag Electronics 25:135-7 O '52

Junction transistor circuit applications. P. G. Sulzer. bibliog diags Electronics 26: 170-3 Ag '53

Lock-in performance of an afc circuit. G. W. Preston and J. C. Tellier. diag Inst Radio Eng Proc 41:249-51 F '53

Maximum gain of an rc network. A. D. Fialkow and I. Gerst. diags Inst Radio Eng Proc 41:392-5 Mr '53

Method of analysis of fundamental and overtone crystal-oscillator circuits. F. G. R. Rockstuhl. diags Inst E E Proc 99 pt 3: 377-88 N '52

Method of designing transistor trigger circuits. F. C. Williams and G. B. B. Chaplin. bibliog diags Inst E E Proc 100 pt 3:228-44; Discussion. 245-8 Jl '53

Milled block simplifies microwave construction. il Electronics 26:189+ F '53

Network alignment technique. J. G. Linvill. il diags Inst Radio Eng Proc 41:290-3 F '53

Network theorem. E. E. Zepler. diags Wireless Eng 29:44-5 F '52; Discussion. L. Storch. 30:77-81 Ap '53

Networks with maximally-flat delay. W. E. Thomson. bibliog diag Wireless Eng 29: 256-63 O '52

New linear passive nonreciprocal microwave circuit component. L. Goldstein and M. A. Lampert. Inst Radio Eng Proc 41: 295-6 F '53; Same. Elec Com 30:164-5 Je '53

Optimum linear shaping and filtering networks. R. S. Berkowitz. bibliog diag Inst Radio Eng Proc 41:532-7 Ap '53

Parallel-T resistance; capacitance network. L. G. Cowles. diags Inst Radio Eng Proc 40:1712-17 D '52

Planar triode frequency multiplier for uhf. H. R. Holloway and others. il diags Tele-Tech 12:84-5+ F '53

Quick-change breadboard for circuit research. R. E. Prouty. il diags Electronics 26:126-7 Ja '53

RADIO circuits—*Continued*

Rc cathode-follower feedback circuits. S. C. Dunn. bibliog diags Wireless Eng 30:10-19 Ja '53

Rc or direct-coupled power stage. E. F. Good. diags Wireless Eng 30:54-7 Mr '53

Rlc lattice networks. L. Weinberg. bibliog diags Inst Radio Eng Proc 41:1139-44 S '53

Radio progress during 1952; circuits. bibliog Inst Radio Eng Proc 41:482-3 Ap '53

Repairable plug-in circuit. R. H. Harwood. il Electronics 26:234+ Ap '53

Resistance-capacitance networks with over-unity gain. W. Bacon and D. P. Salmon. diags Wireless Eng 30:20-3 Ja '53

Resistive bidirectional coupler. L. Rosenthal. diags Inst Radio Eng Proc 41:799-800 Je '53

Resonance characteristics by conformal mapping. P. M. Honnell and R. E. Horn. bibliog diags Inst Radio Eng Proc 40:1211-15 O '52

Response of a tuned circuit to a ramp function. M. S. Corrington. diags Inst Radio Eng Proc 41:660-4 My '53

Return-difference matrix in linear networks; abstract. L. Tasny-Tschiassny. diags Inst E E Proc 100 pt 3:248-9 Jl '53

Sketch for an algebra of switchable networks. J. Shekel. bibliog diags Inst Radio Eng Proc 41:913-21 Jl '53

Smith chart applications. J. Markin. diags Tele-Tech 12:85-7+ My '53

Spectrum equalization; use of differentiating and integrating circuits. G. G. Gouriet. bibliog il diags Wireless Eng 30:112-23 My '53

Spurious response chart. A. E. Eberhardt. Tele-Tech 11:49-50 D '52

Symmetrical properties of transistors and their applications. G. C. Sziklai. il diags Inst Radio Eng Proc 41:717-24 Je '53

Synthesis of a network to have a sine-squared impulse response. W. E. Thomson. diag Inst E E Proc 99 pt 3:373-6 N '52

Synthesis of cascaded three-terminal rc networks with minimum-phase transfer functions. P. F. Ordung and others. bibliog diags Inst Radio Eng Proc 40:1717-23 D '52

Synthesis of narrow-band direct-coupled filters. H. J. Riblet. bibliog diags Inst Radio Eng Proc 40:1219-23 O '52

Transformations of linear active networks with applications at ultra-high frequencies. H. Hsu. bibliog diags Inst Radio Eng Proc 41:59-67 Ja '53

Transistor noise in circuit applications. H. C. Montgomery. bibliog diags Inst Radio Eng Proc 40:1461-71 N '52

Vacuum-tube circuits without plate supplies. P. B. Clark. diags Electronics 25:192+ D '52

Voltage-multiplying circuits. G. P. Rumble. diags Q S T 37:25-6 Ja '53

Wide-band phase-delay circuit. H. Sohon. Inst Radio Eng Proc 41:1050-2 Ag '53

Wide-band re-entrant networks. W. D. Fingers. diags Q S T 37:48-9 Ap '53

See also

Radio receiving apparatus

RADIO coils

Coupling toroidal coils. R. R. Darden, jr. il diags Tele-Tech 11:64-5 N '52

Determination of voltage, current, and magnetic field distributions together with the self-capacitance, inductance and hf resistance of single-layer coils. A. E. Mostafa and M. K. Gohar. bibliog diags Inst Radio Eng Proc 41:537-47 Ap '53

Getting acquainted with the ARRL lightning calculator. D. H. Mix. il Q S T 37:44-5+ Ap '53

Keyed mandrels and dereelers speed winding of coils. il Electronics 26:260+ Ap '53

Magnetic ceramics; ferrites; the latest in magnetic materials for r.f. F. E. Vinal. il Q S T 37:44-6 F '53

Make your own u.h.f. chokes. E. J. Gauss. il diags Radio & Tv N 49:83-4 My '53

Measuring small r-f chokes. T. L. Snowdon. il diags Electronics 26:334+ Mr '53

Moisture-aging of powder-core toroids. E. J. Oelbermann and others. il Electronics 26:236+ My '53

Powdered magnetic cores. W. J. Polydoroff. bibliog il Tele-Tech 12:69-71+ F '53

Manufacture

Wire tension meter reduces coil rejects. E. J. Saxl. il Electronics 25:282+ N '52

Testing

Coil turns counter. il Electronics 26:284+ My '53

RADIO communication

COZI; communication zone indicator. L. C. Edwards. il diags Electronics 26:152-5 Ag '53

Communications and electronics. M. J. Kelly. Elec Eng 71:965-9 N '52

Comparison of the informational capacities of amplitude- and phase-modulation communication systems. N. M. Blachman. diags Inst Radio Eng Proc 41:748-59 Je '53

Engineering highlights of 1952; relaying and communication. C. A. Scarlott. il Westinghouse Eng 13:12-14 Ja '53

Inexpensive radioteletype converter. M. Bernstein. diags Q S T 37:44-5+ Ja '53

Performance of am and single-sideband communications. J. F. Honey. diags Tele-Tech 12:64-6+ S '53

Servo system comparators; comparison of error signals in communications systems. M. Cooperstein. diags Tele-Tech 11:65-7 D '52

See also

Airlines—Radio communication

Concrete plants—Radio communication

Electric communication

Electric utilities—Radio communication

Petroleum industry and trade—Radio communication

Public utilities—Radio communication

Radio aids to navigation and other headings beginning Radio

Railroads—Radio communication

Railroads, Industrial—Radio communication

Beam system

New wide-angle microwave reflector. K. S. Kelleher. il diags Tele-Tech 12:98-9+ Je '53

Passive repeater bends microwave beam. H. Magnuski and T. F. Koch. il map diag Electronics 26:134-7 F '53

Bibliography

Abstracts and references. Published in monthly numbers of Wireless engineer; reprinted in Institute of radio engineers proceedings

Emergency use

Mobile communications center ready for civil defense service. Elec Eng 71:1156-7 D '52

Philadelphia's new mobile unit. E. P. Grim. il Radio & Tv N 49:51 Mr '53

History

Bending of the microwaves; Marconi's third great discovery, his prophecy of 1932. il Tele-Tech 12:57+ Ag '53

Interference

Aircraft radio interference measurements. M. M. Newman and others. il diag Elec Eng 72:36-40 Ja '53

Intermodulation interference in radio systems. W. C. Babcock. Bell System Tech J 32:63-73 Ja '53

Optimum filters for the detection of signals in noise. L. A. Zadeh and J. R. Ragazzini. bibliog diags Inst Radio Eng Proc 40:1223-31 O '52

Radiocommunication on frequencies exceeding predicted values. E. Appleton and W. J. G. Beynon. bibliog diags Inst E E Proc 100 pt 3:192-8 Jl '53

See also

Television transmission—Interference

Interference elimination

Filter insertion loss in the 10-1000 mc range. S. Shive. il diags Tele-Tech 12:95-7+ Je '53

Frequency economy in mobile radio bands. K. Bullington. Bell System Tech J 32:42-62 Ja '53; Abstract. Electronics 26:228+ Je '53

RADIO communication—Interference elimination—*Continued*

Interference reducing radio receiving system; patent. diag Electronics 26:202-4 Ap '53

New antenna fittings reduce precipitation-static interference. C. De Vore. il diags Tele-Tech 12:77-9+ My '53

Noise limiter deluxe. J. J. Hoefer. diags Radio & Tv N 49:76+ My '53

Noise limiter for mobile vhf. N. Bishop. diags Electronics 26:164-5 Je '53

Precipitation static is licked. F. Flader. il diags Aero Digest 66:64-6+ Je '53

Qrm rejection the simple way. L. G. McCoy. il diag Q S T 37:22-3 Je '53

Tunable hum in broadcast receivers. S. Wald. diags Radio & Tv N 49:42+ Je '53

What to do about certifying your induction heater. O. Noeske. il diag Am Mach 97:144-6 Mr 16 '53; Same. Mill & Factory 52:104-7 Je '53; Same. Rubber Age 73:230 My '53; Same cond. Textile World 103:104+ Je '53; Excerpts. Elec World 139:112-13 Ap 20 '53

Short wave

Channel spacings at 152 to 174 mc.; report on comparative performances of two-way radio equipments for channels of 60, 30, and 20 kc. in the 160-mc. band. H. E. Strauss. il diag Commun Eng 13:17-21+ Mr '53

Communication news for those who are concerned with mobile, point-to-point, and microwave relay systems. il Radio Com 12:24+ O '52

Extended-range high-frequency radio communication at relatively low power, by means of overlapping oblique reflections from meteor ionization trails. O. G. Villard, jr. and others. Science 117:638-9 Je 5 '53

Frequency economy in mobile radio bands. K. Bullington. Bell System Tech J 32:42-62 Ja '53; Abstract. Electronics 26:228+ Je '53

International short-wave; foreign stations, call letters, time schedules. K. R. Boord, comp. Published in monthly numbers of Radio and television news

Meteor scatter; extended-range communication in 15- and 20-meter bands. O. G. Villard, jr. and A. M. Peterson. il map diags Q S T 37:11-15+ Ap '53

Microstrip, a new transmission technique for the kilomegacycle range. D. D. Grieg and H. F. Engelmann. il diags Inst Radio Eng Proc 40:1644-50 D '52; Same. Elec Com 30:26-35 Mr '53

New set of equipment for a new art; microwave communication. N. B. Tharp. il diags Westinghouse Eng 12:198-203 N '52

Vehicular communications symposium. Electronics 26:200+ F '53

World's longest private system of microwave serves Transcontinental 1840-mile line. R. A. Rhodes and others. il map diags Gas Age 111:55-62+ Ap 23 '53

See also

Radio receiving apparatus—Short wave

Radio transmitters—Short wave

Traffic control use

Radio trafficasting aids highway control. diag Tele-Tech 12:66 S '53

Wire line connections

Privately-owned microwave circuits and telephone company facilities. J. Courtney. Commun Eng 13:13+ Ja '53

RADIO communication, Marine

See also

Radio telephone on ships

RADIO communication, Military

Development of military radio equipment. Engineer 194:96 Jl 18 '52; Engineering 174:153-4, 189 Ag 1-8 '52

Instrument electronics. M. H. Aronson. diags Instruments 26:108-12+ Ja '53

Navy vlf transmitter will radiate 1,000 kw. T. D. Hobart. il diags Electronics 25:98-101 D '52

Vhf communications in Korea. R. G. Gould. il diag Radio & Tv N 49:35-8+ Je '53

See also

United States—Navy—Communications system

RADIO communication, Naval. See Radio communication, Military

RADIO condenser company

Common stock offered. Comm & Fin Chr 177:1841 Ap 27 '53

RADIO condensers

Design of linear-frequency capacitance tuners for shorted transmission line. A. Newton. Electronics 26:246+ Je '53

Initial conditions in transient analysis. L. Tasny-Tschiassny. diags Wireless Eng 30:28-31 F '53

Low-cost low-pass filters from standard mica condensers. G. Grammer. il diag Q S T 36:38-9 D '52

Small wire capacitors. il Electronics 25:184+ O '52

Tantalum-foil capacitors save space. L. W. Foster. Electronics 26:242+ My '53

Why use a condenser in a v.h.f. oscillator? R. Wagner. il diags Radio & Tv N 49:40-1 Je '53

Testing

Capacitor-testing merry-go-round. il Electronics 26:298-9 My '53

RADIO conductors

Forming high-frequency conductors. G. W. Lee. diags Commun Eng 13:27 Mr '53

Launching of electromagnetic waves on a cylindrical conductor. R. B. Dyott. bibliog diags Inst E E Proc 99 pt 3:408-13 N '52

See also

Radio lines

Wave guides

RADIO control

Microwave control of pump station raises line capacity at minimum cost. J. R. Ellis. il Oil & Gas J 51:258-9+ N 17 '52; Same. Am Pet Inst Proc 32(5):29-34 '52; Same cond. Nat Pet N 44:64-5 N 12 '52

Microwave remote control for Yale plant; Pacific power & light co. E. R. de Luccia. il Elec West 109:80-1 N '52

Microwave to control c.t.c. in Venezuela. diag Ry Age News ed 135:22 Ag 3 '53

Model boat for the 27 mc. citizens band. H. B. Smith. bibliog il diags Radio & Tv N 49:35-8+ Mr '53

Radio controlled light may save half million. il Electronics 26:18 Ap '53

Radio-controlled models; abstract and discussion. P. A. Cummins. Inst E E Proc 99 pt 3:405-6 N '52

Remote control with a 420-mc. link. K. L. Bowles and R. B. Dyce. diags Q S T 37:32-7 Jl '53

Short-wave railroading; remotely controlling switches, signals and interlockings. map Mill & Factory 53:128+ Ag '53

See also

Carrier current contol

RADIO corporation of America

Five stocks with better-than-average prospects; with comparative balance sheet items. Mag of Wall St 91:127 N 1 '52

RADIO detectors

Measurements of detector output spectra by correlation methods. L. Weinberg and L. G. Kraft. bibliog diags Inst Radio Eng Proc 41:1157-66 S '53

RADIO echoes

Extended-range high-frequency radio communication at relatively low power, by means of overlapping oblique reflections from meteor ionization trails. O. G. Villard, jr. and others. Science 117:638-9 Je 5 '53

RADIO engineering

IRE national convention, New York, March 23-26; summaries of technical papers. Inst Radio Eng Proc 41:403-27 Mr '53

Radio; coalescence of science and arts. I. S. Coggeshall. Inst Radio Eng Proc 40:1156-7 O '52

Radio progress during 1952. bibliog (1057 titles) il Inst Radio Eng Proc 41:452-507 Ap '53

Reference sheet section. bibliog diags Electronics 26:R 1-64 Mid-Je '53

RADIO engineering—*Continued*

Synthesis of transfer functions with poles restricted to the negative real axis. L. Weinberg. diags J Ap Phys 24:207-16 F '53

See also

Direction finding apparatus

Loud speaking apparatus

Microphones

Radar

Radio apparatus and other headings beginning Radio

Sound—Recording and reproducing

Television

Vacuum tubes

Bibliography

Abstracts and references. Published in monthly numbers of Wireless engineer; reprinted in Institute of radio engineers proceedings

RCA technical papers, third quarter, 1952. RCA R 13:573-4 D '52

RCA technical papers; fourth quarter, 1952. RCA R 14:125-7 Mr '53

RCA technical papers; first quarter 1953. RCA R 14:297-8 Je '53

History

Radio; founder of a dynasty. W. L. Everitt. Midwest Eng 5:5-6+ Ja '53

Spirit of discovery; an appreciation of the work of Marconi. E. H. Armstrong. bibliog il Elec Eng 72:670-6 Ag '53

Tables, calculations, etc.

Calculation of sky-wave field strength. K. Rawer. bibliog il diags Wireless Eng 29:287-301 N '52

Getting acquainted with the ARRL lightning calculator. D. H. Mix. il Q S T 37:44-5+ Ap '53

Graphical aids to broadcasting. A. E. Richmond. diag Electronics 25:195+ O '52

Matrix representation of transistor circuits. J. Shekel. bibliog diags Inst Radio Eng Proc 40:1493-7 N '52

Nomograms for the computation of tropospheric refractive index. D. M. Swingle. bibliog Inst Radio Eng Proc 41:385-91 Mr '53

Parallel-paired resistance values. C. F. White. Tele-Tech 12:81 Ap '53

Rapid parallel-Z calculations. L. Storch. Tele-Tech 12:91-3+ Ag '53

Universal skin-effect chart for conducting materials. H. A. Wheeler. bibliog Electronics 25:152-4 N '52

See also

Radio antennas

Terminology

Standards on receivers; definitions of terms, 1952. Inst Radio Eng Proc 40:1681-5 D '52

RADIO engineers, Institute of. See Institute of radio engineers

RADIO facsimile

Radio progress during 1952; facsimile. bibliog Inst Radio Eng Proc 41:472 Ap '53

Recent developments in photo-telegraphy and facsimile transmission. J. Bell and others. bibliog il diags Inst E E Proc 99 pt 3:344-59; Discussion. 359-63 N '52

Transmission of pictures by radio. A. W. Cole and J. A. Smale. bibliog il diags Inst E E Proc 99 pt 3:325-34; Discussion. 359-63 N '52

See also

Facsimile transmission

Phototelegraphy

RADIO filters

Audio-frequency filters using negative feedback. T. Janisz. il diag Electronics 26:222+ S '53

Bandwidth nomograph for pulse filter network; reference sheet. B. L. Adams and T. M. Stout. bibliog Electronics 25:142, 144 D '52

Coaxial transmission-line filters. D. E. Mode. il diags Inst Radio Eng Proc 40:1706-11 D '52

Combining the antenna coupler and low-pass filter. G. Grammer. il diag Q S T 37:17-19+ Mr '53

Design of low-frequency constant time delay lines. C. M. Wallis. diags Elec Eng 71:1123 D '52

Design procedure for crystal lattice filters. W. C. Vergara. il diags Tele-Tech 12:86-7 S '53

Detection of a sine wave in the presence of noise by the use of a nonlinear filter. T. G. Slattery. bibliog diag Inst Radio Eng Proc 40:1232-6 O '52

Effects of terminations and dissipation on the insertion loss of some simple ladder filters. M. Strasberg. diag Inst Radio Eng Proc 41:777-80 Je '53

Electronic curve tracer; patent. diag Electronics 26:240+ S '53

Filter insertion loss in the 10-1000 mc range. S. Shive. il diags Tele-Tech 12:95-7+ Je '53

Filter transfer function synthesis. G. L. Matthaei. bibliog diags Inst Radio Eng Proc 41:377-82 Mr '53

$5 low-pass filter. J. G. Rountree. il diag Radio & Tv N 49:47+ Je '53

Formulae for ladder filters. H. J. Orchard. diags Wireless Eng 30:3-5 Ja '53

How to use mechanical i-f filters. M. L. Doelz and J. C. Hathaway. il diags Electronics 26:138-42 Mr '53

Low-cost low-pass filters from standard mica condensers. G. Grammer. il diag Q S T 36:38-9 D '52

Magnetostriction devices and mechanical filters for radio frequencies. W. V. Roberts. diags Q S T 37:24-7 Je; 28-30+ Jl; 32-5+ Ag '53

Mechanical bandpass filters for i.f. ranges. B. Roberts. il Q S T 37:22-4 F '53

New filter slices air waves finer; developed by Collins Radio. P. Klass. il diag Aviation W 57:61-3 N 3 '52

Nonlinear filtering and waveshape multiplexing. R. E. Scott and others. diags Electronics 25:146+ D '52

Optimum filters for the detection of signals in noise. L. A. Zadeh and J. R. Ragazzini. bibliog diags Inst Radio Eng Proc 40:1223-31 O '52

Optimum linear shaping and filtering networks. R. S. Berkowitz. bibliog diag Inst Radio Eng Proc 41:532-7 Ap '53

Power-supply filters. G. P. Rumble. diags Q S T 36:43+ D '52

Qrm rejection the simple way. L. G. McCoy. il diag Q S T 37:22-3 Je '53

Single-frequency audio filter. T. M. Dauphinee. diags Electronics 26:254+ Mr '53

Synthesis of narrow-band direct-coupled filters. H. J. Riblet. bibliog diags Inst Radio Eng Proc 40:1219-23 O '52; Discussion. 41:1058-9 Ag '53

Tvi hints for the u.h.f. man. E. P. Tilton. il diags Q S T 37:16-20 Ap '53

Transient response of r.f. and i.f. filters to a wave packet. A. W. Gent. bibliog diags Inst E E Proc 99 pt 3:414-16 N '52

Vibrating-wire high-Q resonator. A. W. Dickson and W. P. Murden. il diags Electronics 26:164-7 S '53

Testing

Production-testing filters. W. Rianda. il diags Electronics 26:300+ Ap '53

RADIO frequency

Instantaneous frequency. J. Shekel. Inst Radio Eng Proc 41:548 Ap '53

Modified wide-range shunted-T circuit for the measurement of impedance in the a.f., r.f. and v.h.f. ranges. D. Karo. diags Inst E E Proc 100 pt 3:25-8 Ja '53

Allocation

Future of microwaves. E. L. White. Commun Eng 13:29+ My '53

Spectrum of FCC frequency allocations, 1953: chart in six colors. Tele-Tech 12:supp Ja '53 (reprints, folded chart 50c; chart for framing $1)

Spectrum utilization. E. W. Allen, jr. Inst Radio Eng Proc 41:835 Jl '53

See also

Television transmission—Frequency allocation

Control

Evaluating afc systems for television receivers. G. Howitt. diags Electronics 25:132-5 N '52

Vibrating-wire high-Q resonator. A. W. Dickson and W. P. Murden. il diags Electronics 26:164-7 S '53

RADIO frequency—*Continued*

Crystal control

Low-cost crystal calibrator. G. L. Countryman. il diag Radio & Tv N 50:63+ Ag '53

RADIO frequency modulation

Distortion of a frequency-modulated signal by small loss and phase variations. F. Assadourian. diags Inst Radio Eng Proc 40:172-6 F '52; Same. Elec Com 29:314-20 D '52

Double-counter f-m and afc discriminator. J. J. Hupert and others. diags Electronics 25:124-5 D '52

Field strengths recorded on adjacent fm channels at 93 mc over distances from 40 to 150 miles. G. S. Wickizer and A. M. Braaten. map Inst Radio Eng Proc 40:1694-9 D '52

Frequency discriminator for narrow-band f-m. E. C. Miller. il diags Electronics 26:128-9 F '53

Fm for aircraft. il diag Radio Com 12:22-3 D '52

Fm microwave radio relay. R. E. Lacy and C. E. Sharp. il diags Inst Radio Eng Proc 41:125-8 Ja '53

Hand-carried two way fm equipment. il diags Commun Eng 13:28-30 Mr '53

Multiple television and frequency-modulation transmitting antenna installation on the Empire State building. J. B. Dearing and others. il diags Inst Radio Eng Proc 41:324-37 Mr '53

New multiplex system for three-dimensional sound; stereosonic system. A. J. Forman. il diags Tele-Tech 12:92-3+ Ap '53

Photo-telegraph transmitter-receiver utilizing sub-carrier frequency modulation. R. O. Carter and L. K. Wheeler. il diags Inst E E Proc 99 pt 3:335-43; Discussion. 359-63 N '52

See also

Radio receiving apparatus—Frequency modulation receivers

Radio transmitters—Frequency modulation transmitters

RADIO generators

Carrier generators for s.s.b. reception. P. N. Wright. diags Q S T 36:35-6 D '52

Low distortion audio signal generator. G. E. Jones, jr. il diags Radio & Tv N 50:58-60 Jl '53

Low-frequency function generator. R. H. Brunner. il diags Electronics 25:114-17 D '52

Signal generator system for low output levels. J. W. Herbstreit. diag Electronics 26:218+ Ja '53

See also

Pulse generators

RADIO industry

Directories

1952-53 motion picture and television almanac. C. S. Aaronson, ed. 24th ed 1010p Quigley publications, 1270 6th av, New York '52 ($5)

RADIO instruments

Accurate radio-frequency microvoltages; abstract. M. C. Selby. il diags Elec Eng 72:515 Je '53

Adapting v.o.m. as a field strength meter. E. Robberson. il Radio & Tv N 50:59 Ag '53

Automatic Smith chart plotter aids study of transmission lines and vhf circuits. K. S. Packard. il diag Tele-Tech 12:65-7+ Ap '53

Calibrating ammeters above 100 mc. H. R. Meahl and C. C. Allen. bibliog il diags Inst Radio Eng Proc 41:152-9 Ja '53

Choose the probe to fit the test. A. Liebscher. il diags Radio & Tv N 50:40-2+ Ag '53

COZI; communication zone indicator. L. C. Edwards. il diags Electronics 26:152-5 Ag '53

Compact filament and short checker. R. Baxter. il diags Radio & Tv N 50:134 Ag '53

Handy handful; miniature grid-dip meter using magic-eye indicator. C. V. Chambers. il diags Q S T 37:29-31+ Mr '53

High-frequency bridge with variable-ratio arms. J. E. Houldin and G. T. Thompson. il diags Wireless Eng 30:32-8 F '53

Impedance-measuring apparatus for use with v.h.f. aerials. M. P. Beddoes. bibliog il diags Wireless Eng 30:69-72 Mr '53

Instrument for dielectric measurements in the frequency range 100-300 mc/s. D. L. Hollway and G. J. A. Cassidy. bibliog il diags Inst E E Proc 99 pt 3:364-72 N '52

Let's use neon bulbs as indicators and oscillators. L. G. McCoy. il diags Q S T 37:22-5+ Jl '53

Low-cost crystal calibrator. G. L. Countryman. il diag Radio & Tv N 50:63+ Ag '53

Monimeter. L. V. Broderson. il diags Radio & Tv N 50:47+ Jl '53

Novel probe switch. M. White. il diags Radio & Tv N 49:72+ Je '53

Nuclear resonance spectrometer. L. Malling. il diags Electronics 26:184-7 Ap '53

Precision phase comparator for use at low radio frequencies. B. G. Pressey and others. diags Inst E E Proc 99 pt 3:413-14 N '52

Principles and applications of converters for high-frequency measurements. D. A. Alsberg. bibliog il diags Inst Radio Eng Proc 40:1195-203 O '52

Radio progress during 1952; instrumentation. bibliog il Inst Radio Eng Proc 41:487-92 Ap '53

Reliable locked-oscillator pulse timer. P. G. Sulzer. bibliog il diags Tele-Tech 12:68-9+ Ap '53

S-band sweep generator and test set. R. E. Larson. il diags Tele-Tech 12:116-18+ Je '53

600-mc/s field-strength meter. A. C. Gordon-Smith. diags Wireless Eng 29:306-8 N '52

Special magnetic materials in wow meter. il Product Eng 23:222 O '52

Transistor broadcast regenerator. P. G. Sulzer. diag Electronics 26:200 Je '53

Transistor sine-wave clipper. L. E. Garner, jr. il diags Radio & Tv N 49:50-1+ My '53

Transistors in terms of vacuum tubes; transistor bridge described. H. E. Hollmann. il diags Tele-Tech 12:74-6+ My '53

Uhf grid-dip meter. A. E. Hylas and W. V. Tyminski. il diags Electronics 26:175-7 Ap '53

Universal-shunt milliammeter design. W. Price. diags Q S T 37:43+ F '53

Versatile wavemeter. J. Roberson. il diags Radio & Tv N 48:70-1+ N '52

What's the q.l.c? Q meter. W. Philbrook. il diag Radio & Tv N 50:61+ Jl '53

Wide-range calibrator for vibration pickups; uses nonloading displacement transducer. W. A. Yates and M. Davidson. bibliog il diags Electronics 26:183-5 S '53

See also

Direction finding apparatus

Oscillators

Radio meteorographs

Raydist

Wavemeters

Testing

Calibration of commercial field-strength meters. C. C. Cook. diags Tele-Tech 11:44-6+ O '52

RADIO interference. See Radio communication—Interference

RADIO-KEITH-ORPHEUM theaters corporation

RKO; it's only money. il Fortune 47:122-7+ My '53

RADIO laws and regulations

Complying with the FCC rules. C. I. Fonger. Radio Com 12:13+ N '52

O.K. to depict crime; can radio commit one? J. Walker. Ed & Pub 85:56 D 20 '52

Privately-owned microwave circuits and telephone company facilities. J. Courtney. Commun Eng 13:13+ Ja '53

See also

Radio frequency—Allocation

RADIO lines

Anti-resonant h.f. transmission lines; input impedance characteristics. H. M. Barlow. Wireless Eng 29:145-7 Je '52; Discussion. 29:334-5 D '52

Bandwidth of quarter-wave sections. E. G. Fubini and F. H. Rockett, jr. Electronics 25:138-9 O '52

Broad-band matching with a directional coupler. W. C. Jakes, jr. diags Inst Radio Eng Proc 40:1216-18 O '52

Coaxial transmission-line filters. D. E. Mode. il diags Inst Radio Eng Proc 40:1706-11 D '52

RADIO lines—*Continued*

Composite-dielectric coaxial line. J. A. Kostriza. bibliog diag Elec Com 30:155-63 Je '53

Design of low-frequency constant time delay lines. C. M. Wallis. diags Elec Eng 71:1123 D '52

Effect of radiation on resonant lines. R. A. Chipman. diags Electronics 26:133-5 Ja '53

Equipment for impedance matching and measurement at very high frequencies. A. Bloch and others. il diags Inst E E Proc 100 pt 3:93-9 Mr '53

Fixed-length transmission lines as circuit elements. A. A. Meyerhoff and R. Graham, jr. il diags Inst Radio Eng Proc 41:262-8 F '53

Frequency range for air-dielectric coaxial lines. O. Fiet and others. diag Tele-Tech 12:82-4+ Mr '53

Impedance matching with transformer sections. R. W. Klopfenstein. diags RCA R 14:64-71 Mr '53

Liquid dielectric r-f coaxial cables. R. M. Soria and others. bibliog diags Tele-Tech 11:38-41+ D '52

Microstrip, a new transmission technique for the kilomegacycle range. D. D. Grieg and H. F. Engelmann. il diags Inst Radio Eng Proc 40:1633-50 D '52; Same. Elec Com 30:26-35 Mr '53

Microstrip components. J. A. Kostriza. il diags Inst Radio Eng Proc 40:1658-63 D '52; Same. Elec Com 30:46-54 Mr '53

Open-line swr checks. G. W. Lee. diags Commun Eng 13:36 My '53

Optimum piston position for wide-band coaxial-to-waveguide transducers. W. W. Mumford. il diags Inst Radio Eng Proc 41:256-61 F '53

Radiation resistance of resonant transmission lines. R. A. Chipman and others. bibliog diags J Ap Phys 23:613-20 Je '52

Radiofrequency power supply. E. M. Reilley and others. diag R Sci Instr 23:572-3 O '52

Simplified theory of microstrip transmission systems. F. Assadourian and E. Rimai. diags Inst Radio Eng Proc 40:1651-7 D '52; Same. Elec Com 30:36-45 Mr '53

Standardization of rigid coaxial transmission lines. J. J. Drvostep and A. W. Lebert. il diags Tele-Tech 12:78-9+ F '53

Theory of the single-wire transmission line. T. E. Roberts, jr. bibliog diags J Ap Phys 24:57-67 Ja '53

Transmission-line formulae. G. W. O. Howe. Wireless Eng 30:101-2 My '53

Uhf and microwave matching termination. R. C. Ellenwood and W. E. Ryan. diags Inst Radio Eng Proc 41:104-7 Ja '53

Uhf surface-wave transmission line. C. E. Sharp and G. Goubau. il diag Inst Radio Eng Proc 41:107-9 Ja '53

See also

Television cables

Wave guides

Bibliography

Radio progress during 1952; antennas, waveguides, and transmission lines. il Inst Radio Eng Proc 41:495-7 Ap '53

RADIO loud speakers

Gain of electromagnetic horns. E. H. Braun. diags Inst Radio Eng Proc 41:109-15 Ja '53

New 2½-ton electromagnet used to magnetize radio speakers. il Iron Age 171:140 My 28 '53

See also

Loud speaking apparatus

Manufacture

Cement-applying shortcuts boost speaker production. il Electronics 26:274+ Mr '53

Testing

Universal speaker tester. S. Lenson and M. Tepper. il diag Radio & Tv N 49:58+ Mr '53

RADIO masts

Portable aluminium test masts. il diag Engineer 196:87 Jl 17 '53; Engineering 176:127 Jl 24 '53; Elec J 151:204 Jl 17 '53; Metallurgia 48:104 S '53

RADIO measurements

Antenna impedance-measuring instrument. J. F. Cline. il diag Inst Radio Eng Proc 40:1686-9 D '52

Attenuation and surface roughness of electroplated waveguides. F. A. Benson. bibliog il diag Inst E E Proc 100 pt 3:213-16 Jl '53

Attenuation of wire helices in dielectric supports. R. W. Peter and others. bibliog diags RCA R 13:558-72 D '52

Automatic recording slide-back peak voltmeter. C. R. Ammerman. il diags R Sci Instr 24:161-4 F '53

Comparison of cw field intensity and backscatter delay. W. L. Hartsfield and R. Silberstein. bibliog Inst Radio Eng Proc 40:1700-6 D '52

Conductance measurements on operating magnetron oscillators. M. Nowogrodzki. bibliog diags Inst Radio Eng Proc 40:1239-43 O '52

Constants in the equation for atmospheric refractive index at radio frequencies. E. K. Smith, jr. and S. Weintraub. bibliog Inst Radio Eng Proc 41:1035-7 Ag '53

Determination of impedance with a double-slug transformer. R. C. Ellenwood and E. H. Hurlburt. diag Inst Radio Eng Proc 40:1690-3 D '52; Discussion. G. W. O. Howe. Wireless Eng 30:131-2 Je '53

Determination of voltage, current, and magnetic field distributions together with the self-capacitance, inductance and hf resistance of single-layer coils. A. E. Mostafa and M. K. Gohar. bibliog diags Inst Radio Eng Proc 41:537-47 Ap '53

Effect of radiation on resonant lines. R. A. Chipman. diags Electronics 26:133-5 Ja '53

Equipment for impedance matching and measurement at very high frequencies. A. Bloch and others. il diags Inst E E Proc 100 pt 3:93-9 Mr '53

Equipments for measuring junction transistor admittance parameters for a wide range of frequencies. L. J. Giacoletto. bibliog il diags RCA R 14:269-96 Je '53

Experimentally determined radiation characteristics of conical and triangular antennas. G. H. Brown and O. M. Woodward, jr. bibliog il diags RCA R 13:425-52 D '52

Field strength of KC2XAK, 534.75 mc recorded at Riverhead, N.Y. G. S. Wickizer. map Inst Radio Eng Proc 41:140-2 Ja '53

Field strengths recorded on adjacent fm channels at 93 mc over distances from 40 to 150 miles. G. S. Wickizer and A. M. Braaten. map Inst Radio Eng Proc 40:1694-9 D '52

Filter insertion loss in the 10-1000 mc range. S. Shive. il diags Tele-Tech 12:95-7+ Je '53

High Q measurement; reference sheet. W. J. Spaven. diag Electronics 25:166 N '52

High-Q measurements in the 1000-mc range. A. Horvath. diags Tele-Tech 11:62-4+ D '52

Highly stable microwave oscillator and its application to the measurement of the spatial variations of refractive index in the atmosphere. L. Essen. bibliog diags Inst E E Proc 100 pt 3:19-24 Ja '53

How to measure low-level r-f signals. K. E. Mortenson. diags Electronics 26:162-3 Ag '53

Impedance-measuring equipment for the 50-500 mc/s range. J. E. Houldin. diags Inst E E Proc 99 pt 3:389-99 N '52

Measurement of high standing-wave ratios; abstract. T. J. Buchanan. diag Inst E E Proc 100 pt 3:44 Ja '53

Measurement of the phase velocity of ground-wave propagation at low frequencies over a land path. B. G. Pressey and others. bibliog diags Inst E E Proc 100 pt 3:73-84 Mr '53

Measurements of some operational characteristics of an amplitude-modulated injection-locked uhf magnetron transmitter. L. L. Koros. bibliog diags Inst Radio Eng Proc 41:4-10 Ja '53

Measuring resistance and reactance of an r-f impedance. S. L. Shive. diags Electronics 26:238+ Ag '53

Measuring small r-f chokes. T. L. Snowdon. il diags Electronics 26:334+ Mr '53

Measuring wavelength in millimeters; optical methods. J. R. Martin and C. F. Schunemann. il diags Electronics 26:184-7 My '53

Microwave correlator. R. M. Page and others. il diags Inst Radio Eng Proc 41:128-31 Ja '53

RADIO measurements—*Continued*

Microwave measurements on metallic delay media. S. B. Cohn. diags Inst Radio Eng Proc 41:1177-83 S '53

Mismatch errors in microwave power measurements. R. W. Beatty and A. C. Macpherson. diags Inst Radio Eng Proc 41:1112-19 S '53

Modified wide-range shunted-T circuit for the measurement of impedance in the a.f., r.f and v.h.f. ranges. D. Karo. diags Inst E E Proc 100 pt 3:25-8 Ja '53

Network alignment technique. J. G. Linvill. il diags Inst Radio Eng Proc 41:290-3 F '53

One problem in choosing test leads. G. S. Cohen and R. W. Hessinger. diags Q S T 37:47+ Jl '53

Principles and applications of converters for high-frequency measurements. D. A. Alsberg. bibliog il diags Inst Radio Eng Proc 40:1195-203 O '52

Q-meter correction chart for distributed capacitance. R. Lafferty. Tele-Tech 11:63 N '52

Radio-frequency power measurements. R. A. Schrack. diags U S Nat Bur Stand Circ 536: 1-16 bibliog(p14-16); pa 15c Supt. of doc. '53

Ratio meter measures reflection coefficient. L. A. Rosenthal and others. il diags Electronics 25:136-9 N '52

Signal generator system for low output levels. J. W. Herbstreit. diag Electronics 26:218+ Ja '53

Slide rule computes radio refractive index of air. S. Weintraub. il Electronics 26:182+ Ja '53

Squeeze-section phase shifter for microwave measurements. J. J. Brady and others. diags R Sci Instr 23:601-4 N '52

Three-probe method of impedance measurement at microwave frequencies. W. J. Duffin. diags Wireless Eng 29:317-20 D '52

Torque-operated wattmeter for three-cm microwaves; abstract. A. L. Cullen and I. M. Stephenson. bibliog diags Inst E E Proc 99 pt 2:516-17 O '52

Transmission loss in radio propagation. K. A Norton. bibliog diag Inst Radio Eng Proc 41:146-52 Ja '53

Wide-band waveguide phase-shifter. G. J. Halford. diag Inst E E Proc 100 pt 3:117-24; Discussion. 140-2 My '53

See also

Multivibrators
Radio echoes
Radio instruments
Radio standards
Voltmeters, Vacuum tube
Wavemeters

RADIO meteorographs

Barometer element for radio-sondes. H. V. Neher. il diags R Sci Instr 24:97-8 F '53

National bureau of standards mobile low-level sounding system. P. D. Lowell and others. bibliog il diags J Res Nat Bur Stand 50:7-17 Ja '53

RADIO modulation

Carrier control with self-biased clamp-tube modulator. il diags Q S T 36:41-4 N '52

Class AB_1 modulator for the small transmitter. G. Grammer. il diags Q S T 37:19-23+ My '53

Comparison of the informational capacities of amplitude- and phase-modulation communication systems. N. M. Blachman. diags Inst Radio Eng Proc 41:748-59 Je '53

Delta modulation. diag Elec Com 30:71-4 Mr '53

Diode modulators. B. Goodman. diags Q S T 37:39-42 Ap '53

Duo-diode modulation monitor. J. Lucas and D. Peters. il diag Radio & Tv N 48:55+ D '52

Electron coupler; a developmental tube for amplitude modulation and power control at ultra-high frequencies; engineering aspects. C. L. Cuccia. diags RCA R 14:72-99 Mr '53

Grid magnetron delivers modulated uhf output. P. L. Spencer. il diags Electronics 26:148-53 My '53

Impulse modulator. H. Moss. diags Electronics 25:206+ O '52

Intermodulation interference in radio systems. W. C. Babcock. Bell System Tech J 32:63-73 Ja '53

Low-pressure modulation facts. H. Wright. Q S T 37:15-17+ Jl '53

Modulation and frequency indicator for vhf and uhf. R. Grimm. il diags Tele-Tech 12: 86-7+ Ag '53

Performance of rectifier modulators. D. G. Tucker. diags Inst E E Proc 99 pt 3:400-4 N '52

Radio progress during 1952; information theory and modulation systems. bibliog il Inst Radio Eng Proc 41:483-7 Ap '53

Remodulation in electron multiplier cascades. H. E. Kallmann. diag Inst Radio Eng Proc 41:282-3 F '53

See also

Radio frequency modulation
Radio pulse time modulation

Mechanical analogies

Mechanical synthesis of the amplitude-modulated wave. A. M. Hardie. bibliog il diag Wireless Eng 29:326-33 D '52

Terminology

Standards on modulation systems; definitions of terms, 1953. Inst Radio Eng Proc 41:612-15 My '53

RADIO noise. See Radio communication—Interference; Radio communication—Interference elimination

RADIO noise, Solar

Solar enhanced radiation and plasma oscillations. H. K. Sen. bibliog Phys R 88: 816-22 N 15 '52

RADIO operators, Amateur

Amateurs and the radio law of 1912; editorial. Q S T 36:9-10 D '52

How to live longer; safety technique for ham equipment. D. H. Mix. diags Q S T 37:18-21+ Je '53

No news is bad news! amateur radio publicity. Q S T 37:50-1+ My '53

Progress report on tvi committees. G. S. Turner. Q S T 37:48-9+ F '53

Radio amateur civil emergency service. il map diag Q S T 37:50-2+ Mr; 59-61+ Ap; 60-2+ My '53

See also

Radio stations, Amateur

RADIO oscillators. See Oscillators

RADIO phonograph. See Radio receiving apparatus—Phonograph combination

RADIO pulse code modulation

Pulse-code modulation systems. A. J. Oxford. bibliog il diags Inst Radio Eng Proc 41: 859-65 Jl '53

Recent development in communication technique. C. W. Earp. bibliog diags Inst E E Proc 99 pt 3:181-6 Jl '52; Same. Elec Com 30:61-70 Mr '53

RADIO pulse time modulation

Moving target indicator in pulse radar systems and the Doppler myth. J. F. Bachman. il diags Tele-Tech 12:86-8+ Ap '53

Variable slope pulse modulation. O. E. Kruse. diag Inst Radio Eng Proc 40:1604 N '52

RADIO receiving apparatus

Bendix receiver has 360 channels. il Aviation W 58:82 My 25 '53

Build this transistor receiver. R. K. Dixon. il diags Radio & Tv N 49:35-7+ F '53

Cabinetry. J. Markell. il diags Radio & Tv N 48:35-7+ N '52

CONELRAD alert receiver. M. M. Mitchum. il diag Electronics 25:110-11 O '52

Custom audio. H. Becker. il Radio & Tv N 48:46-7 N '52

Ferri-Loopstick crystal receiver. J. D. Amorose. il diag Radio & Tv N 50:42+ Jl '53

Low level synchronous mixing; abstract. M. E. Brodwin and others. Inst Radio Eng Proc 41:969-70 Ag '53

Radio progress during 1952; receivers. bibliog il Inst Radio Eng Proc 41:471-2 Ap '53

Transistor receiver. M. E. Quisenberry. il diag Radio & Tv N 50:122 Jl '53

See also

Radio loud speakers
Television receiving apparatus

Clock combinations

Clock-radios hit big time. il Electronics 26:6+ My '53

RADIO receiving apparatus—*Continued*

Frequency modulation receivers

Booster for FM sets. C. E. Cohn. diag Radio & Tv N 47:149 Mr; 48:108 N '52

Counter-circuit multiplex receiver. A. R. Vallarino and others. il diags Electronics 26: 178-81 Jl '53

Eliminating oscillator hum in fm receivers. H. Michels. diags Radio & Tv N 49:82 F '53

Fm receiver tuning indicator. H. R. Hyder. diags Radio & Tv N 49:148 Ap '53

Portable transistor fm-receiver. R. C. Ballard. il diag Tele-Tech 12:79+ Ag '53

Installation on automobiles

One-tube 75-meter mobile converter. J. G. Rountree. il diag Q S T 37:36-7+ Mr '53

Signal-seeking automobile receiver. J. H. Guyton. il diags Electronics 26:154-8 My '53

Installation on motor buses

Transit Radio gets the death blow in Cincinnati and Washington. Bsns W p46+ Je 6 '53

Manufacture

Assembling dial drive cords. il Electronics 25:304+ N '52

Plated circuit process for radio production; illustrations with text. Tele-Tech 11:56-7 N '52

Printed circuits for home radio receivers. E. Waverling. il Electronics 25:140-2 N '52

Subassembly soldering jigs. il Electronics 26: 294+ Mr '53

Unitized assembly lines. C. Brunetti. Tele-Tech 12:160+ Ag '53

With plated circuits Motorola takes big step toward automatic assembly. E. H. Waverling. il diags Factory Management 110:84-7 O '52

Multiplex receivers

Counter-circuit multiplex receiver. A. R. Vallarino and others. il diags Electronics 26: 178-81 Jl '53

Noise

Detection of weak signals by correlation methods. P. Rudnick. diags J Ap Phys 24: 128-31 F '53

Gaseous discharge super-high-frequency noise sources. H. Johnson and K. R. Deremer. bibliog il diags Inst Radio Eng Proc 39:908-14 Ag '51; Discussion. H. L. Steele, jr. 40:1603-4 N '52

Measurements of detector output spectra by correlation methods. L. Weinberg and L. G. Kraft. bibliog diags Inst Radio Eng Proc 41:1157-66 S '53

Optimum linear shaping and filtering networks. R. S. Berkowitz. bibliog diag Inst Radio Eng Proc 41:532-7 Ap '53

Simple proof of the formula for the relative accuracy of a noise power measurement with a quadratic detector. A. van der Ziel. Inst Radio Eng Proc 41:800-1 Je '53

Standards on electron devices; methods of measuring noise. diags Inst Radio Eng Proc 41:890-6 Jl '53 [reprints 75¢]

Tunable hum in broadcast receivers. S. Wald. diags Radio & Tv N 49:42+ Je '53

Phonograph combinations

New radiogram demonstrated. il Electrician 149:542 Ag 22 '52

Rating

Two non-high fidelity radio-phonograph combinations. il Consumers Res Bul 30:9-10 D '52

Repair

See also
Radio service shops

Selectivity

Mechanical bandpass filters for i.f. ranges. B. Roberts. il Q S T 37:22-4 F '53

Qrm-cutting selectivity for the mobile receiver. G. M. Brown. il diags Radio & Tv N 49:60-2+ My '53

Short wave

Advanced regenerative circuit. I. Gottlieb. il diags Radio & Tv N 49:48-9+ My '53

All-purpose super-selective i.f. amplifier. B. Goodman. il diags Q S T 37:23-8+ Mr '53

Antenna coupler helps the receiver, too! J. J. Glauber. diag Q S T 37:47 Ap '53

Bargain (?) novice station; a war-surplus conversion to end them all. J. B. Work. il diag Q S T 36:15-17+ D '52

Carrier generators for s.s.b. reception. P. N. Wright. diags Q S T 36:35-6 D '52

Coffee-can receiver. E. E. Hayward. il diags Q S T 36:38-40 N '52

Design notes on a specialized phone receiver. R. W. Ehrlich. bibliog il diags Q S T 37:31-4+ Ap '53

Good four-tube superhet. B. Goodman. il diags Q S T 37:19-24+ Ja '53

Let's listen. L. G. McCoy. diags Q S T 37: 43-6 Mr '53

Modifying the Heathkit Ar-1 receivers for amateur use. L. G. McCoy. il diags Q S T 37:38-41 My '53

Mullard independent-sideband communications receiver. il Engineer 196:140-1 Jl 31 '53; Engineering 176:184 Ag 7 '53

Qrm rejection the simple way. L. G. McCoy. il diag Q S T 37:22-3 Je '53

Reception of single-sideband signals. P. N. Wright. Q S T 36:25-6+ N '52

Simplifying the ten-meter crystal-controlled converter. W. W. Deane. il diag Q S T 36: 52-3 N '52

Single-control transmitter-receiver. G. Treuke. il diags Q S T 37:26-31 My '53

Some ABCs of v.h.f. receiver design. E. P. Tilton. Q S T 37:40-1+ Ja '53

Some aspects of mixer crystal performance. P. D. Strum. bibliog diag Inst Radio Eng Proc 41:875-89 Jl '53

Time-varied gain control; aid to break-in. C. C. Miller and F. T. Meichner. il diags Q S T 37:20-2 Mr '53

V.h.f. converter design. J. P. Van Duyne and K. E. Treptau. diags Q S T 37:52-5 F '53

YRS-one modifications and experiments. A. Dinsmore. diags Q S T 36:44+ N '52

Superheterodyne

Cascade-cascode on two meters. R. B. Tomer. il diags Radio & Tv N 48:48-9+ D '52

Design of slug-tuned superheterodyne receivers. P. S. Wessels. Electronics 25:176+ N '52

Oscillator booster for battery superhets. C. E. Cohn. diag Radio & Tv N 49:84 My '53

Receivers for B.B.C. monitoring service. il Engineer 196:186 Ag 7 '53; Engineering 176: 137 Jl 31 '53

Transistorized superhet receiver; abstract. E. Toth. diag Electronics 26:202+ Ag '53

Superregenerative

Fluctuation noise in a microwave superregenerative amplifier. T. S. George and H. Urkowitz. diags Inst Radio Eng Proc 41: 516-21 Ap '53

Terminology

Standards on receivers; definitions of terms, 1952. Inst Radio Eng Proc 40:1681-5 D '52

Testing

Electronic failure prediction. J. H. Muncy. il diags Tele-Tech 12:76-7 F '53

Noise generators; their uses and limitations. E. P. Tilton. il diags Q S T 37:10-14+ Jl '53

Tuning

Am-fm tuners for high-fidelity use. il Consumers Res Bul 31:22-5 Mr '53

Analysis of uhf tuner design. A. Newton. diags Electronics 26:106-11 Mr '53

Modernize your am-fm tuner. B. E. Hargrove. il diags Radio & Tv N 50:80+ Ag '53

Multiband tuner design chart. G. J. Maki. Electronics 26:200 Ag '53

Remote-tuning receiver has no moving parts. S. Stiber. il diag Electronics 26:186-8 Jl '53

Turret switching for the receiver or vfo. R. J. Rodenbo. il diags Q S T 36:32-5+ N '52

Why use a condenser in a v.h.f. oscillator? R. Wagner. il diags Radio & Tv N 49:40-1 Je '53

RADIO receiving apparatus, Portable

Home security radio. H. G. Bourne and E. J. Cordier. il diag Radio & Tv N 50:60-2+ Ag '53

Portable transistor fm-receiver. R. C. Ballard. il diag Tele-Tech 12:79+ Ag '53

Sell portables year-round. il Radio & Tv N 48:44+ D '52

Vest-pocket receiver. E. G. Louis. il diag Radio & Tv N 49:60-1+ F '53

RADIO reception

Reception of single-sideband signals. P. N. Wright. Q S T 36:25-6+ N '52

RADIO recorders

F-m recording in guided missiles. A. A. Gerlach. il diags Electronics 26:108-11 Ja '53

RADIO rectifiers

Axle-driven alternator-rectifier system for caboose power supply. A. H. Hoffer and G. W. Weber. il diags Elec Eng 72:699-703 Ag '53

Cadmium-sulfide crystal rectifiers; abstract. G. Strull. diag Electronics 25:189+ D '52

High-voltage medium-power rectifier. C. L. Rouault and G. N. Hall. il Inst Radio Eng Proc 40:1519-21 N '52

Performance of rectifier modulators. D. G. Tucker. diags Inst E E Proc 99 pt 3:400-4 N '52

Power rectifiers and transistors. R. N. Hall. bibliog diags Inst Radio Eng Proc 40:1512-18 N '52

Resistance-capacitance loading of selenium rectifiers. C. E. Hamann. Tele-Tech 11:58-9+ N '52

Survey of various types of selenium rectifiers. J. T. Cataldo. flow chart il diags Tele-Tech 12:96-7+ Ag '53

Testing

Production testing of rectifier plates. J. Bradshaw. il Electronics 26:262+ Ap '53

RADIO relay systems

C1 alarm and control system for microwave radio; abstract. H. M. Pruden. diag Electronics 26:246+ My '53

Design features of a microwave relay. E. Dyke. il diags Tele-Tech 11:54-7+ D '52; 12:60-3+ Ja '53

Emergency power switching systems. V. T. Callahan. il diag Commun Eng 13:25-6 Mr '53; Same. Diesel Power 31:32-5 My '53

Fm microwave radio relay. R. E. Lacy and C. E. Sharp. il diags Inst Radio Eng Proc 41:125-8 Ja '53

Global microwave system for tv and communications. A. J. Forman. maps diags Tele-Tech 11:40-1+ N '52

Israel intercity vhf telecommunication systems. L. C. Simpson. il diags RCA R 14:100-24 Mr '53

Microwave developments overseas. V. J. Nexon. map Commun Eng 13:19-21+ My '53

Microwave picture, 1953. map Tele-Tech 12: sec 2 F '53

Microwaves from coast-to-coast. J. R. Rae. il map diags Gen Elec R 56:17-21 Mr '53

New wide-angle microwave reflector. K. S. Kelleher. il diags Tele-Tech 12:98-9+ Je '53

Passive repeater bends microwave beam. H. Magnuski and T. F. Koch. il map diag Electronics 26:134-7 F '53

Profile charts for microwave links. map diag Commun Eng 13:23-4+ Mr '53

Remotes extend airways vhf range. Electronics 26:22+ Mr '53

Santa Fe's microwave spans Bay and Gulf. il map diag Ry Age 134:35-8 F 2 '53

Travelling-wave tube as output amplifier in centimeter-wave radio links. D. C. Rogers. bibliog il diags Inst E E Proc 100 pt 3:151-6 My '53

Uhf radio-relay system engineering. J. J. Egli. diags Inst Radio Eng Proc 41:115-24 Ja '53

Vhf communications in Korea. R. G. Gould. il diag Radio & Tv N 49:35-8+ Je '53

Vhf radio relay does the job; Cumberland valley electric co. L. P. Scarborough. il map diag Elec World 139:98-9 F 23 '53

Testing

Microwave system test equipment. A. S. May. il Commun Eng 13:24-5+ My '53

Path testing for microwave radio routes. R. D. Campbell. il map diag Elec Eng 72:571-7 Jl '53

RADIO research

Radio progress during 1952; wave propagation. bibliog il Inst Radio Eng Proc 41:497-506 Ap '53

Radio research, 1952, covering the work of the Radio research board. Engineer 196:110 Jl 24 '53; Elec J 151:262 Jl 24 '53; Elec R (Lond) 153:215-16 Jl 24 '53

Radiophysics in Australia. A. J. Higgs. Science 117:sup3 Ja 30 '53

Waves and fluctuations. E. C. S. Megaw. bibliog il diag Inst E E Proc 100 pt 3:1-8 Ja '53

RADIO resistors

Automatic production machine for close-tolerance printed resistors; Autobrader. J. Bayha. il diags Tele-Tech 12:78-80+ S '53

Enamel covered glass resistors. J. K. Davis. il Tele-Tech 11:55+ N '52

Parallel-resistor chart; reference sheet. M. Aron. Electronics 26:192, 194 Jl '53

Production control of printed resistors. W. H. Hannahs and J. W. Eng. il Electronics 25:106-9 O '52

Resistor temperature coefficients of pyrolytic-deposited-carbon resistors and metal-film resistors. F. A. Paul. il Tele-Tech 12:52-3, 120 Ja '53

Soldering resistors. il Electronics 26:294-7 Je '53

RADIO resonators

Calculation of a waveguide-loaded resonator for interdigital magnetrons. G. Hok. bibliog diags Inst Radio Eng Proc 41:763-9 Je '53

Coupled resonator reflex klystron. E. D. Reed. bibliog il diags Bell System Tech J 32:715-66 My '53

High-Q measurements in the 1000-mc range. A. Horvath. diags Tele-Tech 11:62-4+ D '52

Magnetostriction devices and mechanical filters for radio frequencies. W. V. Roberts. diags Q S T 37:24-7 Je; 28-30+ Jl '53

Vibrating-wire high-Q resonator. A. W. Dickson and W. P. Murden. il diags Electronics 26:164-7 S '53

Testing

Production testing of magnetron cavities. M. Nowogrodzki. il diags Electronics 26:258+ My '53

RADIO service shops

Mac's radio service shop. J. T. Frye. Published in monthly numbers of Radio and television news

Servicing mobile radio equipment. M. E. Kennedy. il Electronics 25:140-3 O '52; Discussion. 26:358+ Ja '53

Specialize for profit. Y. O. Johnson. Radio & Tv N 49:90+ My '53

RADIO signals

CONELRAD; FCC and air force plan controls station operation to prevent use of signals as navigational aid to enemy aircraft. diags Tele-Tech 12:85+ Mr '53

Detection of weak signals by correlation methods. P. Rudnick. diags J Ap Phys 24:128-31 F '53

Distortion of a frequency-modulated signal by small loss and phase variations. F. Assadourian. diags Inst Radio Eng Proc 40:172-6 F '52; Same. Elec Com 29:314-20 D '52

How to measure low-level r-f signals. K. E. Mortenson. diags Electronics 26:162-3 Ag '53

Switch provides d-c reference display; oscilloscope displays magnitude of nonvarying signal component. R. S. Mackay. il diags Electronics 25:122-3 D '52

See also

Radio echoes

Time signals, Radio

RADIO standards

Calibration of commercial field-strength meters. C. C. Cook. diags Tele-Tech 11:44-6+ O '52

Inexpensive *L* and *C* standards. il Q S T 37:48+ Ja '53

Standards on electron devices; methods of measuring noise. diags Inst Radio Eng Proc 41:890-6 Jl '53 (reprints 75¢)

RADIO standards—*Continued*
Standards on modulation systems; definitions of terms, 1953. Inst Radio Eng Proc 41:612-15 My '53
See also
Television—Standards

RADIO stations
Gulf hurricane net set up; Central power & light co. joins with other coastal industries to disseminate weather information by radio. Elec World News ed 138:9 S 29 '52
See also
Radio broadcasting stations
Radio transmitters

Equipment

Station and studio equipment directory. Tele-Tech 11:113+ O '52

RADIO stations, Airline
See also
Airlines—Radio communication

RADIO stations, Amateur
Electronic voltmeter in the amateur station. M. Seybold. il diags Q S T 37:28-32+ Je '53
Expedition to Brunei; the story of VS5ELA. C. F. Norton. il map Q S T 37:40-2+ F '53
Tvi reduction in strong-signal areas. N. Johnson. il Q S T 37:17-18 My '53
Unpainted but adequate; an idea for the compact ham station. J. W. Paddon. il diag Q S T 37:50+ Ja '53

RADIO stations, Portable
Mobile communications center ready for civil defense service. Elec Eng 71:1156-7 D '52
Philadelphia's new mobile unit. E. P. Grim. il Radio & Tv N 49:51 Mr '53

RADIO stations, Standard frequency
See also
Radio broadcasting—Frequency standards

RADIO symbols
Circuit diagrams. G. W. O. Howe. diags Wireless Eng 30:1-2 Ja '53

RADIO telegraph
Another vacuum-tube keyer; tetrode-keying considerations. H. F. Bates. diag Q S T 37:32 My '53
Automatic recording slide-back peak voltmeter. C. R. Ammerman. il diags R Sci Instr 24:161-4 F '53
Better electronic key. J. D. Gallagher. il diags Radio & Tv N 49:52-4 Ja '53
Code practice keyer. J. R. McDermott. il diags Electronics 26:182-5 Jl '53
Dot anticipator for the electronic key. R. E. Brann. il diags Q S T 37:18-21 Jl '53
Modernize your bug. J. F. Clemens. il diag Radio & Tv N 49:39 Ap '53
Radio telegraph printing. Elec J 150:1723-4 My 15 '53
Radio transmission line exchange. il Engineer 194:451-2 O 3 '52
Transistor code practice oscillator. L. E. Garner, jr. il diags Radio & Tv N 49:40-1+ Ap '53
Tur-key; new idea in all-electronic keying. R. H. Turrin. diag Q S T 36:18-21+ D '52
Ultimatic; the key with a memory. J. Kaye. il diags Q S T 37:11-15+ F '53

Multiplex system

How response speed is affected by the bandwidth of multiplex channels. J. S. Smith. bibliog diags Commun Eng 13:22-3+ My '53
New multiplex microwave system. N. B. Tharp. il diags Commun Eng 13:31-4+ Mr '53

RADIO telemetry. See Telemetering

RADIO telephone
Citizen radio class A equipment. R. L. Borchardt. diags Electronics 26:166-9 My '53
Design features of a microwave relay. E. Dyke. il diags Tele-Tech 11:54-7+ D '52; 12:60-3+ Ja '53
Electronic telephone; Neophone. il Electronics 26:154+ Ja '53
Keeping in touch with a roving boss; Page-Ette. il Bsns W p96-8 Jl 25 '53
Low-pressure modulation facts. H. Wright. Q S T 37:15-17+ Jl '53
Mobile radio aids Hawaiian sugar industry. il Electronics 25:204+ D '52
Radio-telephone link between Turkey and the West. il Engineer 195:363 Mr 6 '53; Engineering 175:358 Mr 20 '53; Elec J 150:681 F 27 '53
Single-sideband system for overseas telephony. N. F. Schlaak. il diags Electronics 25:146-9 N '52
$250,000 two-way radio-telephone network established for Montana-Dakota utilities. il Elec Eng 72:181-2 F '53
Two-way radio in the ready mixed concrete business; abstract. H. L. Pinkerton. Rock Prod 56:234+ Ag '53
Voice frequency tone signaling for mobile radio systems. C. L. Rouault. diags Tele-Tech 11:66-8+ N '52
See also
Telephone, Carrier current

Fire department use

Motorola delivers radio system to New York. il Tele-Tech 12:186 Ap '53
New York's fire radio system. S. Harmatuk. il diag Radio Com 12:32-3+ My; 32-4 Je '52; [cont as] Commun Eng 13:26-8+ My '53

Highway department use

How Wyoming uses radio communication. T. D. Sherard and J. T. Roberts. il map diags Commun Eng 13:26-9 Ja '53
Radio-telephone service on Ontario's winter-maintenance vehicles is extended. Roads & Eng Constr 90:81 N '52

Multiplex system

How response speed is affected by the bandwidth of multiplex channels. J. S. Smith. bibliog diags Commun Eng 13:22-3+ My '53
New multiplex microwave system. N. B. Tharp. il diags Commun Eng 13:31-4+ Mr '53
Nonlinear filtering and waveshape multiplexing. R. E. Scott and others. diags Electronics 25:146+ D '52
Reducing distortion in microwave systems. W. L. Firestone and J. S. Byrne. il Electronics 26:184-8 Je '53

Taxicab dispatching

Complying with the FCC rules. C. I. Fonger. Radio Com 12:13+ N '52
Radio dispatching system for large taxicab fleet operation. A. R. Vallarino and S. W. Lewinter. diags Elec Eng 71:232-5 Mr '52; Same. Elec Com 30:55-60 Mr '53; Same abr. Radio Com 12:14-15+ N '52

RADIO telephone, Portable
Hand-carried portable rig for 220 mc. J. R. Wolfskill. il diag Q S T 37:45-7 My '53
Hand-carried two way fm equipment. il diags Commun Eng 13:28-30 Mr '53
Handie-micro-talkie. W. J. Weisz. il diags Commun Eng 13:19-20+ Ja '53
Methods for compact construction. Y. Beers. il Q S T 37:14-17 Je '53
Mobile radio. L. G. Sands. il diags Radio & Tv N 48:35-7+ S; 43-5+ O; 53-5 N; 62-4 D '52
Noise limiter for mobile vhf. N. Bishop. diags Electronics 26:164-5 Je '53
Six-meter emergency transceiver. R. L. Hankey and M. P. Johnson. il diags Radio & Tv N 50:56-8+ Ag '53
Structural details of the Detroit c.d. portables. G. E. Undy and J. A. Gardella. il diags Q S T 37:16-18 F '53

Manufacture

Details of the PRC-6. F. T. Koen and R. C. Sprague. il diag Commun Eng 13:21-5 Ja '53

RADIO telephone in factories
Radio-controlled industrial trucks expedite materials handling; Electric storage battery co. T. Mac New. il Automotive Ind 108:38-9+ My 15 '53

RADIO telephone in mines
Carrier radio aids mine communications. il Electronics 26:200 My '53
Telephone goes underground. il Safety Maint & Prod 105:23+ My '53

RADIO telephone in mines—*Continued*

Underground radio communication in Lake Superior district mines. E. W. Felegy. bibliog Min Eng 5:Trans 518-21 My '53

RADIO telephone on aircraft

Fm for aircraft. il diag Radio Com 12:22-3 D '52

RADIO telephone on automobiles

Automatic multiband mobile antennas and mobile antenna characteristics. A. M. Pichitino. il diags Q S T 37:11-13+ Je '53

Best antenna location is center on car roof. C. G. Landis and S. K. Waldorf. il diags Elec World 139:66-9 My 4 '53

Comparison of mobile radio transmission at 150, 450, 900, and 3700 mc. W. R. Young, jr. map Bell System Tech J 31: 1068-85 N '52; Same. Commun Eng 13:15-18+ Ja '53; Abstract. Electronics 26:214+ My '53

Different approach to high-power mobile. J. E. Jennings. il diag Q S T 37:28-9+ Ap '53

Hints and kinks for mobileers. J. Najork. diags Radio & Tv N 50:84 Ag '53

How costs can be reduced in mobile radio equipment design. J. B. Ferguson. il diag Commun Eng 13:30-1+ My '53

Improving the series noise limiter. H. O. Lorenzen. diag Q S T 37:30 Ap '53

Installing mobile equipment. D. K. Johnson. il Radio & Tv N 49:62-3+ Mr '53

Investigating antennas for uhf mobiles. E. F. Harris. il diags Electronics 25:127-9 N '52

Minimum mobile for ten-meter civilian defense. R. G. Finkbeiner. il diags Radio & Tv N 50:52-3+ Jl '53

Multi-band v.f.o. mobile transmitter. L. C. Watkins, jr. il diags Radio & Tv N 48:39-43+ D '52

Noise limiter deluxe. J. J. Hoefer. diags Radio & Tv N 49:76+ My '53

Qrm-cutting selectivity for the mobile receiver. G. M. Brown. il diags Radio & Tv N 49:60-2+ My '53

Qsying the 75-meter mobile antenna. W. W. Varnedoe, jr. il diags Q S T 37:26-7 Jl '53

Servicing mobile radio equipment. M. E. Kennedy. il Electronics 25:140-3 O '52; Discussion. 26:358+ Ja '53

Single-package mobile unit for 28 mc. R. F. Tschannen. il diags Q S T 37:33-7+ Je '53

20-watt six band mobile. H. B. Smith. il diags Radio & Tv N 49:43-6+ Ap '53

Two in a car; crystal-controlled converter for improved two-meter mobile reception. H. A. Blodgett. il diag Q S T 36:40-1+ D '52

Uhf mobile antenna. E. F. Harris. il diags Electronics 26:181-3 My '53

Vehicular communications symposium. Electronics 26:200+ F '53

Where is your mobile signal going? H. J. Hanson. diag Q S T 36:15+ N '52

RADIO telephone on motor trucks

Truck radios save trips and money; W. Theodore Miller & son. il Nat Pet N 44: 51-2 O 15 '52

RADIO telephone on railroads

See also

Railroads—Radio communication

RADIO telephone on ships

Admiralty radio-telephone equipment type 619. il Elec J 151:419-20 Ag 7 '53

Electronics for the yachtsman. H. R. Ashley. il Radio & Tv N 50:67+ Ag '53

How to design small boat antennas. E. Robberson. bibliog il diags Electronics 26: 146-9 Jl '53

There's cash afloat. E. Robberson. il diag Radio & Tv N 49:35-7+ My '53

Would avert ship collisions by communication devices. Marine Eng 58:80 O '53

RADIO time signals. See Time signals, Radio

RADIO towers

Build your own steel tower for the beam antenna. W. J. Sheehan. il diag Q S T 37:41-3 Je '53

1,218-foot radio tower provides electronic data for air force. il Elec Eng 72:182-3 F '53

Steel tower; antenna 1218 ft high aids USAF in developing radio use. Iron Age 171:173-4 F 5 '53

RADIO transformers

A-c voltage regulation with ordinary transformers. W. G. Shepard. Electronics 26: 238+ Jl '53

Balance measurements on balun transformers. O. M. Woodward, jr. il diags Electronics 26: 188-91 S '53

Cool kilowatt; illustrations with text. Q S T 36:16-17 N '52

Impedance matching with transformer sections. R. W. Klopfenstein. diags RCA R 14:64-71 Mr '53

Low capacitance bifilar winding. S. Wald. bibliog diags Electronics 26:218+ My '53

More effective utilization of the small power transformer for novice-type transmitter. G. Grammer. il diag Q S T 36:18-20+ N '52

Q-section transformers. W. B. Wrigley. diag Q S T 37:32-3+ Mr '53

R-f coupling nomograph; reference sheet. R. E. Lafferty. diags Electronics 25:166 O '52

Toroid design charts; reference sheet. R. E. Prouty. Electronics 26:193-4, 196 Ag '53

Design

Design of series peaking transformers. A. C. Sim. diag Wireless Eng 30:90-3 Ap '53

Turns index for pulse transformer design; abstract. H. W. Lord. diag Elec Eng 71: 978 N '52

Manufacture

Automatic core-dipper applies strippable plastic coatings. il Electronics 25:218 D '52

Testing

Automatic transformer-testing turntable. il Electronics 25:266+ N '52

RADIO transmission

Calculation of sky-wave field strength. K. Rawer. bibliog il diags Wireless Eng 29: 287-301 N '52

Calculation of the path of a radio-ray in a given ionosphere. A. H. De Voogt. diags Inst Radio Eng Proc 41:1183-6 S '53

Comparison of cw field intensity and back-scatter delay. W. L. Hartsfield and R. Silberstein. bibliog Inst Radio Eng Proc 40: 1700-6 D '52

Comparison of mobile radio transmission at 150, 450, 900, and 3700 mc. W. R. Young, jr. map Bell System Tech J 31:1068-85 N '52; Same. Commun Eng 13:15-18+ Ja '53

Constants in the equation for atmospheric refractive index at radio frequencies. E. K. Smith, jr. and S. Weintraub. bibliog J Res Nat Bur Stand 50:39-41 Ja '53

Field strengths recorded on adjacent fm channels at 93 mc over distances from 40 to 150 miles. G. S. Wickizer and A. M. Braaten. map Inst Radio Eng Proc 40: 1694-9 D '52

Instrument electronics. M. H. Aronson. diags Instruments 25:1446+ O '52

Large reductions of vhf transmission loss and fading by the presence of a mountain obstacle in beyond-line-of-sight paths. F. H. Dickson and others. Inst Radio Eng Proc 41:967-9 Ag '53

Low-loss waveguide transmission. S. E. Miller and A. C. Beck. bibliog il diags Inst Radio Eng Proc 41:348-58 Mr '53

Lunar dx on 144 mc.! E. P. Tilton. il Q S T 37:11-12+ Mr '53

Measurement of the phase velocity of ground-wave propagation at low frequencies over a land path. B. G. Pressey and others. bibliog diags Inst E E Proc 100 pt 3:73-84 Mr '53

Meteor scatter; extended-range communication in 15- and 20-meter bands. O. G. Villard, jr. and A. M. Peterson. il map diags Q S T 37:11-15+ Ap '53

Microstrip, a new transmission technique for the kilomegacycle range. D. D. Grieg and H. F. Engelmann. il diags Inst Radio Eng Proc 40:1644-50 D '52; Same. Elec Com 30:26-35 Mr '53

Microstrip components. J. A. Kostriza. il diags Inst Radio Eng Proc 40:1658-63 D '52; Same. Elec Com 30:46-54 Mr '53

Microstrip; transmission technique for the kilomegacycle range. G. W. O. Howe. diags Wireless Eng 30:75-6 Ap '53

RADIO transmission—*Continued*

New kind of radio propagation at very high frequencies observable over long distances. D. K. Bailey and others. diag Phys R 86: 141-5 Ap 15 '52; Abstracts. Electronics 25: 102-3 Je '52; Franklin Inst J 254:417-20 N '52; Discussion. H. Johnson. Electronics 26: 368-9 Ja '53

Piggy-back boost for radio. Bsns W p52 Mr 28 '53

Prediction of the nocturnal duct and its effect on uhf. L. J. Anderson and E. E. Gossard. Inst Radio Eng Proc 41:136-9 Ja '53

Radio telemetering. E. D. Whitehead and J. Walsh. bibliog diags Inst E E Proc 100 pt 3:45-56; Discussion. 57-9 Mr '53

Radio transmission beyond the horizon in the 40- to 4,000-mc band. K. Bullington. map Inst Radio Eng Proc 41:132-5 Ja '53

Review of present knowledge of the ionospheric propagation of very-low, low- and medium-frequency waves. F. A. Kitchen and others. Inst E E Proc 100 pt 3:100-8 bibliog(70 titles, p 107-8) Mr '53

Review of vhf ionospheric propagation. M. G. Morgan. bibliog Inst Radio Eng Proc 41:582-7 My '53

Simplified theory of microstrip transmission systems. F. Assadourian and E. Rimai. diags Inst Radio Eng Proc 40:1651-7 D '52; Same. Elec Com 30:36-45 Mr '53

Theory of time series for waveform-transmission systems; abstract. W. E. Thomson. bibliog Inst E E Proc 100 pt 3:112-14 Mr '53

Transmission loss in radio propagation. K. A. Norton. bibliog diag Inst Radio Eng Proc 41:146-52 Ja '53

Transmission of microwaves through plexiglas windows. il Electronics 26:226+ Mr '53

Tropospheric propagation; a selected guide to the literature. bibliog Inst Radio Eng Proc 41:588-94 My '53

Waves and fluctuations. E. C. S. Megaw. bibliog il diag Inst E E Proc 100 pt 3: 1-8 Ja '53

See also

Radio antennas
Radio broadcasting
Radio communication
Radio lines
Radio pulse time modulation
Radio relay stations
Radio telephone
Radio transmitters
Radio waves
Television transmission

Fading

Propagation above 100 mc. P. E. Lannan. bibliog diags Tele-Tech 12:89-91+ Ap '53

RADIO transmitters

Better SOS's; emergency device. J. E. Tillman. Electronics 26:414-16 My '53

Duo-diode modulation monitor. J. Lucas and D. Peters. il diag Radio & Tv N 48:55+ D '52

Megawatt am broadcast transmitter. J. O. Weldon. il Tele-Tech 12:50-1+ Ja '53

Modern transmitter for a-m broadcasting; station WNEW. A. A. McKenzie. il plan diags Electronics 26:130-6 S '53

Multiple-feedback oscillators; patent. diags Electronics 26:200+ Ja '53

Navy vlf transmitter will radiate 1,000 kw. T. D. Hobart. il diags Electronics 25:98-101 D '52

Radio buoy for marking whales. il Engineering 175:255 F 20 '53

Radio progress during 1952. bibliog Inst Radio Eng Proc 41:466-70 Ap '53

Single sideband converter. F. A. Dunnigan and J. D. Kane. il diag Tele-Tech 12:98+ Ag '53

Single-sideband system for overseas telephony. N. F. Schlaak. il diags Electronics 25:146-9 N '52

Venner lifeboat S.O.S. transmitter. il Engineer 195:526-7 Ap 10 '53; Engineering 175: 479 Ap 10 '53

Control

Automatic control system with provision for scanning and memory. N. H. Young. il diags Elec Eng 72:782-4 S '53

Broadcast remote control. il diags Electronics 26:200+ Je '53

Broadcast transmitter remote control system. G. W. Lee. il diag Electronics 26:138-41 Je '53

Operating remote control broadcast stations. P. Whitney. il diags Tele-Tech 12:72-5+ S '53

Remote control with a 420-mc. link. K. L. Bowles and R. B. Dyce. diags Q S T 37: 32-7 Jl '53

Remote-controlled broadcast transmitter. V. E. Hughes. il Electronics 25:238+ O '52

Frequency modulation transmitters

Fm distortion in reflex klystrons. R. L. Jepsen and T. Moreno. diags Inst Radio Eng Proc 41:32-6 Ja '53

Power supply

Compact bandswitching v.f.o. multiplier. E. Snader. il diag Radio & Tv N 49:52-3+ F '53

High-efficiency coolers for power tubes. M. B. Lemeshka and A. G. Nekut. il diags Tele-Tech 11:69-71+ N '52

Low-voltage filament supplies; a d.c. source for battery-tube filaments. E. J. Gauss. diags Q S T 37:35+ F '53

More effective utilization of the small power transformer for novice-type transmitter. G. Grammer. il diag Q S T 36:18-20+ N '52

Power-supply filters. G. P. Rumble. diags Q S T 36:43+ D '52

Safety measures

How to live longer; safety technique for ham equipment. D. H. Mix. diags Q S T 37:18-21+ Je '53

Short wave

Another coffee-can rig. E. Hayward. il diags Q S T 37:42-3+ Ja '53

Bargain (?) novice station; a war-surplus conversion to end them all. J. B. Work. il diag Q S T 36:15-17+ D '52

Class AB$_1$ modulator for the small transmitter. G. Grammer. il diags Q S T 37:19-23+ My '53

Combining the antenna coupler and low-pass filter. G. Grammer. il diag Q S T 37: 17-19+ Mr '53

Cool kilowatt; illustrations with text. Q S T 36:16-17 N '52

Eight-band mobile transmitter. C. V. Chambers. il diag Q S T 37:11-16 My '53

High-powered amplifier for 50, 28 and 21 mc. E. P. Tilton. il diag Q S T 36:11-14+ D '52

Measurements of some operational characteristics of an amplitude-modulated injection-locked uhf magnetron transmitter. L. L. Koros. bibliog diags Inst Radio Eng Proc 41:4-10 Ja '53

Midget self-contained 15-watt transmitter. A. J. Shalna, jr. il diag Radio & Tv N 49: 66-7 Ap '53

Modernizing the SCR-274/N transmitter. C. V. Hays. il diags Radio & Tv N 49:58-9+ Ja '53

Modifying the Viking I for 50-mc operation. J. Klar. diag Q S T 36:22+ D '52

More effective utilizaton of the small power transformer for novice-type transmitter. G. Grammer. il diag Q S T 36:18-20+ N '52

Multi-band v.f.o. mobile transmitter. L. C. Watkins, jr. il diags Radio & Tv N 48:39-43+ D '52

Novice 35-watter; simple construction with tvi precautions. L. G. McCoy. il diag Q S T 37:32-4 Ja '53

Novice transmitter kit. D. Lagenour. il diags Radio & Tv N 48:45+ N '52

125-watt audio system with clipping. R. F. Lewis. il diags Radio & Tv N 50:39-41+ Jl '53

Packaging 35 watts for 80 and 40. R. M. Smith. il diags Q S T 36:21-4+ N '52

Pulse-operated relays for the ham transmitter. C. H. Ericson. diags Q S T 37: 44-5 Je '53

Push-pull 6146s at 144 mc. C. V. Chambers. il diag Q S T 36:11-14 N '52

Self-contained vfo rig; 50 watts, three bands in a single unit. G. L. Countryman. il diag Q S T 37:25-8+ F '53

75 watts with an economy power supply. G. Grammer. il diag Q S T 36:23-30 D '52

Single-control transmitter-receiver. G. Treuke. il diags Q S T 37:26-31 My '53

SS-75 s.s.b. transmitter-exciter. B. Goodman. il Q S T 36:42 D '52

RADIO transmitters—Short wave—*Continued*

Sweep-tube c.w. rig for 3.5 and 7 mc. C. V. Chambers. il diag Q S T 37:35-8+ Ap '53

Three watts in a coffee can. J. Fahnestock. il diags Radio & Tv N 49:66-7 Je '53

Transistor, or 25 miles on a hunk of germanium. G. M. Rose. il diags Q S T 37:13-15+ Mr '53

Two-meter master. R. Wagner. il diags Radio & Tv N 49:39-41+ Ja '53

Tuning

Bandswitching the antenna tuner. J. F. Wohlford. il diag Q S T 36:28-9 N '52

Tune-up loop. L. G. McCoy. il Q S T 36:37 D '52

RADIO transmitters, Portable

Compact transmitter uses printed circuit. il Machine Design 25:137 F '53

C.w. transmitter. G. W. Dye. diag Radio & Tv N 49:115 F '53

Packaging 35 watts for 80 and 40. R. M. Smith. il diags Q S T 36:21-4+ N '52

RADIO waves

Bridges across the infrared-radio gap. M. J. E. Golay. bibliog diags Inst Radio Eng Proc 40:1161-5 O '52

Calculation of sky-wave field strength. K. Rawer. bibliog il diags Wireless Eng 29:287-301 N '52

Calculation of the path of a radio-ray in a given ionosphere. A. H. De Voogt. diags Inst Radio Eng Proc 41:1183-6 S '53

Experimental study of wave propagation at 850 mc. J. Epstein and D. W. Peterson. bibliog il map diags Inst Radio Eng Proc 41:595-611 My '53

Graphical solution of sky-wave problems; reference sheet. R. A. Helliwell. diag Electronics 26:150, 152 F '53

Hissing arc and radio-frequency self-generated oscillations in the d-c carbon arc. B. H. List and T. B. Jones. diag Elec Eng 72:683-6 Ag '53

Instantaneous frequency. J. Shekel. Inst Radio Eng Proc 41:548 Ap '53

Interaction of microwaves propagated through a gaseous discharge plasma. L. Goldstein and others. bibliog il Phys R 90:151-2 Ap 1 '53

Investigation of the characteristics of cylindrical surface waves; abstract. H. M. Barlow and A. E. Karbowiak. Elec R (Lond) 152:1081 My 8 '53

Ionospheric storm-warning services. C. M. Minnis. Wireless Eng 30:103-8 My '53

Launching of electromagnetic waves on a cylindrical conductor. R. B. Dyott. bibliog diags Inst E E Proc 99 pt 3:408-13 N '52

Low-frequency ionosphere recorder. il diag Tele-Tech 12:337 Je '53

Measurement of the phase velocity of ground-wave propagation at low frequencies over a land path. B. G. Pressey and others. bibliog diags Inst E E Proc 100 pt 3:73-84 Mr '53

Measuring wavelength in millimeters; optical methods. J. R. Martin and C. F. Schunemann. il diags Electronics 26:184-7 My '53

Mechanical synthesis of the amplitude-modulated wave. A. M. Hardie. bibliog il diag Wireless Eng 29:326-33 D '52

Microwave response law corrector. L. J. Perenic. diag Tele-Tech 12:67 S '53

Microwave technique for studying discharges in gases. M. A. Lampert and A. D. White. diags Elec Com 30:124-8 Je '53

Microwave vehicle approach alarm operates on Doppler reflection principle. W. C. White. il diag Tele-Tech 11:48+ D '52

Nomograms for the computation of tropospheric refractive index. D. M. Swingle. bibliog Inst Radio Eng Proc 41:385-91 Mr '53

Pipe-lines for microwaves. Elec R (Lond) 153:15-18 Jl 3 '53

Radiocommunication on frequencies exceeding predicted values. E. Appleton and W. J. G. Beynon. bibliog diags Inst E E Proc 100 pt 3:192-8 Jl '53

Radio progress during 1952; wave propagation. bibliog il Inst Radio Eng Proc 41:497-506 Ap '53

Ratio meter measures reflection coefficient. L. A. Rosenthal and others. il diags Electronics 25:136-9 N '52

Reflection and absorption of radio waves in the ionosphere. W. R. Piggott. bibliog diags Inst E E Proc 100 pt 3:61-72 Mr '53

Review of present knowledge of the ionospheric propagation of very-low, low- and medium-frequency waves. F. A. Kitchen and others. Inst E E Proc 100 pt 3:100-8 bibliog(70 titles, p 107-8) Mr '53

Review of vhf ionospheric propagation. M. G. Morgan. bibliog Inst Radio Eng Proc 41:582-7 My '53

Spectrum equalization; use of differentiating and integrating circuits. G. G. Gouriet. bibliog il diags Wireless Eng 30:112-23 My '53

Square waves for audio testing. G. E. Bauder. il Radio Com 12:22-3 O '52

Surface waves; abstract. H. M. Barlow and A. L. Cullen. Elec R (Lond) 152:1081 My 8 '53

Toward a theory of reflection by a rough surface. W. S. Ament. diag Inst Radio Eng Proc 41:142-6 Ja '53

Tropospheric propagation; a selected guide to the literature. bibliog Inst Radio Eng Proc 41:588-94 My '53

Waves and fluctuations. E. C. S. Megaw. bibliog il diag Inst E E Proc 100 pt 3:1-8 Ja '53

See also

Radio echoes

Wave guides

Biological effect

R-f irradiation of seeds. H. Jonas. bibliog il diags Electronics 26:161-3 Ap '53

Physiological effect

Bilateral lenticular opacities occurring in a technician operating a microwave generator. F. G. Hirsch and J. T. Parker. bibliog il A M A Archives Ind Hygiene & Occup Med 6:512-17 D '52

Certain physiologic and pathologic effects of microwaves. J. F. Herrick and F. H. Krusen. bibliog il diags Elec Eng 72:239-44 Mr '53

Scattering

COZI; communications zone indicator. L. C. Edwards. il diags Electronics 26:152-5 Ag '53

Comparison of cw field intensity and backscatter delay. W. L. Hartsfield and R. Silberstein. bibliog Inst Radio Eng Proc 40:1700-6 D '52

Measurement of tropospheric index-of-refraction fluctuations and profiles. C. M. Crain and others. bibliog Inst Radio Eng Proc 41:284-90 F '53

Meteor scatter; extended-range communication in 15- and 20-meter bands. O. G. Villard, jr. and A. M. Peterson. il diags Q S T 37:11-15+ Ap '53

Multiple scattering of radiation by an arbitrary planar configuration of parallel cylinders and by two parallel cylinders. V. Twersky. diags J Ap Phys 23:407-14 Ap '52

Multiple scattering theory of the finite grating and the Wood anomalies. V. Twersky. diags J Ap Phys 23:1099-118 O '52

Scattering of electromagnetic energy in a randomly inhomogeneous atmosphere. H. Staras. J Ap Phys 23:1152-6 O '52

Scattering of radio waves by meteorological particles. N. R. Labrum. bibliog diag J Ap Phys 23:1324-30 D '52

Some experiments on centimeter-wavelength scattering by small obstacles. N. R. Labrum. bibliog diags J Ap Phys 23:1320-3 D '52

Statistical fluctuations of radio field strength far beyond the horizon. S. O. Rice. diags Inst Radio Eng Proc 41:274-81 F '53

Theory of radio scattering in a randomly inhomogeneous atmosphere. H. Fine. Inst Radio Eng Proc 41:294 F '53

RADIO workers

Collective bargaining; radio, television, and electronics industry. A. Bercowitz and others. U S Bur Labor Statistics Bul 1089: 1-32; pa 20c Supt. of doc. '52

RADIO writing

Writing for profit and prestige. L. E. Garner, jr. il diag Radio & Tv N 49:59+ F '53

RADIOACTIVE isotopes. See Isotopes; Radioactive tracers

RADIOACTIVE substances

Autoradiographic study of marine shales. V. F. Ross. bibliog il Econ Geol 47:783-93 D '52

Hot laboratory helps solve problems of work with radioactive materials. il Elec Eng 72:180-1 F '53

Materials in the atomic age; abstract. J. C. Robinson. Tool Eng 31:127-9 S '53

Natural and artificial sources for gamma radiography. B. N. Clack. il diags Engineer 194:195-8 Ag 8 '52

Packaging radioactives. P. Colsman. Steel 131:124+ N 3 '52

Radioactive europium 150 and gadolinium 150. R. C. Mack and others. bibliog Phys R 91:903-4 Ag 15 '53

Radioactivity as a guide to ore. W. H. Gross. bibliog maps diags Econ Geol 47:722-42 N '52

Radioactivity of the hot springs at Tiberias. D. B. Rosenblatt and H. Lindeman. Science 116:689-90 D 19 '52

Small radioactive spheres for possible use in medical or biological investigation. L. P. Hatch. A M A Archives Ind Hygiene & Occup Med 7:109-10 F '53

Tracerlab; middleman for radioactives. Bsns W p68-70 Jl 25 '53

See also

Atomic piles—Waste
Polonium
Radium
Thorium
Uraninite
Uranium

Analysis

Occurrence of the $(4n + 1)$ series in nature. D. F. Peppard and others. bibliog Am Chem Soc J 74:6081-4 D 5 '52

Scintillation tube for the measurement of radioactive gases. P. E. Damon and H. I. Hyde. diags R Sci Instr 23:766 D '52

See also

Uranium—Analysis

Industrial applications

Future uses for fission products. Safety Maint & Prod 104:56 O '52

Industrial applications of radioactive materials. J. Cockcroft. il Engineer 196:153-5 Jl 31 '53; Same cond. Engineering 176:157-8 Jl 31 '53; Abstract. Elec J 151:365 Jl 31 '53

Instruments; radiation field grows. A. K. Rannells. Iron Age 171:55 Ja 29 '53

Look into problems of business management in the atomic age. P. J. Lovewell. il Chem & Eng N 31:1857-9 My 4 '53

Metals in radioactive static eliminators. J. D. Graves. il diag Metal Prog 62:94-6 N '52

Radioactive press guards. J. H. Heacock. il diag Nat Safety N 68:32-3 Ag '53

Radioactivity helps study of silver brighteners. S. E. Eaton and others. Metal Finishing 50:63-4 D '52; Discussion. D. Wood. 51:68+ Ap '53

Taming the prodigal wildcat. P. C. Ingalls. Oil & Gas J 51:173 O 6 '52

RADIOACTIVE tracers

Analytical applications of radiochemical techniques. J. E. Hudgens, jr. bibliog Anal Chem 24:1704-8 N '52

Applications of radiotracers to the study of surfaces. J. E. Willard. bibliog J Phys Chem 57:129-34 F '53

Aspects of nuclear fission of interest to foundrymen and metallurgists. E. W. Colbeck. bibliog(25 titles) il diags Metallurgia 48:33-40 Jl '53; Same cond. Engineering 175:797-9 Je 19 '53

Atom enters the bus business; radioactive tracers to measure engine wear. Bus Transportation 32:64 Je '53

Biochemists find wide application for radioactive tracer techniques. Chem & Eng N 31:1632+ Ap 20 '53

Computational procedure for the isotope method of brain tumor localization. A. Langer and R. Loevinger. diag Science 117:247-8 Mr 6 '53

Current uses of radioactive isotopes in industry. P. C. Aebersold. Machine Design 25:282+ F '53

Determination of tracers in the presence of their radioactive daughters. H. W. Kirby. Anal Chem 24:1678-9 O '52

Effect of cyclotron bombardment on self-diffusion in silver. R. D. Johnson and A. B. Martin. bibliog diags J Ap Phys 23:1245-54 N '52

Hot stuff helps build better cars; Ford lab uses radioactive materials for delicate measurements. R. D. Raddant. il Iron Age 171:106 Ap 2 '53

Isotope missionaries; selling of isotopes and radioactive instruments. il Chem W 72:61-2+ F 21 '53

•Isotopes trace pigs in pipe lines; a case in point, and a review of other work. K. C. Biederman. map diag Oil & Gas J 51:124-6 D 15 '52

Metal solidification studies; radioactive tracer methods. Tech R 55:88 D '52

Multiplication of bacterial viruses. G. S. Stent. il diags Sci Am 188:36-9 My '53

New use for radioactive tracers, measuring catalyst flow rates in cat crackers. D. E. Hull and R. R. Bowles. il diag Oil & Gas J 51:295-6+ Mr 23 '53

Oil products moved by radioactive tracers. R. K. Bond. il Elec West 109:88-9 O '52

Practical applications of radioisotopes in protective coatings. H. Gottlieb. il diags Paint Oil & Chem R 116:56-8+ O 8 '53

Preparation of wet ashed tissues for liquid counting. C. T. Bahner and others. Science 115:597-8 My 30 '52; Discussion. 116:640 D 5 '52

Putting the atom to work in industry; radioactive isotopes. Bsns W p68+ O 25 '52

Radioactive cobalt; tracer on carriers helps spot jams in pneumatic tubes. il Iron Age 171:156-7 Mr 26 '53; Comp Air Mag 58:199 Jl '53; Mill & Factory 53:140 Jl '53

Radioactive cutting tools for rapid tool-life testing. M. E. Merchant and others. il A S M E Trans 75:549-59 My '53; Excerpts. Iron Age 170:154-5 S 4 '52; Automotive Ind 108:48-50+ Ja 15 '53; Mill & Factory 52:121-2 F '53

Radioactive gears speed lube studies. V. N. Borsoff and S. S. Sorem. il diag Power 97:96-7+ Mr '53; Abstract. Iron Age 170:136 S 25 '52

Radioactive isotope-equipped go-devil cuts costs for Anglo-Iranian. il Oil & Gas J 51:91 Ja 19 '53

Radioactive method of measuring moisture. diag Roads & Eng Constr 91:208-9 Mr '53

Radioactive tracers reveal friction and wear of metals. J. T. Burwell and C. O. Strang. il diag Metal Prog 60:69-74 S '51; Same cond. Product Eng Hdbk p A 10-12 '53

Radioactive tracers to mark interfaces and measure intermixing in pipelines. D. E. Hull and J. W. Kent. Ind & Eng Chem 44:2745-50 N '52

Radioactive tracers track metal cleaner effectiveness. J. W. Hensley. il Iron Age 170:151-4 N 13 '52

Radioactivity in mineral dressing. A. M. Gaudin. Engineering 174:677 N 21 '52

Radioisotope tracer successful in products-pipe-line application. G. Weber. il Oil & Gas J 51:115-16+ N 10 '52

Radioisotopes in metallurgy. H. R. Spedden. Metal Prog 63:186-8 Je '53

Radiometric evaluation of the effectiveness of the chromic acid rinse treatment for phosphated work. S. L. Eisler and J. Doss. il Metal Finishing 50:54-8+ D '52

Some possible applications of radioisotopes in the pulp and paper industry. E. E. Dickey. Tappi 36:sup 108A-11A Ja '53

Special conference on atomic energy in industry, New York. Metal Prog 62:138+ D '52

Studies of self-diffusion in graphite using C-14 tracer. M. H. Feldman and others. bibliog diag J Ap Phys 23:1200-6 N '52

Studies on fate of parathion in rabbits, using radioactive isotope techniques. J. A. Jensen and others. bibliog A M A Archives Ind Hygiene & Occup Med 6:326-31 O '52

Swedish tests prove out radioactive tool experiments. diags Am Mach 97:194 Mr 16 '53

Syntheses with isotopic tracer elements; [$^{14}C_1$]benzene. H. S. Turner and R. J. Warne. diags Chem Soc J p789-95 Mr '53

Technical modifications of radiocardiography. A. A. Luisada and others. Science 117:299-300 Mr 20 '53

RADIOACTIVE tracers—*Continued*

Test of tritium as a labeling device in a biological study. W. G. Verly and others. bibliog Am Chem Soc J 74:5941-3 D 5 '52

Theory of ion exchange for polyelectrolytes undergoing electrolytic transference. F. T. Wall and P. F. Grieger. bibliog J Chem Phys 20:1200-6 Ag '52

Tracer-diffusion in liquids; self-diffusion of calcium ion and chloride ion in aqueous calcium chloride solutions. J. H. Wang. bibliog Am Chem Soc J 75:1769-70 Ap 5 '53

Tracer diffusion in the ground in radioactive leak location. A. Gemant. bibliog J Ap Phys 24:93-5 Ja '53

Tracer method for the thickness measurement of thin Bi films. J. J. Antal and A. H. Weber. bibliog il R Sci Instr 23:424-6 Ag '52

Tracer studies in the aquation and hydrolysis of cobalt complexes. C. A. Bunton and D. R. Llewellyn. Chem Soc J p 1692-6 Je '53

Trends in detection and measurement of radioisotopes for medical purposes. J. W. Hitch. bibliog il diags Elec Eng 72:484-9 Je '53

Use of radioactive isotopes in a study of evaporation from thermionic cathodes. W. F. Leverton and W. G. Shepherd. diag J Ap Phys 23:787-93 Jl '52

Use of radioisotopes in pulp and paper mills. L. Walter. Paper Ind 35:75-6 Ap '53

Using radioactivity in the refinery. G. C. Gester, jr. and others. bibliog flow diag diags Pet Processing 8:550-2 Ap '53

Analysis

Electrochromatographic separations of calcium and phosphate ions; factors influencing separations. T. R. Sato and others. bibliog il Anal Chem 25:438-46 Mr '53

RADIOACTIVE waste. See Atomic piles—Waste; Sewage disposal—Radioactive waste disposal; Trade waste—Radioactive waste

RADIOACTIVE water. See Water purification—Radioactive water

RADIOACTIVITY

Activities in light nuclei from nitrogen ion bombardment. L. D. Wyly and A. Zucker. Phys R 89:524-5 Ja 15 '53

Activity assignment to titanium 51. W. R. Hammond and others. bibliog Phys R 90:157 Ap 1 '53

Alpha-radioactivity in the 82-neutron region. J. O. Rasmussen, jr. and others. bibliog Phys R 89:33-48 Ja 1 '53

Atomic excitation in beta-decay. H. M. Schwartz. bibliog J Chem Phys 21:45-51 Ja '53

β—half-life of Pu^{241}. D. R. MacKenzie and others. Phys R 90:327-8 Ap 15 '53

Decay of Mg^{28}. A. H. Wapstra and A. L. Veenendaal. bibliog Phys R 91:426 Jl 15 '53

Decay of Re^{188} and the lifetimes of Os^{186m} and Os^{186m}. C. C. McMullen and M. W. Johns. bibliog diag Phys R 91:418-19 Jl 15 '53

Dependence of gamma-radiation lifetimes on nucleon configurations. R. D. Hill. bibliog Phys R 88:1428-9 D 15 '52

Determination of thallium by radioactivation; application to potassium iodide. C. J. Delbecq, L. E. Glendenin and P. H. Yuster. bibliog Anal Chem 25:350-1 F '53

Determination of trace impurities in magnesium by activation analysis. G. J. Atchison and W. H. Beamer. bibliog Anal Chem 24:1812-15 N '52

Energy levels associated with the radioactive decay of Gd^{158} and Tb^{161}. J. M. Cork and others. diags Phys R 88:685-6 N 1 '52

Experimental efforts to find radioactivity induced by the firing of shaped charges. G. J. Plain and others. J Chem Phys 20:1049 Je '52

Half-life of Ca^{45}. C. F. G. Delaney and J. H. J. Poole. Phys R 89:529-30 Ja 15 '53

Half-life of Co^{60}. J. Kastner and G. N. Whyte. Phys R 91:332 Jl 15 '53

Half-life of I^{131}. H. H. Seliger and others. Phys R 90:443 My 1 '53

Half-life of thallium-204. G. Harbottle. Phys R 91:1234 S 1 '53

Half-life of W^{187}. G. G. Eichholz. bibliog Phys R 89:525-6 Ja 15 '53

How induced radioactivity may help separate minerals. A. M. Gaudin and others. bibliog Eng & Min J 153:95-9+ N '52

Isomerism of In^{110} and In^{112}. E. Bleuler and others. bibliog diags Phys R 90:464-8 My 1 '53

Method of time-free solutions for radioactive decay and radionuclide production. L. Gold. J Ap Phys 24:88-90 Ja '53

New method uses atomic energy to detect impurities in raw materials; abstract. C. E. Larson. Cer Ind 59:131 O '52

Nuclear spectra of Rb^{82} and Rb^{84}. C. M. Huddleston and A. C. G. Mitchell. bibliog diags Phys R 88:1350-4 D 15 '52

Possible explanation of the radioactivity induced by the detonation of shaped charges. L. Grunberg and K. H. R. Wright. il J Chem Phys 21:763 Ap '53

Potential hazard from use of thoriated tungsten electrodes. A. J. Breslin and W. B. Harris. Welding J 32:134 F '53

Radiations from Zr^{97} and Nb^{97}. C. E. Mandeville and others. bibliog Franklin Inst J 254:381-9 N '52

Radiations of neutron-deficient barium and cesium nuclides. R. W. Fink and E. O. Wiig. bibliog Phys R 91:194 Jl 1 '53

Radiations of 6.7-day U^{237}. F. Wagner, jr. and others. bibliog Phys R 89:502-7 Ja 15 '53

Radiations of Th^{231}(UY). M. S. Freedman and others. bibliog diag Phys R 89:302-9 Ja 1 '53

Radioactive charging through a dielectric medium. E. G. Linder and P. Rappaport. diag Phys R 91:202 Jl 1 '53

Radioactive decay of Cs^{134}, Os^{185}, Os^{191}, and Os^{193}. J. M. Cork and others. bibliog diags Phys R 90:444-7 My 1 '53

Radioactive decay of tungsten 187. J. M. Cork and others. bibliog Phys R 89:1291-2 Mr 15 '53

Radioactive decay of Y^{91}. F. I. Boley and D. S. Dunavan. Phys R 90:158 Ap 1 '53

Radioactive dust from nuclear detonations. M. Eisenbud and J. H. Harley. bibliog map Science 117:141-7 F 13 '53

Radioactive fallout in Massachusetts surface waters. H. A. Thomas, jr. and others. Am Water Works Assn J 45:562-8 Je '53

Radioactivity in mineral dressing. A. M. Gaudin. Engineering 174:677 N 21 '52

Radioactivity of Cu^{67}. H. T. Easterday. Phys R 91:653-4 Ag 1 '53

Radioactivity of phosphatic sediments. D. McConnell. bibliog Econ Geol 48:147-8 Mr '53

Radioactivity of Pt^{191} and Pt^{193m}. J. B. Swan and others. Phys R 90:257-8 Ap 15 '53

Radioactivity of scandium 43. J. R. Haskins and others. Phys R 88:876-7 N 15 '52

Radiocolloids. G. K. Schweitzer and M. Jackson. bibliog(82 ref) J Chem Educ 29:513-22 O '52

Slow neutron-induced radioactivities of nuclear explosions. C. E. Mandeville. Franklin Inst J 252:297-308; 255:133-7 O '51, F '53

Soft radiation from Pu^{239}. H. I. Israel. Phys R 88:682-3 N 1 '52

State of chemical combination of $iodine^{131}$ formed by neutron irradiation of tellurium in organic liquids. F. J. Keneshea, jr. and M. Kahn. bibliog Am Chem Soc J 74:5254-5 N 5 '52

Theory of alpha decay. J. J. Devaney. bibliog Phys R 91:587-93 Ag 1 '53

Transistor research aid. Steel 132:83 F 16 '53

Use of radioactive material for the generation of high voltage. E. G. Linder and S. M. Christian. il diags J Ap Phys 23:1213-16 N '52

What the uranium prospector should know about radiation. R. J. Wright. Eng & Min J 154:92-5 Ja '53

See also

Alpha rays
Atoms—Disintegration
Beta rays
Cloud chambers
Electrons
Gamma rays
Ionization, Gaseous
Neutrons
Radioactive substances
Radioactive tracers
Radiography
Radium
X rays

RADIOACTIVITY—*Continued*

Bibliography

International bibliography on atomic energy, volume 2, Scientific aspects. (Supplement no. 1) pa $3.50 Atomic energy section, Dept. of security council affairs, United nations, New York; for sale by Columbia univ. press, 2960 Broadway, New York 27 '52

Measurement

Amateur scientist. A. G. Ingalls. diags Sci Am 188:104-6 Mr '53

Correction for finite angular resolution in directional correlation measurements. J. S. Lawson, jr. and H. Frauenfelder. diags Phys R 91:649-52 Ag 1 '53

Determination of specific activities of tritium-labeled compounds with liquid scintillators. E. C. Farmer and I. A. Berstein. bibliog Science 117:279-80 Mr 13 '53

Determination of tracers in the presence of their radioactive daughters. H. W. Kirby. Anal Chem 24:1678-9 O '52

Experimental energy and angular distributions of inner bremsstrahlung. T. B. Novey. bibliog diags Phys R 89:672-8 F 15 '53

Jet pilotness drones collect data on radiological hazards in atomic clouds. Elec Eng 72:567 Je '53

Liquid scintillation counting of tritium-labeled water and organic compounds. F. N. Hayes and R. G. Gould. bibliog Science 117: 480-2 My 1 '53

Radiac instrumentation. D. Taylor. bibliog diags J Sci Instr 29:315-22 O '52

Radiations of Pu^{243}. D. W. Engelkemeir and others. bibliog diag Phys R 90:6-10 Ap 1 '53

Self-absorption phenomena in the measurement of the radioactivity of nickel-63. G. K. Schweitzer, B. R. Stein and J. W. Nehls. J Phys Chem 56:692-3 Je '52

Trends in detection and measurement of radioisotopes for medical purposes. J. W. Hitch. bibliog il diags Elec Eng 72:484-9 Je '53

Physiological effect

Carbon isotope effects in biological systems. D. L. Buchanan and others. bibliog Science 117:541-5 My 22 '53

Occurrence of lymphocytes with bilobed nuclei in cyclotron personnel. M. Ingram and others. bibliog Science 116:706-8 D 26 '52

Retention, distribution and elimination of inhaled particulates; with particular reference to the evaluation of radiologic risk. M. Eisenbud. bibliog A M A Archives Ind Hygiene & Occup Med 6:214-25 S '52

Protection

Cleaner air; stack effluent from atom power lab cleaner than normal air. J. J. Fitzgerald. Iron Age 170:182-3 D 11 '52; Same. Materials & Methods 37:158+ Ja '53

Concrete for radiation shielding. E. J. Callan. bibliog(29 titles) diags Am Concrete Inst J 25:17-44 S '53

Constructing ventilation systems for radioactive work. W. W. McIntosh. il Heating-Piping 25:98-102 Je; 98-102 Jl '53

Findings of research program on radiological decontamination announced. F. D. Snell. Elec Eng 72:758 Ag '53

Gamma penetration. Safety Maint & Prod 104: 54 O '52

Hot lab; atomic age tool. il Safety Maint & Prod 105:56-7 F '53; Same. Nat Safety N 67:2-3 Je '53

Huge G-M counter monitors background count. R. M. Ball. diags Electronics 25: 199-200+ D '52

Looking in on dangerous operations at the Hanford works. J. M. Holeman. il diags Gen Elec R 55:27-31 N '52

Nuclear energy brings new problems to industry. R. C. Stratton. Nat Safety N 67: 35 Je '53

Piping radiological labs. W. W. McIntosh. il Heating-Piping 25:73-9 O '53

Precast concrete in laboratory design for handling radioactive materials. il diags Concrete 60:16+ O '52

Radiation detecting instruments for large samples. il Product Eng 23:212 N '52

Radioisotope facilities for the general hospital. S. C. Ingraham. plans Arch Rec 112: 181-2+ D '52

Radiological health field training unit. S. Kinsman and M. I. Goldman. il plan Pub Health Rep 67:1216-18 D '52

See also

Atomic bombs—Protective measures

RADIOCARBON. See Carbon—Isotopes

RADIOCHEMISTRY

Analytical applications of radiochemical techniques. J. E. Hudgens, jr. bibliog Anal Chem 24:1704-8 N '52

Charge transfer in the radiation chemistry of gases. M. Burton and J. L. Magee. bibliog J Phys Chem 56:842-5 O '52

Chemical engineering and atomic energy; pilot plant problems. C. M. Nicholls and A. S. White. il plans diag Chem & Ind p51-5 Ja 17 '53

Effect of oxygen on a radioreduction reaction. N. Todd and S. L. Whitcher. bibliog J Chem Phys 20:1172-3 Jl '52

Radiochemical preparation of heptadecene-8. V. L. Burton and I. A. Breger. bibliog Science 116:477-9 O 31 '52

Radiochemical studies on the photofission of thorium. D. M. Hiller and D. S. Martin, jr. bibliog Phys R 90:581-5 My 15 '53

Radiochemistry in paint research; new technique discussed by GCCA. Chem Age (Lond) 68:129-31 Ja 17 '53

Theory of radiation chemistry; track effects in radiolysis of water. A. H. Samuel and J. L. Magee. bibliog J Chem Phys 21:1080-7 Je '53

RADIOCOLLOIDS. See Colloids

RADIOGRAPHY

Application of fluorescence X-rays to metallurgical microradiography. H. R. Splettstosser and H. E. Seemann. bibliog il diag J Ap Phys 23:1217-22 N '52

Autoradiographic study of marine shales. V. F. Ross. bibliog il Econ Geol 47:783-93 D '52; Discussion. D. McConnell. 48:147-8 Mr '53

Economic aspect of radiographic inspection. V. E. Pullin. Engineer 194:641-3 N 14 '52

Electrical technology in medicine; International congress of radiology 7th meeting, Copenhagen. Elec R (Lond) 153:448-9 Ag 28 '53

Gamma-radiography; progress in non-destructive testing. H. Manley. il Chem Age (Lond) 67:795-6 D 13 '52

Gamma radiology; application to detection of cracking in riveted seams of boiler drums. A. R. Haworth. il Elec J 149:1163-72 O 17 '52

Hot radiography cuts weld inspection time. A. Gobus. il Steel 131:72-3 O 27 '52

Natural and artificial sources for gamma radiography. B. N. Clark. il diags Engineer 194:195-8 Ag 8 '52

New inspection technique of hot radiography saves many hours on big welding jobs. il Mill & Factory 53:138 Jl '53

New method of inspecting pipe line welds saves money and promotes safety; gamma ray inspection of radiography. W. C. Grant. il Gas Age 110:19-22 N 6 '52

Non-destructive testing reveals casting defects. J. M. Anspach. il diags Am Mach 97: 119-20 Mr 2 '53

Plant inspection gamma-radiographic equipment. il Chem Age (Lond) 68:212 Ja 31 '53

Powder camera modification for high temperature photographs. H. T. Heal and others. diag J Sci Instr 29:380-1 N '52

Production of monochromatic X-radiation for microradiography by excitation of fluorescent characteristics radiation. T. H. Rogers. diag J Ap Phys 23:881-7 Ag '52

Progress in radiography; exhibition, Copenhagen. Elec R (Lond) 153:307-8 Ag 7 '53

Radiation exposure in the United States. D. W. Moeller and others. bibliog il diags Pub Health Rep 68:57-65 Ja '53

Radiographic exposure calculator. diag Engineer 196:247-8 Ag 21 '53

Radiographic inspection assures good welds on Providence distribution line. L. S. Fletcher. il Gas Age 111:45-7 Ap 9 '53

RADIOGRAPHY—*Continued*

Radiography with gamma rays machines; Gamma industries inc. il Foundry 81:282+ O '53

Simplified planigraphic tube motion. I. J. Kane. bibliog il diags Science 117:458-9 Ap 24 '53

Use of X-ray film for the quantitative measurement of diffraction line intensities. K. E. Beu. il R Sci Instr 24:103-8 F '53

X-ray image amplifier for medical use. Franklin Inst J 255:264-5 Mr '53; Electronics 26:218+ Ap '53

X-ray motion picture techniques employed in medical diagnosis and research. S. A. Weinberg and others. bibliog il diag Soc Motion Picture & Tv Eng J 59:300-8 O '52

You can get better case depth measurements with radioactive isotopes. A. D. Kirshenbaum and H. C. Boynton. bibliog il diag Iron Age 171:138-40 My 14 '53

See also

Diagnosis, Radioscopic

Metals—X ray inspection

Welding—X ray inspection

RADIOGRAPHY, Stereoscopic

Study of grain shape in an aluminum alloy and other applications of stereoscopic microradiography. W. M. Williams and C. S. Smith. bibliog il diags J Metals 4: Trans 755-65 Jl '52; Discussion. 5:Trans 741-3 sec 2 My '53

RADIOISOTOPES. See Isotopes; Radioactive tracers

RADIOLOGICAL defense laboratory. See United States—Navy—Laboratories

RADIOSCOPIC diagnosis. See Diagnosis, Radioscopic

RADIO-SONDE. See Radio meteorographs

RADIOTHERAPY

Radiation exposure in the United States. D. W. Moeller and others. bibliog il diags Pub Health Rep 68:57-65 Ja '53

Trends in detection and measurement of radioisotopes for medical purposes. J. W. Hitch. bibliog il diags Elec Eng 72:484-9 Je '53

Apparatus

Cobalt-60 irradiator; new tool for medical research. E. D. Trout and J. Vlach. il Gen Elec R 55:44-7 N '52

Flexible cast to immobilize patients during X-ray treatments. il Mod Plastics 30:197 N '52

RADIOTHORIUM. See Thorium—Isotopes

RADIUM

Precipitation process speeds radium output. Materials & Methods 38:238+ O '53

Thermal energy relaxation length of Ra-Be neutrons in water. J. Tittman. bibliog Phys R 90:256-7 Ap 15 '53

Isotopes

Alpha-particles of radium. F. Asaro and I. Perlman. bibliog Phys R 88:129-31 O 1 '52

Radiations of Ra^{227}. J. P. Butler and J. S. Adam. bibliog Phys R 91:1219-21 S 1 '53

Safety measures

Hazard evaluation and control after a spill of forty milligrams of radium; abstract. R. K. Skow and others. Nat Safety N 68:212-14 O '53

Work safely with radium. H. Bavley. il Safety Maint & Prod 105:49-50 My '53

RADIUM D

Disintegration of radium D. A. A. Jaffe and S. G. Cohen. bibliog Phys R 89:454-8 Ja 15 '53

Electromagnetic spectrum of radium D. P. E. Damon and R. R. Edwards. bibliog il Phys R 90:280-4 Ap 15 '53

Radiations from RaD and RaE. C. S. Wu and others. bibliog diags Phys R 91:319-27 Jl 15 '53

Studies of bond rupture in the decay of RaD as tetramethyl lead. R. R. Edwards and others. bibliog J Chem Phys 21:1555-8 S '53

RADIUM E

Radiations from RaD and RaE. C. S. Wu and others. bibliog diags Phys R 91:319-27 Jl 15 '53

RADIUM poisoning

Radium exposure claim not excluded by products clause. Nat Underw 57:35 F 12 '53

RADON

Scintillation tube for the measurement of radioactive gases. P. E. Damon and H. I. Hyde. diags R Sci Instr 23:766 D '52

Isotopes

Neutron capture cross section of Em^{222}. A. P. Baerg. Phys R 90:1121 Je 15 '53

RAFTERS

Modular construction for the small home builder; common rafter calculations with Wilson rafter table. G. S. Clark. diags Am Bld 75:206-13 Ja '53

Modular principles in roof framing; hip and valley rafter calculations. G. S. Clark. diags Am Bld 75:122-4 F '53

RAFTS

New flexible type deepsea bundle raft. Paper Tr J 135:9 N 21 '52; Pulp & Pa of Can 54:138 Ap '53

RAGS

Buying and use of roofing rags. O. A. Bigler. Paper Tr J 135:18+ D 5 '52

Cotton rags in '52. S. I. Lippman. Paper Tr J 136:146+ F 20 '53

RAIL fastenings

Standards

Tests guide track bolt design. C. B. Bronson. il Standardization 24:100-3 Ap '53

RAIL joints

Testing

Progress reports of investigation of railroad rails and joint bars. R. E. Cramer and R. S. Jensen. il Ill U Eng Exp Sta Reprint Ser 49:1-36 '52 (pa 30c)

Progress reports of investigation of railroad rails and joint bars. R. E. Cramer and R. S. Jensen. il Ill U Eng Exp Sta Reprint Ser 51:1-31 '53 (pa 30c)

Welding

Electrical resistance flash welding of railway rails; abstract. R. Keuhnel. Metal Prog 64:138+ Jl '53

Longest welded rail-haul. il diags Ry Age News ed 135:27 O 12 '53

RAILINGS

These handrails are made from scrap. G. M. Priske. il diag Welding J 32:863 S '53

RAILROAD and utilities commissioners, National association of. See National association of railroad and utilities commissioners

RAILROAD associations

See also Association of American railroads; Car department officer's association; Pan American railway congress association

RAILROAD board of mediation. See National mediation board

RAILROAD bridges. See Bridges, Railroad

RAILROAD construction. See Railroads—Construction

RAILROAD engineering

Development of the engineer in railway practice. R. A. Riddles. diags Inst Mech Eng Proc (A) 167 no 2:141-5, pl 1-6 '53; Same cond. Engineering 175:188-9 F 6 '53

Progress in railway mechanical engineering, 1951-1952. il plan diags Mech Eng 75:291-306 Ap '53

See also

Bridges, Railroad

Cars

Henderson medal

Locomotives

Railroad research

Railroads—Construction

Railroads—Earthwork

Railroads—Maintenance and repair

Railroads—Track

RAILROAD engineers

Why we need more technically trained men today. C. G. Grove. Ry Age 134:92-3 Mr 9 '53

RAILROAD labor. See Railroads—Employees

RAILROAD law

Developments in railroad law during the past year. W. I. Woodcock, jr. Pub Util 52:549-53 O 8 '53

Discussion of developments in transportation law subsequent to July 1, 1951. G. L. Buland. Pub Util 50:584-90 O 23 '52

RAILROAD law—*Continued*

I.C.C. wants brake specification law. W. M. W. Splawn and J. K. Knudson. Ry Age News ed 134:12 Mr 16 '53

Railroads oppose radio, brake bills; Senate committee hearing. Ry Age 134:12-13 Ap 20 '53

Regulatory lag and rail rates. E. H. Burgess. Pub Util 50:659-66 O 23 '52

Review of railway operations in 1952; legislation affecting the railroads. J. H. Parmelee. Ry Age 134:159-60 Ja 12 '53

Wage reports need support, not changes in Railway labor act. F. A. O'Neill, jr. Ry Age News ed 134:12-14 Mr 16 '53

See also
Interstate commerce commission
National mediation board
Railroads—Employees
Railroads—Rates
Railroads and state

RAILROAD management. See Railroads—Management

RAILROAD motor cars. See Motor cars (railroad)

RAILROAD public relations association

Annual meeting, 1st, Chicago, June 8-9. Ry Age 134:54-5 Je 29 '53

RAILROAD rates. See Railroads—Rates

RAILROAD research

Air filter adhesive developed in laboratory and field tests; Diesel-engine filtration study. A. W. Hardy and others. il Ry Loco & Cars 127:65-71 Mr '53

Always a better way; research is revolutionizing America's railroads. D. J. Russell. il Dun's R 61:26+ Ja '53

High-level railroad cooperation, plus operations research methods equal more efficient railroading; Westinghouse air brake co. il Ry Age 134:71-3 Ap 20 '53

RAILROAD shops. See Car shops; Locomotive shops; Railroads—Shops

RAILROAD stations. See Railroads—Stations

RAILROAD strikes

Great Western strike cases settled. Ry Age News ed 134:14 Mr 16 '53

Grievance strike hits Chicago Great Western. Ry Age 134:16 F 2 '53

Stalemate in Great Western strike issues continues. Ry Age 134:15 F 9 '53

Wildcat strike ties up union railroad. Ry Age 134:17-18 Ap 6 '53

RAILROAD superintendents, American association of. See American association of railroad superintendents

RAILROAD supplies industry

Exhibitions

New ways to better railroading. il Bsns W p 136+ Jl 4 '53

Showing off; rail equipment makers parade their hopeful wares. A. Glenn. Barron's 33:17-18 Je 29 '53

RAILROAD ties

Longer life for boxed-heart Douglas fir ties. il Ry Age 134:44-5 F 2 '53

Mechanized tie-renewal gang cuts insertion cost one dollar per tie; Santa Fe. il Ry Age 135:74-6 Ag 24 '53

Unit tie costs up 127.7 per cent since '41; rails up 95.4 per cent. Ry Age 133:12 N 24 '52

See also
Railway tie association

Statistics

Tie renewals at new low in 1951. il Ry Age 133:47-50 O 20 '52

RAILROAD ties, Concrete

Prestressed railway ties in Germany. il diags Concrete 61:6-7 Jl '53

RAILROAD tracks. See Mine tracks; Railroads—Track

RAILROAD yards. See Railroads—Yards

RAILROADS

Horizon looks brighter as '52 passes; railroad year in pictures. A. M. Cox, jr. Ry Age 134:165-77 Ja 12 '53

Roads join fight on oil imports. Ry Age 134:13-14 Mr 9 '53

See also
Air brakes
Bridges, Railroad
Carriers
Cars
Electric railroads
Freight car service
Freight cars
Grade crossings
Locomotives
Motor cars (railroad)
Railroad engineering
Railroad research
Railroad ties
Railroads and state
Rails
Railway mail service
Rapid transit
Seaboard air line railroad
Southern Pacific railroad
Transportation

also Pan-American railway congress association

Accidents

Air-travel hazard 6½ times rail in 1952. Ry Age 134:16 Ap 20 '53

Automatic train control on British railways; report on double collision, Oct. 8 at Harrow and Wealdstone station in the London Midland region, British railways. Engineering 176:53-5 Jl 10 '53; Excerpt. Elec R (Lond) 153:103-4 Jl 10 '53

Closed angle cock cause of Washington wreck. diag Ry Loco & Cars 127:85-6 Ap '53

Fast, efficient restoration job, puts Washington station back in shape for inaugural traffic; illustrations with text. Ry Age 134:14-15 Ja 26 '53

Harrow and Wealdstone accident. il plan Engineer 194:514-15 O 17 '52

Harrow and Wealdstone railway accident report. G. R. S. Wilson. Engineer 196:11-14 Jl 3 '53

Harrow and Wealdstone train accident inquiry. Engineer 194:560 O 24 '52

I.C.C. holds hearing on federal accident. Ry Age 134:18+ F 2 '53

I.C.C. reports on Conneaut accident. Ry Age News ed 135:14 Jl 6 '53

I.C.C. urges immediate angle cock inspection; Union station, Washington. il Ry Age 134:18-19 F 23 '53

More cases of suspected sabotage are reported. Ry Age 134:48-9 F 2 '53

New York Central three-train wreck kills 21. Ry Age 134:13-14 Ap 6 '53

1952, the railroads' safest year. Ry Age 134:15 F 16 '53

Rear-end crashes distress the D.T.A. administrator. J. K. Knudson. Ry Age 134:16-17 Je 29 '53

Report on the collision at Guildford station. Engineer 195:501 Ap 3 '53

Senate group studies runaway train accident. Ry Age 134:55-6 Ja 26 '53

Train runs through gates at Washington station. Ry Age 134:18 Ja 19 '53

Two railway accident reports. D. McMullen. Engineering 175:9 Ja 2 '53

See also
Grade crossing accidents
Locomotives—Failure
Locomotives, Diesel-electric—Failure
Railroads—Safety measures

Accounting

Centralized machine car accounting; Santa Fe. flow chart il Ry Age 135:62-71 O 5 '53

Developing accounting officers; Chesapeake & Ohio. il Ry Age 134:84-6 Mr 23 '53

How Denver & Rio Grande Western uses cost controls. R. J. Herring. Ry Age 134:62-4 Ap 6 '53

How to speed revenue prorating; workshop on punched card mechanical abstracting for interline received carload freight. Ry Age 134:130+ Mr 9 '53

New accounting system slashes payroll costs by $100,000; Baltimore & Ohio railroad. C. A. Strickland. il Am Bsns 23:10-11+ Mr '53

They do yard paper work faster; new work unit helps Southern Pacific clerks at Taylor yard. il Ry Age 134:42-3 F 2 '53

See also
Railroads—Finance
Railroads—Records
Waybills

also Association of American railroads—Accounting division

RAILROADS—*Continued*

Advertising

Faith proves a potent, new campaign theme; Texas and Pacific railway. il Ptr Ink 242: 45 Ja 16 '53
Let's take the train; how a Kansas City department store tied in displays with Santa Fe. il Ry Age 135:19 S 21 '53
Public relations becomes human relations for railway; Southern Pacific. C. Watson. Ed & Pub 86:7+ F 21 '53
Railroads encourage camera fans. il Ry Age 134:43-5 Je 29 '53

Air brakes

See Air brakes

Airline competition

Air lines still winning travelers. Ry Age News ed 134:10 My 25 '53
Predictability, that's what the shipper wants; interview with John C. Emery. il Ry Age 133:63-5 N 10 '52
Three-cent mail will go by air; experimental shift of New York-Chicago and Washington-Chicago business from the railroads. Ry Age News ed 135:9-10 S 14 '53

Automatic stop and train control

Automatic train control. W. A. Tuplin. Engineer 195:140 Ja 23 '53
Automatic train control on British railways; report on double collision Oct. 8 at Harrow and Wealdstone station in the London Midland region, British railways. Engineering 176:53-5 Jl 10 '53; Excerpt. Elec R (Lond) 153:103-4 Jl 10 '53
Higher speeds with train stop; Chicago & North western. il map Ry Age 134:73-5 Mr 23 '53

Ballast

See Ballast

Brakes

See Air brakes

Braking

Don't hurry a freight-train stop. J. S. Swan. il Ry Age 134:48-50 Ja 26 '53
Double acting slack adjuster. il diag Ry Loco & Cars 127:108+ Je '53; Same cond. Ry Age 134:113 My 18 '53
Dynamic braking for low-grade lines. il diags Ry Loco & Cars 127:69-74 F '53
How hot boxes can stop trains automatically. il Ry Age 134:84-5 F 9 '53; Same. Ry Loco & Cars 127:59-60 F '53
I.C.C. wants brake specification law. W. M. W. Splawn and J. K. Knudson. Ry Age News ed 134:12 Mr 16 '53
Klasing slack adjuster. il diags Ry Loco & Cars 127:110+ Ap '53
Locomotive utilizes dynamic braking. Machine Design 25:155 Ja '53
Train handling; report of Railway fuel and traveling engineers' association. Ry Mech & Elec Eng 126:74-6 N '52
What causes stresses in brake beams. R. B. Cottrell. il Ry Loco & Cars 127:45-8 F '53

See also
Air brakes
Electric railroads—Braking

Bridge crossing

See Bridges, Railroad

Buildings and structures

Canton railroad expands ore dock at Baltimore. W. H. Raff. il plan diags Ry Age 133:52-5 D 15 '52
Fire-resistant and efficient new Central of Georgia nitrate warehouse. il diag Ry Age 135:80-2 Ag 24 '53
On the Union Pacific, livestock dines in style; new feed and rest stockyard. il plans diag Ry Age 135:86-7+ Jl 13 '53
Operating advantages from new crew-dispatching building; Belt railway of Chicago. il plans Ry Age 134:49-51 F 23 '53
Reading rehabilitates tidewater piers. il Ry Age 133:44-6 D 22 '52

See also
Bridges, Railroad
Car shops
Freight houses
Locomotive shops
Railroads—Shops
Railroads—Stations
Railroads—Terminals

Car departments

See also Car department officer's association

Cars

See Baggage and express cars; Cars; Dining cars; Freight cars; Motor cars (railroad); Ore cars; Postal cars; Refrigerator cars; Sleeping cars

Centralized traffic control

See Railroads—Signals

Claims

Carriers are liable for failure to handle freight through Montgomery Ward picket lines. Ry Age News ed 135:11-12 Jl 20 '53
Court holds roads aren't liable for flood damage. Ry Age News ed 135:12 Jl 20 '53
Examiners deny U.S. reparations. Ry Age 135:12-13 Jl 27 '53
Flood claim test cases moved to Kansas City. Ry Age 133:14 N 10 '52
Loss and damage can be reduced. il map Ry Age 134:51-2 My 4 '53
More light on claim causes results in suggested new prevention activity; transportation and packing survey. il Ry Age 133: 85-7 N 3 '52
R.F.C.'s $1 million claim dismissed by the I.C.C. Ry Age 134:12 Ja 12 '53

Commuter service

New York Central adds commuter trains. E. C. Nickerson. Ry Age 134:11 Mr 9 '53
Philadelphia railroads rescue thousands otherwise stranded by four-day strike of transit lines; illustrations with text. Ry Age 134: 12 Ja 26 '53
Sense of humor keeps the Southern Pacific out of commuter's doghouse. Ry Age News ed 135:13 Ag 3 '53

Competitive transportation

Everybody in the hot seat; Chamber of commerce panels at Minneapolis. il Ry Age 134:40-3 Ja 5 '53
Review of railway operations in 1952; competitive situation still of grave concern. J. H. Parmelee. Ry Age 134:162-4 Ja 12 '53

See also
Highway transportation
Railroads—Airline competition
Railroads—Motor vehicle competition

Construction

Build railroad through north Canadian bush. H. W. Richardson. il map Constr Methods 35:62-4+ O '53
Burlington's Kansas City short-cut engineered to modern standards. il map Ry Age 134:74-6 F 9 '53
Construction vs. dividends; New Haven railroad stock fight over capital improvements may decide other roads' programs. il Eng N 150:26-7 F 12 '53
Difficulties overcome in building far-north railway line. S. C. Cooper. il map Roads & Eng Constr 91:101-7 F '53
Laying steel to bring out Labrador's ore. il maps Bsns W p82-6+ Jl 18 '53
Pennsylvania railroad streamlines tracks, terminals. il map Eng N 149:27-8 D 18 '52
Railroad nearing Labrador Iron Ore; illustrations with text. Eng & Min J 154:78-81 Ag '53
Railways are building extensively for better service, more profit. H. E. Michael. il Ry Age 134:240-5 Ja 12 '53
Union Pacific completes line change. il map Ry Age 134:46-9 Je 29 '53

See also
Railroads—Earthwork
Railroads—Relocation
Railroads—Track

Costs

Many-stringed bow; cutting railroad costs. N. Willatt. Barron's 32:13 D 8 '52
1953 outlays put at $1¼ billion. Ry Age 135:16 S 21 '53
Railroad tracks, New York; unit prices. Eng N 150:77 Je 25 '53
This year's capital expenditures estimated at about $1.3 billion. Ry Age 133:12 D 22 '52

RAILROADS—*Continued*

Crossings

See also
Grade crossings

Curves and turnouts

Super-elevation of railway track curves. Engineering 174:221 Ag 15 '52

Damage from floods, storms, etc.

Flood damage to railways in the Eastern Region. il(p400) Engineering 175:395 Mr 27 '53; Engineer 195:470 Mr 27 '53

Development work

ACL's territory enjoying continued growth. il Manuf Rec 122:60-1 Je '53

Joint meeting of American railway development association and Railway development association of the Southeast, Mobile, Ala. April 19-21. Ry Age News ed 134:16 My 11 '53

Railroad development of industrial sites described as helpful to cities. G. C. Smith. Ry Age 133:11-12 N 10 '52

Warehouse project at Atlanta; Atlantic coast line cooperating with Champion terminal warehouses, inc. il plan Ry Age 134:68-9 My 4 '53

Earthquake damage

Men and machines blitz earthquake damage: Southern Pacific railroad. il Constr Methods 34:55-6 O '52

Earthwork

How the Illinois Central uses long-stick crawler shovels in widening cuts. il Ry Age 134:36-7 Ja 19 '53

Soil failures in a railway cutting. il diags Engineer 195:384-5, 414-15 Mr 13-20 '53; Engineering 175:456-7, 487-90 Ap 10-17 '53

Electric equipment

Electric tracer for railway service; Austin Crompton Parkinson electric vehicles, ltd. il Engineering 174:690 N 28 '52

Electrical signalling and interlocking; Indian railway centenary. H. C. Towers. il Elec J 150:1705-8 My 15 '53

Electrically operated traffic barrier; Westinghouse brake and signal co. il Engineer 194:875 D 26 '52; Engineering 175:63-4 Ja 9 '53

Electronic equipment in railroading. J. M. Carroll. bibliog il diags Electronics 26:130-5 Ag '53

Electronics at work on EJ&E. il plan Ry Age 135:78-82+ O 19 '53

Railroad officers establish one clearing house for electrical practices. A. G. Oehler. il Ry Age 134:208-9 Ja 12 '53

Railway batteries; signal and telecommunication requirements for India. H. C. Towers. il Elec R (Lond) 151:431-4 Ag 29 '52

Research and engineering progress, 1952; rail. il Gen Elec R 56:34-6 Ja '53

See also
Association of
American railroads
—Electrical sections
Railroads—Signals

Electrification

Motive power for railways. C. M. Cock. Engineering 174:421-4, 453-4 S 26-O 3 '52; Same cond. Engineer 194:428-30 S 26 '52; Abstracts. Elec R (Lond) 151:671-2 S 26 '52; Electrician 149:931-2 S 26 '52

See also
Electric locomotives

Africa

Central Africa's first electric railway opens. For Comm W 48:24 D 1 '52

Austria

Electrification of Austrian federal railroads conserves country's goal. For Comm W 49:21 Ja 26 '53

Belgium

Belgium maps extensive electrification program. J. W. Ashton. map Ry Age 134:47 Ja 26 '53

Brazil

São Paulo development; abstracts and discussion. R. J. B. Chatterton and D. H. Rooney. Elec J 150:529-30 F 13 '53; Elec R (Lond) 152:369-70 F 13 '53

France

Electrification of the Paris-Lyons railway. il map Engineering 174:654-8, pl 52-3 N 21 '52

France authorizes bond issue to finance electrification of national railroad. For Comm W 49:13 Ap 20 '53

French railway electrification. il diag Engineer 194:516-17 O 17 '52

Fundamental techniques in transport and their recent evolution; abstract. L. Armand. Elec R (Lond) 152:169 Ja 16 '53

Great Britain

Economic aspects of overhead equipment for d.c. railway electrification. O. J. Crompton and G. A. Wallace. diags Inst E E Proc 100 pt 1:133-45; Discussion. il map 146-53 Jl '53

Electric traction in Lancashire. Elec R (Lond) 151:1386 D 26 '52; Same abr. Engineer 194:801 D 12 '52

50-cycle traction technique. il Elec J 151:485-6 Ag 14 '53

Railway electrification in Great Britain. C. M. Cock. Engineer 189:359-61, 402-3 Mr 24-31 '50; Discussion. Inst E E Proc 100 pt 1:26-31 Ja '53

Transport commission's results; annual report. Elec R (Lond) 152:1459-60 Je 26 '53

Norway

Electrification of Norwegian state railways approved. For Comm W 49:18 Ja 19 '53

Sweden

Swedish railways to use still more electricity. Elec J 150:872 Mr 13 '53

Employees

Arbiters write rule on more than one class of service for train and engine employees. Ry Age 133:11 D 15 '52

Bolstering up morale. il Bsns W p 162-3 D 13 '52

Calendar of labor and wage events, 1952. J. S. Gallagher, jr. Ry Age 134:210 Ja 12 '53

Car-float employee covered by harbor workers act. Ry Age 134:49 F 2 '53

Chicago & North Western, Katy, sign union shop agreements. Ry Age 133:13 D 22 '52

Find college men who want to railroad. H. T. Cover. Ry Loco & Cars 127:73 Ag '53

How boiler supervisors can educate themselves for other positions; report of Master boiler makers' association. Ry Mech & Elec Eng 126:62-3 N '52

How Frisco organizes for track maintenance without section gangs. E. L. Anderson. il Ry Age 133:48-51 O 27 '52

How the Southern Pacific cultivates human relations. il Ry Age 133:37-40 O 20 '52

Mediation board tells Congress it may want to reexamine emergency board procedures. Ry Age 134:12-13 F 9 '53

Milwaukee wholesales its ten Super Dome cars; ticket agents, passenger representatives and information clerks sample the new merchandise. il Ry Age 134:52-5 F 23 '53

Non-op unions would improve fringe benefits. Ry Age 134:17-18 Je 1 '53

Railroads and education. R. R. Young. Ry Age 134:89 Ap 6 '53

Review of railway operations in 1952; disturbing trends in employment and wages. J. H. Parmelee. Ry Age 134:149-51 Ja 12 '53

Review of railway operations in 1952; Railroad retirement board operations. J. H. Parmelee. Ry Age 134:157-8 Ja 12 '53

Seminar for management; Illinois Central. Ry Age 134:70-3 My 4 '53

What makes a good supervisor? V. E. McCoy. il Ry Age 133:94-7 N 3 '52

When employee-stockholders go to a meeting. il Bsns W p60-2 My 9 '53

RAILROADS—Employees—*Continued*

Working on the railroad; a study of job satisfaction. R. Stagner and others. (I.L.I.R. bul. ser. v. 5, no. 4) p293-306 Univ. of Illinois, Urbana '52 (pa 10c)

See also

Railroad engineers
Railroad strikes
Railroads—Pensions
Railroads—Wages
Roundhouses—Employees

also American railway magazine editors' association

Training

Baltimore and Ohio supervisory development program. Ry Age 133:40-2 D 22 '52

Developing accounting officers; Chesapeake & Ohio. il Ry Age 134:84-6 Mr 23 '53

How apprentices should be trained; report of Locomotive maintenance officers' association. Ry Mech & Elec Eng 126:82-4 N '52

School for agents on Texas & New Orleans. il Ry Age 134:97 Ap 20 '53

Ten ways to train maintainers for Diesel locomotives. J. W. Teker and E. R. Ainsworth. il Ry Age 134:122-6 Mr 9 '53

This is the PRR program for triple-goal employee training. il Ry Age 135:73-5 O 19 '53

See also

Cars, Instruction

Equipment and supplies

Coordinated systems necessary before railroads use giant brains; panel discussion. il Ry Age 134:74-5+ My 4 '53

New equipment and methods for reducing head end losses. il Ry Age 134:142-3 My 18 '53

New Gradall makes its debut. il Ry Age 135: 69 S 21 '53

Northern Pacific eases material handling equipment maintenance job. il diag Ry Age 133:86-7 D 1 '52

Outlay for maintenance equipment at new high, 1952. M. H. Dick. il Ry Age 134:198-9 Ja 12 '53

Railroad corrosion conference, 4th, Wrightsville Beach, N.C. May 19-21. Ry Loco & Cars 127:55-7 Jl '53

Railway roof inspection ladder; Merryweather and sons. il Engineer 196:60 Jl 10 '53; Engineering 176:118 Jl 24 '53

Railway vehicle re-railing equipment. il Engineer 196:118-19 Jl 24 '53

Track exhibit; Railway supply manufacturers' assn. il Ry Age 135:94-7 Jl 13 '53

See also

Air brakes
Car couplings
Cars
Freight cars
Locomotives
Railroad supplies industry
Railroad ties
Railroads—Electric equipment
Railroads—Maintenance and repair
Railroads—Purchasing
Railroads—Rolling stock
Railroads—Shops—Equipment
Railroads—Signals
Rails
Refrigeration on cars, trucks, etc.

Equipment trust certificates

Equipment trusts; improved carriers' credit position. M. Halpern. Barron's 33:15 Je 29 '53

Representative equipment trust issues sold in 1952; tabulation. Ry Age 134:189 Ja 12 '53

Fares

Contrast, and a suburban fare increase; Chicago, Burlington & Quincy. il Ry Age 135: 17 Jl 13 '53

Rates that produce profits. C. E. Peterson. il Ry Age 134:141 My 18 '53

Review of railway operations in 1952; tardy increases in rates and fares. J. H. Parmelee. Ry Age 134:151-2 Ja 12 '53

Union Pacific to try family plan fares. Ry Age 135:12 Ag 24 '53

Western lines take to family fare plan. Ry Age 135:12-13 S 21 '53

Finance

Can they hold the pace all year? Bsns W p 134+ Je 6 '53

Earnings, near-term outlook strengthen railroad stocks. G. C. Hudson. il Ry Age 134 188-93 Ja 12 '53

Gauging the rails. A. Jansen. Barron's 33: 9+ Mr 30 '53

How to rebuild a railroad. il Bsns W p52-4+ Mr 14 '53

Impact of recent wage increase on rail earnings. Guthrie. Comm & Fin Chr 177:1332 Mr 26 '53

Improvement programs will continue in 1953 on 1952's $1.3-billion level. W. T. Faricy. Ry Age 133:32 D 29 '52

I.C.C. bureau distributes 1951's passenger deficit by traffic types. Ry Age 133:11 N 10 '52

Is this the answer to the passenger-service deficit? il Ry Age 133:67-71 N 17 '52

Last year's net only eight per cent above 1941's, despite 97.9 per cent rise in gross. Ry Age 134:17 F 23 '53

Lo, the poor passenger; losing proposition for the railroads. A. Jansen. Barron's 33: 11+ Je 29 '53

1952 capital outlays totaled $1⅛ billion. W. J. Taft. il Ry Age 134:178-80 Ja 12 '53

1952's net income was $827 million. Ry Age 134:12 F 16 '53

Passenger service still big loser. Ry Age News ed 134:11 My 25 '53

Rail earnings; the '52 figures look good. Bsns W p94-6 N 29 '52

Railroad earnings; further rise is probable in 1953. A. Jansen. Barron's 32:9+ D 8 '52

Railroad earnings too low. S. Weeks. Ry Age News ed 134:9-10 Je 8 '53

Railroads' plight in supply manufacturers' language. J. P. Newell. Ry Age 134:46-7 Ja 26 '53

Revenues and expenses of railways, month of Dec. and twelve months of 1952; tabulation. Ry Age 134:36-9 F 23 '53

Review of railway operations in 1952; financial results somewhat improved. J. H. Parmelee. Ry Age 134:147-9 Ja 12 '53

Selected income and balance-sheet items of class one steam railways in the United States; tabulation. Ry Age 134:191 My 18 '53

Six months' net income; $418 million. Ry Age News ed 135:9 Ag 17 '53

Some aspects of wage-price relationships in regulated industry; the railways as a case study. R. W. Harbeson. bibliog J Bsns 25: 175-86 Jl '52; Discussion. J. J. Kaufman. 26:48-50; Reply. 51-2 Ja '53

Spokane International nears goal; 23.4 per cent return on Diesels. J. B. Williams. il Ry Age 133:56-7 N 17 '52

See also

Railroads—Costs
Railroads—Fares
Railroads—Management
Railroads—Rates
Railroads—Securities
Railroads—Taxation

also names of railroads, e.g.

Atchison, Topeka and Sante Fe railway
Atlantic coast line railroad
Baltimore and Ohio railroad
Chicago, Rock Island and Pacific railroad
Delaware, Lackawanna and western railroad
Gulf, Mobile and Ohio railroad
Illinois central railroad
Kansas City southern railway
Long Island railroad
New York, New Haven and Hartford railroad
Northern Pacific railway
Pennsylvania railroad
Seaboard air line railroad
Southern Pacific railroad
Southern railway
Union Pacific railroad
Western Maryland railway

also Association of American railroads—Treasury division

Fires and fire protection

Rip track fire fighting wagon. il Ry Loco & Cars 127:68 Jl '53

Target; damper on trestle fires. il Chem W 72:30 F 7 '53

Flood damage

See Railroads—Damage from floods, storms, etc.

RAILROADS—*Continued*

Forms and blanks

Railroads broaden attack on paperwork costs. J. W. Milliken. il Ry Age 134:200-1 Ja 12 '53

Freight

Backstopping Soo Line sales force. il Ry Age 134:65+ Ap 6 '53
Cars of revenue freight loaded, by products, 1943-1952; tabulation. Iron Age 171:444 Ja 1 '53
Freight carloadings, by classes. Fed Res Bul 39:56 Ja '53 [cont monthly]
Freight handled by Diesel power, 1946-1952. Comm & Fin Chr 177:1972 My 7 '53
How the Erie is forecasting freight traffic. E. S. Root. il Ry Age 135:81-3 Ag 10 '53
Railroads' share of intercity ton-miles was 58.6 per cent in 1951. Ry Age 133:15 O 27 '52
Reciprocity in traffic doesn't pay. H. G. Huhn. Ry Age 133:55 N 17 '52
Tariff aids made; an effective sales tool. Ry Age News ed 135:17 S 14 '53
This coal road is also a speedy bridge line; Clinchfield. il map Ry Age 133:80-4+ D 1 '52
What statistics are needed? freight traffic statistics workshop. Ry Age 134:134-5 Mr 9 '53
Will railway movement of coal decline? L. K. Sillcox. il Ry Age 133:36-9 D 22 '52

See also

Freight car service
Freight cars
Freight handling
Railroads—Claims
Railroads—Loading rules
Railroads—Motor vehicle auxiliaries
Railroads—Rates
Railroads—Terminals
Railroads—Yards
Refrigerator cars
Waybills

also Associated traffic clubs of America; Association of American railroads—Freight station section

Freight agents

Freight agents get to see what they sell; Erie railroad's educational tours. il Bsns W p48-9 Je 27 '53

Freight cars

See Freight cars

Government ownership

See Railroads and state

Grade crossings

See Grade crossings

History

Mr Lincoln goes to Gettysburg; enactment by Western Maryland. il Ry Age 133:12-13 O 27 '52

See also

Locomotives—History

Inspection

How the Pennsylvania railroad is improving passenger train service. il Ry Age 134:46-7 F 2 '53

See also

Cars, Inspection

Law

See Railroad law

Lighting

Illumination; A.A.R. Electrical section committee report. il Ry Loco & Cars 127:87+ Ag '53

Loading rules

Loading rules; A.A.R. Mechanical division committee report. Ry Loco & Cars 127:62-3 Ag '53
Report on A.A.R. loading rules; Car department officers' association. il Ry Mech & Elec Eng 126:98-101 N '52

Location

Burlington's Kansas City short-cut engineered to modern standards. il map Ry Age 134:74-6 F 9 '53
Burlington's Kansas City short-cut; Kansas City Zephyr, American Royal Zephyr. il map Ry Age 134:71-3 F 9 '53

Maintenance and repair

Big plans for fixed properties in 1953. il Ry Age 134:89-91+ Mr 9 '53
$1 billion maintenance now deferred, 1952. Ry Age News ed 134:10-11 Mr 30 '53
Outlay for maintenance equipment at new high, 1952. M. H. Dick. il Ry Age 134:198-9 Ja 12 '53

See also

Locomotive shops
Locomotives, Diesel-electric—Maintenance and repair
Railroads—Management

Maintenance of way

See Railroads—Track

Management

Bench marks and yardsticks (cont). Ry Age 133:69 N 3; 49 N 10; 51 N 17; 37 N 24; 71 D 1; 61 D 8; 45 D 15; 25 D 22; 28 D 29 '52; 134:31 Ja 5 '53 [cont weekly]
German railways; an analysis of economic adaptation. J. P. Carter. bibliog Land Econ 28:307-17 N '52
Ike Duffey, shipper turned railroader. W. H. Schmidt, jr. il Ry Age 133:88-92 D 1 '52
Interdepartmental team work. J. H. Aydelott. Ry Loco & Cars 127:61 Ag '53
Progress is not self-made. P. E. Feucht. Ry Age 135:99-100 S 21 '53
R.S.P.A. workshops. il Ry Age 135:110-11 Jl 13 '53

See also

Freight car service
Railroads—Employees
Railroads—Finance
Railroads—Office management
Railroads—Public relations
Railroads—Purchasing
Railroads—Rates
Railroads—Stores systems
Railroads—Trains

Mechanical departments

See also

Association of American railroads—Mechanical division

Military use

Car service division studies keep military freight on the railroads. Ry Age 133:11-12 D 8 '52
Military railway service develops modern military rolling stock. H. A. Jacobs. il Ry Age 135:63-7 O 19 '53

Models

Sale I never forgot; she traded him down. C. D. Webster. il Ptr Ink 242:52+ Ja 30 '53
To sell trains; men only. il Bsns W p 128-9+ N 22 '52
Tooling for toys; A. C. Gilbert co. G. F. Schumacher. il diag Tool Eng 29:63-9 D '52

Motor vehicle auxiliaries

Short-haul passenger service, a problem in Los Angeles, too; Pacific Electric. O. A. Smith. il map Ry Age 133:43-7 O 27 '52
Trucking subsidiary gets modern freighthouse and garage. il plan Ry Age 135:60-3 Jl 27 '53

Motor vehicle competition

E.R.P.C. files answer in truckers' suit. Ry Age News ed 135:14+ S 28 '53
Is Britain freeing rails to fight freed trucks? W. H. Schmidt, jr. il Ry Age 134:60-1+ My 4 '53
Pennsylvania truckers sue 30 eastern railroads for conspiracy; ask $250 million damages. Ry Age 134:17-18+ Ja 26 '53
Pipe line threat leads to railroad rate cut; opposition of motor carriers. Ry Age 134:13 F 9 '53
Time to stop bickering! E. F. Ryan. Ry Age News ed 134:12-13 My 25 '53
Truck suit enters second phase. Ry Age News ed 134:14+ Mr 30 '53
Where railroads lose traffic to trucks. Ry Age 135:11-12 Jl 13 '53

Negro passengers

Supreme court won't review segregation ruling. Ry Age 133:13-14 N 24 '52

RAILROADS—*Continued*

Office management

New accounting system slashes payroll costs by $100,000; Baltimore & Ohio railroad. C. A. Strickland. il Am Bsns 23:10-11+ Mr '53

They do yard paper work faster; new work unit helps Southern Pacific clerks at Taylor yard. il Ry Age 134:42-3 F 2 '53

See also
Railroads—Records

Officials

607 salaries of $20,000 or more paid in 1951. Ry Age 134:47 Ja 19 '53

See also
American association of railroad superintendents

Passenger service

Extras of travel by rail. il Ry Age 134:123-5 My 18 '53

Great Northern tells why passenger service is important. il Ry Age 134:64-7 Je 1 '53

How the Pennsylvania railroad is improving passenger train service. il Ry Age 134:46-7 F 2 '53

How the Santa Fe Los Angeles-San Diego service makes money. il map Ry Age 134: 31-3 Ja 19 '53

Is this the answer to the passenger-service deficit? il Ry Age 133:67-71 N 17 '52

Lo, the poor passenger; losing proposition for the railroads. A. Jansen. Barron's 33:11+ Je 29 '53

New York Central would drop some Beeliners. E. C. Nickerson. Ry Age News ed 134:12 Mr 30 '53

Only the railroads had enough capacity for milk, water and boys. il Ry Age 135:84-9 S 7 '53

Pennsylvania railroad expands suburban service. T. J. Costello. Ry Age 134:13-14 Je 29 '53

Railroad service complaints rise. Ry Age News ed 135:12 S 14 '53

Railroads plan for huge scout jamboree. Ry Age News ed 135:13 Jl 6 '53

Railroads planned well for inauguration traffic. il Ry Age 134:13-14 F 2 '53

Short-haul passenger service, a problem in Los Angeles, too; Pacific Electric. O. A. Smith. il map Ry Age 133:43-7 O 27 '52

Southern Pacific Shasta Daylight quiz reveals why passengers used trains. il Ry Age 135: 88-90 Jl 13 '53

Speeding up railroad Pullman ticket sales; New York Central's Travel service center, Cleveland. il Bsns W p 174-6+ Je 6 '53

Tool for better selling; sales manual. il Ry Age News ed 135:18 S 28 '53

What's interesting, what's new? illustrations with text. Ry Age 134:150-4+ My 18 '53

Why don't people ride trains? A. F. Arpaia. Ry Age 134:11-12 Ap 6 '53

Woman's solution to railroad passenger problems. B. Barton. il Ry Age News ed 135: 18-19 O 12 '53

See also
Dining cars
Railroads—Commuter service
Railroads—Reservation systems
also American association of passenger traffic officers

Passenger traffic

How traffic analysis helped; Erie railroad. Ry Age 134:68-9 Je 1 '53

I.C.C. bureau distributes 1951's passenger deficit by traffic types. Ry Age 133:11 N 10 '52

Passenger service still big loser. Ry Age News ed 134:11 My 25 '53

Passenger traffic issue. il maps diag Ry Age 134:123-54+ My 18 '53

Railroads handled 7.88 per cent of last year's passenger traffic. Ry Age 133:12 N 24 '52

What can be done about the passenger deficit? J. P. Newell. il Ry Age 133:88-90 N 3 '52

Pensions

Baltimore & Ohio employees like annuity plan. Ry Age 134:64-5 My 4 '53

Railroad retirement board's annual report. Ry Age 135:14-15 S 21 '53

Retirement board says go slow before new amendments are made. Ry Age 134:11 Mr 9 '53

Retirement taxes found short of sustaining basis. Ry Age 134:16 My 18 '53

Periodicals

B&O magazine offers human interest; editor Virginia Tanner tells a story with accent on the human side. il Ry Age News ed 135:24-5 S 14 '53

Power

See also
Locomotives

Public relations

How juniors are learning about business, U.S.A. style. il Ry Age 133:64-6 N 17 '52

Public relations becomes human relations for railway; Southern Pacific. C. Watson. Ed & Pub 86:7+ F 21 '53

Public relations; more plain talk. D. I. Mackie. Ry Age News ed 134:14 Ap 27 '53

See also
Railroad public relations association

Purchasing

Class I railroads 1952 purchases totaled $1.8 billion. Ry Age News ed 134:9-10 Ap 13 '53

Nine months' purchases $1,808,000,000. Ry Age 133:55-6 D 8 '52

Railroad buying continues steady in first five months. Ry Age 135:93-4 Ag 10 '53

Railroad purchases down in 1952, better in 1953. F. C. Miles and J. W. Milliken. il Ry Age 134:181-3 Ja 12 '53

Reciprocity in traffic doesn't pay. H. G. Huhn. Ry Age 133:55 N 17 '52

See also
Association of American railroads—Purchases and stores division

Radio communication

Association of American railroads Communication section 29th annual meeting, Edgewater Park, Miss. Oct. 21-23. Ry Age 133: 98-100 N 3 '52

Axle-driven alternator-rectifier system for caboose power supply. A. H. Hoffer and G. W. Weber. il diags Elec Eng 72:699-703 Ag '53

Communications modernized in 1952. R. W. McKnight. il Ry Age 134:214-19 Ja 12 '53

Electronic equipment in railroading. J. M. Carroll. bibliog il diags Electronics 26: 130-5 Ag '53

Frisco's radio-loudspeaker system allows faster car inspection. il Ry Age 134:47-8 F 23 '53

Great Northern begins long-range freight radio program. il Ry Age News ed 134:24 Mr 30 '53

How radio helps record ore move on Great Northern iron range lines. il map Ry Age 135:100-2+ S 7 '53

How the Southern Pacific uses train-wayside radio in the high Sierra. il map Ry Age 134: 39-41 Ja 26 '53

Modern retarders and communications in Ernest Norris yard. il Ry Age 133:60-2 N 10 '52

Operations of five yards coordinated by radio; Chicago, Burlington & Quincy. il map Ry Age 135:84-6 Ag 10 '53

Radio on Indian railways. H. C. Towers. il Elec J 149:1241-3 O 24 '52

Radio pays off on Bangor & Aroostook. il map Ry Age 134:70-2 Je 1 '53

Radio to grab car numbers. Ry Age 134:50 F 2 '53

Santa Fe's microwave spans Bay and Gulf. il map diag Ry Age 134:35-8 F 2 '53

Rates

Asks railroad price freedom. B. R. Prall. Ry Age 134:11-12 My 4 '53

Canadian railroads turned down on immediate rate increase petition. Ry Age 133:15 N 3 '52

Canadian railways win nine per cent rate increase to offset higher wages. Ry Age 133:14 D 29 '52

RAILROADS—Rates—*Continued*

Canadian roads ask freight rate increase to offset higher wages. Ry Age 133:12 D 8 '52

Car-spotting tariff condemned. Ry Age News ed 134:12 Ap 13 '53

Denver & Rio Grande Western wins partial victory over Union Pacific in Ogden gateway case. Ry Age 134:12 F 2 '53

Estimates of average overall increases in railroad freight rates authorized since June 30, 1946; tabulation. Ry Age 133:16 O 27 '52

Everybody in the hot seat; Chamber of commerce panels at Minneapolis. il Ry Age 134:40-3 Ja 5 '53

Ex parte 175 rates extended. Ry Age News ed 135:10 Ag 3 '53

Freight rate increase extension is approved. Oil Paint & Drug Rep 164:5 Ag 3 '53

Freight rates: what are they? G. L. Wilson. Ry Age 135:67-70 Ag 24 '53

ICC decision grants interim increases. F. K. Edwards. Pub Util 50:516-20 O 9 '52

I.C.C. decisions in divisions cases will shift revenues to official-territory roads. Ry Age 134:11-12 F 9 '53

I.C.C. finds outlook uncertain; ex parte 175 freight rate case. Ry Age News ed 135:10-11 Ag 17 '53

I.C.C. gets railroad rate pleas. il Ry Age News ed 134:9-10 My 25 '53

I.C.C. may fix below-cost rates. Ry Age 134: 11-12 Mr 23 '53

I.C.C. sees no undue delay in its general rate decisions; 66th annual report. Ry Age 134: 86-8 F 9 '53

I.C.C.'s splawn raps time-lag bill. Ry Age 134:11-12 My 18 '53

Interterritorial rate pact approved by I.C.C. Ry Age 134:13-14 F 16 '53

Intrastate freight rates may reflect passenger loss. Ry Age 133:13 D 29 '52

Is Britain freeing rails to fight freed trucks? W. H. Schmidt, jr. il Ry Age 134:60-1+ My 4 '53

Meeting of railroad and National industrial traffic league groups results in new tariff improvement plans. Ry Age 133:13-14 N 3 '52

Railroad earnings too low. S. Weeks. Ry Age News ed 134:9-10 Je 8 '53

Rates should be made like competitive prices, which they are. G. L. Wilson. Ry Age 133:33-5 D 22 '52

Regulatory lag and rail rates. E. H. Burgess. Pub Util 50:659-66 O 23 '52

Regulatory lag in the ICC. A. P. Matthew. Pub Util 50:638-50 O 23 '52

Restates his position on ex parte 175. F. K. Edwards. Ry Age 133:85 D 1 '52

Review of railway operations in 1952; tardy increases in rates and fares. J. H. Parmelee. Ry Age 134:151-2 Ja 12 '53

Revision of rail rate structure urged. W. A. Mather. Comm & Fin Chr 177:2070 My 14 '53

Revival of freight absorption in basic materials. S. Fish. Manuf Rec 122:32-3 S '53

Roads ask permanent rate boost. Ry Age 134:16 Ap 6 '53

Roads ask permanent rate hike. Ry Age 135: 11 Jl 13 '53

Should the I.C.C. be force draft'd on general rate cases? panel discussion. il Ry Age 133:91-3 N 3 '52

Tariff simplification in critical phase. C. S. Baxter. Ry Age 134:14 My 18 '53

Tariffs will be improved this year. R. O. Small. Ry Age 134:15-16 Ap 6 '53

Time-lag bill; hearing before committee on interstate and foreign commerce. Ry Age News ed 134:12-13 My 11 '53

Uniform classification in sight? western roads revising class rates. Ry Age News ed 134:10 Mr 16 '53

Uniform rate structure incompatible with competitive system. A. H. Schwietert. Ry Age 134:16 Ja 26 '53

Views on transportation problems. C. W. Tobey. Ry Age 134:15-16 F 23 '53

What tariff simplification in 1953? C. S. Baxter. il Ry Age 134:194-5+ Ja 12 '53

See also
Railroads—Fares

Chemicals

Railroad freight rates on chemicals. F. C. Tighe. il map Chem & Eng N 31:752-6 F 23 '53

Fertilizers

Fertilizer rail charges too steep, NFA warns. J. F. Gale. Oil Paint & Drug Rep 163:3+ My 18 '53

Iron ore

Can Baltimore hold its top spot? map Bsns W p 150+ Mr 28 '53

Paper

Recollections of a one-time freight agent. G. Tombs. il Pulp & Pa of Can 54:157-60 My '53

Petroleum and petroleum products

Oil truckers fight rail rate cuts. Nat Pet N 45:40 My 20 '53

Pipe line threat leads to railroad rate cut; opposition of motor carriers. Ry Age 134:13 F 9 '53

Steel

I.C.C. to distinguish steel sheets from steel plates. Ry Age 133:15-16 D 22 '52

Records

How punch cards help as CPR cuts car hire expense. il Ry Age 135:92-3 S 21 '53

Modernized Kirk yard, how it promotes efficient operation. il Ry Age 133:82-4 N 3 '52

Railroads broaden attack on paperwork costs. J. W. Milliken. il Ry Age 134:200-1 Ja 12 '53

Word-subject filing system. il Ry Age 134: 78-9 Mr 23 '53

See also
Railroads—Forms and blanks

Relocation

In Texas & New Orleans line change, kinks removed despite terrain. il plan Ry Age 134:82-3 Ap 6 '53

N&W line and grade change smooths routes in mountains. il plan Ry Age 135:81-3 S 7 '53

Rock Island completes 34-mile line change. il map Ry Age 135:59-61 O 5 '53

Union Pacific changes 42 miles of line. il Comp Air Mag 58:112 Ap '53

Union Pacific completes line change. il map Ry Age 134:46-9 Je 29 '53

Reservation systems

New service bureaus speed sale of reserved space. il diag Ry Age 134:144-7 My 18 '53

On with the new tickets; forms and reservation procedures. il Ry Age 134:126-7 My 18 '53

Pennsylvania railroad and New York Central to inaugurate new ticket sale facility. Ry Age 134:12-14 F 2 '53

Pennsylvania railroad inaugurates timesaving ticket selling service. il Elec Eng 72:655-6 Jl '53

Speeding up railroad Pullman ticket sales; New York Central's Travel service center, Cleveland. il Bsns W p 174-6+ Je 6 '53

Rolling stock

Engineering outlook; the locomotive and rolling stock industries. Engineering 175:263-6 F 27 '53

Military railway service develops modern military rolling stock. H. A. Jacobs. il Ry Age 135:63-7 O 19 '53

New locomotives placed in service by Class one railroads, 1947-1952; passenger car shipments, 1946-1952; freight cars ordered, 1948-1952; freight car shipments, 1951-1952; tabulations. Steel 132:185 Ja 5 '53

Progress in railway mechanical engineering, 1951-1952. il plan diags Mech Eng 75:291-306 Ap '53

See also
Baggage and express cars
Cars
Dining cars
Freight cars
Locomotives
Motor cars (railroad)
Postal cars
Refrigerator cars
Tank cars

Safety measures

Color code can cut accidents. F. Birren. il Ry Age News ed 135:18 Ag 31 '53

RAILROADS—Safety measures—*Continued*

Employee safety awards; group winners of the Railroad employees national safety award. Ry Age 134:13 My 18 '53; Nat Safety N 67:136 Je '53

Freight house goes modern; Santa Fe Corwith freight house. il Nat Safety N 67: 34-5+ Ap '53

How hot boxes can stop trains automatically. il Ry Age 134:84-5 F 9 '53; Same. Ry Loco & Cars 127:59-60 F '53

Railroad employee is three times safer on job. J. T. Williams. Safety Maint & Prod 106:34 S '53

Train for safety; railroad instruction car. il Safety Maint & Prod 105:59-60 Ap '53

Transportation safety. Safety Maint & Prod 104:37-9 D '52

See also

Air brakes

Car couplings

Grade crossings

Harriman memorial medals for safety

Railroads—Fires and fire protection

Railroads—Signals

also Association of American railroads—Safety section

Sanitation

See also

Freight cars—Insect infestation

Schedules

Automatic computation of railway train schedules. F. Dubois. il plan Engineering 174:717-19 D 5 '52

Securities

Earnings, near-term outlook strengthen railroad stocks. G. C. Hudson. il Ry Age 134: 188-93 Ja 12 '53

Good yields in guaranteed rails. R. Carleson. Mag of Wall St 92:93+ Ap 18 '53

Gulf Mobile & Ohio in expanding phase. R. Carleson. Mag of Wall St 91:355+ D 27 '52

Investment bankers find both good and bad in railroad finances. il Ry Age 133:75-6 D 8 '52

Investment companies think better of railroad stocks. H. A. Long. Ry Age 133:98-9 D 1 '52

Market for railroad securities much improved; report of railroad securities committee of IBA. Comm & Fin Chr 176:2352+ D 18 '52

Opportunities in rail bonds. R. Carleson. Mag of Wall St 92:281+ My 30 '53

Railroad securities. Published in weekly Thursday numbers of Commercial and financial chronicle

Railway preferences. I. U. Cobleigh. Comm & Fin Chr 177:2410-11 Je 4 '53

Resurgent rails, or the choo-choo named expire. I. U. Cobleigh. Comm & Fin Chr 176:2328 D 18 '52

Status of the railroads; with important changes in position of leading railroads, 1941 to 1951. R. Carleson. Mag of Wall St 91:184-6+ N 15 '52

Three eastern roads compared; Pennsylvania, New York Central, Baltimore & Ohio. R. Carleson. Mag of Wall St 91:468+ Ja 24 '53

Undervalued investment rails. R. Carleson. Mag of Wall St 91:587+ F 21 '53

What of the railroads now? with statistical position of leading railroads. R. Carleson. Mag of Wall St 92:443-5+ Jl 11 '53

Will railroad securities go up faster than industrial stocks? P. Bretey. il Ry Age 134:43-4 Ja 19 '53

See also

Railroads—Equipment trust certificates

Service

What can railroads sell but service? A. M Ribe. il Ry Age 135:91-3 Jl 13 '53

What if railroads were free? W. Brown. il Ry Age 135:102+ S 21 '53

See also

Freight car service

Railroads—Passenger service

Shops

Burning wood shavings cuts fuel bill 20 per cent, Grand Trunk Western shops. il Ry Loco & Cars 127:57 Ja '53

How Southern reconditions Diesel cylinder liners. il Ry Mech & Elec Eng 126:70-1 O '52

One building houses car and Diesel shop; Ann Arbor railroad. il plan diags Ry Mech & Elec Eng 126:66-9 O '52; Same cond. Ry Age 133:108-9 O 6 '52

Reconditioning traction motor housings; Louisville and Nashville. il Ry Mech & Elec Eng 126:82-3 O '52

Seaboard has model motor shop at Jacksonville. il Ry Loco & Cars 127:101-4+ S '53

Shops and shop equipment, 1952. H. C. Wilcox. il Ry Age 134:196-7 Ja 12 '53

See also

Car shops

Locomotive shops

Equipment

Crankshaft rotating device. il diags Ry Loco & Cars 127:62 Ja '53

Northern Pacific's South Tacoma electric shop. il Ry Loco & Cars 127:74-9 Ja '53

Southern Pacific air-brake shop. il plan Ry Loco & Cars 127:55-9 F '53

Spare armature protection; storage rack used in the Silvis, Ill., electric shop of the Rock Island. C. F. Steinbrink. il Ry Mech & Elec Eng 126:82-3 D '52

Texas & Pacific wheel shop at Marshall, Tex. il plan Ry Loco & Cars 127:58-65 Jl '53; Excerpts. Ry Age 134:52-3 Je 29 '53

Wheel shops; equipment and operation. R. H. Herman. il plan Ry Loco & Cars 127: 93-8 S '53

Side line activities

Carrier sidelines; transportation isn't only source of railroad income. F. Henle. Barron's 33:13-15 Mr 30 '53

Signals

C.t.c. adapted to volume of traffic, present and future; Atlantic coast line. il maps plan Ry Age 133:45-7 N 24 '52

C.t.c. saves a minute a mile; Louisville & Nashville. il plans Ry Age 133:36-7 D 29 '52

C.t.c. saves minute per mile on 217 miles of single track; Union Pacific. il maps Ry Age 135:65-7 Ag 24 '53

Electrical signalling and interlocking; Indian railway centenary. H. C. Towers. il Elec J 150:1705-8 My 15 '53

Erie first railroad to install train identification system. il plans Ry Age 134:38-9 Ja 19 '53

Microwave to control c.t.c. in Venezuela. diag Ry Age News ed 135:22 Ag 3 '53

Model speeds signal rules instruction; Kansas City Southern. il Ry Age News ed 135: 15 Ag 17 '53

Modernized Kirk yard, how it promotes efficient operation. il Ry Age 133:82-4 N 3 '52

On the Canadian National c.t.c. for 12 trains daily. il map plan Ry Age 134:90-3 Ap 20 '53

On the Chesapeake & Ohio this 155-mile c.t.c. project produced these benefits. il maps diag Ry Age 134:50-1 F 16 '53

Resignalling at Euston. il Engineer 194:485-7 O 10 '52; Engineering 174:513-14 O 17 '52; Elec J 149:1191-2 O 17 '52

Seaboard Air Line adapts c.t.c. to ten trains. il map plan Ry Age 134:56-8 Je 29 '53

Short-wave railroading; remotely controlling switches, signals and interlockings. map Mill & Factory 53:128+ Ag '53

Signal construction, 1952 good progress, 1953 good prospects. J. H. Dunn. il Ry Age 134: 202-7 Ja 12 '53

Southern Region colour light signalling. il plan Engineer 194:529-30 O 17 '52

Toward the automatic railroad. S. H. Bingham. diag Ry Age 134:76-7 Mr 23 '53

Unique communication system; Quebec north shore and Labrador railway. Can Min J 74: 68 Je '53

Signs, markings, etc.

How the Santa Fe is reflectorizing roadway signs. il Ry Age 134:77-9 Ap 20 '53

RAILROADS—*Continued*

Snow protection and removal

Air blows snow from switches. il diags Ry Age News ed 134:18 Je 8 '53

Economical snow melting with electric switch-heaters. H. C. Griffith, jr. il diags Ry Age 133:77-8+ D 8 '52

How the Southern Pacific uses train-way-side radio in the high Sierra. il map Ry Age 134:39-41 Ja 26 '53

Pneumatic switch cleaner; Racor snow blower. J. C. Pierce. il diags Comp Air Mag 58:280-1 O '53

Snow removal in mountain districts. L. Wylie. il Ry Age 133:56-7 D 15 '52

Stations

Broad Street station passes. C. H. Vivian. il Comp Air Mag 58:104-10 Ap '53

Mechanized mail handling; St Louis Union station. il plan diag Ry Age 135:72-6 O 5 '53

New Haven plans new $250,000 station near Canton, Mass. Ry Age 134:18 Mr 9 '53

Three-way benefits expected from station changes at Camden, N.J. il map plan Ry Age 134:47-9 F 16 '53

Tunnel, viaducts join rail stations and transform central Brussels. G. N. Balbachevsky. il plan diags Eng N 149:40-2 O 9 '52

U.S. depot; a portfolio. W. Evans. Fortune 47:138-43 F '53

See also
Railroads—Terminals

Lighting

Illumination; report of A.A.R. Electrical section. il Ry Mech & Elec Eng 126:113-14 N '52

Train announcing

Modernised public address system; installation at Glasgow central station. il Elec J 151:487 Ag 14 '53

Statistics

Cars of revenue freight loaded, by products, 1943-1952; tabulation. Iron Age 171:444 Ja 1 '53

How are the railroads doing? Am Bsns 23:32 Ja '53

Railroad construction indices, 1952. Ry Age News ed 135:34 S 14 '53

Review of railway operations in 1952. J. H. Parmelee. Ry Age 134:144-64 Ja 12 '53

What statistics are needed? freight traffic statistics workshop. Ry Age 134:134-5 Mr 9 '53

See also
Cars—Statistics
Locomotives—Statistics
Railroads—Finance

Stores systems

How Diesels affect railroad storekeeping. J. F. Duffy. il Diesel Power 31:59-61 S '53

Storehouse-to-shop tunnel; Frisco gains added Diesel repair space. il Ry Age 134:14 Ap 20 '53

See also
Railroads—Purchasing
also Association of American railroads—Purchases and stores division

Strikes

See Railroad strikes

Switching

C.t.c. saves minute per mile on 217 miles of single track; Union Pacific. il maps Ry Age 135:65-7 Ag 24 '53

On the Canadian National c.t.c. for 12 trains daily. il map plan Ry Age 134:90-3 Ap 20 '53

Rock Island holds open house at new route interlocking. il Ry Age News ed 135:11 Ag 31 '53

Short-wave railroading; remotely controlling switches, signals and interlockings. map Mill & Factory 53:128+ Ag '53

This easy-working interlocking on C&WI first of its kind. il plan Ry Age News ed 135:16-17 S 28 '53

This single yard control machine does everything; Reading's rebuilt eastbound classification yard at Rutherford, Pa. il plan Ry Age 133:52-4 O 27 '52

Taxation

Guatemala attaches railway in tax claim. M. Bannell. Barron's 33:14 Ap 6 '53

Law change needed because taxes shackle private capital. E. L. Tennyson. Ry Age 134:90 Ap 6 '53

Telegraph

Communications modernized in 1952. R. W. McKnight. il Ry Age 134:214-19 Ja 12 '53

Telephone

Communications modernized in 1952. R. W. McKnight. il Ry Age 134:214-19 Ja 12 '53

New approach to volume ticket sales; Southern Pacific's telephone office system. il Ry Age 133:49-51 D 15 '52

Unique communication system; Quebec north shore and Labrador railway. Can Min J 74:68 Je '53

Terminals

How batteries are maintained at Grand Central terminal. il diags Ry Mech & Elec Eng 126:84-6 O '52

How railroads are improving yard and terminal operations. il Ry Age 134:35-9 Ja 5 '53

New terminals for piggy backs. il Ry Age 135:82-3 O 5 '53

Southern's Ernest Norris yard; Birmingham. il map plan Ry Age 133:54-9 N 10 '52

See also
Freight houses
Railroads—Stations
Railroads—Yards

Ticket agents

American association of railroad ticket agents 29th annual meeting, Miami Beach, Nov. 10-11. Ry Age 133:11-12 N 24 '52

Passengers must be sold. il Ry Age 134:148 My 18 '53

Ticket offices

D.&R.G.W. relights its ticket office. il Ry Mech & Elec Eng 126:86 O '52

New approach to volume ticket sales; Southern Pacific's telephone office system. il Ry Age 133:49-51 D 15 '52

Tickets

New Keysort train tickets provide traffic figures; Long Island railroad. Am Bsns 23:32 Ja '53

On with the new tickets; forms and reservation procedures. il Ry Age 134:126-7 My 18 '53

See also
Railroads—Reservation systems

Ties

See Railroad ties

Time tables

Personalized timetables build sales; Missouri Pacific. il Ry Age 133:52-3 N 24 '52

Track

D&RGW widens slim-gage line. il Ry Age News ed 135:23 Jl 6 '53

Electronic track tester keeps supervisors on edge. il Bsns W p78-9 N 22 '52

Fast way to lay new track. il Ry Age 134:72-4 Ap 6 '53

For new or rehabilitated lines, what weight of rail? C. J. Code. il Ry Age 135:90-2 Ag 10 '53

How Frisco organizes for track maintenance without section gangs. E. L. Anderson. il Ry Age 133:48-51 O 27 '52

Hydraulic rams for lining track. il Ry Age News ed 135:23 S 14 '53

In maintenance of way, more work for the same money. J. P. Hiltz, jr. il Ry Age 133:33-5 D 29 '52

Maintenance of way hits rough spots during year. M. H. Dick. il Ry Age 134:211-13 Ja 12 '53

Rail track testing coach. il Engineer 194:809 D 12 '52; Engineering 174:766-7 D 12 '52

RAILROADS—Track—*Continued*

Use of rubber rail pads on the permanent way; abstract. R. Sonneville. diag Engineer 194:688-9 N 21 '52

Vehicle for recording the condition of railway track. il diags Engineering 174:225-6 Ag 22 '52

See also

Ballast
Grade crossings
Mine tracks
Railroad ties
Railroads—Weed removal
Railroads, Narrow gage
Railroads, Single rail
Rails

Track cleaning machinery

Ballast cleaning on British railways. il Engineer 196:280 Ag 28 '53

Making beds for iron horses. C. H. Vivian. il diags Comp Air Mag 58:236-41 S '53

On the New Haven, improved machine for cleaning ballast. il Ry Age 133:60-1 N 17 '52

Track elevation

On this new highline, MP trains lifted out of street. il Ry Age 135:90-2+ S 7 '53

Track making machinery

Kershaw Jack-All. il Ry Age 135:69 S 7 '53

Mechanized tie-renewal gang cuts insertion cost one dollar per tie; Santa Fe. il Ry Age 135:74-6 Ag 24 '53

Spacer-nipper-spiker. il Ry Age 133:35 N 24 '52

Traffic

Review of railway operations in 1952; break in upward traffic trends. J. H. Parmelee. Ry Age 134:145-7 Ja 12 '53

See also

Freight car service
Railroads—Freight
Railroads—Passenger traffic

Train dispatching

Erie first railroad to install train identification system. il diags Ry Age 134:38-9 Ja 19 '53

Train ferries

See Train ferries

Trains

Bringing the candidate to the people is a full time job for the man who keeps the special rolling. il Bsns W p78-82+ N 1 '52

Burlington's Kansas City short-cut; Kansas City Zephyr, American Royal Zephyr. il map Ry Age 134:71-3 F 9 '53

How can charging air reservoirs in freight trains be speeded? G. L. Cotter. il Ry Age 133:71 N 10 '52

Three years of Talgo in Spain. il Ry Age 135:77-9 O 5 '53

What's ahead in equipment? il Ry Age 134:129-31 My 18 '53

See also

Railroads—Braking
Railroads—Passenger service

Trespassing

Juvenile trespassing reduced; how the B&O does it. il Ry Age 135:96-7 S 21 '53

Wages

Baggagemen's wages eight times revenues. Ry Age 133:12-13 D 22 '52

Calendar of labor and wage events, 1952. J. S. Gallagher, jr. Ry Age 134:210 Ja 12 '53

Canadian wage increase becomes effective. Ry Age 133:15 D 22 '52

Escalator clauses call for cent-per-hour cut. Ry Age 133:48-9 D 29 '52

How big a raise? productivity boost. Bsns W p 126 Ja 10 '53

Rail wage boost; productivity award. Bsns W p 176-7 Mr 28 '53

Railroaders get four-cent raise. Ry Age 134:11 Mr 23 '53

Railroads conclude testimony in productivity case. Ry Age 134:13 Ja 26 '53

Railroads earnings, employment, 1948-1952; tabulation. Iron Age 171:443 Ja 1 '53

Some aspects of wage-price relationships in regulated industry; the railways as a case study. R. W. Harbeson. bibliog J Bsns 25:175-86 Jl '52; Discussion. J. J. Kaufman. 26:48-50; Reply. 51-2 Ja '53

Wage demands would add half-billion dollars to railroad operating costs. D. P. Loomis. Ry Age 134:11-12 Ja 19 '53

Wage increases to railroad employees far outrun railroad productivity increases. D. R. Thomas. Ry Age 134:11-12 F 2 '53

Wages of railroad employees should not be further increased. J. E. Monroe. Ry Age 134:12-13 Ja 19 '53

War measures

See Railroads in war

Water supply

Water treatment; abstract. B. W. DeGeer. Ry Mech & Elec Eng 126:72-3 N '52

Weed removal

Operation killer; chemicals control brush and weeds. il Can Chem Process 37:52+ Ag '53

Women passengers

Woman's solution to railroad passenger problems. B. Barton. il Ry Age News ed 135:18-19 O 12 '53

Yards

Electronics at work on EJ&E. il plan Ry Age 135:78-82+ O 19 '53

For the Chicago, Milwaukee, St Paul & Pacific, another modern freight yard. il plan Ry Age 135:81-5 Jl 13 '53

Hobart repair yard increases Santa Fe's car output. il plan Ry Mech & Elec Eng 126:61-5 O '52

How railroads are improving yard and terminal operations. il Ry Age 134:35-9 Ja 5 '53

J spends $4.4 million to build more efficiency into Kirk yard. il plan Ry Age 133:78-81 N 3 '52

Modernized Kirk yard, how it promotes efficient operation. il Ry Age 133:82-4 N 3 '52

New Indian Harbor belt rip track boosts capacity 25 per cent. il plans diags Ry Loco & Cars 127:81-4 Je '53; Ry Age 135:71-3 Ag 24 '53

On the Atlantic Coast Line, lots of uses for talk-back loudspeakers. il plan Ry Age 133:41-3 O 20 '52

Operating advantages from new crew-dispatching building; Belt railway of Chicago. il plans Ry Age 134:49-51 F 23 '53

Operations of five yards coordinated by radio; Chicago, Burlington & Quincy. il map Ry Age 135:84-6 Ag 10 '53

Operations research can find efficient yard capacity. Ry Age 134:75-6 Ap 20 '53

Push-button retarders in new D&RGW yard. il plan Ry Age 135:68-72 O 19 '53

Shifting Nashville's freight yards; quarrymaster rig drilling with rotary bits. E. S. Williams. il Comp Air Mag 58:48-9 F '53

$6 million Southern Pacific yard at Houston. il Ry Age 134:72-3 Je 1 '53

Southern dedicates new yard at Birmingham. il plan map Ry Age 133:53-62 N 10 '52

Southern is busy boosting the South; two ultra-modern rail yards dedicated. il Manuf Rec 121:48-9 D '52

Syndicate buys rail yard to build center. il Eng N 150:45-6 Mr 5 '53

Talk-backs in freight transfer. il Ry Age 134:59-61 Ap 6 '53

This single yard control machine does everything; Reading's rebuilt eastbound classification yard at Rutherford, Pa. il plan Ry Age 133:52-4 O 27 '52

This yard is adaptable to seasonal business; Southern Pacific's Jennings yard at Roseville, Cal. il plan Ry Age 134:48-51 Ja 5 '53

$3.6-million yard improves service for Jersey Central patrons. il plans Ry Age 133:73-5 N 3 '52

Africa, French West

Modern equipment bought for French West African railways. For Comm W 48:17 N 10 '52

RAILROADS—*Continued*

Australia

Australia increases rail freight rates. For Comm W 49:26 Je 22 '53

Diesel power for Victorian railways. il Ry Age 134:75 Mr 23 '53

Austria

See also

Railroads—Electrification—Austria

Belgium

Belgian government to reduce subsidies to railways despite large deficits. For Comm W 50:20 Jl 6 '53

Brazil

See also

Railroads—Electrification—Brazil

Canada

Canadian railroads turned down on immediate rate increase petition. Ry Age 133:15 N 3 '52

Canadian railways battle rising costs. il Ry Age 134:233-6 Ja 12 '53

Canadian railways win nine per cent rate increase to offset higher wages. Ry Age 133:14 D 29 '52

Canadian roads ask freight rate increase to offset higher wages. Ry Age 133:12 D 8 '52

Laying steel to bring out Labrador's ore. il maps Bsns W p82-6+ Jl 18 '53

Recollections of a one-time freight agent. G. Tombs. il Pulp & Pa of Can 54:157-60 My '53

Trans-Canadian and British railway experiences. E. H. Livesay. il maps diags Engineer 194:638-41, 674-7, 710-13, 746-50, 782-5, 818-19 N 14-D 19 '52

See also

Canadian Pacific railway

Ceylon

Diesel-electric locomotives for Ceylon. il Engineer 194:721-2 N 28 '52; Engineering 174: 696, 700-1 N 28 '52; Elec J 149:1665-6 N 28 '52; Elec R (Lond) 151:1159-61 N 28 '52

Costa Rica

Costa Rican railroad transport volume up. For Comm W 49:16 Ap 6 '53

Ecuador

Ecuadorian railroads to be reorganized. For Comm W 49:16 Ap 6 '53

Egypt

Egyptian railroads to be improved. For Comm W 49:23 Mr 30 '53

France

French railway system showing improvement. For Comm W 48:33 D 15 '52

Standard railcars on French railways. il Engineer 194:774 D 5 '53

See also

Railroads—Electrification—France

Germany

German railways; an analysis of economic adaptation. J. P. Carter. bibliog Land Econ 28:307-17 N '52

German railways' '52 deficit large. For Comm W 49:28 My 4 '53

Great Britain

British locomotive performance in practice. W. A. Tuplin. Engineer 194:506-9+ O 17 '52

Opening-out of Brotherton railway tunnel. il(p440) Engineering 174:447-8 O 3 '52

Present-day locomotive working in Great Britain; King class 4-6-0s of the former G.W.R. O. S. Nock. il diags Engineer 196:34-6, 66-8 Jl 10-17 '53

Present-day locomotive working in Great Britain; Thompson and Peppercorn Pacifics of the former L.N.E.R. O. S. Nock. il diag Engineer 195:754-6, 786-9 My 29-Je 5 '53

Southern Region colour light signalling. il plan Engineer 194:529-30 O 17 '52

Wagons and containers of British railways. Engineering 175:221-3 F 13 '53

See also

Railroads—Electrification—Great Britain

Railroads and state—Great Britain

India

Electrical signalling and interlocking; Indian railway centenary. H. C. Towers. il Elec J 150:1705-8 My 15 '53

Indian metre gauge locomotives. il Engineer 194:590-1 O 31 '52; Engineering 174:575 O 31 '52

Radio on Indian railways. H. C. Towers. il Elec J 149:1241-3 O 24 '52

Railway batteries; signal and telecommunication requirements for India. H. C. Towers. il Elec R (Lond) 151:431-4 Ag 29 '52

Jamaica

American railroad in Jamaica hauls bauxite ore. B. K. Martin. il Ry Age 135:112 Jl 13 '53

Libya

Libyan railways show operating loss in '52. For Comm W 49:24 My 18 '53

Malaya

Business still good for Malayan railways. For Comm W 50:20 Jl 13 '53

Manitoba

Build railroad through north Canadian bush. H. W. Richardson. il map Constr Methods 35:62-4+ O '53

Difficulties overcome in building far-north railway line. S. C. Cooper. il map Roads & Eng Constr 91:101-7 F '53

Mexico

Better equipped Mexican roads get more traffic; change deficit to net. A. H. Lozano. il Ry Age 134:237-9 Ja 12 '53

Railways repaired, expanded. For Comm W 49:23 Mr 16 '53

Mozambique

Portugal to receive credit for railway. For Comm W 49:4 Ja 26 '53

Netherlands

Netherlands railways place large orders; plan further development. For Comm W 49:18 F 2 '53

Newfoundland

Canadian National railroad's Newfoundland lines serving Canada's newest province. il map Ry Age 133:58-9 D 15 '52

New South Wales

Articulated locomotives for New South Wales railways. il diags Engineer 194:572-5 O 31 '52

Norway

See also

Railroads—Electrification—Norway

Pakistan

Diesel locomotives in Thailand and Pakistan. K. Askry. il Diesel Power 31:44-5 Mr '53

Pakistan expands its railway services. For Comm W 49:22 Je 1 '53

Peru

Henry Meiggs, colossus of Andean railroading. il Comp Air Mag 58:78-9 Mr '53

Rhodesia

IBRD loan to assist Rhodesia railways. For Comm W 49:3 Mr 23 '53

Siam (Thailand)

Diesel locomotives in Thailand and Pakistan. K. Askry. il Diesel Power 31:44-5 Mr '53

South America

Railroadin' south of the border. L. B. Rogers. il Gen Elec R 56:56-8+ S '53

Southern states

Southern is busy boosting the South. il Manuf Rec 121:48-9 D '52

RAILROADS—*Continued*

Spain

Three years of Talgo in Spain. il Ry Age 135:77-9 O 5 '53

Sudan

Locomotives for the Sudan railways. il Engineer 194:628 N 7 '52

Turkey

Turkish rails spend $146,397,000. J. L. White. il map Ry Age 135:64-5 Jl 27 '53

United States

How banking is affected by vicissitudes of railroads. D. C. Bevan. Comm & Fin Chr 176:2024+ N 27 '52

Railroad perspective. Steel 132:82-3 F 2 '53

Railroads; more efficient, but. W. T. Faricy. il Steel 132:45 Je 29 '53

Railroads push construction to speed traffic, services. il Eng N 149:21-3 N 20 '52

Review of railway operations in 1952. J. H. Parmelee. Ry Age 134:144-64 Ja 12 '53

Role of the railroads. F. G. Gurley. Midwest Eng 5:3-4+ N '52

Transport's future on three fronts; panel discussion. il Ry Age News ed 135:9-11 S 28 '53

See also

Association of American railroads

Erie railroad

Interstate commerce commission

New York central railroad

New York, Susquehanna and western railroad

Venezuela

Short-wave railroading; remotely controlling switches, signals and interlockings. map Mill & Factory 53:128+ Ag '53

RAILROADS, Industrial

Railway traffic of the Appleby-Frodingham steelworks. E. R. S. Watkin. il plans Iron & Steel Inst J 173:1-15 Ja '53; Abstract. Engineering 175:617 My 15 '53; Discussion. Iron & Steel Inst J 174:341-4 Ag '53; Engineering 175:617-18 My 15 '53; Engineer 195:692-4 My 15 '53

Train arrivals, handling costs, and the holding and storage of raw materials. M. D. J. Brisby and R. T. Eddison. Iron & Steel Inst J 172:171-83 O '52; Discussion. 174: 341-4 Ag '53; Engineer 195:692-4 My 15 '53; Engineering 175:617-18 My 15 '53

See also

Mine tracks

Radio communication

Electronic communications at the Abbey steel mills. il Elec J 150:231-2 Ja 16 '53

RAILROADS, Mine. See Mine tracks

RAILROADS, Narrow gage

D&RGW widens slim-gage line. il Ry Age News ed 135:23 Jl 6 '53

Tweetsie rides again! Shenandoah Central. il Ry Age News ed 134:14 Je 22 '53

RAILROADS, Short line

See also

American short line railroad association

Central Indiana railway

RAILROADS, Single rail

High-speed electric mono-railway; Alweg mono-rail electric train. il diag Engineer 194:871-2 D 26 '52

Monorail trains, operated from roadside, may attain speed of 200 m.p.h.; Alweg monorail system. il Ry Age 133:14-15 O 27 '52; Same. Ry Mech & Elec Eng 126:100 D '52

RAILROADS, Toy. See Railroads—Models

RAILROADS and state

Rails, power industry are bulwarks of free enterprise. B. L. England. Pub Util 51:52-4 Ja 1 '53

See also

Railroads—Rates

Europe

Organisation of some nationalized European railways. Engineer 196:18-19 Jl 3 '53

Great Britain

Competition in transport. Economist 166: 819-20 Mr 21 '53

Decentralisation of British railways administration. Engineer 196:2-3 Jl 3 '53

Is Britain freeing rails to fight freed trucks? W. H. Schmidt, jr. Ry Age 134:60-1+ My 4 '53

Organising the railways. Economist 167:919-21 Je 27 '53

Guatemala

Guatemala attaches railway in tax claim. M. Bannell. Barron's 33:14 Ap 6 '53

United States

Criticizes railroad over-regulation. T. I. Parkinson. East Underw 53:10 D 26 '52

Everybody in the hot seat; Chamber of commerce panels at Minneapolis. Ry Age 134:40-3 Ja 5 '53

Nationalization no idle threat! E. G. Plowman. il Ry Age 133:42-3+ D 22 '52

New Chamber of commerce transport declarations; overriding authority for I.C.C. and ending of Section 22 rates. Ry Age News ed 134:11 My 11 '53

Review of railway operations in 1952; Interstate commerce commission activities. J. H. Parmelee. Ry Age 134:158-9 Ja 12 '53

What's wrong with railroad regulation? E. F. Uhrbrock, jr. Pub Util 50:457-9 S 25 '52

See also

Interstate commerce commission

RAILROADS in war

Why civil defense? Ry Age 134:11 Je 15 '53

RAILS

For new or rehabilitated lines, what weight of rail? C. J. Code. il Ry Age 135:90-2 Ag 10 '53

Practical approach in selecting a rail section. G. W. Hunt. diag Ry Age 135:87-9 S 21 '53

Rail-cutting aids road improvement. il diag Welding J 31:1056 N '52

Unit tie costs up 127.7 per cent since '41; rails up 95.4 per cent. Ry Age 133:12 N 24 '52

Failure

Progress reports of investigation of railroad rails and joint bars. R. E. Cramer and R. S. Jensen. il Ill U Eng Exp Sta Reprint Ser 49:1-36 '52 (pa 30c)

Progress reports of investigation of railroad rails and joint bars. R. E. Cramer and R. S. Jensen. il Ill U Eng Exp Sta Reprint Ser 51:1-31 '53 (pa 30c)

Manufacture

Operation and roll design of the Gary rail mill. R. W. Dickson. il plan diags Iron & Steel Eng 30:93-9; Discussion. 99-101 Ja '53

Rolls and rolling (cont). E. E. Brayshaw. diags Blast F & Steel Pl 40:1311-18; 41: 69-74, 399-407, 1040-7, 1176-86 N '52, Ja, Ap, S-O '53

Prices

Steel rails at Pittsburgh number one, OH, 1934-1952; tabulation. Iron Age 171:411 Ja 1 '53

Testing

Branson ultrasonic equipment for detecting flaws in rails. il Engineer 196:15 Jl 3 '53; Engineering 176:11 Jl 3 '53

Transportation

Longest welded rail-haul. il diags Ry Age News ed 135:27 O 12 '53

RAILWAY express agency

How REA finds executive talent. Ry Age 134:52-3 F 16 '53

Intensive sales efforts help REA regain traffic. il Ry Age 133:76-7 N 3 '52

Most roads like new REA pact. F. Carpi. Ry Age News ed 135:12 S 14 '53

Railroads will continue REA. Ry Age 134: 16-17 Je 1 '53

REA seeks approval of new rate increase. Ry Age 134:15-16 F 9 '53

REA wins 15 per cent rate rise. Ry Age News ed 135:10-11 Ag 3 '53

What's ahead for Railway Express? F. Carpi. il Ry Age 134:149 My 18 '53

RAILWAY fuel and traveling engineers' association

Annual meeting, Chicago, Sept. 14. Ry Age 135:98-100 S 21 '53

Annual meeting, 53d, Chicago, Sept. 15-17; with abstracts of papers and committee reports. Ry Mech & Elec Eng 126:69-76 N '52

RAILWAY magazine editors association, American. See American railway magazine editors association

RAILWAY mail service

Great Northern tackles head-end delays; speed handling of storage mail and railway express on passenger trains. il map diag Ry Age 134:115-18 Mr 9 '53

Mechanized mail handling; St Louis Union station. il map diag Ry Age 135:72-6 O 5 '53

New equipment and methods for reducing head end losses. il Ry Age 134:142-3 My 18 '53

Roads seek higher mail pay. Ry Age News ed 135:12 Jl 6 '53

Union Pacific mechanizes mail handling. il plan diag Ry Age 134:109-13 Je 15 '53.

Cars

See Postal cars

RAILWAY supply manufacturers association

Annual meeting, Atlantic City. Ry Age News ed 135:10-12 Jl 6 '53

Exposition, Atlantic City, June 22-27. il Ry Loco & Cars 127:88-9 Ag '53

New ways to better railroading. il Bsns W p 136+ Jl 4 '53

RAILWAY systems and procedures association

Meeting, Chicago, Dec. 11-12. Ry Age 133:47-8 D 22 '52

Workshops, Chicago, Feb. 26-27. Ry Age 134:129-30+ Mr 9 '53

RAILWAY tie association

Annual meeting, 34th, New Orleans, Oct. 22-24; with abstracts of papers. Ry Age 133:68-70 N 10 '52

RAIN and rainfall

Forest in relation to rainfall. W. E. Howell. bibliog Pulp & Pa of Can 54:212+ My '53

Frequency analysis of hydrologic data with special application to rainfall intensities. Ven Te Chow. map Ill U Eng Exp Sta Bul 414:1-80 bibliog(p79-80) '53 (pa 80c)

Radioactive fallout in Massachusetts surface waters. H. A. Thomas, jr. and others. Am Water Works Assn J 45:562-8 Je '53

Rainfall studies using rain-gage networks and radar. H. E. Hudson, jr. and others. bibliog il maps diags Am Soc C E Proc 79 [no 178]:1-26 Mr '53

See also

Droughts
Floods
Run-off

RAIN gages

Rainfall studies using rain-gage networks and radar. H. E. Hudson, jr. and others. bibliog il maps diags Am Soc C E Proc 79 [no 178]:1-26 Mr '53

RAIN making

Cloud seeding operations; BPA committee reports on cloud seeding. Elec West 109:134 D '52

Clouds with a silver lining; four western power companies are now experimenting with cloud seeding. R. Bollay. il diag Elec West 110:73-7 Mr '53

Demands for rainmaking service seen increasing. Eng N 150:26 Ap 9 '53

Increasing water resources through cloud seeding; abstract. I. P. Krick. Pub Works 84:61+ Jl '53

Increasing water resources through weather modification. I. P. Krick. bibliog il maps diags Am Water Works Assn J 44:996-1020 N '52; Abstract. Water & Sewage Works 99:260-1 Jl '52

Project Cirrus; story of cloud seeding. il Gen Elec R 55:8-26 N '52

Rain-making efforts are continued in Arizona. Eng N 150:35 Ja 8 '53

Tomorrow's weather. il maps Fortune 47:144-9+ My '53

RAIN water

Is rain water OK for boiler feed? Power 97:132+ Ag '53

RAINCOATS

Rating

Men's plastic raincoats. il Consumers Res Bul 31:27-9 Je '53

RAISINS

Export subsidy program for raisins renewed. For Comm W 48:28 O 6 '52

Spain has more raisins to sell; 1952 exports up. For Comm 49:26 Mr 16 '53

Turkish raisin output high in 1952; exports increased. For Comm W 49:20 F 9 '53

RAMAN effect

Composition of acetic acid-water mixtures. J. J. Kipling. Chem Soc J p2858-62 Jl '52

Design of photoelectric Raman apparatus. W. R. Busing. diags Opt Soc Am J 42:774-8 O '52

Determination of the intensities of Raman lines. E. J. Rosenbaum and others. Opt Soc Am J 42:670-2 S '52

Directional variation of frequency in the infrared spectrum of crystals. L. Couture-Mathieu and others. bibliog diag J Chem Phys 20:1492-3 S '52

Infrared and Raman spectra of CF_3OF. R. T. Lagemann and others. J Chem Phys 20:1768-71 N '52

Infrared and Raman spectra of dicyanoacetylene. F. A. Miller and R. B. Hannan, jr. bibliog diag J Chem Phys 21:110-14 Ja '53

Infrared and Raman spectra of fluorinated ethanes. J. R. Nielsen and others. bibliog J Chem Phys 21:1060-76 Je '53

Infrared and Raman spectra of fluorinated ethanes; the series CF_3CF_3 CF_3CF_2Cl, CF_3CFCl_2, and CF_3CCl_3. J. R. Nielsen and others. bibliog J Chem Phys 21:383-93 Mr '53

Infrared and Raman spectra of fluorinated ethylenes; 1,1-difluoro-2-chloroethylene. J. R. Nielsen and others. bibliog J Chem Phys 20:1090-4 Jl '52

Infrared and Raman spectra of fluorinated ethylenes; hexafluoropropene. J. R. Nielsen and others. bibliog J Chem Phys 20:1916-19 D '52

Infrared and Raman spectra of SiH_2Cl_2. J. A. Hawkins and M. K. Wilson. bibliog J Chem Phys 21:360-2 F '53

Infrared and Raman spectroscopy studies of light and heavy trifluoroacetic acids. N. Fuson and others. bibliog J Chem Phys 20:1627-34 O '52

Methanesulphonic acid-sulphur trioxide complex; detection by Raman spectroscopy. I. Sandeman. Chem Soc J p 1135-8 Ap '53

Molecular structures of *trans*-1,4-dihalogenocyclohexanes. K. Kozima and T. Yoshino. bibliog Am Chem Soc J 75:166-71 Ja 5 '53

ν_3 Raman band of ammonia. C. Cumming and H. L. Welsh. bibliog J Chem Phys 21:1119-20 Je '53

Photoelectric Raman spectrometer with automatic range changing. R. F. Stamm and others. bibliog il diags Opt Soc Am J 43:119-37 F '53

Raman and infrared spectra of CF_3Br and CF_3I. W. F. Edgell and C. E. May. bibliog J Chem Phys 20:1822-3 N '52

Raman and infrared spectral data and assignments for dimethyldiacetylene. S. M. Ferigle and others. bibliog J Chem Phys 20:1928-31 D '52

Raman and infrared spectral data, assignments, potential constants, and calculated thermodynamic properties for oxalyl chloride. J. S. Ziomek and others. bibliog diags J Chem Phys 21:90-100 Ja '53

Raman effect spectrum, structure, force constants, and thermodynamic properties of bromine pentafluoride. C. V. Stephenson and E. A. Jones. bibliog diag J Chem Phys 20:1830-4 D '52

Raman frequency of bromine monochloride. H. Stammreich and R. Forneris. bibliog J Chem Phys 21:944-5 My '53

Raman spectra of ethoxychlorosilanes. H. Murata. J Chem Phys 20:1184 Jl '52

Raman spectra of hexamethyldisilane and hexamethyldisiloxane. H. Murata and M. Kumada. J Chem Phys 21:945 My '53

Raman spectra of vinyl- and dichlorovinyltrichlorosilane. H. Murata. J Chem Phys 21:181-2 Ja '53

RAMAN effect—*Continued*

Raman spectrum and cathodo-luminescence spectrum of aluminum phosphate. B. D. Saksena and L. M. Pant. bibliog il J Chem Phys 21:1414 Ag '53

Raman spectrum of gaseous ethforane. J. R. Nielsen and C. W. Gullikson. J Chem Phys 21:1416 Ag '53

Raman spectrum of monomeric methyl methacrylate at -180°C. S. C. Sirkar and N. K. Roy. il J Chem Phys 21:938-9 My '53

Raman spectrum of oxalyl chloride. B. D. Saksena and others. J Chem Phys 21:1613-14 S '53

Rotational isomers of chloroacetyl chloride, bromoacetyl chloride, and bromoacetyl bromide. I. Nakagawa and others. bibliog J Chem Phys 20:1720-4 N '52

Rotational Raman spectrum of benzene vapor. B. Stoicheff. bibliog il J Chem Phys 21:1410-11 Ag '53

Source unit for Raman spectroscopy. J. W. Kemp and others. il diag Opt Soc Am J 42:811-14 N '52

Statistical interpretation of polarization data in Raman spectra. M. C. Tobin. J Chem Phys 21:1110-11 Je '53

Study of chloroiodides of silicon, tin and germanium using the Raman spectra as proof of equilibria. M. L. Delwaulle, M. B. Buisset and M. Delhaye. bibliog Am Chem Soc J 74:5768-70 N 20 '52

Substituted methanes; Raman and infrared spectra, assignments, potential constants, and calculated thermodynamic properties for $CHClBr_2$ and $CDClBr_2$. D. A. Pontarelli and others. bibliog J Chem Phys 20:1949-54 D '52

Vibrational Raman spectrum of gaseous ethylene. B. P. Stoicheff. J Chem Phys 21:755-6 Ap '53

RAMAZZINI, Bernardino, 1633-1714

De morbis artificum diatriba; Bernardino Ramazzini's textbook. Ind Med 22:38-9 Ja '53

RAMBUSCH decorating company

Modern designing with old crafts. il Bsns W p 106-10+ D 13 '52

RAMPS

Airport's pedestrian ramp has snow melting. il Heating-Piping 25:96 Ap '53

Portable yard ramp that one man can handle. il Mill & Factory 51:149 D '52

Snow melting piping keeps garage ramps in use. il Heating-Piping 25:99 O '53

Safety measures

Stairs and ramps. Nat Safety N 67:15-16 Mr '53

RAMSAY, Sir William, 1852-1916

Ramsay centenary appeal. Chem Age (Lond) 67:501-2 O 11 '52

Ramsay chemical dinner, Glasgow, March 13. Chem & Ind p296-7 Mr 28 '53

RANCK, Paul S.

Union Central dinner in honor of Paul Ranck. East Underw 54:5 Ja 16 '53

RAND, William McNear, 1886-

Appointment as deputy director of the Mutual security administration. por Chem Eng 60:316 My '53

Rand chosen Deputy administrator of MSA. por(cover) Chem & Eng N 31:1540 Ap 13 '53

RAND mines, limited

Statement by the chairman. W. H. A. Lawrence. Economist 167:567 My 23 '53

RANDALL, Clarence Belden, 1891-

Portrait. Fortune 47:96 Mr '53

RANDOLPH, Woodruff, 1892-

Portrait. Bsns W p 147 Ja 24 '53

RANDOM digits

Random digits (1-6000). Am Stat Assn J 47:710-14 D '52

RANEY nickel. See Nickel—Raney nickel

RANGE finders

Variable prism unit for range finders. H. Asher. diag J Sci Instr 29:402-3 D '52

Manufacture

Northrop plant producing range finders for tanks; illustrations with text. Mach 59:194-5 My '53

Plant air conditioning sends costs down, morale up; Airtemp division of Chrysler corp. W. G. Patton. il Iron Age 171:159-63 Je 18 '53

RANKING (statistical methods)

Use of ranks in one-criterion variance analysis. W. H. Kruskal and W. A. Wallis. Am Stat Assn J 47:583-621 bibliog(65 titles, p618-21) D '52

RANNEY water collectors

Installation and performance of radial collector wells in Ohio River gravels. H. K. Gidley. maps diags Am Water Works Assn J 44:1117-26 D '52

RAPID transit

Are one-way streets a rush-hour transit cure? H. Bratter. Pub Util 51:74-87 Ja 15 '53

Cheap and practical solution to the transit problem? A. J. Lundberg. Pub Util 50:454-7 S 25 '52

City transit, the utility stepchild. G. G. Steele. Pub Util 50:432-6 S 25 '52

Forum on forward planning for better transportation. Bus Transportation 32:41-56 Ag '53

Material controls for the transit business. J. K. Knudson. Pub Util 50:411-14 S 25 '52

Survey shows nation-wide transit dilemma. Pub Util 52:257-9 Ag 13 '53

Transit industry marks another year. H. L. Swift. Pub Util 50:399-410 S 25 '52

Transit industry review, 1952-53. H. W. Arnold. Pub Util 52:201-10 Ag 13 '53

See also

Electric railroads
Motor bus lines
Railroads
Trolley buses

also subdivision Rapid transit under names of cities, e.g.

Chicago—Rapid transit
Los Angeles—Rapid transit
New York (city)—Rapid transit

also American transit association

Bibliography

Selected references relating to mass transit. (Information circ. no. 23) 9 l Institute of transportation and traffic engineering, Univ. of California, Berkeley 4 '52

Employees

BLS survey shows increase for union drivers in transit field. Bus Transportation 32:62-3 Ap '53

Union wages and hours; local transit operating employees, Oct. 1, 1952. A. Moros. U S Bur Labor Statistics Bul 1133:1-12; pa 15c Supt. of doc. '53

Urge new status for supervisors as transit takes fight to Congress. Bus Transportation 32:50 My '53

See also

Motor bus lines—Employees

Fares

Increases in transit fares. O. Ely. Pub Util 52:251-4 Ag 13 '53

MTA loses as DPU commissioners wrangle on law. Bus Transportation 32:62-3 S '53

Operating ratio, a regulatory tool. C. A. Wright. Pub Util 51:24-9 Ja 1 '53

State forces new fare raise on city-owned transit in New York. Bus Transportation 32:63 Ap '53

Transit operating ratio; another view. L. S. Knappen. bibliog(26 ref) Pub Util 51:485-97 Ap 9 '53

Transit regulation needs modification. J. G. Hunter. Pub Util 50:437-42 S 25 '52

Finance

Cincinnati transit story. G. W. Keith. Pub Util 52:86-94 Jl 16 '53

NYTA sets billion-dollar plan. il Bus Transportation 32:63 S '53

Operating ratio, a regulatory tool. C. A. Wright. Pub Util 51:24-9 Ja 1 '53

Problems of transit finance. C. A. Wright. Pub Util 51:611-15 My 7 '53

Transit operating ratio; another view. L. S. Knappen. bibliog(26 ref) Pub Util 51:485-97 Ap 9 '53

What price local transit's future? R. Budd. Pub Util 50:415-23 S 25 '52

RAPID transit—*Continued*

Insurance requirements

Chicago transit authority drops insurance. Nat Underw 56:4 N 27 '52

Management

New York's city-owned transit passes to authority ownership. il Bus Transportation 32:50 Jl '53

Plans for New York city's transit system. S H. Bingham. Pub Util 52:235-42 Ag 13 '53

Municipal ownership

Is public ownership the answer to urban transit? R. G. Smith. Pub Util 50:424-31 S 25 '52

What price local transit's future? R. Budd. Pub Util 50:415-23 S 25 '52

Regulation

Should transit be regulated? H. S. Simpson. Pub Util 52:259-60 Ag 13 '53

Transit regulation needs modification. J. G. Hunter. Pub Util 50:437-42 S 25 '52

Safety measures

Transit fire protection; National fire protection association standards. Safety Maint & Prod 105:45-6 Ja '53

Statistics

Annual review of transit industry. O. Ely. Pub Util 52:248-51 Ag 13 '53

Transit trends, 1950-1952; tabulation. Bus Transportation 32:30-1 F '53

United States

Annual review of the transit industry. O. Ely. Pub Util 50:445-8 S 25 '52

RAPP, J. C.

Everything is tidy. Fortune 46:191 O '52

RARE earth compounds

Crystal field theory in the rare earths. R. J. Elliott. bibliog Rs Mod Phys 25:167-9 Ja '53

Stability of the rare earth complexes with ethylenediaminetetraacetic acid. E. J. Wheelwright, F. H. Spedding and G. Schwarzenbach. bibliog Am Chem Soc J 75:4196-201 S 5 '53

Use of rare-earth metals and compounds in stainless steel melting. C. B. Post and H. O. Beaver. il Blast F & Steel Pl 41:627-34+ Je '53

RARE earth halides

Conductances, transference numbers and activity coefficients of aqueous solutions of some rare earth halides at 25°. F. H. Spedding and I. S. Yaffe. bibliog Am Chem Soc J 74:4751-5 O 5 '52

Vapor phase hydrolysis of the rare earth halides; heat and free energy of the reactions; $SmCl_3(s) + H_2O(g) = SmOCl(s) + 2HCl(g)$ and $GdCl_3(s) + H_2O(g) = GdOCl(s) + 2\ HCl(g)$. C. W. Koch and B. B. Cunningham. Am Chem Soc J 75:796-7 F 20 '53

Vapour pressures of some rare-earth halides. E. R. Harrison. bibliog diag J Ap Chem 2:601-2 O '52

RARE earth metals

Concentration of bastnaesite and other cerium ores; with analytical methods. J. B. Zadra and others. U S Bur Mines Rep of Invest 4919:1-15 '52

Hall effect in yttrium, lanthanum, cerium, praseodymium, neodymium, gadolinium, dysprosium, and erbium. C. J. Kevane and others. bibliog diags Phys R 91:1372-9 S 15 '53

Magnesium-rare earth casting alloys. J. C. McDonald. il J Metals 4:242-4 Mr '52; Same cond. Product Eng Hdbk p B 14-15 '53

Properties of cast steels improved with rare earth element additions. G. A. Lillieqvist and C. G. Mickelson. il diags J Metals 4:1024-31 O '52

Rare earths; some observations on solutions of certain rare earth metal salts in basic solvents. T. Moeller and P. A. Zimmerman. bibliog Am Chem Soc J 75:3940-3 Ag 20 '53

Rare metals research planned by Reno unit. Oil Paint & Drug Rep 164:5+ Ag 17 '53

Use of rare-earth metals and compounds in stainless steel melting. C. B. Post and H. O. Beaver. il Blast F & Steel Pl 41:627-34+ Je '53; Excerpts. Iron & Steel Eng 30:106-7 Ag '53; Abstract. Iron Age 171:148-9 Je 4 '53

See also

Cerium	Neodymium
Europium	Praseodymium
Gadolinium	Samarium
Lanthanum	Yttrium

Analysis

Gravimetric determination of thorium and rare earth elements in magnesium alloys. G. B. Wengert and others. bibliog Anal Chem 24:1636-8 O '52

Method for determination of small amounts of rare earths and thorium in phosphate rocks. C. L. Waring and H. Mela, jr. bibliog Anal Chem 25:432-5 Mr '53

Isotopes

Slow neutron scattering cross sections for rare earth nuclides. W. C. Koehler and E. O. Wollan. bibliog Phys R 91:597-9 Ag 1 '53

Separation

Analysis of inorganic compounds by paper chromatography; the separation and detection of certain lanthanons. F. H. Pollard, J. F. W. McOmie and H. M. Stevens. Chem Soc J p4730-4 D '52

Electrochromatographic separations of rare earths. T. R. Sato and others. Am Chem Soc J 74:6154-5 D 5 '52

Quantity separation of rare earths by liquid-liquid extraction; the first kilogram of gadolinium oxide. B. Weaver, F. A. Kappelmann and A. C. Topp. bibliog diags Am Chem Soc J 75:3943-5 Ag 20 '53

Separation of the lanthanons by ion exchange; a comparison of eluants. R. C. Vickery. diags Chem Soc J p4357-63 N '52

Separation of the lanthanons with the aid of ethylenediaminetetra-acetic acid (enta acid); sodium lanthanon sulphate precipitation from sodium lanthanon enta solution. J. K. Marsh. Chem Soc J p4804-11 D '52

RARE earths

Rare earths now medium-rare. flow sheet Chem Eng 60:120+ Ja '53

Studies of the solvent extraction behavior of the transition elements; order and degree of fractionation of the trivalent rare earths. D. F. Peppard and others. bibliog J Phys Chem 57:294-301 Mr '53

X-ray studies of rare earth oxide systems; the oxide systems Ce^{IV}-Sm^{III}, Ce^{IV}-Gd^{III}, Ce^{IV}-Y^{III}, Pr^{IV}-Y^{III} and Pr^{III}-Y^{III}. J. D. McCullough and J. D. Britton. Am Chem Soc J 74:5225-7 O 20 '52

See also

Dysprosium

Analysis

Rapid method for fractionating crude rare earth ores into mixtures greatly enriched with regard to particular rare earths. E. J. Wheelwright and F. H. Spedding. bibliog Am Chem Soc J 75:2529-30 My 20 '53

RARE gases. See Gases, Rare

RARITAN formation

Critical analysis of cretaceous stratigraphy and paleobotany of Atlantic coastal plain. E. Dorf. bibliog Am Assn Pet Geologists Bul 36:2161-84 N '52

RARITAN river

Still at odds; Raritan River factions find no agreement as upstream group's report is released. Eng N 150:26 My 28 '53

Upper Raritan sewerage plan outlined. maps Eng N 150:27 Je 11 '53

RASPE, Rudolf Erich, 1737-1794

Science and roguery. G. E. Cole. bibliog por Can Min J 73:67-75 O '52

RAT poisons. See Rats—Extermination

RATCHET mechanism

Positive ratchet mechanisms designed for silent operation. H. Murro. diags Mach 59:208-9 My '53

Rachet fixture speeds stamping circumferential holes. J. Watson. diags Am Mach 97:150 Je 22 '53

RATCHET mechanism—*Continued*
Roller and disc type ratchet mechanism. W. M. Halliday. diags Mach 59:198-9 Mr '53
Sheet metal gears; sprockets, worms, and ratchets; drawings with text. H. Murro. Product Eng 24:208-9 My '53

RATIO delay method. See Time study—Delay allowances

RATIONING

Israel

Israel tries decontrol. Economist 166:495-6 F 21 '53

RATIONING, Industrial. See Priorities and allocations, Industrial

RATIOS, Financial. See Financial ratios

RATS
Prolific pests; rat proofing. W. Walmsley. il Nat Safety N 68:34-5+ S '53

Extermination

Fluoroacetate (1080) poisoning. J. W. E. Harrisson and others. Ind Med 21:440-2 bibliog(58 titles, p441-2) S '52
Perspective on rat control. D. E. Davis. bibliog Pub Health Rep 67:888-93 S '52
Rodent and insect control. Nat Safety N 67: 68-9 Mr '53

RATS as carriers of infection
Three studies on domestic rats and murine typhus control. Pub Health Rep 67:1131-2 N '52

RAVENNA metal products corporation
Stock offered. Comm & Fin Chr 177:1301-2 Mr 23 '53

RAW materials
Adjustments in materials. Survey of Cur Bsns 33:3-4 Ap '53
Fuel-power-raw materials; tabulations. Steel 132:200-1 Ja 5 '53
More raw materials used in 1951 by steel plants. Blast F & Steel Pl 40:1219 O '52; Same. Materials & Methods 36:192+ N '52
Raw materials for the U.S. Sci Am 188:44 Ap '53
Resources, today and tomorrow; report by the President's materials policy commission; with graphs and charts. Mod Ind 24: 42-7 O; 50-3 N '52
Road ahead. Iron Age 170:292-4+ O 9 '52
Some raw material problems of the Indian iron and steel industry. P. Kutar. diag Blast F & Steel Pl 41:755-60 Jl '53
Sources of raw materials. E. S. Mason. Advanced Management 18:46-8 Ja '53
See also

Cellulose
Ceramic materials
Chemicals
Clay
Coal
Cotton
Farm produce
Metals
Minerals
Mines and mineral resources
Oils and fats
Petroleum
Rubber
Textile fibers
Wood

International aspects

Dollar problem and raw materials prices. P. Einzig. Comm & Fin Chr 177:293 Ja 22 '53
See also
International materials conference

RAY, E. Lansing, 1884-
Gov. Donnelly lauds service of E. L. Ray. Ed & Pub 86:77 F 21 '53

RAYDIST
Raydist helps helicopter to land on a dime. il Tele-Tech 12:140-1 Ap '53
Raydist measures speed of ships. J. P. Comstock and C. E. Hastings. il diags Marine Eng 58:50-60 Je '53; Discussion. 58: 58-60 Ja '53

RAYLEIGH disk
Thermal Rayleigh disk measurements in He^3-He^4 mixtures. B. Weinstock and J. R. Pellam. Phys R 89:521 Ja 15 '53

RAYMOND, Percy Edward, 1879-1952
Memorial. H. C. Stetson. por(pl 11) Geol Soc Proc 1952:121-5 bibliog(p 123-5) Je '53

RAYMOND concrete pile company
Security I like best. S. L. Joseph. Comm & Fin Chr 177:674 F 12 '53

RAYON
New Rayonier Rayocord-X will produce better rayon. il Paper Tr J 137:25 O 2 '53
New rayon's fiber structure is close to natural cellulose; abstract. L. Soep and N. Drisch. Chem & Eng N 30:5056 D 1 '52
Progress in making carpetings. G. Boyo. il Mod Textiles Mag 34:34-5 My '53
Progress in rayon. G. Boyo. il Mod Textiles Mag 34:43-4 S '53

Dyeing

See Dyes and dyeing—Rayon

Moisture content

Sorption of water by viscose rayon at low humidities. J. B. Taylor. bibliog(34 ref) diag Textile Inst J Trans 43:T489-515 S '52

Patents

Patents and abstracts; reports on manufacturing and processing of synthetic textiles (cont). P. Wengraf. Mod Textiles Mag 33:79+ N; 84-5 D '52; 34:105 Mr '53

Strength

Effect of the degree of polymerization on the serimetric properties of regenerated cellulose fibers. J. R. Coley. Textile Res J 23: 34-6 Ja '53

RAYON cords
Characterization of cord fatigue in tires. K. R. Williams, J. W. Hannell and J. M. Swanson. bibliog Ind & Eng Chem 45:796-800 Ap '53
How Aldora mills makes tire cord. E. D. White. il Textile World 103:108-11 Ag '53
New stronger tire rayon is safer, more durable; Super Cordura. il Textile World 103: 106-7 O '53
Streamline your tire cord tests. R. C. Crawford. diags Mod Textiles Mag 34:48+ Ja '53

RAYON drying
Some aspects of the drying and heating of textiles; the stability of thermal modifications of fibres in subsequent treatments. J. M. Preston and S. P. Gundavda. Soc Dyers & Col J 68:511 D '52

RAYON fabrics
Avcoset stabilization of rayon fabrics. I. H. Welch and J. A. Woodruff. Am Dyestuff Rep 41:880-4 D 22 '52
Elementary fabric design. T. Friedl. diags Rayon 33:36+ Jl; 34-5+ Ag '52; [cont as] Mod Textiles Mag 33:97+ S; 73+ O; 75-7 N; 53-4 D '52
Ironing temperatures for rayon and acetate. il diags Mod Textiles Mag 34:36+ O '53

Defects

Causes of seaming damage and pinholing in cotton and rayon fabrics. C. M. Dorkin and N. H. Chamberlain. bibliog il diags Textile Inst J Trans 43:T203-33, T536-44 My, O '52

Shrinkage

Chemical modification of cellulose aids rayon stabilization. A. R. Wachter. il Textile World 103:122-3+ My '53
Here is how to curb rayon shrinkage. il Mod Textiles Mag 34:56+ Mr '53
Laboratory investigation of methods for the determination of shrinkage on washing of woven rayon and synthetic fibre fabrics. bibliog Textile Inst J 44:S5-41 Jl '53
Standard method for determination of shrinkage on washing of woven rayon and synthetic fibre fabrics. Textile Inst J 44:S 1-4 Jl '53

Wool mixtures

Wool-blend scouring requires special care. Textile World 102:252+ D '52

RAYON fibers
All-skin rayon fiber; Rayocord-X. il Mod Textiles Mag 34:31+ O '53
In-fiber dimensional stability of rayon! R. E. Ellsworth. Mod Textiles Mag 34:32-3 S '53
More facts about highly polymerized rayon. S. Tachikawa. diags Mod Textiles Mag 34: 67-8+ Jl '53
Products of fragmentation of textile fibres, as seen in the electron microscope; cellulose fibres. D. G. Drummond. bibliog il Textile Inst J Trans 44:T53-8 F '53
Skin effect in crimped rayon. W. A. Sisson and F. F. Morehead. il diag Textile Res J 23:152-7 Mr '53

RAYON fibers—*Continued*

Some aspects of the drying and heating of textiles; the stability of thermal modifications of fibres in subsequent treatments. J. M. Preston and S. P. Gundavda. Soc Dyers & Col J 68:511 D '52

Theory and morphology of crimped rayon staple. M. Horio and T. Kondo. il diags Textile Res J 23:137-51 Mr '53

Blending

Flexibility aids efficiency in dyeing and finishing synthetic blends; Reeves brothers, inc. G. M. Moisson. il Textile World 103:102-3 Ap '53

Testing

Inter-fibre friction of viscose rayon. J. C. Guthrie and P. H. Oliver. bibliog(31 ref) il Textile Inst J Trans 43:T579-94 D '52

Sorption of water by viscose rayon at low humidities. J. B. Taylor. bibliog(34 ref) diag Textile Inst J Trans 43:T489-515 S '52

RAYON finishing

Avcoset stabilization of rayon fabrics. I. H. Welch and J. A. Woodruff. Am Dyestuff Rep 41:880-4 D 22 '52

Chemical modification of cellulose aids rayon stabilization. A. R. Wachter. il Textile World 103:122-3+ My '53

Here is how to curb rayon shrinkage. il Mod Textiles Mag 34:56+ Mr '53

How to apply resins to spun rayons. A. C. Tate. Textile World 103:106-7+ Ja '53

New Aquex resins for rayon give abrasion resistance. G. M. Moisson. Textile World 103:76 Ap '53

Now, you can stabilize direct-dyed rayons. Mod Textiles Mag 34:60 Ap '53

Stabilizing cellulosic fabrics; dimethylhydantoin-formaldehyde condensates; patents. Am Dyestuff Rep 42:50 Ja 19 '53

Testing resins used in creaseproofing rayon; abstract. Kraner and Graeser. Am Dyestuff Rep 41:749 N 10 '52

See also

Dyes and dyeing—
Rayon

Rayon sizing

RAYON industry

Information center established by rayon producing industry. Mod Textiles Mag 34:73+ My '53

Pioneer in the development of rayons; Walter Ross. G. Boyo. Mod Textiles Mag 33:35+ N '52

Resurrection at Schwarzenbach Huber; Robert Schwarzenbach, jr. R. E. Ellsworth. Mod Textiles Mag 34:35+ O '53

See also

Celanese corporation
of America

Rayonier, inc.

Statistics

Rayon and acetate output revived strongly in 1952. Mod Textiles Mag 34:82 F '53

Canada

Canada's synthetic yarn and fiber industry shows much improvement. For Comm W 48:13 D 29 '52

Chile

Chile's synthetic fiber production up. For Comm W 48:17 O 13 '52

Cuba

Miracle man from Matanzas; James Dayton Hedges. R. E. Ellsworth. il Mod Textiles Mag 34:34+ F '53

Great Britain

British producer cuts price of rayon staple. For Comm W 50:10 Jl 27 '53

Rayon dividends with a flourish. Economist 167:837+ Je 20 '53

Rayon on the offensive. Economist 165:56 O 4 '52

Recovery in rayon. Economist 166:440-1 F 14 '53

What the British are doing about rayon. il Mod Textiles Mag 34:63+ Je '53

Italy

Italy attempting to revive rayon industry. For Comm W 49:15+ Ja 5 '53

Japan

Where Japanese rayon stands today. B. Mori. Mod Textiles Mag 34:66 S '53

RAYON mills

Modern spun rayon yarn mill. il Can Chem Process 36:52+ O '52

Accidents

Du Pont rayon plant tops industrial safety records. Nat Safety N 68:72-3 Ag '53

Employees

How Enka trains for instrumentation. W. G. Baker, jr. il Mod Textiles Mag 34:44-5 Ag '53

Wage chronology, 1945-51. C. W. Reed, jr. and M. R. Robbins. Mo Labor R 75:630-6 D '52

Equipment

$2½-million modernization program in a spun-rayon mill. J. H. Kennedy. il Textile World 103:105-7 Je '53

Management

How to run a big rayon-weaving job. il Textile World 102:112-13+ D '52

Waste

Industrial waste treatment at a viscose-rayon factory; abstract. J. W. Hughes. Sewage & Ind Wastes 24:1440 N '52

Rayon waste recovery and treatment. H. L. Jacobs. flow sheet Sewage & Ind Wastes 25:296-302; Discussion. C. E. Renn. 302-4 Mr '53

RAYON research

In-fiber dimensional stability of rayon! R. E. Ellsworth. Mod Textiles Mag 34:32-3 S '53

Moisture regain of methylcellulose and cellulose acetate. G. C. Gibbons. bibliog Textile Inst J Trans 44:T201-8 My '53

More facts about highly polymerized rayon. S. Tachikawa. diags Mod Textiles Mag 34:67-8+ Jl '53

Skin effect in crimped rayon. W. A. Sisson and F. F. Morehead. il diag Textile Res J 23:152-7 Mr '53

Theory and morphology of crimped rayon staple. M. Horio and T. Kondo. il diags Textile Res J 23:137-51 Mr '53

RAYON sizing

Homogenized size for spun synthetics saves $8,000 a year in slashing; Marion mfg. co. J. H. Kennedy. il Textile World 103:122, 186 Mr '53

RAYON waste

See also

Rayon mills—Waste

RAYON weaving

Elementary fabric design; analyzing woven fabrics. T. Friedl. il Mod Textiles Mag 33:75-7 N; 53-4 D '52

How to run a big rayon-weaving job. il Textile World 102:112-13+ D '52

Quilling, weaving, and cloth-grading tips from Belton weaving mill. J. H. Hill. il Textile World 102:120-1 D '52

RAYON yarn

Irregularities in cotton and rayon-staple slivers caused by roller slip at the draw-frame. G. Dakin and others. Textile Inst J Trans 43:T545-62 N '52

Longer lasting rayon tires. K. C. Bass. il diag Mod Textiles Mag 34:31+ Ag '53

RAYONIER, inc.

Chipping chemicals out of timber. Bsns W p 126+ Jl 4 '53

Off with the wraps. il Chem W 71:44+ N 15 '52

Progress made at all divisions of Rayonier. C. B. Morgan. il Paper Tr J 136:38-43 My 15 '53

RAYS

Which rays injure the eyes? A. L. Koven. Safety Maint & Prod 105:30-2+ Ap '53

See also

Absorption of rays
Alpha rays
Cosmic rays
Gamma rays
Infrared rays
Polarization of rays
Radiation
Ultraviolet rays
X rays

RAYTHEON manufacturing company
Newcomers on the New York stock exchange. J. S. Williams. Mag of Wall St 91:666 Mr 7 '53

RAZOR blade sharpeners

Rating

Safety razor blade sharpeners. il Consumers Res Bul 30:13-14 N '52

RAZOR blades
Fixtureless blade packs; Pal blade co. il Mod Packaging 26:88-9+ My '53
Safety blades and electric shavers enjoy paradoxical boom. N. Willatt. Barron's 33:11-12 F 16 '53

REACTANCE
Blondel test; accurate determination of leakage reactance. T. F. Wall. diags Elec R (Lond) 152:1107-8 My 15 '53
Current limiting reactance calculator aids switchboard design; engineering reference sheet. A. Conangla. Elec World 138:127 D 1 '52
Influence of a-c reactance on voltage regulation of six-phase rectifiers; abstract. R. L. Witzke and others. Elec Eng 72:689 Ag '53
Mercury-arc rectifiers; how reactance affects regulation. F. T. Bennell. diags Elec R (Lond) 151:459-60 Ag 29 '52
Reactance chart calculations. C. W. Young. diags Tele-Tech 12:69-71+ Ag '53

REACTIVE power
Measurement of power factor, and active and reactive power, of balanced *n*-phase *n*-wire systems. J. E. Parton. bibliog (37 titles) diags Inst E E Proc 99 pt 2:620-3 D '52
Sign of reactive-power. R. O. Kapp. diags Electrician 149:470-2 Ag 15 '52
Sign of reactive power. R. O. Kapp. Elec J 149:1589-90 N 21 '52

REACTORS
Branch feeder protection; low-voltage current limiting reactions. R. Bell. il Elec West 109:94-5 O '52
D-c current-measuring reactor. il Blast F & Steel Pl 41:236 F '53
Double three-phase rectifier with inter-phase reactor excited from a frequency tripler. L. R. Blake. diags Inst E E Proc 100 pt 2: 310-14 Je '53
Make your own u.h.f. chokes. E. J. Gauss. il diags Radio & Tv N 49:83-4 My '53
Reactor control provides constant cutting speed. Tool Eng 30:77 Ap '53
Saturable reactor with inductive d-c load. H. F. Storm. diags Elec Eng 72:151 F '53

REACTORS, Nuclear. See Atomic piles

READING
Aid to executive development; reading business magazines for profit. W. K. Beard, jr. Oil & Gas J 52:255+ My 18 '53
Executive training program in speed-reading; Adult reading center, Western reserve university. J. O. Jacobson. il Burroughs Clearing House 37:29 Je '53
Executives get basic training; reading for profit. H. Judson. il Oil & Gas J 52:250-2 My 18 '53
Fast reading vs. fast thinking. Fortune 47: 188 My '53
In-plant training for better reading. J. S. Massie. il plan Factory Management 111: 110-12 Mr '53
Reading time; you can cut it down. H. Johnson. Steel 132:81 F 2 '53
Relation of critical fusion frequency to fatigue in reading. T. A. Ryan and others. bibliog Illum Eng 48:385-91 Jl '53
Speed up your reading. H. Johnson. Oil & Gas J 52:253 My 18 '53
Stop wasting your time; executives find need for faster reading, turn to development courses. G. G. Carr. Iron Age 171:118 Mr 5 '53
21 top executives learn to read 216 per cent faster. C. J. Mullins and H. W. Mowry, 3d. Personnel J 31:336-8 F '53
Would you read a little faster. R. G. Ranney. Dun's R 61:30-1+ Mr '53

READING company
Net this year will set a postwar high. Barron's 32:19-20 N 10 '52

READY-mixed concrete. See Concrete mixing—Ready-mixed concrete

REAL estate boards, National association of. See National association of real estate boards

REAL estate business
Chart-loving real estate analyst. Bsns W p89-90+ F 28 '53
Footlights and frontage; Mr Dowling makes both pay off for City Investing. B. Lefferts. Barron's 32:5+ O 20 '52
Real estate lending in 1953. J. R. Jones. Comm & Fin Chr 177:1107+ Mr 12 '53
Real estate office secretary's handbook. L. Doris. 430p $4.95 Prentice-Hall, 70 5th av, New York 11 '53
Real estate outlook. C. B. Shattuck. Comm & Fin Chr 178:350-1 Jl 30 '53
Real estate; the traffic light has turned to amber. R. Wenzlick. Banking 45:47-8 S '52
Stock market and real estate boom or disastrous deflation ahead? R. E. Wenzlick. Comm & Fin Chr 177:1218-19 Mr 19 '53
You can still sell the old homestead. Bsns W p32 F 7 '53

See also
Building
Housing projects
Insurance, Life—Real estates operations
Land—Subdivision
Leases
Mortgages
Rent

Advertising

CAMs help realtors at California convention. D. L. Lionel. Ed & Pub 85:28 O 11 '52
Expert outlines ads that sell real estate. J. C. Tysen. Ed & Pub 85:32 N 15 '52
Sees extra linage in real estate wanted. D. L. Lionel. Ed & Pub 85:56 S 27 '52
Sees want ads as bouillon cubes. O. S. Wespe. Ed & Pub 85:32 O 18 '52
12-point rule is too good for Harrington real estate ads. il Ind Marketing 38:72 Je '53

Bibliography

Rehabilitation and other real estate trends today. M. P. McLean, comp. (Business literature v. 26, no. 2) p67-8 Business library, Newark public lib, 34 Commerce st, Newark, N.J. O '53

REAL estate developments. See Suburban development

REAL property
See also
Mortgages
Real estate business

Valuation

Look beyond 1953. R. Wenzlick. Bankers Mo 70:42+ Ap '53

REAMERS
Anti-chatter reamer drive. H. J. Gerber. diag Tool Eng 31:42 Jl '53
Gun reamer ups tool life ten times. R. Doceff. diags Am Mach 97:157 Ap 27 '53

REAMING
Dodge burnish-reams tappet holes. R. Le Grand. diags Am Mach 97:137 My 11 '53
What's ahead the next ten years in machining; drilling and reaming. Am Mach 96: E 11-12 Mid-N '52

REARRANGEMENTS, Molecular. See Molecular rearrangements

RECEIPTS
Standard American encyclopedia of formulas. A. A. Hopkins, ed. 1077p $3.50 Grosset & Dunlap, 1107 Broadway, New York 10 '53

RECEIVABLES. See Accounts receivable

RECEIVERS
See also
Insurance companies—Receiverships

RECIPROCAL purchasing. See Purchasing—Reciprocal purchasing

RECIPROCAL trade agreements. See Commercial treaties and agreements

RECIPROCITY, Law of. See Photography—Exposure

RECLAIMED rubber. See Rubber—Reclaiming

RECLAMATION association, National. See National reclamation association

RECLAMATION of land
Meadowlark farming; stripped and reserve coal lands; illustrations with text. Coal Age 58:88-93 Ag '53

RECLAMATION of land—*Continued*
Pakistan gets wheat crop from the desert; Thal reclamation program. il Bsns W p 138-40 Ja 24 '53
Reclaiming land from salt water bay; fresh river water will flush salt. il Eng N 150:60 My 7 '53
Salt River project, a reclamation first. H. F. Unger. Pub Util 52:434-9 S 24 '53
Sanitary fill as a means of reclaiming waste land. G. H. Richards. il Munic Util 90:40+ N '52

RECOMBINATION of atoms. See Atoms—Recombination

RECOMBINATION of ions. See Ions—Recombination

RECONSTRUCTION (World war, 1939-1945)
See also
European recovery program

RECONSTRUCTION finance corporation
Economic consequences of the operations of the RFC. B. W. Sprinkel. bibliog J Bsns 25:211-24 O '52
Finding a successor for RFC. Bsns W p 118 Je 13 '53
In defense of the RFC. H. A. McDonald. Comm & Fin Chr 176:2346+ D 18 '52
RFC death to leave money gap. Eng N 150:88 Ap 2 '53
RFC lending policy. Burroughs Clearing House 37:43 O '52
RFC ordered to cease lending, liquidate itself. Oil Paint & Drug Rep 164:3 Ag 3 '53
RFC overhauls its loan policy as spur to bank participation. Oil Paint & Drug Rep 163:3+ My 25 '53
RFC termination plan hit by outgoing chief. Oil Paint & Drug Rep 163:5+ My 4 '53
Slow death of RFC. Fortune 47:119+ Ap '53

RECORDING instruments
Analog to digital recorder; Adrad. il R Sci Instr 24:186 F '53
Automatic recording of the pressure-area, pressure-time, and area-time characteristics of monomolecular films. P. A. Anderson and A. A. Evett. plan diags R Sci Instr 23:485-8 S '52
Logarithmic counting-rate recorder. D. Shaw and R. N. Weltmann. il diag R Sci Instr 23:528-31 O '52
Magnetic tape drive designed for minimum speed variation. E. S. Kinney. il diags Machine Design 25:219-21 O '53
Magnetic tape recording system for precision data; abstract. L. L. Fisher. Product Eng 24:308+ My '53
Pen friction with vertical drum recording instruments. R. H. Eldridge. diag J Sci Instr 30:101-2 Mr '53
Photomechanical wave analyser for Fourier analysis of transient waveforms. T. B. Whiteley and L. R. Alldredge. diags J Sci Instr 29:358-62 N '52
Recording stress relaxometer. J. R. McLoughlin. bibliog il diags R Sci Instr 23:459-62 S '52
Snooper tells how trucks operate; recording speedometer. il Nat Pet N 45:56-8 Ja 21 '53
See also
Oscillographs, Cathode ray
Radio recorders
Telephone recorders

RECORDING instruments, Electric
Automatic charge measuring and recording apparatus. G. R. Feaster and others. diag R Sci Instr 23:763-4 D '52
Automatic transfer function measuring and recording system; abstract. R. J. Ehret and others. il diag Elec Eng 72:796 S '53
Chart reader for galvanometer-type recording instruments. B. Manning and M. Sylvester. R Sci Instr 24:71-2 Ja '53
Continuous recorder keep-alive circuit uses multivibrators. R. L. Ives. il diags Electronics 25:161-3 N '52
Counting strain gauge. J. B. Lambie. il diags Engineering 174:168-70 Ag 8 '52
Electric recording water meter. J. K. Tuthill. il plan diags Ill U Eng Exp Sta Circ 65:1-18 '52 (pa 20c)
Electronic recorder with range and precision adequate for the platinum resistance thermometer; abstract. A. J. Williams, jr. diag Elec Eng 72:57 Ja '53
Electronic recorders. E. Ferree. il diags Instruments 25:1743-6 D '52
Instrument electronics. M. H. Aronson. diags Instruments 25:1572-5+ N '52
Instrumentation studies; automatic recording of the lead-elongation characteristics of paper. K. W. Hardacker and others. bibliog il Tappi 35:sup 117A-24A O '52
Modification of a fixed-range potentiometer recorder into a variable-range recorder. F. A. Kanda and R. C. Shaver. diags Am Cer Soc J 36:101-4 Mr 1 '53
New balance automatically records fast changes in weight. Iron Age 171:141-2 My 28 '53; Same abr. Steel 132:196+ My 25 '53
New type data recorder and annunciator. Franklin Inst J 254:442-3 N '52
Nyquist diagram plotter. diag J Sci Instr 29:302 S '52
Play-back system aids seismic exploration. J. J. Jakosky and J. J. Jakosky, jr. il diags Pet Eng 24:B 112+ O '52
Pressure recorder for rocket motor studies. J. Alman. il diags Electronics 26:146-7 My '53
Pulse recording system for research at high altitude. J. Linsley. il R Sci Instr 24:181-2 F '53
Recording instruments; discussion. Inst E E Proc 100 pt 2:102-4 Ap '53; Same cond. Elec J 149:1849-50 D 12 '52; Excerpts. Elec R (Lond) 151:1296-7 D 12 '52
Six-channel photographic recorder. il Engineering 174:625 N 14 '52
Test set for recording impulses. L. J. Nijs. il diags Elec Com 30:9-11 Mr '53

RECORDS
Chrysler combines record keeping for group insurance and pensions. D. G. Baird. il Am Bsns 22:26+ N '52
Planning an efficient records retention-disposal program; abstract. Management R 41:663-4 O '52
Realistic approach to records management. A. McDonald. Special Lib 44:93-5 Mr '53
Reducing waste and risk through planned records storage; abstract. E. J. Leahy and R. E. Weil. Management R 41:792 D '52
See also
Accounting
Card system in business
Files and filing (documents, etc.)
Forms and blanks, Business
Inventories
Microfilm records
Photographic records
Punched card system
Sales records
Stores systems
also subdivision Records under special subjects, e.g.
Banks and banking
Employment departments
Factories
Railroads

RECORDS, Preservation of
Money in the wastebasket. P. Stryker. il Fortune 47:144-5+ F '53
Records go underground for safety; U.S. Steel stores valuable paperwork in worked-out coal mine. il Iron Age 170:94 N 13 '52

Bibliography

Bibliography on data storage and recording. (Tech. memo. no. 8) 34 l Servomechanisms lab, Electrical engineering dept, Mass. inst. of technology, Cambridge 39 '53

RECORDS, Visible
Visible index organization chart; Hooker electrochemical co. il Factory Management 111:117 F '53

RECREATION
Horseshoes for the auto plant; Chrysler corp. il Mod Ind 26:75 Jl '53
How to run a successful recreation program; Northrop Aircraft. il Factory Management 110:90-1 O '52
Industry hits home run. R. M. Lorz. Iron Age 171:66 My 28 '53
See also
Reservoirs—Recreational use

Bibliography

Recreation bibliography. 71 l pa $1 American assn. for health, physical education, and recreation, National education assn, 1201 Sixteenth st, N.W, Washington 6 '53

RECREATION areas
See also
Reservoirs—Recreational use

RECREATION rooms
Air conditioning YMHA health center. plan diags Sheet Metal Worker 44:130 Ja '53

RECRYSTALLIZATION. See Crystallization

RECTIFICATION
Rectification at reduced pressures. H. Bliss, A. M. Eshaya, and N. W. Frisch. bibliog diags Chem Eng Prog 48:627-32 D '52

RECTIFIERS, Electric. See Electric rectifiers

RECTIFIERS, Radio. See Radio rectifiers

RECUPERATORS. See Furnaces, Recuperative and regenerative

RECYCLING of natural gas. See Gas, Natural—Recycling

RED
See also
Turkey red

RED CLAY creek
Pollution study of the Red Clay Creek drainage basin. A. J. Kaplovsky and others. map diags Sewage & Ind Wastes 25:963-70, 1072-6 Ag-S '53

REDINGTON, John, 1874-1953
John Redington a symbol; the Cousin Jacks in North America. G. E. Cole. Can Min J 74:78-9 Ap '53

REDMOND, John
Bringing tomorrow nearer; a metallurgist's career. R. M. Love. pors Steel 132:74-5 Ap 13 '53

REDMOND, Louis
He makes every copy writer a little taller. S. H. Margolis and M. Silverstein. Ptr Ink 241:29-30+ D 19 '52

REDONDO BEACH, California
Wild seas batter Redondo Beach, Calif. Eng N 150:24 Ja 22 '53

REDOX diagrams
Redox diagrams. L. G. Sillén. bibliog J Chem Educ 29:600-8 D '52

REDOX potential. See Potential, Electric

REDUCTION, Chemical
Differential reduction of steroid ketones. A. H. Soloway, A. S. Deutsch and T. F. Gallagher. bibliog Am Chem Soc J 75:2356-8 My 20 '53
Direct reduction of aldoses and ketoses by Raney nickel. J. V. Karabinos and A. T. Ballum. bibliog Am Chem Soc J 75:4501-2 S 20 '53
Electrochemical measurements in pyridine; the redox potentials of some quinones. A. K. Gupta. Chem Soc J p3479-83 S '52
Electron transfer processes and the oxidation-reduction reactions of hexacyanoferrate(III) ion in aqueous solution. A. W. Adamson. bibliog J Phys Chem 56:858-62 O '52
Enhancement of the reducing properties of metallic mercury in presence of thiocyanate and cyanide; its analytical applications; abstract. F. Burriel-Martí. Chem Age (Lond) 67:561 O 25 '52
Extent of the photochemical reduction of phosphotungstic acid. L. Chalkley. J Phys Chem 56:1084-6 D '52
Mechanism of the Meerwein-Ponndorf-Verley reaction; a deuterium tracer study. E. D. Williams, K. A. Krieger and A. R. Day. bibliog Am Chem Soc J 75:2404-7 My 20 '53
Polarographic method for the indirect determination of polarization curves for oxygen reduction on various metals; chromium, molybdenum, tantalum, titanium, tungsten, and zirconium. P. Delahay and L. J. Stagg. Electrochem Soc J 99:546-8 D '52
Rearrangement of α-aminoketones during Clemmensen reduction; the fate of asymmetry at the α-carbon. N. J. Leonard, R. C. Sentz and W. J. Middleton. Am Chem Soc J 75:1674-5 Ap 5 '53
Reduction of alkaline 3 : 5-dinitrosalicylate by certain carbohydrates. D. J. Bell, D. J. Manners and A. Palmer. Chem Soc J p3760-3 O '52
Reduction of chemically modified cellulose by sodium borohydride. A. Meller. Tappi 36: 366-7 Ag '53
Reduction of chromium wastes by sulfur dioxide. H. B. Channon. Sewage & Ind Wastes 25:923-9 Ag '53
Reduction of tetracyclone. N. O. V. Sonntag and others. bibliog Am Chem Soc J 75: 2283-92 My 20 '53
Reduction properties of vat dyes. W. J. Marshall and R. H. Peters. bibliog 3pls diags Soc Dyers & Col J 68:289-99 Ag '52
Reductions with aluminium alkoxides; the kinetics of the racemization of optically active alkoxides by their corresponding ketones. L. M. Jackman and A. K. Macbeth. diag Chem Soc J p3252-60 Ag '52
Sodium borohydride as a reducing agent in the sugar series. M. L. Wolfrom and K. Anno. bibliog Am Chem Soc J 74:5583-4 N 20 '52
See also
Hydrogenation

REDUCTION, Electrolytic
Electrolytic production of quadrivalent uranium. H. K. El-Shamy and S. E. Zayan. Chem Soc J p384-6 F '53
Electrolytic reduction of bicyclic α-aminoketones; a method for the synthesis of medium rings containing nitrogen. N. J. Leonard, S. Swann, jr. and E. H. Mottus. bibliog Am Chem Soc J 74:6251-3 D 20 '52
Electrolytic reduction of bicyclic α-aminoketones; a new method for the synthesis of medium rings containing nitrogen. N. J. Leonard, S. Swann, jr. and J. Figueras, jr. bibliog Am Chem Soc J 74:4620-4 S 20 '52
Electrolytic reduction of organic compounds at carbon cathodes. S. Swann, jr. and others. bibliog Electrochem Soc J 99:460-6 N '52; Discussion. 100:293-4 Je '53
Electrolytic reduction of perrhenate; studies in perchloric, ethanesulfonic, trifluoroacetic and hydrochloric acids. J. C. Hindman and P. Wehner. bibliog Am Chem Soc J 75:2869-72 Je 20 '53
Electrolytic reduction of perrhenate; studies in sulfuric acid. P. Wehner and J. C. Hindman. bibliog Am Chem Soc J 75:2873-7 Je 20 '53
Electrolytic reduction of simple nitrate esters. F. Kaufman, H. J. Cook and S. M. Davis. bibliog Am Chem Soc J 74:4997-5001 O 20 '52
Irreversible polarographic reduction of simple metal ions in the presence of acid serum albumin. C. Tanford. bibliog Am Chem Soc J 74:6036-9 D 5 '52
Oxygen induced electroreduction of hydrogen peroxide and reduction of oxygen at the rotated gold wire electrode. I. M. Kolthoff and J. Jordan. bibliog Am Chem Soc J 74:4801-5 O 5 '52
Passivity of metals; the anodic behaviour of iron oxide films. U. R. Evans and I. D. G. Berwick. diag Chem Soc J p3432-7 S '52
Polarographic behavior of methyl vinyl ketone and methyl vinyl sulfone. C. W. Johnson, C. G. Overberger and W. J. Seagers. bibliog Am Chem Soc J 75:1495-6 Mr 20 '53
Polarographic reduction of crystal-violet, brilliant-green, malachite-green, and auramine. R. C. Kaye and H. I. Stonehill. Chem Soc J p3231-9 Ag '52
Polarographic reduction of hexamminecobalt(II) ion; the effect of complexing agents. H. A. Laitinen and P. Kivalo. bibliog Am Chem Soc J 75:2198-202 My 5 '53
Polarographic reduction of hexamminecobalt(III) ion; the effect of non-complexing electrolytes. H. A. Laitinen, A. J. Frank and P. Kivalo. bibliog Am Chem Soc J 75: 2865-9 Je 20 '53
Polarographic reduction of pyridine, quinoline, and phenazine. R. C. Kaye and H. I. Stonehill. Chem Soc J p3240-3 Ag '52
Polarographic reduction of some natural and artificial hydrogen-carriers in bacterial enzyme systems. R. C. Kaye and H. I. Stonehill. Chem Soc J p3244-7 Ag '52
Polarographic study of azobenzene. C. R. Castor and J. H. Saylor. bibliog Am Chem Soc J 75:1427-9 Mr 20 '53
Polarography of tellurium(VI). E. Norton, R. W. Stoenner and A. I. Medalia. bibliog Am Chem Soc J 75:1827-30 Ap 20 '53
Reduction potentials and unsaturation energy changes in electrode reactions leading to the formation of acridyl radicals. N. S. Hush. bibliog J Chem Phys 20:1660-1 O '52
Substituted aromatic glycols prepared by electrolytic reduction. M. J. Allen, J. E. Fearn and H. A. Levine. Chem Soc J p2220-3 Je '52
See also
Polarography

REDUCTONE

Chemistry of reductone; alkenediols related to reductone. W. Cocker, D. S. Jenkinson and P. Schwarz. Chem Soc J p 1628-30 My '53

REDUX. See Resinous products—Adhesives

REED, Chauncey William, 1890-

Portrait. Bsns W p29 N 8 '52

REED, Daniel Alden

Portrait. Bsns W p29 N 8 '52

REED, Malcolm Willard, 1895-

U.S. Steel spends $1.5 billion for construction and expansion. pors Eng N 150:45-6, cover Ja 1 '53

REEFS

Facies relationships of organic reefs. P. E. Cloud, jr. diags Am Assn Pet Geologists Bul 36:2125-49 bibliog(p2147-9) N '52

Interpretation of seismic data in locating reefs in Alberta. P. I. Bediz. map diag World Oil 136:86+ F '53

New gravity approach aids reef interpretation. R. A. Pohly. bibliog maps diags World Oil 136:116+ My '53

Reefal oil reservoirs in western Canada. R. Pot. map Pet Eng 25:B61-2+ F '53

REELS

See also

Electric cable reels

Moving picture films—Reels

REESE, Everett D.

Meet the new vice-president. por Banking 45:77 N '52

REEVES, Ernest N. 1895-

Major Reeves lives victoriously in spite of World war I injury. por Inland Ptr 131:54 My '53

REEVES, Hazard E.

Portrait. Fortune 47:93 Ja '53

REEVES brothers, inc.

Widening margins brighten Reeves brothers' outlook. Barron's 33:21 F 23 '53

REFERENCE books

See also

Bibliography

Bibliography

Reference books of 1951-1952. C. M. Winchell. (College and research libraries 14:72-8 Ja '53) Am. lib. assn, 50 E. Huron st, Chicago '53

Reference books on Canada; selected bibliography for a business library. R. M. Dow. Special Lib 44:150-1 Ap '53

Selecting material for science-technology libraries. R. H. Phelps. Special Lib 44:89-92 Mr '53

REFERENCE work. See Libraries—Reference work

REFINERIES, Petroleum. See Petroleum refineries

REFLECTION (optics)

Absolute optical absorption from diffuse reflectance. P. D. Johnson. diag Opt Soc Am J 42:978-81 D '52

Analysis of goniophotometric reflection curves. I. Nimeroff. Opt Soc Am J 42:579-83 Ag '52

Color and reflectance of human flesh. A. Stimson and E. Fee. Soc Motion Picture & Tv Eng J 60:553-8 My '53

Color and reflectance of stainless steels. F. K. Bloom. il diags Metal Prog 63:67-72 Je '53

Computation of spherical-mirror systems by means of finite-difference equations. L. P. Raitiere. diags Opt Soc Am J 42:960-5 D '52

Importance of ground reflection in daylighting. J. W. Griffith and others. Illum Eng 48:35-6; Discussion. 37-8 Ja '53

Improved sphere paint. W. E. K. Middleton and C. L. Sanders. bibliog diag Illum Eng 48:254-6 My '53

Luminous directional reflectance of snow. W. E. K. Middleton and A. G. Mungall. il diags Opt Soc Am J 42:572-9 Ag '52

Optical and infrared reflectivity of metals at low temperatures. T. Holstein. Phys R 88:1427-8 D 15 '52

Reflectance of thin cellulose nitrate films. L. Harris and J. K. Beasley. Opt Soc Am J 42:634-6 S '52

Reflectivity of copper electrodeposits. W. H. Gauvin and C. A. Winkler. bibliog Electrochem Soc J 99:447-9 N '52

See also

Reflectors

REFLECTORS

Characteristics of Alzak aluminum as used in the lighting industry. H. Lyons and W. Weibel. bibliog flow sheet il Illum Eng 48:135-9 Mr '53

Focus and quality determination of searchlight reflections. Illum Eng 48:sup24A+ Je '53

How the Santa Fe is reflectorizing roadway signs. il Ry Age 134:77-9 Ap 20 '53

Industrial lighting; high wattage translucent and blended fittings. J. G. Holmes. il Elec R (Lond) 151:993-8 N 7 '52

Metallized butyrate reflectors. il Mod Plastics 30:110-12+ Mr '53

Ventilation; key to self-maintenance. F. W. Sell. il diags Illum Eng 58:500-2 S '53

REFLECTOSCOPE

Ultrasonic testing of a large engine crankshaft; abstract. W. A. Black. il diags Blast F & Steel Pl 41:1065-6+ S '53

REFORESTATION. See Forests and forestry

REFORMATORIES

See also

Juvenile detention homes

REFORMATSKY reaction

Aldol condensation of esters with ketones or aldehydes to form β-hydroxy esters by lithium amide; comparison with the Reformatsky reaction. C. R. Hauser and W. H. Puterbaugh. bibliog Am Chem Soc J 75:1068-72 Mr 5 '53

α- and γ-additions in the Reformatsky reaction with methyl γ-bromocrotonate. A. S. Dreiding and R. J. Pratt. bibliog Am Chem Soc J 75:3717-23 Ag 5 '53

REFRACTION

Bond refractions for compounds of tin, silicon, lead, mercury, and germanium. W. T. Cresswell and others. Chem & Ind p 19 Ja 3 '53

REFRACTION, Double

Birefringence and refractive index of synthetic fibers with special reference to their identification. A. N. J. Heyn. bibliog(26 ref) diag Textile Res J 22:513-22 Ag '52; Discussion. 23:258-9 Ap '53

Flow birefringence in solutions of macromolecules. R. Cerf and H. A. Scheraga. il diags Chem R 51:185-261 bibliog(p256-61) O '52

Identification of synthetic fibers by their refractive indices and birefringence. A. N. J. Heyn. il diags Textile Res J 23:246-51 Ap '53

Instrument for the study of double refraction of flow at low and intermediate velocity gradients. J. T. Edsall and others. bibliog il diags R Sci Instr 23:695-701 D '52

Magnetic double refraction at microwave frequencies. M. T. Weiss and A. G. Fox. Phys R 88:146-7 O 1 '52

Structure and properties of the condensed phosphates; flow birefringence. J. R. Van Wazer, M. Goldstein and E. Farber. bibliog Am Chem Soc J 75:1563-7 Ap 5 '53

See also

Kerr effect

REFRACTION, Molecular

Exaltations of molecular refractions. E. D. Bergmann and E. Fischer. Chem Soc J p2837-9 S '53

Molecular refractions of the SO_3 and SO_2Cl groups in *p*-ethylbenzenesulfonyl chloride and the methyl, ethyl and *n*-butyl esters of *p*-ethylbenzenesulfonic acid. R. H. Wiley and R. P. Davis. bibliog Am Chem Soc J 74:6142-4 D 5 '52

REFRACTIVE index

Additional light scattering functions for spherical particles of refractive index of 2. M. Kerker and H. E. Perlee. Opt Soc Am J 43:49-50 Ja '53

Birefringence and refractive index of synthetic fibers with special reference to their identification. A. N. J. Heyn. bibliog(26 ref) diag Textile Res J 22:513-22 Ag '52; Discussion. 23:258-9 Ap '53

REFRACTIVE index—*Continued*

Constants in the equation for atmospheric refractive index at radio frequencies. E. K. Smith, jr. and S. Weintraub. bibliog J Res Nat Bur Stand 50:39-41 Ja '53; Same. Inst Radio Eng Proc 41:1035-7 Ag '53

Density and refractive index of uranyl fluoride solutions. J. S. Johnson and K. A. Kraus. Am Chem Soc J 75:4594-5 S 20 '53

Detection of additives in vegetable waxes; the use of instrumental analysis. C. J. Marsel and others. Soap & San Chem 28: 127+ N '52

Geographical and height distribution of the gradient of refractive index. B. R. Bean. maps Inst Radio Eng Proc 41:549-50 Ap '53

Highly stable microwave oscillator and its application to the measurement of the spatial variations of refractive index in the atmosphere. L. Essen. bibliog diags Inst E E Proc 100 pt 3:19-24 Ja '53

Identification of synthetic fibers by their refractive indices and birefringence. A. N. J. Heyn. il diags Textile Res J 23:246-51 Ap '53

Index of refraction of magnesium oxide. R. E. Stephens and I. H. Malitson. diag J Res Nat Bur Stand 49:249-52 O '52

Interference films on glass; some observations during acid leaching of X-ray plate glass. S. Anderson and D. D. Kimpton. Am Cer Soc J 36:175-9 Je 1 '53

Interpretation of the refractive index measurements on the ternary system RbCl-RbBr-KBr-KCl. J. E. Ricci. diags Am Chem Soc J 74:5788-90 N 20 '52

Measurement of tropospheric index-of-refraction fluctuations and profiles. C. M. Crain and others. bibliog Inst Radio Eng Proc 41:284-90 F '53

Method of solving the wave equation in a region of rapidly varying complex refractive index. J. J. Gibbons and R. L. Schrag. J Ap Phys 23:1139-42 O '52

Microthermal analysis of the system 1,2,3,4-tetrachlorobenzene-pentachlorobenzene. C. J. Arceneaux. bibliog il Anal Chem 25:486-9 Mr '53

Nomograms for the computation of tropospheric refractive index. D. M. Swingle. bibliog Inst Radio Eng Proc 41:385-91 Mr '53

Precision refractometer for continuous recording of index of refraction of flowing liquid streams. R. H. Müller. Anal Chem 25:sup27A-8A Mr '53

Proposed method of test for measurement of refractive index and refractive dispersion of hydrocarbon liquids. Am Soc T M Proc 50:284-8 '50

Rapid identification of fibers by the Christiansen effect. Z. Norwick. bibliog Textile Res J 23:259-61 Ap '53

Refractive index of potassium bromide for infrared radiant energy. R. E. Stephens and others. bibliog Opt Soc Am J 43:110-12 F '53

Refractive indices of some cyclohexanol solutions. C. M. Wheeler, jr. and F. S. Jones. bibliog Anal Chem 24:1991-2 D '52

Refractivity of potassium bromide for visible wavelengths. R. J. Spindler and W. S. Rodney. bibliog il J Res Nat Bur Stand 49:253-62 O '52

Scattering of electromagnetic energy in a randomly inhomogeneous atmosphere. H. Staras. J Ap Phys 23:1152-6 O '52

Slide rule computes radio refractive index of air. S. Weintraub. il Electronics 26: 182+ Ja '53

Studies of hemiacetal formation in alcohol-aldehyde systems; refraction studies. F. E. McKenna, H. V. Tartar and E. C. Lingafelter. bibliog Am Chem Soc J 75:604-7 F 5 '53

Study of refractive index increments of weak acids and buffer mixtures. E. B. Dismukes and R. A. Alberty. bibliog il diag Am Chem Soc J 75:809-14 F 20 '53

System acetic acid-water-dimethylaniline; liquid phase behavior and analysis. L. Garwin and P. O. Haddad. bibliog Anal Chem 25:435-7 Mr '53

REFRACTOMETERS

Precision recording refractometer. S. E. J. Johnsen and P. D. Schnelle. il diags R Sci Instr 24:26-35 Ja '53

REFRACTORIES institute

Annual meeting, Absecon, N.J. June 11-12. Brick & Clay Rec 123:31+ Jl '53

Fall meeting, 2d, Point Clear, Ala. Oct. 20-21. Brick & Clay Rec 121:63-4 N '52

REFRACTORY concrete. See Concrete, Refractory

REFRACTORY industry

Corhart adopts federated charity plan. Glass Ind 33:680-1 D '52

Meeting of refractories industry's plant operating men, Colorado Springs, Sept. 29-30; with abstracts of papers. Brick & Clay Rec 121:67 N '52

Men who make refractories explain their part in the progress of the industry. Brick & Clay Rec 122:67-8+ Ja '53

Refractories buoyed by steel rate; record steel production expected in 1953 lends optimism to refractory producers. R. M. Lorz. il Iron Age 170:99 N 13 '52

Refractories industry; where it's been and where it may be going. il Brick & Clay Rec 122:56-7 Ja '53

Statistics

These industries could not have grown without refractories. Brick & Clay Rec 122:60-1 Ja '53

REFRACTORY materials

American ceramic society Refractories division fall meeting, French Lick, Ind. Sept. 12-13; with abstracts of papers. Brick & Clay Rec 121:67-8 O '52

American foundrymen's society 57th annual meeting, Chicago, May 4-8; abstracts of papers of interest to refractory industry. Brick & Clay Rec 122:77-8 Je '53

A.I.M.M.E. national open hearth steel committee and blast furnace coke oven and raw materials committee joint conference, Buffalo, April 22-24; abstracts of papers. Brick & Clay Rec 122:68-70 My '53

Behavior of refractory oxides in contact with metals at high temperatures. G. Economos. bibliog diag Ind & Eng Chem 45:458-9 F '53

Cast refractories replace brick in heating furnaces. W. G. Patton. il Iron Age 170: 140-1 D 18 '52

Castable refractories in the steel mill. J. D. McCullough. il diags Iron & Steel Eng 30: 84-9; Discussion. 89-93 Je '53

Determination of progressive corrosion of glass tank refractories. P. G. Herold and V. P. Maheshwary. il diags Mo U Sch Mines & Met Bul tech ser 82:1-28 '52; Excerpts. Glass Ind 34:551+ O '53

Effect of molten aluminum on alumina-silica refractories. K. J. Brondyke. il diags Am Cer Soc J 36:171-4 My 1 '53

Ethyl silicate has five advantages in refractories. Brick & Clay Rec 123:71 Ag '53

Examination of refractory specimens in reflected light. R. B. Snow. il Am Cer Soc J 36:299-304 S 1 '53

From waste to product via research; rice mills. il Can Chem Process 36:26-8 D '52

Masters of the inferno. il Brick & Clay Rec 122:50-2 Ja '53

Monolithic refractories do smooth big-boiler job. il diag Power 97:98-9 Mr '53

Petroleum ash components and their effect on refractories. M. C. K. Jones and R. L. Hardy. Ind & Eng Chem 44:2615-19 N '52

Refractories and the pusher-type kiln. M. H. Berns and C. E. Milligan. il Am Cer Soc Bul 31:317-19 S 15 '52

Refractories; bubble-brick developed by Carborundum co. il Iron Age 171:172-3 F 5 '53

Refractories grain sizing. Brick & Clay Rec 122:79+ Je '53

Refractories review and forecast. il Iron Age 171:281 Ja 1 '53

Refractory products from Saskatchewan clays. il Can Chem Process 37:46+ Ja '53

Standard refractory tubes in recrystallised alumina, mullite and aluminous porcelain. Metallurgia 47:321-2 Je '53

REFRACTORY materials—*Continued*

Surface barrier analysis for the highly refractory metals by means of Schottky deviations. D. W. Juenker and others. bibliog diag Phys R 90:772-8 Je 1 '53

See also

Boron nitride
Concrete, Refractory
Fire brick
Fire clay
Magnesite brick
Silica brick
Silicon carbide
Zirconium oxides

Electric properties

Electrical conductivity of some commercial refractories in the temperature range 600° to 1500°C. V. E. J. Chiochetti and E. C. Henry. bibliog diag Am Cer Soc J 36:180-4 Je 1 '53

Electrical resistance of some refractory oxides and their mixtures in the temperature range 600° to 1500° C. J. R. Hensler and E. C. Henry. bibliog diags Am Cer Soc J 36:76-83 Mr 1 '53

Manufacture

Fundamentals of control testing. S. M. Swain. Am Cer Soc Bul 32:69 Mr 15 '53

How to avoid defects in pressing refractories. G. L. Day. Brick & Clay Rec 123:63-4 Jl '53

Hydraulic pressing helps specialty department pay higher profits. il diags Brick & Clay Rec 122:63 My '53

Modern materials handling cuts costs; General Refractories new Los Angeles plant. il Brick & Clay Rec 121:53-5 D '52

Preparation of refractories from uranium dioxide. R. E. Corwin and G. B. Eyerly. il Am Cer Soc J 36:137-9; Discussion. H. Z. Schofield. 140 Ap 1 '53

Refractory works; Morgan refractories, ltd. il Engineer 195:836-7 Je 12 '53; Engineering 175:757-8 Je 12 '53; Metallurgia 47:300-4 Je '53

Safety, personnel training, kiln care lecture topics at 2d TRI factory operators committee meeting, Pittsburgh, March 30-31; abstracts of papers. Brick & Clay Rec 122:65-7 My '53

Testing

Comparison of gas-fired pyrometric cone equivalent furnaces. H. F. Smalley and R. B. Sosman. bibliog il diags Am Cer Soc Bul 32:5-11 Ja 15 '53

Permeability and some other properties of a variety of refractory materials. G. B. Massengale and others. bibliog il diags Am Cer Soc J 36:222-9, 273-8 Jl 1-Ag 1 '53

Refractory properties of Pacific Northwest chromites. H. J. Kelly and others. 23pls U S Bur Mines Rep of Invest 4929:1-38 bibliog and patent list(192 titles, p28-38) '52

Study on permeability to air of various fire bricks and of refractory-clay pots used for melting glass. il diag Brick & Clay Rec 123:39-40 O '53

Testing and development of basic refractories for the open hearth. L. W. Austin. il diag Blast F & Steel Pl 41:639-45 Je '53

Thermal stress failure of pure refractory oxides. B. Schwartz. bibliog il diags Am Cer Soc J 35:325-33 D 1 '52

Titanium casting research tests shell molded refractories. J. G. Kura. il diags Iron Age 170:88-92 O 30 '52

REFRACTORY research

Reactions of sodium sulfate with alumina-silica refractories. W. A. Lambertson. Am Cer Soc J 35:161-5 Jl 1 '52

REFRIGERANTS

Leakages in refrigerating machinery and their detection; abstract. T. E. Schmidt. Refrig Eng 60:1290 D '52

Measuring refrigerant flow in small refrigerating machines; abstract. J. van Dam. diag Refrig Eng 61:755 Jl '53

Operating engineer looks at the common refrigerants. E. L. Forbes. Refrig Eng 60:1182-4+ N '52

Product called Sno-Gel; today's hottest news in refrigeration. E. Gidlow. il Sales Management 69:30-2+ O 1 '52

Sno-Gel, a eutectic solution now being distributed on West coast, has wide variety of cooling applications. Refrig Eng 61:86 Ja '53

See also

Ammonia
Brine
Carbon dioxide, Solid
Chlorodifluoromethane
Chlorofluoromethanes
Dichlorodifluoromethane
Ice

REFRIGERATING engineering

See also

Cold storage

Study and teaching

Air conditioning and refrigeration courses in vocational schools. N. N. Wolpert. Heat & Ven 50:103-4 O '53

Air conditioning, refrigeration, and heating and ventilating courses offered by colleges; tabulations. N. N. Wolpert. il Heat & Ven 50:87-90 Ag; 99-102 S '53

REFRIGERATING industries

Future of the refrigeration industry. C. H. Linder. Comm & Fin Chr 178:199+ Jl 16 '53; Same abr. Refrig Eng 61:870+ Ag '53

Shape of things to come; how to plan for the future of the household refrigerator industry; three papers. W. J. Donald and others. Refrig Eng 61:45-9+ Ja '53

Maintenance contracts

Save money with preventive maintenance; purchased maintenance plans. G. H. Walker. il Refrig Eng 60:939-42+ S '52; Same cond. Power Eng 57:85-6 Ja '53

Statistics

Air conditioning, commercial refrigeration equipment; shipments, 1940-1951; tabulation. Steel 132:180 Ja 5 '53

1952 shipments of air conditioning and refrigeration equipment; tabulations. Refrig Eng 61:871-3+ Ag '53; Excerpts. Heat & Ven 50:132+ S '53

Great Britain

British refrigeration association luncheon, London, March 20. Elec J 150:1051 Mr 27 '53; Elec R (Lond) 152:710-11 Mr 27 '53

Israel

Israel increases use of ice and refrigeration For Comm W 50:19 Jl 13 '53

Russia

Soviet steps up refrigeration production. V. Kokorev. Refrig Eng 61:1098 O '53

Trends and developments in the refrigeration industry of the Soviet Union; abstract. Refrig Eng 61:275 Mr '53

REFRIGERATING plants

See also

Cold storage
Cold storage warehouses
Piping (refrigerating plants)
Refrigeration and refrigerating machinery

Equipment

Cut compressor ills with the right upkeep. il Power 97:144-5 O '53

World's largest plant for freezing pineapple juice. H. D. Jefferson and R. H. Lloyd. flow diag il Refrig Eng 60:1167-71 N '52

REFRIGERATION and refrigerating machinery

Absorption refrigeration system may be your answer. C. L. Rescorla. diags Refrig Eng 61:276-9 Mr '53

Building construction plans should provide separate category for refrigeration and air conditioning. Refrig Eng 60:1179+ N '52

Centrifugal refrigerating compressors without stuffing box and without gear; abstract. F. Chistiakoff and A. Plotnikoff. Refrig Eng 60:1290 D '52

Determination of condensing unit capacity by a water calorimeter. A. P. Boehmer. bibliog diag Refrig Eng 61:284-5 Mr '53

Electrical analogger application to the heat pump process. C. F. Kayan. bibliog diags Heating-Piping 25:123-7 Ag '53

Extraction plant strips high pressure gas. il diag Pet Eng 25:A73-4+ Ap '53

Forty years with compressor valves. C. R. Neeson. il diags Refrig Eng 60:1292-5 D '52

REFRIGERATION and refrigerating machinery *—Continued*

Gas refrigeration plant designed to extract minimum of natural gasoline. R. B. McLaughlin and C. P. Stanley. flow diag il Oil & Gas J 51:103-4+ Ap 6 '53

Hexane-plus fractions serve as absorbent in absorption-refrigeration gasoline plant. D. H. Stormont. flow sheet il Oil & Gas J 51:210-12 Ap 27 '53

Making the most of superheat in ammonia and Freon-12 systems. L. Buehler. diags Refrig Eng 61:617-19+ Je '53

Practical method of selecting capillary tubes. J. R. Prosek. diags Refrig Eng 61:644-7 Je '53; Discussion. 61:875+ Ag '53

Refrigerating plant comprising a centrifugal compressor and a turboexpander as prime mover, both using the same working agents; abstract. F. Chistiakoff and A. Plotnikoff. diags Refrig Eng 61:50-1 Ja '53

Refrigeration. Food Eng 25:127-9 O '53

Refrigeration helps Lockheed build planes. P. E. Hunt. il Aero Digest 66:21 Ap '53

Refrigeration internationally speaking; digests of significant articles appearing in foreign journals. R. Plank, comp. Published in monthly numbers of Refrigerating engineering

Refrigeration systems for cooling drinking water. J. Askin. il diags Heat & Ven 50:81-6 F '53

Ropes field has refrigeration type gasoline plant. R. F. Carlson. il Oil & Gas J 52:74-5 Je 29 '53

Self-contained automatic ice cube makers; with specifications. E. MacLeod. il Refrig Eng 61:280-1+ Mr '53

Simplified analysis of two stage low temperature refrigeration systems. H. P. Soumerai. flow diag Refrig Eng 61:746-50+ Jl '53

Steam-jet refrigeration. L. J. Murphy. il diags Mill & Factory 53:96-9 Jl '53

Suction gas superheaters for Freon-12 systems. diags Heat & Ven 50:82-4 Mr; 127-8 Ap '53

Tips on selecting thermal expansion valves for refrigeration. M. L. Hoglund. il diag Mill & Factory 51:120-1 D '52

See also

Air conditioning
Carbon dioxide, Solid
Cold storage
Compressors
Cooling
Cooling equipment
Cooling of water
Electricity in refrigeration
Freezing
Heat pump
Ice machines
Insulation (heat)
Piping (refrigerating plants)
Refrigerants
Refrigerating engineering
Refrigeration on cars, trucks, etc.
Refrigeration on ships
Refrigerator cars
Refrigerators
Skating rinks
Temperature, Low

Control

Merchants' refrigeration warehouse in Hopkins, Minn.; unattended plant runs smooth with remote signals. N. R. Bernz. il plan diags Power 97:90-3 Ja '53

Refrigeration Q&A; special control valves for your system. T. Hicks. diags Power 97:118-19 S '53

Cost

Refrigeration operating costs; charts. L. J. Murphy. Heat & Ven 50:87-9 O '53

Defrosting

Commercial and industrial defrosting; symposium. C. F. Holske and others. il diags Refrig Eng 61:261-74; Discussion. 274+ Mr '53

Fail-safe, automatic defrosting switches. il Product Eng 24:212 Ja '53

How often cooling coils should be defrosted in storage rooms. N. N. Wolpert. Heat & Ven 50:116-17 Ja '53

Use of the bimetal disc thermostat as a defrost control. E. F. Kurtz. il diags Refrig Eng 61:531-3+ My '53

Electric analogies

Application of an electric analogue to domestic refrigerator cabinets. P. E. Davey and J. C. Spooner. bibliog il diags Refrig Eng 60:1300-3+ D '52

Lubrication

Testing refrigeration oils. H. Steinle. bibliog il diags Refrig Eng 61:1065-71+ O '53

Viscosity of lubricating oil-Freon-22 mixtures. J. L. Little. diags Refrig Eng 60:1191-5 N '52; Discussion. 61:62+ Ja '53

Maintenance and repair

Drake's refrigeration service manual. H. P. Manly. 343p $2.50 Frederick J. Drake & co, 117 Green Bay road, Wilmette, Ill. '53

Good operation, maintenance assured at Naval ordnance laboratory for the air conditioning and refrigeration systems. C. E. Mandley. il Heating-Piping 25:136-9 Ja '53

Key to better cold-job output; illustrations with text. Power 97:116-17 Ja '53

Leakages in refrigerating machinery and their detection; abstract. T. E. Schmidt. Refrig Eng 60:1290 D '52

Low temperature knocks out compressor. R. A. Line. il Power 96:114-15 N '52

Now let's pack your refrigerating compressor; illustrated instructions. S. Elonka. Power 97:122-3 Je '53

Refrigeration trouble shooting. C. T. Baker. il Power 97:112-13 Ag '53

See also

Refrigerating industries—Maintenance contracts

Manufacture

Refrigeration industry needs high speed production machinery. W. P. Hill. il Refrig Eng 61:641-3 Je '53

Moisture problem

Dehydrate your Freon system now. D. Godfrey. il diags Power 97:118-19 My '53

Moisture removal from refrigerating systems. P. E. James. il diag Refrig Eng 61:625+ Je '53

Preventing exterior sweating on freezer cabinets. R. L. Eichhorn. Refrig Eng 61:969-70 S '53

Patents

Noteworthy patents. H. L. Stults, ed. diags Published in monthly numbers of Refrigerating engineering

Safety measures

Safety code for mechanical refrigeration. bibliog diag Refrig Eng 61:sup 1-19 O '53 (reprints $1)

Safety devices in refrigeration. R. T. Moore. il diags Refrig Eng 60:1286-9 D '52; Discussion. 61:60-1 Ja '53

Standards

Method for testing capillary tubes; proposed ASRE standard. diag Refrig Eng 61:sup 1-4 Ag '53 (reprints 35c)

Tables, calculations, etc.

Charts for refrigeration design. L. J. Murphy. Heat & Ven 50:87-8 Je '53

Effects of internal roughness on pressure drop and heat transfer of integral finned tubes. V. R. S. Arni and J. E. Myers. bibliog il diag Refrig Eng 61:757-9+ Jl '53; Discussion. 61:874-5 Ag '53

Temperature change as affected by different pulldown methods. N. E. Hopkins and J. J. Seelaus. Refrig Eng 61:63-70; Discussion. 70-1 Ja '53

Thermodynamic analysis of the Plank cycle; maximum efficiency in a carbon dioxide system. O. Almoslino. diags Refrig Eng 61:1090-5 O '53

What refrigeration do you need? beverage plant cooling requirements. T. Hicks. Food Eng 25:63+ F '53

REFRIGERATION equipment manufacturers association

REMA and ACRMA plan to merge. Heat & Ven 50:83 My '53; Refrig Eng 61:535 My '53

REFRIGERATION on airplanes

Stratos wrings out air cycle unit. Aviation W 58:66-7 Mr 30 '53

REFRIGERATION on cars, trucks, etc.

Frozens run cross-country in reefer-truck test. Food Eng 25:192 Jl '53

It's new; a combo l.c.l. car. il Ry Age News ed 134:11 Mr 16 '53

REFRIGERATION on cars, trucks, etc.—*Cont.*
Mobile refrigerator and cold-storage plant; Thermo Train. Comp Air Mag 57:320 N '52
New snap in their deliveries; using low-bed truck with six-compartment body; Foremost dairies. il diag Food Eng 25:135-7 My '53
Norfolk & Western dining car refrigeration. il plan Ry Loco & Cars 127:76-9 My '53
Novel Thermo Train developed in Sweden freezes perishables on the spot anywhere. il Refrig Eng 61:295 Mr '53
Railroads were cold to the idea until Thermo-King showed savings of mechanical refrigeration. J. A. Numero. il Sales Management 69:113-15 O 1 '52
Refrigerated railway transport in western Europe; abstract. F. L. Levy. Refrig Eng 61:755+ Jl '53
Refrigerated truck transport problems. W. H. Redit. il diags Refrig Eng 61:514-18 My '53
Trucks fresh meats nationally; Dugdale packing co. il Food Eng 25:96+ Ag '53
Walk-in truck speeds deliveries; Pioneer ice cream division of the Borden co. il diag Food Eng 25:129-31 Ja '53
See also
Refrigerator cars

REFRIGERATION on ships
Insulation of a refrigerated cargo liner; abstracts. K. C. Hales and J. D. Farmer. Engineer 195:625 My 1 '53; Engineering 175:776 Je 19 '53; Discussion. Engineer 195:625-7 My 1 '53; Engineering 175:776-8 Je 19 '53
Marine refrigeration in Europe; abstract. Dumolin; O. Prinzing. Refrig Eng 61:275+ Mr '53
Quick freezes and cartons shrimp at sea; Crossland fisheries. C. E. Wright. Food Eng 25:133 My '53

REFRIGERATOR cars
Air envelope cars will compare mechanical reefers. il Food Eng 25:76+ Jl '53
American Refrigerator Transit gets 500 new reefers. il Ry Age 133:93-5 D 1 '52
Dressed-beef damage reduced. il Ry Age 134:58-9 My 4 '53
Experimental refrigerator car designed by Canadian national railways. diags Can Chem Process 37:38 Ap '53
Frozen strawberries shipped coast to coast by rail without reicing. il diag Refrig Eng 61:882 Ag '53
New European refrigerated railway cars; abstract. M. Fasoli. diag Refrig Eng 61:275 Mr '53
On this Santa Fe mechanical temperature control reefer, temperatures stay below zero. il Ry Age 135:93-6 S 7 '53
Rail transportation of perishable foodstuffs. R. B. Tewksbury. il Refrig Eng 61:52-4+ Ja '53
Six years' experience with an aluminum reefer. il Ry Loco & Cars 127:72-5 Mr '53; Excerpts. Ry Age 134:57-8 F 23 '53
Super perishables run; Santa Fe's first train of expedited perishables. Ry Age 134:11 Je 15 '53
Transport and storage of perishables in Canada. C. P. Lentz and W. H. Cook. bibliog diags Refrig Eng 61:160-2; Discussion. 162-3+ F '53

REFRIGERATORS
Factors affecting the rusting and spalling of titania enamels under alternate freezing and thawing in the presence of moisture. R. F. Patrick. il Am Cer Soc Bul 31:334-9 S 15 '52
First all plastic refrigerator food chamber now in production. il Refrig Eng 60:1306 D '52
Present state of household refrigerators in France and Switzerland; abstract. A. Braive. Refrig Eng 60:1180-1 N '52
Steel in a refrigerator; tabulations. Iron Age 171:439 Ja 1 '53
See also
Refrigeration and refrigerating machinery

Manufacture

Brazing methods for refrigeration units. A. L. Johnson. il Welding J 32:235-7 Mr '53
Hung ware licks hung-up production. M. E. McHardy. il Cer Ind 60:103 Je '53
They glide through the air with the greatest of ease; handling in new Scarborough, Ont. plant of Frigidaire Products. il Can Chem Process 37:58 Ja '53

REFRIGERATORS, Electric
Application of an electric analogue to domestic refrigerator cabinets. P. E. Davey and J. C. Spooner. bibliog il diags Refrig Eng 60:1300-3+ D '52
Household refrigerators in Russia; abstract. K. Lipinsky and N. Likhareva. diag Refrig Eng 61:627 Je '53
Proper motors required for long-life hermetic compressors. A. C. Dickson. il diags Refrig Eng 61:504-8 My '53
Servel goes all-plastic; Wonderbar refrigerette. D. Dailey. il Mod Plastics 30:111-13+ N '52
Shape of things to come; how to plan for the future of the household refrigerator industry; three papers. W. J. Donald and others. Refrig Eng 61:45-9+ Ja '53

History

Making it safe to be hungry. R. F. Roider. il Gen Elec R 55:37-40 S '52; Same. Refrig Eng 60:1279-80+ D '52

Manufacture

Appliance assembly; novel device up-ends refrigerators on assembly line. Iron Age 171:242+ My 7 '53
Forming and assembling condenser coils and fins. R. Wagner. il diag Mach 59:192-4 Ag '53
How vapor flux brazing produces quality joints; manufacture of household refrigerators at the Erie works of General electric co. H. S. Card. il diags Materials & Methods 37:120-2 Je '53
Production-line painting methods. J. T. Pederson. il diag Elec Com 30:84-95 Je '53

Rating

New Servel electric refrigerator with icemaker. il Consumers Res Bul 32:17-18 Jl '53
1952 refrigerators and a refrigerator-freezer combination. il Consumers Res Bul 30:9-16 O; 21-2 N; 13 D '52

REFRIGERATORS, Gas
Household icemaking is continuous process in basically new gas refrigerator. il diag Am Gas J 177:43+ D '52

Merchandizing

Accent refrigerator sales. A. E. Lee. Am Gas Assn Mo 34:29-30+ N '52
To sell gas refrigerators, you have to sell the dealer. V. O'Brien. il Gas Age 112:17-18+ Jl 30 '53

REFUGEES
Furniture in the cotton field; Latvian workers on Mississippi plantations use old world skills. il Bsns W p 118+ N 8 '52
Integration of displaced persons into U.S. economic life. G. Minton. Mo Labor R 75:611-14 D '52
Mr Dulles and the Arabs. Economist 167:340-2 My 9 '53

REFUSE, Utilization of
Equipment for heat-treating garbage used for hog food. diags Pub Works 84:83-4+ My '53
Highlights from APWA survey on swine feeding methods of garbage disposal. Pub Works 84:88 My '53
Many states may bar feeding raw garbage to swine. Pub Works 84:83-4 Mr '53
See also
Refuse as fertilizer

REFUSE as fertilizer
Composting for profit; Compost corporation of America. il diag Eng N 148:44-5 Je 26; 149:40-1 N 6 '52
Composting trouble; Maryland city wants out after learning Long Island process doesn't work well. Eng N 150:24 Ap 23 '53
Possibilities of composting municipal refuse. P. H. McGauhey and C. C. Golueke. Pub Works 84:126-8+ O '53
Product they found in the Oakland garbage heap; Com-Co. R. Stovroff. il Sales Management 69:30-2+ O 15 '52

REFUSE as fertilizer—*Continued*

Refuse-sewage composting; engineering aspects. H. Gutteridge. Engineer 194:498-500 O 10 '52

Studies on composting city refuse; University of California Sanitary engineering research project. Pub Works 84:34 Ap '53

Where composting stands. R. R. Kennedy. Eng N 150:35 My 28 '53

REFUSE collection

City practices for refuse collection and disposal; survey. il Pub Works 84:73-4+ O '53

Garbage and refuse collection and disposal in Ohio. Pub Works 84:66 Ja '53

Municipal refuse collection practice analyzed. E. A. Pearson and others. Civil Eng 22:711-18+ S '52; Same. Munic Util 91:26-8+ Mr '53

No more gripes about garbage. il Pub Works 84:57+ F '53

Study of refuse collection. Pub Works 84:133-5 Je '53

Survey on practices in garbage and refuse collection and disposal. Pub Works 84:88+ F '53

REFUSE disposal

City practices for refuse collection and disposal; survey. il Pub Works 84:73-4+ O '53

Examination of household refuse in Toronto. L. A. Campbell. bibliog Can Chem Process 36:90+ N '52

Garbage and refuse collection and disposal in Ohio. Pub Works 84:66 Ja '53

Miscellaneous sanitation problems; guided discussion. Munic Util 90:76+ N '52

Sanitary fill as a means of reclaiming waste land. G. H. Richards. il Munic Util 90:40+ N '52

Sanitary fills pay off in Seattle. R. F. Karolevitz. il Pub Works 83:78-9+ D '52

Sanitary landfill operated by contract; Oneonta, New York. il Pub Works 84:63+ Mr '53

Survey on practices in garbage and refuse collection and disposal. Pub Works 84:88+ F '53

See also

Refuse as fertilizer

Refuse incinerators

Refuse incinerators, Domestic

Sewage disposal

Sewage disposal—Sludge and refuse mixing

Trade waste

Bibliography

Sewerage and refuse digest. diags Published in monthly numbers of Public works

Cost

Costs of municipal refuse incineration. W. M. Jarrett. il Pub Works 84:71-2 Jl '53

REFUSE grinders

Garbage grinding pays its way! W. E. Ross and S. L. Tolman. il Pub Works 84:70-2+ My '53

REFUSE grinders, Domestic

Community effects of household garbage grinding. flow diag il Pub Works 84:52-3+ Ja '53

Disposer boom in the making! Dom Eng 182:92-3+ O '53

Shorewood Hills will grind its garbage. Pub Works 84:102 Ja '53

World's largest garbage-free community; Lakewood Park. il Elec World News ed 139:41 Ja 5 '53

REFUSE incinerators

Best way to dispose of wastes; burn 'em in an incinerator. K. Hesselberg. il Factory Management 111:124-5 F '53

Commercial gas incineration subcommittee; report. Am Gas Assn Proc 1952:203-5

Halfway measures make good incineration impossible. M. Evans. diags Power 97:112-13 My '53

How can we get incineration? T. W. Cadmus. il Pub Works 84:82-3+ O '53

Incinerators; your best answer for waste disposal. J. C. McQuay. il Mill & Factory 52:93-5 F '53

New York city turns to incineration. C. A. Rogus. il map Civil Eng 22:1030-5+ D '52

That incinerator! il Power Eng 57:81 Jl '53

12 factors to consider in planning for incineration. A. E. Stilson. il Pub Works 84:91-3+ Ag '53

Cost of operation

Costs of municipal refuse incineration. W. M. Jarrett. il Pub Works 84:71-2 Jl '53

REFUSE incinerators, Domestic

Fly time is incinerator time; American gas association promotion of gas-fired incinerators. il Gas Age 112:40-1 Jl 2 '53

How Chicago opened up the market for gas incinerators; Peoples gas light and coke co. F. C. Kramer. il Gas Age 112:28-9 Ag 13 '53

How East Ohio built $300,000 annual income with gas incinerator promotion. H. E. Eckes. il Gas Age 111:76-7 Ap 23 '53

How to install packaged incinerators. diags Am Bld 74:288 O '52

Launch first integrated gas incinerator sales campaign. Am Gas Assn Mo 35:37-8 Jl-Ag '53

Advertising

Incinerator promotions reap handsome rewards. N. Wical. il Am Gas Assn Mo 35:6-8+ F '53

REGAL shoe company

Trying to figure where the shoe industry is going. Bsns W p 138-40 Jl 25 '53

REGIONAL planning

Development charge; kill or cure? Economist 165:432-4 N 15 '52

Ham Moses; the only way out is to grow. Bsns W p72-3+ My 30 '53

Tapping U.S. knowhow to reclaim waste land; TVA-style projects around the world. map Bsns W p 164-5 N 8 '52

See also

Rural planning

REGISTRATION of securities. See Securities—Registration

REGULATORS, Voltage. See Voltage regulators

REHABILITATION. See Disabled—Rehabilitation

REHEATERS, Steam. See Steam reheaters

REID foundation

Six get Reid foundation travel awards. Ed & Pub 85:52 D 6 '52

REINDOLLAR, Robert M.

Reindollar heads road builders group. por(cover) Eng N 150:48 F 12 '53

REINFORCED concrete. See Concrete, Reinforced

REINFORCING steel. See Steel, Reinforcing

REISSERT'S compounds

Syntheses of 7,8-benzopyrrocoline derivatives; a novel reaction of Reissert compounds. V. Boekelheide and J. C. Godfrey. bibliog Am Chem Soc J 75:3679-85 Ag 5 '53

RELATIVITY (physics)

Continuum in special relativity. B. Leaf. Phys R 90:1090-101 Je 15 '53

Conversion of an amplified Dirac equation to an approximately relativistic form. W. A. Barker and Z. V. Chraplyvy. bibliog Phys R 98:446-51 Ja 15 '53

Derivation of the mass-energy relation. H. E. Ives. Opt Soc Am J 42:540-3 Ag '52

General relativistic approach to short-range forces. H. Amar. Phys R 89:1298-9 Mr 15 '53

Gravitational motion. A. E. Scheidegger. Rs Mod Phys 25:451-68 Ap '53

Primitive quantization in the relativistic two-body problem. J. L. Synge. bibliog Phys R 89:467-71 Ja 15 '53

Quasi-relativistic theory of gravitation. M. G. Moore. Phys R 89:587-90 F 1 '53

Reduction of relativistic two-particle wave equations to approximate forms. Z. V. Chraplyvy. bibliog Phys R 91:388-91 Jl 15 '53

Relativistic configuration space formulation of the multi-electron problem. M. Günther. Phys R 88:1411-21 D 15 '52

Relativistic contributions to the magnetic moment of n-electron atoms. W. Perl. bibliog Phys R 91:852-8 Ag 15 '53

Relativistic contributions to the magnetic moment of $^3S_1$ helium. W. Perl and V. Hughes. bibliog Phys R 89:886-7; 91:842-52 F 15, Ag 15 '53

Relativistic corrections to the magnetic moments of nuclear particles. G. Breit and R. M. Thaler. bibliog Phys R 89:1177-86 Mr 15 '53

RELATIVITY (physics)—*Continued*

Relativistic statistical thermodynamics. A. E. Scheidegger and R. V. Krotkov. bibliog Phys R 89:1096-100 Mr 1 '53

Relativity of size. B. Hoffmann. Phys R 89:49-52 Ja 1 '53

Relativity precession of the asteroid Icarus. J. J. Gilvarry. Phys R 89:1046 Mr 1 '53

Similarity theory of relativity and the Dirac-Schrödinger theory of electrons. B. Hoffmann. bibliog Phys R 89:52-9; 91:751-2 Ja 1, Ag 1 '53

Spin and angular momentum in general relativity. P. G. Bergmann and R. Thomson. bibliog Phys R 89:400-7 Ja 15 '53

Wave function of a relativistic system. F. J. Dyson. Phys R 91:1543-50 S 15 '53

See also

Field theories (physics)

Wave mechanics

RELAXATION

How one president relaxes; W. Paul Jones of Servel, inc. W. Norris. Am Bsns 23:14-15+ S '53

RELAXATION time (physics)

Calculation of vibrational relaxation times in gases. R. N. Schwartz and others. bibliog diag J Chem Phys 20:1591-9 O '52

Dielectric and ultrasonic relaxation in glycerol. T. A. Litovitz and D. Sette. bibliog J Chem Phys 21:17-22 Ja '53

Dielectric dispersion in materials having a distribution of relaxation times. J. R. Macdonald. bibliog J Chem Phys 20:1107-11 Jl '52

Dielectric relaxation and the internal field. J. G. Powles. bibliog J Chem Phys 21:633-7 Ap '53

Nuclear magnetic relaxation in viscous liquids. R. L. Conger. J Chem Phys 21:937 My '53

Paramagnetic relaxation in metals. A. W. Overhauser. diags Phys R 89:689-700 F 15 '53

Relaxation effects in the ferromagnetic resonance. R. W. Damon. bibliog diags Rs Mod Phys 25:239-45 Ja '53

Relaxation processes in ferromagnetism. C. Kittel and E. Abrahams. bibliog Rs Mod Phys 25:233-8 Ja '53

Relaxation time of equilibrium systems as related to ultrasonic absorption and reaction kinetics. M. Manes. J Chem Phys 20:1658 O '52

RELAXOMETERS

Recording stress relaxometer. J. R. McLoughlin. bibliog il diags R Sci Instr 23:459-62 S '52

RELAYS

Analysis of polyphase directional relay torques; abstract. C. J. Baldwin, jr. and B. N. Gafford. diag Elec Eng 72:625 Jl '53

Application of relays for unbalanced faults on generators; abstract. J. E. Barkle and F. von Roeschlaub. Elec Eng 72:542 Je '53

Automatic relay control. E. Brooke. il diag Machine Design 25:154-8 Ap '53

Check street lighting relays with less time and effort. B. Breedlove. il diag Elec World 138:123+ O 20 '52

Circuits and applications of contactor control devices. S. Davis and A. Gronner. diags Product Eng 24:204-13 Ap '53

Colors label one-shot bus relays for system safety. F. W. Cornetet. il Elec World 138:134+ O 20 '52

Contactor amplifiers for automatic control. S. Davis. diags Product Eng 24:186-94 Mr '53

Direct-current relays and devices for industrial motor controllers. R. B. Immel. il diags Product Eng 23:181-93 D '52

Engineering highlights of 1952; relaying and communication. C. A. Scarlott. il Westinghouse Eng 13:12-14 Ja '53

Ground fault relay protection; abstract. J. L. Blackburn. Elec Eng 71:1119 D '52

Heavy-duty relay for electrical circuits. il Engineering 175:119 Ja 23 '53

How to prevent sticking contacts and relays. R. S. Kercher and L. E. Markle. il Coal Age 58:112 Ag '53

Microwave protective relaying. H. W. Lensner. il diags Radio Com 12:26-7+ O; 24-5 D '52

Moving-coil relay applied to modern high-speed protective systems. C. Ryder and others. diags Inst E E Proc 100 pt 2:261-73; Discussion. 273-6 Je '53; Elec J 150:534-5 F 13 '53

Multi-contact relay. il Elec J 149:1253-4 O 24 '52

New approach to cold load restoration; method of calculating relay performance. O. Ramsaur. Elec World 138:101-3 O 6 '52

New general-purpose relay for telephone switching systems. A. C. Keller. il diags Bell System Tech J 31:1023-67 N '52; Same cond. Elec Eng 71:1007-12 N '52

New inverse time overcurrent relay with adjustable characteristics. W. K. Sonnemann. diags Elec Eng 72:607-9 Jl '53

Novel capacitance relay. R. Graham. il diag Radio & Tv N 48:50-1+ D '52

Phase comparison carrier relaying for three-terminal lines; abstract. H. W. Lensner. Elec Eng 72:698 Ag '53

Power-line carrier for relaying and joint usage. G. W. Hampe and B. W. Storer. Elec Eng 72:144 F '53

Protection for an industrial plant connected to a utility system with reclosing breakers. D. F. Langenwalter. bibliog diags Tappi 36:199-203 My '53

Pulse-operated relays for the ham transmitter. C. H. Ericson. diags Q S T 37:44-5 Je '53

Relay system between Public Service Electric & Gas, Philadelphia Electric stations. Elec World 138:83 D 1 '52

Resonant reed frequency sensitive relay. il Product Eng 23:211 O '52

Review of backup relaying practices; AIEE committee report; abstract. Elec Eng 72:328 Ap '53

Selection of a relaying system. R. C. Cheek and J. L. Blackburn. diags Commun Eng 13:30-3+ Ja '53

Sensitive ground relaying of a-c generators; abstract. E. T. B. Gross. diags Elec Eng 72:115 F '53

Special-purpose relays. L. J. Nijs and R. A. H. Faict. il diags Elec Com 29:260-5 D '52

Speed-sensing relay. J. H. Porter. diag Electronics 25:174+ N '52

Sudden gas pressure relay for transformer protection; abstract. R. L. Bean and H. L. Cole. Elec Eng 72:440 My '53

Sudden-pressure relay for power transformers. Westinghouse Eng 13:79 Mr '53

Suitable current polarizing sources for ground type relays. O. A. Lentz. diags Elec World 138:74-6 D 29 '52

Thermal relay for protecting induction motors. il diag Engineer 194:731-2 N 28 '52; Engineering 174:757 D 12 '52; Elec R (Lond) 151:1181-2 N 28 '52

Thermal relay gives overload indication. J. F. Brubaker and E. A. Thompson. il Elec World 138:132+ O 20 '52

Thermal relays control heater voltage. C. D. Geer and W. C. Broekhuysen. diags Electronics 26:166+ Ja '53

Transistor-operated photocell relay. L. E. Garner, jr. il diags Radio & Tv N 49:64-5+ My '53

Using a transistor to increase relay sensitivity. L. E. Garner, jr. il diag Radio & Tv N 49:39+ Je '53

See also

Voice operated relays

Testing

Check overcurrent relay elements with portable tester. E. D. Andrews. il diags Elec World 138:92+ D 29 '52

Check relays with portable current and voltage supply. il diags Elec World 138:118 D 1 '52

Don't guess, check your overload relays! M. Coben. il Safety Maint & Prod 106:19-20 S '53

Pulse-timer shows up short-time relay characteristics. W. F. Blom. il Elec World 139:82-3 My 4 '53

RELAYS, Time limit

Electro Methods pneumatic time-delay relay. il Engineering 176:218 Ag 14 '53

RELAYS, Time limit—*Continued*
Highly stable variable time-delay system. Y. P. Yu. bibliog il diags Inst Radio Eng Proc 41:228-35 F '53
Overload relays with built-in time delay. il diags Product Eng 24:236B My '53

RELIANCE electric and engineering company
Prospects are bright. Barron's 32:17-18 N 17 '52

RELIGION
Research, religion and peace. R. W. Babson. Comm & Fin Chr 177:2102 My 14 '53

RELIGION and science
Science and religion. H. B. Phillips. Tech R 55:314+ Ap '53

REMINGTON arms company
Three by nine analysis of some unlisted stocks. H. J. King. Comm & Fin Chr 177:1208 Mr 19 '53

REMODELING (architecture)
Houseful of ideas with one aim; sell the fixup market. il Bsns W p66-8 F 14 '53
Seaside hotel is remodeled; Dune Deck hotel, Westhampton, Long Island. il plans diag Arch Rec 113:128-31 Ja '53
Weekend contracting. Bsns W p 102 Jl 11 '53
See also
Buildings, Remodeled
Houses, Remodeled
Plumbing trade—Remodeling

RENDERING plants
Cold rendering process for oils and fats, impulse rendering. il Engineer 194:627 N 7 '52; Abstract. Engineering 174:595 N 7 '52
Why and how of treating rendering plant wastes. L. S. Farrell. il Water & Sewage Works 100:172-5 Ap '53

RENEGOTIATION of contracts. See Contracts, Government—Renegotiation

RENIN
Effect of renin on diuresis in rats. H. Croxatto and others. bibliog Science 116:507-10 N 7 '52

RENNET
Calcium salts and the rennet coagulation of milk. G. T. Pyne. Chem & Ind p302-3 Mr 28 '53

RENT
Collective bargaining on company-owned house rents. N. C. Rockwood. Rock Prod 56:61 F '53
Nationalising rents. Economist 166:716 Mr 14 '53
U.S. Court of appeals upholds N.L.R.B.'s ruling on company-owned house rentals. N. C. Rockwood. Rock Prod 56:55+ S '53

Laws and regulations

Implications of rent control; experience in the United States. L. Grebler. bibliog Int Labour R 65:462-85 Ap '52; Abstract. Arch Forum 97:176-7+ S '52

Statistics

Rental income and outlay in the United States, 1929-52. H. D. Osborne. Survey of Cur Bsns 33:17-24 Je '53

RENTING of equipment
New lighting for old, by rental; Parker appliance co. E. C. Hartley. il Factory Management 111:136-8 Jl '53
Rental; new idea in X-ray. D. Goodman. Am Mach 97:152-3 Jl 6 '53
See also
Construction equipment—Renting
Machine tool industry—Rental plan

REO motors, inc.
Trucks on lease. Bsns W p50 Ja 24 '53

REPAIR parts
For your spare parts needs analyze each machine; Kaiser steel corp. J. Joseph. il Mill & Factory 52:134-6 Je '53
Parts, an answer to keep equipment running; Euclid road machinery co. and Caterpillar tractor co. il Constr Methods 35:122-4 Jl '53
Proposals for repair parts books. Constr Methods 35:134 Ag '53
Spare parts; how to keep track of them. J. P. Devine. Oil & Gas J 51:250-1 Mr 23 '53
What price spares in a refinery? J. E. Bell. Oil & Gas J 51:244+ Mr 23 '53
See also
Automobile parts
Machine parts

REPAIR shops
Tooling a shop for Diesels. il Diesel Power 30:71-3 O '52
See also
Locomotive shops
Radio service shops

REPAIR shops, Portable
Put wheels on your tools; Union oil co. il Mill & Factory 52:116 Je '53

REPAIRING
See also
Building—Repair and reconstruction
also subdivision Repair or Maintenance and repair under various headings, e.g. Factories—Maintenance and repair; Machinery—Maintenance and repair; Railroads—Maintenance and repair

REPANDULINE
Alkaloids of daphnandra species; observations on repanduline. I. R. C. Bick and others. Chem Soc J p692-5 F '53

REPLACEMENT (chemistry). See Substitution (chemistry)

REPLACEMENT of machinery. See Machinery, Replacement of

REPLICA technique
Preservation of groove-form in replicas of diffraction gratings. G. D. Dew. il J Sci Instr 29:277-9 S '52
Replica technique for grating ruling engine adjustments. D. K. Rice and F. A. McNally. Opt Soc Am J 42:783 O '52
See also
Electron microscope—Replica technique

REPORTERS
Turns burglar to talk to youths in prison; Don Kellerman. Ed & Pub 85:11 O 25 '52

REPORTING
Canadians told true reporting is needed. E. Canham. Ed & Pub 86:12 F 14 '53
Just call me monitor, here's Monday news; taken from radio and television. J. Walker. Ed & Pub 86:52 Ja 31 '53
Shipboard censorship rolls Scranton editor. Ed & Pub 85:16 N 29 '52
See also
Newspapers—Crime reporting
Privileged communications
United States—Supreme court

REPORTS
Applying the engineering method to report writing. J. W. Souther. il Machine Design 24:114-18 D '52
Business school reports. Bsns W p65-6+ My 9 '53
Economic facts for executives; what today's management does and thinks about reports. Mod Ind 24:48-51 D '52
Quality control; communicating data effectively. W. W. Kauffman. il diag Tool Eng 31:54-60 S '53
See also
Accountants' reports
Banks and banking—Reports
Corporations—Reports and yearbooks

REPRINTS

Bibliography

Catalog of reprints in series. R. M. Orton, ed. 13th ed 276p H. W. Wilson co, New York '52

REPRODUCTION
Autosynthesis. C. Hinshelwood. Chem Soc J p 1947-56 Je '53
Multiplication of bacterial viruses. G. S. Stent. il diags Sci Am 188:36-9 My '53
Physiologic control of fertility. P. S. Henshaw. Science 117:572-82 bibliog(167 ref, p580-2) My 29 '53
Unusual reproductive phenomena in rodents. F. L. Evans. bibliog Science 117:159-60 F 13 '53

REPTILES
See also
Amphibia

REPUBLIC aviation corporation
Feeling its way overseas. il Bsns W p82+ Jl 11 '53
Republic Aviation to report sharp rise in sales and profits. Barron's 33:29-30 Mr 30 '53
Security I like best. N. L. Jarvis. Comm & Fin Chr 177:462 Ja 29 '53

REPUBLIC steel corporation

Broader operations strengthen its industry position. D. L. Saunders. Barron's 33:17+ Jl 20 '53

Powdered iron; Republic Steel plans big-scale output. Bsns W p31 Jl 4 '53

Republic output almost eight million tons in 1952. Blast F & Steel Pl 41:507 My '53

Three-way payoff in Liberia. H. Solow. il Fortune 47:130-3+ Ap '53

REPUBLICAN party

Canada and the Republicans. Economist 167:607-8 My 30 '53

G.O.P. policy committee. F. Morley. Barron's 33:3 Ja 5 '53

New guard; Senator Knowland represents a different G.O.P. J. Chamberlain. Barron's 33:5-6 Jl 6 '53

RESALE price fixing. See Price fixing, Resale

RESEARCH

Alabama story. il Manuf Rec 122:96-7 Je '53

Deliberate creativeness in science and engineering. M. Nelles. Chem & Eng N 31:1520-3 Ap 13 '53

How research leads to top. il Bsns W p44+ Je 13 '53

Outline of certain processes of reasoning in research. H. J. Masson. bibliog diags J Eng Educ 43:410-19 Mr '53

Questions loom on basic research. Bsns W p 165 Je 27 '53

Realigning research, a current need. Chem Eng 59:342-3 D '52

Research administration symposium. E. A. Walker and others. Heating-Piping 25:137-40; Discussion. 140-1 S '53

Research at the National bureau of standards; its importance and its fulfillment. A. V. Astin. Refrig Eng 61:756+ Jl '53

Research points the way; research activities for NCPMI. E. M. Davids. il Brick & Clay Rec 122:72, 76-7 Mr '53

Research, religion and peace. R. W. Babson. Comm & Fin Chr 177:2102 My 14 '53

Resources for the chemical industry in the United States; Mid Atlantic; educational and research facilities. H. K. Work. bibliog il Ind & Eng Chem 45:513-16 Mr '53

See also

Advertising research
Aeronautic research
Automobile research
Building research
Ceramic research
Chemical research
Coal research
Colleges and universities—Research
Concrete research
Corrosion research
Cotton research
Economic research
Electric research
Engineering research
Food research
Foundry research
Gas research
Government research
Heating research
Highway research
Industrial research
Laboratories
Lighting research
Lubrication research
Market research
Metallurgical research
Military research
Operations research
Paint research
Paper research
Petroleum research
Pharmaceutical research
Purchasing research
Radio research
Railroad research
Rubber research
Scientific research
Social research
Steel research
Telephone research
Textile research
Wood research
Wool research

also Armour research foundation; Southern research institute

RESEARCH companies

They're products of the future. il Bsns W p99-101 F 28 '53

RESEARCH corporation

Organized for altruism. Chem W 71:37-8+ N 22 '52

RESEARCH departments

New product development, a study of company procedures. Management R 41:736-7 N '52

Spotlight on directors. Chem W 71:34+ N 15 '52

See also

Research records

RESEARCH records

Records of research. J. G. Jackson. Franklin Inst J 254:355-68 N '52

RESEARCH workers

Alternative to administration. il Chem W 72:54+ F 28 '53

How not to be just another researcher. T. F. Cathey. il Chem Eng 60:282+ My '53

Profile of the man in industrial research. E. W. Engstrom and E. H. Alexander. Inst Radio Eng Proc 40:1637-44 D '52

Role of sponsored research in training research personnel. R. A. Morgen. J Eng Educ 43:145-8 N '52

Training at Bar Harbor. C. C. Little. Science 117:sup3 Ja 9 '53

RESERVE fund. See Advertising—Finance

RESERVOIRS

California reservoir advances. map Eng N 149:42 N 27 '52

De-icing reservoir with air. Comp Air Mag 58:143 My '53

Embankment design for relocations at John H. Kerr reservoir project. J. A. Rhodes and G. E. Weber. il map diags Roads & Sts 96:52-8 Ja '53

Erosion control in reservoir areas; task group report. Am Water Works Assn J 45:790-6 bibliog(56 titles, p794-6) Ag '53; Abstract. Water & Sewage Works 100:348-9 S '53

If you need to dredge a reservoir. il Pub Works 83:86 D '52

Potable-water storage reservoirs. Am Water Works Assn J 45:1079-89 O '53

Reservoir treatment by improved methods. R. L. Derby and F. W. Townsend. il diags Water & Sewage Works 100:211-16 Je '53

Snow hydrology for multiple-purpose reservoirs. H. S. Riesbol. Am Soc C E Proc 79 [no 189]:1-19 My '53

They welcome silt in these reservoirs at Holtwood and Safe Harbor, Pa.; silt contains coal that can be reclaimed. il map diag Eng N 150:32+ Ap 23 '53

Works of the Stirlingshire and Falkirk water board. E. W. Denholm. Engineer 194:348 S 12 '52

See also

Dams

Cleaning

Cleaning a water works reservoir. Pub Works 84:104-5 F '53

Lining

Lining a reservoir with rubber. Engineering 175:811 Je 26 '53

Recreational use

Private hydro's recreational advantages. W. J. Cadigan. Pub Util 52:354-8 S 10 '53

Reservoirs for recreation. T. J. Rouner. Edison Elec Inst Bul 21:18+ Ja '53

Weed removal

Removing floating islands in Charleston reservoir. F. B. McDowell. il Water & Sewage Works 100:352-3 S '53

RESERVOIRS, Concrete

Design of reinforced concrete reservoirs and tanks to comply with the ICE code of practice; abstract. A. G. Flatt and J. W. Perks. Am Water Works Assn J 45:sup68+ My '53

First stage of waterworks improvement program completed in Fredericton. il plan diag Munic Util 91:21-2+ Ag '53

New 24-mg. reservoir at Ottawa. C. T. Heeney. il Munic Util 91:23-4 Jl '53

Portable shelters permit winter reservoir construction. il Pub Works 84:88 Ag '53

Reinforced concrete clear-water basin built to be leak-proof. il map Eng N 150:42-3 My 21 '53

RESERVOIRS, Steel

Advantages of steel tanks as distribution reservoirs. C. K. Wells. il Am Water Works Assn J 45:569-79 Je '53; Excerpts. Munic Util 91:42-7 Jl '53

RESINOLS

Triterpene resinols and related acids; ursa-11:13(18)-dienol. J. D. Easton, W. Manson and F. S. Spring. Chem Soc J p943-4 Mr '53

RESINOUS products

Body armor; basic ingredients, glass cloth synthetic resin. Mech Eng 75:238 Mr '53

Casting resins for electronic equipment. W. R. Cuming. il Tele-Tech 12:68-9+ Mr '53

Chemicals in foundry work; abstract. E. S. Bauer. Oil Paint & Drug Rep 164:60-1 S 21 '53

Correlation between properties of alkyds and composition of modifying fatty acids; effect of various oil-resin ratios. D. T. Moore. Ind & Eng Chem 44:2676-8 N '52

RESINOUS products—*Continued*

Coumarone-indene resins. A. C. Zettlemoyer and E. T. Pieski. bibliog Ind & Eng Chem 45:165-73 Ja '53

Epoxies; amazing performance of ethoxylene resins. il Mod Plastics 30:89-94 O '52

Evaluation of plasticizer performance in vinyl resins. T. C. Patton. bibliog India Rubber World 127:371-4 D '52

Fatty acids tailored for Canadian alkyd industry. J. V. Lang. il Can Chem Process 37:42-3 My '53

Gums and resins. C. R. Bragdon. Paint Oil & Chem R 116:26-32+ Je 4 '53

High temperature phenolics; abstract. W. E. Braham. Automotive Ind 108:53-4 Ap 1 '53

Improved plaster tooling; plaster of Paris castings impregnated with resin; Plaspreg. J. Starr. il Tool Eng 30:68-9 F '53

Methods of increasing the efficiency of wet-strength resins. J. V. Kindall and J. B. Davidson. Tappi 36:12-14 Ja '53

Microfiltration with resin-impregnated wool filters. E. D. Kane. bibliog il diags Ind & Eng Chem 45:860-4 Ap '53

New casting resin for potting components. il Electronics 25:252+ N '52

New developments in Laminac resins. H. M. Day. India Rubber World 127:230-2 N '52

New materials for the industry. Paper Tr J 137:149-56 S 18 '53

New resin for the resin pulp molding industry. R. Lindenfelser. bibliog(52 ref) Tappi 36:sup20A+ Je '53

New resin linings give better container protection. D. E. Hartman. il Iron Age 171:129-32 Je 11 '53

New resin process. diag Chem Eng 60:344+ Ap '53

New thermosetting resins; ethoxyline resins. il Can Chem Process 36:56-7 D '52

New urea formaldehyde resins for wet strength. Paper Ind 34:1352-3 F '53

Petroleum pay-off; Piccopale, new, low-cost hydrocarbon resin. Chem W 72:32+ Ja 24 '53

Phenolic duplicating masters; quick-curing casting resin replaces steel in production of multi-cavity molds from original models. il Mod Plastics 30:98-9 S '52

Pipe leak seal developed for navy uses glass fiber cloth and plastic. W. M. Freeman. Heat & Ven 50:146+ Je '53

Polyester resins; abstract. R. T. Dean. Tappi 36:sup 14A+ Je '53

Problems in applications of resins to paper; panel discussion. J. Pullman and others. Tappi 36:sup70A+ Je '53

Progress in resin coating; new data on methods, with a comparison of properties of six different hot-melt plastic materials. L. M. Burgess and L. F. Swec. il diag Mod Packaging 26:151-5+ S '52; Same. Tappi 36:sup 174A-8A F '53

Properties and applications of some common plastics; engineering file facts. Materials & Methods 37:139, 141 F '53

Recent developments in resin-wool air cleaners. H. C. Murphy. Heating-Piping 25:108 Ap '53

Resin forming reactions of furfural and phenol. L. H. Brown. bibliog Ind & Eng Chem 44:2673-5 N '52

Resin-glass air blenders. il Mod Plastics 30:90 F '53

Resin impregnation of metal castings fills pores completely. Chem & Eng N 31:1883-4 My 4 '53

Resins and plastics in 1952. A. F. Cadenhead. Can Chem Process 37:74+ Ap '53

Resins based on ketones; abstract. F. Josten. Paint Oil & Chem R 116:54 Mr 12 '53

Selection of casting resins. diag Electronics 26:254+ F '53

Slip-proof ladder tread. il Mod Plastics 30:177 Ap '53

TAPPI paper-plastics conference, Syracuse, Nov. 5-6, 1952. Tappi 36:sup8A+ Je '53

TAPPI paper plastics conference, Syracuse; abstracts of papers. Paper Ind 34:1123-4 D '52

See also

Chlorotrifluoroethylene
Melamine resins
Methacrylates
Molded products
Phenol condensation products
Plaskon
Plastic materials
Polyethylene
Rubber, Artificial—Mixing with resins
Saran
Styrene (and polymers)
Teflon
Vinyl chloride
Vinyl compounds

Adhesives

Aircraft makers study use of Redux. I. Stone. il diags Aviation W 58:48+ Ap 6 '53

Evaluation of heat-seal adhesives; laboratory procedures for applying test coatings and test apparatus. H. Wittcoff and D. Peerman. il Mod Packaging 26:135-40 N '52

Joining distortion minimized; new group of organic bonding materials known as Chemo-Tec. H. Thielsch and J. R. Charlton. il diags Steel 132:92-6 F 9 '53

Metal-to-metal bonding in aircraft; Redux process. N. A. de Bruyne. il Engineer 195:511 Ap 3 '53

Resins extend the forests; plywood, laminated timbers, and conversion of wood waste offer increasing markets for plastics. R. D. Behm. il Mod Plastics 30:100-4+ O '52

Analysis

Interpretive analyses of urea-formaldehyde resins. P. P. Grad. bibliog il diags Paint Oil & Chem R 115:20-1+ D 18 '52; Correction. 116:6B Ja 29 '53

Binding materials

Densified woodwinds; fabricated from phenolic impregnated stabilized wood. il Mod Plastics 30:101+ N '52

Furfuryl alcohol as a resin former. E. A. Reineck. il Mod Plastics 30:127-8+ O '52

Selecting a resin for shell molds. M. F. Drumm. Automotive Ind 109:66+ Jl 1 '53

Shell molding; cheap sand may boost resin needs. Iron Age 171:144-5 Je 25 '53

Shell moulds and cores. il Engineer 194:845 D 19 '52

Finishing materials

Acid catalyzed resin coatings; abstract. F. Oschatz. Paint Oil & Chem R 116:30 Jl 16 '53

Coming up on the inside. il Chem W 71:43-4 N 1 '52

Effect of driers on alkyd resin finishes; abstract. Paint Oil & Chem R 116:43 My 21 '53

Evaluation of polyhydric alcohols. bibliog il diag Paint Oil & Chem R 116:12-13+ Mr 26; 24+ Ap 9 '53

Externally plasticized latices in paints. R. B. Green. Ind & Eng Chem 45:726-8 Ap '53

Formulation of industrial coatings with vinyl resins. E. J. Bromstead and others. bibliog Paint Oil & Chem R 115:22-4+ O 23 '52

Furan resin impregnants for plaster; Plaspreg. J. Starr. il Materials & Methods 38:140+ Jl '53

High viscosity alkyd resins. bibliog il Paint Oil & Chem R 116:14-18 My 21 '53

Importance of polyhydric alcohols in the chemical industry; abstract. H. Rose. Paint Oil & Chem R 116:26 Jl 2 '53

Magnesium finishes for aircraft evaluated. H. D. Childers. il diags Iron Age 170:157-61 D 4 '52

New butyrate resin for finishes. il Materials & Methods 38:116+ Jl '53

New finish: Glidden shows new one-coat enamel; Nubelon, S. Iron Age 171:74 Mr 12 '53; Machine Design 25:237-8 My '53; Materials & Methods 37:141 My '53

New polyalcohol; abstract. K. H. Wuellenweber. Paint Oil & Chem R 116:20 Ap 23 '53

Oleoresinous floor finishes. C. R. Given. Soap & San Chem 28:141-3+ S '52

Polyhydric alcohols. bibliog Paint Oil & Chem R 116:12-21 F 26 '53

Polyhydric alcohols as protective coating intermediates. bibliog il Paint Oil & Chem R 116:12-18+ My 7 '53

Progress report on epoxy resins. R. E. Bayes. Paint Oil & Chem R 115:24-6 N 20 '52

Rainbow on the wall; an organic glazed coating for concrete building blocks. il Chem W 72:47-8 Ja 10 '53

Resinous polyhydric alcohols. bibliog Paint Oil & Chem R 116:24-6+ Ag 13 '53

Synthetic resin for surface protection of metals. Engineering 175:557 My 1 '53

RESINOUS products—Finishing materials—*Continued*

Testing amino resins for stoving finishes, by the Birmingham club. Paint Oil & Chem R 115:64+ D 4 '52

Touch-up aerosol enamels. F. S. Palmer and R. W. Morrow. Soap & San Chem 28:191+ D '52

Use of dimethyl isophthalate. F. Oswald. Paint Oil & Chem R 116:78 O 8 '53

Water soluble enamel enters coatings field; Hydrophen. T. B. Brown. il Materials & Methods 38:7+ O '53

Water soluble synthetic resins available to industry. Paint Oil & Chem R 116:12 S 10 '53

See also

Paper coating, Plastic

Insulating materials

Development of enamelled strip. il Elec J 150:295-6 Ja 23 '53

Effect of humidity upon the insulation resistance of alkyd molding compounds. M. H. Bigelow and P. E. Nowicki. il Electrochem Soc J 100:60-2 F '53

Effect of moisture and fungus on plastic insulating materials. R. K. Witt and others. diags Mod Plastics 30:119-20+ S '52

Fluorothene wire insulation. B. H. Maddock and W. M. Land. diag Mod Plastics 30:126+ D '52; Abstract. Product Eng 24:298+ My '53

New wires for subscribers' lines. N. Sidenmark and others. il diags Elec J 151:557-64 Ag 21 '53

Newer laminated plastic insulating materials. A. N. Hawthorn and S. W. Messent. Engineer 195:436-7 Mr 20 '53

Properties of synthetic rubbers and thermoplastics as insulation for electric cables. E. W. Davis. Tappi 36:78-82 F '53

Silicone resins in insulation at power frequencies. W. J. Renwick and J. R. Reed. bibliog Engineer 195:471-3 Mr 27 '53

Wire and cable in the telegraph industry; abstract. W. F. Markley. Elec Eng 72:410 My '53

Ion exchanging

Absorption of inorganic salts from organic solvents onto anion exchange resins. L. J. Katzin and E. Gebert. bibliog Am Chem Soc J 75:801-3 F 20 '53

Absorption of some organic bases by carboxylic acid ion-exchange resins; equilibrium studies. L. Saunders and R. S. Srivastava. Chem Soc J p2111-18 Je '52

Chelate ion exchange resins. H. P. Gregor and others. bibliog Ind & Eng Chem 44: 2834-9 D '52

Complexes involving tervalent iron and orthophosphoric acid; experiments with ion-exchange resins. J. E. Salmon. Chem Soc J p2316-23 Je '52

Dairy products improved by ion exchange. O. F. Garrett. diag Food Eng 25:61+ Jl '53

Dealkalization, without acid; chloride anion exchanger. diags Power Eng 57:68+ Mr '53

Deionization yields low-silica feedwater. il diag Power Eng 57:60-1+ F '53

Determination of heavy metals and silica in chromate-treated cooling waters. S. Sussman and I. L. Portnoy. bibliog Anal Chem 24:1644-6 O '52

Equilibrium studies of the silver-sodium-hydrogen system on Dowex 50. O. D. Bonner and V. Rhett. J Phys Chem 57:254-6 F '53

Hydrolysis of proteins by ion exchange resin catalysis. J. C. Paulson, F. E. Deatherage and E. F. Almy. bibliog Am Chem Soc J 75:2039-41 My 5 '53

Ion exchange experiment for physical chemistry. T. H. Roberts and others. bibliog J Chem Educ 29:545-8 N '52

Ion exchange mechanism and isotherms from deep bed performance. C. N. Merriam, jr. and others. bibliog J Chem Phys 20:1842-6 D '52

Ion exchange; new hope for waste recovery. A. G. Gray. flow sheet il plan Steel 131: 96-100 O 20 '52

Ion-exchange treatment of water supplies. J. Thompson and F. X. McGarvey. Am Water Works Assn J 45:145-50; Discussion. J. C. Tracey. 150-2 F '53

Ion exclusion; a unit operation utilizing ion exchange materials. R. M. Wheaton and W. C. Bauman. bibliog Ind & Eng Chem 45:228-33 Ja '53

Latest tricks with atom-swapping. Mod Ind 25:95-6+ F '53

Mechanism of cation and anion exchange capacity. M. A. Cook and others. bibliog J Phys Chem 57:1-6 Ja '53

New boiler water test uses ion exchange resin. il Power Eng 57:76 Jl '53

New separation process; ion exclusion. diags Chem Eng 59:234+ O '52

Properties of ion-exchange resins in relation to their structure; exchange of organic cations. D. K. Hale, D. I. Packham and K. W. Pepper. Chem Soc J p844-51 Mr '53

Properties of ion-exchange resins in relation to their structure; kinetics of exchange. D. Reichenberg. bibliog Am Chem Soc J 75:589-97 F 5 '53

Properties of ion-exchange resins in relation to their structure; swelling and shrinkage of sulphonated polystyrenes of different cross-linking. K. W. Pepper, D. Reichenberg and D. K. Hale. diag Chem Soc J p3129-36 Ag '52

Reactions catalyzed by anion exchange resins; cyanoethylation of alcohols. M. J. Astle and R. W. Etherington. bibliog Ind & Eng Chem 44:2871-2 D '52

Reactions catalyzed by anion exchange resins; Knoevenagel condensation; aldol condensation. M. J. Astle and J. A. Zaslowsky. Ind & Eng Chem 44:2867-71 D '52

Separation of quadrivalent and quinquevalent vanadium from phosphoric acid by ion-exchange resins; some observations on the reduction of quinquevalent vanadium by ion-exchange resins. J. E. Salmon and H. R. Tietze. Chem Soc J p2324-6 Je '52

Sheep and goats; ion exclusion process. Sci Am 188:36 Ja '53

Silica removal characteristics of highly basic anion exchangers. M. E. Gilwood and others. bibliog diag Am Water Works Assn J 44:1057-64 N '52

Some reactions of sugars catalysed by a cation-exchange resin. W. H. Wadman. Chem Soc J p3051-5 Ag '52

Specific effects in acid catalysis by ion exchange resins; hydrolysis of esters in 70 per cent aqueous acetone. S. A. Bernhard and L. P. Hammett. bibliog Am Chem Soc J 75:1798-800 Ap 20 '53

Studies on ion exchange resins; activity coefficients of diffusible ions in various cation-exchange resins. H. P. Gregor and M. H. Gottlieb. bibliog Am Chem Soc J 75:3539-43 Jl 20 '53

Synthetic ion exchange materials in industrial waste treatment. A. B. Mindler. il Water & Sewage Works 100:288-90 Jl '53

Manufacture

Citric acid ester plasticizers. F. J. Prescott and G. O. Cragwell. bibliog Mod Plastics 30:134+ O '52

Effective control of lead dust in the manufacture of vinyl plastics. A. E. Goss and A. M. Ross, jr. diags India Rubber World 127:652-6 F '53

Eliminating fire hazard with hexane; Combined metals reduction co. O. Duke. il Elec West 109:96 O '52

Instrumentation for continuously recording viscosity of resins and polymers in large reactors, by the Chicago club. bibliog diags Paint Oil & Chem R 115:80-1+ D 4 '52; Abstract. Oil Paint & Drug Rep 162:78-80 N 24 '52

Kinetics of the manufacture of pure and modified alkyds; abstract. K. Wekua and W. Klausch. Paint Oil & Chem R 116:30 Jl 16 '53

Plasticizers

See Plasticizers

Standards

Report of ISO committee on seedlac, shellac, and dry bleached lac. Standardization 23: 291 S '52

RESINOUS products—*Continued*

Temperature effect

Effect of temperature on the creep and recovery of a melamine-glass fabric laminate. W. J. Worley and W. N. Findley. bibliog diag Am Soc T M Proc 50:1399-413 '50

Testing

Protection; resin based coatings stand up to salt spray tests. il Iron Age 171:181-2 F 5 '53

Studies of thermosetting polyvinyl alcohol systems. C. F. Brown. bibliog Rubber Age 72:211-14 N '52

Textile uses

How to apply resins to spun rayons. A. C. Tate. Textile World 103:106-7+ Ja '53

Modification of wool by the application of linear synthetic polyamides; pretreatment of wool. D. L. C. Jackson. bibliog il Textile Res J 23:616-22 S '53

New Aquex resins for rayon give abrasion resistance. G. M. Moisson. Textile World 103:76 Ap '53

Reichhold chemicals, inc. opens new Charlotte plant to serve growing needs of textile industry. H. H. Reichhold. il Manuf Rec 121:41 O '52

Relaxed drying helps resin-finished goods. M. T. Fleming. il diags Mod Textiles Mag 34:72+ Je '53

Test procedures are diverse for vinyl-coated fabrics. T. J. Kerr. Textile World 103: 141, 276+ F '53

Water treatment

Dealkalization, without acid; chloride anion exchanger. diags Power Eng 57:68+ Mr '53

Decontaminating plating solutions. Mech Eng 75:151-2 F '53; Excerpt. Iron Age 170:220 N 6 '52

Deionization yields low-silica feedwater. il diag Power Eng 57:60-1+ F '53

Ion-exchange treatment of water supplies. J. Thompson and F. X. McGarvey. Am Water Works Assn J 45:145-50; Discussion. J. C. Tracey. 150-2 F '53

New regeneration method improves feed water; Martin-Century farms. Food Eng 25: 62 F '53

Silica removal characteristics of highly basic anion exchangers. M. E. Gilwood and others. bibliog diag Am Water Works Assn J 44:1057-64 N '52

RESNATRON

Axial-flow resnatron for uhf. R. L. McCreary and others. bibliog il diag Inst Radio Eng Proc 41:42-6 Ja '53

Oil-immersed 110-kv 440-kw rectifier unit for resnatron plate supply; abstract. R. P. Featherstone and others. il diag Elec Eng 72:634 Jl '53

Theory of the reflex resnatron. M. Garbuny. diag Inst Radio Eng Proc 41:37-42 Ja '53

RESONANCE

Resonance characteristics by conformal mapping. P. M. Honnell and R. E. Horn. bibliog diags Inst Radio Eng Proc 40:1211-15 O '52

RESONANCE (chemistry)

Aromatic hydrocarbons; resonance restriction and the absorption spectra of aromatic hydrocarbons. E. Clar and D. G. Stewart. bibliog Am Chem Soc J 74:6235-8 D 20 '52

Radiofrequency spectra of Li^6F^{19} by the molecular beam electric resonance method. J. C. Swartz and J. W. Trischka. bibliog diags Phys R 88:1085-92 D 1 '52

Resonance energies of benzene and butadiene. G. Glockler. bibliog J Chem Phys 21: 1249-54 Jl '53

Resonance energies of certain organic free radicals and ions. J. L. Franklin and F. H. Field. bibliog Am Chem Soc J 75:2819-21 Je 20 '53

Resonance in the hydrogen molecule. L. Pauling. J Chem Phys 20:1041 Je '52

Spin-spin relaxation in ferromagnetic resonance. F. Keffer. Phys R 88:686-7 N 1 '52

Steric inhibition of amide resonance and its possible significance in enzyme action. R. W. Holley. bibliog Science 117:23-5 Ja 9 '53

Studies in stereochemistry; effect of configuration on steric inhibition of resonance in diastereomerically related compounds. F. Hawthorne and D. J. Cram. bibliog Am Chem Soc J 74:5859-66 D 5 '52

RESONANCE radiation. See Fluorescence; Radiation

RESONATORS

Characteristics of jet-edge-resonator whistles. W. L. Nyborg and others. bibliog diags Acoustical Soc Am J 25:138-46 Ja '53

Effects of viscous dissipation in the spherical acoustic resonator. H. G. Ferris. Acoustical Soc Am J 25:47-50 Ja '53

Multiple Helmholtz resonators. C. S. McGinnis and V. F. Albert. diags Acoustical Soc Am J 24:374-9 Jl '52

RESORCINOL

Carboxylation of resorcinol and the separation of β- and γ-resorcylic acid by ion-exchange chromatography. D. K. Hale and others. diag Chem Soc J p3503-9 S '52

Synthetic choleretics; resorcinol derivatives. R. R. Burtner. bibliog Am Chem Soc J 75:2341-4 My 20 '53

RESORCYLIC acid

Some derivatives of 2 : 6-dihydroxybenzoic acid. R. D. Watson. Chem Soc J p2940-1 Jl '52

Synthesis of γ-resorcylic acid (2 : 6-dihydroxybenzoic acid). N. J. Cartwright, J. I. Jones and D. Marmion. diag Chem Soc J p3499-502 S '52

Analysis

Carboxylation of resorcinol and the separation of β- and γ-resorcylic acid by ion-exchange chromatography. D. K. Hale and others. diag Chem Soc J p3503-9 S '52

RESORT airlines

Building air tour trade. il Bsns W p84+ Jl 25 '53

Resort airlines gets new management. Aviation W 58:84 My 18 '53

RESORTS

Case history of a vacationland; Ulster-Greene counties; development work of Central Hudson gas & electric corp. E. M. Huben. Edison Elec Inst Bul 20:423-5 D '52

Sewage treatment for resort areas. O. Borden and E. B. Rodie. Sewage & Ind Wastes 25: 1156-60; Discussion. M. T. Hill. 1160-2 O '53

Your work is near your play in Tennessee. il Manuf Rec 121:117-20 N '52

See also

Summer resorts

RESOURCES for the future, inc.

Conservation plans on the grid; conference to be held in Washington next March. Bsns W p34 N 15 '52

RESPIRATION

Impairment of pulmonary function in anthracosilicosis. P. Pelnář; H. L. Motley. A M A Archives Ind Hygiene & Occup Med 6:532-3 D '52

Retention, distribution and elimination of inhaled particulates; with particular reference to the evaluation of radiologic risk. M. Eisenbud. bibliog A M A Archives Ind Hygiene & Occup Med 6:214-25 S '52

Retention of air-borne particulates in the human lung. H. D. Landahl and others. A M A Archives Ind Hygiene & Occup Med 3:359-66; 6:508-11 Ap '51, D '52

See also

Insects—Respiration

RESPIRATION, Artificial

Artificial respiration; new improved methods. il Power Eng 57:61-3 Jl '53

Automatic resuscitation. il Safety Maint & Prod 105:46-8 Je '53

Comparative studies of new push-pull methods for pole-top resuscitation. A. S. Gordon and others. bibliog il Elec Eng 72:132-7; Discussion. E. W. Oesterreich. 137-40 F '53

EEI resuscitation awards emphasize importance of intensive safety training. Edison Elec Inst Bul 21:19-24+ Ja; 55-8 F '53

Film festival awards Oscar to Institute motion picture, Poletop rescue. il Edison Elec Inst Bul 21:304-5 Ag '53

Improved methods of pole-top resuscitation. J. E. Appel. bibliog il Nat Safety N 67:22-5+ Ap '53

RESPIRATION, Artificial—*Continued*

Methods of artificial respiration. W. Maclachlan. il Can Min J 74:72-5 S '53

Resuscitation methods and equipment. il Nat Safety N 67:226 Mr '53

Successful applications of resuscitation recognized be EEI awards. Edison Elec Inst Bul 21:349-53 S '53

Treatment of low-voltage burns. H. S. Brown. Ind Med 21:575-6 D '52; Same abr. Nat Safety N 67:38+ Je '53

RESPIRATION of bacteria. See Bacteria—Respiration

RESPIRATION of tissues. See Metabolism

RESPIRATORY apparatus

Acrylic respirator shell. il Mod Plastics 30:176 Ap '53

Compressed air under the waves; Aqualung. R. J. Nemmers. il diag Comp Air Mag 58:221-5 Ag '53

Don't die like a fly! G. L. Seth. il Safety Maint & Prod 105:50-2 Ap '53

Lighter weight respirators find wider employee acceptance. il Iron Age 171:168 Je 18 '53

Respiration maintenance program that works. il Foundry 80:194+ O '52

Respiratory protection. il Nat Safety N 67:85+ Mr '53

Siebe miner's self-rescuer respirator. il Engineering 175:576 My 1 '53

Use of respirators assures workers' safety; Richmond radiator co. il Cer Ind 60:128 Je '53; Steel 132:113 Je 15 '53

RESPIRATORY organs

Diseases

Respiratory cancer. Safety Maint & Prod 106:51-2 Ag '53

See also

Cold (disease)
Influenza
Lungs—Diseases

REST periods

Coffee break is no fad; abstract. Management R 41:724-5 N '52

RESTAURANTS

All 49 holiday award winners cook with gas. Am Gas Assn Mo 34:16 D '52

Striking design for a triangular site; restaurant in Los Angeles. il plan Am Bld 74:128-9 N '52

See also

Lunchrooms and cafeterias, Employees'
New Orleans—Hotels, restaurants, etc.

Air conditioning

Air conditioning the outdoors; historic New Orleans restaurant cools its open-air patio. T. Richards. il Heating-Piping 25:89 S '53

Employees

Outlook for women as food-service managers and supervisors. A. W. Mitchell. il U S Women's Bur Bul 234-2:1-54 bibliog(p52-4); pa 20c Supt. of doc. '52

Equipment

Ancient and honorable steak emporium chooses modern gas equipment. W. C. Grant. il Gas Age 110:31+ D 4 '52

Volume feeding offers growing gas sales potential. J. F. Vollmer. Am Gas Assn Mo 35:29 Ja '53

Insurance requirements

Cafe and hotel fire covers. C. T. Hubbard. Rough Notes 96:23+ Je '53

Eating and drinking risks provide lots of prospects. H. D. Toner. Rough Notes 96:25 Je '53

How to write liability on eating and lodging risks. C. Edwards. Rough Notes 96:24+ Je '53

RESTRAINT of trade

Competition in investment banking; Department of justice's anti-trust suit. Comm & Fin Chr 177:3+ Ja 1 '53

FTC calls Shell fuel oil exclusive dealing contract illegal. Nat Pet N 44:24 O 29 '52

Lively rivalry cited in answer to suit of Syracuse broadcasting stations. S. I. Newhouse. Ed & Pub 85:16a N 29 '52

Pipe-line suit filed; guaranteed-tender contract proposed by U.S. Pipe Line. Oil & Gas J 51:74 D 8 '52

Soap anti-trust suit. Soap & San Chem 29:38-9+ Ja '53

Soap makers face antitrust suit; government moves for break-up. Oil Paint & Drug Rep 162:3+ D 15 '52

See also

Exclusive agencies
Monopolies
Price fixing
Trusts, Industrial

RESUSCITATION

See also

Respiration, Artificial

RETAIL dry goods association, National. See National retail dry goods association

RETAIL paint and wallpaper distributors association

Annual meeting and show, 5th, Chicago, Nov. 12-15. Paint Oil & Chem R 115:14-15 N 20 '52

RETAIL salesmen. See Salesmen, Retail

RETAIL trade

Back in the market, consumers are buying; sales pickup has manufacturers rolling again; with graphs. Bsns W p32-3 O 25 '52

British retail changes due. il Bsns W p72+ D 13 '52

Happy days for most retailers, but. Bsns W p30-1 Je 27 '53

How to sell more housewares. il Bsns W p48-9 Ja 24 '53

Merchandising trends; panel discussion. E. B. Weiss and others. Paper Tr J 135:19-20+ O 24 '52

Retail boom. Fortune 47:32+ F '53

Retail trade; new trends in merchandising. E. M. Stanton. Trusts & Estates 92:513-15+ Jl '53

Retailers had a spring carnival. il Bsns W p31 Ap 11 '53

Retailers plan $5-billion program. il Eng N 150:106 Je 18 '53

Retailing in ferment; from national advertiser's viewpoint; by merchandising agency executives. E. Peterson and others. il Ptr Ink 241:41-106 D 12 '52

They kept climbing, but in low gear. Bsns W p41-2 My 16 '53

See also

Advertising—Dealers, Appeal to
Auctions
Chain stores
Charge accounts (retail trade)
Christmas business
Cooperative associations
Dealer helps
Dealer relations
Department stores
Display of merchandize
Electric utilities—Appliance selling
Gasoline service stations
Grocery trade
Instalment plan
Mail order business
Market stores
Marketing
Merchandizing
Plumbing shops
Price fixing, Resale
Purchasing
Returned goods
Salesmanship, Retail
Salesmen, Retail
Self service
Self service stores
Shopping areas
Shopping centers
Show windows
Special sales
Store buildings
Vending machines

Accounting

Are retail stores inviting regulation? handling anticipatory discounts. T. D. Ellsworth. J Retailing 28:111-22+ Fall '52

How to install and operate a cycle billing system in a retail business. J Account 95:38-43 Ja '53

Advertising

Ad production costs high hurdle. J. T. Pirie, jr. Ed & Pub 85:22 S 27 '52

Agency woman charges ads cover up facts. L. Goold. Ed & Pub 85:24 O 25 '52

Dealer copy. Aesop Glim. Ptr Ink 242:60 Ja 30 '53

For creative men only; time, copy writer's worst enemy. G. Moses. Adv Agency 46:78+ Mr '53

How fashionable is glove advertising during the Easter season? K. R. Gillespie. J Retailing 29:67-70+ Summer '53

How retailer can help in keeping ad cost down. D. J. Swann. Ed & Pub 85:15+ N 15 '52

RETAIL trade—Advertising—*Continued*

New Bureau pitch sparks dailies' linage push. Ed & Pub 85:26 O 18 '52

Radio pushing for sales tests by retailers. Ed & Pub 85:14 O 18 '52

Retail ad conference sets newspaper goals. Ed & Pub 86:26 Ja 31 '53

Seven ways to put retail sell into national ads. P. Schofield. Ptr Ink 242:27-8 Mr 6 '53

See also

Advertising, Point of sale

Christmas advertising

Department stores—Advertising

Hours of business

How will evening openings affect retail workers? T. D. Ellsworth. J Retailing 29:1-16 Spring '53

New shopping habits are related to timing and technique of retailing. D. E. Shea. Ptr Ink 241:54 D 12 '52

New study shows Canadian stores open longer hours. Ptr Ink 241:112 D 12 '52

Open store in evening may run into labor trouble. Bsns W p78 D 27 '52

Shopping after dark. D. A. Saunders. il Fortune 46:120-3+ N '52

Shopping hours in Philadelphia. Bsns W p78-9 D 13 '52

Manufacturers' demonstrations

See also

Department stores—Manufacturers' demonstrations

Purchasing

How sound is your buying? R. J. Ginzl, jr. J Retailing 28:167-8+ Winter '52

See also

Retail trade—Stock

Research

Columbia set to research role of merchandising. Ed & Pub 85:20 N 8 '52

Service

Customer's part in service. G. B. Cross. J Retailing 29:27-30+ Spring '53

Small town stores

Trends in rural retailing in two Illinois districts, 1938 to 1950. D. W. Scotton. (Bur. of economic and business research bul. 76) 54p Univ. of Illinois, Urbana '53

Statistics

Business inventories and sales; monthly tables, Dec. 1950-Sept. 1952. Survey of Cur Bsns 32:18-19 N '52

Domestic trade, 1952. Survey of Cur Bsns 33:16-17 F '53

Fourteen important ratios for wholesaling and retailing; with tables. R. A. Foulke. Dun's R 60:32-3+ N '52

Growing markets spur southern expansion; with list of consumer sales in 182 urban centers. C. R. Walker. Manuf Rec 121:38-9 O '52

New series on retail store inventories; with tables of inventories by kind of business, 1948-52. Survey of Cur Bsns 32:14-16 N '52

New series on retail store sales; with detailed tables for 1951. Survey of Cur Bsns 32:16-20 S '52

New U.S. report on retail sales shows buying is at high level. R. Y. Giles. Ptr Ink 242:38 F 13 '53

Regional trade barometers; aids to sales planning; with data on consumer spending and retail sales. M. C. Booss and G. Loesch. map Dun's R 61:30-6 Ap '53

Retail sales in 1952. E. D. Fraser. J Retailing 29:85-90+ Summer '53

Retail trade in 1951. T. D. Ellsworth and E. D. Fraser. J Retailing 28:63-8+ Summer '52

Retail trade; Nov.-Dec. 1951-Jan.-Nov. 1952. Survey of Cur Bsns 33:S8-10 Ja '53 [cont monthly]

Retailing chalks up its biggest year yet. Bsns W p 152 F 21 '53

Sales in seven added store types, 187 metropolitan areas; dollar estimates for eating and drinking places, apparel stores, gasoline filling stations, lumber yards and building materials, hardware stores, packaged liquor stores and jewelry stores. Sales Management 69:83-4+ N 10 '52

See also

Department stores—Statistics

Stock

Case study in creative merchandising; garden furniture retailer sells Christmas trees. D. E. Faville. J Retailing 28:172-4+ Winter '52

Store location

Downtown department store is not doomed! W. G. McCargo. Comm & Fin Chr 177:1434-5 Ap 2 '53

From 126 fast-growing markets, here's how Fedway picked eight. L. M. Hughes. Sales Management 70:75-6+ Mr 1 '53

New neighbors; Martin's stores of Massachusetts, inc. Bsns W p42+ Ja 17 '53

Store management

Curious dealers seek Dearborn's four one-thousand-dollar ideas. C. N. Hinds. Sales Management 69:40-2 O 1 '52

Market share, not sales, measure of performance. R. Scott. Ed & Pub 85:32 D 13 '52

Study and teaching

Let's spread the word about retail training. E. C. Scott. J Retailing 28:81-4+ Summer '52

Retailing club; its place in school and community. A. L. Klepp. J Retailing 28:175-6+ Winter '52

See also

Salesman, Retail—Training

Canada

U.S. retail store chains expanding in Canada. J. Montagnes. Barron's 32:33 D 8 '52

Dallas

Fellow retailers give Texas store a working over. il Bsns W p48-50 Ap 25 '53

Germany

War crushed German retailing, but. il Bsns W p46+ N 29 '52

Great Britain

British retail changes due. il Bsns W p72+ D 13 '52

Last year's retail sales. Economist 167:110 Ap 11 '53

Network and patchwork. map Economist 166:223-5 Ja 24 '53

Pre-budget sales. Economist 167:544 My 23 '53

Purchase tax and the retailer. Economist 166:824 Mr 21 '53

Retail trade returning to normal? Economist 165:127 O 11 '52

Sales after the budget. Economist 167:841-2 Je 20 '53

Self-service revolution. Economist 165:636-7 N 29 '52

Illinois

Trends in rural retailing in two Illinois districts, 1938 to 1950. D. W. Scotton. map (Bur. of economic and business research bul. 76) 54p Univ. of Illinois, Urbana '53

Los Angeles

Easier skating for downtown stores. il Bsns W p52-3 D 20 '52

New York (city)

Do you know or are you guessing? survey of 4,300 34th street, New York City shoppers. T. D. Ellsworth and others. J Retailing 28:97-106+ Fall '52

Philadelphia

Shopping hours in Philadelphia. Bsns W p78-9 D 13 '52

San Diego

How merchants in San Diego cut shoplifting. H. Waterman. Am Bsns 23:24 My '53

RETAIL trade—*Continued*

United States

How economic necessity is changing merchandising. V. Savage. Mag of Wall St 92:155-7+ My 2 '53

RETAIL trading zones. See Shopping areas

RETAIL workers

How to obtain and retain superior personnel. C. M. Edwards, jr. J Retailing 29:53-6+ Summer '53

How will evening openings affect retail workers? T. D. Ellsworth. J Retailing 29:1-16 Spring '53

Open-door policy in operation; W. T. Grant co. G. F. Davis. Personnel 29:507-10 My '53

Retail engineer. G. B. Cross. J Retailing 29: 79-82 Summer '53

Retailers, it's your move! a study of college students' preferences for careers in six major industries. J. Mason and E. L. Slater. J Retailing 28:49-60+ Summer '52

Shorter hours; retail revolution. Bsns W p41 Je 6 '53

See also

Department stores—Employees

Retail trade—Study and teaching

Salesmen, Retail

RETINA

Directional scattering of light by the human retina. G. Toraldo di Francia and L. Ronchi. diag Opt Soc Am J 42:782-3 O '52

Effect on foveal vision produced by a spot of light on the sclera near the margin of the retina. G. A. Fry and M. Alpern. diag Opt Soc Am J 43:187-8 Mr '53

Integrate capacity in time and space of the human peripheral retina. M. A. Bouman and G. van den Brink. diag Opt Soc Am J 42:617-20 S '52

Intensity-time relation for multiple flashes of light in the peripheral retina. E. Davy. bibliog Opt Soc Am J 42:937-41 D '52

Multibeam ophthalmoscope for the study of retinal physiology. S. A. Talbot and S. W. Kuffler. il diag Opt Soc Am J 42:931-6 D '52

Retinal receptors isolated with ac method and polychromatic theory. K. Motokawa and M. Ebe. Opt Soc Am J 43:203-9 Mr '53

RETINENE

Studies in the polyene series; C_{23}, C_{25} and C_{43} ketones derived from retinene. J. C. Hamlet, H. B. Henbest and V. Thaller. Chem Soc J p658-60 F '53

RETIREMENT

Advice to a man about to retire; financial position. R. Colston. Mag of Wall St 92: 337+ Je 13 '53

Can employees be prepared for retirement? H. Terrell. Personnel J 31:299-301 Ja '53

Conditioning for retirement. R. B. Robson. Nat Safety N 66:24-5+ N '52

Equity investment and retirement goals. N. Belfer. Comm & Fin Chr 177:1109 Mr 12 '53

Executives' financial preparation for retirement. H. R. Hall. Harvard Bsns R 31: 83-96 Ja '53

Helping employees adjust to retirement. C. P. Boyle. Personnel 29:261-74, 441-52 N '52, Mr '53

How to build a retirement fund. D. L. Babson. Comm & Fin Chr 177:2542 Je 11 '53

How to get out of advertising alive. F. Denman. Ptr Ink 242:54+ Ja 23 '53

How to retire an executive. Bsns W p66+ Ap 25 '53

Investors diversified services, inc. reports on Nation's first comprehensive housing survey; preferences of elderly men and women looking forward to retirement. E. E. Crabb. Comm & Fin Chr 176:2247 D 11 '52

New projects for the oldsters; retirement homes. Bsns W p 125-7 Jl 11 '53

Our Inca ideas about retirement; abstract. M. Gumpert. Management R 41:652-3 O '52

Plan your retirement activities early. H. R. Hall. Harvard Bsns R 31:118-28 S '53

Planning for retirement. il Mod Ind 25:42-5 Ja '53

Preparation for retirement; boon or boondoggle? I. Ladimer. Factory Management 111:88-91 Je '53

Prepare to retire; opportunities for financially trained executives. R. Reeder. Trusts & Estates 91:818-19 N '52

Retirement handbook; a complete planning guide to your future. J. C. Buckley. 329p $3.95 Harper and brothers, 49 E. 33d st, New York 16 '53

Retirement incomes generally below subsistence. R. G. Gibbs. Chem & Eng N 31:642 F 16 '53

Retirement plans. A. D. Marshall. East Underw 54:14-15 Je 5 '53

Rocking chair blues; they hold no terror for workers in the Mid-Continent area. A. Gibbon. il World Oil 135:84-5 D '52

Time to leave Inland Steel. Bsns W p 120 My 23 '53

Bibliography

Your second career; how to find the doors retirement opens. M. E. Hunt, comp. (Business literature v. 25, no. 8) p57-60 Business library, Newark public lib, Newark, N.J. Ap '53

RETORTS

Engineering features of the Union oil-shale retort. H. C. Reed and C. Berg. il map diags A S M E Trans 75:453-7 Ap '53

Mechanical design in oil-shale retorting plants. L. H. Brakel. bibliog il plan diags A S M E Trans 75:441-51 Ap '53

Thermal requirements for the gasification of lignite in an externally heated retort. M. H. Chetrick. bibliog 3pls U S Bur Mines Rep of Invest 4957:1-7 '53

RETURNED goods

Ask me about the seven. G. C. Engel, jr. J Retailing 28:61-2+ Summer '52

Retailers worry about returns in Detroit. Bsns W p52 My 16 '53

REUTHER, Walter Philip, 1907-

No one-man show in CIO. por Bsns W p 142+ D 13 '52

Portrait. Bsns W p 156 N 15 '52

Why Reuther? por Fortune 47:66+ Ja '53

REVENUE bonds. See Bonds, Revenue

REVERBERATION. See Echo

REVERBERATION chamber. See Sound absorbent materials—Testing

REVERE camera company

Revere Camera in stereo field. Bsns W p 104 My 23 '53

REVIEWS

See also

Newspapers—Book reviews

REVOLVERS

Gunmaking; artistry in steel. il Steel 131:73 N 10 '52

REWARDS, prizes, etc.

Accounting merit awards made; A.G.A. Accounting section. Am Gas Assn Mo 34:23 N '52

American chemical society awards and honors. Chem & Eng N 31:1274-6 Mr 30 '53

Annual Doehler award goes to David Laine. Foundry 80:169 O '52

Annual prize awards signify electric industry advancement. Edison Elec Inst Bul 20:363-5 O '52

Award prizes in A.G.A.-GAMA exposition essay contest. Am Gas Assn Mo 35:35 Mr '53

Awards of Society of motion picture and television engineers. Soc Motion Picture & Tv Eng J 59:535-40 D '52

Beecroft award is presented to Franklin M. Kreml. S A E J 60:91 N '52

Daniel W. Mead prizes awarded for essays on ethics. Civil Eng 22:1044 D '52

EEI prize awards for 1952. Edison Elec Inst Bul 20:434 D '52

Endeavour prizes announced by British science association. Elec Eng 72:375-6 Ap '53

Honors night dinner sponsored by the Institute of the aeronautical sciences, fellowships and annual awards. Aviation W 58: 17 Ja 26 '53

J. P. Crowley trounced electric competition and won AGA-Servel promotion award. il Am Gas J 177:46 N '52

Kiewit and Palmer win Moles' awards. por Eng N 149:76-7 N 6 '52; Explosives Eng 30:190+ N '52; Comp Air Mag 57:350 D '52

Moses wins 1952 Kelly award. Iron & Steel Eng 29:135 O '52

REWARDS, prizes, etc.—*Continued*
National sheet metal apprenticeship awards. Sheet Metal Worker 44:80 Jl '53
Operation achievement; A.G.A. gas summer air conditioning progress awards for 1952. W. P. Jones. Am Gas Assn Proc 1952:234-6
Pan American prizes awarded. Ry Age News ed 135:9-10 Jl 6 '53
Progress cast in bronze; 1953 Food Engineering award recognizes Hormel's contribution to advancement of industry. il Food Eng 25:43+ Je '53
Railroad advertising men make awards to Electro-Motive division and General Electric. Ry Age 134:14-15 F 9 '53
Robert Moses wins General Motors top award; easy competition on How to plan and finance the roads we need. Roads & Sts 96:59 Jl '53
Royal aeronautical society awards. Engineering 176:274-5 Ag 28 '53
Royal institute of chemistry Sir George Beilby memorial award; Meldola medal. Chem & Ind p403-4 Ap 25 '53
$2250 in prizes for papers on resistance welding. Welding J 32:68 Ja '53
Warren A. Cook wins award in industrial hygiene. Nat Safety N 67:59 Ja '53
See also
Advertising awards
Coffin foundation
Fire protection—Contests and awards
Franklin institute
Hales trophy
Insurance awards
Journalism awards
Medals
Musick memorial trophy
Nobel prizes
Safety contests and awards
Washington award

REYNOLDS metals company
Security I like best. B. F. Rayvid. Comm & Fin Chr 177:2734+ Je 25 '53

REYNOLDS number. See Fluids

REYNOLDS tobacco company
Investment audit. H. L. Blackburn. il Mag of Wall St 91:234-6+ N 29 '52
Pre-tax profit margin is highest in the industry; with tables of financial data, 1939-52. R. B. Fant. Barron's 32:15-16 D 22 '52

RHEE, Syngman, 1875-
Portrait. Bsns W p29 Je 27 '53
Problem of Rhee. Economist 167:886-7 Je 27 '53

RHENIUM
Description of the arc and spark spectra of rhenium. W. F. Meggers. bibliog J Res Nat Bur Stand 49:187-216 S '52
Electronic and lattice specific heats in W, Mo, and Re. M. Horowitz and J. G. Daunt. bibliog Phys R 91:1099-106 S 1 '53
Superconductivity of rhenium. J. G. Daunt and T. S. Smith. bibliog diags Phys R 88:309-11 O 15 '52

Isotopes

Decay of Re^{188} and the lifetimes of Os^{186m} and Os^{188m}. C. C. McMullen and M. W. Johns. bibliog diag Phys R 91:418-19 Jl 15 '53

RHENIUM compounds
Silicides of rhenium. A. W. Searcy and R. A. McNees, jr. bibliog Am Chem Soc J 75:1578-80 Ap 5 '53

RHENIUM oxides
Vapor pressures of rhenium heptoxide and perrhenic acid. W. T. Smith, jr., L. E. Line, jr. and W. A. Bell. bibliog Am Chem Soc J 74:4964-6 O 5 '52

RHEOLOGY
Property of Bessel functions and its application to the theory of two rheometers. H. Markovitz. J Ap Phys 23:1070-7 O '52
Rheological system for analyzing the flow properties of pseudoplastic and thixotropic pseudoplastic materials. R. N. Thompson and G. D. Hansen. Tappi 36:sup 172A-4A F '53
Rheology of concentrated rubber solutions. il Rubber Age 72:69-70 O '52
See also
Plasticity

RHEOSTATS
High wattage pressed steel rheostats. il Product Eng 24:136 My '53
Taking the steam out of a liquid rheostat. K. A. Petraske and I. C. San Jule. il diag Gen Elec R 56:34-6 My '53

RHEUMATIC fever
Community program for the prevention of rheumatic fever recurrence. M. A. Smith. bibliog Pub Health Rep 68:16-19 Ja '53
Prevention of rheumatic fever. bibliog Pub Health Rep 68:12-15 Ja '53
Use of infrared absorption techniques in the study of hypersensitivity diseases. J. T. Agnew and others. bibliog Opt Soc Am J 42:815-17 N '52

RHEUMATISM
Major health problem. Safety Maint & Prod 105:59-60 Mr '53

RHINOCEROS
Vanishing unicorn. Sci Am 188:38 Ja '53

RHODAMINE
Metachromasy of rhodamine 6G produced by polyvinyl sulfate. M. Koizumi and N. Mataga. Am Chem Soc J 75:483-4 Ja 20 '53

RHODANINE
Condensation products of rhodanine and keto-acids. G. G. Allan, D. Maclean and G. T. Newbold. Chem Soc J p5053-4 D '52
Ketone derivatives of rhodanine show mildewproofing activity. Chem & Eng N 31:1990+ My 11 '53

RHODE ISLAND
See also
Geology—Rhode Island

RHODE ISLAND insurance company
Former ally charges Hopps and clique with slick schemes; T. A. Walsh suit. Nat Underw 56:2 N 20 '52

RHODES, Cecil John, 1853-1902
Sketch. Comp Air Mag 58:171 Je '53

RHODES scholars
Rhodes scholars; role in world opinion and events. Economist 167:885-6 Je 27 '53

RHODESIA
Across the Limpopo; southern Rhodesia. map Economist 165:701-2 D 6 '52
Climax in Central Africa; proposals for federating the two Rhodesias and Nyasaland. map Economist 166:337-9 F 7 '53
Reaction to federation. Economist 166:407 F 14 '53
Rear-guard action in Africa. map Bsns W p 166-7 F 21 '53
Southern Rhodesia and its neighbours. Economist 165:245-4 O 25 '52
See also
Copper mines and mining—Rhodesia
Hydroelectric plants—Rhodesia
Tobacco industry and trade—Rhodesia

Economic relations

United States

Mining loan made to northern Rhodesian group; Rhodesia Congo border power corp. For Comm W 50:2 Jl 13 '53

RHODIUM
Extension of the first spectrum of rhodium (Rh I). R. J. Murphy. bibliog J Res Nat Bur Stand 49:371-5 D '52
Metal-catalysed reaction between acetylene and hydrogen; the reaction over rhodium and iridium. J. Sheridan and W. D. Reid. Chem Soc J p2962-6 Ag '52
Parameters for the slow neutron resonance in rhodium. V. L. Sailor. bibliog Phys R 91:53-7 Jl 1 '53
Rhodium coatings; vacuum equipment hastens use of rare metal on many materials. il Iron Age 171:183-4 Je 18 '53

Isotopes

Decay of Rh^{106}. D. E. Alburger. bibliog diag Phys R 88:339-43 O 15 '52
Decay of Rh^{104m} (4.3 min) and Rh^{104} (44 sec). W. C. Jordan and others. bibliog diag Phys R 90:862-4 Je 1 '53
Inelastic nuclear scattering of photons by Rh^{103}. C. S. del Rio y Sierra and V. L. Telegdi. bibliog Phys R 90:439-42 My 1 '53

RHODIUM compounds
Bis-cyclopentadienyl compounds of rhodium (III) and iridium(III). F. A. Cotton, R. O. Whipple and G. Wilkinson. bibliog Am Chem Soc J 75:3586-7 Jl 20 '53
Preparation of tris-acetylacetone-rhodium (III) and -iridium(III). F. P. Dwyer and A. M. Sargeson. Am Chem Soc J 75:984-5 F 20 '53

RHODIUM plating
Heavy rhodium electroplates now possible. A. M. Weisberg. il Materials & Methods 37:85-7 Mr '53

RIBAZOLE. See Benzimidazole

RIBBON
Gift-ties plus; Burlington mills turns foil and paperboard on ribbon packages into re-use Christmas-tree decorations. il Mod Packaging 26:142-3 S '52

RIBOFLAVIN. See Vitamins—Vitamin B_2

RIBONUCLEASE
Nucleotides; the action of ribonuclease on simple esters of the monoribonucleotides. D. M. Brown and A. R. Todd. Chem Soc J p2040-9 Jl '53
Nucleotides; the action of ribonuclease on the 2′ : 3′-phosphates of uridine and cytidine. D. M. Brown, C. A. Dekker and A. R. Todd. Chem Soc J p2715-21 Jl '52

RIBONUCLEIC acid
Chemistry of heredity. A. E. Mirsky. il Sci Am 188:47-57 F '53
Cytoplasmic localization of highly polymerized liver ribonucleic acid. E. L. Grinnan and W. A. Mosher. bibliog Franklin Inst J 255:347-51 Ap '53
Liberation of polynucleotides by the alkaline hydrolysis of ribonucleic acid from yeast. K. C. Smith and F. W. Allen. bibliog Am Chem Soc J 75:2131-3 My 5 '53
Nucleotides; the action of ribonuclease on the 2′ : 3′-phosphates of uridine and cytidine. D. M. Brown, C. A. Dekker and A. R. Todd. Chem Soc J p2715-21 Jl '52

RIBONUCLEOSIDES
Nucleotides; ribonucleoside-5′ phosphites; a new method for the preparation of mixed secondary phosphites. N. S. Corby, G. W. Kenner and A. R. Todd. Chem Soc J p3669-75 O '52

RIBOSE
Achromycin; synthetic studies; synthesis of 3-amino-D-ribose, a hydrolytic product. B. R. Baker and R. E. Schaub. Am Chem Soc J 75:3864-5 Ag 5 '53
Preparation of crystalline 2,3,5-tri-*O*-benzoyl-D-ribose from D-ribose. R. K. Ness and H. G. Fletcher, jr. Am Chem Soc J 75:3289-90 Jl 5 '53

RIBOSIDES
Enzymatic synthesis of 4-amino-5-imidazolecarboxamide riboside from 4-amino-5-imidazolecarboxamide and riboside-1-phosphate. E. D. Korn, F. C. Charalampous and J. M. Buchanan. bibliog Am Chem Soc J 75:3610-11 Jl 20 '53
Isolation of 4-amino-5-imidazolecarboxamide riboside from the culture medium of sulfonamide-inhibited escherichia coli. G. R. Greenberg. bibliog Am Chem Soc J 74:6307-8 D 20 '52
Vitamin B_{12}; synthesis of the 1-D-ribosides of 5,6-dimethylbenzimidazole. F. W. Holly and others. bibliog Am Chem Soc J 74:4521-5 S 20 '52

RICE
Arkansas crop rotation; rice, fish, and sportsmen. il Bsns W p 100-3 Jl 18 '53
Distribution of rice exports announced. For Comm W 49:24 My 11 '53
Distribution of U.S. rice exports among importing areas announced. For Comm W 49:23 Ja 19 '53
Export procedures for rice announced. For Comm W 48:27-8 O 13 '52
Iran's rice production reaches all-time high. For Comm W 49:17 Ja 19 '53
Iraq keeps rice for home use; restricts exports. For Comm W 48:16 N 10 '52
Japan plans to import million tons of rice. For Comm W 49:18 F 23 '53
Larger crop due to ease rice shortage. Barron's 32:23-4 D 1 '52
Licensing against rice export allocation nears completion. For Comm W 48:32 D 8 '52
Lower exports of rice curtail Thai business. For Comm W 49:7 My 4 '53
Malayan rice crop low; imports also decline. For Comm W 49:14 F 2 '53
More rice exports to be licensed by OIT. For Comm W 48:11 N 24 '52
OIT receives recommendations on rice licensing from committee; Rice export allocations set for July-December. For Comm W 50:22 Jl 13 '53
Record world rice crop is forecast. For Comm W 48:20 N 24 '52
Rice exporters meet with OIT, discuss licensing procedures. For Comm W 48:35 D 15 '52
Rice irrigation in Louisiana. E. E. Shutts. maps Am Soc C E Proc 78 [no 156]:1-14 O '52
Rice licensed against allocations for 1952-53 exceeds ten million bags. For Comm W 50:5 Jl 6 '53
Second-quarter rice licensing procedure announced by OIT. For Comm W 49:32 Mr 16 '53
Tames wild rice; Holbert bros. il Food Eng 25:94+ Mr '53
Training center opened in India for rice breeding. For Comm W 48:20 O 20 '52
U.S. and Cuba agree on methods of fixing, announcing rice quotas. For Comm W 50:8 Jl 13 '53

By-products

From waste to product via research; rice mills. il Can Chem Process 36:26-8 D '52

RICE oil
Rice bran oil; paying product. J. A. Lee. il Food Eng 24:98-9 D '52
Rice bran yields edible oil. il diag Chem Eng 59:222 O '52
USDA group contributes to growth of rice bran oil industry. Chem & Eng N 30:4847-8 N 17 '52

RICH, John Fletcher, 1908-
Businessmen in the news. por Fortune 47:37 Ja '53

RICHARDSON, Charles G.
50 years with Builders iron foundry. por Water & Sewage Works 100:141 Ap '53

RICHARDSON, William Samuel, 1893-
Businessmen in the news. por Fortune 47:38 Ja '53

RICHFIELD oil company
Contempt action looms over Richfield pacts. Nat Pet N 44:29 D 10 '52

RICKETTSIA
Reversal of *p*-aminobenzoic acid inhibition of growth of rickettsiae by *p*-hydroxybenzoic acid in agar-slant tissue culture. N. Takemori and M. Kitaoka. bibliog Science 116:710-11 D 26 '52

RICKMANSWORTH, England

Sewerage

Britain's most up-to-date sewage plant has many distinctive features. G. T. G. Scott. il plan Munic Util 91:22-6+ My '53

RIDER, John Hall, 1864-1953
Sketch. por Engineer 195:635 My 1 '53

RIFFE, John
CIO closes ranks. por Bsns W p 173-4 Mr 28 '53

RIFLES

Rating

.22 caliber rifles. diag Consumers Res Bul 30:5-8 O '52

RIGHT to labor
Right to work; an unalienable right. G. A. Marr. Comm & Fin Chr 177:1016 Mr 5 '53

RIJKE tube. See Singing tube

RILEY, Jack
How to get rich on blueprints. Fortune 46:205 D '52

RIO DE JANEIRO

Architecture

Rio sports center; a progress report; stadium and gymnasium. il plans diags Arch Rec 112:131-9 O '52

RIORDAN, William A. 1893-1953
Sketch. por East Underw 54:30 F 13 '53

RIO TINTO company, limited
Statement by the chairman. Earl of Bessborough. Economist 167:779 Je 13 '53

RISERS. See Foundry practice

RITCHIE, Robert Estes
Dedication marks naming of new Arkansas power and light co. head. por Manuf Rec 121:37+ O '52

RITCHIE, Robert Estes—*Continued*

Ritchie heads Arkansas Power & Light. por(cover) Elec World News ed 138:29 O 13 '52

RIVER brand rice mills

Security I like best. S. Van Vechten. Comm & Fin Chr 177:592 F 5 '53

RIVER traffic

Barges; shipment curve goes up; inland waterway cargoes increase steadily since 1930. K. W. Bennett. Iron Age 170:43 O 16 '52

See also

St Lawrence waterway and power project

RIVERS

Equitable utilization of stream resources by industries. E. B. Phelps. il Water & Sewage Works 99:495-7 D '52

Hydraulic geometry of stream channels and some physiographic implications. L. B. Leopold and T. Maddock, jr. bibliog diags U S Geol S Professional Pa 252:1-57; pa 35c Supt. of doc. '53

Normal size distribution found in samples of river-bed sand. T. Blench. Civil Eng 22:147 F '52; Discussion. W. D. Baines. 22:494 Jl '52; Reply. 23:113+ F '53

River channel roughness. H. A. Einstein and N. L. Barbarossa. il diag Am Soc C E Proc 77[no 78]:1-12 Jl '51; Discussion. 78[no D-78]:1-14 Jl '52

Techniques and trends; river use and control; description of major projects. il Eng N 150:105-6+ F 19 '53

See also

Dams
Floods
River traffic
Water pollution
Water supply

also names of rivers, e.g.

Mississippi river
Missouri river
Ohio river
White river

Bank protection

Bank stabilization by revetments and dikes. R. H. Haas and H. E. Weller. il diag Am Soc C E Proc 78[no 148]:1-12 S '52

Regulation

Destruction of our cultural heritage. M. E. Tong, jr. Science 116:488 O 31 '52

Divert stream over dams under construction; Blakely Mountain dam. J. R. Stephens. il diags Constr Methods 35:92+ S '53

Slackwater improvement of the Columbia river. O. E. Walsh. il map Am Soc C E Proc 79 [no 181]:1-16 Ap '53

Third-stage diversion at Canyon Ferry dam. il Eng N 149:42-3 O 30 '52

See also

Dams
Levees

New Hampshire

See also

Floods—New Hampshire

Wisconsin

Free flood control by utilities on Wisconsin rivers. A. T. Lenz. Pub Util 50:843-9 D 4 '52

RIVETED joints

Testing

Study of the practical efficiency under static loading of riveted joints connecting plates. W. M. Wilson and others. il diags Ill U Eng Exp Sta Bul 402:1-75 '52 (pa 75c)

RIVETING

Accessories permit automatic riveting. il Mill & Factory 51:140 N '52

Feeler switch holds riveter clamp within set distance of stringer edge. C. H. Rowan. il Tool Eng 29:43 D '52

Simplified loading on automatic dial riveter. il Am Mach 96:182 O 27 '52

Staking machine. il Tool Eng 29:92 N '52

RIVETS

Aluminium as a structural material. M. Bridgewater. il diags Engineering 175:794 Je 19 '53; Abstract. Metallurgia 48:15-16 Jl '53

Blind riveting simplified with English pop rivet. il Iron Age 171:138-9 Ap 16 '53; Materials & Methods 38:124+ Jl '53; Sheet Metal Worker 44:76 Ag '53

Pop rivet fasteners for aircraft. G. C. Bailey and P. C. Ergler. il diags Product Eng 24:191-8 My '53

Rivet round-up and review. J. E. Hyler. diags Mill & Factory 53:102-7 Jl '53

Rivets covered by injection molding. il Mod Plastics 30:123 Ap '53

Small rivets for big jobs. R. M. Gordon. il diags Product Eng 24:119-27 Mr '53

Use of rivets and other fasteners; report of panel on fastening and mechanical joining. R. L. Hand. il S A E J 61:41-3 Je '53

Standards

Small solid rivets; American standard ASA B18.1; reference book sheet. diags Am Mach 97:177 S 14 '53

Testing

How much combined stress can a rivet take? T. R. Higgins and W. H. Munse. il diag Eng N 149:40-2 D 4 '52

ROACH, Alden Gallup, 1901-

Portrait. Bsns W p34 Ja 24 '53

ROAD contractors

Contractor builds own hauling bridge. il Roads & Sts 95:100-1 O '52

Canada

Contractors for engineered construction; directory. Roads & Eng Constr 91:228+ Je '53

ROAD making machinery

Better transportability of equipment needed to reduce roadbuilding costs; earthmoving industry conference sponsored by the Central Illinois section of the Society of automotive engineers. Eng N 150:24 Ap 16 '53

Blaw Knox motor grader. il Engineer 195:841-2 Je 12 '53; Engineering 175:761 Je 12 '53

British-built construction equipment. J. L. Ritchie. il Roads & Eng Constr 90:136+ N '52

Grader attachment cuts road costs, permits faster road widening. il Eng N 150:98+ Je 25 '53

Heavy discs under grader helped scarify old mat. il Roads & Sts 96:109 Mr '53

Imports (including parts) during past three years; Canada. Roads & Eng Constr 91:96 Je '53

Municipally owned equipment reduces street costs! W. D. Frizzell. il Pub Works 83:52-3+ N '52

Road machinery; jump in highway outlays brings industry a sales bonanza. M. J. Saada. Barron's 33:11+ Mr 16 '53

Transportability of earthmoving equipment. H. W. Rockwell. il S A E J 61:53-4; Discussion. 54-5 Jl '53

World's best highway system produced by modern equipment. A. N. Carter. il Civil Eng 22:628-32 S '52

See also

Excavating machinery
Paving machines
Road scrapers
Roads—Construction equipment
Roads, Concrete—Construction equipment

Cleaning

Why construction equipment should be kept clean. E. W. Fair. il Pub Works 84:71-2+ F '53

Exhibitions

Public works and municipal services congress and exhibition, Olympia, Nov. 3-8. il Engineer 194:582-3, 625-6 O 31-N 7 '52; Engineering 174:568, 573-4, 595-7, 600, 626-8, 632 O 31-N 14 '52

Roadbuilding and construction show at 6th Canadian international trade fair, Toronto, June 1-12. il Roads & Eng Constr 91:119-21 Ag '53

Maintenance and repair

How on-job repairs cut shovel and scraper output. Roads & Sts 96:82 Jl '53

How should road machinery be cared for? L. Westlake; C. S. Anderson. Roads & Eng Constr 91:198+ Mr '53

ROAD materials

Daley's two-way plant supplies hot asphaltic or cement-stabilization mix. il plan Roads & Sts 96:96-8 Je '53

Native materials make good road. Constr Methods 35:172 My '53

Peat as a roadbuilding material. Comp Air Mag 57:351 D '52

Proving ground for sulfite roadbinder built in Wisconsin. il Paper Ind 35:650 S '53

Spent sulphite liquor studies; use of spent liquor in reconditioning asphalt road surfaces. A. J. Wiley and others. il Tappi 36: 162-5 Ap '53; Abstract. Paper Tr J 136: 100 F 20 '53

Spent sulphite liquor studies; use of spent liquor in reconditioning asphalt road surfaces; abstract. W. Sherman and others. Paper Tr J 136:100 F 20 '53

Success indicated in roadbinder experiment; spent sulphite liquor. Paper Ind 34:946 N '52

30 million gallons of waste liquor contributed for Wisconsin road-building. Paper Ind 34: 1440 Mr '53

See also

Aggregates
Asphalt
Bituminous materials
Cement
Concrete
Gravel
Pavements
Stone, Crushed

ROAD rollers

Buffalo-Springfield's C-model, two-axle tandem. il Roads & Eng Constr 90:90 N '52

Contractor makes his own sheepsfoot roller. il Constr Methods 35:63 S '53

Field penetration tests for selection of sheepsfoot rollers. Roads & Sts 95:115 N '52

ROAD scrapers

Scrapers build county sand-lift roads. W. H. Taylor. il Roads & Sts 96:72+ Je '53

ROAD signs

Missouri engineers and contractors cooperate on new job flagging and signing system. il Roads & Sts 96:66 Jl '53

Plastic material used as basis of day-night road signs. il Roads & Eng Constr 90: 90+ D '52

Travel by spider web. map Bsns W p94+ Ap 18 '53

ROAD tar

Testing

Brittle fracture of tars and bitumens. P. J. Rigden and A. R. Lee. bibliog il diags J Ap Chem 3:62-70 F '53

ROAD traffic

Better roads for tomorrow's loads. F. B. Lautzenhiser. il Roads & Eng Constr 90:94-6+ D '52

Changing picture in highway traffic. D. G. Mickle. il map Civil Eng 22:678-84 S '52

Engineer's contribution to traffic safety. Roads & Sts 96:74+ Ja '53

Insurance industry group lists 12 major steps for New York traffic safety. East Underw 54:32+ Ja 23 '53

Let's remove the road block. il Roads & Eng Constr 90:91-3+ D '52

Traffic up 24 per cent, accidents down on N.J. turnpike. Roads & Sts 96:89-90 S '53

Trends in traffic volumes, vehicle types and weights, 1951. T. B. Dimmick. Pub Roads 27:111-24 F '53

See also

Motor trucks and roads
Street traffic
Traffic signals

ROADMASTERS' and maintenance of way association

Annual meeting, Chicago, Sept. 15-17. Ry Age 135:106+ S 21 '53

ROADS

American association of state highway officials annual meeting, Kansas City, Mo. Dec. 10. Roads & Sts 96:72-3 Ja '53

Colloidal science and some aspects of road construction; abstract. W. L. Peard. Chem & Ind p 1155 N 22 '52

Long-range highway plans. A. N. Carter. il Roads & Eng Constr 90:146+ N '52

Old highway hands win top prizes in GM contest. Eng N 150:21-2 Je 25 '53

Traffic improvement sought in General Motors contest. Nat Safety N 66:54+ D '52; Same abr. Eng N 149:28 N 20 '52

Up front for adequate roads. L. J. Ritter, jr. Pub Works 84:10+ Ja '53

See also

Causeways
Expressways
Forest roads
Highway administration
Highway engineering
Highway research
Highway transportation
Motor trucks and roads
Mountain roads
Pan-American highway
Pavements
Road making machinery
Road materials
Snow removal
Streets

By-pass roads

Build short-cut truck road. il map Rock Prod 56:124+ Je '53

Bypasses around urban centers feature Ontario's highway program. maps Roads & Eng Constr 91:116-18+ Ag '53

How by-passes affect life of community. H. L. Michael. Pub Works 84:94 Je '53

Construction

Alcan in British Columbia; construction battles difficult access. L. L. Wise. il maps Constr Methods 34:42-8 N '52

Building a 1,000,000 cu. yd. fill. il diag Roads & Sts 95:45-7 O '52

Motorists' West Virginia turnpike view is spectacular, but contractors' view is hard work, rough going. R. H. Lewis. il map Constr Methods 35:64-8+ S '53

New Jersey turnpike, U.S.A. il map diags Engineer 194:198-9, 210-12, 242-7 Ag 8-22 '52

New road from Beersheba to Sodom. il map diag Engineering 175:705-6 Je 5 '53

Report of the Road research board for 1951. Engineering 175:23 Ja 2 '53

Road construction for a tropical oilfield. Engineer 195:239 F 13 '53

Road-making with sand. Engineering 175:158 Ja 30 '53

Survey of Trans-Canada Highway construction progress; with present status and cost data. F. R. Inglis. il map Roads & Eng Constr 91:95-8+ Jl '53

Thruway problems in Montezuma swamp. W. Robinson. il map diag Roads & Sts 95:44-7+ D '52

Tunneling through a canyon wall. J. E. Witte. il maps diags Roads & Sts 96:73-7 Mr '53

Water industry problems in highway construction. R. Fuller. Pub Works 84:76+ My '53

Construction equipment

British-built construction equipment. J. L. Ritchie. il Roads & Eng Constr 90:136+ N '52

Buyer's guide; international directory of construction equipment. Roads & Eng Constr 91:384+ Je '53

Equipment distributors, Canada; listing the principals whom they represent. Roads & Eng Constr 91:140+ Je '53

Equipment that sets the pace. H. F. Hess. il Roads & Eng Constr 90:150+ N '52

Frederick Parker, ltd. announces Spot-Mix plant. il Roads & Eng Constr 91:74 My '53

Manufacturers; their products and their distributors in Canada. Roads & Eng Constr 91:320+ Je '53

Power auger drills and their use in highway work. C. G. Johnston. il Roads & Sts 95:81+ D '52

Road builders in strong position. E. A. Barnes. Mag of Wall St 92:334-6 Je 13 '53

Tractor-mounted drills help boost yardage on Savin's big thruway job. il Roads & Sts 96:58-60+ S '53

Trencher builds low-cost road in Texas. il diags Eng N 150:40+ Ap 30 '53

Turner turnpike. il map Diesel Power 31: 44-5 Jl '53

Construction schedules

What causes your job delays? F. B. Farrell. Roads & Sts 96:60+ Je '53

Contracts

New York state thruway construction contracts under way on Dec. 8, 1952; tabulation. Roads & Sts 96:81 Ja '53

ROADS—Contracts—*Continued*

New York thruway program spotlights big business of roadbuilding. il Roads & Sts 96:69 Ag '53

Cost

Access roads, Florida; unit prices. Eng N 150:77 Ap 30 '53

Alaska highway surfacing; unit prices. Eng N 150:77 Je 25 '53

Canyon highway, Colorado; unit prices. Eng N 149:105 D 18 '52

Highway and bridges, Massachusetts; unit prices. Eng N 150:98 Je 18 '53

Highway departments planning bigger programs in the year ahead. il Roads & Sts 96:58-9 F; 65-6 Mr '53

Highway operations in Ontario for current year to involve expenditure of $153,000,000. L. M. Frost. Roads & Eng Constr 91:89 Mr '53

Highway price index, composite standard mile; tabulation. Eng N 150:64 F 26 '53

Highway, South Dakota; unit prices. Eng N 149:83 O 2 '52

Hot plant mix is economical for county highways. P. S. Banaszek. il Pub Works 84:54-6+ Jl '53

Kentucky highway costs; unit prices. Eng N 150:85 Ap 2 '53

Over $420,000,000 for rural highways in Canada this year. il Roads & Eng Constr 91:109-12+ My '53

Volume of road work projected for 1953, Canada. Roads & Eng Constr 91:190 Je '53

Curves

Minimum sight distance on vertical curves should be 500 ft., New York study shows. B. A. Lefeve. Roads & Eng Constr 91:116 Mr '53; Same. Safety Maint & Prod 105:57 Ap '53

Detours

Detour handles 100,000 cars; Cahuenga-Hollywood freeway connection. il plans Eng N 150:40-1 My 28 '53

High-type detours for very heavy traffic. J. L. Wehmeyer. il diag Roads & Sts 95:110-11 N '52

Shoo-fly for Michigan boulevard; heavy-duty detour pavement. il plan Roads & Sts 96:124-5+ My '53

Drainage

Special drainage along Ohio turnpike to protect farm tiling. H. N. Luebcke. il plan diags Roads & Sts 96:73-6+ Jl '53

Economic aspects

How by-passes affect life of community. H. L. Michael. Pub Works 84:94 Je '53

Los Angeles study reveals freeway benefits. L. Aldrich. Pub Works 84:96-7 Jl '53

Federal aid

Congress launches far-reaching review of federal highway policies. Roads & Sts 96:57 My '53

Continued federal-provincial highways program urged by C.C.A. Roads & Eng Constr 91:124+ F '53

Federal highway aid funds reduced. Eng N 150:22 My 7 '53

State highway officials urge raising federal aid to full gas tax income. Eng N 150:24 My 21 '53

Finance

Administration seen writing public roads policy as pressure for federal fuels tax repeal grows. Bus Transportation 32:87 Ag '53

Alberta contemplates $100,000,000 expenditure in next five years. A. Frame. Roads & Eng Constr 90:124-5 N '52

AASHO leaders scan $45 billion job. B. D. Tallamy. Roads & Sts 96:68-9 Ja '53

Border-line toll roads have possibilities; supplemental ways for financing could provide means for speeding construction. F. Gannett. Eng N 149:41-3 D 25 '52

Continued federal-provincial highways program urged by C.C.A. Roads & Eng Constr 91:124+ F '53

'53 highway budget exceed last year's record by 34 per cent. Eng N 150:21-2 Mr 19 '53

Highway administration and modern methods of financing. T. J. Mahony. Roads & Eng Constr 91:134-6+ Mr '53

Highway plans spurt in some states, hit money, legal snags in others. Eng N 149:102+ O 23 '52

How should township roads be financed? J. N. Allan. Roads & Eng Constr 91:208 Mr '53

Investment billions ride the turnpikes. il Bsns W p 110+ My 30 '53

More highway revenues enacted in many states. Roads & Sts 96:39-40 Ag '53

New Jersey turnpike issues $28,000,000 new bonds for expansion. Roads & Sts 95:47-8 N '52

Recent trends in highway bond financing. H. C. Duzan and others. bibliog(29 titles) il maps Pub Roads 27:57-88 O '52; Same cond. Roads & Eng Constr 90:120+ O '52

Road-user and property taxes on selected motor vehicles, 1953; charts and tables. E. M. Cope and R. W. Meadows. maps Pub Roads 27:127-53 Ap '53

Robert Moses wins General Motors top award; essay competition on How to plan and finance the roads we need. Roads & Sts 96:59 Jl '53

Toll turnpikes vs. toll-free bond roads; abstract. R. E. Jorgensen. Roads & Sts 95:110-11 N '52

Turnpike financing and construction. E. J. Donnelly. Midwest Eng 5:3-4+ Ja '53

Why and how of toll roads. P. Merrill. il Bankers Mo 70:18+ Mr '53

Foundations

Bituminous soil stabilization in Kansas. D. L. Lacy. il Roads & Sts 95:72-6+ D '52

Heavy base lifts for resurfacing. C. R. Waters. il diags Roads & Sts 95:75-8 O '52

Neat portable plant prepares granular base for Utah road. J. B. Parsons. il Constr Methods 34:82-4+ N '52

North Carolina's new flexible pavement methods for primary highways. T. V. Fahnestock. il Roads & Sts 96:78-80+ F '53

Use of emulsified asphalt in base course materials. D. E. Stevens. Road & Sts 96:100+ Je '53

Soil-cement

Soil-cement methods on Kentucky federal secondary road project. C. B. Owens. il Roads & Sts 96:82-4 Ja '53

Traveling asphalt plant mixes soil-cement base. il Constr Methods 35:153-4+ Mr '53

Grading

Big grading job started for West Virginia turnpike. il map Roads & Sts 96:44-5 Je '53

Contour method of grade design and earthwork calculation. C. V. Kane. maps diags Roads & Sts 95:53-4+ D '52; Abstract. Pub Works 84:64 F '53

How Dougherty moved 300,000 c.y. monthly on Thruway. il Roads & Sts 96:70-1 Ap '53

Rate of change of grade per station. C. J. Brownell. diags Am Soc C E Proc 78 [no 121]:1-20 Mr '52; Discussion. 79 [no D-121]:1-6 F '53

Guard rails

See Roads—Safety guards

History

Roads of the past. R. J. Forbes. bibliog Chem & Ind p70-4 Ja 24 '53

Ice control

Chemicals for a clear road. il Chem W 72:62+ Ja 24 '53

Ice control to require 300 spreaders in New Jersey. Roads & Sts 96:122 Ja '53

Ice-free roads still not in sight. S. M. Breuning. Pub Works 84:113 My '53; Same. il Roads & Eng Constr 91:94+ Jl '53; Same. Roads & Sts 96:82 S '53

Mixing salts with surfacing for ice-free pavement. plan Pub Works 84:62 Ap '53

Snow and ice control in upstate New York. F. R. Williams. il Pub Works 84:75+ Ag '53

Lighting

Below eyelevel lighting; unusual units used at Shasta dam. il Elec West 109:94 N '52

ROADS—Lighting—*Continued*

Development of highway lighting in metropolitan Chicago and northern Illinois. R. J. Seitz and E. M. Prims. il diag Illum Eng 48:534-8 O '53; Discussion. 48:636-8 D '53

Instrument for the evaluation of night visibility on highways. A. E. Simmons and D. M. Finch. bibliog il diags Illum Eng 48:517-23 O '53

Pavement brightness measurements. D. M. Finch and R. B. Marxheimer. bibliog il diags Illum Eng 48:65-71; Discussion. 71-4 F '53

See also

Street lighting

Location

Aerial photographs facilitate surveys of pavement condition. A. R. Legault and H. M. McMaster. il Civil Eng 22:883-5 O '52

Embankment design for relocations at John H. Kerr reservoir project. J. A. Rhodes and G. E. Weber. il map diags Roads & Sts 96:52-8 Ja '53

Locating super roads among existing utilities; experience on New Jersey turnpike indicates need for public-relations ability. E. H. Harlow. il diag Eng N 150:32-4+ Mr 5 '53

Oregon primary road relocation. il map Roads & Sts 96:74-6 Ap '53

Relocating a mountain highway in North Carolina. O. M. Davis. il Explosives Eng 30:146-51+ S '52

Maintenance and repair

Highway maintenance problems solved by research. J. Walter. il Roads & Eng Constr 91:142-4+ Mr '53

How equipment helps in essential maintenance; Maintenance department of the Kansas highway commission. L. J. Siler. il Pub Works 84:56-7 Ja '53

How equipment lowers cost of highway maintenance. C. W. Ross. il Pub Works 84:72-4+ Mr '53

Long look at highway maintenance. R. M. Whitton. il Civil Eng 22:673-7+ S '52

Maintaining the Alaskan highway. il map Roads & Sts 95:106-9+ D '52

Maintenance of the Alaska highway requires constant vigilance. il Roads & Eng Constr 91:83-6+ Jl '53

Missouri engineers and contractors cooperate on new job flagging and signing system. il Roads & Sts 96:66 Jl '53

More money and new equipment for Georgia highways. C. E. Wright. il Pub Works 84:60-1+ F '53

Patching pavements properly. G. E. Martin. il Pub Works 84:76-91 Je '53

Practical highway maintenance equipment. E. L. Schmidt. il Pub Works 84:80-1 Ap '53

What about dust control? G. E. Stephenson. Roads & Eng Constr 91:152+ Mr '53

See also

Roads—Winter maintenance

Military use

Defense jeopardized by government's attitude toward roads. C. W. Gilchrist. Roads & Eng Constr 91:68 Jl '53

Roads and national security. J. R. B. Jones. il Roads & Eng Constr 90:131-2+ N '52

Protection

Analysis of corrective actions for highway landslides. R. F. Baker. il diags Am Soc C E Proc 79 [no 190]:1-25 My '53

Nine-acre screen protects new highway from falling rocks. A. Wintle. il Pub Works 84:49 Ja '53

Solutions proposed for problem of controlling sand erosion along Pan American highway. E. E. Verbeemen; K. F. Shippey. diag Civil Eng 23:250 Ap '53

Relocation

See Roads—Location

Resurfacing

Heavy base lifts for resurfacing. C. R. Waters. il diags Roads & Sts 95:75-8 O '52

Hot plant mix is economical for county highways. P. S. Banaszek. il Pub Works 84:54-6+ Jl '53

How a Virginia highway was rebuilt for heavier traffic. H. J. McKeever. il map diags Roads & Sts 96:105-10 Ja '53

North Carolina improves heavy-duty route. C. E. Proudley. il diag Roads & Sts 96:72-5+ My '53

Rehabilitation, or new construction? M. B. Hodges. il diags Roads & Sts 96:106-9 Jl '53

Winter stockpiling, aggregate blending speeded Minnesota hot mix job. il Roads & Sts 96:120-2 My '53

Safety guards

Highway safety guard wins world-wide acceptance. Roads & Eng Constr 90:94 N '52

Simple equipment rebuilds wire rope guard rail. il Roads & Sts 95:66+ N '52

Safety measures

Engineer's contribution to traffic safety. Roads & Sts 96:74+ Ja '53

Flashing lights help traffic safely through contractor jobs. il Roads & Sts 96:86-7 Ja '53

Insurance industry group lists 12 major steps for New York traffic safety. East Underw 54:32+ Ja 23 '53

Light-colored shoulders are built-in safety measure on high-speed highway. C. M. Noble. il Roads & Eng Constr 91:134+ My '53

Will super-highways bring super-accidents or super-safety? P. H. Blaisdell. Safety Maint & Prod 105:44-5 Ja '53

See also

Grade crossing elimination

Shoulders

Cure for high, rutted shoulders. il diags Roads & Sts 96:84-5 Ap '53

How to get improved shoulder construction and maintenance; with cost data. il Pub Works 84:80-1+ O '53

Light-colored shoulders are built-in safety measure on high-speed highway. C. M. Noble. il Roads & Eng Constr 91:134+ My '53

New shoulder maintenance methods. il diag Pub Works 84:116 O '53

98½ mile turnpike shoulder contract. il Roads & Sts 96:71-5 F '53

Power scraper clears highway shoulders. il Constr Methods 35:152+ S '53

Reducing the cost of roadside mowing and shoulder maintenance. R. C. Bannerman, jr. il Pub Works 84:67+ Mr '53

Slipperiness

Anti-skid treatment of seal-coated pavements. N. R. Bangert. Roads & Sts 95:80 N '52

Subgrades

Bearing capacity of cohesive soils. G. Piette. Roads & Eng Constr 90:188-90 N '52

Building roads with a ditch digger. il Pub Works 84:95 S '53

Soil selection in Manitoba. G. B. Williams. Roads & Eng Constr 90:184-6+ N '52

Subsoil problems in Quebec. P. M. Bilodeau. il Roads & Eng Constr 90:128-9+ N '52

Texas stabilizes roads with quicklime. il Eng N 150:38-9+ F 5 '53

Sufficiency rating

American highways; how to measure their adequacy. R. E. Jorgensen. il Civil Eng 22:668-72 S '52

Businesslike approach to the highway problem; abstract. R. E. Jorgensen. S A E J 61:116+ Ag '53

Superhighways

Concrete selected for Delaware superhighway. diags Roads & Sts 95:114 N '52

Los Angeles study reveals freeway benefits. L. Aldrich. Pub Works 84:96-7 Jl '53

N.Y. thruway contractors begin record season. map Roads & Sts 96:69+ Ap '53

U.S. turnpike expansion. T. Mac New. il map Automotive Ind 108:56-8 Ap 1 '53

Venezuela builds new Caracas-La Guaira superhighway. H. Siblesz. il map diag Civil Eng 23:149-51 Mr '53

Venezuela rushes superhighway. il Constr Methods 34:76-7+ O '52

ROADS—Superhighways—*Continued*

Will super-highways bring super-accidents or super-safety? P. H. Blaisdell. Safety Maint & Prod 105:44-5 Ja '53

World's largest prestressed concrete bridge forms part of $6,000,000-a-mile road. il Roads & Eng Constr 90:114-15 O '52

Surface treatment

Minnesota improves its sealing methods. G. A. McPherson. Roads & Sts 96:113-14 Ap '53

Sealcoating in fall, winter, early spring. C. L. Motl. Roads & Sts 96:118 Ja '53

Surveying

Road surveys with gyroscopic equipment. il Engineer 195:368 Mr 6 '53

Testing

Washo and other current road tests. A. W. Johnson. il Roads & Eng Constr 90:130+ N '52

Tolls

$1.2 billion in toll projects reach construction stage. il Roads & Sts 96:63+ Ag; 86 S '53

Push toll highway proposals in five states; other programs. Eng N 150:24 Ja 15 '53

Rebirth of turnpikes. J. M. Fischer. Comm & Fin Chr 176:6+ sec 2 N 13 '52

State toll-highway proposals mount. Eng N 150:24 F 12 '53

Toll road problems and some solutions. R. H. Collacott. Nat Pet N 45:65-7 Mr 25 '53

Toll road proposals bustin' out all over. Roads & Sts 96:62-3 Ap '53

Toll turnpikes vs. toll-free bond roads; abstract. R. E. Jorgensen. Roads & Sts 95:110-11 N '52

Tolls proposed for Chicago expressways. map Roads & Sts 96:53 S '53

U.S. turnpike expansion. T. Mac New. il map Automotive Ind 108:56-8 Ap 1 '53

Why and how of toll roads. P. Merrill. il Bankers Mo 70:18+ Mr '53

Widening

Building slag widening strip, U.S. 20 near Dunkirk, N.Y.; illustrations with text. Roads & Sts 95:79 O '52

58-mile desert job in one contract; Carl E. Nelson co. il Roads & Sts 96:104-6 Mr '53

Putting new life in a dying road. J. C. Burnham. il Pub Works 84:86+ O '53

Rehabilitation, or new construction? M. B. Hodges. il diags Roads & Sts 96:106-9 Jl '53

Winter stockpiling, aggregate blending speeded Minnesota hot mix job. il Roads & Sts 96:120-2 My '53

Winter maintenance

Getting ready for winter. il Pub Works 84:71 Ag '53

Radio-telephone service on Ontario's winter-maintenance vehicles is extended. Roads & Eng Constr 90:81 N '52

Winter maintenance in New Hampshire. Pub Works 84:74+ Ag '53

See also

Roads—Ice control

Snow removal

Alberta

Alberta contemplates $100,000,000 expenditure in next five years. A. Frame. Roads & Eng Constr 90:124-5 N '52

Bolivia

Second try promises success on spectacular mountain highway. il maps Eng N 149:28-30 O 2 '52

Brazil

Brazil gets $3 million IBRD loan for highways. For Comm W 49:20 My 11 '53

Brazilian state asks world bank funds for roadbuilding machines. Eng N 150:72+ Ja 15 '53

British Columbia

Alcan in British Columbia; construction battles difficult access. L. L. Wise. il maps Constr Methods 34:42-8 N '52

British Columbia makes progress under difficult circumstances. E. S. Jones. Roads & Eng Constr 90:123-4 N '52

California

Bayshore freeway makes progress. il Eng N 149:50 N 20 '52

California highway planning survey aided by Census Bureau interviews. il Eng N 150:43 Mr 26 '53

Six-year road modernization job is over; Ridge route through the Sierra Madre. il Eng N 150:35-6 Ap 2 '53

Canada

Better roads for tomorrow's loads. F. B. Lautzenhiser. il Roads & Eng Constr 90:94-6+ D '52

Canadian counterpart of P.A.R. launched by Canadian good roads association. Roads & Eng Constr 91:90+ Jl '53

Canadian good roads association keeps pace with roadbuilding. M. D. Rawding. Roads & Eng Constr 90:162-5 N '52

Canadian good roads association 33d annual meeting, Quebec, Oct. 20-23. Roads & Eng Constr 90:113-22+ N '52

Continued federal-provincial highways program urged by C.C.A. Roads & Eng Constr 91:124+ F '53

Highways for industry are highways for defense. J. R. B. Jones. Roads & Eng Constr 91:154+ Mr '53

Highways in Canada, exclusive of urban streets; by provinces. Roads & Eng Constr 91:68 Je '53

Let's remove the road block. W. A. Wecker. il Roads & Eng Constr 90:91-3+ D '52

Need for roads outrunning construction. C. W. Gilchrist. Roads & Eng Constr 91:142+ My '53

Over $420,000,000 for rural highways in Canada this year. il Roads & Eng Constr 91:109-12+ My '53

Provincial highway officials; organization charts, provincial departments of highways. Roads & Eng Constr 91:70+ Je '53

Road mileages in Canada; according to type of surface, by provinces. Roads & Eng Constr 91:67 Je '53

Survey of Trans-Canada Highway construction progress; with present status and cost data. F. R. Inglis. il map Roads & Eng Constr 91:95-8+ Jl '53

Volume of road work projected for 1953 Roads & Eng Constr 91:190 Je '53

Connecticut

All is not peaceful as Connecticut works for competition on turnpikes. R. E. Bjorkback. Nat Pet N 45:44 Ap 15 '53

Connecticut plans expressway network. map Eng N 150:25 Ap 9 '53

Connecticut to take tolls on paid-up projects as aid to big road program. Eng N 150:26 Je 11 '53

Florida

Florida toll road faces test. Eng N 150:26 Ja 8 '53

Georgia

More money and new equipment for Georgia highways. C. E. Wright. il Pub Works 84:60-1+ F '53

Germany

Benefits of German de-freezer doubted; salt and snowplows still will be needed. Eng N 150:88+ My 14 '53

Great Britain

Right roads for Britain. map Economist 165:277-8+ O 25 '52

State of the roads. Economist 167:586 My 30 '53

Indiana

Indiana builds its own test pavements. il map diags Eng N 150:46-8 Ja 15 '53

Indiana looks to future of its roads. il map Eng N 149:35-7 D 18 '52

Indiana to compare pavement types. diags Roads & Sts 95:57-8+ N '52

Israel

New road from Beersheba to Sodom. il map diag Engineering 175:705-6 Je 5 '53

Kansas

All-weather road pleases the voters. L. A. Tilton. Pub Works 84:100 Ap '53

ROADS—*Continued*

Kentucky

Soil-cement methods on Kentucky federal secondary road project. C. B. Owens. il Roads & Sts 96:82-4 Ja '53

Louisiana

Louisiana road, bridge work spurts. map Eng N 150:26 Ja 22 '53

Maine

Putting new life in a dying road. J. C. Burnham. il Pub Works 84:86+ O '53

Manitoba

Manitoba is meeting road needs of an expanding economy. G. Collins. Roads & Eng Constr 90:126 N '52

Maryland

$568-million road plan urged for Maryland. map Eng N 149:27 N 20 '52

12-year $568-million road program approved by Maryland legislature. Eng N 150:23 Ap 16 '53

Massachusetts

Massachusetts wants gold plated deal on highway service station contracts. R. E. Bjorkback. Nat Pet N 44:18 D 24 '52

Spending slowdown; Massachusetts puts brake on road contract awards. Eng N 150:27 My 28 '53

Mexico

Mexico opens expressway. Eng N 149:66+ D 18 '52

Mexico's trans-isthmian highway nearing completion. il map Eng N 150:77 Ap 16 '53

Michigan

Highway program of Wayne county, Mich. Pub Works 84:80+ Jl '53

Minnesota

Minnesota, North Carolina reshape highway policies, administration. Eng N 150:26 My 14 '53

Nevada

58-mile desert job in one contract; Carl E. Nelson co. il Roads & Sts 96:104-6 Mr '53

New Brunswick

New Brunswick looks forward to increased road activity. G. W. Cassidy. Roads & Eng Constr 90:127 N '52

New Hampshire

Winter maintenance in New Hampshire. Pub Works 84:74+ Ag '53

New Jersey

Garden State parkway to stay within original cost estimates. Eng N 150:65 F 26 '53

Jersey turnpike carried over 18,200,000 vehicles first year. Roads & Sts 96:82-3 My '53

Locating super roads among existing utilities; experience on New Jersey turnpike indicates need for public-relations ability. E. H. Harlow. il diag Eng N 150:32-4+ Mr 5 '53

New Jersey turnpike acts to cut fog accidents. Eng N 149:26 N 27 '52

New Jersey turnpike, U.S.A. il map diags Engineer 194:198-9, 210-12, 242-7 Ag 8-22 '52

98½ mile turnpike shoulder contract. il Roads & Sts 96:71-5 F '53

Traffic rise on N.J. turnpike steps up expansion planning. map Eng N 149:40+ N 13 '52

Traffic up 24 per cent, accidents down on N.J. turnpike. Roads & Sts 96:89-90 S '53

Turnpike speed reduction urged. T. N. Boate. Weekly Underw 167:1512+ D 6 '52

27 per cent of turnpike accidents involve military personnel. C. E. McCandless. Safety Maint & Prod 105:62+ Mr '53

New York (state)

New York state thruway construction contracts under way on Dec. 8, 1952; tabulation. Roads & Sts 96:81 Ja '53

N.Y. thruway contractors begin record season. map Roads & Sts 96:69+ Ap '53

New York thruway program spotlights big business of roadbuilding. il Roads & Sts 96:69 Ag '53

Snow and ice control in upstate New York. F. R. Williams. il Pub Works 84:75+ Ag '53

Thruway branch will ease Buffalo traffic flow problems. C. R. Waters. il maps Eng N 150:41-3 Mr 19 '53

Thruway problems in Montezuma swamp. W. Robinson. il map diag Roads & Sts 95:44-7+ D '52

Tractor-mounted drills help boost yardage on Savin's big thruway job. il Roads & Sts 96:58-60+ S '53

Nicaragua

New highways opening markets in Nicaragua. For Comm W 49:27 My 4 '53

North Carolina

Minnesota, North Carolina reshape highway policies, administration. Eng N 150:26 My 14 '53

North Carolina improves heavy-duty route. C. E. Proudley. il diag Roads & Sts 96:72-5+ My '53

North Carolina's new flexible pavement methods for primary highways. T. V. Fahnestock. il Roads & Sts 96:78-80+ F '53

Nova Scotia

Continued highway improvement faces Nova Scotia. J. L. Wickwire. Roads & Eng Constr 90:156-7 N '52

Nova Scotia road builders association 6th annual meeting, Halifax, March 20. Roads & Eng Constr 91:117-20+ Ap '53

Ohio

Asphalt case; turnpike body authorized to await new ruling before revising plans. Eng N 150:22 Ap 9 '53

Asphalt vs. concrete battle in Ohio may affect future turnpike paving. H. Ridder. Nat Pet N 45:60-1 Ap 22 '53

Court says concrete for Ohio turnpike. Concrete 61:24 Jl '53; Abstract. Rock Prod 56:275 Ag '53

59 Ohio turnpike projects to be awarded soon. Roads & Sts 95:99 O '52

High court reverses lower; Ohio turnpike to be concrete. il Eng N 150:21-2 Je 11 '53

Ohio plans new turnpike. il Eng N 149:23 N 6 '52

Ohio ruling favoring asphalt goes to state Supreme court. Eng N 150:21 Ap 2 '53

Ohio turnpike; cement monopoly charge made in brief filed by asphalt interests. Eng N 150:22 My 21 '53

Ohio Turnpike commission expected to appeal if asphalt ruling holds. Eng N 150:24 Mr 5 '53

Ohio turnpike construction launched. Roads & Sts 96:64-5 Jl '53

Ohio turnpike paving costs challenged at hearings on asphalt vs. concrete. Eng N 149:25 D 4 '52

Special drainage along Ohio turnpike to protect farm tiling. H. N. Luebcke. il plan diags Roads & Sts 96:73-6+ Jl '53

Suit to open Ohio turnpike bidding to asphalt interests nears climax. Eng N 149:24 N 27 '52

Oklahoma

Turner turnpike. il map Diesel Power 31:44-5 Jl '53

Turner turnpike opened to traffic. il Manuf Rec 122:55+ Je '53

Turner turnpike's home stretch. il diag Roads & Sts 96:84-6, 92-3 Ag '53

Ontario

Atikokan road will be completed in Dec. map Roads & Eng Constr 91:98 Ag '53

Bypasses around urban centers feature Ontario's highway program. maps Roads & Eng Constr 91:116-18+ Ag '53

Highway operations in Ontario for current year to involve expenditure of $153,000,000. L. M. Frost. Roads & Eng Constr 91:89 Mr '53

Ontario Department of highways completes year of great progress. J. D. Millar. Roads & Eng Constr 91:141+ Mr '53

ROADS—Ontario—*Continued*

Ontario good roads association annual meeting, 51st, Toronto, Feb. 10-11; with abstracts of papers. Roads & Eng Constr 91:127-36+ Mr '53

Oregon

Oregon primary road relocation. il map Roads & Sts 96:74-6 Ap '53

Pennsylvania

Penn turnpike cuts top vehicle speeds. Eng N 150:27 Ja 29 '53
Pennsylvania adds up-hill truck lanes. il Roads & Sts 95:104-5 D '52
Pennsylvania turnpike commission checks into bus accidents. Roads & Sts 95:41 D '52
Pittsburgh dedicates eastern leg of Penn-Lincoln Parkway project. map Eng N 150:49-50 Je 25 '53
Revised road map. Bsns W p 137-8 My 16 '53

Quebec (province)

Province of Quebec carrying out its greatest road program. A. Bergeron. Roads & Eng Constr 90:127+ N '52

Saskatchewan

Saskatchewan's basic problem is large mileage, small population. W. M. Stewart. Roads & Eng Constr 90:125-6 N '52

South Africa

South Africa's national roads well advanced. For Comm W 48:27 O 20 '52

Texas

Rehabilitation, or new construction? M. B. Hodges. il diags Roads & Sts 96:106-9 Jl '53
Texas stabilizes roads with quicklime. il Eng N 150:38-9+ F 5 '53

United States

American highways; how to measure their adequacy. R. E. Jorgensen. il Civil Eng 22:668-72 S '52
Highway plans spurt in some states, hit money, legal snags in others. Eng N 149:102+ O 23 '52
Highway problem. Comp Air Mag 58:21 Ja '53
State highway programs, 1952-1953; construction programs, toll roads; tabulations. Eng N 150:22 Mr 19 '53
Techniques and trends; transportation; major projects. il Eng N 150:120-2+ F 19 '53
Toll road proposals bustin' out all over. Roads & Sts 96:62-3 Ap '53

Utah

Neat portable plant prepares granular base for Utah road. J. B. Parsons. il Constr Methods 34:82-4+ N '52

Venezuela

Boqueron tunnels carry Autopista through Andean foothills. R. Smillie. il diags Civil Eng 23:152-3 Mr '53
Caracas-la Guaira highway to cost $7 million a mile. il map Eng N 149:60+ N 6 '52
Venezuela builds new Caracas-La Guaira superhighway. H. Siblesz. il map diag Civil Eng 23:149-51 Mr '53
Venezuela rushes superhighway. il Constr Methods 34:76-7+ O '52
World's largest prestressed concrete bridge forms part of $6,000,000-a-mile road. il Roads & Eng Constr 90:114-15 O '52

Virginia

Alternate tunnel route proposed; Norfolk planners urge change to course for Hampton Roads bridge and tunnel. Eng N 150:46 F 26 '53
How a Virginia highway was rebuilt for heavier traffic. H. J. McKeever. il map diags Roads & Sts 96:105-10 Ja '53
Traffic snarls spur new highway plans. Eng N 149:28 D 25 '52

Washington (state)

$5-million freeway moves ahead. il Eng N 149:48 N 20 '52
Seattle highway work awaits legislative acts. Eng N 150:53 Ja 22 '53

West Virginia

Alternate paving bids planned for West Virginia turnpike. diags Roads & Sts 96:74-5+ S '53
Big grading job started for West Virginia turnpike. il map Roads & Sts 96:44-5 Je '53
Judge upholds West Virginia turnpike. Eng N 149:26 N 20 '52
Motorists' West Virginia turnpike view is spectacular, but contractors' view is hard work, rough going. R. H. Lewis. il map Constr Methods 35:64-8+ S '53

Wyoming

Keeping up Wyoming's asphalt roads. W. E. Sutton. il Roads & Sts 95:78-80 N '52

ROADS, Asphalt

58-mile desert job in one contract; Carl E. Nelson co. il Roads & Sts 96:104-6 Mr '53
See also
Pavements, Asphalt

ROADS, Bituminous

All-weather road pleases the voters. L. A. Tilton. Pub Works 84:100 Ap '53
Asphalt membranes; their potential uses in highway and airfield pavement design. J. R. Benson. diags Roads & Sts 95:78-80 D '52
Bituminous soil stabilization in Kansas. D. L. Lacy. il Roads & Sts 95:72-6+ D '52
Brittle fracture of tars and bitumens. P. J. Rigden and A. R. Lee. bibliog il diags J Ap Chem 3:62-70 F '53
Heavy base lifts for resurfacing. C. R. Waters. il diags Roads & Sts 95:75-8 O '52
How a Virginia highway was rebuilt for heavier traffic. H. J. McKeever. il map diags Roads & Sts 96:105-10 Ja '53
Native materials make good road. Constr Methods 35:172 My '53
Neat portable plant prepares granular base for Utah road. J. B. Parsons. il Constr Methods 34:82-4+ N '52
Road construction for a tropical oilfield. Engineer 195:239 F 13 '53
Scrapers build county sand-lift roads. W. H. Taylor. il Roads & Sts 96:72+ Je '53
Sealcoating in fall, winter, early spring. C. L. Motl. Roads & Sts 96:118 Ja '53
Use of emulsified asphalt in base course materials. D. E. Stevens. Roads & Sts 96:100+ Je '53
Views and comments on bituminous highway construction. H. G. Nevitt. Roads & Sts 95:86 O '52 [cont monthly]
Winter stockpiling, aggregate blending speeded Minnesota hot mix job. il Roads & Sts 96:120-2 My '53
See also
Pavements, Bituminous

Maintenance and repair

Heavy discs under grader helped scarify old mat. il Roads & Sts 96:109 Mr '53
Hot patching mixtures in highway maintenance. il Roads & Sts 95:92-5 S; 87-8+ O; 88+ N; 82-3 D '52
Keeping up Wyoming's asphalt roads. W. E. Sutton. il Roads & Sts 95:78-80 N '52
Patching methods in Arkansas. W. E. Carter. Roads & Sts 96:75 F '53
Reworking of bituminous pavements. H. H. Harris. il Roads & Sts 96:110+ Mr '53

ROADS, Bituminous concrete

Alternate paving bids planned for West Virginia turnpike. diags Roads & Sts 96:74-5+ S '53
Asphalt vs. concrete battle in Ohio may affect future turnpike paving. H. Ridder. Nat Pet N 45:60-1 Ap 22 '53
Cooperative study of fillers in asphaltic concrete. C. A. Carpenter. Pub Roads 27:101-10 D '52
Current practices in use of quarry fines in bituminous concrete; abstract. J. E. Gray. Rock Prod 56:81-3 Mr '53
Hot plant mix is economical for county highways. P. S. Banaszek. il Pub Works 84:54-6+ Jl '53
Indiana builds its own test pavements. il map diags Eng N 150:46-8 Ja 15 '53
Ohio turnpike paving costs challenged at hearings on asphalt vs. concrete. Eng N 149:25 D 4 '52

ROADS, Bituminous concrete—*Continued*

Slow curing oil used on several hot mix jobs in Minnesota. Roads & Sts 96:114-15 Ap '53

Suit to open Ohio turnpike bidding to asphalt interests nears climax. Eng N 149:24 N 27 '52

Traveling asphalt plant mixes soil-cement base. il Constr Methods 35:153-4+ Mr '53

Turner turnpike's home stretch. il diag Roads & Sts 96:84-6, 92-3 Ag '53

See also

Pavements, Bituminous concrete

Prices

Bituminous highway, Maine; unit prices. Eng N 149:105 D 18 '52

ROADS, Concrete

Alternate paving bids planned for West Virginia turnpike. diags Roads & Sts 96:74-5+ S '53

Asphalt vs. concrete battle in Ohio may affect future turnpike paving. H. Ridder. Nat Pet N 45:60-1 Ap 22 '53

Concrete selected for Delaware superhighway. diags Roads & Sts 95:114 N '52

Court says concrete for Ohio turnpike. Concrete 61:24 Jl '53; Abstract. Rock Prod 56:275 Ag '53

High court reverses lower; Ohio turnpike to be concrete. il Eng N 150:21-2 Je 11 '53

Indiana builds its own test pavements. il map diags Eng N 150:46-8 Ja 15 '53

Ohio turnpike paving costs challenged at hearings on asphalt vs. concrete. Eng N 149:25 D 4 '52

Suit to open Ohio turnpike bidding to asphalt interests nears climax. Eng N 149:24 N 27 '52

Test post-tensioned highway slabs. il Eng N 150:59-61 Ap 23 '53

See also

Pavements, Concrete

Roads, Bituminous concrete

Construction equipment

Contractor's formless paver shows promise. H. J. Spelman, jr. il Constr Methods 35:128-9+ S '53

Joints

Mechanised joint maintenance for concrete roads. il Engineer 195:870-1 Je 19 '53

Ohio's new cold joint seal methods. C. W. McCaughey. il Roads & Sts 96:46-7 Je '53

Maintenance and repair

North Carolina improves heavy-duty route. C. E. Proudley. il diag Roads & Sts 96:72-5+ My '53

Pavement undersealing; abstract. W. E. Chastain and J. E. Burke. Roads & Sts 96:65 F '53

Subsealing concrete pavements with emulsion. J. M. Lewis. il Pub Works 84:139 S '53

Standards

Proposed manual of standard practice for detailing reinforced concrete highway structures. plans diags Am Concrete Inst J 24:857-60 My '53

Testing

Prestressing of concrete for road paving studied by British research board. il diags Roads & Eng Constr 91:93-5+ S '53

ROADS, County

Creosoted timber bridge for county highways. W. D. Keeney. il Pub Works 84:68-9+ Je '53

Highway program of Wayne county, Mich. Pub Works 84:80+ Jl '53

Hot plant mix is economical for county highways. P. S. Banaszek. il Pub Works 84:54-6+ Jl '53

Problems of the county and township road authorities. M. F. Ker and others. Roads & Eng Constr 91:150+ Mr '53

Scrapers build county sand-lift roads. W. H. Taylor. il Roads & Sts 96:72+ Je '53

ROADS, Elevated

Fabrication and erection methods for all-welded expressway viaduct. H. H. Tarzian and P. G. Jonas. il plan diags Roads & Sts 96:70-7 Ag '53

Lighting an elevated roadway. W. Henschel. il Illum Eng 48:75-6 F '53

Steel-framed elevated highway as a traffic-relief measure in New York city. il map Roads & Eng Constr 91:87-9+ Jl '53

Tunnel and viaduct to ease Seattle's traffic troubles. R. W. Finke. il plan Civil Eng 22:1025-9 D '52

ROADS, Experimental

Construction, instrumentation and testing; Washo test road in southern Idaho. N. W. McLeod. Roads & Eng Constr 91:92-3+ Ja '53

Cracking and surface displacement evident in some sections of Washo test road. Roads & Eng Constr 91:72 My '53; Roads & Sts 96:81-2 My '53

Indiana builds its own test pavements. il map diags Eng N 150:46-8 Ja 15 '53

Indiana to compare pavement types. diags Roads & Sts 95:57-8+ N '52

Procedure in constructing the Washo test road. T. N. Carter. Roads & Eng Constr 91:93 Ja '53

Progress report on WASHO road test. Roads & Eng Constr 91:90 Ag '53

Test trucks rolling on Washo road tests. Roads & Eng Constr 90:86 N '52; Roads & Sts 95:47 N '52

ROADS, Gravel

Stabilization

Service behavior of calcium chloride treated gravel roads. E. M. Baylard. Pub Works 84:134 O '53

Stabilizing a township road with salt. il Eng N 150:43+ Je 25 '53

Sulphite liquor as a stabilizer. J. E. Hurtubise. Roads & Eng Constr 90:190-2 N '52; Same. il Can Chem Process 37:58+ F '53

ROADS, Macadam

What about hard top for township roads? M. F. Ker. Roads & Eng Constr 91:150+ Mr '53

ROADS, Oiled

One way to squirt a side road turnout; illustrated instructions. il Roads & Sts 96:129 My '53

ROADS, State

State toll-highway proposals mount. Eng N 150:24 F 12 '53

ROADS, Township

Effect of highway research on township and municipal road development. N. W. McLeod. diags Roads & Eng Constr 91:145-8+ Mr '53

Problems of the county and township road authorities. M. F. Ker and others. Roads & Eng Constr 91:150+ Mr '53

ROADSIDE planting

Ground-cover plants for erosion control. Roads & Sts 95:118-20 N '52

Roadside vegetative cover research in New York. Roads & Sts 96:88-9+ Jl '53; Abstract. Pub Works 84:84 Jl '53

ROADSIDES

Kent county cuts brush, and then sprays chemicals. O. S. Hess. Roads & Sts 96:88-9 My '53

Mulching for roadside protection and improvement. il Roads & Eng Constr 91:128+ Ap '53; Same cond. Pub Works 84:99 Jl '53

New power equipment ideas for roadside landscaping and maintenance. W. J. Garmhausen. il Roads & Sts 96:52-5 Je; 84-6 Jl '53

Precise sloping ditch replaces weed-choked and silted roadside. il diags Constr Methods 35:92-3 Mr '53

Reducing the cost of roadside mowing and shoulder maintenance. R. C. Bannerman, jr. il Pub Works 84:67+ Mr '53

What about roadside weed and brush control? A. H. Martin; R. M. Dawson. Roads & Eng Constr 91:203-4+ Mr '53

ROAN antelope copper mines, limited

Statement by the chairman. R. L. Prain. Economist 165:484 N 15 '52

ROANOKE river

Dam harnesses the Roanoke. il Eng N 149:28 O 9 '52

ROBERTS, Dudley, jr.

Portrait. Fortune 47:93 Ja '53

ROBERTSHAW-FULTON controls company

Preferred stock offered. Comm & Fin Chr 177:2787 Je 29 '53

ROBERTSON, Albert J.
Portrait. Bsns W p98 Je 27 '53

ROBERTSON, Alexander
Royal society awards. Chem Age (Lond) 67:763-4 D 6 '52

ROBINSON, Ed
My group head talks to goats; Ed Robinson splits his thoughts and time between copy at J. Walter Thompson and crops on his farm. S. H. Margolis and M. Silverstein. Ptr Ink 242:40+ Mr 13 '53

ROBINSON, Kinsey Maxfield, 1895-
Businessmen in the news. por Fortune 47:61 Ap '53

ROBINSON-PATMAN law. See Price discrimination—Patman law

ROCHELLE salt. See Potassium sodium tartrate

ROCHESTER, Minnesota

Sewerage

Industrial wastes influence municipal plant design. R. E. Monson. il Pub Works 84:84 Ap '53

ROCHESTER, New York
Open shop bastion wavers. il Bsns W p 161-2 My 16 '53
Teaching a city economics. il Bsns W p78-80+ Je 20 '53

Streets

Prescription for winter-coated streets. J. V. Lewis. il Pub Works 84:76-7+ O '53

ROCHESTER conference on high-energy physics
Annual meeting, 3d, Dec. 18-20, 1952. Science 117:474-6 My 1 '53

ROCHESTER gas and electric corporation
Stock offering underwritten. Comm & Fin Chr 177:2397 Je 1 '53

ROCK drills
Completely air-operated block hole drill. W. E. Johnson. il Rock Prod 56:91-3 Mr '53
Drilling down under follows familiar lines. Eng & Min J 154:100-1 O '53
How goes the airleg drilling combination? Eng & Min J 153:105-8 D '52
Hydraulic drilling; Gay coal & coke co. il Coal Age 58:94-5 F '53
Induction heating for better blast hole drill bits. J. H. Hearding, jr. il Min Eng 5:974-6 O '53
Jackrolling tool will prolong life of alloy-steel drill rods for detachable bits. il Comp Air Mag 57:320 N '52
New rock drill principle tested. il Eng N 150:66 Je 11 '53; Constr Methods 35:135-6 S '53
Novel drill is fast with deep vertical four-in. holes; Record H.S. deep rock drilling machine. il Eng & Min J 154:102-4 S '53
Orientation of cube diamonds in drill bits. E. P. Pfleider. il Min Eng 5:Trans 998-1003 O '53
Oriented diamond bits cut drilling costs. A. E. Ross and A. E. Long. il Min Cong J 39:71-3 Ag '53
Power auger drills and their use in highway work. C. G. Johnston. il Roads & Sts 95:81+ D '52
Research on the cutting action of the diamond drill bit. E. P. Pfleider and R. L. Blake. bibliog il diags Min Eng 5:Trans 187-95 F '53
Rock breaking; American mining congress, Western division; abstracts of papers. Min Cong J 38:118-21 O '52
Rotary drilling in open pit operations. G. R. Putnam. il Min Cong J 39:44-6 Je '53
Selection of detachable drill bits. E. R. Borcherdt. bibliog il diags Min Eng 5:Trans 201-8 F '53
Shank breakage less with one-inch tipped steel. Eng & Min J 154:118 My '53
Sink deep holes at low cost with rotary drill; Virginian limestone corp. D. O. Duncan. il Rock Prod 56:87-8+ F '53
Standards up to date for diamond core drill fittings. H. A. Kurtze. diag Eng & Min J 153:112 D '52
Tooling takes to the road; Joy manufacturing co. H. B. Osborn, jr. il Tool Eng 31:79-80 O '53
Tractor-mounted drills help boost yardage on Savin's big thruway job. il Roads & Sts 96:58-60+ S '53
Trends in hollow drill steel. W. H. McCormick and R. W. Persons. il diag Min Cong J 38:58-61 D '52; Abstract. Steel 131:300+ O 13 '52; Discussion. Min Cong J 38:61-3 D '52
Tungsten carbide drilling takes the lead. A. H. Hubbell. il Eng & Min J 154:111-16 F '53
Verticals drill blast holes. il Constr Methods 35:158 F '53
Why mines in Norway and Sweden adopted flat drill steel. C. C. Austin. diags Eng & Min J 154:86-7 O '53

See also

Drilling and boring (earth and rocks)

ROCK products

See also

Aggregates
Stone, Crushed

ROCK products industry
Building community good will; American aggregates corp.; presentation of a landscaped park to the city of Greenville. Rock Prod 55:96-7 D '52
Dams and the rock products industries. W. B. Lenhart. il Rock Prod 55:98-102+ D '52
Merchandise production of several companies through sales concern; Material sales co. C. E. Brady. il Rock Prod 56:88-90 My '53
Outlook; producers views indicate active 1953. B. Nordberg. Rock Prod 56:102-7+ Ja '53
Progress in the sand and gravel industry. W. B. Lenhart. flow sheet il Rock Prod 56:92-101 Ja '53

Pennsylvania

Pennsylvania stone producers association and Pennsylvania aggregates producers annual meeting, Harrisburg, Jan. 28. Rock Prod 56:101+ Mr '53

ROCK products plants

Directories

Commercial producers of sand, gravel and crushed stone, Canada. Roads & Eng Constr 91:198+ Je '53

Equipment

Diversify; only company which produces cement, aggregates, ready mix, and concrete products; New York coal sales co. B. Nordberg. il map plan diag Rock Prod 56:74-86+ F '53
Moving large crushing plant; New York trap rock corp. il Rock Prod 56:71 My '53
Nation's outstanding new crushed stone plant; Dolese bros. co. B. Nordberg. flow sheet il plans diags Rock Prod 56:108-25+ Ja '53
Rock Products directory of manufacturers' equipment, 1953. Rock Prod 56:279-314 Ja '53
Secondary collectors for recovery of fine dust. E. Weller. il Rock Prod 55:114 D '52
Small plant has high capacity; Valley Forge stone co. W. B. Lenhart. il Rock Prod 55:104-5 D '52

Safety measures

Plant safety pays bonus to employees; New Haven trap rock co. T. W. Jones. il Concrete 61:28-30 S '53
Succeeding with safety. A. J. R. Curtis. Rock Prod 56:120 Mr '53

ROCK salt. See Salt

ROCK wool. See Mineral wool

ROCKDALE, Texas
When big business comes to a country town. J. Garth. il Am Bsns 23:26-7+ Mr '53

ROCKEFELLER, James Stillman, 1902-
Businessmen in the news. por Fortune 47:56 F '53
New chiefs for the National city bank. por Bsns W p26 Ja 10 '53

ROCKEFELLER, Nelson Aldrich, 1908-
Portrait. Bsns W p94 F 21 '53

ROCKET engines
Assisted take-off rocket motor; de Havilland aircraft co. Engineer 196:252 Ag 21 '53; Engineering 176:287 Ag 28 '53
Liquid propellant rocket motors. B. R. Diplock and others. il plan diags Roy Aeronautical Soc J 57:19-28 Ja '53
Rocket engine design advances. il Aviation W 58:47 Ap 13 '53

ROCKET engines—*Continued*

Fuel

Behavior of liquid hydrocarbons with white fuming nitric acid. C. H. Trent and M. J. Zucrow. bibliog diag Ind & Eng Chem 44:2668-73 N '52

Testing

Applications of high-speed photography in rocket motor research. F. G. Stratton and K. R. Stehling. il diag Soc Motion Picture & Tv Eng J 60:597-602 My '53

Pressure recorder for rocket motor studies. J. Alman. il diags Electronics 26:146-7 My '53

Rockets; fuel consumption accurately predicted in Ryan setup. il Iron Age 170:160+ D 18 '52

ROCKET propulsion

Aerodynamic research with rocket-propelled models at the Pilotless aircraft research station of the National advisory committee for aeronautics. il Engineer 194:254-5 Ag 22 '52

Dawn of aviation's new era. D. G. Samaras. il S A E J 61:69-72 S '53

IAS summaries. Aviation W 58:43-4 F 16 '53

ROCKETS

American rocket society 7th annual convention, New York; abstracts of papers. Aviation W 57:31-2 D 22; 58:41+ Ja 5; 30+ Ja 12 '53

Automatic rocket-firing device for jet interceptors. il Elec Eng 72:397 My '53

Conductor stringing with the help of rockets. Engineer 196:119 Jl 24 '53; Elec R (Lond) 153:144 Jl 17 '53

Development of rocketry; abstract. W. Von Braun. il S A E J 61:106, 108 Mr '53

Down-to-earth view of space flight. M. W. Rosen. Machine Design 25:284+ My '53

Evaluation of plastics for liquid rocket propellant applications. P. M. Terlizzi and A. E. Lenehan. il diags Mod Plastics 30:140+ F '53

Experimental study of natural vibrations of cantilevered triangular plates. P. N. Gustafson and others. bibliog il diags J Aeronautical Sci 20:331-7 My '53

F-86D's rocket launcher shown. il Aviation W 58:16 Mr 23 '53

Free-flight investigation of the possibility of high Reynolds number supersonic laminar boundary layers. J. Sternberg. bibliog il diags J Aeronautical Sci 19:721-33 N '52

Hawker-Siddeley buys rocket-missile plant. Aviation W 58:34 Mr 16 '53

High altitude research. E. Burgess. il diags Engineer 194:338-40, 370-3 S 12-19 '52

Microsecond photography of rocket in flight. E. Barkofsky and others. il diags Electronics 26:142-7 Je '53

Propellant injector design. R. W. Young. diags S A E J 61:36 Ag '53

Ramjets or rockets for missiles? S. H. Reiniger. il Aviation W 58:25-6 Ja 12 '53

Rocket determination of the ionization spectrum of charged cosmic rays at λ=41°N. G. J. Perlow and others. bibliog diags Phys R 88:321-5 O 15 '52

Rocket nozzles; search for high heat resistant materials continues. Iron Age 170:148 N 20 '52

Rockets push XF-91 past Mach one. il Aviation W 57:17 D 15 '52

Space ship the easy problem. M. W. Rosen and R. B. Snodgrass. Midwest Eng 5:30-1 N '52

Study of burner oscillations of the organ-pipe type. A. A. Putnam and W. R. Dennis. diags A S M E Trans 75:15-26; Discussion. 27-8 Ja '53

System study urged for satellite. Aviation W 58:155 Mr 2 '53

Wide peace use seen for earth satellite. H. Ross. Aviation W 58:39-40 Ap 27 '53

Manufacture

Air and ideas make spotwelder automatic; Stewart-Warner corp. R. P. Roberts. il diag Am Mach 96:104-5 D 22 '52

Cold extrusion saves time and material in making rocket elements. J. Geschelin. il Automotive Ind 108:62-5 Ja 1 '53

Conveyors carry cold-extruded rockets to high production level; Pontiac division, General motors corp. W. G. Patton. il diag Iron Age 171:225-31 My 7 '53

Forming and welding of titanium. F. H. Stevenson. il Welding J 31:1035-41 N '52

Pontiac cold-extrudes rocket projectiles. B. C. Brosheer. il diag Am Mach 97:118-20 Ja 5 '53

Testing

Jet engine speeds at 1500 mph on special railroad track. il Iron Age 171:168 Ap 2 '53

U S air force rocket experiments send mammals to 200,000 feet. Elec Eng 71:1155-6 D '52; Same cond. il Electronics 25:180+ D '52

ROCKFORD morning star

Rockford dailies bought by E. K. Todd and F. W. Justs. Ed & Pub 85:11+ N 1 '52

ROCKFORD register republic

Rockford dailies bought by E. K. Todd and F. W. Justs. Ed & Pub 85:11+ N 1 '52

ROCKHILL productions, inc.

Stock offered. Comm & Fin Chr 177:2460 Je 8 '53

ROCKLAND light and power company

Public utility securities. O. Ely. Comm & Fin Chr 176:1942 N 20 '52

ROCKS

Application of high pressure in geophysics; experimental rock deformation. J. Handin. bibliog il diags A S M E Trans 75:315-24 Ap '53

Differentiation of a composite aplite from the Pribilof islands, Alaska. T. F. W. Barth. bibliog map Am J Sci Bowen vol p27-36 '52

Dilatancy in migration and accumulation of oil in metamorphic rocks. D. A. McNaughton. bibliog maps diags Am Assn Pet Geologists Bul 37:217-31; Discussion. 314-30 F '53

Eastern front of the Bitterroot range, Montana. C. P. Ross. il map diag U S Geol S Bul 974-E:135-75, pl 4 [in pocket] bibliog(p 173-4); pa $1.00 Supt. of doc. '52

Effect of rock content and placement density on consolidation and related pore pressure in embankment construction. H. J. Gibbs. il diags Am Soc T M Proc 50:1343-60; Discussion. 1361-3 '50

Electrical conduction in fluid-saturated rocks. B. F. Howell, jr. diags World Oil 136:113-14+ F; 142+ Mr '53

Gefügerelief illustrated by schist tor topography in central Otago, New Zealand. F. J. Turner. bibliog map Am J Sci 250:802-7, pl 1-2 N '52

Granulites of Lapland. P. Eskola. il map Am J Sci Bowen vol p 133-71 bibliog(p 170-1) '52

Hydrothermal rock alteration at Wairakei, New Zealand. A. Steiner. bibliog il map diag Econ Geol 48:1-13 Ja '53

Lithologic character of Chester rocks in Illinois-Kentucky fluorspar district. A. H. Sutton and W. A. Oesterling. map diags Am Assn Pet Geologists Bul 36:1777-801 S '52

Method of petrographic examination of aggregates for concrete. K. Mather and B. Mather. il Am Soc T M Proc 50:1288-312 bibliog (p 1308-12); Discussion. 1312-13 '50

Petrographic classification of argillaceous sedimentary and low-grade metamorphic rocks in subsurface. P. T. Flawn. Am Assn Pet Geologists Bul 37:560-5 Mr '53

Petrography and metamorphism of sediments of Ouachita facies. A. Goldstein, jr. and D. H. Reno. il maps diags Am Assn Pet Geologists Bul 36:2275-90 D '52

Ripple marks aid geologists. O. F. Evans. il diags World Oil 135:153-4+ O '52

Terminology for stratification and cross-stratification in sedimentary rocks. E. D. McKee and G. W. Weir. bibliog diags Geol Soc Bul 64:381-9 Ap '53

See also

Breccia
Continental shelf
Dolomite
Drilling and boring (earth and rocks)
Geology
Geophysics
Granite
Gypsum
Limestone
Metamorphism
Minerals
Pegmatites
Phosphate rock
Quarries and quarrying
Sedimentation and deposition
Shale
Stone, Crushed

ROCKS—*Continued*

Age

See Geological time

Analysis

Chemical petrology of some metamorphosed Adirondack gabbroic, syenitic and quartz syenitic rocks. A. F. Buddington. bibliog il map diags Am J Sci Bowen vol p37-84 '52

Clay minerals in sedimentary rocks and derived soils. F. B. Van Houten. map Am J Sci 251:61-82 bibliog(p80-2) Ja '53

Leucite, potash nepheline, and clinopyroxene from volcanic lavas from southwestern Uganda and adjoining Belgian Congo. T. G. Sahama. Am J Sci Bowen vol p457-70 bibliog(p469-70) '52

Physico-chemical studies on dusts; accuracy of chemical estimation of free silica in rocks and mineral dusts. W. M. Cumming, P. B. Dempster and P. D. Ritchie. bibliog J Ap Chem 2:658-63 N '52

Simple test for titanium gives rock formation clues. Chem & Eng N 30:5372-3 D 22 '52

ROCKS, Igneous

Granitic rocks of the western Carolina Piedmont. W. R. Griffitts and W. C. Overstreet. bibliog map Am J Sci 250:777-89 N '52

Gravity and magnetic investigation of the structure of the Cortlandt complex, New York. N. C. Steenland and G. P. Woollard. bibliog maps diags Geol Soc Bul 63:1075-104 N '52

Metamorphism of basaltic rocks; a review. A. Poldervaart. Geol Soc Bul 64:259-73 bibliog(p271-3) Mr '53

Method for determining the age of igneous rocks using the accessory minerals. E. S. Larsen, jr. and others. bibliog Geol Soc Bul 63:1045-52 O '52

Pegmatitic differentiates of basic sheets. F. Walker. Am J Sci 251:41-60, pl 1 bibliog(p59-60) Ja '53

Pleistocene clastic dikes in weathered granite-gneiss, Rhode Island. J. H. Birman. bibliog maps diags Am J Sci 250:721-34, pl 1 O '52

Some trends of basaltic magma in limestone syntexis. C. E. Tilley. bibliog diags Am J Sci Bowen vol p529-45 '52

System FeO—Al_2O_3—SiO_2. J. F. Schairer and K. Yagi. diags Am J Sci Bowen vol p471-512 bibliog(p510-12) '52

See also

Granite
Laccoliths
Ore deposits
Pegmatites
Volcanic ash, tuff, etc.

ROCKWELL hardness test. See Hardness—Testing

ROCKY Mountain electrical league

Meeting, Denver, April 27-28. Elec West 110:156+ Je '53

ROD mills (for crushing). See Tube mills

RODENTICIDES

Poisons rules changes take effect Jan. 19. Oil Paint & Drug Rep 162:4 D 22 '52

See also

Rats—Extermination

RODENTS

Insect and rodent control in epidemics and disasters. J. S. Wiley and P. A. Stephens. il Pub Health Rep 68:334-7 Mr '53

Unusual reproductive phenomena in rodents. F. L. Evans. bibliog Science 117:159-60 F 13 '53

See also

Mice

RODGERS, William Starling Sullivan, 1886-

W.S.S. Rodgers heads NSC trustees. por Nat Safety N 67:35 F '53

ROEBLING, John A., sons company

Romance of the Roeblings. Comp Air Mag 58:53 F '53

ROESCH, W. Eugene, d 1952

Sketch. por Spectator 160:31 O '52

ROGERS, Augustus James, 1848-1907

Pioneer American electrometallurgist. O. L. Kowalke. Electrochem Soc J 99:sup315C-18C N '52

ROGERS, Bruce, 1870-

Bruce Rogers of October house. L. H. Allen. pors Inland Ptr 131:44-5+ My '53

ROGERS, William Pierce

Portrait. Bsns W p29 D 6 '52

ROLE-playing in training. See Dramatization in training

ROLLER bearings. See Bearings, Roller

ROLLERS

Motion of a link chain over a roller. A. E. R. de Jonge. diags A S M E Trans 75:747-58 Jl '53

ROLLERS (earthwork)

Pneumatic rollers cut costs and time on earthfill dams. G. E. Bertram. il diag Eng N 150:30-2 Ap 2 '53

Twose tractor-roller assembly. il Engineer 195:563 Ap 17 '53

ROLLERS, Printers'

Understand detergents you use for cleaning rollers. C. F. King. il Inland Ptr 130:50+ D '52

ROLLING (metal work)

Cold roll forming. F. Spicer. il Automobile Eng 43:391-2 S '53

Cold-rolled fillets. R. J. Love. diags Engineering 174:164 Ag 8 '52

Cold-rolling and annealing textures of molybdenum single crystals. N. K. Chen and R. Maddin. bibliog il diags J Metals 5: Trans 300-4 sec 2 F '53

Cone rolling made easy. il Steel 132:122 My 25 '53

Control of strip thickness in cold rolling by varying the applied tensions. R. B. Sims and others. bibliog diags Iron & Steel Inst J 173:343-54 Ap '53; Discussion. 174: 353-8 Ag '53

Developments in the rolling of broad flange beams at the Cargo fleet iron company, ltd. G. B. Thomas. 4pls Iron & Steel Inst J 173:113-18 F '53; Abstract. Engineering 175: 650 My 22 '53; Discussion. Iron & Steel Inst J 174:339-40 Ag '53; Engineering 175: 650 My 22 '53; Engineer 195:694 My 15 '53

Effect of direction of rolling, direction of straining, and ageing on the mechanical properties of a mild-steel plate. C. F. Tipper. bibliog Iron & Steel Inst J 172: 143-8 O '52; Abstract. Metal Prog 64:288+ O '53; Discussion. il diags Iron & Steel Inst J 173:280-4 Mr '53; Engineer 194:824-5 D 19 '52

Effect of temperature on the rolling texture of plastically deformed low-carbon strip; abstract. N. P. Goss. Metal Prog 63:182+ F '53

Effect of tension on torque and roll force in cold strip rolling. W. C. F. Hessenberg and R. B. Sims. bibliog Iron & Steel Inst J 168:155-64 Je '51; Discussion. 172:28-40 S '52

Factors influencing surface quality of high sulphur steels. G. G. Blean. Iron & Steel Eng 30:79-81; Discussion. 82-3 Ja '53

Formation of deformation bands in Al-3 per cent Mg monocrystals during cold rolling. J. Herenguel and others. bibliog il diags J Metals 5:Trans 559-64 Ap '53

Measurement of strip tension in tandem mills. R. B. Sims. il diags Engineering 174:232-3, 262-4 Ag 22-29 '52

New vistas opened for metals; warm working at temperatures of 300 to 650°F affords control of texture. N. P. Goss. Steel 132:84 Ja 26 '53

Paper-thin metals; availability stimulates design. M. Sherman. il Product Eng 24:138-41 Ja '53

Pass design for hexagons. H. E. Muller. diags Iron & Steel Eng 30:55-63; Discussion. 63-4 My '53

Precision rolling forms jet seals at high speed. W. G. Patton. il Iron Age 171:128-30 Je 25 '53

Pressure distribution between stock and rolls in hot and cold flat rolling. C. L. Smith and others. bibliog diags Iron & Steel Inst J 170:347-59 Ap '52; Discussion. 172:28-40 S '52

Roll forming; simple method for designing rolls. E. J. Vanderploeg. il diags Tool Eng 31:59-65 O '53

Rolling of precision rounds in the U.S.A. R. Stewartson. plan diags Iron & Steel Inst J 172:419-26 D '52

Rolling tapered aluminum isn't easy. J. H. Alden. il Steel 132:118-19 My 25 '53

Rolls and rolling (cont). E. E. Brayshaw. diags Blast F & Steel Pl 40:1311-18; 41: 69-74, 399-407, 1040-7, 1176-86 N '52, Ja, Ap, S-O '53

ROLLING (metal work)—*Continued*

Speed-dependent variables in cold strip rolling. R. B. Sims and D. F. Arthur. bibliog Iron & Steel Inst J 172:285-95 N '52; Discussion. 174:353-8 Ag '53

Wire rolling; Knowles Loom rolls stainless steel wire for loom reeds. il Iron Age 171: 154+ Ap 9 '53

Works trial of the T methods of automatic gauge control. R. B. Sims and others. il diags Iron & Steel Inst J 173:354-60 Ap '53; Discussion. 174:353-8 Ag '53

See also

Rolling mills

Steel, Strip

Thread rolling

Tables, calculations, etc.

Cold rolling with strip tension. H. Ford and others. bibliog diags Iron & Steel Inst J 168:57-72 My '51; Discussion. 172:28-40 S '52

Rolling of thin strip. M. D. Stone. bibliog il diags Iron & Steel Eng 30:61-73; Discussion. 73-4 F '53

ROLLING mills

Armco strip mill bows in. il Iron Age 171: 72-3 My 28 '53; Steel 132:76-7 My 25 '53

Association of iron and steel engineers, rolling mill committee annual spring conference, Buffalo, May 18-19; abstracts of papers. Iron & Steel Eng 30:107-10 Ap '53

Developments in the iron and steel industry during 1952. I. E. Madsen. il diags Iron & Steel Eng 30:141-6 Ja '53

European steel industry and the wide strip mill. Engineer 196:238-9 Ag 21 '53

Granite City starts roughing mill. Blast F & Steel Pl 41:1175 O '53

Granite City Steel starts new blooming mill. il Iron & Steel Eng 30:125 My '53

High speed mills and their application to ferrous and non-ferrous rolling. G. Perrault, jr. il plan diags Iron & Steel Eng 30:83-9 Jl '53; Excerpts. Steel 131:102+ O 6 '52; Discussion. Iron & Steel Eng 30: 89-91 Jl '53

Machine to cold reduce 18-in. tubing. G. B. Brown. diags Iron & Steel Eng 30:80-6 Ap '53; Abstract. Steel 132:90-1 F 9 '53

Mechanical design and operation of J & L's new blooming mill; abstract. J. H. Mayer. Steel 132:94+ Je 29 '53

New mill rolls uranium bars on production basis. il Iron Age 171:138 My 28 '53

On the frontier; steel-rod mill in Aliquippa, Pa.; illustration. Fortune 47:112-13 Ap '53

Operation and roll design of the Gary rail mill. R. W. Dickson. il plan diags Iron & Steel Eng 30:93-9; Discussion. 99-101 Ja '53

Rebuilding of 12-in. bar mill. J. O. Dague. il plan diags Iron & Steel Eng 30:114-21 Mr '53

Rehabilitation of a slab mill without loss in production time. A. Taylor. 2pls plans diags Iron & Steel Inst J 173:69-80 Ja '53

Rolling mill yield. L. R. Silliman. il Iron & Steel Eng 30:103-10 Jl '53

Small two-high reversing mills for the rolling of semi-finished products. E. T. Peterson and others. il diags Iron & Steel Eng 29:69-76; Discussion. 76-7 O '52

Small two-high reversing mills gain favor. E. C. Peterson. il diags Steel 132:115+ Mr 9 '53

Steel expansion; blast furnaces, rolling mills openhearth and electric furnaces installed during 1952, rerolled rail shipments; tabulations. Iron Age 171:413 Ja 1 '53

Steel mill finishing facilities installed in 1950 to 1952; tabulation. Iron Age 171:40 Ap 30 '53

Tinplate; fastest line in production. il Iron Age 171:80-1 My 21 '53

Bearings

Bearing has tapered bore. il Steel 131:282+ O 13 '52

Considerations in the design of plain bearings. A. E. Cichelli. diags Iron & Steel Eng 30:164-75; Discussion. 175-8 S '53

Design and application of bronze slippers in universal couplings; abstract. J. R. Lottes. Steel 132:97 Je 29 '53

Heavy duty high speed roll neck bearing. P. L. Haager. il diags Iron & Steel Eng 30:158-63 S '53

Performance of hydrodynamically lubricated roll neck bearings. R. B. Sims. bibliog Iron & Steel Inst J 172:415-18 D '52

Electric equipment

Application and control of a-c motors on intermittent loads. R. H. Wright. il diags Iron & Steel Eng 30:65-71; Discussion. 71-2 Ja '53

Developments in electrical drives for steel mill applications. W. R. Harris. il plan diags Iron & Steel Eng 29:69-73; Discussion. 73-4 D '52

D-c mill motor brake standard. diags Iron & Steel Eng 29:131-4; Discussion. 134 D '52

Electric drives for continuous hot mills. G. R. Wilson. il diags Iron & Steel Inst J 172:215-25 O '52; Discussion. 173:420-5 Ap '53

Electric systems for hot strip mills. R. E. Marrs. Steel 132:97+ Je 29 '53

Electrical developments in 1952. W. E. Miller. il Blast F & Steel Pl 41:63-8 Ja '53

Electrical drive for a 42½ inch cogging mill; Redbourn works of Richard Thomas and Baldwins, ltd. il diag Engineer 194:281-4 Ag 29 '52; Same cond. Electrician 149:683-4 S 5 '52

Electrical engineering in the steel-tube industry; abstracts. H. E. Knight. Inst E E Proc 100 pt 1:10-11 Ja '53; Elec R (Lond) 151:1003 N 7 '52

Electrical equipment in steel plants. A. F. Kenyon. il diag Blast F & Steel Pl 41:81-6, 192-7 Ja-F '53

Electrical plant for the metal industries, progress in 1952 reported. il Metallurgia 47: 59-62, 141-4 F-Mr '53

Electrically-driven 42½-in. cogging mill; Redbourn works of Messrs. R. Thomas and Baldwins, ltd. il diag Engineering 175:633-5, pl 19 My 15 '53

Electricity speeds production of tinplate from Trostre. il diag Electrician 149:829-32 S 19 '52

Electronic frequency changer used as nonsynchronous tie between a-c systems; abstracts. H. Winograd. il diag Elec Eng 72: 398 My '53; Power 97:232+ My '53

Engineering highlights of 1952; metal working. C. A. Scarlott. il Westinghouse Eng 13:30-1 Ja '53

Gaugemeter for strip mills. R. B. Sims. il diag Engineering 175:33-5 Ja 9 '53

Hot strip rolling; Port Talbot works. il Elec R (Lond) 151:1311-18, 1365-70 D 19-26 '52

Installations at Trostre. il Electrician 149: 1004, 1097-100 O 3-10 '52

Magnetic amplifier in control circuits. R. W. Moore. il diags Iron & Steel Eng 30:67-73 Jl '53

Maintenance experience on 600-volt rectifiers. R. T. Lucas and H. K. Fish. il Iron & Steel Eng 30:184-7; Discussion. diag 187-90 S '53

Mechanization of 12-in. bar mill. G. A. Henderson. il diags Iron & Steel Eng 30: 107-13 Mr '53

Mercury arc rectifiers for main roll drives. H. E. Larson. il plans diags Iron & Steel Eng 29:61-73 N '52

Multiple generators for processing lines. E. E. Vonada. il diags Iron & Steel Eng 29: 77-82; Discussion. 83-6 N '52

New hot strip mill at Pittsburgh Steel. J. C. Peth and F. E. Fairman, 3d. il plans diags Blast F & Steel Pl 41:926-38+ Ag '53

Operating experience with regulating systems for the steel industry. W. R. Harris. il diags Iron & Steel Eng 29:113-22+ O '52

Pickling lines for steel; a start-stop process made continuous; illustrations with text. Westinghouse Eng 13:64-5 Mr '53

Rectifier applications on steel mill drives. G. B. Scheer. Iron & Steel Eng 29:107-9; Discussion. 110-12 O '52

Regulating systems for the steel industry. W. R. Harris. il diags Westinghouse Eng 12:187-94 N '52; Same cond. Steel 131:106+ N 3; 112+ N 10 '52

Regulation systems, the key to higher production. W. R. Harris. il diags Blast F & Steel Pl 41:302-6 Mr '53

ROLLING mills—Electric equipment—*Cont.*

Reversing hot strip mill. A. F. Kenyon. il diags Iron & Steel Eng 30:62-70 Je '53

Role of electricity in a modern iron and steel works; abstracts. H. Clay. il Elec J 150:285-6 Ja 23 '53; Elec R (Lond) 152:258-9 Ja 30 '53

Selection and analysis of regulating systems for mill drives. W. E. Miller and F. S. Rothe. bibliog il diags Iron & Steel Eng 29:81-91; Discussion. 91-7 D '52

Synchronous motor torque requirements for steel mill applications. W. A. Thomas. il Iron & Steel Eng 30:73-81; Discussion. 81-3 Ag '53

Temper mill drives at the Trostre tinplate works. il diags Engineer 196:265-8 Ag 28 '53

Trostre tin-plate works of the Steel company of Wales. il Engineering 174:649-52, pl 51 N 21 '52

See also

Electric driving—Rolling mills

Equipment

Armco starts operation on new 80-in. hot strip mill at its Ashland plant. il Iron & Steel Eng 30:115-16 Je '53; Blast F & Steel Pl 41:770-1 Jl '53

Bethlehem's Johnstown plant. T. J. Ess. il plan Iron & Steel Eng 30:J 10-18 Ap '53

Billet heating furnace replaced in 16 days. il Steel 132:98+ Je 22 '53

Columbia-Geneva boosts capacity. il Steel 132:76-7 My 25 '53

Continuous heat treatment process produces high strength oil well casing. F. H. Bremmer and F. J. Zehnder. il diags Iron & Steel Eng 30:55-62; Discussion. 62-4 Ja '53

Custom mill tackles production headaches; American silver co. S. W. Baker. il Steel 131:94-7 D 8 '52

Design and practices of the semi-continuous strip mill; Youngstown plant of Republic steel corp. H. H. Warnock. Iron & Steel Eng 30:57-60; Discussion. 60-1 Je '53

Economies effected in roller guide applications. H. Glassner. il diags Iron & Steel Eng 30:192+ S '53

Handling and reclaiming mill scale. il Iron & Steel Eng 29:138-9 N '52

Heating steel in a specialty mill. L. F. Van Mater. Iron & Steel Eng 29:74-6 N '52

Increasing productivity of Fontana blooming mill. W. A. Vogt. plans diags Iron & Steel Eng 30:55-62; Discussion. 62-3 Mr '53

Last of the merry-go-rounds; Keystone retires its repeater table in favor of a modern billet mill. il Steel 132:140+ Ap 20 '53

Materials handling; hydraulic rams, conveyors speed movement of coils in process. il diag Iron Age 171:185-6 Je 18 '53

Modern high speed side trimming lines. J. R. Erbe. il diags Blast F & Steel Pl 41:514-19 My '53

Modern outlet table installed on piercing mill. il Iron & Steel Eng 30:122 My '53

New breaker block designed to limit roll loads. W. H. Bailey. il diags Iron & Steel Eng 30:99-101 F '53

New hot mill for strips up to 24 in. wide. M. Langen. il plans diags Iron & Steel Inst J 172:203-14 O '52; Discussion. 173:425-30 Ap '53

Operation of a 12-in. continuous bar mill. A. H. Griffiths. il plan diags Iron & Steel Eng 29:55-60 N '52

Photoelectric width gage for hot-strip steel mills. E. S. Sampson. il diags Electronics 26:114-18 Mr '53

Pittsburgh Steel starts new 66-in. hot strip mill. il plan Iron & Steel Eng 30:118+ Ag '53; Blast F & Steel Pl 41:1053-6 S '53

Power transmission; speed reducers built for steel mill in king size class. il Iron Age 171:157 Je 25 '53

Production of aluminum foil. W. B. Hackett. Iron & Steel Eng 30:94 Ag '53

Push-button controlled wheel forging and rolling plant; Taylor bros. and co. il plan Metallurgia 46:275-80 D '52

Restored slabbing mill attains high output. S. Elliott. il Iron Age 171:118-20 Ap 16 '53

Roll levelling machine; Bronx engineering co. il Engineer 194:267 Ag 22 '52

Rotary coil pickling plant. il diags Iron & Steel Eng 29:128-9 O '52; Same cond. Steel 133:92+ S 28 '53

Shot blasts 430 cleaning costs; Washington steel corp. il Steel 132:86+ F 16 '53

Speedy stripper; Pittsburgh steel co. il Mill & Factory 53:142 S '53

Strip annealing is high-speed, continuous in direct-fired radiant-gas mill equipment. C. A. Turner, jr. il diag Am Gas J 178:16-19 Ja '53; Same cond. Steel 130:106+ Ap 14 '52

Strip mill does a quick change; Allegheny Ludlum's Brackenridge works. il Steel 132:100+ My 18 '53

Strip mill with designed-in extras; Armco Steel's, Ashland, Ky. division. flow diag il Steel 132:102+ Je 15 '53

Television in hot strip mill helps avoid pileups. il Iron Age 171:154-5 My 21 '53; Steel 132:188+ My 25 '53

Timken operates modern outlet table. il Blast F & Steel Pl 41:546 My '53

Tin plate now being manufactured by completely modern West Coast mill; Kaiser steel corp. T. G. Simison and M. C. King. il Blast F & Steel Pl 41:489-96+ My '53

Tinplate production in South Wales; new plant at Trostre. il Metallurgia 46:169-74 O '52; diags Engineer 194:413-14, 447-9, 481-4 S 26-O 10 '52; Engineering 174:382 S 19 '52

Watch charm mill specializes on small diameter buttweld pipe; Sharon tube co. J. D. Knox. il Steel 131:90+ D 1 '52

X-ray gage controls rolling mill equipment. Mach 59:187 Je '53

Youngstown sheet and tube company increases service to the Midwest; blooming mills, pipe mills, strip mills, cold reduction mills. C. Longenecker. il diags Blast F & Steel Pl 41:910-22 Ag '53

See also

Furnaces, Heating

Gearing

Causes and prevention of premature gear failures. R. Johnson, jr. and S. D. Craine. il diag Iron & Steel Eng 30:118-28; Discussion. 128-36 S '53

Lubrication

Better lubrication boosts production; lithium base grease in hot strip mill. A. D. Binz. il Steel 132:88+ Ja 26 '53

Functioning of a lubrication organization in heavy rolling mills. R. R. Taylor. plan Iron & Steel Eng 30:107-10; Discussion. 110-12 Ja '53

Lubricants must survive rough treatment. M. S. Clark. il Steel 131:228+ O 13 '52

Oil mist tames tinning problems. il Steel 132:80+ Ja 12 '53

Performance of hydrodynamically lubricated roll neck bearings. R. B. Sims. bibliog Iron & Steel Inst J 172:415-18 D '52; Discussion. 174:353-8 Ag '53

Steel mill lubrication problems; abstract. A. C. Keiser, jr. and others. Iron & Steel Eng 30:157 S '53

Maintenance and repair

Developments in submerged melt welding for steel plant maintenance. D. E. Knight. il diags Iron & Steel Eng 30:98-104 S '53; Excerpts. Iron Age 170:221-2 N 6 '52

Planned maintenance of blooming mills. Iron & Steel Eng 29:118-21 D '52

Safety measures

Accident control in rolling mills. C. Kendall. Iron & Steel Eng 29:98-9 N '52

ROLLS (bending machines)

Cast meehanite rolls used for heavy-duty bending. M. R. Nelson. il Iron Age 171:135-7 My 28 '53

Four-roll plate-bending machine. il diags Engineering 174:140-1 Ag 1 '52

ROLLS (bread). See Bread

ROLLS (paper machinery)

Advantages of hard chrome plating in the corrugator field. M. P. Boggio. Tappi 36:sup 170A-1A My '53

Corrugating roll life. A. W. Werner. diag Tappi 36:sup 171A-5A My '53

ROLLS (paper machinery)—*Continued*

Crownless press rolls. W. W. Macklem. diags Paper Tr J 135:17-18 D 5 '52

Driven dandy rolls. P. S. Sinclair. Pulp & Pa of Can 54:112-13 Ag '53

How to care for and maintain calenders and calender rolls today. A. Seaton. il diag Paper Tr J 137:14-16+ O 2 '53

Improved flute and advantages of chrome plating contours of corrugating rollers; abstract. A. Warner. Paper Tr J 136:102 F 20 '53

Large electrically heated roller. il Engineer 194:562-3 O 24 '52; Engineering 174:584 O 31 '52; Elec R (Lond) 151:839 O 17 '52

Rubber hardness conversion; chart for rubber covered rolls and other rubber products; data sheet. Pulp & Pa of Can 54:140 Je '53

Rubber roll covers; data sheet. Pulp & Pa of Can 54:141 Je '53

Unionmelt cladding of mild steel roll by series-arc technique. J. F. Collins and others. il Welding J 31:1050-1 N '52

Testing

Hardness of rubber-covered rolls (plastometer test). diags Tappi 36:sup 120A-1A S '53

ROLLS (rolling mills)

Application of self-centering rolls for strip processing lines. E. T. Lorig. Iron & Steel Eng 30:149 S '53

Carbide rolls save. il Steel 132:95-6 Je 22 '53

Heat treated roll for hot strip mills. Blast F & Steel Pl 41:425-6 Ap '53

Machine to cold reduce 18 inch tubing; abstract. G. B. Brown. Steel 131:106+ O 6 '52

Mill rolls; better roll finish permits longer life, greater loads. il Iron Age 171:134-5 F 19 '53

New breaker block designed to limit roll loads. W. H. Bailey. il diags Iron & Steel Eng 30:99-101 F '53

Operation and roll design of the Gary rail mill. R. W. Dickson. il plan diags Iron & Steel Eng 30:93-9; Discussion. 99-101 Ja '53

Roll forming; simple method for designing rolls. E. J. Vanderploeg. il diags Tool Eng 31:59-65 O '53

Rolls and rolling (cont). E. E. Brayshaw. diags Blast F & Steel Pl 40:1311-18; 41:69-74, 399-407, 1040-7, 1176-86 N '52, Ja, Ap, S-O '53

Small mill; tailored to needs with standard interchangeable parts. il Iron Age 171:148+ Je 25 '53

Small mills, heavy jobs; flat or grooved rolls produce variety of shapes; Stanat mfg. co. il Steel 132:168+ My 25 '53

Special machine improves stainless roll finish. M. B. Hanks. il Steel 131:66-7+ D 22 '52

Manufacture

Automatic contour lathe. il Mech Eng 75:402-3 My '53

Hydraulic lathe cuts roll-machining time. B. A. Wilson. diag Iron Age 171:128-9 Ap 16 '53

Hydraulic roll lathe saves time in rough machining. il Steel 132:142+ Ap 6 '53

Lathe turns rolls automatically. il Iron Age 171:73 F 12 '53; Steel 132:107 Mr 9 '53

New roll foundry completed in Great Britain. V. Delport. il plan Foundry 81:108-11+ F '53

Roll lathe has three hydraulic movements. il Blast F & Steel Pl 40:1500-1 D '52; Same. Iron & Steel Eng 29:136 D '52

Superfinishing of mill rolls lengthens their life. il Mach 59:192 Mr '53

ROLLS (textile machinery)

Are your top rolls in top shape? R. Crowsley. il Textile World 103:120-1+ Ja '53

Inclined roll stands highlight Whitin G10D roving frame. il Textile World 102:171-2 N '52

RONEO, limited

Statement by the chairman. G. Maginness. Economist 165:335-6 N 1 '52

RONSON art metal works, inc.

Ronson's time of trouble. il Fortune 46:137-9+ D '52

ROOF bolts. See Mine roofs

ROOFING

Built-up roofing industry. T. M. Dantz. il Sheet Metal Worker 43:48-9 S; 44:46-7+ N; 29-30 D '52

Cost-saving steel panels. il Bsns W p47 Ap 4 '53

ROOFING, Asphalt

Determination of per cent voids filled in roofing. C. W. Wilkinson. diag Pet Eng 24:C37-8+ D '52

Ondalit plant in operation; South America. il Paper Tr J 136:12 Ja 23 '53

ROOFING, Copper

Unique application of sheet copper roofs on home. J. F. Redding. il Sheet Metal Worker 44:82+ Ag '53

ROOFING, Terne plate

How to construct terne steel roofs. il Constr Methods 35:174+ Ap '53

ROOFING felt. See Felt, Roofing

ROOFS

Beamless, light-gage roof developed. il Eng N 150:25 Ja 1 '53

Curved roof on cables spans big arena; livestock judging pavilion at Raleigh, N.C. F. S. Merritt. il diags Eng N 150:31-4+ F 5 '53

How to construct a flat locked seam roof. il Am Bld 75:64+ Ja '53

Modular principles in roof construction; typical roof framing plans and methods. G. S. Clark. diags Am Bld 74:118-23 D '52

Roof insulating methods; fruit cold storage buildings. G. F. Sainsbury. Refrig Eng 61:286-91+ Mr '53

Why Consumers Power put new boilers on the roof of its building. A. D. Almquist. il Gas Age 112:28-9+ Jl 16 '53

See also

Flashing	Skylights
Rafters	Trusses

Water cooling

Evaporative cooling of a residential roof; test results at the Acme ceramic housing project. R. A. Bacon and W. E. Long. il diags Heat & Ven 49:79-82 N '52

ROOFS, Aluminum

Aluminum roofing, custom made at the job. il Sheet Metal Worker 44:88+ Ag '53

Corrosion resistance of aluminum to coal gas; aluminium roof over purification plant, Sevenoaks, Kent, gasworks. Engineer 195:365 Mr 6 '53; Engineering 175:377 Mr 20 '53; il Metallurgia 47:246 My '53

ROOFS, Concrete

Bison long-span hollow roof slabs. il Engineering 175:605 My 8 '53

Concrete waffle formed with plastic pans. il diag Eng N 149:39-40 O 2 '52

Construction plant for shell structures should be carefully coordinated. A. Tedesko. il diags Civil Eng 23:96-101 F '53; Same. Am Concrete Inst J 24:505-20 F '53

Forming arches seen cheaper than reinforcing slabs; water filters in West Hartford, Conn. il diags Eng N 149:36+ N 27 '52

Four million square feet of thin-shell rib panels for roof framing. C. C. Zollman. il diags Am Concrete Inst J 24:809-23 My '53

Garage roof of prestressed block beams. A. M. Lount and L. Schenker. il diag Concrete 61:32+ F '53

Lapped church roof of precast slabs. il Concrete 60:14 O '52

Lift-slab construction. il Am Concrete Inst J 25:sup20-2 S '53

Perlite concrete roof cast on metal lath. il Eng N 150:45 My 21 '53

Precast concrete offers new possibilities for design of shell structures. P. L. Nervi. il diags Am Concrete Inst J 24:537-48 F '53; Same cond. Civil Eng 23:85-8 F '53

Prestressed concrete station roof. Engineer 195:307 F 27 '53; Engineering 175:508 Ap 17 '53

Refinements in thin-shell concreting. il Constr Methods 34:52-6 D '52

Shell design adaptable to many uses. C. S. Whitney. il diags Civil Eng 23:89-91 F '53; Same. tables Am Concrete Inst J 24:521-36 F '53

ROOFS, Concrete—*Continued*
Skew shell utilized in unusual roof. F. Candela. il plan diags Am Concrete Inst J 24: 657-64 Mr '53
Why waffle slab failed. E. E. Seelye. diags Eng N 149:10+ O 23 '52

ROOFS, Steel
High line crew places novel roof over North Carolina state fair Live stock judging pavilion. il Constr Methods 35:52-4 F '53
Pre-formed pre-cut steel deck for bow-string roof. il Sheet Metal Worker 44:54 Je '53
Steel decking vs wood; tobacco warehouse in Kentucky. il Sheet Metal Worker 44:42+ D '52

ROOFS, Tank. See Oil tanks—Roofs

ROOMS
See also
Bathrooms
Dining rooms
Kitchens

ROOS, Charles Frederick, 1901-
Portrait. Fortune 46:116 D '52

ROOSEVELT, Theodore, 1858-1919
When T. R. streamlined the officers. L. W. Johnson. por U S Naval Inst Proc 78:1310-13 D '52

ROOTS
Grow roots fast; treated plastic, called Airwrap. Bsns W p72 My 16 '53
Root illumination and flowering. H. J. Fuller and S. L. Wilson. bibliog il Science 116:688-9 D 19 '52
Rooting lemon cuttings with fruits attached. L. C. Erickson and P. DeBach. bibliog il Science 117:102-3 Ja 30 '53

ROOTS, Numerical
Analog computer for the roots of algebraic equations. L. Löfgren. diags Inst Radio Eng Proc 41:907-13 Jl '53

ROOZEN, Walter
Businessmen in the news. por Fortune 46: 48 D '52

ROPE
Fiber rope. Nat Safety N 67:165-6 Mr '53
Here's how to get the most out of rope. R. C. Weaver. il Am Bld 75:174-8 F; 208-10+ Mr; 187-90+ My; 228-9+ Je '53
Pick it up? J. R. Sears. il Power 97:109-11 My '53
What you should know about rope; selection, care and handling. J. Durgin. il diag Constr Methods 35:133-4+ Mr '53
See also
Wire rope

RORSCHACH test. See Personality tests

ROSE, H. Chapman
Treasury's new team. por Bsns W p70+ D 20 '52

ROSE, Harold Wickliffe, 1896-
Portrait. Fortune 47:99 Mr '53

ROSENFIELD, Isadore
Rosenfield and his hospitals; he approaches his jobs like a city planner. por Arch Forum 97:128-35 S '52

ROSIN
Opportunity for rosin. Chem W 72:29+ Ja 24 '53
Surface properties of rosin size precipitate. E. F. Thode and others. bibliog Tappi 36: 310-19 Jl '53

ROSOCYANIN
Compounds of curcumin and boric acid; infrared studies of rosocyanin and allied compounds. L. J. Bellamy, G. S. Spicer and J. D. H. Strickland. Chem Soc J p4653-6 D '52
Compounds of curcumin and boric acid; the structure of rosocyanin. G. S. Spicer and J. D. H. Strickland. Chem Soc J p4644-50 D '52

ROSS, Walter
Pioneer in the development of rayons. G. Boyo. por Mod Textiles Mag 33:35+ N '52

ROTATING disks. See Disks, Rotating

ROTATION, Optical. See Optical rotation

ROTATION of molecules. See Molecules—Rotation

ROTENONE
Infrared analysis of rotenone-dihydrorotenone mixtures. H. L. Cupples. Anal Chem 24: 1657 O '52

ROTIFERA
Experiments in aging. A. I. Lansing. il diag Sci Am 188:38-42 Ap '53

ROTOGRAVURE
Inquirer's solvent recovery system takes dollars out of air; Philadelphia inquirer's Palace of rotogravure. Ed & Pub 86:55 Ja 10 '53
Paper problems of the rotogravure printer. R. T. Van Derveer. Tappi 36:sup 190A-2A My '53
What are the present and future paper needs for gravure printing. F. MacArthur. Paper Tr J 137:56+ S 18 '53

ROTORS
Contribution to the theory of oil whip. H. Poritsky. bibliog diags A S M E Trans 75: 1153-8; Discussion. 1158-61 Ag '53
Pair forging makes giant rotor disks; illustrations with text. Am Mach 96:138-9 S 1 '52; J Metals 4:1032 O '52
Rotor temperature measurement and control in the ultracentrifuge. D. F. Waugh and D. A. Yphantis. diags R Sci Instr 23:609-14 N '52
Supercharger rotors machined with good setups; Pesco products division of the Borg-Warner corp. G. E. Campbell. il Iron Age 170:100-1 O 2 '52

ROTORS (electric machinery)
Are you missing your wound-rotor motors? R. F. Woll. il Factory Management 111: 122-3 Ag '53
Balancing turbine-generator rotors. L. P. Grobel. il diags Gen Elec R 56:22-5 Jl '53
Induction motor rotor bars. W. E. Bruges. diags Electrician 149:539-41 Ag 22 '52
Tapered rotor supplies built-in motor brake. il diag Product Eng 24:146-7 Mr '53

ROTPROOFING of textiles
See also
Textile fabrics—Protection

ROUNDHOUSES

Employees

Skin hazards in railroad roundhouses and machine shops. L. Schwartz. Ind Med 21: 482-4 O '52

Heating and ventilation

It was drafty as a barn, but 30 unit heaters warmed it up! il Dom Eng 181:98-9 Ap '53

ROW houses. See Houses, Row

ROWAND, William H.
Babcock & Wilcox elects two vice presidents. por Elec World 139:202 Ap 20 '53

ROWANTREES kiln. See Potteries

ROYAL aeronautical society
Annual report of the Council, 88th, 1952-1953. Roy Aeronautical Soc J 57:247-63 Ap '53
New Zealand division, 4th annual report, year ended Dec. 31, 1952. Roy Aeronautical Soc J 57:264-6 Ap '53
Royal aeronautical society awards. Engineering 176:274-5 Ag 28 '53

ROYAL aeronautical society, Journal of the
Journal history. J. L. Pritchard. Roy Aeronautical Soc J 57:52-4 Ja '53

ROYAL bank of Scotland
Statement by the chairman. Duke of Buccleuch. Economist 166:770-1 Mr 14 '53

ROYAL Dutch-Shell group
Shell cornucopia. Economist 167:754+ Je 13 '53
Shell outlay boosted. map Oil & Gas J 52:55-6 Je 29 '53

ROYAL-LIVERPOOL insurance group
Royal-Liverpool group names new secretaries. Weekly Underw 168:194 Ja 17 '53

ROYAL observatory, Greenwich. See Greenwich royal observatory

ROYAL society of Canada
Annual meeting, Quebec, June 2-4. Science 116:469-70 O 31 '52

ROYAL society of London
Annual conversazione, London. Elec R (Lond) 152:1245-6 My 29 '53
Annual conversazione, London, May 21. Engineering 175:692 My 29 '53

Scientific information conference

Action taken by Aslib to implement the Scientific information conference's proposals. L. Wilson. Aslib Proc 4:241-5; Discussion. 245-54 N '52
Review of the results of the Royal society scientific information conference, 1948. D. J. Urquhart. Aslib Proc 4:233-40 N '52

ROYAL technical college, Glasgow

Report on research. Engineering 175:77 Ja 16 '53

ROYAL warrants. See Warranty

RUBBER

Akron group symposium on crude rubber and GR-S. India Rubber World 128:75-9 Ap '53; Rubber Age 73:73-80 Ap '53

American society of mechanical engineers Rubber and plastics division annual meeting, New York, Dec. 4-5; abstracts of papers. India Rubber World 127:523-4 Ja '53; Rubber Age 72:502-3 Ja '53

Chemical engineering materials of construction; elastomers. H. L. Fisher. il Ind & Eng Chem 44:2309-17 bibliog(183 ref, p2316-17) O '52

Chemical engineering materials of construction; hard rubber. H. Peters. bibliog(48 ref) Ind & Eng Chem 44:2344-5 O '52

Chemical knife; preservation of ozone for thirty-six days. H. O. Albrecht. J Chem Phys 21:1421-2 Ap '53

Coal-tar pavements containing rubber show promise for jet-plane runways. Eng N 150:42 Mr 5 '53

Common rubber materials; tabulation; reference book sheet. Product Eng 24:203 Ja '53

Defense department report on stockpiling reviews rubber development projects. India Rubber World 129:82 O '53

Differential migration of rubber by reversed-phase partition chromatography. T. F. Banigan, jr. bibliog il Science 117:249-50 Mr 6 '53

Engineering developments of rubber, 1951-52. B. J. Clinebell and L. E. Straka. Rubber Age 72:485-92 bibliog(139 titles, p490-2) Ja '53; Same. Mech Eng 75:632-8+ Ag '53

Natural rubber quality. W. J. Sears. India Rubber World 127:99 O '52

Properties of natural and synthetic rubbers. Product Eng Hdbk p C22-3 '53

Rubber-base plastic. Steel 132:179 Je 1 '53

Rubber in chemical engineering; development leads to unexpected applications. il Chem Age (Lond) 68:205-7 Ja 31 '53

Rubber-like adhesives and sealants. W. J. Clayton and R. K. Humke. Machine Design 25:260-2+ Ag '53

RMA crude rubber quality seminar, New York, Oct. 14-15; with abstracts of papers. India Rubber World 127:235-6 N '52

Statistical thermodynamics of rubber elasticity. H. M. James and E. Guth. diags J Chem Phys 21:1039-49 Je '53

Use of rubber in bituminous road surfaces; abstract and discussion. A. R. Smee and L. Mullins. Chem & Ind p 193 F 28 '53

See also

Guayule

Rubber industry and trade

Rubber plants and planting

Tires, Automobile

Tires, Rubber

Vulcanization

also American society of mechanical engineers—Rubber and plastics division

Aging

Effect of oxygen concentration on aging of rubber vulcanizates. J. R. Shelton and W. L. Cox. bibliog Ind & Eng Chem 45:392-401 F '53

Migration effects in oven aging. A. E. Juve and R. Shearer. bibliog India Rubber World 128:623-5 Ag '53

Analysis

Review of analytical chemistry; natural and synthetic rubbers; chemical and physical testing. N. Bekkedahl. Anal Chem 25:54-64 bibliog(302 ref, p61-4) Ja '53

Study of the oxidation of rubber by means of the isotopic method. A. D. Kirshenbaum and others. bibliog il Rubber Age 72:625-30 F '53

Bibliography

Rubber bibliography. Published in monthly numbers of India rubber world

Rubber division library bibliography; numbers 1-16. Rubber division lib, Univ. of Akron, Akron 4, Ohio '52-53

Chemistry

ACS Division of rubber chemistry national meeting, Los Angeles; with abstracts of papers. Chem & Eng N 31:1407-8 Ap 6 '53

American chemical society Rubber division 61st meeting, Buffalo, Oct. 29-31; abstracts of papers. Rubber Age 72:71-6 O '52; India Rubber World 127:86-90, 378+ O, D '52

ACS Rubber division meeting, 62d, Los Angeles, March 18-19. Rubber Age 73:88-9 Ap '53

A.C.S. Rubber division meeting, 62d, Los Angeles, March 18-19; abstracts of papers. Rubber Age 72:493-6 Ja '53; India Rubber World 127:658-61 F '53

A.C.S. Rubber division 63d meeting, Boston, May 27-29; with abstracts of papers. Rubber Age 73:213-17, 376-7 My-Je '53; India Rubber World 128:214-17, 498-500 My, Jl '53

A.C.S. Rubber division 64th meeting, Chicago, Sept. 9-11; with abstracts of papers. Rubber Age 73:501-5 Jl '53; India Rubber World 128:636-9 Ag '53

Chemical institute of Canada Rubber chemistry division 8th conference, Windsor, Ont. June 5; abstracts of papers. India Rubber World 128:218-19, 501 My, Jl '53; Rubber Age 73:228-9, 378 My-Je '53

Developments and possibilities in the field of rubber derivatives; abstract. G. Salomon. India Rubber World 127:128+ O '52

Gordon research conference Elastomers section symposium, New London, N.H. June 30-July 4. Rubber Age 72:91-3 O '52

Variables controlling the cross-linking reactions in rubber. B. C. Barton and E. J. Hart. bibliog Ind & Eng Chem 44:2444-8 O '52

See also

Rubber—Chlorination

Rubber—Reclaiming

Chlorination

Chlorinated rubber finishes in water and sewage works. F. K. Shankweiler. il Water & Sewage Works 100:230-3 Je '53

Curing

See Vulcanization

Cutting

See Rubber cutting

Dirt content

Survey on dirt content of natural rubber. K. F. Heinisch. India Rubber World 127:503-4 Ja '53; Same cond. il Rubber Age 72:512-13 Ja '53; Discussion. H. T. Karsten. India Rubber World 128:198+ My '53

Electric properties

Conductive rubber has many safety uses. Nat Safety N 67:140 Je '53; Same. Weekly Underw 168:1066 Ap 18 '53

Radiant heating panel uses electrically conductive rubber. il Elec Eng 72:183 F '53; Mech Eng 75:233 Mr '53

Rubber and its uses. M. R. Horne. il Elec R (Lond) 152:1385-7 Je 12 '53

Where electrically conductive rubbers are proving useful. P. O'Keefe. il Materials & Methods 37:96-7 Ap '53

Gas content

Bibliography

Rubber division library bibliography; diffusion of gases through natural rubber and butyl rubber. 7 l Rubber division lib, Univ. of Akron, Akron 4, Ohio '52

Joining to metal

Bonding methods for adhering rubber to metal. J. H. Gerstenmaier. il diags Rubber Age 73:495-500 Jl '53; Same cond. Tool Eng 30:59-62 My '53; Abstract. Automotive Ind 108:43-4+ Ap 15 '53

New fabricating materials from rubber and copper-clad aluminum. Can Chem Process 37:54 F '53

Rubber-steel combination prolongs equipment life. Brick & Clay Rec 121:42 O '52

Manufacture

Methods employed in compounding research. I. Drogin. bibliog(248 titles) il India Rubber World 127:65-9+, 365-9, 505-10, 646-50, 797-801; 128:59-63, 203-5, 345-7+, 627-9, 771-4; 129:63-8 O, D '52-Je, Ag-O '53

RUBBER—Manufacture—*Continued*

Practical compounding for economy. V. H. Vodra and L. A. Jarvis. India Rubber World 127:633-9+ F '53

See also

Carbon black
Rubber—Chlorination
Rubber—Reclaiming
Rubber, Artificial—Manufacture
Rubber chemicals
Rubber goods—Manufacture
Vulcanization

Bibliography

Rubber division library bibliography; use of lignin in rubber and synthetic rubbers, 1945-May 1952. 7 l Rubber division lib, Univ. of Akron, Akron 4, Ohio '52

Mixing with resins

Engineering design for rubber-phenolics; abstract. A. P. Landall. Product Eng 24:268+ Mr '53

Bibliography

Rubber division library bibliography; use of synthetic resins in natural and synthetic rubbers. 15 l Rubber division lib, Univ. of Akron, Akron 4, Ohio '52

Oil effect

Stress relaxation in compression of rubber and synthetic-rubber vulcanizates immersed in oil. J. R. Beatty and A. E. Juve. bibliog diags A S M E Trans 75:605-12 My '53; Same. India Rubber World 127:357-62+ D '52; Same abr. Machine Design 25:276+ F '53

Oxidation

Influence of carbon black on the oxidation of natural rubber. G. J. van Amerongen. bibliog Ind & Eng Chem 45:377-9 F '53

Study of the oxidation of rubber by means of the isotopic method. A. D. Kirshenbaum and others. bibliog il Rubber Age 72:625-30 F '53

Ozone effect

Evaluation of ozone protective agents for elastomers; apparatus for the evaluation under dynamic conditions. K. E. Creed, jr., R. B. Hill and J. W. Breed. bibliog il diags Anal Chem 25:241-4 F '53

Polythene derivative imparts ozone resistance to rubber. Chem Eng 60:132+ Ap '53

Reclaiming

Boston Woven Hose new reclaim plant. il Rubber Age 72:770-1 Mr '53

Defibering of ground rubber scrap with cellulose-decomposing fungi. W. D. Stewart and others. India Rubber World 127:794-6+ Mr '53

Magnetic separators contribute to rubber reclaiming process. il Rubber Age 73:648 Ag '53

Powdered reclaim. D. S. Le Beau. il Rubber Age 73:785-91 S '53

Reclaimed rubber, 1952. J. M. Ball. India Rubber World 128:201-2 My '53

Rubber plant runs itself, almost; Boston woven hose & rubber co. il Bsns W p72+ Mr 14 '53

Reinforcement

Relationship between the modulus of reinforced rubber compounds and the physical properties of various carbon blacks. M. L. Studebaker. India Rubber World 127:215-19+ N '52

Role of heat in the carbon black reinforcement of rubber. C. W. Sweitzer; H. A. Braendle. bibliog il Rubber Age 72:55-63, 205-10 O-N '52; Excerpts. Can Chem Process 36:94+ N '52; 37:76-7 Ja '53

Specifications

Revised standard on rubber compounds. N. L. Catton. S A E J 61:75-7 Ap '53

Rubber and synthetic rubber compounds for automotive and aeronautical applications; SAE-ASTM specifications. India Rubber World 128:74-5 Ap '53; Rubber Age 73:98-9 Ap '53

Standards

ASTM standards on rubber (with related information); prepared by ASTM committee D-11 on rubber and rubber-like materials; methods of testing specifications. il diags 680p Am. soc. for testing materials, 1916 Race st, Philadelphia 3 '52 [issued annually]

Strength

Bibliography

Rubber division library bibliography; tear strength of natural and synthetic rubbers. 25 l Rubber division lib, Univ. of Akron, Akron 4, Ohio '53

Rubber division library bibliography; tensile strengths of natural and synthetic rubbers. 8 l Rubber division lib, Univ. of Akron, Akron 4, Ohio '52

Sulfur content

See also
Vulcanization

Swelling

Stress relaxation in compression of rubber and synthetic-rubber vulcanizates immersed in oil. J. R. Beatty and A. E. Juve. bibliog diags A S M E Trans 75:605-12 My '53; Same. India Rubber World 127:357-62+ D '52; Same abr. Machine Design 25:276+ F '53

Temperature effect

Armed forces symposium on low-temperature testing of rubber, 2d. India Rubber World 128:221 My '53; Rubber Age 73:238 My '53

Testing

ASTM committee D-11 and SAE-ASTM technical committee A meetings, Detroit, March 4-6. India Rubber World 128:71-4 Ap '53

ASTM committee D-11 meeting, Atlantic City, July 3; abstracts of reports. India Rubber World 128:640-2+ Ag '53

ASTM committee D-11 on rubber and rubber-like materials meeting, Detroit, March 4-6. Rubber Age 73:232-3 My '53

ASTM crude rubber subcommittee meeting, Atlantic City, July 1. Rubber Age 73:812 S '53

Effect of severity of service on the relative abrasion resistance of natural rubber, GR-S-10, and GR-S-100. C. C. Biard and J. F. Svetlik. India Rubber World 127:363-4 D '52

Errors of stress-strain testing. S. T. Bowell and I. C. Rush. Rubber Age 72:215-19 N '52

Machine for measuring load and deformation of rubber under cyclical compression. D. M. Davies. il diags Engineering 176:196-8 Ag 14 '53

Material laboratory-Admiralty indentometer. J. Z. Lichtman and C. K. Chatten. bibliog il diag India Rubber World 129:61-2 O '53

Preparing crude rubber test specimens for oxygen-absorption measurements. W. J. Gowans. bibliog il Anal Chem 24:1648-9 O '52

Simple compression plastometer. E. F. Linhorst. il India Rubber World 128:626 Ag '53

Symposium on recent developments in the evaluation of natural rubber. (Special tech. pub. no. 136) 111p pa $2.25 Am. soc. for testing materials, 1916 Race st, Philadelphia 3 '53

Vulcanization characteristics of natural rubber. R. D. Stiehler and F. L. Roth. bibliog India Rubber World 127:783-90 Mr '53

See also
Rubber—Aging
Rubber laboratories

Transportation

Gaylord container for rubber. diag Rubber Age 72:239 N '52

Uses

Rubber and its uses. M. R. Horne. il Elec R (Lond) 152:1385-7 Je 12 '53

Bibliography

Rubber division library bibliography; uses of rubber in agriculture. 3 l Rubber division lib, Univ. of Akron, Akron 4, Ohio '52

RUBBER—*Continued*

Vulcanization

See Vulcanization

RUBBER, Artificial

Akron group symposium on crude rubber and GR-S. India Rubber World 128:75-9 Ap '53; Rubber Age 73:73-80 Ap '53
Alfin rubbers; new type of polymer. A. A. Morton. bibliog Rubber Age 72:473-6 Ja '53
All going on the block. Bsns W p26-7 Je 6 '53
American physical society Division of high-polymer physics meeting, 11th, Chapel Hill, N.C. March 26-28; abstracts of papers. Rubber Age 72:762-4 Mr '53; India Rubber World 128:220 My '53
ASME Rubber and plastics division annual meeting, New York, Dec. 4-5; abstracts of papers. India Rubber World 127:523-4 Ja '53
Chemical engineering materials of construction; elastomers. H. L. Fisher. il Ind & Eng Chem 44:2309-17 bibliog(183 ref, p2316-17) O '52
Chicago group symposium on GR-S compounding. India Rubber World 127:521-3 Ja '53
Chlorosulfonated polyethylene; Hypalon. R. E. Brooks and others. India Rubber World 127:791-3; 128:54-8, 348-50 Mr-Ap, Je '53
Common rubber materials; tabulation; reference book sheet. Product Eng 24:203 Ja '53
Creep of neoprene in shear under static conditions; ten years. W. N. Keen. diags A S M E Trans 75:891-3 Jl '53; Same. India Rubber World 128:351-3 Je '53
Elastomers of the future; abstract. G. W. Kuckro. India Rubber World 128:80 Ap '53
Elastomers; rubberlike materials. C. M. Miller. S A E J 61:32-5 Je '53; Same cond. Machine Design 25:270+ Mr '53
Engineering developments of rubber, 1951-52. B. J. Clinebell and L. E. Straka. Rubber Age 72:485-92 bibliog(139 titles, p490-2) Ja '53; Same. Mech Eng 75:632-8+ Ag '53
Experimental oil masterbatch polymer numbers assigned by RFC. Rubber Age 72:89 O '52; India Rubber World 127:91-2 O '52
Extracts from Paley commission report on coal and petroleum chemicals and products made therefrom. India Rubber World 126:777-81; 127:70-3+, 226-8+, 511-13 S-N '52, Ja '53
Extrusion plasticity of a butadiene-acrylonitrile rubber; effect of amide-type compounds. A. W. Campbell and P. F. Tryon. bibliog Ind & Eng Chem 45:125-30 Ja '53
Flexible flashing; reinforced synthetic rubber can be applied with brush. il House & Home 2:113 S '52
Flexible silicone rubber. Mech Eng 75:319 Ap '53
Geon plastisol compounds for cold-dipping applications. Rubber Age 72:76 O '52
Gordon research conferences elastomer conference, New London, N.H. June 30-July 4, 1952; summary. Science 117:367-70 Ap 10 '53
GR-S and its uses in the rubber industry; panel discussion of Chicago rubber group. Rubber Age 72:772-7 Mr '53
House bill proposes commission for sale of government rubber plants. Oil Paint & Drug Rep 163:3+ Je 1 '53
House committee holds hearings on synthetic labeling proposal. Rubber Age 73:676-7 Ag '53
Hypalon; chlorosulfonated polythene; abstract. W. J. Remington. Rubber Age 72:782 Mr '53
Latest developments in synthetic elastomers. H. L. Fisher. bibliog(68 ref) India Rubber World 127:641-5+ F '53
Life everlasting; new rubber. Bsns W p32 Ja 31 '53
Longitudinal and transverse ultrasonic waves in a synthetic rubber. A. W. Nolle and P. W. Sieck. diag J Ap Phys 23:888-94 Ag '52
Maybe tires will outwear autos; Goodyear's new rubber substitute. il Chem Eng 60:262 Ap '53
New elastomer-impregnated leather; Conpor. A. S. Berens. Materials & Methods 38:127 O '53
New Goodyear rubber; abstract. R. P. Dinsmore. India Rubber World 128:222 My '53
New polymers authorized by Office of synthetic rubber, Reconstruction finance corporation. Rubber Age 72:658-9, 794-5; 73:686 F-Mr, Ag '53
New standard numbers for oil-masterbatch polymers with interchangeable oils. Rubber Age 73:534 Jl '53
New synthetic-rubber compound for asphalt roads is undergoing study under Firestone Tire sponsorship. Roads & Eng Constr 91:78 S '53
New X-numbers and styrene contents for GR-S oil and oil-black polymers. India Rubber World 127:808+ Mr '53
Plant disposal awaits appointment of commissioners to get started. India Rubber World 128:785 S '53
Plasticizers for elastomers. M. A. Pollack. India Rubber World 127:497-502+ Ja '53
Polybutenes and adhesives; abstract. G. P. Mack. Rubber Age 72:652 F '53
Properties of natural and synthetic rubbers. Product Eng Hdbk p C22-3 '53
RFC simplifies sales procedure; synthetic rubber. India Rubber World 127:102 O '52
Senate committee approves disposal bill as House passes Shafer bill by voice vote. Rubber Age 73:516-17 Jl '53
Silicone elastomers; Fort Wayne rubber and plastics group panel discussion; abstracts of papers. India Rubber World 128:783-4 S '53; Rubber Age 73:801-4 S '53
Sorption of GR-S type of polymer on carbon black; sorption by commercial blacks. I. M. Kolthoff and R. G. Gutmacher. bibliog J Phys Chem 56:740-5 Je '52
Stress relaxation in elastomers. A. M. Bueche. bibliog J Chem Phys 21:614-16 Ap '53
Survey of modern specialty rubbers. J. D. D'Ianni. Rubber Age 72:371 D '52
Synthetic-rubber plants; RFC's new plans. Mod Ind 24:83+ N '52
Trends in rubber insulation. I. C. Eaton. il Gen Elec R 56:11-12 My '53
Two new synthetic rubbers. K. Rose. il Materials & Methods 37:104-5 My '53
US rubber plants sale plan goes to Congress. Oil Paint & Drug Rep 163:3+ Ap 20 '53
Unleashing synthetic rubber. Bsns W p33-4 O 25 '52
What's new in synthetic rubber modifications. K. Rose. il Materials & Methods 38:108-9 S '53

See also
Neoprene

Analysis

Review of analytical chemistry; natural and synthetic rubbers; chemical and physical testing. N. Bekkedahl. Anal Chem 25:54-64 bibliog(302 ref, p61-4) Ja '53

Bibliography

Rubber division library bibliography; numbers 1-16. Rubber division lib, Univ. of Akron, Akron 4, Ohio '52-53

Chemistry

ACS Division of rubber chemistry 61st meeting, Buffalo, Oct. 29-31. Chem & Eng N 30:4720-2 N 10 '52
American chemical society Rubber division 61st meeting, Buffalo, Oct. 29-31; abstracts of papers. Rubber Age 72:71-6 O '52; India Rubber World 127:86-90, 378+ O, D '52
A.C.S. Rubber division meeting, 62d, Los Angeles, March 18-19; abstracts of papers. Rubber Age 72:493-6 Ja '53; India Rubber World 127:658-61 F '53
A.C.S. Rubber division 64th meeting, Chicago, Sept. 9-11; with abstracts of papers. Rubber Age 73:501-5 Jl '53; India Rubber World 128:636-9 Ag '53
Developments and possibilities in the field of rubber derivatives; abstract. G. Salomon. India Rubber World 127:128+ O '52
Gordon research conference Elastomers section symposium, New London, N.H. June 30-July 4. Rubber Age 72:91-3 O '52
Ideal copolymers and the second-order transitions of synthetic rubbers; non-crystalline copolymers. M. Gordon and J. S. Taylor. bibliog J Ap Chem 2:493-500 S '52
Physical properties of sodium-catalyzed polymers. M. H. Reich, R. E. Schneider and W. K. Taft. bibliog Ind & Eng Chem 44:2914-22 D '52

RUBBER, Artificial—Chemistry—*Continued*

Polymerization-stopping agents. G. J. Antlfinger and C. H. Lufter. bibliog Ind & Eng Chem 45:182-6 Ja '53

Electric properties

Properties of synthetic rubbers and thermoplastics as insulation for electric cables. E. W. Davis. Tappi 36:78-82 F '53

Where electrically conductive rubbers are proving useful. P. O'Keefe. il Materials & Methods 37:96-7 Ap '53

Gas content

Bibliography

Rubber division library bibliography; diffusion of gases through natural rubber and butyl rubber. 7 l Rubber division lib, Univ. of Akron, Akron 4, Ohio '52

Joining to metal

Chance discovery; making silicone rubber stick to steel. Nat Safety N 66:102 D '52

Latex

Determination of volume shrinkage in latex cast elastomeric films. I. Aisenberg and others. Rubber Age 72:759-61 Mr '53

Electron microscopy of synthetic latices. S. H. Maron and others. il J Ap Phys 23:900-5 Ag '52

Latex particle size determination using diffraction peaks obtained with the point focusing X-ray monochromator. W. E. Danielson and others. bibliog il J Ap Phys 23:860-5 Ag '52

Plasticizing a synthetic latex. R. E. Dillon, E. B. Bradford and R. D. Andrews, jr. bibliog il diags Ind & Eng Chem 45:728-35 Ap '53

Styrene-butadiene type latex upgrades paper coatings. il Paper Ind 34:1460-1 Mr '53

Synthetic latex in scrub-resistant intumescent coatings. E. K. Stilbert and I. J. Cummings. bibliog il Ind & Eng Chem 45:748-54 Ap '53

Synthetic latexes for paper coatings. E. J. Heiser. Tappi 36:sup 133A-4A F '53

Manufacture

Acrylic elastomers; preparation and properties of vulcanizable acrylic ester-acrylonitrile copolymers. E. M. Filachione and others. bibliog Rubber Age 72:631-7 F '53

Compounding butyl rubber for mineral-filled stocks. W. C. Smith. bibliog India Rubber World 129:55-60 O '53

Compounding of silicone rubber. A. C. Glime and others. bibliog il India Rubber World 128:766-70+ S '53

Cooling system speeds rubber forming. il Heat & Ven 50:132 My '53

Doubts disposal under new law. P. W. Shafer. India Rubber World 129:80-1 O '53

Effect of associated salts on the polymerization of butadiene by organo-sodium reagents. A. A. Morton and others. bibliog Ind & Eng Chem 44:2876-82 D '52

Government should sell its $700 million synthetic rubber industry to private enterprise. P. W. Shafer. Chem & Eng N 31:850 Mr 2 '53

Hearings on Shafer disposal plan begin as Senate introduces different measure. Rubber Age 73:373-5 Je '53

Impatience on synthetics. Chem W 72:15 Ap 4 '53

Methods employed in compounding research; ingredients for compounding research. I. Drogin. bibliog India Rubber World 127:505-10, 646-50, 797-801; 128:59-63, 203-5, 345-7+, 627-9, 771-4; 129:63-8 Ja-Je, Ag-O '53

Pilot plant production of Lactoprene EV. W. W. Howerton and others. bibliog flow sheet il diags Rubber Age 72:353-62 D '52

Polymer production; abstracts. J. J. Deasy. India Rubber World 128:783 S '53; Rubber Age 73:801 S '53

Practical compounding for economy. V. H. Vodra and L. A. Jarvis. India Rubber World 127:633-9+ F '53

Practical neoprene compounds of low elastomer content. D. C. Thompson. bibliog Rubber Age 72:638-42 F '53

Processing oil-extended and carbon black GR-S masterbatches. H. L. Ericson and L. D. Carver. bibliog Ind & Eng Chem 45:792-5 Ap '53

RFC program for disposal to private industry of government-owned rubber-producing facilities; summary of report and conclusions. India Rubber World 128:82-4+ Ap '53

RFC proposes sale of synthetic rubber plants. Chem & Eng N 31:1096+ Mr 16 '53

Revolution in rubber; Goodrich's new process for manufacturing cold rubber. Bsns W p32 Ja 10 '53

Rubber by pipeline; new faster continuous process. il Chem Eng 60:112-13 Mr '53

Rubber innovation; Copolymer corp. reveals new method of dispersing carbon black in cold rubber. F. L. Resen. il diag Oil & Gas J 51:160 Mr 23 '53

Synthetic plant disposal bill passed in Senate; compromise bill by Aug. possible. A. J. Kraft. India Rubber World 128:649-51 Ag '53

Synthetic rubber from Canada chemical valley. il diag Can Chem Process 36:38-40+ S '52

Use of the Banbury to modify properties of synthetic elastomers. M. H. Reich and W. K. Taft. bibliog Rubber Age 72:619-24 F '53

Vulcollan; new polyester rubber. F. Popper. Rubber Age 73:81-3 Ap '53

Bibliography

Rubber division library bibliography; mastication of GR-S. 25 l Rubber division lib, Univ. of Akron, Akron 4, Ohio '52

Rubber division library bibliography; processing of GR-S involving the use of plasticizers. 11 l Rubber division lib, Univ. of Akron, Akron 4, Ohio '52

Rubber division library bibliography; use of lignin in rubber and synthetic rubbers, 1945-May 1952. 7 l Rubber division lib, Univ. of Akron, Akron 4, Ohio '52

Mixing with resins

Development of thiokol polymer protective coatings for steel. A. P. Massa, H. Colon and W. F. Schurig. bibliog il Ind & Eng Chem 45:775-82 Ap '53

Bibliography

Rubber division library bibliography; use of synthetic resins in natural and synthetic rubbers. 15 l Rubber division lib, Univ. of Akron, Akron 4, Ohio '52

Oil effect

Oil resistance of nitrile rubber. N. G. Duke and W. A. Mitchell. bibliog India Rubber World 128:485-91 Jl '53

Stress relaxation in compression of rubber and synthetic-rubber vulcanizates immersed in oil. J. R. Beatty and A. E. Juve. bibliog diags A S M E Trans 75:605-12 My '53; Same. India Rubber World 127:357-62+ D '52; Same abr. Machine Design 25:276+ F '53

Ozone effect

Evaluation of ozone protective agents for elastomers; apparatus for the evaluation under dynamic conditions. K. E. Creed, jr., R. B. Hill and J. W. Breed. bibliog il diags Anal Chem 25:241-4 F '53

Research

Cold rubber speed-up. Chem W 72:32 Ja 17 '53

Compounding of silicone rubber. A. C. Glime and others. bibliog il India Rubber World 128:766-70+ S '53

Continuous emulsion polymerization in a tubular reactor. M. Feldon and others. bibliog diag India Rubber World 128:51-3+ Ap '53

Determination of volume shrinkage in latex cast elastomeric films. I. Aisenberg and others. Rubber Age 72:759-61 Mr '53

Goal; a name for toughness. Chem W 72:32+ F 7 '53

Influence of variations in rotors, dies, and rate of shear on Mooney viscosity. G. E. Decker and F. L. Roth. il India Rubber World 128:339-43 Je '53

RUBBER—Research—*Continued*

Methods employed in compounding research; ingredients for compounding research. I. Drogin. bibliog India Ruber World 127:505-10, 646-50, 797-801; 128:59-63, 203-5, 345-7+, 627-9, 771-4; 129:63-8 Ja-Je, Ag-O '53

Opportunity for rosin. Chem W 72:29+ Ja 24 '53

Present and future requirements of rubber-like materials for a global air force. E. R. Bartholomew. bibliog Rubber Age 72:64-8 O '52

Products of oxidation of an olefin structurally related to GR-S. G. R. Mitchell and J. R. Shelton. bibliog Ind & Eng Chem 45:386-92 F '53

Rheology of concentrated rubber solutions. il Rubber Age 72:69-70 O '52

Role of heat in the carbon black reinforcement of rubber. C. W. Sweitzer. bibliog il Rubber Age 72:55-63, 205-10 O-N '52

Ultrasonic-wave study of swollen Buna-N rubber. A. W. Nolle and J. F. Mifsud. bibliog J Ap Phys 24:5-14 Ja '53

U.S. air force rubber development program. W. Postelnek. il Chem & Eng N 31:1958-60 My 11 '53

Use of the Banbury to modify properties of synthetic elastomers. M. H. Reich and W. K. Taft. bibliog Rubber Age 72:619-24 F '53

Specifications

Revised standard on rubber compounds. N. L. Catton. S A E J 61:75-7 Ap '53

Rubber and synthetic rubber compounds for automotive and aeronautical applications; SAE-ASTM specifications. India Rubber World 128:74-5 Ap '53; Rubber Age 73:98-9 Ap '53

Standards

ASTM standards on rubber (with related information); prepared by ASTM committee D-11 on rubber and rubber-like materials; methods of testing specifications. il diags 680p Am. soc. for testing materials, 1916 Race st, Philadelphia 3 '52 [issued annually]

Statistics

Record of a record breaker; synthetic rubber industry; rubber and products industry. Chem W 72:46 F 28 '53

Strength

Bibliography

Rubber division library bibliography; tear strength of natural and synthetic rubbers. 25 l Rubber division lib, Univ. of Akron, Akron 4, Ohio '53

Rubber division library bibliography; tensile strengths of natural and synthetic rubbers. 8 l Rubber division lib, Univ. of Akron, Akron 4, Ohio '52

Swelling

Stress relaxation in compression of rubber and synthetic-rubber vulcanizates immersed in oil. J. R. Beatty and A. E. Juve. bibliog diags A S M E Trans 75:605-12 My '53; Same. India Rubber World 127:357-62+ D '52; Same abr. Machine Design 25:276+ F '53

Testing

Material laboratory-Admiralty indentometer. J. Z. Lichtman and C. K. Chatten. bibliog il diag India Rubber World 129:61-2 O '53

Study of the Goodrich flexometer with synthetic polymer compounds. B. G. Labbe. India Rubber World 128:193-8 My '53

Two extrusion plastometers for use with polyvinyl chloride. R. Hayes. diags Chem & Ind p 1069-72 N 1 '52

Use of the Mooney plastometer to disclose structural effects in high polymers. D. S. Fensom. bibliog Rubber Age 73:795-8 S '53

Tire use

Effect of severity of service on the relative abrasion resistance of natural rubber, GR-S-10, and GR-S-100. C. C. Biard and J. F. Svetlik. India Rubber World 127:363-4 D '52

Use of GR-S in tires; abstract. R. N. Hendriksen. Rubber Age 72:773 Mr '53

Bibliography

Rubber division library bibliography; tire design and manufacturing, 1941-1951. 30 l Rubber division lib, Univ. of Akron, Akron 4, Ohio '52

Vulcanization

See Vulcanization

RUBBER, Foam. See Rubber, Sponge

RUBBER, Powdered

Powdered reclaim. D. S. Le Beau. il Rubber Age 73:785-91 S '53

RUBBER, Sponge

Production of cast aluminum molds for forming foam rubber products. R. F. Dalton. il Rubber Age 73:211-12 My '53

Use of GR-S in foam; abstract. E. C. Svendsen. Rubber Age 72:774 Mr '53

Use of GR-S in sponge; abstract. C. S. Yoran. Rubber Age 72:772 Mr '53

Manufacture

Latex foam production at Armstrong-Norwalk. il Rubber Age 73:792-3 S '53

RUBBER bags

Flexible rubber bags finding application in medical field. Rubber Age 72:362 D '52

RUBBER chemicals

Studies on the toxicity and skin effects of compounds used in the rubber and plastics industries; carcinogenicity of carbon black extracts. E. von Haam and F. S. Mallette. il A M A Archives Ind Hygiene & Occup Med 6:237-42 S '52

Studies on the toxicity and skin effects of compounds used in the rubber and plastics industries; plasticizers. F. S. Mallette and E. von Haam. A M A Archives Ind Hygiene & Occup Med 6:231-6 S '52

See also
Butadiene
Vulcanization—Accelerators

RUBBER coating

Chlorinated rubber finishes in water and sewage works. F. K. Shankweiler. il Water & Sewage Works 100:230-3 Je '53

Major causes of color discoloration on building wire. Rubber Age 72:70 O '52

Recent developments in rubber calenders. N. J. Elder. il diags India Rubber World 128:482-4 Jl '53

Rubber-base coating resists abrasion at high aircraft speeds. B. G. Floersch. il Materials & Methods 36:184+ N '52

Rubber coated electrical insulation. il Materials & Methods 38:143 S '53

RUBBER cutting

Campbell roller die cutter. il Rubber Age 73:656 Ag '53

Maimin Stripomatik cutting machine. il Rubber Age 72:108 O '52

Tapered disk cuts hard rubber. J. K. Matter and F. W. Smith. il diags Am Mach 97:134-5 S 14 '53

RUBBER factories

Photographs improve housekeeping efforts at Ohio rubber plant. Rubber Age 73:663 Ag '53

Rubber plant runs itself, almost; Boston woven hose & rubber co. il Bsns W p72+ Mr 14 '53

See also
Rubber—Reclaiming
Tire factories

Accidents

NSC announces award winners of 1952 Rubber section contest. Rubber Age 73:231 My '53

Report of recent accidents in rubber factories. Rubber Age 72:224 N '52

Electric equipment

Crown Products picks motors to match jobs. il Rubber Age 72:482-4 Ja '53

Employees

Rubber cages its wildcats. Bsns W p 116 N 29 '52

See also United rubber, cork, linoleum and plastic workers of America

RUBBER factories—*Continued*

Equipment

Beta-ray gaging in the rubber industry. R. T. Stacy and S. Bernstein. il diag Rubber Age 72:350-2 D '52

Cutting costs at Hood Rubber with beta gauge control. J. Garrod. il diag Rubber Age 73:359-60 Je '53

Stripping and concentration of rubber latices; Turba-Film evaporator. flow sheet Rubber Age 73:794 S '53

See also

Rubber machinery

Safety measures

How the states stand on rubber mill safety. il Standardization 23:340-1 O '52

Information on the handling of diatomaceous earth. Rubber Age 73:369 Je '53

Problem of static electricity. Rubber Age 72: 63 O '52

RUBBER footwear. See Shoes, Rubber, plastic, etc.

RUBBER goods

Can't keep a sideline down. Bsns W p 176+ Ap 11 '53

Industrial rubber products. B. H. Capen. India Rubber World 128:201 My '53

Joint committee on automotive rubber reports considerable progress. Rubber Age 72:368 D '52

Rubber products used in the automotive industry; panel discussion. India Rubber World 127:237-8 N '52

Tylox flexible-rubber pipe gaskets give fast, sure seal. il Eng N 150:142 F 5 '53

See also

Hose
Molds (for rubber)
Rubber lining
Shoes, Rubber, plastic, etc.
Tires, Rubber

Manufacture

A.S.M.E. Rubber and plastics division meeting; symposium on molded goods. Rubber Age 73:222 My '53

Progress in manufacturing methods in the molded rubber products industry. J. H. Gerstenmaier and F. J. Fetter. il India Rubber World 128:761-5 S '53

Use of GR-S in extruded goods; abstract. J. B. Braden. Rubber Age 72:775 Mr '53

Standards

ASTM standards on rubber (with related information); prepared by ASTM committee D-11 on rubber and rubber-like materials; methods of testing specifications. il diags 680p Am. soc. for testing materials, 1916 Race st, Philadelphia 3 '52 [issued annually]

RUBBER goods, Mechanical

Air-inflated truck spring introduced by General. il Nat Pet N 45:73 Ap 15 '53

Aircraft powerplant seals; report of round table discussion. diags S A E J 61:23-9 Jl '53

Expanding arbors utilize rubber elements. E. Mosthaf. diags Mach 59:208-9 Ag '53

One piece molded elastic piston seal. il diags Product Eng 23:210 O '52

Rubber hardness conversion; chart for rubber covered rolls and other rubber products; data sheet. Pulp & Pa of Can 54:140 Je '53

Rubber parts. P. O'Keefe. il Materials & Methods 38:85-100 Jl '53 (reprints 25c)

Rubber roll covers; data sheet. Pulp & Pa of Can 54:141 Je '53

Tips for designing rubber parts and assemblies; drawings with text. Product Eng 24:160-1 Ja '53

Use of GR-S in molded goods; abstract. H. A. Winkelmann. Rubber Age 72:773 Mr '53

Use of rubber rail pads on the permanent way; abstract. R. Sonneville. diag Engineer 194:688-9 N 21 '52

Bibliography

O-rings; annotated bibliography. B. J. Clinebell. diags India Rubber World 127:74-8 O '52

Testing

Effect of di-ester lubricants on aircraft rubber parts. R. M. Harper. Rubber Age 73:355-8 Je '53

RUBBER heels. See Heels, Rubber

RUBBER hose. See Hose

RUBBER industry and trade

All going on the block. Bsns W p26-7 Je 6 '53

Copenhagen study group meeting and the buffer stock plan. India Rubber World 128: 228-9 My '53

Equilibrium in rubber. Economist 167:763 Je 13 '53

Gap between rubber use and output narrows. Barron's 32:27-8 N 24 '52

In the future; bigger doings for the rubber industry. W. L. Semon. il Chem Eng 59:318+ N '52

Industry leaders in accord on 1953 as another record year. Rubber Age 72:500 Ja '53

Industry of eternal youth; abstract. H. G. Smith. India Rubber World 128:366-7 Je '53

Industry previews and reviews. Automotive Ind 108:52-3 Ja 15 '53

International rubber study group meeting, 10th, Copenhagen. Rubber Age 73:382-3 Je '53

Must plan now for enough rubber. P. W. Litchfield. Materials & Methods 38:8+ Ag '53

Natural rubber output equal to world demand. For Comm W 49:13 Je 15 '53

RFC chided by planters as rubber price slumps. Barron's 33:27-8 Ap 20 '53

Rising rubber consumption; abstract. J. J. Newman. Rubber Age 73:396 Je '53

Rubber; C&EN annual review. J. T. Cox, jr. Chem & Eng N 31:35-6 Ja 5 '53

Rubber industry as an ordnance supplier; abstract. J. E. Trainer. India Rubber World 127:387-8 D '52

Rubber industry gains in '53. E. J. Thomas. Rubber Age 72:369 D '52

Rubber looks up. Economist 165:717 D 6 '52

RMA looks to all-time new consumption record by industry in 1953. Rubber Age 72:504 Ja '53; Same. India Rubber World 127:530-1 Ja '53

Rubber outlook and a study of cartels and their consequences; abstract. J. L. Collyer. Automotive Ind 107:126+ O 1 '52

Rubber plants; view of leading producers of rubber. I. U. Cobleigh. Comm & Fin Chr 178:256 Jl 23 '53

Too little rubber, or too much. Bsns W p26 My 2 '53

Trends in the international trade in rubber; abstracts. E. G. Holt. India Rubber World 128:79 Ap '53; Rubber Age 73:103 Ap '53

World production of natural and synthetic rubber shows decline. For Comm W 48: 28 D 15 '52

See also

Firestone tire and rubber company
Goodyear tire and rubber company
Tire industry and trade
United States rubber company

Advertising

How preventive public relations is used by Natural rubber bureau. G. B. Payne. il Ed & Pub 86:57 F 21 '53

Finance

Earnings of the big four in 1952 as compared with 1951 earnings; tabulation. Rubber Age 73:221 My '53

Tire makers; trends in sales and profits, March quarter, representative rubber and tire manufacturers. M. J. Saada. Barron's 33:9-10 My 4 '53

Regulation

Commerce department's new rubber set-up. India Rubber World 128:510 Jl '53

Statistics

Production, consumption and stocks of synthetic rubber and consumption of natural, synthetic and reclaimed rubber; 1941-1951; chart and tabulations. Automotive Ind 108: 333 Mr 15 '53

Rubber and rubber products, Nov.-Dec. 1951-Jan.-Nov. 1952. Survey of Cur Bsns 33:S37 Ja '53 [cont monthly]

World consumption of rubber sets new record in 1952. For Comm W 49:13 Mr 2 '53

World rubber output down; use rising. For Comm W 49:11 My 25 '53

RUBBER industry and trade—Statistics—*Cont.*

World rubber production declines; U.S. increases natural imports. For Comm W 49:15 Ja 19 '53

World use of rubber continues to rise. For Comm W 49:15 Mr 23 '53

Argentina

Argentine consumption of rubber increases. For Comm W 49:13 Mr 23 '53

Canada

Canadian rubber facts; past and present. Can Chem Process 37:34 F '53

Ceylon

Ceylon's rubber for China's rice. India Rubber World 127:838+ Mr '53

France

Rubber imports and consumption, 1951. India Rubber World 127:698 F '53

Germany

Germany; postwar vs. prewar rubber industry. India Rubber World 128:814 S '53

Japan

Japan lays foundation for giant synthetic rubber industry with advice from U.S. Chem & Eng N 31:1998 My 11 '53

Malaya

Malaya rubber trade falling off. India Rubber World 128:259-60 My '53

RUBBER laboratories

New rubber laboratories at the Wyandotte research center. il Rubber Age 73:506-7 Jl '53

Equipment

Cabot laboratories feature extensive facilities. il Rubber Age 73:370-1 Je '53

RUBBER latex

Stripping and concentration of rubber latices; Turba-Film evaporator. flow sheet Rubber Age 73:794 S '53

Studies on the yellow fraction of latex. G. E. Van Gils. bibliog Ind & Eng Chem 45:452-4 F '53

Zinc oxide in latex; influence of zinc oxide on colloidal stability. H. C. Jones and C. A. Klaman. bibliog Rubber Age 73:63-70 Ap '53

See also

Rubber, Artificial—
Latex

RUBBER libraries

See also American chemical society—Rubber division—Library

RUBBER lining

Lining a reservoir with rubber. Engineering 175:811 Je 26 '53

Materials for chemical handling equipment. L. R. Honnaker and M. L. Monack. diags Am Water Works Assn J 45:469-72 My '53

Rubber lining on solids-handling pump. il Eng N 149:124-5 D 18 '52

Bibliography

Rubber division library bibliography; rubber linings. 9 l Rubber division lib, Univ. of Akron, Akron 4, Ohio '52

RUBBER machinery

Chicago group discussion on rubber processing equipment. India Rubber World 127:807-8 Mr '53

Maintenance of rubber machinery; panel discussion. Rubber Age 73:508-14 Jl '53; India Rubber World 128:645-7 Ag '53

Stacomizer press for rubber processing. il India Rubber World 127:396 D '52

See also

Rubber laboratories
—Equipment

Bibliography

Rubber division library bibliography; mills and calenders. 9 l Rubber division lib, Univ. of Akron, Akron 4, Ohio '52

RUBBER plantations

Sir Henry Wickham; British pioneer. E. V. Lane. il Rubber Age 73:649-56 Ag '53

RUBBER plants and planting

Growth and regeneration in hevea seedlings. T. J. Muzik. diags Science 117:555-6 My 22 '53

Oidium heveae, leaf mildew of hevea. India Rubber World 127:273-4 N '52

Studies on natural pollination of hevea brasiliensis in Brazil. H. E. Warmke. bibliog Science 116:474-5 O 31 '52

See also

Guayule

RUBBER reclaiming. See Rubber—Reclaiming

RUBBER research

Biosynthesis of guayule rubber. India Rubber World 127:640+ F '53

BRPRA reports on technological advances made during 1951. Rubber Age 72:98-9 O '52

Coefficients of friction of rubber samples. J. A. Hurry and J. D. Prock. il diag India Rubber World 128:619-22 Ag '53

Development and use of rubber in bituminous pavements. H. K. Fisher. il India Rubber World 127:220-2 N '52

Diffusion phenomena in solvent deresination of guayule rubber. T. F. Banigan, jr. bibliog Ind & Eng Chem 45:577-81 Mr '53

High-quality rubber by acetone deresination of guayule. F. E. Clark and others. bibliog Ind & Eng Chem 45:572-6 Mr '53

Methods employed in compounding research I. Drogin. bibliog(248 titles) il India Rubber World 127:65-9+, 365-9, 505-10, 646-50, 797-801; 128:59-63, 203-5, 345-7+, 627-9, 771-4; 129:63-8 O, D '52-Je, Ag-O '53

Physics of rubber. S. D. Gehman. bibliog India Rubber World 128:199-201 My '53

Role of heat in the carbon black reinforcement of rubber. C. W. Sweitzer. bibliog il Rubber Age 72:55-63, 205-10 O-N '52

Technical publications of BRPRA; abstracts. Rubber Age 73:530-1, 820 Jl, S '53

U.S. air force rubber development program. W. Postelnek. il Chem & Eng N 31:1958-60 My 11 '53

See also

Rubber, Artificial—
Research
Rubber laboratories

RUBBER shoes. See Shoes, Rubber, plastic, etc.

RUBBER soles. See Soles, Rubber

RUBBER stamps

Even unskilled operators set up their own machines; rubber stamps on setup sheet, pictures proper tool arrangement; sheet lists operations, proper feeds, speeds, etc.; Temco aircraft corp. P. F. Young. il diags Am Mach 97:109-13 Ja 5 '53

RUBBER waste

See also

Rubber—Reclaiming

RUBBERS. See Shoes, Rubber, plastics, etc.

RUBEANIC acid. See Dithioöxamide

RUBEROID company

Five companies paying dividends in stock and cash; with comparative balance sheet items. Mag of Wall St 92:224 My 16 '53

RUBIDIUM

Broadening and shift of the second doublet of the rubidium absorption series under different pressures of argon and helium. S. Ch'en and D. A. Kohler. bibliog Phys R 90:1019-21 Je 15 '53

Isotopes

Evidence for a 25.5-day Sr-76-sec Rb chain. P. Kruger and N. Sugarman. bibliog Phys R 90:158-9 Ap 1 '53

Isomer Rb^{84m}. R. S. Caird and A. C. G. Mitchell. bibliog diag Phys R 89:573-4 F 1 '53

Nuclear spectra of Rb^{82} and Rb^{84}. C. M. Huddleston and A. C. G. Mitchell. bibliog diags Phys R 88:1350-4 D 15 '52

Radiations from Rb^{86} and Rb^{86m}. R. B. Schwartz and others. bibliog Phys R 91:883-4 Ag 15 '53

Rb^{87} and Cs^{133} magnetic resonance shifts in the solid halides. H. S. Gutowsky and B. R. McGarvey. J Chem Phys 21:1423-4 Ag '53

RUBIDIUM chloride

Differential diffusion coefficient of rubidium chloride in dilute aqueous solution at 25°. H. S. Harned and M. Blander. bibliog Am Chem Soc J 75:2853-5 Je 20 '53

RUBIDIUM compounds

Interpretation of the refractive index measurements on the ternary system RbCl-RbBr-KBr-KCl. J. E. Ricci. diags Am Chem Soc J 74:5788-90 N 20 '52

RUBIDIUM fluoride
Complex fluorides; the structural chemistry of some complex fluorides of potassium, rubidium, cæsium, ammonium, and thallium. B. Cox and A. G. Sharpe. Chem Soc J p 1783-4 Je '53

RUBIDIUM telluride
Photoemission from cesium and rubidium tellurides. E. Taft and L. Apker. Opt Soc Am J 43:81-3 F '53

RUBREMETINIUM bromide
Synthesis of emetine and related compounds; the synthesis of (±)-rubremetinium bromide. A. R. Battersby, H. T. Openshaw and H. C. S. Wood. Chem Soc J p2463-70 Ag '53

RUBROCURCUMIN
Compounds of curcumin and boric acid; the structure of rubrocurcumin. G. S. Spicer and J. D. H. Strickland. Chem Soc J p4650-3 D '52

RUBROGLIOCLADIN. See Antibiotic substances

RUDOLFS, Willem, 1886-
Rutgers loses Rudolfs by retirement. pors Eng N 149:71-4 N 6 '52

RUGS
Nylon rug carving. il Mod Textiles Mag 34: 80 Ag '53
See also
Carpets
Saran

Manufacture

Machinery changes help make better cotton rugs. R. B. Pressley. il Textile World 103: 114-15 Ja '53

RUGS, Cotton
Machinery changes help make better cotton rugs. R. B. Pressley. il Textile World 103: 114-15 Ja '53

RUHR valley
Krupp and the new Ruhr. Economist 166: 578+, 644-5 F 28-Mr 7 '53
West German businessmen analyze Ruhr commodity market trends. For Comm W 49:10 My 25 '53

RULING machines
Replica technique for grating ruling engine adjustments. D. K. Rice and F. A. McNally. Opt Soc Am J 42:783 O '52

RUMANIA
See also
Chemical industries—Rumania
Electricity supply—Rumania

RUMFORD, Sir Benjamin Thompson, Count, 1753-1814
Count Rumford; heating engineer. W. Allphin. por Heating-Piping 25:114-15 Jl '53
Count von Rumford, F.R.S. E. C. Smith. por Engineering 175:374-5, 405 Mr 20-27 '53

RUN-OFF
Aerial pictures of snow markers aid forecasts of stream runoff. T. Henderson. il map Elec World News ed 139:22-3 Ap 13 '53
Flood intensities and frequencies on British catchments. G. Bransby-Williams. maps Engineer 194:247-51 Ag 22 '52
Taste and odor problems during spring runoff; panel discussion. J. F. Erdei and others. diag Am Water Works Assn J 44: 1127-43 D '52

RUNWAYS, Airport. See Airports—Runways

RUPTURE disk. See Pressure vessels—Safety measures

RURAL electrification administration
Are REA super co-op leases valid? R. L. Arnold. Pub Util 51:761-8 Je 4 '53
Court rules on REA act. Pub Util 52:106-7 Jl 16 '53
Decline in REA loans expected. Elec World News ed 139:15 Mr 30 '53
For REA; Ancher Nelsen, Republican. Elec World 139:72 Ap 6 '53
GOP makes its first power moves. Elec World News ed 139:6-7 F 2 '53
New REA program overseer. Elec World News ed 138:10 D 8 '52
Power firms challenge REA loans to co-ops as bypassing Congress. il Eng N 150:27 Ja 22 '53
REA shake-up announced. Pub Util 52:37-8 Jl 2 '53
REA's statistics on power; 14th annual report. Pub Util 52:326 Ag 27 '53
Status of western REA-financed systems; tabulation. Elec West 110:98-9 F '53
Wickard quits as head. Elec World 139:109 Mr 23 '53

RURAL fire protection. See Fire protection, Rural

RURAL planning
Plans for the country. Economist 166:188-9 Ja 24 '53

RUSK, Howard A. 1901-
Receives $10,000 Mutual of Omaha Criss award for achievement. por Weekly Underw 168:1241 My 2 '53
Wins $10,000 award of mutual benefit. Weekly Underw 167:1658 D 20 '52

RUSSELL, F. C., company
Annual report. Comm & Fin Chr 178:244-5 Jl 20 '53
Easing of metal shortages to spur operations. Barron's 33:25 F 9 '53

RUSSELL manufacturing company
Security I like best. W. A. Casey. Comm & Fin Chr 177:2 Ja 1 '53

RUSSIA
IPI study advocates more Russian experts. Ed & Pub 85:13 O 4 '52
Russia and warm water; a fallacious generalization and its consequences. J. A. Morrison. U S Naval Inst Proc 78:1168-79 N '52
What do the Russian purges mean? J. Cordelli. Mag of Wall St 91:565+ F 21 '53
See also
Airplanes, Military—Russia
Canals—Russia
Chemical industries—Russia
Education—Russia
Engineering education—Russia
Finance—Russia
Hydroelectric plants—Russia
Labor and laboring classes—Russia
Machine tool industry—Russia
Munitions industry—Russia
Petroleum industry and trade—Russia
Prices—Russia
Tractor industry and trade—Russia

Air force

Red air forces. il Fortune 47:120-1+ F '53

Army

Politics of the red army. Fortune 47:90+ My '53
Security in the Soviet army. Economist 165: 894-5 D 27 '52

Commerce

Can we do business with Malenkov? A. W. May. Comm & Fin Chr 177:1208-9 Mr 19 '53
Effects of the embargo on Soviet trade. N. Spulber. Harvard Bsns R 30:122-8 N '52
Moscow opens trade offensive. map Bsns W p 166-8 My 9 '53
Russia; how its buying habits change. Iron Age 170:86 D 18 '52
Trade on whose terms? Economist 167:137-8 Ap 18 '53
Trading with Mao and Malenkov. Economist 167:797-8 Je 20 '53

Commercial policy

Soviet foreign trade, road to conquest. S. Garbuny. Comm & Fin Chr 177:678 F 12 '53

Economic conditions

Shades of Marx! private trading still lubricates the Soviet machine. P. Wohl. Barron's 33:5 Jl 20 '53
Strength through misery; Five year plan, 1950-1955. Barron's 33:1 Jl 13 '53
U.S.-Soviet economic positions. P. Wohl. Mag of Wall St 92:387-9 Je 27 '53

Economic policy

Moscow opens trade offensive. map Bsns W p 166-8 My 9 '53
Russia's strength today. D. B. Shimkin. bibliog Automotive Ind 109:62-6+ O 1; 42-5+ O 15 '53
Soviet exploitation of capitalist devices proving futile. A. W. May. Comm & Fin Chr 177:889+ F 26 '53
Stalin starts heads rolling; purge trials. Bsns W p 136-7 Ja 24 '53
What the Russians know about long-range planning. Bsns W p 116-18 N 1 '52
Why Russia is caught in an economic trap. il map Bsns W p94-6+ D 20 '52

RUSSIA—*Continued*

Economic relations

Czechoslovakia

Soviets tighten Czech leash. Bsns W p 154+ Je 13 '53

Yugoslavia

Yugoslavia and Soviet exploitation of her satellites. A. W. May. Comm & Fin Chr 178:105+ Jl 9 '53

Foreign relations

Eisenhower urges Russia prove she wants world peace. Comm & Fin Chr 177:1741+ Ap 23 '53

Is peace or a truce in sight? Bsns W p30-1 My 23 '53

Keep our economic powder dry! A. W. May. Comm & Fin Chr 177:1733+ Ap 23 '53

Korean truce talks; are they a start toward shaping a new kind of world? il Bsns W p27-8 Ap 25 '53

Malenkov's hundred days. Economist 167:715-16 Je 13 '53

Next round with Mr Vyshinsky. Economist 166:551-2 F 28 '53

Nineteen fifty-three. L. M. Cherne. Paint Oil & Chem R 115:38-40+ D 4 '52

Rare opportunity; Stalin's death has offered a fleeting advantage to the West. F. Morley. Barron's 33:3 Mr 16 '53

Stalin's operation orders. Economist 165:71-2 O 11 '52

Under the olive branch. Economist 167:131-2 Ap 18 '53

Without Stalin, what next? Bsns W p27-8 Mr 7 '53

China

Far Eastern future. map Economist 165:870-2 D 27 '52

Europe, Eastern

Crisis in east Europe. map Bsns W p31-2 Jl 18 '53

Israel

Israel and the Russians. Economist 166:645 Mr 7 '53

United States

Can we do business with Malenkov? A. W. May. Comm & Fin Chr 177:1208-9 Mr 19 '53

Liberation without fears? Economist 166:469-70 F 21 '53

Reading Pravda; reply to President Eisenhower's peace programme. Economist 167:279-80 My 2 '53

Robert's rules; using them with Communists the U.S. always loses. J. Chamberlain. Barron's 33:3 Jl 27 '53

Three envoys to Russia; Representative L. H. Smith suggests we play some diplomatic poker. F. Morley. Barron's 33:7+ Ap 13 '53

Yugoslavia

Complications for President Tito. Economist 167:807 Je 20 '53

Industries and resources

Kremlin's plan V. il maps Fortune 47:112-19+ F '53

1952 balance sheet for Soviet industry. Economist 166:425-6 F 14 '53

Russia's strength today. D. B. Shimkin. bibliog Automotive Ind 109:62-6+ O 1; 42-5+ O 15 '53

Soviet economy catches up. Economist 166:265 Ja 31 '53

Soviet industry in 1953. V. L. Horoth. maps Mag of Wall St 91:527-9+ F 7 '53

What the Russians know about long-range planning. Bsns W p 116-18 N 1 '52

Navy

New red naval doctrine in the making? R. A. Shafter. il U S Naval Inst Proc 78:1090-8 O '52

Soviet satellite seas; naval aims. Economist 167:581-2 My 30 '53

Politics and government

April mood in the Kremlin. Economist 167:67-9 Ap 11 '53

Building a Soviet superstate. Bsns W p 156-8 O 25 '52

Case of Comrade Voznessensky. Economist 166:85-6 Ja 10 '53

Crisis in the Kremlin. il Bsns W p30-1 Jl 18 '53

From cell to Kremlin. Economist 165:31-2 O 4 '52

Malenkov reports to the party. Economist 165:103-4 O 11 '52

Malenkov's men. Economist 166:791 Mr 21 '53

Purging through Georgia. Economist 167:209-10 Ap 25 '53

Soviet central Asia. map Economist 165:310+, 394-6 N 1-8 '52

Soviet regime. Economist 165:459-60, 546-8 N 15-22 '52

Stalin and Malenkov. R. W. Babson. Comm & Fin Chr 177:1214 Mr 19 '53

Stalin on the fifth lap. Economist 165:240-1 O 25 '52

Ten days' council in the Kremlin. Economist 165:170+ O 18 '52

Twenty days after Stalin. Economist 166:879-80 Mr 28 '53

Social conditions

Soviet society; from the dacha set down. il Fortune 47:125-9+ F '53

RUSSIAN language

Dictionaries

New complete Russian-English dictionary. L. Segal. 4th ed rev & enl 1016p $9 British book centre, 122 E. 55th st, New York 22 '51

Study and teaching

Languages of the language of science. R. J. Howerton and C. E. Diss. Science 117:391-2 Ap 10 '53

RUSSIANS in Germany

Up against a new blockade. il Bsns W p 138-41 F 28 '53

RUST, John Daniel

Mr little ol' Rust. pors Fortune 46:150-2+ D '52

RUST. See Corrosion and anti-corrosives

RUSTS (botany)

Crystalline organo-iron pigment from a rust fungus (ustilago sphaerogena). J. B. Neilands. bibliog il Am Chem Soc J 74:4846-7 O 5 '52

Nutritive value of rust-infected leaves. C. E. Yarwood and others. bibliog Science 117:326-7 Mr 27 '53

RUTGERS university

School of ceramics

Rutgers' 50 years of ceramic education and research. il Am Cer Soc Bul 31:462-4 N 15 '52

RUTHENIUM

Analysis

Colorimetric determination of ruthenium with *p*-nitrosodimethylaniline. J. E. Currah and others. bibliog Anal Chem 24:1980-2 D '52

Isotopes

Zr^{92}-Mo^{92} and Zr^{94}-Mo^{94} pairs and the Zr^{96}-Mo^{96}-Ru^{96} triplet. J. S. Geiger and others. bibliog diags Phys R 89:621-3 F 1 '53

RUTHENIUM acetate

Basic trinuclear ruthenium acetate. F. S. Martin. Chem Soc J p2682-4 Jl '52

RUTHENIUM compounds

Polarographic chemistry of ferrocene, ruthenocene and the metal hydrocarbon ions. J. A. Page and G. Wilkinson. Am Chem Soc J 74:6149-50 D 5 '52

Preparation and some properties of ruthenocene and ruthenicinium salts. G. Wilkinson. bibliog Am Chem Soc J 74:6146-7 D 5 '52

Spectrophotometric investigations of some complexes of ruthenium; ruthenium reactions with thiosemicarbazide, 4-phenylthiosemicarbazide and diphenylthiocarbazide. R. P. Yaffe and A. F. Voigt. bibliog Am Chem Soc J 74:5043-6 O 20 '52

Vibrational spectra and structure of ferrocene and ruthenocene. E. R. Lippincott and R. D. Nelson. bibliog J Chem Phys 21:1307-8 Jl '53

RUTHENIUM fluorides

New fluorine compounds of ruthenium; ruthenium trifluoride and potassium ruthenium fluoride. E. E. Aynsley and others. Chem & Ind p 1002 O 11 '52

RUTHENIUM oxides
Chemistry of Ru(VI), -(VII) and -(VIII); reactions, oxidation potentials and spectra. R. E. Connick and C. R. Hurley. bibliog Am Chem Soc J 74:5012-15 O 20 '52
Oxidations with ruthenium tetroxide. C. Djerassi and R. R. Engle. bibliog Am Chem Soc J 75:3838-40 Ag 5 '53

RUTHENIUM sulfates
Sexavalent ruthenium sulphate. F. S. Martin. Chem Soc J p3055-9 Ag '52

RUTHERFORD, Ralph Leslie, 1894-1952
Memorial. J. A. Allan. bibliog por(pl 12) Geol Soc Proc 1952:127-30 Je '53

RUTILE
Effect of sorption on the structure of surfaces of solids; magnetic susceptibility of sorbed NO_2-N_2O_4 on rutile; the stoichiometry of rutile. L. H. Reyerson and J. M. Honig. bibliog Am Chem Soc J 75:3920-2 Ag 20 '53
Effect of sorption on the structure of surfaces of solids; sorption of NO_2-N_2O_4 on rutile. L. H. Reyerson and J. M. Honig. bibliog Am Chem Soc J 75:3917-19 Ag 20 '53
Heat capacities of multimolecular layers of methane adsorbed on rutile. K. S. Dennis, E. L. Pace and C. S. Baughman. Am Chem Soc J 75:3269-70 Jl 5 '53
Influence of impurities on electrical conductivity of rutile. G. H. Johnson. bibliog Am Cer Soc J 36:97-101 Mr 1 '53
Mining and concentration of ilmenite and associated minerals at Trail Ridge, Fla. J. H. Carpenter and others. flow sheet il Min Eng 5:Trans 789-95 Ag '53
Some thermodynamic properties of methane adsorbed on rutile between 80 and 140°K. E. L. Pace and others. bibliog J Chem Phys 21:1225-8 Jl '53
Titanium; rutile and ilmenite deposits along Australia's eastern coastline. J. Loughlin. diag Light Metal Age 11:16-17+ F '53

RUTLEDGE, John Joseph, 1870-1952
Memorial. J. T. Singewald, jr. bibliog por(pl 13) Geol Soc Proc 1952:131-5 Je '53

RUTLEDGE, Wiley Blount, 1894-1949
Portrait. Fortune 46:143 O '52

RYAN, Joseph Patrick, 1884-
Portrait. Bsns W p 133 My 30 '53

RYDBERG constant
Rydberg constant and the atomic mass of the electron. E. R. Cohen. bibliog diag Phys R 88:353-60 O 15 '52
Third Rydberg series of N_2. R. E. Worley. Phys R 89:863-4 F 15 '53

RYERSON, Edward Larned, 1886-
Time to leave Inland Steel. Bsns W p 120 My 23 '53

RYLANDS and sons, limited
Statement by the chairman. E. Rhodes. Economist 167:56-7 Ap 4 '53

RYNALLOY. See Alloys, Heat resisting

S

S-PARTICLES
Recent experimental results on *S* particles. H. Bridge and others. il Phys R 91:1024 Ag 15 '53

SH group. See Mercapto group

SKF industries, inc.
Top management by mathematics; linear programming. il Bsns W p86+ My 30 '53

SAAR (territory)
Again the Saar; France's new premier thrusts that vital area into the spotlight. Barron's 33:7+ Ja 19 '53
Little Ruhr; France puts its chips on Lorraine and the Saar. Barron's 33:5 My 4 '53
Saarbruecken; German? French? or European? il Bsns W p 146-9 D 6 '52

SACCHARIDES
See also
Oligosaccharides

SACCHARIN
N-alkyl saccharins and their reduction products. L. M. Rice, C. H. Grogan and E. E. Reid. Am Chem Soc J 75:4303-5 S 5 '53

SACCHARINIC acids
Concerning the mechanism of formation of saccharinic acids. J. C. Sowden and D. J. Kuenne. bibliog Am Chem Soc J 75:2788-9 Je 5 '53

SACRAMENTO, California

Sewage

Joint venture bids low on $4-million sewage job. Eng N 149:52 D 4 '52

SAFE deposits
Audit of safekeeping. N. T. Shepherd. Banking 45:58 Ja '53

Law

Safe deposit; bank becomes gratuitous bailee of money mislaid in safe deposit area. J. R. Vincens. Banking 45:78-9 Mr '53
Safe deposit procedures. J. A. McBain. Banking 45:61 F; 57 Mr; 47 Ap; 60 My; 111 Je '53

SAFETY advertising
Safe till tomorrow, campaign; Willys-Overland. il Nat Safety N 66:24-5+ D '52

SAFETY at sea
Hull fittings and equipment; safety features; Mariners. il diag Marine Eng 58:90-3 My '53
International safety standards at sea advanced. Marine Eng 58:35 Ja '53
Lessons from disasters. L. B. Olson. Nat Safety N 67:20-1+ Je '53
Realistic safety programs for Congress and management. E. C. Holden, jr. East Underw 53:27 D 5 '52
Safety features of new Andrea Doria. J. J. Baicich. East Underw 53:30 D 19 '52
World's safest floating art gallery; S. S. Andrea Doria. il Safety Maint & Prod 105:63-4 Mr '53
See also
Lightships
Radio aids to navigation
Ships—Fires and fire protection

SAFETY awards. See Safety contests and awards

SAFETY belts
It's not the fall, it's the sudden stop; impact loads on tail lines for safety belts. W. E. Rossnagel. Constr Methods 35:112+ F '53
Safety belts and harness. Nat Safety N 67: 103-4 Mr '53

SAFETY bonus
Plant safety pays bonus to employees; New Haven trap rock co. T. W. Jones. il Concrete 61:28-30 S '53

SAFETY campaigns
Comprehensive safety at Westvaco's Luke mill. il Paper Ind 34:980-3 N '52; Same cond. Mill & Factory 52:100-2 Mr '53
Home folks help to keep mill and community safe; West Virginia pulp and paper co. il Nat Safety N 67:38-9+ Ja '53
Is off-the-job safety any of your business? il Factory Management 110:146-9 O '52
Off-the-job accidents cost three billion dollars a year. A. S. Johnson. Am Mach 96: 148-50 O 13 '52
Safe till tomorrow, campaign; Willys-Overland. il Nat Safety N 66:24-5+ D '52
Tell them a story. L. A. Long. Nat Safety N 68:22-3+ Jl '53

SAFETY cartoons
Cartoon booklet teaches operators; Caterpillar tractor co. il Nat Safety N 67:50+ My '53
National safety council celebrates a decade of drawing for safety. il Spectator 161: 22 Je '53

SAFETY clothing. See Clothing, Protective

SAFETY codes
Legal codes affecting car air conditioning need to be modernized. J. Geschelin. Automotive Ind 109:67+ O 1 '53
New ladder code approved by ASA. Nat Safety N 67:54-5 Ja '53
New provisions in building exits code. Nat Safety N 67:48 Ap '53
Safety through accepted rules. M. M. Braidech. Nat Safety N 68:18-19+ S '53
Wisconsin public service commission issues interim rules for gas distribution safety. Gas Age 110:69+ O 23 '52

SAFETY committees
Safety, jet propelled; North American Aviation. W. G. Johnson. il Nat Safety N 68:18-19+ Ag '53
Show-place is safe place; Theo. Hamm brewing co. J. J. Renner and O. D. Duggins. il Food Eng 25:74-6 Ja '53
Worth the effort; Quaker oats co. il Nat Safety N 66:70+ D '52

SAFETY conferences

Accident prevention workshops for Hawaiian employers. A. W. Hendrickson. il Nat Safety N 67:40-1+ Ap '53
Annual labor-management safety conference, 7th, Tacoma, March 12-13. Paper Ind 35:86 Ap '53

SAFETY congresses

New York safety council 23d annual safety convention and exposition. Safety Maint & Prod 105:33-4+ My '53

See also

National safety council

SAFETY contests and awards

Accident frequency reduction award approved by EEI board of directors. Edison Elec Inst Bul 21:92 Mr '53
Association safety efforts recognized; National safety council's new award. Safety Maint & Prod 104:38 N '52
Basis for judging safety contests. Nat Safety N 67:47 Mr '53
Bureau of mines safety awards. Rock Prod 56:218+ Ag '53
Carnival celebrates award; Tampa electric co. il Nat Safety N 67:80+ My '53
Celebrate winning of safety trophy; Lyman-Richey sand & gravel corp. B. Nordberg. Rock Prod 56:80-3 My '53
Contest report for first quarter shows ten per cent drop from 1952. Paper Ind 35:356+ Je '53
EEI resuscitation awards emphasize importance of intensive safety training. Edison Elec Inst Bul 21:19-24+ Ja '53; 55-8 F '53
Employee safety awards; group winners of the Railroad employees national safety award. Ry Age 134:13 My 18 '53; Nat Safety N 67:136 Je '53
Flight safety award winners. Aviation W 57:15 D 1 '52
For distinguished service; National safety council awards for outstanding records. Published in monthly numbers of National safety news
Fork truck competition for operating safety. Safety Maint & Prod 105:36 Je '53
Formula for your safety contest. C. L. Rienzo. Nat Safety N 66:30 N '52
Fritz trophy to Westvaco for second straight year. il Paper Ind 34:992 N '52
Gas utilities chalk up records for safe operations. Am Gas Assn Mo 35:43 Jl-Ag '53
Harman-Feds Creek foremen honored for safety records. Coal Age 58:144 Mr '53
Holmes awards cite safety achievements. Coal Age 58:176+ Je '53
Miners and quarrymen honored at safety award ceremonies. Explosives Eng 31:13-17 Ja '53
N.R.M.C.A. safety contest. Rock Prod 56:266-7 Ja '53
NSC announces award winners of 1952 Rubber section contest. Rubber Age 73:231 My '53
N.S.C. safety award winner; employees of West Virginia pulp and paper company won the Edward Benton Fritz memorial trophy. Pulp & Pa of Can 53:200 N '52
National sand and gravel association safety competition. Rock Prod 55:142+ O '52
New records in mining safety; 1952 National safety competition. Nat Safety N 68:94 S '53
1952 NSC pulp and paper contest shows five per cent rate reduction. Paper Ind 34:1494+ Mr '53
PI contest report for six months shows 11 per cent decrease from 1952. Paper Ind 35:685-6 S '53
Portland cement association given high honors for industrial safety. il Concrete 61:34 Ja '53
Presentation of safety awards to member companies of the A.G.A. W. H. Adams. Am Gas Assn Proc 1952:128-9
Recognition for good records; second year of National safety council's industrial award plan. N. Mozley. il Nat Safety N 68:114-15+ O '53
Red Jacket honors 97 foremen for safety. Coal Age 58:140 Mr '53
Safety citation to Heinrich. Safety Maint & Prod 104:42 D '52
Safety design wins match book award; National lead co. Safety Maint & Prod 104:38 N '52
Safety leaders of 1952; winners in National safety council's industrial contests. Nat Safety N 67:37+ Ap '53
Safety merit award rules and regulations clarified. Edison Elec Inst Bul 21:61 F '53
Sentinels of safety; trophy awards. Min Cong J 39:91 Ag '53
Two dramatic safety records; Capital airlines, North Atlantic constructors. Safety Maint & Prod 104:46-7 Ap '53
Union Pacific's coal miners win top safety honors, fourth consecutive year. Explosives Eng 30:184-5+ N '52
What Strathmore is doing to preserve its safety record. il Paper Tr J 137:45 O 16 '53

See also

Fire protection—Contests and awards
Harriman memorial medals for safety
Safety bonus

SAFETY councils

See also

National safety council

SAFETY devices and measures

Almost human! Safety Zoo booklet offers something new in publications for employees. il Nat Safety N 66:21 N '52
Amyl acetate; hazards and precautions; data sheet. il Nat Safety N 68:30-1+ Ag '53
Better lighting maintenance; illustrations with text. Safety Maint & Prod 105:30-1 Ja '53
Conductive rubber has many safety uses. Nat Safety N 67:140 Je '53; Same. Weekly Underw 168:1066 Ap 18 '53
Dangerous new products cost manufacturers million. Product Eng 24:200-1 Ja '53
Discharge your static electricity. il Safety Maint & Prod 104:29-30+ N '52
Dust removal's a must! il Safety Maint & Prod 104:66-8 N '52
Easy tire mounting; pneumatic tire and rim mounting machine. il diag Safety Maint & Prod 105:22 My '53
Employee-run program pays off with safety; Hobbs manufacturing co. Safety Maint & Prod 106:56 O '53
Equal safety for women. Safety Maint & Prod 105:83 Mr '53
Explosion-proof devices; install them right. J. W. St Andre. il diag Factory Management 111:106-7 Je '53
Hand and power tools. bibliog Nat Safety N 67:183+ Mr '53
Here's a modern way to keep workers posted on safety. il Mill & Factory 52:86 My '53
How to control propane leaks. il Safety Maint & Prod 105:67-70 F '53
How to transfer flammable liquids. il Safety Maint & Prod 105:27-8+ Ja '53
Is your new product safe? J. V. Grimaldi. Mech Eng 75:122-4+ F '53
Lighting and accident prevention. M. A. McTaggart. il Elec R (Lond) 151:661-3 S 26 '52
Maintenance operating policies; abstract. D. F. Stanfill. Safety Maint & Prod 105:21+ Mr '53
Methods that take the hazard out of handling sodium. M. Sittig. bibliog il Nat Safety N 68:26-7+ Jl '53
National safety news; seventeenth annual safety equipment issue. il Nat Safety N 67:2-324 Mr '53
New way to improve safety in manufacturing plants; Crucible steel co., Midland. il Rough Notes 96:46+ Je '53
No accident records are not accidental; Whirlpool corp. il Safety Maint & Prod 105:17-18+ Ja '53
Painting for people and protection. H. Ketcham. il Safety Maint & Prod 105:20-2+ Je '53
Progress with color. H. Ketcham. il Nat Safety N 66:28-9+ N '52
Push-button plants to pose new safety problems. F. W. Braun. Nat Safety N 66:37 D '52
Safe trends are steps to safety. P. C. Crawford. il diags Safety Maint & Prod 104:14-16+ D '52
Safer, economic hauling; Autocar co. il Nat Safety N 68:174 O '53
Safety; a challenge to industrial statesmanship; abstract. R. L. Minckler. Management R 41:649-50 O '52
Safety for women in industry. J. Michael. il Safety Maint & Prod 106:11-12+ Ag '53
Safety instruments. V. R. Croswell. Ind & Eng Chem 45:sup 117A-18A+ Ja '53
Safety inventory. Nat Safety N 67:3 Mr '53

SAFETY devices and measures—*Continued*

Safety, it doesn't just happen; Westinghouse's Sunbury, Pa., plant. il Mod Ind 25:48-9 My '53

Safety measures on logging craft. il Nat Safety N 68:42+ Ag '53

Safety was built into this plant; Western cartridge co.; illustrations with text. Mill & Factory 51:130-1 O '52

Simple valve cover shields worker from hazardous sprays. il diag Factory Management 110:168-9 O '52

Small business and associations. A. M. Baltzer. Published in monthly numbers of National safety news

Spot your hazards. E. C. Shedd. Safety Maint & Prod 106:21+ O '53

Stop injuries with atoms; Hazatrol. il Factory Management 111:112 Jl '53

Suggests six point program. M. Donlon. Weekly Underw 168:873+ Mr 28 '53

Thermostats keep watch on hot asphalt tank. diag Nat Safety N 67:48+ Ja '53; Same. Safety Maint & Prod 105:54 F '53

Twin keys to production; safety and efficiency at new Mennen plant. il Safety Maint & Prod 105:37-8+ Je '53

UN lighting high in safe maintenance. il Safety Maint & Prod 104:17 D '52

What's your safety IQ? Standard register co. safety quiz. il Safety Maint & Prod 105:19+ Je '53

Where women work; how to utilize their skills effectively and safely. Nat Safety N 67:5 Mr '53

Xylene and toluene; hazards and precautions; data sheet. il Nat Safety N 68:38-9+ Ag '53

Your plant, too, could go boom! J. W. St Andre. il Factory Management 111:142-4 Ap '53

See also

Automobile driving
Clothing, Protective
Color codes, Safety
Eye—Protection
Factories—Lighting
Fire protection
First aid in illness and injury
Floors—Anti-slip surfaces
Fusible plugs
Goggles
Inflammable liquids
Lightning protection
National safety council
Poisons, Industrial
Presses—Safety devices
Railroads—Signals
Respiratory apparatus
Safety at sea and other headings beginning Safety
Street lighting—Safety aspects
Trade associations—Safety work
Traffic signals

also subdivision Safety measures under special subjects, e.g.

Airlines
Aviation
Breweries
Building
Chemical plants
Chemicals
Coal mines and mining
Conveying machinery
Electric equipment
Electric tools, Portable
Foundries
Gas, Natural—Pipe lines
Gas appliances, Domestic
Gas companies
Glass factories
Hoisting
Hospitals
Ladders
Lumbering
Machine shops
Mining engineering
Motor bus lines
Motor trucks, Industrial
Offices
Paper mills
Petroleum industry and trade
Petroleum refineries
Quarries and quarrying
Railroads
Roads
Scaffolding
Shipyards
Textile mills
United States—Forest service

Bibliography

Safety library. Published in monthly numbers of National safety news

Cost

What does it cost? how much does it save? summary of accident and safety program costs. J. A. De Luca. Nat Safety N 67:30-1 Ja '53

Psychological aspects

Diary of an industrial physician. H. P. Dastur. Nat Safety N 67:26+ Ap; 42+ My; 37+ Je '53

Happy workers seek safety. W. J. Rodgers. Pet Refiner 32:234+ Ap '53

Man the most unpredictable element. W. H. Seymour. Weekly Underw 167:1728 D 27 '52

Master mechanics in human maintenance; the industrial nurse. W. E. Park. Advanced Management 17:15-18 D '52

Mental factors in traffic accidents. H. Brandaleone; abstract. Safety Maint & Prod 104:52-3 N '52

People need maintenance, too. W. E. Park. Nat Safety N 67:32-3+ My '53

Psychological tests of tractor-trailer drivers; abstract. D. J. Moffie and others. Safety Maint & Prod 104:44+ N '52

See also

Accidents, Industrial—Psychological aspects

SAFETY education

Juvenile trespassing reduced; how the B&O does it. il Ry Age 135:96-7 S 21 '53

See also

Moving pictures in safety education
National safety council
Safety instructions and training

SAFETY engineering

Beyond the slide rule. W. J. M. Redwood. Nat Safety N 66:28+ D '52

Good medicine for any plant; Aluminum ore co. D. H. Tilson. il Nat Safety N 67:20-1+ F '53

How good is our performance? D. N. Edwards. bibliog Nat Safety N 68:36-7+ Ag '53

Making the foundry safe for top production. S. C. Herbine. il Foundry 80:120-3+ N '52

Message to young engineers. J. Cost. Nat Safety N 68:20-1+ Ag '53

Natural gasoline plants; a safety inspection program. D. Attaway. il Pet Eng 24:C46+ N '52

Plant design and layout. il Nat Safety N 67:9+ Mr '53

Plant expands, so does safety; Monarch machine tool co. il Safety Maint & Prod 105:68-75 Ap '53

Protective equipment is available for employees, but, how do you get them to use it? L. A. Greiner. Safety Maint & Prod 105:11-12+ F '53

Safety views; variety of approaches to accident prevention presented by speakers at National safety congress. Safety Maint & Prod 105:16+ F '53

Small plant, big problem. A. J. Austin. il Nat Safety N 66:120-1+ O '52

See also

Building—Safety aspects
Chemical plants—Safety measures
Coal mines and mining—Safety measures
Mining engineering—Safety measures
Petroleum engineering—Safety measures
Safety inspection

SAFETY engineers

Hybrid engineers. L. S. Hill. Nat Safety N 66:36 D '52

I'm sick of the three E's. C. R. Zeskey, jr. Nat Safety N 67:22-3+ My '53

Inside a safety engineer. Safety Maint & Prod 104:13+ N '52

Let's be practical. H. B. Hurd. Nat Safety N 68:24-5+ S '53

Safety and public relations. E. Landry. Pulp & Pa of Can 54:201+ Ag '53

Safety engineer is in on everything. Chem Eng 59:336+ N '52

Safety engineer rolls up his sleeves. S. F. Spence. il Safety Maint & Prod 104:19+ O; 25-6+ N '52

William Jewell college honors Paul Jones. Nat Safety N 67:42+ Ja '53

See also

Sang, Earl

SAFETY equipment

National safety congress and exposition, 41st, Chicago, Oct. 19-23; guide, floor plans, directory of exhibitors. Nat Safety N 68:1-10 O '53

National safety news; seventeenth annual safety equipment issue. il Nat Safety N 67:2-324 Mr '53

Protective equipment is available for employees, but, how do you get them to use it? L. A. Greiner. Safety Maint & Prod 105:11-12+ F '53

SAFETY equipment—*Continued*
Safety on display; Sun oil company, Marcus Hook refinery. W. Boon. il Nat Safety N 68:118-19+ O '53
Spot for safety; give emergency equipment a spot of its own, where everyone can find it. il Safety Maint & Prod 104:78 O '52
See also
Clothing, Protective
Fire extinguishers
Gloves, Safety
Respiratory apparatus

SAFETY exhibits
Industrial safety; exhibition and congress, Birmingham. Elec R (Lond) 152:1457-8 Je 26 '53
National safety congress and exposition, 40th, Chicago, Oct. 20-24; guide, floor plans, directory of exhibitors. Nat Safety N 66:1-10 O '52
Safety arcade at Wisconsin state fair. il Nat Safety N 67:97 Ja '53
Safety exposition of 40th National safety congress, Chicago, Oct. 20-24; with list of exhibitors. Nat Safety N 66:38-9+ D '52
3 D safety displays. il plan Safety Maint & Prod 106:32-3 Ag '53

SAFETY glass. See Glass, Safety

SAFETY glasses. See Goggles

SAFETY guards, Highway. See Roads—Safety guards

SAFETY hats. See Hats, Safety

SAFETY in the home
See also
Accidents in the home
Electric apparatus and appliances, Domestic—Safety measures

SAFETY inspection
Looking for trouble; inspections that spot hazards before they cause accidents. H. G. Jordan. il Nat Safety N 68:24-5+ Ag '53

SAFETY instructions and training
At Safety's Morocco base. il Nat Safety N 67:18-19+ My '53
Cartoon booklet teaches operators; Caterpillar tractor co. il Nat Safety N 67:50+ My '53
Foremen need roving eyes to keep workers accident free; safety observers. il Mill & Factory 53:100-1 Jl '53
Methods of training for mobile operations. J. E. Neason and W. H. Fleming. il Min Cong J 38:32-4+ D '52
More power to your words; camera can provide pictures that make on-the-job teaching graphic and impressive. N. Burch. il Nat Safety N 67:22-3+ F '53
More regulations, or better safety training? D. H. Stormont. il Oil & Gas J 51:230+ S 29 '52
More than selling. S. W. Homan. Nat Safety N 66:32-3 D '52
Practical method for teaching mine workers and officials use of gas-detecting equipment. D. S. Kingery and F. D. Baker. 12pls U S Bur Mines Information Circ 7639:1-6 '52
Safety on display; Sun oil company, Marcus Hook refinery. W. Boon. il Nat Safety N 68:118-19+ O '53
Safety seminar, its value to your employees. W. T. Rogers. Am Gas Assn Proc 1952:134-6
Safety's Arctic outpost; Operation Blue Jay. il Nat Safety N 67:18-19+ F '53
Take time to instruct new employees. Constr Methods 35:144 My '53
These 11 ideas helped cut new-worker accidents 78 per cent; Bullard co. A. P. Lombard and W. D. Noa. il Factory Management 111:98-101 F '53
Train employes to work safely; West Virginia pulp and paper co. il Mill & Factory 51:126-7 D '52
Train for safety; railroad instruction car. il Safety Maint & Prod 105:59-60 Ap '53
Training for safety. bibliog il Nat Safety N 67:233+ Mr '53
Visual aids in safety training. il Nat Safety N 67:65-8+ Je '53
Wayagamack achievement. J. A. Draper. Pulp & Pa of Can 54:198+ Jl '53; Excerpt. Nat Safety N 68:164 O '53
See also
First aid in illness and injury
Safety posters

Bibliography

Occupational safety services; catalog. il Nat Safety N 67:N1-N52 Mr '53

SAFETY labels
Danger is the same in any language. il Bsns W p66 Ja 17 '53

SAFETY lamps, Electric
Galvanometer lamp and a clamp with four degrees of freedom. R. V. Jones. diags J Sci Instr 29:338 O '52
Lamphouse design for better lamp care. il Min Eng 5:490 My '53
Leak-proof alkaline cap lamps. il diag Elec R (Lond) 151:306 Ag 8 '52; Engineer 194:233-4 Ag 15 '52
Miner's lamps aid airplane maintenance. il Safety Maint & Prod 104:33-4 N '52

SAFETY laws and regulations
Federal law to prevent major coal-mine disasters, 1952. Mo Labor R 75:505-7 N '52
How the states stand on rubber mill safety. il Standardization 23:340-1 O '52
Safety in boiler operation. J. R. Fellows. Heating-Piping 24:90-2 D '52
Safety provisions of the Factories acts. C. F. Mayson. bibliog Engineering 174:214-15 Ag 15 '52
Safety regulations and how they affect the electrical industry. L. D. Price. Elec Eng 72:480-2 Je '53
Serving Wisconsin industry; Industrial commission. C. Fish. il map Nat Safety N 66:108-10+ O '52

SAFETY literature

Bibliography

Occupational safety services; catalog. il Nat Safety N 67:N1-N52 Mr '53

SAFETY movement
Fight for life; report on the 39th year of the National safety council. Nat Safety N 66:97-124 N '52
Free and responsible. L. W. Youngdahl. Nat Safety N 66:18-19+ D '52
Green Cross news. T. A. Burke, comp. Published in monthly numbers of National safety news
Milwaukee celebrates safety anniversary. Nat Safety N 66:31 N '52
Other countries ahead of us in safety? Safety Maint & Prod 104:97-8 O '52
Public service work of the National safety council. W. S. S. Rodgers. Nat Safety N 67:17+ Je '53
Two miles of safety; New York Green Cross safety parade. il Nat Safety N 66:34-5 D '52
Unfinished business. N. H. Dearborn. Nat Safety N 66:17+ D '52
See also
National safety council

SAFETY on the farm
Accident prevention workshops for Hawaiian employers. A. W. Hendrickson. il Nat Safety N 67:40-1+ Ap '53
Vice president Nixon keynotes farm safety week. Nat Safety N 68:68 S '53

SAFETY organization
Accident prevention among the brass. J. W. Carpenter. il Nat Safety N 68:112-13+ O '53
Benefits of a safety campaign to a mine; Snow hill coal corp. A. G. Gossard. il Min Cong J 39:50-2 Mr '53
Build better public relations through safety. F. G. Wilson. Safety Maint & Prod 105:13+ Je '53
Eliminate lost time accidents; A.G.A. laboratories. Am Gas Assn Mo 35:12-13+ Mr '53
Facts and fancies about safety supervision. E. S. Hannaford. Nat Safety N 67:32-3+ Ap '53
Ground safety with the Pacific airlift. N. Burch. il map Nat Safety N 67:20-1+ Ap; 26-7+ My '53
It's management's responsibility to eliminate accidents. D. T. Mould. il Safety Maint & Prod 105:13-14+ Ap '53
Keeping weak links out of safety; Chain belt co. A. W. Bathke. il Am Mach 96:134-5 D 8 '52
Management supplies the spark. M. G. Geiger. Nat Safety N 67:18-19+ Ja '53

SAFETY organization—*Continued*

Management's function in the safety program. G. W. E. Nicholson. Paper Tr J 135:19-20 N 7 '52; Same. Pulp & Pa of Can 54:204+ Ag '53

Operation zero cut our accidents; Southern coach lines, inc. il Bus Transportation 32:34-5 Ap '53

President speaks on safety. L. F. Whittemore. Pulp & Pa of Can 53:160+ D '52

Psychological warfare against accidents; Fraser paper, limited. G. F. Hutchings. Nat Safety N 66:93-5 D '52

Safety, essential job of management. B. L. Storey. World Oil 135:78+ O '52

Safety in water works. W. R. La Due. Water & Sewage Works 100:89-94 Mr '53

Size is no bar to need for safety. W. H. Adams. Am Gas Assn Mo 35:14+ Ap '53

Succeeding with safety. A. J. R. Curtis. Rock Prod 56:120 Mr '53

Suggested accident prevention program. Tappi 36:sup 100A+ Je '53

Topping the industry's record; Television-radio division plant at Sunbury, Pa. il Nat Safety N 67:28-9+ Ap '53; Same. Mach 59:176-9 Ap '53; Same. Safety Maint & Prod 105:10-12+ My '53

Western ice plant cools off accidents; Crystal ice and cold storage co. Nat Safety N 68:166 O '53

What's in it for me? comment scribbled on a poster gave the safety department something to think about. R. W. Avison. il Nat Safety N 67:36-7 F '53

When mines work together; Lake Superior mines safety council. il Nat Safety N 66:18-20 N '52

Workers spot plant hazards; packing firm's accident rate and lost time plunge to new low. I. C. Miller. il Food Eng 25:92-3+ Mr '53

You must decide! plain talk for management for smaller businesses. L. Walters. il Nat Safety N 67:38-9+ Ap '53

See also

Safety committees

SAFETY posters

1953 directory of occupational safety posters. Published by the National safety council, 425 N. Michigan av, Chicago 11 (50c)

Posters warn against blasting caps. Nat Safety N 68:66+ Ag '53

Safety posters. Published in monthly numbers of National safety news

SAFETY shoes. See Shoes, Safety

SAFETY signs

How safety slogans helped cut Salt Lake City lines accidents. il Bus Transportation 32:52-3 F '53

Safety signs. il Nat Safety N 67:234 Mr '53

SAFETY slogans

How safety slogans helped cut Salt Lake City lines accidents. il Bus Transportation 32:52-3 F '53

SAFETY standards

American standard safety code for installing and using electrical equipment in and about coal mines (M2.1). diags U S Bur Mines Bul 514:1-28; pa 20c Supt. of doc. '52; Excerpts. il Min Cong J 39:62-4 Mr '53

A.S.A. hygiene standards for industry. H. G. Lamb. il Safety Maint & Prod 105:41-3 F '53

How the states stand on rubber mill safety. il Standardization 23:340-1 O '52

International safety standards at sea advanced. Marine Eng 58:35 Ja '53

Plan machine guards for taller men; American standard safety code. Nat Safety N 68:106-7 S '53

Safety code for mechanical refrigeration. bibliog diag Refrig Eng 61:sup 1-19 O '53 (reprints $1)

Safety through accepted rules. M. M. Braidech. Nat Safety N 68:18-19+ S '53

Standards are safeguards. D. G. Vaughan. il Nat Safety N 66:106-7+ O '52

See also

Safety codes

SAFETY tags

How to protect your power distribution. J. W. St Andre. il Factory Management 111:148-9 O '53

Novel warning tags score a hit. R. R. Proctor. il Pet Processing 8:401 Mr '53

Safety tagging works well for West Penn. T. C. Montgomery. il diag Power Eng 57:58-61+ My '53

SAFETY valves

High-pressure boiler blowoff valves. E. E. Finsel. il diags Power 97:94-7+ S '53

Power relief valve aids superheater venting in h-p, h-t boiler start-ups. J. W. Mackenzie. il diag Power Eng 57:58-9+ Mr '53

Safety devices in refrigeration. R. T. Moore. il diags Refrig Eng 60:1286-9 D '52; Discussion. 61:60-1 Ja '53

What changes are needed to drop heating steam from 125 psi to 15 psi? Power Eng 57:79-80 Mr; 98 Ap '53

SAFEWAY stores, inc.

Five diversified stocks with strong investment appeal; with comparative balance sheet items. Mag of Wall St 92:397 Je 27 '53

Safeway stores; earnings outlook. P. J. Fitzgerald and J. M. Fee. Barron's 33:19+ Ap 13 '53

SAGINAW, Michigan

Water supply

Management and operation of Saginaw-Midland water supply system. A. Eckert. Am Water Works Assn J 45:1075-8 O '53

SAHARA desert

See also

Mines and mineral resources—Sahara desert

SAILING vessels

First extreme clipper, the Rainbow. C. C. Hanks. Marine Eng 58:78 F '53

See also

Yachts and yachting

SAILORS. See Seamen

SAILORS surplus, inc.

Surplus commercial candor. Fortune 46:215 D '52

SAILORS' union of the Pacific

Union makes a home for landlocked seafarers. il Bsns W p74-5 Ja 3 '53

SAINT BARTHOLOMEW (island)

Geology of St Bartholomew, St Martin, and Anguilla, Lesser Antilles. R. A. Christman. bibliog maps Geol Soc Bul 64:65-96, pl 1-4 Ja '53

ST FOY, Quebec

Road construction accompanies building boom. E. T. Nesbitt. il Roads & Eng Constr 90:111+ O '52

ST HELENS pulp and paper company

Restraint imposed on trustees in disputed sale of St Helens. Paper Tr J 136:12 My 1 '53

ST JOHN, Eugene, 1876-1953

Sketch. por Inland Ptr 131:68 Ap '53

ST JOSEPH Missouri

See also

Floods—St Joseph, Missouri

ST LAWRENCE waterway and power project

Dynamic business impact of St Lawrence seaway. J. T. Russell. map Mag of Wall St 92:316-17+ Je 13 '53

FPC engineers favor plan to build part of St Lawrence power project. Eng N 149:25 D 11 '52

FPC staff backs New York bid to build St Lawrence project. Elec World News ed 139:6 Mr 2 '53

IJC gives OK on St Lawrence. Elec World News ed 138:9 N 10 '52

Latest seaway plea called weakest. G. S. Prince. Ry Age News ed 134:9-10 Ap 27 '53

License to N.Y. seems assured. Elec World 139:76 Mr 9 '53

N.Y. St Lawrence license OK'd. Elec World 139:128 My 18 '53

N.Y. state plan for St Lawrence power development favored by FPC examiner. Eng N 150:26 My 21 '53

New York takes its St Lawrence story to FPC. il Elec World 138:90-1 D 15 '52

Outlook brightens for St Lawrence project. map Eng N 149:24-5 D 18 '52

Public power asks New York preference. Elec World 138:84 O 6 '52

St Lawrence hearings near end. Elec World News ed 138:10 D 22 '52

St Lawrence hearings will be resumed Feb. 2. Elec World News ed 139:21 Ja 5 '53

ST LAWRENCE waterway and power project—*Continued*

St Lawrence pact scrapped by Canada. Eng N 149:27 N 13 '52

St Lawrence power development; FPC moves on New York application. Elec World News ed 138:8 N 24 '52

St Lawrence seaway. maps Engineering 174: 549-51, 612-13 O 24, N 7 '52

St Lawrence Seaway project. R. H. Saunders. Electrician 149:333-4 Ag 1 '52

Seaway again. Bsns W p26 Ja 10 '53

Seaway without power dam is proposed by Senator Wiley. Elec World 139:59-60 Ja 12 '53

Status of the St Lawrence seaway. L. Chevrier. Roads & Eng Constr 90:54 D '52

ST LOUIS

St Louis slum-clearing planned. map Eng N 150:224-5 F 19 '53

Education, Board of

See Public schools—St Louis

Railroads

On this new highline, MP trains lifted out of street. il Ry Age 135:90-2+ S 7 '53

Six railroad crossings eliminated; Missouri Pacific lines. il Nat Safety N 68:72+ S '53

Rapid transit

City takeover? Bsns W p 112-13 N 15 '52

ST LOUIS county, Missouri

Towns into cities. Bsns W p 155 N 22 '52

ST LOUIS globe democrat

St Louis G-D takes bow on 100th birthday. Ed & Pub 85:15+ N 8 '52

ST LOUIS-SAN FRANCISCO railway

St Louis-San Francisco in sharp earnings upsurge. Barron's 32:21-2 D 15 '52

Security I like best. G. S. Colby. Comm & Fin Chr 177:1206 Mr 19 '53

ST LOUIS southwestern railway

Cotton Belt marks 75 years. il Manuf Rec 121:60-1 N '52

SAINT MARTIN (island)

Geology of St Bartholomew, St Martin, and Anguilla, Lesser Antilles. R. A. Christman. bibliog maps Geol Soc Bul 64:65-96, pl 1-4 Ja '53

ST PAUL, Minnesota

Streets

Keeping streets clear in winter. G. M. Shepard. il Pub Works 84:67-9+ S '53

ST PAUL fire and marine insurance companies

100 years old. East Underw 54:21 My 1 '53

ST PETERSBURG, Florida

Sewerage

Solving the subdivision sewage disposal problem. C. E. Wright. il Pub Works 84:77 S '53

ST REGIS paper company

Security I like best. T. Alexander. Comm & Fin Chr 177:994 Mr 5 '53

Security I like best. S. R. Winters. Comm & Fin Chr 177:674+ F 12 '53

SAKRETE

Sakrete concrete producers 5th annual meeting, Los Angeles, Feb. 19-20. Rock Prod 56: 230 Ap '53

SALARIES

Salary ranges in 304 offices. Am Bsns 23:8-10 Ap '53

Wages and salaries, how to administer them. D. Tver. Pet Refiner 31:104-5 O '52

See also

Chemists—Salaries
Engineering colleges—Professors and instructors—Salaries
Engineers—Salaries
Executives—Salaries
Government employees—Salaries
Judges—Salaries
Salesmen—Salaries and commissions
Wages

Regulation

Bank salaries and wages; discontinued services, rules changes, regulations checklist. Banking 45:141 O '52

Employers of professional engineers warned regarding wage stabilization. J. D. Cooper. Elec Eng 71:1053 N '52

Wage and salary regulations affecting random rate banks. W. Powers. Banking 45: 52-3+ D '52

Wage and salary stabilization changes. Banking 45:116 S '52

SALE, Rhys Manly, 1897-

Portrait. Bsns W p91 My 16 '53

SALES

Sales terms for nonferrous castings. Foundry 81:222 F '53

See also

Auctions
Exclusive agencies
Instalment plan
Warranty

SALES agencies. See Exclusive agencies

SALES agents. See Manufacturers' agents

SALES campaigns

Industry gets home market sales plan; Archer-Daniels-Midland co. il Paint Oil & Chem R 116:6-6B Jl 2 '53

Satisfied customers provide best leads; Amana freezers. C. J. Swan. il Ptr Ink 241: 41-3 N 7 '52

Stop-and-go campaign hits snag then gets results for Nopco. P. E. Moreton. il Ind Marketing 37:136+ D '52

$200,000 promotion by G&T co-op and its members wins farmers. il Elec World 138: 94-6 O 6 '52

SALES conferences

Concentrate on just one sales aid. W. J. Tobin. Ptr Ink 242:45-6 Ja 2 '53

SALES contests

Are incentive drives impractical if your sales force is unionized? E. Gidlow. Sales Management 70:40+ Ja 1 '53

Chicago and Philadelphia start contest on single-point-ignition ranges. Gas Age 112:31 S 24 '53

How to ring fresh change on an old sales theme; Old stove roundup. A. D. Schrodt. il Sales Management 70:65-8 F 1 '53

Old political names enliven Doeskin contest. Sales Management 69:116-17 O 1 '52

Sell a few, sell them hard; reorganizing industrial sales to sell retail accounts. il Chem W 71:43+ O 25 '52

Why salesmen leave home. B. Kingston. Ptr Ink 242:106 Mr 13 '53

SALES contests, Dealers'

Daisy, daisy; it's a winning promotion theme! Oxford filing supply co. il Ptr Ink 242:49-50 F 20 '53

Prizes for dealers' wives and women business associates boost sales 27 per cent. J. A. Marsh. Ptr Ink 241:44+ O 24 '52

SALES conventions

Brown & Bigelow's circus presents show-how of sales. il Sales Management 69:19-20 pt 2 O 1 '52

Films go beyond visual aids; they're meeting insurance. W. Burnham. Sales Management 69:16-18 pt 2 O 1 '52

GE sells industrial goods with Broadway stage show. il Bsns W p44 F 28 '53

Pacific Intermountain Express, invites customers and competitors to its annual sales meeting. Sales Management 70:82-4 Mr 1 '53

Sales meetings. Published quarterly as part 2 of Sales management, beginning Jan. 1, 1953

Sound tape and slide films sharpen skits at Ansul sales meeting. M. Kingman. il Ind Marketing 37:44-5+ N '52

What every meeting planner should know about objectives, audience and results. R. Beckhard. Sales Management 69:26+ pt 2 O 1 '52

Your entertainment is loafing unless you give it a real job to do. S. Melba. il Sales Management 69:36+ pt 2 O 1 '52

Moving pictures

What made Schenley use a film instead of its elaborate meeting? H. L. Laupheimer. il Sales Management 70:55-7 pt 2 Ja 1 '53

Television conventions

Industry takes to theater network television; James Lees and sons co. il map Mod Ind 25:57-8 Mr '53

On tv; an 18,000-man conference. il Bsns W p56-8+ D 13 '52

Sales meeting features color telecast. C. Day. il Ptr Ink 241:28+ D 19 '52

Will theatre tv replace regular sales meetings? il Sales Management 70:62-5 pt 2 Ja 1 '53

SALES costs

How many calls does a salesman make in a week? what's the cost per call? Ptr Ink 241:44+ N 7 '52

See also

Salesmen—Expenses

SALES departments

Sales H.Q. into sales tool; Frank H. Lee co. il Mod Ind 25:61-2+ Mr '53

Records

See also

Sales records

SALES estimates

Forecasting sales of industrial products; one company's method; abstract. D. E. Gates. Management R 41:803-4 D '52

How to use trade show medium for sales forecasting studies. J. T. Fosdick. Sales Management 70:19-20 pt 2 Ja 1 '53

Techniques in forecasting consumer durable goods sales. A. C. MacGowan. J Marketing 17:156-62 O '52

SALES letters

How 3-M's crying letter upped response to 63 per cent; Minnesota Mining's recording tape for radio stations. il Sales Management 70:38-9 Mr 15 '53

How to put warmth and friendliness into your sales letters. R. E. Smallwood. Sales Management 70:42-5 Ja 15; 98-101 Mr 15 '53

Why ten per cent of Tandy's letters are never mailed. M. K. Pirie. Sales Management 69:41-2+ N 20 '52

See also

Follow-up systems

Lost customers

Peeved patrons reconsidered. Sales Management 70:73 Ja 15 '53

SALES literature. See Advertising literature

SALES management

Administering salesmen's compensation. H. R. Tosdal. Harvard Bsns R 31:70-83 Mr '53

All salesmen own bosses; Howard J. Barrett, Philadelphia. P. Lance. il Soap & San Chem 28:146-7+ S '52

Conference on sales management; contributed papers, 1953. S. H. Rewoldt, ed. (Michigan business papers no. 26) 110p pa $2 Univ. of Michigan press, 311 Maynard st, Ann Arbor '53

Fallacies that limit sales success. C. L. Lapp. Management R 41:613-15 S '52

How to discover what your salesmen want discussed at your meeting. R. Beckhard. Sales Management 70:42+ pt 2 Ja 1 '53

New title for salesmen is display engineer. E. B. Weiss. Ptr Ink 241:29-30 D 26 '52

Sales and distribution. il Mod Ind 25:97-8+ Ja '53 [cont monthly]

Seven-way policy for building a happy and productive sales force; Republic supply co. R. L. Temple. il Sales Management 70:24-5+ Mr 1 '53

Seven ways to wind up run-down salesmen. Sales Management 70:73 Mr 15 '53

Students stage summer sales blitz; Charles Pfizer & co. contacts doctors and hospitals with medical students. C. Judson. Ptr Ink 241:78+ O 17 '52

Three biggest problem areas in sales management; salesmen's compensation, job definition, and training. J. O. Vance. Sales Management 70:24-5+ Mr 15 '53

20 ways to show salesmen you're the man to be their boss. W. J. Tobin. Sales Management 69:24-6 D 1 '52

See also

Advertising
Advertising and salesmen
Branch management
Dealer helps
Display of merchandize
Drivers as salesmen
Marketing
Printing trade—Salesmen
Prospect lists
Sales contests and other headings beginning Sales
Salesmanship
Salesmen

SALES managers

Selling's honor fraternity; Pi sigmi epsilon; chapter activity at University of Georgia. Sales Management 70:55 Mr 1 '53

Training

NSE sponsors grad school for young sales supervisors. Sales Management 70:84 Mr 15 '53

SALES manuals

Tool for better selling. il Ry Age News ed 135:18 S 28 '53

SALES policies

Economics of chemical selling. H. O. Ladd. Chem & Eng N 30:4938-41 N 24 '52

Fjord-to-fjord technique sells radar in Norway; seagoing salesroom. il Ptr Ink 241:33 N 28 '52

Freezer; rocking the food industry. il Bsns W p64-6+ Mr 28 '53

How a small company lives, and grows, in the hazardous garment industry; Tabak sports wear. J. H. Collins. il Sales Management 70:94+ Mr 1 '53

How to extend a beachhead in the home-building market; Pressteel recessed lighting fixtures. P. A. Jones and others. Sales Management 69:56+ O 1 '52

Learn-as-you-play idea earns all-year market for toys; Playskool mfg. co. D. J. Atchison. il Sales Management 69:30-2 N 10 '52

Non-price competition at the department-store level. P. Bliss. J Marketing 17:357-65 Ap '53

One-market saturation selling wins leadership for Laurel Springs. C. J. Knapp. il Sales Management 69:53-4+ N 20 '52

Perfection proves merit of if you can't lick 'em, join 'em; changing from oil to gas and electric ranges. L. Bushfield. il Sales Management 69:82+ N 1 '52

Product that sells. il Fortune 47:110-12+ Mr '53

Ready-mixed concrete business; sales policy. J. A. Nicholson. Rock Prod 56:264-6+ Ag '53

Ten big benefits you enjoy when you put your policies in writing; Aldens, Chicago mail order company. J. C. Staehle. Sales Management 70:24-5+ Ja 1 '53

What IHC says to farmers' wives about food freezers. R. H. Burnside and J. H. Coats. il Sales Management 70:30-2+ F 1 '53

When a mere upstart challenges big-name competition; Rose Marie Reid's swimsuits. B. L. Kamberg. il Sales Management 69:128-32 O 15 '52

When home buyers clamor for 20 colors; Creo-Dipt's plan. Sales Management 69:64 N 20 '52

See also

Credit
Customer relations
Dealer helps
Dealer relations
Discount, Cash
Discount, Trade
Exhibits
Gas industry—Merchandizing
Instalment plan
Jobbers
Marketing
Premiums (merchandising)
Price fixing, Resale
Price policies
Products, Improved
Returned goods

Free goods

Throw in a free case of baby food; Staffin-Johns opens 1,000 new accounts; baby mattress business. J. H. Haas. il Sales Management 69:44-5 O 1 '52

Selective selling

How Pheoll eliminated losses on 6,000 chicken feed accounts. R. C. Taylor, jr. il Sales Management 70:30-2 Mr 15 '53

Small orders

12-for-the-price-of-11 deal moves small orders in off season; Stone mountain grit co. C. Davidson. il Ptr Ink 242:75-6 Ja 16 '53

What can be done about orders that are unprofitable? B. S. Britton. Am Bsns 23:22+ Mr '53

SALES policies, Retail

See also

Self service

SALES promotion

Art by the yard. B. Bradshaw. J Retailing 29:83-4+ Summer '53

Boston cooking festival carries gas story to eastern Massachusetts homes. J. C. Rafferty. il Gas Age 110:32-3 N 6 '52

Byron goes inside classroom and out after the buyer. W. N. Beadle. il Ind Marketing 37:60+ S '52

SALES promotion—*Continued*

Can peep show sell hard goods? Viking tries it, says yes. B. Enos. il Ind Marketing 38:104-5+ Mr '53

Dramatize then capitalize; newspaper cooking schools. K. L. Rathbone. il Am Gas Assn Mo 35:18-20+ Ap '53

Executive flight for Xmas sales; Minnesota mining & mfg. co.'s Scotch brand Cellophane tape division. il Mod Ind 24:56-7 D '52

Gas cooking festival, Boston, Sept. 22-25. Am Gas Assn Mo 34:19-20 N '52

How to see outer space for a box top; Ralston Purina's touring rocket ships. il Bsns W p30-1 O 25 '52

Is machinery promotion dull? dealer proves it isn't, hikes sales ten per cent. M. Reinsberg. il Ind Marketing 37:58-9+ D '52

Legal roadblock; giveaways illegal in Alabama. Bsns W p48 Jl 4 '53

Now a soda fountain in every home! ice cream manufacturer in New Orleans. il Sales Management 70:86+ Mr 1 '53

Promotion takes over 3-D. Bsns W p96+ Jl 11 '53

Promotional value of your star or show. G. N. Montgomery. Adv Agency 46:28+ Ap '53

Pup; $10 down, $5 weekly; Amerbrit kennels. il Bsns W p42-4 Je 6 '53

Sales boosters for stations. F. Breese. il Nat Pet N 44:60-1 O 8 '52

Sales promotion clinic for water connected appliances. J. M. Wicht; T. F. Elrod. Dom Eng 181:101+ Mr '53

Sales promotion ideas. Published in monthly numbers of Industrial marketing

Selling; the big job for many top men; how it's done at Firestone. Bsns W p60+ Jl 4 '53

Shutterbugs can help you sell. il Sales Management 70:56-9 Ja 1 '53

Spring tonic for rural sales. il Dom Eng 181:96+ Ap '53

Tailor-made promotional program. W. W. Kuenn. Sheet Metal Worker 44:53 D '52

Thousands of housewives jam sewing clinics; cooperative promotion; how to make draperies and slip covers. il Sales Management 69:56+ O 15 '52

Trade characters in promotion programs. C. A. Kirkpatrick. J Marketing 17:366-71 Ap '53

When 34-year-old Ray Hickok shook up the sales plan. il Sales Management 69:102-4+ O 1 '52

With big-time traveling show of handling equipment, Yale & Towne takes it right to the customer. il Factory Management 111:276+ Ap '53

You are now entering the industrial merchandising era! G. D. Crain, jr. il Ind Marketing 38:52-5 My '53

See also

Dealer helps
Disney, Walt, productions
Exhibits
Exhibits, Traveling
Instruction in use of product
Premiums (merchandizing)
Publicity

Entertainment

Advertisers' new musical shows hit the road. il Ptr Ink 242:15 Ja 23 '53

Appliances in show business. il Elec West 110:100-1 Mr '53

50 gorgeous girls, 50; merchandising extravaganzas. R. S. Lammers. Ptr Ink 242:73-4 Mr 6 '53

GE dramatizes a sales program for 4,000 distributor salesmen. il Ind Marketing 38:50-1 Je '53

GE to inspire its distributors. il Elec World News ed 139:46 Mr 2 '53

Servel opens on Broadway; musical show gets to hearts of distributors and dealers. il Am Gas J 178:47-8 F '53

Servel promotes 1953 appliance line with million-dollar musical shows. il Am Gas J 178:42 Ja '53

Traveling ads; roving stage shows for industry. Bsns W p34 Ap 25 '53

Why companies spend millions to introduce new models to dealers; Servel's million-dollar musical comedy. W. Norris. il Am Bsns 23:20-1 Mr '53

SALES quotas

How to estimate sales quotas your salesmen will go for. J. O. Painter. Ptr Ink 241:56-7+ N 14 '52

Sales quotas, are they the answer to your selling problems? il Dom Eng 181:88-91 Mr '53

SALES records

File highlights sales facts. Am Bsns 22:46-7 N '52

Here are some sales aids for live printing salesmen. P. R. Russell. Inland Ptr 130:48-9 N '52

SALES statistics

See also

Retail trade—Statistic

SALES tax

D-day for furniture. Economist 165:411 N 8 '52

Do sales taxes apply out of state? Bsns W p56+ My 23 '53

Down with uplift? comment on report of Grant committee. Economist 167:466 My 16 '53

Federal sales tax? U.S. Treasury ponders Canada's success with it. J. C. W. Schaie. Barron's 33:9 Je 29 '53

Gas bills, appliance sales in Pennsylvania subject to one per cent tax. Gas Age 112:41-2 S 24 '53

Relief for consumer goods; reductions in purchase tax. Economist 164:774+ S 27 '52

SALES territories

Key questions to ask salesmen when you revamp territories. B. M. Austin. Sales Management 70:89+ Mr 15 '53

Mapping industrial markets and planning of sales territories; with list of 80 major ones. E. J. Heimer. Dun's R 61:39-41+ My '53

SALESMANSHIP

Confidence is the basis of all successful salesmanship. J. Dutton. Comm & Fin Chr 177:1455 Ap 2 '53

Don't be a half failure! P. Salisbury and A. A. Hood. Sales Management 70:82+ Ja 15 '53

14 ways to use sales-promotion materials in 1953. L. H. Fritz. Ptr Ink 241:74+ N 21 '52

How Snap-On breaks a sale into its component parts. P. J. Schutt. il Sales Management 70:82+ F 1 '53

Levels of salesmanship. C. L. Lapp. Life Ins Courant 58:21-2 My '53

More psychology in selling. R. C. Brewster. Harvard Bsns R 31:91-9 Jl '53

New profession of chemical salesmanship in the making. Chem & Eng N 30:5146-7 D 8 '52

Not enough salesmen for a hard sell. Bsns W p 136+ Mr 14 '53

Perfection is death! L. H. Brendel. Ptr Ink 241:56+ N 28 '52

Purchasing agents classify salesmen. Sales Management 69:60 N 10 '52

Sale I never forgot; first sale of Simmonds push-pull engine control for airplanes. W. R. Enyart. Ptr Ink 242:82 F 20 '53

Sale I never forgot; he refused to get out; twelve year old salesman. R. A. Snelling. Ptr Ink 241:84 N 21 '52

Sale I never forgot; I held my temper. A. F. Warren. Ptr Ink 242:66 F 27 '53

Sale I never forgot; selling mouse traps to plant managers. F. Weismann. Ptr Ink 242:56+ F 6 '53

Sale I never forgot; 17 hours of show me; prospects' engineers visit Edward Valves plant. W. F. Crawford. Ptr Ink 241:64 N 28 '52

Sale I never forgot; the customer dug out driveway for used Duro car. P. G. Hoffman. Ptr Ink 242:54-5 Ja 2 '53

Sales engineer and his problems. B. Lester. Published in monthly numbers of Machinery

Salespeople not needed? I say phooey! R. D. Polatsek. Sales Management 70:129 F 15 '53

Sell yourself before product. E. A. Hageny. Credit & Fin Management 54:17+ D '52

Selling a trust service. W. P. J. Drakeley, jr. Trusts & Estates 92:492-4+ Jl '53

Selling; its importance in the chemical industry. J. W. Kinsman. Chem Eng Prog 48:433-6 S '52

SALESMANSHIP—*Continued*

Some differences between advertising and selling. N. Samstag. Adv Agency 46:75-7 Ap '53

Successful sales techniques. J. M. Hickerson. Harvard Bsns R 30:33-46 S '52

There are only six basic reasons why people don't buy. W. E. Meuse. Ptr Ink 242:48+ Ja 23 '53

What makes a salesman make a sale? J. S. Nirenberg. Ptr Ink 242:46+ Ja 9 '53

What the buyer expects of sanitary supply salesmen. P. Lance. il Soap & San Chem 28:175+ D '52

Why big orders are the ones to shoot for. J. B. Singer. Ptr Ink 241:43 N 28 '52

See also

Advertising
Advertising, Soliciting of
Advertising and salesmen
Auctions
Door-to-door selling
Insurance, Life—Agents
Insurance agents
Mail order business
Premiums (merchandizing)
Prospect lists
Sales letters
Sales management
Salesmen
Salesmen, Retail
Salesmen's portfolios

Approach

Horse is tired, too! irrelevant approach. D. W. Gibson. Adv Agency 46:74-6 F '53

One way to sell an air conditioner. il Bsns W p 156+ My 9 '53

Sale I never forgot; another brush-off made me sell. T. Gaskins. Ptr Ink 241:64 D 5 '52

Sale I never forgot; two noes and one yes. T. Sachs. Ptr Ink 241:86 N 7 '52

Demonstrations

Are you using visuals to sell to government? J. Shoenfeld. Sales Management 70:38+ F 1 '53

DoAll shows 'em with visual catalog. il Sales Management 69:33 N 20 '52

How to demonstrate the impossible; slide films and tape recording for surgical equipment. il Sales Management 70:99 F 1 '53

Now the tea bag gets a new competitor. C. H. Newman. Sales Management 70:93-4+ Ja 15 '53

Pretty girls plus no experience do something for lift trucks; Buda co. il Ind Marketing 38:69 S '53

Repetition need not mean monotony; Lewyt corp. idea; demonstration sells vacuum cleaners. il Sales Management 70:12-14 pt 2 Ja 1 '53

Sale I never forgot; a portable taste test. P. T. Thorwall. Ptr Ink 241:111 D 12 '52

Sale I never forgot; betting $50 to a nickel on a demonstration. C. Hulsh. Ptr Ink 241:62 O 24 '52

Sale I never forgot; prospect demonstrates Ad-Stik. J. Katz. Ptr Ink 242:84 F 13 '53

Sale I never forgot; user demonstrations of silver polish pay off. H. Wessel, jr. Ptr Ink 241:114 O 17 '52

What's inside Reynolds' trailers? aluminum foil military and industrial packaging, and farm building products. il Sales Management 69:89-90+ N 1 '52

See also

Department stores—Manufacturers' demonstrations

Graphic aids

Sale I never forgot; speaking graphically. D. W. Chandler. Ptr Ink 241:78 O 31 '52

Group selling

Sometimes you sell more when you cut out the commercial; Producers Council selling of building materials. J. Shoenfeld. Sales Management 70:50+ Mr 15 '53

Number of calls

How this secret weapon builds sales by making every minute count; canvassing book. W. A. McDermid. Ptr Ink 242:54 F 6 '53

Price problem

Take the ice out of price! Dom Eng 182:88-9+ S '53

Why price is tenth in buyer preferences. D. Markstein. Sales Management 70:110+ F 15 '53

Samples

Samples on the spot; they save sales for National cash register co. il Sales Management 70:102 Mr 1 '53

Service

Curious dealers seek Dearborn's four one-thousand-dollar ideas. C. N. Hinds. Sales Management 69:40-2 O 1 '52

Good sources of information for salesmen. E. W. Fair. Inland Ptr 130:66-7 F '53

Help wanted; merchandiser-salesman. J. S. Schiff. Ptr Ink 241:27-8 N 28 '52

How to increase use of display material; General Foods' answer. P. Lillard. il Ptr Ink 241:36-8 O 24 '52

Sale I never forgot; servicing for leads; International correspondence school student helped by salesman. L. W. Tice. Ptr Ink 242:84+ Mr 27 '53

Salesmen make one call a day, all day; Pan-Am Southern. D. Markstein. il Ptr Ink 241:36-7 D 5 '52

Salesmen need a new pledge. E. B. Weiss. Ptr Ink 242:38 Ja 2 '53

Why do so many fail to make Turnover club? selling to Phelps-Roberts corp. auto parts wholesalers. J. Shoenfeld. Sales Management 69:70-3 O 1 '52

Study and teaching

Auto dealers' sons go back to school; auto industry schools for sons of dealers. D. G. Baird. il Am Bsns 23:18-19 Ag '53

Training for hard selling. il Bsns W p66+ Jl 4 '53

Telephone calls

Building an investment clientele; using the telephone to arrange interviews. J. Dutton Comm & Fin Chr 177:701 F 12 '53

See also

Insurance, Life—Agents—Telephone calls

Time of calls

Sale I never forgot; breakfast calls paid off. W. J. Grede. Ptr Ink 241:33 D 19 '52

SALESMANSHIP, Retail

Adventures in shopping (cont). Sales Management 69:62+ O 1 '52

Robot clerk, tomorrow's retail salesman; abstract. Management R 41:746-7 N '52

Sale I never forgot; she traded him down. C. D. Webster. il Ptr Ink 242:52+ Ja 30 '53

Salespeople can't be trained, and shouldn't be. E. B. Weiss. Fortune 46:131+; Editorial comment. 102 N '52

Selling problems of department store salespeople. E. P. Shapiro. J Marketing 17:284-9 Ja '53

Demonstrations

Torture test sells merchandise at point of sale; sandpaper-and-scissor test of hosiery. il Ptr Ink 242:80 F 27 '53

SALESMEN

Back talk to critics of Salesmen I detest. H. C. Jones. Sales Management 70:138-9 Mr 15 '53

Buyers and sellers rate each other. R. H. Herrmann. Foundry 81:180-1+ S '53

40 times around the world; John Sunshine. Am Bsns 23:22 O '53

Here is spacesaving plan for salesmen's room. il Am Bsns 23:32 My '53

Meet Put; the hat salesman who's in love with South Dakota. Sales Management 70:28-9 Mr 1 '53

Sale I never forgot; rebirth of a salesman. G. Buzza. Ptr Ink 242:68 Mr 6 '53

Salesmen. R. W. Babson. Comm & Fin Chr 177:1324 Mr 26 '53

Selling's honor fraternity; Pi sigma epsilon; chapter activity at University of Georgia. Sales Management 70:55 Mr 1 '53

SALESMEN—*Continued*

12 types of salesmen I detest. H. C. Jones. Sales Management 69:94+ O 1 '52; Same. Rough Notes 96:32+ My '53

See also

Advertising and salesmen
Door-to-door selling
Drivers as salesmen
Engineers as salesmen
Gas companies—Salesmen
Insurance, Life—Agents
Insurance agents
Paper industry and trade—Salesmen
Plumbing trade—Salesmen
Printing trade—Salesmen
Purchasing—Treatment of salesmen
Sales management
Salesmanship

Bonuses

Novel sales meetings, bonus spark jobbers' salesmen; Theobald industries. R. T. Behrman. il Ind Marketing 37:154+ N '52

What a bonus-for-quality pay plan is doing for Investors diversified services. G. Clark. Sales Management 69:52-4+ D 15 '52

Expenses

Centaur finds a short cut for handling salesmen's expenses; Traveletter. R. E. Gray. il Sales Management 70:122+ Mr 15 '53

Our expense account headache. J. C. Aspley. Am Bsns 23:10-11+ S '53

Number of calls

How many calls does a salesman make in a week? what's the cost per call? Ptr Ink 241:44+ N 7 '52

Routing

Why Heinz salesmen like their route control form. il Sales Management 69:34+ N 1 '52

Salaries and commissions

Administering salesmen's compensation. H. R. Tosdal. Harvard Bsns R 31:70-83 Mr '53

Commission payments for door-to-door selling. Sales Management 69:43 N 1 '52

How to compensate the 1953 salesman. Mod Ind 26:57-8+ Jl '53

How to design the salesman's compensation plan. H. R. Tosdal. Harvard Bsns R 31:61-70 S '53

Three biggest problem areas in sales management; salesmen's compensation, job definition, and training. J. O. Vance. Sales Management 70:24-5+ Mr 15 '53

Wage stabilization board revises pay regulations. Inland Ptr 130:74 D '52

Selection

Are salesmen made or born? V. W. Eimicke. Ptr Ink 242:78-80 F 27 '53

Going to hire a salesman? R. F. Walton. Sheet Metal Worker 45:47-9 O '53

How Brown & Bigelow recruits a new salesman and gets him started. R. E. Kranhold. Sales Management 69:94-6 D 1 '52

How do you pick salesmen? Elec West 110:124+ Ap '53

How to find and hire the 1953 salesman. Mod Ind 25:38-40 My '53

Pick right man for right job. T. Metaxas. Iron Age 171:78 Mr 19 '53

Westinghouse sales engineers; how they're picked and trained. D. W. McGill. il Sales Management 69:24-6 N 10 '52

Service

See Salesmanship—Service

Training

Ask your salesmen, what do you really sell, when you sell our product? W. J. Tobin. Ptr Ink 242:56-9 F 13 '53

Canco now trains with seminars for salesmen. J. H. Caldwell. Sales Management 70:24-5+ F 1 '53

Daily mailings replace costly sales training manual. W. D. Molitor. il Ind Marketing 37:60 O '52

Effect of intensive sales training experience upon salesman-candidates. V. W. Eimicke. J Marketing 17:260-6 Ja '53; Abstract. Ptr Ink 242:78-80 F 27 '53; Discussion. H. C. Cash and W. J. Crissy. J Marketing 18:169-70 O '53

G-E blueprints job pattern for air conditioning salesmen. M. J. Hackney. Sales Management 70:34+ Mr 1 '53

Have we sold sales training short? H. G. Bailey. Ptr Ink 241:96+ N 7 '52

Help wanted; merchandiser-salesman. J. S. Schiff. Ptr Ink 241:27-8 N 28 '52

How G-E trains by listening to answers. P. Patterson. Sales Management 70:122+ F 15 '53

How to get better field photographs from your salesmen. S. L. Smith. Ptr Ink 242:54+ Mr 6 '53

How to get the trial-and-error out of your salesmen in advance. J. S. Nirenberg. Ptr Ink 242:58+ F 20 '53

How to teach salesmen come-backs to objections. W. C. Dorr. Sales Management 69:68+ D 1 '52

How your top salesmen can become your best sales trainers. W. J. Tobin. Ptr Ink 241:39-40+ O 24 '52

Increased sales, good will featured in new training film. il Ind Marketing 38:106+ Mr '53

Lay stress on sales training; New England regional sales training clinic. H. S. Walter. Am Gas Assn Mo 35:27-9 Jl-Ag '53

Let's sell wholesale selling! train your own sales force to teach jobber salesmen. G. E. O'Connor and S. W. Caplan. Ptr Ink 241:59+ N 7 '52

Making sales training realistic; Carborundum co. Steel 132:66-7 My 4 '53

Must salesmen know company finances? Ansul explains them. Ind Marketing 38:108+ Je '53

New training concept geared to buyer reaction. C. L. Lapp. Sales Management 69:180+ N 10 '52

New wrinkle in fabric sales training; Geigy co. retailer's brochure helps sell Mitin and woolens. Sales Management 69:59 N 20 '52

Reading maketh a good salesman, or at least it helps. C. B. Larrabee. Ptr Ink 241:5 O 31 '52

Research turns meeting into practical sales clinic; customers tell salesmen what's wrong with their techniques. J. T. Fosdick. Sales Management 69:21-2 pt 2 O 1 '52

Sales acting builds selling action. J. L. McDonald. il Elec West 110:87-9 Ap '53

Salesmen miss out on business papers. E. B. Weiss. Ptr Ink 241:78 N 14 '52

Selecting and training utility salesmen. P. M. Alden and A. G. Garrigues. Pub Util 52:487-93 O 8 '53

Snap-On trains salesmen to talk benefits. P. J. Schutt. il Sales Management 70:74-6+ Ja 15 '53

Ten common faults of gas appliance salesmen. K. Jacobson. Gas Age 112:35-9 Jl 2; 41-2+ Jl 16; 41-2+ Jl 30; 45-6+ Ag 13; 26-7+ Ag 27 '53

Three biggest problem areas in sales management; salesmen's compensation, job definition, and training. J. O. Vance. Sales Management 70:24-5+ Mr 15 '53

U.S. Steel men get into the act in sales training sessions. R. P. Pettit. il Sales Management 69:76-8 O 15 '52

Ways to train and retrain the 1953 salesman. Mod Ind 25:51-3 Je '53

Westinghouse sales engineers; how they're picked and trained. D. W. McGill. il Sales Management 69:24-6 N 10 '52

What 92 companies are doing about sales training; abstract. Management R 41:745-6 N '52

What's wrong with my business or could it be me? S. W. Franklin. Paper Tr J 135:26-8+ D 26 '52

See also

Sales managers—Training
Salesmanship—Study and teaching

SALESMEN, Jobbers'

Hotpoint's president talks to 10,000 dealers; four-minute recording; player carried by distributor salesmen. il Sales Management 70:102 Mr 15 '53

Jobber's salesmen partners. il Soap & San Chem 28:125+ N '52

Novel sales meetings, bonus spark jobbers' salesmen; Theobald industries. R. T. Behrman. il Ind Marketing 37:154+ N '52

SALESMEN, Jobbers'—*Continued*

Training

Let's sell wholesale selling; train your own sales force to teach jobber salesmen. G. E. O'Connor and S. W. Caplan. Ptr Ink 241: 59+ N 7 '52

New help for wholesalers' salesmen; Sylvania electric products. D. C. Lash, jr. il Ptr Ink 242:42-4 Ja 23 '53

Three training musts win distributor's men; Industrial Tape. Sales Management 70:32 Mr 1 '53

SALESMEN, Retail

Training

Business magazine's clinic to train clerks. il Ptr Ink 242:63 F 6 '53

Does it pay manufacturers to train retail salespeople? R. E. Taylor. Sales Management 69:94+ O 15 '52

How a small company lives, and grows, in the hazardous garment industry; Tabak sports wear. J. H. Collins. il Sales Management 70:94+ Mr 1 '53

How to make store training work. P. E. Smith. J Retailing 29:31-4+ Spring '53

Man-made confusion on man-made fibers; Ladies' home journal training sessions for department store personnel. il Sales Management 70:34+ pt 2 Ja 1 '53

Parker Pen spoofs retail salespeople. Sales Management 70:28-9 Mr 15 '53

Salespeople can't be trained, and shouldn't be. E. B. Weiss. Fortune 46:131+; Editorial comment. 102 N '52

Timken arms dealers with a manpower kit; manuals on locating, selecting, paying, supervising sales recruits. A. F. Mahan, jr. Sales Management 69:97-8 O 1 '52

Westinghouse brass get an earful. J. D. Lee and H. L. Wiler. il Sales Management 69: 48-50 O 1 '52

Why Atlanta sales chiefs lend a hand to training. W. E. Callahan. Sales Management 69:126-7 O 15 '52

SALESMEN and advertising. See Advertising and salesmen

SALESMEN and credit

Good credit training for better salesmen; comments by treasury and credit executives. Credit & Fin Management 54:8-11 N '52

Help push out goods now to offset adjustment in '53. F. F. Hoyt. Credit & Fin Management 54:28-9 N '52

Salesman's own judgement found best guide to policy in collecting accounts. H. H. Niebuer. Credit & Fin Management 55:40 F '53

Small business needs a friend, and sales and credit management can help him in three ways. B. Y. Cooper. Credit & Fin Management 54:26-7 S '52

What sales leaders expect of creditman. Credit & Fin Management 54:8-9 D '52

Work together or lose that marginal account; sales-credit conference, Atlanta. Credit & Fin Management 55:22-7 Mr '53

SALESMEN'S association of the American chemical industry

Best foot forward. Chem W 71:50-2 N 8 '52

Chemical sales clinic, New York, Oct. 28. Chem & Eng N 30:4834+ N 17 '52

SALESMEN'S equipment

Eight ways for salesmen to use sales literature; Allis-Chalmers pre-planning and follow-up on sales calls. H. M. Kinne. Sales Management 70:129 Mr 15 '53

14 ways to use sales-promotion materials in 1953. L. H. Fritz. Ptr Ink 241:74+ N 21 '52

SALESMEN'S portfolios

Watch this swatch switch! Schumacher's printed portfolio for interior decorators. N. Keine. il Ptr Ink 241:58-9 O 17 '52

When dealers ask what is net to me? Hunter Douglas salesmen sales portfolio. Sales Management 69:87 N 1 '52

SALICYLALDEHYDE

Studies on bond type in certain cobalt complexes; the constitution of cobalt complexes with salicylaldehyde anils. B. West. Chem Soc J p3123-9 Ag '52

SALICYLAMIDE

Internecine strife. il Chem W 71:71-2 N 29 '52

SALICYLIC acid

Effect of salicylic acid on the hypoprothrombinemia induced by dicumarol in the dog and the rat. J. B. Field. bibliog Science 117:499-501 My 8 '53

SALICYLIDES

Eight- and higher-membered ring compounds; di-, tri-, and tetra-thiosalicylides. W. Baker, A. S. El-Nawawy and W. D. Ollis. Chem Soc J p3163-7 Ag '52

SALKELD, H. B. 1880-

Half-century club; careers epitomizing contributions to coal-mining progress. por (p 102) Coal Age 58:103 Ja '53

SALMON

British Columbian salmon catch large. For Comm W 49:16 Ja 19 '53

Lethality of methyl mercaptan to king salmon as influenced by variation of the volume of test solution. E. P. Haydu and others. Tappi 36:131-3 Mr '53

Return of the sockeye. Comp Air Mag 58:254 S '53

Salmon pack; Pacific canners face mounting cost squeeze. R. H. Syring. Barron's 33: 17-18 Ap 6 '53

SALMONELLA

Bacteriological study of irrigated vegetables. N. N. Norman and P. W. Kabler. bibliog Sewage & Ind Wastes 25:605-9 My '53

Cobalt enhancement of penicillin activity against salmonella pullorum. A. Pital and others. bibliog Science 117:459-60 Ap 24 '53

Public health and clinical laboratories in the diagnosis of enteric bacterial infections. E. J. Tiffany. bibliog Pub Health Rep 67: 1069-75 N '52

Salmonella and shigella cause epidemic in Korea. L. E. Zimmerman. Pub Health Rep 68:99-100 Ja '53

Salmonella and shigella identified in two days; abstract. R. A. MacCready and M. B. Holmes. Pub Health Rep 68:262 F '53

Salmonella infections in chickens and turkeys; abstract. L. C. Heemstra. Pub Health Rep 67:986-7 O '52

SALT

Alpha-particle induced phosphorescence of silver-activated sodium chloride. C. E. Mandeville and H. O. Albrecht. bibliog Phys R 90:25-8 Ap 1 '53

Apparatus for studying electrogravitational separations; some experiments on the extraction of sodium chloride from solution in a flow system. G. W. Murphy and D. Batzer. diags Electrochem Soc J 99:520-6 D '52

Crack formation on sodium chloride single crystal surfaces. R. A. Lad. il J Ap Phys 23:800-1 Jl '52

Dielectric losses of sodium chloride crystals. Y. Haven. J Chem Phys 21:171-2 Ja '53

Effect of salt on the critical concentrations of potassium *n*-alkanecarboxylates as determined by the change in color of pinacyanole. S. H. Herzfeld. bibliog J Phys Chem 56:959-63 N '52

Effect of solvent on the ultra-violet absorption spectra of aromatic hydrocarbons with special reference to the mechanism of salting-out; aqueous salt solutions. E. F. G. Herington and W. Kynaston. Chem Soc J p3143-9 Ag '52

Effect of X-ray irradiation on the self-diffusion coefficient of Na in NaCl. D. Mapother. Phys R 89:1231-2 Mr 15 '53

Effects of *F* centers on the internal friction of rocksalt single crystals. D. R. Frankl and T. A. Read. Phys R 89:663-4 F 1 '53

Electronic Hall effect in NaCl. A. G. Redfield. bibliog diag Phys R 91:753 Ag 1 '53

Fluorescence, phosphorescence, and photostimulation of NaCl(AgCl) with high-energy irradiation. M. Furst and H. Kallmann. bibliog il diags Phys R 91:1356-67 S 15 '53

Interchangeability of sodium sulfate and common salt in acid-dyeing wool. H. W. Leitch. Am Dyestuff Rep 41:678-81 O 13 '52

Model for epitaxy in metal-rock salt pairs. O. G. Engel. J Chem Phys 20:1174 Jl '52

Nomograph gives vapor pressures of saturated salt solutions. J. T. Hogan. Chem Eng 60: 233 Mr '53

SALT—*Continued*

Osmotic properties of aqueous sodium chloridecesium chloride mixtures at 25°. R. A. Robinson. Am Chem Soc J 74:6035-6 D 5 '52

Photoemission from silver into AgCl, KBr, NaCl, and new bands of photosensitivity in AgCl. M. A. Gilleo. bibliog diags Phys R 91:534-42 Ag 1 '53

Presence of free chlorine in sodium chloride crystals containing color centers and color center precursors. M. Hacskaylo and others. bibliog J Chem Phys 21:1434-5 S '53

Presence of free sodium in sodium chloride crystals containing color centers and color center precursors. M. Hacskaylo and D. Otterson. J Chem Phys 21:552-3 Mr '53

Radiofrequency spectrum of the components of a sodium chloride beam; the dimerization of the alkali halides. S. A. Ochs and others. bibliog diags J Chem Phys 21:459-66 Mr '53

Reactions in fused aluminium chloride-sodium chloride. D. B. Bruce, A. J. S. Sorrie and R. H. Thomson. Chem Soc J p2403-6 Ag '53

Rock salt saves money on snow removal. L. M. McConnell. il Pub Works 83:70 N '52

Role of sodium chloride and sodium sulfate in acid-dyeing wool. J. D. Justice and W. W. Ewing. bibliog diags Am Dyestuff Rep 41:668-77 O 13 '52

Stabilizing a township road with salt. il Eng N 150:43+ Je 25 '53

Study of the solubility limits at 35° in the system NaBr-NaCl. E. L. Simons, C. A. Orlick and P. A. Vaughan. bibliog Am Chem Soc J 74:5264-6 N 5 '52

System NaCl-H_2O at supercritical temperatures and pressures. C. S. Copeland and others. bibliog diags J Chem Phys 21:12-16 Ja '53

Turkish salt industry offers opportunities. For Comm W 49:14 Mr 30 '53

See also

Brine

Manufacture

New chemical works; electrolytic process for producing chlorine and caustic soda from brine; Murgatroyd's salt & chemical co. il Elec R (Lond) 151:423-9 Ag 29 '52

Passing the salt at the rate of 6,000 tons per day; Leslie solar evaporation salt farm. E. Schrier. flow diag il Chem Eng 59:138-41 O '52

Salt-purified natural product. il diag Can Chem Process 36:50+ S '52

Therapeutic use

Case for coated salt tablets. M. Halperin. Safety Maint & Prod 106:52-3 Jl '53

SALT cake. See Sodium sulfates

SALT domes

Bayou Choctaw salt dome producing 3,000 bbl. daily, after 22 years. D. D. Utterback. il diag Oil & Gas J 52:277-81 Je 22 '53

Jefferson Island salt dome, Iberia and Vermilion parishes, Louisiana. J. B. Wharton, jr. maps diags Am Assn Pet Geologists Bul 37:433-43 F '53

New drilling barge for sulfur exploration. W. F. Rose. il Oil & Gas J 51:108-9 O 6 '52

Salt domes still reign in Gulf coast. P. G. Ingalls. map Oil & Gas J 52:357 Je 22 '53

SALT mines and mining

See also

Salt domes

Canada

Canadian salt shake-up. Can Chem Process 36:20 S '52

New York (state)

Largest salt mine in the western hemisphere. B. Root. il Explosives Eng 31:49-52+ Mr '53

Ontario

Rock salt to be mined at Windsor. Roads & Eng Constr 90:130-1 D '52

SALT River Valley water users' association

Salt River project, a reclamation first. H. F. Unger. Pub Util 52:434-9 S 24 '53

SALT water. See Sea water; Water supply—Salt water intrusion

SALTERINI, John B.

Wrought iron; it's new indoors. il Bsns W p52-4+ Mr 21 '53

SALTING-out

Salting-out of non-electrolytes; the effect of ionic size, ionic charge, and temperature. T. J. Morrison. Chem Soc J p3814-18 O '52

Salting-out of non-electrolytes; the effect of variation in non-electrolyte. T. J. Morrison and F. Billett. diags Chem Soc J p3819-22 O '52

SALTONSTALL, Leverett, 1892-

Portrait. Bsns W p28 N 8 '52

SALTPETER. See Potassium nitrate

SALTS

Acidimetric titrations of salts of weak acids; equilibria in the copper (II)-mandelate system. L. Meites. bibliog Am Chem Soc J 75:2859-62 Je 20 '53

Activity coefficients of nonelectrolyte solutes in aqueous salt solutions. F. A. Long and W. F. McDevit. Chem R 51:119-69 bibliog (180 ref, p 154-7) Ag '52

Critical review of literature on the toxicity of industrial wastes and their components to fish. P. Doudoroff and M. Katz. Sewage & Ind Wastes 25:802-39 bibliog(155 titles, p834-9) Jl '53

Dissociation constants of acids in salt solutions. M. Kilpatrick, R. D. Eanes and J. G. Morse. bibliog Am Chem Soc J 75:584-9 F 5 '53

Effect of solvent on the ultra-violet absorption spectra of aromatic hydrocarbons with special reference to the mechanism of salting-out. E. F. G. Herington and W. Kynaston. Chem Soc J p3137-49 Ag '52

Extraction studies on the extent of hydration of salts in non-aqueous solvents. P. C. Yates and others. bibliog Am Chem Soc J 75:2212-15 My 5 '53

Kinetic salt effects on the decomposition of diacetone alcohol in solutions of tetraalkylammonium hydroxides. E. S. Halberstadt and J. E. Prue. Chem Soc J p2234-6 Je '52

Magnetic susceptibility of adsorbed paramagnetic salts. M. T. Rogers and R. V. Vennen. bibliog Am Chem Soc J 75:1751-2 Ap 5 '53

Mechanism of substitution at a saturated carbon atom; kinetic effect of common-ion and of non-common-ion salts on the aqueous solvolysis of diphenylmethyl halides: demonstration of the unimolecular mechanism of solvolysis. O. T. Benfey, E. D. Hughes and C. K. Ingold. Chem Soc J p2488-93 Jl '52

New method of studying basic metal salts applied to certain basic salts of nickel. W. J. Singley, jr. and J. T. Carriel. bibliog diag Am Chem Soc J 75:778-81 F 20 '53

Peptization of UX_1 by various metallic ions; a possible mechanism. I. Adler and J. Steigman. diag J Phys Chem 57:443-8 Ap '53

Reversible bleaching of chlorophyll by metallic salts. W. F. Watson. Am Chem Soc J 75:2522-3 My 20 '53

Reversible catalytic cleavage of hydroxyamino acids by pyridoxal and metal salts. D E. Metzler, J. B. Longenecker and E. E. Snell. bibliog Am Chem Soc J 75:2786-7 Je 5 '53

Salt and acid effects on the thallous-thallic exchange reaction. R. W. Dodson. bibliog Am Chem Soc J 75:1795-7 Ap 20 '53

Some crystal energetic relationships in oxysalts. H. Ramberg. J Chem Phys 20:1532-7 O '52

SALTS, Complex

Analysis of the general mathematical formulations for the calculation of association constants of complex ion systems. J. C. Sullivan and J. C. Hindman. bibliog Am Chem Soc J 74:6091-6 D 5 '52

Complex salts of dihydrostreptomycin. V. V. Bogert and I. A. Solomons. bibliog Am Chem Soc J 75:2355-6 My 20 '53

Complexes involving tervalent iron and orthophosphoric acid: experiments with ion-exchange resins. J. E. Salmon. Chem Soc J p2316-23 Je '52

Complexes of various metals with ethylenediaminetetraacetic acid. A. E. Martell and R. C. Plumb. bibliog J Phys Chem 56:993-6 N '52

SALTS, Complex—*Continued*

Inorganic complex compounds containing polydentate groups; zirconium(IV) complexes with 2-nitroso-1-naphthol. H. B. Jonassen and W. R. deMonsabert. Am Chem Soc J 74:5298-301 N 5 '52

Isotope effect in some reactions of carbon-14-labeled carbonatotetrammine cobaltic complex ion. D. R. Stranks and G. M. Harris. bibliog diag J Phys Chem 56:906-10 O '52

Modifications of the absorption spectra of anions induced by complex formation. L. I. Katzin. bibliog J Chem Phys 20:1165-9 Jl '52

Preparation of nickel(II) thiocyanate complex compounds with picolines and the determination of their heats of formation. A. V. Logan and D. W. Carle. Am Chem Soc J 74:5224-5 O 20 '52

Sexadentate chelate compounds. F. P. Dwyer and others. bibliog Am Chem Soc J 75:1526-8, 2443-6 My 20-Ap 5 '53

Some current topics in physical chemistry; annual survey. H. Mackle. bibliog Chem Age (Lond) 68:87-91 Ja 10 '53

Spectrophotometric studies of empirical formulas of complex ions. A. E. Harvey, jr. and D. L. Manning. bibliog Am Chem Soc J 74:4744-6 O 5 '52

Stability of the complexes of the group IIA metal ions. R. J. P. Williams. Chem Soc J p3770-8 O '52

Stereochemistry and reaction mechanisms of hexacovalent inorganic complexes. F. Basolo. diags Chem R 52:459-527 bibliog(p521-7) Je '53

Steric effects and the stability of complex compounds; the chelating tendencies of N-alkylethylenediamines, with copper(II) and nickel(II) ions. F. Basolo and R. K. Murmann. bibliog Am Chem Soc J 74:5243-6 N 5 '52

Studies in co-ordination chemistry; magnetic moments and bond types of transition-metal complexes. F. H. Burstall and R. S. Nyholm. Chem Soc J p3570-9 S '52

Two complex salts of chlorine and copper chloride and their activity as catalysts of fat oxidation. P. L. White, D. M. Hegsted and J. Mayer. bibliog Am Chem Soc J 75:2352-4 My 20 '53

X-ray investigation of $Co(NH_3)_6PbCl_6$ and $Co(NH_3)_6BiCl_6$. M. Atoji and T. Watanabe. J Chem Phys 20:1045-6 Je '52

Analysis

Analytical procedures based on complex formation. Z. G. Szabó and M. T. Beck. bibliog Anal Chem 25:103-8 Ja '53

SALTS, Fused

Reactions in fused aluminium chloride-sodium chloride. D. B. Bruce, A. J. S. Sorrie and R. H. Thomson. Chem Soc J p2403-6 Ag '53

SALTS, Molten

Salt bath case hardening with molybdenum and tungsten. il Materials & Methods 37:94-7 Mr '53

Water in molten salt increases quenching power lowers operating temperature. E. N. Case and A. M. White. il Metal Prog 64:122-4 O '53

SALVADOR

See also

Bridges—Salvador

Commerce

Prospects bright for Salvadoran trade. For Comm W 48:6 O 13 '52

Economic conditions

Economic conditions abroad (cont). For Comm W 50:4 Jl 6 '53

SALVAGE

Salvage of Singapore floating dock. il Engineering 174:728 D 5 '52

SALVAGE (waste, etc.)

Bolt and nut reclamation system. il Engineer 195:475-6 Mr 27 '53

Cleaner salvages equipment. il Pet Eng 24:C24 O '52

Collector system ups mill scale recovery. Steel 131:102 O 20 '52

Dow Chemical's six-point program for managed salvage. Factory Management 111:142-3 Ja '53

How Chrysler saves money on tools. D. G. Baird. il diags Mill & Factory 53:98-9 Ag '53

It pays to look at your scrap pile; Consolidated Vultee aircraft corp. Factory Management 111:268+ O '53

It's worth salvaging your old grinding wheels. il Iron Age 171:143 Ap 23 '53

New method of reclaiming old pipe. R. L. Bullock. il diags Oil & Gas J 51:294-5+ O 13 '52

Reuse waste pickling liquors. A. G. Gray. diag Steel 132:130+ Ap 27 '53

Salvage and reclamation program saves $17 million for Ontario Hydro-electric commission. R. H. Saunders. Roads & Eng Constr 91:182+ Ap '53

Salvage copper scrap without making smoke; Los Angeles Department of water and power incinerator. Elec World 138:134+ O 6 '52

Salvaging isn't a job at Cleveland transit system; it's a project worth $228,788! il Bus Transportation 32:31-3+ Ap '53

$70,000 bonus in one year making salvage a full time operation; Hyster co. il Mill & Factory 53:112-13 S '53

Watch your waste-line; Erie, Pa., plant of General electric co. F. E. Bliven. il Mill & Factory 52:126-7 My '53

See also

Scrap metal

SAMARIUM

Massive samarium distilled from oxide and lanthanum metal. Chem & Eng N 31:2090+ My 18 '53

Preparation of samarium and ytterbium metals. A. H. Daane, D. H. Dennison and F. H. Spedding. bibliog Am Chem Soc J 75:2272-3 My 5 '53

SAMMONS, Edward Curf, 1891-

Portrait. Fortune 47:97 Mr '53

SAMPLES (merchandizing)

How a co-op wins customers with dog food prize. Sales Management 70:110-11 Ja 15 '53

How's your sample program; symposium. Chem & Eng N 31:1514-19 Ap 13 '53

If they try it, will they buy it? il Sales Management 69:106+ D 1 '52

Sale I never forgot; bought to sell; Guest Pac. J. J. Harris. Ptr Ink 241:54-5 D 26 '52

United Wallpaper makes it easier for the lady to buy. il Sales Management 70:92+ F 15 '53

Watch this swatch switch! Schumacher's printed portfolio for interior decorators. N. Keine. il Ptr Ink 241:58-9 O 17 '52

See also

Coupons

Salesmanship—Samples

SAMPLING

Apparatus for collecting flocculated samples. A. J. Fischer and A. Hillman. diags Water & Sewage Works 100:R 120 My '53

Proportional sampling device for metered liquids. P. Hart and R. C. King. diag Oil & Gas J 51:93 Mr 2 '53

Sampling facilities, restandardization, and stability are important design factors in process instrumentation. B. W. Thomas. Ind & Eng Chem 45:sup87A-9A Ap '53

Sampling methods; method of obtaining test bars key to foundry test results. il Iron Age 171:132-3 Ap 16 '53

Sinter sampling technique developed by U.S. steel corp. R. L. Stephenson and D. J. Carney. il J Metals 5:628-9 My '53

See also

Feed water sampling

Gas sampling

Ore sampling

Petroleum—Well drilling—Sampling

SAMPLING (statistical methods)

Analysis and correlation of test data. I. W. Burr. Metal Prog 64:112-18+ O '53

Business statistics going Ph.D. Bsns W p96+ My 30 '53

Confidence intervals for medians and other position measures. R. S. Woodruff. Am Stat Assn J 47:635-46 D '52

Describing uncertainties in single-sample experiments. S. J. Kline and F. A. McClintock. bibliog Mech Eng 75:3-8 Ja '53

Discovery sampling cuts costs in quality control. J. R. Crawford. Iron Age 171:114-17 Ja 29 '53

SAMPLING (statistical methods)—*Continued*
Evaluation of noise samples. A. J. F. Siegert. bibliog J Ap Phys 23:737-42 Jl '52
Generalization of sampling without replacement from a finite universe. D. G. Horvitz and D. J. Thompson. Am Stat Assn J 47:663-85 D '52
In Europe they sue over competitive media claims; Belgian case of Reader's digest. I. W. Digges. Ptr Ink 242:38 Mr 6 '53
Practice of quality control. A. G. Dalton. diags Sci Am 188:29-33 Mr '53
Sample survey of home injuries. F. M. Hemphill. Pub Health Rep 67:1026-34 O '52
Sampling of records. R. E. Patton. bibliog Pub Health Rep 67:1013-19 O '52
Scientific sampling. R. K. Mueller. il Mod Plastics 30:79-84 Ap '53
Serial number analysis. L. A. Goodman. bibliog Am Stat Assn J 47:622-34 D '52
Some aspects of acceptance sampling. K. C. Lyon. bibliog Glass Ind 33:581-5+ N '52
Statistical evaluation of rational and stratified methods of sampling. J. V. Strela. il Tool Eng 29:37-40 Ag; 61-6 S; 55-60 O; 56-61 N; 70-2 D '52
Use of ranks in one-criterion variance analysis. W. H. Kruskal and W. A. Wallis. Am Stat Assn J 47:583-621 bibliog(65 titles, p618-21) D '52
See also
Probabilities
Work sampling

SAN ANTONIO, Texas
San Antonio expressway progresses. map Eng N 149:53-4 O 23 '52
Turning around. Bsns W p 144 O 25 '52

SANBORN map company
You're on the map; courtesy of Sanborn. il Bsns W p96-8+ N 15 '52

SAND
Compact subbase with sand piles. Constr Methods 35:156 S '53
Describes new construction method; plant built on sand nears completion. Chem & Eng N 30:5156 D 8 '52; Paper Tr J 135:47 D 12 '52; Manuf Rec 122:29 Ja '53; Civil Eng 23:60 Ja '53; Mech Eng 75:157-8 F '53; Roads & Sts 96:139 My '53
Earth resistivity surveying for sand and gravel deposits; abstract. I. R. Thomas. Rock Prod 56:141-2 Ap '53
Effect of wettability on the electrical resistivity of sand. G. V. Keller. bibliog diags Oil & Gas J 51:62-5 Ja 5 '53
More data on heat transfer to fluidized solids. W. E. Schmid and others. bibliog Chem Eng 59:172-3 O '52
Normal size distribution found in samples of river-bed sand. T. Blench. Civil Eng 22:147 F '52; Discussion. W. D. Baines. 22:494 Jl '52; Reply. 23:113+ F '53
Road-making with sand. Engineering 175:158 Ja 30 '53
Size distribution in the sand fractions of soils. D. Carroll. bibliog Am J Sci 250:790-801 N '52
Vibroflotation process used in preparing plant site on sand in Florida phosphate field. il Eng & Min J 154:104-6 Ja '53
See also
Aggregates
Bituminous sand
Oil sand

Stone sand

Rod mill grinding for fine aggregates; abstract. R. S. Barneyback. Rock Prod 56:140-1 Ap '53

SAND, Bituminous. See Bituminous sand

SAND, Foundry
Cheap sand is no saving when it's for shell molding. M. F. Drumm. Steel 132:180+ My 25 '53
Core and molding sand; American foundrymen's society annual meeting, Chicago; abstracts of papers. Foundry 81:152+ Je '53
Hopper, conveyer and silo replace yard gang; unloading carloads of foundry sand. E. H. Taylor. il plan diag Iron Age 170:105-6 O 23 '52
Influence of ramming and of sintering on the penetration of molten metals into compacted silica-sand mixes. T. P. Hoar and others. bibliog 2pls diags Iron & Steel Inst J 175:19-29 S '53
Installs modern sand handling system; Riverside foundry. il diag Foundry 81:202-3 Ag '53
Sand shop course; American foundrymen's society annual meeting, Chicago; abstracts of papers. Foundry 81:130+ Jl '53
Silos provide advantages in storing core sand; Ferro machine & foundry, inc. M. F. Degley. il Foundry 81:192-3+ Mr '53
What causes molding green strength? C. A. Sanders. il Foundry 80:108-9+ O '52

Reclamation

Foundry sand reclamation; American foundrymen's society annual meeting, Chicago; abstracts of papers. Foundry 81:98-9+ Jl '53
Sand reclamation by wet methods. R. Webster. il Foundry 80:238+ O '52

Testing

Apparent thermal conductivities of moulding materials at high temperatures. D. V. Atterton. bibliog il diags Iron & Steel Inst J 174:201-11 Jl '53

SAND, Oil. See Oil sand

SAND and gravel association, National. See National sand and gravel association

SAND and gravel plants
Antitrust case; sand and gravel companies face contempt charges. Eng N 150:27 Ap 30 '53
Diversify; only company which produces cement, aggregates, ready mix, and concrete products; New York coal sales co. B. Nordberg. il map plan diag Rock Prod 56:74-86+ F '53
High-quality aggregate from rejected material; Owatonna aggregates corp. W. B. Lenhart. flow sheets il Rock Prod 56:56-61 Jl '53
Merchandise production of several companies through sales concern; Material sales co. C. E. Brady. il Rock Prod 56:88-90 My '53
Percentage depletion for the sand and gravel industry; abstract. J. T. Sapienza. Rock Prod 56:113-14 Ap '53
Progress in the sand and gravel industry. W. B. Lenhart. flow sheet il Rock Prod 56:92-101 Ja '53
Sales policies for multi-line companies; abstract. R. F. Porter. Rock Prod 56:110-12 Ap '53
Sand and gravel; three stages of a basic industry. il Fortune 46:136-40 O '52

Accounting

Cost accounting for a ready mix plant. J. W. Murphy. il Concrete 61:6-8+ Je '53; Abstract. Rock Prod 56:115+ Ap '53

Directories

Commercial producers of sand, gravel and crushed stone, Canada. Roads & Eng Constr 91:198+ Je '53

Employees

Two vital U.S. Supreme court decisions; Alstate construction co. and Hempt brothers cases. N. C. Rockwood. Rock Prod 56:83+ Ap '53

Equipment

Automatic sand and gravel plant; Holliday sand & gravel co. T. Brown. il Rock Prod 56:108-9 Ag '53
Belt conveyors cut handling costs; Pacific coast aggregates, inc. il plan Rock Prod 56:130-2+ Ja '53
Classifying system anticipates specifications; Texas construction material co. R. H. Klossner. flow sheet il Rock Prod 55:112-13 D '52
Depletion necessitates long rail haul; Rio Grande city, Texas, plant of Fordyce gravel co. W. B. Lenhart. flow sheet il Rock Prod 55:105-6 O '52
Design plant to recover fine sand; American sand & material co. T. Brown. il Rock Prod 56:75+ S '53
First H.M.S. application to gravel industry in the United States; Dravo corp. W. L. Price. flow diag il Rock Prod 56:96-9 Ap '53; Same cond. Eng & Min J 154:86-7 Ap '53
First New England cold-mix asphaltic concrete plant; Dunning sand & gravel co. il diag Rock Prod 55:88-9 D '52

SAND and gravel plants—Equipment—*Cont.*
Five plants in a 30-mile radius; Thorstenberg and Tamborello. W. B. Lenhart. flow sheets il plan Rock Prod 56:68-71+ Jl '53
From sand and gravel to lightweight aggregate; Kentucky light aggregates, inc. W. B. Lenhart. flow sheet il Rock Prod 56:70-4 S '53
Gravel plant designed for ground storage; Consolidated sand and gravel limited. J. T. Mogan. flow sheet il Rock Prod 55:93-5+ O '52
Heavy media separation; Dravo corp.; abstract. L. P. Struble, jr. Rock Prod 56:108-9 Ap '53
Increase sand and gravel capacity; Janesville sand and gravel co. R. S. Torgerson. il Rock Prod 56:68-70+ My '53
Large capacity excavation and haulage units cut plant operating costs; Central Texas sand and gravel co. W. B. Lenhart. il Rock Prod 56:76-7+ S '53
Mechanize to improve quality; H. G. Fenton material co. W. B. Lenhart. il Rock Prod 56:104-5 Je '53
Meeting fine sand specifications; Pequannock sand and gravel co. flow sheet il diags Rock Prod 55:116-17+ D '52
Plant improves gravel dredged from river bed; Dravo corporation. il diag Constr Methods 35:71+ S '53
Processing aggregates for Folsom dam. W. B. Lenhart. flow sheet il diag Rock Prod 56:72-7+ Mr '53
Produce many sizes in compact plant; Radam plant of Henry J. Kaiser co. W. B. Lenhart. flow sheet flow diag il diags Rock Prod 56:126-9+ Ja '53
Pumps produce, classify and load sand; illustrations with text. Constr Methods 35:61 O '53
Recover sands once wasted. L. D. Minsk. flow sheets il Rock Prod 56:92-5 Je '53
Smelter slag processed for ballast; Utah sand and gravel co. W. B. Lenhart. flow sheet il Rock Prod 56:70-3 F '53
Straight-line sand and gravel plant; Zanesville gravel co. L. D. Minsk. il diag Rock Prod 55:76-7+ N '52

Safety measures

Accident prevention program that works; Warner co. L. P. Warner. il Rock Prod 56:98-9 F; 74-7 My '53

Celebrate winning of safety trophy; Lyman-Richey sand & gravel corp. B. Nordberg. Rock Prod 56:80-3 My '53

National sand and gravel association safety competition. Rock Prod 55:142+ O '52

SAND bars
Revised nomenclature for depositional coastal features. F. P. Shepard. bibliog il map Am Assn Pet Geologists Bul 36:1902-12 O '52

SAND blast
Contractor sandblasts masonry walls to bring out color and texture. Concrete 61:25 Je '53

Sandblasting and annealing to improve flame-cut high-tensile steel. A. Erker. Welding J 32:sup402+ Ag '53

Sandblasting equipment cleans welds and doubles production at less cost per unit. il Mill & Factory 52:133 F '53

SAND dunes
Eolian sand control. R. C. Kerr and J. O. Nigra. il diags Am Assn Pet Geologists Bul 36:1541-73 bibliog(p 1572-3) Ag '52

SAND handling
Hopper, conveyer and silo replace yard gang; unloading carloads of foundry sand. E. H. Taylor. il plan diag Iron Age 170:105-6 O 23 '52

See also
Sand and gravel plants

SAN DIEGO, California

Harbor

San Diego wants authority to dredge for new industry. il Bsns W p82-4 Ap 11 '53

Industries

San Diego wants authority to dredge for new industry. il Bsns W p82-4 Ap 11 '53

Sewerage

$16-million sewage plant recommended by engineers. Eng N 149:68+ O 9 '52

Water supply

San Diego aqueduct capacity restored by chlorination. L. Streicher. il map Water & Sewage Works 100:333-7 S '53

SAN DIEGO bay
Oxygen resources of San Diego bay. I. Nusbaum and H. E. Miller. bibliog map Sewage & Ind Wastes 24:1512-27 D '52

SAN DIEGO gas and electric company
Common stock offering. Comm & Fin Chr 177:2682 Je 22 '53

SANDMEYER reaction
Incidents during forty-three years of chemical research; abstract. H. H. Hodgson. Chem & Ind p236-7 Mr 14 '53

SANDSTONE
Marine origin of Preuss sandstone of Idaho, Wyoming, and Utah. R. W. Imlay. bibliog maps Am Assn Pet Geologists Bul 36:1735-53 S '52

SANDWICH construction. See Laminated construction

SANFORIZING
Improved sanforized machine smooths both fabric sides. Textile World 103:144 Jl '53

SAN FRANCISCO
See also
Wages—San Francisco

Earthquake and fire, 1906-

United States navy and the San Francisco fire. J. E. Pond. il U S Naval Inst Proc 78:982-93 S '52

Harbor

San Francisco expands harbor radar tests. Marine Eng 58:78 F '53

Railroads

Santa Fe builds modern freighthouse for San Francisco. il plan Ry Age 134:42-5 Ja 26 '53

Sewerage

Bulk storage of liquid chlorine at sewage plants. B. Benas. il diags Water & Sewage Works 100:381-5 O '53
Centralized sludge treatment featured in sewage plan. B. Benas. flow diag il Civil Eng 23:226-8 Ap '53

Streets

Steep street repaved. il Roads & Sts 96:70 Jl '53

Tunnels

San Francisco tunnel open to traffic. il Eng N 149:48 D 25 '52
San Francisco's Broadway tunnel completed. R. G. Wadsworth. il map diags Civil Eng 23:241-5 Ap '53
San Francisco's Broadway tunnel under Russian Hill. R. L. Behme. il Explosives Eng 31:22-7 Ja '53

Water supply

San Francisco water lines completed. il map Eng N 150:46+ Ja 8 '53

SAN FRANCISCO Bay bridges
Bay bridge bids in, bonds may snag. il Eng N 150:23 Ja 1 '53
Economic studies determine location and design of Richmond-San Rafael bridge. N. C. Raab and R. A. Tudor. maps diags Civil Eng 23:232-5+ Ap '53
Legal delays cloud Bay Bridge work. Eng N 150:102-3 Ja 8 '53
New bridge for San Francisco. map Bsns W p 176 Je 20 '53
Recommend Golden Gate bridge bracing. Eng N 150:22 Ja 22 '53
San Francisco bridge; San Rafael-Richmond crossing. Eng N 149:26 O 2 '52
$62-million bond sale authorized for new San Francisco Bay bridge. Eng N 149:108 N 20 '52

SANG, Earl
Meet ACF's dean of safety. J. W. Rice. pors Nat Safety N 67:26-7+ Je '53

SANGRE DE CRISTO mountains
Structure and origin of northern Sangre de Cristo range, Colorado. J. W. Gabelman. il maps diags Am Assn Pet Geologists Bul 36:1574-612 bibliog(p 1611-12) Ag '52

SANITARY chemicals

See also

Disinfection and disinfectants

Manufacture

Manufacturing the products one sells. E. G. Thomssen. Soap & San Chem 29:79+ Ja '53

Production clinic; processing heating equipment. E. G. Thomssen. Soap & San Chem 28:87 N '52

SANITARY districts

Organization of suburban areas. J. T. Ramsaur and W. N. Long. Am Water Works Assn J 45:236-40 Mr '53

SANITARY engineering

APHA conference report; century of progress in sanitary engineering. Pub Health Rep 68:202-4 F '53

Engineering in sewage disposal. S. A. Greeley. Midwest Eng 5:3+ O '52

See also

Air conditioning
Drainage
Dust removal
Factory sanitation
Filters and filtration
Heating
Mosquitoes—Extermination
Plumbing
Refuse disposal
Sanitation
Sewage disposal
Sewerage
Ships—Sanitation
Snow removal
Trade waste
Ventilation
Water pollution
Water purification
Water supply engineering

Study and teaching

Use of films as outside assignment. H. Wilke. J Eng Educ 43:171-2 N '52

SANITARY engineering congress, Inter-American. See Inter-American sanitary engineering congress

SANITARY engineers

European sanitary engineers call for greater cooperation among specialists. Eng N 149:56 D 4 '52

Sanitary engineer; analysis of figures collected by 1949-50 survey by the American public health association. A. P. Miller and W. A. Lyon. Eng N 150:44-5 Ja 8 '53

Sanitary engineers group proposed. Eng N 150:28 F 12 '53

See also

Hollis, Mark D.
Rudolfs, Willem

Directories

Directory of engineers in charge of water pollution control. Water & Sewage Works 100:R215 My '53

Directory of state sanitary engineers. Water & Sewage Works 100:R214 My '53

Federation of sewage and industrial wastes association annual yearbook and list of members, 1953. Sewage & Ind Wastes 25:353-90 Mr '53

Salaries

Special report on sanitary engineering salaries. E. Boyce and W. H. Wisely. bibliog Sewage & Ind Wastes 25:110-13 Ja '53

SANITARY laws. See Air pollution—Laws and regulations; Public health laws

SANITARY products industry

Everything but the janitor; N. Brittingham and sons, Philadelphia. P. Lance. Soap & San Chem 28:155+ O '52

National sanitation foundation announces first Seal of approval for food and other equipment with health connection. il Ind Med 21:489-90 O '52

What the buyer expects of sanitary supply salesmen. P. Lance. il Soap & San Chem 28:175+ D '52

SANITARY ware

Manufacture

Automatic tank glazing unit sets high production rate; Abingdon potteries. il Cer Ind 59:96-7 D '52

Ceramic manufacturing in an Argentine plant; Ferrum S.A. de ceramica y metalurgia. E. E. Antaki. il Am Cer Soc Bul 32:160-1 Ap 15 '53

Eljer solves the raw material dusting problem. il Cer Ind 59:92 D '52

Modernization ups production 200 per cent; Abingdon potteries. F. S. Lappin. il Mill & Factory 51:118-19 D '52

New separator doubles slip screening capacity; Sweco separator at Universal Rundle. il Cer Ind 61:91+ O '53

Plant design versus sanitary ware manufacturing. J. R. Beam. Am Cer Soc Bul 32:124-5 Ap 15 '53

SANITATION

Environmental health needs in a dynamic society. M. D. Hollis. map Pub Health Rep 67:903-8 S '52

Sanitary standards for dishwashing machines. Nat Safety N 68:78 S '53

See also

Air conditioning
Air pollution
Air purification
Disinfection and disinfectants
Dust removal
Factory sanitation
Food factories—Sanitation
Hygiene, Industrial
Milk supply
Plumbing
Public health
Refuse disposal
Sanitary engineering
Sewage disposal
Sewerage
Ships—Sanitation
Smoke prevention
Trade waste
Ventilation
Water purification
Water supply

SANITATION foundation, National. See National sanitation foundation

SANTA FE railway. See Atchison Topeka and Santa Fe railway

SANTONIN

Santonin; the synthesis of two optically inactive stereoisomerides of santonin. Y. Abe and others. bibliog Am Chem Soc J 75:2567-71 Je 5 '53

Synthesis in the santonin series. G. R. Clemo and F. J. McQuillin. Chem Soc J p3839-44 O '52

Synthesis in the santonin series; some oxidation products of α-(2-keto-4-methyl*cyclo*hexyl)propionic acid. G. R. Clemo and F. J. McQuillin. Chem Soc J p3835-9 O '52

See also

Pseudosantonin

SAPOGENINS

Degradation of 12-ketosapogenins to pregnane derivatives. J. A. Moore and E. L. Wittle. bibliog Am Chem Soc J 74:6287-8 D 20 '52

Infrared adsorption spectra of the steroid sapogenins. R. N. Jones, E. Katzenellenbogen and K. Dobriner. bibliog Am Chem Soc J 75:158-66 Ja 5 '53

Stereochemistry of the catalytic hydrogenation of Δ^{8}-11-keto steroids; synthesis of 8-iso- and 14-iso-11-keto sapogenins. C. Djerassi and others. bibliog Am Chem Soc J 75:3496-500 Jl 20 '53

Steroidal sapogenins; experiments in the hecogenin series; degradation of 22a-5α-spirostane-3β,12β-diol-11-one. H. Martinez and others. bibliog Am Chem Soc J 75:239-40 Ja 5 '53

Steroidal sapogenins; hydrolysis of steroidal saponins. E. S. Rothman, M. E. Wall and H. A. Walens. bibliog Am Chem Soc J 74:5791-2 N 20 '52

Steroidal sapogenins; Markogenin (22b-spirostane-2ξ,3β-diol); a new sapogenin isolated from yucca. M. E. Wall and others. bibliog Am Chem Soc J 75:4437-40 S 20 '53

Steroidal sapogenins; synthesis and side chain degradation of 22a,5β-spirostan-3α-ol-11-one acetate. G. Rosenkranz and others. bibliog Am Chem Soc J 75:4430-2 S 20 '53

Steroidal sapogenins; the reaction of peracids with enol acetates of Δ^{8}-7-keto and Δ^{8}-11-keto steroidal sapogenins. O. Mancera and others. bibliog Am Chem Soc J 75:4428-9 S 20 '53

Steroids; steroidal sapogenins; the chemical reduction of Δ^{8}-11-keto and of saturated 11-keto steroids; a new approach to 11-keto and 11 α-hydroxy steroids. F. Sondheimer and others. bibliog Am Chem Soc J 75:1282-5 Mr 20 '53

See also

Hecogenin

Analysis

Catalog of infrared absorption spectra of steroidal sapogenin acetates. C. R. Eddy, M. E. Wall and M. K. Scott. bibliog Anal Chem 25:266-71 F '53

SAPONIFICATION
Effect of nuclear substituents on the C^{14} isotope effect in the saponification of carboxyl-labeled ethyl benzoates at 25°C. G. A. Ropp and V. F. Raaen. J Chem Phys 20:1823 N '52
4-Nitrophthalimides; derivatives of alkyl halides giving a saponification equivalent. J. H. Billman and R. V. Cash. Am Chem Soc J 75:2499-501 My 20 '53

SAPOTA achras
Constitution of sapote gum; methanolysis of sapote gum methyl ether. E. V. White. bibliog Am Chem Soc J 75:257-9 Ja 20 '53

SAPOTE. See Sapota achras

SAPPHIRES
Corundum deposits of Montana. S. E. Clabaugh. il maps diags U S Geol S Bul 983: 1-100, pl 1-6[in pocket] bibliog(p96-8) '52

SARAN
Electron microscope study of plasticized latices. E. B. Bradford. il J Ap Phys 23: 609-12 Je '52
How Saran managed the debut of its new synthetic fiber; press preview. il Sales Management 69:74+ N 20 '52
Modern Textiles handbook; saran. L. Mauer and H. Wechsler. il Mod Textiles Mag 34: 78+ Ap '53
Progress in saran and vicara. G. Boyo. il Mod Textiles Mag 34:53-4 S '53
Saran spreads out. il Mod Plastics 30:93 S '52

SARCOCEPHALUS diderrichii
Chemistry of extractives from hardwoods; the cyclitols and steroids of opepe (sarcocephalus diderrichii). F. E. King and L. Jurd. Chem Soc J p 1192-5 Ap '53

SARDINIA
DDT in Sardinia. il map Fortune 47:113-20 Mr '53

SARMENTOSIDES
Cardio-active glycosides of strophanthus sarmentosus P.DC. sarmentoside B and its relation to an original sarmentobioside. R. K. Callow and D. A. H. Taylor. Chem Soc J p2299-304 Je '52

SARNIA
Sarnia story; chemical valley of Canada. Can Chem Process 36:26+ S '52

SARVEROGENIN
Some reactions of sarverogenin. D. A. H. Taylor. Chem Soc J p4832-5 D '52
Structure of sarverogenin. D. A. H. Taylor. Chem & Ind p62-3 Ja 17 '53

SASKATCHEWAN
See also
Mines and mineral resources—Saskatchewan
Petroleum—Saskatchewan
Roads—Saskatchewan
Wood pulp—Saskatchewan

Sanitary affairs

Control of water and sewage works. J. G. Schaeffer. Munic Util 91:26+ Je '53

SATELLITE states. See Europe, Eastern

SATELLITES, Artificial. See Rockets

SATIN
Practical fabric design and analysis; selvages for satins. V. Lobl. il diags Mod Textiles Mag 34:47-8+ Ap '53

SAUDI ARABIA. See Arabia

SAUNDERS, Clarence
Saunders tries again; Foodelectric store. Bsns W p68+ Jl 18 '53

SAUSAGE
Packaged barbecue; frankfurters with sauce in transparent pouch. il Mod Packaging 26:91 O '52

Manufacture

Divorces smoke from cook; Peter Eckrich & sons. C. W. Schmidt. il Food Eng 25:80-2 Jl '53
Output up 50 per cent by mechanizing; Stahl-Meyers' new meat-handling system. il Food Eng 25:125+ Ja '53

SAVANNAH

Harbor

Savannah dedicates new state docks. il Manuf Rec 121:40-1 O '52

SAVANNAH electric and power company
Preferred stock offered. Comm & Fin Chr 177:1841 Ap 27 '53

SAVANNAH River project. See Atomic energy commission (United States)—Savannah River project

SAVEALLS
Paper mill waste treatment. R. W. Simpson and J. J. Samsel. flow diags Paper Ind 35:551-3 Ag '53

Bibliography

White water; savealls. C. J. West, comp. (Bibliog. ser. no. 180) 149p Institute of paper chemistry, Appleton, Wis. '52 ($5)

SAVILE, Leopold H. 1870-1953
Sketch. por Engineer 195:212 F 6 '53; Engineering 175:180-1 F 6 '53

SAVING
Decline in the savings rate; graphs. Fortune 47:23 Mr '53
Economics of savings, capital flow, and mortgages. M. Nadler. Comm & Fin Chr 177: 1444-5 Ap 2 '53
Monetary policy and savings. E. S. Adams. Comm & Fin Chr 177:1006+ Mr 5 '53
One-man pension funds. J. F. Allison. Fortune 47:111 My '53
Outlook for savings. K. R. Bopp. Comm & Fin Chr 177:917 F 26 '53
Public's savings exceed $200 billion during 1952. Comm & Fin Chr 177:809 F 19 '53
Shortfall in small savings. Economist 167:181 Ap 18 '53
Taxing the source of welfare and security. D. B. Woodward. Comm & Fin Chr 177: 2082-3 My 14 '53; Excerpts. East Underw 54:3+ Ap 24 '53
See also
Christmas clubs
Investments
Savings banks
Savings deposits
School savings

Statistics

Estimated liquid asset holdings of individuals and businesses; with figures by type of holder, 1939-1952. Fed Res Bul 39:719-20 Jl '53
Expenditures in 1952; personal income, consumption expenditures, and saving. Fed Res Bul 38:1189-92 N '52
Family income, expenditures, and savings in 1950; preliminary report (revised). U S Bur Labor Statistics Bul 1097:1-66; pa 35c Supt. of doc. '53
Family income, expenditures, and savings in ten cities. U S Bur Labor Statistics Bul 1065:1-110; pa 50c Supt. of doc. '52

SAVINGS and loan associations. See Building and loan associations

SAVINGS and loan associations, Federal. See Federal savings and loan associations

SAVINGS and loan league, United States. See United States savings and loan league

SAVINGS banks
Federal reserve and savings banks. A. Sproul. Comm & Fin Chr 177:685+ F 12 '53
Ideas from a highly successful bank opening; Manhattan Savings. E. Tyng. il Burroughs Clearing House 37:26-7 Ja '53
Look at Canada's Caisses populaires; Quebec institutions serving as co-operative savings banks. L. Remillard. il Burroughs Clearing House 37:34-5+ Ap '53
Mutual savings gains. Burroughs Clearing House 37:23-4 Mr '53
Mutuals show gains; table of rank of 25 largest. Banking 45:114 S '52
Need for savings bank expansion. R. M. Catharine. Comm & Fin Chr 176:1834 N 13 '52
Needed, a reaffirmation of functions of financial institutions; controversy over savings banks' branch extensions. E. H. Watson. Comm & Fin Chr 177:2414 Je 4 '53
News on savings banking. Banking 45:92-4 Ja '53 [cont monthly]
Savings accounts for babies; Valley national bank of Phoenix. il Banking 45:145 S '52
Savings bank survey. Burroughs Clearing House 37:24+ Mr '53
Savings banks' perspective for coming new year. R. M. Catharine. Comm & Fin Chr 176:2501+ D 25 '52
Savings banks' problems with A and B homeowners' forms discussed. Nat Underw 57:4+ F 12 '53
Savings business; a vista of great opportunities. J. E. Perry. Banking 45:46+ S '52

SAVINGS banks—*Continued*

Support inflation curbs and savings bank branch extension. S. A. Neilson. Comm & Fin Chr 177:2416-17 Je 4 '53

See also

American bankers association—Savings and mortgage division

Postal savings banks

School savings

Advertising

See Bank advertising

Insurance requirements

Savings banks association of New York state advises banks on values, extended coverage, etc. Nat Underw 56:10 O 30 '52

Insurance selling

Savings bank life insurance. C. E. Gillespie. Comm & Fin Chr 177:1024 Mr 5 '53

Investments

Commercial bank investment of savings deposits. R. W. Storer. Comm & Fin Chr 176:1932+ N 20 '52

Equities vs. mortgages as savings bank investment. A. J. Casazza. Comm & Fin Chr 176:2330+ D 18 '52

Growth company shares; a basis for savings bank investment. M. Moes. Comm & Fin Chr 177:474-5 Ja 29 '53

Institutional investors mutual fund, inc.; mutual investment company organized by the Savings banks association of the state of New York. A. C. Middlebrook. Comm & Fin Chr 177:2076+ My 14 '53

Irrigation bonds made legal investments for savings banks by new California measure. Eng N 150:27 My 7 '53

New York savings banks turn to stocks in search for higher earnings. W. A. Lyon. Comm & Fin Chr 176:1833+ N 13 '52

Great Britain

Trustee savings banks' progress. Economist 166:506 F 21 '53

SAVINGS banks' insurance forum of New York

Savings banks' problems with A and B homeowners' forms discussed. Nat Underw 57:4+ F 12 '53

SAVINGS certificates. See Banks and banking—Savings certificates

SAVINGS clubs

See also

Christmas clubs

SAVINGS deposits

How banks can meet savings and loan competition. J. B. Mack, jr. Comm & Fin Chr 177:684 F 12 '53

Record mutual savings deposits in 1952. R. M. Catharine. Comm & Fin Chr 177:604 F 5 '53

Savings deposits show $506 million gain in first quarter. Comm & Fin Chr 177:1747 Ap 23 '53

See also

Christmas clubs

Postal savings banks

School savings

Accounting

Audit control in savings deposit accounting. O. Salvesen. Banking 45:123-4 Je '53

Interest

Commercial bank's answer to the savings rate problem; 2½ per cent thrift certificate. T. A. Glenn, jr. il Burroughs Clearing House 37:34-5+ Mr '53

Measuring the profitability of savings deposits in country banks; with table of savings departments of commercial banks with total assets under $7,500,000 for 1951. L. M. Schwartz. Burroughs Clearing House 37:32-3+ D '52

Prospects of interest rates on savings. J. R. Dunkerley. Comm & Fin Chr 177:916-17 F 26 '53

Questions and answers; should we pay interest on savings deposits? Banking 45:112-13 S '52

What to pay savings depositors; with table of savings departments of commercial banks with under $7,500,000 for 1951. Banking 45:48-9+ N '52

SAW grass

Increased newsprint from sawgrass not very likely. L. E. Pasek. Paper Tr J 137:12 S 11 '53

Newsprint from sawgrass planned in $500,000 Everglades project. Paper Ind 35:201-2 My '53

SAWMILL waste. See Wood waste

SAWMILLS

Electric equipment

Electric carriage drive for sawmill; data sheet. W. P. Riordan. il Elec West 110:95 Mr '53

Equipment

Wood conservation step taken by St Regis; Swedish equipment installed; Andersson barker and chipper. Paper Ind 34:1205-6 Ja '53

Power

Push-button sawmills. J. Mater. il Comp Air Mag 58:68-9 Mr '53

Standards

Sawmill standardization, an engineering challenge. M. A. Mater. il Standardization 24:74-8 Mr '53

SAWS

After decades a revolution in saws. il Fortune 47:49 Ja '53

Air-powered saw cuts anywhere, even under water. J. M. Connolly. il Eng N 149:121+ D 18 '52; Same. Constr Methods 35:121-2+ Ja '53

Floor-type saw bench. il Engineering 174:520 O 17 '52

How Champion paper & fiber co. developed dustless saw for slicing cement. il Paper Tr J 136:24 Ap 10 '53

Pavement saw speeds removal of old asphalt pavement. il Roads & Sts 96:80 Ag '53

Report of cutting tool committee, Woodlands section C.P.P.A. Pulp & Pa of Can 53:156+ O '52

Training aids for mechanical saws. L. Kerr. Pulp & Pa of Can 53:165-6 O '52

Whoever heard of sawing vertically up a concrete wall; illustrations with text. Constr Methods 35:62-3 My '53

SAWS, Chain

Basic suggestions for the care and filing of chains on power saws. N. T. Adair. Pulp & Pa of Can (Convention no) 54:279+ [F] '53

Engine-driven saw weighs only 30 pounds. il Machine Design 25:134 Je '53

Small two-cycle combustion and lubrication problems; abstract. F. Davison. S A E J 61:103-4 O '53

Safety measures

Portable power chain saws. Tappi 36:sup 86A Ap '53; Same. Pulp & Pa of Can 54:182 Je '53

SAWS, Electric

Abrasive blades designed to cut any kind of material. il Eng N 149:122 D 11 '52

Variety of new electric saws. Mod Ind 26:118+ Jl '53

Wolf heavy-duty electric hand saw. il Engineering 175:768 Je 12 '53

SAWS, Metal working

Band saw walks through metal. M. A. Bergson. il Steel 131:92-4 O 20 '52

Band-sawing saves stock by reducing chip waste. H. J. Chamberland. il Mach 59:188-9 Ja '53

Big bite; cutter simplifies cutting chain by mill supply houses. il Iron Age 171:175 F 5 '53

DoAll band sawing machine for heavy-duty service. il Automotive Ind 108:74 Ja 1 '53; Mach 59:226-7 Ja '53

Double hacksaw blade life. A. F. Scoblic. diag Am Mach 97:131 Mr 2 '53

Friction band sawing tool. il Aero Digest 66:66+ Ja '53

Friction saw cuts steel faster; 15 seconds required for heavy, 30-in. beams. L. J. Langevin. il Elec World 139:209 Ja 26 '53

Homemade table extender increases bandsaw capacity. C. Molloy. diag Am Mach 97:149 Jl 20 '53

How to extend bandsaw blade life. A. G. Byers and R. H. Stolz. diags Am Mach 97:151 Je 22 '53

SAWS, Metal working- *Continued*

Improving band tool performance. M. A. Bergson. il diags Tool Eng 30:56-8 F '53

Latest word on box-strap sawing. il Factory Management 111:290+ Mr '53

Need a power saw? R. H. Wilcox. il diags Mill & Factory 51:107-10 D '52

New rotary saw gives planes close shaves; Boeing airplane co. H. E. Jackson. il Mill & Factory 52:127-8 Je '53

Special saws used for trimming aircraft parts. R. Kautz. il Automotive Ind 108:32-3+ Je 15 '53

Suggested corrective measures for various sawing problems; data sheet. Mach 60:255 O '53

Voucher cold-sawing machine. il Engineering 176:61 Jl 10 '53

SAXAPAHAW, North Carolina

Saxapahaw tradition; planning for village charm. M. B. Andrews. Textile World 102:188+ N '52

SAYEN, Clarence N.

New leader, new look for pilots. por Bsns W p 144+ N 8 '52

SCAFFOLDING

High scaffolding supports heavy stone; Cathedral of the Sacred Heart in Newark, N.J. il Constr Methods 35:60-2 S '53

Scaffold goes inside to topple tower. il Constr Methods 35:156 My '53

Scaffolding goes underground! il Safety Maint & Prod 106:27-8 Ag '53

Scaffolding helps speed the job. il Constr Methods 35:180 Je '53

Safety measures

About scaffolds. Constr Methods 34:8+ N '52

Modern scaffolding; highroad to safety; illustrations with text. Safety Maint & Prod 104:32-4 O '52

Safety of maintenance employees depends largely on type of scaffolding. E. J. Clary. il diag Gas Age 111:44-5+ Mr 12 '53; Same. Safety Maint & Prod 106:24-5+ Jl '53

Scaffold safety hints. Sewage & Ind Wastes 25:745-6 Je '53

Scaffolding with built-in stairs, safety feature on Buffalo bridge job. il diag Roads & Sts 96:56-8 Jl '53

Scaffolds and staging. il Nat Safety N 67:41-2 Mr '53

SCAFFOLDING, Aluminum

Aluminum scaffold for repointing Peace tower. il Roads & Eng Constr 91:86 F '53

SCAFFOLDING, Steel

Bethlehem gains safety and economy with steel staging. il Marine Eng 58:56-8 Jl '53

Shoring with steel scaffold cuts costs. il Civil Eng 22:883 O '52

SCALES

Electronic scale makes packing line really automatic; Calavo growers of California. il Factory Management 111:91 Ag '53

Strain gage on scale job. Steel 131:147 N 17 '52

See also

Balances

SCALING of metals. See Metals—Scaling

SCANDINAVIA

Nordic council 1st meeting, Copenhagen. Economist 166:744 Mr 14 '53

Yearbooks

Scandinavian year book for 1953. rev ed 696p 30s Wm. Dawson and sons, Cannon House, Macklin st, London, W.C.2 '53

SCANDINAVIAN airlines system

Scandinavian airlines records progress. For Comm W 49:20 Je 15 '53

SCANDIUM

Chemistry of scandium; the structure of scandium oxinate. L. Pokras, M. Kilpatrick and P. M. Bernays. Am Chem Soc J 75:1254-5 Mr 5 '53

Thermal neutron absorption cross section of scandium. E. E. Lockett and E. Bowell. bibliog Phys R 89:657-8 F 1 '53

Analysis

Separation of carrier-free scandium from a calcium target. J. E. Duval and M. H. Kurbatov. Am Chem Soc J 75:2246-8 My 5 '53

Isotopes

Disintegration of Sc^{47}. L. S. Cheng and M. L. Pool. Phys R 90:886-8 Je 1 '53

Gamma-ray cascade following decay of Sc^{46}. C. E. Whittle and F. T. Porter. Phys R 90:498 My 1 '53

Neutron capture cross sections for production of Sc^{46} and Sr^{85}. W. S. Lyon. Phys R 89:1307 Mr 15 '53

Neutron capture γ-rays from scandium, vanadium, manganese, cobalt, and copper. G. A. Bartholomew and B. B. Kinsey. bibliog diags Phys R 89:386-95 Ja 15 '53

Radioactivity of scandium 43. J. R. Haskins and others. bibliog Phys R 88:876-7 N 15 '52

SCANDIUM oxide

Neutron diffraction studies on scandium orthovanadate and scandium oxide. W. O. Milligan and others. bibliog J Phys Chem 57:535-7 My '53

SCANDIUM perchlorate

Acid dissociation of the aquoscandium ions. M. Kilpatrick and L. Pokras. bibliog Electrochem Soc J 100:85-92 F '53

SCANDIUM vanadate

Neutron diffraction studies on scandium orthovanadate and scandium oxide. W. O. Milligan and others. bibliog J Phys Chem 57:535-7 My '53

SCATTERING of light. See Light, Scattering of

SCATTERING of particles and rays

Angular distribution of scattering and reaction cross sections. J. M. Blatt and L. C. Biedenharn. bibliog Rs Mod Phys 24:258-72 O '52

Application of the multiple scattering theory to cloud-chamber measurements. M. Annis and others. bibliog diags Phys R 89:1216-27 Mr 15 '53

Applications of variational principles to scattering problems. S. Altshuler. bibliog Phys R 89:1278-83 Mr 15 '53

Atomic electron ejection in large-angle scattering. M. E. Ebel and W. F. Fry. il diag Phys R 88:1306-8 D 15 '52

Calculation of peaked angular distributions from Legendre polynomial expansions and an application to the multiple scattering of charged particles. L. V. Spencer. Phys R 90:146-50 Ap 1 '53

Charge independence of nuclear forces. D. Feldman. Phys R 89:1159-60 Mr 1 '53

Construction of potentials in quantum field theory. K. A. Brueckner and K. M. Watson. bibliog Phys R 90:699-708 My 15 '53; Reply. A. Klein. 91:1285 S 1 '53

Coulomb and nuclear interactions of cosmic-ray mesons and protons in lead. W. L. Whittemore and R. P. Shutt. bibliog Phys R 88:1312-21 D 15 '52

Coulomb scattering of relativistic electrons and positrons by nuclei. H. Feshbach. bibliog Phys R 88:295-7 O 15 '52

Elastic scattering and neutralization of low velocity hydrogen ions in methforane and ethforane. J. H. Simons and C. S. Garber. bibliog J Chem Phys 21:689-92 Ap '53

Elastic scattering of alpha-particles by carbon. R. W. Hill. bibliog Phys R 90:845-8 Je 1 '53

Elastic scattering of alpha-particles by oxygen. J. R. Cameron. bibliog diag Phys R 90:839-44 Je 1 '53

Electromagnetic back-scattering from cylindrical wires. C. T. Tai. diag J Ap Phys 23:909-16 Ag '52

Exchange scattering in a three-body problem. H. E. Moses. Phys R 91:185-92 Jl 1 '53

Excitation of molecular rotations and vibrations in inelastic scattering processes. E. H. Kerner. bibliog diag Phys R 91:1174-81 S 1 '53

Formal theory of scattering. M. Gell-Mann and M. L. Goldberger. bibliog Phys R 91:398-408 Jl 15 '53

Impulse approximation and field theoretical calculations. J. S. Blair and B. Segall. Phys R 88:621-4 N 1 '52

Inelastic nuclear scattering of photons by Rh^{103}. C. S. del Rio y Sierra and V. L. Telegdi. bibliog Phys R 90:439-42 My 1 '53

Interference between Coulomb and nuclear scattering in *p-p* collisions at 240 Mev. H. P. Noyes and H. G. Camnitz. Phys R 88:1206-7 D 1 '52

SCATTERING of particles and rays—*Cont.*
Lower limits for interaction times in photon scattering processes. E. Gora. Phys R 88: 1212-13 D 1 '52
Molière's theory of multiple scattering. H. A. Bethe. bibliog Phys R 89:1256-66 Mr 15 '53
Multiple scattering and radiation damping. H. Ekstein. bibliog Phys R 89:490-501 Ja 15 '53
Multiple scattering and the many-body problem; applications to photomeson production in complex nuclei. K. M. Watson. bibliog Phys R 89:575-87 F 1 '53
Multiple scattering corrections to the impulse approximation in the two-body system. K. A. Brueckner. bibliog Phys R 89: 834-8 F 15 '53
Multiple scattering of radiation by an arbitrary planar configuration of parallel cylinders and by two parallel cylinders. V. Twersky. diags J Ap Phys 23:407-14 Ap '52
Multiple scattering theory of the finite grating and the Wood anomalies. V. Twersky. diags J Ap Phys 23:1099-118 O '52
Polyphosphates as polyelectrolytes; light scattering and viscosity of sodium polyphosphates in electrolyte solutions. U. P. Strauss, E. H. Smith and P. L. Wineman. bibliog Am Chem Soc J 75:3935-40 Ag 20 '53
Proposed method for producing short intense monoenergetic ion pulses. R. C. Mobley. diag Phys R 88:360-1 O 15 '52
Range of alpha-particles in water. H. G. de Carvalho and H. Yagoda. bibliog il diag Phys R 88:273-8 O 15 '52
Resonance scattering in indium. L. B. Borst. bibliog diags Phys R 90:859-62 Je 1 '53
S-matrix and causality condition; Maxwell field. N. G. van Kampen. bibliog Phys R 89:1072-9 Mr 1 '53
Scattering factors for certain polydisperse systems. M. Goldstein. bibliog J Chem Phys 21:1255-8 Jl '53
Stopping power of *K*-electrons. M. C. Walske. bibliog Phys R 88:1283-9 D 15 '52
Unbacked thin films. G. A. Sawyer. bibliog il R Sci Instr 23:604-6 N '52
University of Pittsburgh scattering project. R. S. Bender and others. plan diags R Sci Instr 23:542-7 O '52
Variational principle for scattering. H. Feshbach and S. I. Rubinow. bibliog Phys R 88: 484-7 N 1 '52
Variational principles for three-body scattering problems. S. Borowitz and B. Friedman. bibliog Phys R 89:441-5 Ja 15 '53
See also
Deuterons—Scattering
Electrons—Reflection, Scattering, etc.
Gamma rays—Scattering
Ions—Scattering
Neutrons—Scattering
Protons—Scattering
Radio waves—Scattering
X rays—Scattering

SCATTERING of radio waves. See Radio waves—Scattering

SCATTERING of sound. See Sound—Scattering

SCHACHT, Hjalmar, 1877-
International troubles keep Dr Schacht busy. pors Fortune 46:47 N '52

SCHEDULES
Crew charting tells workers what to do, when to do it; Temco aircraft corp. G. N. Brown. il Factory Management 111:128-9 S '53
How to set up effective maintenance schedules. R. P. Neuschel. il Mill & Factory 52: 80-5 My '53
Production department schedules and controls orders. T. Friedl. Textile World 103: 93-5+ Je '53
Schedule a slice out of down time; Warner & Swasey co. il Steel 132:66-7 Ja 26 '53
Scheduling designers' work load; Leeds and Northrup co. A. E. Malter. il Tool Eng 30:44 Ja '53
See also
Advertising—Schedules
Production control
Railroads—Schedules

SCHENECTADY, New York

Sewerage

Rehabilitation of the sewage treatment plant. E. S. Ordway. il Sewage & Ind Wastes 25: 684-9; Discussion. M. M. Cohn. 689-91 Je '53

SCHENLEY industries, inc.
Schenley eyes Dant as a boost to sales. Bsns W p30 F 21 '53

SCHERING corporation
Patents; Schering vs. government. Bsns W p28 D 13 '52
Schering sued by US over patent licenses. Oil Paint & Drug Rep 162:3+ D 8 '52

SCHIESSLER, Robert W. 1918-
Precision scientific award in petroleum chemistry. por(cover) Chem & Eng N 31:778 F 23 '53

SCHIFF bases
Kinetic evidence for a Schiff base intermediate in the Knoevenagel condensation. T. I. Crowell and D. W. Peck. bibliog Am Chem Soc J 75:1075-7 Mr 5 '53
Kinetics of the catalytic hydrogenation of certain Schiff bases. A. Roe and J. A. Montgomery. bibliog Am Chem Soc J 75: 910-12 F 20 '53
Metal ion catalysis in the hydrolysis of Schiff bases. G. L. Eichhorn and J. C. Bailar, jr. bibliog Am Chem Soc J 75:2905-7 Je 20 '53
Sodium borohydride reduction of quaternary Schiff bases and alkaloids. B. Witkop and J. B. Patrick. bibliog Am Chem Soc J 75:4474-6 S 20 '53

SCHIZOPHRENIA
Psychotherapy for schizophrenia. D. D. Jackson. il Sci Am 188:58-63 Ja '53; Discussion. M. Gruenthal. 188:4+; Reply. 6+ Mr '53

SCHLIEREN apparatus
Interferometer-Schlieren instrument for aerodynamic investigations. R. E. Blue and J. L. Pollack. il diags R Sci Instr 23:754-5 D '52
Miniature supersonic wind tunnel. P. W. Powers. il diags Aeronautical Eng R 11: 38-42 D '52
Radial symmetry in a Schlieren image. R. B. Edmonson and others. il diag Opt Soc Am J 42:984-5 D '52

SCHLUMBERGER well surveying corporation
New Schlumberger plant ready for operations. C. M. Davis. il Oil & Gas J 51:120-1 My 4 '53
Schlumberger moves into $6 million Houston plant. il World Oil 136:420+ My '53

SCHMIDT, Walter August, 1883-
Meeting chairmen. por(cover) Chem & Eng N 31:551 F 9 '53

SCHMIDT reaction
Further aspects of the Schmidt reaction. R. D. Westland and W. E. McEwen. bibliog Am Chem Soc J 74:6141-2 D 5 '52
Migration of nitrogen in the Schmidt reaction. E. Lieber, R. A. Henry and W. G. Finnegan. Am Chem Soc J 75:2023 Ap 20 '53
Schmidt reaction with unsymmetrical ketones. G. M. Badger, R. T. Howard and A. Simons. Chem Soc J p2849-52 Jl '52

SCHNEIDER, Heinrich
Portrait. Bsns W p 148 D 6 '52

SCHNITZLER, William F.
A.F. of L.'s new number two man. por Fortune 47:64 Ja '53

SCHOELLKOPF medal
High polymer research earns Schoellkopf medal for Izard. Chem & Eng N 31:1754 Ap 27 '53

SCHOLARSHIPS and fellowships
AISE graduate fellowship awarded to Carnegie Tech student. Iron & Steel Eng 30:130 Je '53
ASTE award winners announced. Tool Eng 30:91-2 Je '53
Athlone fellowship scheme for the practical training in industry of Canadian engineering graduates in Great Britain. W. Abbott. Engineer 195:561-3 Ap 17 '53; Discussion. 195:567-8, 587-8 Ap 17-24 '53
Grants and fellowships. Science 117:352 Ap 3 '53
National science foundation awards fellowships. Chem & Eng N 31:1678+ Ap 20 '53
New program to assist teaching chemistry in colleges and universities announced by DuPont. Paint Oil & Chem R 116:6 Ja 15 '53
St Regis offers forestry scholarships. Paper Tr J 135:14 D 5 '52
Scholarship awards win public approval; Bank of America's achievement awards program; California high schools. J. Bedford. il Bankers Mo 70:30+ Je '53

SCHOLARSHIPS and fellowships—*Continued*

Taxation

Robertson and taxability of awards and scholarship grants. J Account 95:219-20 F '53

SCHOOL architecture. See School buildings—Designs and plans

SCHOOL buildings

Callaway helps LaGrange build a better school. M. B. Andrews. il Textile World 103:155+ Je '53

Langley-Math-Clearwater high school, Aiken county, S.C. il plans diag Arch Rec 112:130-5 S '52

Money saving portable school building; with cost data. il plans Eng N 149:55-6 O 2 '52

New school projects planned to cut costs. il Arch Rec 112:14 N '52

One-story Vierendeel trusses ideally suited to school building. R. H. Courland. il plans diags Civil Eng 22:878-82 O '52

Sunshine school for the cerebral palsied; Fresno, Calif. il plan Arch Rec 112:156-61 S '52

Terrazzo panels give new school a distinctive finish. il Am Bld 74:224+ S '52

U.S. school loans top $40 million. Eng N 149:74 N 27 '52

See also

Classrooms

Cost

Economy move pays off on school costs. diags Eng N 150:38+ Mr 26 '53

Designs and plans

Designed for multi-stage construction; Cahuilla elementary school. il plans diags Arch Rec 113:117-23 Ja '53

New building for consolidated school; Winecoff high school, North Carolina. il plans Arch Rec 113:146-51 F '53

Schools; building types study. il plans diags Arch Rec 112:119-50 N '52

Electric equipment

Voltage up, wiring cost down; four-wire distribution in Twin Falls school. A. I. Sawyer. il diags Elec West 109:82-4 D '52

Equipment

Annual voluntary inspections of schools assure complete safety for youth. D. E. Hughes. Gas Age 112:33+ O 8 '53

Heating and ventilation

Experience is their teacher! installation of radiant heating in school. il diag Dom Eng 181:82-5+ Mr '53

How do you heat and ventilate schoolrooms? H. Wright; S. A. Baird. Dom Eng 180:99+ D '52

How to control unit ventilators in school buildings. H. W. Alyea. diag Heating-Piping 25:92-5 O '53

Radiant heating in elementary school; illustrations with text. Heat & Ven 49:126+ D '52

Unit ventilator performance in heating, cooling classrooms. W. G. Potter and F. G. Baker. il Heating-Piping 25:104-7 Ap '53

Watch the kid population in your town; new and remodeled schools in your future; Lewis plumbing and heating co. il Dom Eng 181:82-5 Je '53

Lighting

Adopt recommended practice in schools; illustrations with text. Illum Eng 48:316-17 Je '53

Attainment of quality daylighting in school classrooms. R. A. Boyd. bibliog il Illum Eng 48:15-20; Discussion. 20-2 Ja '53

Chalkboard lighting unit gives illumination without glare. H. Lazerson. Elec Eng 72:469-70 My '53

Classroom lighting; a practical comparison. R. D. Bradley. il plans Illum Eng 47:540-4 O '52

Comfortable high levels in school libraries; illustrations with text. Illum Eng 48:346-7 Je '53

Common sense of school wiring. M. J. Feron. Illum Eng 48:321-2 Je '53

Controlling and redirecting daylight by means of louvers. H. S. Bull. il Illum Eng 48:25-30; Discussion. 30-2 Ja '53

Correlation of lighting goals with school building design. C. D. Gibson and F. K. Sampson. il diag Illum Eng 48:291-5 Je '53

Daylighting performance of a pre-tested school design. C. L. Crouch. diags Illum Eng 48:343-5 Je '53

Fundamentals of lighting maintenance. R. R. Wylie. Illum Eng 48:336-8 Je '53

Improved school lighting; the Minneapolis plan. R. A. Putnam and G. T. Lee. Illum Eng 48:323-4 Je '53

Lighting for classrooms with nine-foot ceilings. J. F. Parsons. Illum Eng 48:318 Je '53; Discussion. 48:sup 16A+ S '53

Louvered skylight, ventilator combined. il diag Arch Rec 112:204-5 S '52

Meeting lighting quality requirements in school classroom. J. J. Neidhart. diag Illum Eng 48:311-15 Je '53

Meeting recommended practice; ten systems. G. G. Gilleard. il diags Illum Eng 48:308-9 Je '53

Performance vs installation; luminous panel systems. B. S. Benson, jr. and E. H. Church. il Illum Eng 48:363-6 Jl '53

Planning a stage lighting installation for a modern school auditorium. T. Fuchs. plans Illum Eng 48:348-53 Je '53

Pre-testing school design. il diag Illum Eng 48:339-40 Je '53

Relighting to standard practice; illustrations with text. Illum Eng 48:334-5 Je '53

School built to pre-tested design. R. MacKinnon, jr. il diag Illum Eng 48:341-2 Je '53

Several techniques in school lighting systems; illustrations with text. Illum Eng 48:310 Je '53

Small budget rural schools want good lighting; illustrations with text. Illum Eng 48:306-7 Je '53

Visibility of school tasks. J. M. Ketch and C. J. Allen. il Illum Eng 48:299-305; Discussion. 305 Je '53

Visual requirements for chalkboard lighting. R. G. Hopkinson. il Illum Eng 48:325-33 Je '53

SCHOOL children

Science for the young; exhibition and lectures for school children. Elec J 150:49-50 Ja 2 '53

Why do you let Americans skip breakfast, and like it? Better breakfast week. L. B. Colby. il Sales Management 70:48+ Mr 1 '53

See also

Mental hygiene, School

SCHOOL decoration

See also

Color in school decoration

SCHOOL finance

School building controversy flares in Washington; Taxpayers' association fights Wanamaker proposal for additional funds. Eng N 150:79-80 Ja 22 '53

SCHOOL hygiene

APHA conference report; school health policies. Pub Health Rep 68:207-9 F '53

APHA conference report; school health research. Pub Health Rep 68:248-50 F '53

See also

Mental hygiene, School

SCHOOL libraries

Comfortable high levels in school libraries; illustrations with text. Illum Eng 48:346-7 Je '53

SCHOOL savings

American bankers association, Savings and mortgage division, National school savings forum, New York. Banking 45:97+ Ap; 95 My '53

SCHOOL savings banks

Banking on teen agers; Waterbury, Conn. J. Johnson. Banking 45:108 Je '53

SCHOOLS

Liability of schools and hospitals is stirred up again. Nat Underw 57:21 F 5 '53

See also

Colleges and universities

Education

Engineering colleges

Trade schools

SCHOOLS—*Continued*

Insurance requirements

Agent to answer report on Dade county school insurance; survey details. Nat Underw 57:32 Ap 16 '53

Wind hazard makes self-insurance idea in Florida dangerous. J. L. Turner. Nat Underw 56:7 N 20 '52

SCHOTTKY effect

Magnesium-cadmium alloys; the cadmium-rich alloys; some lattice parameters and phase relationships between 25 and 300°; structure of the $MgCd_3$ superlattice; Schottky defects and the anomalous entropy. D. A. Edwards, W. E. Wallace and R. S. Craig. bibliog Am Chem Soc J 74:5256-61 N 5 '52

Periodic deviations in the Schottky effect for molybdenum. E. G. Brock and others. bibliog Phys R 89:851-4 F 15 '53

Photoemission of tungsten in the region of predicted Schottky deviations. E. E. Buder and others. bibliog diag Phys R 91: 561-6 Ag 1 '53

Relation between the conductance and the noise power spectrum of certain electronic streams. J. J. Freeman. diag J Ap Phys 23:1223-5 N '52

Shot noise in germanium filaments. R. H. Mattson and A. van der Ziel. J Ap Phys 24:222 F '53

Shot noise in semiconductors. A. van der Ziel. J Ap Phys 24:222-3 F '53

Surface barrier analysis for the highly refractory metals by means of Schottky deviations. D. W. Juenker and others. bibliog diag Phys R 90:772-8 Je 1 '53

SCHRÖDINGER equation. See Wave mechanics

SCHULMAN, A., inc.

Schulman celebrates twenty-fifth anniversary. il Rubber Age 73:671 Ag '53

SCHUMAN plan. See Coal-steel pool

SCHWARZENBACK HUBER company

Last resort. Bsns W p 126-7 F 7 '53

Resurrection; Robert Schwarzenbach, jr. R. E. Ellsworth. Mod Textiles Mag 34:35+ O '53

SCIENCE

Discovery of science. P. W. Bridgman. Inst Radio Eng Proc 41:580-1 My '53

Engineer and the scientist. W. F. G. Swann. J Eng Educ 43:241-8 D '52

Engineering science. N. A. Hall. Science 117: sup3 F 13 '53

Pledge of faith in America's future. A. C. Jacobs. Mech Eng 74:980-2 D '52

Science for the young; exhibition and lectures for school children. Elec J 150:49-50 Ja 2 '53

See also

Bacteriology
Biological chemistry
Biology
Botany
Chemistry
Crystallography
Geology
Mathematics
Metallography
Microscope and microscopy
Optics
Paleobotany
Paleontology
Physics
Scientific research
Technology

Bibliography

Abstracting services for foreign scientific periodicals. T. S. Shaw. Special Lib 43:352-3 N '52

Book reviews. Science 117:414-37 Ap 17 '53

Children's books; science for younger readers. J. R. Newman. Sci Am 187:78-83 D '52

History

History of science; ancient science through the golden age of Greece, by G. Sarton. Review, by H. Butterfield. Sci Am 188: 95-8 F '53

See also

Chemistry—History

International aspects

Visas and meetings. Sci Am 188:46+ Mr '53

See also Ciba foundation for the promotion of international co-operation in medical and chemical research

Methodology

Development of logical deductive disciplines in the physical sciences. H. Margenau. Elec Eng 72:284-6 Ap '53

Nomenclature

See also

Zoology—Nomenclature

Periodicals

Abstracting services for foreign scientific periodicals. T. S. Shaw. Special Lib 43: 352-3 N '52

National sources of scientific journals. E. J. Crane. Chem & Eng N 31:864 Mr 2 '53

See also

Chemistry—Periodicals

Philosophy

Man's awareness and the limits of physical science; abstract. A. H. Compton. Science 116:519 N 14 '52

Two philosophies. F. A. Magoun and R. C. Nyman. il Tech R 55:147-50+ Ja '53

Popularization

Popular-science books. J. Pfeiffer. Science 117:399-403 Ap 17 '53

Science publicity; challenge and dilemma. J. I. Mattill. bibliog Tech R 55:203-6+ F '53

Scientists can talk to the layman. J. W. Hill and J. E. Payne. Science 117:403-5 Ap 17 '53

Social aspects

Ethical dilemma of science. A. V. Hill. Engineering 174:310-11, 356-7 S 5-12 '52; Same cond. Engineer 194:312-13 S 5 '52; Excerpts. Chem Age (Lond) 67:315-17 S 6 '52; Abstracts. Chem & Eng N 30:4052 S 29 '52; Electrician 149:697-8 S 5 '52

50-year moratorium on science? C. A. Thomas. Chem & Ind p308-10 Ap 4 '53; Same. Ind & Eng Chem 45:706-8 Ap '53; Abstract. Chem & Eng N 31:330-1 Ja 26 '53

Science and the citizen. Published in monthly numbers of Scientific American

Science at bay. W. Pigman. Chem & Eng N 31:652-7 F 16 '53

Science, industry and society; abstract. Earl of Halsbury. Chem & Ind p59-60 Ja 17 '53

Science, poetry, and politics. E. Larrabee. Science 117:395-9 Ap 17 '53

Science, wait for us. M. C. Faught. il Dun's R 60:28+ O '52

Study and teaching

Laboratory work in a physical science course. W. E. Morrell. J Chem Educ 30: 80-2 F '53

Science teaching in the secondary schools. A. Postl. Science 117:567 My 22 '53

See also

Scientific education

Terminology

Classification of variable material. H. S. Conard. Science 117:364 Ap 3 '53

Scientific terminology. J. N. Hough. 231p $3.50 Rinehart and co, 232 Madison av, New York 16 '53

Australia

Scientific research has progressed. Science 117:322 Mr 27 '53

Great Britain

British scientific research needs better liaison with industry. Chem & Eng N 31:2208-9 My 25 '53

Spain

See also

Optics—Spain

SCIENCE (periodical)

Gladys M. Keener resigns as executive editor. Science 117:319 Mr 27 '53

SCIENCE and industry

Exploitation of science by industry; sixth annual report of the Advisory council on scientific policy. Engineer 196:78-9 Jl 17 '53

Science in industry. J. French. Engineer 194: 374-5 S 19 '52

Use of science and technology in industry; need for greater appreciation by management; discussion. E. Smith and others. Chem Age (Lond) 68:19-20 Ja 3 '53

SCIENCE and religion. See Religion and science

SCIENCE and state

Astin dismissal. Science 117:sup3 Ap 17 '53

Science and government; government research laboratories. L. A. DuBridge. il Chem & Eng N 31:1384-90 Ap 6 '53

See also

Government research

National science foundation

Great Britain

Science research in the Commonwealth; cooperation at Australian conference. Chem Age (Lond) 68:303-5 F 21 '53

See also

Great Britain—Scientific and industrial research, Department of

United States

Common ground of science and politics. K. F. Mather. Science 117:169-74 F 20 '53

Dangers confronting American science. M. Phillips. Science 116:439-43 O 24 '52; Discussion. J. K. Marcus. 117:507-9 My 8 '53

University and government sponsored research. V. L. Parsegian. Chem & Eng N 30:4470-2 O 27 '52

See also

National science foundation

SCIENCE foundation, National. See National science foundation

SCIENCE park. See Boston—Science park

SCIENTIFIC and industrial research, Department of. See Great Britain—Scientific and industrial research, Department of

SCIENTIFIC apparatus and instruments

American scientific equipment; technical assistance for British laboratories. il Elec R (Lond) 151:381-4 Ag 22 '52

British scientific instrument research association open days, Nov. 5-6. il(p664) Engineering 174:659-60 N 21 '52

Scientific apparatus; another good year. il Steel 132:50-1 Ap 27 '53

See also

Aeronautic instruments

Cathode ray tubes

Chemical apparatus

Electric apparatus and appliances

Electric instruments

Electron microscope

Medical instruments and apparatus

Optical instruments

Physical instruments

Pycnometers

Radio instruments

Spectrograph

Surgical instruments and apparatus

Exhibitions

International congress on analytical chemistry, Oxford; exhibits. Anal Chem 24:sup 23A-4A+ O '52

SCIENTIFIC conferences

Meetings and conferences. Science 117:sup 16 Ap 3 '53

Scientific conferences and papers. R. J. Donaldson, jr.; P. F. Klens. Science 117:112-14 Ja 30 '53

SCIENTIFIC education

Educational activities of Westinghouse. Tappi 35:sup 102A-4A O '52

Effective learning in college. O. Tead. J Chem Educ 29:565-70 N '52

Modern engineer should be educated as a scientist; in industry. H. K. Ihrig. J Eng Educ 43:269-73 D '52

Science education. R. D. Wells. J Chem Educ 30:94-9 F '53

See also

Chemical education

SCIENTIFIC expeditions

Chicago museum field work. H. B. Harte. Science 116:sup3 D 19 '52

Voyage of the Challenger. H. S. Bailey, jr. il map Sci Am 188:88-94 My '53

See also

Bounty (ship)

SCIENTIFIC information, Freedom of

Dangers confronting American science. M. Phillips. Science 116:439-43 O 24 '52; Discussion. J. K. Marcus. 117:507-9 My 8 '53

SCIENTIFIC information conference. See Royal society of London—Scientific information conference

SCIENTIFIC literature

Improving the internal information services in scientific research organizations. S. Herner. bibliog Special Lib 44:15-19 Ja '53

International organization of scientific documentation based on legislation. G. W. Sinclair. Science 117:233-4 F 27 '53

Languages of the language of science. R. J. Howerton and C. E. Diss. Science 117:391-2 Ap 10 '53

Popular-science books. J. Pfeiffer. Science 117:399-403 Ap 17 '53

Scientist and the library cataloger. R. J. Poulin. Science 117:538-9; Discusion. R. S. Angell. 539 My 15 '53

We are in danger of building a Tower of Babel. V. Bush. Pub Health Rep 68:149-52 F '53

We talk to ourselves too much! D. H. Killeffer. Chem Eng Prog 49:155-7 Mr '53

See also

Chemical literature

Science—Periodicals

SCIENTIFIC management. See Industrial management

SCIENTIFIC method

Practical common sense is the best scientific method; Edgar Fahs Smith memorial lecture. J. H. Hildebrand. Chem & Eng N 31:1413-14 Ap 6 '53

See also

Science—Methodology

SCIENTIFIC research

Concerned over research needs. A. T. Waterman. Oil Paint & Drug Rep 163:5+ F 9 '53

Developing industrial researchers is greatest scientific problem; symposium on the future of fundamental research in the United States. Chem & Eng N 31:1868 My 4 '53

Engineering highlights of 1952; new knowledge. C. A. Scarlott. il Westinghouse Eng 13:46-7 Ja '53

Exploitation of science by industry; sixth annual report of the Advisory council on scientific policy. Engineer 196:78-9 Jl 17 '53

Partnership for progress; steady advancement of creative enterprises requires teamwork of industry, government, and the universities. J. R. Killian, jr. il Tech R 55:23-6 N '52

Questions loom on basic research. Bsns W p 165 Je 27 '53

Research and engineering progress, 1952; research. il diag Gen Elec R 56:13-15 Ja '53

Research at the National bureau of standards; its importance and its fulfillment. A. V. Astin. Refrig Eng 61:756+ Jl '53

Research in America; British review of activities. Elec R (Lond) 153:87-8 Jl 10 '53

Science at bay. W. Pigman. Chem & Eng N 31:652-7 F 16 '53

Technical and scientific publications in the British Isles. J. T. Kemp. Special Lib 43:344-7 N '52

UNESCO's science program. Sci Am 188:45 Ap '53

See also

Aeronautic research

Atomic research

Chemical research

Electric research

Electron microscope

Engineering research

Government research

Industrial research

Laboratories

Medical research

Metallurgical research

Microscope and microscopy

Petroleum research

Psychological research

Scholarships and fellowships

Textile research

also Gordon research conferences; Great Britain—National physical laboratory, Teddington; Great Britain—Scientific and industrial research, Department of; Little, Arthur D., inc; National science foundation; Southern research institute; White Mountain high altitude research station

Finance

University and government sponsored research. V. L. Parsegian. Chem & Eng N 30:4470-2 O 27 '52

Australia

Scientific research in Australia; third annual report of the Commonwealth scientific and industrial organization. Engineering 174:764-5, 784-5, 827-8 D 12-26 '52

India

Scientific and industrial research. Engineer 196:219-20 Ag 14 '53

SCIENTIFIC research—*Continued*

Russia

Soviet astronomy. Sci Am 188:56+ My '53

United States

Dangers confronting American science. M. Phillips. Science 116:439-43 O 24 '52; Discussion. J. K. Marcus. 117:507-9 My 8 '53

SCIENTIFIC societies

Informal meeting of representatives of associations for the advancement of science. G. Wendt. Science 117:94-6 Ja 30 '53

See also American association for the advancement of science; American chemical society; National academy of sciences

Great Britain

See also Royal society of London

SCIENTIFIC writing

See also
Science—Periodicals
Technical writing

SCIENTISTS

Atomic energy gets the cream of engineering and physical science graduates. Bsns W p 120+ Ja 24 '53

Employment and education fair in science. J. F. Codington. Science 117:567-8 My 22 '53

Engineer shortage; treatment but no cure Bsns W p29 My 23 '53

How to live with your scientists. P. Drucker. Chem W 72:26+ Mr 28 '53

Keeping tabs on U.S. technical manpower. Bsns W p96+ My 9 '53

Manpower utilization and national security. C. H. Brown. Mech Eng 74:892-6+ N '52

National manpower council; summary of statement on scientific and professional manpower. Science 117:617-22 Je 5 '53

Occupational mobility of scientists; a study of chemists, biologists and physicists with Ph.D. degrees. T. R. Shapiro. U S Bur Labor Statistics Bul 1121:1-63; pa 35c Supt. of doc. '53

Psychologist examines 64 eminent scientists. A. Roe. il Sci Am 187:21-5 N '52; Discussion. 188:2+ Ja '53

Report to Eisenhower confirms shortage of scientific manpower. Chem & Eng N 31:2202+ My 25 '53

Science in industry. J. French. Engineer 194:374-5 S 19 '52

Science, poetry, and politics. E. Larrabee. Science 117:395-9 Ap 17 '53

Science versus administration in certain U.S. foreign aid efforts. J. R. King. Science 117:568-9 My 22 '53

Scientific census. Eng N 150:68-9 My 7 '53

Wanted; more brains. Bsns W p 160 My 30 '53

See also
Chemists
Engineers and scientists of America
Rumford, Sir Benjamin Thompson, Count

Public relations

Professor and his public. J. H. Hildebrand. il Chem & Eng N 30:4934-7 N 24 '52

SCIENTISTS, Russian

Scientific manpower in Russia. Sci Am 188:31 Ja '53

SCIENTISTS' committee on loyalty and security. See Federation of American scientists—Scientists' committee on loyalty and security

SCINTILLATION. See Fluorescence

SCINTILLATION counters. See Counters (electrons, ions, etc.)

SCLEROSIS

Social factors absent in multiple sclerosis. K. B. Westlund and L. T. Kurland. Pub Health Rep 68:84 Ja '53

SCOPOLAMINE

Stereochemistry of alkaloids. R. C. Cookson. bibliog Chem & Ind p337-40 Ap 11 '53

Stereochemistry of scopolamine. J. Meinwald. Chem Soc J p712-13 F '53

Stereochemistry of the tropane alkaloids; the configuration of scopolamine and of valeroidine. G. Fodor and Ö. Kovács. Chem Soc J p2341-4 Ag '53

SCORPIONS

Invertase in palamnaeus bengalensis. M. B. Lal and M. S. Kanungo. bibliog Science 117:57-8 Ja 16 '53

SCOTLAND

See also
Hydroelectric plants —Scotland

Economic conditions

Scottish survey. Economist 166:832+ Mr 21 '53

Industries and resources

Index of Scottish output. Economist 167:113-14 Ap 11 '53

SCOTT paper company

12 promising specialties. P. Dobbs. Mag of Wall St 92:122 Ap 18 '53

SCOTTISH life assurance company

Statement by the chairman. C. R. Munro. Economist 166:839 Mr 21 '53

SCOTTISH widows' fund and life assurance society

Statement by the chairman. W. M. Younger. Economist 166:607 F 28 '53

SCOURING of textiles

See also
Wool scouring

SCRAP material

Frontal attack on the scrap accounting problem. J. G. Barrett. N A C A Bul 34:791-6 F '53

See also
Cotton waste
Salvage (waste, etc.)
Scrap metal

SCRAP metal

Conveyor for handling 250 tons of scrap per day; Grand Rapids Fisher body plant. C. H. Wick. il Mach 59:190-3 My '53

Conveyor network moves press scrap. H. C. Tuttle. il Steel 131:100-1 D 8 '52

Detinners; the tin coat gets thinner. T. Metaxas. Iron Age 171:40-1 Ja 15 '53

Heenan and Froude baling presses for scrap metal. il Engineering 175:729 Je 5 '53

Metallurgical treatment of swarf; abstract. E. R. Thews. Metal Prog 64:194 S '53

Scrap; Bethlehem's explosive way of inspecting number two bundles. Iron Age 171:83 My 21 '53

Scrap; by the bucketful; Atwood vacuum machine co. il Steel 132:76 Ja 26 '53

Scrap disposal by automation; Fisher body plant. J. Geschelin. il Automotive Ind 109:38-40 Ag 15 '53

Scrap goes by subway; General Motors' Fisher body division. il Mill & Factory 52:133 Je '53

Scrap preparation and scrap contamination. R. F. Kuhnlein. Iron & Steel Eng 30:142-3 S '53

Shortages of raw materials will require public cooperation in collection of solid wastes. H. R. Murdock. Ind & Eng Chem 44:sup 117A-18A N '52

Stamping scrap belt is 1100 ft long. Automotive Ind 108:72 Ap 1 '53

See also
Metal waste
Steel waste

Prices

Average monthly quotations in 1952; tabulations. Steel 132:172 Ja 5 '53

Scrap prices (heavy melting) and steel output, 1902-1952; chart and tables. Steel 132:44b-44d Ja 12 '53

Scrap prices; number one heavy melting and cast prices in major steelmaking areas; composite prices; tabulations. Iron Age 171:431-2 Ja 1 '53

Steelmaking scrap price composite; tabulation. Steel 132:171 Ja 5 '53

Testing

Blasted bales give up secrets; checking the interior quality of purchased scrap bales. il diag Steel 132:97-8 Je 8 '53

SCRAP metal baling. See Baling presses

SCRAP metal industry

More scrap for more steel. Steel 132:44a-44e Ja 12 '53

Scrap review and forecast. Iron Age 171:280 Ja 1 '53

See also
Institute of scrap iron and steel

SCRAP metal industry—*Continued*

Statistics

Scrap consumption in 1952 slightly less than in 1951, a record year. E. C. Barringer. Blast F & Steel Pl 41:56 Ja '53

Scrap prices (heavy melting) and steel output, 1902-1952; chart and tables. Steel 132:44b-44d Ja 12 '53

U.S. consumption of scrap, 1911-1952; tabulation. Iron Age 171:432 Ja 1 '53

SCRAPERS

Carryall scraper plays major role in open pit mining at Inspiration. H. H. Mellus. il Min Eng 5:978-9 O '53

How on-job repairs cut shovel and scraper output. Roads & Sts 96:82 Jl '53

J. C. Critcher's scrapers push-load each other. il Roads & Sts 96:64 Ja '53

Lever-action scrapers introduced by Euclid co. il diags Roads & Eng Constr 91:74 Jl '53

Power scraper clears highway shoulders. il Constr Methods 35:152+ S '53

Scraper bucket delivers 82 tons an hour. il Brick & Clay Rec 122:46-7 F '53

Use of scrapers for shovel-mix. J. W. Gulledge. il Roads & Sts 96:99 F '53

SCRAPERS, Pipe

Isotopes trace pigs in pipe lines; a case in point, and a review of other work. K. C. Biederman. map diag Oil & Gas J 51:124-6 D 15 '52

SCRAPERS, Road. See Road scrapers

SCREEN printing, Silk. See Silk screen printing

SCREEN process printing association

Annual convention, Chicago, Oct. 25-28. Inland Ptr 130:65 D '52

SCREENING

See also

Paper making—
Screening

SCREENS

Cementing metal screens to cathode ray tubes. R. W. Holmes. il diag Materials & Methods 38:184+ S '53

Converting to high capacity pulp screens. W. C. Stevens and others. Tappi 36:372-4 Ag '53

Heated screens pay off. il Coal Age 58:98-9 Ap '53

Hot screen cuts clogging. Steel 132:121 F 2 '53

How radial screens raise dewatering efficiency. E. Brock. il diags Coal Age 58:95-9 S '53

New boom intake, will it cut screening costs? G. Rodemeyer. diags Power Eng 57:62-3+ F '53; Discussion. 57:57+ My '53

Picking the proper screens for most efficient sifting. A. T. Templin. diag Food Eng 25:78-9+ Ja '53

Principles and applications of a revolutionary screening device; Sweco separator. D. G. Brant. il diags Am Cer Soc Bul 32:267-71 Ag 15 '53

Screens and screening. il Brick & Clay Rec 122:52-3 Mr '53

See also

Wire cloth

SCREENS (architecture)

How to build the screen separator that divides living and dining areas. il plans diags Am Bld 74:100-1 N '52

SCREENS, Door and window

Insect screen of glass. Bsns W p 116 Je 27 '53

SCREW conveyors. See Conveying machinery—Screw conveyors

SCREW machine products association, National. See National screw machine products association

SCREW machine products industry

Machine tool shops must boost versatility if orders drop. J. H. Spaulding and others. Ind Marketing 38:18+ S '53

Screw machines: short runs pay; Hartford machine screw co. W. V. Packard. il Iron Age 171:72-3 Je 25 '53

Screw machines; too much defense? T. Metaxas. il Iron Age 171:50 Ap 30 '53

SCREW machines

Carbide tools challenge efficiency of automatic screw machines. C. R. Morgan. il Iron Age 170:97-9 O 2 '52

Eyelet machine products versus screw machine products. W. E. Allan. il diags Product Eng 23:181-3 N '52

Time for screw-machine parts; nomograph; reference book sheet. I. Zorich. Am Mach 97:181 S 14 '53

Manufacture

Air-feed boosts screw-machine production. il Comp Air Mag 57:347 D '52

SCREW threads

Inserts in magnesium cast covers provide strong threads. il Iron Age 170:118-19 O 16 '52

Inserts pare service wear. Steel 131:105 N 3 '52

Inserts protect threads tapped in soft metals. Tool Eng 29:56 D '52

Spring inserts solve threading problem in aluminum castings. il Iron Age 171:158 Mr 26 '53

Thread insert locks bushing. il Product Eng 23:164-5 O '52

Thread inserts cut overhaul time. il Steel 132:92 Je 22 '53

Thread inserts for wear protection. diag Tool Eng 31:46 S '53

Thread inserts protect new jets; growing use of aluminum and magnesium opens way for Heli-Coil applications. G. L. Christian. il diags Aviation W 58:58+ My 4 '53

Various methods of locking threaded members; drawings. Product Eng 23:148-9 O '52

Wire thread inserts; design for production. P. E. Wolfe. il diag Tool Eng 31:67-73 O '53

See also

Thread cutting

Measurement

Continuous recording of the effective diameter of screw gauges. P. W. Harrison and Mrs J. G. Wood. il diag Engineer 195:205-6 F 6 '53; Same. Engineering 175:318-19 Mr 6 '53

Simplified measurement over wires for National Acme threads; reference book sheet. D. E. Sweet. Am Mach 97:159 My 25 '53

Tolimit caliper thread gauges. il Engineering 175:407 Mr 27 '53

Standards

Buttress screw threads; reference book sheet. diag Am Mach 97:159, 161 S 28 '53

Report of ISO committee on screw threads. Standardization 23:277-8 S '52

Twenty-eight year old standard contributes to civilian defense; American standard for fire-hose coupling screw threads. Standardization 24:81 Mr '53

Unified screw thread system. diags Product Eng Hdbk p G2-5 '53

What about unified threads? M. Rhoads. Am Mach 97:121 Ja 5 '53

SCREWS

Adjustable mount using differential screws. J. A. Macinante. il diag J Sci Instr 30:98-9 Mr '53

Fasteners provide opportunity to cut assembly costs one-third. il Mill & Factory 53:152 O '53

Screws; basic fasteners of universal application. J. E. Hyler. il Mill & Factory 53:84-8 Ag; 107-11 S '53

Special screw feeds plastic in molding press. il Machine Design 25:141 Mr '53

What's ahead the next ten years in joining and assembly; bolts and screws. Am Mach 96:F7-8 Mid-N '52

Manufacture

Automatic heat-treat operation streamlines fastener handling; Standard pressed steel co. il diag Tool Eng 31:100-1 O '53

High speed screw slotter cuts several heads. J. A. Largay. il Iron Age 170:100-1 O 16 '52

Standards

Standard spring and tooth lock-washer and machine screw assemblies; data sheet. diags Mach 59:243 Mr '53

SCRIPPS, Charles E. 1920-

Businessmen in the news. por Fortune 46:50 N '52

Portrait. J. Walker. Ed & Pub 85:11 D 27 '52

SCRIPPS-HOWARD newspaper alliance

Who's who in Scripps-Howard. Ed & Pub 85:57 S 27 '52

SCRIPPS league

Scripps league uses early Lusty policy. C. Watson. Ed & Pub 85:12 D 6 '52

SCURVY grass

Cochlearia officinalis s.l. (scurvy grass) in northernmost Alaska. N. Polunin. bibliog Science 116:430-2 O 17 '52

SEA air

Impact deposition of atmospheric sea salts on a test plate. A. H. Woodcock. bibliog il diags Am Soc T M Proc 50:1151-60; Discussion. 1161-6 '50

SEA food

See also

Fish as food

SEA level

Sea level and the rotation of the earth. W. Munk and R. Revelle. bibliog Am J Sci 250: 829-33 N '52

SEA power

Danger of a pre-conceived naval strategy. G. W. Kittredge. il U S Naval Inst Proc 78:1324-5 D '52

Sea power of tomorrow. G. H. Miller. il U S Naval Inst Proc 78:958-68 S '52

Soviet satellite seas; naval aims. Economist 167:581-2 My 30 '53

SEA valleys. See Canyons, Submarine

SEA walls

Coast protection at Pett, Sussex. il Engineer 195:98 Ja 16 '53

Seawall unit is round, firm and full. il diag Eng N 149:47-8 N 6 '52

Tidal sluice gates for sea-walls and land drainage. E. C. Bowden-Smith. il diags Engineer 195:240-2 F 13 '53

See also

Breakwaters

SEA walls, Concrete

Harbour arm at Lynmouth. Engineer 195: 808 Je 5 '53

Precast prestressed concrete units for a sea wall. diags Engineer 195:364-5 Mr 6 '53

SEA water

Dow conquers sea water corrosion. D. P. Thornton, jr. il Pet Processing 7:1640-3 N '52

Electrical properties of sea water. J. A. Saxton and J. A. Lane. bibliog Wireless Eng 29:269-75 O '52

Experiments with fresh-water barrier to prevent sea water intrusion. P. Baumann. maps diags Am Water Works Assn J 45: 521-34 My '53

French explore sea depths for power and fresh water. il Eng N 150:38+ Mr 12 '53; Bsns W p52+ Ap 18 '53

Heat treatment of dolomite; the precipitation of magnesia from sea-water by calcined dolomite. H. T. S. Britton, S. J. Gregg and E. G. J. Willing. J Ap Chem 2:701-3 D '52

How Bahrein Petroleum combats sea-water corrosion at Persian Gulf installations. R. L. Davis and R. F. Heinzerling. il diags Oil & Gas J 51:264+ D 22 '52

Interest rises in tapping the sea's mineral wealth. R. L. Holman. Barron's 32:18 O 6 '52

Pollution of sea-water by oil. Engineering 174:151-2 Ag 1 '52

Spray testing with natural and synthetic sea water. T. P. May and A. L. Alexander. bibliog il Am Soc T M Proc 50:1131-41, 1144-9; Discussion. 1142-3, 1150 '50

Submarines to obtain oxygen from electrolysis of water. Chem & Eng N 31:1882 My 4 '53

Analysis

Semimicrodetermination of dissolved oxygen. E. L. Harper. diags Anal Chem 25:187-8 Ja '53

Desalting

Desalting water by ion-selective-type membranes. Pub Works 84:136 Ag '53

How sailors obtain fresh water. Nat Safety N 67:84 My '53

Processes for separating salt from saline waters. R. G. Gibbs. Chem & Eng N 30: 5016+ D 1 '52

Scale formation in sea-water distilling plants and its prevention. H. Hillier. diag Inst Mech Eng Proc (B) 1B no 7:295-311, pl 1-2 '52; Same cond. Engineering 175:284-5, 378-80, 442-4 F 27, Mr 20, Ap 3 '53; Same cond. Engineer 195:208-9, 255-6 F 6-13 '53; Discussion. Inst Mech Eng Proc (B) 1B no 7:311-22 '52

Water for Kuwait. map Economist 167:28-9 Ap 4 '53

SEABEES. See United States—Navy—Construction battalions

SEABOARD air line railroad

Investment audit. R. Carleson. Mag of Wall St 91:128-30+ N 1 '52

Railroad securities. Comm & Fin Chr 177:2544 Je 11 '53

SEABOARD finance company

Preferred stock offered. Comm & Fin Chr 177:2012 My 11 '53

SEAFARERS international union of North America

Shipowners get ringside seat; digest of union meetings in Seafarers log gives management an idea of what seamen really complain about. il Bsns W p 170-1 Ap 18 '53

SEALING

Aircraft powerplant seals; report of round table discussion. diags S A E J 61:23-9 Jl '53

Asphalt sealer sprayed; air-placed sand follows. il Constr Methods 35:136-7 Ag '53

Chan-O-Seal for modern aircraft; abstract. B. Gross. il S A E J 61:54-5 Ja '53

Clamping arrangement for sealing castings to be tested for leakage. R. S. Newton. diags Mach 59:199-200 N '52

Industrial seals; research campaigns find new uses for oil, grease and dust seals. Steel 132:59 My 4 '53

Lubrication seals for rotating shafts. J. R. Fawcett. diags Product Eng Hdbk p J30-1 '53

New meter stop causes greater safety; Lubo-seal. F. H. Mueller. il Gas Age 110:81+ O 23 '52

Ohio's new cold joint seal methods. C. W. McCaughey. il Roads & Sts 96:46-7 Je '53

Seals to minimize leakage at higher pressure. B. A. Niemeier. bibliog il diags A S M E Trans 75:369-79 Ap '53

Vacuum-tight seal between LiF and silver. R. C. Lord and R. S. McDonald. diag R Sci Instr 23:442 Ag '52

Waterstops water at Chicago pool. il diags Constr Methods 35:101-2 Ag '53

Bibliography

O-rings; annotated bibliography. B. J. Clinebell. diags India Rubber World 127:74-8 O '52

SEALING (packaging)

Evaluation of heat-seal adhesives; laboratory procedures for applying test coatings and test apparatus. H. Wittcoff and D. Peerman. il Mod Packaging 26:135-40 N '52

New uses for cellulose bands. il Mod Packaging 26:77-82+ Ag '53

Solution of a sealing problem; I. J. Grass noodle co., inc. il Mod Packaging 26:162-4 Ap '53

Vacuum sealing of folding cartons. W. J. Cupo. il diags Mod Packaging 26:149-52+ D '52

SEALING compositions

Aircraft specialties; coatings and sealers. F. H. Jankowski. il Can Chem Process 37: 80+ Mr '53

Asbestoprene. Mech Eng 75:319 Ap '53

Correct impregnation of castings prevents leakage, internal corrosion, and spotted or blistered finishes. W. N. Pratt. il Metal Prog 63:88-92 Ap '53

Effect of time of application of sealing compound on the quality of concrete. G. E. Burnett and M. R. Spindler. il Am Concrete Inst J 24:193-200 N '52; Discussion. 25:200^{1}-200^{6} pt 2 D '53

Impregnation; antidote for microporosity permits salvage of rejected castings; Polyplastex MC. il Iron Age 170:128 O 23 '52; Aviation W 57:37 N 24 '52; Materials & Methods 36:151 N '52; Steel 131:166 N 10 '52; Mech Eng 75:154 F '53

SEALING compositions—*Continued*
Leaky pistons; no short cut will work. Consumers Res Bul 31:25-6 Mr '53
Porous castings sealed. Steel 132:134 Je 22 '53
Rubber-like adhesives and sealants. W. J. Clayton and R. K. Humke. Machine Design 25:260-2+ Ag '53
Sealers as engineering materials. R. S. Piper. il diags Machine Design 25:158-69 O '53

SEAMEN
Industrial medicine goes to sea. J. G. Hewitt. bibliog Ind Med 21:535-7 N '52
Shipowners get ringside seat; digest of union meetings in Seafarers log gives management an idea of what seamen really complain about. il Bsns W p 170-1 Ap 18 '53
See also
Seafarers international union of North America

SEAPLANES
See also
Flying boats

SEARCHLIGHTS
Automatic focusing device improves reliability of searchlights. Elec Eng 71:1100 D '52
Floodlighting Table mountain. H. D. Einhorn. il map diag Illum Eng 47:529-33 O '52
Focus and quality determination of searchlight reflections. Illum Eng 48:sup24A+ Je '53
120cm naval searchlight. il Engineer 196:206 Ag 14 '53
Short arc mercury lamp, boon to searchlights. Westinghouse Eng 13:79 Mr '53

SEARING, Hudson Roy, 1895-
Businessmen in the news. por Fortune 47:58 Mr '53

SEARS extension institute
Sears uncovers hidden talents with homestudy courses. M. French. il Am Bsns 22:16-17+ O '52

SEARS, Roebuck and company
Great mail order combination of Sears-Roebuck and Simpson's. H. F. Travis. il Mag of Wall St 91:352-4+ D 27 '52
How Sears moved into Mexico. Bsns W p 168 My 9 '53
Sears uncovers hidden talents with homestudy courses. M. French. il Am Bsns 22:16-17+ O '52
U.S. retail store chains expanding in Canada. J. Montagnes. Barron's 32:33 D 8 '52

SEASHORE
Revised nomenclature for depositional coastal features. F. P. Shepard. bibliog il map Am Assn Pet Geologists Bul 36:1902-12 O '52

SEASONAL industries
How to sell a mid-winter specialty in midsummer; air travel to Miami. il Ptr Ink 242:66+ Ja 23 '53
12-for-the-price-of-11 deal moves small orders in off season; Stone mountain grit co. C. Davidson. il Ptr Ink 242:75-6 Ja 16 '53
Valentine's day promotion pays off; Belding Corticelli sewing kits. M. Mazor. il Ptr Ink 242:66+ F 20 '53
See also
Greeting card industry
Winter construction

Advertising

See also
Toy industry and trade—Advertising

SEASTONE, John
Personalities in engineering. por Westinghouse Eng 12:197 N '52

SEATRAIN lines, inc.
Seatrain, advised by court, takes complaint to I.C.C. Ry Age 133:51 D 22 '52

SEATS
See also
Airplanes—Seats
Automobiles—Seats
Motor buses—Seats

SEATTLE
Tunnel and viaduct to ease Seattle's traffic troubles. R. W. Finke. il plan Civil Eng 22:1025-9 D '52
See also
Housing—Seattle

Bridges

Seattle cross-sound bridge location is questioned. Eng N 150:42 F 12 '53

Sanitary affairs

Sanitary fills pay off in Seattle. R. F. Karolevitz. il Pub Works 83:78-9+ D '52

Sewerage

Finke resigns in sewerage squabble. Eng N 149:69-70 D 4 '52

SEAWEED. See Algae

SEBACATES
Physical constants and infrared spectra of a homologous series of dialkyl sebacates. W. H. Stahl and H. Pessen. bibliog Am Chem Soc J 74:5487-9 N 5 '52

SEBERA, William J. 1909-
Bill Sebera successful contractor, humanitarian; contractor-of-the-month. pors Dom Eng 181:100-5+ F '53

SECOND sound in liquid helium. See Helium, Liquid

SECRECY
Strategy of the seller or, what businessmen won't tell. J. McDonald. Fortune 46:124-7+ D '52

SECRETARIES
Mr Corporate Secretary, 1952. J. H. Mathis. Am Gas Assn Proc 1952:137-40

SECRETARIES, Private
Getting along with stenos. Am Bsns 23:36+ F '53
How your secretary got where she is in business. H. O. Brayer. Am Bsns 23:18-19+ F '53
Real estate office secretary's handbook. L. Doris. 430p $4.95 Prentice-Hall, 70 5th av, New York 11 '53
Vanishing secretary; abstract. Management R 41:727 N '52

SECURITIES
Answers to inquiries. Published in bi-weekly numbers of Magazine of Wall street
Biggest year since 1929; the 1952 crop of new corporate issues. Bsns W p58+ D 27 '52
For profit and income. Mag of Wall St 91:410-11+ Ja 10 '53 [cont bi-weekly]
London stock market today, with its Wall Street implications. A. W. May. Comm & Fin Chr 177:2629+ Je 18 '53
New look at the securities business. H. A. McDonald. Comm & Fin Chr 177:104 Ja 8 '53
1953 midyear re-appraisals of values; earnings and dividend forecasts. Mag of Wall St 92:442-50+, 504-11+, 556-65+, 610-21+, 657-71+, 718-29+ Jl 11-S 19 '53
Outlook for money rates and fixed income securities. R. F. Murray. Comm & Fin Chr 177:2514-15+ Je 11 '53
Paging Joe Public; New York stock exchange educational program to expand public ownership of securities. G. K. Funston. Comm & Fin Chr 177:2073+ My 14 '53
Recent money market developments. Survey of Cur Bsns 33:3-5 Jl '53
Securities now in registration. Published in weekly Thursday numbers of Commercial and financial chronicle
Security I like best; selections of experts in the investment and advisory field. Published in weekly Thursday numbers of Commercial and financial chronicle
Stock market outlook for 1953. N. E. Crane. Comm & Fin Chr 176:2494-5+ D 25 '52
Suggestions for sound investment. Mag of Wall St 91:278 D 13 '52
See also
Arbitrage
Banks and banking—Investments
Banks and banking—Stock
Bonds
Investments
Investments, Foreign
Loans, Foreign
Mortgages
Municipal bonds
Stockholders
Stocks
Stocks, Preferred
Trusts and trustees—Investments
also subdivision Securities under names of industries, e.g.
Airlines
Airplane industry and trade
Building trades
Cement industry and trade
Chemical industries
Distilling industries

SECURITIES—See also—*Continued*
Drug trade
Electric utilities
Food industry and trade
Gas companies
Gold mines and mining
Holding companies
Insurance companies
Moving picture industry
Paper industry and trade
Petroleum industry and trade
Public utilities
Railroads
Steel industry and trade
Sugar industry and trade
Television apparatus industry
Textile industry
Tobacco industry and trade

Advertising

Building an investment clientele. J. Dutton. Comm & Fin Chr 177:298 Ja 22 '53
First advance-stock ad placed by Eastman, Dillon. Ed & Pub 85:22 N 15 '52
First post-effective identifying statement published on Commonwealth Edison co. offering. Comm & Fin Chr 176:2020 N 27 '52
New advertising idea. J. Dutton. Comm & Fin Chr 178:125 Jl 9 '53
SEC gives green light to financial ad copy. Ed & Pub 85:24 O 11 '52

Exemption from taxation

See Taxation, Exemption from

Law

Incredible, but true; repeal of securities acts and abolition of SEC and NASD advocated. Comm & Fin Chr 177:993+ Mr 5 '53; Discussion. 177:1108+ Mr 12 '53
Inventory adjustments in interim statements; accounting lessons in the Kaiser-Frazer v. Otis case. J Account 94:727-8+ D '52
New Illinois securities law. Comm & Fin Chr 178:272 Jl 23 '53
New state legislation affecting securities; report of IBA state legislation committee. Comm & Fin Chr 176:2348+ D 18 '52
Regulation T; arrangement for credit by brokers or dealers. Fed Res Bul 38:1105 O '52
SEC changes the rules on the distribution of the so-called red herring prospectus. Elec World 138:111 O 6 '52
See also
Securities and exchange commission

Margin buying

Regulation T; arrangement for credit by brokers or dealers. Fed Res Bul 38:1105 O '52

Marketing

Building an investment clientele. J. Dutton. Comm & Fin Chr 176:2138, 2414, 2504; 177: 24, 208, 298, 605, 701, 810, 923, D 4, 18, 25 '52, Ja 1, 15, 22, F 5, 12, 19, 26 '53
Choose your partners for contango; new pattern of the dance. Economist 167:685-6 Je 6 '53
Direct placements. C. M. Shanks. East Underw 53:49 D 12 '52
Growing importance of "off board" market. Trusts & Estates 91:708 O '52
High taxes depleting corporate working capital; report of IBA industrial securities committee. Comm & Fin Chr 176:2349+ D 18 '52
Institutional market for equities. J. I. Bogen. Comm & Fin Chr 176:2327+ D 18 '52
Loans by banks for the purpose of purchasing or carrying stocks registered on a national securities exchange; amendment no. 12 to Regulation U; text. Fed Res Bul 39:599 Je '53
McCormick sees sad and sick security business. Comm & Fin Chr 177:1734+ Ap 23 '53
New sales approach to investment banking. Burroughs Clearing House 37:3 Jl '53
New type of institutional buying; where a support, where a threat to securities. L. A. Lukens. Mag of Wall St 91:168-9+ N 15 '52
Private placements. Burroughs Clearing House 37:3-4 O '52
Private placements issue. L. B. Heller. Comm & Fin Chr 176:2491+ D 25 '52
Securities salesman's corner. J. Dutton. Published in weekly Thursday numbers of Commercial and financial chronicle
Security transactions; on and off the stock exchange. L. A. Lukens. Mag of Wall St 91:574-5+ F 21 '53
Some aspects of negotiated securities markets. D. C. Cook. Comm & Fin Chr 177: 286+ Ja 22 '53
£10 to invest. Economist 166:499-501 F 21 '53
$200-million deal unites feuding houses. Bsns W p 142 Mr 28 '53
See also National association of securities dealers

Over-the-counter marketing

Diversion of stock block purchases to stock exchange considered. H. J. King. Comm & Fin Chr 177:2518 Je 11 '53
Exchange vs. counter trading in inactive securities. H. J. King. Comm & Fin Chr 176:9+ sec 2 N 13 '52
Over-the-counter market. Published in weekly numbers of Barron's

Prices

Security prices, 1944-1951; monthly Dec. 1951-Nov. 1952. Fed Res Bul 39:85 Ja '53 [cont monthly]

Private placement

See Securities—Marketing

Registration

Identifying statements and the prospectus; Rule 132; editorial. Comm & Fin Chr 176: 2115+ D 4 '52
Look at the SEC prospectus requirements. J. H. Rossbach. Comm & Fin Chr 178:256+ Jl 23 '53

Regulation

SEC's revised Regulation A flouts congressional edict. Comm & Fin Chr 177:2187+ My 21 '53
Some aspects of negotiated securities markets. D. C. Cook. Comm & Fin Chr 177: 286+ Ja 22 '53
See also
Securities—Law
Securities and exchange commission

Statistics

Capital flotations in the United States in Dec. and for the twelve months of calendar year 1952. Comm & Fin Chr 177:1787+ Ap 27 '53; Correction. 177:2001 My 11 '53
New security issues, noncorporate, corporate, new capital; yearly 1938-1951; monthly Oct.-Dec. 1951 and Jan.-Sept. 1952. Fed Res Bul 39:44 Ja '53 [cont monthly]
SEC annual report. Comm & Fin Chr 177: 784 F 19 '53
Securities issued, Nov.-Dec. 1951-Jan.-Nov. 1952. Survey of Cur Bsns 33:S 18-19 Ja '53 [cont monthly]
Summary of corporate, foreign government, farm loan and municipal financing for the month of Dec. for five years; table. Comm & Fin Chr 177:2204 My 11 '53
Summary of corporate, foreign government, farm loan and municipal financing for the twelve months ended Dec. 31 for five years; table. Comm & Fin Chr 177:2005 My 11 '53

Unlisted securities

See also
Securities—Over-the-counter marketing

Valuation

Valuation of assets for Canadian tax purposes. J. K. Allison. Trusts & Estates 92:453-6 Je '53

Austria

Prize drawings set up under Austrian loan. For Comm W 50:4 Jl 13 '53

Germany

German security markets; their revival depends on tax reform and re-education. H. Gross. Barron's 32:9-10 O 20 '52
Stock prices decline on west German exchange. For Comm W 49:4 Ap 13 '53

Great Britain

British investors' dilemma. P. Einzig. Comm & Fin Chr 178:361 Jl 30 '53

SECURITIES—Great Britain—*Continued*

Choose your partners for contango; new pattern of the dance. Economist 167:685-6 Je 6 '53

London stock market today with its Wall Street implications. A. W. May. Comm & Fin Chr 177:2629+ Je 18 '53

Small-scale funding; announcing a new issue of government stock. Economist 166:654 Mr 7 '53

Japan

Bull market. J. B. Cohen. Barron's 33:19-21 Je 29 '53

Japan settles its debts; Market's reaction; business in Japanese issues. Economist 165:48+ O 4 '52

Security I like best; Japanese securities. J. Bleibtreu. Comm & Fin Chr 178:2 Jl 2 '53

Yield on Japanese bonds; with table. Economist 165:123 O 11 '52

United States

Security I like best; United States government short-term obligations. D. L. Moffat. Comm & Fin Chr 177:1310+ Mr 26 '53

SECURITIES and exchange commission

Annual report, 17th; section dealing with activities in accounting and auditing. J Account 94:507-8+ O '52

Economist marks paternal bureaus for early oblivion. J. W. Beck. Comm & Fin Chr 177:2759 Je 25 '53

Extinction via regulation; an indictment of the SEC and ICC. O. G. Saxon. Comm & Fin Chr 177:1849+ Ap 30 '53

Identifying statements and the prospectus; Rule 132; editorial. Comm & Fin Chr 176:2115+ D 4 '52

Incredible, but true; repeal of securities acts and abolition of SEC and NASD advocated. Comm & Fin Chr 177:993+ Mr 5 '53; Discussion. 177:1108+ Mr 12 '53

Look at the SEC prospectus requirements. J. H. Rossbach. Comm & Fin Chr 178:256+ Jl 23 '53

New face; chairman-to-be Demmler. J. C. Perham. Barron's 33:7 Ap 20 '53

New SEC appointments mean end of staff rule. L. Gould. Comm & Fin Chr 177:2310 My 28 '53

New SEC rules. Bsns W p 136 O 25 '52

Oppression; SEC and Kaiser-Frazer corporation financing dispute with Otis & co. Comm & Fin Chr 177:2407+ Je 4 '53

Salesmen as parties to disciplinary proceedings. Comm & Fin Chr 177:1103+ Mr 12 '53

SEC accounting series release no.73; the Thomascolor case. J Account 95:83-96+ Ja '53; Discussion (Accountants held not guilty of gross negligence by AIA committee on ethics). 95:723-4 Je '53

SEC annual report. Comm & Fin Chr 177:784 F 19 '53

SEC blocks capital flow with red tape. J. Dudley. Comm & Fin Chr 177:1424 Ap 2 '53

SEC down to its last three commissioners. Bsns W p70 Je 13 '53

SEC head resigns. Comm & Fin Chr 177:900 F 26 '53

SEC is not a stern policeman. J. H. Rossbach. Comm & Fin Chr 176:8 sec 2 N 13 '52

SEC looks the other way. Bsns W p 138 Ap 18 '53

Should SEC's utility functions be transferred to the FPC? O. Ely. Pub Util 51:442-4 Mr 26 '53

Some aspects of negotiated securities markets. D. C. Cook. Comm & Fin Chr 177:286+ Ja 22 '53

Suspends trading on American stock exchange in Adolph Goebel stock. Comm & Fin Chr 177:1212 Mr 19 '53

Time of decision. Comm & Fin Chr 177:283+ Ja 22 '53

Tongue in cheek! stock purchase plans offered by corporations to their employees should not be regarded as a public offering; SEC proposed form S-8. Comm & Fin Chr 177:1729+ Ap 23 '53

SECURITIES dealers, National association of. See National association of securities dealers

SECURITY analysts

Canada and the security analyst. R. W. Lambourne. Comm & Fin Chr 177:2198+ My 21 '53

SECURITY bureau, inc.

Warfare against theft and pilferage in New York. B. Barber. Weekly Underw 168:938+ Ap 4 '53

SECURITY traders association, National. See National security traders association

SECURITY traders association of New York

Annual election meeting, New York, Dec. 5; portraits. Comm & Fin Chr 176:2237-41 D 11 '52

SEDIMENTATION

Concentration effect on sedimentation rate and its use in estimating molecular weights. R. H. Golder. bibliog Am Chem Soc J 75:1739-41 Ap 5 '53

Determination of electrokinetic charge and potential by the sedimentation method; silica in some aqueous chloride solutions. C. I. Dulin and G. A. H. Elton. Chem Soc J p 1168-72 Ap '53

Determination of the specific surface of barium sulphate; a comparison of results by different methods. D. W. Jopling. bibliog il diag J Ap Chem 2:642-51 N '52

Determinations of electrokinetic charge and potential by the sedimentation method; pyrex glass in aqueous potassium chloride solutions. G. A. H. Elton and F. G. Hirschler. Chem Soc J p2953-5 Ag '52

Nonequilibrium thermodynamics of the sedimentation potential and electrophoresis. S. R. de Groot and others. bibliog J Chem Phys 20:1825-9 D '52

Sedimentation behavior of flexible chain molecules; polyisobutylene. L. Mandelkern and others. bibliog J Chem Phys 20:1392-7 S '52

Sedimentation constant of insulin in acid solution; a re-examination. F. Tietze and H. Neurath. bibliog Am Chem Soc J 75:1758-60 Ap 5 '53

Sedimentation in the ultracentrifuge. R. J. Goldberg. bibliog diags J Phys Chem 57:194-202 F '53

Studies on crystalline trypsin, soybean trypsin inhibitor and inhibitor-trypsin compound with the ultracentrifuge. E. Sheppard and A. D. McLaren. bibliog diags Am Chem Soc J 75:2587-91 Je 5 '53

Turbulent diffusion and erosion. R. W. Davies. diag J Ap Phys 23:941-8 S '52

SEDIMENTATION and deposition

Continental shelf sediments of southern California. K. O. Emery. bibliog Geol Soc Bul 63:1105-7, pl 1 N '52

Factors of sedimentary basin development that control oil occurence. L. G. Weeks. maps diags Am Assn Pet Geologists Bul 36:2071-124 N '52

Regional subsurface geology of the Midland basin. G. F. Warn and others. bibliog diag Oil & Gas J 51:113-14+ O 20 '52

Sedimentary trends, Colorado member of Oficina formation, San Roque, Anzoategui, Venezuela. R. Passega. map diag Am Assn Pet Geologists Bul 37:331-9 F '53

Sedimentary volumes in Gulf coastal plain of United States and Mexico. G. E. Murray and others. bibliog 8pls maps diags Geol Soc Bul 63:1157-228 D '52

Siliceous sediments of Ouachita facies in Oklahoma. A. Goldstein, jr. and T. A. Hendricks. bibliog map diag Geol Soc Bul 64:421-41, pl 1-4 Ap '53

See also

Ocean bottom

Ore deposits

Silt

SEDIMENTS

Plastic lithification of sands *in situ*. W. E. Brown and H. W. Patnode. il diag Am Assn Pet Geologists Bul 37:152-7 Ja '53

Sediment problems on irrigation projects in the United States. E. W. Lane. il Engineering 176:1-4 Jl 3 '53

Stream competence and the graded stream profile. C. D. Holmes. bibliog Am J Sci 250:899-906 D '52

SEDOHEPTULOSE

Synthesis of sugars from simpler substances; enzymic synthesis of sedoheptulose. L. Hough and J. K. N. Jones. Chem Soc J p342-5 Ja '53

SEDOHEPTULOSE—*Continued*

Transaldolase; the formation of fructose-6-phosphate from sedoheptulose-7-phosphate. B. L. Horecker and P. Z. Smyrniotis. Am Chem Soc J 75:2021-2 Ap 20 '53

SEEDING

Direct seeding as a means of reforestation. A. P. Leslie. Pulp & Pa of Can 54:180+ bibliog(83 titles, p 184+) Ap '53

SEEDING machinery

Precision drilling of sugar beet seed. il diag Engineer 195:603-4 Ap 24 '53

SEEDS

Constitution of the polysaccharide from tamarind seed. E. V. White and P. S. Rao. bibliog Am Chem Soc J 75:2617-19 Je 5 '53

Glycosides of the seeds of strophanthus amboensis E. and Pax. M. R. Salmon, R. Foppiano and W. G. Bywater. bibliog Am Chem Soc J 74:4536-7 S 20 '52

Glycosides of the seeds of strophanthus schuchardti Pax. R. Foppiano, M. R. Salmon and W. G. Bywater. bibliog Am Chem Soc J 74:4537-8 S 20 '52

How tree seed is procured. R. S. Carman. Pulp & Pa of Can 54:100-2+ Ja '53

Method of marking seed used in experiments. J. L. Farrar and J. W. Fraser. Pulp & Pa of Can 54:163 Jl '53

R-f irradiation of seeds. H. Jonas. bibliog il diags Electronics 26:161-3 Ap '53

Reasons for planting and the problems involved. R. C. Hosie. Pulp & Pa of Can 54:109+ Ja '53

Seed fat of myrrhis odorata; contributions to the chemistry of petroselinic acid. G. R. Clemo and R. Stevens. Chem Soc J p4684-5 D '52

Seed treatment with peroxygen chemicals. bibliog Can Chem Process 36:84+ S '52

Sprouting seeds; mass market has replaced the luxury trade. N. Willatt. Barron's 33:7+ Mr 16 '53

Dispersal

Splash-cup dispersal mechanism in chrysosplenium and mitella. D. B. O. Savile. Science 117:250-1 Mr 6 '53

Testing

Quality of cereals and their industrial uses; viability testing of cereal seeds. A. M. MacLeod. bibliog Chem & Ind p289-91 Mr 28 '53

SEEGER refrigerator company

Fiscal '53 sales peak seen. Barron's 33:25 Ja 12 '53

SEEPAGE

Surface-water seepage into anthracite mines in the Lackawanna basin, Northern field; anthracite region of Pennsylvania. S. H. Ash and others. bibliog il maps fold maps U S Bur Mines Bul 518:1-37; pa 75¢ Supt. of doc. '52

SEIBERT, Walter E.

Mining on credit; fluorspar in Newfoundland. Fortune 46:236 N '52

SEISMOGRAPHS

Cable handling device includes new features. J. E. Ortloff. il diags World Oil 136:107-8+ Ap '53

Measurement of blasting efficiency. H. H. White. Rock Prod 56:133+ Ja '53

Seismic-refraction profile across the Gulf of Maine. S. Katz and others. map Geol Soc Bul 64:249-51 F '53

Seismic shooting, improved methods. diags Oil & Gas J 51:128 O 6 '52

Wavefront charts and raypath plotters. A. W. Musgrave. il diags Colorado School of Mines [Golden] Quarterly 47:1-60 [fold charts in pocket] bibliog(p59-60) O '52 (pa $1)

SEISMOLOGICAL society of America

Abstracts of papers at 1952 meeting. Geol Soc Bul 63:1349-56 pt 2 D '52

SEISMOMETRY

Need for quantity and quality in velocity surveys; symposium. Oil & Gas J 51:119-22+ Mr 30 '53

SELECTIVE selling. See Sales policies—Selective selling

SELENIOUS acid

Rate law for the reaction of selenious acid and iodide ion. J. A. Neptune and E. L. King. bibliog Am Chem Soc J 75:3069-72 Jl 5 '53

SELENIUM

Anisotropic resistivities of selenium crystals at high frequencies. H. W. Henkels and J. Maczuk. bibliog Phys R 91:1562-3 S 15 '53

Are you saving enough selenium? W. H. Manring. Cer Ind 59:84-5 D '52

Investigation of the selenium rectifier for contact protection. H. F. Herbig and J. D. Winters. il diags Elec Com 30:96-105 Je '53

Photochemistry of selenium; photogalvanic effects with red selenium. R. W. Pittman. diag Chem Soc J p855-60 Mr '53

Recent developments and life characteristics of selenium rectifiers. C. E. Brigham. il Metal Finishing 51:56-9+ My '53

Resistance-capacitance loading of selenium rectifiers. C. E. Hamann. Tele-Tech 11:58-9+ N '52

Selenium as catalyst in *cis-trans*-isomerization of unsaturated fatty acids. J. H. Skellon and J. W. Spence. Chem & Ind p302 Mr 28 '53

Selenium; uses, outlook, availability, prices, etc. il Iron Age 170:283-4 O 9 '52

Specific heat of crystalline selenium at low temperatures. W. Desorbo. bibliog J Chem Phys 21:1144-8 Jl '53

Survey of various types of selenium rectifiers. J. T. Cataldo. flow chart il diags Tele-Tech 12:96-7+ Ag '53

Total fast neutron cross sections of Co, Ga, Se, Cd, Te, Pt, Au, Hg, and Th. M. Walt and others. Phys R 89:1271-2 Mr 15 '53

Isotopes

Magnetic moments of Si^{29}, S^{33}, Zn^{67}, As^{75}, Se^{77}, Te^{123}, and Te^{125}. H. E. Weaver, jr. bibliog il diags Phys R 89:923-30 Mr 1 '53

Nuclear magnetic resonance measurements of selenium. H. E. Walchli. Phys R 90:331-2 Ap 15 '53

Radiations from $selenium^{75}$. E. N. Jensen and others. bibliog Phys R 90:557-63 My 15 '53

SELENIUM compounds

Electric moments of some sulfur and selenium compounds. M. T. Rogers and K. J. Gross. bibliog Am Chem Soc J 74:5294-6 N 5 '52

Selenium dithiocyanate. S. M. Ohlberg and P. A. vander Meulen. bibliog Am Chem Soc J 75:997-8 F 20 '53

Some polycyclic derivatives of selenophen. N. P. Buu-Hoï and N. Hoán. Chem Soc J p3745-7 O '52

SELENIUM oxides

Cholesterol and companions; microdetermination of Δ^7-stenols. K. Nakanishi, B. K. Bhattacharyya and L. F. Fieser. diag Am Chem Soc J 75:4415-17 S 20 '53

Cholesterol and companions; oxidation of Δ^7-stenols with selenium dioxide. L. F. Fieser and G. Ourisson. bibliog Am Chem Soc J 75:4404-14 S 20 '53

SELENIUM poisoning

Poisoning hazard in radio and tv sets; selenium rectifiers. Consumers Res Bul 30:26-7 O '52

Unrecognized hazards in electronics; dangers of carbon tet and selenium. T. R. Hughes. Radio & Tv N 49:96+ Ap; 50:98 Ag '53

SELENIUM rectifier. See Electric rectifiers

SELF, Cecil M. 1900-

C. M. Self elected president of Norfolk Southern. por(p8) Ry Age 134:58 F 23 '53

SELF, James Cuthbert, 1876-

He hated cotton. por Manuf Rec 122:38-9+ Mr '53

SELF service

Ad execs forecast more advertising as result of self-service. Ptr Ink 242:31-3 F 6 '53

Advertising is the great conditioner; packaging the closer of sales at retail today. A. Johnson. il Ptr Ink 241:94+ D 12 '52

Customer's part in service. G. B. Cross. J Retailing 29:27-30+ Spring '53

Faster tempo calls for quick-action promotions in stores. C. K. Bagg. il Ptr Ink 241:84+ D 12 '52

How to wrap it up and sell itself; P.I. packaging panel tells how to make the most of retail trend to self-service and self-selection. il Ptr Ink 242:94+ Mr 20 '53

Indexing self-selection; Kleinert's uses tabs on carded baby pants. il Mod Packaging 26:83 Ag '53

SELF service—*Continued*

Packaging considerations in converting to self-service; abstract. D. W. Berlin. Mod Packaging 26:145 Je '53

Self-service revolution. Economist 165:636-7 N 29 '52

Silent selling; challenge of self-service retailing. il Mod Ind 25:46-9 Mr '53

Why manufacturers and agencies must watch self-service drugstores. J. S. Trieb. il Ptr Ink 241:38-40 N 7 '52

See also
Market stores

SELF service stores

Saunders tries again; Foodelectric store. Bsns W p68+ Jl 18 '53

Self-service reaches the drugstore. Bsns W p43-4 Mr 7 '53

SELIWANOFF reaction

Validity of the Seliwanoff reaction on fructose. E. Berner and S. Sandlie. Chem & Ind p 1221-2 D 13 '52

SELLING agents' commissions insurance. See Insurance, Selling agents' commissions

SELSYN apparatus

Remotely-steered coal-mining machine; patterns on cathode ray oscilloscope guide operator. J. Markus. il diags Electronics 26:148-51 Ag '53

3-D movies; more synch units needed. il Iron Age 171:48-9 Ap 30 '53

SELVAGES

Practical fabric design and analysis. V. Lobl. il Mod Textiles Mag 34:40+ Ja; 51+ F; 41+ Mr; 47-8+ Ap; 83-4+ Je; 42-4+ Jl '53

SEMICARBAZIDES

Mesitylurea and mesitylsemicarbazide. J. Packer, J. Vaughan and T. W. Watts. Chem Soc J p2654-6 Jl '52

SEMI-CONDUCTORS. See Electric conductors—Semi-conductors

SEMPERVIRINE

Studies on carboline anhydronium bases. B. Witkop. bibliog Am Chem Soc J 75:3361-70 Jl 20 '53

SENATORS

Race for the Senate. D. Norton-Taylor. il Fortune 46:121-5+ O '52

SENECIO

Alkaloids of senecio ruwenzoriensis. M. L. Sapiro. Chem Soc J p 1942-3 Je '53

Senecio alkaloids; the synthesis and resolution of 3 : 4-dihydroxy-2-methylpentane-3-carboxylic acids; viridifloric and trachelantic acids. L. J. Dry and F. L. Warren. Chem Soc J p3445-8 S '52

SENIORITY. See Employees—Length of service

SENSES and sensation

See also
Hearing
Pain
Sight
Taste

SENSITOMETRY

Step wedge for sensitometry with the electron microscope. J. Hamilton. il diag R Sci Instr 24:309-12 Ap '53

SEPARATION

Adsorption; techniques are ideal for difficult separations. R. E. Treybal. diags Chem Eng 59:150-2 O '52

Apparatus for studying electrogravitational separations; some experiments on the extraction of sodium chloride from solution in a flow system. G. W. Murphy and D. Batzer. diags Electrochem Soc J 99:520-6 D '52

Diffusion process for separating gases getting attention of petroleum industry; Texas co.; patent. diags Pet Processing 7:1817 D '52

How induced radioactivity may help separate minerals. A. M. Gaudin and others. bibliog Eng & Min J 153:95-9+ N '52

Industrial viewpoints on separation processes. K. H. Hachmuth. bibliog il diags Chem Eng Prog 48:523-7, 570-4, 617-26 O-D '52

Ion exclusion; a unit operation utilizing ion exchange materials. R. M. Wheaton and W. C. Bauman. bibliog Ind & Eng Chem 45:228-33 Ja '53

Quantitative isolation of fatty acids in petroleum oils. L. R. Dickson and R. R. Jay. Pet Eng 25:C45-6 Mr '53

Separation. il Food Eng 25:149-50+ O '53

Two-component separations by double-solvent extraction; diagrams for determining operating conditions. A. Klinkenberg. diag Ind & Eng Chem 45:653-7 Mr '53

See also
Adsorption
Centrifugation
Chromatography
Crystallization
Distillation
Dust removal
Electric precipitation
Extraction processes
Filters and filtration
Flotation process (non-metals)
Hydrocarbons—Separation processes
Ion exchangers
Ore treatment
Precipitation
Sedimentation
Sink and float process
Vaporization

SEPARATORS

Factors affecting ore separations in a four-inch DSM cyclone separator. E. C. Herkenhoff. diags Eng & Min J 154:88-91 Ag; 95-9+ S '53

New separator doubles slip screening capacity; Sweco separator at Universal Rundle. il Cer Ind 61:91+ O '53

Optimum separator pressures. R. F. Nielsen. Oil & Gas J 51:171 Ap 20 '53

Principles and applications of a revolutionary screening device; Sweco separator. D. G. Brant. il diags Am Cer Soc Bul 32:267-71 Ag 15 '53

Revamped cyclone system features Humble's cat cracker expansion. F. L. Resen. il diags Oil & Gas J 52:220+ My 25 '53

These vapor separators cut concentrate losses 92 per cent; Minute maid corp. W. F. Mantey. il Food Eng 24:105+ N '52

Versatile dross pump-separator gets U.S. showing. il Steel 132:137 Je 15 '53

See also
Centrifuges
Classifiers
Concentrators
Dust collectors
Electric precipitation
Evaporators
Filters and filtration (technical chemistry)
Magnetic separators
Oil separators
Screens

SEPARATORS, Electrostatic. See Electrostatic separators

SEPTIC tanks

Cost reduced on septic tank installation. il Pub Works 84:106+ Ag '53

Investigation of the performance of six small septic tanks. E. R. Baumann and H. E. Babbitt. il diags Ill U Eng Exp Sta Bul 409:1-75 bibliog(p74-5) '53 (pa 60c)

Refresher course in plumbing; remodeling on the farm means more septic tank systems. T. W. Bendixen. il diags Dom Eng 181:89-91+ F '53

SEQUESTERING agents

Sequestering agents in aluminum etching. F. J. Prescott and others. bibliog il Metal Finishing 51:65-7 O '53

SEQUESTRENE. See Ethylenediamine tetra-acetic acid

SERGE

Some properties of serges made from blends of wool with acrylic type synthetics. H. Bogaty and others. bibliog Textile Res J 23:536-44 Ag '53

SERIAL number sampling. See Sampling (statistical methods)

SERICIN

X-ray pattern of sericin and silk wax from bombyx mori. E. H. Mercer and F. H. Meyer. bibliog il Textile Res J 23:243-6 Ap '53

SERICITE

Summit develops Pennsylvania nonmetal mine. G. Ahl, jr. and C. M. Dolliver, jr. il Min Eng 5:977 O '53

SERIES, Maclaurin. See Maclaurin series

SERIGRAPHY. See Silk screen printing

SERINE

β-Arylserine ethyl esters. W. H. Hartung, T. T. Dittrich and Y. Chang. bibliog Am Chem Soc J 75:238-9 Ja 5 '53

In vivo conversion of glycine to serine. G. L. Nardi. bibliog Science 117:160-1 F 13 '53

N-carboxy-anhydrides of *O*-acetyl- and *O*-carbobenzyloxy-serine. M. Frankel and M. Halmann. Chem Soc J p2735-7 Jl '52

Synthesis of poly-(*O*-acetyl-DL-serine) and of poly-DL-serine. M. Frankel, S. Cordova and M. Breuer. Chem Soc J p 1991-4 Jl '53

SERINE—*Continued*

Analysis

Simultaneous estimation of threonine and serine. B. A. Neidig and W. C. Hess. bibliog Anal Chem 24:1627-8 O '52

SEROTONIN

Synthesis of nitro- and aminoindoles analogous to serotonin. E. Shaw and D. W. Woolley. bibliog Am Chem Soc J 75:1877-81 Ap 20 '53

SERUM

Binding of simple substances to serum proteins and its effect on apparent antibody-hapten combination constants. D. Pressman and M. Siegel. bibliog diags Am Chem Soc J 75:686-93 F 5 '53

Influence of age of serum on microbiological response. E. S. Wynne and D. A. Mehl. Science 117:153-5 F 13 '53

Isolation of fructose from beef serum. F. A. H. Rice. bibliog Am Chem Soc J 75:2262-3 My 5 '53

Reactions of antiserum homologous to the *p*-azohippurate ion. M. Siegel and D. Pressman. bibliog Am Chem Soc J 75:3436-9 Jl 20 '53

Solubilization of 4-dimethylaminoazobenzene (butter yellow) in serum. C. Wunderly. bibliog il Science 117:248-9 Mr 6 '53

Analysis

Modified procedure for determination of protein-bound iodine in serum. H. Sobel and S. Sapsin. bibliog diag Anal Chem 24:1829-31 N '52

Quantitative estimation of total bilirubin in serum. J. J. Quigley. Anal Chem 24:1859-60 N '52

Use of anthrone reaction for determination of carbohydrates in the presence of serum protein. M. R. Shetlar. bibliog Anal Chem 24:1844-6 N '52

SERUM albumin. See Albumin

SERUM therapy

See also

Antigens and antibodies

SERVANTS

Household employment in the United States. F. S. Miller. Int Labour R 66:318-37 O '52

SERVEL, inc.

Security I like best. S. L. Stirling. Comm & Fin Chr 177:774+ F 19 '53

SERVICE (in industry)

Better customer service; case studies. Am Bsns 22:34+ N '52

Customer school trains carbide specialists. il Steel 131:108-9 D 15 '52

Low cost research to assure customer satisfaction; American wheelabrator & equipment corp. E. F. Anderson. il Product Eng 24:160-1 My '53

Practical notes on gas burner service; business side of servicing (cont). P. K. Wadsworth. Sheet Metal Worker 44:77-8+ N; 60-1 D '52; 124+ Ja; 48+ F '53

Technical service, sales insurance; Tennessee Eastman corp. il Chem W 71:56-8 O 18 '52

Why Hyster's customers like service-by-contract. il Sales Management 70:62+ Mr 1 '53

See also

Banks and banking—Service
Dealer helps
Electric utilities—Service
Gas companies—Service
Instruction in use of product
Retail trade—Service

SERVICE industries

See also

Banks and banking
Gasoline service stations
Hotels
Laundries
Railroads
Telegraph
Telephone
Trust companies

Accounting

Accounts receivable and unbilled costs in personal service businesses. J Account 95:75-6 Ja '53

SERVICE of process. See Process serving

SERVICE pipes. See Water pipes—Service pipes

SERVICE stations. See Gasoline service stations

SERVOMECHANISMS

All-triode electronic switch. C. W. Spindler, jr. diag Electronics 25:172+ N '52

Analogies for hydraulic and electric drives in servomechanisms. Yaohan Chu and L. A. Gould. bibliog diags A S M E Trans 75:851-7 Jl '53

Analogue computer for use in the design of servo systems. E. E. Ward. diags Inst E E Proc 99 pt 2:521-32; Discussion. 549-52 D '52

Analogue computers for feedback control systems; abstract. R. A. Bruns. diags Elec Eng 72:211 Mr '53

Analysis of control systems involving digital computers. W. K. Linvill and J. M. Salzer. diags Inst Radio Eng Proc 41:901-6 Jl '53

Analyzing nonlinear servos. J. M. Nightingale. diags Machine Design 25:139-42 Ag '53

Antiswing crane with anticreep variable-speed hoisting. R. C. Goertz. il diags Elec Eng 72:635-7 Jl '53

Apparatus for varying effective dihedral in flight with application to a study of tolerable dihedral on a conventional fighter airplane. W. M. Kauffman and others. bibliog il diags U S Nat Advisory Com for Aeronautics 1949:529-44 '51

Automatic control system with provision for scanning and memory. N. H. Young. il diags Elec Eng 72:782-4 S '53

Characteristics of precision servo computer potentiometers. D. C. Duncan. diags Tele-Tech 11:52-4+ N '52

Compensation of feedback-control systems subject to saturation. G. C. Newton, jr. bibliog diags Franklin Inst J 254:281-96, 391-413 O-N '52

Computers and servos combine to permit machining by the numbers. il Mill & Factory 53:91 Ag '53

Consideration of off-on modulated reversing clutch servo system. T. R. Stuelpnagel and J. P. Dallas. bibliog diags Elec Eng 72:430-4 My '53

Contactor amplifiers for automatic control. S. Davis. diags Product Eng 24:186-94 Mr '53

Contributions to hydraulic control. S. Lee and J. F. Blackburn. diags A S M E Trans 74:1005-9, 1013-16; 75:1163-80 Ag '52, Ag '53; Discussion. 74:1009-11 Ag '52

Cranes; no swing, no sway; servomechanism control. Steel 132:119 My 4 '53

Design and testing of an electronic simulator for a hydraulic remote-position-control servo mechanism. F. J. U. Ritson and P. H. Hammond. diags Inst E E Proc 99 pt 2:533-48; Discussion. 549-52 D '52

Electronics; adaptability to aircraft engine control. J. D. Peterson and R. W. Curran. il diags Aeronautical Eng R 12:70-4 My '53; Excerpts. Product Eng 24:284-6+ Ap '53

Fast-acting exposure control system for color motion picture printing. J. G. Streiffert. il diags Soc Motion Picture & Tv Eng J 59:410-16 N '52

Feedback system engineering; expanding professional field. G. S. Brown. Elec Eng 71:1067-71 D '52; Same cond. Machine Design 25:386+ Ap '53

Field-mapping method for analysis and synthesis of linear closed-loop systems. M. W. Fossier and H. A. Rosen. bibliog diags J Aeronautical Sci 20:205-9 Mr '53

Frequency response of linear systems from transient data. M. E. LaVerne and A. S. Boksenbom. bibliog diags U S Nat Advisory Com for Aeronautics 1950:547-57 '51

Hydraulic control systems; servo systems. R. Hadekel. diags Machine Design 25:165-9 Ag '53

Hydraulic servo-mechanisms; Institution of mechanical engineers conference; discussion of papers. Engineer 195:275-7 F 20 '53

Hydraulic servo; redesigned for accuracy and stability through research and model analysis. W. Ernst. il plan diags Machine Design 25:123-6 F '53

Hydraulic servos incorporating a high-speed hydraulic-amplifier-actuated valve; abstract. R. L. Scrafford. diag Elec Eng 72:504 Je '53

Improved magnetic servo amplifier; abstract. C. W. Lufcy and others. diag Elec Eng 72:308 Ap '53

SERVOMECHANISMS—*Continued*

Industrial applications of feedback control systems. R. W. Moore. il diags Westinghouse Eng 12:178-83 N '52; Same cond. diags Machine Design 24:190-1+ D '52

Introduction to hydraulic servo-mechanism theory. H. G. Conway and E. G. Collinson. diags Engineer 195:294-6, 330-2 F 20-27 '53

Magnetic amplifiers for airborne applications. J. K. McKendry. diags Tele-Tech 12:32-4+ Jl '53

Metrization of phase space and nonlinear servo systems. Chi Lung Kang and G. H. Fett. diag J Ap Phys 24:38-41 Ja '53

Motor and gear train selection for automatic control systems. A. M. Fuchs. il diags Product Eng 24:128-33 Mr '53

New type of magnetic servo amplifier; abstract. W. A. Geyger. diag Elec Eng 72:250 Mr '53

Open-loop frequency response method for nonlinear servomechanisms; abstract. R. L. Cosgriff. diags Elec Eng 72:677 Ag '53

Operating characteristics of servomechanism drives. W. O. Osbon. diag Product Eng Hdbk p H24-7 '53

Powered flying-controls; some design considerations. F. J. Bradbury and S. M. Parker. diags Inst Mech Eng Proc (B) 1B no 4:99-105 '52; Abstract. Engineering 173:183 F 8 '52; Discussion. il Inst Mech Eng Proc (B) 1B no 4:106-13 '52

Principle of a servo-type mechanism requiring variable elements. R. Drenick. diag Inst Radio Eng Proc 41:373-7 Mr '53

Pulse transfer function and its application to sampling servo-systems; abstract. R. H. Barker. bibliog diags Inst E E Proc 99 pt 2:517-20 O '52

Punched tape guides milling machine cutters. J. O. McDonough. il diags Electronics 26:135-7 Ap '53

Reduction of forced error in closed-loop systems. L. H. King. bibliog il diags Inst Radio Eng Proc 41:1037-42 Ag '53

Rotary amplifiers in servomechanisms. G. Lehmann. il diags Elec Com 30:12-25 Mr '53

Rotating cable senses coal height in loader. il diags Machine Design 25:182 Ap '53

Servomechanism for the elimination of time lag. R. L. Garwin. diags R Sci Instr 23:681-3 D '52

Servo mechanism in aircraft. F. W. Meredith. diags Engineering 174:481-2, 515-17 O 10-17 '52

Servomechanism theory applied to afc circuit design. G. D. Doland. diags Tele-Tech 12:95-7+ My '53

Servo mechanisms for ships. J. R. D. Walker. diags Engineering 174:706-8 N 28 '52

Servo system comparators; comparison of error signals in communications systems. M. Cooperstein. diags Tele-Tech 11:65-7 D '52

Sinusoidal analysis of feedback control systems containing nonlinear elements; abstract. E. C. Johnson. diag Elec Eng 72:626 Jl '53

Specification and measurement of performance in servo systems; discussion meeting. Inst E E Proc 99 pt 2:494-6 O '52

Stabilization templates for servomechanisms; abstract. O. J. M. Smith. Elec Eng 72:237 Mr '53

Subminiaturization of servo amplifiers. A. C. Smith. il diags Tele-Tech 11:45-7+ N '52

Synthesis of closed loop systems using curvilinear squares to predict root location; abstract. D. W. Russell and C. H. Weaver. diag Elec Eng 72:41 Ja '53

Bibliography

Radio progress during 1952; feedback-control systems. il Inst Radio Eng Proc 41:480-2 Ap '53

SETTLING basins

Settling rate of suspensions in solids contact units. A. A. Kalinske. diags Am Soc C E Proc 79 [no 186]:1-8 Ap '53

SETTLING tanks

How to design a radial flow settling basin. H. H. Elliston. diag World Oil 136:182-3 Mr '53

Moving baffles in sedimentation tanks. F. E. Daniels. diag Pub Works 84:104+ Ag '53

Primary settling tanks and their operation. D. E. Bloodgood. il Water & Sewage Works 100:386-9 O '53

Studies of sedimentation basin design. T. R. Camp. bibliog plans diags Sewage & Ind Wastes 25:1-12; Discussion. A. E. Estrada. 12-14 Ja '53

SEVERANCE pay. See Wages—Dismissal wage

SEVERUD, Fred N. 1899-

Honor Severud for path-finding career. por Eng N 149:57 O 16 '52

Presentation of the Frank P. Brown medal. por Franklin Inst J 254:465-6 D '52

SEWAGE

Algae symbiosis in oxidation ponds; growth characteristics of chlorella pyrenoidosa cultured in sewage. W. J. Oswald and others. bibliog Sewage & Ind Wastes 25:26-37 Ja '53

Characteristics of sewage. D. E. Bloodgood. il Water & Sewage Works 100:159-61 Ap '53

Measurement of surface tension of sewage. D. R. Bowers. bibliog Sewage & Ind Wastes 24:1069-76, 1447-55 S, D '52

Organic solids in sewage. D. E. Bloodgood. diags Water & Sewage Works 100:244-7 Je '53

Analysis

Anionic syndets in Amsterdam sewage. P. N. Degens, jr. and others. Sewage & Ind Wastes 25:20-5 Ja '53

Colorimetric determination of cyanide and thiocyanate. J. M. Kruse and M. G. Mellon. bibliog Anal Chem 25:446-50 Mr '53

Control of sewage chlorination by amperometric titration. W. L. Henderson. bibliog Sewage & Ind Wastes 24:1467-72 D '52

Critical review of the literature of 1952 on sewage, waste treatment, and water pollution. Sewage & Ind Wastes 25:511-18 bibliog (55 titles, p516-18) My '53

Determination of sulphate and sulphonate anion-active detergents in sewage. P. N. Degens, jr. and others. bibliog J Ap Chem 3:54-61 F '53

Determination of surface active agents. G. R. Lewis and L. K. Herndon. bibliog Sewage & Ind Wastes 24:1456-66 D '52

Sewage analysis; abstract. W. F. Hester and R. D. Raybould. Sewage & Ind Wastes 25:865-6 Jl '53

Syndets in sewage can be measured. S. D. Faust. bibliog il Water & Sewage Works 100:242-3 Je '53

See also

Trade waste—Analysis

Bacteriology

Application of molecular filter techniques to the bacterial assay of sewage. A. Goetz. bibliog il diags Sewage & Ind Wastes 25:1136-44 O '53

Bactericidal effects of sewage chlorination. S. G. Hess and others. bibliog diag Sewage & Ind Wastes 25:751-8, 909-17 Jl-Ag '53

Bacteriological studies of sludge digestion. T. C. Buck, jr. and others. bibliog(45 titles) il Sewage & Ind Wastes 25:993-1002, 1174-8 S-O '53

Effect of detergents on sewage microorganisms. R. Manganelli and E. S. Crosby. il Sewage & Ind Wastes 25:262-76 Mr '53

Environment for anaerobic destruction of organic material. R. G. Coulter. bibliog Pub Works 84:78-9+ My '53

Lauryl tryptose broth for coli determinations in chlorinated sewage. C. T. Mudgett. Sewage & Ind Wastes 25:557-9 My '53

New bacteriological technique for testing water and sewage; MF Millipore filters. J. H. Bush. bibliog il diag Water & Sewage Works 100:151-3 Ap '53

Phosphorus content

Removal of phosphorus from sewage plant effluent with lime. R. Owen. Sewage & Ind Wastes 25:548-56 My '53

Testing

Action of detergents in sewage treatment; study by industry. W. R. Gowdy. il plan Sewage & Ind Wastes 25:255-60; Discussion. W. N. Wells. 260-1 Mr '53

Comparative study of derivation procedures for b.o.d. velocity constants. F. J. Ludzack and others. bibliog Sewage & Ind Wastes 25:875-81 Ag '53

Computations of b.o.d. for seeded samples of high dilution. G. Akerlindh. Sewage & Wastes 25:293-5 Mr '53

SEWAGE—Testing—*Continued*

Deoxygenation of sewage. H. E. Orford and W. T. Ingram. bibliog Sewage & Ind Wastes 25:419-34, 566-75 Ap-My '53; Discussion. R. L. Woodward. 25:918-20 Ag '53

Determination of the b.o.d. of sewage and industrial wastes with the polarograph. A. W. Busch and C. N. Sawyer. bibliog Anal Chem 24:1887-91 D '52

Evaluation of the oxygen consumed test. H. V. Roberts and W. W. Sanderson. bibliog Sewage & Ind Wastes 25:793-7 Jl '53

Inoculation studies in b.o.d. determination on sewage and pulp mill waste. R. Zehnpfenning and M. S. Nichols. Sewage & Ind Wastes 25:61-5 Ja '53

Laboratory digester and gasometer. W. A. Sperry. il diags Sewage & Ind Wastes 25:858-61 Jl '53

Measurements of the respiratory activity of activated sludge. D. B. Smith. bibliog diag Sewage & Ind Wastes 25:767-76; Discussion. H. A. Thomas, jr. 776-8 Jl '53

Oxidation-reduction potential of chlorinated sewage. C. E. Keefer and J. Meisel. bibliog Sewage & Ind Wastes 25:759-66 Jl '53

Radioactive effects on the b.o.d. of sewage. W. N. Grune. bibliog(28 titles) flow diag il Sewage & Ind Wastes 25:882-97 Ag '53

Single dilution technique for b.o.d. studies. H. E. Orford and others. Sewage & Ind Wastes 25:284-9 Mr '53

Study of chromium toxicity by several oxygen demand tests. R. S. Ingols and E. S. Kirkpatrick. bibliog Anal Chem 24:1881-4 D '52

SEWAGE, Utilization of

Sewage reclamation by spreading basin infiltration. R. Stone and W. F. Garber. bibliog diags Am Soc C E Proc 77[no 87]:1-20 S '51; Discussion. 78[no D-87]:1-10 Jl '52

Treatment of sewage for industrial utilization at Moose Jaw. J. E. Haack. flow sheet Munic Util 90:20-1+ O '52

See also

Sewage irrigation

Sewage sludge as fertilizer

SEWAGE and industrial wastes associations, Federation of. See Federation of sewage and industrial wastes associations

SEWAGE disposal

Advances in sewage treatment and present status of the art; progress report. Am Soc C E Proc 79 [no 176]:1-46 bibliog(171 titles, p37-46) Mr '53

Can digester recirculation be overdone? W. A. Sperry and W. P. Pfeiffer. Sewage & Ind Wastes 25:741-4 Je '53

Chemical structure and action of synthetic detergents. W. R. Gowdy. il diags Sewage & Ind Wastes 25:15-19 Ja '53

Critical review of the literature of 1952 on sewage, waste treatment, and water pollution. Sewage & Ind Wastes 25:518-38 bibliog(129 titles, p535-8) My '53

Custom culture; Jeffreys Bionetic. il Ind & Eng Chem 44:sup 13A+ D '52

Data on the industrial waste problems of cities. Pub Works 84:63-4+ S '53

Delaware mayors study sewage disposal; Kent, Wash., is ordered to build disposal plant, Penn township, Pa. told plant is not a nuisance. Eng N 150:48 Ja 22 '53

Detergent compounds; their composition and behavior. L. Flett and L. F. Hoyt. Sewage & Ind Wastes 25:245-51; Discussion. W. Rudolfs. 252-4 Mr '53

Digester operation in an institutional plant; Gowanda state hospital. W. L. Edwards. Sewage & Ind Wastes 25:861-3 Jl '53

Digester scum control at Syracuse, N.Y. U. T. Mann. il Sewage & Ind Wastes 25:730-3 Je '53

Effect of detergents on sewage and water treatment; symposium. il Chem & Eng N 31:1072-9 Mr 16 '53

Effect of temperature on sewage treatment processes. W. E. Howland. bibliog Sewage & Ind Wastes 25:161-9 F '53

Engineering in sewage disposal. S. A. Greeley. Midwest Eng 5:3+ O '52

Environment for anaerobic destruction of organic material. R. G. Coulter. bibliog Pub Works 84:78-9+ My '53

How enzymes improved sludge digestion. A. C. Bryan. Pub Works 83:69-70 D '52

Industrial wastes; community problem. E. B. Besselievre. il Pub Works 83:74-6+ D '52; 84:68-70+ F '53

Maryland-Delaware water and sewage association annual meeting, 26th, Ocean City, Md. May 21-22; with abstracts of papers. Water & Sewage Works 100:315-17 Ag '53

Miscellaneous sanitation problems; guided discussion. Munic Util 90:76+ N '52

Missouri holds joint meeting of water and sewage groups, Jefferson City, Sept. 21-23. Water & Sewage Works 99:498-501 D '52

New Jersey sewage and industrial wastes association 38th annual meeting, Atlantic City, March 11-13; with abstracts of papers. Water & Sewage Works 100:199-203 My '53

1952 operators' forum. J. H. L. Giles and others. Sewage & Ind Wastes 25:219-30, 339-47 F-Mr '53

Ohio sewage and industrial treatment conference 27th annual meeting, Akron, June 17-19; with abstracts of papers. Water & Sewage Works 100:365-8 S '53

Operating experiences with detergents at Washington, D.C. R. E. Fuhrman and J. E. Rice. Sewage & Ind Wastes 25:277-80; Discussion. 280-3 Mr '53

Operation kinks at the Gowanda, N.Y., state hospital sewage plant. W. L. Edwards. il Sewage & Ind Wastes 25:92-5 Ja '53

Pennsylvania water and sewage associations annual conferences, State College, Aug. 25-29. Water & Sewage Works 99:512-19 D '52

Pollution-control problem. A. E. Berry. il Munic Util 91:19-22+ Jl '53

Progress in abating stream pollution in 1952. H. R. Murdock. Ind & Eng Chem 45:sup 108A+ Ja '53

Quarter century of sewage treatment in the central states. F. W. Mohlman. Sewage & Ind Wastes 24:1349-54 N '52

Report from abroad. J. Finch. il Water & Sewage Works 99:431-3; 100:42-3, 128-30, 239-41, 416-18 O '52, Ja, Mr, Je, O '53

Sewage disposal in tidal estuaries. A. N. Diachishin and others. diags Am Soc C E Proc 79 [no 167]:1-14 Ja '53

Sewage disposal problems in the world's largest city. R. H. Gould. map Sewage & Ind Wastes 25:155-60 F '53

Sewage treatment; abstract. J. Stiksa. Sewage & Ind Wastes 24:1553-4 D '52

Sewage treatment and water pollution research in England; Water pollution research laboratory. Pub Works 83:88-9 N '52

Sewage works developments during the year 1952. E. S. Chase. il Water & Sewage Works 100:45-55 F '53

Sewage works practices. D. E. Bloodgood. il diags Water & Sewage Works 100:56-9, 159-61, 244-7, 326-9, 386-9 F, Ap, Je, Ag, O '53

Sludge-disposal methods for Canada. N. S. Bubbis and D. L. McLean. il plan diags Munic Util 90:42+ N '52

Southern municipal and industrial wastes conference, 2d. Chapel Hill. Eng N 150:26 Mr 26 '53

Streams and sewage treatment. D. E. Bloodgood. il Water & Sewage Works 100:56-9 F '53

Survey of research facilities and projects, 1953. H. Heukelekian and W. H. Wisely. Sewage & Ind Wastes 25:1077-91 S '53

Synthetic detergents and sewage processing; abstracts. M. Elton and others. Sewage & Ind Wastes 24:1548-9 D '52

Synthetic detergents and sewage treatment; experimental trials at Wolverhampton. Chem Age (Lond) 67:657-9 N 15 '52

Techniques and trends; water supply and sanitation; major projects. il Eng N 150:144-6+ F 19 '53

Treatment and disposal of milk wastes. S. I. Zack. Sewage & Ind Wastes 25:177-87 F '53

Treatment of waste waters from the manufacture of penicillin; abstract. G. E. Eden and G. F. Lowden. Sewage & Ind Wastes 25:242-3 F '53

Use of tonnage oxygen in sewage treatment. D. A. Okun. bibliog flow chart il Water & Sewage Works 100:374-9 S '53

Waste treatment methods and economies. R. L. Smith and R. J. Ellison. il plan Pub Works 84:65-6 Jl '53

SEWAGE disposal—*Continued*

West Virginia sewage and industrial wastes association meeting, Parkersburg, Oct. 3-4. Water & Sewage Works 99:520-1 D '52

See also

Federation of sewage and industrial wastes associations
Plumbing
Septic tanks
Sewage sludge
Sewage tanks
Sewer pipes
Sewerage
Trade waste
Water pollution

Activated sludge method

Action of detergents in sewage treatment; study by industry. W. R. Gowdy. il plan Sewage & Ind Wastes 25:255-60; Discussion. W. N. Nells. 260-1 Mr '53

Activated sludge application to industrial waste treatment. E. B. Besselievre. bibliog flow sheets il Pub Works 84:71-3+ S '53

Activated sludge plant operation. T. R. Haseltine. bibliog Sewage & Ind Wastes 24:1533-7 D '52; Same. Water & Sewage Works 100:R 179-80 My '53

Activated sludge studies; sludge age and its effect on the activated sludge process. C. E. Keefer and J. T. Meisel. Sewage & Ind Wastes 25:898-908 Ag '53

Application of oxidation-reduction potentials to the control of sewage treatment processes. F. E. Nussberger. bibliog flow diags diag Sewage & Ind Wastes 25:1003-14 S '53

Britain's most up-to-date sewage plant has many distinctive features. G. T. G. Scott. il plan Munic Util 91:22-6+ My '53

Measurements of the respiratory activity of activated sludge. D. B. Smith. bibliog diag Sewage & Ind Wastes 25:767-76; Discussion. H. A. Thomas, jr. 776-8 Jl '53

Modifications in aeration and activated sludge process offer flexibility. G. P. Edwards. diags Civil Eng 23:300-3 My '53

Operation objectives in the activated sludge process. J. T. Tapleshay. Sewage & Ind Wastes 24:1529-32 D '52

Protozoa as indicators in activated sludge treatment. S. Baines and others. bibliog Sewage & Ind Wastes 25:1023-33 S '53

Sewage treatment plant for steel mill wastes. D. M. Vail. flow sheet il Pub Works 84:65-6 S '53

Sewage works symposium; activated sludge plant operation. Water & Sewage Works 99:514-16 D '52

Special treatment for industrial wastes at a city plant. A. J. Van Breda. flow diag il Pub Works 83:54-6+ N '52

Treatment of formaldehyde wastes by activated sludge methods; abstract. T. Waldmeyer. Sewage & Ind Wastes 25:351-2 Mr '53

White water treatment; activated sludge process. W. Rudolfs and H. R. Amberg. bibliog Sewage & Ind Wastes 25:191-200 F '53

Aeration

Aeration efficiency and design. W. W. Eckenfelder, jr. bibliog Sewage & Ind Wastes 24:1221-8, 1361-7 O-N '52; Correction. 24:1455 D '52

Aeration with high-oxygen atmosphere in the activated sludge process; abstract. H. E. Babbitt. Sewage & Ind Wastes 24:1445-6 N '52

Application of oxidation-reduction potentials to the control of sewage treatment processes. F. E. Nussberger. bibliog flow diags diag Sewage & Ind Wastes 25:1003-14 S '53

Impingement aeration at Kirkwood, Mo. plants. J. Kruegel. il Water & Sewage Works 100:176-9 Ap '53

Modifications in aeration and activated sludge process offer flexibility. G. P. Edwards. diags Civil Eng 23:300-3 My '53

Biological treatment

Application of biological methods in the treatment of radioactive wastes. C. C. Ruchhoft and L. R. Setter. bibliog flow diag Sewage & Ind Wastes 25:48-60 Ja '53

Biocatalysts and waste disposal. R. E. McKinney. bibliog il diags Sewage & Ind Wastes 25:1129-35 O '53

Biological treatment of industrial wastes. W. Rudolfs and H. Heukelekian. bibliog (45 ref) il Chem Eng Prog 48:449-54 S '52

Color in industrial wastes; effect of biological treatment and activated carbon. W. Rudolfs and W. D. Hanlon. Sewage & Ind Wastes 25:484-9 Ap '53

Concept of interface and loading in submerged aerobic biological sewage treatment systems; abstract. G. M. Fair and H. A. Thomas, jr. Sewage & Ind Wastes 25:990-1 Ag '53

Chemical treatment

Elements of water and sewage chemistry. il Pub Works 84:84-5+ O '53

Chlorination

Bactericidal effects of sewage chlorination. S. G. Hess and others. bibliog diag Sewage & Ind Wastes 25:751-8, 909-17 Jl-Ag '53

Control of sewage chlorination by amperometric titration. W. L. Henderson. bibliog Sewage & Ind Wastes 24:1467-72 D '52

Lauryl tryptose broth for coli determinations in chlorinated sewage. C. T. Mudgett. Sewage & Ind Wastes 25:557-9 My '53

Oxidation-reduction potential of chlorinated sewage. C. E. Keefer and J. Meisel. bibliog Sewage & Ind Wastes 25:759-66 Jl '53

Recommended procedures in the use of chlorine at water and sewage plants. Am Water Works Assn J 45:1060-74 O '53; Same. Sewage & Ind Wastes 25:1235-49 O '53; Same cond. Water & Sewage Works 100:390-4 O '53 (to be cont)

Sewage treatment and the virus of poliomyelitis. V. W. Langworthy. bibliog Sewage & Ind Wastes 25:290-2 Mr '53

Coagulation

Activated silica treatment of raw and waste waters. A. B. Middleton. bibliog flow diags il Water & Sewage Works 100:85-7 F '53

Filtration

Accelo filter system of sewage and waste treatment. H. W. Gillard. flow diags il Pub Works 84:71-4+ Ap '53

Alternating-double-filtration has the all clear signal in Great Britain. J. Finch. il Water & Sewage Works 100:323-5 Ag '53

Application of molecular filter techniques to the bacterial assay of sewage. A. Goetz. bibliog il diags Sewage & Ind Wastes 25:1136-44 O '53

Biofiltration. R. S. Rankin. flow sheets il Pub Works 84:63-5+ Je '53

Design takes the guesswork out of trickling filters. O. Borden. il Pub Works 84:82-3+ S '53

Detergent situation in England; more about micro-strainers. J. Finch. Water & Sewage Works 100:241 Je '53

Efficiency of filter beds for treating radioactive waste; abstracts. L. Gemmell. Am Water Works Assn J 45:sup68+ Mr '53; Nat Safety N 67:46 Mr '53

Engineering data on the Aero-filter. J. A. Montgomery. il Pub Works 84:58-9+ F '53

Nutritional requirements in the biological stabilization of industrial wastes; treatment on high-rate filters. H. D. Kilgore, jr. and C. N. Sawyer. bibliog Sewage & Ind Wastes 25:596-604 My '53

Pre-fabricated media for biological trickling filters. H. C. Leibee. il Pub Works 84:93-4 O '53

Rotary tubes as experimental trickling filters. E. F. Gloyna and others. il diags Sewage & Ind Wastes 24:1355-7 N '52

Sewage purification by rock filters; removal of oxygen demand of soluble organic material. J. H. Sorrels and P. J. A. Zeller. Sewage & Ind Wastes 25:779-86 Jl '53

Sludge filtration studies. C. E. Keefer and J. Meisel. Water & Sewage Works 100:80-4 F '53

Statistical analysis of trickling filter data. J. M. Fairall. Sewage & Ind Wastes 24:1358-60 N '52

Trickling filter application to industrial waste treatment. E. B. Besselievre. flow sheets il Pub Works 84:75-9+ Mr '53

Trickling filter results at Fairfield, Ill. W. A. Hasfurther. diag Sewage & Ind Wastes 25:494-7 Ap '53

SEWAGE disposal—Filtration—*Continued*

Trickling filter roach invasion. G. T. Lohmeyer. il Sewage & Ind Wastes 25:1104-7 S '53

Trickling filter treats domestic sewage and radioactive waste. A. L. Biladeau. plan Pub Works 84:107-8 S '53

Radioactive waste disposal

Application of biological methods in the treatment of radioactive wastes. C. C. Ruchhoft and L. R. Setter. bibliog flow diag Sewage & Ind Wastes 25:48-60 Ja '53

Critical review of the literature of 1952 on sewage, waste treatment, and water pollution. Sewage & Ind Wastes 25:538-47 bibliog(51 titles, p545-7) My '53

Radioactive effects on the b.o.d. of sewage. W. N. Grune. bibliog(28 titles) flow diag il Sewage & Ind Wastes 25:882-97 Ag '53

Radioactive waste disposal. C. C. Powell and H. L. Andrews. Pub Health Rep 67:1214-15 D '52; Excerpts. Sewage & Ind Wastes 25:313 Mr '53

Refresher course in plumbing; what every contractor should know about atoms and plumbing. W. H. Taylor. il Dom Eng 181:89+ F '53

Removal of radioactive iodine by laboratory trickling filters. M. W. Carter. bibliog il Sewage & Ind Wastes 25:560-5 My '53

Trickling filter treats domestic sewage and radioactive waste. A. L. Biladeau. plan Pub Works 84:107-8 S '53

Sludge and refuse mixing

Community effects of household garbage grinding. flow diag il Pub Works 84:52-3+ Ja '53

Garbage grinding pays its way! W. E. Ross and S. L. Tolman. il Pub Works 84:70-2+ My '53

Nutritional requirements in the biological stabilization of industrial wastes. E. N. Helmers and others. bibliog il Sewage & Ind Wastes 22:1200-6; 23:884-99; 24:496-507; 25:596-604 S '50, Jl '51, Ap '52, My '53

Operational experiences at the East Bay municipal utility district plant. E. E. Ross. Sewage & Ind Wastes 25:1220-8 O '53

SEWAGE disposal, Rural

Brand new threat to the privy; aerobic process that works on recirculated water; sewerless toilet. Eng N 149:39+ O 30 '52

Providing adequate suburban disposal systems. Am Bld 75:217 F '53

See also
Septic tanks

SEWAGE disposal plants

Cincinnati shows way in Ohio River cleanup. il map diag Eng N 150:40-1+ Je 25 '53

Daily log (cont). F. I. Vilen; J. R. Szymanski. Sewage & Ind Wastes 24:1543-6; 25:738-41, 1101-4 D '52, Je, S '53

Good results from a twelve-year old sewage plant. Pub Works 84:115-16 Ag '53

Industrial plant gets deluxe sewage works; Link-Belt co. il Eng N 150:45 F 5 '53

Industrial wastes influence municipal plant design. R. E. Monson. il Pub Works 84:84 Ap '53

Initial digestion problems in a new plant. A. E. Sparr. diag Sewage & Ind Wastes 25:610-12 My '53

Interesting extracts from operation reports (cont). Sewage & Ind Wastes 24:1424-32, 1538-41; 25:95-100, 497-502, 617-18, 734-7, 852-7, 975-83, 1107-14 N '52-Ja, Ap-S '53

N.P.A. approves 703 additional water and sewage projects costing almost $350,000,000; tabulated by states. Water & Sewage Works 100:70 F '53

1952 operators' forum. J. H. L. Giles and others. Sewage & Ind Wastes 25:219-30, 339-47 F-Mr '53

Portland sewage treatment plant. J. W. Cunningham. flow diag il Sewage & Ind Wastes 25:1015-22 S '53

Public relations program gets better sewerage; Ada, Okla. il Pub Works 84:74-6 F '53

Sewage disposal plant can be used in home; abstract. D. E. Bloodgood. Pub Health Rep 68:245-6 F '53

Sewage pumping station is in the country club set; Fairway, Kansas, residential suburb of Kansas City. il Pub Works 84:58-9 Ja '53

Sewage treatment for resort areas. O. Borden and E. B. Rodie. Sewage & Ind Wastes 25:1156-60; Discussion. M. T. Hill. 1160-2 O '53

Sewage treatment plant completed; Rochester, Minn. il Eng N 150:56 Mr 26 '53

Sewage-treatment plant for pre-planned $200,000,000 community. J. S. L. King. il Munic Util 91:19-20+ My '53

$16-million sewage plant recommended by engineers. Eng N 149:68+ O 9 '52

Solving the subdivision sewage disposal problem. C. E. Wright. il Pub Works 84:77 S '53

See also
Trade waste—Disposal plants

Accounting

Postcard billing for water and sewage utilities. D. L. Maffitt. il Water & Sewage Works 100:217-20 Je '53

Costs

Are sewage works costs justified? L. L. Sphar. Sewage & Ind Wastes 25:787-92 Jl '53

Directories

Directory of sewage-treatment plants in Canada. Munic Util 91:111-20 Ja '53

Electric equipment

Electric power system practices for sewage plants. M. C. Boggis and N. L. Hadley. il diags Sewage & Ind Wastes 25:391-404; Discussion. R. Kennedy. 404-5 Ap '53

Improved sewage disposal; Wandle Valley scheme. il Elec R (Lond) 152:841-5 Ap 17 '53

Large sewerage scheme; electrical provisions for Colne Valley area. il Elec R (Lond) 151:579-85 S 19 '52

New equipment lowers pumping costs at Trenton's sewage treatment plant. E. C. Condict. il diags Water & Sewage Works 100:154-8 Ap '53

Practical electricity in the plant. M. C. Smith. diags Water & Sewage Works 100:186-90 My '53

Employees

Iowa voluntary certification program. Sewage & Ind Wastes 25:503-4 Ap '53

1952 operators' forum; personnel. J. H. L. Giles and others. Sewage & Ind Wastes 25:225-30 F '53

1953 California wage survey; sewage treatment plants. Sewage & Ind Wastes 25:978-83 Ag '53

Organizing water and sewage works personnel on a regional basis. Munic Util 91:16 Je '53

Training of emergency personnel. H. P. Orland. Sewage & Ind Wastes 25:849 Jl '53

Equipment

Belt conveyors handle sewage sludge. il Pub Works 84:75+ Je '53

Britain's most up-to-date sewage plant has many distinctive features. G. T. G. Scott. il plan Munic Util 91:22-6+ My '53

Bulk storage of liquid chlorine at San Francisco sewage plants. B. Benas. il diags Water & Sewage Works 100:381-5 O '53

Centralized sludge treatment featured in San Francisco sewage plan. B. Benas. flow diag il Civil Eng 23:226-8 Ap '53

Chlorinated rubber finishes in water and sewage works. F. K. Shankweiler. il Water & Sewage Works 100:230-3 Je '53

Classified index of products used in waterworks and sewage field. Water & Sewage Works 100:R 1-14 My '53

Comprehensive metering of sewage at the world's largest treatment works; Chicago's West-Southwest plant. N. E. Anderson. flow diag il Water & Sewage Works 100:412-15 O '53

Dual purpose sewage treatment plant provides research facilities; Link-Belt co. il plan Pub Works 84:64-5 Ja '53

Functional aspects of sewage plant instrumentation. J. M. Betz. bibliog diags Sewage & Ind Wastes 24:1325-38 N '52

Glass elbow eliminates sludge pumping guesswork. H. J. Rieping. il Sewage & Ind Wastes 25:737-8 Je '53

SEWAGE disposal plants—Equipment—*Cont.*

How a modern sewage treatment plant was insulated. A. F. McCormack. il diag Water & Sewage Works 100:38-9 Ja '53

Internal sludge mixer operation at Stamford, Conn. A. L. Wilcox. il Sewage & Ind Wastes 25:614-17 My '53

Investigate pneumatic conveyors for handling bulk chemicals. G. N. Havens. il diags Pub Works 83:50-1+ N '52

Modernization of West Haven sewage treatment plant. E. B. Cobb. flow diag il Water & Sewage Works 100:162-9 Ap '53

Ohio experience with sludge heat exchangers; symposium. J. H. Blodgett and others. il Sewage & Ind Wastes 24:1416-24 N '52

Operating experiences with a rotary comminutor. J. J. C. Heynike. Sewage & Ind Wastes 25:622-4 My '53

Operating gadgets at Boise, Idaho, plant. A. J. Wahl. il Sewage & Ind Wastes 25: 335-9 Mr '53

Plastic plates solve sewage plant corrosion problem; Dallas, Texas treatment plant. C. V. Ing, jr. il Water & Sewage Works 100: 40-1 Ja '53

Production of combustible and fertilising sludge at Maple Lodge sewage works. il Engineering 174:222-3 Ag 15 '52

Proposed sewage works improvements at Toledo, Ohio. T. B. Henry. map plan Sewage & Ind Wastes 24:1339-48 N '52

Rehabilitation of the Schenectady sewage treatment plant. E. S. Ordway. il Sewage & Ind Wastes 25:684-9; Discussion. M. M. Cohn. 689-91 Je '53

Sewage treatment plant is showplace of city; Easton, Pa. H. C. Herbert. flow diag il Pub Works 84:76-7+ Ap '53

Studies of sedimentation basin design. T. R. Camp. bibliog plans diags Sewage & Ind Wastes 25:1-12; Discussion. 12-14 Ja '53

Tacoma treatment plant reduces Puget Sound pollution. A. R. MacPherson. flow diag il Pub Works 83:65-6 N '52

Treatment of sewage for industrial utilization at Moose Jaw. J. E. Haack. flow sheet Munic Util 90:20-1+ O '52

Triturator operation improved by retipping of teeth. J. R. Szymanski. diag Sewage & Ind Wastes 25:984-5 Ag '53

Vacuator operation at Santa Maria. T. J. Mays. il diag Sewage & Ind Wastes 25: 1228-32 O '53

What's right with my plant; sewage treatment plant, Hartford, Conn. E. A. Locke. il Sewage & Ind Wastes 24:1410-15 N '52

Grit chambers

Grit chambers; their function, operation and control. D. E. Bloodgood. il Water & Sewage Works 100:326-9 Ag '53

Laboratories

1952 operators' forum; plant laboratories. J. H. L. Giles and others. Sewage & Ind Wastes 25:220-5 F '53

Maintenance and repair

Operation and maintenance of equipment in sewage-treatment plants. J. A. Tapleshay. il diag Munic Util 90:27-8+ O '52

Preventive maintenance. J. D. McDonald. il Water & Sewage Works 100:118-23 Mr '53

Management

Organization and management control in a sewage treatment plant. R. D. Bargman. bibliog Sewage & Ind Wastes 25:1145-55 O '53

Sewage works management. H. J. Graeser. Sewage & Ind Wastes 25:133-9; Discussion. V. Enloe. 139-41 F '53

Power

Power-house at Maple Lodge sewage disposal works. il Engineer 194:687-8 N 21 '52; Engineering 174:628-9 N 14 '52

Rockaway sewage treatment works. il Diesel Power 31:36-9 Jl '53

Sludge gas engines power new Roanoke plant. il Water & Sewage Works 100:97 Mr '53

Supercharged dual fuel engines at Nassau County sewage works. W. L. Kaehrle. flow diag il diag Water & Sewage Works 99: 470-80 N '52; Same cond. Diesel Power 30: 40-5 N '52

Records

Sewer maintenance records are a must! J. L. Carey. Sewage & Ind Wastes 25:1219-20 O '53

Safety measures

Evolution of a safety program. J. R. Szymanski. Sewage & Ind Wastes 25:850-2 Jl '53

Fundamental principles of handling chlorine. V. W. Langworthy. il diags Water & Sewage Works 100:234-8, 318-22, 361-4 Je, Ag-S '53

Safety in sewage works maintenance and operation. L. W. Van Kleeck. il Water & Sewage Works 100:284-7, 330-2, 369-73, 395-9 Jl-O '53 (to be cont)

Safety in sewer maintenance; whose responsibility? D. E. Hall. Sewage & Ind Wastes 25:971-3 Ag '53

Tables, calculations, etc.

Chart for determining per cent sludge digestion. F. H. Burley. Water & Sewage Works 100:R207 My '53

Sewage-sludge digestion calculations. L. B. Escritt. Engineer 195:158-60, 194-5 Ja 30-F 6 '53

War measures

Sewage works in civil defense. A. S. Nesheim. il Pub Works 84:73-4+ Je '53

SEWAGE flow

Flow characteristics and roughness coefficients of sewer pipes. K. W. Cosens. il Pub Works 84:68-9 Mr '53

SEWAGE irrigation

Land disposal of sewage and industrial wastes. R. Stone. bibliog il Sewage & Ind Wastes 25:406-18 Ap '53

SEWAGE lagoons

Algae symbiosis in oxidation ponds; photosynthetic oxygenation. W. J. Oswald and others. bibliog diag Sewage & Ind Wastes 25:692-705 Je '53

Sewage disposal by the lagoon method. W. van Heuvelen. Sewage & Ind Wastes 24: 1381 N '52

Sludge-disposal methods for Canada. N. S. Bubbis and D. L. McLean. il plan diags Munic Util 90:42+ N '52

Sludge lagooning at Winnipeg. Pub Works 84:112-13 S '53

Spent sulphite liquor pollution abatement programs in the Pacific Northwest. H. R. Amberg. Paper Tr J 136:20-1+ F 27 '53

SEWAGE pumping

Design of sewage pumping plants. R. G. Martin. Water & Sewage Works 100:291-3 Jl '53

Sewage pumping station is in the country club set, Fairway, Kansas, residential suburb of Kansas City. il Pub Works 84:58-9 Ja '53

SEWAGE pumps

Brittingham laboratory pump. L. R. Setter and others. bibliog il Sewage & Ind Wastes 25:798-801 Jl '53

New equipment lowers pumping costs at Trenton's sewage treatment plant. E. C. Condict. il diags Water & Sewage Works 100:154-8 Ap '53

1952 operators' forum; pumps. C. E. Keefer and others. Sewage & Ind Wastes 25:219-20 F '53

Packing problem solved with common garden hose. W. H. Higgins. Water & Sewage Works 100:419 O '53

SEWAGE sludge

Activated sludge studies; sludge age and its effect on the activated sludge process. C. E. Keefer and J. T. Meisel. Sewage & Ind Wastes 25:898-908 Ag '53

Application of the sludge volume index test to plant operation. D. E. Bloodgood. Water & Sewage Works 100:R 183-5 My '53

Bacteriological studies of sludge digestion. T. C. Buck, jr. and others. bibliog(45 titles) il Sewage & Ind Wastes 25:993-1002, 1174-8 S-O '53

Chart for determining per cent sludge digestion. F. H. Burley. Water & Sewage Works 100:R207 My '53

Design features of the Cleveland Southerly sludge heater installation. F. S. Palocsay. il Sewage & Ind Wastes 25:38-43 Ja '53

Heat treatment of sewage sludge; abstract. C. Jepson and L. Klein. Sewage & Ind Wastes 25:992 Ag '53

SEWAGE sludge—*Continued*

How enzymes improved sludge digestion. A. C. Bryan. Pub Works 83:69-70 D '52

Initial digestion problems in a new plant. A. E. Sparr. diag Sewage & Ind Wastes 25:610-12 My '53

Internal sludge mixer operation at Stamford, Conn. A. L. Wilcox. il Sewage & Ind Wastes 25:614-17 My '53

New source of revenue discovered in sewage sludge by Milwaukee sewage plant researchers. J. F. Friedrick and R. E. Zinn. Munic Util 91:18+ Je '53

1952 operators' forum; sludge digestion and disposal. Sewage & Ind Wastes 25:344-7 Mr '53

Ohio experience with sludge heat exchangers; symposium. J. H. Blodgett and others. il Sewage & Ind Wastes 24:1416-24 N '52

Removal of toxic materials by sewage sludges. W. Rudolfs and A. L. Zuber. bibliog Sewage & Ind Wastes 25:142-54 F '53

Sewage-sludge digestion calculations. L. B. Escritt. Engineer 195:158-60, 194-5 Ja 30-F 6 '53

Sludge-disposal methods for Canada. N. S. Bubbis and D. L. McLean. il plan diags Munic Util 90:42+ N '52

Sludge filtration studies. C. E. Keefer and J. Meisel. Water & Sewage Works 100:80-4 F '53

Vitamin B_{12} project announced; produce vitamin B_{12} concentrate from Milorganite. Sewage & Ind Wastes 25:881 Ag '53

See also Sewage disposal—Activated sludge method

Analysis

See Sewage—Analysis

Drying

Heat treatment as an aid to sludge dewatering; ten years' full-scale operation; abstract. C. Lumb. Sewage & Ind Wastes 25:1126 S '53

Production of combustible and fertilising sludge at Maple Lodge sewage works. il Engineering 174:222-3 Ag 15 '52

Speed-up sludge drying. il Eng N 149:63 O 23 '52

Gas production

Removal of carbon dioxide from digester gas. J. E. Frook. diag Sewage & Ind Wastes 24:1473-7 D '52

Sludge gas engines power new Roanoke plant. il Water & Sewage Works 100:97 Mr '53

Transportation

New sludge vessel prevents pollution in New York harbor. il Marine Eng 58:66 Ja '53

SEWAGE sludge as fertilizer

Case for sludge as a soil improver. H. A. Lunt. bibliog il Water & Sewage Works 100:295-301 Ag '53

Problems in sewage farming; abstract. F. Shreier. Sewage & Ind Wastes 25:241 F '53

Refuse-sewage composting; engineering aspects. H. Gutteridge. Engineer 194:498-500 O 10 '52

Utilization of sewage sludge. L. W. Van Kleeck. il Water & Sewage Works 99:463-7 N '52

See also
Sewage irrigation

SEWAGE tanks

Can digester recirculation be overdone? W. A. Sperry and W. P. Pfeiffer. Sewage & Ind Wastes 25:741-4 Je '53

Digester scum control at Syracuse, N.Y. U. T. Mann. il Sewage & Ind Wastes 25:730-3 Je '53

Liming a digester. B. F. Rockecharlie. Sewage & Ind Wastes 25:613-14 My '53

Moving baffles in sedimentation tanks. F. E. Daniels. diag Pub Works 84:104+ Ag '53

Operator looks at digester design standards. F. I. Vilen. Sewage & Ind Wastes 25:973-4 Ag '53

Permanent wellpoints keep sewage tanks from floating. il Eng N 150:47 Mr 26 '53

Quake-induced surge damages sewage tank. il Eng N 149:36 O 9 '52

See also
Septic tanks
Settling tanks

Heating

Design features of the Cleveland Southerly sludge heater installation. F. S. Palocsay. il Sewage & Ind Wastes 25:38-43 Ja '53

SEWER cleaning

Sewer cleaning and maintenance; guided discussion. Munic Util 90:74+ N '52

Sewer maintenance. R. Poss. Pub Works 84:111-12+ Ag '53

SEWER design

Studies show Pittsburgh how to drop sewage 90 ft vertically to tunnel interceptors. L. M. Laushey. il diags Eng N 150:38-9+ Mr 5 '53

SEWER pipes

How a 64-year old sewer was relined. W. P. Schmitz. il Pub Works 84:105 O '53

Joint materials for sewer repairs. A. P. Collins. il Sewage & Ind Wastes 25:1115-17 S '53

New method of breaking sewers to make service connections. H. W. Jewell. il Water & Sewage Works 100:252 Je '53

Simple procedures help divers place sewer outfall. J. H. Gilbert. il diags Constr Methods 35:81+ Mr '53

Siphons carry sewage under expressway. D. W. Johnson. il diag Pub Works 84:85-6 Ag '53

Freezing

Flush tank used to prevent sewer freezing. E. M. Lamphere. Sewage & Ind Wastes 25:100-2 Ja '53

Steam cleaner thaws mains and sewers in Leduc, Alta. Munic Util 90:10 D '52

SEWER pipes, Concrete

Protection

Value of arch encasement for clay and concrete pipe. H. W. Jewell. il diags Munic Util 90:25-6+ S '52; 91:22 Mr; 29-31 S '53

Testing

Flow characteristics and roughness coefficients of sewer pipes. K. W. Cosens. il Pub Works 84:68-9 Mr '53

SEWER pipes, Vitrified clay

Dual clay sewer carries industrial waste. D. Skylar. il Pub Works 84:66 Je '53

Esso refinery reconstructs industrial waste sewer. A. Keshen. il Water & Sewage Works 100:126-7 Mr '53

How to glaze sewer pipe. J. Marquis. il Brick & Clay Rec 121:56-7 O '52

Industrial municipality installs multiple-clay pipeline; Monsanto, Ill. il Civil Eng 23:128 F '53

Methods of increasing efficiency of firing sewer pipe in a tunnel kiln. C. Sutherland. il Am Cer Soc Bul 31:486-8 D 15 '52

We choose clay pipe; illustrations with text. Brick & Clay Rec 122:62-3 Mr '53

Manufacture

Fast drying of small sizes of sewer pipe. H. Dye and J. D. Feack. Am Cer Soc Bul 32:126-7 Ap 15 '53

Their specialty is four inch sewer pipe, fittings; Atlas sewer pipe co. il Brick & Clay Rec 122:46+ My '53

Protection

Value of arch encasement for clay and concrete pipe. H. W. Jewell. il diags Munic Util 90:25-6+ S '52; 91:22 Mr; 29-31 S '53

Testing

Flow characteristics and roughness coefficients of sewer pipes. K. W. Cosens. il Pub Works 84:68-9 Mr '53

SEWERAGE

Continuous miner digs sewer tunnel through shale. il Constr Methods 35:54-6 O '53

Floodproof outfall structure for sewers. il Water & Sewage Works 99:494 D '52

Integrating reclamation and disposal of waste water. A. M. Rawn and others. bibliog il Am Water Works Assn J 45:483-90 My '53

Peninsula, moat keep sewer dry. O. A. Trippel. Eng N 150:32 Mr 19 '53

Public relations program gets better sewerage; Ada, Okla. il Pub Works 84:74-6 F '53

Trunk and interceptor sewers, Augusta, Ga.; unit prices. Eng N 150:77 Ap 30 '53

Trunk sewer built under a railroad. C. B. Spencer. il diag Eng N 150:31-2 F 12 '53

SEWERAGE—*Continued*

Water and sewage works reference and data section, 1953. Water & Sewage Works 100: R 1-223 My '53

Weir plates helpful in sewer gaging. A. W. Sweeton, 3d. il diags Civil Eng 23:40 Ja '53

See also

Plumbing
Sanitary districts
Sewage disposal
Sewage sludge
Sewer design
Sewer pipes
Sewers, Concrete
Trade waste
Water pollution

also subdivision Sewerage under names of cities, e.g. Chicago—Sewerage

Bibliography

Reviews and abstracts. Published in monthly numbers of Sewage and industrial wastes

Sewerage and refuse digest. diags Published in monthly numbers of Public works

Water and sewage works information; where to find it. L. H. Enslow. Water & Sewage Works 100:R 16-17 My '53

Cost

Municipal sewage disposal project, California; unit prices. Eng N 149:68 O 30 '52

Sewer tunnel and hydraulic chambers, Cincinnati; unit prices. Eng N 150:76 Ja 29 '53

Sewerage system, New Jersey; unit prices. Eng N 150:98 Je 18 '53

Finance

City, agency fight on treatment finances. Eng N 149:55-6 D 18 '52

Financing sewage treatment on a participation basis. H. Van Der Vliet. il Water & Sewage Works 100:403-5 O '53 (to be cont)

Rentals finance sewer system and treatment plant; New Cumberland, Pa. I. M. Glace, jr. il Pub Works 84:67 Ja '53

Revenue dictates sewer building. Eng N 149: 101 O 23 '52

Sewage treatment on pay-as-you-go basis. J. L. Morrison. il Pub Works 84:58-9 Jl '53

Sewerage contracts run at record pace. maps Eng N 150:107 Je 18 '53

Maintenance and repair

Custom-built truck for sewer maintenance work. A. A. Appel. il Sewage & Ind Wastes 25:1100-1 S '53

Outfall sewer repair at Little Rock. T. W. Clapham. il diags Sewage & Ind Wastes 25:1092-9 S '53

Planning of sewer maintenance. F. G. Denson. il Munic Util 90:24-6+ O '52

Preventive sewer maintenance. W. M. Colony. Sewage & Ind Wastes 25:490-4 Ap '53

Procedures and hazards in ocean outfall inspection. F. R. Bowerman. il diag Pub Works 83:60-1 D '52

Safety in sewer maintenance; whose responsibility? D. E. Hall. Sewage & Ind Wastes 25:971-3 Ag '53

Sewer maintenance. R. Poss. Pub Works 84: 111-12+ Ag '53

Sewer maintenance records are a must! J. L. Carey. Sewage & Ind Wastes 25:1219-20 O '53

Canada

Canadian sewerage works statistics, by provinces; tabulation. Munic Util 91:8 Ja '53

Control over water and sewage works by provincial authorities. Munic Util 91:20-1+ Mr; 25-6+ Je; 25-6+ Jl '53

Directory of sewage-treatment plants in Canada. Munic Util 91:111-20 Ja '53

Government officials in charge of Canadian public water supplies and sewerage systems. Munic Util 91:10 Ja '53

Sludge-disposal methods for Canada. N. S. Bubbis and D. L. McLean. il plan diags Munic Util 90:42+ N '52

Delaware

Regional sewerage project spreads constructors over wide variety of jobs; Wilmington-New Castle County project. il map Eng N 150:40-2+ Ja 15 '53

England

Plant dedication marks completion of significant English sewerage system; Colne Valley scheme. il Eng N 149:52-3 O 2 '52

Great Britain

Sewerage and sewage disposal in 1951; abstract. Sewage & Ind Wastes 25:119-20 Ja '53

Middle western states

Quarter century of sewage treatment in the central states. F. W. Mohlman. Sewage & Ind Wastes 24:1349-54 N '52

New Jersey

New sewer service contracts drawn for revised Raritan Valley trunk line. map Eng N 149:44 D 18 '52

Still at odds; Raritan River factions find no agreement as upstream group's report is released. Eng N 150:26 My 28 '53

Upper Raritan sewerage plan outlined. maps Eng N 150:27 Je 11 '53

Newfoundland

Modern water and sewage works for group of Newfoundland towns. A. C. Northover. il Munic Util 91:23-4+ Je '53

Poland

Sewage treatment; abstract. J. Stiksa. Sewage & Ind Wastes 24:1553-4 D '52

Scandinavia

Sewage treatment of Scandinavia as practiced in the four capital cities. E. L. Knoedler. flow diag Water & Sewage Works 100:124-5 Mr '53

Switzerland

Sewage and industrial waste treatment in Switzerland; abstract. W. Dardel. Sewage & Ind Wastes 25:628-9 My '53

SEWERS, Concrete

Air-placed concrete speeds large sewer construction. il Pub Works 84:66 Mr '53

See also

Sewer pipes, Concrete

SEWING

Development of a sewability test for cotton fabrics. E. B. Frederick. il Textile Res J 22:687-92 O '52

Lighting for machine sewing. G. T. Anderson, jr. il Illum Eng 47:545-6 O '52

SEWING kits

Valentine's day promotion pays off; Belding Corticelli sewing kits. M. Mazor. il Ptr Ink 242:66+ F 20 '53

SEWING machines

Cam-controlled sewing machine sews complex stitches; Elna corp. of America, inc. il Machine Design 25:140 Mr '53

Plastic cams control automatic sewing machine. il diag Product Eng 24:140-3 Mr '53

Sewing machine motors; Sewtric, ltd. il Elec R (Lond) 151:391-2 Ag 22 '52

Singer zigzag sewing machine. il Consumers Res Bul 31:15-16 F '53

Two accessories for sewing machines. il Consumers Res Bul 31:26-7 Ja '53

SEX

Dependence of the secondary sex ratio in humans on the age of the father. E. Novitski. bibliog Science 117:531-3 My 15 '53

SEX differences

Greater resistance of the female to experimental burns following starvation. L. P. Munan and A. Einheber. bibliog Science 116:425-7 O 17 '52

SHADOW casting. See Electron microscope

SHAFT sinking

Shaft sinking; panel discussion. il plans diags Min Eng 5:772-9 Ag '53

Shaft sinking; roof support; American mining congress, Western division meeting; abstracts of papers. Min Cong J 38:101-4 O '52

Vlakfontein sets world record for shaft sinking in May. il diag Eng & Min J 154: 130 Ag '53

See also

Mine shafts

SHAFTING

Driveshafts for Mack trucks and buses balanced to close tolerances. T. Mac New. il Automotive Ind 108:74+ Ap 15 '53

Life begins for a generator shaft. il Elec World News ed 139:32-3 Mr 16 '53

Pillow blocks for long shafting; illustrated instructions. Power 97:120-1 F '53

Practical way to line up shafting. il Power 96:133 D '52

SHAFTING, Flexible
Power from flexible shafts. il plan diags Mill & Factory 53:111-13 Ag '53
Selecting the right flexible shaft. il diags Product Eng Hdbk p E24-7 '53

SHAFTS
Angle-true motion provided by orthodromic mechanisms for connecting parallel shafts in precision applications. M. Daniloff. bibliog diags Machine Design 25:153-7 My '53
Axial shaft alignment. W. H. Weaver. diags Pet Eng 24:C44 D '52
Experimental and theoretical investigation of propeller shaft failures; abstract. N. H. Jasper and L. A. Rupp. Marine Eng 58:63; Discussion. 63-4 F '53
Hole fits. G. E. Hieber. diags Machine Design 25:116-20 Ja '53
How to seal rotating shafts against high pressures. W. Coopey. diags Chem Eng 58:116-17 Jl '51; Same cond. Product Eng Hdbk p J26 '53
Lubrication seals for rotating shafts. J. R. Fawcett. diags Product Eng Hdbk p J30-1 '53
Multistage sealing for rotating shafts operating at elevated pressures and temperatures. A. F. Saxon. il diags Machine Design 25:170-2 Mr '53
Precision measurement of shaft speeds; use of 440-cycle tone from station WWV as standard. O. V. Riley. il diags Electronics 24:104-5 O '51; Same abr. Product Eng Hdbk p E23 '53
Quenching machine automatically straightens shafts. il Machine Design 25:140 Ja '53
Straighten a bent shaft. J. Zollinger. diags Am Mach 97:112 Ag 17 '53; Same. Rock Prod 56:104 Ag '53

SHAFTS, Mine. See Mine shafts

SHAKING apparatus
Unloading hoppered-bottom cars. T. S. Abbott. diags Rock Prod 55:74-5+ S '52; Same. il Paper Ind 34:854-6 O '52; Same cond. Iron Age 170:160-3 S 4 '52; Abstract. Coal Age 57:117 N '52

SHALE
Effect of additional pugging on clays and shales. A. P. Steele, jr. Am Cer Soc Bul 32:215-17 Je 15 '53
Fractured shale reservoirs of California. L. J. Regan, jr. maps diags Am Assn Pet Geologists Bul 37:201-16; Discussion. 314-30 F '53
Frontier formation, Wyoming and adjacent areas. W. A. Cobban and J. B. Reeside, jr. bibliog map diags Am Assn Pet Geologists Bul 36:1913-61 O '52
Lightweight aggregates; expanded shale. J. W. Shaver. il map Concrete 61:3-6+ O '53
Origin of Crow Creek member of Pierre shale in central South Dakota. D. R. Crandell. bibliog il map Am Assn Pet Geologists Bul 36:1754-65 S '52
Sylvan shale in northeastern Oklahoma. G. G. Huffman. bibliog il map Am Assn Pet Geologists Bul 37:447-50 F '53
Uranium in the clay of a black radioactive shale. J. H. Brown, jr. and W. D. Keller. bibliog Science 116:632-3 D 5 '52
See also
Oil shales

SHALE oil. See Oil shales

SHAMPOOS
Ever-ready squeeze; Noreen's teardrop poly shampoo bottle. il Mod Packaging 26:84-5+ Ag '53
New shampoo shown at toiletries show. Soap & San Chem 28:43+ N '52

SHAPERS
Hydraulic draw-cut shaper machines tapered openings in breech rings. il Am Mach 96:184 D 8 '52; Same. Mach 59:222 D '52
Mechanical shapers offer new drive. diag Automotive Ind 109:82 Jl 1 '53
1953 American Machinist production preview. il Am Mach 97:158-9 Ja 19 '53
Pattern-controlled shaping machine for turbine blades. il diags Engineering 175:540-1 Ap 24 '53
Shaper used for machining radii of knuckle joint. R. Putnoky. diags Am Mach 97:183 Je 8 '53
What's ahead the next ten years in machining; planing and shaping. Am Mach 96:E 18-19 Mid-N '52

SHAREHOLDERS. See Stockholders

SHARK liver oil
Isolation from shark (galeorhinus australis) liver oil of a multi-branched C_{18} saturated fatty acid fraction. I. M. Morice and F. B. Shorland. bibliog Chem & Ind p 1267-8 D 27 '52

SHARKS
Northernmost record of the whale shark. E. W. Gudger. Science 116:432-3 O 17 '52

SHARP and Dohme, inc.
Merck, Sharp & Dohme announce merger plan. Oil Paint & Drug Rep 163:5 Mr 9 '53

SHARPENING
Matrix broach sharpening machine. il Automobile Eng 43:371-2 S '53
See also
Cutting tools, Carbide—Sharpening

SHAVER, Dorothy, 1897-
Businesswoman in Hartford. por Fortune 47:59 Ap '53

SHAVERS, Electric. See Electric shavers

SHEA chemical corporation
Busting the big time. il Chem W 72:20+ F 7 '53

SHEAR. See Strains and stresses

SHEARON, Will H. 1914-
Shearon to succeed Myatt as managing editor of Industrial and engineering chemistry. por Chem & Eng N 31:1557 Ap 13 '53

SHEARS (machines)
Arrow Machine Tools bar and angle shearing machine. il Engineering 175:189 F 6 '53
Bigwood over-crank guillotine shear for precision work. il Engineering 175:697 My 29 '53
Rotary shear knives; reference book sheet. diags Am Mach 97:123 Ag 31 '53
Shear type trimmer cuts machining time in half. il Iron Age 171:157-8 Mr 19 '53
Shearing and slitting; cut it yourself. il Steel 132:49 Je 8 '53
Steelweld shear cuts 20 foot plate. il Blast F & Steel Pl 41:238-40 F '53; Abstract. Am Mach 96:146 D 22 '52
Versatile leveler shear feeds tailored sheets. il Steel 132:131 My 18 '53

SHEAVES
Bushed sheaves; illustrations with text. Power 96:132 D '52

SHEEP
Nutritional factors limiting increased livestock production from hills. C. F. Mills. bibliog Chem & Ind p330-3 Ap 11 '53

SHEET iron
Determination of the texture of rolled sheet from X-ray diffraction photographs. A. E. De Barr and B. Roberts. il diags Iron & Steel Inst J 164:285-7 Mr '50; Abstract. Metal Prog 63:210-11 Ap '53

SHEET metal
Application of titanium sheet-strip limited by presently available alloys. J. W. Sweet. il J Metals 5:143-5 F '53
Limiting creep and stress rupture values for various ferrous and nonferrous materials in sheet form; tabulation; engineering file facts. Materials & Methods 36:139, 141, 143 D '52
Precision rolled thin strip offers close tolerances, superior surface qualities, controlled grain size and hardness. A. I. Nussbaum. il Materials & Methods 38:82-4 Jl '53
Thin metals that remain flat after machining. J. C. Wagner. il Metal Prog 63:92-4 Je '53
See also
Sheet steel
Tin plate

Standards

Preferred thicknesses of sheet metals; reference book sheet. Am Mach 96:155 O 27 '52

Testing

Stress-strain relation in shear from twisting test of annulus. W. Ramberg and J. A. Miller. il diags J Res Nat Bur Stand 50:125-30 F '53
Test for drawing qualities of sheet metals; Flex-Tester. il Engineer 194:874 D 26 '52
Twisted square plate method and other methods for determining the shear stress-strain relation of flat sheet. W. Ramberg and J. A. Miller. bibliog il diags J Res Nat Bur Stand 50:111-23 F '53
X-ray gaging irons out strip variables. B. H. McGar. il Steel 132:110 My 18 '53

SHEET metal, Enameled

Architectural porcelain enamel; with time-saver standards. il plans diags Arch Rec 111:227+ Je; 112:193+ Jl; 195+ Ag; 217 S '52

Contribution to the theory of enamel adherence. M. Berg and M. Humenik, jr. il diags Am Cer Soc Bul 31:329-31 S 15 '52

Designer's guide to vitreous coatings. R. L. Stedfeld. il Machine Design 24:166-70 D '52

Path to enameling shop rough on base metals. Steel 131:104-6 N 10 '52

Recommended practices for designing porcelain enamel products; drawings with text. P. F. Metz. Product Eng 23:176-7 N '52

Steel men say you shall have it late in '53, if; supplies of steel for porcelain enameling. Cer Ind 60:88+ Mr '53

Study of some phenomena associated with the adherence of sheet iron ground coats. H. F. Patrick and others. bibliog il Am Cer Soc J 36:305-13 S 1 '53

Study of the enameling of sheet nickel. J. H. Healy and A. I. Andrews. Am Cer Soc Bul 32:119 Ap 15 '53

What steel for enamelers? M. B. Gibbs and F. R. Porter. il Steel 132:108-9+ Je 1 '53

SHEET metal, Expanded

Expanded aluminum mesh for grilles. il Materials & Methods 38:134 Ag '53

Modern construction uses old idea; expanded metal lath. il Steel 132:140-1 Ap 27 '53

SHEET metal contractors national association

Annual meeting, 10th, New Orleans, May 4-6. Sheet Metal Worker 44:70+ Je '53

SHEET metal distributors, National association of. See National association of sheet metal distributors

SHEET metal houses

Aluminum house and components easily assembled on site. il Iron Age 171:192 Mr 5 '53

SHEET metal shops

Going to hire a salesman? R. F. Walton. Sheet Metal Worker 45:47-9 O '53

Old firm moves to new location; Tornquist co. il plan Sheet Metal Worker 44:88-90+ Ja '53

Sheet metal department reorganized to speed duct fabrication; Frank A. McBride co. A. Stout. il plan Sheet Metal Worker 44:56-9 Je '53

Sheet metal departments, by states; tabulation. Iron Age 171:455 Ja 1 '53

Shop of the month. A. Stout. il Sheet Metal Worker 44:82-4 Jl; 83-6 Ag; 77-9 S; 45:51-3 O '53

Employees

See Sheet metal workers

Equipment

Pre-planning doubles new plant's output; sheet metal plant of the Binks mfg. co. il Steel 132:110-12 Je 1 '53

Production setup in large duct fabricating plant; Universal sheet metal corp. il Sheet Metal Worker 44:59-61+ My '53

See also

Sheet metal working machinery

Management

Custom sheet metal work builds profitable market; South Denver sheet metal works. il Sheet Metal Worker 44:31+ D '52

Good housekeeping builds healthy business; Goodwin sheet metal works. R. Latimer. il Sheet Metal Worker 44:25-6 D '52

Records

Shop inventory to prevent material leaks; Frank Yoder, inc. P. Lance. Sheet Metal Worker 44:65-6 Ap '53

SHEET metal trade

Carolinas roofing and sheet metal contractors association 10th annual convention, Myrtle Beach, S.C. June 18-20. Sheet Metal Worker 44:110 Jl '53

Fourth year for compensation group; Employers association of roofing and sheet metal workers of Greater New York annual meeting, New York, Jan 6. Sheet Metal Worker 44:82+ F '53

Look ahead into 1953; opinions of executives of various industries. Sheet Metal Worker 44:76-83+ Ja '53

Michigan heating and sheet metal association 42d annual meeting, Flint, Feb. 26-27. Sheet Metal Worker 44:104 Ap '53

New York state sheet metal roofing and air conditioning contractors' association annual meeting, 30th, Buffalo, Jan. 18-21. Sheet Metal Worker 44:85-6 F '53

Ohio sheet metal contractors' association 39th annual meeting, Akron, Feb. 23-25. Sheet Metal Worker 44:80-2 Ap '53

Sheet metal, air conditioning and roofing contractors' association of Pennsylvania 5th annual convention, Erie, June 18-20. Sheet Metal Worker 44:93-4+ Jl '53

Sheet metal and roofing contractors association of Minnesota annual meeting, St Paul, Jan. 8-10. Sheet Metal Worker 44:80-1 F '53

Sheet metal and warm air heating contractors' association of Indiana 35th annual meeting, Indianapolis, Feb. 5-6. Sheet Metal Worker 44:94-5 Mr '53

Sheet metal contractors association of Illinois 39th annual meeting, Peoria, April 15-16. Sheet Metal Worker 44:73+ Je '53

Texas contractors meet tornado emergency. Sheet Metal Worker 44:25 Jl '53

See also National association of sheet metal distributors; Sheet metal contractors national association

Accounting

Simplified bookkeeping system; Shuman co. R. Howe. Sheet Metal Worker 44:71-3 S '53

Directories

Product-tradename directory; manufacturers of products and equipment used in warm air heating, air conditioning, ventilating, sheet metal work. Sheet Metal Worker 44:183-211 Ja '53

Records

Stepped up record processing speeds warehouse distribution; Siskin steel & supply co., inc. G. Siskin and A. M. Siskin. il Sheet Metal Worker 44:54-6 F '53

SHEET metal work

Air conditioning contractor finds owning sheet metal shop economical; Nuckols-Cathey co. il Sheet Metal Worker 44:52-4 Je '53

Automatic stamping and welding of sheet metal parts; Chrysler corp. il Automotive Ind 109:48-9 O 1 '53

Bending of aluminum alloy sheet; tabulations; engineering file facts. H. M. Jensen. Materials & Methods 36:143 N '52

Colossal press spearheads Lockheed's skin program. R. B. Scott and R. L. Vaughn. il diags Mach 59:166-71 Jl '53

Contour developer for sheet metal products. L. W. Goodwin. il diag Tool Eng 29:48-51 D '52

Correct welding procedure. L. F. Spencer. il diags Sheet Metal Worker 44:42+ O; 51-4 N; 36-8+ D '52; 59-62+ F; 74+ Mr; 70-2+ Ap; 63+ Je; 102-3+ Ag; 87-9 S; 45:61-2+ O '53 (to be cont)

Cosmotron doughnut magnet is 288 shop-made sandwiches. il Am Mach 96:128-31 N 10 '52; Welding J 32:145-7 F '53

Fabricating titanium. il Iron Age 170:268-70 O 9 '52

Forming aluminum sheet and plate; reference book sheet. E. V. Sharpnack. diags Am Mach 97:165, 167 Ap 27 '53

Forming and welding of titanium. F. H. Stevenson. il Welding J 31:1035-41 N '52

Greater emphasis on automation in stamping production; Ford motor co. T. Mac New. il Automotive Ind 107:34-8+ N 15 '52

Joining sheet metal in a punch press; Williams Metalacing technique. il Engineering 175:781 Je 19 '53

Mass producing prefab fittings; Southwark metal mfg. co.; illustrations with text. Sheet Metal Worker 44:96-9 Ja '53

Metal fastening by self lacing; Metalacing. il Tool Eng 30:110 Je '53; Iron Age 171:158-9 Mr 19 '53; Light Metal Age 11:20 Ap '53; Factory Management 111:100-1 My '53

Metal stitching applications. A. G. Denne. il diags Tool Eng 30:51-6 Mr '53

Plastic forming of metals. il diags Fortune 46:138-41+ N '52

Producing short-run items in sheet metal; F. T. Myerson, ltd. il Sheet Metal Worker 44:79-81 Mr '53

SHEET metal work—*Continued*

Production costs lowered with pre-coated coil stock. A. E. Uhleen. il diag Iron Age 170: 145-7 D 18 '52

Pushbutton control shifting for contoured skin panels; Temco aircraft corp. R. McCulloch. il Light Metal Age 10:14-15+ O '52

Radial forming of sheet metal aircraft parts; Ryan aeronautical co. il Automotive Ind 109:48-9+ O 15 '53

Removing wrinkles in formed aluminum sheets; North American aviation, inc. G. C. Close. il diags Mach 60:188-90 S '53

Sheet magnesium problem licked. il diag Aviation W 58:40 Ja 12 '53

Sheet metal gears, sprockets, worms, and ratchets; drawings with text. H. Murro. Product Eng 24:208-9 My '53

Some basic relations in contour forming; abstract. G. Sachs. Machine Design 25:284+ Ag '53

Stainless steel aircraft nacelles present many production problems; Solar aircraft co. J. A. Logan. il Automotive Ind 107:48-9+ D 1 '52

Tips on forming and joining sheet metal; report of panel on precision forming and joining. S A E J 61:31-3 O '53

Use of rivets and other fasteners; report of panel on fastening and mechanical joining. R. L. Hand. il S A E J 61:41-3 Je '53

Wire stitching; special stitch developed for fast assembly of seat frames. il Iron Age 170:101 O 30 '52

Wire stitching speeds auto-part production. il Materials & Methods 38:130 O '53

Working titanium at North American. G. A. Fairbairn. il Mach 59:182-7 Jl '53

See also

Air conditioning equipment
Air pipes
Dies
Dust collectors
Exhaust systems
Metal drawing
Metal spinning
Presses
Rolling (metal work)
Rolling mills
Sheet metal, Enameled
Shells (metal work)
Stamping
Stretching
Tin cans
Tin plate
Ventilators

Estimates

Duplicate bids to all contractors; Air duct installation co. P. Lance. il Sheet Metal Worker 44:47+ Je '53

Standards

Training the sheet metal draftsman; sheet metal stretcher's standards. W. J. Hornung. diags Sheet Metal Worker 44:60+ Je '53

Tables, calculations, etc.

Reference tables help you to shear economically. D. D. Amison. il Am Mach 97:151-3 Ap 13 '53

SHEET metal work, Architectural

Church steeples and spires rebuilt with stainless. il Sheet Metal Worker 44:92 Ja '53

Sheet metal workers' catechism; construction and erection of sheet metal skylights (cont). W. Neubecker. plans diags Sheet Metal Worker 44:55-6+ N '52; 64-5 F; 80 My; 90+ S '53 (to be cont)

Stainless steel; with time-saver standards. diags Arch Rec 112:191+ D '52; 113:179, 181 Ja; 201, 203 F '53

Suggested sheet metal details. diags Am Bld 74:54+ O '52

See also

Flashing
Roofing, Copper

SHEET metal workers

Steps in training sheet metal draftsmen. W. J. Hornung. il diags Sheet Metal Worker 44:62+ Ap; 75-6+ My; 60+ Je; 95-7 Jl; 92+ Ag; 85-6 S; 45:54-5 O '53 (to be cont)

SHEET metal working machinery

Giant Douglas planes built with huge machines. C. O. Herb. il Mach 59:188-93 Jl '53

High-speed routing equipment is remote controlled; North American aviation, inc. il Mach 59:197-9 D '52

How to increase press brake efficiency. H. M. Smithgall. il diag Tool Eng 29:57-9 D '52

Niagara welded-steel press brakes have laminated non-metallic ways. il Am Mach 97:207 F 16 '53

Production press brake; F. J. Edwards, ltd. il Engineering 175:630 My 15 '53

Radial forming gets added muscle. il Steel 132:112-13 Je 29 '53

Small tubing solves problem on wire stitching machine. il Iron Age 171:116 Ap 30 '53

Turner sheet metal bending machine. il diags Engineer 195:572 Ap 17 '53

Universal folding machine. il Engineer 195: 152 Ja 23 '53; Engineering 175:159 Ja 30 '53

Versatile producer; the press brake. J. M. Matthewman. diags Am Mach 97:124-5 S 14 '53

See also

Hydraulic presses
Presses
Punching machinery
Shears (machines)
Stretching machines

SHEET piling

Chart simplifies sheetpile design. R. E. Mann. Eng N 149:86 N 20 '52

Deep wharf cells stand by themselves. J. H. Patterson. il Eng N 150:36 Ap 23 '53

Design curves for anchored steel sheet piling. W. C. Boyer and H. M. Lummis, 3d. diags Am Soc C E Proc 79 [no 165]:1-12 Ja '53

Field study of a sheet-pile bulkhead. C. M. Duke. il diags Am Soc C E Proc 78 [no 155]: 1-26 O '52

Seawall unit is round, firm and full. il diag Eng N 149:47-8 N 6 '52

SHEET steel

Accelerated strain aging of commercial sheet steels. L. R. Schoenberger and E. J. Paliwoda. Automotive Ind 107:141-2+ N 15 '52

Basco sheet steel separator. il Blast F & Steel Pl 41:1092 S '53

Cold-rolled, hot-rolled, galvanized and stainless sheets; prices tabulated. Iron Age 171: 411 Ja 1 '53

Deep drawing steel sheet surface quality. R. J. Walter. J Metals 5:630 My '53

Guide for stainless steel buyers. Steel 132: 33-78 sec 2 Je 22 '53

Hints for welding sheet steel; illustrated instructions. Y. Hale. diag Welding J 32:335 Ap '53

How to butt-weld 0.005-in. stainless. M. S. Weinstein. il diags Am Mach 97:102-4 Ag 31 '53

Path to enameling shop rough on base metals. Steel 131:104-6 N 10 '52

Sheets; shipping rate climbs sharply. Iron Age 171:64-5 Je 11 '53

Steel men say you shall have it late in '53, if; supplies of steel for porcelain enameling. Cer Ind 60:88+ Mr '53

Use of sheet steel for the construction of shielded rooms; abstract. A. M. Intrator. Elec Eng 72:809 S '53

You'll be getting better electrical sheet and strip; highly oriented polycrystalline-silicon steel with the same characteristics of a single crystal. N. P. Goss. il diags Iron Age 171:147-52+ F 5 '53

See also

Steel, Strip

Testing

New test for drawability; sheet and strip steels; abstracts. C. B. Buker and J. R. Speer. Materials & Methods 38:156+ Ag '53; il S A E J 61:24-5 O '53

New tester accurately checks drawability of sheet steel. W. G. Patton. il Iron Age 171: 143-5 Mr 19 '53

Report of subcommittee XIV on inspection of black and galvanized sheets. Am Soc T M Proc 50:104-9 '50

SHEETS

Pequot puts the feel back into the sheets; swatch board. E. M. Kelley. il Sales Management 70:64 Ja 15 '53

Rating

How to get your money's worth when buying sheets. I. B. Wingate. J Retailing 29:21-6 Spring '53

SHEFFIELD, England

Industries

Engineering industries. M. A. Fiennes. il Engineering 176:57-9, pl 1-4 Jl 10 '53

SHEFFIELD, England—Industries—*Continued*
Metallurgical industries. C. Sykes. il Engineering 176:89-91, pl 7-8 Jl 17 '53
Rise and development of industry. G. P. Jones. Engineer 196:91-2 Jl 17 '53

SHEFFIELD university, England
Story of glass technology. il Am Cer Soc Bul 32:178-80 My 15 '53

SHELL molding. See Foundry practice

SHELL oil company
Shell hikes output; displaces Standard as firm with biggest company-operated crude production in California. D. H. Stormont. Oil & Gas J 51:107-8 Ap 20 '53
Shell Oil; accounting policies keep reported earnings low. E. N. Morse. Barron's 33:17-18 My 4 '53

SHELLS
Lehigh manufactures cement from coquina and staurolite residue. B. Nordberg. il plans diags Rock Prod 56:130-49+ Ag '53

SHELLS (metal work)
Cylindrical shells; experimental investigation into redrawing; abstract. S. Y. Chung and H. W. Swift. Metal Prog 63:216+ My '53
Flame hardening of large diameter thin-wall cylindrical shells. G. A. Weber. il diags Welding J 32:37-43 Ja '53
Layout of deep-drawn shells follows certain steps. S. R. Cope. diags Am Mach 97:126-9 S 28 '53
Shallow shells require careful die design. S. R. Cope. diags Am Mach 97:164-6 S 14 '53
Sorting and feeding shells closed end first. W. M. Halliday. diags Mach 59:206-8 Je '53

SHELLS (projectiles)
Anti-tank shell developed in two weeks. il Iron Age 171:75 F 12 '53
Real reasons behind shortage. K. W. Bennett. il Iron Age 171:55-6 Ap 16 '53

Loading plants

Soap with protective coloration; soap used by ordnance workers colors skin if dangerous residue is present. il Safety Maint & Prod 104:104-6 O '52

Manufacture

Accurate centering of projectiles insures precise turning. il diag Mach 59:195 Ap '53
Blasting away at the shell shortage. il Steel 132:64 Ap 6 '53
Carbide shell core production mechanized; Carboloy department of General electric co. il Tool Eng 30:112 My '53; Steel 132:92+ F 23 '53
Castings; a material for ammunition. F. E. Shumann. il Foundry 81:88-93 Jl '53
Conveyorized lines speed delivery of 105-mm shell. G. E. Avery. il Am Mach 97:169-73 Ap 13 '53
Fast gas furnace anneals at normalizing temperatures. C. A. Turner, jr. and S. L. Yarborough. il diags Iron Age 170:140-2+ N 20 '52
Giving punch to mortar shells. il Iron Age 171:77 Ap 9 '53
Manufacturing 90-mm. shells; Bryant heater division, Affiliated gas equipment co. O. L. Ducharme. il diag Mach 59:143-51 Mr '53
Shell machining techniques. M. L. Backstrom. diags Tool Eng 30:45-51 Ja '53
Shells; ordnance raises its sights. K. W. Bennett. Iron Age 171:73 Mr 12 '53
Tungsten-carbide shell cores. E. Altholz. il Mach 59:159-64 Ap '53

Testing

Biggest gage; automatic unit checks tolerances of loaded shells for gun fit. Iron Age 170:189 D 11 '52
X-ray absorption gage checks artillery shells. G. M. Ettinger. il diags Electronics 26:142-5 Ap '53

SHELTERS
Shelter for maintenance in the field. il Constr Methods 35:138+ S '53

SHELTON, Mercel J.
Sketch. por Civil Eng 22:961 N '52

SHELVING
Compact shelving; lighting problem; Archives building of the Illinois state library. F. Babiak, jr. and J. W. Marquardt. il plan Illum Eng 48:393-4 Ag '53

SHENNAN, James Grierson, 1910-
How to meet low tariffs. por Fortune 47:207 Mr '53

SHEPERD, Howard Cotterill, 1894-
Businessmen in the news. por Fortune 47:56 F '53
New chiefs for the National city bank. por Bsns W p26 Ja 10 '53

SHERATON corporation of America
Sage of Sheraton, E. Henderson. Barron's 33:5-6 Ap 27 '53

SHERBROOKE machineries, limited
Brief histories of some of our original 1903 advertisers or their successors. Pulp & Pa of Can 54:297+ My '53

SHERWIN-WILLIAMS company
Five stocks best suited to resist downtrend; with comparative balance sheet items. Mag of Wall St 91:29 O 4 '52

SHIGELLA
Public health and clinical laboratories in the diagnosis of enteric bacterial infections. E. J. Tiffany. bibliog Pub Health Rep 67:1069-75 N '52
Salmonella and shigella cause epidemic in Korea. L. E. Zimmerman. Pub Health Rep 68:99-100 Ja '53
Salmonella and shigella identified in two days; abstract. R. A. MacCready and M. B. Holmes. Pub Health Rep 68:262 F '53

SHIMS
Laminated shims for toolbits. C. T. Bower. diags Am Mach 97:128 Mr 2 '53

SHINGLES, Colored
When home buyers clamor for 20 colors; Creo-Dipt's plan. Sales Management 69:64 N 20 '52

SHINNER, Ernest G. 1883-
Businessmen in the news. por Fortune 47:53 F '53

SHIP model tanks
Hydraulics research station. Engineering 175:664 My 22 '53
Plastic used in building scale models; experimental work at the David Taylor model basin. il Machine Design 25:111 Ja '53

SHIP models
Model boat for the 27 mc. citizens band. H. B. Smith. bibliog il diags Radio & Tv N 49:35-8+ Mr '53
Ship and plane testing models; production techniques, using polyester-glass. il Mod Plastics 30:125-6+ N '52
See also
Ships—Model testing

SHIP plates
Bending strength of corrugated plate. J. B. Caldwell. il diags Engineering 174:609-12 N 7 '52
Heat-treatment effects on transition temperature of a ship steel. E. B. Evans and L. J. Klingler. bibliog il diags Welding J 32:sup417-31 S '53

SHIP propulsion
Delaware Sun's propelling machinery. J. A. Wasmund. il plans Marine Eng 58:60-4 S '53
Propulsion machinery and auxiliaries on the Mariners. il plans diags Marine Eng 58:99-110 My '53
See also
Boilers, Marine
Diesel engines, Marine
Gas turbines, Marine
Motor ships
Propellers
Ship resistance
Steam turbines, Marine
Steamboats

SHIP propulsion, Atomic
New fuel with a big future. il Bsns W p94+ Mr 14 '53

SHIP propulsion, Electric
How to keep 'em sailing; electric-propulsion equipment. A. J. Heigel. il diags Marine Eng 58:78-84 S '53

SHIP resistance
B.S.R.A. resistance experiments on the Lucy Ashton. J. F. C. Conn and others. diag Engineer 195:467-9, 488-90, 540-4 Mr 27-Ap 10 '53; Abstract. Engineering 175:469 Ap 10 '53; Discussion. Engineer 195:491-3 Ap 3 '53; Engineering 175:469-70, 503-4, 519-21 Ap 10-24 '53
Skin-friction determination, using wall-sided models of great draught; abstract. R. T. Shiells. Engineering 175:731; Discussion. 731-2 Je 5 '53
Wake studies of plane surfaces; abstract. J. F. Allan and R. S. Cutland. Engineer 195:397 Mr 13 '53

SHIP subsidies

Plea to assist tramp shipping. F. R. Clark. Weekly Underw 168:1542 Je 6 '53

SHIP yards. See Shipyards

SHIPBUILDING

Longitudinal strength of ships; welded vs. riveted ships. J. Turnbull. Engineering 174: 449-50, 483 O 3-10 '52; Discussion. 174: 466, 498 O 10-17 '52; Engineer 194:479-80 O 10 '52

Merchant shipbuilding in principal countries of the world as of Oct. 1, 1952; tabulation. Iron Age 171:442 Ja 1 '53

Shortcutting the trip from blueprints to steel; Lumotrace method. il Bsns W p56-8 Jl 18 '53

Society of naval architects and marine engineers 60th annual meeting, New York, Nov. 13-15; with abstracts of papers. Marine Eng 58:52-64 Ja; 60-7 F '53

See also

Barges
Dry docks
Freight ships
Motor ships
Naval architecture
Navy yards and naval stations
Propellers
Ships
Ships—Reconstruction
Ships, Wooden
Shipyards
Steamboats
Steering gear
Tank ships
Towboats
Warships

Cost

Shipowners urge tax deferments to aid shipbuilding. J. A. Farrell. Marine Eng 58:77-8 Mr '53

History

Ships and shipbuilding in Belfast. D. Rebbeck. il map plans diags Engineering 174: 376, 385-8, 417-20, pl 28-31 S 19-26 '52

Labor conditions

See Shipyards—Employees

Materials

Sound conditioning in ship construction. G. W. Handy. il Marine Eng 58:56-9 O '53

Safety measures

See Shipyards—Safety measures

Statistics

American interests build 5,273,034 tons of new ships in foreign yards. Marine Eng 58:69-77 S '53

Less active shipyards; returns compiled by Lloyd's register of shipping for the first quarter of the year. Economist 167:622 My 30 '53

Lloyd's Register reports that 1,202 vessels are being built; with table by country of ship construction, March 31, 1953 and December 31, 1952. Weekly Underw 168:1284 My 9 '53

Lloyd's Register shipbuilding returns for quarter ended June 30. Engineering 176: 137 Jl 31 '53

Lloyd's shipbuilding returns for the quarter ended Dec. 31, 1952. Engineer 195:166 Ja 30 '53

Merchant ship construction, 1941-1951; uncompleted merchant vessels, Jan. 1, 1952; naval shipbuilding; tabulations. Steel 132: 185 Ja 5 '53

Merchant tonnage under construction hit all time high at end of last year. Weekly Underw 168:394 F 7 '53

Monthly shipbuilding report. Published in monthly numbers of Marine engineering

724 inland watercraft built in 1952. Marine Eng 58:68 F '53

Shipbuilding activity throughout world showed fine increase in 1952. Weekly Underw 168:722+ Mr 14 '53

Shipbuilding tops 2,500,000 tons; merchant vessels to be built as of Jan. 1, 1953; merchant vessels built, 1952; tables. Marine Eng 58:40-3 F '53

Shipyards' output declines. Economist 165:260 O 25 '52

United States shipyards exceed peacetime records in 1952. il Marine Eng 58:44-59 F '53

World's shipbuilding; statistics issued by Lloyd's register of shipping; with table, number and tonnage of merchant vessels of 100 tons gross and upwards launched during the years 1918-1952. Engineering 175:348 Mr 13 '53

Study and teaching

Training for the shipbuilding industry. T. E. Smith. Engineering 174:639 N 14 '52

Welding operations

Applying welding to ship repairs. S. Swan. diags Marine Eng 58:65-8 Ag '53

Brittle strength and transition temperature of structural steel. W. C. Hoeltje and N. M. Newmark. bibliog diags Welding J 31: sup515-21 N '52

Brittle structural failures with emphasis on welded ships. J. O. Almen. il diags Product Eng 24:192-203 Ap '53

Considerations of welded hatch corner design. plans diags Welding J 32:sup316-23 Jl '53

Evaluation of brittle failure research. E. F. Sweeney. bibliog(46 titles) diags Welding J 32:sup 1-13 Ja '53

Failures and defects encountered in the construction of welded ships. R. D. Bradway. diags Welding J 31:1111-21 D '52

Investigation of structural failures of welded ships. M. L. Williams and G. A. Ellinger. bibliog(26 titles) il Welding J 32:sup 498-527 O '53

Research under the ship structure committee; abstract and discussion. E. A. Wright and others. Marine Eng 58:61-4 Ja '53

Shipbuilding uses low temperature joining method. il Light Metal Age 11:22 F '53

Structural failures in welded ships. il diags Welding J 32:sup342-6 Jl '53; Same cond. Engineer 195:856-8 Je 19 '53; Abstracts. Iron Age 171:148+ Mr 12 '53; Eng N 150:64 Ap 23 '53

Structural research establishment at Glengarnock. il plan diags Engineer 194:609-11 N 7 '52

Studies continue on welded ships. il Materials & Methods 38:148+ Jl '53

Welded light alloy yacht. il Engineer 196: 138-9 Jl 31 '53; Engineering 176:180-2 Ag 7 '53

Welding time on minesweeper stacks cut in half. il Welding J 32:624 Jl '53

Germany

New German ships; Bonn subsidizes revival of transatlantic liner services. J. Joesten. Barron's 33:7-8 Mr 2 '53

Great Britain

Engineering outlook; shipbuilding and marine engineering. Engineering 175:389-92 Mr 27 '53

Frustration for shipbuilders. Economist 165: 901-2 D 27 '52

Institution of engineers and shipbuilders in Scotland; presidential address. W. Wallace. Engineering 174:711, 742-3 N 28-D 5 '52

Shipbuilding and marine engineering in 1952. il Engineer 195:16-19, 53-5, pl 2, 102-6, 135-7 Ja 2-23 '53

Ireland

Ships and shipbuilding in Belfast. D. Rebbeck. il map plans diags Engineering 174: 376, 385-8, 417-20, pl 28-31 S 19-26 '52

United States

Design group in an American shipbuilding organisation. il Engineer 194:788-9 D 12 '52

1952 hits peak in shipbuilding. L. R. Sanford. Marine Eng 58:67-8 F '53

Shipbuilding resumes on the Pacific coast. il Marine Eng 58:49-50 Ja '53

SHIPBUILDING research association, British. See British shipbuilding research association

SHIPMENT of goods

More light on claim causes results in suggested new prevention activity; transportation and packing survey. il Ry Age 133:85-7 N 3 '52

Reduction of product damage in shipping; abstract. W. B. White. Mod Packaging 26:140 Je '53

SHIPMENT of goods—*Continued*

Shipment of animal disease organisms and vectors. Science 117:339-40 Mr 27 '53

See also

Air freight service
Chemicals—Transportation
Containers (for shipping)
Conveying machinery (long distance)
Crates
Freight car service
Freight handling
Loading and unloading—Cars
Motor trucks in freight service
Packing for shipment
Railroads—Claims
Railroads—Loading rules
Railroads—Rates
Transportation

SHIPPERS advisory boards, National association of. See National association of shippers advisory boards

SHIPPING

Greeks, the Senator, and the slump. Bsns W p30 Ap 11 '53

Rough seas ahead for ship operators. Bsns W p 102-4 N 15 '52

Shipping in rough waters. Economist 165:247-8 O 25 '52

See also

Barges
Free ports and zones
Freight handling
Insurance, Marine
Merchant marine
Ore ships
Ports
Shipbuilding
Shipment of goods
Ships
Steamboat lines
Train ferries
Transportation
Waterways

Claims

See also

Insurance, Marine—Adjustment of claims

Finance

Insurance companies make loans to shipping lines. Marine Eng 58:85-6 S '53

See also

Ship subsidies

Rates

What low tanker rates mean to oil markets. il Nat Pet N 45:17-18 My 13 '53

Egypt

Egyptian river craft increases in 1952. For Comm W 49:27 Je 22 '53

Great Britain

Revised freight index. Economist 167:328 My 2 '53

Tugs and towage. Economist 167:799-800 Je 20 '53

Great Lakes

Autos float where they're going. R. D. Raddant. il Iron Age 171:80 Mr 12 '53

Iron ore; steam's up for Lake shipping. R. M. Lorz. il Iron Age 171:93 Ap 2 '53

1952 Lakes shipments reviewed. L. Spencer. Marine Eng 58:92+ Mr '53

Plan 100,000,000 ton Great Lakes ore carry. Weekly Underw 168:266 Ja 24 '53

Toronto port improvement spurred by Lakes trade. J. Montagnes. Barron's 33:24 Je 15 '53

Up and down the Great Lakes. Published in monthly numbers of Marine engineering

See also

Interlake steamship company
Iron ores—Transportation
St Lawrence waterway and power project

Libya

First Libyan shipping company organized. For Comm W 49:23 My 18 '53

Southern states

Port activity. il Manuf Rec 122:41-4 S; 42-5 O '53

United States

Heavy seas; ship owners' headaches; foreign aid cuts, new wage demands. A. Glenn. Barron's 33:9 Je 1 '53

U.S. water-borne imports and exports carried on dry-cargo vessels show decline. For Comm W 49:17-18 Ap 27 '53

See also

Merchant marine—United States

SHIPPING containers. See Containers (for shipping)

SHIPS

Distinctive ships. il plans diags Marine Eng 57:67-115 D '52

See also

Barges
Clipper ships
Dredges
Ferryboats
Fireboats
Fishing boats
Freight ships
Lightships
Loading and unloading—Ships
Merchant marine
Motor ships
Naval architecture
Ore ships
Power plants, Floating
Propellers
Radio telephone on ships
Refrigeration on ships
Salvage
Seamen
Ship propulsion
Ship resistance
Shipbuilding
Shipping
Shipyards
Steamboats
Submarine boats
Tank ships
Towboats
Train ferries
Transports
Warships

Air conditioning

Sixty separate air conditioning systems on S.S. United States. il Sheet Metal Worker 44:64 D '52

Cargo

Dehumidifier system protects cargoes from moisture. Marine Eng 58:77 S '53

Instrument for indicating stresses in ships due to cargo distribution; Kelvin Hughes stress finder. il Engineering 175:425-6 Ap 3 '53

See also

Stowage

Collisions

See Collisions at sea

Communication

Docking and navigating electronic system for tankers. il Marine Eng 58:106+ Ja '53

New audio electronic system developed for tankers. Marine Eng 58:68 S '53

See also

Radio telephone on ships

Deck coverings

B&O tugboat gets new plastic deck covering; Celastic. il Marine Eng 58:69 O '53

Electric equipment

Admiralty proving station; engineering laboratories for marine equipment. il Electrician 149:841 S 19 '52

Aircraft carrier operation; abstracts. J. C. Turnbull. Elec R (Lond) 151:845 O 17 '52; Electrician 149:1096 O 10 '52

Electrical equipment of S.S. San Florentino. il Engineering 175:684-5 My 29 '53

How to keep 'em sailing; how to maintain switchgear. W. A. Hall. il Marine Eng 58:70-5 O '53

Inherent current, voltage and speed control in dynamo-electric machinery. J. C. Macfarlane and others. bibliog il diags Inst E E Proc 99 pt 2:421-34; Discussion. 434-9 O '52

Marine electric whistle for ocean-going ships. il Engineering 175:735 Je 5 '53

Marine switchgear; Whipp & Bourne, ltd. il Elec R (Lond) 152:881-3 Ap 17 '53

Propulsion machinery and auxiliaries on the Mariners. il Marine Eng 58:109-10 My '53

Regulators for the marine industry. S. A. Haverstick. il diags Westinghouse Eng 13:130-4 Jl '53

Research and engineering progress, 1952; marine. il Gen Elec R 56:36 Ja '53

Servo mechanisms for ships. J. R. D. Walker. diags Engineering 174:706-8 N 28 '52

Transient performance of d-c machinery; abstract. J. Cybulski and others. Elec Eng 72:598 Jl '53

See also

Ship propulsion, Electric
Winches, Electric

Equipment

Aluminum marine furniture. il Light Metal Age 10:13 O '52

Cargo-handling gear and deck machinery; Mariner ships. il diag Marine Eng 58:94-8 My '53

SHIPS—Equipment—*Continued*

Chesapeake & Ohio operates largest Lakes carferry. il plans diags Marine Eng 58:42-57 Mr '53

How to control marine corrosion with galvanic anodes. R. D. Taylor. il Marine Eng 58: 69-73 Je '53

How to keep 'em sailing. R. O. Butcher and others. il diags Marine Eng 58:43-8 Jl; 79-83 Ag; 78-84 S; 70-5 O; 80-7 N '53

Hull fittings and equipment; safety features; Mariners. il diag Marine Eng 58:90-3 My '53

Institution of engineers and shipbuilders in Scotland; presidential address. W. Wallace. Engineering 174:711 N 28 '52

Magnesium anodes used to check hull corrosion. il Marine Eng 57:150+ D '52

Materials and equipment on the Mariner-class ships. Marine Eng 58:114-17 My '53

North Sea liner Leda. il plan Engineer 195: 695-8 My 15 '53; Engineering 175:662-3 My 22 '53

Passenger liner El Djezair. il Engineer 194: 230-1 Ag 15 '52

Post-war Italian liners; Andrea Doria. il Engineering 175:809-11, pl 26 Je 26 '53

Post-war Italian liners; Guilio Cesare. il Engineering 175:261-2, pl 5 F 27 '53

600-foot Lakes ore carriers built in East Coast shipyard. R. M. Cashman and C. E. Ericson. il plans diag Marine Eng 58:36-47 Ja; 70-5 F; 64-75 Mr; 69-75 Ap '53

Steamer Edward B. Greene becomes the new Cleveland-Cliffs flagship. il plans Marine Eng 57:38-50 N '52

Sun Oil enters supertanker field with Delaware Sun class ships. il plans diags Marine Eng 58:50-66 S '53

Twin-screw steamship Vigilant. il Engineer 196:106-7 Jl 24 '53

Ultralite insulation easily and quickly installed. il Marine Eng 58:124+ Je '53

Welding in marine engineering. H. N. Pemberton. diags Inst Mech Eng Proc (A) 167 no 1:48-61, pl 1-8 '53; Same abr. Engineering 175:73-6, 80, 122-5 Ja 16-23 '53; Same cond. Engineer 195:131-3, 160-2 Ja 23-30 '53

See also
Boilers, Marine
Nautical instruments
Radio apparatus on ships
Refrigeration on ships

Failure

Brittle fracture in steel; Iron and steel institute symposium. Engineering 176:70-3 Jl 17 '53

Brittle structural failures with emphasis on welded ships. J. O. Almen. il diags Product Eng 24:192-203 Ap '53

Failures and defects encountered in the construction of welded ships. R. D. Bradway. diags Welding J 31:1111-21 D '52

Fatigue in ship structures; summary and discussion. R. Weck. Engineer 195:559-60 Ap 17 '53

Initiation and propagation of brittle fracture in structural steels. P. P. Puzak and others. bibliog il diags Welding J 31: sup561-81 D '52

Investigation of structural failures of welded ships. M. L. Williams and G. A. Ellinger. bibliog(26 titles) il Welding J 32:sup498-527 O '53

Longitudinal strength of ships; welded vs. riveted ships. J. Turnbull. Engineering 174: 449-50, 483 O 3-10 '52; Discussion. 174:466, 498 O 10-17 '52; Engineer 194:479-80 O 10 '52

Structural failures in welded ships. il diags Welding J 32:sup342-6 Jl '53; Same cond. Engineer 195:856-8 Je 19 '53; Abstracts. Iron Age 171:148+ Mr 12 '53; Eng N 150:64 Ap 23 '53

Fires and fire protection

Fire protection in passenger ships; abstracts and discussion. J. Venus and E. C. B. Corlett. Engineer 194:523-4 O 17 '52; Engineering 174:690-1 N 28 '52

Liner Empress of Canada victim at Liverpool dock. Weekly Underw 168:328 Ja 31 '53

Safety on the United States. Mod Plastics 30:164+ S '52

World's safest floating art gallery; S.S. Andrea Doria. il Safety Maint & Prod 105:63-4 Mr '53

Fouling

See also
Paint, Antifouling

Heating and ventilation

Hull fittings and equipment; safety features; Mariners. il diag Marine Eng 58:90-3 My '53

Inspection

ABS explains its special surveys. S. Swan. il Marine Eng 58:60-3 Jl '53

Lighting

Developments in submarine and small vessel lighting. D. Farnsworth. il diags Illum Eng 47:616-21; Discussion. 621-2 N '52

Model testing

B.S.R.A. resistance experiments on the Lucy Ashton. J. F. C. Conn and others. diag Engineer 195:467-9, 488-90, 540-4 Mr 27-Ap 10 '53; Abstract. Engineering 175:469 Ap 10 '53; Discussion. Engineer 195:491-3 Ap 3 '53; Engineering 175:469-70, 503-4, 519-21 Ap 10-24 '53

Ship-model correlation; abstract. E. V. Telfer. Engineering 174:637; Discussion. 637-8 N 14 '52; Engineer 194:522-3 O 17 '52

Skin friction determination using wall-sided models of great draught; discussion. R. T. Shiells. Engineer 195:607-8 Ap 24 '53

Wake studies of plane surfaces; abstract. J. F. Allan and R. S. Cutland. Engineer 195:397 Mr 13 '53

Painting

See also
Paint, Antifouling

Performance

How Mariners perform on sea trials. il Marine Eng 58:111-13 My '53

Improvements in ship performance. J. F. Allan. Engineer 195:430-1 Mr 20 '53

Sea trials on a victory ship, AP3, in normal merchant service; summary and discussion. G. Aertssen. Engineer 195:662-3 My 8 '53; Engineering 175:806-7 Je 26 '53

Piping

Plastic pipe patches. il Mod Plastics 30:96 O '52

Prices

Secondhand ship values. Economist 167:49 Ap 4 '53

Radio equipment

See Radio apparatus on ships

Reconstruction

Design group in an American shipbuilding organisation. il Engineer 194:788-9 D 12 '52

Registration and transfer

Greeks, the Senator, and the slump. Bsns W p30 Ap 11 '53

Repair

Applying welding to ship repairs. S. Swan. diags Marine Eng 58:65-8 Ag '53

Divers complete hazardous repairs to ammunition ship. Marine Eng 58:68 Ag '53

Glass fiber laminations in cruiser's hull. il Materials & Methods 38:133 O '53

Industrial sculpture; stern frame and skeg flame-gouged from huge steel blocks. il Iron Age 171:153 My 14 '53

Tricky problems in welded ship repair. M. Forman. diags Welding J 32:715-20 Ag '53

Safety measures

See Safety at sea

Sanitation

Sanitation aboard American flag vessels. E. C. Garthe and H. W. Chapman. il diags Pub Health Rep 67:963-71 O '52

SHIPS—*Continued*

Speed

Raydist measures speed of ships. J. P. Comstock and C. E. Hastings. il diags Marine Eng 58:50-60 Je '53; Discussion. 58:58-60 Ja '53

See also
Hales trophy

Stability

Automatic ship stabilizer developed at Stanford university. Marine Eng 58:54 Ap '53

Investigation into the motions of ships at sea; abstracts. A. J. Williams. Engineering 174:798 D 19 '52; Engineer 194:589 O 31 '52; Discussion. Engineering 174:798, 819 D-19-26 '52; Engineer 194:589-90 O 31 '52

Steering gear

See Steering gear

Strains and stresses

Fatigue in ship structures; abstract and discussion. R. Weck. Engineering 175:648-9 My 22 '53

Instrument for indicating stresses in ships due to cargo distribution; Kelvin Hughes stress finder. il Engineering 175:425-6 Ap 3 '53

Longitudinal strength of ships; welded vs. riveted ships. J. Turnbull. Engineering 174:449-50, 483 O 3-10 '52; Discussion. 174:466, 498 O 10-17 '52; Engineer 194:479-80 O 10 '52

Stress finder for ship loading. il Engineer 194:329+ S 5 '52

Structural behaviour of the main engine seatings and bedplate in a cargo ship under static bending tests; abstract. A. J. Johnson and J. E. Richards. Engineering 174:755 D 12 '52

Testing

Design group in an American shipbuilding organisation. il Engineer 194:788-9 D 12 '52

Naval construction testing frame. Engineer 196:88 Jl 17 '53; il Engineering 176:115-16 Jl 24 '53

S.S. Ocean Vulcan sea trials. Welding J 32:sup528 O '53

See also
Ships—Model testing

Transportation

Trucks move boats in western Germany. il Eng N 150:84 Mr 26 '53

Vibration

Measurement of vibrations in ships; abstract and discussion. G. Villa. Engineering 174:658-9 N 21 '52

Water supply

See Water supply for ships

Windows

Kearfoot designs windows for steamship United States. il Marine Eng 57:56-8 N '52

SHIPS, Aluminum

Auxiliary cutter Coimbra. il Engineer 194:702-3 N 21 '52

SHIPS, Iron and steel

First iron steamer. H. P. Spratt. bibliog il Engineer 195:163-4 Ja 30 '53

SHIPS, Wooden

Building wooden ships for iron men; Higgins, inc. il Marine Eng 58:50-4 Ap '53

SHIPWRECKS

Blame for the Princess Victoria. Economist 167:839 Je 20 '53

January termed one of blackest months on record by British underwriters. Weekly Underw 168:652-3 Mr 7 '53

See also
Collisions at sea
Salvage

SHIPYARDS

See also
Navy yards and naval stations
Shipbuilding

Electric equipment

Development scheme for Falmouth docks. il Elec J 150:1068 Mr 27 '53; Elec R (Lond) 152:771-2 Ap 3 '53

Employees

Shipbuilding employment, 1948-1952; tabulation. Iron Age 171:443 Ja 1 '53

Equipment

Bethlehem gains safety and economy with steel staging. il Marine Eng 58:56-8 Jl '53

Portable heaters play vital role in meeting winter production schedules. il Marine Eng 57:110+ N '52

Management

Management techniques cut maintenance costs 20 per cent; Pearl Harbor naval shipyard. Factory Management 110:122-30 D '52

Safety measures

Shipyards increase safety and efficiency of production; illustrations with text. il Marine Eng 58:66-7 Ap '53

SHIRTS

Rating

Men's sport shirts. il Consumers Res Bul 32:5-10 Jl '53

SHOCK

Traumatic shock. J. Fine. il diags Sci Am 187:62-6+ D '52

SHOCK absorbers

Numerical analysis of damped vibrating systems. E. S. Ault and W. J. Graff, jr. diags Machine Design 25:169-74 My '53

Shock absorbers. J. W. Kinchin and C. R. Stock. diags Inst Mech Eng Proc (Auto div pt 2):67-78; Discussion. il 78-86 '51-52

SHOCK ignition engine. See Airplane engines—Ignition devices

SHOCK waves

Approximate solutions for the detached shock problem. S. F. Borg. J Aeronautical Sci 20:137-8 F '53

Atomic bomb blast waves. E. F. Cox. il Sci Am 188:94-6+ Ap '53

Chayen's impulse. diag Ind & Eng Chem 45: sup 11A+ Mr '53

Curved shocks in steady plane flow of an ideal fluid. C. Truesdell. J Aeronautical Sci 19:826-8 D '52

Diffraction of a shock or an electromagnetic pulse by a right-angled wedge. J. B. Keller. J Ap Phys 23:1267-8 N '52

Diffraction of strong shock waves. W. Griffith and D. E. Brickl. bibliog diags Phys R 89:451-3 Ja 15 '53

Experimental study of the formation of a vortex ring at the open end of a cylindrical shock tube. F. K. Elder, jr. and N. de Haas. bibliog il J Ap Phys 23:1065-9 O '52

Flow behind an attached curved shock. S. I. Pai. diag J Aeronautical Sci 19:734-42 N '52

Initial behavior of a spherical blast. J. A. McFadden. J Ap Phys 23:1269-75 N '52

Interaction of plane shock waves and rough surfaces. R. E. Duff. il diag J Ap Phys 23:1373-9 D '52

Method for location of detached shock waves ahead of plane bodies. R. W. Truitt. diag J Aeronautical Sci 20:61-2 Ja '53; Discussion. W. E. Moeckel. 20:36 My '53

Normal shock wave phenomena in a convergent-divergent nozzle. B. W. Martin. diags Roy Aeronautical Soc J 57:455-60 Jl '53

Production of high temperature gases in shock tubes. E. L. Resler and others. il diags J Ap Phys 23:1390-9 D '52

Shape and thickness of shock fronts in argon, hydrogen, nitrogen, and oxygen. E. F. Greene and D. F. Hornig. bibliog J Chem Phys 21:617-24 Ap '53

Shock ignition engine. F. F. Rand, jr. il diags Aeronautical Eng R 11:22-7+ O '52

Shock-wave effects on the laminar skin friction of an insulated flat plate at hypersonic speeds. T. Li and H. T. Nagamatsu. bibliog J Aeronautical Sci 20:345-55 My '53; Discussion. M. Z. v. Krzywoblocki. 20:799-800 N '53

Shock waves by test tube. il Steel 132:106-7 Je 29 '53

Shock waves expel cold fat; Chayen process. il Chem Eng 60:118+ F '53

Shock waves in chemical kinetics; the rate of dissociation of N_2O_4. T. Carrington and N. Davidson. bibliog il diags J Phys Chem 57:418-27 Ap '53

SHOCK waves—*Continued*

Shock waves in low pressure spark discharges. R. G. Fowler and others. il Phys R 88:137-8 O 1 '52

Some aspects of noise from supersonic aircraft. G. M. Lilley and others. bibliog il diags Roy Aeronautical Soc J 57:396-414 Je '53; Abstract. Engineering 175:439-40 Ap 3 '53

Transition through a weak shock front. P. Mandl. bibliog J Aeronautical Sci 20:151-2 F '53

Transonic flow past a wedge with detached shock wave. A. H. Armstrong and others. diags J Aeronautical Sci 19:715 O '52

Two routes to rendering; shock blast, flash heat. il Chem W 71:42+ D 20 '52

SHOE dressings

Rating

White shoe dressings. il Consumers Res Bul 32:27-8 Jl '53

SHOE factories

Management

Predetermined time values told us to break with tradition; H. H. Brown shoe co. il O. Woerner and J. Indeck. il Factory Management 110:88-9 N '52

SHOE industry and trade

Biggest shoemaker gets bigger. il Bsns W p 146-8 F 14 '53

Department openings are springboard for series of new in-store promotions. L. F. Thomann. il Ptr Ink 242:42-3 F 27 '53

Rounding out; International shoe co. Bsns W p88 F 7 '53

Shoe makers, exporters strengthen hide market. Barron's 33:35-6 My 4 '53

Egypt

Leathermaking in Egypt shows marked progress. For Comm W 49:13 Mr 2 '53

Germany

West German leather and shoe industries make new progress. For Comm W 50:10 Jl 27 '53

United States

What's behind mergers in shoe industry? J. D. C. Weldon. il Mag of Wall St 92:399+ Je 27 '53

SHOE machinery

Shoe decision aftermath. Bsns W p 140 Mr 14 '53

Shoe machines ordered on sale. Bsns W p41 F 28 '53

Shoe-soling machinery company; Auto-Soler. Fortune 46:182 D '52

SHOE polish

Packaged shoe shine; Gold seal co. il Mod Packaging 27:100-1 S '53

SHOEMAKER, Frank O.

F. O. Shoemaker joins Best company. por Safety Maint & Prod 105:26 Mr '53

SHOES

Uplift for footwear; Mishawaka rubber & woolen mfg. co. il Mod Packaging 26:165 Ap '53

Manufacture

See also
Shoe factories
Shoe machinery

SHOES, Rubber, plastic, etc.

Recent developments in footwear, 1952. B. H. Capen and others. bibliog il India Rubber World 128:199-202 My '53

Rubber footwear features safety. S. A. Hall. il Safety Maint & Prod 105:36-8 Ja '53

Use of GR-S in footwear; abstract. J. S. Kramer. Rubber Age 72:774 Mr '53

See also
Soles, Rubber

SHOES, Safety

Do you know the special safety contribution made by wooden sole shoes. M. G. Reece. il Safety Maint & Prod 105:33-5 F '53

Foot protection. il Nat Safety N 67:88+ Mr '53

Good customers for the shoe business. il Nat Safety N 66:122-3+ O '52

New trends in safety shoes. W. G. Greenan. il Safety Maint & Prod 104:18-20 D '52

No costly toe injuries in years; A. P. Green fire brick co. L. B. Hawthorne, jr. il Brick & Clay Rec 122:87-8 Mr '53

Plant shoe store safety salesman; Great Lakes steel corp. H. F. Reves. il Safety Maint & Prod 105:29-30 Mr '53

Rubber footwear features safety. S. A. Hall. il Safety Maint & Prod 105:36-8 Ja '53

Safety shoes can lower foot accidents 85 per cent in construction industry. Safety Maint & Prod 105:42 Ja '53

Stop foot accident losses. il Brick & Clay Rec 121:60-1 N '52

Urge safety shoes on construction work. H. B. Wallace. Nat Safety N 67:72 Ja '53

Versatile sole; neoprene crepe. il Safety Maint & Prod 105:29-30+ Je '53

What's their line? shoes designed to meet needs of certain jobs. il Nat Safety N 68:33+ Jl '53

SHOP management

See also
Job work
Machine shop management

SHOPLIFTING

Cracking down on shoplifters. il Bsns W p58+ N 1 '52

Houston finds a cure for shoplifting spate. Bsns W p56 Je 6 '53

How merchants in San Diego cut shoplifting. H. Waterman. Am Bsns 23:24 My '53

SHOPPING

See also
Market stores

SHOPPING areas

Test of law of retail gravitation. R. B. Reynolds. J Marketing 17:273-7 Ja '53; Discussion. P. D. Converse. 18:170-1; Reply. 172-4 O '53

SHOPPING centers

Air-conditioned shopping centers may spark new trend in design. il Eng N 150:44-5 F 12 '53

Big new shopping center; central plant supplies steam for heating, chilled water for air conditioning. J. B. Olivieri. diags Heating-Piping 25:102-6 S '53

Convenience is king in the new shopping centers. R. W. Welch. il Ptr Ink 241:50-3 D 12 '52

Financing shopping centers. V. Gruen. Comm & Fin Chr 177:1332+ Mr 26 '53

One-roof shopping center planned to be built on a 46-acre estate in Baltimore. il Eng N 150:57 Mr 12 '53

One-stop shopping; California style Town and country village shops, Sacramento. il plan Am Bld 74:94-5 O '52

Park Forest shopping center proves value of good planning. il plan diags Am Bld 74:107-11 S '52

Planned shopping centers; judging centers for business potential and standards to be met. V. Gruen. il Dun's R 61:37-8+ My '53

Planning a bank in a shopping center; Utica Square national bank, Tulsa. W. H. Dodson, jr. il Burroughs Clearing House 37:34-5+ Je '53

Shopping centers continue growth. il Eng N 150:44 Ap 2; 43-4 Ap 30 '53

Shopping goes suburban. Economist 165:752-3 D 13 '52

Successful shopping center banks. E. R. Lucas. il Banking 45:162-3 Mr '53

$35 million in shopping centers planned for Twin Cities area; other plans are reported from cities in Florida and Ohio. il Eng N 150:47 Ja 29 '53

Traffic problems in shopping centers; parking; parcel pick-up service. K. C. Welch and B. Funaro. il plans diags Arch Rec 112:223-8 O '52

Two-level shopping center in Wichita. il plans House & Home 2:140-3 S '52

SHOPPING habits. See Buying habits

SHOPS

Health and ventilation in an air conditioned shop; Humble oil and refining co. J. W. Hammond and R. J. Davis. il Heat & Ven 50:93-5 Ja '53

See also
Airlines—Shops
Car shops
Locomotive shops
Machine shops
Motor bus lines—Shops
Plumbing shops
Railroads—Shops
Sheet metal shops

SHORE lines

Shorelines of the glacial Great Lakes in Cook county, Minn. R. P. Sharp. bibliog maps diags Am J Sci 251:109-39, pl 1-2 F '53

See also

Continental shelf

SHORE protection

Lake Michigan erosion studies. J. R. Hardin and W. H. Booth, jr. map plan diags Am Soc C E Proc 78 [no 115]:1-12 F '52; Discussion. 78 [no D-115]:1-10 N '52

See also

Breakwaters

Levees

Rivers—Bank protection

SHORING and underpinning

School building corner modification. il Constr Methods 35:89-90 F '53

Shoring with steel scaffold cuts costs. il Civil Eng 22:883 O '52

SHORT, Dewey, 1898-

Portrait. Bsns W p28 N 8 '52

SHORT, Joseph H. 1904-1952

Joe Short, White House press secretary, dies. J. J. Butler. por Ed & Pub 85:8 S 27 '52

SHORT, Maxwell Naylor, 1889-1952

Memorial. E. D. McKee. bibliog por(pl 14) Geol Soc Proc 1952:137-8 Je '53

SHORT circuits

Branch feeder protection; low-voltage current limiting reactions. R. Bell. il Elec West 109:94-5 O '52

Flashing of d-c machines caused by short circuits; abstract. A. T. McClinton and J. P. O'Connor. Elec Eng 72:510 Je '53

How to calculate short circuits in your electrical system; maintenance data sheet. R. Loewe and P. F. Lovato. diag Factory Management 111:162+ O '53

Short cuts in short circuit calculations for plant systems; engineering reference sheet. F. E. Reeves. Elec World 138:154 N 17 '52

Significance of generator short-circuit ratio. C. M. Laffoon. Westinghouse Eng 12:207-8 N '52

SHORT line railroad association, American. See American short line railroad association

SHORT selling. See Stocks—Short selling

SHORTENING

Six-factor control assures quality deep fat-fried foods. R. W. Bates. il Food Eng 24:82-3+ D '52

SHOT blasting

Portable surface cleaning plant. il diag Engineer 194:392 S 19 '52

Shot blasts 430 cleaning costs; Washington steel corp. il Steel 132:86+ F 16 '53

SHOT effect. See Schottky effect

SHOT peening

Effect of shot peening and the fatigue life of steel. A. G. H. Coombs. il diags Engineering 174:545-6, 580-1 O 24-31 '52

Shot peening as a factor in the design of gears. J. C. Straub. Machine Design 23:178-80+ Je '51; Same cond. bibliog il Mech Eng 73:565-9 Jl '51; Same cond. Product Eng Hdbk p E28-30 '53; Discussion. Mech Eng 74:79-80 Ja '52

Shot peening coverage. H. H. Miller and P. H. Flynn. il S A E J 61:29-33 F '53

Shot peening in gear design; abstracts. J. C. Straub. Automotive Ind 109:68-9+ Jl 1 '53; Machine Design 25:294+ S '53

Where shot peening can be used to advantage. J. L. Everhart. il Materials & Methods 38:110-13 O '53

SHOULDER

Diseases

Management of bursitis of the shoulder in industry. B. Behrend and P. S. Friedman. il Ind Med 21:583-4 D '52

SHOVELING machines

Caterpillar's newest, the no. six shovel. il diag Constr Methods 35:132+ Ap '53

How on-job repairs cut shovel and scraper output. Roads & Sts 96:82 Jl '53

How the Illinois Central uses long-stick crawler shovels in widening cuts. il Ry Age 134:36-7 Ja 19 '53

Light tractor-operated shovel. il Engineer 194:667-8 N 14 '52

New two-cubic yard tractor shovel launched. il Eng N 150:122 Ap 23 '53

Outsize casting replaces fabricated chassis on big shovel. il Iron Age 170:181 N 13 '52

Series shunt capacitors reduce voltage dips of power shovel. T. Wren. il diag Elec World 139:144 Mr 23 '53

Steel walking crank of 30-cu. yd. shovel reclaimed. J. X. Merkt. il Welding J 32:864-5 S '53

Tractor can haul hydraulic pullshovel. il Eng N 150:96+ Ja 29 '53

Tractor shovels. R. D. Evans. il Constr Methods 35:88-9+ My; 109+ Je '53

What's behind 1,522,154 yards in one month? Georgetown no. 12 strip mine. A. E. Flowers. il Coal Age 58:80-7 O '53

See also

Buckets

Electric shovels

Advertising

Survey and new markets prove ad effectiveness for Hough. il Ind Marketing 37:44-5+ S '52

Manufacture

Advanced automatic flame cutting for machinery weldments; Marion power shovel co. H. B. Cary. il Welding J 32:957-65 O '53

SHOW rooms. See Showrooms

SHOW windows

Coronation showroom displays. il Elec R (Lond) 152:421 F 20 '53

Let's take the train; how a Kansas City department store tied in displays with Santa Fe. il Ry Age 135:19 S 21 '53

Lighting

Do they pass by your window? il diags Elec J 150:42-5 Ja 2 '53

SHOWER baths

Rubber diaphragm replaces metal nozzle in home shower head. il Product Eng 24:174-5 My '53

SHOWROOMS

How one space became four; showroom and offices for Scarves by Vera. il plans diags Arch Rec 113:159-64 F '53

How to turn your showrooms into sales rooms. N. Keine. il Ptr Ink 242:52-3 Mr 20 '53

Showroom and offices for Standard rug co. il plan Arch Rec 112:164-5 N '52

Successful showroom merchandising methods; Stevens, inc. R. Latimer. il Sheet Metal Worker 44:42-3 Je '53

See also

Plumbing shops—Showrooms

Lighting

Skilful use of lighting helps convert factory area to display rooms at low cost. il Illum Eng 48:173-4 Ap '53

SHRIMPS

Shrimp found in Newfoundland waters. For Comm W 48:18 O 6 '52

SHRIMPS, Frozen

Quick freezes and cartons shrimp at sea; Crossland fisheries. C. E. Wright. Food Eng 25:133 My '53

SHRINKAGE of ceramic materials

Unique firing shrinkage test. L. E. Gates, jr. diags Am Cer Soc Bul 32:354-5 O 15 '53

SHRINKAGE of metals

Design aid for shrink-fit calculations. S. Archer. Engineering 176:228-9 Ag 21 '53

Temperature for shrink fits; reference book sheet. T. Hicks. Am Mach 97:163 Ap 27 '53

SHRINKAGE of textiles

Now there's a way to relax and pre-shrink nylon. il Mod Textiles Mag 34:38 F '53

See also

Sanforizing

Textile fabrics—Shrinkage

SHRYOCK, James N.

Portrait. Bsns W cover O 25 '52

SHUTTLES

Standardize your shuttle size to improve weave-room operation. Textile World 103:127+ Jl '53

SIAM (Thailand)

Too much program; not enough action hinders U.S.-UN efforts in Siam. R. G. Lurie. Barron's 32:9-10 O 6 '52

See also

Railroads—Siam (Thailand)

SIAM (Thailand)—*Continued*

Economic conditions

Economic conditions abroad (cont). For Comm W 48:6 O 13; 5+ D 29 '52; 49:7 My 4 '53

Thai assembly passes big budget for 1953; new taxes considered. For Comm W 49:2 Ja 26 '53

SIARESINOLIC acid

Triterpenoids; some derivatives of siaresinolic acid. D. H. R. Barton and others. Chem Soc J p3751-9 O '52

SIBERIA

Soviet Arctic. map Economist 166:341-2 F 7 '53

SICK leave

Issue clarification of court decision on sick leave pay. Nat Underw 57:8 Ap 9 '53; Same. Nat Underw (Life ed) 57:7 Ap 10 '53

SICKNESS

87 per cent of personal sickness not insured, new SS study shows; reviews costs. Nat Underw (Life ed) 57:4 Ja 2 '53

Planning better coverage for prolonged-illness; with tables. G. Hirschfeld. Spectator 161:10-14+ F '53

Report issued on study of prolonged non-occupational illness. Weekly Underw 167:1706 D 27 '52; Same. Safety Maint & Prod 105:38+ F '53; Same cond. Nat Underw 56:29 D 18 '52; Same cond. Nat Underw (Life ed) 56:12 D 19 '52

See also

Diseases
Insurance, Health
Medical service
Mortality
Public health

Statistics

Industrial sickness absenteeism; rates for specific causes in 1951 and half of 1952. Pub Health Rep 68:353-7 Mr '53

Morbidity and mortality experience among chromate workers; respiratory cancer and other causes. H. P. Brinton and others. Pub Health Rep 67:835-47 S '52

Sampling and field procedures of the Pittsburgh morbidity survey. D. G. Horvitz. bibliog Pub Health Rep 67:1003-12 O '52

SIDE lines

Can't keep a sideline own. Bsns W p 176+ Ap 11 '53

SIDEWALKS

Built-in sidewalk lighting. il Illum Eng 47:657 D '52

Sidewalk patching need not be a headache. G. E. Huey. il Pub Works 84:67+ Ap '53

SIDING (building)

Wood siding left to weather naturally. F. L. Browne. il Arch Rec 112:197-9 N '52

SIDLER, Paul R.

Portrait. Bsns W p 150 Je 13 '53

SIFTING machines

Small sifting machine. il Engineer 194:629 N 7 '52

SIGHT

Are we confusing eyes with vision? D. B. Haron. Illum Eng 48:209-11; Discussion. 211-12 Ap '53

Brightness difference; basic factor in supra-threshold seeing. S. K. Guth and others. il Illum Eng 48:233-7; Discussion. 237-9 My '53

Corrected vision aids plant safety, survey reveals. J. C. Stennett. Weekly Underw 168:512 F 21 '53

Correction of low intensity luminance functions for the Purkinje effect. C. S. Bridgman. bibliog Opt Soc Am J 42:832-6 N '52

Effect of a peripheral glare source upon the apparent brightness of an object. G. A. Fry and M. Alpern. diags Opt Soc Am J 43:189-95 Mr '53

Effect on foveal vision produced by a spot of light on the sclera near the margin of the retina. G. A. Fry and M. Alpern. diag Opt Soc Am J 43:187-8 Mr '53

Light, vision and accidents. H. L. Logan. il Nat Safety N 66:112-13+ O '52

Nervous reactions of the retina; abstract. E. D. Adrian. Elec J 150:458 F 6 '53

Orientation reflex; abstract. H. L. Logan. Illum Eng 48:482-3 S '53

Peripheral contrast thresholds for various and different wavelengths for adapting field and test stimulus. M. A. Bouman. diag Opt Soc Am J 42:820-31 N '52

Photopic luminosity curve for a group of fifteen Egyptian trichromats. I. G. H. Ishak. bibliog Opt Soc Am J 42:529-34 Ag '52

Prone flight vision. G. O. Emerson. Aero Digest 66:98-101 My '53

Studies of psychophysical methods for measuring visual thresholds. H. R. Blackwell. Opt Soc Am J 42:606-16 S '52

Tool-up the working eye. il Safety Maint & Prod 106:15-16+ Ag '53

Visibility of black objects against an illuminated background. M. A. Bouman and E. W. M. Blokuis. diag Opt Soc Am J 42:525-8 Ag '52

Vision at high speed and altitude. V. A. Byrnes. bibliog Aeronautical Eng R 12:61-4+ Ap '53

Visioneering; a new concept in industrial lighting. P. Hildebrand. il Elec World 139:100-2+ F 23 '53

Visual fatigue; abstract. H. C. Weston. Elec J 149:1832 D 12 '52

Visual thresholds for line-shaped targets. M. A. Bouman. Opt Soc Am J 43:209-11 Mr '53

Why lighting is protection! H. L. Logan. map diags Safety Maint & Prod 106:18-20+ Ag '53

See also

Blind
Color blindness
Color sense
Eye
Optics, Physiological
Visibility

SIGMA delta chi

Hills appoints committees. Ed & Pub 86:44 F 21 '53

SDX offers to sponsor study of campaign news. R. U. Brown. Ed & Pub 85:7+ N 29 '52

SIGNAL hill telecasting corporation

Turning an idea into a tv station. Bsns W p 152+ F 14 '53

SIGNALS and signaling

See also

Electric signals
Fire alarms
Light signals
Radio signals
Railroads—Signals
Traffic signals

SIGNIFICANT difference (statistics)

Introduction to statistical cost control. L. W. Smith, jr. N A C A Bul 34:509-15 D '52

SIGNS

Big fly sign took plenty of groundwork. J. Zaniboni. diag Cer Ind 61:53 Ag '53

Do you believe in signs? M. B. Andrews. il Textile World 103:164+ Ja '53

Get your company's name out in the open; factory names are necessary as house numbers. il Mill & Factory 51:126-7 N '52

Makes blacklight signs in porcelain enamel. il Cer Ind 59:64-5 D '52

Porcelain enamel; sign letters; with timesaver standards. H. Edelman. diags Arch Rec 112:203 Ag; 217 S '52

See also

Electric signs
Railroads—Signs, markings, etc.
Road signs
Safety signs

SIKORSKY, Igor Ivan, 1889-

Sikorsky S-55. il diags Aero Digest 66:26-32+ F '53

SILANE

Alkaline cleavage of tetrasubstituted silanes. H. Gilman, A. G. Brook and L. S. Miller. bibliog Am Chem Soc J 75:4531-4 S 20 '53

Analogs of hexaphenylethane; hexaaryldisilanes containing phenyl and *p*-tolyl groups. H. Gilman and T. C. Wu. bibliog Am Chem Soc J 75:3762-5 Ag 5 '53

Assignment of frequencies for the methyl halomethanes and silanes $(CH_3)XY_3$, $(CH_3)_2XY_2$ and $(CH_3)_3XY$. M. C. Tobin. bibliog Am Chem Soc J 75:1788-90 Ap 20 '53

Chlorophenylsilanes. C. A. Burkhard. Am Chem Soc J 74:6275-6 D 20 '52

Crystal structure of diethylsilanediol and its hydroxyl groups. M. Kakudo and T. Watase. diag J Chem Phys 21:167-8 Ja '53

Dimethylvinylethoxysilane and methylvinyldiethoxysilane. M. Cohen and J. R. Ladd. Am Chem Soc J 75:988 F 20 '53

Formation of tetraphenylsilane from reactions involving triphenylsilylpotassium. H. Gilman and T. C. Wu. bibliog Am Chem Soc J 75:2509-10 My 20 '53

SILANE—*Continued*

Functional aromatic silanes. K. C. Frisch and P. D. Shroff. bibliog Am Chem Soc J 75:1249-50 Mr 5 '53

Hydrogen chloride cleavage of some trimethylarylsilanes. R. A. Benkeser and H. R. Krysiak. bibliog Am Chem Soc J 75:4528-31 S 20 '53

Hydrogen isotope effect in the hydrolysis of triphenylsilane. L. Kaplan and K. E. Wilzbach. Am Chem Soc J 74:6152-3 D 5 '52

Hydrolysis of methoxysilanes; dimethylsilanediol. S. W. Kantor. bibliog Am Chem Soc J 75:2712-14 Je 5 '53

Infrared and Raman spectra of SiH_2Cl_2. J. H. Hawkins and M. K. Wilson. bibliog J Chem Phys 21:360-2 F '53

Infrared spectrum of methyltrichlorosilane. L. Burnelle and J. Duchesne. J Chem Phys 20:1324 Ag '52

Interesting side-reaction in the preparation of triphenylvinylsilane. L. F. Cason and H. G. Brooks. bibliog Am Chem Soc J 74:4582-3 S 20 '52

Methylisocyanosilanes. J. J. McBride, jr. and H. C. Beachell. bibliog Am Chem Soc J 74:5247-50 N 5 '52

Nitration of trimethylphenylsilane. J. L. Speier. bibliog Am Chem Soc J 75:2930-1 Je 20 '53

Partial hydrolysis of hexachlorodisilane. W. C. Schumb and R. A. Lefever. Am Chem Soc J 75:1513 Mr 20 '53

Preparation and reactions of α-halo derivatives of certain tetra-substituted hydrocarbon silanes; Grignard syntheses of some silyl compounds. C. R. Hauser and C. R. Hance. bibliog Am Chem Soc J 74:5091-6 O 20 '52

Raman spectra of hexamethyldisilane and hexamethyldisiloxane. H. Murata and M. Kumada. J Chem Phys 21:945 My '53

Reaction of sodium with organosilanes at elevated temperatures. R. A. Benkeser and D. J. Foster. bibliog Am Chem Soc J 74:5314-17 N 5 '52

Reactions of vinyltrichlorosilane and vinyltriethoxysilane. G. H. Wagner and others. bibliog Ind & Eng Chem 45:367-74 F '53

Silanol derivatives of the dimethyl substituted organosilicon compounds. J. F. Hyde. bibliog Am Chem Soc J 75:2166-7 My 5 '53

Silicon-containing aromatic phosphorus derivatives. K. C. Frisch and H. Lyons. Am Chem Soc J 75:4078-9 Ag 20 '53

Some reactions of pentaphenylchlorodisilane. H. Gilman and J. J. Goodman. bibliog Am Chem Soc J 75:1250-2 Mr 5 '53

Synthesis and properties of some alkylsilanes. S. Tannenbaum, S. Kaye and G. F. Lewenz. bibliog Am Chem Soc J 75:3753-7 Ag 5 '53

Synthesis of (arylthioalkyl)- and (arylsulfonylalkyl)-silanes. H. Gilman, L. F. Cason and H. G. Brooks, jr. bibliog Am Chem Soc J 75:3760-2 Ag 5 '53

Synthesis of 3,5-dibromophenylsilanes. C. R. Morgan, H. A. Hoffman and F. E. Granchelli. Am Chem Soc J 75:4602-4 S 20 '53

Tetra-substituted aryl silanes. H. Gilman, A. G. Brook and L. S. Miller. bibliog Am Chem Soc J 75:3757-9 Ag 5 '53

True identity of the solvated free radical triphenylsilicyl ethylammine; the multiple addition of lithium to an aromatic system in ethylamine. R. A. Benkeser, R. E. Robinson and H. Landesman. Am Chem Soc J 74:5699-701 N 20 '52

Vibrational spectra of $SiHCl_3$, SiH_2Cl_2, and SiH_2Br_2. J. A. Hawkins and others. J Chem Phys 21:1122 Je '53

See also
Bromosilane
Chlorosilane

SILANEDIOL

Dialkylsilanediols. P. D. George, L. H. Sommer and F. C. Whitmore. bibliog Am Chem Soc J 75:1585-8 Ap 5 '53

SILANOLS. See Silicols

SILAZANES

Electron diffraction investigation of hexamethylcyclotri- and octamethylcyclotetrasilazanes. M. Yokoi and K. Yamasaki. Am Chem Soc J 75:4139-41 S 5 '53

SILENCERS

How air intake was silenced at Lever House. M. Hirschorn. il Heating-Piping 25:92-2 Ag '53

SILICA

Activated silica as a coagulant aid in water purification. il Munic Util 91:32-3+ S '53

Activated silica treatment of raw and waste waters. A. B. Middleton. bibliog flow diags il Water & Sewage Works 100:85-7 F '53

Activation of silica for use in water treatment. C. A. Black. Am Water Works Assn J 45:1101-7 O '53; Abstract. Water & Sewage Works 100:265 Jl '53; Discussion. A. E. Griffin. Am Water Works Assn J 45:1107-9 O '53; Water & Sewage Works 100:265 Jl '53

Deionization yields low-silica feedwater. il diag Power Eng 57:60-1+ F '53

Determination of electrokinetic charge and potential by the sedimentation method; silica in some aqueous chloride solutions. C. I. Dulin and G. A. H. Elton. Chem Soc J p 1168-72 Ap '53

Determinations of electrokinetic charge and potential by the sedimentation method; silica in conductivity water and aqueous nitrate solutions. D. P. Benton, G. A. H. Elton and C. I. Dulin. Chem Soc J p2096-101 Jl '53

Glaze investigations; effect of various silicas in typical glazes. R. Russell, jr. and R. R. Rowlands. bibliog Am Cer Soc J 36:1-8 Ja 1 '53

Hydraulic methods for underground mining of silica sand. A. D. Bryant. il diag Min Eng 5:282-3 Mr '53; Abstract. Rock Prod 55:118+ O '52

Mechanism of the hydrothermal transformation of silica glass to quartz under isothermal conditions. J. F. Corwin and others. bibliog Am Chem Soc J 75:3933-4 Ag 20 '53

Phase equilibrium investigation of the Na_2O-P_2O_5-SiO_2 ternary system. E. T. Turkdogan and W. R. Maddocks. 3pls diags Iron & Steel Inst J 172:1-15 S '52

Silica micro-balance; its construction and manipulation, and the theory of its action. R. S. Bradley. bibliog diags J Sci Instr 30:84-9 Mr '53

Silica sols. K. C. Bryant and S. Baxter. Chem Soc J p3017-27 Ag '52

Studies in the terpene series; skeletal isomerization and hydrogen transfer of cyclic olefins in the presence of alumina-hydrogen chloride and silica-alumina catalysts. H. Pines, R. C. Olberg and V. N. Ipatieff. bibliog Am Chem Soc J 74:4872-6 O 5 '52

Temperature dependence of the elastic moduli and internal friction of silica and glass. J. W. Marx and J. M. Sivertsen. bibliog diags J Ap Phys 24:81-7 Ja '53

Thermal conductivity measurements on silica. B. P. Colosky. diag Am Cer Soc Bul 31:465-6 N 15 '52

Viscosity studies of system CaO-MgO-Al_2O_3-SiO_2; 35, 45, and 50 percent SiO_2. J. S. Machin and others. Am Cer Soc J 35:322-5 D 1 '52

See also
Diatomaceous earth
Quartz
Sand

Analysis

Determination of heavy metals and silica in chromate-treated cooling waters. S. Sussman and I. L. Portnoy. bibliog Anal Chem 24:1644-6 O '52

Photometric determination of silica in alkalies. O. A. Kenyon and H. A. Bewick. bibliog Anal Chem 25:145-8 Ja '53

Physico-chemical studies on dusts; accuracy of chemical estimation of free silica in rocks and mineral dusts. W. M. Cumming, P. B. Dempster and P. D. Ritchie. bibliog J Ap Chem 2:658-63 N '52

Spectrographic method for analysis of cracking catalysts. C. W. Key and G. D. Hoggan. bibliog Anal Chem 24:1921-5 D '52

SILICA, Fused

Compressibility of vitreous silica. H. T. Smyth and others. Am Cer Soc J 36:238-40 Jl 1 '53

Fused quartz; applications in the CPI, physical and mechanical properties, and the chemical resistance. J. Gialanella. il Chem Eng 60:302+ Ap '53

SILICA, Fused—*Continued*

Fused quartz; versatile industrial material. F. E. Wright. il Materials & Methods 37:98-100 F '53

Permeability and solubility of He^3 and He^4 in vitreous silica. W. M. Jones. bibliog diag Am Chem Soc J 75:3093-6 Jl 5 '53

Study of the structure of quartz, cristobalite, and vitreous silica by reflection in infra-red. I. Šimon and H. O. McMahon. bibliog diags J Chem Phys 21:23-30 Ja '53

Thermal capacity of vitreous silica. H. T. Smyth and others. Am Cer Soc J 36:327-8 O 1 '53

SILICA brick

Pre-shaped brick saves 70 per cent on labor. il Brick & Clay Rec 121:58 D '52

Properties and uses of semisilica brick. G. B. Remmey. il diag Iron & Steel Eng 30:94-100; Discussion. 100-2 My '53

Refractory trends in the glass industry. R. G. Abbey. il Am Cer Soc Bul 32:110-13 Ap 15 '53

Silica refractories perform under extreme conditions. Brick & Clay Rec 121:61 D '52

Study of silica brick from a glass tank crown. E. S. Chrzan and others. il Am Cer Soc J 35:173-81 Jl 1 '52; Abstract. Glass Ind 33:603 N '52

Manufacture

Control system problems with semisilica brick. G. B. Remmey. il diag Am Cer Soc Bul 32:70-3 Mr 15 '53

Down in the land of pure silica we modernized for profit; Cambria clay products co. H. S. DeHart. il Brick & Clay Rec 123:72-3+ Ag '53

New silica refractories plant built at Windham, Ohio. il Iron & Steel Eng 30:124+ Ag '53; Brick & Clay Rec 123:69-72+ S '53; Foundry 81:186+ S '53; Blast F & Steel Pl 41:1187-92 O '53; Metal Prog 64:161-4+ O '53

Processing silica for refractory brick; Harbison-Walker refractories co. flow sheet il Rock Prod 56:114+ S '53

Push-button plant. il Am Cer Soc Bul 32:328-9 S 15 '53

Silica brick and the new Harbison-Walker plant at Windham. F. W. Preston. il Glass Ind 34:497 S '53

SILICA gel

Action of carbon tetrachloride on silica gel. R. K. Taylor. Am Chem Soc J 75:2521-2 My 20 '53

Adsorption of ions from buffer solutions by silica, alumina and silica-alumina gels. C. J. Plank. bibliog diag J Phys Chem 57:284-90 Mr '53

Bound water in silica gel. I. Shapiro and H. G. Weiss. bibliog J Phys Chem 57:219-21 F '53

Colored complexes with inorganic salts mounted on silica gel. H. A. Benesi. Am Chem Soc J 75:2250-1 My 5 '53

Control of physical structure of silica-alumina catalyst. K. D. Ashley and W. B. Innes. bibliog il Ind & Eng Chem 44:2857-63 D '52

Determination of sulfur dioxide by color-changing gels. G. D. Patterson, jr. and M. G. Mellon. bibliog Anal Chem 24:1586-90 O '52

Dielectric dispersion of water vapor absorbed on silica gel. K. Kamiyoshi and T. Odake. bibliog J Chem Phys 21:1295-6 Jl '53

Heat conduction and isotherms of adsorbed helium on silica gel. D. White and others. bibliog J Chem Phys 20:1819-20 N '52

Infrared spectra of heavy water adsorbed on silica gel. G. C. Pimentel, C. W. Garland and G. Jura. diag Am Chem Soc J 75:803-5 F 20 '53

Mills use colloidal silica to make better wool emulsions. il Textile World 103:119 F '53

Proposed method of test for hydrocarbon type analysis of Diesel fuels by silica gel adsorption. diag Am Soc T M Proc 50:271-5 '50

Removal and recovery of traces of ethylene in air by silica gel. F. Stitt and Y. Tomimatsu. bibliog diag Anal Chem 25:181-3 Ja '53

Silica aerogel-thickened greases. E. C. Milberger and L. J. Swatik. Oil & Gas J 51:55-6 Ja 5 '53

Silica gel removes aromatics. diag Chem Eng 60:374 F '53

Sorption of amines by silica gels. M. J. Brown and A. G. Foster. bibliog J Phys Chem 56:733-7 Je '52

Trends in dehydrated packaging; use of desiccants in military and non-military packages. R. H. Herrmann. il Mod Packaging 26:200-4 Ap '53

SILICATE research, Institute of. See Institute of silicate research

SILICATES

t-Alkyl-*n*-alkyl orthosilicates. P. D. George and J. R. Ladd. Am Chem Soc J 75:987-8 F 20 '53

Hydrothermal chemistry of silicates; reactions of analcite and leucite. R. M. Barrer, L. Hinds and E. A. White. Chem Soc J p 1466-75, pl 1-7 My '53

List of systems investigated at geophysical laboratory. L. H. Adams. Am J Sci Bowen vol p 1-26 bibliog(156 titles, p 19-26) '52

Prospective chemistry of cement and concrete. N. C. Rockwood. diags Rock Prod 56:110+ Mr; 101-3 Je '53

Temperature scales and silicate research. R. B. Sosman. Am J Sci Bowen vol p517-28 '52

See also

Calcium silicates
Glass
Melilite
Mica
Pyroxenes
Sericite
Sodium silicates
Staurolite
Talc
Vermiculite
Wollastonite

Testing

Interferometer procedure applied to the study of the chemical durability of silicates, enamels, and metals. R. G. Pike and D. Hubbard. bibliog J Res Nat Bur Stand 50:87-93 F '53

SILICIC acid

Association between polysilicic acid and polar organic compounds. R. K. Iler. bibliog J Phys Chem 56:673-7 Je '52

Polymerization of polysilicic acid derived from 3.3 ratio sodium silicate. R. K. Iler. bibliog J Phys Chem 57:604-7 Je '53

Polymerization of silicic acid; catalytic effect of fluoride. R. K. Iler. bibliog J Phys Chem 56:680-3 Je '52

Polymerization of silicic acid; retarding effect of chromate ion. R. K. Iler. J Phys Chem 56:678-9 Je '52

Preparation of monosilicic acid. G. B. Alexander. bibliog Am Chem Soc J 75:2887-8 Je 20 '53

SILICIDES

Silicides of rhenium. A. W. Searcy and R. A. McNees, jr. bibliog Am Chem Soc J 75:1578-80 Ap 5 '53

Superconducting silicides and germanides. G. F. Hardy and J. K. Hulm. Phys R 89:884 F 15 '53

SILICOLS

Physical properties of organosilicon compounds; trimethylsilanol and triethylsilanol. W. T. Grubb and R. C. Osthoff. bibliog Am Chem Soc J 75:2230-2 My 5 '53

SILICON

Appraisal of silicon and its alloys. W. R. Johnson and M. Hansen. il Metal Prog 63:105-9 F '53

Atomic heat of silicon below 100°K. N. Pearlman and P. H. Keesom. bibliog Phys R 88:398-405 O 15 '52

C_p-C_v in silicon and germanium. M. E. Fine. bibliog J Chem Phys 21:1427 Ag '53

Contamination of silicon ingots. G. Sandoz and H. E. Stauss. J Metals 5:Trans 653 My '53

Crystallization of silicon from a floating liquid zone. P. H. Keck and M. J. E. Golay. il Phys R 89:1297 Mr 15 '53

Diffusion of lithium into germanium and silicon. C. S. Fuller and J. A. Ditzenberger. bibliog Phys R 91:193 Jl 1 '53

Diffusion of silicon in iron. W. Batz and others. bibliog J Metals 4:Trans 1070 O '52

Du Pont develops process for manufacturing pure silicon. Elec Eng 72:662 Jl '53

Effect of neutron bombardment on the low temperature atomic heat of silicon. P. H. Keesom and others. bibliog Science 116:630-1 D 5 '52

Effect of silicon on the tempering of martensite; abstract. A. G. Allten and P. Payson. Metal Prog 62:134 N '52

SILICON—*Continued*

Electron multiplication in silicon and germanium. K. G. McKay and K. B. McAfee. bibliog Phys R 91:1079-84 S 1 '53

Electron spin resonance in a silicon semiconductor. A. M. Portis and others. Phys R 90:988-9 Je 1 '53

Energy band structure in silicon crystal. E. Yamaka and T. Sugita. Phys R 90:992 Je 1 '53

Infrared photoconductivity due to neutral impurities in silicon. E. Burstein and others. Phys R 89:331-2 Ja 1 '53

Mobility of holes and electrons in high electric fields. E. J. Ryder. diag Phys R 90:766-9 Je 1 '53

New photoelectric devices utilizing carrier injection. K. Lehovec. bibliog diags Inst Radio Eng Proc 40:1407-9 N '52

Paramagnetic resonance in *N*- and *P*-type silicon. F. K. Willenbrock and N. Bloembergen. Phys R 91:1281 S 1 '53

Photoelectric properties of ionically bombarded silicon. E. F. Kingsbury and R. S. Ohl. il diags Bell System Tech J 31:802-15 Jl '52; Abstract. Wireless Eng 29:311-12 D '52

Plastic deformation of germanium and silicon. G. J. Gallagher. il Phys R 88:721-2 N 15 '52

Plastic deformation of silicon and germanium; abstract. R. G. Treuting. J Metals 4:1044 O '52

Plasticity of silicon and germanium. F. Seitz. bibliog Phys R 88:722-4 N 15 '52

Properties of silicon and germanium. E. M. Conwell. bibliog Inst Radio Eng Proc 40:1327-37 N '52

Reduction of silicon from blast furnace type slags. J. C. Fulton and others. bibliog diags J Metals 5:Trans 185-90 F '53

Silicon-containing azo dyes; dyeing properties and lightfastness. S. V. Sunthankar and H. Gilman. bibliog Textile Res J 23:53-8 Ja '53

Silicon content of blast furnace iron lowered by oxygen injection in ladle. P. S. Leroy. bibliog diags J Metals 5:396-400 Mr '53

Silicon *p-n* junction alloy diodes. G. L. Pearson and B. Sawyer. bibliog il Inst Radio Eng Proc 40:1348-51 N '52

Silicon; uses, outlook, price and suppliers, etc. il map Iron Age 170:282-3 O 9 '52

Solubility of silicon and germanium in gallium and indium. P. H. Keck and J. Broder. Phys R 90:521-2 My 15 '53

Studies in the deoxidation of iron; deoxidation by silicon. E. L. Evans and H. A. Sloman. bibliog pl Iron & Steel Inst J 172:296-300 N '52

Surface tension at elevated temperatures; furnace and method for use of the sessile drop method; surface tension of silicon, iron and nickel. W. D. Kingery and M. Humenik, jr. bibliog diags J Phys Chem 57:359-63 Mr '53

Surface tension of liquid silicon and germanium. P. H. Keck and W. Van Horn. Phys R 91:512-13 Ag 1 '53

Temporary traps in silicon and germanium. J. R. Haynes and J. A. Hornbeck. Phys R 90:152-3 Ap 1 '53

Thermal treatment of silicon rectifiers. L. Esaki. Phys R 89:398-9 Ja 15 '53

Transistors; theory and application; transistor action in germanium and silicon. A. Coblenz and H. L. Owens. il diags Electronics 26:166-71 Je '53

Analysis

Photometric determination of silicon in ferrous, ferromagnetic, nickel, and copper alloys; a molybdenum blue method. C. L. Luke. bibliog Anal Chem 25:148-51 Ja '53

Isotopes

Energy levels in Si^{28} excited by alpha-particles on Mg^{24}. S. G. Kaufman and others. Phys R 88:673-6 N 1 '52

Isotopic constitution of silicon, germanium, and hafnium. J. H. Reynolds. bibliog Phys R 90:1047-9 Je 15 '53

Magnetic moments of Si^{29}, S^{33}, Zn^{67}, As^{75}, Se^{77}, Te^{123}, and Te^{125}. H. E. Weaver, jr. bibliog il diags Phys R 89:923-30 Mr 1 '53

Mass difference Si^{27}-Al^{27}. J. D. Kington and others. Phys R 89:530 Ja 15 '53

New nuclides produced in chlorine spallation. M. Lindner. Phys R 91:642-4 Ag 1 '53

Search for Si^{32} in natural silicon. A. Turkevich and A. Tompkins. Phys R 90:247 Ap 15 '53

States of S^{33} and Si^{29} from (d,p) stripping. J. R. Holt and T. N. Marsham. Phys R 89:665-6 F 1 '53

SILICON alcoholates

Structural chemistry of the alkoxides; normal alkoxides of silicon, titanium, and zirconium. D. C. Bradley and others. Chem Soc J p2025-30 Jl '53

SILICON alloys

Appraisal of silicon and its alloys. W. R. Johnson and M. Hansen. il Metal Prog 63:105-9 F '53

Distribution of sodium in modified Al-Si alloys. A. B. Michael and M. B. Bever. bibliog il J Metals 5:Trans 679-80 My '53

Elastic constants of Cu-4 percent Si. C. S. Smith and J. W. Burns. bibliog J Ap Phys 24:15-18 Ja '53

Premixed alloy. Bsns W p50+ Mr 28 '53

See also

Iron alloys—Silicon alloys

SILICON bronze

Silicon bronze weldment replaces cast iron in Venturi fabrication. il Am Mach 97:199 Mr 16 '53

SILICON carbide

Contribution to the theory of the silicon carbide contact. E. Holm. bibliog il diags J Ap Phys 23:509-17 My '52

Economic factors must govern wheel selection for grinding carbides. F. J. Lennon, jr. il diag Am Mach 97:165-70 F 16 '53

Electronic conduction in silicon carbide. J. T. Kendall. bibliog il diags J Chem Phys 21:821-7 My '53

How sharp are carbide tools finished with silicon carbides? J. C. Redmond. il Am Mach 97:120 Ag 3 '53

Identification of certain iron-silicon carbides. W. S. Owen and B. G. Street. bibliog 2pls Iron & Steel Inst J 172:15-18 S '52; Discussion. W. I. Pumphrey. il 174:31-2 My '53

Light emission produced by current injected into a green silicon-carbide crystal. K. Lehovec and others. bibliog il Phys R 89:20-5 Ja 1 '53

Silicon carbide deoxidation practice grows. Iron Age 171:105 Ja 22 '53

Silicon carbide heating elements; development, uses, chemical and physical investigations. T. H. Elmer. bibliog Am Cer Soc Bul 32:23-5; Discussion. B. A. Bovee. 26-7 Ja 15 '53

Silicon-carbide wheels for carbide grinding. A. Ashburn. il Am Mach 97:142-4 Ap 27 '53

SILICON chlorides

Catalytic process yields polysilicon chlorides. Chem Eng 60:144+ Ap '53

Lower chlorides of silicon. E. G. Rochow and R. Didtschenko. bibliog diag Am Chem Soc J 74:5545-6 N 5 '52

New method for producing silicon chlorides. Can Chem Process 37:62 Mr '53

SILICON compounds

Acetylenic silicon derivatives. K. C. Frisch and R. B. Young. Am Chem Soc J 74:4853-6 O 5 '52

Addition of triphenylsilylpotassium to *trans*-stilbene. H. Gilman and T. C. Wu. Am Chem Soc J 75:234 Ja 5 '53

Bond refraction for compounds of tin, silicon, lead, mercury, and germanium. W. T. Cresswell and others. Chem & Ind p 19 Ja 3 '53

Electric moments and structures of organosilicon compounds. H. Freiser, M. V. Eagle and J. Speier. bibliog Am Chem Soc J 75:2821-7 Je 20 '53

Exchange reactions in volatile isocyanates and isothiocyanates of silicon, germanium and phosphorus. H. H. Anderson. bibliog Am Chem Soc J 75:1576-8 Ap 5 '53

Fragments of chemistry; silicon, germanium, and tin. C. A. Kraus. J Chem Educ 29:488-91 O '52

Organosilicon compounds; some sterically hindered compounds. C. Eaborn. Chem Soc J p2840-6 Jl '52

SILICON compounds—*Continued*

Organosilicon compounds; the preparation of organofluorosilanes. C. Eaborn. Chem Soc J p2846-9 Jl '52

Organosilicon compounds; the reaction between organofluorosilanes and aluminium halides. C. Eaborn. Chem Soc J p494-501 F '53

Physical properties of organosilicon compounds; hexamethylcyclotrisiloxane and octamethylcyclotetrasiloxane. R. C. Osthoff, W. T. Grubb and C. A. Burkhard. bibliog Am Chem Soc J 75:2227-9 My 5 '53

Physical properties of organosilicon compounds; trimethylsilanol and triethylsilanol. W. T. Grubb and R. C. Osthoff. bibliog Am Chem Soc J 75:2230-2 My 5 '53

Reactions of triphenylsilylpotassium with benzophenone and with 4,4'-dimethylbenzophenone. H. Gilman and T. C. Wu. bibliog Am Chem Soc J 75:2935-6 Je 20 '53

Reactions of vinyltrichlorosilane and vinyltriethoxysilane. G. H. Wagner and others. bibliog Ind & Eng Chem 45:367-74 F '53

Relationships between analogous organic compounds of silicon and carbon. H. Gilman and G. E. Dunn. Chem R 52:77-115 bibliog(p 110-15) F '53

Silanol derivatives of the dimethyl substituted organosilicon compounds. J. F. Hyde. bibliog Am Chem Soc J 75:2166-7 My 5 '53

Water repellent textiles treated with silicone oil emulsions; patent. Am Dyestuff Rep 42:18 Ja 5 '53

See also

Silane	Silicones
Silica	Siloxanes

Analysis

Mass spectra of the tetramethyl compounds of carbon silicon, germanium, tin, and lead. V. H. Dibeler. bibliog J Res Nat Bur Stand 49:235-9 O '52

Nomenclature

A.C.S. committee on nomenclature, spelling, and pronunciation; organosilicon compounds. Chem & Eng N 30:4517-22 O 27 '52

SILICON fluoride

Bond moments and derivatives in CF_4, SiF_4, and SF_6 from infrared intensities. P. N. Schatz and D. F. Hornig. bibliog diags J Chem Phys 21:1516-30 S '53

SILICON monoxide. See Silicon oxides

SILICON oxides

Absorption band systems of SiO and GeO in the Schumann region. H. C. Rowlinson and R. F. Barrow. bibliog J Chem Phys 21:378-9 F '53

Structural chemistry of the alkoxides; amyloxides of silicon, titanium, and zirconium. D. C. Bradley, R. C. Mehrotra and W. Wardlaw. Chem Soc J p2027-32 Je '52

Structural chemistry of the alkoxides; secondary alkoxides of silicon, titanium, and zirconium. D. C. Bradley, R. C. Mehrotra and W. Wardlaw. Chem Soc J p5020-3 D '52

Structural chemistry of the alkoxides; tertiary alkoxides of silicon, titanium, zirconium, and hafnium. D. C. Bradley, R. C. Mehrotra and W. Wardlaw. Chem Soc J p4204-9 N '52

Thermodynamic properties of silicon monoxide; an experimental study of the equilibria $SiO_2 + Si \rightleftharpoons 2SiO$ and $SiO_2 + H_2 \rightleftharpoons SiO + H_2O$. N. C. Tombs and A. J. E. Welch. bibliog diag Iron & Steel Inst J 172:69-78 S '52

Unbacked thin films. G. A. Sawyer. bibliog il R Sci Instr 23:604-6 N '52

Use of Hi-Sil in natural rubber white sidewall compounds. R. F. Wolf and others. il Rubber Age 72:765-9 Mr '53

SILICON oxyhydride

Silicon oxyhydride; a filler and blowing agent for rubber. Chem Eng 59:204+ N '52

SILICON steel

Grain-oriented iron-silicon alloys. G. H. Cole. bibliog il Elec Eng 72:411-16 My '53

Orienting grains in transformer steel. M. J. Bolton. il diags Gen Elec R 56:13-16 My '53

You'll be getting better electrical sheet and strip; highly oriented polycrystalline-silicon steel with the same characteristics of a single crystal. N. P. Goss. il diags Iron Age 171:147-52+ F 5 '53

SILICON tetrachloride

Effect of the isomeric transition in Br^{80} on its reactivity with the tetrachlorides of carbon, silicon, germanium, and tin. C. C. Coffin and W. D. Jamieson. J Chem Phys 20:1324-5 Ag '52

SILICON tetrafluoride

System silicon tetrafluoride-trimethylamine. C. J. Wilkins and D. K. Grant. Chem Soc J p927-32 Mr '53

SILICON tetrapropionate

Preparation and properties of silicon tetrapropionate. F. C. Lanning. bibliog Am Chem Soc J 75:1596 Ap 5 '53

SILICONES

Colored silicone finishes. M. A. Glaser and E. Miller. il Product Eng 24:167-74 Mr '53

Compounding of silicone rubber. A. C. Glime and others. bibliog il India Rubber World 128:766-70+ S '53

Developments to watch. Product Eng Hdbk p C33 '53

Do you know what silicones will do for your motors? J. St Andre. Factory Management 110:156+ N '52

High-temperature silicones. J. D. Hayden. Elec R (Lond) 153:330-2 Ag 14 '53

How silicones are licking some tough electrical problems; Dow chemical co. W. Rupprecht and E. A. Crosby. il Factory Management 111:113-16 F '53

Low-pressure lamination of silicone resins. K. R. Hoffman. il Mod Plastics 30:146+ N '52

More plant, new product. il Chem W 72:40+ Ja 17 '53

New developments in silicones. il Materials & Methods 38:111 Jl '53

Opening of new silastic plant marks Dow Corning birthday. Rubber Age 73:388 Je '53

Properties and uses of silicones. A. J. Barry. bibliog Tappi 36:sup 18A+ Je '53

Silicone-aluminum paints stretch high-temperature life of steel. A. E. Durkin and A. H. Horner. il Materials & Methods 38:114-16 S '53

Silicone elastomers; Fort Wayne rubber and plastics group panel discussion; abstracts of papers. India Rubber World 128:783-4 S '53; Rubber Age 73:801-4 S '53

Silicone resins add more pluses to your acetate. P. Duggan and F. Fortress. il Mod Textiles Mag 34:31+ Mr '53

Silicone resins in insulation at power frequencies. W. J. Renwick and J. R. Reed. bibliog Engineer 195:471-3 Mr 27 '53

Silicone sealed switch. il Mod Plastics 30:194 N '52

Silicone spotlight. Chem W 71:13 D 6 '52

Silicone-treated dust collectors in high temperature dust-control systems. L. C. McCabe. il Ind & Eng Chem 45:sup 104A-6A F '53

Silicones for the electrical industry. Engineer 195:434 Mr 20 '53

Silicones help Convair B-36 fight cold. il Aviation W 58:38-9+ Mr 30 '53

Silicones help to assure accurate power control. L. G. Friedle. il Power Eng 57:90-2 My '53

Silicones shoulder their way into the big time. il Chem & Eng N 31:2074+ My 18 '53

Still on the way up. il Chem W 72:64 F 7 '53

Strength of silicone rubber boosted by addition of silica. F. L. Kilbourne, jr. Chem & Eng N 30:4720 N 10 '52

Three new silicone insulating materials announced. Materials & Methods 37:140 Ap '53

Vinyl silicone resin treatment of glass fibers. M. H. Jellinek. Mod Plastics 30:150+ N '52

What silicones can do. il Mod Plastics 30:73-80+ S '52

Manufacture

Silicone horizons. F. J. Quail. il Can Chem Process 37:62+ S '53

SILICOSIS

Impairment of pulmonary function in anthracosilicosis. P. Pelnář; H. L. Motley. A M A Archives Ind Hygiene & Occup Med 6:532-3 D '52

Pneumosilicosis. S. Ambery. bibliog India Rubber World 128:344+ Je '53

SILK

Testing

Stress relaxation of fibrous materials; instrumentation and preliminary results. E. T. Kubu. bibliog il diags Textile Res J 22:765-77 D '52

Wax content

X-ray pattern of sericin and silk wax from bombyx mori. E. H. Mercer and F. H. Meyer. bibliog il Textile Res J 23:243-6 Ap '53

SILK fibroin. See Fibroin

SILK screen printing

Techniques for photographic silk screen printed circuits. W. Bornemann. il diags Tele-Tech 11:62-3+ O '52

Trend to fine-screen printing. il Mod Packaging 26:99-104 Je '53

Why silk-screen printing is versatile. A. H. Baum. il Ptr Ink 242:50-1 Ja 30 '53

SILK trade

Japan

Japanese silk industry at high level; government aid given. For Comm W 49:10 Ja 26 '53

SILKWORMS

Display of silk-producing moths. il Am Dyestuff Rep 41:790-1 N 24 '52

SILLIMANITE

Analysis

Calcination and fluorescence in the evaluation of samples of the sillimanite minerals. W. R. Foster and others. bibliog Am Cer Soc Bul 31:326-8 S 15 '52

SILOS

Aluminium grain silo. il Engineer 195:108 Ja 16 '53; Engineering 175:86 Ja 16 '53

SILOXANES

Aliphatic organo-functional siloxanes. L. H. Sommer and others. bibliog Am Chem Soc J 75:2932-4 Je 20 '53

Decaethylcyclopentasiloxane. D. T. Hurd and R. C. Osthoff. bibliog Am Chem Soc J 75:234-5 Ja 5 '53

Heats of combustion and formation of some linear polydimethylsiloxanes; the Si-C and Si-O bond-energy terms. R. Thompson. Chem Soc J p 1908-14 Je '53

Ionization and dissociation of methyl siloxanes by electron impact. V. H. Dibeler and others. J Chem Phys 21:180-1 Ja '53

Physical properties of organosilicon compounds; hexamethylcyclotrisiloxane and octamethylcyclotetrasiloxane. R. C. Osthoff, W. T. Grubb and C. A. Burkhard. bibliog Am Chem Soc J 75:2227-9 My 5 '53

Tetramethyldisiloxane-1,3-diol. G. R. Lucas and R. W. Martin. Am Chem Soc J 74:5225 O 20 '52

SILT

Electricity dries wet silt; principle known as electro-osmosis. il diag Eng N 150:36+ Ap 30 '53

Regime flow in a silt carrying channel. J. F. Cooke. Engineer 196:40 Jl 10 '53

Sediment problems on irrigation projects in the United States. E. W. Lane. il Engineering 176:1-4 Jl 3 '53

Sedimentation sleuths board new boat; floating laboratory of the Omaha district, Corps of engineers; illustrations with text. Eng N 149:77 N 20 '52

They welcome silt in these reservoirs at Holtwood and Safe Harbor, Pa.; silt contains coal that can be reclaimed. il map diag Eng N 150:32+ Ap 23 '53

SILVER

Alpha-particle induced phosphorescence of silver-activated sodium chloride. C. E. Mandeville and H. O. Albrecht. bibliog Phys R 90:25-8 Ap 1 '53

Alteration of surface properties of gold and silver as indicated by contact angle measurements. F. E. Bartell and J. T. Smith. bibliog diags J Phys Chem 57:165-72 F '53

Anomaly in the low temperature atomic heat of silver. P. H. Keesom and N. Pearlman. bibliog Phys R 88:140-1 O 1 '52

Diffusion of antimony in silver single crystals. L. Slifkin and others. bibliog J Ap Phys 23:1405 D '52

Effect of cyclotron bombardment on self-diffusion in silver. R. D. Johnson and A. B. Martin. bibliog diags J Ap Phys 23:1245-54 N '52

Effect of impurities on the self-diffusion of silver. R. E. Hoffman and D. Turnbull. J Ap Phys 23:1409-10 D '52

Effect of stress on metal electrode potentials. R. E. Fryxell and N. H. Nachtrieb. bibliog il diags Electrochem Soc J 99:495-503 D '52

Electron diffraction from small crystals. C. R. Berry. bibliog Phys R 88:596-9 N 1 '52

Equilibrium studies of the silver-sodium-hydrogen system on Dowex 50. O. D. Bonner and V. Rhett. J Phys Chem 57:254-6 F '53

Evaporated point contact rectifiers. E. G. Roka and others. diag J Ap Phys 24:228-9 F '53

Photoemission from silver into AgCl, KBr, NaCl, and new bands of photosensitivity in AgCl. M. A. Gilleo. bibliog diags Phys R 91:534-42 Ag 1 '53

Radiation damage and recovery in Cu, Ag, Au, Ni, and Ta. J. W. Marx and others. bibliog diags Phys R 88:106-12 O 1 '52

Self-diffusion in pure polycrystalline silver. L. Slifkin and others. bibliog J Ap Phys 23:1032-4 S '52

Silver in modern society. R. D. Morris. Can Min J 74:68-70 Ag '53

Solid solubility of silver in aluminum; abstract. L. Rotherham and L. W. Larke. Metal Prog 63:208+ My '53

Storage of energy in silver activated potassium chloride. C. E. Mandeville and H. O. Albrecht. bibliog Phys R 91:566-7 Ag 1 '53

Vacuum-tight seal between LiF and silver. R. C. Lord and R. S. McDonald. diag R Sci Instr 23:442 Ag '52

Vapor pressure of silver. C. L. McCabe and C. E. Birchenall. bibliog diag J Metals 5: Trans 707-9 sec 2 My '53

Vapor pressure of silver over silver-gold solid solutions. C. L. McCabe and others. bibliog J Metals 5:Trans 709-11 sec 2 My '53

Analysis

Catalytic determination of submicrogram quantities of silver. A. L. Underwood, A. M. Burrill and L. B. Rogers. bibliog Anal Chem 24:1597-601 O '52

Use of the ferric-ferrous system as a cathode potential regulator in the electrolytic separation of silver from baser elements. G. Norwitz. Metallurgia 48:47 Jl '53

Industrial applications

Metal-carbon composites for mechanical and electrical parts. E. P. Eaton, jr. il Product Eng 23:173-5 N '52

Pure silver forms strongest brazed joints in titanium. H. L. Meredith. il Iron Age 171:143-6 Mr 26 '53

See also
Silver solder

Isotopes

(α,n) and $(\alpha,2n)$ cross sections of Ag^{109}. E. Bleuler and others. bibliog Phys R 90:460-3 My 1 '53

Disintegration of 24-minute Ag^{106}. W. L. Bendel and others. bibliog diag Phys R 90:888-90 Je 1 '53

Fission asymmetry as a function of excitation energy of the compound nucleus. J. L. Fowler and others. Phys R 88:71-2 O 1 '52

Studies in low concentration chemistry; the radiocolloidal properties of silver-111. G. K. Schweitzer and J. W. Nehls. bibliog Am Chem Soc J 74:6186-9 D 20 '52

Prices

Bullion market under pressure. Economist 165:558+ N 22 '52

Nonferrous prices; tabulation. Steel 132:173 Ja 5 '53

Treasury's fraudulent valuation of silver. D. J. Ramsey. Comm & Fin Chr 177:1872-3 Ap 30 '53

SILVER acetate

Ionic equilibria in aqueous and mixed solvent solutions of silver acetate and silver monochloroacetate. F. H. MacDougall and L. E. Topol. bibliog J Phys Chem 56:1090-3 D '52

SILVER alloys

Equilibrium of solid α-silver-zinc alloys with zinc vapor. G. Scatchard and R. A. Westlund, jr. bibliog diags Am Chem Soc J 75: 4189-93 S 5 '53

Extension of sensitivity of polarographic analysis with rotating amalgam electrodes. W. D. Cooke. bibliog diag Anal Chem 25: 215-18 F '53

Phase TiAg. R. J. Van Thyne and others. il J Metals 5:Trans 670-1 My '53

Silver-cadmium eutectoid. G. R. Speich and D. J. Mack. bibliog il J Metals 5:Trans 549-53 Ap '53

Sterling silver containing aluminium. G. E. Gardam. il Metallurgia 47:29-33 Ja '53

See also

Silver solder

SILVER as money

Silver, 1952. H. M. Bratter. Eng & Min J 154:76-7 F '53

United States

Treasury's fraudulent valuation of silver. D. J. Ramsey. Comm & Fin Chr 177:1872-3 Ap 30 '53

SILVER brazing. See Silver solder

SILVER bromide

Electron diffraction from small crystals. C. R. Berry. bibliog Phys R 88:596-9 N 1 '52

Heat capacity and thermal diffusivity of silver bromide. T. E. Pochapsky. bibliog J Chem Phys 21:1539-40 S '53

Mechanism of photographic sensitivity in silver bromide; abstract. J. W. Mitchell. bibliog Chem & Ind p 1220-1 D 13 '52

Some optical properties of molten silver bromide-alkali bromide solutions. C. D. Thurmond. bibliog Am Chem Soc J 75:3928-32 Ag 20 '53

Thermodynamics of coprecipitation; dilute solid solutions of AgBr in AgCl. F. Vaslow and G. E. Boyd. bibliog Am Chem Soc J 74:4691-5 S 20 '52

SILVER chloride

Density effect for the ionization loss in various materials. R. M. Sternheimer. bibliog Phys R 88:851-9 N 15 '52

Fluorescence, phosphorescence, and photostimulation of NaCl(AgCl) with high-energy irradiation. M. Furst and H. Kallmann. bibliog il diags Phys R 91:1356-67 S 15 '53

Holder for infrared spectrophotometry of small samples on silver chloride. H. J. R. Stevenson and S. Levine. diags R Sci Instr 24:229-30 Mr '53

Photoemission from silver into AgCl, KBr, NaCl, and new bands of photosensitivity in AgCl. M. A. Gilleo. bibliog diags Phys R 91:534-42 Ag 1 '53

Thermodynamics of coprecipitation; dilute solid solutions of AgBr in AgCl. F. Vaslow and G. E. Boyd. bibliog Am Chem Soc J 74:4691-5 S 20 '52

SILVER compounds

Applications of the Hunsdiecker silver salt degradation; the preparation of dibromides and tribromides. J. C. Conly. Am Chem Soc J 75:1148-50 Mr 5 '53

Conversion of silver (+)-2-ethylhexanoate into (+)-3-bromoheptane. D. C. Abbott and C. L. Arcus. Chem Soc J p3195-7 Ag '52

Metathetical reactions of silver salts in solution; the synthesis of acyl trifluoroacetates. A. F. Ferris and W. D. Emmons. bibliog Am Chem Soc J 75:232-3 Ja 5 '53

Metathetical reactions of silver salts in solution; the synthesis of alkyl sulfonates. W. D. Emmons and A. F. Ferris. Am Chem Soc J 75:2257 My 5 '53

Reaction of silver cyclobutanecarboxylate with bromine. E. R. Buchman and J. C. Conly. Am Chem Soc J 75:1990 Ap 20 '53

Reactions of metallic salts of acids with halogens; some reactions of salts of fluorohalogenoacetates and of perfluoro-acids. R. N. Haszeldine. Chem Soc J p4259-68 N '52

Studies on the thermal decomposition of silver salts of perfluorocarboxylic acids. A. D. Kirshenbaum, A. G. Streng and M. Hauptschein. bibliog diag Am Chem Soc J 75: 3141-5 Jl 5 '53

Analysis

Partition studies; silver complexes of aromatic amines. C. Golumbic. bibliog Am Chem Soc J 74:5777-8 N 20 '52

SILVER fluoride

Preparation of silver tetrafluoroborate and silver(I) fluoride. A. G. Sharpe. Chem Soc J p4538-9 N '52

SILVER fluoroborate

Preparation of silver tetrafluoroborate and silver(I) fluoride. A. G. Sharpe. Chem Soc J p4538-9 N '52

SILVER halides

Mechanism of coagulation of lyophobic sols as revealed through investigations of silver halide sols in statu nascendi. B. Težak and others. bibliog J Phys Chem 57:301-7 Mr '53

See also

Silver bromide
Silver chloride
Silver iodide

SILVER industry and trade

Mine output too small to meet silver demand. Barron's 33:35-6 F 9 '53

Silver, 1952. H. M. Bratter. Eng & Min J 154:76-7 F '53

Silver, 1952. P. McCarran. Min Cong J 39: 116-17 F '53

Statistics

U.S. silver output, 1944-1952; tabulation. Steel 132:177 Ja 5 '53

Taxation

Should the silver profits tax be removed? H. M. Bratter. Eng & Min J 154:75-7+ Ag '53

SILVER iodide

Increasing water resources through weather modification. I. P. Krick. bibliog il maps diags Am Water Works Assn J 44:996-1020 N '52

SILVER iodomercurate

Solid phases in the system Ag_2HgI_4-Cu_2HgI_4. L. Suchow and P. H. Keck. bibliog Am Chem Soc J 75:518-22 F 5 '53

SILVER king coalition mines company. See United Park City mines company

SILVER metallurgy

New oxide lead unit for Darwin. J. B. Huttle. flow sheet il Eng & Min J 154:81-3 Mr '53

See also

Cyanide process

SILVER mines and mining

Idaho

Filling with unclassified tailing in modified cut-and-fill stopes, Dayrock mine, Wallace, Idaho. P. H. Toepfer. bibliog 2pls U S Bur Mines Information Circ 7649:1-14 '52

Rock bolting progress at Sunshine. W. B. Foster. il Min Cong J 39:26-8 Jl '53

Montana

Investigation of the combination silver-tungsten mine, Granite county, Mont. M. E. Volin and others. 8pls U S Bur Mines Rep of Invest 4914:1-26 '52

Ontario

Golden jubilee of a great silver camp. il Can Min J 74:47-52 Ag '53

SILVER nitrate

Determination of chromium by oxidation in the presence of silver nitrate. S. Lynn and D. M. Mason. bibliog Anal Chem 24:1855 N '52

Metathetical reactions of silver salts in solution; the synthesis of nitrate esters. A. F. Ferris and others. Am Chem Soc J 75:4078 Ag 20 '53

Manufacture

Kodak redoubles silver nitrate output. flow sheet il diag Chem Eng 59:217-18+ O '52

SILVER oxalate

Photothermal decomposition of mixed silver and mercurous oxalates. L. Suchow and S. L. Hersh. bibliog J Phys Chem 57:437-9 Ap '53

SILVER oxide

Reaction of vanillin with silver oxide in the presence of technical caustic. I. A. Pearl and D. L. Beyer. Ind & Eng Chem 44:2893-4 D '52

SILVER paint

Strain gage circuits from a bottle; silver paint can be used to make slip rings for strain gage circuits. D. K. Wright and J. R. Jeromson, jr. il Iron Age 171:102-3 Ap 30 '53

SILVER perchlorate

Acylation and allied reactions catalyzed by strong acids; the alleged activity of silver perchlorate as a Friedel-Crafts catalyst. H. Burton and P. F. G. Praill. Chem Soc J p837-9 Mr '53

SILVER plating

My experience with analytical control of electroplating solutions. G. B. Hogaboom. Metal Finishing 51:93-6+ Je '53

Processing silverplate. il Can Chem Process 37:36+ F '53

Radioactivity helps study of silver brighteners. S. E. Eaton and others. Metal Finishing 50:63-4 D '52; Discussion. D. Wood. 51:68+ Ap '53

Silver and gold plated parts meet tough specifications. T. C. Du Mond. il Materials & Methods 36:114-15 N '52

SILVER polish

Birth of a million-dollar advertiser; Lewal Instant dip magic silver cleaner. N. Kelne. il Ptr Ink 242:42-4 Ja 2 '53

Taking a shine to silver. il Chem W 72:48-9+ Ja 3 '53

Advertising

Instant-Dip; a success story with silver lining. H. Wessel, jr. il Ed & Pub 86:18+ F 21 '53

Rating

Silver cleaners. Consumers Res Bul 30:19-20 D '52

SILVER solder

Brazing alloy is clad to strip; American silver co. J. P. Emmerich. il diags Am Mach 97:110-11 Mr 2 '53

Brazing; flux-in-flame gives better joints, lowers rebuilding cost. il Iron Age 170:100 O 30 '52

Silver alloy brazing of stainless steel. R. C. Jewell. Welding J 32:331 Ap '53

Silver brazing of nickel alloys; reference book sheet. diags Am Mach 95:169, 171, 173 S 17 '51; Same cond. Product Eng Hdbk p G 14-15 '53

Analysis

Electrochemical analysis of silver solder. R. W. C. Broadbank and B. C. Winram. Metallurgia 47:155-7 Mr '53

SILVER sulfide

Temperature dependence of the optical absorption of β-Ag_2S. K. Lehovec. bibliog J Chem Phys 21:54-7 Ja '53

SILVER thiocyanate

Study of thiocyanatoargentate(I) ions by a solubility method. G. C. B. Cave and D. N. Hume. bibliog Am Chem Soc J 75:2893-7 Je 20 '53

SILVER trifluoroacetate

Reactions of metallic salts of acids with halogens; some reactions of salts of fluorohalogenoacetates and of perfluoro-acids. R. N. Haszeldine. Chem Soc J p4259-68 N '52

SILVERING

Some factors in spray-silvering. P. B. G. Upton and others. bibliog il Metal Finishing 51:65-8 F '53

Temperature control in mirror making. il Glass Ind 34:314+ Je '53

SILVERWARE

Advertising

Best-read magazine advertisements. D. Starch. il Adv Agency 45:78-9 N '52

Manufacture

Silverware for moderns; Reed & Barton. il Steel 132:106 Ap 20 '53

Tarnishing

See Tarnishing of metals

SILVICHEMISTRY (term)

Latest word; silvichemistry. Tappi 36: sup96A-7A Ag '53

SILYL chloride. See Chlorosilane

SILYL fluoride. See Fluorosilane

SIMILARITY, Theory of

Similarity laws for stressing heated wings. H. S. Tsien. diags J Aeronautical Sci 20: 1-11 Ja '53

SIMMONDS aerocessories, inc.

Gadget-hunting in Europe. il Bsns W p 170-2 My 9 '53

SIMON, Arthur, 1893-

Sketch. R. E. Oesper. por(front) J Chem Educ 29:609-10 D '52

SIMPLIFICATION in industry

Machine tool simplification, especially as applied to horizontal boring machines. C. A. Sparkes. diags Inst Mech Eng Proc (A) 166 no 4:450-8, pl 1-10; Discussion. 458-65 '52; Engineer 194:620-1 N 7 '52

Two case studies in simplification and standardization. M. Lipton. Factory Management 111:148-9 Ap '53

See also

Standardization

SIMPSON, Howard Edward, 1896-

H. E. Simpson, salesman, heads the B&O; Roy B. White, board chairman. por Ry Age 135:97-9 S 7 '53

SIMPSON, James Charles Edward, 1908-1952

Sketch. C. M. Atkinson. Chem Soc J p718-20 F '53

SIMPSONS-SEARS, ltd.

Great mail order combination of Sears-Roebuck and Simpson's. H. F. Travis. il Mag of Wall St 91:352-4+ D 27 '52

SIMULTANEOUS equations. See Equations, Simultaneous

SINCLAIR oil corporation

Bankers underwrite Sinclair Oil debs. Comm & Fin Chr 177:207 Ja 15 '53

Debentures offered. Comm & Fin Chr 177:238 Ja 19 '53

SINGER, Fred G.

Portrait. Fortune 47:99 Mr '53

SINGING tube

Investigation of sound vibrations in a tube containing a heat source. J. L. Neuringer and G. E. Hudson. diag Acoustical Soc Am J 24:667-74 N '52

SINGLE rail railroads. See Railroads, Single rail

SINK

Kitchen sink designed for center-of room installation. il plan Arch Rec 112:294 O '52

SINK and float process

Beaver Brook heavy-media plant. flow sheet il Coal Age 58:104-7 Ja '53

Cleaning various coals in a drum-type dense-medium pilot plant. M. R. Geer and others. Min Eng 5:Trans 696-705 Jl '53; Discussion. 5:Trans 1125-6 N '53

First H.M.S. application to gravel industry in the United States; Dravo corp. W. L. Price. flow diag il Rock Prod 56:96-9 Ap '53; Same cond. Eng & Min J 154:86-7 Ap '53

Heavy-media flotation process used in gravel production. il Am Concrete Inst J 24: sup27+ Je '53

Heavy-media separation; abstract. D. M. Kerr. il Rock Prod 55:82-4 N '52

Heavy media separation; Dravo corp.; abstract. L. P. Struble, jr. Rock Prod 56: 108-9 Ap '53

Heavy media separation removes friable granite from dolomite; Kaiser aluminum and chemical corp. W. B. Lenhart. flow sheet il Rock Prod 56:89-93+ F '53

Heavy media separation upgrades dolomite. il diag Chem Eng 60:114-16 My '53

High-quality aggregate from rejected material; Owatonna aggregates corp. W. B. Lenhart. flow sheets il Rock Prod 56:56-61 Jl '53

Laboratory tests of aggregate treated by the heavy media process; abstract. D. L. Bloem. Rock Prod 56:109 Ap '53

Plant improves gravel dredged from river bed; Dravo corporation. il diag Constr Methods 35:71+ S '53

Preparation of low-ash coal for production of electrodes. A. L. Wesner and A. C. Richardson. flow sheet diag Min Eng 4:Trans 1059-61 N '52

SINTERING

Chemical constitution of sinters. R. Wild. bibliog pl Iron & Steel Inst J 174:131-5 Je '53

SINTERING—*Continued*

Continuous updraft sintering recovers more SO_2 for smelter. W. R. Burrow. il diags Eng & Min J 153:90-4 N '52

Densification and kinetics of grain growth during the sintering of chromium carbide. H. J. Hamijian and W. G. Lidman. il J Metals 5:Trans 696-9 sec 2 My '53

Hard carbides; their properties and application to the production of sintered hard metal. A. G. Gardner. il Metallurgia 47:163-70 Ap '53

Initial phase of sintering; abstract. H. H. Hausner and J. L. Zambrow. J Metals 4:1040 O '52

Lightweight aggregates from argillaceous raw materials. F. O. Anderegg. Rock Prod 55:122 D '52

Permeability of sinter beds. E. W. Voice and others. diags Iron & Steel Inst J 174:136-9 Je '53

Reactions during sintering of a zirconium carbide-niobium cermet. W. G. Lidman and H. J. Hamjian. bibliog il Am Cer Soc J 35:236-40 S 1 '52

Sampling and testing of sinter. R. L. Stephenson and D. J. Carney. il Min Eng 5:Trans 309-11 Mr '53; Discussion. 5:Trans 1124-5 N '53

Sinter sampling technique developed by U.S. steel corp. R. L. Stephenson and D. J. Carney. il J Metals 5:628-9 My '53

Sintered aluminium with high strength at elevated temperatures. R. Irmann. il diag Metallurgia 46:125-33 S '52; Abstract. Metal Prog 63:188+ Ap '53

Sintering of ultrafine ferromagnetic powders. N. I. Ananthanarayanan and J. F. Libsch. bibliog J Metals 5:Trans 79-80 Ja '53

Soda sinter process for treating low-grade titaniferous ores. R. T. MacMillan and others. 10pls U S Bur Mines Rep of Invest 4912:1-62 bibliog (p61-2) '52

Spray and sinter to make high temperature alloy parts. J. E. Cline and others. Product Eng 24:272+ F '53

SIPHONS

Paper diaphragm starts siphon for corrosive liquids. R. Volterra. diags Chem Eng 60:210 Ap '53

Siphons carry sewage under expressway. D. W. Johnson. il diag Pub Works 84:85-6 Ag '53

SIRUPS

See also

Corn sirup

Sugar, Liquid

SITOSTENE

3α-Carboxylic acids of 5-sitostene and stigmastane. E. N. Squire. Am Chem Soc J 75:493-4 Ja 20 '53

SIX, Robert Forman

Mr Six sees an inauguration of the new President. pors Bsns W p30-2 Ja 31 '53

SIZE (biology)

No virtue goes with size. F. W. Nordsiek. il Tech R 55:27-30 N '52

SIZES (garments). See Clothing and dress—Standards

SIZING (textiles)

Cluett-Peabody installs new slashers and controls. F. Suss. il diag Textile World 103:137+ F '53

Composition of tamarind seed kernel powder. P. B. Sarkar and A. K. Mazumdar. bibliog Textile Inst J Trans 43:T453-4 Ag '52; Discussion. il 44:T401-3 Ag-S '53

Dacron sizing formulations. Mod Textiles Mag 34:72 O '53

Five-minute review of warp-sizing developments. F. A. Lewis. il Textile World 103:137+ Ja '53

Guard knitting machines against PM-90 size damage. J. H. Quinn. il Textile World 103:164-5+ S '53

Percent of size on warps is automatically controlled; Shirley automatic size box. il diag Textile World 103:152 F '53

Preliminary study of the sizing of staple Orlon and Dacron. W. C. Wylie, jr. Am Dyestuff Rep 42:11-13 Ja 5 '53

Ready for the loom; co-operation between research, engineering and production departments at Canadian celanese limited. E. A. Murphy. il diag Can Chem Process 37:40+ Ag '53

Viscosity in warp-size preparation; abstract. Textile World 102:145 D '52

See also

Cotton sizing

Nylon sizing

Rayon sizing

SIZING of paper. See Paper sizing

SKATING rinks

Artificial ice rinks are new development in municipal-utility operation. C. A. Meadows. il Munic Util 91:23-5+ Ag '53

Easier skating for downtown stores. il Bsns W p52-3 D 20 '52

SKELLY oil company

Refinery strikes cut earnings. Barron's 33:20 Mr 16 '53

SKIDS

Skid-mounted poly unit installed at Inland refining co. plant. F. L. Resen. flow plan il Oil & Gas J 51:99-100 Ja 19 '53

SKIL corporation (formerly Skilsaw, inc.)

How established company successfully changed its name. il Ind Marketing 38:53 Ap '53

SKILSAW, inc. See Skil corporation

SKIN

Self-sterilization of human skin; abstract. C. R. Ricketts and others. Soap & San Chem 28:148+ O '52

Simple test of the normality of twenty-four distributions of electrical skin conductance. H. Schlosberg and W. C. Stanley. bibliog Science 117:35-7 Ja 9 '53

Studies on the toxicity and skin effects of compounds used in the rubber and plastics industries. F. S. Mallette and E. von Haam. il A M A Archives Ind Hygiene & Occup Med 5:311-17; 6:231-42 Ap, S '52

See also

Soap—Physiological effect

Diseases

Clam digger's dermatitis; schistosome dermatitis from sea water; abstract. L. Orris and F. C. Combes. A M A Archives Ind Hygiene & Occup Med 7:69 Ja '53

Cutting-oil dermatitis. G. E. Morris and C. C. Maloof. il Ind Med 21:573-4 D '52

Dermatitis. Safety Maint & Prod 105:51-2 My '53

Dermatologists on hand cleaners. Soap & San Chem 29:57 Ja '53

International congress of dermatology, 10th, London, July 21-26; in relation to occupational dermatoses. Ind Med 21:502-4 O '52

More than just clean! M. M. Maglio and J. M. Hannegan. il Safety Maint & Prod 106:50-2 S '53

New occupational diseases, Diesel itch; sodium bichromate. Safety Maint & Prod 106:49+ S '53

No substitute for cleanliness. il Nat Safety N 68:26-7 Ag '53

Occupational skin cancer in a group of tar workers. R. E. W. Fisher. A M A Archives Ind Hygiene & Occup Med 7:12-18 Ja '53; Abstract. Nat Safety N 67:60+ My '53

Patch tests. G. E. Morris. bibliog il Ind Med 22:19-21 Ja '53

Psychogenic aspects of diseases of the skin of industrial workers, with discussion of red hands of occupational origin. J. V. Klauder. bibliog il Ind Med 21:413-19 S '52; Excerpts. Nat Safety N 67:86 Ja '53

Skin cleansers for industry. Can Chem Process 37:70 My '53

Skin hazards in railroad roundhouses and machine shops. L. Schwartz. Ind Med 21:482-4 O '52

Skin infections. Nat Safety N 67:74+ Mr '53

Stop dermatitis before it starts! il Safety Maint & Prod 106:47-8+ Ag '53

See also

Pinta

SKIN effect

Mathematical theory of laminated transmission lines. S. P. Morgan, jr. diags Bell System Tech J 31:883-949, 1121-206 S-N '52

Universal skin-effect chart for conducting materials. H. A. Wheeler. bibliog Electronics 25:152-4 N '52

SKIN friction

Calculation method for three dimensional rotationally symmetrical laminar boundary layers with arbitrary free-stream velocity and arbitrary wall-temperature variation. R. M. Drake, jr. bibliog diag J Aeronautical Sci 20:309-16+ My '53

Direct measurement of supersonic skin friction. D. Coles. J Aeronautical Sci 19:717 O '52

Effects of angle of attack on local skin-friction coefficients at $M_0=4$. J. J. Martin. J Aeronautical Sci 20:211-12 Mr '53

Effects of density fluctuations on the turbulent skin friction of an insulated flat plate at high supersonic speeds. T. Y. Li and H. T. Nagamatsu. J Aeronautical Sci 18:696-7 O '51; Discussion. E. R. Van Driest. 20:360-2 My '53

Shock-wave effects on the laminar skin friction of an insulated flat plate at hypersonic speeds. T. Li and H. T. Nagamatsu. bibliog J Aeronautical Sci 20:345-55 My '53; Discussion. M. Z. v. Krzywoblocki. 20:799-800 N '53

Skin-friction determination, using wall-sided models of great draught; abstract. R. T. Shiells. Engineering 175:731; Discussion. 731-2 Je 5 '53

SKIN grafting

Primary closure of skin defects. B. C. Kilbourne. il diags Ind Med 21:577-80 D '52

SKIS and skiing

Putting the bus in ski business. H. E. Jackson. il Bus Transportation 31:34-6 D '52

SKOURAS, Spyros Panagiotes, 1893-

Businessmen in the news. por Fortune 47:52 My '53

SKULL

Computational procedure for the isotope method of brain tumor localization. A. Langer and R. Loevinger. diag Science 117:247-8 Mr 6 '53

SKY

Calculation of the polarization of a sunlit sky composed of pure air molecules. A. Hammad. Opt Soc Am J 43:184-7 Mr '53

Explanation of the brightness and color of the sky, particularly the twilight sky. E. O. Hulburt. bibliog diags Opt Soc Am J 43:113-18 F '53

OH in the airglow at high latitudes. J. W. Chamberlain and N. J. Oliver. bibliog Phys R 90:1118-19 Je 15 '53

SKYLIGHTS

Daylighting with a new kind of functional skylight; abstract. R. A. Boyd and J. L. Reid. diags Illum Eng 48:472-3 S '53

Functional top-lighting with glass blocks; abstract. H. F. Kingsbury and others. diag Illum Eng 48:471-2 S '53

Glass block designed structurally and optically for use in skylights. il Eng N 150:124+ Mr 12 '53

Innovation in skylights. il Sheet Metal Worker 44:69 D '52

Louvered skylight, ventilator combined. il diag Arch Rec 112:204-5 S '52

Save on sunlighting maintenance. il Safety Maint & Prod 106:40 O '53

Sheet metal workers' catechism; construction and erection of sheet metal skylights (cont). W. Neubecker. plans diags Sheet Metal Worker 44:55-6+ N '52; 64-5 F; 80 My; 90+ S '53 (to be cont)

Toplite system filters solar heat for cool interiors. il Eng N 150:174 Ap 16 '53

SKYSCRAPERS. See High buildings

SLABS, Concrete. See Concrete slabs

SLAG

Activities of constituents of iron and steelmaking slags. E. T. Turkdogan and J. Pearson. bibliog Iron & Steel Inst J 173:217-23 Mr '53

Chasing outdoor odors; Lorain slag co. Steel 132:60-1 Mr 2 '53

Chemical behavior of sulphur in iron and steelmaking. J. Chipman. bibliog plan diags Metal Prog 62:97-107 D '52

Crushing plant prepares Garfield slag for railroad ballast. il Min Eng 5:661 Jl '53

Evaluation of the pH and conductivity methods of slag control. P. D. S. St Pierre. bibliog il J Metals 5:Trans 41-3 Ja '53

Expanded blast furnace slag for use as light weight concrete aggregate. R. W. Miller. bibliog il Blast F & Steel Pl 41:635-8+ Je '53

Fire tests on expanded slag block walls. il Concrete 60:3-7 N '52

Manganese from open hearth slag could supply half of U.S. needs. R. C. Buehl and others. il J Metals 5:520-1 Ap '53

Manganese from waste slag. Comp Air Mag 58:199 Jl '53

Manganese; retrieved from steel slag. Iron Age 171:42 Ja 8 '53

Manganese sources; soot and slag. Materials & Methods 38:6 S '53

Phase equilibrium investigation of the Na_2O-P_2O_5-SiO_2 ternary system. E. T. Turkdogan and W. R. Maddocks. 3pls diags Iron & Steel Inst J 172:1-15 S '52

Production of commercial blast furnace slag. F. Hubbard. bibliog Am Concrete Inst J 24:713-19 Ap '53

Production of high manganese slags by selective oxidation of spiegeleisen. M. B. Royer and R. C. Buehl. bibliog il J Metals 4: Trans 1295-300 D '52

Production of spiegeleisen from open-hearth slag in an experimental blast furnace. R. C. Buehl and M. B. Royer. bibliog il diag J Metals 4:Trans 1289-94 D '52

Reduction of silicon from blast furnace type slags. J. C. Fulton and others. bibliog diags J Metals 5:Trans 185-90 F '53

Short talks on lightweight slag concrete. H. E. de Weerdt. Concrete 61:16+ Jl; 12+ Ag '53

Slag production, 1952. Rock Prod 56:226 Ag '53

Smelter slag processed for ballast; Utah sand and gravel co. W. B. Lenhart. flow sheet il Rock Prod 56:70-3 F '53

Sydney foamed slag as a lightweight aggregate; abstract. M. R. Foran and others. Roads & Eng Constr 91:145-6+ Ag '53

Vanadium; possibility of its production from indigenous sources. J. Sandor. bibliog flow sheets Metallurgia 46:268-74 D '52

Analysis

Gravimetric determination of sulphur in basic steelmaking slags. Iron & Steel Inst J 174:28-30 My '53

Stoichiometric combustion method for the determination of sulphur in slags. C. J. B. Fincham and F. D. Richardson. Iron & Steel Inst J 172:53-5 S '52

SLAG (in boilers)

Application of additives to fuel oil and their use in steam-generating units. J. B. McIlroy and others. il diag Power 97:86-8 Mr '53

Oil additive developed to relieve boiler slagging. il diag Blast F & Steel Pl 40:938-50 Ag '52; Steel 131:120-2+ Jl 21 '52; Heat & Ven 49:134+ S '52; Iron Age 170:178-9 S 11 '52; Marine Eng 57:59-62 N '52; Power Eng 56:83-4 D '52

Shoot that slag! diags Power Eng 57:74-5 My '53

SLAG association, National. See National slag association

SLAG ladles. See Cinder pots

SLASHER sizing. See Cotton sizing; Sizing

SLAUGHTERING and slaughterhouses

Experimental slaughterhouse. il Engineer 194:796-7 D 12 '52

Waste

Rendering plant waste treatment studies. M. L. Granstrom. flow diag Sewage & Ind Wastes 23:1012-16; 24:1478-88 Ag '51, D '52

Slaughterhouse waste digestion. W. Rudolfs and V. Del Quercio. bibliog diags Water & Sewage Works 100:60-4 F '53

SLEEP

Electronic sleep-teaching. H. Stockman. diags Inst Radio Eng Proc 41:160 Ja '53

Sleep. N. Kleitman. il Sci Am 187:34-8 N '52

SLEEPING cars

Budd's Siesta coach, new lure for passengers. il Ry Age 134:59-62 Je 1 '53

Patrons' ideas built in Beauty Sleepers for three railroads. il Ry Age 134:78-81 Ap 6 '53

SLICHTER, Sumner Huber, 1892-

Portrait. Fortune 46:116 D '52

S. Slichter bets Americans will choose inflation. pors Bsns W p 100-2+ O 25 '52

SLICK, Earl Frates
- Businessmen in the news. por Fortune 47:50 My '53

SLICK airways
- CAB approval forecast in cargo merger; Flying Tiger-Slick consolidation appears assured. L. Moore. map Aviation W 58:91-2 Ap 6 '53
- Marriage of convenience; Flying tiger line merger with Slick airways. il Bsns W p 172+ Ap 11 '53
- Tigers, Slick file merger arguments. Aviation W 58:18 My 25 '53

SLIDE films
- Audio-visual aid field thrives; films hit $45,000,000 sales. il Ind Marketing 37:32+ N '52
- Benefits from a bank's own slide-film program; Citizens state bank, Sheboygan, Wis.; staff training and public relations. H. W. Sichter. il Burroughs Clearing House 37:30-1+ Jl '53
- Films go beyond visual aids; they're meeting insurance. W. Burnham. Sales Management 69:16-18 pt 2 O 1 '52
- For effective slidefilm projection. Nat Safety N 67:76+ Je '53
- How to demonstrate the impossible; slide films and tape recording for surgical equipment. il Sales Management 70:99 F 1 '53
- How to use rotary pumps; excerpts from sound film; Worthington corp. E. Richman. il Power 97:122-3 My '53
- Huber produces slide-film on estate planning. S. Huber. Nat Underw (Life ed) 57:6 Mr 13 '53
- Producing a sound slidefilm. Nat Safety N 67:72+ Je '53
- Pump maintenance; Allis-Chalmers slide-film. il Coal Age 58:96-9 Mr '53
- Refresher course in Diesel trouble-shooting; Missouri Pacific sound-slide film. il Ry Age 133:62-3 N 17 '52
- Sound tape and slide films sharpen skits at Ansul sales meeting. M. Kingman. il Ind Marketing 37:44-5+ N '52
- This slide film sells retail brass; Union underwear co. N. Kelne. il Ptr Ink 242:39 Mr 13 '53
- Visual aids in safety training. il Nat Safety N 67:65-8+ Je '53

See also
- Lantern slides
- Television broadcasting—Slide films

Catalogs
- Current list of safety films. Nat Safety N 67:sup N 1-48 Je '53

Projectors
- A-c high-intensity arc slide projector. A. J. Hatch. il Soc Motion Picture & Tv Eng J 59:335-7 O '52
- Slide projector molded of phenolic and high-impact styrene. il Mod Plastics 30:165 D '52
- Slide projectors. il Consumers Res Bul 30:19-21 O '52
- Telojector for tv stations projects transparencies automatically in sequence. il Elec Eng 72:372-3 Ap '53
- 28 visual aids old and new, make promotion, selling job easier. il Ind Marketing 37:74-5+ N '52

Rating
- Slide projectors. Consumers Res Bul 31:18 Ap '53

SLIDE rule
- Circular slide rule for calculating spectral intensities. L. D. Frederickson, jr. diag Anal Chem 24:2019 D '52
- Quick slide-rule calculations for design of uniformly loaded beams. M. B. Shany. diags Civil Eng 22:1037 D '52
- Radiographic exposure calculator. diag Engineer 196:247-8 Ag 21 '53
- Slide rule computes radio refractive index of air. S. Weintraub. il Electronics 26:182+ Ja '53

SLIGH, Charles Robert, 1906-
- New role for business leaders. por(cover) Bsns W p 180 D 6 '52

SLIME
- Protective coatings and slime growths. H. Heukelekian and E. S. Crosby. il Sewage & Ind Wastes 25:869-74 Ag '53
- Slime coatings; how to explain and control them in flotation processes. A. C. Dorenfeld. bibliog il Eng & Min J 154:87-91 My '53

SLINGS and hitches
- How safe are your slings? W. C. Richards. il diags Nat Safety N 68:22-3+ Ag '53; Same, with tables. Oil & Gas J 52:329 Je 22; 107 Jl 6; 146 Jl 13 '53
- This sling gives longer life. diag Mill & Factory 52:123 F '53
- What kind of a sling do you need for the job? W. C. Richards. il diags Mill & Factory 52:108-10 Ap '53; Same. Constr Methods 35:114+ Ap '53; Abstract. Steel 132:140 Ap 6 '53

SLIP rings
- Recast generator slip rings save time and labor. il Elec World 138:127 O 6 '52

SLIPS (ceramics)
- Vibrating-plate viscometer, an aid in slip-casting control. J. G. Woodward. il Am Cer Soc Bul 31:389-91 O 15 '52

Testing
- Clay-slip testing with the vibrating-plate viscometer. G. W. Phelps and others. bibliog il Am Cer Soc J 36:60-5 F 1 '53

SLITTING machines
- Gang slitting machine. il Metallurgia 47:149 Mr '53
- Special slitting machine serves many purposes and eliminates unnecessary handling. il Mill & Factory 52:150 Je '53

SLOGANS
- Daisy, daisy; it's a winning promotion theme! Oxford filing supply co. il Ptr Ink 242:49-50 F 20 '53
- So you've got to write a slogan. G. Moses. Adv Agency 45:70+ D '52

See also
- Safety slogans

SLOTKIN, Samuel, 1885-
- Businessmen in the news. por Fortune 46:48 N '52

SLOTTING
- Planing, shaping and slotting; reference sheet. Tool Eng 30:85-6 Je '53

SLOTTING machines
- High speed screw slotter cuts several heads. J. A. Largay. il Iron Age 170:100-1 O 16 '52

SLUDGE, Sewage. See Sewage sludge

SLUDGE ships. See Sewage sludge—Transportation

SLUMS
- Baltimore plan; is this the way to beat slums? il Eng N 150:49-50+ My 28 '53
- Cities plan $10 billion to rebuild blighted areas. il Eng N 149:22-4 D 25 '52
- Los Angeles passes laws to organize slum-clearance. Eng N 149:55 D 11 '52
- Nation's slums and what to do about them. A. Brockbank. House & Home 2:126-7 S '52
- Ohio slum clearance approved. il Eng N 150:55 Mr 12 '53
- Razing the slums; federal aid gives U.S. cities a chance to clear up slums. Bsns W p76+ Ap 11 '53
- St Louis slum-clearing planned. map Eng N 150:224-5 F 19 '53
- Slums threaten building funds. Eng N 150:81 Ja 22 '53

SMALL business. See Business—Small business

SMALL loan companies. See Finance companies

SMALL orders. See Sales policies—Small orders

SMALL space advertisements. See Advertisements, Small space

SMALLPOX
- Compulsory smallpox vaccination. N. A. George. Pub Health Rep 67:1135-8 N '52

SMELL

See also
- Odors

SMELTING
- Electric smelting at Bureau of mines seeks utilization of Northwest ores. R. T. C. Rasmussen. bibliog il J Metals 4:1273-9 D '52
- Flash smelting improves Harjavalta's metallurgy. F. Benitez. il diags Eng & Min J 154:76-80 O '53
- Lead blast furnace gas handling and dust collection. R. Bainbridge. flow sheet diags J Metals 4:Trans 1302-6 D '52

SMELTING—*Continued*
Pig iron smelting without metallurgical coke; abstract. W. W. Krebs and D. J. Ram. Metal Prog 63:210-11+ My '53
Zinc recovery by the Sterling process; abstract. W. M. Peirce. Min Cong J 38:117 O '52
See also
Blast furnaces
Smelting works

SMELTING works

Employees

Antimony poisoning in industry. L. E. Renes. bibliog plans A M A Archives Ind Hygiene & Occup Med 7:99-108 F '53

Equipment

Chuquicamata, story of Chilean copper. il J Metals 5:28-31 Ja '53
Chuquicamata sulphide plant; smelter. H. G. Dwyer; C. W. Dunham. il plan diags Min Eng 4:1192-200 D '52
New fiber gives excellent service in dust fume bags; Bradley co.'s Yellow Pine mine & smelter. il Eng & Min J 154:121 Ja '53
Operations at New Cornelia copper smelter of Phelps Dodge corp. J. W. Byrkit. flow sheet il plan diags J Metals 5:Trans 633-42 My '53
Two smelter experts exchange letters on a tough waste-heat problem. F. Benitez; R. C. Wilson. Eng & Min J 154:196+ My '53
Waste furnace heat to be used by boiler; White Pine copper smelter. Midwest Eng 5:29-30 Mr '53

Power

Waste heat from copper furnace drives steam power generator. diag Iron Age 171:148-9 My 14 '53; Steel 132:170+ Je 1 '53; Power Eng 57:73 Ag '53

SMITH, Alexander, and son's carpet company
Alexander Smith recuperates. Bsns W p 130+ My 23 '53

SMITH, Clarke, 1901-
Sketch. por East Underw 53:63 D 12 '52

SMITH, Cyril Stanley, 1903-
Presentation of the Francis J. Clamer medal. por Franklin Inst J 254:466-8 D '52

SMITH, Cyrus Rowlett, 1899-
Businessmen in the news. por Fortune 46:57 O '52

SMITH, Ernest Rice, 1891-1952
Memorial. J. C. Maxwell. bibliog por(pl 15) Geol Soc Proc 1952:139-41 Je '53

SMITH, H. Alexander, 1880-
Congress moves to give T-H a new look. por Bsns W p 138+ Ja 17 '53

SMITH, Harold V.
Sketch. por East Underw 54:29+ Ap 10 '53

SMITH, Paul Clifford, 1908-
Paul Smith out in San Francisco chronicle policy dispute. por Ed & Pub 85:46 D 20 '52

SMITH-DOUGLASS company
Stock sold. Comm & Fin Chr 176:1966-7 N 24 '52

SMITH asbestos products, inc.
Smith Asbestos acquired by National Gypsum. Paper Tr J 136:11 Ap 24 '53

SMOG. See Air pollution

SMOKE
Smoke-tunnel testing. Mech Eng 75:226 Mr '53
See also
Flue gas
Fumes
Smoke prevention

SMOKE detectors
Smokescope. diag Power Eng 57:94 Jl '53
Smokescope aids in estimation of density of stack smoke. N. W. Hertz. Heat & Ven 50:148 My '53; Same. Midwest Eng 5:20 My '53

SMOKE point
Relation of smoke point to molecular structure. R. A. Hunt, jr. bibliog Ind & Eng Chem 45:602-6 Mr '53

SMOKE prevention
Check list of air pollution control ordinances. Iron Age 171:456 Ja 1 '53
Current lines of attack on the smoke problem in Britain; abstract. P. C. G. Isaac. Nat Safety N 68:103-5 Jl '53
Overfire air limits underfeed stoker smoke. il diags Power Eng 57:102-3 Ag '53
Properly-sized chimneys aid smoke control. J. G. Mingle. Power Eng 57:82-3+ Mr '53
Troublesome smoke at Bayway plant is eliminated by atomized spray. il Oil & Gas J 51:130 N 24 '52
See also
Electric precipitation

SMOKED meat. See Meat, Smoked

SMOKEHOUSES
Stops fires before they start; electronic hot-spot detector. F. De Vaux. il Food Eng 25:77+ S '53

SMOKELESS powder
Static control stops fires in powder plant. Safety Maint & Prod 106:64+ Ag '53

SMOKING
Cure for the tobacco habit? Bacco-Ban. Consumers Res Bul 31:30 Ap '53
Did you give him cigarettes? smoking and lung cancer. Economist 165:883 D 27 '52
Smoking a cause of cancer. Consumers Res Bul 32:24-5 Ag '53
Smoking and asthma. Safety Maint & Prod 105:45 F '53

SMUCKER, David E. 1907-
D. E. Smucker heads the Detroit, Toledo & Ironton. por Ry Age 134:52 Ja 5 '53

SMUGGLING
Columbia acts to curtail smuggling. For Comm W 49:8 F 16 '53
Gloom over Muralla st.; Cuba's textile scandal. Mod Textiles Mag 34:54 Ja '53

SNAILS
Amino acid content of dehydrated giant African snails (achatina fulica Bowdich). A. R. Mead and A. R. Kemmerer. bibliog Science 117:138-9 F 6 '53
Removal of soft parts of snails by freezing. C. B. Knight, jr. Science 117:235 F 27 '53
Snail intermediate host of the rabbit parasite hasstilesia tricolor (trematoda; brachylaemidae). W. B. Rowan. bibliog Science 117:559-60 My 22 '53

SNAPDRAGONS
Effect of indoleacetic acid and amount of solar radiation on heterosis in the snapdragon (antirrhinum majus L.). J. B. Gartner and others. Science 117:593-5 My 29 '53

SNELL'S chemical market report (periodical)
Costly chemical service has a cheaper offspring. Bsns W p44 Ap 4 '53

SNODGRASS, Cornelius Stribling, 1900-
Businessmen in the news. por Fortune 46:48 N '52

SNO-GEL. See Refrigerants

SNOW
Dielectric properties of ice and snow at 3.2 centimeters. W. A. Cumming. bibliog il diags J Ap Phys 23:768-73 Jl '52
Luminous directional reflectance of snow. W. E. Knowles Middleton and A. G. Mungall. il diags Opt Soc Am J 42:572-9 Ag '52
Snow hydrology for multiple-purpose reservoirs. H. S. Riesbol. Am Soc C E Proc 79 [no 189]:1-19 My '53
Snow thermodynamics offers better understanding of mechanical properties of snow. R. W. Gerdel. il Civil Eng 22:1022-4 D '52

SNOW fences
Michigan expands test of paper for snow fence. il Eng N 150:52 Ap 16 '53

SNOW plows
Army gets electric powered rotary snow plow. Ry Age 135:57 O 19 '53
Snow removal appliances; report on limited tests of four. il Consumers Res Bul 30:11-12 N '52
Snow removal in mountain districts. L. Wylie. il Ry Age 133:56-7 D 15 '52
Toro snow hound. il Consumers Res Bul 31:17 F '53

SNOW removal
Airport's pedestrian ramp has snow melting. il Heating-Piping 25:96 Ap '53
Benefits of German de-freezer doubted; salt and snowplows still will be needed. Eng N 150:88+ My 14 '53
Cable reduces snow removal costs. il Elec World 138:145 N 3 '52
Design of snow melting systems. W. P. Chapman. bibliog diag Heat & Ven 49:95-102 Ap; 88-91 N '52

SNOW removal—*Continued*
Follow good piping practices when installing snow melting coils. G. D. Lain. diags Heating-Piping 25:111-12 My '53
Forecast, foul weather ahead; snow fighting equipment. il Bus Transportation 32:57 Ag '53
He sells up to snow melting! Bill Kelly of Camden, N.J. il Dom Eng 181:101+ Ap '53
Hotel installs snow melter. il Am Bld 74:166-7 D '52
How city engineer and police cooperate to keep Minneapolis winter traffic moving. H. G. Erickson. il Roads & Sts 96:54-6 S '53
How we get Florida streets in the winter. F. F. Harmon. il Pub Works 84:72-4 Ag '53
How we save money on snow and ice control; Oil City, Pa. A. E. Stanton. il Pub Works 83:65 D '52
Keeping streets clear in winter. G. M. Shepard. il Pub Works 84:67-9+ S '53
Materials handling activities need not be interrupted by snowfall. T. W. Rodes. Ind & Eng Chem 45:sup 115A-16A+ F '53
Prescription for winter-coated streets. J. V. Lewis. il Pub Works 84:76-7+ O '53
Protecting snow melting piping against corrosion. Heating-Piping 25:103 Je '53
Road problems arising from snow and ice; abstract. A. C. Whiffin and W. I. J. Price. Chem & Ind p1154-5 N 22 '52; Discussion. p 1155 N 22 '52; p82-3 Ja 24 '53
Rock salt saves money on snow removal. L. M. McConnell. il Pub Works 83:70 N '52
Snow and ice control in upstate New York. F. R. Williams. il Pub Works 84:75+ Ag '53
Snow melting piping keeps garage ramps in use. il Heating-Piping 25:99 O '53
Snow-melting system; Hewitt-Robins, inc. il Safety Maint & Prod 104:42 N '52
Snow-melting system on city street in Ohio. Roads & Eng Constr 91:128+ Jl '53
Winter's big chore. il Nat Safety N 66:50 D '52
See also
Snow plows

SNOW surveys
Aerial pictures of snow markers aid forecasts of stream runoff. T. Henderson. il map Elec World News ed 139:22-3 Ap 13 '53
Snow surveys made on the wing. il Elec West 110:81 My '53

SNYDER, John Wesley, 1895-
Businessmen in the news. por Fortune 47:58 Mr '53

SNYDER, Vern
He learned safety the hard way. por Nat Safety N 66:79-82 N '52

SOAKING pits. See Furnaces, Heating

SOAP
Comparison of the effects of several solubilized C_6-hydrocarbons on the viscosity of a polysoap solution. U. P. Strauss and L. H. Layton. bibliog J Phys Chem 57:352-4 Mr '53
Electron microscopic studies of some paraffinic sodium soaps. M. L. E. Chwalow. bibliog il diag J Phys Chem 57:354-8 Mr '53
Packing orientation of soap crystallites. M. J. Vold. bibliog diags J Phys Chem 57:26-9 Ja '53
Soap with protective coloration; soap used by ordnance workers colors skin if dangerous residue is present. il Safety Maint & Prod 104:104-6 O '52
Solubilization in alcohol-soap micelles; electrolytes as additives. H. B. Klevens. bibliog Am Chem Soc J 74:4624-6 S 20 '52
Study of soap aerogels from lubricating greases. W. H. Peterson and A. Bondi. bibliog il J Phys Chem 57:30-5 Ja '53
See also
Cleaning compositions
Potassium laurate
Saponification
Shampoos

Analysis
Determining free alkali in soap; abstract. A. Accinelli. Soap & San Chem 29:73 Ja '53

Drying
More on soap spray drying. M. Foch. Soap & San Chem 28:99 D '52

Physiological effect
Toxicity of soap and detergents. L. C. Barail. Soap & San Chem 28:48-51+ D '52

SOAP, Antiseptic
Antiseptic skin cleansers. M. M. Maglio and J. M. Hannegan. bibliog il Soap & San Chem 28:38-41+ N '52
Antiseptic soaps. W. S. Gump and A. R. Cade. bibliog Soap & San Chem 28:52-3+ D '52
Battle of the bacteriostats, Actamer and Lorothiodol. il Chem W 72:52+ Mr 14 '53
More than just clean! M. M. Maglio and J. M. Hannegan. il Safety Maint & Prod 106:50-2 S '53
New bacteriostat for soap; Actamer 2,2′-thiobis (4,6-dichlorophenol). R. S. Shumard and others. bibliog il Soap & San Chem 29:34-7+ Ja '53

SOAP, Metallic
Aluminum monochlorodilaurate, a nonthickener for hydrocarbons. K. J. Mysels and D. M. Chin. bibliog Am Chem Soc J 75:1750-1 Ap 5 '53
Aluminum soap powder in paint vehicles. M. L. Stumpf. Paint Oil & Chem R 116:16-17+ Ja 1 '53
Metallic soaps as gelling agents for plastigels. K. Parker and L. Tritsch. il Mod Plastics 30:129-30+ F '53
Some new metallic compounds of unsaturated fatty acids; their preparation and properties. J. H. Skellon and J. W. Spence. bibliog J Ap Chem 3:10-14 Ja '53
See also
Copper laurate

Analysis
Extraction of aluminum soap with acetone. K. J. Mysels, H. H. Pomeroy and G. H. Smith. bibliog Anal Chem 25:173-4 Ja '53

SOAP and glycerine producers, Association of American. See Association of American soap and glycerine producers

SOAP factories

Equipment
Simon soap stream divider. il Engineer 195:476 Mr 27 '53
Soap plant observer; Filmill dispersion machine. J. W. McCutcheon. il Soap & San Chem 28:95+ N '52

SOAP industry and trade
Soap anti-trust suit. Soap & San Chem 29:38-9+ Ja '53
Soap association defended against anti-trust charges. Oil Paint & Drug Rep 162:7 D 22 '52
Soap makers face antitrust suit; government moves for break-up. Oil Paint & Drug Rep 162:3+ D 15 '52
Soap pricing charges set for FTC dismissal. Oil Paint & Drug Rep 164:5+ Jl 6 '53
Soap splitup? Bsns W p53-4 D 20 '52
Soaps and syndets; C&EN annual review. F. D. Snell. Chem & Eng N 31:38-40 Ja 5 '53
What share of the market a new soap product can expect. K. Groesbeck. Adv Agency 46:73 Ja '53
See also
Association of American soap and glycerine producers

Advertising
How soap makers are spending their advertising dollars. Adv Agency 45:67+ O '52

Statistics
Record of a record breaker; soaps and detergents. Chem W 72:48 F 28 '53

Canada
Soaps and cleaning preparations. Can Chem Process 37:28 Je 20 '53

France
Toilet soaps in France. Soap & San Chem 28:50+ O '52

Great Britain
Soap and synthetics. Economist 167:767 Je 13 '53

SOAP laboratories
New Proctor & Gamble research laboratory. il Soap & San Chem 28:46-7+ O '52

SOAP manufacture
Allen B. Wrisley company, 1862-1952, 90th anniversary. il Soap & San Chem 28:50-2+ S '52
Electrolytes in soap making. F. Mock. Soap & San Chem 28:95 D '52
Potash soap manufacture. M. J. H. E. Hustinx. Soap & San Chem 28:107 D '52
Soap plant observer. J. W. McCutcheon. Published in monthly numbers of Soap and sanitary chemicals
See also
Soap factories
Soap materials

By-products

See also
Glycerin—Manufacture

SOAP materials
Metal complexing agents in soap and detergent products. H. W. Zussman. bibliog Soap & San Chem 28:79+ N '52
New phosphate for soap. F. H. Mackenzie. il Soap & San Chem 28:42-3 N '52
See also
Coconut oil
Tall oil

SOAP wrapping paper
Lever spore cloud method for the evaluation of antimycotic properties of paper and paperboard used in the soap industry. L. J. Vinson. il Tappi 36:234-6 My '53

SOCIAL conditions
World social situation. W. Kotschnig. Mo Labor R 75:400-1 O '52

SOCIAL insurance. See Insurance, Social

SOCIAL laws and legislation
See also
Insurance, Social

SOCIAL problems
See also
Housing
Liquor problem
Medical service
Public health
Safety movement
Unemployment

SOCIAL psychology
See also
Groups (sociology)

SOCIAL research
Human behavior. Sci Am 188:44 Mr '53

SOCIAL science reporter (periodical)
College research on human relations in industry. Bsns W p70 My 9 '53

SOCIAL sciences
Need for general laws in the social sciences. E. W. Leaver and J. J. Brown. Science 114:379-82 O 12 '51; Discussion. 116:70-1, 640 Jl 18, D 5 '52
Top executives tell how to use social sciences in advertising. H. E. Green. Ptr Ink 242: 35-7+ F 27 '53
See also
Economics

Bibliography

Theses in the social sciences; an international analytical catalogue of unpublished doctorate theses, 1940-1950. 236p United nations educational, scientific and cultural organization, 19 Avenue Kléber, Paris 16ᵉ '52

SOCIAL security. See Insurance, Social

SOCIAL security act
Amendments of 1952. Life Ins Courant 58:50 F '53

SOCIAL statistics
See also
Demography

SOCIAL welfare
Welfare commonwealth. Economist 166:718+ Mr 14 '53

Directories

International directory of nation-wide organizations concerned with family, youth and child-welfare. 289p pa $2 Columbia univ. press, 2960 Broadway, New York 27 '52

SOCIAL work
See also
Child welfare

Directories

Directory of social and health agencies of New York city, 1952-1953. D. M. Swart, ed. 551p $5 Columbia univ. press, 2960 Broadway, New York 27 '52

SOCIAL workers
Workers in the field of mental health. J. V. Coleman. Ann Am Acad 286:81-91 Mr '53

SOCIALISM

Great Britain

Socialism in conservative Britain. P. Einzig. Comm & Fin Chr 178:117 Jl 9 '53

Indonesia

Men around Sjahrir. Economist 166:32 Ja 3 '53

SOCIETIES
See also
Engineering societies
Trade associations
Trade unions

SOCIETY buildings
I.A.S. San Diego building reopened. il Aeronautical Eng R 12:33 My '53

Lighting

Shriner's Syria mosque. H. S. James. il Illum Eng 47:583-4 N '52

SOCIETY of actuaries
Actuaries discuss reinsurance, expense analysis, cost trends, tax reporting. Nat Underw (Life ed) 56:20-1 N 21 '52
Annual meeting, White Sulphur Springs, W.Va. Nov. 10-12. Nat Underw (Life ed) 56:1-2+ N 14 '52; Weekly Underw 167: 1598+, 1664+ D 13-20 '52
Annual meeting, White Sulphur Springs, W.Va. Nov. 10-12; program. Nat Underw (Life ed) 56:1+ O 24 '52
Eastern spring meeting, New York. East Underw 54:3-4 Ap 3 '53; Nat Underw (Life ed) 57:1+, 4 Ap 3 '53; Weekly Underw 168: 1036-8, 1116 Ap 11-18 '53
Society of actuaries publishes official mathematical text; Life contingencies, by C. W. Jordan. East Underw 54:1+ Ap 3 '53
Western spring meeting, Cincinnati. East Underw 54:3+ Je 19 '53; Nat Underw (Life ed) 57:1+ Je 12 '53; Weekly Underw 168: 1701+, 1773-4 Je 20-27 '53

SOCIETY of automotive engineers
Annual meeting, Detroit. Steel 132:47 Ja 19 '53
Annual meeting, Detroit, Jan. 12-16; program. S A E J 60:86-9 D '52
Annual meeting, Detroit; with abstracts of papers. Automotive Ind 108:44-9, 76+ F 15 '53
Annual meeting, 46th, Detroit, Jan 12-16; with abstracts of papers. S A E J 61:17-18+ F '53
Annual production meeting and forum, Cleveland; abstracts of papers. Automotive Ind 108:62-4+ My 1 '53
Annual production meeting and forum, Cleveland, March 25-27. S A E J 61:71-7 My '53
International West Coast meeting, Vancouver, B.C. Aug. 17-19; with abstracts of papers. S A E J 61:55-9 O '53
Milwaukee repeats production forum. S A E J 60:76-8 O '52
National aeronautic meeting, aeronautic production forum, and engineering display, New York, April 20-24; program. S A E J 61:100-3 Ap '53
National aeronautic meeting, aircraft production forum and engineering display, Los Angeles, Oct. 1-4. S A E J 60:63-75 N '52
National aeronautic meeting, Los Angeles. Automotive Ind 107:49+ N 1 '52
National aeronautic meeting, Los Angeles; abstracts of papers. Aviation W 57:35+ O 20 '52
National aeronautic meeting, New York. Automotive Ind 108:59+ My 15 '53
National aeronautic meeting, New York. Steel 132:52 Ap 27 '53
National aeronautic meeting, New York, April 20-23; with abstracts of papers. S A E J 61:69-85 Je '53
National Diesel engine meeting. S A E J 60: 70-4 D '52
National fuels and lubricants meeting, Tulsa, Nov. 6-7. S A E J 60:80C-80G D '52
National passenger car, body and materials meeting, Detroit, March 3-5. Automotive Ind 108:103-4+ Ap 1 '53
National passenger car, body; and materials meeting, Detroit, March 3-5. S A E J 61: 80-6 Ap '53

SOCIETY of automotive engineers—*Continued*
National production meeting, Cleveland. Iron Age 171:100 Ap 2 '53
National tractor meeting, Milwaukee. Automotive Ind 109:53+ O 1 '53
National tractor meeting, Milwaukee, Sept. 8-11. S A E J 60:71-5+ O '52
National transportation meeting, Pittsburgh, Oct. 22-4. S A E J 60:75-80B D '52
National West coast meeting, San Francisco, Aug. 11-13; with abstracts of papers. S A E J 60:55-60 O '52
1952 annual report. S A E J 61:17-25 Ja '53
1953 SAE president and vice presidents. S A E J 61:19-23 F '53
Proposed amendments to the SAE constitution. S A E J 60:56-8 N '52
Section officers for 1953-54. S A E J 61:104-8 Ag '53
Summer meeting, Atlantic City; abstracts of papers. Steel 132:63-4 Je 15 '53
Summer meeting, Atlantic City, June 7-12; program. S A E J 61:86-8 My '53
Summer meeting, Atlantic City, June 7-12; with abstracts of papers. S A E J 61:17+ Jl '53
Summer meeting, Atlantic City; with abstracts of papers. Automotive Ind 109:58-63+ Jl 1 '53

SOCIETY of chemical industry
List of meetings of sections and groups from Jan. 1, 1953 to Sept. 1953. Chem & Ind [insert] Ja 3 '53

SOCIETY of cosmetic chemists
Annual meeting, New York, Dec. 11th; with abstracts of papers. Oil Paint & Drug Rep 162:5+ D 15 '52

SOCIETY of economic geologists
Joint meeting with Geological society of America, Boston, Nov. 13-15; abstracts of papers. Econ Geol 47:767-79 N '52

SOCIETY of economic paleontologists and mineralogists
Joint annual meeting with American association of petroleum geologists and Society of exploration geophysicists, Houston, March 23-26. World Oil 136:76-8+ Ap '53
Joint annual meeting with American association of petroleum geologists and Society of exploration geophysicists, Houston, March 23-26; abstracts of papers. Oil & Gas J 51:174-9 Mr 30 '53

SOCIETY of exploration geophysicists
Joint annual meeting with American association of petroleum geologists and Society of economic paleontologists and mineralogists, Houston, March 23-26. World Oil 136:76-8+ Ap '53
Joint annual meeting with American association of petroleum geologists and Society of economic paleontologists and mineralogists, Houston, March 23-26; abstracts of papers. Oil & Gas J 51:174-9 Mr 30 '53

SOCIETY of motion picture and television engineers
Awards. Soc Motion Picture & Tv Eng J 59:535-40 D '52
Constitution and bylaws, officers, treasurer's report, awards. Soc Motion Picture & Tv Eng J 60:421-38 Ap '53
Convention, 72d, Washington, Oct. 6-10. Soc Motion Picture & Tv Eng J 59:432-40 N '52
Convention, Washington, Oct. 6-10; list of papers. Soc Motion Picture & Tv Eng J 59:551-5 D '52

SOCIETY of naval architects and marine engineers
Annual meeting, 60th, New York, Nov. 13-15; with abstracts of papers. Marine Eng 58:52-64 Ja; 60-7 F '53
Spring meeting, Boston, May 7-9. Marine Eng 58:62-7 Je '53

SOCIETY of plastics engineers
Annual technical conference, 9th, Boston, Jan. 21-23. Chem & Eng N 31:424-6 F 2 '53
Annual technical conference, 9th, Boston, Jan. 21-23. Mod Plastics 30:126+ F '53
National technical conference, 9th, Boston, Jan. 21-23. Rubber Age 72:661 F '53
National technical conference, 9th, Boston, Jan. 21-23; program and abstracts of papers. India Rubber World 127:376-7+, 519-20, 656-7+ D '52-F '53
Reinforced plastics conference, Washington; with abstracts of papers. Automotive Ind 108:52-5+ Ap 1 '53; Materials & Methods 37:8+ Ap '53
Reinforced plastics division 8th annual technical and management conference, Washington, Feb. 18-20. India Rubber World 128:69 Ap '53

SOCIETY of public analysts and other analytical chemists
Annual meeting, 79th, London, March 6. Chem Age (Lond) 68:455-6 Mr 21 '53; Chem & Ind p299-301 Mr 28 '53

SOCIETY of the plastics industry
Plastics film, sheeting and coated fabrics division conference, 4th, New York, Dec. 4-5; abstracts of papers. India Rubber World 127:518-19 Ja '53
Reinforced plastics division 8th annual technical and management conference, Washington, Feb. 18-20. Mod Plastics 30:93 Ap '53

SOCIETY of women engineers
Convention report. Midwest Eng 5:9-10+ S '52

SOCIOLOGY
See also

Cities and towns	Leadership
Crime and criminals	Liquor traffic
Family	Population
Groups (sociology)	Unemployment

SOCONY-VACUUM oil company
Houdry sues Socony-Vacuum on cat-cracking patents. Pet Eng 25:C81 Ap '53
Profits rule major's marketing department. H. Willetts. Nat Pet N 45:23-4 Mr 11 '53
Socony-Vacuum sued; Houdry wants damages for alleged patent infringement involved in licensing Air-Lift T.C.C. Oil & Gas J 51:66-7 Mr 9 '53

SODA ash
Soda ash is and will be ample. Chem Eng 60:193 Mr '53
Trona→soda ash; on recently-discovered mineral resources of Green River formation a new intermountain chemical industry is being built. il diag Chem Eng 60:118+ My '53

SODA fountains
Orange juice in a bag; package for single fountain servings of frozen concentrate. il Mod Packaging 26:110-13+ S '52

SODAMIDE. See Sodium amide

SODIUM
Adsorption of calcium and sodium on pyrite. A. M. Gaudin and W. D. Charles. bibliog Min Eng 5:Trans 195-200 F '53
Condensations by sodium; the effect of alkali metal halides upon amylsodium. A. A. Morton and E. F. Cluff. bibliog Am Chem Soc J 75:134-6 Ja 5 '53
Condensations by sodium; the effect of sodium reagents on indicators. A. A. Morton and F. H. Bolton. bibliog Am Chem Soc J 75:1146-8 Mr 5 '53
Distribution of sodium in modified Al-Si alloys. A. B. Michael and M. B. Bever. bibliog il J Metals 5:Trans 679-80 My '53
Effect of X-ray irradiation on the self-diffusion coefficient of Na in NaCl. D. Mapother. Phys R 89:1231-2 Mr 15 '53
Equilibria in aqueous systems containing Sr^{2+}, K^{+}, Na^{+} and Cl^{-}. G. O. Assarsson. bibliog J Phys Chem 75:207-10 F '53
Equilibrium studies of the silver-sodium-hydrogen system on Dowex 50. O. D. Bonner and V. Rhett. J Phys Chem 57:254-6 F '53
Fission of phaeanthine and bebeerine dimethyl ether with sodium in liquid ammonia. D. A. A. Kidd and J. Walker. bibliog Chem & Ind p243-4 Mr 14 '53
Formation and excitation of atomic sodium in hydrogen diffusion flames. L. Lindner and others. J Chem Phys 21:161-2 Ja '53
Have some sodium? il Mod Ind 24:109 O '52
Latest sodium handling techniques. J. M. Gill and others. il diags Chem Eng 60:217-19 Mr '53
Methods that take the hazard out of handling sodium. M. Sittig. bibliog il Nat Safety N 68:26-7+ Jl '53
Microwave spin resonance absorption by conduction electrons in metallic sodium. T. W. Griswold and others. il Phys R 88:951-2 N 15 '52
Physical properties of sodium-catalyzed polymers. M. H. Reich, R. E. Schneider and W. K. Taft. bibliog Ind & Eng Chem 44:2914-22 D '52

SODIUM—*Continued*

Polarization of sodium atoms. W. B. Hawkins and R. H. Dicke. bibliog diags Phys R 91:1008-9 Ag 15 '53

Preparation of dross-free sodium and other low melting metals and alloys by the underpour method. L. Silverman. diags R Sci Instr 24:80-1 Ja '53

Presence of free sodium in sodium chloride crystals containing color centers and color center precursors. M. Hacskaylo and D. Otterson. J Chem Phys 21:552-3 Mr '53

Production of sodium airglow excitation by imprisonment of resonance radiation. A. Foderaro and T. M. Donahue. Phys R 91: 1561 S 15 '53

Rate of ion exchange. E. R. Gilliland and R. F. Baddour. bibliog il diag Ind & Eng Chem 45:330-7 F '53

Reaction of sodium with ethyl trifluoroacetate. E. T. McBee and others. Am Chem Soc J 75:4090-1 Ag 20 '53

Reaction of sodium with organosilanes at elevated temperatures. R. A. Benkeser and D. J. Foster. bibliog Am Chem Soc J 74: 5314-17 N 5 '52

Self-diffusion in solid sodium. N. H. Nachtrieb and others. bibliog diag J Chem Phys 20:1185-94 Ag '52

Sodium as a plant food; abstract and discussion. J. J. Lehr. Chem & Ind p34 Ja 10 '53

Sodium dispersions in acetoacetate ester condensation. O. D. Frampton and J. F. Nobis. bibliog diags Ind & Eng Chem 45:404-10 F '53

Sodium photosensitized isomerization of *cis*-butene-2. W. M. Smith. J Chem Phys 20: 1808 N '52

Solutions of sodium in liquid ammonia. W. N. Lipscomb. bibliog J Chem Phys 21:52-4 Ja '53

Steric factor and activation energy of the reaction $Na+C_2H_5Cl=NaCl+C_2H_5$. R. J. Cvetanović and D. J. Le Roy. bibliog diags J Chem Phys 20:1016-20 Je '52

Thermodynamic properties of sodium vapor. A. Benton and T. H. Inatomi. bibliog J Chem Phys 20:1946-8 D '52

Total cross sections of chlorine, sodium, titanium, and bromide for fast neutrons. H. R. Dvorak and R. N. Little, jr. bibliog diag Phys R 90:618-22 My 15 '53

Analysis

Flame photometer for routine biochemical use. R. L. Warren. il diags J Sci Instr 29: 284-6 S '52

Isotopes

Angular distributions of protons from $Na^{23}(d,p)Na^{24}$. S. Takemoto and others. Phys R 91:1024-5 Ag 15 '53

Cross section for the reaction $Al^{27}(\alpha,\alpha 2pn)Na^{24}$ from threshold to 380 Mev. M. Lindner and R. N. Osborne. Phys R 91:342-4 Jl 15 '53

Excitation function for the $Al^{27}(d,\alpha p)Na^{24}$ reaction. R. E. Batzel and others. Phys R 91:939-42 Ag 15 '53

Magnetic analysis of the proton groups from the $Na^{23}(d,p)Na^{24}$ reaction. A. Sperduto and W. W. Buechner. bibliog diag Phys R 88: 574-9 N 1 '52

Nuclear gamma-rays from low energy proton bombardment of sodium, magnesium, and aluminum. H. Casson. bibliog diags Phys R 89:809-20 F 15 '53

Separation of high specific activity sodium^{23} from large quantities of magnesium. V. J. Linnenbom. J Chem Phys 20:1657-8 O '52

Solid diffusion of radioactive sodium in perthite. M. L. Jensen. bibliog diag Am J Sci 250:808-21 N '52

Spectrometer measurement on the high energy positions of sodium 22. B. T. Wright. Phys R 90:159-60 Ap 1 '53

Total neutron cross section of sodium. P. H. Stelson and W. M. Preston. bibliog Phys R 88:1354-7 D 15 '52

Manufacture

Production of metallic sodium. H. N. Gilbert. Electrochem Soc J 99:sup305C-6C N '52

SODIUM, Liquid

Piping liquid metal at the Knolls atomic power laboratory. il diag Heating-Piping 25:112-13 Jl '53

SODIUM acetate

Electrolytic oxidation of salts of aliphatic acids by the Hofer-Moest reaction; formation of methanol from sodium acetate. T. Kunugi. bibliog Am Chem Soc J 75: 1597-9 Ap 5 '53

SODIUM acrylate

Dependence of the intrinsic viscosity sodium polyacrylate on salt concentration. P. J. Flory and others. bibliog J Chem Phys 21: 164-5 Ja '53

SODIUM alginate

Preliminary study of the sizing of staple Orlon and Dacron. W. C. Wylie, jr. Am Dyestuff Rep 42:11-13 Ja 5 '53

SODIUM alloys

Diffraction of X-rays by liquid alloys of sodium and potassium. N. S. Gingrich and R. E. Henderson. bibliog J Chem Phys 20: 1117-20 Jl '52

See also

Sodium amalgam

Sodium potassium alloys

SODIUM aluminum silicates

Thermodynamic properties of sodium-aluminum and potassium-aluminum silicates. K. K. Kelley and others. bibliog 4pls U S Bur Mines Rep of Invest 4955:1-21 '53

SODIUM amalgam

Influence of impurities in the electrolyte in chlorine-caustic electrolysis by the mercury cell process; investigation of the influence of metallic impurities upon the decomposition rate of sodium amalgam. G. Angel and others. bibliog Electrochem Soc J 99:435-46; 100:39-44 N '52, Ja '53

SODIUM amide

Reaction of dihaloanisoles with sodium amide in liquid ammonia. R. A. Benkeser and G. Schroll. bibliog Am Chem Soc J 75:3196-7 Jl 5 '53

Studies on the chemistry of heterocyclics; investigations on the mechanism of reactions of 2-thienyl halides with sodium amide and sodium acetylide in liquid ammonia. A. Vaitiekunas and F. F. Nord. bibliog Am Chem Soc J 75:1764-8 Ap 5 '53

Use of sodamide in preparation of 2- and 3-pyridylmethylcarbinols. A. J. Nunn and K. Schofield. Chem Soc J p716-17 F '53

SODIUM benzoate

Sodium benzoate and sodium nitrite as corrosion-inhibitors in ethylene glycol antifreeze solutions. F. Wormwell, A. D. Mercer and H. C. K. Ison. bibliog il J Ap Chem 3:22-7, 133-44 Ja, Mr '53

Sodium benzoate and sodium nitrite as corrosion-inhibitors in ethylene glycol antifreeze solutions; laboratory investigations. F. Wormwell and A. D. Mercer. bibliog J Ap Chem 3:22-7 Ja '53

SODIUM borohydride

Low temperature heat capacities of inorganic solids; heat capacity of sodium borohydride from 15-300°K. H. L. Johnston and N. C. Hallett. Am Chem Soc J 75: 1467-8 Mr 20 '53

Nature of the gradual transition in sodium borohydride. W. H. Stockmayer and C. C. Stephenson. bibliog J Chem Phys 21:1311-12 Jl '53

11-Oxygenated steroids; the selective reduction of steroidal 11,20-diketones with sodium borohydride. E. P. Oliveto and E. B. Hershberg. bibliog Am Chem Soc J 75: 488-90 Ja 20 '53

Polarographic studies on the oxidation and hydrolysis of sodium borohydride. R. L. Pecsok. bibliog Am Chem Soc J 75:2862-4 Je 20 '53

Preparation of sodium borohydride by the high temperature reaction of sodium hydride with borate esters. H. I. Schlesinger, H. C. Brown and A. E. Finholt. bibliog Am Chem Soc J 75:205-9 Ja 5 '53

Reactions of diborane with alkali metal hydrides and their addition compounds; new syntheses of borohydrides; sodium and potassium borohydrides. H. I. Schlesinger and others. bibliog diags Am Chem Soc J 75: 199-204 Ja 5 '53

Reduction of chemically modified cellulose by sodium borohydride. A. Meller. Tappi 36: 366-7 Ag '53

Simple volumetric assay for sodium borohydride. D. A. Lyttle, E. H. Jensen and W. A. Struck. Anal Chem 24:1843-4 N '52

SODIUM borohydride—*Continued*
Sodium borohydride as a reducing agent in the sugar series. M. L. Wolfrom and K. Anno. bibliog Am Chem Soc J 74:5583-4 N 20 '52
Sodium borohydride, its hydrolysis and its use as a reducing agent and in the generation of hydrogen. H. I. Schlesinger and others. bibliog diag Am Chem Soc J 75:215-19 Ja 5 '53
Sodium borohydride reduction of N-alkyl-3,4-dihydroisoquinolinium iodides. W. M. Whaley and C. N. Robinson. bibliog Am Chem Soc J 75:2008-9 Ap 20 '53
Sodium borohydride reduction of quaternary Schiff bases and alkaloids. B. Witkop and J. B. Patrick. bibliog Am Chem Soc J 75:4474-6 S 20 '53

SODIUM bromide
Conductance at 25° of lithium chloride, sodium and potassium bromides and potassium iodide in methanol, and of lithium chloride, sodium bromide and potassium iodide in water. R. E. Jervis and others. bibliog Am Chem Soc J 75:2855-8 Je 20 '53
Study of the solubility limits at 35° in the system NaBr-NaCl. E. L. Simons, C. A. Orlick and P. A. Vaughan. bibliog Am Chem Soc J 74:5264-6 N 5 '52

SODIUM carbonate
Effect of sulfur compounds in the causticizing equilibrium. K. A. Kobe and J. A. Wilkinson. bibliog il diags Ind & Eng Chem 45:307-12 F '53
Reactions of sodium carbonate and sodium hydroxide with dinitrogen tetroxide. C. C. Addison and J. Lewis. Chem Soc J p 1319-20 Ap '53

SODIUM carboxymethyl cellulose
Carboxymethylcellulose; a staff-industry collaborative report. R. N. Hader, W. F. Waldeck and F. W. Smith. bibliog flow sheets il diags Ind & Eng Chem 44:2803-12 D '52

SODIUM chlorate
Chlorine dioxide generation by reduction of sodium chlorate with sulphur dioxide. J. B. Heitman. bibliog flow diag il Tappi 36:419-23 S '53
Progress in the electrolytic manufacture of chlorates and perchlorates in the United States and Canada since 1902. W. Wallace. Electrochem Soc J 99:sup309C-10C N '52

SODIUM chloride. See Salt

SODIUM chlorite
Action of acid chlorite on wheat straw. V. D. Harwood. bibliog(34 ref) Tappi 35:549-55 D '52
Chemistry of the wood cell wall; the delignification of beech and spruce woods by sodium chlorite in buffered aqueous solution. W. G. Campbell and I. R. C. McDonald. Chem Soc J p2644-50 Jl '52
Pulp bleaching with sodium chlorite. R. L. Carr and K. S. MacLeod. bibliog Tappi 36:sup 195A-8A My '53
Sodium chlorite as a bleaching agent; abstract. Am Dyestuff Rep 41:787 N 24 '52

SODIUM chromate
Determination of heavy metals and silica in chromate-treated cooling waters. S. Sussman and I. L. Portnoy. bibliog Anal Chem 24:1644-6 O '52

SODIUM compounds
Effect of associated salts on the polymerization of butadiene by organo-sodium reagents. A. A. Morton and others. bibliog Ind & Eng Chem 44:2876-82 D '52
Electron microscopic studies of some paraffinic sodium soaps. M. L. E. Chwalow. bibliog il diag J Phys Chem 57:354-8 Mr '53
Magnetic and spectroscopic studies on triphenyl-boron sodium. Ting Li Chu. bibliog Am Chem Soc J 75:1730-2 Ap 5 '53
Polymerization; a comparison of the action of organosodium reagents and of the Alfin catalyst on styrene. A. A. Morton and E. Grovenstein, jr. bibliog Am Chem Soc J 74:5434-6 N 5 '52
Polymerization; the reactions of amylsodium with α- and β-methylstyrenes. A. A. Morton and E. Grovenstein, jr. bibliog Am Chem Soc J 74:5437-40 N 5 '52

SODIUM cyanide
Reaction of sodium cyanide on cupric ammonia. R. K. McAlpine. bibliog Anal Chem 25:331-4 F '53

SODIUM dichromate
Cholesterol and companions; exhaustive dichromate oxidation. L. F. Fieser. bibliog il Am Chem Soc J 75:4386-94 S 20 '53
Cholesterol and companions; partial dichromate oxidation to Δ^4-cholestene-6β-ol-3-one. L. F. Fieser. bibliog Am Chem Soc J 75:4377-85 S 20 '53
New occupational diseases, Diesel itch; sodium bichromate. Safety Maint & Prod 106:49+ S '53

SODIUM diethyldithiocarbamate
Determination of copper ion by a modified sodium diethyldithiocarbamate procedure; iron, zinc, and lead interference eliminated. C. A. Noll and L. D. Betz. Anal Chem 24:1894-5 D '52

SODIUM dithionite. See Sodium hydrosulfite

SODIUM dodecyl sulfate
Preparation of sodium ribonucleate with the use of sodium dodecyl sulfate. E. R. M. Kay and A. L. Dounce. bibliog Am Chem Soc J 75:4041-4 Ag 20 '53

SODIUM ethoxide
Kinetics and mechanism of nucleophilic displacements in allylic systems; reaction of 3 : 3-dichloroprop-1-ene with the ethoxide ion. P. B. D. de la Mare and C. A. Vernon. Chem Soc J p3325-31 S '52
Some reactions of fluoroethanes with sodium ethoxide. P. Tarrant and J. A. Young. bibliog Am Chem Soc J 75:932-4 F 20 '53

SODIUM ferrocyanide
Sodium ferrocyanide; pictured flow sheet. Chem Eng 60:240-3 F '53

SODIUM fluoride
Dimerization in NaF. P. Kusch. J Chem Phys 21:1424 Ag '53
Fluoride model systems; the system NaF-BeF_2 and the polymorphism of Na_2BeF_4 and BeF_2. D. M. Roy and others. Am Cer Soc J 36:185-90 Je 1 '53
Formation and growth of quartz in sodium fluoride solutions under isothermal conditions. J. F. Corwin and others. bibliog Am Chem Soc J 75:1581-3 Ap 5 '53

SODIUM fluoroacetate
Behaviour of easily hydrolysable P in heart muscle during fluoroacetate poisoning. P. Buffa. bibliog Chem & Ind p 1080 N 1 '52
Fluoroacetate (1080) poisoning. J. W. E. Harrisson and others. Ind Med 21:440-2 bibliog(58 titles, p441-2) S '52
Toxic fluorine compounds containing the C-F link; preparation of carbon-labelled sodium fluoroacetate on a micro-scale. B. C. Saunders and T. S. Worthy. diags Chem Soc J p 1929-34 Je '53

SODIUM formate
Polarized infrared spectrum of sodium formate. R. Newman. J Chem Phys 20:1663-4 O '52

SODIUM gluconate
Gluconic acid and its derivatives. F. J. Prescott and others. bibliog(84 ref) Ind & Eng Chem 45:338-42 F '53

SODIUM hydride
Preparation of sodium borohydride by the high temperature reaction of sodium hydride with borate esters. H. I. Schlesinger, H. C. Brown and A. E. Finholt. bibliog Am Chem Soc J 75:205-9 Ja 5 '53
Sodium hydride as a condensing agent with acylaminomalonates in the synthesis of amino acids. J. Shapira, R. Shapira and K. Dittmer. bibliog Am Chem Soc J 75:3655-7 Ag 5 '53

SODIUM hydrosulfite
Manufacture of sodium hydrosulphite (dithionite). T. Dijs and others. bibliog flow sheet diag Chem & Ind p 1073-5 N 1 '52

SODIUM hydroxide
Better caustic utilization within a modern refinery treating plant. A. V. Sierra. flow diags il Oil & Gas J 52:252+ Je 22 '53
Caustic cracking in marine Scotch boilers. W. McClimont. bibliog Engineering 175:219-20 F 13 '53
Electrochemical behavior of aluminum; in buffered and alkaline solutions of potassium ferricyanide and in sodium hydroxide. J. V. Petrocelli. Electrochem Soc J 99:513-19 D '52
Electrolytic interaction of nylon with sodium hydroxide solutions at different temperatures. F. T. Wall and P. M. Saxton. bibliog J Phys Chem 57:370-5 Mr '53

SODIUM hydroxide—*Continued*

Electrolytic properties of aqueous solutions of polyacrylic acid and sodium hydroxide; the rate of sodium ion exchange between polyacrylate and free sodium ions. F. T. Wall and others. J Chem Phys 20:1206-11 Ag '52

Engineering approach to sales; case history of chlorine and caustic. M. E. Clark. maps Chem Eng Prog 48:643-6 D '52

Gas absorption; absorption of carbon dioxide from air by sodium and potassium hydroxides. H. A. Blum, L. F. Stutzman and W. S. Dodds. bibliog flow sheets Ind & Eng Chem 44:2969-74 D '52

Influence of impurities in the electrolyte in chlorine-caustic electrolysis by the mercury cell process; investigation of the influence of metallic impurities upon the decomposition rate of sodium amalgam. G. Angel and others. bibliog Electrochem Soc J 99:435-46; 100:39-44 N '52, Ja '53

Kinetics of the oxidation of galena in sodium-hydroxide solutions under oxygen pressure. J. E. Andersen and others. bibliog il diag J Metals 5:Trans 554-8 Ap '53; Discussion. 5:Trans 1556-8 sec 2 N '53

Piping hot caustic soda. il Steel 132:92 Ja 26 '53; Iron Age 171:205 Mr 5 '53

Preparation of pure sodium hydroxide solution for use in electrode kinetics. E. C. Potter. bibliog diags Chem & Ind p 1149-50 N 22 '52

Reaction of vanillin with silver oxide in the presence of technical caustic. I. A. Pearl and D. L. Beyer. Ind & Eng Chem 44:2893-4 D '52

Reactions of sodium carbonate and sodium hydroxide with dinitrogen tetroxide. C. C. Addison and J. Lewis. Chem Soc J p 1319-20 Ap '53

Study of the solubility limits at 35° in the system NaBr-NaCl. E. L. Simons, C. A. Orlick and P. A. Vaughan. bibliog Am Chem Soc J 74:5264-6 N 5 '52

Upgrading domestic manganese ores by leaching with caustic soda. R. V. Lundquist. Min Eng 5:Trans 413-17 Ap '53

Manufacture

Chlor-alkali industry, 1902-52. D. O. Hubbard. Electrochem Soc J 99:sup307C-9C N '52

Effect of sulfur compounds in the causticizing equilibrium. K. A. Kobe and J. A. Wilkinson. bibliog il diags Ind & Eng Chem 45:307-12 F '53

Fused caustic soda; abstract. G. J. Lewis. Chem Age (Lond) 67:872 D 27 '52

How this alkali plant grew with Canada; Canadian industries limited at Windsor. il Can Chem Process 37:31+ Ja '53

New chemical works; electrolytic process for producing chlorine and caustic soda from brine; Murgatroyd's salt & chemical co. il Elec R (Lond) 151:423-9 Ag 29 '52

New pattern for chlor-alkali. J. Gordon. Chem W 72:28-36+ Ap 4 '53

SODIUM iodide

Energy loss of cosmic-ray mu-mesons in sodium iodide crystals. A. Hudson and R. Hofstadter. bibliog il diag Phys R 88:589-96 N 1 '52

Packaging of NaI(Tl) crystals for scintillation spectrometry. R. K. Swank and J. S. Moenich. diag R Sci Instr 23:502-3 S '52

Phoswich, a multiple phosphor. D. H. Wilkinson. diags R Sci Instr 23:414-17 Ag '52

Scintillation response from NaI(Tl) crystals under bombardment with positive ions of energies 60-600 kev. S. K. Allison and H. Casson. bibliog diags Phys R 90:880-5 Je 1 '53

Surface effect of sodium iodide scintillators. E. der Mateosian and L. C. L. Yuan. Phys R 90:868-9 Je 1 '53

SODIUM iodine

Preparing thin sodium iodine crystals with a microtome. L. Cranberg. R Sci Instr 24:328-9 Ap '53

SODIUM lactobionate

Crystalline sodium lactobionate monohydrate. G. E. N. Nelson and F. H. Stodola. Am Chem Soc J 75:1748-9 Ap 5 '53

SODIUM metaphosphate

System sodium metaphosphate-calcium metaphosphate. G. W. Morey. Am Chem Soc J 74:5783-4 N 20 '52

SODIUM methoxide

Reactivity of *meta*-nitrofluorobenzene and 3 : 5-dinitrofluorobenzene with sodium methoxide. C. W. L. Bevan and G. C. Bye. Chem & Ind p981-2 O 4 '52

SODIUM nitrate

Fire-resistant and efficient new Central of Georgia nitrate warehouse. il diag Ry Age 135:80-2 Ag 24 '53

SODIUM nitrite

Amperometric titration of sulfamates with the dropping mercury cathode. S. T. Hirozawa and R. C. Brasted. bibliog Anal Chem 25:221-6 F '53

Purification of yttrium by precipitation with sodium nitrite. O. M. Hilal and M. El-Abbady. Chem Soc J p2935-6 Jl '52

Sodium benzoate and sodium nitrite as corrosion-inhibitors in ethylene glycol antifreeze solutions. F. Wormwell, A. D. Mercer and H. C. K. Ison. bibliog il J Ap Chem 3:22-7, 133-44 Ja, Mr '53

SODIUM oxides

Heat capacities at low temperatures and entropies at 298.16°K. of sodium superoxide, potassium superoxide and sodium peroxide. S. S. Todd. Am Chem Soc J 75:1229-31 Mr 5 '53

Liquid dinitrogen tetroxide solvent system; reactions of sodium, calcium, and zinc oxides with dinitrogen tetroxide and its thermal dissociation products. C. C. Addison and J. Lewis. Chem Soc J p 1874-9 Je '53

Phase equilibrium investigation of the Na_2O-P_2O_5-SiO_2 ternary system. E. T. Turkdogan and W. R. Maddocks. 3pls diags Iron & Steel Inst J 172:1-15 S '52

SODIUM pentachlorophenate

Effects of soils and sunlight on dilute concentrations of sodium pentachlorophenate. C. G. Dobrovolny and W. T. Haskins. Science 117:501-2 My 8 '53

SODIUM perborate

Application of peroxygen compounds in the textile industry. R. A. Secord. Am Dyestuff Rep 41:581-4 S 15 '52

Sodium perborate as a reagent in organic chemistry; oxidation of polyhydric alcohols. S. M. Mehta and R. S. Iyer. Am Chem Soc J 74:5541-2 N 5 '52

SODIUM periodates

Oxidation of simple organic substances by sodium metaperiodate in solutions exposed to daylight. F. S. H. Head and C. Hughes. Chem Soc J p2046-52 Je '52

SODIUM permanganate

Densities and freezing points of sodium permanganate solutions. J. C. White and R. R. Miller. Am Chem Soc J 75:3282-3 Jl 5 '53

SODIUM phosphates

Control slurry viscosity with additive; Missouri portland cement co. J. Romig and B. Kester. il Rock Prod 56:64-7 My '53

Nature of the films formed by passivation of iron with solutions of sodium phosphate. M. J. Pryor and others. bibliog Electrochem Soc J 99:542-5 D '52

Polyphosphates as polyelectrolytes; light scattering and viscosity of sodium polyphosphates in electrolyte solutions. U. P. Strauss, E. H. Smith and P. L. Wineman. bibliog Am Chem Soc J 75:3935-40 Ag 20 '53

See also
Sodium metaphosphate

Analysis

Estimation of sodium triphosphate; improvement in zinc titration method. R. N. Bell, A. R. Wreath and W. T. Curless. Anal Chem 24:1997-8 D '52

SODIUM plutonyl acetate

Magnetochemistry of the heaviest elements; sodium plutonyl acetate. J. K. Dawson. Chem Soc J p2705-7 Jl '52

SODIUM polyacrylate. See Sodium acrylate

SODIUM potassium alloys

Studies of fast reactions which evolve gases; the reaction of sodium-potassium alloy with water in the presence and absence of oxygen. M. Kilpatrick, L. L. Baker, jr. and C. D. McKinney, jr. bibliog il diag J Phys Chem 57:385-90 Ap '53

SODIUM ribonucleate

Preparation of sodium ribonucleate with the use of sodium dodecyl sulfate. E. R. M. Kay and A. L. Dounce. bibliog Am Chem Soc J 75:4041-4 Ag 20 '53

SODIUM silicates

Davison to make silicate by new Cowles process. Chem Eng 60:134+ Mr '53

Polymerization of polysilicic acid derived from 3.3 ratio sodium silicate. R. K. Iler. bibliog J Phys Chem 57:604-7 Je '53

Soluble silicates of soda. il Can Chem Process 36:76-7 S '52

System H_2O—Na_2O—SiO_2 at 400°C. G. W. Morey and J. M. Hesselgesser. bibliog diags Am J Sci Bowen vol p343-71 '52

SODIUM sulfates

Acid pulping with sodium sulphate liquors. G. A. Richter. Tappi 36:228-33 My '53

Interchangeability of sodium sulfate and common salt in acid-dyeing wool. H. W. Leitch. Am Dyestuff Rep 41:678-81 O 13 '52

Old salt has a lot of gall. Cer Ind 61:61 Ag '53

Production of sodium sulphate from natural brines at Monahans, Tex. flow sheets diag Min Eng 5:Trans711-15 Jl '53

Reactions of sodium sulfate with alumina-silica refractories. W. A. Lambertson. Am Cer Soc J 35:161-5 Jl 1 '52

Role of sodium chloride and sodium sulfate in acid-dyeing wool. J. D. Justice and W. W. Ewing. bibliog diags Am Dyestuff Rep 41: 668-77 O 13 '52

Ternary system $NaVO_3$-Na_2SO_4-H_2O. R. Trujillo and E. Tejera. Am Chem Soc J 75:741 F 5 '53

SODIUM sulfides

Conversion of sodium sulfide from spent cooking liquors to sodium sulfite; patent. diag Paper Ind 35:690 S '53

SODIUM sulfites

Chemical reaction equilibria in the combustion of sodium-base pulping liquors. M. N. May. bibliog Tappi 35:511-17 N '52

Conversion of sodium sulfide from spent cooking liquors to sodium sulfite; patent. diag Paper Ind 35:690 S '53

Analysis

Field estimation of sulfites in waters. S. Sussman and I. L. Portnoy. Anal Chem 24:1652-4 O '52

SODIUM sulfonates

Extent of hydration of some crystalline phases of sodium 1-alkanesulfonates. E. C. Lingafelter, L. H. Jensen and A. E. Markham. bibliog J Phys Chem 57:428-9 Ap '53

SODIUM thiophenoxide

Kinetics and mechanisms of nucleophilic displacements in allylic systems; the reactions between 3 : 3-dichloroprop-1-ene and the thiophenoxide ion. P. B. D. de la Mare and C. A. Vernon. Chem Soc J p3331-4 S '52

SODIUM thiosulfate

Preparation and standardization of sodium thiosulphate solutions. A. I. Vogel. Chem & Ind p 1177-8 N 29 '52

Standardizing iodine solution by means of sodium thiosulphate standard solution. R. Rands. Chem & Ind p 1001 O 11 '52

SODIUM thymonucleate

Viscosity and rigidity of solutions of sodium thymonucleate. S. Katz and J. D. Ferry. bibliog Am Chem Soc J 75:1589-93 Ap 5 '53

SODIUM tricarballylate

Condensation of trisodium tricarballylate with propionic anhydride. N. B. Mehta and W. E. McEwen. bibliog Am Chem Soc J 75:240-2 Ja 5 '53

SODIUM vanadate

Ternary system $NaVO_3$-Na_2SO_4-H_2O. R. Trujillo and E. Tejera. Am Chem Soc J 75: 741 F 5 '53

SOFTENING agents

Stiffness of papers with softening agents; abstract. J. Kubat. Paper Ind 35:90 Ap '53

Tactual and instrumental ranking of softeners on starched and unstarched cottons. C. R. Stock and A. Hvizdak. bibliog il Textile Res J 23:186-96 Mr '53

SOFTENING points

How to determine the softening point of viscosity. R. K. Day. Cer Ind 60:64-5 Mr '53

SOIL analysis

Determination of phosphorus and potassium in acid extracts of soils; abstracts and discussion. J. H. Hammence and others. Chem & Ind p57 Ja 17 '53

Determination of total iron in soils by disodium dihydrogen ethylenediamine tetraacetate titration. Kuang Lu Cheng, R. H. Bray and T. Kurtz. bibliog Anal Chem 25:347-8 F '53

Determination of traces of cobalt in soils; a field method. H. Almond. bibliog il Anal Chem 25:166-7 Ja '53

Diphenylthiocarbazone; Australians are using it to find ore. il Eng & Min J 154:134 O '53

Occurrence of L-fucose in soil, peat, and in a polysaccharide synthesized by soil bacteria. R. B. Duff. Chem & Ind p 1104-5 N 8 '52

Some relations between conductivity and acidity in soil suspensions and other solutions. H. Nicol and E. K. Schofield-Palmer. Chem & Ind p 1080-1 N 1 '52

SOIL bacteriology

Bacteriological control. Oil & Gas J 52:113 Je 29 '53

SOIL-cement mixtures

Cement-mud raises concrete slabs. il Constr Methods 35:103+ F '53

Soil-cement for house construction. R. Stone. il Civil Eng 22:1005-7 D '52

SOIL conditioners

After the snow is over. il Chem W 71:50-2 D 13 '52

Soil conditioner to assist in controlling erosion; Bondite. Roads & Eng Constr 91:70 Jl '53

Soil conditioners. R. L. Van Boskirk. Mod Plastics 30:200+ Ja '53

Soil conditioners; the fight goes on; with editorial comment. il Bsns W p43-6 Ja 31 '53

See also

Krilium

SOIL conservation

Bank policies on conservation farming credit. R. D. Hale. Banking 45:79-82 Je '53

Soil conservation service farm plans; asset to country bankers. J. C. Rogers. map Banking 45:66+ N '52

SOIL consolidation. See Soils—Consolidation

SOIL corrosion. See Corrosion and anti-corrosives—Underground corrosion

SOIL mechanics

Bearing capacity of cohesive soils. G. Piette. Roads & Eng Constr 90:188-90 N '52

Capillary rise of water in soils under field conditions. G. J. Bouyoucos. bibliog J Phys Chem 57:45-9 Ja '53

Control of embankment material by laboratory testing. F. C. Walker and W. G. Holtz. bibliog il diags Am Soc C E Proc 77[no 108]:1-25 D '51; Discussion. 78[no D-108]:1-13 N '52

Soil mechanics work in Canada. W. R. Schriever. Roads & Eng Constr 90:192+ N '52

Symposium on direct shear testing of soils. (Special tech. pub. no. 131) il diags 87p Am. soc. for testing materials, 1916 Race st, Philadelphia 3 '53

Symposium on the use of radioisotopes in soil mechanics. (Special tech. pub. no. 134) il diags 34p Am. soc. for testing materials, 1916 Race st, Philadelphia 3 '53

See also

Earth pressure
Landslides
Roads—Testing
Soil stabilization

SOIL moisture

Moisture movement in soils due to temperature difference. W. A. Hadley and R. Eisenstadt. il Heating-Piping 25:111-14 Je '53

Radioactive method of measuring moisture. diag Roads & Eng Constr 91:208-9 Mr '53

See also

Soil stabilization

SOIL research

Soil research in Scotland; year's work of the Macaulay institute reviewed. Chem Age (Lond) 67:875-6 D 27 '52

SOIL stabilization

Bituminous soil stabilization in Kansas. D. L. Lacy. il Roads & Sts 95:72-6+ D '52

Methods of soil stabilisation and their application to the construction of airfield pavements; abstract. D. Maclean and P. J. M. Robinson. Engineering 175:342 Mr 13 '53

SOIL stabilization—*Continued*

Soil stabilizing permits sand augering. il Elec West 110:82-3 My '53

Subsoil problems in Quebec. P. M. Bilodeau. il Roads & Eng Constr 90:128-9+ N '52

Sulphite liquor as a stabilizer. J. E. Hurtubise. Roads & Eng Constr 90:190-2 N '52; Same. il Can Chem Process 37:58+ F '53

Texas stabilizes roads with quicklime. il Eng N 150:38-9+ F 5 '53

Use of emulsified asphalt in base course materials. D. E. Stevens. Roads & Sts 96:100+ Je '53

See also

Roads, Gravel—Stabilization

Testing

Tests for stabilised soils. Engineering 176:60 Jl 10 '53

SOIL surveys

Method for making highway soil surveys. K. B. Woods. bibliog il maps Am Soc C E Proc 78[no 152]:1-10 S '52

SOIL temperature

Rapid measurement of the thermal resistivity of soil; abstract. V. V. Mason and M. Kurtz. Elec Eng 71:985 N '52

Soil temperatures in water works practice. R. F. Legget and C. B. Crawford. bibliog diags Am Water Works Assn J 44:923-39 O '52

SOILING of textiles

Microscopic study of molecular complex formation and soil removal. D. G. Stevenson. bibliog il diags Textile Inst J Trans 44:T 12-35 Ja '53

New soiling mixture for use in detergency evaluation. R. E. Wagg. Textile Inst J Trans 43:T515-16 S '52

Reflectance as a measure of the soil content of cotton fabric. I. Reich, F. D. Snell and L. Osipow. Ind & Eng Chem 45:137-41 Ja '53

Soiling and soil retention in textile fibers; suspending power of surfactants. J. Compton and W. Hart. Ind & Eng Chem 45:597-602 Mr '53

Study of soiling and soil retention in textile fibers. J. Compton and W. J. Hart. bibliog Textile Res J 23:158-68, 418-23 Mr, Je '53

SOILS

Determine anchor holding power by class of soil; engineering reference sheet. Elec World 138:130 O 20 '52

Effects of soils and sunlight on dilute concentrations of sodium pentachlorophenate. C. G. Dobrovolny and W. T. Haskins. Science 117:501-2 My 8 '53

Mineral aggregates for the soil. N. C. Rockwood. Rock Prod 56:81+ Ap '53

Moisture movement in soils due to temperature difference. W. A. Hadley and R. Eisenstadt. il Heating-Piping 25:111-14 Je '53

New criterion for weathering in soils. B. N. Rolfe and C. D. Jeffries. bibliog diag Science 116:599-600 N 28 '52

Properties of soils. E. Thelen. il Franklin Inst J 254:323-5 O '52

Rapid measurement of the thermal resistivity of soil; abstract. V. V. Mason and M. Kurtz. Elec Eng 71:985 N '52

Size distribution in the sand fractions of soils. D. Carroll. bibliog Am J Sci 250:790-801 N '52

Soil science and plant nutrition. J. Tinsley. bibliog il Chem Age (Lond) 68:63-9 Ja 10 '53

Soil selection in Manitoba. G. B. Williams. Roads & Eng Constr 90:184-6+ N '52

What you should know about soil engineering. L. J. Ritter. bibliog il diags Pub Works 84:94-103 Ag; 84-94 S; 95-104 O '53

See also

Agriculture
Clay
Drainage
Earthwork
Erosion
Fertilizers
Foundation soils
Highway engineering
Irrigation
Roads—Subgrades
Sand
Silt
Soil moisture

Consolidation

Asphalt membranes; their service record on Gulf Freeway fills. W. J. Van London. il diags Roads & Sts 96:104-6+ Ap '53

Effect of rock content and placement density on consolidation and related pore pressure in embankment construction. H. J. Gibbs. il diags Am Soc T M Proc 50:1343-60; Discussion. 1361-3 '50

Electric curtain stabilizes wet ground for deep excavation. H. W. Richardson. il plan diag Constr Methods 35:52-8 Ap '53

Large scale plant built on sand is nearing completion; Vibroflotation. il Chem & Eng N 30:5156 D 8 '52; Paper Tr J 135:47 D 12 '52; Manuf Rec 122:29 Ja '53; Civil Eng 23:60 Ja '53; Mech Eng 75:157-8 F '53; Roads & Sts 96:139 My '53

Sandy foundation area compacted by unusual method. il Roads & Sts 96:62 Jl '53; Eng N 150:62 Je 25 '53; Constr Methods 35:156 S '53

Soil compactor. il Engineer 194:628-9 N 7 '52; Engineering 175:192 F 6 '53

Soil densification by vibrator-compactor was feature of Killaloe airport job. F. R. Inglis. il Roads & Eng Constr 90:87-8+ D '52

Special construction features of Rayonier's Jesup plant. C. E. Wright. il Paper Tr J 137:21-2 S 25 '53

Vibratory soil compactor; A.-B. Vibro-Verken. il Engineering 176:60 Jl 10 '53

Vibroflotation process used in preparing plant site on sand in Florida phosphate field. il Eng & Min J 154:104-6 Ja '53

See also

Rollers (earthwork)

Electric properties

Pipe line corrosion and cathodic protection; soil resistivity surveys. M. E. Parker. diags World Oil 136:210-12 F '53

Soil resistivity instruments and measurements. O. W. Wade. Am Gas Assn Proc 1952:487-8

Freezing

Big top speeds job during winter months in frigid Alaska; extension to power plant of Ladd air force base. il Constr Methods 35:80-1+ My '53

How wells are drilled in permafrost. R. C. Jensen. il map World Oil 135:152+ D '52

Permafrost problems under field investigation. Roads & Eng Constr 91:64 F '53; Same. Arch Rec 112:36 N '52

Research station established at Norman Wells. Munic Util 91:46+ Mr '53

Soil freezing for tunnel construction; abstract. P. O. Persson. diag Refrig Eng 61:403 Ap '53

You can doze in winter. il diags Constr Methods 35:50-3 Ja '53

Mineral content

Clay minerals in sedimentary rocks and derived soils. F. B. Van Houten. map Am J Sci 251:61-82 bibliog(p80-2) Ja '53

Structural and energy relationships in the formation of iron and aluminum oxides, hydroxides, and silicates. T. Tamura and M. L. Jackson. bibliog Science 117:381-3 Ap 10 '53

Trace elements. W. D. McElroy and C. P. Swanson. diags Sci Am 188:22-5 Ja '53

Salt content

Land reclamation in northern India and Pakistan. Engineering 176:233-4 Ag 21 '53

Sulfur content

Sulfur in ether extracts of lake sediments. J. R. Vallentyne. Science 116:667 D 12 '52

Testing

Control of embankment material by laboratory testing. F. C. Walker and W. G. Holtz. bibliog il diags Am Soc C E Proc 77[no 108]:1-25 D '51; Discussion. 78[no D-108]:1-13 N '52

Effect of rock content and placement density on consolidation and related pore pressure in embankment construction. H. J. Gibbs. il diags Am Soc T M Proc 50:1343-60; Discussion. 1361-3 '50

Method for the rapid assessment of the fertility status of the soil. B. E. Beater. Chem & Ind p 1150-2 N 22 '52

SOILS—Testing—*Continued*

Pilot studies of soil density measurements by means of X-rays. D. Berdan and R. K. Bernhard. bibliog il diags Am Soc T M Proc 50:1328-38; Discussion. 1338-42 '50

Soil testing for better crops. il Can Chem Process 37:80 Ja '53

Symposium on exchange phenomena in soils. (Special tech. pub. no. 142) 74p pa $1.75 Am. soc. for testing materials, 1916 Race st, Philadelphia 3 '53

SOKOLOVSKII, Vasilii Danilovich

Portrait. Fortune 47:96 My '53

SOLANIDANE

Structure of isorubijervine; conversion to solanidane and solanidane-3β-ol. F. L. Weisenborn and D. Burn. bibliog Am Chem Soc J 75:259-62 Ja 20 '53

SOLANIDINE

Veratrine alkaloids; the structure of isorubijervine; conversion to solanidine. S. W. Pelletier and W. A. Jacobs. bibliog Am Chem Soc J 75:4442-6 S 20 '53

SOLANUM

Solanum alkaloids; solamargine, a new alkaloid from solanum marginatum. L. H. Briggs and others. Chem Soc J p3587-91 S '52

Solanum alkaloids; the mode of linkages in the trisaccharide moiety of solamargine. L. H. Briggs and E. G. Brooker. Chem Soc J p2833-4 S '53

Solanum alkaloids; the mode of linkages in the trisaccharide moiety of solanine and solasonine. L. H. Briggs and L. C. Vining. Chem Soc J p2809-15 S '53

Solanum alkaloids; the relation between constitution and basicity in solasodine, its derivatives, and solanidine. H. Bloom and L. H. Briggs. Chem Soc J p3591-2 S '52

SOLAR aircraft company

First all-faiths industrial chapel started by aircraft co. P. Eastman. Am Bsns 23:32 F '53

SOLAR eclipses. See Eclipses, Solar

SOLAR energy. See Solar heating; Solar power; Solar radiation

SOLAR heating

Solar energy. il Chem & Eng N 31:2056-60 My 18 '53

Utilisation of solar energy. bibliog Engineering 174:607-8 N 7 '52; Same cond. Engineer 194:686 N 21 '52

SOLAR power

Solar energy. il Chem & Eng N 31:2056-60 My 18 '53

Utilisation of solar energy. bibliog Engineering 174:607-8, 645-6, 679 N 7-21 '52; Same cond. Engineer 194:685-7 N 21 '52; Excerpts. Elec R (Lond) 151:1017-19 N 7 '52

Utilisation of solar energy; abstract. E. C. Bullard. Engineer 195:804 Je 5 '53

SOLAR radiation

Continuous layer formation in the atmosphere under the influence of solar radiation. H. K. Kallmann. bibliog Phys R 90:153-4 Ap 1 '53

Design data for slat-type sun shades for use in load estimating. G. V. Parmelee and D. J. Vild. il diags Heating-Piping 25:130-6 S '53

Distribution of solar energy over the United States. I. F. Hand. bibliog map Heat & Ven 50:73-5 Jl '53

H-bomb in your basement; fuels, the stored energy of nuclear reactions in the sun. F. W. Hutchinson. Heat & Ven 50:84-5 My '53

Shading of sunlit glass; experimental study of slat-type sun shades. G. V. Parmelee and others. bibliog il diags Heating-Piping 25:192-200 Ja '53

Solar constant. L. B. Aldrich and W. H. Hoover. Science 116:sup3 D 12 '52

Toplite system filters solar heat for cool interiors. il Eng N 150:174 Ap 16 '53

Ultraviolet radiant energy from the sun observed at 11,190 feet. R. Stair. bibliog J Res Nat Bur Stand 49:227-34 S '52

World-wide effects of continuous emission of cosmic rays from the sun. V. Sarabhai and R. P. Kane. Phys R 90:204-6 Ap 15 '53

See also

Earth temperature
Radio noise, Solar
Solar heating
Solar power
Spectrum, Solar

SOLAR radio noise. See Radio noise, Solar

SOLAR spectrum. See Spectrum, Solar

SOLAR system

Cosmic cloud hypotheses of the origin of the solar system. P. S. Palmer. bibliog Science 117:236-7 F 27 '53

Origin of the earth. H. C. Urey. il Sci Am 187:53-8+ O '52

See also

Planets

SOLASODINE

Transformation of kryptogenin to solasodine. F. C. Uhle. Am Chem Soc J 75:2280-1 My 5 '53

SOLDER and soldering

Aluminum soldering alloy. il Electronics 26:272+ F '53

Approach to automation; mechanized dip soldering of television receivers. K. M. Lord. il Electronics 26:130-7 Je '53; Excerpts. Am Mach 97:104-5 Ag 17 '53

Better solder joints; copper water pipe, fittings are easily joined. il Iron Age 171:160+ F 12 '53

Central vacuum system draws off soldering fumes. il Electronics 26:256-7 Ja '53

Cold soldering technique for printed circuits. Electronics 26:259-60 Ja '53

Five simple rules for copper water tube solder joints. J. S. Coe. il Dom Eng 181:95+ Mr '53; Same. Heating-Piping 25:88-9 My '53

Flow of liquid metals on solid metal surfaces and its relation to soldering, brazing and hot-dip coating; abstract and discussion. G. L. J. Bailey and H. C. Watkins. Engineering 174:414 S 26 '52

How to braze and solder zirconium. W. G. Schickner and others. il Steel 132:118-19 My 4 '53

How to solder strong joints every time; illustrated instructions. Power 96:138 N '52

How ultrasonic soldering works. L. Walter. diags Am Mach 97:126-8 S 14 '53

Induction soldering setups. il Electronics 26:260-2 Ja '53

Infrared soldering of transformer headers. il Electronics 26:262+ Jl '53

Joining aluminum to other metals. M. A. Miller. bibliog il Welding J 32:730-40 Ag '53; Same cond. Materials & Methods 38:96-9 S '53

Joining copper tube and soldered fittings. D. L. Mills. il Heat & Ven 49:105-6 D '52

Joining of aluminium and its alloys. W. V. Binstead. il Metallurgia 47:81-8 F '53

Multi-fixture table speeds soldered assemblies; dual carburetor floats at Rochester products division of General motors corp. il Iron Age 171:101 Ja 22 '53

New demands lead to new directions in engineering materials; welding and joining. T. C. Du Mond. Materials & Methods 37:95-6 Je '53

Research findings on brazing and soldering titanium. H. L. Meredith. il diag Automotive Ind 109:34-7+ Ag 15 '53

Soldering 1000 leads in one mechanized operation; General electric co. K. M. Lord. il Factory Management 111:108-9 Jl '53

Subassembly soldering jigs. il Electronics 26:294+ Mr '53

Ultrasonic soldering; abstract. E. A. Neppiras. Metal Prog 63:170+ Ap '53

Ultrasonic soldering in the foundry. Engineering 174:647 N 14 '52

Ultrasonic soldering in the foundry. il Metallurgia 46:251-2 N '52

Ultrasonic tinning techniques for aluminum. A. E. Crawford. bibliog il plan diags Electronics 25:102-5 D '52

Ultrasonics, the answer to aluminum soldering? L. Walter. il diags Materials & Methods 38:59-61 Jl '53

See also

Brazing
Silver solder
Welding

SOLDERING apparatus

Water cooling for resistance soldering tool. il Electronics 26:230+ F '53

SOLDIERS, Discharged. See Veterans

SOLENOIDS

Helmholtz coils for production of powerful and uniform fields and gradients. S. T. Lin and A. R. Kaufmann. bibliog diags Rs Mod Phys 25:182-90 Ja '53

SOLENOIDS—*Continued*

Integrated designs for solenoid operated shutoff valves. K. Jones. il diags Product Eng 24:186-90 My '53

Solenoid operated shutoff valves for aircraft hydraulic circuits. K. Jones. diags Product Eng 24:175-7 Mr '53

SOLES

Versatile sole; neoprene crepe. il Safety Maint & Prod 105:29-30+ Je '53

SOLES, Rubber

Soles and heels. India Rubber World 128:202 My '53

SOLES, Wood

Do you know the special safety contribution made by wooden sole shoes. M. G. Reece. il Safety Maint & Prod 105:33-5 F '53

SOLID catalysts. See Catalysts

SOLID hydrogen. See Hydrogen, Solid

SOLID solutions. See Solutions, Solid

SOLIDS

Accuracy of determination of the magnetic susceptibility of solids by the Gouy method. C. M. French and D. Harrison. Chem Soc J p2538-40 S '53

Calculated surface tensions of some organic substances in the solid state. J. W. Mitchell and G. A. H. Elton. Chem Soc J p839-43 Mr '53

Contact angles and boundary energies of a low energy solid. F. M. Fowkes and W. M. Sawyer. bibliog J Chem Phys 20:1650 O '52

Critical temperature of solids. B. J. Alder and G. Jura. J Chem Phys 20:1491-2 S '52

Flexural response of a submerged solid to a pulsating gas bubble. G. Chertock. diags J Ap Phys 24:192-7 F '53

International symposium on the reactivity of solids. Am Cer Soc Bul 31:269-73 Ag 15 '52

Nature of solids. G. H. Wannier. il diags Sci Am 187:39-48 D '52

Nernst memorial lecture. J. R. Partington. bibliog Chem Soc J p2867-70 S '53

Paramagnetic resonance in the solid state. B. Bleaney. bibliog il diags J Phys Chem 57:508-17 My '53

Relation between dynamic viscosity and rigidity. A. A. K. Ibrahim. J Chem Phys 21: 1422 Ag '53

Solid state phase changes in long chain compounds. J. D. Hoffman and B. F. Decker. bibliog diags J Phys Chem 57:520-9 My '53

Solid state reaction between magnesium and chromium oxides. G. Parravano. Am Chem Soc J 74:6123-5 D 5 '52

Solids feeders. T. R. Olive. il diags Chem Eng 59:163-78 N '52

Sonic analysis for solid bodies. N. N. Ault and H. F. G. Ueltz. bibliog diag Am Cer Soc J 36:199-203 Je 1 '53

Theory of sensitized luminescence in solids. D. L. Dexter. bibliog J Chem Phys 21:836-50 My '53

Thermal conductivity of solids and fluids from studies of aggregate matter. H. S. Strickler. bibliog J Chem Phys 20:1333-4 Ag '52

Thermal expansion of solids. J. S. Dugdale and D. K. C. MacDonald. Phys R 89:832-4 F 15 '53

Venturi as a meter for gas-solids mixtures. L. Farbar. bibliog flow diag il diags A S M E Trans 75:943-51 Jl '53

See also

Crystals	Powders
Expansion (heat)	Solutions, Solid
Melting points	Surface phenomena
Particles	

SOLINSKY, Robert Sam

Businessmen in the news. por Fortune 47:54 F '53

SOLS. See Colloids

SOLUBILITY

Aqueous solubility relations of potassium molybdate, and aqueous ternary isotherms at 25° with KOH, KNO_3 and KIO_3. J. E. Ricci and F. J. Loprest. Am Chem Soc J 75:1224-6 Mr 5 '53

Correlation of solid metal and nonelectrolyte solubilities. P. L. Auer. J Chem Phys 21: 1113-14 Je '53

Determination of purity of steroids; solubility analysis. W. Tarpley and M. Yudis. bibliog diags Anal Chem 25:121-7 Ja '53

Effect of Wiley mill cutting on solubility of cellulose fibers. A. F. Johnson and W. A. Mueller. Ind & Eng Chem 45:215-17 Ja '53

Entropy of solution of nonelectrolytes. J. H. Hildebrand and R. L. Scott. bibliog J Chem Phys 20:1520-1 O '52

Experimental determination of solubilities. H. K. Zimmerman, jr. diags Chem R 51: 25-65 bibliog(245 ref, p60-5) Ag '52

Fractionation of cellulose acetate. A. J. Rosenthal and B. B. White. bibliog diags Ind & Eng Chem 44:2693-6 N '52

Freezing point lowering and solubility curves of cellulose fibers. J. M. Preston and M. V. Nimkar. bibliog Textile Res J 23: 119-20 F '53

Hydrothermal synthesis. G. W. Morey. bibliog diags Am Cer Soc J 36:279-85 S 1 '53

Influence of impurities on the solubilities of high molecular weight amine acetates. C. W. Hoerr and H. J. Harwood. bibliog Ind & Eng Chem 44:2923-8 D '52

New method for studying the solubility properties of cellulose acetates. K. Borgin. bibliog Tappi 36:284-8 Je '53

Pteridine studies; the solubility and the stability to hydrolysis of pteridines. A. Albert, D. J. Brown and G. Cheeseman. Chem Soc J p4219-32 N '52

Review of physico-chemical data on the state of supercritical fluids. F. G. Smith. diags Econ Geol 48:14-38 bibliog(108 titles, p34-8) Ja '53

Solubilities and structures in aqueous aliphatic hydrocarbon solutions. W. F. Claussen and M. F. Polglase. bibliog diag Am Chem Soc J 74:4817-19 O 5 '52

Solubilities of naphthalene and biphenyl in aqueous solutions of electrolytes. M. A. Paul. bibliog Am Chem Soc J 74:5274-7 N 5 '52

Solubilities of oleic and linoleic acids in common organic solvents. C. W. Hoerr and H. J. Harwood. bibliog J Phys Chem 56: 1068-73 D '52

Solubility and diffusion coefficient of carbon in nickel; reaction rates of nickel-carbon alloys with barium oxide. J. J. Lander and others. bibliog J Ap Phys 23:1305-9 D '52

Solubility and shear. Ind & Eng Chem 45: sup 18A+ Mr '53

Solubility characteristics of some binary liquid mixtures. D. N. Campbell and J. B. Hickman. bibliog Am Chem Soc J 75:2879-81 Je 20 '53

Solubility diagram and the temperature-composition diagram at atmospheric pressure of the liquid system ozone-oxygen. H. J. Schumacher. J Chem Phys 21:1610-11 S '53

Solubility of ammonium, magnesium and zinc fluosilicates from 2 to 68°. E. A. Simpson and E. M. Glocker. bibliog J Phys Chem 57: 529-30 My '53

Solubility of carbon and oxygen in liquid bismuth. C. B. Griffith and M. W. Mallett. bibliog Am Chem Soc J 75:1832-4 Ap 20 '53

Solubility of carbon in 18-percent-chromium-ten-percent-nickel austenite. S. J. Rosenberg and C. R. Irish. bibliog il J Res Nat Bur Stand 48:40-8 Ja '52; Abstract. Metal Prog 63:164+ Mr '53

Solubility of cerium(IV) pyrophosphate. J. C. Brantley and J. R. Huizenga. Am Chem Soc J 74:6101 D 5 '52

Solubility of ferrous sulphate in aqueous solutions of sulphuric acid. W. Bullough, T. A. Canning and M. I. Strawbridge. J Ap Chem 2:703-7 D '52

Solubility of fluorides of metals in liquid hydrogen fluoride. A. W. Jache and G. H. Cady. bibliog J Phys Chem 56:1106-9 D '52

Solubility of hydrous germanous oxide and the potential of the germanous oxide-germanic oxide couple. W. L. Jolly and W. M. Latimer. Am Chem Soc J 74:5751-2 N 20 '52

Solubility of indium in mercury. W. M. Spicer and C. J. Banick. bibliog Am Chem Soc J 75:2268-9 My 5 '53

Solubility of organic solids in fluorocarbon derivatives. J. H. Simons and M. J. Linevsky. bibliog Am Chem Soc J 74:4750-1 O 5 '52

Solubility of silicon and germanium in gallium and indium. P. H. Keck and J. Broder. Phys R 90:521-2 My 15 '53

Solubility of the copper salts of aromatic carboxylic acids in benzene-ethanol mixtures. M. Crawford and F. H. C. Stewart. Chem Soc J p288-92 Ja '53

SOLUBILITY—*Continued*

Solubilization in alcohol-soap micelles; electrolytes as additives. H. B. Klevens. bibliog Am Chem Soc J 74:4624-6 S 20 '52

Some factors affecting the solubility of polymers. P. A. Small. bibliog J Ap Chem 3: 71-80 F '53

Some factors influencing the solubility of amine sulphates; abstract. M. Kapel. Chem Age (Lond) 67:495 O 11 '52

Study of lead sulfide solubility and its relation to ore deposition. J. J. Hemley. bibliog diag Econ Geol 48:113-38 Mr '53

Study of the solubility limits at 35° in the system NaBr-NaCl. E. L. Simons, C. A. Orlick and P. A. Vaughan. bibliog Am Chem Soc J 74:5264-6 N 5 '52

Study of thiocyanatoargentate(I) ions by a solubility method. G. C. B. Cave and D. N. Hume. bibliog Am Chem Soc J 75:2893-7 Je 20 '53

Ternary solubility data for systems involving 1-propanol and water. J. F. McCants, J. H. Jones and W. H. Hopson. bibliog Ind & Eng Chem 45:454-6 F '53

SOLUTION (chemistry)

Activity coefficients of nonelectrolyte solutes in aqueous salt solutions. F. A. Long and W. F. McDevit. Chem R 51:119-69 bibliog(180 ref, p 154-7) Ag '52

Application of the cell method to the statistical thermodynamics of solutions; experimental. V. Mathot and A. Desmyter. bibliog diag J Chem Phys 21:782-8 My '53

Cooperative orientation effects in solutions. J. A. Barker. bibliog J Chem Phys 20:1526-32 O '52

Cooperative orientation in solutions; the accuracy of the quasi-chemical approximation. J. A. Barker. bibliog diag J Chem Phys 21:1391-4 Ag '53

Critical phenomena of saturated solutions in binary systems. C. A. van Gunst, F. E. C. Scheffer and G. A. M. Diepen. bibliog J Phys Chem 57:578-81 Je '53

Critical phenomena of saturated solutions in ternary systems. C. A. van Gunst, F. E. C. Scheffer and G. A. M. Diepen. bibliog J Phys Chem 57:581-3 Je '53

Dielectric constants of solutions of charged particles. G. K. Fraenkel. J Chem Phys 20:1931-3 D '52

Dielectric polarisation of solutions; the polarisations and apparent dipole moments of various primary, secondary, and tertiary amines in solutions in non-polar solvents and in the liquid state. E. G. Cowley. Chem Soc J p3557-70 S '52

Dissolution of metals over the temperature range of 25 to -60°; the dissolution of zinc in hydrochloric acid-methyl alcohol-water solutions. J. Y. Welsh and A. B. Garrett. bibliog J Phys Chem 56:727-30 Je '52

Effect of pressure on diffusion in aqueous and alcoholic salt solutions. R. B. Cuddeback and H. G. Drickamer. J Chem Phys 21:597-601 Ap '53

Effect of pressure on diffusion in water and in sulfate solutions. R. B. Cuddeback and others. bibliog J Chem Phys 21:589-97 Ap '53

Flow birefringence in solutions of macromolecules. R. Cerf and H. A. Scheraga. il diags Chem R 51:185-261 bibliog(p256-61) O '52

Four ternary liquid systems involving monochlorobenzene; phase equilibria and tie line data. J. S. Peake and K. E. Thompson, jr. bibliog Ind & Eng Chem 44:2439-41 O '52

Influence of nonrandomness of mixing in the cell model of solutions. I. Saroléa. J Chem Phys 21:182-4 Ja '53

Model of metal-ammonia solutions, with reference to electron spin resonance experiments. J. Kaplan and C. Kittel. bibliog diag J Chem Phys 21:1429-33 S '53

Nernst memorial lecture. J. R. Partington. bibliog Chem Soc J p2858-60 S '53

Physical toxicity of chemicals; a systematic treatment of physical toxicity in aqueous solutions; 269 compounds listed. J. C. McGowan. bibliog J Ap Chem 2:651-8 N '52

Proton transfers in solution. A. Nisonoff and others. bibliog J Chem Phys 20:985-9 Je '52

Solutions in sulphuric acid; electrical conductivity measurements. R. J. Gillespie and S. Wasif. Chem Soc J p221-31 Ja '53

Solutions in sulphuric acid; the densities and viscosities of some sulphuric acid solutions. R. J. Gillespie and S. Wasif. Chem Soc J p215-21 Ja '53

Solutions in sulphuric acid; the electrical conductivity of the water-sulphur trioxide system in the region of the composition of sulphuric acid. R. J. Gillespie and S. Wasif. diags Chem Soc J p204-8 Ja '53

Solutions in sulphuric acid; transport-number measurements. R. J. Gillespie and S. Wasif. diag Chem Soc J p209-15 Ja '53

Solutions of halogens in highly acidic, polar solvents. R. E. Buckles and J. F. Mills. bibliog Am Chem Soc J 75:552-5 F 5 '53

Solutions of sodium in liquid ammonia. W. N. Lipscomb. bibliog J Chem Phys 21:52-4 Ja '53

Solvent effects in the α-chymotrypsin-hydrocinnamic ester system. M. L. Barnard and K. J. Laidler. bibliog Am Chem Soc J 74: 6099-101 D 5 '52

Some aspects of the solution chemistry of zirconium. B. A. J. Lister and L. A. McDonald. diags Chem Soc J p4315-30 N '52

Specific molar quantities in the cell model of solutions. J. Nasielski. J Chem Phys 21: 184-5 Ja '53

Statistical theory of r-mer solutions. I. Prigogine and others. J Chem Phys 21:560-1 Mr '53

Thermodynamic study of liquid metallic solutions; approximate thermodynamic data from the phase diagram for the systems copper-bismuth, copper-lead and copper-thallium. O. J. Kleppa. Am Chem Soc J 74:6047-51 D 5 '52

Thermodynamic study of liquid metallic solutions; the systems zinc-bismuth and zinc-lead. O. J. Kleppa. bibliog Am Chem Soc J 74:6052-6 D 5 '52

See also

Colloids
Crystallization
Diffusion
Electrolysis
Electrolytes
Ions
Precipitation
Solubility
Solvents
Supersaturation

SOLUTION, Heat of

Heats of solution of the cobaltous chloride hydrates in water and certain organic solvents. L. I. Katzin and J. R. Ferraro. Am Chem Soc J 75:3821-4 Ag '53

Heats of solution of the cobaltous nitrate hydrates in water and in certain organic solvents and binding energies of molecular ligands. L. I. Katzin and J. R. Ferraro. bibliog Am Chem Soc J 74:6040-7 D 5 '52

Solubilities and structures in aqueous aliphatic hydrocarbon solutions. W. F. Claussen and M. F. Polglase. bibliog diag Am Chem Soc J 74:4817-19 O 5 '52

SOLUTIONS, Solid

Alpha solid-solution area of the Cu-Mn-Sn system. C. W. Funk and J. A. Rowland. bibliog il J Metals 5:Trans 723-5 sec 2 My '53

Anelastic measurements of atomic mobility in substitutional solid solutions. A. S. Nowick. bibliog Phys R 88:925-34 N 15 '52

Concentration dependence of diffusion coefficients in metallic solid solution. D. E. Thomas and C. E. Birchenall. bibliog J Metals 4:Trans 867-73 Ag '52; Discussion. 5:Trans 726-8 sec 2 My '53

Correlations between the creep behavior and the resulting structures in alpha solid solutions. O. D. Sherby and J. E. Dorn. bibliog il J Metals 5:Trans 324-30 sec 2 F '53

Development of porosity during diffusion in substitutional solid solutions. R. W. Balluffi and B. H. Alexander. il J Ap Phys 23: 1237-44 N '52

Effect of some solid solution alloying elements on the creep parameter of nickel; abstract. T. H. Hazlett and E. R. Parker. Metal Prog 64:298+ O '53

Electrical resistance of binary metallic mixtures. R. Landauer. bibliog diags J Ap Phys 23:779-84 Jl '52

Electrical resistivity in indium-thallium solid solutions. J. W. Stout and L. Guttman. Phys R 88:713-14 N 15 '52

SOLUTIONS, Solid—*Continued*

Grain boundary diffusion of zinc in copper. R. Flanagan and R. Smoluchowski. J Ap Phys 23:785-7 Jl '52

Infrared studies of mixed crystals; naphthalene-d_8 in naphthalene. W. B. Person and G. C. Pimentel. bibliog J Chem Phys 20:1913-15 D '52

Liquidus$\rightleftarrows$solidus relations in the system iron-cobalt in the range 0-30 atomic per cent cobalt. G. B. Harris and W. Hume-Rothery. bibliog diag Iron & Steel Inst J 174:212-18 Jl '53

Magnetic susceptibility of urania-thoria solid solutions. J. K. Dawson and M. W. Lister. Chem Soc J p5041-2 D '52

Scintillation process in plastic solid solutions. R. K. Swank and W. L. Buck. bibliog Phys R 91:927-33 Ag 15 '53

Separate your solid solutions! diag Chem Eng 60:368 F '53

Solid phases in the system Ag_2HgI_4-Cu_2HgI_4. L. Suchow and P. H. Keck. bibliog Am Chem Soc J 75:518-22 F 5 '53

Solid solubility of silver in aluminum; abstract. L. Rotherham and L. W. Larke. Metal Prog 63:208+ My '53

Solid solution series, boron-boron carbide. R. D. Allen. Am Chem Soc J 75:3582-3 Jl 20 '53

Solid solutions of metallic compounds; abstract. I. I. Kornilov. Metal Prog 63:190+ Ja '53

Studies on the melilite solid solutions. R. W. Nurse and H. G. Midgley. bibliog diags Iron & Steel Inst J 174:121-31 Je '53

Superconductivity of indium-thallium solid solutions. J. W. Stout and L. Guttman. bibliog Phys R 88:703-12 N 15 '52

Thermodynamics of coprecipitation; dilute solid solutions of AgBr in AgCl. F. Vaslow and G. E. Boyd. bibliog Am Chem Soc J 74:4691-5 S 20 '52

Transition temperatures in solid solutions of ammonium chloride and ammonium bromide; a new transition in pure ammonium bromide. C. C. Stephenson and H. E. Adams. J Chem Phys 20:1658-9 O '52

Transition temperatures in some dihydrogen and dideutero phosphates and arsenates and their solid solutions. C. C. Stephenson and others. J Chem Phys 21:1110 Je '53

Vanadium-oxygen solid solutions. A. U. Seybolt and H. T. Sumsion. bibliog il diag J Metals 5:Trans 292-9 sec 2 F '53

Vapor pressure of silver over silver-gold solid solutions. C. L. McCabe and others. bibliog J Metals 5:Trans 709-11 sec 2 My '53

SOLUTIONS, Standard

Absolute sulfuric acid, a highly accurate primary standard. J. E. Kunzler. bibliog diags Anal Chem 25:93-103 Ja '53

Preparation of very dilute standard base by ion exchange. B. W. Grunbaum, W. Schöniger and P. L. Kirk. diag Anal Chem 24:1857-8 N '52

Standardizing iodine solution by means of sodium thiosulphate standard solution. R. Rands. Chem & Ind p 1001 O 11 '52

SOLUTIONS, Supersaturated. See Supersaturation

SOLUTIZER process. See Gasoline—Manufacture

SOLVENTS

Acid-base catalysis in non-aqueous solvents; the depolymerisation of paraldehyde in ethereal solutions of proton acids and Lewis acids. R. P. Bell and B. G. Skinner. Chem Soc J p2955-9 Ag '52

Chemical analysis of industrial solvents; abstract. M. Jacobs and L. Scheflan. Nat Safety N 68:60+ Jl '53

Conductivity of potassium chloride in mixed solvents. J. Daly and C. G. Smith. diags Chem Soc J p2779-84 S '53

Correlating diffusion coefficients in liquids. D. F. Othmer and M. S. Thakar. bibliog Ind & Eng Chem 45:589-93 Mr '53

Dipole moments and near ultraviolet absorption of some monosubstituted benzenes; the effect of solvents and hydrogen bonding. S. Nagakura and H. Baba. bibliog Am Chem Soc J 74:5693-8 N 20 '52

Effect of solvent on equilibrium and rate constants; the measurement and correlation of acid dissociation constants of anilinium and ammonium salts in the system ethanol-water. B. Gutbezahl and E. Grunwald. bibliog Am Chem Soc J 75:559-65 F 5 '53

Effect of solvents on the absorption spectra of aromatic compounds. H. E. Ungnade. bibliog Am Chem Soc J 75:432-4 Ja 20 '53

Effect of solvents on the decarboxylation of picolinic acid. N. H. Cantwell and E. V. Brown. bibliog Am Chem Soc J 75:4466-8 S 20 '53

Effect of solvents on the tautomeric equilibria of 4-arylazo-1-naphthols and the *ortho*-effect. A. Burawoy and A. R. Thompson. Chem Soc J p 1443-7 My '53

Electrolyte-solvent interaction; quaternary salts in methanol-nitromethane and methanol-benzene mixtures. R. C. Miller and R. M. Fuoss. bibliog Am Chem Soc J 75:3076-80 Jl 5 '53

Extraction studies on the extent of hydration of salts in non-aqueous solvents. P. C. Yates and others. bibliog Am Chem Soc J 75:2212-15 My 5 '53

Fuel oil sludge solvents. L. W. Fitzpatrick. Power Eng 57:97-8 Ap '53

How to clean storage tanks; use of chemical solvents. R. P. Robinson and E. W. Hudgens. il Pet Eng 25:C16+ Ap '53

Influence of the solvent on rates of ionization, entropies, and heats of activation. R. G. Pearson. bibliog J Chem Phys 20:1478-80 S '52

Interdiffusion of polyvinyl acetate with a series of solvents. A. T. Hutcheon and others. bibliog J Chem Phys 20:1232-6 Ag '52

Isotopic exchange reactions in acetic acid and acetic anhydride. E. A. Evans, J. L. Huston and T. H. Norris. bibliog diags Am Chem Soc J 74:4985-91 O 20 '52

Liquid dinitrogen tetroxide solvent system; thermal and conductivity measurements on nitromethane-liquid dinitrogen tetroxide mixtures. C. C. Addison, N. Hodge and J. Lewis. diag Chem Soc J p2631-5 S '53

Miscibility of organic solvent pairs. J. S. Drury. Ind & Eng Chem 44:2744 N '52

New technique for polarography of water-insoluble compounds. G. E. O. Proske. bibliog Anal Chem 24:1834-6 N '52

Phase equilibria in polymer solvent systems. A. R. Shultz and P. J. Flory. bibliog diag Am Chem Soc J 74:4760-7 O 5 '52

Phase equilibria in polymer-solvent systems; thermodynamic interaction parameters from critical miscibility data. A. R. Schultz and P. J. Flory. bibliog Am Chem Soc J 75:3888-92 Ag 20 '53

Polymorphic behavior of 2-undecyl- and 2-heptadecylbenzothiazoles in organic solvents. P. L. DuBrow. C. W. Hoerr and H. J. Harwood. bibliog Am Chem Soc J 74:6241-5 D 20 '52

Rare earths; some observations on solutions of certain rare earth metal salts in basic solvents. T. Moeller and P. A. Zimmerman. bibliog Am Chem Soc J 75:3940-3 Ag 20 '53

Solubilities of quaternary ammonium salts in certain organic solvents. V. L. Hughes and A. A. Vernon. J Phys Chem 56:927-8 O '52

Solvent action of organic substances on poly acrylonitrile. E. E. Walker. bibliog J Ap Chem 2:470-81 Ag '52; Discussion. Chem & Ind p320-2 Ap 4 '53

Solvent properties of liquids and their relation to the solubility, swelling, isolation and fractionation of lignin. C. Schuerch. bibliog Am Chem Soc J 74:5061-7 O 20 '52

Solvents dip for a shake-down. Chem Eng 60:200-1 Mr '53

Some factors affecting the solubility of polymers. P. A. Small. bibliog J Ap Chem 3:71-80 F '53

Specific influence of solvents on the infrared spectra of alcohols. A. V. Stuart. J Chem Phys 21:1115 Je '53

Studies of the solvent extraction behavior of the transition elements; order and degree of fractionation of the trivalent rare earths. D. F. Peppard and others. bibliog J Phys Chem 57:294-301 Mr '53

SOLVENTS—*Continued*

Studies on coördination compounds; a method for determining thermodynamic equilibrium constants in mixed solvents. L. G. Van Uitert and C. G. Haas. bibliog Am Chem Soc J 75:451-5 Ja 20 '53

Thermodynamics of dissociating solvents. K. W. Dunning and W. J. Dunning. Chem Soc J p2993-7 Ag '52

Titrations in nonaqueous solutions; effects of solvents for increasing sensitivity. C. W. Pifer, E. G. Wollish and M. Schmall. bibliog diag Anal Chem 25:310-14 F '53

See also

Acetone
Acetonitrile
Benzene
Bromoform
Butyl alcohol
Carbon disulfide
Carbon tetrachloride
Chlorobenzene
Chloroform
Cleaning compositions
Extraction processes
Furfural
Methanol
Naphtha
Tetrahydrofuran
Trichloroethylene

Analysis

Dielectric method of determining solvent content of dewaxing mixes; methyl ethyl ketone and toluene. H. D. LeRosen, L. V. Wike and S. W. Denton. bibliog Anal Chem 24:1620-2 O '52

Recovery

Adsorption; vapor phase processes serve industry well; solvent recovery, gas purification, dehydration and separation. F. M. Browning. flow diag il Chem Eng 59:158-61 O '52

Inquirer's solvent recovery system takes dollars out of air; Philadelphia inquirer's Palace of rotogravure. Ed & Pub 86:55 Ja 10 '53

Solvent recovery cuts costs. il Chem Eng 60:150+ My '53

Safety measures

Chlorinated solvent degreasers; recommended practices for safe operation. G. M. Hamma. bibliog il Nat Safety N 68:128-9+ O '53

How safe are safety solvents? M. Z. Poliakoff. bibliog il Nat Safety N 67:28-9+ F '53

Solvent vapors burned in stacks; catalytic burning of vapors eliminated odors and furnished heat. Safety Maint & Prod 104: 67 D '52

Statistics

Petroleum derivatives. Published in weekly numbers of Oil, paint and drug reporter

SOLVOLYSIS

Benzyl tosylates; the application of the Hammett equation to the rates of their solvolysis. J. K. Kochi and G. S. Hammond. bibliog Am Chem Soc J 75:3445-51 Jl 20 '53

Correlation of rates of solvolysis. C. G. Swain and D. C. Dittmer. Am Chem Soc J 75: 4627 S 20 '53

Kinetic studies in the phosphinyl chloride and phosphorochloridate series; solvolytic reactions. I. Dostrovsky and M. Halmann. Chem Soc J p502-7 F '53

Mechanism of substitution at a saturated carbon atom; kinetic effect of common-ion and of non-common-ion salts on the aqueous solvolysis of diphenylmethyl halides; a demonstration of the unimolecular mechanism of solvolysis. O. T. Benfey, E. D. Hughes and C. K. Ingold. Chem Soc J p2488-93 Jl '52

Mechanism of substitution at a saturated carbon atom; kinetic effects of hydroxide and alkoxide ions on the rate-controlling and product-forming stages of unimolecular solvolysis of *tert.*-butyl and diphenylmethyl halides. O. T. Benfey, E. D. Hughes and C. K. Ingold. Chem Soc J p2494-8 Jl '52

Neighboring carbon and hydrogen; participation in solvolysis of some primary benzenesulfonates. S. Winstein and others. bibliog Am Chem Soc J 75:147-55 Ja 5 '53

Neighboring carbon and hydrogen; rearrangement as a sequel to neighboring functional group participation; solvolysis of 2-methyl-2-methoxy-1-propyl *p*-bromobenzenesulfonate. S. Winstein, C. R. Lindegren and L. L. Ingraham. bibliog Am Chem Soc J 75:155-8 Ja 5 '53

Rates of solvolysis of some alkyl fluorides and chlorides. C. G. Swain and C. B. Scott. Am Chem Soc J 75:246-8 Ja 5 '53

Solvolysis rates of some deuterated tertiary amyl chlorides. V. J. Shiner, jr. bibliog Am Chem Soc J 75:2925-9 Je 20 '53

Steric strains as a factor in the solvolytic reactions of neopentyldimethyl and dineopentylmethylcarbinyl chlorides. H. C. Brown and H. L. Berneis. bibliog Am Chem Soc J 75:10-14 Ja 5 '53

Steroids; solvolysis of *epi*cholesteryl toluene-*p*-sulphonate and other steroid toluene-*p*-sulphonates. D. D. Evans and C. W. Shoppee. Chem Soc J p540-7 F '53

Studies in stereochemistry; the course of the solvolytic-substitution reactions in the 1,2-diphenyl-1-propyl system. F. Ahmed Abd Elhafez and D. J. Cram. bibliog Am Chem Soc J 75:339-46 Ja 20 '53

SOMALILAND, Italian

See also

Labor and laboring classes—Somaliland, Italian
Petroleum—Somaliland, Italian
Petroleum industry and trade—Somaliland, Italian

SOMMELET reaction

Sommelet reaction; methyleneamines; a proposed mechanism for the reaction. S. J. Angyal, D. R. Penman and G. P. Warwick. Chem Soc J p 1743-7 Je '53

Sommelet reaction; *N*-heteroaromatic aldehydes. S. J. Angyal, G. B. Barlin and P. C. Wailes. Chem Soc J p 1740-1 Je '53

Sommelet reaction; the preparation of aliphatic aldehydes. S. J. Angyal, D. R. Penman and G. P. Warwick. Chem Soc J p 1737-9 Je '53

SONIC guard system. See Burglar alarms

SONIC pump. See Pumps

SONISCOPE

Pulse techniques applied to dynamic testing. J. R. Leslie. bibliog il diags Am Soc T M Proc 50:1314-23; Discussion. 1324-6 '50

SONOCO products company

Security I like best. G. E. Anderson. Comm & Fin Chr 177:2302 My 28 '53

SOO line. See Minneapolis, St Paul and Sault Ste Marie railway

SORBIC acid

New fungicide; sorbic acid. Food Eng 25: 127+ Ag '53

Polyene acids; a new (*cis-trans*-)isomer of sorbic acid and its relation to hexenolactones. U. Eisner, J. A. Elvidge and R. P. Linstead. Chem Soc J p 1372-9 My '53

SORBITOL

Sorbitol storage. diag Paint Oil & Chem R 115:42 Ag 28 '52; Same. Can Chem Process 36:78 S '52

Symposium on polyhydric alcohols. Chem & Eng N 30:4479-80 O 27 '52

Synthesis of L-ascorbic-1-C^{14} acid from D-sorbitol. L. L. Salomon, J. J. Burns and C. G. King. bibliog Am Chem Soc J 74:5161-2 O 20 '52

Versatile industrial chemical with unlimited supply and thousands of uses. Can Chem Process 37:72+ Mr '53

SORBOSE

Bimolecular dianhydrides of L-sorbose. M. L. Wolfrom and H. W. Hilton. bibliog Am Chem Soc J 74:5334-6 N 5 '52

Synthesis of sugars from simpler substances; enzymic synthesis of 6-deoxy-D-fructose and 6-deoxy-L-sorbose. L. Hough and J. K. N. Jones. Chem Soc J p4052-5 O '52

SORBY, Henry Clifton, 1826-1908

H. C. Sorby; pioneer in metallurgical microscopy. E. N. Simons. por Metallurgia 46: 199-200 O '52

SORGHUM

Methanol-insoluble material in sorgo and beet juices. W. A. Harris and others. bibliog Ind & Eng Chem 44:2414-17 O '52

SORGO. See Sorghum

SORIA, Dario

Portrait. Fortune 46:180 D '52

SORPTION. See Adsorption

SORTING devices

Automatic sorting, feeding and injecting devices. J. R. Paquin. il diags Tool Eng 30:73-7 Ap '53

Electronic gaging and sorting applications. A. C. Sanford. il Electronics 26:144-7 S '53

Electronic separation cuts labor, boosts quality; John F. Renshaw co. E. Grosz. il Food Eng 25:95+ Ag '53

Mechanization reaches egg processing; illustrations with text. Elec West 109:101 O '52

Mercury and magnetism identify mixed carbide blanks. C. Edgar. Am Mach 97:187 S 14 '53

New Keysort train tickets provide traffic figures; Long Island railroad. Am Bsns 23:32 Ja '53

Precise parts sorting on production lines. A. C. Sanford. il diags Electronics 26:142-5 Jl '53

Sorting and feeding shells closed end first. W. M. Halliday. diags Mach 59:206-8 Je '53

Sorting eggs by shell color. diag Electronics 26:198 Ap '53

Table speeds up sorting of small parts; Louisville & Nashville heavy car repair shops. il diag Ry Locomotives & Cars 127:55-6 Ja '53

SOSMAN, Robert Browning, 1881-

Ceramics expert wins Bleininger award. por(cover) Chem & Eng N 31:251 Ja 19 '53

SOUND

Acoustic problems at the Waldbühne open-air sound theater in Berlin. H. Simon. il diags Soc Motion Picture & Tv Eng J 59:512-16 D '52

Atmospheric winds and temperatures to 50-kilometers altitude as determined by acoustical propagation studies. J. M. Richardson and W. B. Kennedy. bibliog map diags Acoustical Soc Am J 24:731-41 N '52

Effect of a finite circular baffle board on acoustic radiation. T. Nimura and Y. Watanabe. bibliog diags Acoustical Soc Am J 25:76-80 Ja '53

Investigation of sound vibrations in a tube containing a heat source. J. L. Neuringer and G. E. Hudson. diag Acoustical Soc Am J 24:667-74 N '52

Study of burner oscillations of the organ-pipe type. A. A. Putnam and W. R. Dennis. diags A S M E Trans 75:15-26; Discussion. 27-8 Ja '53

Theory of steady rotational flow generated by a sound field. P. J. Westervelt. bibliog Acoustical Soc Am J 25:60-7 Ja '53

Thoughts on the imitation of natural sounds. D. W. Martin. Acoustical Soc Am J 25:158-9 Ja '53

See also

Acoustics, Architectural
Electroacoustics
Hearing
Noise
Pipe tone
Polarization (sound)
Sound waves
Speech
Ultrasonic waves
Vibration

Absorption

Acoustic wall for aero-engine tests. plan diags Engineering 176:201 Ag 14 '53

Dependence of intensity of sound at source on its absorption coefficient in liquids. S. Parthasarathy and others. J Chem Phys 21:185 Ja '53

Mechanism of acoustic absorption in tissue. W. J. Fry. bibliog Acoustical Soc Am J 24:412-15 Jl '52

Tube method of measuring sound absorption. H. O. Taylor. Acoustical Soc Am J 24:701-4 N '52

Ultrasonic velocity, dispersion and absorption in dry, CO_2-free air. C. Ener and others. Acoustical Soc Am J 24:474-7 S '52

Apparatus

Accurate time-modulated pulse circuit. C. Tschiegg and M. Greenspan. diag R Sci Instr 24:183 F '53

Acoustic firing error indicator. M. C. Eliason and W. G. Hornbostel. il diags Electronics 25:98-101 O '52

Analysis of noise; new American standard specifications of octave-band filter sets. A. Peterson. il diag Standardization 24:108-11 Ap '53

Apparatus for absolute measurement of analogous impedance of acoustic elements. G. B. Thurston. il diags Acoustical Soc Am J 24:649-52 N '52

Approach of narrow band noise after a non-linear device to a normal probability density. G. R. Arthur. J Ap Phys 23:1143-4 O '52

Auxiliary mechanical sound sources for obstacle perception by audition. V. Twersky. il diags Acoustical Soc Am J 25:156-7 Ja '53

Effectiveness of plastic focusing lenses with high intensity ultrasonic radiation. J. A. Bronzo. il Acoustical Soc Am J 24:718-20 N '52

Gunshot generator for television studios. J. L. Hathaway and R. E. Lafferty. il diags Electronics 26:140-4 F '53

High sensitivity tone discriminator. S. Wald. diag Electronics 26:215-16 F '53

New acoustic cell for liquids. J. A. Roetling and J. W. Ballou. il diag R Sci Instr 24:329-30 Ap '53

Noise generators; their uses and limitations. E. P. Tilton. il diags Q S T 37:10-14+ Jl '53

Square waves for audio testing. G. E. Bauder. il Radio Com 12:22-3 O '52

See also

Electroacoustic transducers
Hearing aids, Mechanical
Interferometers, Sonic
Loud speaking apparatus
Microphones
Moving picture sound recording
Phonograph
Radio apparatus
Resonators
Soniscope
Sound—Measurement
Sound—Recording and reproducing
Sound filters
Telephone

Attenuation

Attenuation of sound resulting from ionic relaxation. L. H. Hall. Acoustical Soc Am J 24:704-8 N '52

Measurement of the propagation of sound in fiberglas. Z. Esmail-Begui and T. K. Naylor. diags Acoustical Soc Am J 25:87-9 Ja '53

Measurement

Accurate method of measuring frequency in the audio range. A. F. B. Nickson. diags J Sci Instr 29:391-3 D '52

Analysis of noise; new American standard specifications of octave-band filter sets. A. Peterson. il diag Standardization 24:108-11 Ap '53

Evaluation of noise samples. A. J. F. Siegert. bibliog J Ap Phys 23:737-42 Jl '52

Exact solution of the acoustical field near a circular transducer. E. W. Guptill. Acoustical Soc Am J 24:784 N '52

In search of the missing six db. W. A. Munson and F. M. Wiener. bibliog Acoustical Soc Am J 24:498-501 S '52

Initial-throw method of operation of a Rayleigh disk. J. L. Simonds and R. Heller. Acoustical Soc Am J 25:157-8 Ja '53

Measurement and interpretation of machinery noise with special reference to oil engines. C. H. Bradbury. diags Inst Mech Eng Proc (B) 1B no 1:1-8, pl 1-4 '52; Same abr. il Engineer 192:773-5 D 14 '51; Discussion. Inst Mech Eng Proc (B) 1B no 1:8-18 '52

Measurement of the propagation of sound in fiberglas. Z. Esmail-Begui and T. K. Naylor. diags Acoustical Soc Am J 25:87-9 Ja '53

Noise analyzer for transistor production. R. F. Merrithew. diags Electronics 26:136-7 My '53

Noise in private cars. J. R. Bristow. Inst Mech Eng Proc (Auto div pt 1):9-15 '51-52; Same. Engineering 173:201-2, 252-3 F 15-22 '52; Discussion. Inst Mech Eng Proc (Auto div pt 1):16-22 '51-52

Physical interpretation of the expression for an outgoing wave in cylindrical coordinates. M. C. Junger. diags Acoustical Soc Am J 25:40-7 Ja '53

SOUND—Measurement—*Continued*

Plotting noise measurements. R. W. Young and R. M. Sherwood. Acoustical Soc Am J 24:541 S '52

Radiation pressure and dispersion. E. J. Post. Acoustical Soc Am J 25:55-60 bibliog(46 titles, p59-60) Ja '53

Sound and vibration analysis. il diags Engineering 174:286-8 Ag 29 '52

Sound-level measurements of a light airplane modified to reduce noise reaching the ground. A. W. Vogeley. bibliog il U S Nat Advisory Com for Aeronautics 1949: 115-20 '51

Standards on sound recording and reproducing; methods of measurement of noise, 1953. Inst Radio Eng Proc 41:508-12 Ap '53 (reprints 50c)

Statistical errors in measurements on random time functions. W. B. Davenport, jr. and others. bibliog J Ap Phys 23:377-88 Ap '52

Systematic errors in indirect measurements of the velocity of sound. P. W. Smith, jr. bibliog diags Acoustical Soc Am J 24:687-95 N '52

Tube method of measuring sound absorption. H. O. Taylor. Acoustical Soc Am J 24: 701-4 N '52

Unsolved basic physical research problems in the field of noise. H. C. Hardy. Acoustical Soc Am J 24:767-8 N '52

See also

Interferometers, Sonic

Rayleigh disk

Sound—Velocity

Recording and reproducing

Asco Audiomat. I. Greene. il diag Radio & Tv N 49:58-9 My '53

Audio equalization. L. A. Wortman. Radio & Tv N 49:39+ My '53

Binaural recordings add new dimension to recorded music. Elec Eng 71:1156 D '52

Binaural sound reproduction. G. Southworth. il diags Radio & Tv N 49:71-3+ Mr '53

40-db feedback audio amplifier. B. B. Drisko and R. D. Darrell. il diags Electronics 25: 130-2 Mr '52; Discussion. 25:420+ O '52; 26:362+ Ja '53

High-quality record reproduction at low cost. F. H. Yonker. il diag Radio & Tv N 50:64-5 Ag '53

Phase-shift tone controls. G. Southworth. diags Radio & Tv N 49:56-7+ Ja '53

Piggy-back boost for radio. Bsns W p52 Mr 28 '53

Quality disc recording with home equipment. J. T. Moore. il diags Radio & Tv N 48: 38-40+ N '52

Radio progress during 1952; audio techniques. bibliog il Inst Radio Eng Proc 41:462-4 Ap '53

Recording binaural sound on discs. E. Cook. il diags Tele-Tech 11:48-50+ N '52

Recording facilities for conferences. G. E. Beggs, jr. il diag Electronics 26:186-7 S '53

Sound reproduction; demonstration of three-dimensional technique. Electrician 149:626 Ag 29 '52

Three-dimensional sound. Consumers Res Bul 32:20-1 Ag '53

See also

Moving picture sound recording

Speech, Visible

Talking books

Magnetic recording

Automatic switching for tape-recording machine; Sonomatic control. Engineering 175: 671 My 22 '53

Continuous magnetic recording. il Elec J 150:1422 Ap 24 '53

Diminutive wire recorder, minifon. H. Sampson. il diag Radio & Tv N 49:38+ My '53

Four-channel continuous recorder-reproducer. il Radio & Tv N 49:100 Je '53

Fm data reduction from magnetic tape recordings. L. Costrell. diag R Sci Instr 24: 76-7 Ja '53

Improving response of magnetic playback heads. A. H. Mankin. diags Electronics 26:150-1 Jl '53

Influence of some head and tape constants on the signal recorded on a magnetic tape. E. D. Daniel. diags Inst E E Proc 100 pt 3: 168-75 My '53

Magnetic recording. M. Camras. il diags Tele-Tech 12:81-3+ S '53

Measurement of harmonic distortion with a filter. diag Electronics 26:212+ F '53

Measuring magnetic tape recorder flutter. H. N. Morris. il Electronics 26:230+ Mr '53

Music on tape; Magnecord's package for high-fidelity tape recordings. il Mod Packaging 26:84-5+ F '53

New tape recorder has many features. E. Berlant. il Radio & Tv N 48:48-9+ N '52

Noise test for magnetic recording media. R. C. Curtis. diag Electronics 26:216+ Jl '53

Performance of high-output magnetic tape. L. B. Lueck and W. W. Wetzel. Electronics 26:131-3 Mr '53

Recorder bias and audio level measuring instrument. D. E. Taylor. il diag Electronics 26:230+ Ap '53

Reproduction of signals recorded on magnetic tape. E. D. Daniel and P. E. Axon. bibliog diags Inst E E Proc 100 pt 3:157-67 My '53

Storage of magnetic recording tape. Electronics 26:270 Mr '53

Time compressor. il Radio & Tv N 49:96 Je '53

Time compressor does an hour in 45 minutes. Electronics 26:14+ Ap '53

Use of binaural tape recording in automotive noise problems. D. C. Apps. il Acoustical Soc Am J 24:660-2 N '52

See also

Moving picture sound recording—Magnetic recording

Noise elimination

Standards on sound recording and reproducing; methods of measurement of noise, 1953. Inst Radio Eng Proc 41:508-12 Ap '53 (reprints 50c)

Standards

Standards on sound recording and reproducing; methods of measurement of noise, 1953. Inst Radio Eng Proc 41:508-12 Ap '53 (reprints 50c)

Scattering

Multiple scattering of radiation by an arbitrary planar configuration of parallel cylinders and by two parallel cylinders. V. Twersky. diags J Ap Phys 23:407-14 Ap '52

Multiple scattering theory of the finite grating and the Wood anomalies. V. Twersky. diags J Ap Phys 23:1099-118 O '52

Scattering of cylindrical waves by a cylinder. J. J. Faran, jr. Acoustical Soc Am J 25: 155-6 Ja '53

Sound scattering by thin elastic shells. M. C. Junger. bibliog diags Acoustical Soc Am J 24:366-73 Jl '52

Transmission thru sea water

Submarine topographic echoes from explosive sound. B. Luskin and others. bibliog Geol Soc Bul 63:1053-68, pl 1-7 O '52

Transmission thru water

Some design considerations for high frequency anechoic tanks. M. S. Weinstein. diag Acoustical Soc Am J 25:101-5 Ja '53

Thermal-noise limit in the detection of underwater acoustic signals. R. H. Mellen. Acoustical Soc Am J 24:478-80 S '52

Velocity

Acoustic propagation in granular media. R. W. Morse. Acoustical Soc Am J 24:696-700 N '52

Acoustic relaxation in a van der Waals gas. R. T. Beyer. bibliog Acoustical Soc Am J 24:714-15 N '52

Molecular sound velocity and molecular compressibility of liquid mixtures. O. Nomoto. bibliog J Chem Phys 21:950-1 My '53

Precision measurement of the velocity of sound in air. P. W. Smith, jr. bibliog diags Acoustical Soc Am J 25:81-6 Ja '53

Sound dispersion in *cis*- and *trans*-dichloroethylene vapors. M. Boudart. J Chem Phys 21:955-6 My '53

Translational dispersion in monatomic gases. R. A. Boyer. Acoustical Soc Am J 24:716-17 N '52

SOUND—Velocity—*Continued*

Velocity of sound in liquids and molecular weight. S. Parthasarathy and N. N. Bakhshi. J Phys Chem 57:453-4 Ap '53

Velocity of sound in superconducting lead and tin. H. Bömmel and J. L. Olsen. Phys R 91:1017-18 Ag 15 '53

See also

Rayleigh disk

SOUND absorbent materials

Acoustic screening by an experimental running-up pen. J. D. Hayhurst. il plan Roy Aeronautical Soc J 57:3-11 Ja '53

Acoustical insulation doubles as thermal insulation. il Safety Maint & Prod 106:48 O '53

Anechoic chamber for microwaves uses new broadband absorbing material. A. J. Simmons and W. H. Emerson. il diag Tele-Tech 12:47-9+ Jl '53

New coordinated system for suspended acoustical ceiling. il diags Arch Rec 112:233+ O '52

Some design considerations for high frequency anechoic tanks. M. S. Weinstein. diag Acoustical Soc Am J 25:101-5 Ja '53

Sound conditioning in ship construction. G. W. Handy. il Marine Eng 58:56-9 O '53

Thermal insulation of paper honeycomb cores and sound absorption of sandwich panels. D. J. Fahey and others. bibliog il diags Paper Ind 35:658-62 S '53

Vinyl-faced fibrous glass tile. il Mod Plastics 30:183 O '52

Testing

Reverberation chamber with polycylindrical walls. J. H. Botsford and others. il diags Acoustical Soc Am J 24:742-4 N '52

SOUND filters

Acoustical interference filters. K. K. Curtis and L. N. Hadley. il Acoustical Soc Am J 24:721-5 N '52

Phase principle for complex-frequency analysis and its implications in auditory theory. W. H. Huggins. il diags Acoustical Soc Am J 24:582-9 N '52

SOUND laboratories

Anechoic chamber for microwaves. A. J. Simmons and W. H. Emerson. il diag Tele-Tech 12:47-9+ Jl '53

SOUND production by animals

Porpoise sounds as sonar signals. W. N. Kellogg and others. bibliog il Science 117:239-43 Mr 6 '53

Ultrasonic porpoise communications. H. N. Morris and others. il diags Electronics 26:208+ Ag '53

SOUND waves

Acoustic radiation pressure of plane-compressional waves at oblique incidence. F. E. Borgnis. diags Acoustical Soc Am J 24:468-9 S '52

Acoustic streaming due to attenuated plane waves. W. L. Nyborg. bibliog diag Acoustical Soc Am J 25:68-75 Ja '53

Acoustical radiation from the velocity field in a compressible fluid. E. N. Parker. Phys R 90:240-2 Ap 15 '53

Acousto-electric effect. R. H. Parmenter. bibliog diags Phys R 89:990-8 Mr 1 '53

Atomic bomb blast waves. E. F. Cox. il Sci Am 188:94-6+ Ap '53

Calculation of the directivity index for various types of radiators, by C. T. Molloy; discussion. H. Stenzel. Acoustical Soc Am J 24:417-18 Jl '52

Diffraction of a shock or an electromagnetic pulse by a right-angled wedge. J. B. Keller. J Ap Phys 23:1267-8 N '52

Electronic flowmeter is new method for measuring air currents or fluid flow. il diag Elec Eng 72:371-2 Ap '53; Same. Franklin Inst J 255:333-5 Ap '53; Same. Pet Processing 8:731+ My '53; Same. Pet Eng 25:D34-6 Jl '53; Same cond. Oil & Gas J 52:149 Je 15 '53; Excerpts. Mech Eng 75:313 Ap '53; Abstract. Aviation W 58:34+ Mr 30 '53

Measurement of dynamic shear viscosity and stiffness of viscous liquids by means of traveling torsional waves. H. J. McSkimin. bibliog il diags Acoustical Soc Am J 24:355-65 Jl '52

Nonlinear dissipative distortion of progressive sound waves at moderate amplitudes. J. S. Mendousse. il diags Acoustical Soc Am J 25:51-4 Ja '53

Second-order acoustic fields; relations between energy and intensity. J. J. Markham. bibliog diags Phys R 89:972-7 Mr 1 '53

Sonic analysis for solid bodies. N. N. Ault and H. F. G. Ueltz. bibliog diag Am Cer Soc J 36:199-203 Je 1 '53

Waves in liquid-filled cylinders. R. D. Fay. diags Acoustical Soc Am J 24:459-62 S '52

See also

Ultrasonic waves

Industrial applications

Effects of vibration during solidifications of castings. W. Rostoker and M. J. Berger. bibliog il Foundry 81:100-5+ Jl '53

Harnessing sound; uses range from boiling eggs to fusing metals. R. L. Holman. Barron's 33:15 Mr 16 '53

Pulse techniques applied to dynamic testing. J. R. Leslie. bibliog il diags Am Soc T M Proc 50:1314-23; Discussion. 1324-6 '50

Sonic energy, industry's new production and inspection tool. C. W. Boyce. il diag Factory Management 111:84-95 Mr '53

Sonic pump successful; sound waves are used for lifting fluids. D. H. Stormont. il diag Oil & Gas J 51:32-3 F 2 '53

SOUNDING

Echometer for coastal waters; Marconi international marine communication co. il Engineer 196:284 Ag 28 '53

SOUNDPROOFING

See also

Acoustics, Architectural

Sound absorbent materials

Sound—Absorption

SOUP, Dried

Better dry soups by comminuting; pea-soup mix. A. C. Rauch. diags Food Eng 25:97+ F '53

Solution of a sealing problem; I. J. Grass noodle co., inc. il Mod Packaging 26:162-4 Ap '53

SOUTH

Economic conditions

Growing markets spur southern expansion; with list of consumer sales in 182 urban centers. C. R. Walker. Manuf Rec 121:38-9 O '52

It pays to sell in the South. C. R. Walker. Manuf Rec 121:64 N '52

Industries and resources

Atlantic Coast Line's territory enjoying continued growth. il Manuf Rec 122:60-1 Je '53

Bagasse offers the South a new industry and an answer to the newsprint problem. M. Smith. Manuf Rec 121:50+ D '52

Blue book will show South's industrial gains. C. R. Walker. Manuf Rec 122:27+ Mr '53

Capital goods spending to remain high in 1953. S. Fish. Manuf Rec 122:38-9 Ja '53

Cost-cutting advantages of southern plant locations. S. Fish. Manuf Rec 122:34-5 Jl '53

Industrial boom spurs port improvements. S. Fish. il Manuf Rec 122:40-1 Ag '53

Industry is building a dynamic South. M. Smith. il Mag of Wall St 91:519-21+ F 7 '53

Manufacture of gas industry equipment and appliances a growing southern activity. Am Gas J 178:53 My '53

Marketing advantages luring plants South. S. Fish. Manuf Rec 121:62-3 N '52

New and expanding plants; list by states. Published in monthly numbers of Manufacturers record

New food plants reflect industrial growth. S. Fish. il Manuf Rec 122:42-3 F '53

New plant site selection techniques place greater emphasis on southern locations for industry. S. Fish. Manuf Rec 121:42-3 O '52

New plants continue to stream southward. C. R. Walker. Manuf Rec 122:39 F '53

Should industry move South? J. O. Tomb. Harvard Bsns R 31:83-90 S '53

South gaining mighty industries. W. V. Packard. Iron Age 170:97 N 13 '52

South holds advantage in defense plant growth. S. Fish. Manuf Rec 122:42-3 Ap '53

SOUTH—Industries and resources—*Continued*
South paces Nation in capital investment. C. R. Walker. Manuf Rec 122:32 Ja '53
See also
Southern research institute

SOUTH AFRICA
Assignment; Africa. M. Johnson. Ed & Pub 86:12 F 14 '53
See also
Electric industries—South Africa
Electricity supply—South Africa
Forests and forestry—South Africa
Gold miners—South Africa
Gold mines and mining—South Africa
Mines and mineral resources—South Africa
Motor truck industry—South Africa
Paper industry and trade—South Africa
Rhodesia

Biography

South African who's who, 1952. K. Donaldson, ed. 36th ed 752p £4 4s Ken Donaldson, Power house, Fraser st, Johannesburg, South Africa '52

Commerce

South Africa eases import of dollar piece goods. For Comm W 49:7 My 25 '53

Commercial policy

Controls on international trade. For Comm W 48:16 D 1 '52
South Africa to maintain quotas fixed for 1953. For Comm W 49:7 Mr 30 '53

Economic conditions

Economic conditions abroad. For Comm W 49:3+ Je 22 '53

Politics and government

Malan and the English. Economist 167:447-8 My 16 '53
Men against Malan. Economist 166:576-7, 643-4 F 28-Mr 7 '53
Vote against Vereeniging. Economist 167:209 Ap 25 '53

Race problems

Fruits of Malanism. Economist 165:431-2 N 15 '52
Men against Malan. Economist 166:576-7, 643-4 F 28-Mr 7 '53

SOUTH AFRICAN association for the advancement of science
Jubilee meeting, Cape Town, July 7-12. Science 117:51-2 Ja 16 '53

SOUTH AMERICA
See also
Railroads—South America

SOUTH CAROLINA
See also
Charleston, South Carolina

Industries and resources

Industrial development in South Carolina in '52. L. W. Bishop. Manuf Rec 122:57 F '53
South Carolina gets region's first metal powder plant. Manuf Rec 122:42+ Ja '53

SOUTH CAROLINA electric and gas company
Public utility securities. O. Ely. Comm & Fin Chr 177:1343 Mr 26 '53
Stock offered. Comm & Fin Chr 177:878 F 23 '53

SOUTHEASTERN society of ichthyologists and herpetologists
Annual meeting, 2d, Tuscaloosa, Oct. 24-25. Science 117:270 Mr 13 '53

SOUTHERN advance bag and paper company
Three by nine analysis of some unlisted stocks. H. J. King. Comm & Fin Chr 177:1208 Mr 19 '53

SOUTHERN airways
Southern airways renewal is urged. Aviation W 57:67 D 22 '52

SOUTHERN brick and tile manufacturers association
Annual meeting, 11th. Brick & Clay Rec 122:65+ Je '53

SOUTHERN California Edison company
Annual report. Comm & Fin Chr 177:1302 Mr 23 '53
Stock sold. Comm & Fin Chr 177:416 Ja 26 '53

SOUTHERN California research council
Teaming up for local economic research. Bsns W p 100-2 Ja 24 '53

SOUTHERN classified advertising managers
Annual convention, 7th, Dallas. Ed & Pub 86:28 Ja 17 '53

SOUTHERN Connecticut and Long Island television company, inc.
Stocks offered. Comm & Fin Chr 176:2273 D 15 '52

SOUTHERN gas association
Annual meeting, 45th, New Orleans, May 11-13. Am Gas Assn Mo 35:42 Je '53
Meeting, 45th, New Orleans, May 11-13. Am Gas J 178:18-19 Je '53; Gas Age 111:25-7+ Je 4 '53

SOUTHERN natural gas company
Bonds and debentures offered. Comm & Fin Chr 177:2252+ My 25 '53
Outlook is favorable for Southern Natural. Barron's 32:22 D 15 '52

SOUTHERN New England telephone company
Stock offered. Comm & Fin Chr 176:1568 O 27 '52

SOUTHERN newspaper publishers association
Annual convention, 49th, White Sulphur Springs, Nov. 20-22; with abstracts of papers. Ed & Pub 85:11-12+ N 29 '52
Convention, 49th, White Sulphur Springs, Nov. 20-22. Ed & Pub 85:12 N 8 '52

SOUTHERN Pacific railroad
Security I like best. G. Y. Billard. Comm & Fin Chr 177:1102 Mr 12 '53

SOUTHERN production company, inc.
Rise in gas volume, price, to aid Southern Production. Barron's 33:29 Ap 6 '53

SOUTHERN railway
Annual report, 59th, year ended Dec. 31. Comm & Fin Chr 177:1333-5 Mr 26 '53
Bonds offered. Comm & Fin Chr 176:2273-4 D 15 '52
Bonds sold. Comm & Fin Chr 176:2439 D 22 '52
Five outstanding candidates for stock-splits; with comparative balance sheet items. Mag of Wall St 91:297 D 13 '52
Plans refunding. Comm & Fin Chr 176:1568 O 27 '52
Railroad securities. Comm & Fin Chr 177:2101 My 14 '53
Ten potential market leaders for 1953; with comparative balance sheet items. Mag of Wall St 91:642 Mr 7 '53

SOUTHERN research institute
Annual meeting, Birmingham, May 15. Manuf Rec 122:51 My '53

SOUTHERN society of cancer cytology
Meeting, 2d, Jan. 28. Science 117:493 My 8 '53

SOUTHERN wholesalers association
Annual meeting, 5th, Atlanta, May 27-29. Dom Eng 182:93 Jl '53

SOUTHWEST

Industries and resources

See also
Chemical industries—Southwestern states

SOUTHWEST airways
CAB refuses subsidy for Southwest 2-0-2s. Aviation W 58:81 Je 1 '53

SOUTHWESTERN public service company
Securities offered. Comm & Fin Chr 177:628-9 F 9 '53
Southwestern Public Service; growth record best in south central area. O. Ely. Barron's 33:17-20 Ja 5 '53

SOUTHWESTERN states telephone company
Preferred stock offered. Comm & Fin Chr 177:2013 My 11 '53

SOVEREIGN immunity. See Immunity (law)

SOYBEAN flour
Soy-flour bread wins its place. C. W. Ofelt and others. bibliog il Food Eng 24:145+ D '52

SOYBEAN meal
Concerning the site of nitrogen absorption in rats fed autoclaved or raw soybean oil meal. R. Borchers. Science 117:482 My 1 '53

SOYBEAN oil
Commodity credit corporation firms cottonseed and soybean oil markets. Barron's 33:27-8 Mr 2 '53
Improvement in soybean oil quality highlights fats and oils trends. Food Eng 25:229-30 F '53

SOYBEAN oil—*Continued*
Lukenwald designs packaged solvent extraction plant. Chem Eng 60:147-8 Ap '53
New extraction process for vegetable oils at Toronto elevators. il Can Chem Process 37:28-9 Ja '53
Soybean oil use boost in margarine forecast. Oil Paint & Drug Rep 164:7 Ag 10 '53
Soybeans, soybean oil exports lower in 1952. Oil Paint & Drug Rep 163:45 Mr 16 '53

Analysis

Soybean oil evaluation. Soap & San Chem 28:99 S '52

SOYBEANS
Detectors end flame; hazards; soybean extraction plant, Swift & co. il plan Food Eng 25:96-7 Ja '53
Soybean price prospects seen as favorable. Barron's 32:27-8 N 17 '52
Soybean world output seen short of record. Oil Paint & Drug Rep 164:7+ Jl 6 '53
Soybeans, soybean oil exports lower in 1952. Oil Paint & Drug Rep 163:45 Mr 16 '53
Spontaneous ignition and dust explosion hazards of certain soybean products; abstract. Safety Maint & Prod 105:66+ My '53; Same. East Underw 54:36 Mr 20 '53
Stability of soya products. E. M. Learmonth. Chem & Ind p276 Mr 21 '53
Viscosity stability of latex paints; effect of unhydrolyzed soybean protein. D. A. Bixler. Ind & Eng Chem 45:739-42 Ap '53

SPACE
Space, field, and ether in contemporary physics. A. W. Stern. bibliog Science 116:493-6 N 7 '52
See also
Infinite

SPACE charge
Admittance of a diode with a retarding field. J. J. Freeman. diag J Ap Phys 23:743-5 Jl '52
Effects of space-charge layer widening in junction transistors. J. M. Early. diags Inst Radio Eng Proc 40:1401-6 N '52
Field emission; large current densities, space charge, and the vacuum arc. W. P. Dyke and J. K. Trolan. bibliog il diags Phys R 89:799-808 F 15 '53
Impurity diffusion and space charge layers in fused-impurity *p-n* junctions. J. S. Saby and W. C. Dunlap, jr. bibliog diags Phys R 90:630-2 My 15 '53
n-Type surface conductivity on *p*-type germanium. W. L. Brown. bibliog diags Phys R 91:518-27 Ag 1 '53
Photocurrent, space-charge buildup, and field emission in alkali halide crystals. A. von Hippel and others. bibliog diags Phys R 91:568-79 Ag 1 '53
Potential distribution for space-charge limited current between a plane accelerating grid and parallel anode. E. G. Ramberg and L. Malter. diag J Ap Phys 23:1333-5 D '52
Propagation of space-charge waves in infinite and finite electron beams. P. Parzen. bibliog diags Elec Com 30:134-8 Je '53
Space-charge layer and distribution of lattice defects at the surface of ionic crystals. K. Lehovec. bibliog J Chem Phys 21:1123-8 Jl '53
Space charge limited currents between inclined plane electrodes; approximate solutions. H. F. Ivey. diag J Ap Phys 24:227 F '53
Space-charge limited emission in semiconductors. W. Shockley and R. C. Prim. bibliog diags Phys R 90:753-8 Je 1 '53
Space-charge limited hole current in germanium. G. C. Dacey. bibliog diags Phys R 90:759-63 Je 1 '53
Space charge reduction of low frequency fluctuations in thermionic emitters. T. B. Tomlinson. bibliog diags J Ap Phys 23:894-9 Ag '52
Space-charge sheath of the Geiger counter. D. H. Wilkinson. R Sci Instr 23:463-4 S '52
Statistical approach to the space-charge distribution in a cut-off magnetron. G. Hok. diags J Ap Phys 23:983-9 S '52

SPACE flight. See Interplanetary flight

SPACE perception
See also
Echo ranging

SPACE ship. See Interplanetary flight

SPAGHT, Monroe Edward, 1909-
Businessmen in the news. por Fortune 47:58 F '53

SPAIN
Spain; next stop for U.S. airbase builders? W. G. Bowman. il maps Eng N 150:33-5+ My 14 '53
See also
Investments, Foreign (in Spain)
Steel works—Spain

Economic conditions

Spain on the mend. Economist 166:370 F 7 '53

Economic relations

United States

Japan, Spain granted credit to buy cotton. For Comm W 49:4 Ap 27 '53

Foreign relations

Franco rises in the world. Economist 166:272 Ja 31 '53

United States

American Gibraltars? Madrid-Washington agreement. Economist 167:429 My 16 '53

Industries and resources

Why American firms have trouble getting toehold in Spain. H. Lund. il Am Bsns 23:38-40 Ag '53

SPALLATION. See Atoms—Disintegration

SPALLING
Spalling of fire-clay brick. G. R. Eusner and W. S. Debenham. il diag Am Cer Soc Bul 31:489-92 D 15 '52

SPANISH broom
Non-saponifiable constituents of Spanish broom. O. C. Musgrave, J. Stark and F. S. Spring. Chem Soc J p4393-7 N '52

SPANISH moss
Report on the waxy constituents of Spanish moss, tillandsia usneoides L. S. D. Feurt and L. E. Fox. bibliog Science 117:600-1 My 29 '53

SPANISH river
Industrial waste in town of 2,400 equals domestic sewage from city of 74,000; pollution of Spanish river. J. Wilkinson. Munic Util 91:22+ F '53
Investigation of wood-fibre discharges into the Spanish river. I. G. Simmonds. Munic Util 90:19-24+ D '52
Pollution studied biologically. R. G. Ferguson. Munic Util 91:31-2+ F '53
Spanish River investigation. A. V. DeLaporte. il map Munic Util 90:36+ N '52

SPARK, Electric. See Electric spark

SPARK cutting. See Electric cutting

SPARK gap
Standard waveguide spark gap. D. Dettinger. diag Inst Radio Eng Proc 40:1604 N '52

SPARK ignition. See Electric ignition

SPARK plugs
Plug problems analyzed by Spark plug and ignition conference, Toledo. Aviation W 57:64+ N 10 '52

SPECIAL days. See Advertising campaigns—Special weeks and days

SPECIAL libraries
See also
Information service

SPECIAL libraries association
Annual convention, 44th, Toronto, June 22-25; preliminary program. Special Lib 44:129-36 Ap '53
Division highlights. A. Blomshield. Special Lib 43:368-9 N '52
It's every member's business. K. L. Kinder. Special Lib 44:109 Mr '53
President's message; the non-myopic outlook. E. Ferguson. Special Lib 43:413 D '52

Public relations clinic

See Libraries, Special—Public relations

Publications

SLA publications; cumulative statement on publications in print as of Dec. 31, 1952. Special Lib 44:114 Mr '53

SPECIAL libraries association—*Continued*

Science-technology division

Metals section

S-T Metals section regional meeting, Philadelphia, Oct. 20. Special Lib 44:30-1 Ja '53

SPECIAL sales

Sale at Filene's; how to price suits at $11 and still turn a profit. il Bsns W p 142-4+ Mr 14 '53

SPECIAL weeks. See Advertising campaigns—Special weeks and days

SPECIALIZATION in medicine. See Medicine—Specialization

SPECIES, Origin of

Darwin's finches. D. Lack. il maps Sci Am 188:66-8+ Ap '53

SPECIFIC gravity

Acid-base titration, viscosity and density of α-, β- and γ-casein. N. J. Hipp, M. L. Groves and T. L. McMeekin. bibliog Am Chem Soc J 74:4822-6 O 5 '52

Densities of mixtures; water and methanol. G. Chapas. Am Chem Soc J 74:6275 D 20 '52

General relation between the density virial coefficients and the pressure virial coefficients. W. E. Putnam and J. E. Kilpatrick. J Chem Phys 21:951 My '53

How to adjust the specific gravity of repaired batteries. Coal Age 58:112 Jl '53; Same abr. Power Eng 57:82 S '53; Same. Iron & Steel Eng 30:113 Je '53

Net heat of combustion of petroleum hydrocarbons. R. S. Fein, H. I. Wilson and J. Sherman. bibliog Ind & Eng Chem 45:610-14 Mr '53

Partial molal volumes of cadmium nitrate and water in concentrated aqueous solutions. W. W. Ewing and C. H. Herty, 3d. J Phys Chem 57:245-6 F '53

Proposed method of test for measurement of density of knock test standard normal heptane and *iso*octane by the pycnometer. il diags Am Soc T M Proc 50:289-94 '50

Quick method gives specific gravities of mixtures. R. S. Cook. Chem Eng 60:233-4 Mr '53

Specific gravities determined faster. diag Eng N 149:88 N 6 '52

See also

Gravitometers

Pycnometers

SPECIFIC heat

Anomaly in the heat capacity of manganous oxide. R. K. Wangsness. bibliog Science 116:537 N 14 '52

Anomaly in the low temperature atomic heat of silver. P. H. Keesom and N. Pearlman. bibliog Phys R 88:140-1 O 1 '52

Atomic heat of germanium below 4°K. P. H. Keesom and N. Pearlman. bibliog diag Phys R 91:1347-53 S 15 '53

Atomic heat of silicon below 100°K. N. Pearlman and P. H. Keesom. bibliog Phys R 88:398-405 O 15 '52

Calorimetric properties of polytetrafluoroethylene (Teflon) from 0° to 365°K. G. T. Furukawa and others. bibliog J Res Nat Bur Stand 49:273-8 O '52

Compressor calculations; correlating specific-heat data. R. W. Brooks. Oil & Gas J 51:139-40 My 4 '53

Compressor calculations; specific heat data for hydrocarbons. R. W. Brooks. Oil & Gas J 51:287 Ap 27 '53

C_p-C_v in silicon and germanium. M. E. Fine. bibliog J Chem Phys 21:1427 Ag '53

Effect of neutron bombardment on the low temperature atomic heat of silicon. P. H. Keesom and others. bibliog Science 116:630-1 D 5 '52

Electronic and lattice specific heats in W, Mo, and Re. M. Horowitz and J. G. Daunt. bibliog Phys R 91:1099-106 S 1 '53

Frequency spectra of simple solids from specific heat data. Jenn Lin Hwang. bibliog J Chem Phys 21:168-70 Ja '53

Heat capacities at low temperatures and entropies at 298.16°K. of sodium superoxide, potassium superoxide and sodium peroxide. S. S. Todd. Am Chem Soc J 75:1229-31 Mr 5 '53

Heat capacities at low temperatures and entropies at 298.16°K. of titanomagnetite and ferric titanate. S. S. Todd and E. G. King. bibliog Am Chem Soc J 75:4547-9 S 20 '53

Heat capacities of superconducting and normal tantalum. R. D. Worley and others. bibliog Phys R 91:1567-8 S 15 '53

Heat capacity and thermal diffusivity of silver bromide. T. E. Pochapsky. bibliog J Chem Phys 21:1539-40 S '53

Heat capacity, gas imperfection, infrared spectra, and internal rotation barriers of ethyl alcohol. G. M. Barrow. bibliog J Chem Phys 20:1739-44 N '52

Heat capacity, heat of fusion and heat of vaporization of hydrogen fluoride. J. Hu, D. White and H. L. Johnston. bibliog diag Am Chem Soc J 75:1232-6 Mr 5 '53

Heat capacity of chromium carbide (Cr_3C_2) from 13 to 300°K. W. DeSorbo. bibliog Am Chem Soc J 75:1825-7 Ap 20 '53

Heat capacity of *cis*- and *trans*-decahydronapthalene and the possible existance of a λ-region for the *cis* form at 50.1-50.5°. W. F. Seyer. bibliog Am Chem Soc J 75:616-21 F 5 '53

Heat capacity of gallium from 15 to 320°K.; the heat of fusion at the melting point. G. B. Adams, jr., H. L. Johnston and E. C. Kerr. bibliog diag Am Chem Soc J 74:4784-7 O 5 '52

Heat capacity of KCl below 4°K. P. H. Keesom and N. Pearlman. bibliog Phys R 91:1354-5 S 15 '53

Heat capacity of organic vapors; data for some aliphatic alcohols using an improved flow calorimeter requiring only 25 ml. of sample. G. C. Sinke and T. De Vries. bibliog Am Chem Soc J 75:1815-18 Ap 20 '53

Heat capacity standards for the range 14 to 1200° K. D. C. Ginnings and G. T. Furukawa. Am Chem Soc J 75:522-7 F 5 '53

Heat transfer in condensation; effect of heat capacity of condensate. L. A. Bromley. bibliog Ind & Eng Chem 44:2966-9 D '52

High temperature heat contents of hafnium dioxide and hafnium tetrachloride. R. L. Orr. bibliog Am Chem Soc J 75:1231-2 Mr 5 '53

High temperature heat contents of magnesium orthosilicate and ferrous orthosilicate. R. L. Orr. bibliog Am Chem Soc J 75:528-9 F 5 '53

High temperature heat contents of meta- and orthotitanates of barium and strontium. J. P. Coughlin and R. L. Orr. bibliog Am Chem Soc J 75:530-1 F 5 '53

Isobaric heat capacities at bubble point; *cis*-2-butene, isopropylbenzene, and *n*-decane. W. G. Schlinger and B. H. Sage. bibliog Ind & Eng Chem 44:2454-6 O '52

Isobaric heat capacity; analytical determination from Joule-Thomson coefficients. K. Yang. Ind & Eng Chem 45:786-8 Ap '53

Isobaric heat capacity of propane over a wide range of temperature and pressure. J. H. Seifarth and J. Joffe. bibliog Ind & Eng Chem 44:2894-7 D '52

Low temperature heat capacities of inorganic solids; heat capacity and thermodynamic properties of cuprous bromide from 16 to 300°K. J. Hu and H. L. Johnston. bibliog Am Chem Soc J 74:4771-2 O 5 '52

Low temperature heat capacities of inorganic solids; heat capacity of ammonium chromium alum. H. L. Johnston, J. Hu and W. S. Horton. Am Chem Soc J 75:3922-4 Ag 20 '53

Low temperature heat capacities of inorganic solids; heat capacity of cupric oxide from 15 to 300°K. J. Hu and H. L. Johnston. bibliog Am Chem Soc J 75:2471-3 My 20 '53

Low temperature heat capacities of inorganic solids; heat capacity of sodium borohydride from 15-300°K. H. L. Johnston and N. C. Hallett. Am Chem Soc J 75:1467-8 Mr 20 '53

Low temperature heat capacities of inorganic solids; the heat capacity and entropy of red mercuric oxide. T. W. Bauer and H. L. Johnston. bibliog Am Chem Soc J 75:2217-19 My 5 '53

Low temperature heat capacities of inorganic solids; the heat capacity of β-gallium oxide from 15 to 300°K. G. B. Adams, jr. and H. L. Johnston. bibliog Am Chem Soc J 74:4788-9 O 5 '52

SPECIFIC heat—*Continued*

Specific heat discontinuity in antiferromagnets and ferrites. L. N. Howard and J. S. Smart. bibliog Phys R 91:17-19 Jl 1 '53

Specific heat of austenite and martensite. E. Griffiths and P. R. Pallister. diags Iron & Steel Inst J 175:30-2 S '53

Specific heat of lead in the temperature range 1°K to 75°K. M. Horowitz and others. bibliog Phys R 88:1182-6 D 1 '52

Specific heat of small particles at low temperatures. G. Jura and K. S. Pitzer. diags Am Chem Soc J 74:6030-2 D 5 '52

Specific heat of sulphate black liquor. R. L. Harvin and W. F. Brown. bibliog il diag Tappi 36:270-4 Je '53

Specific heat of synthetic high polymers; polyhexamethylene adipamide and sebacamide. R. C. Wilhoit and M. Dole. bibliog J Phys Chem 57:14-21 Ja '53

Surface contribution to the heat capacities of solids. J. T. Law. bibliog J Chem Phys 20:1329-30 Ag '52

T^2 dependence of the low temperature specific heat of gallium. W. De Sorbo. bibliog J Chem Phys 21:168 Ja '53

Theoretical and experimental heat capacities of superconducting metals. R. D. Worley and others. bibliog Phys R 87:1142-3 S 15 '52

Viscosity, thermal conductivity and specific heat of carbon dioxide at elevated pressures and temperatures. I. Granet and P. Kass. bibliog Pet Refiner 31:137-8 N '52

Viscosity, thermal conductivity and specific heat of dry air at elevated pressures and temperatures. I. Granet and P. Kass. bibliog Pet Refiner 31:113-14 O '52

Viscosity, thermal conductivity and specific heat of nitrogen at elevated pressures and temperatures. I. Granet and P. Kass. bibliog Pet Refiner 32:149-50 Mr '53

Viscosity, thermal conductivity and specific heat of steam at elevated pressures and temperatures. I. Granet and P. Kass. bibliog Pet Refiner 32:179-81 My '53

SPECIFIC surface

Air flow method of measuring the specific surface of jute; study of chemically treated fibres. M. M. Roy. bibliog Textile Inst J Trans 44:T90-4 Mr '53

Determination of the specific surface of barium sulphate; a comparison of results by different methods. D. W. Jopling. bibliog il diag J Ap Chem 2:642-51 N '52

Permeability method of specific surface determination; a correction factor. H. E. Rose. J Ap Chem 2:511-20 S '52

Surface area of pulp fibres, an important factor in papermaking; abstract. J. W. Beamesderfer. Pulp & Pa of Can 54:138-9 Je '53

SPECIFIC volume

Partial specific volumes. R. F. Nielsen. Oil & Gas J 51:297 Ap 27 '53

Use of partial specific volumes. R. F. Nielsen. Oil & Gas J 52:137 My 11 '53

Volumetric and phase behavior of mixtures of nitric oxide and nitrogen dioxide. F. T. Selleck, H. H. Reamer and B. H. Sage. bibliog Ind & Eng Chem 45:814-19 Ap '53

SPECIFICATIONS

How to select and specify materials. J. W. Frazier. Machine Design 25:292+ Ag '53

Selecting materials to meet mechanical design requirements. J. R. Hunt. diags Materials & Methods 38:102-7 S '53

See also

Standards

also subdivision Specifications under special subjects, e.g.

Airplane engines
Airplanes
Automobile engines
Automobiles
Cast iron
Internal combustion engines
Motor boat engines, Outboard
Paper
Vacuum tubes

SPECTACLES

Fifty-million goggles in a garage. il Bsns W p 108-10 Mr 21 '53

Advertising

Self-liquidating mail-order campaign gets money for educational advertising program; Rayex nite glasses. N. Keine. il Ptr Ink 241:40+ O 31 '52

SPECTROGRAPH

Adjustable slit for a vacuum spectrograph. M. T. Christensen. il J Sci Instr 30:70-1 Mr '53

Airborne, infrared spectrograph. C. W. Hargens. il Franklin Inst J 255:59-60 Ja '53

Apparatus for Raman spectrography. J Sci Instr 30:29 Ja '53

Better spectra; echelle spectrograph. Sci Am 188:46+ Ap '53

Fixed-focus broad-range echelle spectrograph of high speed and resolving power. G. R. Harrison and others. bibliog il diags Opt Soc Am J 42:706-12 O '52

Infrared spectrograph for use in the 40-150-micron spectral region. R. A. Oetjen and others. bibliog il diags Opt Soc Am J 42:559-66 Ag '52

Littrow-Echelle spectrograph embodies major development in spectrum optics. il Elec Eng 72:373 Ap '53

Making labs customers. il Bsns W p80-2+ F 21 '53

Measurement of wavelength in echelle spectra. N. A. Finkelstein. il diags Opt Soc Am J 43:90-6 F '53

New type spectrograph makes industrial analyses more accurate. il Iron Age 171:160+ Mr 19 '53

Research instruments aid engine maintenance; based on papers by J. L. Broughten and others. il S A E J 61:50-2 Jl '53

Spectrograph as a maintenance tool. il Diesel Power 31:42-8 My '53

See also

Spectrophotometers

SPECTROGRAPH, Photoelectric

Design of photoelectric Raman apparatus. W. R. Busing. diags Opt Soc Am J 42:774-8 O '52

SPECTROGRAPHY

Handy calculator for X-ray spectrographic work. diags Eng & Min J 154:114+ O '53

High temperature X-ray spectrograms of calcium silicates and cement clinkers. G. Tromel and H. Moller. bibliog il Rock Prod 55:72-5+ N '52

SPECTROMETERS

Design of thermocouple transformers for infra-red chopped beam systems. T. S. Robinson. bibliog J Sci Instr 29:311-13 O '52

Focusing in a beta-ray spectrometer with tilted sources. C. M. Fowler and P. Domotor. diags J Ap Phys 23:415-17 Ap '52

Grating spectrometer will aid studies of unknown spectrum. Chem & Eng N 30:4968 N 24 '52

Infrared analyzers. R. H. Munch. diags Ind & Eng Chem 44:sup81A-3A Ag; sup95A-6A+ S; sup93A-4A+ O '52

Infra-red solar spectroscopy in a high-altitude aircraft. J. Yarnell and R. M. Goody. bibliog il diags J Sci Instr 29:352-7 N '52

Magnetic lens spectrometer measurements of the radiations from light nuclear reactions. R. G. Thomas and T. Lauritsen. bibliog diags Phys R 88:969-86 D 1 '52

Multislit multipass spectrometers. M. J. E. Golay. bibliog diags Opt Soc Am J 43:58-60 Ja '53

Neutron measurements with the Brookhaven crystal spectrometer. L. B. Borst and V. L. Sailor. bibliog il diag R Sci Instr 24:141-8 F '53

Nuclear resonance spectrometer. L. Malling. il diags Electronics 26:184-7 Ap '53

Optical cell for use with liquid helium. W. H. Duerig and I. L. Mador. bibliog il R Sci Instr 23:421-4 Ag '52

Optical slit mechanism. R. V. Jones. il diags J Sci Instr 29:345-50 N '52

Pair measurement of gamma-rays with a lens spectrometer. D. E. Alburger. bibliog diags R Sci Instr 23:671-7 D '52

Photocell amplifier for infra-red spectroscopy. D. A. H. Brown. diag J Sci Instr 29:292-4 S '52

Photoelectric Raman spectrometer with automatic range changing. R. F. Stamm and others. bibliog il diags Opt Soc Am J 43:119-37 F '53

Proposal for a lens type pair spectrometer. M. S. Freedman. R Sci Instr 23:643-4 N '52

Refractivity of potassium bromide for visible wavelengths. R. J. Spindler and W. S. Rodney. bibliog il J Res Nat Bur Stand 49:253-62 O '52

SPECTROMETERS—*Continued*

Scintillation spectrometer study of the decay of Tl^{204}. E. der Mateosian and A. Smith. bibliog diag Phys R 88:1186-90 D 1 '52

Simple high-speed spectrometer for the infra-red region. D. A. H. Brown and V. Roberts. bibliog il diags J Sci Instr 30:5-8 Ja '53

Simplified method of calibrating infra-red spectrometers. J. H. Towler and W. Guy. diag J Sci Instr 29:393-7 D '52

Spectrometer cuts analysis time, speeds warehousing operations; Fairchild engine & airplane corp. Iron Age 171:155-6 Mr 26 '53; Steel 132:147 Ap 27 '53

Spectrometer for the far infrared and the spectrum of 1,2 dichloroethane. C. R. Bohn and others. bibliog diag J Chem Phys 21:719-21 Ap '53

Vacuum-tight seal between LiF and silver. R. C. Lord and R. S. McDonald. diag R Sci Instr 23:442 Ag '52

SPECTROMETERS, Gamma ray

Automatic recording gamma-ray spectrometer. T. D. Strickler and W. G. Wadey. bibliog diags R Sci Instr 24:13-16 Ja '53

Precision measurements of nuclear γ-ray wavelengths of Ir^{192}, Ta^{182}, RaTh, Rn, W^{187}, Cs^{137}, Au^{198}, and annihilation radiation. D. E. Muller and others. bibliog diags Phys R 88:775-93 N 15 '52

SPECTROMETERS, Mass. See Mass spectrometers

SPECTROMETERS, X ray

Critical evaluation of the Norelco high angle X-ray spectrometer for elastic strain measurements. S. R. Maloof and H. R. Erard. diags R Sci Instr 23:687-92 D '52

Determination of sulfur in petroleum distillates by X-ray absorption. A. Y. Mottlau and C. E. Driesens, jr. Anal Chem 24:1852-4 N '52

Effect of a low absorption coefficient on X-ray spectrometer measurements. D. T. Keating and B. E. Warren. diag R Sci Instr 23:519-22 O '52

Fast scanning mechanism for use with a Geiger counter X-ray spectrometer. J. Adam. il diags J Sci Instr 29:324-5 O '52

Quantitative analysis of clay minerals with the X-ray spectrometer. G. Talvenheimo and J. L. White. bibliog Anal Chem 24:1784-9 N '52

Some applications of the fluorescent X-ray spectrometer in ceramics. R. F. Patrick. bibliog il Am Cer Soc J 35:189-93 Ag 1 '52

X-ray fluorescent analysis provides fast control. il Materials & Methods 37:226+ Je '53

X-ray fluoroscopy analyzes alloys; Thomson laboratory. R. M. Brissey and G. A. Chase. il diags Am Mach 97:132-3 Ap 27 '53

X-ray studies of crystalline and amorphous order in high polymers. S. Krimm. bibliog J Phys Chem 57:22-5 Ja '53

SPECTROPHOTOMETERS

Applications of a modified spectrophotometer for microspectrometry, microdensitometry, and continuous flame photometry. A. Opler and J. H. Miller. Opt Soc Am J 42:784-5 O '52

Automatic relative-transmission attachment for the Beckman model DU spectrophotometer. W. Kaye and R. G. Devaney. bibliog il diags Opt Soc Am J 42:567-71 Ag '52

Automatic spectrophotometry of paper strip chromatograms. T. V. Parke and W. W. Davis. il Anal Chem 24:2019-20 D '52

Beer's law and spectrophotometer linearity. C. G. Cannon and I. S. C. Butterworth. Anal Chem 25:168-70 Ja '53

Determination of small amounts of hydrocarbons in the atmosphere. P. P. Mader and others. bibliog il diags Anal Chem 24:1899-902 D '52

Dye control with the *R*-cam and ruler. B. S. Pritchard and E. I. Stearns. bibliog Opt Soc Am J 42:752-3 O '52

Modification of the Beckman spectrophotometer with external C battery supply and voltage-checking arrangement. L. P. Cecchini and M. Eicher. diags Anal Chem 25:534-5 Mr '53

New slit drive for Beckman IR-2 infrared spectrophotometer. W. E. Tolberg and H. M. Boyd. il Anal Chem 24:1836-9 N '52

Nucleic acid derivatives; apparatus for simultaneously separating and recording ultraviolet absorption. A. Deutsch, R. Zuckerman and M. S. Dunn. il diags Anal Chem 24:1763-9 N '52

Nucleic acid derivatives; separation and quantitative analysis by ultraviolet spectrophotometry. A. Deutsch, R. Zuckerman and M. S. Dunn. bibliog Anal Chem 24:1769-73 N '52

Periodate method for manganese and effect of band width. M. D. Cooper. il Anal Chem 25:411-16 Mr '53

Spectrophotographic curves of materials shown. il Product Eng 24:210 Ja '53

Use of a spectrophotometer in the pulp and paper industry. T. R. Hobbs. diag Pulp & Pa of Can 54:87-90 Ja '53

Use of micrometer Baly cells with Beckman and Cary ultraviolet spectrophotometers. R. C. Hirt and F. T. King. bibliog il Anal Chem 24:1545-8 O '52

Variable-length cell compartment for Beckman DU spectrophotometer. L. P. Cecchini. diags Anal Chem 25:457-60 Mr '53

SPECTROPHOTOTOMETERS, Recording

Single detector split-beam automatic recording spectrophotometer. H. W. Etzel. il diags Opt Soc Am J 43:87-90 F '53

SPECTROPHOTOMETRY

Differential multicomponent spectrophotometry; spectrophotometric method for determination of benzyl benzoate and N-butyl acetanilide in clothing impregnant M-1960. M. Beroza. bibliog Anal Chem 25:112-15 Ja '53

Displacement spectrophotometry. R. H. Hamilton. bibliog Anal Chem 25:399-403 Mr '53

Holder for infrared spectrophotometry of small samples on silver chloride. H. J. R. Stevenson and S. Levine. diags R Sci Instr 24:229-30 Mr '53

Important developments in spectrophotometry; annual review. G. S. Egerton. il Chem Age (Lond) 68:55-61 Ja 10 '53

Infrared spectrophotometric study of veratrum alkaloids. G. Papineau-Couture and R. A. Burley. bibliog Anal Chem 24:1918-21 D '52

Intensity of spectral lines produced in nonhomogeneous flames. A. C. Kolb and E. R. Streed. bibliog J Chem Phys 20:1872-8 D '52

Ion-exchange and spectrophotometric investigation of iron(III) sulfate complex ions. R. A. Whiteker and N. Davidson. bibliog Am Chem Soc J 75:3081-5 Jl 5 '53

Microgram and submicrogram determination of phosphate; applications of sealed tube digestion and capillary cell spectrophotometry. F. L. Schaffer, J. Fong and P. L. Kirk. bibliog il diags Anal Chem 25:343-6 F '53

Photometer and absorption cell attachment for ultramicro-spectrophotometry. R. Craig and others. bibliog il diag R Sci Instr 24:49-52 Ja '53

Polarographic, potentiometric and spectrophotometric study of lead nitrate complexes. H. M. Hershenson, M. E. Smith and D. N. Hume. bibliog Am Chem Soc J 75:507-11 F 5 '53

Spectrophotometric atlas of the $^2\Sigma^+$—$^2\pi$ transition of OH. A. M. Bass and H. P. Broida. U S Nat Bur Stand Circ 541:1-22; pa 20c Supt. of doc. '53

Spectrophotometric attachment for use in paper chromatography. H. Campbell and J. A. Simpson. il Chem & Ind p342-3 Ap 11 '53

Spectrophotometric determination of aluminum in thorium; extraction of aluminum with 8-quinolinol in chloroform. D. W. Margerum, W. Sprain and C. V. Banks. bibliog Anal Chem 25:249-52 F '53

Spectrophotometric determination of small quantities of 2,4-dichlorophenoxyacetic acid and 2,4,5-trichlorophenoxyacetic acid using partition chromatography. N. Gordon. bibliog diag Anal Chem 24:1968-71 D '52

Spectrophotometric determination of the hydroxyl contents of aliphatic and alicyclic alcohols. J. P. Riley. Chem Soc J p2108-10 Je '52

SPECTROPHOTOMETRY—*Continued*

Spectrophotometric investigation of the complexes formed between copper and pyrophosphate ions in aqueous solution. J. I. Watters and A. Aaron. bibliog Am Chem Soc J 75:611-16 F 5 '53

Spectrophotometric investigation of the copper(II) ion-triethanolamine complex. J. M. Bolling and J. L. Hall. bibliog Am Chem Soc J 75:3953-5 Ag 20 '53

Spectrophotometric investigations of organic complexes from copolymerization monomers; the instantaneous complex formation of parasubstituted styrenes and maleic anhydride. E. R. Garrett and R. L. Guile. Am Chem Soc J 75:3958-60 Ag 20 '53

Spectrophotometric investigations of some complexes of ruthenium; ruthenium reactions with thiosemicarbazide, 4-phenylthiosemicarbazide and diphenylthiocarbazide. R. P. Yaffe and A. F. Voigt. bibliog Am Chem Soc J 74:5043-6 O 20 '52

Spectrophotometric method for following dichromate oxidations. M. J. Cardone and J. Compton. bibliog Anal Chem 24:1903-8 D '52

Spectrophotometric studies of empirical formulas of complex ions. A. E. Harvey, jr. and D. L. Manning. bibliog Am Chem Soc J 74:4744-6 O 5 '52

Spectrophotometric study of dichromate-chromic salt mixtures; application to the determination of glycerol in vinegar. D. T. Englis and L. A. Wollerman. Anal Chem 24:1983-5 D '52

Spectrophotometric study of Np(V) oxalate complexes. D. M. Gruen and J. J. Katz. bibliog Am Chem Soc J 75:3772-6 Ag 5 '53

Spectrophotometric study of the complex formed between cerous and sulfate ions. T. W. Newton and G. M. Arcand. bibliog Am Chem Soc J 75:2449-53 My 20 '53

Spectrophotometric study of the iron(III) chloro-complexes. G. A. Gamlen and D. O. Jordan. Chem Soc J p 1435-43 My '53

Spectrophotometric study of the phosphorus-interhalogen complexes in carbon tetrachloride and acetonitrile. A. I. Popov and E. H. Schmorr. bibliog Am Chem Soc J 74:4672-4 S 20 '52

Spectrophotometric study of the tetrachloroiodide complex in acetonitrile. A. I. Popov and J. N. Jessup. bibliog Am Chem Soc J 74:6127-8 D 5 '52

Spectrophotometry is practical at Mohawk carpet mills; abstract. J. J. Hanlon. Textile World 102:141+ D '52

Spectroscopic study of the benzene-*s*-trinitrobenzene molecular complex. D. M. G. Lawrey and H. McConnell. bibliog Am Chem Soc J 74:6175-7 D 20 '52

Ultraviolet spectrophotometric determination of nitrites with 4-aminobenzene-sulfonic acid. J. M. Pappenhagen and M. G. Mellon. bibliog Anal Chem 25:341-3 F '53

SPECTROSCOPE

Amateur scientist. A. G. Ingalls. diags Sci Am 187:86-8 D '52

Light sources

Source unit for Raman spectroscopy. J. W. Kemp and others. il diag Opt Soc Am J 42:811-14 N '52

SPECTROSCOPY

Bridges across the infrared-radio gap. M. J. E. Golay. bibliog diags Inst Radio Eng Proc 40:1161-5 O '52

Chemical spectroscopy. W. R. Brode. il diags Am Soc T M Proc 50:513-59 bibliog(p557-9) '50

Coaxial stark cell for microwave spectroscopy. il Electronics 25:206+ D '52; diags Tele-Tech 11:41+ D '52

Conference on analytical chemistry and applied spectroscopy, Pittsburgh, March 2-6; abstracts of papers. Anal Chem 25:516-30 Mr '53

High resolution spectroscopy of the infrared. D. H. Rank and others. Opt Soc Am J 43:214-15 Mr '53

Infrared and Raman spectroscopy studies of light and heavy trifluoroacetic acids. N. Fuson and others. bibliog J Chem Phys 20:1627-34 O '52

Kinetics of OH radicals from flame emission spectra; a study of the acetylene-oxygen flame. K. E. Shuler and H. P. Broida. bibliog il J Chem Phys 20:1383-8 S '52

Low temperature spectroscopy in the farther ultraviolet region. W. J. Potts, jr. bibliog il diags J Chem Phys 21:191-5 F '53

NBS develops spectroscopic method for studying speech characteristics. il Elec Eng 71:1051-2 N '52

Nuclear spectroscopy of Ba^{131}. M. W. Elliott and others. bibliog Phys R 88:263-5 O 15 '52

One to two millimeter wave spectroscopy. W. C. King and W. Gordy. il Phys R 90:319-20 Ap 15 '53

Optics in the oil industry. P. D. Foote. il Opt Soc Am J 42:886-97 D '52

Pittsburgh conference on analytical chemistry and applied spectroscopy, March 2-6; program. Chem & Eng N 31:583-6 F 9 '53

Rotational temperatures of OH in several flames. H. P. Broida and G. T. Lalos. bibliog il J Chem Phys 20:1466-71 S '52

Spectroscopic standards by-pass lengthy analyses. Chem & Eng N 31:2192 My 25 '53

Spectroscopy on a cosmic scale. E. I. Stearns. il J Chem Educ 29:573-5 N '52

Studies in spectroscopy; steric effects in some substituted butadienes and *cyclo*butanes. K. B. Alberman, R. N. Haszeldine and F. B. Kipping. diag Chem Soc J p3284-8 Ag '52

Studies in spectroscopy; the ionisation constants and infra-red spectra of some primary and secondary halogen-containing alcohols. R. N. Haszeldine. Chem Soc J p 1757-63 Je '53

Studies in spectroscopy; the ultra-violet absorption spectra of halogen-containing aliphatic iodo-compounds, and the relative stability of free halogen-containing alkyl radicals. R. N. Haszeldine. diag Chem Soc J p 1764-71 Je '53

Thermodynamic properties of the diatomic interhalogens from spectroscopic data. L. G. Cole and G. W. Elverum, jr. bibliog J Chem Phys 20:1543-51 O '52

Time-resolved spectroscopy of ultraspeed pellet luminosity. W. A. Allen and E. B. Mayfield. il J Ap Phys 24:131-3 F '53

Validity of anomalous population temperatures in flames. S. S. Penner. bibliog J Chem Phys 20:1175-6 Jl '52

Validity of spectroscopic temperature determinations in flames. K. E. Shuler. bibliog J Chem Phys 20:1176-7 Jl '52

X-ray spectroscopy as a control method in the production of zirconium and hafnium. D. M. Mortimore and P. A. Romans. bibliog il diag Opt Soc Am J 42:673-7 S '52

History

Short history of spectroscopy. T. W. Chalmers. il diags Engineer 196:166-8, 194-5, 226-7, 258-60, 290-1, 328-9, 359-60, 386-7, 418-19, 450-1 Ag 7-O 9 '53

SPECTRUM

Configuration interaction between the odd terms in the iron group. N. Rosenzweig. bibliog Phys R 88:580-6 N 1 '52

Cross terms in allowed shape β spectra. J. P. Davidson and D. C. Peaslee. bibliog Phys R 91:1232-3 S 1 '53

Deficiency of the phenomenological theory of the Lamb shift. F. J. Belinfante. Phys R 91:1285-6 S 1 '53

Effect of spectral line shape on apparent rotational temperatures of OH. S. S. Penner. bibliog J Chem Phys 21:686-8 Ap '53

Electronic emission spectrum of C^{13}O^{16}. K. E. McCulloh and G. Glockler. bibliog Phys R 89:145-7 Ja 1 '53

Electronic orbitals, shapes, and spectra of polyatomic molecules. A. D. Walsh. Chem Soc J p2260-331 Ag '53

Emission characteristics of vacuum spark discharges. J. C. Wahr and others. il Opt Soc Am J 43:151-6 Mr '53

Emission of radiation from diatomic gases; emissivity calculations for CO and HCl for nonoverlapping rotational lines as a function of temperature and optical density. S. S. Penner. bibliog diag J Ap Phys 23:825-37 Ag '52

SPECTRUM—*Continued*

Emission spectrum of aluminum monofluoride. S. M. Naudé and T. J. Hugo. Phys R 90:318 Ap 15 '53

Emission spectrum of OH from 1.4 to 1.7 μ. W. S. Benedict and others. bibliog J Chem Phys 21:398-402 Mr '53

Emission spectrum of undecomposed *N* methylpyrrole. G. Milazzo. J Chem Phys 21:163-4 Ja '53; Correction. 21:1312 Jl '53

Evidence of the once-forbidden spectra for the law of β-decay. H. M. Mahmoud and E. J. Konopinski. bibliog Phys R 88:1266-75 D 15 '52

Flame emission spectrum of HBr. B. W. Bullock and others. J Chem Phys 20:1808-9 N '52

Influence of temperature on the spectrum of 9 : 10-diphenylanthracene. J. C. D. Brand and J. R. Davidson. Chem Soc J p352-4 Ja '53

Intermediate coupling as encountered in some of the *p*-shell nuclei. D. R. Inglis. bibliog diags Phys R 87:915-21 S 15 '52

Interpretation of the visible and near-infrared spectra of NpO_2^+ and PuO_2^{++} ions. D. M. Gruen. bibliog J Chem Phys 20:1818-19 N '52

Isotope shifts in erbium. L. Wilets and L. C. Bradley, 3d. bibliog diags Phys R 87:1018-22 S 15 '52

Lamb shift for hydrogen and deuterium. E. E. Salpeter. bibliog Phys R 89:92-7 Ja 1 '53

Light emission produced by current injected into a green silicon-carbide crystal. K. Lehovec and others. bibliog il Phys R 89:20-5 Ja 1 '53

Low even configurations of the first spectrum of molybdenum (Mo I). R. E. Trees and M. M. Harvey. bibliog J Res Nat Bur Stand 49:397-408 D '52

Lowest triplet levels of aromatic hydrocarbons. C. Reid. il J Chem Phys 20:1214-15 Ag '52

Measurement of wavelength in echelle spectra. N. A. Finkelstein. il diags Opt Soc Am J 43:90-6 F '53

Molecular constants of cesium chloride by the molecular beam electric resonance method. R. G. Luce and J. W. Trischka. bibliog diag J Chem Phys 21:105-9 Ja '53

Nuclear radiofrequency spectra of D_2 and H_2 in intermediate and strong magnetic fields. N. J. Harrick and others. bibliog Phys R 90:260-6 Ap 15 '53

Pure quadrupole spectra; alkyl bromides and iodides. H. Zeldes and H. Livingston. J Chem Phys 21:1418-19 Ag '53

Pure quadrupole spectra of molecular crystals. H. C. Allen, jr. diags J Phys Chem 57:501-4 My '53

Pure quadrupole spectra of solid chlorine compounds. R. Livingston. bibliog J Phys Chem 57:496-501 My '53

Radiofrequency spectra of Li^6F^{19} by the molecular beam electric resonance method. J. C. Swartz and J. W. Trischka. bibliog diags Phys R 88:1085-92 D 1 '52

Radiofrequency spectrum of the components of a sodium chloride beam; the dimerization of the alkali halides. S. A. Ochs and others. bibliog diags J Chem Phys 21:459-66 Mr '53

Reflection spectra of some solid cobalt(II) salts in the visible region. L. I. Katzin and E. Gebert. bibliog Am Chem Soc J 75:2830-2 Je 20 '53

Regularities in the spectra of molecular complexes. H. McConnell and others. bibliog J Chem Phys 21:66-70 Ja '53

Relation between spectral changes and *p*H of the anthocyanin pelargonidin 3-monoglucoside. E. Sondheimer. bibliog Am Chem Soc J 75:1507-8 Mr 20 '53

Sixth series in the spectrum of atomic hydrogen. G. J. Humphreys. bibliog il diag J Res Nat Bur Stand 50:1-6 Ja '53

Spectrum of an argon-nitrogen mixture excited in a high voltage arc. R. W. Nicholls. bibliog J Chem Phys 21:568 Mr '53

Spectrum of gadolinium II. N. Zeldes. bibliog Phys R 90:413-15 My 1 '53

See also

Bathochromic effect
Mass spectra
Raman effect
Spectrography
Spectroscopy
Spectrum analysis
Stark effect
Zeeman effect

Absorption spectra

Absorption band systems of SiO and GeO in the Schumann region. H. C. Rowlinson and R. F. Barrow. bibliog J Chem Phys 21:378-9 F '53

Absorption bands and lines in irradiated LiF. C. J. Delbecq and P. Pringsheim. bibliog J Chem Phys 21:794-800 My '53

Absorption coefficients of oxygen in the vacuum ultraviolet. K. Watanabe and others. bibliog diag J Chem Phys 21:1026-30 Je '53

Absorption spectra and basicity of 2,3-diaminodibenzofuran. E. Sawicki and F. E. Ray. Am Chem Soc J 75:2519-20 My 20 '53

Absorption spectra of azlactones. F. W. Schueler and S. C. Wang. bibliog Am Chem Soc J 72:2220-5 My '50; Correction. 74:5542 N 5 '52

Absorption spectra of crystalline chlorophyll derivatives. E. E. Jacobs and A. S. Holt. J Chem Phys 20:1326 Ag '52

Absorption spectra of free NH and NH_2 radicals produced by the flash photolysis of hydrazine. D. A. Ramsay. bibliog il J Phys Chem 57:415-17 Ap '53

Absorption spectra of free radicals in continuously irradiated photochemical systems. D. A. Ramsay. bibliog diag J Chem Phys 21:165-6 Ja '53

Absorption spectra of SH and SD produced by flash photolysis of H_2S and D_2S. D. A. Ramsay. bibliog il diags J Chem Phys 20:1920-7 D '52

Absorption spectra of solutions of pheophytin a in methanol containing acid or base. R. Livingston and others. Am Chem Soc J 75:3025-6 Je 20 '53

Absorption spectra of some α- and β-diketones. R. P. Barnes and G. E. Pinkney. bibliog Am Chem Soc J 75:479-80 Ja 20 '53

Absorption spectra of tetracyclones. S. B. Coan, D. E. Trucker and E. I. Becker. bibliog Am Chem Soc J 75:900-3 F 20 '53

Absorption spectra of the direct dye benzopurpurine 4B and related structures. H. A. Standing and M. Stein. bibliog Textile Inst J Trans 44::T224-9 My '53

Absorption spectrum of an equimolecular mixture of azoxybenzene and hydrazobenzene. R. J. W. Le Fèvre and J. Northcott. Chem Soc J p4082-3 O '52

Absorption spectrum of bacteriochlorophyll. J. W. Weigl. bibliog Am Chem Soc J 75:999-1000 F 20 '53

Absorption spectrum of cyclopropane in the vacuum ultraviolet; note on the absorption spectrum of methyl cyclopropane. P. Wagner and A. B. F. Duncan. bibliog J Chem Phys 21:516-19 Mr '53

Absorption spectrum of free HCO radicals. D. A. Ramsay. bibliog il J Chem Phys 21:960-1 My '53

Absorption spectrum of hydrated americium chloride. B. J. Stover and J. G. Conway. diag J Chem Phys 20:1490-1 S '52

Absorption spectrum of iodine in oxygenated solvents and the dissociation of iodine water. L. I. Katzin. bibliog J Chem Phys 21:490-1 Mr '53

Absorption studies of the vapors of the three isomeric picolines in the near ultraviolet. J. H. Rush and H. Sponer. bibliog il J Chem Phys 20:1847-62 D '52

Analysis of the spectrum of the Nd^{+++} ion in the bromate crystal. R. A. Satten. bibliog J Chem Phys 21:637-48 Ap '53

Aromatic azo-compounds; absorption spectra of azo- and azoxy-compounds. G. M. Badger and R. G. Buttery. Chem Soc J p2156-8 Jl '53

Aromatic hydrocarbons; resonance restriction and the absorption spectra of aromatic hydrocarbons. E. Clar and D. G. Stewart. bibliog Am Chem Soc J 74:6235-8 D 20 '52

Assignment of the naphthalene bands at 3200-2900 A. D. P. Craig and L. E. Lyons. bibliog J Chem Phys 20:1499-500 S '52

Asymmetric rotor; hydrogen sulfide absorption in the regions 8700 cm^{-1} and 11 000 cm^{-1}. K. K. Innes and others. bibliog J Chem Phys 21:545-7 Mr '53

Asymmetric rotor; the hydrogen sulfide spectrum in the 5150 cm^{-1} region. H. C. Allen, jr. and others. J Chem Phys 20:1709-10 N '52

SPECTRUM—Absorption spectra—*Continued*

Basicity of hydrocarbons; ultra-violet absorption spectra of conjugated hydrocarbons in sulphuric acid solution. V. Gold and F. L. Tye. Chem Soc J p2172-80 Je '52

Carbon-oxygen absorption band in the infrared spectra of alcohols. H. H. Zeiss and M. Tsutsui. bibliog Am Chem Soc J 75:897-900 F 20 '53

Characteristic infra-red absorption frequencies of aromatic nitro-compounds. R. R. Randle and D. H. Whiffen. Chem Soc J p4153-4 N '52

Characteristic infra-red absorption of some organic derivatives of phosphoric acid. M. Halmann and S. Pinchas. Chem Soc J p626-9 F '53

Chemical modulation; a method for investigating transient molecules. E. J. Bair and others. J Chem Phys 21:759 Ap '53

Chemistry of Ru(VI), -(VII) and -(VIII); reactions, oxidation potentials and spectra. R. E. Connick and C. R. Hurley. bibliog Am Chem Soc J 74:5012-15 O 20 '52

Components of podophyllin; absorption spectra and reaction with iodine of the dihydro-β-naphthoic acids. A. W. Schrecker, G. Y. Greenberg and J. L. Hartwell. bibliog Am Chem Soc J 74:5669-71 N 20 '52

Correlation of color and constitution; 2,4-dinitrophenylhydrazones. G. D. Johnson. Am Chem Soc J 75:2720-3 Je 5 '53

Derivatives of 2,2-diphenylcyclohexanone; some anomalous absorption spectra. W. B. Bennet and A. Burger. bibliog Am Chem Soc J 75:84-7 Ja 5 '53

Dipole moments and near ultraviolet absorption of some monosubstituted benzenes; the effect of solvents and hydrogen bonding. S. Nagakura and H. Baba. bibliog Am Chem Soc J 74:5693-8 N 20 '52

Direct measurement of the absorption spectra of some plant phenols on paper strip chromatograms. A. E. Bradfield and A. E. Flood. Chem Soc J p4740-4 D '52

Effect of alkali and strong acid on the ultraviolet absorption spectrum of lignin and related compounds. O. Goldschmid. bibliog Am Chem Soc J 75:3780-3 Ag 5 '53

Effect of alkyl substitution on absorption spectra. H. C. Barany and M. Pianka. Chem Soc J p2217-24 Ag '53

Effect of methylation on the light absorption of phenols. A. Burawoy and J. T. Chamberlain. Chem Soc J p2310-16 Je '52

Effect of salt concentration and temperature on the ultraviolet absorption spectra of aqueous thiosulfate and sulfite. D. P. Ames and J. E. Willard. bibliog Am Chem Soc J 75:3267-8 Jl 5 '53

Effect of solvent on the ultra-violet absorption spectra of aromatic hydrocarbons with special reference to the mechanism of salting-out. E. F. G. Herington and W. Kynaston. Chem Soc J p3137-49 Ag '52

Effect of solvents on the absorption spectra of aromatic compounds. H. E. Ungnade. bibliog Am Chem Soc J 75:432-4 Ja 20 '53

Enhancement of X-ray induced absorption bands in alkaline earth compounds. J. H. Schulman and others. bibliog J Chem Phys 20:1966-7 D '52

Equilibria involving the $CF(g)$ and $CF_2(g)$ radicals at high temperatures. J. L. Margrave and K. Wieland. bibliog J Chem Phys 21:1552-4 S '53

Even-odd character of the 2900-3200A absorption transition in naphthalene. H. McConnell and D. S. McClure. J Chem Phys 21:1296-7 Jl '53

Excited states of acetylene; description and analysis of the near-ultra-violet absorption spectra of acetylene and dideuteroacetylene; nature of the excited state. C. K. Ingold and G. W. King. pl diags Chem Soc J p2725-44 S '53

Excited states of acetylene; experimental methods of recording the near-ultra-violet absorption spectra of acetylenes. C. K. Ingold and G. W. King. Chem Soc J p2704-7 S '53

Excited states of acetylene; measured and calculated frequencies in the near-ultra-violet absorption spectra of acetylene and dideuteroacetylene; vibrational and rotational energies of the *trans*-bent excited state. C. K. Ingold and G. W. King. Chem Soc J p2745-55 S '53

Existence of a hidden transition in biphenyl. A. Wenzel. bibliog J Chem Phys 21:403-8 Mr '53

Far ultraviolet absorption spectra of simple alkyl amines. E. Tannenbaum and others. bibliog J Chem PPhys 21:311-18 F '53

Influence of temperature and state on infrared absorption spectra; methyl iodide. I. L. Mador and R. S. Quinn. bibliog J Chem Phys 20:1837-42 D '52

Infrared absorption in *P*-type germanium. W. Kaiser and others. bibliog Phys R 91:1380-1 S 15 '53

Infrared absorption spectra of *cis*- and *trans*-1,2-dichlorohexafluorocyclobutane. J. R. Lacher and others. bibliog J Chem Phys 20:1014-15 Je '52

Infrared absorption spectra of some *N*-bromoacetamides. J. R. Lacher, G. G. Olson and J. D. Park. bibliog Am Chem Soc J 74:5578-80 N 20 '52

Infrared absorption spectra of the steroid sapogenins. R. N. Jones, E. Katzenellenbogen and K. Dobriner. bibliog Am Chem Soc J 75:158-66 Ja 5 '53

Infra-red absorptions of asparagine and glutamine. M. Davies and J. C. Evans Chem Soc J p480-2 F '53

Infrared emission and absorption of thermally excited carbon dioxide. R. H. Tourin. J Chem Phys 20:1651 O '52

Microwave absorption spectrum of ND_3. R. G. Nuckolls and others. bibliog Phys R 89:1101 Mr 1 '53

Microwave absorption spectrum of $(O^{16})_2$ and $O^{16}O^{17}$. S. L. Miller and C. H. Townes. bibliog Phys R 90:537-41 My 15 '53

Microwave spin resonance absorption by conduction electrons in metallic sodium. T. W. Griswold and others. il Phys R 88:951-2 N 15 '52

Modifications of the absorption spectra of anions induced by complex formation. L. I. Katzin. bibliog J Chem Phys 20:1165-9 Jl '52

9-10 μ Region of infrared absorption spectra of steroids in relation to chemical structure. H. Rosenkrantz and L. Zablow. bibliog Am Chem Soc J 75:903-7 F 20 '53

Near-infrared absorption by entire bands of carbon dioxide. J. N. Howard and R. M. Chapman. Opt Soc Am J 42:856 N '52

Near ultraviolet absorption spectra of 1,4 bis-(trifluoromethyl)benzene and 1,3,5 tris-(trifluoromethyl)benzene. C. D. Cooper and F. W. Noegel. bibliog il J Chem Phys 20:1903-7 D '52

New infrared absorption bands in *p*-type germanium. H. B. Briggs and R. C. Fletcher. Phys R 87:1130-1 S 15 '52

N=N stretching frequency; abstract. R. J. W. Le Fèvre and others. bibliog Chem & Ind p378 Ap 18 '53

Nuclear magnetic resonance in metals; broadening of absorption lines by spin-lattice interactions. H. S. Gutowsky and B. R. McGarvey. J Chem Phys 20:1472-7 S '52

Optical studies of injected carriers; infrared absorption in germanium. R. Newman. Phys R 91:1311-12 S 15 '53

Pyrimidines; the ultra-violet absorption spectra of some substituted pyrimidines. M. P. V. Boarland and J. F. W. McOmie. Chem Soc J p3716-28 O '52

Qualitative correlation of the spectra of some heterocyclic carbonyl compounds. J. A. Berson. bibliog Am Chem Soc J 75:3521-3 Jl 20 '53

Quantitative studies of apparent rotational temperatures of OH in emission and absorption (spectral lines with Doppler contour). S. S. Penner. bibliog J Chem Phys 21:31-41 Ja '53

Relation between the absorption spectra and the chemical constitution of dyes; effect of solvent and of temperature on the *cis-trans* isomerization of azo dyes. W. R. Brode, J. H. Gould and G. M. Wyman. bibliog Am Chem Soc J 75:1856-9 Ap 20 '53

Relation between the absorption spectra and the chemical constitution of dyes; phototropism and *cis-trans* isomerism in aromatic azo compounds. W. R. Brode, J. H. Gould and G. M. Wyman. bibliog Am Chem Soc J 74:4641-6 S 20 '52

SPECTRUM—Absorption spectra—*Continued*

Relationship between the stereochemical configuration of 3-hydroxysteroids and their infrared absorption spectra. A. R. H. Cole, R. N. Jones and K. Dobriner. bibliog Am Chem Soc J 74:5571-5 N 20 '52

Relative optical collision diameters from the pressure broadening of individual infrared absorption lines. W. Benesch and T. Elder. bibliog Phys R 91:308-12 Jl 15 '53

Researches on acetylenic compounds; the influence of propargylic substituents on the ultra-violet absorption of diacetylenes. J. B. Armitage and M. C. Whiting. Chem Soc J p2005-10 Je '52

Reversible bleaching of a band in the absorption spectrum of diamond. P. Pringsheim. bibliog Phys R 91:551-4 Ag 1 '53

Separation of the absorption spectra of NO_2 and N_2O_4 in the range of 2400-5000A. T. C. Hall, jr. and F. E. Blacet. bibliog J Chem Phys 20:1745-9 N '52

Solution absorption spectra of americium (III), (V), and (VI). S. E. Stephanou and others. bibliog J Chem Phys 21:42-5 Ja '53

Solutions of halogens in highly acidic, polar solvents. R. E. Buckles and J. F. Mills. bibliog Am Chem Soc J 75:552-5 F 5 '53

Some absorption bands in the far infrared. J. K. O'Loane. bibliog J Chem Phys 21:669-74 Ap '53

Some heavy water rotational absorption lines. C. K. Jen and others. J Chem Phys 21:520-5 Mr '53

Spectra of anthraquinone derivatives. R. H. Peters and H. H. Sumner. Chem Soc J p2101-10 Jl '53

Spectra of azlactones; azlactones derived from substituted benzaldehydes and hippuric and nitrohippuric acids. D. A. Bassi, V. Deulofeu and F. A. F. Ortega. bibliog Am Chem Soc J 75:171-8 Ja 5 '53

Spectra of simple amides in the vacuum ultraviolet. H. D. Hunt and W. T. Simpson. bibliog diag Am Chem Soc J 75:4540-3 S 20 '53

Spectral location of the absorption due to color centers in alkaline earth halide crystals. H. F. Ivey. bibliog Phys R 89:322 Ja 1 '53

Spectroscopic studies in the near ultraviolet of the three isomeric dimethylbenzene vapors; absorption spectra of meta and ortho dimethylbenzene. C. D. Cooper and H. Sponer. bibliog il J Chem Phys 20:1248-59 Ag '52

Studies in the sterol group; ultra-violet absorption spectra of ethylenic centres. P. Bladon, H. B. Henbest and G. W. Wood. Chem Soc J p2737-44 Jl '52

Synthesis and ultraviolet absorption spectra of polyazobenzenes. K. Ueno. Am Chem Soc J 74:4508-11 S 20 '52

Theory of absorption spectra of carotenoids according to Tomonaga-gas model of π-electrons. G. Araki and T. Murai. J Chem Phys 20:1661-2 O '52; Correction. 21:381 F '53

Ultraviolet absorption and fluorescence spectra of acetophenone. R. D. Vanselow and A. B. F. Duncan. bibliog Am Chem Soc J 75:829-32 F 20 '53

Ultraviolet absorption of steroids. L. Dorfman. Chem R 53:47-144 bibliog(p 132-44) Ag '53

Ultraviolet absorption spectra of derivatives of symmetric triazine; amino triazines. R. C. Hirt and D. J. Salley. bibliog J Chem Phys 21:1181-4 Jl '53

Ultraviolet absorption spectra of dibenzylidene-1,2-cycloalkanediones. N. J. Leonard and G. C. Robinson. bibliog Am Chem Soc J 75:2714-17 Je 5 '53

Ultraviolet absorption spectra of fully aromatic esters and thiolesters. G. Cilento. bibliog Am Chem Soc J 75:3748-50 Ag 5 '53

Ultraviolet absorption spectra of hindered ketones. G. D. Hedden and W. G. Brown. bibliog diag Am Chem Soc J 75:3744-8 Ag 5 '53

Ultraviolet absorption spectra of oxazolones and related compounds. E. L. Bennett and E. Hoerger. bibliog Am Chem Soc J 74:5975-9 D 5 '52

Ultraviolet absorption spectra of some polymethylnaphthalenes. W. L. Mosby. bibliog Am Chem Soc J 75:3348-9 Jl 20 '53

Ultra-violet absorption spectra of some pyrroles. G. H. Cookson. Chem Soc J p2789-95 S '53

Ultraviolet absorption spectra of some *p*-substituted D-*threo*-2-dichloroacetamido-1-phenyl-1,3-propanediols. F. C. Nachod and R. A. Cutler. Am Chem Soc J 74:6291-2 D 20 '52

Ultra-violet absorption spectra of *trans*- and *cis*-stilbenes and their derivatives; *trans*- and *cis*-stilbenes. R. N. Beale and E. M. F. Roe. Chem Soc J p2755-63 S '53

Ultraviolet absorption spectra of uninegative ions. H. L. Friedman. bibliog J Chem Phys 21:319-22 F '53

Unsaturated lactones; absorption spectra in a group of α-benzal-γ-substituted crotonolactones. C. Hanna and F. W. Schueler. bibliog Am Chem Soc J 75:741-3 F 5 '53

Band spectra

Absorption bands and lines in irradiated LiF. C. J. Delbecq and P. Pringsheim. bibliog J Chem Phys 21:794-800 My '53

Band width of the *F* band in KBr at 78°K. I. L. Mador and others. Phys R 91:1277 S 1 '53

Emission bands of the NO molecule in the vacuum ultraviolet region. Y. Tanaka. bibliog il diag J Chem Phys 21:788-93 My '53

Excited states of acetylene; theoretical methods for analysis of near-ultra-violet band-systems of acetylenes. C. K. Ingold and G. W. King. diags Chem Soc J p2708-24 S '53

Molecular spectra of condensed oxygen and the O_4 molecule. A. L. Smith and H. L. Johnston. bibliog J Chem Phys 20:1972-3 D '52

Multiple emission bands in zinc cadmium sulfide phosphors. E. B. Fehr and others. bibliog diag Opt Soc Am J 42:917-22 D '52

Precision determination of the velocity of light derived from a band spectrum method. D. H. Rank and others. bibliog il Opt Soc Am J 42:693-8 O '52

Some bands of methyl bromide in the near infrared under high resolution. D. H. Rank and others. Opt Soc Am J 43:157-62 Mr '53

Broadening of lines

See Spectrum—Pressure effects

Fine structure

Anisotropy in the paramagnetic resonance spectrum of peroxylamine disulfonate ion. S. I. Weissman and D. Banfill. bibliog Am Chem Soc J 75:2534 My 20 '53

Chemical significance of quadrupole spectra. B. P. Dailey. bibliog diags J Phys Chem 57:490-6 My '53

Effect of nuclear structure on the hyperfine structure of He^3. V. Hughes and G. Weinreich. Phys R 91:196-7 Jl 1 '53

Electronic structure of O_2. S. L. Miller and others. bibliog Phys R 90:542-3 My 15 '53

Fine structure of the hydrogen atom. S. Triebwasser and others. bibliog diags Phys R 89:98-115 Ja 1 '53

Ground state hyperfine structure and nuclear magnetic moment of praseodymium. H. Lew. Phys R 89:530 Ja 15 '53

Hyperfine structure and nuclear moments of Pr^{141}. H. Lew. bibliog diags Phys R 91:619-30 Ag 1 '53

Hyperfine structure in the paramagnetic resonance of the ion $(SO_3)_2NO^{--}$. J. Townsend and others. Phys R 89:606 F 1 '53

Hyperfine structure in the spectra of iridium and osmium. K. Murakawa and S. Suwa. Phys R 87:1048-9 S 15 '52

Hyperfine structure of hydrogen and deuterium. A. G. Prodell and P. Kusch. bibliog diags Phys R 88:184-90 O 15 '52

Hyperfine structure of the metastable triplet state helium-3. G. Weinreich and others. Phys R 91:195-6 Jl 1 '53

Hyperfine structure of the $3p^2P_{1/2}$ state of Al^{27}. H. Lew and G. Wessel. bibliog diag Phys R 90:1-3 Ap 1 '53

Hyperfine structures of the resonance lines of indium (In^{115}). G. V. Deverall and others. bibliog il diags Phys R 91:297-9 Jl 15 '53

Isotope shift in neutral oxygen. L. W. Parker and J. R. Holmes. bibliog Opt Soc Am J 43:103-9 F '53

SPECTRUM—Fine structure—*Continued*

Magnetic hyperfine structure in diatomic molecules. R. A. Frosch and H. M. Foley. bibliog diags Phys R 88:1337-49 D 15 '52

Magnetic scanning method for investigating hyperfine structure and isotope shift. F. Bitter and others. Phys R 91:421 Jl 15 '53

Molecular beam investigation of rotational transitions; the rotational levels of KBr and their hyperfine structure. B. P. Fabricand and others. bibliog Phys R 91:1403-8 S 15 '53

Molecular beam investigation of rotational transitions; the rotational levels of KCl and their hyperfine structure. C. A. Lee and others. bibliog diags Phys R 91:1395-403 S 15 '53

New fine structure in neutral oxygen. L. W. Parker and J. R. Holmes. bibliog diag Phys R 90:142-3 Ap 1 '53

Nuclear hyperfine structure of Mn^{++}. M. Sachs. bibliog Phys R 90:1058-60 Je 15 '53

Nuclear magnetic moment of Pr^{141} from the hyperfine structure of Pr II. P. Brix. bibliog Phys R 89:1245-6 Mr 15 '53

Paramagnetic resonance absorption; hyperfine structure in dilute solutions of hydrazyl compounds. H. S. Jarrett. J Chem Phys 21:761-2 Ap '53

Rydberg constant and the atomic mass of the electron. E. R. Cohen. bibliog diag Phys R 88:353-60 O 15 '52

Theory of the Stark effect of asymmetric rotator with hyperfine structure. M. Mizushima. bibliog J Chem Phys 21:539-41 Mr '53

Fluorescence spectra

Absorption and fluorescence spectra of *p*-terphenyl in toluene. C. F. Ravilious. R Sci Instr 23:760 D '52

Ultraviolet absorption and fluorescence spectra of acetophenone. R. D. Vanselow and A. B. F. Duncan. bibliog Am Chem Soc J 75:829-32 F 20 '53

Forbidden lines

Forbidden line of N II in the aurora. W. Petrie. Phys R 87:1002 S 15 '52

Intensity

Circular slide rule for calculating spectral intensities. L. D. Frederickson, jr. diag Anal Chem 24:2019 D '52

Determination of absolute *f* values from relative intensity measurements for spectral lines with Doppler contour. S. S. Penner. Opt Soc Am J 43:218-19 Mr '53

Influence of varying amounts of elements in steel and cast irons on spectral intensity. L. J. Canody and others. bibliog Opt Soc Am J 43:145-8 F '53

Vibrational intensities; the use of isotopes. B. Crawford, jr. bibliog J Chem Phys 20:977-81; Discussion. J. C. Decius. 1039 Je '52

Line breadth

Absorption line width in the infrared spectrum of atmospheric carbon dioxide. A. Adel. Phys R 90:1024-5 Je 15 '53

Electric resonance transitions in a tapered electric field. J. N. Goldberg and others. Phys R 89:278-81 Ja 1 '53

Quantum theory of spectral line broadening. S. Bloom and H. Margenau. bibliog Phys R 90:791-4 Je 1 '53

Rotational line-width measurements on NO, HCl, and HBr. D. Weber and S. S. Penner. bibliog J Chem Phys 21:1503-6 S '53

Multiplets

$(K+2)$nd order formula for asymmetry doublets in rotational spectra. D. Kivelson. bibliog J Chem Phys 21:536-8 Mr '53

Pressure effect

Broadening and shift of the second doublet of the rubidium absorption series under different pressures of argon and helium. S. Ch'en and D. A. Kohler. bibliog Phys R 90:1019-21 Je 15 '53

Relative optical collision diameters from the pressure broadening of individual infrared absorption lines. W. Benesch and T. Elder. bibliog Phys R 91:308-12 Jl 15 '53

Tables, etc.

Energy levels and wavelengths of the isotopes of mercury-199 and -200. K. Burns and K. B. Adams. bibliog Opt Soc Am J 42:716-21 O '52

Extension of the first spectrum of rhodium (Rh I). R. J. Murphy. bibliog J Res Nat Bur Stand 49:371-5 D '52

Isotope shifts in thorium-Th 230 and Th 232. G. L. Stukenbroeker and J. R. McNally, jr. bibliog il Opt Soc Am J 43:36-41 Ja '53

Transition probabilities in sharp and diffuse series of potassium. D. S. Villars. bibliog Opt Soc Am J 42:552-8 Ag '52

Vibrational spectra

Classical limit of mean thermal vibration amplitudes. J. C. Decius. J Chem Phys 21:1121-2 Je '53

Complexity of the N-H stretching vibration band in pyrrole and indole. N. Fuson and M.-L. Josien. J Chem Phys 20:1043 Je '52

Excited states of acetylene; measured and calculated frequencies in the near-ultraviolet absorption spectra of acetylene and dideuteroacetylene; vibrational and rotational energies of the *trans*-bent excited state. C. K. Ingold and G. W. King. Chem Soc J p2745-55 S '53

Normal coordinate analysis of the nonplanar vibrations of 1,3,5-trifluorobenzene. E. Ferguson. diag J Chem Phys 21:886-90 My '53

Rotation-vibration spectra of allene and allene-d_4. R. C. Lord and P. Venkateswarlu. bibliog J Chem Phys 20:1237-47 Ag '52

Rotation-vibration spectra of diatomic and simple polyatomic molecules with long absorbing paths; the spectra of the HCN and DCN molecules from 2.5μ to 0.5μ. A. E. Douglas and D. Sharma. bibliog diags J Chem Phys 21:448-58 Mr '53

Rotation-vibration spectra of diatomic and simple polyatomic molecules with long absorbing paths; the spectrum of tri-deuteromethane in the photographic infrared. L. F. H. Bovey. bibliog il J Chem Phys 21:830-6 My '53

Rotational isomerism and the vibrational spectrum of *sym*-dideuterodibromoethane H. J. Bernstein and others. bibliog diags J Chem Phys 20:1227-31 Ag '52

Substituted methanes; vibrational spectra, potential constants, and calculated thermodynamic properties of bromochloromethane. A. Weber and others. bibliog J Chem Phys 21:930-3 My '53

Vibration-rotation spectrum of D_2O. W. S. Benedict and others. bibliog J Chem Phys 21:1301-2 Jl '53

Vibration-rotation spectrum of HDO. W. S. Benedict and others. bibliog J Chem Phys 21:1302-3 Jl '53

Vibrational assignments for 1,1,1-trichloroethane. M. Z. El-Sabban and others. J Chem Phys 20:1810-11 N '52

Vibrational frequencies and the entropy of decaborane. W. E. Keller and H. L. Johnston. bibliog diags J Chem Phys 20:1749-51 N '52

Vibrational intensities; the use of isotopes. B. Crawford, jr. bibliog J Chem Phys 20:977-81; Discussion. J. C. Decius. 1039 Je '52

Vibrational spectra and structure of nitrogen tetrasulfide. E. R. Lippincott and M. C. Tobin. bibliog diags J Chem Phys 21:1559-65 S '53

Vibrational spectra and thermodynamic functions of lead tetramethyl, tin tetramethyl and germanium tetramethyl. E. R. Lippincott and M. C. Tobin. bibliog Am Chem Soc J 75:4141-7 S 5 '53

Vibrational spectra of fluorinated aromatics. E. E. Ferguson and others. bibliog J Chem Phys 21:1457-63, 1470-4 S '53

Vibrational spectra of fluorinated aromatics; fluorobenzene. D. C. Smith and others. bibliog J Chem Phys 21:1475-9 S '53

Vibrational spectra of fluorinated aromatics; 1,2,4,5-tetrafluorobenzene. E. E. Ferguson and others. J Chem Phys 21:1464-9 S '53

Vibrational spectra of molecules and complex ions in crystals; carbon dioxide. W. E. Osberg and D. F. Hornig. bibliog J Chem Phys 20:1345-7 S '52

Vibrational spectra of pyridine and pyridine-d_5. L. Corrsin and others. bibliog J Chem Phys 21:1170-6 Jl '53

SPECTRUM—Vibrational spectra—*Continued*
Vibrational spectra of $SiHCl_3$, SiH_2Cl_2, and SiH_2Br_2. J. A. Hawkins and others. J Chem Phys 21:1122 Je '53
Vibrational spectrum of tetrachlorodiborine. M. J. Linevsky and others. bibliog Am Chem Soc J 75:3287-8 Jl 5 '53
Vibrations of a simple cubic lattice. H. B. Rosenstock and G. F. Newell. diags J Chem Phys 21:1607-8 S '53

SPECTRUM, Auroral: See Auroras—Spectra

SPECTRUM, Beta ray. See Beta rays

SPECTRUM, Electron. See Electrons

SPECTRUM, Infrared
Absolute intensity of the ν_4 infrared absorption band of methane and its enhancement by nitrogen at high pressures. H. L. Welsh and P. J. Sandiford. bibliog J Chem Phys 20:1646-7 O '52
Absolute spectral diffuse reflectance of magnesium oxide in the near infrared. C. L. Sanders and E. E. K. Middleton. Opt Soc Am J 43:58 Ja '53
Absorption line width in the infrared spectrum of atmospheric carbon dioxide. A. Adel. Phys R 90:1024-5 Je 15 '53
Acidity and infrared absorption of fluorinated alcohols. A. L. Henne and W. C. Francis. Am Chem Soc J 75:991-2 F 20 '53
Airborne, infrared spectrograph. C. W. Hargens. il Franklin Inst J 255:59-60 Ja '53
Analysis of pyridine bases from coal tar by infra-red absorption spectroscopy. A. B. Densham, D. J. Langston and G. Gough. Chem Soc J p2433-5 Je '52
Application of a fast-scanning infrared spectrometer to a kinetic study of the NO_2-C_2H_5OH reaction. R. E. Nightingale and others. diag J Chem Phys 21:1398-9 Ag '53
Asymmetric rotor; the hydrogen sulfide spectrum in the 5150 cm^{-1} region. H. C. Allen, jr. and others. J Chem Phys 20:1709-10 N '52
Atmospheric window, 16 to 24 microns, and the second fundamental of nitrous oxide. A. Adel. il Phys R 88:128 O 1 '52
Bond moments and derivatives in CF_4, SiF_4, and SF_6 from infrared intensities. P. N. Schatz and D. F. Hornig. bibliog diags J Chem Phys 21:1516-30 S '53
Carbon-oxygen absorption band in the infrared spectra of alcohols. H. H. Zeiss and M. Tsutsui. bibliog Am Chem Soc J 75:897-900 F 20 '53
Catalog of infrared absorption spectra of steroidal sapogenin acetates. C. R. Eddy, M. E. Wall and M. K. Scott. bibliog Anal Chem 25:266-71 F '53
Characteristic infra-red absorption frequencies of aromatic nitro-compounds. R. R. Randle and D. H. Whiffen. Chem Soc J p4153-4 N '52
Characteristic infra-red absorption of some organic derivatives of phosphoric acid. M. Halmann and S. Pinchas. Chem Soc J p626-9 F '53
Characterization of Δ^5-unsaturated steroids by infrared spectroscopy. H. Hirschmann. bibliog Am Chem Soc J 74:5357-61 N 5 '52
Characterization, of methyl and methylene groups in steroids by infrared spectrometry. R. N. Jones, A. R. H. Cole and B. Nolin. bibliog diags Am Chem Soc J 74:5648-68 N 20 '52
Compounds of curcumin and boric acid; infra-red studies of rosocyanin and allied compounds. L. J. Bellamy, G. S. Spicer and J. D. H. Strickland. Chem Soc J p4653-6 D '52
Correlations of infrared spectra with structure. J. Bomstein. bibliog Anal Chem 25:512-14 Mr '53
Crystallization, structure and infrared spectra of saturated L-α-lecithins. E. Baer. bibliog Am Chem Soc J 75:621-3 F 5 '53
Dipole moment and infra-red spectrum of diosphenol. R. J. W. Le Fèvre, F. Maramba and R. L. Werner. Chem Soc J p2496-8 Ag '53
Directional variation of frequency in the infrared spectrum of crystals. L. Couture-Mathieu and others. bibliog diag J Chem Phys 20:1492-3 S '52
Effect of ring size on the infrared spectra of cyclic ethers; characteristic frequencies of trimethylene oxides and tetrahydrofurans. G. M. Barrow and S. Searles. bibliog Am Chem Soc J 75:1175-7 Mr 5 '53
Fermentation products of wheat germ; identification of methoxy- and 2 : 6-dimethoxy-*p*-benzoquinone; infra-red absorption of some quinones and 1 : 2-dicarbonyl compounds. D. J. Cosgrove and others. Chem Soc J p4821-3 D '52
Geometry of sphingosine. K. Mislow. bibliog Am Chem Soc J 74:5155-7 O 20 '52
Heat capacity, gas imperfection, infrared spectra, and internal rotation barriers of ethyl alcohol. G. M. Barrow. bibliog J Chem Phys 20:1739-44 N '52
High resolution spectroscopy of the infrared. D. H. Rank and others. Opt Soc Am J 43:214-15 Mr '53
Hydrogen bonding and structural problems in the aminoacridines and -quinolines; infra-red studies. L. N. Short. Chem Soc J p4584-9 D '52
Identification of polymorphic forms of crystals by infrared spectroscopy. D. N. Kendall. bibliog diags Anal Chem 25:382-9 Mr '53
Influence of temperature and state on infrared absorption spectra; methyl iodide. I. L. Mador and R. S. Quinn. bibliog J Chem Phys 20:1837-42 D '52
Infrared absorption characteristics of thermiated germanium. D. H. Rank and D. C. Cronemeyer. Phys R 90:202-3 Ap 15 '53
Infrared absorption in *P*-type germanium. W. Kaiser and others. bibliog Phys R 91:1380-1 S 15 '53
Infrared absorption induced by static electric fields. M. F. Crawford and I. R. Dagg. bibliog Phys R 91:1569-70 S 15 '53
Infrared absorption of crystalline and liquid hydrazine monochloride and monobromide. J. C. Decius and D. P. Pearson. bibliog Am Chem Soc J 75:2436-9 My 20 '53
Infrared absorption of solid N_2O_5. R. Teranishi and J. C. Decius. J Chem Phys 21:1116 Je '53
Infrared absorption of the flame of a simple double-base powder. H. F. White and others. J Chem Phys 21:1399 Ag '53
Infrared absorption spectra of *cis*- and *trans* 1,2-dichlorohexafluorocyclobutane. J. R. Lacher and others. bibliog J Chem Phys 20:1014-15 Je '52
Infra-red absorption spectra of dextran and other polyglucosans. S. A. Barker and others. bibliog Chem & Ind p 196-7 F 28 '53
Infrared absorption spectra of some *N*-bromoacetamides. J. R. Lacher, G. G. Olson and J. D. Park. bibliog Am Chem Soc J 74:5578-80 N 20 '52
Infrared absorption spectra of the steroid sapogenins. R. N. Jones, E. Katzenellenbogen and K. Dobriner. bibliog Am Chem Soc J 75:158-66 Ja 5 '53
Infra-red absorptions of asparagine and glutamine. M. Davies and J. C. Evans. Chem Soc J p480-2 F '53
Infra-red absorptions of vinyl and *iso*propenyl groups in polar compounds. W. H. T. Davison and G. R. Bates. Chem Soc J p2607-11 S '53
Infrared analysis of rotenone-dihydrorotenone mixtures. H. L. Cupples. Anal Chem 24:1657 O '52
Infrared and Raman spectra of CF_3OF. R. T. Lagemann and others. J Chem Phys 20:1768-71 N '52
Infrared and Raman spectra of dicyanoacetylene. F. A. Miller and R. B. Hannan, jr. bibliog diag J Chem Phys 21:110-14 Ja '53
Infrared and Raman spectra of fluorinated ethanes. J. R. Nielsen and others. bibliog J Chem Phys 21:1060-76 Je '53
Infrared and Raman spectra of fluorinated ethanes; the series of CF_3CF_3, CF_3CF_2Cl, CF_3CFCl_2, and CF_3CCl_3. J. R. Nielsen and others. bibliog J Chem Phys 21:383-93 Mr '53
Infrared and Raman spectra of fluorinated ethylenes; 1,1-difluoro-2-chloroethylene. J. R. Nielsen and others. bibliog J Chem Phys 20:1090-4 Jl '52

SPECTRUM, Infrared—*Continued*

Infrared and Raman spectra of fluorinated ethylenes; hexafluoropropene. J. R. Nielsen and others. bibliog J Chem Phys 1916-19 D '52
Infrared and Raman spectra of SiH_2Cl_2. J. A. Hawkins and M. K. Wilson. bibliog J Chem Phys 21:360-2 F '53
Infrared and Raman spectroscopy studies of light and heavy trifluoroacetic acids. N. Fuson and others. bibliog J Chem Phys 20:1627-34 O '52
Infrared emission and absorption of thermally excited carbon dioxide. R. H. Tourin. J Chem Phys 20:1651 O '52
Infrared emission spectra of OH, CO, and Co_2 from 3μ to 5.5μ. E. K. Plyler and J. J. Ball. J Chem Phys 20:1178-9 Jl '52
Infrared intensity measurements on nitric oxide, hydrogen chloride, and hydrogen bromide. S. S. Penner and D. Weber. bibliog J Chem Phys 21:649-54 Ap '53
Infrared microspectroscopy; a capillary cell for liquids. E. R. Blout and others. bibliog il diag Opt Soc Am J 42:966-8 D '52
Infrared molecular emission excited in a glow discharge. R. M. Talley and others. diag Opt Soc Am J 42:982-3 D '52
Infrared spectra and structure of the chloramines and nitrogen trichloride. G. E. Moore and R. M. Badger. bibliog Am Chem Soc J 74:6076-80 D 5 '52
Infrared spectra and structure of uranyl and transuranium (*V*) and (*VI*) ions in aqueous perchloric acid solution. L. H. Jones and R. A. Penneman. bibliog J Chem Phys 21:542-4 Mr '53
Infrared spectra and the molecular structure of pyramidal molecules. H. H. Nielsen. diags J Chem Phys 21:142-4 Ja '53
Infrared spectra of bacterial cellulose. H. G. Shirk and G. A. Greathouse. bibliog Anal Chem 24:1774-5 N '52
Infrared spectra of CF_3Br and CF_3I. S. R. Polo and M. K. Wilson. J Chem Phys 20:1183 Jl '52
Infrared spectra of chlorophyll and related compounds. J. W. Weigl and R. Livingston. bibliog Am Chem Soc J 75:2173-6 My 5 '53
Infrared spectra of evaporated films. J. E. Tyler and S. A. Ehrhardt. bibliog il Anal Chem 25:390-4 Mr '53
Infrared spectra of HCl, DCl, HBr, and NH_3 in the region from 40 to 140 microns. R. L. Hansler and R. A. Oetjen. bibliog J Chem Phys 21:1340-3 Ag '53
Infrared spectra of heavy water adsorbed on silica gel. G. C. Pimentel, C. W. Garland and G. Jura. diag Am Chem Soc J 75:803-5 F 20 '53
Infrared spectra of H_2O and CO_2 at 500°C. J. H. Taylor and others. bibliog il diags J Chem Phys 20:1884-98 D '52
Infrared spectra of lignin and related compounds; characteristics carbonyl and hydroxyl frequencies of some flavanones, flavones, chalcones and acetophenones. H. L. Hergert and E. F. Kurth. bibliog Am Chem Soc J 75:1622-5 Ap 5 '53
Infra-red spectra of methyl ximenynate and ximenynyl alcohol. N. H. E. Ahlers and S. P. Ligthelm. Chem Soc J p5039 D '52
Infra-red spectra of natural products; the stereochemistry of lumistanol. A. R. H. Cole. Chem Soc J p4969-72 D '52
Infrared spectra of NF_3 and PF_3. M. K. Wilson and S. R. Polo. bibliog J Chem Phys 20:1716-19 N '52
Infra-red spectra of organo-phosphorous compounds; aliphatic acids and compounds related to natural products. L. J. Bellamy and L. Beecher. Chem Soc J p728-32 Mr '53
Infrared spectra of oriented rhombic sulfur crystals with polarized radiation. G. M. Barrow. bibliog diags J Chem Phys 21:219-22 F '53
Infrared spectra of PF_3, POF_3, and PF_5. H. S. Gutowsky and A. D. Liehr. bibliog J Chem Phys 20:1652-3 O '52
Infrared spectra of pneumococcal polysaccharides. H. J. R. Stevenson and S. Levine. Science 116:705-6 D 26 '52
Infrared spectra of quaternary methiodides of *NN*-disubstituted thioamides. J. D. S. Goulden. Chem Soc J p997-8 Mr '53
Infrared spectra of solutions of iodine. D. L. Glusker and others. J Chem Phys 21:1407-8 Ag '53
Infrared spectra of solutions of iodine in mesitylene. N. S. Ham and others. bibliog J Chem Phys 20:1336-7 Ag '52
Infrared spectra of some cholestanol derivatives. D. R. Johnson and others. bibliog Am Chem Soc J 75:52-5 Ja 5 '53
Infrared spectra of some long-chain 2-alkenoic acids and their bearing on the structure of C_{27}-phthienoic acid. N. K. Freeman. bibliog diag Am Chem Soc J 75:1859-63 Ap 20 '53
Infra-red spectra of some thio-amides. M. S. Flett. Chem Soc J p347-8 Ja '53
Infrared spectra of synthetic polypeptides prepared by the Lossen rearrangement. C. D. Hurd, L. Bauer and I. M. Klotz. bibliog Am Chem Soc J 75:624-6 F 5 '53
Infrared spectra of tetranitromethane. P. H. Lindenmeyer and P. M. Harris. bibliog diags J Chem Phys 21:408-14 Mr '53
Infrared spectra of the isomeric 2-decalols and their acetates; the effects of stereochemical configuration. W. G. Dauben, E. Hoerger and N. K. Freeman. bibliog Am Chem Soc J 74:5206-8 O 20 '52
Infrared spectra of three solid phases of methyl ammonium chloride. R. D. Waldron. J Chem Phys 21:734-41 Ap '53
Infrared spectral data and tentative assignments for CF_3Br and CF_3I. P. R. McGee and others. J Chem Phys 20:1044 Je '52
Infrared spectrograph for use in the 40-150-micron spectral region. R. A. Oetjen and others. bibliog il diags Opt Soc Am J 42:559-66 Ag '52
Infrared spectrometry with a cesium iodide prism. E. K. Plyler and N. Acquista. Opt Soc Am J 43:212 Mr '53
Infrared spectroscopic study of the carbonyl stretching frequency in a group of *ortho* and *para* quinones. M. Josien and others. bibliog J Chem Phys 21:331-40 F '53
Infra-red spectroscopy and structural chemistry; gladiolic acid. J. F. Grove. Chem Soc J p3345-54 S '52
Infra-red spectroscopy and structural chemistry; hydroxyphthalides. L. A. Duncanson, J. F. Grove and J. Zealley. Chem Soc J p 1331-3 My '53
Infra-red spectroscopy and structural chemistry; the infra-red spectra of some tetronic acids. L. A. Duncanson. Chem Soc J p 1207-11 Ap '53
Infrared spectroscopy and the character of chemical binding. R. Mecke. bibliog J Chem Phys 20:1935-9 D '52
Infrared spectrum of CF_3D. S. R. Polo and M. K. Wilson. bibliog J Chem Phys 21:1129-31 Jl '53
Infrared spectrum of chlorine dioxide. A. H. Nielsen and P. J. H. Woltz. bibliog J Chem Phys 20:1878-83 D '52
Infra-red spectrum of crystalline potassium perchlorate; reassignment of the lower fundamental frequencies of the perchlorate ion. H. Cohn. Chem Soc J p4282-4 N '52
Infrared spectrum of dimethyltriacetylene. A. Weber and others. bibliog J Chem Phys 21:1613 S '53
Infrared spectrum of fluoroform from 2.2 to 20μ. H. D. Rix. bibliog J Chem Phys 21:1077-9 Je '53
Infrared spectrum of methyl chloroform. P. Venkateswarlu. J Chem Phys 20:1810 N '52
Infrared spectrum of methyltrichlorosilane. L. Burnelle and J. Duchesne. J Chem Phys 20:1324 Ag '52
Infra-red spectrum of nitric and of deuteronitric acid vapour; completion of identification of the fundamental frequencies; entropy of nitric acid; barrier resisting rotation of the hydroxyl group. H. Cohn, C. K. Ingold and H. G. Poole. diag Chem Soc J p4272-82 N '52
Infrared spectrum of pyrrole and the hydrogen bond. P. Tuomikoski. bibliog J Chem Phys 20:1054-5 Je '52
Infrared spectrum of SO_2F_2. W. D. Perkins and M. K. Wilson. bibliog diags J Chem Phys 20:1791-4 N '52
Infrared spectrum of some complex fluorides. A. de Lattre. J Chem Phys 20:1180 Jl '52
Infrared spectrum of the H_3O^+ ion in acid hydrates. D. E. Bethell and N. Sheppard. bibliog J Chem Phys 21:1421 Ag '53

SPECTRUM, Infrared—*Continued*

Infrared spectrum of the oxonium ion. C. C. Ferriso and D. F. Horning. bibliog Am Chem Soc J 75:4113-14 Ag 20 '53

Infrared studies of mixed crystals; naphthalene-d_8 in naphthalene. W. B. Person and G. C. Pimentel. bibliog J Chem Phys 20: 1913-15 D '52

Interference films on glass; some observations during acid leaching of X-ray plate glass. S. Anderson and D. D. Kimpton. Am Cer Soc J 36:175-9 Je 1 '53

Interferometric wavelength measurements in the near infrared. D. H. Rank and others. Opt Soc Am J 43:213-14 Mr '53

Methylchloroform; the infrared spectrum from 130-430 cm.$^{-1}$, the energy levels and potential for internal rotation and the thermodynamic properties. K. S. Pitzer and J. L. Hollenberg. bibliog Am Chem Soc J 75: 2219-21 My 5 '53

Molecular spectra of condensed oxygen and the O_4 molecule. A. L. Smith and H. L. Johnston. bibliog J Chem Phys 20:1972-3 D '52

9-10 µ Region of infrared absorption spectra of steroids in relation to chemical structure. H. Rosenkrantz and L. Zablow. bibliog Am Chem Soc J 75:903-7 F 20 '53

Near infrared spectra of compounds with two peptide bonds and the configuration of a polypeptide chain. S. Mizushima and others. Am Chem Soc J 74:4639-41 S 20 '52

Near infrared spectra of compounds with two peptide bonds and the configuration of a polypeptide chain. S. Mizushima and others. bibliog Am Chem Soc J 75:1863-5 Ap 20 '53

New infrared absorption bands in *p*-type germanium. H. B. Briggs and R. C. Fletcher. Phys R 87:1130-1 S 15 '52

New infrared-investigations in the *cis-trans* isomerism of *ortho*-halogenphenols. G. Rossmy and others. bibliog J Chem Phys 21: 1606-7 S '53

Optical studies of injected carriers; infrared absorption in germanium. R. Newman. Phys R 91:1311-12 S 15 '53

Organometallic and organometalloidal fluorine compounds; ultra-violet and infrared spectra of bistrifluoromethyl sulphide, bistrifluoromethyl disulphide, and related compounds. G. R. A. Brandt, H. J. Emeléus and R. N. Haszeldine. Chem Soc J p2549-52 Jl '52

Physical constants and infrared spectra of a homologous series of dialkyl sebacates. W. H. Stahl and H. Pessen. bibliog Am Chem Soc J 74:5487-9 N 5 '52

Polarized infrared spectrum of sodium formate. R. Newman. J Chem Phys 20:1663-4 O '52

Potential function of ethylene. B. L. Crawford, jr. and others. bibliog diags J Chem Phys 21:678-86 Ap '53

Process analyzers use infrared. il diags Chem Eng 60:258-9 Ap '53

Quinazolines; a study of the infrared spectra of certain quinazoline derivatives. H. Culbertson, J. C. Decius and B. E. Christensen. bibliog Am Chem Soc J 74:4834-8 O 5 '52

Raman and infrared spectra of CF_3Br and CF_3I. W. F. Edgell and C. E. May. bibliog J Chem Phys 20:1822-3 N '52

Raman and infrared spectral data and assignments for dimethyldiacetylene. S. M. Ferigle and others. bibliog J Chem Phys 20:1928-31 D '52

Raman and infrared spectral data, assignments, potential constants, and calculated thermodynamic properties for oxalyl chloride. J. S. Ziomek and others. bibliog diags J Chem Phys 21:90-100 Ja '53

Reactions of fatty materials with oxygen; polarographic and infrared spectrophotometric investigation of peroxides from autoxidized methyl oleate. D. Swern and others. bibliog Am Chem Soc J 75:3135-7 Jl 5 '53

Refractive index of potassium bromide for infrared radiant energy. R. E. Stephens and others. bibliog Opt Soc Am J 43:110-12 F '53

Relationship between the stereochemical configuration of 3-hydroxysteroids and their infrared absorption spectra. A. R. H. Cole, R. N. Jones and K. Dobriner. bibliog Am Chem Soc J 74:5571-5 N 20 '52

Relative optical collision diameters from the pressure broadening of individual infrared absorption lines. W. Benesch and T. Elder. bibliog Phys R 91:308-12 Jl 15 '53

Resolution of *p*-ethylphenylmethylcarbinol; infrared spectra of enantiomorphs and racemates. E. L. Eliel and J. T. Kofron. bibliog Am Chem Soc J 75:4585-7 S 20 '53

Rotation-vibration spectra of diatomic and simple polyatomic molecules with long absorbing paths; the spectrum of tri-deuteromethane in the photographic infrared. L. F. H. Bovey. bibliog il J Chem Phys 21: 830-6 My '53

Rotational isomerism as a general property of alkyl nitrites. P. Tarte. bibliog J Chem Phys 20:1570-5 O '52

Short history of spectroscopy; exploration of the ultra-violet and infra-red regions. T. W. Chalmers. il diags Engineer 196:194-5 Ag 14 '53

Simple high-speed spectrometer for the infrared region. D. A. H. Brown and V. Roberts. bibliog il diags J Sci Instr 30:5-8 Ja '53

Some absorption bands in the far infrared. J. K. O'Loane. bibliog J Chem Phys 21: 669-74 Ap '53

Some bands of methyl bromide in the near infrared under high resolution. D. H. Rank and others. Opt Soc Am J 43:157-62 Mr '53

Some physical properties of *cis*-stilbene. D. S. Brackman and P. H. Plesch. Chem Soc J p2188-90 Je '52

Specific influence of solvents on the infrared spectra of alcohols. A. V. Stuart. J Chem Phys 21:1115 Je '53

Spectrometer for the far infrared and the spectrum of 1,2 dichloroethane. C. R. Bohn and others. bibliog diag J Chem Phys 21: 719-21 Ap '53

Steric requirements for three-ring carbonyl hyperconjugation. N. H. Cromwell and G. V. Hudson. bibliog Am Chem Soc J 75:872-4 F 20 '53

Studies by infrared spectra on the initiation process in autoxidation of methyl linolenate. N. A. Khan. J Chem Phys 21:952 My '53

Studies in spectroscopy; the infra-red and ultra-violet spectra of some aliphatic nitrocompounds. R. N. Haszeldine. Chem Soc J p2525-7 S '53

Studies in spectroscopy; the ionisation constants and infra-red spectra of some primary and secondary halogen-containing alcohols. R. N. Haszeldine. Chem Soc J p 1757-63 Je '53

Study of some binary silicate glasses by means of reflection in infrared. I. Šimon and H. O. McMahon. bibliog diags Am Cer Soc J 36:160-4 My 1 '53

Study of the structure of quartz, cristobalite, and vitreous silica by reflection in infrared. I. Šimon and H. O. McMahon. bibliog diags J Chem Phys 21:23-30 Ja '53

Substituted methanes; infrared spectral data and assignments for dibromodifluoromethane. C. E. Decker and others. J Chem Phys 21:189-90 Ja '53

Substituted methanes; infrared spectral data, assignments, potential constants, and calculated thermodynamic properties for CF_3Br and CF_3I. P. R. McGee and others. J Chem Phys 21:242-6 F '53

Substituted methanes; infrared spectral data for deuterotrichloromethane. R. B. Bernstein and others. J Chem Phys 20:1979 D '52

Substituted methanes; Raman and infrared spectra, assignments, potential constants, and calculated thermodynamic properties for $CHClBr_2$ and $CDClBr_2$. D. A. Pontarelli and others. bibliog J Chem Phys 20:1949-54 D '52

Tautomerism of *N*-heteroaromatic amines; infra-red spectroscopic evidence. C. L. Angyal and R. L. Werner. Chem Soc J p2911-15 Jl '52

Use of infrared absorption techniques in the study of hypersensitivity diseases. J. T. Agnew and others. bibliog Opt Soc Am J 42:815-17 N '52

Vibrational frequencies and the entropy of decaborane. W. E. Keller and H. L. Johnston. bibliog diags J Chem Phys 20:1749-51 N '52

SPECTRUM, Infrared—*Continued*

Vibrational spectra of molecules and complex ions in crystals; carbon dioxide. W. E. Osberg and D. F. Hornig. bibliog J Chem Phys 20:1345-7 S '52

Water-cooled carbon arc source for infrared spectroscopy. C. S. Rupert. bibliog diag Opt Soc Am J 42:684 S '52

Bibliography

NBS completes first batch of infrared spectra catalog. Chem & Eng N 30:3444-5 Ag 18 '52; Same. Glass Ind 34:144+ Mr '53

Punched-card bibliography of infrared spectra. E. C. Creitz. Science 117:sup3 Ap 3 '53

SPECTRUM, Microwave

Absorption of 3.3-cm microwaves in chloroform and ethylene dichloride in the liquid state. S. C. Sirkar and D. K. Ghosh. J Chem Phys 21:1614-15 S '53

Apparatus for Zeeman effect measurements on microwave spectra. J. R. Eshbach and M. W. P. Strandberg. bibliog diags R Sci Instr 23:623-8 N '52

Applications of large digital computers to calculations of microwave spectroscopy. B. L. Hicks and others. J Chem Phys 21:564 Mr '53

Applications of microwave spectroscopy to chemical problems; abstract and discussion. J. Sheridan. Chem & Ind p 1056-7 O 25 '52

Broad-band, coaxial stark cell for microwave spectroscopy. L. J. Rueger and R. G. Nuckolls. diag R Sci Instr 23:635 N '52

Broadening of microwave absorption lines due to wall collisions. M. Danos and S. Geschwind. bibliog Phys R 91:1159-62 S 1 '53

Electron diffraction and microwave investigation of tertiary butyl fluoride. F. Andersen and others. J Chem Phys 21:373 F '53

Evidence for a completely planar structure of pyrrole from its microwave spectrum. W. S. Wilcox and J. H. Goldstein. J Chem Phys 20:1656-7 O '52

Experimental evidence of restricted rotation in $CH_3{-}C{\equiv}C{-}CF_3$. B. Bak and others. bibliog J Chem Phys 21:1612-13 S '53

Microwave absorption spectrum of ND_3. R. G. Nuckolls and others. bibliog Phys R 89:1101 Mr 1 '53

Microwave absorption spectrum of $(O^{16})_2$ and $O^{16}O^{17}$. S. L. Miller and C. H. Townes. bibliog Phys R 90:537-41 My 15 '53

Microwave gas absorption studies possible with coaxial Stark cell. Iron Age 170:136 O 23 '52

Microwave investigation of pyridine. B. Bak and J. Rastrup-Andersen. J Chem Phys 21:1305-6 Jl '53

Microwave observation of the collision frequency of holes in germanium. T. S. Benedict. Phys R 91:1565-6 S 15 '53

Microwave resonance absorption in gadolinium metal. A. F. Kip. bibliog Rs Mod Phys 25:229-32 Ja '53

Microwave resonance absorption in gadolinium metal. A. F. Kip and others. Phys R 89:518 Ja 15 '53

Microwave spectra and structures of XYH_3 molecules. J. M. Mays and B. P. Dailey. bibliog J Chem Phys 20:1695-703 N '52

Microwave spectra, structure, dipole moment, and chlorine nuclear quadrupole coupling constants of methylene chloride. R. J. Myers and W. D. Gwinn. bibliog J Chem Phys 20:1420-7 S '52

Microwave spectrum and dipole moment of ethylenimine. R. D. Johnson and others. J Chem Phys 21:1425 Ag '53

Microwave spectrum and general properties of ethylene imine. W. S. Wilcox and others. J Chem Phys 21:563-4 Mr '53

Microwave spectrum and structure of chlorine trifluoride. D. F. Smith. bibliog J Chem Phys 21:609-14 Ap '53

Microwave spectrum and structure of chlorofluoromethane. N. Muller. bibliog Am Chem Soc J 75:860-3 F 20 '53

Microwave spectrum and structure of ozone. R. H. Hughes. J Chem Phys 21:959-60 My '53

Microwave spectrum and structure of SiD_3Cl. B. Bak and others. J Chem Phys 21:753-4 Ap '53

Microwave spectrum and structure of SiD_3F. B. Bak and others. J Chem Phys 21:752-3 Ap '53

Microwave spectrum of arsenic trifluoride. P. Kisliuk and S. Geschwind. bibliog J Chem Phys 21:828-9 My '53

Microwave spectrum of $C^8H^{13}Br$ and $C^8H^{13}Cl$. A. H. Nethercot, jr. and A. Javan. diag J Chem Phys 21:363-4 F '53

Microwave spectrum of DI at 1.5-mm wavelength. J. A. Klein and A. H. Nethercot, jr. Phys R 91:1018 Ag 15 '53

Microwave spectrum of HDO. D. W. Posener and M. W. P. Strandberg. J Chem Phys 21:1401-2 Ag '53

Microwave spectrum of the free OH radical. T. M. Sanders, jr. and others. bibliog Phys R 89:1158-9 Mr 1 '53

Microwave spectrum of vinylacetylene. H. W. Morgan and J. H. Goldstein. J Chem Phys 20:1981 D '52

Molecular structure, dipole moment, and *g* factor of ozone from its microwave spectrum. R. Trambarulo and others. bibliog il J Chem Phys 21:851-5 My '53

Possible microwave absorption in the molecules belonging to the point groups $D_{2d}{\equiv}V_d$ and T_d. M. Mizushima and P. Venkateswarlu. bibliog J Chem Phys 21:705-9 Ap '53

Preliminary analysis of the microwave spectrum of ethylenimine. T. E. Turner and others. J Chem Phys 21:564-5 Mr '53

Six-millimeter spectra of OCS and N_2O. S. J. Tetenbaum. bibliog Phys R 88:772-4 N 15 '52

Structure of HNCS from microwave spectra. G. C. Dousmanis and others. J Chem Phys 21:1416-17 Ag '53

Structure of the methyl halides. S. L. Miller and others. bibliog J Chem Phys 20:1112-14 Jl '52

Two D_2O microwave absorption lines. C. I. Beard and D. R. Bianco. bibliog J Chem Phys 20:1488-9 S '52

SPECTRUM, Solar

Atmospheric window, 16 to 24 microns, and the second fundamental of nitrous oxide. A. Adel. il Phys R 88:128 O 1 '52

Infra-red solar spectroscopy in a high-altitude aircraft. J. Yarnell and R. M. Goody. bibliog il diags J Sci Instr 29:352-7 N '52

Intensity of Lyman-alpha line in the solar spectrum. W. A. Rense. bibliog il Phys R 91:299-302 Jl 15 '53

Lyman alpha-line photographed in the sun's spectrum. W. B. Pietenpol and others. Phys R 90:156 Ap 1 '53

Lyman-alpha radiation in the solar spectrum. E. T. Byram and others. bibliog Phys R 91:1278-9 S 1 '53

Short history of spectroscopy. T. W. Chalmers. il diags Engineer 196:166-8, 194-5 Ag 7-14 '53

SPECTRUM, Ultraviolet

Absorption coefficients of gases in the vacuum ultraviolet. K. Watanabe and others. bibliog J Chem Phys 20:1969-70 D '52

Absorption coefficients of oxygen in the vacuum ultraviolet. K. Watanabe and others. bibliog diag J Chem Phys 21:1026-30 Je '53

Absorption spectra of azlactones. F. W. Schueler and S. C. Wang. bibliog Am Chem Soc J 72:2220-5 My '50; Correction. 74:5542 N 5 '52

Absorption spectrum of cyclopropane in the vacuum ultraviolet; note on the absorption spectrum of methyl cyclopropane. P. Wagner and A. B. F. Duncan. bibliog J Chem Phys 21:516-19 Mr '53

Absorption studies of the vapors of the three isomeric picolines in the near ultraviolet. J. H. Rush and H. Sponer. bibliog il J Chem Phys 20:1847-62 D '52

Aromatic nitration; the ultraviolet spectra of aromatic nitro compounds in sulfuric acid. G. S. Hammond and F. J. Modic. bibliog Am Chem Soc J 75:1385-8 Mr 20 '53

Basicity of hydrocarbons; ultra-violet absorption spectra of conjugated hydrocarbons in sulphuric acid solution. V. Gold and F. L. Tye. Chem Soc J p2172-80 Je '52

Correlation of color and constitution; 2,4-dinitrophenylhydrazones. G. D. Johnson. Am Chem Soc J 75:2720-3 Je 5 '53

SPECTRUM, Ultraviolet—*Continued*

Dipole moments and near ultraviolet absorption of some monosubstituted benzenes; the effect of solvents and hydrogen bonding. S. Nagakura and H. Baba. bibliog Am Chem Soc J 74:5693-8 N 20 '52

Dipole moments, ultraviolet spectra and structure of azo-bis-(chloroformamidine) and azo-bis-(nitroformamidine). W. D. Kumler. Am Chem Soc J 75:3092-3 Jl 5 '53

Effect of alkali and strong acid on the ultraviolet absorption spectrum of lignin and related compounds. O. Goldschmid. bibliog Am Chem Soc J 75:3780-3 Ag 5 '53

Effect of salt concentration and temperature on the ultraviolet absorption spectra of aqueous thiosulfate and sulfite. D. P. Ames and J. E. Willard. bibliog Am Chem Soc J 75:3267-8 Jl 5 '53

Effect of solvent on the ultra-violet absorption spectra of aromatic hydrocarbons with special reference to the mechanism of salting-out. E. F. G. Herington and W. Kynaston. Chem Soc J p3137-49 Ag '52

Electronic orbitals, shapes, and spectra of polyatomic molecules; a note on the near-ultra-violet spectrum of acetaldehyde. A. D. Walsh. Chem Soc J p2318-20 Ag '53

Emission bands of the NO molecule in the vacuum ultraviolet region. Y. Tanaka. bibliog il diag J Chem Phys 21:788-93 My '53

Excited states of acetylene; description and analysis of the near-ultra-violet absorption spectra of acetylene and dideuteroacetylene; nature of the excited state. C. K. Ingold and G. W. King. pl diags Chem Soc J p2725-44 S '53

Excited states of acetylene; experimental methods of recording the near-ultra-violet absorption spectra of acetylenes. C. K. Ingold and G. W. King. Chem Soc J p2704-7 S '53

Excited states of acetylene; measured and calculated frequencies in the near-ultra-violet absorption spectra of acetylene and dideuteroacetylene; vibrational and rotational energies of the *trans*-bent excited state. C. K. Ingold and G. W. King. Chem Soc J p2745-55 S '53

Excited states of acetylene; theoretical methods for analysis of near-ultra-violet band-systems of acetylenes. C. K. Ingold and G. W. King. diags Chem Soc J p2708-24 S '53

Existence of a hidden transition in biphenyl. A. Wenzel. bibliog J Chem Phys 21:403-8 Mr '53

Extension of the N_{2+} (C→X) bands in the far ultraviolet region. Y. Tanaka. bibliog J Chem Phys 21:1402-3 Ag '53

Far ultraviolet absorption spectra of simple alkyl amines. E. Tannenbaum and others. bibliog J Chem Phys 21:311-18 F '53

Far ultraviolet radiation from the Cornell synchrotron. P. L. Hartman and D. H. Tomboulian. Phys R 91:1577-8 S 15 '53

Fluorescence studies of some simple benzene derivatives in the near ultraviolet; benzotrifluoride. M. L. N. Sastri and H. Sponer. bibliog il J Chem Phys 20:1428-31 S '52

Intensity measurements in the vacuum ultraviolet. K. Watanabe and E. C. Y. Inn. bibliog Opt Soc Am J 43:32-5 Ja '53

Low temperature spectroscopy in the farther ultraviolet region. W. J. Potts, jr. bibliog il diags J Chem Phys 21:191-5 F '53

Miescher-Baer emission bands in the far ultraviolet region. Y. Tanaka. J Chem Phys 21:562-3 Mr '53

Molecular complexes involving iodine. S. H. Hastings and others. bibliog Am Chem Soc J 75:2900-5 Je 20 '53

Near ultraviolet absorption spectra of 1,4 bis-(trifluoromethyl)benzene and 1,3,5 tris-(trifluoromethyl)benzene. C. D. Cooper and F. W. Noegel. bibliog il J Chem Phys 20:1903-7 D '52

Near ultraviolet spectrum of formaldehyde. A. D. Walsh. J Chem Phys 20:1502-3 S '52

New absorption bands of the oxygen molecule in the far ultraviolet region. Y. Tanaka. bibliog J Chem Phys 20:1728-33 N '52

Nucleic acid derivatives; apparatus for simultaneously separating and recording ultraviolet absorption. A. Deutsch, R. Zuckerman and M. S. Dunn. il diags Anal Chem 24:1763-9 N '52

Nucleic acid derivatives; separation and quantitative analysis by ultraviolet spectrophotometry. A. Deutsch, R. Zuckerman and M. S. Dunn. bibliog Anal Chem 24:1769-73 N '52

Organometallic and organometalloidal fluorine compounds; ultra-violet and infrared spectra of bistrifluoromethyl sulphide, bistrifluoromethyl disulphide, and related compounds. G. R. A. Brandt, H. J. Emeléus and R. N. Haszeldine. Chem Soc J p2549-52 Jl '52

Polarities and ultra-violet spectra of phenyl *p*-tolyl azoxysulphone and its dialkylamino-derivatives. H. C. Freeman and others. Chem Soc J p3384-9 S '52

Pyrimidines; the ultra-violet absorption spectra of some substituted pyrimidines. M. P. V. Boarland and J. F. W. McOmie. Chem Soc J p3716-28 O '52

Researches on acetylenic compounds; the influence of propargylic substituents on the ultra-violet absorption of diacetylenes. J. B. Armitage and M. C. Whiting. Chem Soc J p2005-10 Je '52

Ring-chain tautomerism of hydroxy aldehydes. C. D. Hurd and W. H. Saunders, jr. bibliog diag Am Chem Soc J 74:5324-9 N 5 '52

Rotational isomerism as a general property of alkyl nitrites. P. Tarte. bibliog J Chem Phys 20:1570-5 O '52

Short history of spectroscopy; exploration of the ultra-violet and infra-red regions. T. W. Chalmers. il diags Engineer 196:194-5 Ag 14 '53

Spectra of *p*-fluorobenzontrile in the near ultraviolet. C. D. Cooper. bibliog J Chem Phys 21:379-80 F '53

Spectra of simple amides in the vacuum ultraviolet. H. D. Hunt and W. T. Simpson. bibliog diag Am Chem Soc J 75:4540-3 S 20 '53

Spectrophotometric determination of iron as ferric sulfate complex; ultraviolet study. R. Bastian, R. Weberling and F. Palilla. bibliog Anal Chem 25:284-8 F '53

Spectroscopic studies in the near ultraviolet of the three isomeric dimethylbenzene vapors; absorption spectra of meta and ortho dimethylbenzene. C. D. Cooper and H. Sponer. bibliog il J Chem Phys 20:1248-59 Ag '52

Spectroscopic studies in the near ultraviolet of the three isomeric dimethylbenzene vapors; fluorescence of meta-dimethylbenzene. V. R. Rao and M. L. N. Sastri. il J Chem Phys 20:1552-3 O '52

Steric requirements for three-ring carbonyl hyperconjugation. N. H. Cromwell and G. V. Hudson. bibliog Am Chem Soc J 75:872-4 F 20 '53

Structure of styrene oxide dimers; ultraviolet spectra of 2,5-diphenyl-1,4-dioxanes and related compounds. M. J. Kland-English, R. K. Summerbell and I. M. Klotz. bibliog Am Chem Soc J 75:3709-12 Ag 5 '53

Studies in spectroscopy; molecular compound formation with polyhalogeno-iodo-compounds. R. N. Haszeldine. Chem Soc J p2622-6 S '53

Studies in spectroscopy; the infra-red and ultra-violet spectra of some aliphatic nitro-compounds. R. N. Haszeldine. Chem Soc J p2525-7 S '53

Studies in spectroscopy; the ultra-violet absorption spectra of halogen-containing aliphatic iodo-compounds, and the relative stability of free halogen-containing alkyl radicals. R. N. Haszeldine. diag Chem Soc J p 1764-71 Je '53

Studies in the sterol group; ultra-violet absorption spectra of ethylenic centres. P. Bladon, H. B. Henbest and G. W. Wood. Chem Soc J p2737-44 Jl '52

Synthesis and ultraviolet absorption spectra of polyazobenzenes. K. Ueno. Am Chem Soc J 74:4508-11 S 20 '52

Ultraviolet absorption and fluorescence spectra of acetophenone. R. D. Vanselow and A. B. F. Duncan. bibliog Am Chem Soc J 75:829-32 F 20 '53

Ultraviolet absorption determination of C_9 and C_{10} aromatics. M. S. Norris and N. D. Coggeshall. Anal Chem 25:183-7 Ja '53

Ultraviolet absorption of steroids. L. Dorfman. Chem R 53:47-144 bibliog(p 132-44) Ag '53

SPECTRUM, Ultraviolet—*Continued*

Ultraviolet absorption spectra of derivatives of symmetric triazine; amino triazine. R. C. Hirt and D. J. Salley. bibliog J Chem Phys 21:1181-4 Jl '53

Ultraviolet absorption spectra of dibenzylidene-1,2-cycloalkanediones. N. J. Leonard and G. C. Robinson. bibliog Am Chem Soc J 75:2714-17 Je 5 '53

Ultraviolet absorption spectra of fully aromatic esters and thiolesters. G. Cilento. bibliog Am Chem Soc J 75:3748-50 Ag 5 '53

Ultraviolet absorption spectra of hindered ketones. G. D. Hedden and W. G. Brown. bibliog diag Am Chem Soc J 75:3744-8 Ag 5 '53

Ultraviolet absorption spectra of oxazolones and related compounds. E. L. Bennett and E. Hoerger. bibliog Am Chem Soc J 74:5975-9 D 5 '52

Ultraviolet absorption spectra of some polymethylnaphthalenes. W. L. Mosby. bibliog Am Chem Soc J 75:3348-9 Jl 20 '53

Ultra-violet absorption spectra of some pyrroles. G. H. Cookson. Chem Soc J p2789-95 S '53

Ultraviolet absorption spectra of some *p*-substituted D-*threo*-2-dichloroacetamido-1-phenyl-1,3-propanediols. F. C. Nachod and R. A. Cutler. Am Chem Soc J 74:6291-2 D 20 '52

Ultra-violet absorption spectra of *trans*- and *cis*-stilbenes and their derivatives; *trans*- and *cis*-stilbenes. R. N. Beale and E. M. F. Roe. Chem Soc J p2755-63 S '53

Ultraviolet absorption spectra of uninegative ions. H. L. Friedman. bibliog J Chem Phys 21:319-22 F '53

Ultraviolet spectra and carcinogenic activities of some fluorene and biphenyl derivatives. R. B. Sandin and others. bibliog Am Chem Soc J 74:5073-5 O 20 '52

Ultraviolet spectra and structures of the pyrido[1,2-a]pyrimidones. R. Adams and I. J. Pachter. bibliog Am Chem Soc J 74:5491-7 N 5 '52

Ultraviolet spectrophotometric determination of nitrites with 4-aminobenzenesulfonic acid. J. M. Pappenhagen and M. G. Mellon. bibliog Anal Chem 25:341-3 F '53

Use of micrometer Baly cells with Beckman and Cary ultraviolet spectrophotometers. R. C. Hirt and F. T. King. bibliog il Anal Chem 24:1545-8 O '52

Vacuum ultraviolet spectra of cyclic compounds; amines. L. W. Pickett and others. bibliog Am Chem Soc J 75:1618-22 Ap 5 '53

SPECTRUM, X ray

Application of fluorescence X-rays to metallurgical microradiography. H. R. Splettstosser and H. E. Seemann. bibliog il diag J Ap Phys 23:1217-22 N '52

Penetration and diffusion of X-rays; calculation of spatial distributions by semi-asymptotic methods. L. V. Spencer. bibliog Phys R 88:793-803 N 15 '52

X-ray calculator for identifying elements; for X-ray spectrograph (fluorescence analysis) users in the paper field. V. W. Palen. diag Paper Ind 34:1354-5 F '53

X-ray spectroscopy as a control method in the production of zirconium and hafnium. D. M. Mortimore and P. A. Romans. bibliog il diag Opt Soc Am J 42:673-7 S '52

SPECTRUM analysis

Analysis of metals by spectroscopy; abstract and discussion. A. C. Menzies. Chem & Ind p 151 F 14 '53; Same. Chem Age (Lond) 68:393-4 Mr 7 '53

Application of absorption spectrum of ferric acetate complex to determination of iron. W. Reiss, J. F. Hazel and W. M. McNabb. diag Anal Chem 24:1646-8 O '52

Application of line-width method of spectrogram evaluation to spectrochemical analysis of plant products. R. T. O'Connor and D. C. Heinzelman. bibliog Anal Chem 24:1667-9 O '52

Applications of absorption spectroscopy. Chem Age (Lond) 67:701-5 N 22 '52

Catalog of infrared absorption spectra of steroidal sapogenin acetates. C. R. Eddy, M. E. Wall and M. K. Scott. bibliog Anal Chem 25:266-71 F '53

Comparison of some simple condensed spark circuits in the spectrographic analysis of aluminium and magnesium alloys and pure magnesium. E. C. Mills and S. E. Hermon. Metallurgia 46:213-15 O '52

Description of the arc and spark spectra of rhenium. W. F. Meggers. bibliog J Res Nat Bur Stand 49:187-216 S '52

Determination of barbiturates; ultraviolet spectrophotometric method with differentiation of several barbiturates. L. R. Goldbaum. Anal Chem 24:1604-7 O '52

Determination of individual alkyl aromatic hydrocarbons from benzene through the C_{10} aromatics by infrared spectrometry. R. B. Williams, S. H. Hastings and J. A. Anderson, jr. bibliog Anal Chem 24:1911-18 D '52

Determination of iron in used lubricating oils; spectrochemical analysis by the buffered direct current arc. J. E. Barney, 2d and W. A. Kimball. bibliog il Anal Chem 24:1548-50 O '52

Determination of some chlorine-substituted methanes and ethanes; infrared and mass spectrometric determination. R. B. Bernstein, G. P. Semeluk and C. B. Arends. bibliog Anal Chem 25:139-42 Ja '53

Determining low concentrations of hafnium in zirconium; a spectrographic method. D. M. Mortimore and L. A. Noble. bibliog diag Anal Chem 25:296-8 F '53

Electrodeless discharge lamps containing metallic vapors. M. Zelikoff and others. il diag Opt Soc Am J 42:818-19 N '52

Emission spectra on autoignited heptane-air mixtures. W. J. Levedahl and H. P. Broida. bibliog il Anal Chem 24:1776-80 N '52

Fast spectrographic method for metal impurities in cracking feed. Pet Processing 8:101-2 Ja '53

Influence of varying amounts of elements in steel and cast irons on spectral intensity. L. J. Canody and others. bibliog Opt Soc Am J 43:145-8 F '53

Infrared analysis of rotenone-dihydrorotenone mixtures. H. L. Cupples. Anal Chem 24:1657 O '52

Infrared for process control. D. E. Berger. il Pet Processing 8:887-9 Je '53; Same abr. Oil & Gas J 51:136-8+ Ap 20 '53; Same abr. Pet Eng 25:C26+ My '53

Infrared microspectroscopy; a capillary cell for liquids. E. R. Blout and others. bibliog il diag Opt Soc Am J 42:966-8 D '52

Infrared, ultraviolet, and Raman spectroscopy; application to analysis of complex materials. O. D. Shreve. bibliog Anal Chem 24:1692-9 N '52

Isolation of olefins from Bradford crude oil. R. E. Putscher. bibliog flow diag Anal Chem 24:1551-8 O '52

Isotopic method determines water content. H. J. Morowitz and H. P. Broida. Franklin Inst J 254:537-8 D '52

Method for determination of small amounts of rare earths and thorium in phosphate rocks. C. L. Waring and H. Mela, jr. bibliog Anal Chem 25:432-5 Mr '53

New spectrochemical excitation unit; a key to essential control in boron steels. J. T. Rozsa and L. E. Zeeb. il diag Steel 131:92+ O 6 '52

Polymer degradation studies by absorption and mass spectrometry. B. G. Achhammer. bibliog Anal Chem 24:1925-30 D '52

Rapid spectroscopic determination of total water content. H. J. Morowitz and H. P. Broida. Anal Chem 24:1657-8 O '52

Some developments in spectrochemical methods; abstract. R. L. Mitchell. Chem Age (Lond) 67:564-5 O 25 '52

Spectrographic determination of trace elements in lubricating oils. R. F. Meeker and R. C. Pomatti. bibliog diags Anal Chem 25:151-4 Ja '53

Spectrographic method for analysis of cracking catalysts. C. W. Key and G. D. Hoggan. bibliog Anal Chem 24:1921-5 D '52

Spectrographic oil analysis for Diesel locomotive maintenance. Pet Processing 8:156 F '53

SPECTRUM analysis—*Continued*
Use of infrared absorption techniques in the study of hypersensitivity diseases. J. T. Agnew and others. bibliog Opt Soc Am J 42:815-17 N '52
See also
Mass spectrometric analysis
Spectroscope

SPECULATION
It pays to speculate, off the beaten track! S. J. Sanford. Comm & Fin Chr 177:781+ F 19 '53
Speculative pressure and sterling convertibility. P. Einzig. Comm & Fin Chr 177:1128 Mr 12 '53
See also
Arbitrage
Futures
Stocks—Margin buying

SPEECH
Conference on speech analysis, Cambridge, Mass. June 16-17, 1952. il diags Acoustical Soc Am J 24:581-642 N '52
Dynamic spectrograms of speech. W. E. Kock and R. L. Miller. il Acoustical Soc Am J 24:783-4 N '52
Effect of frequency and amplitude distortion on the intelligibility of speech in noise. I. Pollack. Acoustical Soc Am J 24:538-40 S '52
Experimental study of speech-wave probability distributions. W. B. Davenport, jr. bibliog diags Acoustical Soc Am J 24:390-9 Jl '52
NBS develops spectroscopic method for studying speech characteristics. il Elec Eng 71:1051-2 N '52
See also
Public speaking
Vowels

SPEECH, Visible
Automatic recognition of spoken digits. K. H. Davis and others. diag Acoustical Soc Am J 24:637-42 N '52
NBS develops spectroscopic method for studying speech characteristics. il Elec Eng 71:1051-2 N '52
Voice-operated telephone; automatic digit recognizer. Franklin Inst J 255:269-70 Mr '53

SPEECH perception
Perception of speech sounds by deafened persons. H. Fletcher. Acoustical Soc Am J 24:490-7 S '52
Process of speech perception. J. C. R. Licklider. diag Acoustical Soc Am J 24:590-4 N '52
Some experiments on the perception of synthetic speech sounds. F. S. Cooper and others. il diags Acoustical Soc Am J 24:597-606 N '52

SPEED
Stroboscopic images and the determination of angular speed. J. A. Macinante and W. Dollar. bibliog il diags Engineering 175:132-5 Ja 30 '53
See also
Airplanes—Speed
Velocity

SPEED indicators
Automatic calibration of speed recorders; abstract. W. E. Phillips. diag Electronics 25:210+ D '52
See also
Accelerometers
Tachometers

SPEED variation
Adjustable-speed d-c drives for deep-draw presses; abstract. C. E. Robinson and A. P. DiVincenzo. diag Elec Eng 72:688 Ag '53
A.c. range drive has variable-speed control. diag Textile World 103:152 My '53
Analysis of variable speed requirements. E. A. Gahl. il Paper Ind 34:1235 Ja '53
Antiswing crane with anticreep variable-speed hoisting. R. C. Goertz. il diags Elec Eng 72:635-7 Jl '53
Causes of reduced speed in a-c motors; abstract. Product Eng 24:294-6 My '53
Compound characteristics from shunt wound machines. H. D. James. diags Product Eng 24:164-6 Mr '53
Control of fluid-driven fans. J. F. Tobin. il diag Power Eng 56:64-5 N '52
De Laval giant worm gear reducers. il Blast F & Steel Pl 41:814 Jl '53
D-c drives for multisection machines. L. F. Lewis. il diags Elec Eng 71:1000-5 N '52
Electronic speed control; applications to d.c. motors; abstracts. J. C. Rankin. Elec R (Lond) 152:422 F 20 '53; Elec J 150:604-6 F 20 '53
Here's a maintenance program for variable-speed drives; Vanette hosiery mills. H. B. LeFeaux. il diag Textile World 102:102-3+ D '52
How adjustable speed electronic drives compare. T. R. Breunich. il diags Product Eng 23:189-96 N '52
Industrial regulating systems. M. H. Fisher. il diags Westinghouse Eng 13:162-7 S '53
Magnetic tape drive designed for minimum speed variation. E. S. Kinney. il diags Machine Design 25:219-21 O '53
Maintaining constant surface cutting speed. J. L. Dutcher. il diags Mach 59:160-7 Ag '53
Make quick speed changes easy; Dodge variable-speed drive. il diags Factory Management 110:166-7 N '52
Mechanical variable speed transmissions. W. L. Byler. il diags Power 97:120-1 My; 124-5 Je; 124-5 Jl; 114-15 Ag; 120-1 S '53
Modern high speed side trimming lines. J. R. Erbe. il diags Blast F & Steel Pl 41:514-19 My '53
New industrial motor control circuits. E. F. Kubler. diags Electronics 25:110-15 Mr '52; Same cond. Product Eng Hdbk p H 18-23 '53
Regulating systems for the steel industry. W. R. Harris. il diags Westinghouse Eng 12:187-94 N '52; Same cond. Steel 131:106+ N 3; 112+ N 10 '52
Regulation systems, the key to higher production. W. R. Harris. il diags Blast F & Steel Pl 41:302-6 Mr '53
Shaft-mounted speed reducers can help you standardize. R. H. Jackson. il diags Mill & Factory 53:116-18 Ag '53
Variable-speed drillpress operates in two ranges. il diag Machine Design 25:140 F '53
See also
Electric motors—Control

SPEEDOMETERS
Snooper tells how trucks operate; recording speedometer. il Nat Pet N 45:56-8 Ja 21 '53

SPEKKER absorptiometer. See Absorptiometer

SPENCER chemical company
Growth prospects are better than average. W. K. Gutman. Barron's 33:11-12 Jl 6 '53

SPENCER Kellogg and sons, inc.
Stocks in a doubtful position. H. L. Blackburn. Mag of Wall St 91:647+ Mr 7 '53

SPENDING. See Consumption (economics)

SPERRY corporation
Security I like best. G. V. Billard. Comm & Fin Chr 176:1914 N 20 '52
Seven companies likely to increase dividends in 1953; with comparative balance sheet items. Mag of Wall St 91:400 Ja 10 '53
Ten potential market leaders for 1953; with comparative balance sheet items. Mag of Wall St 91:643 Mr 7 '53

SPHERES
Free volume equation of state for hard spheres. L. H. Lund. J Chem Phys 20:1977-8 D '52
Free volume equation of state for hard spheres. W. W. Wood. J Chem Phys 20:1334 Ag '52
Heat transfer from spheres to a rarefied gas in supersonic flow. R. M. Drake, jr. and G. H. Backer. bibliog il diags A S M E Trans 74:1241-9 O '52
Motion of a sphere moving parallel to a plane boundary. F. C. Karal. diags J Ap Phys 24:147-51 F '53
World's biggest sphere to house sub reactor. il Eng N 149:29 O 23 '52; Iron Age 170:206-7 N 6 '52; Steel 131:48 O 27 '52

SPHERICAL aberration. See Aberration (optics)

SPHERICAL surfaces
Determination of local forced-convection coefficients for spheres. J. R. Cary. bibliog diags A S M E Trans 75:483-7 My '53

SPHINGOMYELIN
Studies on the structure of sphingomyelin. G. Rouser and others. bibliog Am Chem Soc J 75:310-15 Ja 20 '53

SPHINGOSINE
Geometry of sphingosine. K. Mislow. bibliog Am Chem Soc J 74:5155-7 O 20 '52
Synthesis and configuration of dihydrosphingosine. H. E. Carter, D. Shapiro and J. B. Harrison. Am Chem Soc J 75:1007-8 F 20 '53

SPHYGMOMANOMETRY. See Blood pressure

SPICER manufacturing company
Union isn't skeptical; plant, jobs are saved; Spicer mfg. co. Pottstown plant. Bsns W p 142 N 8 '52

SPICES
Gift-shop touch; Hoff products. il Mod Packaging 26:101 Ag '53
Good Taste in plastics; John Wagner & sons use molded canister with sift or pour top for new seasoning. il Mod Packaging 26: 114-15 S '52
Natural spices. J. J. Frank. il Food Eng 25: 78-80+ Je '53

SPIEGELEISEN
Production of high manganese slags by selective oxidation of spiegeleisen. M. B. Royer and R. C. Buehl. bibliog il J Metals 4:Trans 1295-300 D '52
Production of spiegeleisen from open-hearth slag in an experimental blast furnace. R. C. Buehl and M. B. Royer. bibliog il diag J Metals 4:Trans 1289-94 D '52
Production of spiegeleisen, 1931-1952; tabulation. Iron Age 171:436 Ja 1 '53

Prices

Spiegeleisen, 19 to 21 per cent, 1936-1952; tabulation. Iron Age 171:435 Ja 1 '53

SPILLERS, limited
Statement by the chairman. W. D. Vernon. Economist 167:937-8 Je 27 '53

SPILLWAYS
Dam modifications checked by hydraulic models. E. S. Harrison and C. E. Kindsvater. il maps plan diags Am Soc C E Proc 79 [no 184]:1-17 Ap '53
Design of side walls in chutes and spillways. D. B. Gumensky. il diags Am Soc C E Proc 79 [no 175]:1-7 F '53
Increased head approved for Chief Joseph dam. Elec West 110:141 My '53
Prevent spillgate freezing in New England winter; Cabot station of Western Massachusetts electric co. J. L. Hyland and A. L. Davis. il diag Elec World 138:127-8 O 6 '52

SPIN, Nuclear. See Nuclear spin

SPIN of elementary particles. See Nuclear spin

SPINASTEROL

Analysis

Isolation of α-spinasterol from colocynth. B. Hamilton and W. O. Kermack. Chem Soc J p5051-2 D '52

SPINDLES (machine tools)
Moline 56-spindle machine for back-spotfacing operations. il Am Mach 97:183 Jl 6 '53
Timing belts drive spindles in duplicator. il diags Product Eng 24:162-5 My '53

SPINELS
Anomalous behavior of the *g* factor of LiFeCr spinels as a function of temperature. J. S. van Wieringen. Phys R 90:488 My 1 '53
Reversal of spontaneous magnetization as a function of temperature in LiFeCr spinels. E. W. Gorter and J. A. Schulkes. bibliog Phys R 90:487-8 My 1 '53

SPINNING
Dynamical analysis of the spinning balloon. G. M. Bracewell and K. Greenhalgh. il diags Textile Inst J Trans 44:T266-92 Je '53
Effect of filament length on the spinning performance of jute fibre. S. B. Bandopadhyay and S. Paul. Textile Inst J Trans 44:T386-90 Ag-S '53; Correction. 44: T481 O '53
For trouble-free drafting you have to be alert! J. McComb. Mod Textiles Mag 33: 36+ N '52
Forget your spinning habits; test the yarn. J. McComb. il Mod Textiles Mag 33:31+ D '52
Low drafts are best for blends on French combs. il Textile World 103:117+ Ap '53
We increased bobbin weight by 20 per cent in warp spinning. W. M. Benson. Textile World 103:114 My '53
See also
Cotton spinning
Nylon spinning
Woolen and worsted spinning

Tables, calculations, etc.

Applications of a theory of the spinning balloon. M. Hannah. bibliog diags Textile Inst J Trans 43:T519-35 O '52
Balloon diameters and thread tensions calculated for different cap-spinning conditions. J. Crank and D. D. Whitmore. bibliog Textile Res J 23:657-63 S '53
Theoretical investigation of cap and ring spinning systems. J. Crank. bibliog diags Textile Res J 23:266-76 Ap '53
Time-saving tables for the spinning overseer. N. H. Pomfret. Textile World 103:91-3 Ap '53

SPINNING machinery
Factors in plant development; spinning industrialist's point of view. H. G. Greg. Textile Inst J 43:P829-33; Discussion. P833-5 N '52
German direct-spinning machine eliminates spindle-tape drive. il Textile World 102: 182+ N '52
How gill reducers are being used by mills. W. P. Rutley. il Textile World 102:111+ D '52
Machine spins directly from 1,000- to 6,000-denier tow. il Textile World 103:154 My '53
Machine spins staple yarns directly from tow. il diag Textile World 103:124 Ap '53
New direct spinner. J. Chandon. Mod Textiles Mag 34:44 Ap '53
New frames give this mill four times as much yarn; Dionne spinning mills co. R. C. Scott. il Textile World 103:125-7 Je '53
Pointers for the spinning-room overseer. N. H. Pomfret. Textile World 103:137+ S '53
Spinning frame has builder motion in head end. il Textile World 103:160 Je '53
Spinning-twisting spindle has smooth-running features. il diags Textile World 102:156 D '52
Textile engineering. A. V. Pringle. Engineering 174:771-3 D 12 '53
Universal roving-spinning drafting elements improved. il diags Textile World 103:147-8 F '53
See also
Drawing frames
Twisting machines

Cleaning

Suction-type frame cleaner uses minimum of power. il Textile World 103:154 My '53

SPIRAL gearing. See Gearing, Spiral

SPIRES
Church steeples and spires rebuilt with stainless. il Sheet Metal Worker 44:92 Ja '53

SPIRO compounds
Formation of a spiro compound by the action of diazofluorene on acenaphthylene. A. Schönberg, A. Mustafa and N. Latif. Am Chem Soc J 75:2267 My 5 '53
Formation of coloured forms of spirans by low-temperature irradiation. E. Fischer and Y. Hirshberg. Chem Soc J p4522-4 N '52
Gelsemine; the chemistry and rearrangements of spiroöxindoles. B. Witkop and J. B. Patrick. bibliog Am Chem Soc J 75:2572-6 Je 5 '53
Some thermochromic spirans. C. F. Koelsch and W. R. Workman. bibliog Am Chem Soc J 74:6288-9 D 20 '52

SPIROSTANEDIOL
Steroidal sapogenins; Markogenin (22b-spirostane-2ξ,3β-diol); a new sapogenin isolated from yucca. M. E. Wall and others. bibliog Am Chem Soc J 75:4437-40 S 20 '53

SPIROSTANOLONE
Steroidal sapogenins; synthesis and side chain degradation of 22a,5β-spirostan-3α-ol-11-one acetate. G. Rosenkranz and others. bibliog Am Chem Soc J 75:4430-2 S 20 '53

SPLAWN, Walter Marshall William, 1883-
Sketch. por Ry Age News ed 134:10 Je 22 '53

SPLINES. See Keys and keyways (machinery)

SPLIT-up of stocks. See Stocks—Split-up

SPODUMENE

Method for concentration of North Carolina spodumene ores. M. K. Banks and others. bibliog flow sheet Min Eng 5:Trans 181-6 F '53

Second-order effects in nuclear electric quadrupole interaction of Al^{27} in spodumene. H. E. Petch and others. Phys R 88:1201-2 D 1 '52

SPONGE iron. See Iron, Sponge

SPONGE rubber. See Rubber, Sponge

SPONGES, Artificial

Natural phenomenon replaced by product of chemical process. il Can Chem Process 37:46+ My '53

SPONTANEOUS combustion

Spontaneous combustion of metal powders. B. Kopelman and V. B. Compton. il Metal Prog 63:77-9 F '53

Spontaneous ignition and dust explosion hazards of certain soybean products; abstract. Safety Maint & Prod 105:66+ My '53; Same. East Underw 54:36 Mr 20 '53

SPORN, Philip, 1896-

Portrait. Bsns W p 112 Mr 14 '53

SPORTING goods

For the young athlete; King mfg. co. packages junior sporting goods. il Mod Packaging 26:115 Jl '53

SPORTS

See also

Baseball

Newspapers—Sports news

Skating rinks

SPOT test. See Microanalysis

SPOT welding. See Electric welding

SPRAY painting. See Paint spraying

SPRAYING and dusting

Spruce budworm to be objective of extensive air attack. Pulp & Pa of Can 54:131 Mr '53; Paper Ind 35:218 My '53

Statistics of liquid spray and dust electrification by the Hopper and Laby method. E. E. Dodd. bibliog il J Ap Phys 24:73-80 Ja '53

See also

Airplanes in insect control

SPRAYING apparatus

Application of the Schweitzer spray machine to the glazing of vitreous ware. P. L. Christensen and E. Schramm. flow chart il Am Cer Soc Bul 31:384-5 O 15 '52

Automatic tank glazing unit sets high production rate; Abingdon potteries. il Cer Ind 59:96-7 D '52

Characteristics of a spinning-disk liquid sprayer. W. H. Boshoff. bibliog il Inst Mech Eng Proc (A) 166 no 4:443-6; Discussion. 447-9 '52

Clean spray tips properly! il Diesel Power 31:65 Ag '53

Crop spraying equipment. il Engineer 195:223 F 6 '53

How to get maximum spraying results; application of glaze on clay products. il Brick & Clay Rec 121:60-1 O '52

Keep coal dust down. il Power Eng 57:80-2 Je '53

Mechanical weed-spraying equipment. il Engineering 175:190-1 F 6 '53

Metering pump assures accurate spraying job. il diag Roads & Sts 96:81 Ap '53

Photographic analysis of sprays. J. L. York and H. E. Stubbs. bibliog il diags A S M E Trans 74:1157-61; Discussion. 1161-2 O '52

Poof, there goes rust; VPI in combination with compressed air. il Comp Air Mag 58:20 Ja '53

Porcelain cylinder liner protects pump for corrosive chemicals. il diags Product Eng 24:166-7 My '53

Sprays put zip in cleaning. R. Fiske and K. C. Tucker. il Food Eng 25:52-3+ Je '53

SPRAYING of enamel. See Enamel spraying

SPRINGS

Genetic relations of caves to peneplains and big springs in the Ozarks. J. H. Bretz. bibliog maps diag Am J Sci 251:1-24 Ja '53

SPRINGS (mechanism)

Flat coil springs counterbalance door. il Machine Design 25:120 Ja '53

Liquid springs offer high recoil power; Hydra Spring. il Machine Design 25:109 Mr '53

Neg'ator in instrumentation. H. Mankonen. diags Instruments 25:1274-8 S '52

Precision springs. M. G. Fangemann. il diags Machine Design 24:154-8 N '52

Reversed force spring. diags Engineer 195:280 F 20 '53

Save that spring! it might be useful; drawings with text. S. V. Worth. Mill & Factory 53:88-9 S '53

Unusual uses for helical wire springs; drawings with text. H. Murro. Product Eng 23:160-1 D '52

Weight of blue-tempered spring steel, per lineal foot; tabulation; data sheet. A. L. Snape, comp. Mach 59:259 Je; 271 Jl '53

See also

Automobiles—Springs and suspension

Car springs

Motor buses—Springs and suspension

Design

Design of flat-wound tension springs. R. M. Conklin and D. R. Forry. il diags A S M E Trans 74:743-9 Jl '52; Same cond. Machine Design 24:159-61 Ja '52; Same cond. Product Eng Hdbk p F 14-15 '53; Discussion. A S M E Trans 74:749-51 Jl '52

Design of thin cantilever beams; data sheet. J. H. Baltrukonis. bibliog diag Machine Design 25:173-6 Jl '53

Designing springs. S. L. Albright. diags Machine Design 25:134-7 S; 222-6 O '53

Dimensional allowance charts for helical wire springs; reference book sheet. V. Tatarinov. Product Eng 24:207, 209, 211 Mr '53

New approach to compression spring design. K. W. Maier. diags Product Eng 24:154-9 My '53

Manufacture

Automatic bar pointer improves spring production. W. G. Patton. il plan Iron Age 170:120-2 N 27 '52

Vest pocket steel mill; used by Hamilton Watch to make hair- and mainsprings of special alloys; illustrations with text. H. E. Linsley. Am Mach 97:130-1 Jl 20 '53

Testing

Comparator measures coil spring tension. G. Lee. diags Am Mach 97:150 My 25 '53

Endurance of helical springs related to properties of the wire. H. C. Burnett and C. L. Staugaitis. il Metal Prog 64:77-81 S '53

Fatigue properties of springs as affected by heat treatment. R. L. Rickett and A. O. Mason. Metal Prog 63:107-10 Mr '53

SPRINKLER leakage insurance. See Insurance, Sprinkler leakage

SPRINKLING systems

Automatic protection. il Nat Safety N 67:199+ Mr '53

Have you checked your sprinkler system lately? il Factory Management 111:82-3 My '53

New spray sprinklers effective. Weekly Underw 168:714 Mr 14 '53

New sprinkler being tested. il diags Safety Maint & Prod 105:71-2 My '53

New sprinkler means better fire protection. il diags Chem Eng 59:244+ O '52

See also

Insurance, Sprinkler leakage

SPROCKETS

Extending drive sprocket life. il Roads & Sts 96:84-6 My '53

New roller chain sprockets replaced quickly, easily. il Food Eng 25:157 Ap '53

Sheet metal gears, sprockets, worms, and ratchets; drawings with text. H. Murro. Product Eng 24:208-9 My '53

SPROUL, William W. Jr.

Portrait. Fortune 46:121 D '52

SPRUCE

Chemistry of the wood cell wall. W. G. Campbell and I. R. C. McDonald. Chem Soc J p3180-6 Ag '52

Chemistry of the wood cell wall; the delignification of beech and spruce woods by sodium chlorite in buffered aqueous solution. W. G. Campbell and I. R. C. McDonald. Chem Soc J p2644-50 Jl '52

Color precursors in spruce- and western hemlockwoods and inner barks. W. Pigman and others. bibliog Tappi 36:4-12 Ja '53

How tree seed is procured. R. S. Carman. Pulp & Pa of Can 54:100-2+ Ja '53

SPRUCE—*Continued*

Influence of bracken fern on establishment of spruce and fir seedlings. I. M. M. Place. Pulp & Pa of Can 54:169-70+ Ag '53

Logging and utilization in spruce-fir in the East; abstract. R. S. Johnson. Pulp & Pa of Can 54:91 F '53

Logging and utilization in spruce-fir in the West; abstract. L. A. deGrace. Pulp & Pa of Can 53:133 D '52

Ontario government and industry team up on Lakehead spruce regeneration. L. M. Frost. Pulp & Pa of Can 54:181-2 Je '53

Russell formula for gymnosperm lignin. M. A. Smith and others. bibliog Tappi 36:342-5 Ag '53

SPRUCE budworms

Budworms frustrated, softwood stands saved in 1953's $3 million air-spray assault. il map Pulp & Pa of Can 54:136-7 S '53

D.D.T. spells death to the budworm. il Can Chem Process 37:60-1 Je 20 '53

Effective New Brunswick spraying spurs plans for further operations. Paper Ind 34: 958 N '52; Same cond. Pulp & Pa of Can 53:140 O '52

New Brunswick attack on spruce budworm declared successful. il Paper Ind 35:541-2 Ag '53

Spruce budworm. Tappi 36:sup 106A Je '53

Spruce budworm on the Quebec north shore. R. Martineau. Pulp & Pa of Can 54:188+ Je '53

Spruce budworm to be objective of extensive air attack. Pulp & Pa of Can 54:131 Mr '53; Paper Ind 35:218 My '53

SPRUCE PINE, North Carolina

Spruce Pine mineral kingdom. C. H. Vivian. il map Comp Air Mag 58:152-9, 187-94 Je-Jl '53

SPUR gearing. See Gearing, Spur

SQUALENE

Cyclization of squalene in cholesterol synthesis. R. B. Woodward and K. Bloch. bibliog Am Chem Soc J 75:2023-4 Ap 20 '53

Synthesis of C^{14}-labeled squalene. W. G. Dauben and H. L. Bradlow. bibliog Am Chem Soc J 74:5204-6 O 20 '52

Synthetic C^{14}-squalene; concerning its incorporation into cholesterol by liver. G. M. Tomkins and others. bibliog Am Chem Soc J 74:6145-6 D 5 '52

SQUARE deal market company, inc.

Preferred stock sold. Comm & Fin Chr 177: 2788 Je 29 '53

SQUARE root

Taking square root by sweeps. E. C. Varnum. Tool Eng 30:66 Mr '53

SQUARES (instrument)

Measure your angles with a square. F. E. Riley. il Power Eng 57:77 My '53

SQUIRREL cage motors. See Electric motors, Induction

STABILITY, Chemical. See Chemical stability

STABILIZATION in industry

Coal stabilization. Coal Age 57:66-71 D '52

See also

Business cycles

STABILIZING agents

Gum type stabilizers perform new vital functions. il Food Eng 25:105+ Je '53

Organo-tin compounds and stabilizers. Chem Age (Lond) 68:5-7 Ja 3 '53

STACHYOSE

Constitution of stachyose. D. French, G. M. Wild and W. J. James. bibliog Am Chem Soc J 75:3664-6 Ag 5 '53

Improved preparation of stachyose. M. L. Wolfrom and others. bibliog Am Chem Soc J 74:6299 D 20 '52

Structure of stachyose. R. A. Laidlaw and C. B. Wylam. Chem Soc J p567-71 F '53

STACKS. See Chimneys

STADIUMS

Allen County war memorial coliseum. R. E. Coblentz. il diag Welding J 32:320-3 Ap '53

Rio sports center; a progress report; stadium and gymnasium. il plans diags Arch Rec 112:131-9 O '52

Stadium out of the land; Mexico university. il diag Arch Forum 97:106-11 S '52

Lighting

Lighting sports arenas; methods employed and results obtained. W. S. Veness. il plan diags Elec R (Lond) 151:713-18 O 3 '52

STADLER, John, 1874-1948

John Stadler memorial lectures. por Pulp & Pa of Can 54:59, 66 Ja '53

STADTMAN, Earl R. 1919-

Paul-Lewis award in enzyme chemistry. por (cover) Chem & Eng N 31:429 F 2 '53

STAFF assistants. See Executives

STAGE lighting

Planning a stage lighting installation for a modern school auditorium. T. Fuchs. plans Illum Eng 48:348-53 Je '53

STAGE setting and scenery. See Theater—Stage setting and scenery

STAHLE, Clyde V.

AISE graduate fellowship awarded to Carnegie Tech student. por Iron & Steel Eng 30:130 Je '53

STAINED glass

Daylight on a stained glass window; Beverly vista community church. R. E. Bevan. il Illum Eng 47:588 N '52

Modern designing with old crafts. il Bsns W p 106-10+ D 13 '52

STAINLESS steel. See Steel, Stainless

STAINS

Oil stains; removing fingerprints, oil, grease, wax, greasy dirt, and other oily stains from stainless steel work. il Mill & Factory 53:132-3 S '53

STAINS and staining (microscopy)

Aid in paper microscopy; Du Pont fiber identification Stain A. G. K. Boger, jr. bibliog Paper Tr J 136:21-2 Ap 3 '53

Chemistry of gram staining and of the Feulgen and Dische reactions for nuclear material. M. Stacey. Chem & Ind p 124 F 7 '53

Fiber analysis of paperboard; revision of TAPPI tentative standard T 401 m-42. bibliog Tappi 36:sup 170A-8A Ag '53

Rapid technique for the diagnosis of intestinal protozoa. A. J. Bucki and W. H. Wells. Science 117:235 F 27 '53

Reversal of gram-staining behavior. P. Larose and R. Fischer. bibliog Science 117:449 Ap 24 '53

STAIRWAYS

Safe treads are steps to safety. P. C. Crawford. il diags Safety Maint & Prod 104:14-16+ D '52

Stairs and ramps. Nat Safety N 67:15-16 Mr '53

Lighting

Modern lighting eliminates stair falls. il Safety Maint & Prod 105:19 Ap '53

STALIN, Iosif, 1879-1953

Boss of the Bolsheviks. Economist 166:641-2 Mr 7 '53

Iconoclasts in Moscow; playing down the cult of Stalin. Economist 167:370+ My 9 '53

Without Stalin, what next? Bsns W p27-8 Mr 7 '53

STAMPING

Automatic handling of smaller pieces pays off in stamping; Fisher Body's Hamilton, Ohio plant. E. C. Beaudet. il plan Iron Age 171:232-5 My 7 '53

Automatic stamping and welding of sheet metal parts; Chrysler corp. il Automotive Ind 109:48-9 O 1 '53

Door latch rotor now stamped successfully. J. A. Leake. il Automotive Ind 107:78+ N 15 '52

Forming and drawing heavy stampings for IHC crawler tractor. J. C. O'Rourke. il Automotive Ind 107:70-1 O 1 '52

Further thoughts on shaving dies. O. Loeffler. diags Am Mach 97:144-5 Jl 20 '53

Greater emphasis on automation in stamping production; Ford motor co. T. Mac New. il Automotive Ind 107:34-8+ N 15 '52

Joining stampings; drawings with text. F. Strasser. Machine Design 25:163-5 Ja '53

Latest improvements in press automation at Ford. M. J. Rowan. il diags Am Mach 96: 109-18 D 8 '52

Metal stampings produced with latest handling methods at new Ford plant. J. W. Greve. il plan Tool Eng 29:37-42 D '52

New taping method ups production 39 per cent; Ronan & Kunzl, inc. il Mill & Factory 52:124-5 Je '53

Press unloader handles diversified stampings. H. Sahlin. il diags Tool Eng 30:63-5 Mr '53

Progressive stampings; one a second. il Steel 131:100 O 6 '52

STAMPING—*Continued*

Rubber-forming kink cuts wrinkles at Convair. R. B. Stanton. il Am Mach 97:132 My 25 '53

Small lot stampings produced economically. T. A. Dickinson. il Steel 132:83 Mr 23 '53

Stampers; pressing for production. il Steel 132:47 Mr 30 '53

Stamping and forming review and forecast. diags Iron Age 171:300 Ja 1 '53

Stamping plant relies on automation; Ford motor co. il Iron Age 170:162-4 D 11 '52

Stamping plants in U.S. by states; tabulation. Iron Age 171:454 Ja 1 '53

STAMPS, Rubber. See Rubber stamps

STANDARD brands, inc.

Investment audit. J. S. Williams. Mag of Wall St 92:26-8+ Ap 4 '53

STANDARD cable corporation

Sales profits increasing. Barron's 32:20 O 6 '52

STANDARD coil products company

Securities offered. Comm & Fin Chr 176:2274 D 15 '52

Securities sold. Comm & Fin Chr 176:2439 D 22 '52

STANDARD departments

Standardization; the automatic pilot of management; reprinted from Fall 1939 issue. J. Gaillard. Advanced Management 17:15-19 O '52

STANDARD deviation

Nomogram for evaluating test data; reference book sheet. E. C. Varnum. Product Eng 24:215 F '53

T-test techniques. T. R. Bainbridge. bibliog Mod Textiles Mag 33:35+ O; 35+ D '52

Theoretical precision of screen-analysis results. J. B. Gayle. bibliog pl U S Bur Mines Rep of Invest 4933:1-9 '52

STANDARD gas and electric company

Court approves initial step in liquidation plan. Comm & Fin Chr 176:1868 N 17 '52

Further steps in plan of liquidation approved. Comm & Fin Chr 177:1302 Mr 23 '53

Initial step of plan effective. Comm & Fin Chr 176:2066 D 1 '52

Last of big holding companies bows out. Bsns W p 133 N 15 '52

STANDARD life assurance company

Statement by the chairman. G. P. S. Macpherson. Economist 166:909-10 Mr 28 '53

STANDARD of living

Can we get America to live one-third better? W. W. Williams. Comm & Fin Chr 178:358+ Jl 30 '53

Factors promoting prosperity. A. H. Johnson. Comm & Fin Chr 177:588-9 F 5 '53

Investment in the future; industry must spend $200 billion by 1960 to maintain standard of living; abstract. D. E. Carson. Steel 132:68 Mr 16 '53

Less government spending and our standard of living. A. H. Johnson. Comm & Fin Chr 176:1736+ N 6 '52

Why have our living standards improved? R. S. Byfield. Manuf Rec 121:36 O '52

STANDARD oil company (New Jersey)

Investment audit of Standard Oil of N.J. S. Devlin. Mag of Wall St 91:472-4+ Ja 24 '53

STANDARD oil company of Indiana

FTC launches new attack on Stanolind's good faith defense. Ptr Ink 242:19 Ja 30 '53

Five unusual candidates for stock splits; with comparative balance sheet items. Mag of Wall St 92:92 Ap 18 '53

Indiana Standard; largest domestic oil company; with financial data, 1942-1951. E. N. Morse. Barron's 32:15-16 D 1 '52

STANDARD packaging corporation

Security I like best. G. L. Barone. Comm & Fin Chr 178:198 Jl 16 '53

STANDARD power and light corporation

Files exchange plan. Comm & Fin Chr 177:532 F 2 '53

STANDARDIZATION

Goal of international standardization. A. Caquot. Standardization 23:310-13 S '52

Investment in standardization; Bureau of ships. R. V. Vittucci. il Standardization 24:68-72 Mr '53

Lack of standardization stalls NATO rearmament. il Product Eng 24:196-7 Ja '53

National standardization conference, 3d, Chicago, Sept. 8-10. Standardization 23:365-6 N '52

Shaft-mounted speed reducers can help you standardize. R. H. Jackson. il diags Mill & Factory 53:116-18 Ag '53

Standardization in the aircraft industry. C. C. Hurlburt. diags Standardization 24:104-7 Ap '53

Standardization, the automatic pilot of management; reprinted from Fall 1939 issue. J. Gaillard. Advanced Management 17:15-19 O '52

Standards; can they be a curse? Iron Age 170:48 O 2 '52

Two case studies in simplification and standardization. M. Lipton. Factory Management 111:148-9 Ap '53

What we have learned in 1952. J. R. Townsend. il Standardization 24:16-18 Ja '53

World significance of standardization. R. E. Gay. Standardization 23:304-9 S '52

See also

Preferred numbers
Standards
Time study
United States—Defense, Department of—Standardization and cataloging program

STANDARDS

Chemical industry's approach to procurement standards; ASA chemical industry correlating committee meeting; abstracts of papers. Standardization 23:382-3 N '52

Heat capacity standards for the range 14 to 1200° K. D. C. Ginnings and G. T. Furukawa. Am Chem Soc J 75:222-7 F 5 '53

Highlights of project news; condensed from reports presented by chairmen of the Standards boards at a meeting of ASA's Standards council, April 2, 1953. Standardization 24:125-6, 153-8 Ap-My '53

Master mechanic master salesman. F. O. Hoagland. il diag Standardization 24:11-13 Ja '53

Never before has our need for a comprehensive set of national standards been so acute. J. W. Barker. Standardization 23:366-8 N '52

Purchasing; standardizing coordination in company operations; National standardization conference; abstracts of papers. Standardization 23:370-2 N '52

Reference material relating to the military and commercial fields. H. Coonley. Special Lib 44:11-14 Ja '53

Standards deterioration under wage incentives. H. E. Wrapp. J Bsns 26:9-14 Ja '53

United States Chamber of commerce publishes its policy on standards; abstract. Standardization 23:342 O '52

You hear the voice with a smile through Western Electric's service with standards. K. B. Clarke. il map Standardization 23:332-8 O '52

See also

Cost accounting—Standard costs
Electric standards
Preferred numbers
Production standards
Quality of products
Radio standards
Safety standards
Textile standards
Time study
United States—Standards, National bureau of
Weights and measures

also subdivision Standards under special subjects, e.g.

Aeronautics
Airplanes
Boilers
Bolts and nuts
Building
Clothing and dress
Electric circuit breakers
Electric connectors
Electric transformers
Gearing, Worm
Housing
Lenses, Photographic
Military supplies
Moving picture films
Moving pictures
Pipe flanges
Pressure vessels
Screw threads
Television
Water pipes
Water pipes, Steel

Bibliography

American standards; standards approved or being considered. Published in monthly numbers of Standardization

Standards from other countries (cont). Standardization 23:325, 349-51, 416-17; 24:21-2, 55-6, 84-6, 118-20 S-O, D '52-Ap '53

STANDARDS—Bibliography—*Continued*

Supplementary list of publications of the National bureau of standards, July 1, 1947 to June 30, 1952 (with subject and author indexes); is a supplement of National bureau of standards Circular 460, which is a catalog of publications from 1901 to June 30, 1947. 223p U.S. National bur. of standards, Washington; pa 75c Supt. of doc. '53

STANDARDS, Engineering

ABC conference report. Standardization 23: 344 O '52

Basic engineering standards and their place in design. G. C. Adams. diags Inst Mech Eng Proc (A) 166 no 2:164-9 '52; Same cond. Engineering 173:380-1, 411-12 Mr 21-28 '52; Same cond. Engineer 193:405-7 Mr 21 '52; Discussion. Inst Mech Eng Proc (A) 166 no 2:170-9 '52

Engineering significance of standards; ASA Conference of executives of organization meeting; abstracts of papers. Standardization 23:377-81 N '52

Principles and practice governing interchangeability and the specification of manufacturing limits of size, as influenced by statistical considerations. G. C. Adams. diags Inst Mech Eng Proc (A) 167 no 2: 154-63; Discussion. 164-74 '53

See also

Building
Electric standards
Railroads
Standardization
Weights and measures

also subdivision Standards under special subjects, e.g.

Electric equipment
Screw threads

STANDARDS, International

Europe discovers America. W. L. Batt. il Standardization 24:5-10 Ja '53

International electrotechnical commission; actions taken at the recent meetings in Holland. H. S. Osborne. Elec Eng 72:101-4 F '53; Same. Standardization 23:408-11+ D '52

International organization for standardization technical committee meetings, New York, June 9-26. Standardization 23:276-94 S '52

International safety standards at sea advanced. Marine Eng 58:35 Ja '53

International standardization; technical committee 36 on cinematography. F. T. Bowditch; H. Kogel. Soc Motion Picture & Tv Eng J 59:349-55 O '52

NATO standards lack hit. W. L. Batt. Steel 131:149 D 15 '52

Proposal for integral international standardization. A. Caquot. diags Standardization 23: 403-5 D '52

Standards for world trade; an opportunity for American leadership. C. Ainsworth. Standardization 23:369 N '52

Unified screw thread system. diags Product Eng Hdbk p G2-5 '53

What about unified threads? M. Rhoads. Am Mach 97:121 Ja 5 '53

See also

International organization for standardization

STANDARDS, National bureau of. See United States—Standards, National bureau of

STANDARDS of length

Coordinate operators and fundamental lengths. H. T. Flint and E. M. Williamson. bibliog Phys R 90:318-19 Ap 15 '53

Resistance thermometers in the 50 metre comparator at the National physical laboratory. J. S. Clark and L. O. C. Johnson. diag Engineer 196:260-1 Ag 28 '53

STANDARDS of measurement. See Measurement

STANDPIPES

Siamese and sillcock connections; diagrams; detail sheet. Heat & Ven 50:9-10 S '53

Standpipe system for a multistory industrial building. diags Heat & Ven 50:129-30 Ap '53

Measurement

Content of cylindrical tanks and standpipes; nomograph. W. F. Schaphorst. Water & Sewage Works 100:131 Mr '53

STANFORD university

Land-poor Stanford opens its acres on 99-yr. leases. maps Bsns W p 134-6+ D 20 '52

Graduate school of business

Schoolboys show foundries a trick; shell molding. il Bsns W p48-50+ F 7 '53

STANLEY, W. F., and company, limited

Centenary of instrument making. Engineering 175:487 Ap 17 '53

STANNATES

Ceramic and dielectric properties of the stannates. W. W. Coffeen. bibliog Am Cer Soc J 36:207-14 Jl 1 '53

Dielectric bodies in the quaternary system $BaTiO_3—BaSnO_3—SrSnO_3—CaSnO_3$. W. W. Coffeen. bibliog Am Cer Soc J 36:215-21 Jl 1 '53

STANNIC oxide. See Tin oxides

STANNOUS oxide. See Tin oxides

STAPHYLOCOCCI

Chromatography in the purification of staphylococcal enterotoxin. M. S. Bergdoll and others. bibliog Science 116:633-4 D 5 '52

STAPLING machines

Stapling machines for papers. il Consumers Res Bul 30:18 N '52

STARCH

Acid reversion in relation to isomaltose as a starch hydrolytic product. A. Thompson, M. L. Wolfrom and E. J. Quinn. bibliog Am Chem Soc J 75:3003-4 Je 20 '53

Electrolytic preparation of periodate oxystarch. W. Dvonch and C. L. Mehltretter. Am Chem Soc J 74:5522-3 N 5 '52

Enzyme treatment of high-solids starch-pigment mixtures. J. E. Wilber. bibliog diags Tappi 36:sup 156A-61A F '53

Enzymic synthesis and degradation of starch; the minimum chain-length for Q-enzyme action. S. Peat, W. J. Whelan and J. M. Bailey. Chem Soc J p 1422-7 My '53

Mechanism of carbohydrase action; α-amylolysis of linear substrates. W. J. Whelan and P. J. P. Roberts. Chem Soc J p 1298-304 Ap '53

New starch-handling system saves $61 in starch every 24 hrs.; Avondale mills. R. B. Pressley. il diag Textile World 103:138-41 S '53

Solubilising native starch; a new continuous splitting process. Chem Age (Lond) 68:118 Ja 10 '53

Starch-iodine complex. S. Ono, S. Tsuchihashi and T. Kuge. bibliog Am Chem Soc J 75:3601-2 Jl 20 '53

Starch sizing of paper. J. M. Newton. il Paper Tr J 135:314-18+ N 14 '52

Starch solves a tooling problem. R. S. Stanton. il Tool Eng 31:66 O '53

Starches tailormade for users. T. A. White. il Food Eng 25:95+ Je '53

Viscosity of starch and starch products; TAPPI suggested method T 637 sm-53. diag Tappi 36:sup 139A-40A Ap '53

See also

Cornstarch
Potato starch

Analysis

Analysis of starch and starch products; TAPPI tentative standard T 638 m-53. Tappi 36:sup 135A-7A Ap '53

Determination of the carboxyl content of oxidized starches. M. F. Mattisson and K. A. Legendre. bibliog Anal Chem 24:1942-4 D '52

Fractionation of starches from smooth and wrinkled seeded peas; molecular weights, end-group assays and iodine affinities of the fractions. A. L. Potter and others. bibliog il Am Chem Soc J 75:1335-8 Mr 20 '53

STARK effect

Broad-band, coaxial Stark cell for microwave spectroscopy. L. J. Rueger and R. G. Nuckolls. diag R Sci Instr 23:635 N '52

Dynamic characteristics of the plasma in discharges through rare gases. H. N. Olsen and W. S. Huxford. bibliog il diags Phys R 87:922-30 S 15 '52

Electric dipole moments of several molecules from the Stark effect. S. N. Ghosh and and others. bibliog J Chem Phys 21:308-10 F '53

Ion concentrations and recombination in expanding low pressure sparks. R. G. Fowler and others. il diags Phys R 87:966-70 S 15 '52

STARK effect—*Continued*
Theory of the Stark effect of asymmetric rotator with hyperfine structure. M. Mizushima. bibliog J Chem Phys 21:539-41 Mr '53

STARS
Evolution of stars. O. Struve. il Sci Am 188: 34-7 Mr '53
Nuclear reactions in the stars; proton-proton chain. E. E. Salpeter. Phys R 88:547-53 N 1 '52
Radio stars. A. C. B. Lovell. il diags Sci Am 188:17-21 Ja '53
Visibility of stars and planets during twilight. R. Tousey and M. J. Koomen. Opt Soc Am J 43:177-83 Mr '53

STASSEN, Harold Edward, 1907-
Eisenhower's Cabinet; a gamble. por Bsns W p31 N 29 '52

STATE advertising
Florida finds that advertising pays well! tax income from tourists. R. J. Flood. il Ptr Ink 242:45 F 20 '53
How Thompson handles Florida citrus advertising for Florida citrus commission. S. Robin. il Adv Agency 45:59-61+ D '52
Selling Florida to the Latins. Bsns W p 152 N 15 '52

STATE banks. See Banks and banking, State

STATE bonds
Authorities' bond selling under fire in N.J. courts. Eng N 150:62 F 12 '53
Recent trends in highway bond financing. H. C. Duzan and others. bibliog(29 titles) il maps Pub Roads 27:57-88 O '52; Same cond. Roads & Eng Constr 90:120+ O '52
State and city department bond proposals and negotiations. Published in weekly Monday numbers of Commercial and financial chronicle
Voters like bond issues, too. Bsns W p 134+ N 15 '52

STATE finance
State and local government; receipt and expenditure programs. K. O. Nygaard. Survey of Cur Bsns 33:11-16 Ja '53
Tennessee story; taxes, legislation and finance. il Manuf Rec 121:110-15 N '52
Where will the states get the money? boom coming in expenditures of state and local governments. Bsns W p 130+ O 25 '52
See also
Taxation, State

STATE governments
See also
Public health departments
Public utilities commissions

Federal relations

Cussed independence in Yankee land. R. D. Grant. Pub Util 51:821-9 Je 18 '53
Governors approve Missouri compact. Eng N 149:26-7 D 11 '52
State of the Nation's public health services; report on federal-state relations, 1952. J. W. Thurston. Pub Health Rep 68:181-3 F '53

STATE highway officials, American association of. See American association of state highway officials

STATE laws
Do state laws hurt unions? Bsns W p 174 My 9 '53
1952 state legislation on trusts and estates; ABA committee report. Trusts & Estates 91:774-5 O '52
State legislatures' action on utility laws; review of 1952 actions of state legislatures on proposed laws. B. Jones. Pub Util 50: 486-94 O 9 '52
See also
Price fixing, Resale
Taxation, State

STATE parks and reserves
Alabama story; recreation. il Manuf Rec 122: 101-4 Je '53

STATE planning boards
Financial aid for the new and small; development credit corporations. Bsns W p 112+ Jl 4 '53

STATE rights
Tidelands issue. Pub Util 50:520-2 O 9 '52
See also
State governments—Federal relations

STATE securities, inc.
Further details of stock offering. Comm & Fin Chr 176:2533 D 29 '52

STATE taxation. See Taxation, State

STATICS
See also
Dynamics
Elasticity
Electrostatics
Graphic statics
Hydrostatics
Strains and stresses

STATIONERY
Paper; how to specify, plan and buy economically for use in the accounting office. E. J. McDevitt. J Account 95:460-4 Ap '53
Ten ways to save paper. H. L. Wylie. Am Bsns 23:14-15 O '53
See also
Letterheads

STATISTICAL mechanics
Adsorption on proteins, the grand partition function and first-order phase changes according to approximate statistical mechanical theories. T. L. Hill. bibliog J Phys Chem 57:324-9 Mr '53
Atomic theory of the λ transition in helium. R. P. Feynman. bibliog Phys R 91:1291-301 S 15 '53
Dielectric polarization in polar substances. F. E. Harris and B. J. Alder. bibliog J Chem Phys 21:1031-8 Je '53
Equipartition principle of generalized canonical ensembles. H. L. Frisch. bibliog Phys R 91:791-3 Ag 15 '53
Generalized statistical mechanics and the Onsager relations. P. G. Bergmann and A. C. Thomson. bibliog Phys R 91:180-4 Jl 1 '53
Logical relations among the principles of statistical mechanics and thermodynamics. J. S. Thomsen. bibliog diags Phys R 91: 1263-6 S 1 '53
Markoff random processes and the statistical mechanics of time-dependent phenomena. M. S. Green. J Chem Phys 20:1281-95 Ag '52
Relation between time averages and ensemble averages in the statistical dynamics of continuous media. C. Eckart. bibliog Phys R 91:784-90 Ag 15 '53
Some statistical mechanical models of elastic polyelectrolytes and proteins. T. L. Hill. bibliog diags J Chem Phys 20:1259-73 Ag '52
Statistical mechanical theory of irreversible condensation. H. Reiss. bibliog diag J Chem Phys 20:1216-27 Ag '52; Correction. 21:1312 Jl '53
Statistical mechanics of dilute polymer solutions; variation of the osmotic second coefficient with molecular weight. W. R. Krigbaum and P. J. Flory. bibliog diags Am Chem Soc J 75:1775-84 Ap 20 '53
Statistical mechanics of dynamical systems with integrals other than energy. H. Grad. bibliog J Phys Chem 56:1039-48 D '52
Statistical mechanics of irreversibility. H. B. Callen and others. bibliog Phys R 88: 1382-6 D 15 '52
Statistical mechanics of polymer adsorption. H. L. Frisch and others. J Chem Phys 21: 365-6 F '53
Statistical theory of networks of non-Gaussian flexible chains. Ming Chen Wang and E. Guth. bibliog J Chem Phys 20:1144-57 Jl '52
Statistical theory of order-disorder equilibrium at high temperatures. P. Schwed and G. Groetzinger. bibliog J Chem Phys 21: 963-4 Je '53
Statistics of a two-dimensional, hexagonal net. J. P. Hobson and W. A. Nierenberg. Phys R 89:662 F 1 '53
Theoretical and experimental status of the collective electron theory of ferromagnetism. E. P. Wohlfarth. bibliog Rs Mod Phys 25:211-19 Ja '53
Theory of cooperative phenomena; detailed discussions of the cluster variation method. M. Kurata and others. bibliog diags J Chem Phys 21:434-48 Mr '53
Thermodynamic functions from Mayer's theory of ionic solutions; equations for thermodynamic functions. J. C. Poirier. bibliog J Chem Phys 21:965-72 Je '53
See also
Bose-Einstein statistics
Distribution function

STATISTICAL methods
Annealing as a problem in genetics. F. W. Preston. bibliog Am Cer Soc J 36:232-8 Jl 1 '53
Application of statistical concepts to the buffeting problem. H. W. Liepmann. bibliog diag J Aeronautical Sci 19:793-800+ D '52

STATISTICAL methods—*Continued*

Application of statistical quality control in glass fabrication; Kimble glass co. T. R. Meyer and others. Glass Ind 34:539-41+ O '53

Application of statistics to engineering problems. M. D. J. Brisby. bibliog Engineering 174:294-6 S 5 '52

Application of the statistical theory of extreme values to gust-load problems. H. Press. bibliog U S Nat Advisory Com for Aeronautics 1950:711-26 '51

Assigning tolerances for maximum economy. E. W. Pike and T. R. Silverberg. bibliog diags Machine Design 25:139-46 S '53

Check your ratio delay; p charts improve methods for determining downtime. G. Nadler and D. H. Denholm. Iron Age 170:110-13 N 27 '52

Chemical profession warms up to fuller use of statistics; American statistical association 112th annual meeting, Chicago. Chem & Eng N 31:148 Ja 12 '53

Concepts of quality control. W. R. Purcell. Tappi 36:1-4 Ja '53

Conference on application of statistical methods to problems of pulp and paper industry, June 15-26; program. Tappi 36:sup 100A+ Mr '53

Cuts pilot-plant time. Chem Eng 60:322 F '53

Demonstration devices make statistical methods easier to understand. il Factory Management 111:92-5 F '53

Effect of stress amplitude on statistical variability in fatigue life of 75S-T6 aluminum alloy. G. M. Sinclair and T. J. Dolan. bibliog A S M E Trans 75:867-70; Discussion. 870-2 Jl '53

Elements of statistical quality control. W. W. Kauffman. diag Tool Eng 31:59-63 Ag '53

Frequency analysis of hydrologic data with special application to rainfall intensities. Ven Te Chow. map Ill U Eng Exp Sta Bul 414:1-80 bibliog(p79-80) '53 (pa 80c)

How Bigelow-Sanford found 2,000 yd. of lost carpet. A. G. Klock and C. W. Carter. Textile World 103:129+ Je '53

How to attain results with quality control; report of panel discussion. S A E J 61:37-40 Jl '53

How to evaluate assembly tolerances. R. H. Johnson. diags Product Eng 24:179-81 Ja '53

Increasing the efficiency and economy of experimentation. E. C. Harrington, jr. bibliog diags Tappi 36:sup 137A-40A My '53

Inspection and quality control; panel discussion. S A E J 61:30-4 Ag '53

Investigation of statistical nature of fatigue properties. E. Epremian and R. F. Mehl. Machine Design 25:276+ Ja '53

Irregularity of slivers. H. C. Picard. bibliog Textile Inst J Trans 42:T503-9; 43:T251-61; 44:T307-16 D '51, Je '52, Jl '53

Lecture version of paper on annealing as genetics. F. W. Preston. Glass Ind 34:485-6 S '53

Magma copper uses factorial design for better testing. F. T. Davis and A. C. Dorenfeld. Eng & Min J 154:97-9 Ag '53

Measurement of internal boundaries in three-dimensional structures by random sectioning. C. S. Smith and L. Guttman. bibliog diags J Metals 5:Trans 81-7 Ja '53

Next time, use statistics. P. Ferencz and B. H. Lloyd. bibliog diag Chem Eng 60:219-22+ Ap; 207-10 My '53

Office quality; new ways to improve it with statistics. il Mod Ind 25:50-4 Mr '53

Principles and practice governing interchangeability and the specification of manufacturing limits of size, as influenced by statistical considerations. G. C. Adams. diags Inst Mech Eng Proc (A) 167 no 2:154-63; Discussion. 164-74 '53

Quality control and the research function. O. P. Beckwith. bibliog Textile Res J 23:197-206 Mr '53

Quality control; communicating data effectively. W. W. Kauffman. il diag Tool Eng 31:54-60 S '53

Quality control methods; their use in design. D. Shainin. il Machine Design 24:102-8 Jl; 171-5 Ag; 168-74 S; 193-8 O; 161-8 N; 173-9 D '52; 25:150-5 Ja; 160-5 F; 165-9 Mr; 176-80 My '53

Quality control of resistance welding by statistical methods. J. F. Radford and R. K. Waldvogel. bibliog il Welding J 32:521-6 Je '53

Quality control program. J. F. Langmaid, jr. Tappi 36:sup 151A-4A S '53

Quality control through statistical methods. N. L. Enrick. Mod Textiles Mag 34:32-3+ O '53 (to be cont)

Quality control through the introduction of statistical methods; International harvester co. il Automobile Eng 42:533-4 D '52

Realistic approach to structural weight estimation. A. Schnitt and W. H. Buckley. bibliog Aero Digest 66:76+ F '53

Role of statistical methods in the modern quality control program. C. E. Noble. bibliog Paper Tr J 137:21-2+ Jl 10 '53

Selection of a limited number from many possible conditioning treatments for alloys to achieve best coverage and statistical evaluation. J. M. Cameron and W. J. Youden. Am Soc T M Proc 50:951-60; Discussion. 961-4 '50

Sharp uniformity control trims costly variation losses; Brock candy co. E. D. White. il Food Eng 25:80-1+ Mr '53

Some applications of statistical quality control in the paper boxboard industry. B. E. Sooy. diag Paper Tr J 136:20-2 Je 26 '53

Statistical analysis of trickling filter data. J. M. Fairall. Sewage & Ind Wastes 24:1358-60 N '52

Statistical aspects of dynamic loads. Y. C. Fung. bibliog il J Aeronautical Sci 20:317-30 My '53

Statistical control of modern continuous pickling bath lines; abstract. W. Fackert. Metal Finishing 51:79 My '53

Statistical grain structure studies; plane distribution curves of regular polyhedrons. F. C. Hull and W. J. Houk. bibliog il diags J Metals 5:Trans 565-72 Ap '53

Statistical interpretation of polarization data in Raman spectra. M. C. Tobin. J Chem Phys 21:1110-11 Je '53

Statistical method of Gibbs in irreversible thermodynamics. R. T. Cox. bibliog J Phys Chem 56:1030-3 D '52

Statistical methods and operational research in transport. F. A. A. Menzler. Engineer 194:737-40 N 28 '52; Abstract. Engineering 174:738 D 5 '52

Statistical quality control; applications and limitations. L. J. McGovern. Pet Refiner 32:121-4 F '53

Statistical quality control in relation to engineering. W. S. Oliver. diags Automotive Ind 107:38-40+ D 15 '52

Statistical quality control in the glass container industry; past, present, and future. J. H. Toulouse. Am Cer Soc Bul 32:339-40 O 15 '53

Statistical quality control makes tolerances behave; report of panel discussion. I. W. Schoeninger. S A E J 61:23-6 Je '53

Statistical techniques and international trade. W. E. Deming. J Marketing 17:428-33 Ap '53

Statistical work measurement control. R. N. Lehrer. Advanced Management 17:10-11 Ag '52

Statistics can foretell Great Lakes levels. D. M. Pierce and J. E. Vogt. map Eng N 150:30-2 Ja 1 '53

Symposium on fatigue with emphasis on statistical approach. (Special tech. pub. no. 137) il diags 91p Am. soc. for testing materials. 1916 Race st, Philadelphia 3 '53 pa $2

Synthesis of a network to have a sine-squared impulse response. W. E. Thomson. diag Inst E E Proc 99 pt 3:373-6 N '52

Tables for use in fourfold contingency tests. D. Mainland and I. M. Murray. Science 116:591-4 N 28 '52

Ten years' progress in management; statistical quality control. E. R. Ott. bibliog A S M E Trans 75:660-3 My '53

Theory of prediction of nonstationary stochastic processes. R. C. Davis. J Ap Phys 23:1047-53 S '52; Discussion. G. W. Preston. 24:230-1 F '53

Throwdown machine for telephone traffic studies. G. R. Frost and others. il diags Bell System Tech J 32:292-359 Mr '53

STATISTICAL methods—*Continued*

What's ahead the next ten years in inspection and testing; statistical techniques. Am Mach 96:I 8-9 Mid-N '52

Working curves for delayed exponential calls served in random order. R. I. Wilkinson. Bell System Tech J 32:360-83 Mr '53

See also

Business forecasting
Correlation (statistics)
Graphic methods
Index numbers (economics)
Operations research
Probabilities
Punched card system
Ranking (statistical methods)
Sampling (statistical methods)
Standard deviation
Time series

STATISTICS

See also

Business statistics
Census
Commercial statistics
Correlation (statistics)
Economic statistics
Financial statistics
Government statistics
Index numbers (economics)
Industrial statistics
Market statistics
Punched card system
Sampling (statistical methods)
Significant difference (statistics)
Statistical mechanics

also subdivision Statistics under special subjects, e.g.

Population
United States

Yearbooks

See Yearbooks (statistical, historical, etc.)

STATISTICS, Industrial. See Industrial statistics

STATISTICS, Vital. See Vital statistics

STAUROLITE

Induced-roll magnetic separators now recovering staurolite. il Eng & Min J 153:108-9 D '52

Lehigh manufactures cement from coquina and staurolite residue. B. Nordberg. il plans diags Rock Prod 56:130-49+ Ag '53

STEAM

Curing pipe with supersaturated steam. il Concrete 86:3-5+ Ag '53

Effect of steam activation on multilayer adsorption from solution by carbon. R. S. Hansen, R. D. Hansen and R. P. Craig. bibliog J Phys Chem 57:215-19 F '53

Experimental evaluation of expansion factors for steam. J. W. Murdock and C. J. Foltz. A S M E Trans 75:953-9 Jl '53

Heat transfer to low pressure sprays of water in a steam atmosphere. S. Weinberg. bibliog diags Inst Mech Eng Proc (B) 1B no 6:240-53, pl 1-2; Discussion. il 253-8 '52

High-pressure steam curing. Concrete 61:8+ Jl; 16+ Ag '53

High-pressure steam used for 44 years; Crume brick co. il Concrete 61:18+ S '53

How much steam to heat molasses? H. B. Wayne. Power Eng 57:82 My '53

Investigation into the condensation of steam. H. Hampson and N. Özişik. bibliog il diags Inst Mech Eng Proc (B) 1B no 7:282-93; Discussion. 293-4 '52

Many common metals successfully treated in steam atmospheres. F. L. Spangler. il Materials & Methods 37:85-6 Ja '53

Medium pressure steam concentration of waste sulphite liquor. J. P. O'Donoghue, jr. and others. flow diags il diags Pulp & Pa of Can (Convention no) 54:230-8 [F] '53

New era dries more for less with a steam-circulating system. diag Textile World 103:107 Ja '53

Physical properties of high-pressure steam-cured concrete block. il Am Concrete Inst J 24:745-56 Ap '53

Reaction of carbon with steam at elevated temperatures. B. E. Hunt and others. diag Ind & Eng Chem 45:677-80 Mr '53

Reduction potential instrument shows low air concentrations in steam. F. Fahnoe. diag Chem Eng 60:232 My '53

Steam detergent cleaning of industrial equipment cleans faster and saves labor. il Mill & Factory 53:139-40 Jl '53

System NaCl-H_2O at supercritical temperatures and pressures. C. S. Copeland and others. bibliog diags J Chem Phys 21:12-16 Ja '53

Thermodynamic properties of saturated water. R. W. Haywood. bibliog diags Inst Mech Eng Proc (B) 1B no 2:49-57; Discussion. 58-63 '52

Va-Purge process, a revolution in chemical pulping. diags Can Chem Process 37:46+ Je 20 '53

Va-Purge process in chemical pulping; a symposium. diags Paper Ind 35:450-8 Jl '53

Viscosity, thermal conductivity and specific heat of steam at elevated pressures and temperatures. I. Granet and P. Kass. bibliog Pet Refiner 32:179-81 My '53

Wet steam upgrades fish oil. il Chem Eng 60:122 My '53

See also

Boilers
Condensers (steam)
Electric plants (central stations)—Steam distribution
Evaporators
Exhaust steam
Steam engines and other headings beginning Steam
Superheated steam

Tables, calculations, etc.

Basic power plant figuring; what happens to the Btu when you mix water and steam (and sometimes ice)? W. H. Engelman. Power Eng 57:77-9 Mr '53

Correcting boiler steaming rates. F. L. Van Reed. Heat & Ven 50:82-3 My '53

Curves can be established for steam and water consumption over a range production rates and weather conditions. D. E. Pierce. Ind & Eng Chem 45:sup79A-80A+ Mr '53

How to compare automatic-extraction steam-turbine projects. E. V. Pollard. Power 97:96-9 Ap '53

How to figure pressure-temperature equivalents mentally. L. R. Greif. Power Eng 57:76 F '53

Will your extraction turbine use process steam economically? E. V. Pollard. il Power Eng 57:56-8+ F '53

STEAM, Natural

Geothermal power in New Zealand. J. Grindrod. il Electrician 148:1217-18 Ap 18 '52; Mech Eng 74:917-18 N '52

STEAM boilers. See Boilers

STEAM distribution

Reducing customers' steam demand. C. B. Sprenger. Heat & Ven 50:107 Ag '53

See also

Piping (power plants)
Steam flow

STEAM engineering

See also

Boilers
Electric plants (central stations)—Steam distribution
Feed water
Marine engineering
Power (mechanics)
Power plants
Steam engines and other headings beginning Steam
Steamboats
Thermodynamics

Tables, calculations, etc.

Graph your deaerator for flashing mixtures; Heater state triangle. F. R. Alex. diag Power Eng 57:102-4 Ap '53

STEAM engines

Structural behaviour of the main engine seatings and bedplate in a cargo ship under static bending tests; abstracts. A. J. Johnson and J. E. Richards. Engineer 194:698 N 21 '52; Engineering 174:755 D 12 '52

What is wrong with this engine? Power Eng 57:103-5 O '53

See also

Locomotives
Steam turbines

Design

New design for reciprocating steam engines. il Power Eng 57:112 O '53

History

Cornish pumping engine. W. T. Hooper. il Engineer 196:262-3 Ag 28 '53

Steam power in farming. K. W. Willans. il Engineering 174:212 Ag 15 '52

Lubrication

Piping changes improve lubrication. C. T. Baker. diags Heating-Piping 25:106-7 Je '53

STEAM flow
- Effects of inertia on flow of steam through nozzles and blading of axial-flow turbines. W. J. Kearton. bibliog diags Inst Mech Eng Proc (A) 166 no 4:429-35; Discussion. 436-42 '52
- Growth of small water droplets in steam nozzles. D. J. Ryley. bibliog Engineer 195:686-8 My 15 '53
- Here's help in sizing orifices for controlling steam flow. E. Gibbons. Chem Eng 60:234 Mr '53
- How to size piping and valves for flashing mixtures. W. F. Allen, jr. bibliog il Power Eng 56:60-1+ My; 83-5 Je; 85 Ag '52; 57:94 O '53
- Why do these steam flows differ by 20 per cent? Power Eng 56:79-80 D '52; 57:92 Ja '53

STEAM generators. See Boilers

STEAM hammers
- Design and construction of a fully vibration-controlled forging hammer foundation. A. M. Klein and J. H. A. Crockett. il diags Am Concrete Inst J 24:421-44 Ja '53
- 50,000-lb drop-forge hammer; Erie foundry co. il Mech Eng 75:236 Mr '53
- Floating hammer forges 15,000th ingot. il diag Iron & Steel Eng 29:126 O '52; Mill & Factory 51:144 N '52
- Forge hammer set afloat; raft-like buildup for nickel alloy forging cuts vibration. E. M. Kline. il Steel 131:256+ O 13 '52
- Unique foundation isolates vibrations of steam hammer. diag Mach 59:260 F '53

STEAM heaters
- Elimination of traps in unit heater installations. diags Heat & Ven 50:101-2 Ag '53
- Heating system improves foundry working conditions. il Foundry 81:288 My '53
- It was drafty as a barn, but 30 unit heaters warmed it up! il Dom Eng 181:98-9 Ap '53
- Steam unit heaters piping for horizontal and vertical units; detail sheet. diags Heat & Ven 50:9-10 My '53

STEAM heating
- Fundamentals solve heat troubles. R. H. Emerick. diag Power 97:142-3 O '53
- Heating airport terminal building; Greater Pittsburgh airport. T. F. Rockwell. il diag Heating-Piping 24:77-80 D '52
- Heating modernization pays; new central boiler plant for heating Oberlin college. L. S. Ries. Heating-Piping 25:97 Ap '53
- Heating the Pennsylvania turnpike service buildings. il Heat & Ven 50:94 Mr '53
- How shall I set up heating records? Power 97:134-5 F; 133 Mr '53
- Packaged gas-fired heating boiler extends Old Sol's growing season. J. Kanda. il Power 97:126-7 F '53
- Put heating-system maintenance on a long-range operating program; Waldorf-Astoria hotel. T. J. Barrett. il diags Power 97:120-1 Jl '53
- Superheated vs. saturated steam. T. W. Reynolds. diags Heat & Ven 50:84-6 Je '53

See also

Boilers, Heating	Steam heaters
Heating from central stations	Steam pipes

Return systems

- Returning condensate from group of buildings. S. R. Lewis. Heating-Piping 24:118 S '52; Discussion. D. W. Whittington. 25:86 Mr '53

STEAM heating, Industrial
- Heating aggregates in bins. W. J. Shore. diags Rock Prod 55:193-4+ O '52
- How much steam to heat molasses? H. B. Wayne; K. W. Buxton. diag Power Eng 57:82 My; 103 Je '53
- Reduce drying time by preheating clay with steam. Brick & Clay Rec 122:66+ Ap '53
- Steam heated conveyor tunnel solves winter problem. il Mill & Factory 51:134 N '52

STEAM jets
- Corrosion problems in steam-jet vacuum equipment. D. H. Jackson. il diags Chem Eng Prog 49:102-4 F '53
- Jet exhauster cracks rubber hose production problem. diag Rubber Age 72:484 Ja '53
- Steam-jet refrigeration. L. J. Murphy. il diags Mill & Factory 53:96-9 Jl '53

STEAM locomotives. See Locomotives

STEAM pipe lines

See also

Piping (power plants)

STEAM pipes
- Are your steam pipes too small? diags Brick & Clay Rec 123:64 S '53
- Piping for float-thermostatic and thermostatic traps; detail sheet. diags Heat & Ven 50:9-10 O '53
- Rules for proper steam blast coil installation. R. G. Lubinsky. il diags Tappi 36:279-83 Je '53
- Short circuits in piping. B. Depp. diags Heating-Piping 25:112-14 S '53
- Should I repair or replace old steam heating coils? S. R. Lewis. diags Heating-Piping 25:122 Jl '53

See also

Piping (power plants)

Corrosion

- Reducing return line corrosion by new makeup treatment. F. N. Kemmer and N. C. Stratton. il diags Heat & Ven 49:105-7 N '52

Repair

- How repair this leaking pipeline? H. B. Wayne. Power Eng 57:89 S '53

Tables, calculations, etc.

- Equivalent pipe length chart for figuring pressure drops. Power Eng 57:96 Ag '53
- How to size piping and valves for flashing mixtures. W. F. Allen, jr. bibliog il Power Eng 56:60-1+ My; 83-5 Je; 85 Ag '52; 57:94 O '53

STEAM plants
- Electromet's 200,000-kw industrial power plant. il Power Eng 57:82-3 Jl '53
- Factors affecting power station plant availability. H. Weston. Inst E E Proc 100 pt 1:20-1 Ja '53
- Industry modernizes steam plants. Power 97:44-5 Mid-S '53
- Steam and electric power, its past and future; abstract. T. Baumeister. Pub Util 51:708 My 21 '53

See also

Boiler plants	Power plants
Boilers	Steam
Electric plants	Steam, Natural
Feed water	Steam engines
Piping (power plants)	Steam turbines

Binary vapor systems

- Schiller mercury-steam station sets record in first two years. W. Noyes. il Elec World News ed 138:32-4 D 8 '52

By-product power

- Back-pressure steam plant and fuel economy. Engineering 176:28 Jl 3 '53
- How power is produced at Port Alice. W. O. Stevens. il Paper Tr J 136:22-3 My 29 '53
- Saving heat in paper mills; abstract. N. Austin. Heating-Piping 25:87+ My '53

Combined heating and process steam

- Diesel improves steam plant efficiency; Howard university. V. H. Warrick. il Diesel Power 31:36-8 Mr '53
- Good planning gives high steam-plant efficiency; Anniston mfg. co. E. D. White. il Textile World 103:122-3 Ja '53
- Make a heat survey to stop hidden losses. L. Walter. il Textile World 103:112-13+ Mr '53
- Treating condensate cuts maintenance cost. G. A. Mierendorf. il diag Power 96:116-17 N '52

Combined power and process steam

- Engineering problems in packing house; abstract. L. E. Joslin. Heating-Piping 25:86 My '53
- How Tide Water Associated instruments waste-heat steam-generator system. L. L. Benthall. diag Oil & Gas J 51:110-11 Mr 9 '53
- How to compare automatic-extraction steam-turbine projects. E. V. Pollard. Power 97:96-9 Ap '53
- Merrimac paper co. begins long-range electric power modernization. L. B. Rogers. il Power Eng 57:76-7+ O '53

STEAM plants—Combined power and process steam—*Continued*

Modernization of Hawthorne power plant yields big savings. C. E. Morrow and R. F. Born. il plans diags Power Eng 57:86-9 My '53

Silicones help to assure accurate power control. L. G. Friedle. il Power Eng 57: 90-2 My '53

Steam power generation. C. S. Taft. Tappi 36:sup 130A-2A Ap '53

Steam power plant in the Kaukas mills; abstract. il Paper Ind 34:1498 Mr '53

Condensate recovery

Closed steam system on drilling rigs cuts boiler maintenance, fuel needs. G. L. Daggs. il diag World Oil 136:132-4 Ja '53

Contamination of condensate by heat-exchanger-tube alloys. J. D. Ristroph and E. B. Powell. bibliog il diag A S M E Trans 75:729-38; Discussion. 738-45 Jl '53

Detector for organic chlorides in condensate. P. Hart and R. C. King. diag Oil & Gas J 51:293 Ap 27 '53

How to make field tests for condensate pH. J. B. Davis. il Power Eng 57:83-4 Ja '53

How to size and install condensate return lines. Heating-Piping 25:115-16 Ap '53

Reducing return line corrosion by new makeup treatment. F. N. Kemmer and N. C. Stratton. il diags Heat & Ven 49:105-7 N '52

Treating condensate cuts maintenance cost. G. A. Mierendorf. il diag Power 96:116-17 N '52

Water treatment for corrosion in condensate return lines. N. C. Stratton; R. B. Conlan. Heat & Ven 50:107-8 S '53

Costs

Costs for handling coal from cars to storage. W. G. Hudson. diags Power Eng 57:72-3+ O '53

What utility steam power plants cost. H. de Soto. map Power Eng 57:82-3 Ap '53

Design

Location and proximity to load guide new steam plant design; West Springfield plant. J. W. Bennett and C. Rauch. il diags Elec World 139:76-8 My 4 '53

Today's trends in steam plant design. J. B. McClure and A. G. Mellor. il diag Elec World 138:117-19 S 8; 96-9 N 3 '52

Efficiency

Double reheat cycles, the next step? R. H. Shannon and J. D. Selby. plan Power 97: 98-9 F '53

Equipment

Bankside B. il Elec J 150:274-8 Ja 23 '53; plan Elec R (Lond) 152:204-10 Ja 23 '53

Bankside power station. il diag Engineer 195: 143-4, 167-70 Ja 23-30 '53; Engineering 175: 107-9, 112 Ja 23 '53

Bigger and better power plants to meet soaring demand economically. C. R. Earle. il diags Power Eng 57:70-5 Ja '53

Brighton B generating station. il Elec R (Lond) 152:1078-80 My 8 '53

Brighton B power station. il plan diag Engineer 195:663-5, 709-10 My 8-15 '53

Brighton B power station of the British electricity authority. il Engineering 175: 665-6 My 22 '53

Brighton B station. il Elec J 150:1641-3 My 8 '53

Bringing fish out alive is easy at Contra Costa plant. il diag Elec World News ed 139:28-9 My 25 '53

British electricity system. Engineer 195:636-8, 676 My 1-8 '53

Broadway steam plant must take 50 per cent load swing every 20 min. C. O'Connor. plan diags Power Eng 57:78-81+ Ag '53

Butler's Gorge power station. il Elec J 150: 1293-5 Ap 17 '53

Careful attention to detail marks new Whiting plant; Consumers power co. J. W. Mackenzie. il maps diags Power Eng 57: 63-6+ S '53

Centrifugal pumps in steam power stations. R. Pennington. diags Inst Mech Eng Proc (B) 1B no 4:129-40 '52; Same cond. Engineer 193:433-4, 467-9 Mr 28-Ap 4 '52; Discussion. il Inst Mech Eng Proc (B) 1B no 4:140-56 '52

Connaught Bridge power station. il Elec J 150:1146-50 Ap 3 '53; Elec R (Lond) 152: 773-7 Ap 3 '53

Delhi B power station. il diag Elec R (Lond) 152:1399-405 Je 19 '53; Same cond. Elec J 150:2189-92 Je 19 '53

Design and operation of Dunston B generating station with particular reference to 50-megawatt turbo-alternators unitized with reheater boilers. A. Howell and J. B. Jackson. plans diags Inst Mech Eng Proc (A) 167 no 1:81-96 '53; Same abr. Engineer 194: 593-5, 629-32 O 31-N 7 '52; Same cond. Engineering 174:802-4, 836-8 D 19-26 '52; Discussion. Inst Mech Eng Proc (A) 167 no 1:97-108 '53

Du Pont, how they lower power investment. Power Eng 57:78-9+ Ap '53

Europe's latest power plant; Västerås station. il diags Elec J 151:121-4 Jl 10 '53

Franklin heating station. il Heating-Piping 25:95-7 Jl '53

High-temperature steels; abstract. A. M. Sage. Elec R (Lond) 152:618 Mr 20 '53; Discussion. Engineer 195:419-21 Mr 20 '53

Hutchings station has conditioned air; Dayton power and light co.; illustrations with text. Power 97:74-7 Mr '53

Kanawha and Muskingum plants add 200,000-kw, 1050-F units to AG&E. il diag Power Eng 56:60-2+ D '52

Milesburg, three features; West Penn power co. W. V. Drake and R. A. Mycoff. il diags Power Eng 57:54-7 Mr '53

Milwaukee gains efficiency through low back pressure design. O. J. Stallkamp. flow diag il diag Elec World 139:103-5 F 23 '53

Modernization of Hawthorne power plant yields big savings. C. E. Morrow and R. F. Born. il plans diags Power Eng 57:86-9 My '53

Neal station burns pulverized lignite. D. W. DeLaurier and R. L. Hein. il diag Power 97:71-4+ Ja '53

1953 design survey; typical industrial, institutional steam plants; tabulation. Power 97:46-52 Mid-S '53

150-mw power station at Singapore. il Engineering 176:283-4 Ag 28 '53; Elec J 151: 568-72 Ag 21 '53; Elec R (Lond) 153:411-14 Ag 21 '53

Peat power in Ireland. il Elec J 151:337-40 Jl 31 '53

Reheat unit extends Goudey capacity. W. Greacen, 3d. il diags Power 97:71-5 F '53

Renovation roundup. diags Power 97:63-100 Mid-S '53

Semi-outdoor plant invades cold Minnesota; Minnesota power & light company's Aurora station now under construction. F. S. Rice and H. Carpenter. il diag Elec World 138: 106-8 D 1 '52

Steam power generation. C. S. Taft. Tappi 36:sup 130A-2A Ap '53

What's best place for evaporator in cycle? diags Power 96:130-2 N '52

See also

Condensers (steam)	Steam reheaters
Cooling towers	Steam turbines
Pumps, Feed water	Stokers, Mechanical

High pressure

ABC of superpressure. Power 97:162 O; 140 N '53 (to be cont)

Controllability of high-pressure high-temperature reheat steam plants. P. S. Dickey. Elec Eng 72:426-8 My '53

Improvements in thermal efficiencies with single-stage reheating at high steam pressures and temperatures. J. C. London. bibliog diags Inst Mech Eng Proc (B) 1B no 7: 259-69; Discussion. 269-81 '52

Modern high-pressure high-temperature boilers. G. W. Kessler. diags Mech Eng 74: 797-802, 878-84 O-N '52

Monotube comes to U.S. J. V. Santry. il Power Eng 57:69 Ag '53

STEAM plants—High pressure—*Continued*

New 4500-psi generating unit breaks through critical steam pressure barrier; Philco plant. P. Sporn. Power Eng 57:68 Jl '53; Same. Elec World News ed 139:6 My 25 '53; Same. Blast F & Steel Pl 41:942-3 Ag '53; Same cond. Elec Eng 72:657 Jl '53

Quick starting of large hp, ht boilers. J. C. Falkner. Power Eng 57:100-1+ Ap '53

Steam piping and valves for 1100 F service. F. A. Ritchings and S. Crocker. bibliog(32 titles) Heating-Piping 25:84-8 Ag; 82-8 S '53; Discussion. 25:84-90+ O '53

Superpressures; the next step to top efficiency. B. G. A. Skrotzki. il diags Power 97:80-5 S '53

Maintenance and repair

Factors affecting power station plant availability. H. Weston. Inst E E Proc 100 pt 1:20-1 Ja '53

Process steam

New flow meters save steam and improve cost accounting at Hiram Walker distillery. W. I. Bingaman and R. E. Johnson. flow chart il diag Heating-Piping 25:140-2 Ja '53

Will your extraction turbine use process steam economically? E. V. Pollard. il Power Eng 57:56-8+ F '53

Tables, calculations, etc.

Simple figuring for minor feed heating cycle changes. W. F. Allen, jr. diag Power Eng 56:98+ N '52

STEAM plants, Outdoor

Broadway steam plant must take 50 per cent load swing every 20 min. C. O'Connor. plan diags Power Eng 57:78-81+ Ag '53

Low cost, high efficiency at Etiwanda. T. M. Hotchkiss. il diag Elec West 111:89-94 Ag '53

Montana winter tests Frank W. Bird outdoor station design. il Power Eng 57:88 Mr '53

Open-air power station; Kyrene steam plant of Arizona's Salt River project. R. J. Nemmers. il map Comp Air Mag 58:44-7 F '53

Open-air steam plants are cooler and cheaper. il Eng N 150:41-2+ Je 4 '53

STEAM reheaters

Comparative efficiencies of central-station reheat and nonreheat steam-turbine-generator units. C. W. Elston and P. H. Knowlton. diags A S M E Trans 74:1389-98; Discussion. 1398-9 N '52

Double reheat cycles, the next step? R. H. Shannon and J. D. Selby. plan Power 97:98-9 F '53

Improvements in thermal efficiencies with single-stage reheating at high steam pressures and temperatures. J. C. London. bibliog diags Inst Mech Eng Proc (B) 1B no 7:259-69 '52; Excerpts. Elec R (Lond) 151:332 Ag 15 '52; Discussion. Inst Mech Eng Proc (B) 1B no 7:269-81 '52

Reheat cycle; comments on the combined leaving and exhaust loss of non-reheating turbine plant. J. R. Finniecome. Elec R (Lond) 151:883-4 O 24 '52

Reheat turbines are shouldering the increased electrical load. R. L. Jackson. il diag Gen Elec R 55:54-7 N '52

Reheat unit extends Goudey capacity. W. Greacen, 3d. il diags Power 97:71-5 F '53

STEAM traps

Choose the right steam trap. T. Trail. il diags Mill & Factory 52:79-83 F '53

Elimination of traps in unit heater installations. diags Heat & Ven 50:101-2 Ag '53

Improved steam trap. S. H. Tucker. diag Chem & Ind p292 Mr 28 '53

Piping for float-thermostatic and thermostatic traps; detail sheet. diags Heat & Ven 50:9-10 O '53

Short circuits in piping. B. Dopp. diags Heating-Piping 25:112-14 S '53

Why steam traps are important. G. H. Setterlund. diags Power Eng 57:72 My '53

STEAM turbines

Advances in the design of large turbine generators; based on papers by C. E. Kilbourne and others. diags Power Eng 57:98-100+ Ag '53

Aluminum alloy enables manufacture of more powerful steam turbine-generators. il Elec Eng 71:1052 N '52; Elec World 138:178 O 6 '52

Basic power plant figuring; how to tell if a given steam turbine will fit your conditions. W. H. Engelman. diag Power Eng 57:100-3 O '53

Design and application of large steam turbine driven generators. C. E. Kilbourne and J. B. McClure. Power 97:154+ Je '53

Design of British power stations. S. D. Whetman and A. E. Powell. Engineering 175:349-50 Mr 13 '53

Dual steam inlets on turbines pose a piping problem. W. H. Goetz. diags Heating-Piping 25:83 Je '53

Engineering highlights of 1952; turbines. C. A. Scarlott. il Westinghouse Eng 13:2-4 Ja '53

Gas pipeline harnesses steam. L. L. Nunley. il map diags Power 97:73-6 S '53

Prevention of metal losses in the wet steam areas of steam turbines; abstract. F. L. Archibald and others. diag Power 97:150+ Ag '53

Record output of turbine-generators. il Blast F & Steel Pl 41:665-6 Je '53

Reheat cycle; comments on the combined leaving and exhaust loss of non-reheating turbine plant. J. R. Finniecome. Elec R (Lond) 151:883-4 O 24 '52

Reheat turbines are shouldering the increased electrical load. R. L. Jackson. il diag Gen Elec R 55:54-7 N '52

Solid-wheel turbine is tough work horse; illustrations and drawings with text. S. Elonka. Power 97:108-9 S '53

Steam turbines boost paper output 12 per cent. il Power Eng 57:88-9 Ja '53; Same cond. Paper Ind 34:1077-8 D '52; Excerpts. Paper Tr J 135:12 O 24 '52

Turbine will use high temperature steam. Blast F & Steel Pl 40:1199 O '52; il Elec Eng 71:1031 N '52; Iron Age 170:173 N 13 '52

Blades

Effects of inertia on flow of steam through nozzles and blading of axial-flow turbines. W. J. Kearton. bibliog diags Inst Mech Eng Proc (A) 166 no 4:429-35; Discussion. 436-42 '52

Efficiency

Comparative efficiencies of central-station reheat and nonreheat steam-turbine-generator units. C. W. Elston and P. H. Knowlton. diags A S M E Trans 74:1389-98 N '52; Excerpt. Elec World 138:122 O 6 '52; Abstract. Power Eng 56:65+ Mr '52; Discussion. A S M E Trans 74:1398-9 N '52

Improvements in thermal efficiencies with single-stage reheating at high steam pressures and temperatures. J. C. London. bibliog diags Inst Mech Eng Proc (B) 1B no 7:259-69; Discussion. 269-81 '52

Extraction

How to compare automatic-extraction steam-turbine projects. E. V. Pollard. Power 97:96-9 Ap '53

Will your extraction turbine use process steam economically? E. V. Pollard. il Power Eng 57:56-8+ F '53

Failure

Old and costly danger; water carry-over. il Power Eng 57:75-6 My '53

Gearing

See also
Steam turbines, Marine—Gearing

Maintenance and repair

Regular turbine care pays big dividends. H. Neary. il Power 97:108-11 Ap '53

Manufacture

Balancing turbine-generator rotors. L. P. Grobel. il diags Gen Elec R 56:22-5 Jl '53

Machining plant for turbine casings; Rugby works of the British Thomson-Houston co. il Engineer 196:105-6 Jl 24 '53; Engineering 176:97-8 Jl 24 '53

STEAM turbines—*Continued*

Standards

Revision of AIEE-ASME preferred standards for steam turbine-generators; with table. Mech Eng 75:176 F '53

Starting

Factors involved in the starting and subsequent loading of modern steam turbines. C. W. Elston. il Blast F & Steel Pl 41:524-9+ My '53

New start-up method for St Clair turbines. F. Tabor. Power Eng 56:75 N '52

Starting high-pressure turbines. J. S. Hall and O. Howarth. Elec R (Lond) 152:400-1 F 20 '53

Temperature

Some reflections on the thermal distortion of turbine casings; abstract. B. J. Terrell. Engineering 175:392-3 Mr 27 '53

Testing

G.E. building turbine product development laboratory. W. E. Saupe. Blast F & Steel Pl 41:1070 S '53

Turbine shaft distortion; supervisory indicators at Uskmouth. il Elec R (Lond) 151:398 Ag 22 '52; Electrician 149:613 Ag 29 '52

Vibration

Determination of natural resonances in mechanical systems; abstract. O. P. T. Kantorowicz. Engineering 175:393 Mr 27 '53

How to cut vibration in big turbine-generator foundations. F. P. Witmer. diags Power 96:86-7 N '52

STEAM turbines, Marine

Marine turbine research by Pametrada. Engineering 175:727-8, 781 Je 5, 19 '53

Propulsion machinery and auxiliaries on the Mariners. il plans diags Marine Eng 58:99-110 My '53

Steam turbine research and development; Institution of mechanical engineers conference, March 6; with abstracts of papers. Engineering 175:362, 392-3 Mr 20-27 '53; Discussion. 175:426-7, 458-9, 509-10 Ap 3-17 '53; Engineer 195:393-4, 435 Mr 13-20 '53

Design

Development of a marine steam-turbine design. H. G. Yates. diags Engineer 195:387-9, 439-40 Mr 13-20 '53

Gearing

Controlling water vapor inside main reduction gear case. il diag Marine Eng 58:76 O '53

How to keep 'em sailing; maintenance of reduction gears. A. D. Sutton. il Marine Eng 58:79-83 Ag '53

Recent developments in naval propulsion gears; abstract. I. Monk and others. Marine Eng 58:60; Discussion. 60-2 F '53

Lubrication

Marine turbine oil test kit. il Marine Eng 58:76 Ag '53

Maintenance and repair

How to keep 'em sailing; maintenance of marine turbines. R. O. Butcher. il diag Marine Eng 58:43-8 Jl '53

Testing

Full-scale testing of marine turbines; abstract. T. W. F. Brown. Engineering 175:362 Mr 20 '53

Measurement of specific steam consumption; abstract. M. H. Petty. Engineering 175:362 Mr 20 '53

STEAM vehicles. See Motor vehicles, Steam

STEAMBOAT lines

West German-Angolan services installed. For Comm W 48:10 N 3 '52

See also

American export lines

Cunard steam-ship company, limited

United States lines

Accounting

Can completed contract basis be used for all jobs extending into two taxable years? J. S. H. Weiner. J Account 94:708-12 D '52

Taxation

Shipowners urge tax deferments to aid shipbuilding. J. A. Farrell. Marine Eng 58:77-8 Mr '53

Germany

New German ships; Bonn subsidizes revival of transatlantic liner services. J. Joesten. Barron's 33:7-8 Mr 2 '53

STEAMBOATS

Building the Mariner ships. il plans diags Marine Eng 58:79-117 My '53

Changes in Spithead. G. W. Tripp. il Engineer 195:346-7 Mr 6 '53

Chesapeake & Ohio operates largest Lakes carferry. il plans diags Marine Eng 58:42-57 Mr '53

Decade of transition; our early steam navy and merchant marine. R. T. Merrill. il plans diags U S Naval Inst Proc 78:1004-15 S '52

French cross-channel steamer Lisieux. G. W. Tripp. il Engineer 195:588-90 Ap 24 '53

Hotel that floats, Portsmouth, Ohio; Sarah Lee, formerly excursion steamer being made ready for operation as a hotel. il Bsns W p 136+ Ap 11 '53

In the days of the up and down engine. L. S. McCready. il Marine Eng 58:55-8 Ap '53

Large ore carriers for Great Lakes service. il plans Engineer 196:170-2 Ag 7 '53

North Sea liner Leda. il plan Engineer 195:695-8 My 15 '53; Engineering 175:662-3 My 22 '53

Oldest yard launches newest ship. il Marine Eng 58:60 O '53

Paddle steamer for Loch Lomond. G. W. Tripp. il Engineer 195:834-5 Je 12 '53

Passenger liner Viet Nam. il Engineer 195:401 Mr 13 '53

Planning the Mariner class fast cargo ships. il Marine Eng 58:74-8 My '53

Post-war Italian liners; Andrea Doria. il Engineering 175:809-11, pl 126 Je 26 '53

Safety features of new Andrea Doria. J. J. Baicich. East Underw 53:30 D 19 '52

Sinclair's little supertanker, P. C. Spencer, makes good. il plans diags Marine Eng 58:52-64 Ag '53

600-foot Lakes ore carriers built in East Coast shipyard. R. M. Cashman and C. E. Ericson. il plans diag Marine Eng 58:36-47 Ja; 70-5 F; 64-75 Mr; 69-75 Ap '53

Steam tug Horus for Suez canal. il Engineering 175:493 Ap 17 '53

Steamer Edward B. Greene becomes the new Cleveland-Cliffs flagship. il plans Marine Eng 57:38-50 N '52

S.S. United States. E. E. Benzenberg. il Midwest Eng 5:3-5+ My '53; Same cond. diag Elec Eng 72:230-5 Mr '53

S.S. Vigilant for the Mersey docks and harbour board. il Engineering 176:158-9 Jl 31 '53

Steamship, World enterprise. Engineer 195:892-3 Je 26 '53

Sun Oil enters supertanker field with Delaware Sun class ships. il plans diags Marine Eng 58:50-66 S '53

Sun's first super tanker joins fleet. il Marine Eng 58:79 Mr '53

Twin-screw steamship Vigilant. il Engineer 196:106-7 Jl 24 '53

Yale; glamor ship of American coastwise fleet. F. O. Braynard. il Marine Eng 58:63-4 O '53

See also

Boilers, Marine

Naval architecture

Ship propulsion

Shipbuilding

Shipping

Ships

Steam turbines, Marine

Steamboat lines

History

First iron steamer. H. P. Spratt. bibliog il Engineer 195:163-4 Ja 30 '53

Merchant steam vessels of the United States, 1807-1868; the Lytle list. W. M. Lytle, comp. 294p Steamship historical soc. of America, E. A. Patt. West Barrington, R.I. '53 ($5)

STEARATES

See also

Aluminum stearate

STEARIC acid

Adsorption on monolayers; adsorption of the isomeric hexanes on condensed stearic acid monolayers and on clean water surfaces. K. E. Hayes and R. B. Dean. bibliog J Phys Chem 57:80-3 Ja '53

Radioactive monolayers; a new approach to surface research. D. E. Beischer. bibliog il diag J Phys Chem 57:134-8 F '53

Sorption of vapors by monolayers; the differential heats of adsorption of *n*-hexane on stearic acid monolayers. R. B. Dean and K. E. Hayes. bibliog Am Chem Soc J 74: 5982-4 D 5 '52

Analysis

Isolation of palmitic, stearic and linoleic acids from guayule resin. T. F. Banigan, jr. and J. W. Meeks. bibliog Am Chem Soc J 75:3829-30 Ag 5 '53

STEATITE

Further developments in low-loss steatite bodies using Yellowstone talc. R. S. Lamar. bibliog Am Cer Soc Bul 32:12-15 Ja 15 '53

See also

Talc

STEEL

Annual engineering materials review and forecast; irons and steels. T. C. Du Mond. Materials & Methods 37:103 Ja '53

Iron atoms in the service of the electrical engineer. C. Goodeve. bibliog il diags Inst E E Proc 99 pt 1:225-32 N '52; Same cond. Engineer 193:599-600 My 2 '52; Abstract. Engineering 173:551 My 2 '52

More scrap for more steel. Steel 132:44a-44e Ja 12 '53

New demands lead to new directions in engineering materials; iron and steels. T. C. Du Mond. Materials & Methods 37:79-82 Je '53

New pickling processes for iron and steel; abstract. E. Brauns. Metal Finishing 51: 79 Ag '53

Russian steels today. C. A. Zapffe. bibliog Materials & Methods 38:79-86 Ag '53

Steel and iron required for modern-day products; tabulation. Steel 132:169 Ja 5 '53

Studies in the corrosion of metals occasioned by aqueous solutions of some surface-active agents; mild steel. T. K. Ross and H. Holness. bibliog J Ap Chem 2:520-6 S '52

What steel for enamelers? M. B. Gibbs and F. R. Porter. il Steel 132:108-9+ Je 1 '53

What's ahead the next ten years in materials and components. Am Mach 96:A2-4 Mid-N '52

See also

Bessemer process
Bridges, Iron and steel
Case hardening
Chromium nickel steel
Chromium steel
Concrete, Reinforced
Corrosion and anticorrosives
Foundry practice
Iron
Manganese steel
Molybdenum steel
Nickel steel
Open hearth process
Pipes, Steel
Rails
Rolling (metal work)
Rolling mills
Sheet steel
Silicon steel
Springs (mechanism)
Steel, Aircraft and other headings beginning Steel
Tool steel
Tubes, Steel

Aging

Accelerated strain aging of commercial sheet tools. L. R. Schoenberger and E. J. Paliwoda. Automotive Ind 107:141-2+ N 15 '52

Effect of direction of rolling, direction of straining, and ageing on the mechanical properties of a mild-steel plate. C. F. Tipper. bibliog Iron & Steel Inst J 172: 143-8 O '52; Abstract. Metal Prog 64:288+ O '53; Discussion. il diags Iron & Steel Inst J 173:280-4 Mr '53

Effect of residual stresses on yielding and strain-ageing of carbon steel. N. H. Polakowski. bibliog diags Iron & Steel Inst J 172:369-76 D '52

Effects of vanadium or chromium on the strain ageing of rimming steels. W. R. D. Jones and G. Coombes. bibliog il Iron & Steel Inst J 174:9-15 My '53

Fundamental effects of aging on creep properties of solution-treated low-carbon N-155 alloy. D. N. Frey and others. bibliog il diag U S Nat Advisory Com for Aeronautics 1950:939-68 '51

Influence of aging on the Bauschinger effect in inelastically strained beams. T. M. Elsesser and others. bibliog diags A S M E Trans 74:1291-6 N '52

Strain aging behavior of rheotropically embrittled steel; abstract. E. J. Ripling. Metal Prog 64:198+ O '53

Aluminum content

Aluminum good yardstick for steel grain size. J. W. Alden and J. G. Mravec. il Steel 131:96+ N 17 '52

Aluminum-oxygen equilibrium in liquid iron. N. A. Gokcen and J. Chipman. bibliog J Metals 5:Trans 173-8 F '53

Analysis

Absorptiometric determination of tungsten in steel. Iron & Steel Inst J 172:413-15 D '52

Aluminum good yardstick for steel grain size. J. W. Alden and J. G. Mravec. il Steel 131:96+ N 17 '52

Determination of copper in iron and steel. Iron & Steel Inst J 174:335-8 Ag '53

Determination of nonmetallic compounds in metals. H. F. Beeghly. Anal Chem 24:1713-21 bibliog(113 ref, p 1720-1) N '52

Determination of zirconium in steels using *p*-bromo- or *p*-chloromandelic acid. J. J. Klingenberg and R. A. Papucci. bibliog Anal Chem 24:1861-2 N '52

Influence of varying amounts of elements in steel and cast irons on spectral intensity. L. J. Canody and others. bibliog Opt Soc Am J 43:145-8 F '53

Method of storage of solid steel samples for hydrogen analysis. Y. L. Yao and K. S. Milliken. Anal Chem 25:363-4 F '53

New spectrochemical excitation unit; a key to essential control in boron steels. J. T. Rozsa and L. E. Zeeb. il diag Steel 131: 92+ O 6 '52

Sampling methods; method of obtaining test bars key to foundry test results. il Iron Age 171:132-3 Ap 16 '53

Sampling of liquid steel for dissolved oxygen. G. F. Huff and others. bibliog il J Metals 4:Trans 1162-5; Discussion. 1165-7 N '52

Thermal conductivity method for analysis of hydrogen in steel. B. M. Shields and others. bibliog diags J Metals 5:Trans 180-4 F '53; Discussion. 5:Trans 1551 sec 2 N '53

See also

Steel alloys—Analysis

Bibliography

Review of iron and steel literature for 1952. V. S. Polansky. Blast F & Steel Pl 41:651-5, 782-4+ Je-Jl '53 [reprinted by Carnegie library of Pittsburgh]

Blackening

Black oxide coatings on steel; abstract. Metal Finishing 51:77-8 My '53

Boron content

Action of boron in enhancing the hardenability of steel. T. G. Digges. bibliog S A E J 61:24-8 S '53

Addition of boron to steel by reduction from boron oxide. G. E. Speight. bibliog Iron & Steel Inst J 171:147-53 Je '52; Abstract. Metal Prog 63:134+ Ap '53; Discussion. Engineer 194:823-4 D 19 '52; Engineering 174:818 D 26 '52; Iron & Steel Inst J 173: 275-9 Mr '53

Boron and tentative standard steels; American iron and steel institute, Feb. 1953; data sheet. Metal Prog 63:96B Ap '53

Boron steel; now they like it. Bsns W p92-3 D 27 '52

Boron steels; the basis of selection. H. B. Knowlton. Product Eng Hdbk p B2-9 '53; Same abr. S A E J 60:74-7 My '52; Same abr. Materials & Methods 35:84-7 Mr '52

Carbon content determines boron steel behavior. A. S. Jameson. bibliog Steel 131: 154-6 O 13 '52

Effect of boron on notch toughness and temper embrittlement; abstract. A. E. Powers and R. B. Carlson. Metal Prog 64:196+ O '53

Effect of boron on the mechanical properties of low-alloy steels. R. Wilcock. Iron & Steel Inst J 173:406-19 Ap '53; Discussion. Engineer 195:705-6 My 15 '53

STEEL—Boron content—*Continued*

Effect of boron on the overheating temperature of steel. J. Field. bibliog il Metal Prog 64:78-83 Ag '53

81B40. R. N. Imhoff and J. W. Poynter. il Metal Prog 64:65-71 Jl '53

Experiences with boron additions to alloy structural steels; abstract. H. Krainer and M. Kroneis. Metal Prog 63:134+ My '53

Experiences with boron steels in production. H. B. Knowlton. il Metal Prog 63:67-74 Ap '53

Grain boundary films in boron steels. J. W. Spretnak and R. Speiser. J Metals 5:Trans 445-6 Mr '53

Hypotheses for the boron hardenability mechanism; abstract. J. W. Spretnak and R. Speiser. Metal Prog 64:186+ O '53

Induction hardening boron steel gears. G. Van Camp. il Materials & Methods 36:121-2 N '52

Manufacture and use of boron steels in the United States; summary and discussion. L. J. Rohl. Engineer 195:670-1 My 8 '53

New spectrochemical excitation unit; a key to essential control in boron steels. J. T. Rozsa and L. E. Zeeb. il diag Steel 131:92+ O 6 '52

Processing of boron steels in the shop. G. D. Rahrer. il Metal Prog 63:85-9 My '53

Some metallurgical characteristics of medium-carbon boron-treated steels. R. N. Imhoff and J. W. Poynter. il Metal Prog 63: 97-104 Mr '53

Tentative hardenability bands for boron steels; charts; data sheet. Metal Prog 63: 96B My '53

Transformation and hardenability of boron steels; data sheet. Metal Prog 63:96B Mr '53

Brittleness

Brittle fracture in steel; Iron and steel institute symposium. Engineering 176:70-3 Jl 17 '53

Brittle fracture of mild steel. T. S. Robertson. Engineer 192:278-9 Ag 31 '51; Abstract. Metal Prog 62:198+ N '52

Brittle fracture studies in the United States. S. L. Hoyt. Engineering 176:187-8, 220-1 Ag 7-14 '53

Brittle strength and transition temperature of structural steel. W. C. Hoeltje and N. M. Newmark. bibliog diags Welding J 31:sup 515-21 N '52

Brittle structural failures with emphasis on welded ships. J. O. Almen. il diags Product Eng 24:192-203 Ap '53

Cleavage strength of polycrystals. N. J. Petch. bibliog Iron & Steel Inst J 174:25-8 My '53

Effect of arsenic and antimony on temper-brittleness. G. W. Austin and others. bibliog il pl diags Iron & Steel Inst J 173: 376-86 Ap '53; Discussion. 174:358-72 Ag '53

Effect of boron on notch toughness and temper embrittlement; abstract. A. E. Powers and R. B. Carlson. Metal Prog 64:196+ O '53

Effect of chemical composition on susceptibility of steels to temper brittleness; abstract. R. Hultgren and J. C. Chang. Metal Prog 64:252+ O '53

Effect of strain-rate on twinning and brittle fracture. D. Rosenthal and C. C. Woolsey, jr. bibliog(35 ref) il diags Welding J 31: sup475-92 O '52; Correction. 32:sup304 Je '53

Effect of various heat treating cycles upon temper brittleness; abstract. L. D. Jaffe and others. Metal Prog 62:142+ N '52

Embrittlement of alloy steel at high strength levels; abstract. L. J. Klingler and others. Metal Prog 64:260+ O '53

Embrittlement of high-strength ferritic welds. P. P. Puzak and W. S. Pellini. bibliog il diags Welding J 31:sup521-6 N '52; Discussion. H. C. Campbell and R. P. Wentworth. 32:sup73-4 F '53

Endurance limit of temper-brittle steel; abstract. R. D. Chapman and W. E. Jominy. Automotive Ind 107:46-7+ N 15 '52

Evaluation of brittle failure research. E. F. Sweeney. bibliog(46 titles) diags Welding J 32:sup 1-13 Ja '53

Identification of the precipitate accompanying 885° F embrittlement in chromium steels. R. M. Fisher and others. bibliog il J Metals 5:Trans 690-5 sec 2 My '53

Notched slow-bend test as a brittle-fracture test. J. E. de Graaf and J. H. van der Veen. il Iron & Steel Inst J 173:19-30 Ja '53

Relation of preheating to embrittlement and microcracking in mild steel welds. A. E. Flanigan and T. Micleu. diags Welding J 32:sup99-106 F '53

Scale effects in notch brittleness. Y. Akita. diags Welding J 32:sup475-80 S '53

Sigma-phase embrittlement in 25Cr-20Ni heat resisting steels. J. I. Morley and H. W. Kirby. bibliog 4pls Iron & Steel Inst J 172:129-42 O '52; Abstract. Metal Prog 64:140-2+ S '53; Discussion. Iron & Steel Inst J 175:407-8 D '53

Some aspects of temper-brittleness. B. C. Woodfine. bibliog 4pls diag Iron & Steel Inst J 173:240-55 Mr '53; Discussion. 174: 358-72 Ag '53

Strain aging behavior of rheotropically embrittled steel; abstract. E. J. Ripling. Metal Prog 64:198+ O '53

Survey of embrittlement and notch sensitivity of heat resisting steels; abstract. G. Sachs and W. F. Brown, jr. Metal Prog 63:171-2+ My '53

Temper-brittleness; a critical review of the literature. B. C. Woodfine. bibliog(77 ref) Iron & Steel Inst J 173:229-40 Mr '53; Discussion. 174:358-72 Ag '53

Temper brittleness in low-alloy steel weld metal. R. P. Wentworth and H. C. Campbell. bibliog il diags Welding J 31:sup505-14 N '52; Discussion. 32:sup 107-11 F '53

Transition from ductile to brittle behavior in pressure vessel steels. T. N. Armstrong and others. il Welding J 31:sup371-80 bibliog(97 titles, p379-80) Ag '52; Abstract. Metal Prog 63:202+ Ap '53; Discussion. Welding J 31:sup623-4 D '52

Case hardening

See Case hardening

Cathodic protection

Cathodic protection of buried or submerged structures. Engineering 176:287 Ag 28 '53

Cathodic protection of steel; electrical current and potential requirements. F. Wormwell and others. bibliog Chem & Ind p972-4 O 4 '52

Corrosion control of steel equipment. T. R. B. Watson. diags Can Chem Process 37:46+ S '53

What's the matter with magnesium? secret of success as a corrosion mitigator is proper use. M. E. Parker. World Oil 135: 314+ O '52

See also

Tanks, Steel—Cathodic protection

Cleaning

Airless blast saves enameler $154 per day. il Cer Ind 59:56 D '52

Cleaning stainless steel work. E. M. Rains. il Sheet Metal Worker 44:86-7 Jl; 80-1, 140 S '53

Descaling of steel sheet or strip; patent. Iron & Steel Eng 30:26 My '53

How to clean stubborn deposits from stainless steel. il Materials & Methods 37:252+ Je '53

Peeling problem; blast cleaning heads off paint peeling. il Steel 132:74 Ja 26 '53

Scale removal by wet blasting cuts tool polishing costs. il Iron Age 171:144 Je 25 '53

Shot blasts 430 cleaning costs; Washington steel corp. il Steel 132:86+ F 16 '53

Color

Color and reflectance of stainless steels. F. K. Bloom. il diags Metal Prog 63:67-72 Je '53

See also

Steel—Blackening

Corrosion

See Corrosion and anti-corrosives

Decarburization

Continuous annealing with carbon restoration; abstract. J. D. Armour. Metal Prog 63:188+ F '53

STEEL—*Continued*

Defects

Drill pipe rejects show good service life. H. G. Texter. il Pet Eng 24:B78+ D '52; Same cond. Oil & Gas J 51:100-2+ N 10 '52

Segregation, major cause of flakes in alloy gun steels. J. B. Gero and A. R. Troiano. bibliog diags Iron Age 171:133-7 Mr 26 '53

Steel defects commonly attributed to heating. G. Boal. il Iron & Steel Eng 30:64-7 Mr '53

Surface defects in hot-worked mild steel; abstract. H. Buchholtz and R. Pusch. Engineer 196:270 Ag 28 '53

Deoxidation

Aluminum-oxygen equilibrium in liquid iron. N. A. Gokcen and J. Chipman. bibliog J Metals 5:Trans 173-8 F '53

Silicon carbide deoxidation practice grows. Iron Age 171:105 Ja 22 '53

Descaling

See Steel—Cleaning

Failure

Brittle fracture of mild steel. T. S. Robertson. Engineer 192:278-9 Ag 31 '51; Abstract. Metal Prog 62:198+ N '52

Controlled thermal severity cracking test simulates practical welded joints. C. L. M. Cottrell. bibliog il diags Welding J 32: sup257-72 Je '53

Corrosion cracking of martensitic stainless steel. A. E. Durkin. il Metal Prog 64:72-5 Jl '53

Cylinder specimen for testing the cracking tendency of steels and electrodes. P. Werthebach. diag Welding J 32:sup302 Je '53

Deformation and fracturing of thick-walled steel cylinders under explosive attack. J. Pearson and J. S. Rinehart. bibliog il diag J Ap Phys 23:434-41 Ap '52

Effect of chromium plating of steel on the fatigue limit. G. M. Cabble, jr. bibliog Metal Finishing 51:106-8 Je; 60-3 Jl '53

How serious is graphitization? R. J. Fiorentino and A. M. Hall. bibliog il Pet Refiner 32:132-6 My '53; Same cond. diags Oil & Gas J 52:110+ Je 8 '53

Initiation and propagation of brittle fracture in structural steels. P. P. Puzak and others. bibliog il diags Welding J 31:sup 561-81 D '52

Propagation of fractures in mild-steel plates. G. M. Boyd. bibliog il diags Engineering 175:65-9, 100-2 Ja 16-23 '53

Signaller to reduce quench cracking of steel. L. D. Jaffe and others. il diag Metal Prog 64:119-21 O '53

Stress-corrosion cracking of mild steels in nitrate solution. R. N. Parkins. bibliog 2pls diags Iron & Steel Inst J 172:149-62 O '52; Discussion. 174:140-2, 317 Je, Ag '53

Test for measuring quench crack sensitivity of engineering alloy steels. R. D. Chapman and W. E. Jominy. il diags Metal Prog 64: 67-72 S '53

See also

Steel—Brittleness

Finishing

Brake disks deburred; Goodyear aircraft corp. W. J. Hobday. il Automotive Ind 108:53+ My 1 '53

Developments in the iron and steel industry during 1952. I. E. Madsen. il diag Iron & Steel Eng 30:146-8 Ja '53

Effects of grinding and other finishing processes on the fatigue strength of hardened steel. L. P. Tarasov and H. J. Grover. bibliog il diags Am Soc T M Proc 50:668-87; Discussion. 687-98 '50

Machining; better finish, longer tool life attained with carbide inserts. il diag Iron Age 171:206-7 Mr 5 '53

Mechanical cleaning gives higher luster at lower cost; abrasive scouring. W. G. Patton. il Iron Age 170:155-7 D 11 '52

Mechanized hot scarfing. J. H. Zimmerman. il Iron & Steel Eng 30:108-12; Discussion. 112-13 My '53

Non-electrolytic smoothing treatment for steel. W. A. Marshall. il diag Metal Finishing 50:78-83+ N; 67-9 D '52

Processing, properties, and application of cold finished carbon steel bars. J. F. Byers. il diags Iron & Steel Eng 30:103-7 My '53

Selection of interior finish for home freezers. O. J. Spawn. diag Refrig Eng 61:972-3 S '53

Snagging operations. H. W. Wagner. diag Foundry 81:112-13+ Ja '53

Special machine improves stainless roll finish. M. B. Hanks. il Steel 131:66-7+ D 22 '52

Surface finishing the stainless steels. L. F. Spencer. bibliog il Metal Finishing 51:70-7 Mr '53

Tips on surface refinishing of stainless steel work; illustrations with text. E. M. Rains. Sheet Metal Worker 44:66-7 My '53

See also

Steel—Blackening

Hydrogen content

Determination of hydrogen in liquid steel. R. M. Cook and J. D. Hobson. Iron & Steel Inst J 169:24-5 S '51; Discussion. 172:46-51 S '52

Diffusion of hydrogen in iron and iron alloys at elevated temperatures. P. L. Chang and W. D. G. Bennett. bibliog diags Iron & Steel Inst J 170:205-13 Mr '52; Abstract. Metal Prog 62:180+ D '52; Discussion. Iron & Steel Inst J 172:46-51 S '52

Influence of carbon content with diffusion of hydrogen in steel during pickling; hydrogen embrittlement; abstract. S. A. Balezin and D. Ya Solovei. Metal Finishing 51:79-80 S '53

Thermal conductivity method for analysis of hydrogen in steel. B. M. Shields and others. bibliog diags J Metals 5:Trans 180-4 F '53; Discussion. 5:Trans 1551 sec 2 N '53

Hydrogen effect

Effect of hydrogen on the tensile properties of steel. J. D. Hobson and J. Hewitt. bibliog diag Iron & Steel Inst J 173:131-40 F '53

Studies of the crack sensitivity of aircraft steels. A. W. Steinberger and J. Stoop. bibliog il Welding J 31:sup527-42 N '52; Discussion. 32:sup 157-60 Mr '53

War against corrosion; preventing hydrogen attack on steel. W. A. Bonner and others. bibliog il diags Pet Processing 8:686-90, 878-83 My-Je '53

Inclusions

Correlation of machinability with inclusion characteristics in resulphurized Bessemer steels. L. H. Van Vlack. Automotive Ind 107:132+ N 15 '52

Effect of inclusions on the fatigue strength of S.A.E. 4340 steel; abstract. J. T. Ranson. Metal Prog 63:206+ O '53

Liquidus surface of the Fe-S-O system. D. C. Hilty and W. Crafts. bibliog il diags J Metals 4:Trans 1307-12 D '52

Lead content

Metallurgical aspects of machinability of steel; abstract. W. I. Pumphrey. Metal Prog 64:143-4 Ag '53

Marking

Identification marking of blooms, billets and slabs. C. C. Hill, jr. Iron & Steel Eng 30:73-9 Ap '53

Metallography

Absolute rate theory applied to rate of growth of pearlite. J. H. Frye, jr. and others. bibliog J Metals 5:Trans 219-24 sec 2 F '53; Discussion. 5:Trans 1581-2 sec 2 N '53

Advances in metallurgy revealed in ASM sessions. il diag Steel 131:78+ O 27 '52

Aluminum good yardstick for steel grain size. J. W. Alden and J. G. Mravec. il Steel 131:96+ N 17 '52

Behaviour of carbides in niobium stabilized austenitic stainless steel. T. V. Simpkinson. il Metallurgia 47:18-24 Ja '53

Carbide precipitation, secondary hardening, and red hardness of high-speed steel. K. Kuo. bibliog Iron & Steel Inst J 174:223-8 Jl '53

Carbides in chromium, molybdenum, and tungsten steels. K. Kuo. bibliog pl diags Iron & Steel Inst J 173:363-75 Ap '53

STEEL—Metallography—*Continued*

Cleavage strength of polycrystals. N. J. Petch. bibliog Iron & Steel Inst J 174:25-8 My '53

Constitution of iron-nickel-chromium alloys at 550-800°C. A. J. Cook and B. R. Brown. bibliog 3pls Iron & Steel Inst J 171:345-53 Ag '52; Abstract. Metal Prog 63:190+ Je '53

Continuous-cooling transformation diagrams of steels. W. Steven and G. Mayer. bibliog 2pls diags Iron & Steel Inst J 174:33-45 My '53

Continuous short-cycle anneal for spheroidization of cartridge-case steel. O. E. Cullen. il diags Metal Prog 64:79-82 Jl '53

Decomposition of austenite in low carbon, Ni, Mo, steel weld metal. E. F. Bailey and W. J. Harris, jr. il diag Welding J 32:sup 134-8 Mr '53

Deformation by transformation makes alloys tougher. E. S. Machlin. il diags Iron Age 171:106-9 Ja 22 '53

Deformation of austenite in relation to the hardness characteristics of steel. G. R. Bish and H. O'Neill. bibliog pl diags Iron & Steel Inst J 173:398-405 Ap '53; Discussion. 174:347-52 Ag '53

Discontinuous grain growth in high speed steel; abstract. A. H. Grobe and others. Metal Prog 64:232+ O '53

Effect of a prequench on the martensite reaction in tool steel. J. J. Gilman. il J Metals 4:Trans 1300-1 D '52

Effect of carbon on the volume fractions and lattice parameters of retained austenite and martensite. C. S. Roberts. bibliog J Metals 5:Trans 203-4 F '53

Effect of composition on the warm-working characteristics of austenitic alloys. G. T. Harris and H. C. Child. bibliog Iron & Steel Inst J 174:325-30 Ag '53

Effect of molybdenum and of nickel on the rate of nucleation and the rate of growth of pearlite. R. W. Parcel and R. F. Mehl. bibliog il J Metals 4:Trans 771-80 Jl '52; Discussion. 5:Trans 740-1 sec 2 My '53

Effect of nonmartensite decomposition products on the properties of quenched and tempered steels; abstract. E. F. Bailey. Metal Prog 64:182+ O '53

Effect of pearlite spacing on transition temperature of steel at four carbon levels; abstract. J. A. Rinebolt. Metal Prog 64: 268+ O '53

Effect of quenching and tempering on residual stresses in manganese oil hardening toolsteel; abstract. H. J. Snyder. Metal Prog 62:162+ N '52

Effect of strain-rate on twinning and brittle fracture. D. Rosenthal and C. C. Woolsey, jr. bibliog(35 ref) il diags Welding J 31: sup475-92 O '52; Correction. 32:sup304 Je '53

Effect of temperature on the rolling texture of plastically deformed low-carbon strip; abstract. N. P. Goss. Metal Prog 63:182+ F '53

Effects of high-temperature heating on the isothermal formation of bainite. S. A. Cottrell and T. Ko. pl Iron & Steel Inst J 173:224-8 Mr '53; Discussion. 174:347-52 Ag '53

Electrolytic separation and some properties of austenite and sigma in 18-8-3-1 chromium-nickel-molybdenum-titanium steel; abstract. T. P. Hoar and K. W. J. Bowen. Metal Prog 62:136+ N '52

Electron microstructure of steel. il Am Soc T M Proc 50:444-92 '50

Factors influencing the creep resistance of wrought carbon steels. C. H. M. Jenkins and H. J. Tapsell. bibliog 5pls Iron & Steel Inst J 171:359-71 Ag '52; Abstract. Metal Prog 64:130+ Jl '53

Ferrite in austenitic steels estimated accurately; Aminco-Brenner Magne-Gage calibrated by means of iron powder-bakelite compacts. T. V. Simpkinson. il Iron Age 170:166-9 D 11 '52

Formation of bainite. T. Ko and S. A. Cottrell. bibliog 3pls Iron & Steel Inst J 172: 307-13 N '52; Abstract. Metal Prog 64:170+ S '53; Discussion. Iron & Steel Inst J 174: 347-52 Ag '53

Formation of bainite in an En 21 steel. T. Ko. bibliog 2pls Iron & Steel Inst J 175: 16-18 S '53

Fundamental effects of aging on creep properties of solution-treated low-carbon N-155 alloy. D. N. Frey and others. bibliog il diag U S Nat Advisory Com for Aeronautics 1950:939-68 '51

Grain boundary films in boron steels. J. W. Spretnak and R. Speiser. J Metals 5:Trans 445-6 Mr '53

Grain growth in high speed steel; abstract. E. Kula and M. Cohen. Metal Prog 64:212+ O '53

Heat treatment of steel castings. J. H. Hall. il Foundry 81:122-5+ O '53

Heterogeneous nucleation of graphite in hypo-eutectoid steels. W. E. Dennis. bibliog Iron & Steel Inst J 171:59-63 My '52; Abstract. Metal Prog 62:180+ S '52; Discussion. Iron & Steel Inst J 173:52 Ja '52

High-temperature transformations in ferritic stainless steels containing 17 to 25 per cent chromium; abstract. A. E. Nehrenberg and P. Lillys. Metal Prog 64:216+ O '53

How to understand plain carbon steel. S. Storchheim. il diags Am Mach 97:111-18 Mr 30 '53

Hypothesis for the boron hardenability mechanism; abstract. J. W. Spretnak and R. Speiser. Metal Prog 64:186+ O '53

Influence of deformation on the kinetics of the martensitic transformation; abstract. O. P. Maksimova and A. I. Nikonorova. Metal Prog 63:140+ Mr '53

Kinetics of the martensite transformation above room temperature; abstract. G. V. Kurdyumov and O. P. Maksimova. Metal Prog 63:142+ F '53

Line-broadening of martensite in nickel steels. R. A. Smith. bibliog Iron & Steel Inst J 173:147-52 F '53; Discussion. 174:347-52 Ag '53

Liquidus surface of the Fe-S-O system. D. C. Hilty and W. Crafts. bibliog il diags J Metals 4:Trans 1307-12 D '52

Microstructural characteristics of acid corrosion in 18 per cent Cr, 8-14 per cent Ni, 3 per cent Mo steels. H. T. Shirley. bibliog 6pls Iron & Steel Inst J 174:242-9 Jl '53

New vistas opened for metals; warm working at temperatures of 300 to 650°F affords control of texture. N. P. Goss. Steel 132: 84 Ja 26 '53

Occurrence of chi phase in molybdenum-bearing stainless steels. P. K. Koh. il J Metals 5:Trans 339-43 sec 2 F '53

Orienting grains in transformer steel. M. J. Bolton. il diags Gen Elec R 56:13-16 My '53

Plastic critical temperature in strain-induced martensite reactions. C. D. Starr. J Metals 5:Trans 654 My '53

Rapid softening of cold-drawn austenitic stainless steels. F. A. Hodierne and C. E. Homer. 2pls diag Iron & Steel Inst J 171:249-53 Jl '52; Discussion. 173:279-80 Mr '53

Recrystallization kinetics of low carbon steel. S. F. Reiter. bibliog il J Metals 4: Trans 972-9 S '52; Discussion. 5:Trans 739 sec 2 My '53

Retained austenite determinations by X-ray methods. B. L. Averbach. J Metals 5:87-8 Ja '53

Sigma-phase embrittlement in 25 Cr-20Ni heat resisting steels. J. I. Morley and H. W. Kirby. bibliog 4pls Iron & Steel Inst J 172: 129-42 O '52; Abstract. Metal Prog 64:140-2+ S '53; Discussion. Iron & Steel Inst J 175:407-8 D '53

Some effects of austenitic grain size and metallurgical structure on the mechanical properties of steel. G. M. Sinclair and T. J. Dolan. il diags Am Soc T M Proc 50:587-616 bibliog(p615-16); Discussion. 617-18 '50

Specific heat of austenite and martensite. E. Griffiths and P. R. Pallister. diags Iron & Steel Inst J 175:30-2 S '53

Stability of the so-called delta-ferrite phase in austenitic steels. J. Brown and others. Iron & Steel Inst J 174:316-17 Ag '53

Stabilization of the austenite-martensite reaction in a high chromium steel. S. C. Das Gupta and B. S. Lement. bibliog il diags J Metals 5:Trans 530-6 Ap '53

Standard ferrite grain sizes for low-carbon steels; data sheet. R. S. Penrod. il Metal Prog 64:96B Jl '53

STEEL—Metallography—*Continued*

Strain patterns in Charpy impact specimens of 0.20 per cent C mild steel. E. S. Bumps. bibliog il J Metals 4:Trans 1067-70 O '52

Structure of carbides in alloy steels; carbide formation in high-speed steels. H. J. Goldschmidt. bibliog 2pls diag Iron & Steel Inst J 170:189-204 Mr '52; Discussion. 172:283-4 N '52

Structures and properties of some carbonitrided cases. K. B. Valentine. il diags Metal Prog 63:97-103 Je '53

Study of formation of bainite, austenite and martensite; abstracts of papers. Engineering 175:734-5 Je 5 '53

Thermal and microscopic study of the iron-carbon-silicon-system. J. E. Hilliard and W. S. Owen. bibliog 3pls Iron & Steel Inst J 172:268-82 N '52; Discussion. 174:249-50 Jl '53

Thermal stabilization of austenite in carburizing steels. H. M. Otte and T. Ko. bibliog Iron & Steel Inst J 173:31-5 Ja '53; Discussion. 174:347-52 Ag '53

Transformation and hardenability of boron steels; data sheet. Metal Prog 63:96B Mr '53

Transformation of deformed austenite into martensite; abstract. G. V. Kurdyumov and others. Metal Prog 62:146+ S '52; Discussion. M. Cohen. 63:114+ Ap '53

Nitrogen content

Alloy tool steels with nitrogen; tr. by S. L. Case, from a Russian book, by V. I. Prosvirin and others. Iron Age 170:163-5 N 6 '52

Thermodynamics of metal nitrides and of nitrogen in iron and steel. J. Pearson and U. J. C. Ende. bibliog Iron & Steel Inst J 175:52-8 S '53

Nitrogen effect

Effect of nitrogen on blue-brittleness in steels. bibliog Engineer 195:894 Je 26 '53

Overheating and burning

Effect of boron on the overheating temperature of steel. J. Field. bibliog il Metal Prog 64:78-83 Ag '53

Oxygen content

Sampling of liquid steel for dissolved oxygen. G. F. Huff and others. bibliog il J Metals 4:Trans 1162-5; Discussion. 1165-7 N '52

Prices

Average monthly quotations in 1952; tabulations. Steel 132:172 Ja 5 '53

Checklist of steel price increases. Iron Age 171:66 Je 25 '53

Extras; how much they've gone up. J. B. Delaney. Iron Age 171:79-80 My 14 '53

How high will steel base prices go? Bsns W p29 My 23 '53

Iron Age finished steel composite price, 1930-1952; tabulated. Iron Age 171:409 Ja 1 '53

1952 weekly index of finished steel prices; weighted price composite, annual price averages, arithmetical price composite; tabulations. Steel 132:170-1 Ja 5 '53

No wage-price spiral from steel. Bsns W p27 Je 20 '53

Price stability and steel. Economist 167:243-4 Ap 25 '53

Prices in the coal-steel community. Economist 166:860-1 Mr 28 '53

Republic revises carbon bar extras. Steel 132:169 Ap 27 '53

Rising steel. Bsns W p28-9 My 9 '53

Steel; extras done, bases start up. J. B. Delaney. Iron Age 171:65 My 28 '53

Steel; pass on price hikes reluctantly. W. V. Packard. Iron Age 171:65 Je 25 '53

Steel price changes imminent in Europe. Steel 132:77 Mr 16 '53

Steel prices; cold-finished bars, merchant bars, manufacturing bright wire, pipe, tool steel, tinplate and structural steel shapes; sheets (cold-rolled, galvanized, hot-rolled, stainless), heavy rails, plates, hot-rolled and cold-rolled strip. Iron Age 171:410-11 Ja 1 '53

What do extras do to steel prices? Bsns W p 184-6 My 16 '53

Protection

Aluminum coatings applied to steel by many methods. E. M. Smith. bibliog il Materials & Methods 36:105-8 D '52

Brazed, welded tubing coated for corrosion protection. H. Chase. il Iron Age 171:118-19 Ja 29 '53

Carbon absorption cut; ceramic coatings prevent carbon absorption by stainless steels used in aircraft exhaust systems. Steel 131:116+ Ag 18 '52; Iron Age 170:184+ S 11 '52; Cer Ind 59:69 N '52

Ceramic coatings boost alloy steel use. F. D. Shaw. il Steel 132:110+ Ap 13 '53

Chromium diffusion for corrosion and abrasion resistance. F. M. Burt. il Metal Finishing 51:72-5+ Ap '53

Chromizing improves surface properties of steels; Chromalloy process. R. P. Seelig. il diag Materials & Methods 37:106-9 My '53

Coating research extends gate life at Safe Harbor dam. P. M. Hess. il Elec World 139:90-3 Ap 6 '53

Coating steel by the Aldip process. D. K. Hanink and A. L. Boegehold. flow chart il S A E J 61:40-5 Ap '53; Abstract. Automotive Ind 108:76+ F 15 '53; Discussion. S A E J 61:46 Ap '53

Corrosion by retained treatment chemicals on phosphated steel surfaces. S. G. Clarke and E. E. Longhurst. pl diag Iron & Steel Inst J 170:15-18 Ja '52; Discussion. 173:177-81 F '53

Corrosion of galvanized steel in soils. I. A. Denison and M. Romanoff. bibliog il J Res Nat Bur Stand 49:299-314 N '52

Corrosion of steel under phosphate coatings and protective finishes; Iron and steel institute and British iron and steel research association joint meeting. Engineer 194:652-3 N 14 '52; Engineering 174:646-7 N 14 '52; Chem Age (Lond) 67:765-8 D 6 '52; Metallurgia 46:305-7 D '52

Development of thiokol polymer protective coatings for steel. A. P. Massa, H. Colon and W. F. Schurig. bibliog il Ind & Eng Chem 45:775-82 Ap '53

Drums come clean and rust-inhibited. il Steel 132:84 Mr 23 '53

Effect of chromium plating on the endurance limit of steels used in aircraft. H. L. Logan. bibliog il J Res Nat Bur Stand 43:101-12 Ag '49; Same. Am Soc T M Proc 50:699-713; Discussion. 714-16 '50

Experimental plating of internal engine parts. G. W. Grupp. Metal Finishing 51:53-5 Jl '53

Glassed steel. E. A. Sanford and O. J. Britton. il Chem Eng 60:294+ Mr '53

Hot dip aluminising. M. L. Hughes and D. P. Moses. bibliog il diags Metallurgia 48:105-22 S '53

Immersion brass coatings on steel. H. W. Richter. Metal Finishing 51:66-7+ My '53

Industry gets chemically clean steel drums. il plan Iron Age 171:100-1 Ja 15 '53

Influence of the nature of the substratum on the behavior of metal protective paints; abstract. D. Cannegieter. Paint Oil & Chem R 116:56 My 7 '53

Molybdenum-rich and tungsten-rich coatings on steel. Engineer 195:172-3 Ja 30 '53

Phosphate coatings as a basis for painting steel. Iron & Steel Inst J 170:10-15 Ja '52; Discussion. 173:177-81 F '53

Phosphate coatings on steel surfaces. H. A. Holden. il Metallurgia 48:71-7+ Ag '53

Porcelain enamel. Chem Eng 60:229 F '53

Protection of tubular structures from the weather by metallizing. A. Clift. il Metal Prog 62:100-4 N '52

Rust converters; abstract. A. Pollack. Paint Oil & Chem R 116:20 F 12 '53

Silicone-aluminum paints stretch high-temperature life of steel. A. E. Durkin and A. H. Horner. il Materials & Methods 38:114-16 S '53

Steel containers may be adapted to many services. T. W. Rodes. Ind & Eng Chem 44:sup 115A-16A+ D '52

Steel protection by sprayed aluminium. il Engineering 175:158 Ja 30 '53

STEEL—Protection—*Continued*

Study made of underground corrosion of galvanized steel. I. A. Denison and M. Romanoff. Heat & Ven 50:113 Mr '53; Same. il Heating-Piping 25:106-7 Mr '53; Same. Diesel Power 31:85-6 Mr '53; Same. Gas Age 111:43+ Mr 21 '53; Same. Am Gas J 178:17 Mr '53; Same abr. Oil & Gas J 51:289 Ap 27 '53

Sulphur surface treatment increases wear resistance; Sulfinuz. Automotive Ind 109:109-10 O 1 '53

Tentative analytical tests for phosphate coatings on steel. R. S. Preston and others. Iron & Steel Inst J 170:19-20 Ja '52; Discussion. 173:177-81 F '53

Wear-resisting phosphate coatings on steel. il Engineering 175:57 Ja 9 '53

See also

Chromizing
Galvanizing
Steel—Blackening
Steel—Cathodic protection

Rimmed steel

Assessment of skin thickness of rimming ingots. S. J. Smith. Iron & Steel Inst J 173:16-18 Ja '53

Cooling of rimming steel ingots in a casting pit. R. T. Fowler and L. H. W. Savage. diags Iron & Steel Inst J 171:277-88 Jl '52; Discussion. 173:259-63 Mr '53

Effects of vanadium or chromium on the strain ageing of rimming steels. W. R. D. Jones and G. Coombes. bibliog il Iron & Steel Inst J 174:9-15 My '53

Rimming steel production rate studied by multiple correlation. W. W. Black and C. R. Taylor. J Metals 5:401-3 Mr '53

Scaling

Collector system ups mill scale recovery. Steel 131:102 O 20 '52; il Iron & Steel Eng 29:138-9 N '52

Lithium vapor inhibits scale formation, cuts cleaning cost. il Iron Age 171:185+ Mr 12 '53; Steel 132:112 Mr 9 '53

Standards

Boron and tentative standard steels; American iron and steel institute, Feb. 1953; data sheet. Metal Prog 63:96B Ap '53

Hardenability bands for tentative standards; data sheet. Metal Prog 63:114B Ja '53

Report of ISO committee on steel. Standardization 23:282 S '52

Standard carbon steels; chemical composition limits; data sheet. Metal Prog 62:96B N '52

See also

Steel, Stainless—Standards

Strength

Brittle strength and transition temperature of structural steel. W. C. Hoeltje and N. M. Newmark. bibliog diags Welding J 31:sup 515-21 N '52

Creep strength of stainless steels. W. L. Nelson. Oil & Gas J 51:195 Mr 30; 291 Ap 27 '53

Critical design factors for high-strength steel. N. J. Wells and M. V. Ward. il Machine Design 25:149-57 O '53

Effect of shot peening and the fatigue life of steel. A. G. H. Coombs. il diags Engineering 174:545-6, 580-1 O 24-31 '52

Effects of grinding and other finishing processes on the fatigue strength of hardened steel. L. P. Tarasov and H. J. Grover. bibliog il diags Am Soc T M Proc 50:668-87; Discussion. 687-98 '50

Factors affecting resistance of pressure vessel steels to repeated overloading. J. H. Gross and others. il diags Welding J 32:sup 23-30 Ja '53

Fatigue strength of steel through the range from ½ to 30,000 cycles of stress. M. H. Weisman and M. H. Kaplan. bibliog il plans diags Am Soc T M Proc 50:649-65; Discussion. 666-7 '50

High-strength steel castings. Engineer 195:460 Mr 27 '53

High-strength steel helps you. A. F. Stuebing. il Constr Methods 35:186+ Jl '53

Improved ferritic steel can replace austenitic steel. J. Gin-Young Chow and D. W. Kaufmann. il Iron Age 170:166-9 N 6 '52

Influence of surface condition on the fatigue strength of steel; abstract. R. J. Love. Metal Prog 62:144 D '52

Method of obtaining shear stress-strain graphs by interpretation of moment-twist data. P. H. Kaar. A S M E Trans 75:521-3 My '53

Safety factor in construction. F. C. Thompson. Engineering 175:445-6, 477-9 Ap 3-10 '53; Same abr. Engineer 195:343-5 Mr 6 '53

Stability and strength of thin-walled steel struts. A. H. Chilver. bibliog il diags Engineer 196:180-3 Ag 7 '53

Steel strengthened with aluminum nitride; abstract. K. A. Krekeler. Welding J 32:43 Ja '53

Stress concentrations in steel under cyclic load with particular reference to pressure vessels. E. Orowan. bibliog diags Welding J 31:sup273-82 Je '52; Discussion. 31:sup502-4; 32:sup222-3+ O '52, My '53

Structural strength of thin-walled channel sections. J. M. Harvey. Engineering 175:291-3 Mr 6 '53

Ultra high-strength steels; seminar. il Metal Prog 63:95-6+ My '53

Sulfur content

Chemical behavior of sulphur in iron and steelmaking. J. Chipman. bibliog plan diags Metal Prog 62:97-107 D '52

Factors influencing surface quality of high sulphur steels. G. G. Blean. Iron & Steel Eng 30:79-81; Discussion. 82-3 Ja '53

Iron-carbon-sulphur melts. D. A. Spratt and J. A. Kitchener. bibliog 2pls Iron & Steel Inst J 172:383-6 D '52

Titanium can replace manganese for sulfur control of steel. J. D. Roach and R. S. Stewart. bibliog Iron Age 171:150-3 Je 4; 126-8 Je 11 '53

Testing

Basic Bessemer and open-hearth steels. O. Hengstenberg and W. Janiche. Engineer 196:270-1 Ag 28 '53

Bullet v. jet charge; special steel piercing methods appraised. A. Williman and W. P. Wallace. il diags Iron Age 170:96-8 O 30 '52

Comparison of tests for hardenability of shallow-hardening steels. G. K. Manning. S A E J 61:30-6 Jl '53

Deformation and fracturing of thick-walled steel cylinders under explosive attack. J. Pearson and J. S. Rinehart. bibliog il diag J Ap Phys 23:434-41 Ap '52

Effect of hardness on the level of the impact energy curve for temper-brittle and unembrittled steel; abstract. F. L. Carr and others. Metal Prog 62:168 N '52

Effect of shot peening and the fatigue life of steel. A. G. H. Coombs. il diags Engineering 174:545-6, 580-1 O 24-31 '52

Effect of variations in notch acuity on the behavior of steel in the Charpy notched-bar test. N. A. Kahn and others. bibliog il diags Am Soc T M Proc 50:619-47; Discussion. 647-8 '50

81B40. R. N. Imhoff and J. W. Poynter. il Metal Prog 64:65-71 Jl '53

Experimental study of residual plastic strains produced by spherical impact. A. K. Mohamed and A. G. H. Coombs. bibliog il diags Iron & Steel Inst J 175:5-9 S '53

Experimental technique used to measure transient waves through solids. W. A. Allen and C. L. McCrary. bibliog il diags R Sci Instr 24:165-71 F '53

Influence of strain rate on some tensile properties of steel. D. S. Clark and P. E. Duwez. bibliog il diags Am Soc T M Proc 50:560-75; Discussion. 576 '50

New notched-bar impact test; abstract. R. Mitsche. Metal Prog 64:284+ O '53

New tests on steel suggest error in Poisson's ratio. W. D. Manley. il Iron Age 171:148-50 Ap 23 '53

Physical properties of steel as functions of the tempering temperature. A. A. Peebles. Engineering 175:613-15 My 15 '53

Rockwell C hardness on cylindrical steel specimens. F. W. Hussey. diags Am Soc T M Proc 50:1176-85; Discussion. 1186-7 '50

Significance of the Izod test with regard to gear design and performance. J. E. Russell and W. T. Chesters. bibliog il diag Engineering 176:166-9 Ag 7 '53

STEEL—Testing—*Continued*

Some effects of austenitic grain size and metallurgical structure on the mechanical properties of steel. G. M. Sinclair and T. J. Dolan. il diags Am Soc T M Proc 50:587-616 bibliog(p615-16); Discussion. 617-18 '50

Some metallurgical characteristics of medium-carbon boron-treated steels. R. N. Imhoff and J. W. Poynter. il Metal Prog 63:97-104 Mr '53

Strain patterns in Charpy impact specimens of 0.20 per cent C mild steel. E. S. Bumps. bibliog il J Metals 4:Trans 1067-70 O '52

Transverse mechanical properties of slack quenched and tempered wrought steel; abstract. J. Vajda and P. E. Busby. Metal Prog 64:230+ O '53

See also

Steel alloys—Testing

Tool steel—Testing

Temperature effect

Comparisons at elevated temperatures of some commercial grades of ferritic cast steels. H. W. Wyatt and others. bibliog(37 titles) il A S M E Trans 75:289-98; Discussion. 298-300 F '53

Creep properties of steels for power plants. A. E. Johnson and N. E. Frost. Engineering 175:25-8, 58-60, 249-50 Ja 2-9, F 20 '53; Discussion. J. H. M. Draper and G. Gosling. 175:755 Je 12 '53; Reply. 175:820 Je 26 '53

Effect of pearlite spacing on transition temperature of steel at four carbon levels; abstract. J. A. Rinebolt. Metal Prog 64:268+ O '53

Effect of specimen geometry on impact transition temperature. R. S. Zeno and J. L. Dolby. bibliog diags Welding J 32:sup 190-7 Ap '53

Effect of temperature on the mechanical properties, characteristics, and processing of austenitic stainless steels. V. N. Krivobok and A. M. Talbot. bibliog il Am Soc T M Proc 50:895-928; Discussion. 929-30 '50

Effect of temperature on the rolling texture of plastically deformed low-carbon strip; abstract. N. P. Goss. Metal Prog 63:182+ F '53

Elevation of critical temperatures in steel by high heating rates; abstract. W. J. Feuerstein and W. K. Smith. Metal Prog 64:221-2+ O '53

Factors influencing the creep resistance of wrought carbon steels. C. H. M. Jenkins and H. J. Tapsell. bibliog 5pls Iron & Steel Inst J 171:359-71 Ag '52; Abstract. Metal Prog 64:130+ Jl '53

Hardness of various steels at elevated temperatures; abstract. F. Garofalo and others. Metal Prog 62:164+ N '52

High-temperature testing of type 316 stainless steel sheet; abstract. G. J. Guarnieri. Metal Prog 63:184+ Ap '53

Identification of the precipitate accompanying 885° F embrittlement in chromium steels. R. M. Fisher and others. bibliog il J Metals 5:Trans 690-5 sec 2 My '53

Recent experience in examination of high-temperature catalytic-cracking pressure equipment. D. B. Rossheim and others. flow diag il diags A S M E Trans 74:1099-122 O '52; Excerpts. Pet Processing 6:1385-8 D '51; Discussion. A S M E Trans 74:1122-31 O '52

Statistical analysis of behavior in the transition temperature zone. R. W. Vanderbeck and others. bibliog Welding J 32:sup325-32 Jl '53; Correction. 32:sup460 S '53

Thermal shock and other comparison tests of austenitic and ferritic steels for main steam piping; a summary report. W. C. Stewart and W. G. Schreitz. bibliog il diags A S M E Trans 75:1051-67; Discussion. 1068-72 Ag '53

Welding

Arc welding of low chromium-molybdenum steel pipe. J. Bland. bibliog il Welding J 32:803-14 S '53

Assessment of weldability by rapid dilatation tests. C. L. M. Cottrell. bibliog il diag Iron & Steel Inst J 174:17-24 My '53

Beating worn drum problem by automatic welding. il Welding J 32:857-8 S '53

Controlled thermal severity cracking test simulates practical welded joints. C. L. M. Cottrell. bibliog il diags Welding J 32:sup257-72 Je '53

Decomposition of austenite in low carbon, Ni, Mo, steel weld metal. E. F. Bailey and W. J. Harris, jr. il diag Welding J 32:sup 134-8 Mr '53

Effect of strain-rate on twinning and brittle fracture. D. Rosenthal and C. C. Woolsey, jr. bibliog(35 ref) il diags Welding J 31:sup475-92 O '52; Correction. 32:sup304 Je '53

Effect of stresses on strength of circumferentially welded cylinders. L. J. Privoznik. il diags Welding J 31:sup587-95 D '52

Effects of electrodes and heat treatments on mild steel weldments. E. F. Nippes and A. Lesnewich. bibliog(29 titles) il diags Welding J 32:sup353-74 Ag '53

Embrittlement of high-strength ferritic welds. P. P. Puzak and W. S. Pellini. bibliog il diags Welding J 31:sup521-6 N '52; Discussion. H. C. Campbell and R. P. Wentworth. 32:sup73-4 F '53

Factors affecting resistance of pressure vessel steels to repeated overloading. J. H. Gross and others. il diags Welding J 32:sup 23-30 Ja '53

Flash welding and high speed cold reduction of strip steel for tin plate. J. Wargo and R. C. Brunner. il Iron & Steel Eng 30:59-64 Ag '53

Flush welds withstand impact better than reinforced welds. C. E. Hartbower. il Iron Age 171:136-9 Je 25 '53

How proper design in steel saves material. diags Welding J 32:50-2 Ja '53

Inert-gas metal-arc welding of mild and low-alloy steel. F. G. Harkins. il Welding J 32:683-9 Ag '53

Investigation on peening. P. L. Calamari and others. il diag Welding J 32:sup387-402 Ag '53

Iron powder as base material for weldments; abstract. H. Hauttmann. Metal Prog 62:202 N '52

Measurement of transient surface temperatures. R. A. Huggins and others. bibliog il diags R Sci Instr 23:467-70 S '52

Mechanics of the explosion bulge test. C. E. Hartbower. bibliog il diags Welding J 32:sup 333-41 Jl '53

Migration of Cr and C in a weld in type 502. M. A. Scheil. il Metal Prog 64:108+ S '53

Porosity in mild steel weld metal; review of the literature. D. Warren and R. D. Stout. bibliog(39 titles) Welding J 31:sup381-6 Ag '52; Discussion. 31:sup586+ D '52

Porosity in the welding of carbon steel. G. W. Oyler and R. D. Stout. il Welding J 32:sup454-60 S '53

Preheat vs. low- and high-temperature stress-relief treatments. E. P. DeGarmo. il diag Welding J 31:sup233-7 My '52; Same cond. Metal Prog 63:168+ Mr '53

Preheating and postheating of pressure vessel steels. R. D. Stout. bibliog(60 titles) il Welding J 32:sup 14-22 Ja '53; Excerpts. Metal Prog 64:295-6+ O '53

Production welding of steels by gas-shielded arc welding. C. J. Sullivan. il diags Welding J 32:391-6 My '53

Relation of preheating to embrittlement and microcracking in mild steel welds. A. E. Flanigan and T. Micleu. diags Welding J 32:sup99-106 F '53

Report on the design of pressure vessel heads. bibliog il diags Welding J 32:sup 31-52 Ja '53

Role of weld metal area in welding hardenable steels. C. R. McKinsey and J. F. Collins. il Welding J 32:sup 125-31 Mr '53

Scale effects in notch brittleness. Y. Akita. diags Welding J 32:sup475-80 S '53

Shaking out, cleaning, welding, steel castings. J. H. Hall. il diags Foundry 81:92-6+ F; 194-5+ Mr; 96-7+ Ap; 218-20+ My '53

Studies of the crack sensitivity of aircraft steels. A. W. Steinberger and J. Stoop. bibliog il Welding J 31:sup527-42 N '52

Switch from casting to weldment requires careful analysis. diags Iron Age 171:208-9 Mr 5 '53

Tailors in steel to Canadian industry; John Inglis co. I. Mac Fadden. il Welding J 32:997-9 O '53

STEEL—Welding—*Continued*

Temper brittleness in low-alloy steel weld metal. R. P. Wentworth and H. C. Campbell. bibliog il diags Welding J 31:sup505-14 N '52; Discussion. 32:sup 107-11 F '53

Temperature distribution during the flash welding of steel. E. F. Nippes and others. il Welding J 30:sup585-601; 32:sup 113-22 D '51, Mr '53

Thermit welding of concrete reinforcing bars. il Welding J 32:850-3 S '53

Transition from ductile to brittle behavior in pressure vessel steels. T. N. Armstrong and others. il Welding J 31:sup371-80 bibliog(97 titles, p379-80) Ag '52; Metal Prog 63:202+ Ap '53; Discussion. Welding J 31:sup623-4 D '52

Weldability of austenitic manganese steels. F. Danhier. Welding J 32:sup 155-6 Mr '53

Welded and brazed parts. H. R. Clauser. il diags Materials & Methods 36:123-38 N '52 (reprints 25c)

Welded steel structures permit greater strengths at less cost. diags Iron Age 170:152-3 N 20 '52

Welding characteristics of open hearth and Bessemer seamless steel pipe. A. B. Wilder and others. bibliog il diags Am Soc T M Proc 50:763-80; Discussion. 781-8 '50

Welding for low-temperature service; abstract. R. W. Bennett. Metal Prog 63:190+ My '53

Welding of high alloys doubled with new roll-spot technique; Ryan aeronautical co. J. R. Fullerton. il Materials & Methods 37:166+ F '53

See also

Piping (power plants)—Welding

Steel, Stainless—Welding

Steel, Structural—Welding

STEEL, Aircraft

Fatigue from the metallurgist's viewpoint. E. R. Gadd. Roy Aeronautical Soc J 57:565-80 bibliog(78 ref, p579-80) S '53; Abstract. Engineering 175:570 My 1 '53

Fundamental effects of aging on creep properties of solution-treated low-carbon N-155 alloy. D. N. Frey and others. bibliog il diag U S Nat Advisory Com for Aeronautics 1950:939-68 '51

Inert-gas metal-arc welding of mild and low-alloy steel. F. G. Harkins. il Welding J 32:683-9 Ag '53

Jet aircraft depend more on steel as speeds and operating temperatures are increased. Blast F & Steel Pl 41:945 Ag '53

Precipitation hardening stainless steels. J. Joseph. il Aero Digest 66:52+ Ap '53

Precipitation hardening steels show advantages in aircraft. G. A. Fairbain. Machine Design 25:305-6+ F '53; Abstract. S A E J 60:122+ N '52

Rolled T-sections cut aircraft part costs. T. A. Dickinson. il Steel 131:104 D 8 '52

Ultra high-strength steels; seminar. il Metal Prog 63:95-6+ My '53

Testing

Effect of chromium plating on the endurance limit of steels used in aircraft. H. L. Logan. bibliog il J Res Nat Bur Stand 43:101-12 Ag '49; Same. Am Soc T M Proc 50:699-713; Discussion. 714-16 '50

Fatigue notch-sensitivities of some aircraft materials. H. J. Grover. bibliog Am Soc T M Proc 50:717-29; Discussion. 730-4 '50

Studies of the crack sensitivity of aircraft steels. A. W. Steinberger and J. Stoop. bibliog il Welding J 31:sup527-42 N '52; Discussion. 32:sup 157-60 Mr '53

STEEL, Automobile

Steel at any price; such is the buying attitude of the auto industry. il Steel 132:71 Mr 16 '53

Steel for automobile parts; tabulations. Iron Age 171:438-9 Ja 1 '53

STEEL, Clad

Clad metals; small item gets big. J. B. Delaney. il diag Iron Age 171:58-9 Je 11 '53

Clad steel in petroleum equipment. A. Hoersch, jr. diags Pet Processing 8:700-3 My '53

Clad steel protection at bargain prices. R. H. Wilcox. il Mill & Factory 53:134-7 O '53

High-strength vacuum brazing of clad steels. R. C. Bertossa. il Welding J 31:sup441-7 O '52; Abstract. Metal Prog 63:166+ Ap '53

Manufacture and properties of clad steel plates. T. T. Watson. il diag Blast F & Steel Pl 41:318-20+ Mr '53

Unionmelt cladding of mild steel roll by series-arc technique. J. F. Collins and others. il Welding J 31:1050-1 N '52

Use of steel clad with other metals rises. Sheet Metal Worker 44:80-1 Je '53

See also

Steel, Copper clad

Steel, Lead clad

Steel, Nickel clad

STEEL, Cold treatment of

Hardening of austenitic stainless steels by mechanical working at sub-zero temperatures. N. A. Ziegler and P. H. Brace. il diag Am Soc T M Proc 50:861-79; Discussion. 880-1 '50

How cold treatments improve performance of materials. J. L. Everhart. il Materials & Methods 37:115-18 F '53

STEEL, Cold working of

Cold extrusion conference, London, May 12-13. Iron Age 171:124-5 Je 11 '53

Cold extrusion of steel. H. J. Pessl and H. H. Hauttmann. il diags Metal Prog 64:97-102 Jl; 69-73 Ag '53

Cold rolling with strip tension. H. Ford and others. bibliog diags Iron & Steel Inst J 168:57-72 My '51; Discussion. 172:28-40 S '52

Cold shaping of steel by compression reaches commercial applications. A. H. Allen. il Metal Prog 64:65-8 Ag '53

Conference on cold extrusion of steel, London. Metal Prog 64:74-7 Ag '53

Density and hydrogen occlusion of some ferrous metals. J. H. Keeler and H. M. Davis. bibliog J Metals 5:Trans 44-8 Ja '53

Development and new applications of cold flow pressing of steel. K. Sieber. Metal Prog 63:186+ Ja; 130+ My '53

Intricate steel shapes now cold extruded. M. W. Riley. il Materials & Methods 38:100-1 S '53

Metallurgical requirements of steels for cold extrusion. D. V. Wilson. Metal Prog 64:182+ Ag '53

Permanent magnetic properties in 18-8 obtained by cold working. S. Storchheim. Iron Age 171:140-2 F 12 '53

Phosphate coatings on steel surfaces. H. A. Holden. il Metallurgia 48:75-7 Ag '53

Processing, properties, and application of cold finished carbon steel bars. J. F. Byers. il diags Iron & Steel Eng 30:103-7 My '53

Rapid softening of cold-drawn austenitic stainless steels. F. A. Hodierne and C. E. Homer. 2pls diag Iron & Steel Inst J 171:249-53 Jl '52; Discussion. 173:279-80 Mr '53

Steel valve tappets made by cold heading. il Automotive Ind 108:37+ Mr 1 '53

STEEL, Copper clad

Copper-clad steel in commercial production. Chem Eng 59:273-4 O '52; Same abr. Steel 131:272 O 13 '52; Same abr. Mech Eng 74:1017 D '52; Same cond. Paper Tr J 135:20 O 10 '52

STEEL, Corrosion resisting

Holding down corrosion; special corrosion-resistant stainless steel. Steel 132:96 F 9 '53

See also

Chromium nickel steel

Steel, Stainless

STEEL, Effect of sea water on

Spray testing with natural and synthetic sea water; corrosion characteristics in the testing of metals. T. P. May and A. L. Alexander. bibliog Am Soc T M Proc 50:1131-41; Discussion. 1142-3 '50

STEEL, Hardening of

Action of boron in enhancing the hardenability of steel. T. G. Digges. bibliog S A E J 61:24-8 S '53

Automatic heat-treat operation streamlines fastener handling; Standard pressed steel co. il diag Tool Eng 31:100-1 O '53

Boron steels; the basis of selection. H. B. Knowlton. Product Eng Hdbk p B2-9 '53; Same abr. S A E J 60:74-7 My '52; Same abr. Materials & Methods 35:84-7 Mr '52

STEEL, Hardening of—*Continued*

Carbide precipitation, secondary hardening, and red hardness of high-speed steel. K. Kuo. bibliog Iron & Steel Inst J 174:223-8 Jl '53

Care and treatment of cable tool bits. F. J. Spang. il Pet Eng 24:B64-6+ N '52

Comparison of tests for hardenability of shallow-hardening steels. G. K. Manning. S A E J 61:30-6 Jl '53

Deformation of austenite in relation to the hardness characteristics of steel. G. R. Bish and H. O'Neill. bibliog pl diags Iron & Steel Inst J 173:398-405 Ap '53; Discussion. 174:347-52 Ag '53

Development, principles, and applications of interrupted quench hardening. R. F. Harvey. bibliog diags Franklin Inst J 255:93-9 F '53

Effect of boron on the mechanical properties of low-alloy steels. R. Wilcock. Iron & Steel Inst J 173:406-19 Ap '53; Discussion. Engineer 195:705-6 My 15 '53

Effect of hardness on the level of the impact energy curve for temper-brittle and unembrittled steel; abstract. F. L. Carr and others. Metal Prog 62:168 N '52

Effects of grinding and other finishing processes on the fatigue strength of hardened steel. L. P. Tarasov and H. J. Grover. bibliog il diags Am Soc T M Proc 50:668-87; Discussion. 687-98 '50

475° C. hardening characteristics of some high-alloy steels and chromium irons. B. Cina and J. D. Lavender. bibliog 4pls Iron & Steel Inst J 174:97-107 Je '53

Hardenability bands for tentative standards; data sheet. Metal Prog 63:114B Ja '53

Hardened alloy steel for service up to 700 F. G. V. Smith and others. il Am Soc T M Proc 50:882-92; Discussion. diag 893-4 '50

Hardening of austenitic stainless steels by mechanical working at sub-zero temperatures. N. A. Ziegler and P. H. Brace. il diag Am Soc T M Proc 50:861-79; Discussion. 880-1 '50

Hardness of various steels at elevated temperatures; abstract. F. Garofalo and others. Metal Prog 62:164+ N '52

Hypothesis for the boron hardenability mechanism; abstract. J. W. Spretnak and R. Speiser. Metal Prog 64:186+ O '53

Metallurgical effects of oxygen cutting alloy steel (armor plate). F. C. Saacke. il Welding J 32:19-30 Ja '53

Modifications of an X-ray method for the measurement of retained austenite concentrations in hardened steels. K. E. Beu. J Metals 4:Trans 1327-8 D '52

Precipitation hardening stainless steels. J. Joseph. il Aero Digest 66:52+ Ap '53

Precipitation hardening steels show advantages in aircraft. G. A. Fairbain. Machine Design 25:305-6+ F '53; Abstract. S A E J 60:122+ N '52

Relationship between mechanical properties and hardness of steels; engineering file facts. Materials & Methods 37:137 F '53

Rockwell C hardness on cylindrical steel specimens. F. W. Hussey. diags Am Soc T M Proc 50:1176-85; Discussion. 1186-7 '50

Short cycle for hardening high-C, high Cr toolsteel. J. Y. Riedel. il diags Metal Prog 63:67-70 F '53

Tentative hardenability bands for boron steels; charts; data sheet. Metal Prog 63: 96B My '53

Transformation and hardenability of boron steels, data sheet. Metal Prog 63:96B Mr '53

See also

Case hardening
Steel—Aging
Steel, Heat treatment of
Steel, Quenching of

STEEL, Heat resisting

Constitution of iron-nickel-chromium alloys at 550-800°C. A. J. Cook and B. R. Brown. bibliog 3pls Iron & Steel Inst J 171:345-53 Ag '52; Abstract. Metal Prog 63:190+ Je '53

Creep resisting ferritic steels for gas turbines; abstract. H. W. Kirby. Metal Prog 64:134+ Jl '53

High temperature service. R. M. Braca and R. Merims. il Chem Eng 60:165-71+ F '53

High-temperature steels; abstract. A. M. Sage. Elec R (Lond) 152:618 Mr 20 '53; Discussion. Engineer 195:419-21 Mr 20 '53

Improved ferritic steel can replace austenitic steel. J. Gin-Young Chow and D. W. Kaufmann. il Iron Age 170:166-9 N 6 '52

Low alloy steel for high temperature work; Crucible 422. Product Eng 23:200 D '52

Manufacture and characteristics of high-temperature bolts. T. W. Harker. il Metal Prog 64:125-8 O '53

New creep resistant ferritic steels. D. D. Howat. bibliog Materials & Methods 38:87-90 S '53

Pickling of stainless and heat resisting steels; abstract. E. Brauns. Metal Finishing 51:83 O '53

Russians show progress on stainless and heat-resisting steels. C. A. Zapffe. bibliog Iron Age 171:138-42 Mr 19 '53

Sigma-phase embrittlement in 25Cr-20Ni heat-resisting steels. J. I. Morley and H. W. Kirby. bibliog 4pls Iron & Steel Inst J 172:129-42 O '52; Abstract. Metal Prog 64: 140-2+ S '53; Discussion. Iron & Steel Inst J 175:407-8 D '53

Steam piping and valves for 1100 F service. F. A. Ritchings and S. Crocker. bibliog(32 titles) Heating-Piping 25:84-8 Ag; 82-8 S '53; Discussion. 25:84-90+ O '53

Strong, heat resistant alloys and metallic combinations. A. Michel. il Metal Prog 63: 120-4 Ja '53

Survey of embrittlement and notch sensitivity of heat resisting steels; abstract. G. Sachs and W. F. Brown, jr. Metal Prog 63:171-2+ My '53

See also

Steel—Testing—
Temperature effect

Testing

Effect of composition on the warm-working characteristics of austenitic alloys. G. T. Harris and H. C. Child. bibliog Iron & Steel Inst J 174:325-30 Ag '53

Hardened alloy steel for service up to 700 F. G. V. Smith and others. il Am Soc T M Proc 50:882-92; Discussion. diag 893-4 '50

STEEL, Heat treatment of

Close control of all variables in heat treating landing gear struts; Landing gear division, Willys-Overland motors, inc. M. W. McLaughlin. il Automotive Ind 108:53+ My 15 '53

Continuous heat treatment process produces high strength oil well casing. F. H. Bremmer and F. J. Zehnder. il diags Iron & Steel Eng 30:55-62; Discussion. 62-4 Ja '53

Distortion; it can be minimized in heat treating. A. L. Pranses. diag Steel 132:70-2 Ja 26 '53

Effect of various heat treating cycles upon temper brittleness; abstract. L. D. Jaffe and others. Metal Prog 62:142+ N '52

Effects of electrodes and heat treatments on mild steel weldments. E. F. Nippes and A. Lesnewich. bibliog(29 titles) il diags Welding J 32:sup353-74 Ag '53

Effects of high-temperature heating on the isothermal formation of bainite. S. A. Cottrell and T. Ko. pl Iron & Steel Inst J 173:224-8 Mr '53; Discussion. 174:347-52 Ag '53

Fatigue properties of springs as affected by heat treatment. R. L. Rickett and A. O. Mason. Metal Prog 63:107-10 Mr '53

Forum on technical progress; heat treating. il Steel 132:298-300+ Ja 5 '53

Heat treating, clear up design and manufacturing problems; report on panel. S A E J 61:49-50 F '53

Heat treating review and forecast. il Iron Age 171:293 Ja 1 '53

Heat-treatment effects on transition temperature of a ship steel. E. B. Evans and L. J. Klingler. bibliog il diags Welding J 32:sup417-31 S '53

Heat treatment of steel castings. J. H. Hall. il Foundry 81:122-5+ O '53

How to obtain dimensional stability of gages. W. Dubyk. bibliog diag Am Mach 97:121-3 S 14 '53

Influence of residual stress on behavior of thick-wall closed-end cylinders. J. H. Faupel and A. R. Furbeck. bibliog il diags A S M E Trans 75:345-54 Ap '53

STEEL, Heat treatment of—*Continued*

Modern heat treatment practice; report of B.I.S.R.A. conference, Leamington Spa, June 15-17; abstracts of papers. Metallurgia 48:85-90 Ag '53

Preheat vs. low- and high-temperature stress-relief treatments. E. P. DeGarmo. il diag Welding J 31:sup233-7 My '52; Same cond. Metal Prog 63:168+ Mr '53

Properties and heat treatment of magnet steels; tabulations; engineering file facts. K. Hoselitz. Materials & Methods 37:137 Ap '53

Selection of a limited number from many possible conditioning treatments for alloys to achieve best coverage and statistical evaluation. J. M. Cameron and W. J. Youden. Am Soc T M Proc 50:951-60; Discussion. 961-4 '50

See also

Annealing

Case hardening

Steel, Quenching of

STEEL, Lead clad

Lead-clad steel supports coils. diags Chem Eng 59:188 O '52

Machine bonds lead-steel. Steel 132:78-9 Ja 12 '53

STEEL, Molten

Checks heat of hot steel with electronic device. Steel 131:262+ O 13 '52

Determination of hydrogen in liquid steel. R. M. Cook and J. D. Hobson. Iron & Steel Inst J 169:24-5 S '51; Discussion. 172:46-51 S '52

Progress on temperature measurement; abstract. D. G. Harris. Metal Prog 63:194+ Je '53

Quick-immersion thermocouple for liquid steel; review of present-day techniques with practical and theoretical studies. D. Manterfield and others. diags Iron & Steel Inst J 172:387-402 D '52

Sampling of liquid steel for dissolved oxygen. G. F. Huff and others. bibliog il J Metals 4:Trans 1162-5; Discussion. 1165-7 N '52

STEEL, Nickel clad

Nickel-clad steels welded by shielded metal-arc process. R. G. Lyall. il diag Iron Age 171:102-3 Ja 15 '53

STEEL, Powdered

Ductility of metal-powder parts increased. W. G. Patton. il Iron Age 171:140-1 Mr 12 '53

STEEL, Quenching of

Armor plate quenched rapidly, uniformly in hydraulic press. G. A. Leytze. il Iron Age 170:97-9 O 16 '52

Automatic heat treating line with duplex quench, either oil or water; Russell, Burdsall & Ward bolt and nut co. F. C. Schaefer and R. L. Burdsall. il diags Metal Prog 62:113-16 N '52

Cooperative research program on quenching. V. Paschkis. il Metal Prog 62:93-6 D '52

Effect of a prequench on the martensite reaction in tool steel. J. J. Gilman. il J Metals 4:Trans 1300-1 D '52

Effect of nonmartensite decomposition products on the properties of quenched and tempered steels; abstract. E. F. Bailey. Metal Prog 64:182+ O '53

Fork truck simplifies handling in quenching steel castings. il Foundry 80:214+ O '52

Signaller to reduce quench cracking of steel. L. D. Jaffe and others. il diag Metal Prog 64:119-21 O '53

Test for measuring quench crack sensitivity of engineering alloy steels. R. D. Chapman and W. E. Jominy. il diags Metal Prog 64:67-72 S '53

Transverse mechanical properties of slack quenched and tempered wrought steel; abstract. J. Vajda and P. E. Busby. Metal Prog 64:230+ O '53

STEEL, Reinforcing

Prestressing; will bars boost use? G. G. Carr. il diag Iron Age 170:40 O 16 '52

Thermit welding of concrete reinforcing bars. il Welding J 32:850-3 S '53

STEEL, Stainless

Austenitic stainless; solubility of carbon studied by NBS. il Iron Age 170:124 N 27 '52

Before stainless steel could be used in skyscraper sidewalls. R. J. Ritchey. il Sales Management 69:30-2 N 1 '52

Canadian stainless for chemical industries. J. L. Cotsworth. il Can Chem Process 36:70+ S '52

Cause of the chemical resistance of stainless steel. I. D. G. Berwick and U. R. Evans. bibliog il diags J Ap Chem 2:576-90 O '52

Cheaper, better stainless; Simplex ferrochromium; Electro metallurgical co.'s ferroalloy plant. il Steel 132:70 My 25 '53

Chemical engineering materials of construction; stainless steels and other ferrous alloys. W. A. Luce. il Ind & Eng Chem 44:2346-59 bibliog(287 ref, p2357-9) O '52

Church steeples and spires rebuilt with stainless. il Sheet Metal Worker 44:92 Ja '53

Cleaning stainless steel work. E. M. Rains. il Sheet Metal Worker 44:86-7 Jl; 80-1, 140 S '53

Co versus Ti-stabilized stainless steel. G. W. Weeks. il Metal Prog 63:116+ F '53

Cold-forge stainless handles in mid-air; International silver co.; illustrations with text. Am Mach 96:126-7 N 10 '52

Color and reflectance of stainless steels. F. K. Bloom. il diags Metal Prog 63:67-72 Je '53

Considerations for successful use of investment-cast type 410. D. Von Ludwig. il Metal Prog 63:84-7 Ap '53

Corrosion of stainless reduced by materials and process controls. D. R. Keck. Can Chem Process 37:40+ Ja '53

Corrosion resistance of stainless steel; abstract and discussion. U. R. Evans. Chem Ind p275-6 Mr 21 '53

Creep strength of stainless steels. W. L. Nelson. Oil & Gas J 51:195 Mr 30; 291 Ap 27 '53

Distribution, by market classifications, 1950-1952; tabulation. Steel 132:163 Ja 5 '53

Faster stainless polishing. il Steel 131:292+ O 13 '52

Ferrite in austenitic steels estimated accurately; Aminco-Brenner Magne-Gage calibrated by means of iron powder-bakelite compacts. T. V. Simpkinson. il Iron Age 170:166-9 D 11 '52

Guide for stainless steel buyers. Steel 132:33-118 sec 2 Je 22 '53

Heat conduction in alloys at low temperatures. I. Estermann and J. E. Zimmerman. bibliog diags J Ap Phys 23:578-88 My '52

How to clean stubborn deposits from stainless steel. il Materials & Methods 37:252+ Je '53

How to fabricate 430 stainless. L. F. Spencer. il diags Iron Age 171:139-43 Ap 23 '53

How to machine stainless steel with carbides. J. J. Robert. il diags Am Mach 96:109-12 O 27 '52

Improving stainless steel; three new alloy products; Simplex ferrochrome, electrolytic manganese and electrolytic chromium. il Bsns W p92+ Je 6 '53

Investment castings need not be free-machining stainless. R. L. Wood and D. Von Ludwig. Am Mach 96:147-50 N 10 '52

Mechanical cleaning gives higher luster at lower cost; abrasive scouring. W. G. Patton. il Iron Age 170:155-7 D 11 '52

New austenitic stainless, good alternate for 18-8. R. L. Hatschek. il diag Iron Age 171:135-8 Mr 12 '53

New stainless alloy fills long industry need; V2B. N. F. Mott. bibliog il Iron Age 171:149-53 Je 18 '53

New stainless, passes its tests. D. I. Brown. Iron Age 171:228 Ja 1 '53

New stainless stretches nickel! type 301. A. G. Gray. il Steel 132:94-7 Mr 9 '53

Nickel restrictions bring use of new stainless steels. R. A. Lincoln. bibliog il Iron Age 171:129-32 My 14 '53

Non-galling stainless; V2B. Steel 132:106-7 Je 22 '53

Occurrence of chi phase in molybdenum-bearing stainless steels. P. K. Koh. il J Metals 5:Trans 339-43 sec 2 F '53

Oil stains; removing fingerprints, oil, grease, wax, greasy dirt, and other oily stains from stainless steel work. il Mill & Factory 53:132-3 S '53

Pickling of stainless and heat resisting steels; abstract. E. Brauns. Metal Finishing 51:83 O '53

Precipitation hardening stainless steels. J. Joseph. il Aero Digest 66:52+ Ap '53

STEEL, Stainless—*Continued*

Rapid softening of cold-drawn austenitic stainless steels. F. A. Hodierne and C. E. Homer. 2pls diag Iron & Steel Inst J 171: 249-53 Jl '52; Discussion. 173:279-80 Mr '53

Republic woos the ladies; steel firm markets own line of stainless steel kitchens. R. M. Lorz. il Iron Age 171:74 Mr 19 '53

Russians show progress on stainless and heat-resisting steels. C. A. Zapffe. bibliog Iron Age 171:138-42 Mr 19 '53

Shot blasts 430 cleaning costs; Washington steel corp. il Steel 132:86+ F 16 '53

Silver alloy brazing of stainless steel. R. C. Jewell. Welding J 32:331 Ap '53

Solubility limit of carbon in austenitic stainless steel studied. Materials & Methods 37: 172+ Ja '53

Special machine improves stainless roll finish. M. B. Hanks. il Steel 131:66-7+ D 22 '52

Stainless extrusions made in Gary plant. Midwest Eng 5:20-1 Mr '53

Stainless steel aircraft nacelles present many production problems; Solar aircraft co. J. A. Logan. il Automotive Ind 107:48-9+ D 1 '52

Stainless steel big factor in modern mill construction at Jacksonville; St Regis paper co. il Paper Ind 35:773-4 O '53

Stainless steel cuts turbine maintenance. H. H. Gnuse, jr. il Elec World 139:148+ Mr 23 '53

Stainless steel galling characteristics checked. H. Tanczyn. diag Steel 132:150-2 Ap 20 '53

Stainless steel in the Swedish pulp industry; circulating systems for sulphite digesters, and evaporators for black liquor in sulphate mills. E. G. Lindh. bibliog il diags Pulp & Pa of Can (Convention no) 54:239-46+ [F] '53

Stainless steel ingot production, by types, 1948-1952; tabulation. Iron Age 171:401 Ja 1 '53

Stainless steel melting practices have changed. B. R. Queneau and A. C. Ogan. il Iron Age 170:165-9 D 4 '52

Stainless steel parts reduce maintenance costs. M. Gallup. diag Iron Age 170:68 D 25 '52

Stainless steel production, 1951-1952; tabulation. Steel 132:162 Ja 5 '53

Stainless steel shipments, 1949-1952; tabulation. Iron Age 171:403 Ja 1 '53

Stainless steel; with time-saver standards. diags Arch Rec 112:191+ D '52; 113:179, 181 Ja; 201, 203 F '53

Stainless steels; important factors to watch in selection. il Chem Eng 60:290+ Ap '53

Stainless steels in petroleum refining. W. L. Nelson. Oil & Gas J 51:99 F 2 '53

Stainless tubing in radar screens. il Materials & Methods 38:116-18 O '53

Structural applications of stainless steel. A. G. Dean. il diags Engineer 195:853-5, 882-4 Je 19-26 '53

Substitute chromium sources reduce production costs of stainless steel. N. B. McFarlane. il J Metals 4:1284-5 D '52

Surface finishing the stainless steels. L. F. Spencer. bibliog il Metal Finishing 51:70-7 Mr '53

Synthesis of methane by hydrogenation of carbon monoxide in a tubular reactor. M. M. Gilkeson, R. R. White and C. M. Sliepcevich. bibliog flow diag il diag Ind & Eng Chem 45:460-7 F '53

Tests prove ceramic coatings prevent stainless steel absorption of carbon. Cer Ind 59:69 N '52

Tips on surface refinishing of stainless steel work; illustrations with text. E. M. Rains. Sheet Metal Worker 44:66-7 My '53

Use of rare-earth metals and compounds in stainless steel melting. C. B. Post and H. O. Beaver. il Blast F & Steel Pl 41:627-34+ Je '53; Excerpts. Iron & Steel Eng 30:106-7 Ag '53; Abstract. Iron Age 171:148-9 Je 4 '53

What makes steel stainless? Tech R 55:88+ D '52

Why we now make better stainless steels. J. J. Heger. bibliog il Am Mach 96:119-22 O 13 '52

See also

Chromium nickel steel

Chromium steel

Standards

Standard stainless steels, wrought and cast; data sheet. Metal Prog 63:96B Je '53

Testing

Effect of temperature on the mechanical properties, characteristics, and processing of austenitic stainless steels. V. N. Krivobok and A. M. Talbot. bibliog il Am Soc T M Proc 50:895-928; Discussion. 929-30 '50

Hardening of austenitic stainless steels by mechanical working at sub-zero temperatures. N. A. Ziegler and P. H. Brace. il diag Am Soc T M Proc 50:861-79; Discussion. 880-1 '50

High-temperature testing of type 316 stainless steel sheet; abstract. G. J. Guarnieri. Metal Prog 63:184+ Ap '53

Utility of Strauss test. L. H. Satz. Metal Prog 63:136+ Ja '53

Welding

Accelerated corrosion test of stainless steel samples in an effort to establish galvanic attack. J. T. Waber and S. F. Waber. Metal Prog 63:204+ Ja '53

Aft frames. il Welding J 32:527-9 Je '53

Butt welding thin stainless steel. il Tool Eng 29:54 D '52

Chromium recovery during submerged-arc welding. J. G. Kerr and D. A. Elmer. bibliog il Welding J 31:sup431-8 S '52; Discussion. F. G. Harkins. 32:sup 111-12 F '53

Copper in type 347 weld metal. R. P. Wentworth. il Welding J 32:347-51 Jl '53

Finishing weld beads on stainless steel; illustrated instructions. E. M. Rains. Sheet Metal Worker 44:70-1+ Mr '53

How to butt-weld 0.005-in. stainless. M. S. Weinstein. il diags Am Mach 97:102-4 Ag 31 '53

How to fabricate 17 percent chromium stainless steel. R. E. Paret. il Materials & Methods 36:103-4 N '52; Same abr. Mach 59: 186-7 D '52

Incidence of cracking in welding type 347 steels. L. K. Poole. bibliog il Welding J 32: sup403-12 Ag '53

Ingenious machines weld thin-wall stainless tanks; Bell aircraft corp. R. L. Brown. il diags Am Mach 96:125-8 N 24 '52

Metal arc welding of stainless steel; illustrations with text. E. M. Rains. diags Sheet Metal Worker 44:44-5 N '52

Recent developments in the fusion welding of iron and steel. J. W. Shedden and W. I. Pumphrey. bibliog il Metallurgia 48:82-3 Ag '53

Redesign for producibility based on new welding technique; welding stainless steel parts to modified nodular cast iron; center main bearing support for Wright Sapphire turbo-jet engine. il diag Product Eng 23:174-80 D '52

Resistance welding applications in aircraft stainless steels. D. O. Samuelson. il Welding J 32:603-11 Jl '53

Stainless steel heater tanks saved by welding. G. Bethel. il Welding J 32:147 F '53

Successful welds made by new technique, report of U.S. Naval ordnance laboratory; abstract. Metal Prog 62:176 N '52

Welding light-gage stainless steel; practice in the repair shops of Pullman co. il Ry Loco & Cars 127:71 Mr '53

Welding practices with stainless steel; oxyacetylene; inert-gas metal-arc; spot welding; illustrations with text. E. M. Rains. Sheet Metal Worker 44:86-7 Ja '53

Welding stainless steel angles licks deadline. il Steel 131:102 N 3 '52

Welding stainless steel pipe. N. N. Wolpert. Heat & Ven 50:116-17 F '53

Welding stainless steels. Chem Age (Lond) 68:23-5 Ja 3 '53

Welding stainless steels has its problems. W. G. Blackwell. Steel 132:138-9 Ap 6 '53

Welding the stainless steels. H. Thielsch. bibliog il diags Materials & Methods 37: 115-30 My '53 (reprints 25c)

STEEL, Strip

Armco starts operation on new 80-in. hot strip mill at its Ashland plant. il Iron & Steel Eng 30:115-16 Je '53; Blast F & Steel Pl 41:770-1 Jl '53

STEEL, Strip—*Continued*

Armco strip mill bows in. il Iron Age 171:72-3 My 28 '53

Cold-rolled and hot-rolled strip; prices, 1936-1952; 1952 tabulations. Iron Age 171:411 Ja 1 '53

Cold rolling with strip tension. H. Ford and others. bibliog diags Iron & Steel Inst J 168:57-72 My '51; Discussion. 172:28-40 S '52

Control of strip thickness in cold rolling by varying the applied tensions. R. B. Sims and others. bibliog diags Iron & Steel Inst J 173:343-54 Ap '53; Discussion. 174:353-8 Ag '53

Demand and the strip mills. Economist 167:389-90 My 9 '53

Design and practices of the semi-continuous strip mill; Youngstown plant of Republic steel corp. H. H. Warnock. Iron & Steel Eng 30:57-60; Discussion. 60-1 Je '53

Effect of temperature on the rolling texture of plastically deformed low-carbon strip; abstract. N. P. Goss. Metal Prog 63:182+ F '53

Effect of tension on torque and roll force in cold strip rolling. W. C. F. Hessenberg and R. B. Sims. bibliog Iron & Steel Inst J 168:155-64 Je '51; Discussion. 172:28-40 S '52

Flash welding and high speed cold reduction of strip steel for tin plate. J. Wargo and R. C. Brunner. il Iron & Steel Eng 30:59-64 Ag '53

Guide for stainless steel buyers. Steel 132:86-91 sec 2 Je 22 '53

Hot strip rolling; Port Talbot works. il Elec R (Lond) 151:1311-18, 1365-70 D 19-26 '52

New hot mill for strips up to 24 in. wide. M. Langen. il plans diags Iron & Steel Inst J 172:203-14 O '52; Discussion. 173:425-30 Ap '53

New hot strip mill at Pittsburgh Steel. J. C. Peth and F. E. Fairman, 3d. il plans diags Blast F & Steel Pl 41:926-38+ Ag '53

Pittsburgh Steel begins hot strip mill operation. il Blast F & Steel Pl 41:1053-6 S '53

Prepainted steel strip for production forming. K. Rose. il Materials & Methods 37:158+ Mr '53

Reversing hot strip mill. A. F. Kenyon. il diags Iron & Steel Eng 30:62-70 Je '53

Rolling of thin strip. M. D. Stone. bibliog il diags Iron & Steel Eng 30:61-73; Discussion. 73-4 F '53

Speed-dependent variables in cold strip rolling. R. B. Sims and D. F. Arthur. bibliog Iron & Steel Inst J 172:285-95 N '52; Discussion. 174:353-8 Ag '53

Works trial of the T method of automatic gauge control. R. B. Sims and others. il diags Iron & Steel Inst J 173:354-60 Ap '53; Discussion. 174:353-8 Ag '53

You'll be getting better electrical sheet and strip; highly oriented polycrystalline-silicon steel with the same characteristics of a single crystal. N. P. Goss. il diags Iron Age 171:147-52+ F 5 '53

Testing

New test for drawability; sheet and strip steels. C. B. Buker and J. R. Speer. Materials & Methods 38:156+ Ag '53

STEEL, Structural

Experiences with boron additions to alloy structural steels; abstract. H. Krainer and M. Kroneis. Metal Prog 63:134+ My '53

Fabricated structural steel; estimated bookings, 1938-1952. Iron Age 171:441 Ja 1 '53

High-tensile structural steels. Engineer 195:316 F 27 '53

Preparation of structural steel sections; Norwich works of Boulton and Paul, ltd. il Engineer 195:872-4 Je 19 '53

Protection of tubular structures from the weather by metallizing. A. Clift. il Metal Prog 62:100-4 N '52

Safety factor in construction. F. C. Thompson. Engineering 175:445-6, 477-9 Ap 3-10 '53; Same abr. Engineer 195:343-5 Mr 6 '53

Structural applications of stainless steel. A. G. Dean. il diags Engineer 195:853-5, 882-4 Je 19-26 '53

Structural steel fabricators, Canada; directory. Roads & Eng Constr 91:194 Je '53

Structural steel shapes, prices, 1932-1952; tabulation. Iron Age 171:410 Ja 1 '53

Structurals made lighter for homes. E. C. Kellogg. il Iron Age 171:72 Mr 12 '53

See also

Bridges, Iron and steel
Concrete, Reinforced
Steel, Aircraft
Steel, Automobile
Steel, Reinforcing
Steel construction

Testing

Brittle strength and transition temperature of structural steel. W. C. Hoeltje and N. M. Newmark. bibliog diags Welding J 31:sup515-21 N '52

Welding

Corrosion of structural spot welds. B. Karnisky and others. bibliog il diags Welding J 31:903-16 O '52; Excerpts. Metal Prog 63:174+ Je '53

Distortion control in structural fabrication. G. Cape and L. Jehu. il diags Welding J 31:1009-16 N '52

Evaluation of brittle failure research. E. F. Sweeney. bibliog(46 titles) diags Welding J 32:sup 1-13 Ja '53

Fatigue tests of steel girders. H. Bühler. bibliog diag Welding J 32:sup52-4 Ja '53

Initiation and propagation of brittle fracture in structural steels. P. P. Puzak and others. bibliog il diags Welding J 31:sup561-81 D '52

Recent developments in the fusion welding of iron and steel. J. W. Shedden and W. I. Pumphrey. bibliog il Metallurgia 48:78-85 Ag '53

Steel strengthened with aluminum nitride; abstract. K. A. Krekeler. Welding J 32:43 Ja '53

See also

Steel construction—Welding

STEEL alloys

Alloy conservation in steels for truck axle parts; abstract. T. A. Frischman. Automobile Eng 43:199 My '53

Alloy steel production by processes, 1935-1952; tabulation. Steel 132:162 Ja 5 '53

Alloy steel shipments, 1949-1952; tabulation. Iron Age 171:403 Ja 1 '53

Alloy steels for oil refining. Oil & Gas J 51:95 F 2; 141 F 9; 173 F 16; 199 F 23 '53

Ceramic coatings boost alloy steel use. F. D. Shaw. il Steel 132:110+ Ap 13 '53

Decomposition of austenite in low carbon, Ni, Mo, steel weld metal. E. F. Bailey and W. J. Harris, jr. il diag Welding J 32:sup 134-8 Mr '53

Developments in alloy steels; review of recent progress. C. Sykes. bibliog(30 ref) il Metallurgia 47:3-8 Ja '53

Distribution, by market classifications, 1950-1952; tabulation. Steel 132:163 Ja 5 '53

475° C. hardening characteristics of some high-alloy steels and chromium irons. B. Cina and J. D. Lavender. bibliog 4pls Iron & Steel Inst J 174:97-107 Je '53

How to save those critical alloys; recommendations on conserving needed metals by API interim advisory group. Pet Processing 7:1776-7 D '52

How to understand alloy steels. S. Storchheim. il Am Mach 97:105-14 Ag 31 '53

Limitations of investment cast tool alloys. D. Von Ludwig. il Tool Eng 30:51-5 Je '53

New steels lessen industry's dependence on imported alloys. Manuf Rec 122:34-5+ S '53

Notable advances in fabrication methods and metal applications. T. Bishop. il Metal Prog 63:115-20 Ja '53

Properties and heat treatment of magnet steels; tabulations; engineering file facts. K. Hoselitz. Materials & Methods 37:137 Ap '53

SAE iron and steel technical committee Division VIII continues to study ways to surmount alloy shortages. diags S A E J 61:78-9 Ap '53

Structure of carbides in alloy steels; carbide formation in high-speed steels. H. J. Goldschmidt. bibliog 2pls diag Iron & Steel Inst J 170:189-204 Mr '52; Discussion. 172:283-4 N '52

Temper brittleness in low-alloy steel weld metal. R. P. Wentworth and H. C. Campbell. bibliog il diags Welding J 31:sup505-14 N '52; Discussion. 32:sup 107-11 F '53

STEEL alloys—*Continued*

Welds between dissimilar alloys in full-size steam piping. R. U. Blaser and others. il diags Am Soc T M Proc 50:789-808; Discussion. 858-60 '50

See also

Chromium nickel steel
Chromium steel
Ferroalloys
Iron alloys
Molybdenum steel
Nickel chromium steel
Nickel steel
Silicon steel
Steel, Automobile
Steel, Stainless
Steel, Structural
Tool steel

Analysis

Periodate method for manganese and effect of band width. M. D. Cooper. il Anal Chem 25:411-16 Mr '53

Testing

Assessment of weldability by rapid dilatation tests. C. L. M. Cottrell. bibliog il diag Iron & Steel Inst J 174:17-24 My '53

Corrosion of low-alloy irons and steels in soils. I. A. Denison and M. Romanoff. bibliog il J Res Nat Bur Stand 49:315-24 N '52

Effect of boron on the mechanical properties of low-alloy steels. R. Wilcock. Iron & Steel Inst J 173:406-19 Ap '53; Discussion. Engineer 195:705-6 My 15 '53

How low-alloy irons and steels resist corrosion in various soils. il Gas Age 112:47+ S 10 '53

Mechanical properties of alloy steels in investment castings. S. C. Churchill. il diag Engineering 175:164-7 F 6 '53

Recovery and creep in an alloy steel; abstract. H. A. Lequear and J. D. Lubahn. Metal Prog 63:132 F '53

Selection of a limited number from many possible conditioning treatments for alloys to achieve best coverage and statistical evaluation. J. M. Cameron and W. J. Youden. Am Soc T M Proc 50:951-60; Discussion. 961-4 '50

Some considerations in the joining of dissimilar metals for high-temperature high-pressure service. O. R. Carpenter and others. il diags Am Soc T M Proc 50:809-57; Discussion. 858-60 '50

Test for measuring quench crack sensitivity of engineering alloy steels. R. D. Chapman and W. E. Jominy. il diags Metal Prog 64:67-72 S '53

STEEL balls. See Balls, Steel

STEEL barrels. See Barrels, Steel

STEEL bars

Bigger tool steel bars; the inside story. D. P. Hughes. il Steel 131:96-7 N 3 '52

Cold-finished steel bars, merchant bars; prices, 1936-1952; tabulations. Iron Age 171:410 Ja 1 '53

End quench test for determining the hardenability of carburized steels. F. X. Kayser and others. diags Iron Age 171:155-7 Mr 19 '53

Guide for stainless steel buyers. Steel 132:92-107 sec 2 Je 22 '53

Mechanization of 12-in. bar mill. G. A. Henderson. il diags Iron & Steel Eng 30:107-13 Mr '53

Pass design for hexagons. H. E. Muller. diags Iron & Steel Eng 30:55-63; Discussion. 63-4 My '53

Processing, properties, and application of cold finish carbon steel bars. J. F. Byers. il diags Iron & Steel Eng 30:103-7 My '53

Rebuilding of 12-in. bar mill. J. O. Dague. il plan diags Iron & Steel Eng 30:114-21 Mr '53

See also

Steel, Reinforcing

STEEL brothers and company, limited

Statement by the chairman. J. K. Michie. Economist 167:939-40 Je 27 '53

STEEL buildings

Prefab steel buildings turn civilian. Steel 132:55 Je 22 '53

Service buildings for one third less; Red jacket coal corp. il plan diags Coal Age 58:100-2 Ap '53

Standardized steel hangars ease plane maintenance. il Eng N 149:38 D 11 '52

Standardized steel switchhouses. F. E. Brown. il Elec World 139:72-3 My 4 '53

See also

Steel construction

STEEL castings

Big castings require big molds; National supply co.'s Torrance foundry. il Foundry 81:186 O '53

Castings; a material for ammunition. F. E. Shumann. il Foundry 81:88-93 Jl '53

Centrifugally cast steel tubing. T. E. Rybka. il diags Materials & Methods 37:104-7 F '53

Cleaning cast steel armor; Cast armor division of American steel foundries. E. F. Ross. il Foundry 81:178+ Ag '53

Comparisons at elevated temperatures of some commercial grades of ferritic cast steels. H. W. Wyatt and others. bibliog(37 titles) il A S M E Trans 75:289-98; Discussion. 298-300 F '53

Considerations for successful use of investment-cast type 410. D. Von Ludwig. il Metal Prog 63:84-7 Ap '53

Continuous casting makes steady progress. il Steel 131:79+ D 22 '52

Continuous casting of steel billets; Babcock & Wilcox tube co. Metal Prog 63:87+ Mr '53

Cracks and hot tears in steel castings. J. B. Caine. bibliog diags Foundry 81:120-7+ Je '53

Creating a thimble; cinder pot manufacturing requires specialized foundry operations. il Steel 131:90-1 O 20 '52

Determination of feeding systems. R. A. Cech. bibliog diags Foundry 81:128-31 O '53

Developments in steel castings in the heavy power plant industry. F. Buckley. bibliog diags Inst Mech Eng Proc (A) 167 no 2:177-83, pl 1-4; Discussion. 183-9, pl 5-6 '53; Engineer 195:356-8 Mr 6 '53

Fork truck simplifies handling in quenching steel castings. il Foundry 80:214+ O '52

Foundries report on basic electric arc practices. T. N. Armstrong. il Iron Age 170:103-5 N 27 '52

Heat treatment of steel castings. J. H. Hall. il Foundry 81:122-5+ O '53

High-speed molding is done automatically; Symington-Gould corp. W. G. Gude. il Foundry 81:98-101 Ap '53

High-strength steel castings. Engineer 195:460 Mr 27 '53

How to develop cast products. R. J. Franck. il Foundry 80:120-3+ O '52

Ideal steel jobbing foundry. H. G. Schlichter. il plans diags Foundry 80:84-9+ D '52; 81:102-7+ Ja '53

Machinability of cast steels. N. Zlatin and others. il Tool Eng 30:59-67 F '53; Excerpts. Am Mach 97:137, 139, 141 F 2; 189, 191, 193 F 16; 135 Mr 2 '53

Mold design for casting steel in sand. R. W. Tindula. bibliog(52 titles) Foundry 81:242+ O '53

Outsize casting replaces fabricated chassis on big shovel. il Iron Age 170:181 N 13 '52

Properties of cast steels improved with rare earth element additions. G. A. Lillieqvist and C. G. Mickelson. il diags J Metals 4:1024-31 O '52

Properties of steel castings; engineering file facts. Materials & Methods 38:153, 155, 157 O '53

Quality control and inspection as part of the manufacturing process of steel castings; abstract. J. R. Rait. Engineering 175:607 My 8 '53

Research as it affects the customer; abstract. J. F. B. Jackson. Engineering 175:607 My 8 '53

Role of the research foundry unit. G. A. Lillieqvist. bibliog il diags Foundry 80:114-19+ O '52

Sand in their shoes; the story of American steel foundries. F. M. Reck. Foundry 81:126-7+ S '53

Shaking out, cleaning, welding, steel castings. J. H. Hall. il diags Foundry 81:92-6+ F; 194-5+ Mr; 96-7+ Ap; 218-20+ My '53

Shell molding stainless-alloy castings. il Mech Eng 74:1016-17 D '52

Snagging operations. H. W. Wagner. diag Foundry 81:112-13+ Ja '53

Steel castings; American foundrymen's society annual meeting, Chicago; abstracts of papers. Foundry 81:132+ Jl '53

Steel castings and their application; abstract. F. Rowe. Engineering 175:607 My 8 '53

Steel castings; technical progress. C. W. Briggs. il Foundry 81:130-5 My '53

STEEL castings—*Continued*

Steel founders' society of America 7th annual technical and operating conference. Materials & Methods 37:8 Ja '53

Steel founders' society of America 7th annual technical and operating conference, Cleveland, Nov. 6-8; with abstracts of papers. Foundry 81:162+ Ja '53

See also

Steel ingots

Statistics

Steel castings, production, sales, orders by type, 1930-1952; tabulation. Iron Age 171:450 Ja 1 '53

Steel castings shipments, 1946-1952; tabulation. Steel 132:166 Ja 5 '53

Steel ingot and castings output by countries; monthly output of steel for ingots and castings, 1951-1952; tabulations. Steel 132:160-1 Ja 5 '53

Testing

Investment castings need not be free-machining stainless. R. L. Wood and D. Von Ludwig. Am Mach 96:147-50 N 10 '52

Machinability studies compare cast and wrought steels. Iron Age 171:102-4 Ja 22 '53

Mechanical properties of alloy steels in investment castings. S. C. Churchill. il diag Engineering 175:164-7 F 6 '53

Reproducibility of results of tension tests on specimens prepared from cast steel coupons. H. A. Schwartz and W. K. Bock. diags Am Soc T M Proc 50:1167-75 '50

STEEL castings research association, British. See British steel castings research association

STEEL chimneys. See Chimneys, Steel

STEEL construction

Before stainless steel could be used in skyscraper sidewalls. R. J. Ritchey. il Sales Management 69:30-2 N 1 '52

Euclid works of the Lincoln electric co. il plans diag Engineer 194:860-3 D 26 '52

Fabrication and erection methods for all-welded expressway viaduct. H. H. Tarzian and P. G. Jonas. il plan diags Roads & Sts 96:70-7 Ag '53

Good fabrication and erection ideas; Fairchild aircraft corp. il diags Constr Methods 35:126-8+ My '53

Hangar sets records for Brazil. il Eng N 149:66 D 18 '52

High-tensile bolts gain fabricators' nods. H. O. McCully. Steel 132:95 Ja 26 '53

Lightweight structural framing. diag Engineering 175:672 My 22 '53

Modern materials and techniques transform old building into a brand new one; Heppenstall co. il Mill & Factory 52:147 My '53

Old buildings modernized with stainless exterior; Heppenstall co. office building. E. R. Woodward. il diags Sheet Metal Worker 44:67-9 Ap '53

One-story Vierendeel trusses ideally suited to school building. R. H. Courland. il plans diags Civil Eng 22:878-82 O '52

Prefabricated steel piers cut construction costs. H. P. Maxton. il Civil Eng 23:306-7 My '53

Pre-formed pre-cut steel deck for bow-string roof. il Sheet Metal Worker 44:54 Je '53

Solving unusual foundation and steel-framing problems. C. D. Carruthers. il Roads & Eng Constr 91:130+ Ag '53

Sphere is atomic sub lab. il Eng N 150:32-4 Ap 9 '53

Steel frames; Thule air base buildings go up fast with standard frames. il Iron Age 171:179-80 F 5 '53

Steel structural sections replace wood studs, joists. il Eng N 150:103-4 Ja 29 '53

Tests on small triangulated steel frames. R. W. Steed. Engineering 175:53 Ja 9 '53

Using standardized buildings; prefabricated frames in Diesel shops. il diag Ry Age 134:94-6 Mr 9 '53

World's biggest sphere to house sub reactor. il Eng N 149:29 O 23 '52; Iron Age 170:206-7 N 6 '52; Steel 131:48 O 27 '52

See also

Concrete, Reinforced
Riveting
Steel, Structural
Steel houses
Towers, Steel

Concrete encasement

Open-caisson method used to erect Tokyo office building. A. C. Mason. il plan diags Civil Eng 22:944-7 N '52

Design

Built-in deflections cut frame cost. R. W. Waterhouse. diags Eng N 150:45 Mr 26 '53

Compressive buckling of stiffened plates. B. H. Falconer and J. C. Chapman. bibliog diags Engineer 195:789-91, 822-5, Je 5-12 '53

Evaluation of plastic analysis as applied to structural design. B. G. Johnston and others. bibliog(33 titles) il diags Welding J 32:sup224-39 My '53

Here's a better way to design splices; relative gage method. F. W. Schutz, jr. il diags Eng N 150:41-2 Ja 8 '53

Hipped plate analysis, considering joint displacements. I. Gaafar. il diags Am Soc C E Proc 79 [no 182]:1-28 Ap '53

Horizontally curved box beams. C. E. Cutts. bibliog il diags Am Soc C E Proc 78 [no 128]:1-18 My '52; Discussion. 79 [no D-128]:1-10 Mr '53

Laboratory tests recommended to set up design procedure for steel column bases. M. A. Larson. Civil Eng 22:953 N '52

Long trusses and steel cantilevers provide open work area for Boeing flight hangar. M. A. Wilson. il diags Civil Eng 23:312-14 My '53

Phase-plane construction in problems of elastic impact. R. E. D. Bishop. diags Engineer 196:168-70 Ag 7 '53

Plates with boundary conditions of elastic support. S. J. Fuchs. bibliog diags Am Soc C E Proc 79 [no 199]:1-24 Je '53

Stability and strength of thin-walled steel struts. A. H. Chilver. bibliog il diags Engineer 196:180-3 Ag 7 '53

Structural strength of thin-walled channel sections. J. M. Harvey. Engineering 175:291-3 Mr 6 '53

Erection

Construction of a tubular steel skip bridge. il Engineer 194:831-2 D 19 '52; Engineering 174:722-3 D 5 '52

High line crew places novel roof over North Carolina state fair Live stock judging pavilion. il Constr Methods 35:52-4 F '53

Testing

Tests of structural damping. il diags Pub Roads 27:203-33 O '53

Welding

All-welded factory extensions, Fairchild Aircraft, Hagerstown, Md. C. L. Kreidler. il Welding J 32:846-9 S '53

Allen County war memorial coliseum. R. E. Coblentz. il diag Welding J 32:320-3 Ap '53

Case reports on welded structures. N. H. Abrams and others. il diags Welding J 32:135-8 F '53

Column strength under combined bending and thrust. R. L. Ketter and others. bibliog il diags Welding J 31:sup607-22 D '52

Connections for welded continuous portal frames. A. A. Topractsoglou and others. bibliog il diags Welding J 30:sup359-84, 397-405; 31:sup543-60 Jl-Ag '51, N '52

Continuous welded structures. W. S. Atkins and E. M. Lewis. il plan diags Welding J 32:928-46 O '53

Design of welded steel bridges and buildings. F. L. Plummer. bibliog il Welding J 32:489-96 Je '53

Evaluation of plastic analysis as applied to structural design. B. G. Johnston and others. bibliog(33 titles) il diags Welding J 32:sup224-39 My '53

How to save cost by designing for structural welding. A. E. Pearson. il diags Welding J 31:1129-35 D '52

Plastic strength and deflections of continuous beams. K. E. Knudsen and others. bibliog(22 titles) diags Welding J 32:sup240-55 My '53

Unity in welded steel construction. R. S. Hale. il diags Welding J 32:225-9 Mr '53

Welded frames span 328'; Mexico City's huge auditorium. il plan diag Arch Forum 97:158 S '52

STEEL construction—Welding—*Continued*
Welding and welded connections. W. Gerritsen. diags Engineer 194:394-5 S 19 '52
See also
Bridges—Welding operations

STEEL construction, American institute of. See American institute of steel construction

STEEL cutting
Advanced automatic flame cutting for machinery weldments; Marion power shovel co. H. B. Cary. il Welding J 32:957-65 O '53
Bearing races machined at high speed. R. Brooks. il Iron Age 170:180-2 N 6 '52
Centrifugally cast jet engine rings; how to rough machine them. F. Meninger. il Steel 131:78-9 O 6 '52
Correlation of machinability with inclusion characteristics in resulphurized Bessemer steels. L. H. Van Vlack. Automotive Ind 107:132+ N 15 '52
Curtiss-Wright boosts output with machinability data. R. LeGrand. il diags Am Mach 96:141-8 N 24 '52
Cutting feeds and speeds for standard tools; tabulation; reference sheets. Tool Eng 30:79-81 Mr '53
Cutting speed; horizons limited. H. Ernst. Steel 132:88-9 F 9 '53
Dam tooling turns out tough steel rollers and tracks; tractor gates for the Garrison dam. G. W. Hilton and T. Shields. il diags Am Mach 96:130-2 N 24 '52
Friction saw cuts steel faster; 15 seconds required for heavy, 30-in. beams. L. J. Langevin. il Elec World 139:209 Ja 26 '53
High-speed turning research at Jones & Lamson. diags Mach 59:221-3 Jl '53
How to machine stainless steel with carbides. J. J. Robert. il diags Am Mach 96:109-12 O 27 '52
Industrial sculpture; stern frame and skeg flame-gouged from huge steel blocks. il Iron Age 171:153 My 14 '53
Investment castings need not be free-machining stainless. R. L. Wood and D. Von Ludwig. Am Mach 96:147-50 N 10 '52
Machinability of cast steels. N. Zlatin and others. il Tool Eng 30:59-67 F '53; Excerpts. Am Mach 97:137, 139, 141 F 2; 189, 191, 193 F 16; 135 Mr 2 '53
Machinability studies compare cast and wrought steels. Iron Age 171:102-4 Ja 22 '53
Machine cutting to prepare steel castings for welding. il Steel 131:284+ O 13 '52
Metallurgical aspects of machinability of steel. W. I. Pumphrey. Metal Prog 64:194+ Jl; 143-4 Ag '53
Metallurgical effects of oxygen cutting alloy steel (armor plate). F. C. Saacke. il Welding J 32:19-30 Ja '53
Recent developments in the machinability of steel; abstract and discussion. K. J. B. Wolfe. Engineer 194:729-30 N 28 '52
Sandblasting and annealing to improve flame-cut high-tensile steel. A. Erker. Welding J 32:sup402+ Ag '53
Standard machine speed chart. Mill & Factory 51:80 N '52

STEEL forgings
Annealing type 414 stainless steel forgings. A. A. Scafati. il Materials & Methods 38:78-9 Jl '53
Bethlehem makes forgings for heavy press program. il Iron & Steel Eng 30:150 Mr '53
Impact forging can save you money. F. J. Pesak. il Iron Age 171:153 Ap 2 '53
Improved manufacture of large alloy steel forgings. H. H. Burton. il Metal Prog 63:125-9 Ja '53
Pair forging makes giant rotor disks; illustrations with text. Am Mach 96:138-9 S 1 '52; J Metals 4:1032 O '52
Processes; press-forging heavy steel parts with split dies. il Product Eng 24:198 Ja '53
This 275-ton ingot was forged into world's longest steel forging. il Mill & Factory 52:122 Ap '52; Steel 132:109 Mr 16 '53
Wheel forging; English plant turns out 60 railway wheels an hour in new setup; Trafford Park steel works. il Iron Age 171:183-4 F 5 '53

Statistics
Shipments of steel forgings, net tons, 1947-1952; tabulation. Iron Age 171:452 Ja 1 '53
Steel forgings; shipments, 1951-1952; tabulation. Steel 132:162 Ja 5 '53

STEEL founders' society of America
Annual meeting, 51st, Chicago, March 17-18. Foundry 81:253-4+ My '53
Fall meeting, 50th, Hot Springs, Va. Sept. 22-23. Foundry 80:175+ N '52
Technical and operating conference, 7th. Materials & Methods 37:8 Ja '53

STEEL handling
Construction of magnetic sheet-steel separator. diags Electronics 26:286+ Mr '53
Here's how Yale & Towne handles plates, sheets, coils, strip, pipe, channels; illustrations with text. Mill & Factory 51:110-11 O '52
Hydraulic handling; coil handling equipment conveyor at U.S. Steel's sheet and tin mill. il Steel 132:127 Je 29 '53
Warehousing; storage of bar and tube stock simplified with special unit. il Iron Age 171:252+ My 7 '53
See also
Steel construction—Erection

STEEL houses
Structurals made lighter for homes. E. C. Kellogg. il Iron Age 171:72 Mr 12 '53

STEEL industry and trade
Backwash of steel strike. Bsns W p32-3 N 1 '52
Clear case of financial malnutrition. B. F. Fairless. Comm & Fin Chr 177:1637+ Ap 16 '53
Dave McDonald's flub. Fortune 47:92+ Ap '53
Demand and the strip mills. Economist 167:389-90 My 9 '53
Developments in the iron and steel industry during 1952. I. E. Madsen. il diags Iron & Steel Eng 30:123-61 Ja '53
Industry cooperates with Capitol; steelmen seek better government relationship. G. H. Baker. Iron Age 171:93 Je 18 '53
Longer term outlook for the steel industry. B. E. Estes. Comm & Fin Chr 177:1965 My 7 '53
More steel for mid-American users; Granite city steel co. and Laclede steel co. expand their facilities. il Steel 132:52 My 18 '53
New steels lessen industry's dependence on imported alloys. Manuf Rec 122:34-5+ S '53
No wage-price spiral from steel. Bsns W p27 Je 20 '53
Pipe; plastics stir steel firms' interest. W. V. Packard. Iron Age 171:69-70 Mr 12 '53
Reaching the purple twilight. C. F. Hood. Comm & Fin Chr 177:1740+ Ap 23 '53
Republic takes exception; producing line of steel kitchens under its own name, as well as on a contract basis. il Bsns W p41-2 Ja 17 '53
Seven missing keys. R. S. Lynch. Manuf Rec 122:35-6+ Ag '53
Steel; balance melting and finishing. J. B. Delaney. il Iron Age 171:39-40 Ap 30 '53
Steel capacity growing pains. K. W. Bennett. Iron Age 171:44 Ja 15 '53
Steel capacity in Detroit area. Bsns W p27 My 30 '53
Steel capacity; index of strength in war and peace. Materials & Methods 27:6-7+ Mr '53
Steel imports wither as U.S. supply eases. Steel 132:46 F 23 '53
Steel industry has its neck out. C. M. White. Comm & Fin Chr 177:590 F 5 '53
Steel; it's geared to Detroit now. Bsns W p27 Ap 18 '53
Steel warehouses; business still good. il Steel 132:65-6 Mr 9 '53
Steel; what will the industry's future be? W. V. Packard. Iron Age 170:193-5 O 9 '52
Steel's future; producer's point of view. A. B. Homer. Comm & Fin Chr 176:2121+ D 4 '52
Warehousemen prepare for buyers' market. Steel 131:43-4 D 29 '52
Warehouses can sell more steel. Iron Age 171:100-1 Je 18 '53
Warehouses; sales ride boom crest. W. V. Packard. Iron Age 171:97 Je 4 '53
World plans for expansion. Economist 166:321+ Ja 31 '53

STEEL industry and trade—*Continued*

World steel outlook. Economist 166:830+ Mr 21 '53

Year end statement. B. F. Fairless. Blast F & Steel Pl 41:107 Ja '53

See also

Iron industry and trade

Rolling mills

Steel workers

Steel works

Tin plate

also National steel corporation; Pittsburgh steel company

Advertising

Armco Steel increases sales by selling salesmen. Ind Marketing 38:65 Ap '53

How Crucible's booklets talk user-benefits. W. H. Wiewel. diags Sales Management 70:114+ F 15 '53

New promotion is good for hard or soft selling; Crucible Steel industry booklets. N. Kelne. il Ptr Ink 241:34-5 O 24 '52

Directories

Structural steel fabricators, Canada; directory. Roads & Eng Constr 91:194 Je '53

Finance

Financial analysis of the steel industry for years 1951, 1950, 1949; data cover 27 companies representing 92 per cent of U.S. ingot capacity; tabulation. Iron Age 171:414. Ja 1 '53

Income of steel companies drops 13 per cent in 1951. Blast F & Steel Pl 40:1338 N '52

Net profits kept skidding in 1952. T. Metaxas. Iron Age 171:91-2 F 5 '53

Steel earnings slump in 1952. Steel 132:75 F 2 '53

Steel equities; future is not as dim as the market has it. L. F. Licht, jr. Barron's 33:15 Ap 6 '53

Steel; first quarter earnings up. W. V. Packard. Iron Age 171:150 My 7 '53

Steel industry net income declines in 1952. Blast F & Steel Pl 41:670-1 Je '53

Steel reports highlight future profits factors. K. Bloch. Barron's 33:18 F 2 '53

Strike cut profits 22 per cent; Iron Age financial analysis of 27 companies, 1952-1951. J. B. Delaney. Iron Age 171:80, insert Ap 9 '53

Tax collector biggest loser in steel strike; financial analysis of 30 companies, 1952. Steel 132:sup Ap 20 '53

History

Iron and steel production, 1851-1951, and the coke industry. W. Mathesius. Blast F & Steel Pl 40:1305-10+ N '52

Securities

Steel industry; can it hold record high levels? with comparative earnings and dividend records and statistics of leading companies. W. L. Schroeder. Mag of Wall St 92:218-21+ My 16 '53

Swords and plowshares. I. U. Cobleigh. Comm & Fin Chr 177:580-1 F 5 '53

Statistics

American iron and steel institute; production of open hearth, Bessemer and electric steel ingots and steel for castings, 1952; tabulation. Blast F & Steel Pl 41:214 F '53

Annual steel capacity (ingots and steel for castings) as of Jan. 1, 1953; tabulation. J Metals 5:506 Ap '53

Annual steel production by processes; steel ingot production; shipments of steel products by market classifications; 1952 distribution of carbon, alloy and stainless steel; shipments of steel products; shipments of steel forgings, by type of forging; shipments of ferrous castings, by type of casting; tabulations. Automotive Ind 108: 334-5 Mr 15 '53

Enough steel in case of war? first part of DPA survey. Steel 132:74 F 2 '53

1953 metalworking facts and figures. Steel 132:160-72 Ja 5 '53

Official steel industry capacities; tabulations. Iron Age 171:56a-56f Ja 29 '53

Prospects for steel exports. Economist 167: 614-15 My 30 '53

Role of industry statistics in modern business life. G. S. Rose. Special Lib 43:401-6 D '52

Steel capacity increased in all districts. Blast F & Steel Pl 41:sup70+ Ap '53

Steel for oil to be sufficient. World Oil 136: 77-8 F 15 '53

Steel industry prices, production, capacities, shipments. Iron Age 171:399 Ja 1 '53

Steel production in 1952; third largest in history; tabulation. Steel 132:51 Ja 19 '53

Terminology

Handbook of terms commonly used in the steel industry. Iron Age 171:149-78 Mr 12 '53

Australia

Practical metallurgy, down-under. A. S. Reardon. il Metal Prog 63:99-102 Ja '53

Belgium

Postwar progress and trends in steel manufacture in the Benelux region. A. G. Lefebvre. il map Metal Prog 63:84-8 Ja '53

Canada

Canadian steel output, 1924-1952; capacity, 1937-1952; finished steel, 1946-1952; tabulations. Iron Age 171:403 Ja 1 '53

Europe

Europe eyes export markets. Iron Age 171:67 Je 11 '53

European steel industry and the wide strip mill. Engineer 196:238-9 Ag 21 '53

European steel prices wobble. Steel 132:49 Ja 12 '53

Europe's steel exports grow. Steel 132:57 Je 8 '53

Some economic aspects of the European steel industry. M. J. Layton. Iron & Steel Eng 30:104-6 Ag '53

France

Little Ruhr; France puts its chips on Lorraine and the Saar. Barron's 33:5 My 4 '53

New French steel industry. map Economist 166:153-4, 371-2 Ja 17, F 7 '53

Germany

Europe's metalworking exports face cost test in 1953. Steel 131:46-7 D 22 '52

Krupp and the new Ruhr. Economist 166:578+ F 28 '53

Steel trend reverse in Germany. Steel 132: 65 Mr 30 '53

West Germany steps up steel production. For Comm W 49:5 Mr 2 '53

Great Britain

Britain and Luxemburg. Economist 167:718-20 Je 13 '53

Britain drops steel rationing. Steel 132:75 Je 1 '53

British iron and steel industry in 1952. il Engineer 195:29-31, pl 8, 65-8 Ja 2-9 '53

British steel famine subsides. Steel 131:57 D 1 '52

Buyers for steel shares. Economist 167:455-7 My 16 '53

Coke supplies for the steel industry. Engineer 194:187-8 Ag 8 '52

Defining steel denationalisation. Economist 166:505 F 21 '53

Denationalisation on trial. Economist 166: 781-2 Mr 21 '53

Export premiums in steel; realism and steel prices. Economist 167:928+ Je 27 '53

Future for British steel. map Economist 166: 319-21 Ja 31 '53

Good intentions and steel. Economist 165: 467-8+ N 15 '52

How much steel? Economist 165:904-5 D 27 '52

Iron and steel bill. Engineer 194:649 N 14 '52

Iron and steel corporation's report. Engineer 195:871 Je 19 '53

Iron and steel industry; government's proposals for the reorganisation of the industry under free enterprise. Engineer 194: 158-9 Ag 1 '52

Power and steel; new Iron and steel board appointed. Economist 167:612-13 My 30 '53

Productivity in steelmaking; conferences of British iron and steel research association. Engineer 194:550 O 24 '52

Profits from steel. Economist 166:510-11 F 21 '53

STEEL industry and trade—Great Britain— *Continued*

Progress with the steel bill. Economist 166:752 Mr 14 '53
Rise and development of Sheffield industry. G. P. Jones. Engineer 196:91-2 Jl 17 '53
Salesmen for steel shares. Economist 167:760 Je 13 '53
Selling plate in steel; with table. Economist 166:660 Mr 7 '53
Shortage of cheap steel plate. Economist 167:243 Ap 25 '53
Socialism in reverse. il Bsns W p 122-3 Je 27 '53
Steel control and stocks. Economist 166:434-5 F 14 '53
Steel denationalization progressing in U.K. For Comm W 49:6 My 4 '53
Steel denationalized in Great Britain. For Comm W 49:7 Je 29 '53
Steel exports and planning. Economist 166:897 Mr 28 '53
Steel from British ore; with chart of consumption of ore in pig iron production for various years. Economist 165:644 N 29 '52
Steel hits the target. Economist 165:776 D 13 '52
Steel in 1952. Economist 166:236-7 Ja 24 '53
Steel nears the test. Economist 166:823-4 Mr 21 '53
Steel prospect continues to improve. For Comm W 48:5 N 24 '52
Steel shopwindow. Economist 167:829-31 Je 20 '53
Steel without politics. Economist 166:317-19 Ja 31 '53
Three guilty men. Economist 167:802 Je 20 '53
United Kingdom ends steel rationing, plans distribution of steel plate. For Comm W 49:20 Je 1 '53
U.K. imports-exports improve; first quarter, 1953. Steel 132:57 My 18 '53
U.K. steel output recovers from low level; raw material shortage overcome; data for 1951 and 1952. For Comm W 49:7 Mr 16 '53
See also Iron and steel corporation of Great Britain

India

Expansion of iron and steel industry. Engineer 194:701 N 21 '52
India seeks loan to start five-year plan of steel and industrial growth. Iron Age 170:70 N 20 '52
Some raw material problems of the Indian iron and steel industry. P. Kutar. diag Blast F & Steel Pl 41:755-60 Jl '53
Steel strides. Bsns W p68-9 D 27 '52

Italy

Italian steel industry meets stiffer price competition. il Steel 132:57 Mr 23 '53
Resurrection of metallurgy in Italy. A. Scortecci. il map Metal Prog 63:89-93+ Ja '53

Japan

Japanese steel industry loses ground because of diminishing scrap supplies. Chem & Eng N 31:572 F 9 '53
Japanese work on plans to combat steel pool competition. Iron Age 171:82 Ap 23 '53
Priority assistance is granted to seven Japanese steel mills. For Comm W 48:4 O 20 '52

Latin America

Steelmaking in Latin America. map Steel 131:79-81 N 24 '52

Luxemburg

Postwar progress and trends in steel manufacture in the Benelux region. A. G. Lefebvre. il map Metal Prog 63:84-8 Ja '53

Netherlands

Postwar progress and trends in steel manufacture in the Benelux region. A. G. Lefebvre. il map Metal Prog 63:84-8 Ja '53

Poland

Poland pushes industrial expansion. il Steel 132:55 Ja 19 '53

Russia

Important tasks of technical progress in ferrous metallurgy. I. P. Bardin. Metal Prog 64:125-6+ Ag '53
Russian steels today. C. A. Zapffe. bibliog Materials & Methods 38:79-86 Ag '53
Russians show progress on stainless and heat-resisting steels. C. A. Zapffe. bibliog Iron Age 171:138-42 Mr 19 '53

United States

American iron and steelmaking practices compared with British; productivity report. Metal Prog 63:170+ Mr; 138+ Ap '53
Progress in steelmaking processes in America. J. S. Marsh. il Metal Prog 63:74-7 Ja '53
Small steel companies expanding rapidly. Blast F & Steel Pl 40:1342-3 N '52
Steel capacity of the United States reaches a record high level. G. S. Rose. Blast F & Steel Pl 41:47-8 Ja '53
Steel for sale; steel production. Fortune 47:32 Ap '53
Steelmaking spreads over three more states. map Steel 132:210 Ap 20 '53
See also
Armco steel corporation
Green river steel corporation
Pittsburgh steel company
Republic steel corporation
United States steel corporation

Western states

Steel plant activities on the West coast in 1952. T. A. Dickinson. il Blast F & Steel Pl 41:87-91 Ja '53
Steel; West still golden market. T. M. Rohan. Iron Age 171:79 Ap 23 '53

STEEL ingots

Accelerated solidification in ingots; its influence on ingot soundness. E. Marburg. bibliog il diags J Metals 5:Trans 157-72 F '53; Discussion. 5:Trans 1553-6 sec 2 N '53
Bethlehem makes forgings for heavy press program. il Iron & Steel Eng 30:150 Mr '53
Casting of ingots for seamless tubemaking. G. Bowman. il diags Metallurgia 47:129-36 Mr '53; Same. Engineering 175:286-7, 381-3 F 27, Mr 20 '53
Cooling of rimming steel ingots in a casting pit. R. T. Fowler and L. H. W. Savage. diags Iron & Steel Inst J 171:277-88 Jl '52; Discussion. 173:259-63 Mr '53; Engineer 194:765-7 D 5 '52; Engineering 174:721-2 D 5 '52
Factors influencing surface quality of high sulphur steels. G. G. Blean. Iron & Steel Eng 30:79-81; Discussion. 82-3 Ja '53
Ingot heat conservation; cooling of eight-ton ingots between teeming and stripping. L. H. W. Savage and R. T. Fowler. bibliog diags Iron & Steel Inst J 173:119-28 F '53
Metal casting methods; ferrous ingots. J. B. McIntyre. bibliog il plan diags Metallurgia 48:21-6 Jl '53
Monster column takes shape for press section; ingot weighing 275 tons. il Steel 132:109 Mr 16 '53; Mill & Factory 52:122 Ap '53

Molds

Ingot mold wash ends coating fumes. G. P. Michalos and D. J. Girardi. il Steel 131:106+ D 8 '52
Ingot mold with rapid solidification at the bottom; patent. diags Iron & Steel Eng 30:23-4 My '53
Narrow-side vertical cracking in ten-ton ingot moulds. A. Jackson and A. N. Whiting. il diags Iron & Steel Inst J 173:360-2 Ap '53

Statistics

Alloy steel ingot production other than stainless, by grade, net tons, 1946-1952; tabulation. Iron Age 171:401 Ja 1 '53
Scrap prices (heavy melting) and steel output, 1902-1952; chart and tables. Steel 132:44b-44d Ja 12 '53
Steel ingot and castings output by countries; monthly output of steel for ingots and castings, 1951-1952; tabulations. Steel 132:160-1 Ja 5 '53
Steel ingot production, by months, 1927-1952; tabulation. Iron Age 171:400 Ja 1 '53

Testing

Assessment of skin thickness of rimming ingots. S. J. Smith. Iron & Steel Inst J 173:16-18 Ja '53

STEEL ingots—*Continued*

Transportation

Hot load carried safely; specially designed insulated containers, Heppenstall co. il Nat Safety N 67:56-7 My '53

STEEL metallurgy

Addition of boron to steel by reduction from boron oxide. G. E. Speight. bibliog Iron & Steel Inst J 171:147-53 Je '52; Abstract. Metal Prog 63:134+ Ap '53; Discussion. Iron & Steel Inst J 173:275-9 Mr '53

Alloy tool steels with nitrogen; tr. by S. L. Case, from a Russian book, by V. I. Prosvirin and others. Iron Age 170:163-5 N 6 '52

Chemical behavior of sulphur in iron and steelmaking. J. Chipman. bibliog plan diags Metal Prog 62:97-107 D '52

Comparative investment costs for different steelmaking processes. C. F. Ramseyer. Iron & Steel Eng 30:122-34 Mr '53

Continuous cupola-Bessemer process; patent. diags Iron & Steel Eng 30:41-2 S '53

Controlled density steel. Engineer 192:839-40 D 28 '51; Abstract. Metal Prog 63:144+ F '53

Development of active mixer practice at Appleby-Frodingham. A. Jackson. diags Iron & Steel Inst J 172:184-202 O '52

Developments in the iron and steel industry during 1952. I. E. Madsen. il diag Iron & Steel Eng 30:137-41 Ja '53

Discussion on the thermodynamics of steelmaking. bibliog diags Iron & Steel Inst J 173:264-75 Mr '53

Forum on technical progress; steelmaking. il Steel 132:242-4+ Ja 5 '53

From the ore to the ingot. J. Mitchell. Iron & Steel Inst J 174:1-8 My '53

Important tasks of technical progress in ferrous metallurgy. I. P. Bardin. Metal Prog 64:125-6+ Ag '53

Metallic oxidation in chromium steel melting. D. C. Hilty and others. J Metals 5: Trans 649-53 My '53

New use for tunnel kilns, steel production. il Brick & Clay Rec 122:74-5+ Ap '53; Same. Cer Ind 60:112-13+ Je '53

Postwar progress and trends in steel manufacture in the Benelux region. A. G. Lefebvre. il map Metal Prog 63:84-8 Ja '53

Practical metallurgy, down-under. A. S. Reardon. il Metal Prog 63:99-102 Ja '53

Productivity in steelmaking; B.I.S.R.A. conference discusses team's report. Metallurgia 46:244-8 N '52; Abstract. Chem Age (Lond) 67:609-10 N 1 '52

Productivity in steelmaking; conferences of British iron and steel research association. Engineer 194:550 O 24 '52

Progress in steelmaking processes in America. J. S. Marsh. il Metal Prog 63:74-7 Ja '53

Properties of cast steels improved with rare earth element additions. G. A. Lillieqvist and C. G. Mickelson. il diags J Metals 4: 1024-31 O '52

Renaissance in steelmaking methods. H. G. Batcheller. il Steel 131:94+ O 27 '52

Research and the minor constituents of steel. J. Chipman. Blast F & Steel Pl 41:1057-64+ S '53; Excerpts. Iron & Steel Eng 30:95-7 Ag '53

Review of European operating and technical practices. W. C. Bell. diag Iron & Steel Eng 30:97-104 Ag '53

Scrap preparation and scrap contamination. R. F. Kuhnlein. Iron & Steel Eng 30:142-3 S '53

Stainless steel melting practices have changed. B. R. Queneau and A. C. Ogan. il Iron Age 170:165-9 D 4 '52

Steelmaking trends. R. Durrer. Iron Age 170: 382-90+ O 9 '52

Substitute chromium sources reduce production costs of stainless steel. N. B. McFarlane. il J Metals 4:1284-5 D '52

Titanium can replace manganese for sulfur control of steel. J. D. Roach and R. S. Stewart. bibliog Iron Age 171:150-3 Je 4; 126-8 Je 11 '53

Use of rare-earth metals and compounds in stainless steel melting. C. B. Post and H. O. Beaver. il Blast F & Steel Pl 41: 627-34+ Je '53; Excerpts. Iron & Steel Eng 30:106-7 Ag '53; Abstract. Iron Age 171: 148-9 Je 4 '53

Vacuum melting lengthens fatigue life, improves impact properties. J. H. Moore. il Iron Age 171:154-6 Ap 2 '53

See also

Bessemer process
Case hardening
Furnaces, Steel making
Iron metallurgy
Open hearth furnaces
Open hearth process
Steel—Metallography
Steel, Hardening of
Steel, Heat treatment of
Steel alloys
Steel castings
Steel ingots
Steel works

Electrometallurgy

Annual electric furnace steel conference, 10th, Pittsburgh, Dec. 4-6. Foundry 81:186+ F '53

Atlantic Steel using cold metal charge finds costs in favor of electric furnace. J. E. Wilbanks. J Metals 5:627 My '53

Close checks produce top tool steels. L. C. Grimshaw. il Steel 132:102+ F 9 '53

Electric ore smelting passes tests. H. S. Newhall. il Steel 132:144+ My 11 '53

Recent improvements in electric steelmaking; A.I.M.M.E. 10th electric furnace steel conference, Pittsburgh. Metal Prog 63:110-12+ F '53

Rimming steel production rate studied by multiple correlation. W. W. Black and C. R. Taylor. J Metals 5:401-3 Mr '53

See also

Electric furnaces, Steel making

STEEL plates

Compressive buckling of stiffened plates. B. H. Falconer and J. C. Chapman. bibliog diags Engineer 195:789-91, 822-5 Je 5-12 '53

Guide for stainless steel buyers. Steel 132: 79-86 sec 2 Je 22 '53

Manufacture and properties of clad steel plates. T. T. Watson. il diag Blast F & Steel Pl 41:318-20+ Mr '53

Plates at Pittsburgh; prices, 1933-1952; tabulation. Iron Age 171:411 Ja 1 '53

Propagation of fractures in mild-steel plates. G. M. Boyd. bibliog il diags Engineering 175:65-9, 100-2 Ja 16-23 '53

Shortage of cheap steel plate. Economist 167: 243 Ap 25 '53

Study of the practical efficiency under static loading of riveted joints connecting plates. W. M. Wilson and others. il diags Ill U Eng Exp Sta Bul 402:1-75 '52 (pa 75c)

Use of structural quality steel in pressure vessels. I. E. Boberg. Welding J 32:sup 413-16 Ag '53

See also

Armor plate
Ship plates

Testing

Effect of direction of rolling, direction of straining, and ageing on the mechanical properties of a mild-steel plate. C. F. Tipper. bibliog Iron & Steel Inst J 172:143-8 '52; Abstract. Metal Prog 64:288+ O '53; Discussion. il diags Iron & Steel Inst J 173:280-4 Mr '53; Engineer 194:824-5 D 19 '52

STEEL research

British iron and steel research association activities. Metallurgia 46:179-80 O '52

Cooperative research program on quenching. V. Paschkis. il Metal Prog 62:93-6 D '52

Density and hydrogen occlusion of some ferrous metals. J. H. Keeler and H. M. Davis. bibliog J Metals 5:Trans 44-8 Ja '53

Diffusion of hydrogen in iron and iron alloys at elevated temperatures. P. L. Chang and W. D. G. Bennett. bibliog diags Iron & Steel Inst J 170:205-13 Mr '52; Abstract. Metal Prog 62:180+ D '52; Discussion. Iron & Steel Inst J 172:46-51 S '52

Effect of various elements on hot-working characteristics and physical properties of Fe-C alloys. C. T. Anderson and others. il J Metals 5:Trans 525-9 Ap '53

Iron-carbon-sulphur melts. D. A. Spratt and J. A. Kitchener. bibliog 2pls Iron & Steel Inst J 172:383-6 D '52

STEEL research—*Continued*

Machinability studies compare cast and wrought steels. Iron Age 171:102-4 Ja 22 '53

Metallic oxidation in chromium steel melting. D. C. Hilty and others. J Metals 5:Trans 649-53 My '53

Phase equilibrium investigation of the Na_2O-P_2O_5-SiO_2 ternary system. E. T. Turkdogan and W. R. Maddocks. 3pls diags Iron & Steel Inst J 172:1-15 S '52

Research and the minor constituents of steel. J. Chipman. Blast F & Steel Pl 41:1057-64+ S '53; Excerpts. Iron & Steel Eng 30:95-7 Ag '53

Swinden laboratories, Rotherham. il Engineer 194:166-8 Ag 1 '52; Engineering 174:150-1 Ag 1 '52

U.S. Steel plans new research center. Iron & Steel Eng 30:185-6 Mr '53

See also British steel castings research association

STEEL scaffolding. See Scaffolding, Steel

STEEL straps

Insulated drop ceiling supported by strap webbing. il Sheet Metal Worker 45:42 O '53

STEEL tape. See Measuring tape

STEEL using industries

Filled to the brim; more steel will go into containers. il Steel 132:48-9 Ja 26 '53

Gas industry steel use declines. Am Gas Assn Mo 35:16-17 Je '53

Plastics; machinery market booms. H. R. Simonds. il Iron Age 171:107-9 Ja 29; 143-6 F 12 '53

Steel; number one problem of fabricators. W. V. Packard. Iron Age 171:51 Ap 30 '53

Steel; survey shows inventories of manufacturers hold more steel but are unbalanced. Iron Age 171:49-51 Ja 29 '53

Statistics

Distribution of steel, 1940-1951. Blast F & Steel Pl 40:1340 N '52

Finished steel distribution, 1949-1952; tabulation. Steel 132:163 Ja 5 '53

Steel distribution by consuming industries, 1945-1952; tabulation. Iron Age 171:402 Ja 1 '53

Steel used by electrical equipment makers. Iron Age 171:461 Ja 1 '53

Steel used in automobiles and electrical appliances; use of steel in homes; other steel uses; tabulations. Iron Age 171:438-9 Ja 1 '53

Who got the steel; warehouses and automakers accounted for over one-third of last year's shipments. Steel 132:68 Mr 9 '53

STEEL waste

AEC steel scrap isn't hot. Steel 131:138 D 15 '52

Controls maintained over export of iron and steel scrap from the United States. For Comm W 49:24 Je 29 '53

Detecting doctored steel scrap. il Comp Air Mag 58:282 O '53

Firm policy urged on steel scrap exports. For Comm W 49:24 Je 1 '53

STEEL work

Adjustable die for channelling. T. H. Hsu. diags Am Mach 97:180 Je 8 '53

Extrusion of steel; equipment, operation, production. J. Sejournet. diags Iron & Steel Eng 30:73-7; Discussion. 77-8 Ja '53

How to fabricate 430 stainless. L. F. Spencer. il diags Iron Age 171:139-43 Ap 23 '53

How to fabricate 17 percent chromium stainless steel. R. E. Paret. il Materials & Methods 36:100-4 N '52; Same abr. Mach 59:182-8 D '52

Notable advances in fabrication methods and metal applications. T. Bishop. il Metal Prog 63:115-20 Ja '53

Processing of boron steels in the shop. G. D. Rahrer. il Metal Prog 63:85-9 My '53

STEEL workers

Cake is cut at Armco. J. C. Aspley. il Am Bsns 23:8-10+ My '53

Chapter in the steel story. E. B. George. il Dun's R 60:26-7+ S '52

First labor emergency. Bsns W p 178 F 21 '53

Human relations for improved shop performance. R. Smith. J Metals 4:1280-1 D '52

Out of the army, back to the plant; Armco steel corp. program for servicemen. il Mod Ind 24:97-8 O '52

Republic's postgrad course. Bsns W p 121 F 28 '53

Selection and training of personnel. E. E. Moore. Blast F & Steel Pl 40:1200-2+ O '52

Steel bargaining for everybody. Bsns W p 179 My 9 '53

Steel boost, too? Bsns W p 138-9 My 30 '53

Steel compromise has a good chance. Bsns W p 148 My 2 '53

Steel; employment, average hours and earnings, 1937-1952; tabulation. Iron Age 171: 480 Ja 1 '53

Steel employment, wages, hours and payrolls, 1937-1952; tabulations. Steel 132:195 Ja 5 '53

Steel industry's minimum labor rates, 1915-1952. Steel 132:194 Ja 5 '53

Why new USW chief must go after raises. il Bsns W p 121-3 Ja 10 '53

See also

United steelworkers of America

STEEL works

Armco's mills; newest and oldest in the trade. il Bsns W p30-2 My 30 '53

Colorado Fuel and Iron now has steel output of 2,425,000 tons annually. Blast F & Steel Pl 41:427 Ap '53

Developments in the iron and steel industry during 1952. I. E. Madsen. il diags Iron & Steel Eng 30:123-61 Ja '53

Dorman Long Cleveland and Lackenby works. Engineering 175:493 Ap 17 '53

Dynamic painting in steel plants. J. K. Seyler. Iron & Steel Eng 30:71-3 Je '53

Fairless works fosters regional boom; Delaware Valley expansion. W. V. Packard. il map Iron Age 170:75-7 D 18 '52

First blast furnace firing marks record steel expansion. il Eng N 149:26 D 18 '52

Indiana harbor growing fast. K. W. Bennett. il Iron Age 170:106-7 N 6 '52

Inland Steel breaks records. Blast F & Steel Pl 41:531 My '53

Integrated iron and steel works; John Summers and sons, ltd. il Engineering 175:525 Ap 24 '53

Kaiser steel production record set by coke and blast furnace practice. W. C. Rueckel. il map diags J Metals 5:509-14 Ap '53

Lighting up the Fairless works. il Bsns W p20-1 D 20 '52

Lone Star begins integrated operation. il Manuf Rec 122:33 Ag '53

More raw materials used in 1951 by steel plants. Blast F & Steel Pl 40:1219 O '52; Same. Materials & Methods 36:192+ N '52

Pacific Northwest steel plant in commercial operation; Seidelhuber steel rolling mill corp. R. C. Hill. il Steel 131:88+ D 29 '52

Shape of steel to come. Ind & Eng Chem 44: sup 18A+ D '52

Some experiences with air pollution abatement in the steel industry. C. A. Bishop. diag Blast F & Steel Pl 40:1448-53 D '52; Same abr. Iron & Steel Eng 29:122-6 D '52; Abstract. Steel 130:177+ Mr 10 '52

Steel capacity of the U.S. by type and company and by states; tabulations. Iron Age 171:406-9 Ja 1 '53

Steel expansion; blast furnaces, rolling mills openhearth and electric furnaces installed during 1952, rerolled rail shipments; tabulations. Iron Age 171:413 Ja 1 '53

Steel; reroller makes its own; Huntington, W.Va. firm starts producing steel with new electric furnace. W. V. Packard. Iron Age 171:43 Ja 22 '53

Water conservation in steel mills. G. A. Howell. Sewage & Ind Wastes 24:1368-71 N '52

Youngstown sheet and tube company lights number three furnace at Indiana harbor. il Blast F & Steel Pl 41:418-19 Ap '53

Youngstown Sheet & Tube expansion means more steel for the Midwest. il Eng N 149: 147 N 13 '52

See also

Rolling mills

Accidents

Accidents; aim truer with rifle; U.S. Steel uses big management approach to determine accident causes. J. B. Delaney. Iron Age 171:88 Ap 23 '53

STEEL works—*Continued*

Cleanliness

Housekeeping pays dividends; Bethlehem steel co. W. V. Packard. il Iron Age 171: 96-7 Ap 2 '53

Costs

Comparative investment costs for different steelmaking processes. C. F. Ramseyer. Iron & Steel Eng 30:122-34 Mr '53

Train arrivals, handling costs, and the holding and storage of raw materials. M. D. J. Brisby and R. T. Eddison. Iron & Steel Inst J 172:171-83 O '52; Discussion. 174: 341-4 Ag '53; Engineer 195:692-4 My 15 '53; Engineering 175:617-18 My 15 '53

Electric equipment

Adjustable voltage ore bridge drive at Otis works. E. C. Juhnke and C. B. Risler. il Iron & Steel Eng 30:87-92; Discussion. diag 92-6 Ap '53

Electric distribution in iron and steel works. T. B. Rolls and E. C. Slater. diags Iron & Steel Inst J 173:163-76 F '53; Discussion. 174:260-4 Jl '53

Electrical developments in 1952. W. E. Miller. il Blast F & Steel Pl 41:63-8 Ja '53

Electrical plant for the metal industries, progress in 1952 reported. il Metallurgia 47:59-62, 141-4 F-Mr '53

Electronic communications at the Abbey steel mills. il Elec J 150:231-2 Ja 16 '53

How to select a hoist for the job. C. O. Barnes. Iron & Steel Eng 29:111-12 D '52

Maintenance of industrial electronic equipment. W. Few. il diags Iron & Steel Eng 30:179-82 S '53

Modern crane control for steel plants. W. R. Wickerham and G. E. Mathias. il diags Iron & Steel Eng 29:100-11; Discussion. 111-15 N '52

Role of electricity in a modern iron and steel works; abstracts. H. Clay. il Elec J 150: 285-6 Ja 23 '53; Elec R (Lond) 152:258-9 Ja 30 '53

Steel from Shotton. il Elec J 150:1627-31 My 8 '53

Steelworks extensions; Shotton works of John Summers & sons. il Elec R (Lond) 152: 979-82 My 1 '53

Trends in electrical equipment for materials handling in the steel industry. S. Rifkin. il diags Iron & Steel Eng 30:84-90 Ag '53

Trolley changeover increases ore bridge capacity; Granite City steel co. A. L. Williams. il Iron & Steel Eng 30:194+ S '53

Utilization of electricity in iron and steel works. W. F. Cartwright. plan Inst E E Proc 100 pt 1:126-31 My '53

See also
Electric furnaces,
Steel making

Employees

See Steel workers

Equipment

American equipment increases Britain's steel output. il Iron Age 170:74-7 D 25 '52

Application of automatic control to the coal feed of steelworks gas producers. S. A. Burke and G. A. Sparham. il diag Iron & Steel Inst J 172:257-64 N '52

Automatic control of open-hearth furnaces. il Engineer 195:456-8 Mr 27 '53

Autopour makes steel pouring easier, safer, better. T. H. Hoby. il diag J Metals 4:1282-3 D '52

Bethlehem Steel expands Bethlehem plant. il Iron & Steel Eng 30:198+ S '53; Blast F & Steel Pl 41:1194 O '53

Bethlehem's Johnstown plant. T. J. Ess. il plan Iron & Steel Eng 30:J 1-20 Ap '53

Blast furnace charged with belt conveyors at the Société John Cockerill works in Seraing. L. Halbrecq. il plans diags Blast F & Steel Pl 41:743-50 Jl '53

Blast-furnace plant at Hawarden Bridge steelworks. il diag Engineering 175:652, 656, 812 My 22, Je 26 '53

British iron and steel industry in 1952. il Engineer 195:29-31, pl 8, 65-8 Ja 2-9 '53

Coal blending plant at a steel works; Shotton works of John Summers and sons, ltd. il Engineer 195:525-6 Ap 10 '53

Construction of a tubular steel skip bridge. il Engineer 194:831-2 D 19 '52; Engineering 174:722-3 O 5 '52

Crane controls for iron and steel works. L. N. Bramley. bibliog 6pls diags Iron & Steel Inst J 173:53-68 Ja '53

Crane transfer job salvages ladle lining pit. il Steel 132:139 My 18 '53

Crane wheel tread contours. J. J. Stolz. diags Iron & Steel Eng 29:101-4; Discussion. 104-6 O '52

Crucible expansion well under way. il Iron & Steel Eng 30:164+ Ja '53

Developing increased capacity at Armco's Middletown division. G. D. Tranter. il Iron & Steel Eng 29:90-6; Discussion. 96-7 N '52

Development of active mixer practice at Appleby-Frodingham. A. Jackson. diags Iron & Steel Inst J 172:184-202 O '52; Abstract. Engineering 174:765 D 12 '52; Discussion. Engineer 194:785-7 D 12 '52

Development projects of the Steel company of Wales. Engineering 175:312 Mr 6 '53

Diesel-mechanical locomotives for steelworks. il Engineering 174:606 N 7 '52

Diesels at U.S. Steel's Fairless works. il Diesel Power 31:44-5 F '53

Forge for continuous production of solid railway wheels and disc centres; Taylor brothers and co. il plan diags Engineering 174: 713-16, pl 57, 752-4, pl 58 D 5-12 '52; Engineer 194:753-6 D 5 '52; Iron & Steel Eng 30:124+ F '53

Green River Steel starts operation in Kentucky. il Iron & Steel Eng 30:201-2 S '53

Inland Steel increases annual open hearth capacity 750,000 tons. il plan diags Blast F & Steel Pl 41:75-80+, 203-8 Ja-F '53

Instrumentation simplifies annealing; Atlas steels, ltd. H. C. McKinnon. il diag Steel 132:128+ My 25 '53

Integrated plant in operation at Shotton. il Metallurgia 47:237-42 My '53

Largest stack in Great Britain blown-in; Hawarden Bridge steelworks of John Summers & sons, ltd. il Steel 132:114 Je 1 '53

Lukens brings top steel to New York to meet the press. il Welding J 32:854-7 S '53

Magnetic amplifier and its application in the steel industry. W. E. Miller. il diags Iron & Steel Eng 30:65-75; Discussion. 75-9 My '53

Material handling layout of blast furnace and coke plant at Fairless works; abstract. C. Lord. Steel 131:112+ O 6 '52

New blast furnace gas cleaning facilities at Donora. S. P. Kinney. il diag Iron & Steel Eng 30:139-40+ My '53; Same. Blast F & Steel Pl 41:776-9+ Jl '53

New plant meets its many problems; Fairless works; illustrations with text. Mod Ind 25:17-18+ Ja '53

New Spanish steelworks at Aviles. Metallurgia 47:138-41 Mr '53

Ore preparation and blast-furnace plant at Shotton. il Engineer 195:611 Ap 24 '53

Pittsburgh steel company increases production capacity. il Iron & Steel Eng 30:126+ Je '53; Same cond. Blast F & Steel Pl 41:815 Jl '53

Recent development in ingot chariot control. A. W. Leadbeater and R. B. Jamieson. il diags Iron & Steel Inst J 172:264-7 N '52

Scarfing gantry operates 160 hours a week. il Iron & Steel Eng 30:134 My '53

Second-hand concrete pit brings a tidy construction saving; Kaiser steel corp. il Constr Methods 35:59 Je '53

Simplified automatic ingot buggy; abstract. I. N. Tull. Steel 131:110+ O 6 '52

Simplified automatic ingot buggy. I. N. Tull; H. S. Fegely. il diags Iron & Steel Eng 30:84-9; Discussion. 90-1 Mr '53

Steel plant instrument department problems; personnel training and maintenance facilities. J. H. Cuthbert. il Instruments 25: 1722-3+ D '52

Steelworks ladle cranes; Shotton steel works of John Summers and sons. il Engineer 195: 505-6 Ap 3 '53; Engineering 175:417-19, pl 8-9 Ap 3 '53

Unloaders for Fairless. Steel 131:129+ N 17 '52; Same. plan Marine Eng 58:136+ F '53

Wide range metering of oxygen in steel plants. M. S. Gare. flow charts diags Iron & Steel Eng 30:74-81; Discussion. 81-2 Jl '53

STEEL works—Equipment—*Continued*

Youngstown sheet and tube company increases service to the Midwest. C. Longenecker. il plan diags Blast F & Steel Pl 41:898-925 Ag '53

See also

Cinder pots

Fuel

Safe handling of fuels, hazardous gases and liquids. F. R. Pullen. Iron & Steel Eng 30:113-16; Discussion. 116-17 S '53

Lighting

American recommended practice for industrial lighting A-11. J. J. Booth. Iron & Steel Eng 30:135-9 Mr '53

Maintenance and repair

Chromium plating in steel plants. J. B. Allen and J. D. Tulloch. il Iron & Steel Eng 30: 90-4; Discussion. 94-7 S '53

Chromium plating pays off for steel mills. J. B. Allen and J. D. Tullock. il Steel 131: 108+ N 24 '52

For your spare parts needs analyze each machine; Kaiser steel corp. J. Joseph. il Mill & Factory 52:134-6 Je '53

Maintenance in iron and steel works; conference on aspect of productivity; abstracts of papers. Metallurgia 47:55-8 F '53

Maintenance material program. J. E. Anderson and J. B. Whitlock. il Iron & Steel Eng 30:75-81; Discussion. 81-2 S '53

New maintenance tool for steel mill use. J. J. Barry. il Iron & Steel Eng 30:92-7 Mr '53

Plant welding applications. H. J. Ralston. il Iron & Steel Eng 30:105-12 S '53

Rehabilitating a blast furnace and associated equipment. W. C. Daniels. il diag Iron & Steel Eng 30:57-65; Discussion. 65-6 Jl '53

Repair and maintenance of open-hearth furnaces; cold-metal practice. J. E. Pluck. Iron & Steel Inst J 175:59-63; Discussion. 66-70 S '53

Repair and maintenance of open-hearth furnaces; hot-metal practice. S. G. Williams. diag Iron & Steel Inst J 175:64-6; Discussion. 66-70 S '53

Repair and maintenance of open-hearth furnaces in Germany. A. Mund and C. Kreutzer. diags Iron & Steel Inst J 174:373-7; Discussion. il 382-8 Ag '53

Repair and maintenance of open-hearth furnaces in U.S.A. R. W. Evans and I. S. Scott-Maxwell. Iron & Steel Inst J 174: 378-82; Discussion. il diag 382-8 Ag '53

Steelworks furnace maintenance and repair; Iron and steel institute's engineers' group joint meeting with B.I.S.R.A. Plant engineering and steelmaking divisions; abstracts of papers. il Engineer 195:214-16 F 6 '53; Metallurgia 47:113-18 Mr '53

Submerged arc welding at Atlas steels, ltd. C. Ekwall. il Iron & Steel Eng 29:55-60 O '52

Thread inserts cut overhaul time. il Steel 132: 92 Je 22 '53

Wear and operation problems in maintenance; Gary steel works. F. J. Gaydos. il Welding J 32:44-9 Ja '53

Management

Railway traffic of the Appleby-Frodingham steelworks. E. R. S. Watkin. il plans Iron & Steel Inst J 173:1-15 Ja '53; Abstract. Engineering 175:617 My 15 '53; Discussion. Iron & Steel Inst J 174:341-4 Ag '53; Engineering 175:617-18 My 15 '53; Engineer 195:692-4 My 15 '53

Supervision's part in effective cost control. A. C. Croft. Iron & Steel Eng 30:107-9 Je '53

Train arrivals, handling costs, and the holding and storage of raw materials. M. D. J. Brisby and R. T. Eddison. Iron & Steel Inst J 172:171-83 O '52; Discussion. 174: 341-4 Ag '53; Engineer 195:692-4 My 15 '53; Engineering 175:617-18 My 15 '53

Painting

Maintenance painting of steel and coke oven plants. S. C. Frye. il Iron & Steel Eng 30:83-9 S '53

Power

Both waste-heat and new boilers supply bigger steel mills. G. F. Wolfe. il Power 97: 87-9 Ja '53

Control of demand and power factor on electric arc furnaces. H. G. Heath. Iron & Steel Eng 29:78-81; Discussion. 81-3 O '52

Developments in steam generation. F. X. Gilg. il diags Blast F & Steel Pl 41:98-102, 220-3 Ja-F '53

Steam from steel; blast-furnace gas. R. W. Worley and H. J. Bentson. il plans diags Power Eng 57:54-7 Jl '53

Steel plants operating at full capacity require greater power. A. D. Blake. diag Blast F & Steel Pl 41:324-5 Mr '53

Supply and use of hydraulic power at Appleby-Frodingham. L. N. Lloyd. il diags Iron & Steel Inst J 170:271-87 Mr '52; Discussion. 172:87-93 S '52

Supplying power to industry; West Penn power co. F. F. Dickmann. diags Power Eng 57:94+ Ja '53

Quality control

Quality control aids in steel processing control. W. R. Weaver. Blast F & Steel Pl 41: 198-202+, 307-10 F-Mr '53

Quality control cuts rejects and inspection cost; Standard pressed steel co. J. M. Sherman. il Factory Management 111:138-41 Ap '53

Safety measures

Accident prevention in the iron and steel works of the U.S.A. A. Elson and P. Wright. Metallurgia 46:241-3 N '52

Plant shoe store safety salesman; Great Lakes steel corp. H. F. Reves. il Safety Maint & Prod 105:29-30 Mr '53

Safe handling of fuels, hazardous gases and liquids. F. R. Pullen. Iron & Steel Eng 30:113-16; Discussion. 116-17 S '53

Waste

Sewage treatment plant for steel mill wastes. D. M. Vail. flow sheet il Pub Works 84: 65-6 S '53

Water symposium; steel industry in Pennsylvania; approach to problem of water pollution. C. S. Cassels and others. il plans diags Iron & Steel Eng 30:68-82; Discussion. 82-3 Mr '53

See also

Steel waste

Australia

Steel rolling mill for western Australia. Engineer 195:310 F 27 '53

Belgium

Blast furnace charged with belt conveyors at the Société John Cockerill works in Seraing. L. Halbrecq. il plans diags Blast F & Steel Pl 41:743-50 Jl '53

Brazil

Demand outgrows Brazilian steel plant; Volta Redonda steel plant will complete its third expansion. il Steel 132:69 F 9 '53

Detroit area

Steel expands in the Detroit area. R. Sergeson and others. Iron & Steel Eng 30:114-18 My '53

England

Metallurgical industries of Sheffield. C. Sykes. il Engineering 176:89-91, pl 7-8 Jl 17 '53

Steel works developments at Shotton. il Engineer 194:155-6 Ag 1 '52; Engineering 174: 215-16 Ag 15 '52

Germany

Repair and maintenance of open-hearth furnaces in Germany. A. Mund and C. Kreutzer. diags Iron & Steel Inst J 174: 373-7; Discussion. il 382-8 Ag '53

New South Wales

Blast-furnace at Kembla works, New South Wales. Engineer 194:872 D 26 '52

Spain

British enterprise and Spanish steel. Economist 166:440 F 14 '53

STEEL works—Spain—*Continued*
Iron and steel works at Aviles, Spain. Engineer 195:244 F 13 '53
New Spanish steelworks at Aviles. Metallurgia 47:138-41 Mr '53

Venezuela

Venezuela; pledged aid on steel mill. W. V. Packard. Iron Age 171:85 Ap 9 '53

Wales

American equipment increases Britain's steel output. il Iron Age 170:74-7 D 25 '52
Development projects of the Steel company of Wales. Engineering 175:312 Mr 6 '53

STEEN, Charles
Uranium jackpot. B. Meyers. por Eng & Min J 154:72-5 S '53

STEEPLES. See Spires

STEERING
Servo mechanisms for ships. J. R. D. Walker. diags Engineering 174:706-8 N 28 '52
Sperry develops midget electronic pilot, called Lever Pilot, for river towboats. il Marine Eng 58:122+ Mr '53
Steering ships. A. D. Hammes. il diag Gen Elec R 55:37-40 N '52

STEERING gear
New Sperry units will steer any size ship. il Marine Eng 58:75 O '53
See also
Automobiles—Steering gear

STEETLEY company, limited
Statement by the chairman. N. M. Peech. Economist 167:52-3 Ap 4 '53

STENCILS and stencil cutting
Photoelectric printing and engraving machines. J. Markus. il diag Electronics 26:138-40 My '53

STEPHEN reaction
Reduction of aliphatic nitriles by the Stephen reaction. J. A. Knight and H. D. Zook. bibliog Am Chem Soc J 74:4560-2 S 20 '52

STEPHENS, Thomas E.
Portrait. Bsns W p29 D 6 '52

STEPHENSON, J. Newell
Proud occasion for Steve. por Pulp & Pa of Can 54:168-9 My '53

STEPS, Concrete
Metal forms used for casting concrete steps. il Am Bld 75:204+ F '53
Successful precast step business; Homeward step co. L. Roberts. il Rock Prod 56:202 Je '53

STEREOCHEMISTRY
Configuration of flexible C_8 hydrocarbons in the vapour phase. G. A. M. Cummings, J. C. McCoubrey and A. R. Ubbelohde. Chem Soc J p2725-30 Jl '52
Configuration of tropine and pseudotropine. A. Nickon and L. F. Fieser. bibliog Am Chem Soc J 74:5566-70 N 20 '52
Effect of structure on reactivity; the energies of activation and the entropies of activation for the ammonolysis of esters. F. H. Wetzel, J. G. Miller and A. R. Day. bibliog Am Chem Soc J 75:1150-3 Mr 5 '53
Explanation of the preferential formation of certain rings in acetals of the polyhydric alcohols. S. A. Barker, E. J. Bourne and D. H. Whiffen. Chem Soc J p3865-70 O '52
Infra-red spectra of natural products; the stereochemistry of lumistanol. A. R. H. Cole. Chem Soc J p4969-72 D '52
Infra-red spectroscopy and structural chemistry; gladiolic acid. J. F. Grove. Chem Soc J p3345-54 S '52
Marco rings; polynuclear paracyclophanes. H. Steinberg and D. J. Cram. bibliog Am Chem Soc J 74:5388-91 N 5 '52
Mechanism, kinetics, and stereochemistry of octahedral substitutions; edge-displacement as a hypothesis linking mechanism with stereochemistry of substitution. D. D. Brown, C. K. Ingold and R. S. Nyholm. Chem Soc J p2674-80 S '53
Mechanism, kinetics, and stereochemistry of octahedral substitutions; kinetics and molecularity of nucleophilic substitutions in the *cis*-dichlorobisethylenediaminecobalt (III) ion. D. D. Brown and C. K. Ingold. Chem Soc J p2680-96 S '53
Mechanism, kinetics, and stereochemistry of octahedral substitutions; steric course of some unimolecular substitutions in the *cis*-dichlorobisethylenediaminecobalt(III) ion. D. D. Brown and R. S. Nyholm. diags Chem Soc J p2696-701 S '53
Mechanism of substitution reactions in complex ions; stereochemical changes accompanying some reactions of cobalt(III) complexes. F. Basolo, B. D. Stone and R. G. Pearson. bibliog diags Am Chem Soc J 75:819-23 F 20 '53
Molecular configuration of liquid *n*-aliphatic homologues. S. A. Mumford. Chem Soc J p4897-913 D '52
Nucleophilic displacement *via* frontal attack; the stereochemistry of the Stevens rearrangement. J. H. Brewster and M. W. Kline. bibliog Am Chem Soc J 74:5179-82 O 20 '52
Relationship between hyperconjugation and intramolecular configuration; the ethyl alcoholysis of some derivatives of diphenylmethyl chloride. G. Baddeley and M. Gordon. Chem Soc J p2190-3 Je '52
Relationship between the stereochemical configuration of 3-hydroxysteroids and their infrared absorption spectra. A. R. H. Cole, R. N. Jones and K. Dobriner. bibliog Am Chem Soc J 74:5571-5 N 20 '52
Stereochemical course of the addition of halogens to cholesterol. J. B. Ziegler and A. C. Shabica. bibliog Am Chem Soc J 74:4891-4 O 5 '52
Stereochemical factors in the kinetics of Diels-Alder associations. B. Eisler and A. Wassermann. Chem Soc J p979-82 Mr '53
Stereochemical studies in the aminodesoxyinositol series; D,L-*myo*-inosamine-4, D,L-*epi*-inosamine-2 and streptamine. H. Straube-Rieke, H. A. Lardy and L. Anderson. bibliog il Am Chem Soc J 75:694-7 F 5 '53
Stereochemistry and reaction mechanisms of hexacovalent inorganic complexes. F. Basolo. diags Chem R 52:459-527 bibliog(p521-7) Je '53
Stereochemistry of alkaloids. R. C. Cookson. bibliog Chem & Ind p337-40 Ap 11 '53
Stereochemistry of an elimination reaction effected by butyllithium. R. L. Letsinger and E. Bobko. bibliog Am Chem Soc J 75:2649-51 Je 5 '53
Stereochemistry of arylidenecyanoacetic acids and arylarylideneacetonitriles. W. Baker and C. S. Howes. Chem Soc J p 119-24 Ja '53
Stereochemistry of azines; cinnamalazine and phenylpentadienalazine. J. Dale and L. Zechmeister. bibliog Am Chem Soc J 75:2379-86 My 20 '53
Stereochemistry of complex inorganic compounds; a partial resolution of racemic mixtures of organic acids by means of preferential coördination. A. D. Gott and J. C. Bailar, jr. Am Chem Soc J 74:4820-2 O 5 '52
Stereochemistry of complex inorganic compounds; the stereochemistry of hexadentate ethylenediaminetetraacetic acid complexes. D. H. Busch and J. C. Bailar, jr. bibliog Am Chem Soc J 75:4574-5 S 20 '53
Stereochemistry of *cyclo*hexane derivatives. D. H. R. Barton. bibliog diags Chem Soc J p 1027-40 Mr '53
Stereochemistry of α-haloketones; the molecular configurations of some monocyclic α-halocyclanones. E. J. Corey. bibliog Am Chem Soc J 75:2301-4 My 20 '53
Stereochemistry of α-haloketones; the three α-dibrominated cyclohexanones. E. J. Corey. bibliog Am Chem Soc J 75:3297-9 Jl 20 '53
Stereochemistry of Raney nickel action. W. A. Bonner, J. A. Zderic and G. A. Casaletto. bibliog Am Chem Soc J 74:5086-90 O 20 '52
Stereochemistry of reduction of the acetylenic bond. B. S. Rabinovitch and F. S. Looney. bibliog Am Chem Soc J 75:2652-4 Je 5 '53
Stereochemistry of scopolamine. J. Meinwald. Chem Soc J p712-13 F '53
Stereochemistry of some phenylfurans. A. Khawam and E. V. Brown. bibliog Am Chem Soc J 74:5603-5 N 20 '52

STEREOCHEMISTRY—*Continued*

Stereochemistry of the catalytic hydrogenation of Δ^8-11-keto steroids; synthesis of 8-iso- and 14-iso-11-keto sapogenins. C. Djerassi and others. bibliog Am Chem Soc J 75:3496-500 Jl 20 '53

Stereochemistry of the debromination of vicinal dibromides by metals. W. H. Schubert and others. bibliog Am Chem Soc J 74:4590-2 S 20 '52

Stereochemistry of the formation and decomposition of dimethyl-α-phenethylsulfonium bromide. S. Siegel and A. F. Graefe. bibliog Am Chem Soc J 75:4521-5 S 20 '53

Stereochemistry of the furan-maleic acid reaction. J. A. Berson and R. Swidler. bibliog Am Chem Soc J 75:1721-6 Ap 5 '53

Stereochemistry of the Leuckart reaction. D. S. Noyce and F. W. Bachelor. bibliog diag Am Chem Soc J 74:4577-9 S 20 '52

Stereochemistry of the β-phenylserines; characterization of allophenylserine. K. N. F. Shaw and S. W. Fox. bibliog Am Chem Soc J 75:3417-21 Jl 20 '53

Stereochemistry of the β-phenylserines; improved preparation of allophenylserine. K. N. F. Shaw and S. W. Fox. bibliog diag Am Chem Soc J 75:3421-4 Jl 20 '53

Stereochemistry of the reactions of *cis*- and *trans*-2-chlorocyclohexanol with thionyl chloride. H. C. Stevens and O. Grummitt. bibliog Am Chem Soc J 74:4876-9 O 5 '52

Stereochemistry of the S_{N2}' reaction. G. Stork and W. N. White. Am Chem Soc J 75:4119-20 Ag 20 '53

Stereochemistry of the tropane alkaloids. G. Fodor, K. Nádor and O. Kovács. Chem Soc J p721-7 Mr '53

Stereochemistry of the tropane alkaloids; the configuration of scopolamine and of valeroidine. G. Fodor and Ö. Kovács. Chem Soc J p2341-4 Ag '53

Stereochemistry of the tropines. B. L. Zenitz and others. bibliog il Am Chem Soc J 74:5564-6 N 20 '52

Stereospecificity in rearrangements; *erythro*- and *threo*-1-*p*-chlorophenyl-1,2-diphenyl-2-bromoethanol. D. Y. Curtin and E. K. Meislich. bibliog Am Chem Soc J 74:5905-8 D 5 '52

Stereospecificity in thermal elimination reactions; the pyrolysis of (—)-menthyl benzoate. D. H. R. Barton, A. J. Head and R. J. Williams. diag Chem Soc J p 1715-19 Je '53

Stereospecificity of the Baeyer-Villiger rearrangement. K. Mislow and J. Brenner. bibliog Am Chem Soc J 75:2318-22 My 20 '53

Steric requirements for three-ring carbonyl hyperconjugation. N. H. Cromwell and G. V. Hudson. bibliog Am Chem Soc J 75:872-4 F 20 '53

Studies in stereochemistry; differences in the reactivity of diastereomerically related alkyl halides and sulfonates in the S_N2 and E_2 reactions. D. J. Cram and F. A. A. Elhafez. bibliog Am Chem Soc J 74:5851-9 D 5 '52

Studies in stereochemistry; effect of configuration on steric inhibition of resonance in diastereomerically related compounds. F. Hawthorne and D. J. Cram. bibliog Am Chem Soc J 74:5859-66 D 5 '52

Studies in stereochemistry; ionic intermediates in the decomposition of certain alkyl chlorosulfites. D. J. Cram. bibliog Am Chem Soc J 75:332-8 Ja 20 '53

Studies in stereochemistry; molecular rearrangements in the 3,4-dimethyl-4-phenyl-3-hexanol system. D. J. Cram and J. D. Knight. bibliog Am Chem Soc J 74:5839-46 D 5 '52

Studies in stereochemistry; the course of the solvolytic-substitution reactions in the 1,2-diphenyl-1-propyl system. F. Ahmed Abd Elhafez and D. J. Cram. bibliog Am Chem Soc J 75:339-46 Ja 20 '53

Studies in stereochemistry; the 1,2-diphenyl-1-propanol system. F. A. A. Elhafez and D. J. Cram. bibliog Am Chem Soc J 74:5846-51 D 5 '52

Studies in stereochemistry; the preparation and complete resolution of the 3,4-dimethyl-4-phenyl-3-hexanol system. D. J. Cram and J. D. Knight. bibliog Am Chem Soc J 74:5835-8 D 5 '52

Studies in stereochemistry; the preparation, resolution and assignment of configuration to the 4-phenyl-3-hexanol system. D. J. Cram, F. A. Abd Elhafez and H. Weingartner. bibliog Am Chem Soc J 75:2293-7 My 20 '53

Studies in stereochemistry; the question of the structure of the phenonium tosylate ion-pairs that occur as intermediates in the solvolyses of the stereoisomeric 4-phenyl-3-hexyl tosylates. D. J. Cram and F. A. A. Elhafez. bibliog Am Chem Soc J 75:3189-95 Jl 5 '53

Studies in stereochemistry; the rule of steric control of asymmetric induction in the syntheses of acyclic systems. D. J. Cram and F. A. A. Elhafez. bibliog Am Chem Soc J 74:5528-35 D 5 '52

Studies of configuration; the configurations of the 3-methylcyclohexanols. D. S. Noyce and D. B. Denny. bibliog Am Chem Soc J 74:5912-15 D 5 '52

Studies of configuration; the configurations of the 3-methylcyclohexylamines. D. S. Noyce and R. J. Nagle. bibliog Am Chem Soc J 75:127-9 Ja 5 '53

Structural and stereochemical correlation of metanethole with other dimerides of aryl propenyl compounds. W. Baker and others. Chem Soc J p4310-14 N '52

Synthesis of O-(L-α-glycerylphosphoryl)-ethanolamine and some comments on the stereochemical aspects of the biosynthesis of glycerolphosphatides from carbohydrates. E. Baer and H. C. Stancer. bibliog Am Chem Soc J 75:4510-14 S 20 '53

Synthetical and stereochemical investigations of reduced cyclic bases; the synthetic *cis*- and *trans*-octahydroindoles and the anomalous exhaustive methylation products of the *trans*-base. F. E. King and others. Chem Soc J p250-5 Ja '53

Three stereochemical notes. F. Bell. Chem Soc J p5047-8 D '52

See also

Isomerism

Molecular rearrangements

STEREOISOMERS. See Isomerism

STEREOPTICON

Boston Edison customers get a 3-D view of lighting. R. B. Brown, jr. and W. Allphin. il Elec World News ed 139:34-5 My 25 '53

STEREOSCOPIC moving pictures. See Moving pictures, Stereoscopic

STEREOSCOPIC photography. See Photography, Stereoscopic

STEREOSCOPIC radiography. See Radiography, Stereoscopic

STEREOSCOPIC television. See Television, Stereoscopic

STEREOSCOPY

Promotion takes over 3-D. Bsns W p96+ Jl 11 '53

STEREOTYPING

Test pages show shrinkage effects. Ed & Pub 86:41 F 14 '53

STERIC hindrance

Dissociation of the addition compounds of trimethylboron with *n*-butyl- and neopentyldimethylamines; interaction of trimethylboron and boron trifluoride with highly hindered bases. H. C. Brown and R. B. Johannesen. bibliog diag Am Chem Soc J 75:16-20 Ja 5 '53

Homomorphs of 2,6-dimethyl-*t*-butylbenzene. H. C. Brown and M. Grayson. bibliog diag Am Chem Soc J 75:20-4 Ja 5 '53

Linear steric energy relationships. R. W. Taft. jr. Am Chem Soc J 75:4538-9 S 20 '53

Neopentyltrimethylammonium ion as a strained homomorph; the rates of reaction of neopentyldimethylamine with alkyl iodides. H. C. Brown and W. H. Bonner. bibliog Am Chem Soc J 75:14-16 Ja 5 '53

Organosilicon compounds; some sterically hindered compounds. C. Eaborn. Chem Soc J p2840-6 Jl '52

Rates of ionization of pseudo acids; steric effects in the base-catalyzed ionization of nitroethane. R. G. Pearson and F. V. Williams. bibliog Am Chem Soc J 75:3073-5 Jl 5 '53

STERIC hindrance—*Continued*

Reaction of methyl iodide with *o*-phenylenediamine; homomorphs of *o*-di-*t*-butylbenzene. H. C. Brown and K. L. Nelson. bibliog diag Am Chem Soc J 75:24-8 Ja 5 '53

Separation of relative free energies of activation to three basic contributing factors and the relationship of these to structure. R. W. Taft, jr. bibliog Am Chem Soc J 75:4534-7 S 20 '53

*S*N mechanism in aromatic compounds. J. Miller and V. A. Williams. Chem Soc J p 1475-9 My '53

Steric effects and the stability of complex compounds; the chelating tendencies of N-alkylethylenediamines, with copper(II) and nickel(II) ions. F. Basolo and R. K. Murmann. bibliog Am Chem Soc J 74:5243-6 N 5 '52

Steric factor and activation energy of the reaction $Na+C_2H_5Cl=NaCl+C_2H_5$. R. J. Cvetanović and D. J. Le Roy. bibliog diag J Chem Phys 20:1016-20 Je '52

Steric inhibition of amide resonance and its possible significance in enzyme action. R. W. Holley. bibliog Science 117:23-5 Ja 9 '53

Steric strains as a factor in the solvolytic reactions of neopentyldimethyl and dineopentylmethylcarbinyl chlorides. H. C. Brown and H. L. Berneis. bibliog Am Chem Soc J 75:10-14 Ja 5 '53

Strained homomorphs; general summary. H. C. Brown and others. bibliog diags Am Chem Soc J 75:1-6 Ja 5 '53

Studies in spectroscopy; steric effects in some substituted butadienes and *cyclo*butanes. K. B. Alberman, R. N. Haszeldine and F. B. Kipping. diag Chem Soc J p3284-8 Ag '52

Studies in stereochemistry; effect of configuration on steric inhibition of resonance in diastereomerically related compounds. F. Hawthorne and D. J. Cram. bibliog Am Chem Soc J 74:5859-66 D 5 '52

Studies in the Wagner rearrangement; further evidence for a steric effect. C. J. Collins, L. S. Ciereszko and J. G. Burr, jr. bibliog Am Chem Soc J 75:405-8 Ja 20 '53

Studies in the Wagner rearrangement; the steric effect of an ortho methyl group. B. M. Benjamin and C. J. Collins. bibliog Am Chem Soc J 75:402-5 Ja 20 '53

STERILIZATION

Booster heater permits sterilizing dishes. L. K. Franke. Elec World 138:142 O 6 '52

Cathode-ray sterilization preserves foods and drugs. il Electronics 26:200+ Ag '53

Electron beams sterilize food and drugs. E. A. Burrill and A. J. Gale. il diags Electronics 25:98-101 N '52

Electronic sterilisation; its uses for pharmaceutical products. Electrician 149:775 S 12 '52

Facts about cold sterilization. W. M. Urbain. il diags Food Eng 25:45-6+ F; 77-8+ Mr '53

Heat, moisture-sensitive foods sterilized in new unit. il Food Eng 25:99 Ag '53

Index of sterility proves reliable. Pub Health Rep 68:111 Ja '53

Killing germs with invisible ultraviolet radiation. L. J. Buttolph. il Gen Elec R 56:8-10 My '53

Low temperature sterilization with radioactive cobalt-60. il Tech R 55:197-8 F '53

Sterilization by radiations; abstract and discussion. M. Ingram. Chem & Ind p348-9 Ap 11 '53

Sterilizes can seams separately to cut hot-holding time. il diags Food Eng 25:67 Mr '53

Sterilizing foods by cold gamma rays. L. E. Brownell and others. bibliog il diag Refrig Eng 61:55-7+ Ja '53

$250,000 for a sterilizer! Eastern states farmers exchange. il Food Eng 25:51+ Je '53

See also
Disinfection and disinfectants

STERILIZATION of water pipes. See Water pipes—Sterilization

STERILIZERS

Fast end-over-end retorting; new agitating sterilizer speeds heat penetration. il diag Food Eng 25:70-2 F '53

STERILIZERS, Electric

Electric steam steriliser and hot water heater. diag Engineer 195:906 Je 26 '53

STERLING, John C. 1888-

Career award for distinguished services to advertising. por Ptr Ink 242:30-1 Ja 9 '53

STERLING drug company

Five timely selections in risk free stocks; with comparative balance sheet items. Mag of Wall St 92:280 My 30 '53

STEROIDS

Acylation of 17-hydroxy-20-ketosteroids. R. B. Turner. bibliog Am Chem Soc J 75:3489-92 Jl 20 '53

Approaches to the total synthesis of adrenal steroids; a new method for the attachment of ring D. L. H. Sarett and others. bibliog Am Chem Soc J 75:2112-18 My 5 '53

Approaches to the total synthesis of adrenal steroids; 2,4b-dimethyl-7-ethylenedioxy-1,2,3,4,5aα,4b,5,6,7,8,10,10aβ-dodecahydrophenanthrene-4β-ol-1-one and related compounds. R. M. Lukes and others. Am Chem Soc J 75:1707-12 Ap 5 '53

Approaches to the total synthesis of adrenal steroids; 4b-methyl-7-ethylenedioxy-1,2,3,4,4aα,4b,5,6,7,8,10,10aβ-dodecahydrophenanthrene-4β-ol-1-one and related tricyclic derivatives. G. I. Poos and others. bibliog Am Chem Soc J 75:422-9 Ja 20 '53

Characterization of Δ^5-unsaturated steroids by infrared spectroscopy. H. Hirschmann. bibliog Am Chem Soc J 74:5357-61 N 5 '52

Characterization of methyl and methylene groups in steroids by infrared spectrometry. R. N. Jones, A. R. H. Cole and B. Nolin. bibliog diags Am Chem Soc J 74:5648-68 N 20 '52

Chemical studies with 11-oxygenated steroids; 17α-hydroxycorticosterone. R. H. Levin and others. bibliog Am Chem Soc J 75:502-3 Ja 20 '53

Chemical studies with 11-oxygenated steroids; 11β-hydroxyprogesterone. B. J. Magerlein and R. H. Levin. bibliog Am Chem Soc J 75:3654-5 Ag 5 '53

Chemistry of extractives from hardwoods; the cyclitols and steroids of opepe (sarcocephalus diderrichii). F. E. King and L. Jurd. Chem Soc J p 1192-5 Ap '53

Comparative antifibromatogenic action of cortical steroids. A. Lipschutz and others. bibliog(45 ref) Science 116:448-52 O 24 '52

Configuration of steroid bromoketones. L. F. Fieser, R. Ettorre and X. A. Dominguez. bibliog Am Chem Soc J 75:1700-7 Ap 5 '53; Correction. 75:4837-8 O 5 '53

Constitution of conessine; synthesis of some basic steroids. R. D. Haworth, J. McKenna and R. G. Powell. Chem Soc J p 1110-15 Ap '53

Correlation of hydroxysteroids with simpler alcohols. J. A. Mills. bibliog Chem & Ind p218-19 Mr 7 '53

Dehydration of a steroidal Δ^8-11α-hydroxy-7-ketone. A. J. Lemin, G. Rosenkranz and C. Djerassi. bibliog Am Chem Soc J 75:1745-6 Ap 5 '53

Differential reduction of steroid ketones. A. H. Soloway, A. S. Deutsch and T. F. Gallagher. bibliog Am Chem Soc J 75:2356-8 My 20 '53

Direct introduction of oxygen into the steroid nucleus; chromic anhydride oxidation of isoandrosterone acetate and androstanediol diacetate. H. B. MacPhillamy and C. R. Scholz. bibliog Am Chem Soc J 74:5512-14 N 5 '52

Direct introduction of oxygen into the steroid nucleus; studies on the chromic anhydride oxidation of dehydroisoandrosterone acetate dibromide. A. F. St André and others. bibliog Am Chem Soc J 74:5506-11 N 5 '52

Enamine derivatives of steroidal carbonyl compounds. F. W. Heyl and M. E. Herr. bibliog Am Chem Soc J 75:1918-20 Ap 20 '53

Experiments on the synthesis of aza-steroids. G. R. Clemo and L. K. Mishra. Chem Soc J p 192-6 Ja '53

Homologs of some steroid hormones. A. I. Ryer, W. H. Gebert and N. M. Murrill. Am Chem Soc J 75:491-3 Ja 20 '53

Hydrogenation of $\Delta^{5,7}$-sterol derivatives. W. V. Ruyle and others. bibliog Am Chem Soc J 74:5929-33 D 5 '52

Infrared absorption spectra of the steroid sapogenins. R. N. Jones, E. Katzenellenbogen and K. Dobriner. bibliog Am Chem Soc J 75:158-66 Ja 5 '53

STEROIDS—*Continued*

Mechanism of the reduction of steroidal enol acetates by lithium aluminum hydride. W. G. Dauben and J. F. Eastham. bibliog Am Chem Soc J 75:1718-21 Ap 5 '53

Microbiological transformations of steroids. S. H. Eppstein and others. bibliog Am Chem Soc J 75:408-22 Ja 20 '53

Microbiological transformations of steroids; introduction of oxygen at carbon-11 of progesterone. D. H. Peterson and others. bibliog Am Chem Soc J 74:5933-6 D 5 '52

Microbiological transformations of steroids; the preparation of 11α-hydroxy-17α-progesterone. P. D. Meister and others. bibliog Am Chem Soc J 75:55-7 Ja 5 '53

Molecular rotation differences for 17-hydroxy-20-ketosteroids. R. B. Turner. bibliog Am Chem Soc J 75:3604-5 Jl 20 '53

Molecular rotations of polycyclic compounds; general principles and the correlation of the triterpenoids with the steroids. W. Klyne. Chem Soc J p2916-32 Jl '52

9-10 μ Region of infrared adsorption spectra of steroids in relation to chemical structure. H. Rosenkrantz and L. Zablow. bibliog Am Chem Soc J 75:903-7 F 20 '53

New route to 11-ketosteroids by fission of a $\Delta^{9(11)}$-ethylene oxide. H. Heyman and L. F. Fieser. bibliog Am Chem Soc J 74:5938-41 D 5 '52

11-Oxygenated steroids from ergosteryl-*D* acetate. R. Budziarek and F. S. Spring. Chem & Ind p 1102-3 N 8 '52

11-Oxygenated steroids; partial syntheses of 11-ketotestosterone and of adrenosterone. H. L. Herzog and others. bibliog Am Chem Soc J 75:266-9 Ja 20 '53

11-Oxygenated steroids; the preparation of 11α-hydroxypregnanes. E. P. Oliveto, H. L. Herzog and E. B. Hershberg. bibliog Am Chem Soc J 75:1505-7 Mr 20 '53

11-Oxygenated steroids; the preparation of 11β-hydroxy pregnanes. E. P. Oliveto, T. Clayton and E. B. Hershberg. bibliog Am Chem Soc J 75:486-8 Ja 20 '53

11-Oxygenated steroids; the reduction of 11-carbonyl to 11α-hydroxyl in the etiocholane series. H. L. Herzog, M. A. Jevnik and E. B. Hershberg. bibliog Am Chem Soc J 75:269-72 Ja 20 '53

11-Oxygenated steroids; the selective reduction of steroidal 11,20-diketones with sodium borohydride. E. P. Oliveto and E. B. Hershberg. bibliog Am Chem Soc J 75:488-90 Ja 20 '53

11-Oxygenated steroids; the synthesis of Δ^4-pregnen-11α,17α-diol-3,20-dione (11α,17α-dihydroxyprogesterone) and Δ^4-pregnen-11α,17α,21-triol-3,20-dione 11-acetate (11-epi-compound F 11-acetate). E. P. Oliveto and others. bibliog Am Chem Soc J 75:3651-3 Ag 5 '53

Potential carcinogens; Δ^6-steroids. D. L. Garmaise and C. W. Shoppee. Chem Soc J p245-9 Ja '53

Preparation and dehydrohalogenation of 4-halo-3-ketosteroids. R. P. Holysz. bibliog Am Chem Soc J 75:4432-7 S 20 '53

Preparation of $\Delta^{7,9(11)}$-*allo*-steroids by the action of mercuric acetate on Δ^7-*allo*-steroids. W. V. Ruyle and others. bibliog Am Chem Soc J 75:2604-9 Je 5 '53

Reaction of saturated steroid 3-enol acetates with N-bromosuccinimide. M. Rubin and B. H. Armbrecht. bibliog Am Chem Soc J 75:3513-16 Jl 20 '53

Reduction of phosphomolybdic acid by compounds possessing conjugated double bonds. S. Burstein. bibliog Anal Chem 25:422-4 Mr '53

Reductive methylation of steroid ketones. J. C. Babcock and L. F. Fieser. bibliog Am Chem Soc J 74:5472-4 N 5 '52

Relationship between the stereochemical configuration of 3-hydroxysteroids and their infrared absorption spectra. A. R. H. Cole, R. N. Jones and K. Dobriner. bibliog Am Chem Soc J 74:5571-5 N 20 '52

Some glyoxylic steroids. D. Gould and E. B. Hershberg. bibliog Am Chem Soc J 75:3593-4 Jl 20 '53

Stereochemistry of the catalytic hydrogenation of Δ^8-11-keto steroids; synthesis of 8-iso- and 14-iso-11-keto sapogenins. C. Djerassi and others. bibliog Am Chem Soc J 75:3496-500 Jl 20 '53

Stereospecificity in the rearrangement of 17-hydroxy-20-ketosteroids. R. B. Turner. bibliog Am Chem Soc J 75:3484-8 Jl 20 '53

Steroid 17(α)-acetates. Huang-Minlon and others. bibliog Am Chem Soc J 74:5394-6 N 5 '52

i-Steroid hydrocarbon from ergosterol. M. Fieser, W. E. Rosen and L. F. Fieser. bibliog Am Chem Soc J 74:5397-403 N 5 '52

Steroid ring closures using the acyloin condensation. J. C. Sheehan and others. Am Chem Soc J 74:6155-6 D 5 '52

Steroid series; further reactions of fucosterol and 24-ketocholesterol. D. H. Hey, J. Honeyman and W. J. Peal. Chem Soc J p4836-9 D '52

Steroidal alkaloids; the functional groups of cevine. D. H. R. Barton and J. F. Eastham. Chem Soc J p424-8 F '53

Steroidal sapogenins; experiments in the hecogenin series; degradation of 22a-5α-spirostane-3β,12β-diol-11-one. H. Martinez and others. bibliog Am Chem Soc J 75:239-40 Ja 5 '53

Steroidal sapogenins; hydrolysis of steroidal saponins. E. S. Rothman, M. E. Wall and H. A. Walens. bibliog Am Chem Soc J 74:5791-2 N 20 '52

Steroidal sapogenins; Markogenin (22b-spirostane-2ξ,3β-diol); a new sapogenin isolated from yucca. M. E. Wall and others. bibliog Am Chem Soc J 75:4437-40 S 20 '53

Steroidal sapogenins; synthesis and side chain degradation of 22a,5 β-spirostan-3α-ol-11-one acetate. G. Rosenkranz and others. bibliog Am Chem Soc J 75:4430-2 S 20 '53

Steroidal sapogenins; the reaction of peracids with enol acetates of Δ^8-7-keto and Δ^8-11-keto steroidal sapogenins. O. Mancera and others. bibliog Am Chem Soc J 75:4428-9 S 20 '53

Steroids; a ten step conversion of progesterone to cortisone; the differential reduction of pregnane-3,20-diones with sodium borohydride. O. Mancera and others. bibliog Am Chem Soc J 75:1286-90 Mr 20 '53

Steroids and related compounds; 5β-methyl-19-norcoprost-9(10)-ene-3β : 6β : -diol. B. Ellis and V. Petrow. Chem Soc J p2246-54 Je '52

Steroids and Walden inversion. C. W. Shoppee and G. H. R. Summers. pl Chem Soc J p3361-81 S '52

Steroids and Walden inversion; acetolysis of the coprostanyl halides. R. J. Bridgewater and C. W. Shoppee. Chem Soc J p 1709-15 Je '53

Steroids and Walden inversion; epimerisation at $C_{(17)}$. J. Elks and C. W. Shoppee. Chem Soc J p241-5 Ja '53

Steroids and Walden inversion; the reconversion D-homosteroids into steroids. R. J. W. Cremlyn, D. L. Garmaise and C. W. Shoppee. Chem Soc J p 1847-52 Je '53

Steroids derived from bile acids; Barbier-Wieland degradation in the 11-keto series. R. B. Turner and others. bibliog Am Chem Soc J 74:5814-18 D 5 '52

Steroids derived from bile acids; degradation of 3α,9α-epoxy-11-ketonorcholanic acid to 3α,9α-epoxy-11-ketoetiocholanic acid. V. R. Mattox and others. Am Chem Soc J 74:5818-19 D 5 '52

Steroids derived from bile acids; introduction of the 4,5-double bond of cortisone. W. F. McGuckin and E. C. Kendall. bibliog Am Chem Soc J 74:5811-13 D 5 '52

Steroids; 22 : 23-dibromo-9ξ : 11α-dihydroxyergostan-3β-yl acetate and related compounds. R. Budziarek and F. S. Spring. Chem Soc J p956-9 Mr '53

Steroids; 22 : 23-dibromoergosta-7 : 9(11)-dien-3β-yl acetate (ergosteryl-D acetate 22 : 23-dibromide). R. C. Anderson, R. Stevenson and F. S. Spring. Chem Soc J p2901-6 Jl '52

Steroids; introduction of the 11-keto and 11α-hydroxy groups into ring C unsubstituted steroids; performic acid oxidation of 7,9(11)-dienes. C. Djerassi and others. bibliog diags Am Chem Soc J 75:3505-10 Jl 20 '53

Steroids; 3-methyl-A-norcholest-3(5)-ene. C. W. Shoppee and G. H. R. Summers. Chem Soc J p2528-30 Jl '52

Steroids; 19-norprogesterone, a potent progestational hormone. C. Djerassi, L. Miramontes and G. Rosenkranz. bibliog Am Chem Soc J 75:4440-2 S 20 '53

STEROIDS—*Continued*

Steroids; oxidation of ergosteryl-D-acetate 22 : 23-dibromide. R. Budziarek, R. Stevenson and F. S. Spring. Chem Soc J p4874-8 D '52

Steroids; 11-oxygenated steroids from 22 : 23-dibromoergosta-7 : 9(11)-dien-3β-yl acetate (ergosteryl-D acetate 22 : 23-dibromide). R. Budziarek, F. Johnson and F. S. Spring. Chem Soc J p3410-14 S '52

Steroids; 11-oxygenated steroids from ergosteryl-D acetate. R. Budziarek and others. Chem Soc J p2892-900 Jl '52

Steroids; reactions of 22 : 23-dibromo-7ξ : 11α-dihydroxyergost-8-en-3β-yl acetate. R. Budziarek, J. C. Hamlet and F. S. Spring. Chem Soc J p778-82 Mr '53

Steroids; solvolysis of *epi*cholesteryl toluene-*p*-sulphonate and other steroid toluene-*p*-sulphonates. D. D. Evans and C. W. Shoppee. Chem Soc J p540-7 F '53

Steroids; steroidal sapogenins; the chemical reduction of Δ^{8}-11-keto and of saturated 11-keto steroids; a new approach to 11-keto and 11α-hydroxy steroids. F. Sondheimer and others. bibliog Am Chem Soc J 75:1282-5 Mr 20 '53

Steroids; stigmasta-7 : 9(11) : 22-trien-3β-yl acetate. J. A. McEwan and F. S. Spring. Chem Soc J p3646-7 S '52

Steroids; synthesis of allopregnane-3,11,20-trione-17α,21-diol (dihydroallocortisone). from allopregnan-3β-ol-11,20-dione. J. Pataki, G. Rosenkranz and C. Djerassi. bibliog Am Chem Soc J 74:5615-16 N 20 '52

Steroids; synthesis of 11α,17α-dihydroxyprogesterone and of 11α,17α,21-trihydroxyprogesterone, the 11-epimer of Kendall's Compound F. J. Romo and others. bibliog Am Chem Soc J 75:1277-82 Mr 20 '53

Steroids; synthesis of Δ^{4}-pregnene-11α, 21-diol-3,20-dione diacetate, the 11-epimer of corticosterone acetate. F. Sondheimer and others. bibliog Am Chem Soc J 75:2601-3 Je 5 '53

Steroids; the reduction of ergosteryl-D acetate 22 : 23-dibromide. R. Budziarek, F. Johnson and F. S. Spring. Chem Soc J p534-9 F '53

Structure of the enol acetate derivatives of steroid 7- and 11-ketones. R. Hirschmann and N. L. Wendler. bibliog Am Chem Soc J 75:2361-4 My 20 '53

Studies in the steroid group. R. B. Clayton and others. Chem Soc J p2009-21 Jl '53

Studies in the steroid group; oxidation of 5α : 8α-epidioxy-$\Delta^{9(11)}$-steroids. H. B. Henbest and others. Chem Soc J p4894-6 D '52

Studies in the steroid group; reduction of dehydroergosterol epidioxide. P. Bladon and others. Chem Soc J p4883-90 D '52

Studies in the steroid group; side-chain degradation of 3β-acetoxy-5α : 8α-epidioxyergosta-9 : 22-diene. P. Bladon and others. Chem Soc J p4890-4 D '52

Studies in the sterol group; the preparation of 7-hydroxy-3-keto-Δ^{4}-steroids. C. W. Greenhalgh, H. B. Henbest and E. R. H. Jones. Chem Soc J p2375-80 Je '52

Studies in the sterol group; the preparation of some 7α-methoxy-steroids. C. W. Greenhalgh, H. B. Henbest and E. R. H. Jones. Chem Soc J p2380-3 Je '52

Studies in the sterol group; ultra-violet absorption spectra of ethylenic centres. P. Bladon, H. B. Henbest and G. W. Wood. Chem Soc J p2737-44 Jl '52

16-Substituted steroids; 1,3,5(10)-estratrien-3-ol-16-one. M. N. Huffman and M. H. Lott. bibliog Am Chem Soc J 75:4327-9 S 5 '53

Synthesis and reactions of chlorinated 3-ketosteroids. J. J. Beereboom and others. bibliog Am Chem Soc J 75:3500-5 Jl 20 '53

Synthesis of 11-keto steroids. E. M. Chamberlin and others. bibliog Am Chem Soc J 75:3477-83 Jl 20 '53

Synthesis of 11-ketosteroids; dichromate oxidation of a bile acid $\Delta^{7,9(11)}$-diene. L. F. Fieser, W. Huang and J. C. Babcock. bibliog Am Chem Soc J 75:116-21 Ja 5 '53

Synthesis of 11-ketosteroids; 11-ketocholestanol. L. F. Fieser and J. E. Herz. bibliog Am Chem Soc J 75:121-4 Ja 5 '53

Synthesis of 11-ketosteroids; oxidation of $\Delta^{7,9(11)}$-dienes with N-bromosuccinimide. L. F. Fieser, W. P. Schneider and W. Huang. bibliog Am Chem Soc J 75:124-7 Ja 5 '53

Ultraviolet absorption of steroids. L. Dorfman. Chem R 53:47-144 bibliog(p 132-44) Ag '53

See also

Hydroxycorticosterone

Analysis

Catalog of infrared absorption spectra of steroidal sapogenin acetates. C. R. Eddy, M. E. Wall and M. K. Scott. bibliog Anal Chem 25:266-71 F '53

Determination of purity of steroids; solubility analysis. W. Tarpley and M. Yudis. bibliog diags Anal Chem 25:121-7 Ja '53

Paper chromatography of steroids. D. Kritchevsky and M. R. Kirk. bibliog Am Chem Soc J 74:4484-6 S 20 '52

Specific test differentiating between α-ketol and dihydroxyacetone groups of C_{21}-steroids on paper chromatograms. L. R. Axelrod. Am Chem Soc J 75:4074-5 Ag 20 '53

STEROLS

Studies in the sterol group; the preparation of 7-hydroxy-3-keto-Δ^{4}-steroids. C. W. Greenhalgh, H. B. Henbest and E. R. H. Jones. Chem Soc J p2375-80 Je '52

Studies in the sterol group; the preparation of some 7α-methoxy-steroids. C. W. Greenhalgh, H. B. Henbest and E. R. H. Jones. Chem Soc J p2380-3 Je '52

Studies in the sterol group; ultra-violet absorption spectra of ethylenic centres. P. Bladon, H. B. Henbest and G. W. Wood. Chem Soc J p2737-44 Jl '52

See also

Ergosterol

Analysis

Separation and tentative identification of two new sterols from oats. D. R. Idler and others. bibliog Am Chem Soc J 75:1712-15 Ap 5 '53

Separation of the air-oxidation products of cholesterol by column partition chromatography. E. H. Mosbach, M. Nierenberg and F. E. Kendall. bibliog Am Chem Soc J 75:2358-60 My 20 '53

STEVENS, Roger L.

Businessmen in the news. por Fortune 47: 64 Ap '53

STEVENS rearrangement. See Molecular rearrangements

STEVENSON, Adlai Ewing, 1900-

Adlai the investor; Mr Stevenson is no barefoot boy in Wall Street. R. M. Bleiberg. Barron's 32:5 O 13 '52

STEWART, Edward Ellsworth

Stewart of National Dairy. por Fortune 46: 144-5 D '52

STICKLEBACKS

Curious behavior of the stickleback. N. Tinbergen. il Sci Am 187:22-6 D '52

STIFFNESS

Measuring the stiffness of paper. R. B. Hobbs and V. Worthington. bibliog il diags Mod Packaging 26:127-9+ Jl '53

Stiffness of paper. F. T. Carson and V. Worthington. bibliog il diags J Res Nat Bur Stand 49:385-91 D '52; Same. Tappi 36:36-42 Ja '53

Stiffness of papers with softening agents; abstract. J. Kubat. Paper Ind 35:90 Ap '53

STIFFNESS tester

Paper stiffness measured by new NBS development. il diag Paper Ind 34:952 N '52

STIGMASTANE

3α-Carboxylic acids of 5-sitostene and stigmastane. E. N. Squire. Am Chem Soc J 75: 493-4 Ja 20 '53

STIGMASTATRIENYL acetate

Steroids; stigmasta-7 : 9(11) : 22-trien-3β-yl acetate. J. A. McEwan and F. S. Spring. Chem Soc J p3646-7 S '52

STIGMASTENOL

Isolation of Δ^{7}-stigmastenol from wheat. D. R. Idler, A. A. Kandutsch and C. A. Baumann. bibliog Am Chem Soc J 75:4325-7 S 5 '53

STILBENE

Addition of triphenylsilylpotassium to *trans*-stilbene. H. Gilman and T. C. Wu. Am Chem Soc J 75:234 Ja 5 '53

STILBENE—*Continued*

Neutron-proton scattering using organic crystal scintillation detectors. M. E. Remley and others. bibliog diags Phys R 89:1194-8 Mr 15 '53

New stilbenediol vinylog. R. C. Fuson and R. F. Heitmiller. Am Chem Soc J 75:1494-5 Mr 20 '53

Phoswich, a multiple phosphor. D. H. Wilkinson. diags R Sci Instr 23:414-17 Ag '52

Reaction of *trans*-stilbene oxide and 1,1-diphenylethylene oxide with 2-naphthol. C. O. Guss, R. Rosenthal and R. F. Brown. bibliog Am Chem Soc J 75:2393-5 My 20 '53

Reactions of toluic acids with sulfur; stilbenedicarboxylic acids. W. G. Toland, jr., J. B. Wilkes and F. J. Brutschy. bibliog Am Chem Soc J 75:2263-4 My 5 '53

Some physical properties of *cis*-stilbene. D. S. Brackman and P. H. Plesch. Chem Soc J p2188-90 Je '52

Some reactions of the stilbenes in the presence of metal halides. D. S. Brackman and P. H. Plesch. diag Chem Soc J p 1289-92 Ap '53

Ultra-violet absorption spectra of *trans*- and *cis*-stilbenes and their derivatives; *trans*- and *cis*-stilbenes. R. N. Beale and E. M. F. Roe. Chem Soc J p2755-63 S '53

STIRRERS

Apparatus for distillation and stirring. N. S. Radin. diag Anal Chem 24:1686-7 O '52

Induction stirrer for arc furnace. E. G. Malmlow and Q. Graham. il Iron & Steel Eng 30:120+ F '53; Same. bibliog Blast F & Steel Pl 41:311-13 Mr '53; Same. Steel 132:104+ My 4 '53

Induction stirrer for electric arc furnaces. il diags Engineering 175:428-9 Ap 3 '53

Induction stirrers for electric arc furnaces. Engineer 195:469 Mr 27 '53

Most efficient stirrer. Chem Eng 60:312-13 Ja '53

Timken replaces open hearths with electric furnaces. il Iron & Steel Eng 29:139-40+ D '52; Same. Blast F & Steel Pl 41:57-62 Ja '53; Excerpts. diag Iron Age 170:82-4 D 25 '52

STOBBE condensation. See Condensation, Chemical

STOCK brokers. See Brokers

STOCK dividends. See Dividends

STOCK exchange

Banking and the security markets. A. H. Cook. Comm & Fin Chr 177:199+ Ja 15 '53

Bear market? not yet. Bsns W p27-8 Ap 11 '53

Bull market is not over. K. Ward. Comm & Fin Chr 176:1517+ O 23 '52

Bulls, bears both claim market's going their way. Bsns W p 100-2+ N 1 '52

Course of the market. J. Coe. Comm & Fin Chr 177:2069 My 14 '53

Dollars and sense in stock transactions; stock exchanges might streamline their operations by adopting decimal system for transactions. H. J. King. Comm & Fin Chr 177:1111 Mr 12 '53

Dow theory upsets stock market. O. Ely. Pub Util 52:497-500 O 8 '53

Economic outlook for equities. B. K. Thurlow. Comm & Fin Chr 177:470 Ja 29 '53

Individual situations independent of market. A. T. Miller. Mag of Wall St 91:622-3+ Mr 7 '53

Institutional investors and the auction market for equities. R. F. Murray. Comm & Fin Chr 177:1634+ Ap 16 '53

Intermission in the bull market. A. J. Cortese. Comm & Fin Chr 177:1533 Ap 9 '53

An inviting stock market. K. Ward. Comm & Fin Chr 176:2013+ N 27 '52

Let's look at the stock market. A. J. Messing. Comm & Fin Chr 177:1632-3 Ap 16 '53

Low-priced shares; with table of performance of low-priced stocks, 1946 vs. 1953. R. W. Bridwell. Barron's 33:11 Ap 27 '53

Market ahead. K. Ward. Comm & Fin Chr 177:2061+ My 14 '53

Market approaching time of decision; with graphs. A. T. Miller. Mag of Wall St 91:688-9+ Mr 21 '53

Market outlook. A. Gaubis. Comm & Fin Chr 177:1101+ Mr 12 '53

Market outlook and selected securities; growth stocks for various purposes. Comm & Fin Chr 177:2742 Je 25 '53

Market responding to new corporate reports. A. T. Miller. Mag of Wall St 91:514-15 F 7 '53 [cont bi-weekly]

New approach to stock market analysis. H. Fahrner. Comm & Fin Chr 177:11 Ja 1 '53

New bull market? Bsns W p34 D 6 '52

New groups coming to the fore. A. T. Miller. Mag of Wall St 91:330-1 D 27 '52

New look at the securities business. H. A. McDonald. Comm & Fin Chr 177:104 Ja 8 '53

1949-53 bull market; its zigs and zags to date; tabulation. Bsns W p68 F 28 '53

1953 business and stock market outlook. G. M. Loeb. Comm & Fin Chr 177:301 Ja 22 '53

No reversal of bullish trend in stock market. A. J. Neumark. Comm & Fin Chr 177:1852+ Ap 30 '53

Outlook for the stock market. I. de Vegh. Comm & Fin Chr 177:1106 Mr 12 '53

Outlook for the stock market is bearish. J. F. Hughes. Comm & Fin Chr 176:1517+ O 23 '52

Pattern for 1953 market. A. T. Miller. Mag of Wall St 91:380-2+ Ja 10 '53 [cont bi-weekly]

Peace talk starts a spill. Bsns W p 108+ Ap 4 '53

Security transactions; on and off the stock exchange. L. A. Lukens. Mag of Wall St 91:574-5+ F 21 '53

Signs for a better stock market. S. B. Lurie. Comm & Fin Chr 177:2745 Je 25 '53

Stock market and real estate boom or disastrous deflation ahead? R. E. Wenzlick. Comm & Fin Chr 177:1218-19+ Mr 19 '53

Stock market at a glance; price changes, earnings and dividends. Published in weekly numbers of Barron's

Stock market in for wider technical swings. G. R. Payne. Comm & Fin Chr 177:297 Ja 22 '53

Stock market; 1953 first-half box score; tabulation. Bsns W p 118 Jl 4 '53

Stock market prospects. R. W. Babson. Comm & Fin Chr 177:294 Ja 22 '53

Stock market prospects. H. D. Comer. Comm & Fin Chr 177:1213+ Mr 19 '53

Stock market review and preview. Trusts & Estates 92:35 Ja '53

Stock market situation. R. W. Lambourne. Comm & Fin Chr 177:4+ Ja 1 '53

Stock market thru '53. E. W. Tabell. Comm & Fin Chr 177:1+ Ja 1 '53

Stock market today. R. S. Byfield. Comm & Fin Chr 178:103+ Jl 9 '53

Stock values compared with decade-ago levels. F. F. C. Rippon. Barron's 33:23-4 Ja 5 '53

To sell securities; educate a market. il Bsns W p64-5 F 21 '53

What must be done to save securities exchanges. E. T. McCormick. Comm & Fin Chr 177:101 Ja 8 '53

Which 1952 laggards have best chance of recovery? G. L. Merton. Mag of Wall St 91:405-7+ Ja 10 '53

Wisest investment policy now. A. T. Miller. Mag of Wall St 91:566-7+ F 21 '53

See also

Bonds
Brokers
Investments
Securities
Stocks

also names of exchanges, e.g.

American stock exchange
London stock exchange
New York stock exchange
Toronto stock exchange

STOCK exchange firms, Association of. See Association of stock exchange firms

STOCK liquidation agreements

See also

Insurance, Business—Stock liquidation agreements

STOCK market. See Stock exchange

STOCK options. See Stock purchase options

STOCK ownership, Employees'. See Employees as stockholders

STOCK purchase options

Cold feet on options; dealings not to be resumed. Economist 167:462+ My 16 '53

Research bulletin (no. 37) on stock options revised; compensation measured as of date granted. J Account 95:310-13 Mr '53

Stock option snag. Bsns W p85-6+ Ap 4 '53

Accounting

Accounting for stock options; why Accounting research bulletin 37 was revised. J Account 95:436-9 Ap '53

Proposed SEC rule on officer and employee stock options; accounting procedure outlined. Comm & Fin Chr 177:1205+ Mr 19 '53

SEC proposes new accounting rule on stock options. J Account 95:503-5 Ap '53

STOCK purchase warrants

Either way it's a capital gain. Bsns W p 104+ Ap 11 '53

STOCK transfer tax

You pay less stock transfer tax. Bsns W p78+ Je 13 '53

STOCK transfers

Fiduciary transfers; ABA committee report. Trusts & Estates 91:765-7 O '52

STOCKHOLDERS

Analysis of stock ownership. W. L. Crum. Harvard Bsns R 31:36-54 My '53

Buy stock, see America. il Bsns W p64-5 Je 20 '53

Care and feeding of corporate stockholders. D. Parker. Pub Util 50:689-95 N 6 '52

Cruise (at the dock) brings out the stockholders; Matson line. il Bsns W p30-1 Ap 4 '53

Effective stockholder relations. O. Ely. Pub Util 52:41-3 Jl 2 '53

Financial and stockholder relations; problems of the average corporation. H. S. Hettinger. Management R 42:41-6 Ja '53

Information the small stockholder wants from management. W. F. Muenchow. Comm & Fin Chr 178:110-11 Jl 9 '53

Investor relations; important aspect of utility management. P. Hallingby, jr. Pub Util 50:547-52 O 23 '52

Merger; rights of dissenting shareholders; Maryland's Supreme court decision. Banking 46:72+ Jl '53

Political power of the small shareholder. E. F. Lloyd. Pub Util 51:498-501 Ap 9 '53

Program for stockholder relations. P. Hunt. Harvard Bsns R 30:99-110 S '52

Proposal to American business; plan for gathering stockholder statistics. Harvard Bsns R 31:33-5 My '53

Road show for stockholders; General mills. il Mod Ind 24:59-61 D '52

Stockholders discussion at its peak. A. W. May. Comm & Fin Chr 177:2065+ My 14 '53

See also

Banks and banking—Stockholders

Corporations—Reports and yearbooks

Employees as stockholders

STOCKHOLM, Sweden

Bridges

Deep caissons stabilize weak bank. il diags Eng N 150:41+ Ja 22 '53

Sewerage

Sewage treatment of Scandinavia. E. L. Knoedler. Water & Sewage Works 100:125 Mr '53

Subway

Stockholm opens new subway. Comp Air Mag 58:22 Ja '53

Tunnel excavated after it is built, to expedite traffic in street; subway tunnel. il diags Eng N 150:65-6 My 21 '53

STOCKPILING

Defense department report on stockpiling reviews rubber development projects. India Rubber World 129:82 O '53

Final control on material, stockpiling sought for ODM by President Eisenhower. Nat Pet N 45:18 Ap 8 '53

Price propping. Bsns W p27 My 30 '53

Stockpile is reported 79 per cent complete. Oil Paint & Drug Rep 164:3+ S 14 '53

Stockpiling to act as long-range stabilizer for metal market. Am Mach 97:199 Je 8 '53

Warehouses; GSA asks funds to pull stockpiles under one roof by '55. Iron Age 171:76 My 14 '53

STOCKS

Changes in common stock holdings of 44 investment management groups; December 31, 1952-March 31, 1953; tabulations. Comm & Fin Chr 177:1980-1 My 7 '53

Do you hold any of these 38 stocks? specific advice to retain or sell; with table. J. S. Williams. Mag of Wall St 91:131-3+ N 1 '52

Do you own any of these 15 stocks with large market declines? W. Gates. Mag of Wall St 92:400-1+ Je 27 '53

Eyeing tax laws in stock trading. E. W. Stern. Comm & Fin Chr 177:1008 Mr 5 '53

Fallacy of cyclical approach. L. O. Hooper. Trusts & Estates 92:500-1 Jl '53

Favorite fifty. Comm & Fin Chr 177:1114 Mr 12 '53

15 companies with only common stock outstanding. J. S. Williams. Mag of Wall St 92:282-3, 298-300 My 30 '53

Five attractive stocks for capital gains; with comparative balance sheet items. Mag of Wall St 91:469-71 Ja 24 '53

Five companies paying dividends in stock and cash; with comparative balance sheet items. Mag of Wall St 92:222-4 My 16 '53

Five diversified stocks with strong investment appeal; with comparative balance sheet items. Mag of Wall St 92:396-8 Je 27 '53

Five high-yield stocks that meet six important investment tests. Mag of Wall St 92:512-13+ Jl 25 '53

Five medium priced growth stocks; with comparative balance sheet items. Mag of Wall St 91:73-5 O 18 '52

Five outstanding entrenched stocks; with comparative balance sheet items. Mag of Wall St 91:181-3 N 15 '52

Five outstanding investments for the future; with comparative balance sheet items. Mag of Wall St 92:331-3 Je 13 '53

Five stocks best suited to resist downtrend; with comparative balance sheet items. Mag of Wall St 91:27-9 O 4 '52

Five stocks with better-than-average prospects; with comparative balance sheet items. Mag of Wall St 91:125-7 N 1 '52

Five stocks with record-breaking profits in 1952; with comparative balance sheet items. Mag of Wall St 91:240-2 N 29 '52

Five stocks with unique growth prospects; with comparative balance sheet items. Mag of Wall St 92:451-3 Jl 11 '53

Five stocks with unusually stable earnings; with comparative balance sheet items. Mag of Wall St 92:170-2 My 2 '53

Five timely selections in risk free stocks; with comparative balance sheet items. Mag of Wall St 92:278-80 My 30 '53

Five undervalued sound investments; with comparative balance sheet items. Mag of Wall St 91:349-51 D 27 '52

Forty depressed stocks. J. S. Williams. Mag of Wall St 91:533-5+ F 7 '53

How not- and how-to make legacies of corporate stock. Banking 45:55-6 N '52

How protective are protective stocks? with table of comparative percent changes of average market prices, earnings and dividends. R. A. Bing. Comm & Fin Chr 177:1322 Mr 26 '53

Investment funds' stock favorites listed. Trust & Estates 92:199 Mr '53

Investment primer; review of How to buy stocks, by L. Engel. Bsns W p 101-2+ Ap 18 '53

Investment schizophrenia; lack of unanimity of opinion, particularly on individual stock issues. J. A. Close. Comm & Fin Chr 177:996+ Mr 5 '53

It pays to speculate, off the beaten track! S. J. Sanford. Comm & Fin Chr 177:781+ F 19 '53

Long-term outlook for equities. B. Graham. Comm & Fin Chr 176:2016+ N 27 '52

Low-priced stocks headed for higher levels. J. S. Williams. Mag of Wall St 91:237-9+ N 29 '52

Market break; $12-billion. Bsns W p33-4 Je 20 '53

STOCKS—*Continued*

New bull market? Fortune 47:34+ F '53

New York savings banks turn to stocks in search for higher earnings. W. A. Lyon. Comm & Fin Chr 176:1833+ N 13 '52

1953 midyear re-appraisals of values; earnings and dividend forecasts. Mag of Wall St 92:442-50+, 504-11+, 556-65+, 610-21+, 657-71+, 718-29+ Jl 11-S 19 '53

Outlook for Canadian stocks. C. M. Short. Banking 45:74 Ap '53

Outlook for 39 leading stocks; with table of leading stocks compared; price and yield changes (1952 closing to June 30, 1953). J. C. Clifford. Mag of Wall St 92:431-3+ Jl 11 '53

Pipe line stocks, a growing new industry. G. L. Merton. Mag of Wall St 91:346-7+ D 27 '52

Selecting industries and issues. G. M. Loeb. Comm & Fin Chr 176:1723+ N 6 '52

Selection of growth stocks. R. W. Johnson. Comm & Fin Chr 177:783+ F 19 '53

Shares of stock in other firms given as employee bonus; Automatic screw machine products co. il Am Bsns 23:30+ F '53

Stocks for Christmas stockings; with tables of recommended securities. I. U. Cobleigh. Comm & Fin Chr 176:2119 D 4 '52

Stocks in a doubtful position; with table of 13 stocks with lower earnings. H. F. Travis. Mag of Wall St 92:338-9 Je 13 '53

Stocks with pronounced growth prospects. G. L. Merton. Mag of Wall St 91:704-6+ Mr 21 '53

Tax exempts; rising yields make them more attractive to more investors. C. ter Kuile. Barron's 33:11 Je 15 '53

Ten potential market leaders for 1953; with comparative balance sheet items. Mag of Wall St 91:638-43 Mr 7 '53

Three by nine analysis of some unlisted stocks. H. J. King. Comm & Fin Chr 177:1208 Mr 19 '53

To hold, or not to hold. W. Maynard. Comm & Fin Chr 176:1923+ N 20 '52

12 promising specialties. P. Dobbs. Mag of Wall St 92:94-5+ Ap 18 '53

Twenty stocks acting best, poorest; with tables. J. S. Williams. Mag of Wall St 92:225-7+ My 16 '53

20 stocks acting better than average. J. S. Williams. Mag of Wall St 91:584-6+ F 21 '53

20 stocks acting well; giving above-average performance; with table. J. S. Williams. Mag of Wall St 91:187-9+ N 15 '52

Twenty stocks in marginal companies; with table of stocks with declining profit-margins. J. D. C. Weldon. Mag of Wall St 92:174-5 My 2 '53

Which industries and common stocks today? W. Maynard. Comm & Fin Chr 177:2625+ Je 18 '53

Which stocks have done best, which poorest? with table of companies showing divergent earnings trends in 18 groups. J. C. Clifford. Mag of Wall St 91:79-81+ O 18 '52

Worth and prospects of 40 stocks yielding eight per cent or more. J. D. C. Weldon. Mag of Wall St 92:29-31+ Ap 4 '53

See also

Banks and banking—Stock
Bonds
Corporations
Dividends
Investments
Securities
Stock exchange
Stock purchase options
Stock transfers

also subdivision Securities under names of industries, e.g.
Chemical industries
Electric utilities

Margin buying

Buying on borrowed money; margins cut. Bsns W p66+ F 28 '53

Protest 75 per cent margin requirement; letter to the Federal reserve board. M. Dunn and J. B. Huhn. Comm & Fin Chr 176:1633 O 30 '52

Price-earnings ratios

Companies with largest retained earnings over past ten years. J. D. C. Weldon. Mag of Wall St 91:590-1+ F 21 '53

New Dow-Jones series; 20 year statistical record of the utility index's earnings. Barron's 33:13-14 Ja 19 '53

On the average; market historically is neither high nor low. J. C. Clendenin and E. F. Cassady. Barron's 33:5+ Je 1 '53

Price-earnings ratios; residual values make them deceptive. W. Kurtz. Barron's 33:7-8+ F 23 '53

Ratio analysis applied to securities. W. L. Wilcox. Trusts & Estates 91:912 D '52

Solving a stock market mystery. W. Gates. Mag of Wall St 92:318-19+ Je 13 '53

Utilities; they expect improvement in regulatory climate. H. Murphy. Barron's 33:15+ Ja 19 '53

Price fluctuations

Low-priced shares; with table of performance of low-priced stocks, 1946 vs. 1953. R. W. Bridwell. Barron's 33:11 Ap 27 '53

Price forecasting

Forecast of 1953 business and securities markets. J. D. Weiss. Comm & Fin Chr 177:10 Ja 1 '53

Informed forecasting results. A. W. May. Comm & Fin Chr 177:997+ Mr 5 '53

Outlook for stocks and bonds. H. C. Baldwin. Comm & Fin Chr 176:2118+ D 4 '52

Predicts lower stock prices. A. Bernhard. Comm & Fin Chr 176:2035 N 27 '52

Price indexes and averages

Common stock index. Published in bi-weekly numbers of Magazine of Wall Street

Is the Dow Jones industrial average representative? S. Glasser. Comm & Fin Chr 176:1823 N 13 '52

Market approaching time of decision; with graphs. A. T. Miller. Mag of Wall St 91:688-9+ Mr 21 '53

New gilt-edged index. Economist 167:624 My 30 '53

Pro investors lag behind the indexes. Bsns W p 174 Je 20 '53

Seasonal pattern. G. L. Leffler. Barron's 33:27 Mr 30 '53

Stock prices, 1950-1952, monthly Dec. 1951-Dec. 1952; weekly Dec. 1952. Fed Res Bul 39:38 Ja '53 [cont monthly]

Study of price movement; market laboratory. Published in weekly numbers of Barron's

Prices

Business outlook and stock prices. J. I. Bogen. Comm & Fin Chr 177:2304-5 My 28 '53

Commodities and stocks; raw material declines may be bullish for equities. A. Gaubis. Barron's 33:11+ Mr 9 '53

Important individual 1952 price movements in the 330 stocks representing the Magazine of Wall Street combined average; tabulation. Mag of Wall St 91:475 Ja 24 '53

Monthly range of prices on the New York stock exchange for year 1952. Comm & Fin Chr 177:386-99 sec 2 Ja 22 '53

On the average; market historically is neither high nor low. J. C. Clendenin and E. F. Cassady. Barron's 33:5+ Je 1 '53

Radio-tv stock price analysis; price ranges of 120 electronic industries stocks, 1945-1953; with dividends paid and per cent yield. Tele-Tech 12:156-7 F '53

Stock market at a glance; price changes, earnings and dividends. Published in weekly numbers of Barron's

Short selling

Short interest ratio declines 0.01; data as of Jan. 15, 1953 and comparison with Dec. 14, 1952. Barron's 33:36 Ja 26 '53 [cont monthly]

Track of the bear; statistics on short sales may be clue to the market. D. L. Saunders. Barron's 33:5+ Mr 16 '53

Split-up

Five outstanding candidates for stock-splits; with comparative balance sheet items. Mag of Wall St 91:295-7 D 13 '52

Five unusual candidates for stock splits; with comparative balance sheet items. Mag of Wall St 92:90-2 Ap 18 '53

Stock dividends and split-ups; accounting treatment by stockholders and corporation. J Account 95:44-7 Ja '53; Discussion. R. V. Hunter. 95:543-4+ My '53

STOCKS—*Continued*

Statistics

Security markets; Nov.-Dec. 1951-Jan.-Nov. 1952. Survey of Cur Bsns 33:S20 Ja '53 [cont monthly]

Yields

Bond and stock yields, 1950-1952 average; monthly, Dec. 1951-Dec. 1952; weekly, Dec. 1952. Fed Res Bul 39:39 Ja '53 [cont monthly]

Common stock values and yields. W. J. Eiteman and F. P. Smith. (Mich. business studies v. 11, no. 3) 35p pa $2.25 Univ. of Michigan press, 311 Maynard st, Ann Arbor '53

High interest rates and stock prices. E. W. Stern. Comm & Fin Chr 177:1429 Ap 2 '53

Index of yields; selected utilities stocks. Published in monthly numbers of American gas journal

Moody's investors yield tables. Trusts & Estates 91:903; 92:28, 110, 204, 261, 340 D '52-My '53

New trend in investment values and yields. W. Gates. Mag of Wall St 92:76-7+ Ap 18 '53

Sound stocks with above-average yield; with comparative balance sheet items. Mag of Wall St 91:707-9 Mr 21 '53

Stocks in a doubtful position. H. L. Blackburn. Mag of Wall St 91:646-7+ Mr 7 '53

STOCKS, Convertible. See Stocks, Preferred—Convertible stocks

STOCKS, Preferred

If you are holding bonds and preferreds selling above their call prices. J. S. Williams. Mag of Wall St 91:33+ O 4 '52

Preferred position for the new year. I. U. Cobleigh. Comm & Fin Chr 176:2492; 177:7 D 25 '52, Ja 1 '53

Preferred stocks in arrears; with list. S. Devlin. Mag of Wall St 91:713+ Mr 21 '53

Preferreds in common trust funds; with list. Trusts & Estates 92:190-2 Mr '53

Railway preferences. I. U. Cobleigh. Comm & Fin Chr 177:2410-11 Je 4 '53

Convertible stocks

Capital gains through convertibles. J. S. Williams. Mag of Wall St 91:348+ D 27 '52

Convertible preferred stocks; appraisal of representative groups of stocks, selected years, 1946-1952. R. F. Murray. Trusts & Estates 92:428-31 Je '53

Convertible preferreds serve dual purpose during periods of market uncertainty. R. W. Bridwell. Barron's 33:11-12 Je 22 '53

STOICHIOMETRY

Stoichiometric combustion method for the determination of sulphur in slags. C. J. B. Fincham and F. D. Richardson. Iron & Steel Inst J 172:53-5 S '52

STOKERS, Mechanical

Furnace heat absorption in a spreader-stoker-fired steam generator. J. W. Myers and others. bibliog diags A S M E Trans 75:909-40; Discussion. 940-2 Jl '53

Operating spreader stokers at light loads. F. C. Messaros. il diags Mech Eng 74:453-6 Je '52; Discussion. 74:1034-5 D '52

Overfire air limits underfeed stoker smoke. il diags Power Eng 57:102-3 Ag '53

Reducing dust from small spreader stokers. Power Eng 57:104 Ag '53

Spreader stokers; abstract. T. H. Lindsay and P. Pilkington. Elec R (Lond) 152:764 Ap 3 '53

Lubrication

Air-borne oil cuts bearing wear in spreader stokers. C. Filter. il diags Power 96:112-13 D '52

STOKES' law

Ionic hydration and Stokes' law. A. L. Levy. bibliog J Chem Phys 21:566-7 Mr '53

STOLAR, H. M.

Bringing reform to St Louis schools. por Bsns W p 128-31 D 13 '52

STOLK, William C. 1900-

Stolk of American Can. por Fortune 46:148-9 O '52

STOLL, Max, 1899-

1953 Fritzsche award. por(cover) Chem & Eng N 31:1094 Mr 16 '53

STOMACH

Ulcers

Prevention of ulcers in the Shay rat by ox bile. C. Funk and others. bibliog Science 116:638-9 D 5 '52

STONE

See also

Building stone
Dolomite
Granite
Limestone
Marble
Masonry
Quarries and quarrying
Rocks

STONE, Crushed

Crushed stone plant; Ft Worth sand & gravel co. W. B. Lenhart. flow sheet il Rock Prod 56:72-4 Jl '53

Nation's outstanding new crushed stone plant; Dolese bros. co. B. Nordberg. flow sheet il plans diags Rock Prod 56:108-25+ Ja '53

Produce chemical stone and highway materials as by-product; McDonough bros., inc. W. B. Lenhart. flow sheet il Rock Prod 56:88-9+ S '53

Small plant has high capacity; Valley Forge stone co. W. B. Lenhart. il Rock Prod 55:104-5 D '52

Technical matters and trends that will affect crushed stone industry; abstract. A. T. Goldbeck. Rock Prod 56:80-1 Mr '53

STONE and Webster engineering corporation

From Edison to the atomic age; Stone & Webster rolls along. J. P. Chamberlain. Eng N 150:59-60+ My 21 '53

STONE houses

Modern improvements in stone housing; discussion. H. L. Broughton and others. Chem & Ind p 1241 D 20 '52

STONE sand. See Sand—Stone sand

STONE walls. See Walls, Stone

STONER, Arthur M.

Presentation of the Certificate of merit. por Franklin Inst J 254:455-7 D '52

STOP mechanism

Semi-automatic stop for blanking dies. F. Strasser. diags Mach 59:206 My '53

Station stops for progressive dies reduce waste. F. Strasser. diags Tool Eng 31:64-7 Ag '53

Stops for dies; reference book sheet. P. Balsells. diags Am Mach 96:149, 151, 153 D 8 '52

See also

Geneva stop

STOPPING power. See Scattering of particles and rays

STORAGE

Architects' offices; storage; design details, materials, equipment. il diags Arch Rec 113:156-8 Ja '53

Better methods double storage capacity. J. E. Dubbs. il Elec World 139:150+ Mr 23 '53

Die elevator soothes storage headache. il Steel 131:124 D 15 '52

Die storage; system developed by Pittsburgh forgings co. il Iron Age 171:194-5 Mr 5 '53; Steel 132:116+ Mr 2 '53

Dry-store your welding rods. il Factory Management 111:99 Mr '53

Five-high stacking gains 98,000 sq. ft. of storage space; Nordberg manufacturing co. J. T. Hanlon. il Factory Management 111:122-5 O '53

Handling hazards defined. diag Steel 131:318+ O 13 '52

New concepts of military packaging; storage and trans-shipment problems. S. S. Horwitz. il Mod Packaging 26:128-32+ S '52

Proper care of small parts saves money. J. E. Hyler. il Mill & Factory 52:100-4 Ap '53

Records go underground for safety; U.S. Steel stores valuable paperwork in worked-out coal mine. il Iron Age 170:94 N 13 '52

Skillful selection and layout of shelving and storage racks. T. W. Rodes. il Ind & Eng Chem 45:sup 121A-2A+ Mr '53

Storage idea saves space; Cooper-Bessemer corp. Steel 132:83 Ja 12 '53

Storage rack for Diesel engine castings. il Ry Loco & Cars 127:87 Ap '53

STORAGE—*Continued*

To get 25 per cent more storage space. H. I. Bernbaum. il plans Factory Management 111:92-3 Ag '53

See also

Coal storage
Food, Frozen—Storage
Freight houses
Gas, Natural—Storage
Gasoline storage
Liquefied petroleum gas—Storage
Plastic materials—Storage
Stores systems
Water storage
Wood storage

STORAGE batteries

AD-X2; will it prolong battery life? W. V. Packard. Iron Age 171:39-40 Ja 22 '53

Addition agents for negative plates of lead-acid storage batteries; pure organic compounds. E. J. Ritchie. il Electrochem Soc J 100:53-9 F '53

Are policy changes coming up? Bureau of standards is charged with condemning battery additive wrongly. Iron Age 171:82-3 Ap 9 '53

Astin uproar; AD-X2. Fortune 47:108+ My '53

Batteries improved with plastics. il Mod Plastics 30:73-9+ Mr '53

Battery rejuvenator vs. the Bureau of standards. Consumers Res Bul 31:2+ My; 2+ Je '53

Bureau of standards case; AD-X2. Sci Am 188:53 My '53

Care and charging of batteries. S. K. Lessey. il diag Diesel Power 30:74-7 O; 63-5 N '52

Case of AD-X2. Bsns W p48+ Ja 10 '53

Complex sales pitch seen an obstacle on road to increased battery volume. W. E. Blank. Nat Pet N 45:92-4 My 6 '53

Diesel-electrics; how to keep 'em rolling; batteries and battery charging. M. D. Henshaw and B. L. Judy. il diags Ry Loco & Cars 127:82-7 O '53

Diesel-electrics; how to keep 'em rolling; some simple battery circuits. J. L. Judy and W. S. O'Kelly. il diags Ry Loco & Cars 127:80-7 Ja '53

Effect of corrosion and growth on the life of positive grids in the lead-acid cell. J. J. Lander. Electrochem Soc J 99:467-73 N '52

Eight tips for sealing storage battery cells. H. W. Smith. il Power Eng 57:93 Ag '53; Same. Iron & Steel Eng 30:112 Jl '53

Get it in writing, with full details, or look elsewhere. Consumers Res Bul 31:29 Je '53

How batteries are maintained at Grand Central terminal. il diags Ry Mech & Elec Eng 126:84-6 O '52

How do you treat your batteries? V. H. Parker. il diag Constr Methods 35:108+ Jl '53

How good charging methods, maintenance stretch battery life. il Power 97:148 O '53

How to adjust the specific gravity of repaired batteries. Coal Age 58:112 Jl '53; Same abr. Iron & Steel Eng 30:113 Je '53; Same. Power Eng 57:82 S '53

How to diagnose and cure sulphated batteries. Coal Age 58:118 O '53; Same. il Power Eng 57:108+ O '53; Same. Iron & Steel Eng 30:134+ Ag '53

Ignition: new cars get more battery power. Iron Age 170:63 O 23 '52

Juice in batteries; lower lead prices widen industry's profit margins. M. J. Saada. Barron's 33:9-10 Jl 6 '53

Latest tips on battery maintenance. il Paper Tr J 135:23-4 D 26 '52

Lifetime battery? Electric storage battery co. Constr Methods 35:215 My '53

M.I.T. gives ok to battery additive. il Eng N 150:96 Ja 22 '53

Matching batteries and starting equipment for Diesel engine cranking. E. A. Hoxie. il Diesel Power 31:52-7+ Mr '53

More miles for the battery dollar. L. E. Wells. diags Am Gas Assn Proc 1952:477-86; Abstract. Automotive Ind 107:40-1 Jl 1 '52

NBS reaffirms previous stand on value of battery additives; AD-X2 not effective. Chem & Eng N 31:786+ F 23 '53

Nickel-cadmium batteries for navy. Aviation W 58:16 Mr 30 '53

Nickel-cadmium cells hit at one cause of crashes. il Aviation W 58:77+ Ap 27 '53

120-v Nicad batteries power a-c, d-c switchgear; General cable corp. il diag Power Eng 57:71+ O '53

Porvic process; method for making thermoplastics microporous. il Chem Age (Lond) 68:411-13 Mr 14 '53; Engineer 195:386-7 Mr 13 '53; Engineering 175:373 Mr 20 '53; Elec J 150:878 Mr 13 '53

Practical pointers for year-round battery maintenance. il Diesel Power 31:42-3 S '53

Rechargeable alkaline battery. Automobile Eng 43:378 S '53

Recommended voltages for industrial trucks. C. S. Schroeder. Iron & Steel Eng 30:84-6; Discussion. 86-7 Ja '53

Relation of the anodic corrosion of lead and lead-antimony alloys to microstructure. J. B. Burbank and A. C. Simon. bibliog il diag Electrochem Soc J 100:11-14 Ja '53

Select batteries with a capacity curve. K. Vaughan. Power Eng 56:74 N '52; Same. Mill & Factory 52:120-1 Ap '53

Senate committee assails NBS stand on battery additive; battery AD-X2. Chem & Eng N 30:5449-50 D 29 '52

Speeds battery changing; lifting device. il diags Nat Safety N 68:25 S '53

Storage batteries are best yet; charts. L. E. Wells. S A E J 61:66-7 Ja '53

12-volt electrical system will be on some 1953 cars. H. C. Tuttle. Steel 131:89 D 15 '52

Use of battery additives. Bus Transportation 32:47+ O '53

What change to 12-volt batteries will mean to oil's TBA marketers. Nat Pet N 44:75+ N 5 '52

Why the secrecy on 12-volt batteries? service stations should have facts now. F. C. Sturtevant. Nat Pet N 44:74 N 5 '52

Advertising

Animals, real ones, identify Gould with customer benefits. il Ind Marketing 38:150 S '53

Charging

Battery charging equipment. S. K. Lessey. il diag Iron & Steel Eng 30:88-92 Ja '53

Battery-charging simplified for coal-mine service. J. F. Hensler and E. F. Grothe. il diag Coal Age 57:79-83 D '52

Diesel-electrics; how to keep 'em rolling; control for battery charging. M. D. Henshaw and B. L. Judy. il diags Ry Loco & Cars 127:105-11 S '53

Cleaning

Two-way brush solves battery problem. il Nat Pet N 45:83 Ap 1 '53

Manufacture

Dust control pays for itself; Storage battery division of Thomas A. Edison, inc. W. O. Vedder. il Safety Maint & Prod 104:107-8+ O '52

Line, staff, and auxiliary. Bsns W p 117 Mr 7 '53

Rating

Storage batteries. Consumers Res Bul 31:12-14 Mr '53

Repair

Follow these tips for your storage battery repairs. il Power 97:122-3 S '53

How to use a carbon arc burner in battery repair. il Power Eng 59:95-6 Ap '53; Same. Min Cong J 39:55 My '53; Same. Ry Loco & Cars 127:85 My '53; Same. Paper Tr J 137:23-4 Jl 3 '53

Replacing damaged battery covers extends useful life. il Brick & Clay Rec 122:32 Ja '53; Same. Ry Loco & Cars 127:77-8 F '53; Same. Power Eng 57:73 My '53

Right tools, proper procedure keep truck parts alive. il Steel 132:119 Ap 20 '53

Simple splicing mold simplifies repair of battery connectors. il Iron Age 171:185 Ap 2 '53

STORAGE in the home

Storage space in the home. Consumers Res Bul 31:30 Ja '53

STORAGE sheds

Covered storage offers easy access, mobility. il Factory Management 111:168-9 O '53

STORAGE tubes

Direct-viewing memory tube. S. T. Smith and H. E. Brown. bibliog il diags Inst Radio Eng Proc 41:1167-71 S '53

Method for improving the read-around-ratio in cathode-ray storage tubes. J. Kates. il diags Inst Radio Eng Proc 41:1017-23 Ag '53

STORAGE tubes—*Continued*

Single-gun storage tube writes, reads and erases. R. C. Hergenrother and A. S. Luftman. il diags Electronics 26:126-30 Mr '53

STORE buildings

Cousins furniture and appliance store, Johnson county, Kan. il plan Arch Rec 112:173 O '52

Waikiki Beach shops. il plans Arch Rec 112: 153-5 S '52

See also

Department stores

Shopping centers

Air conditioning

Air-conditioned shopping centers may spark new trend in design. il Eng N 150:44-5 F 12 '53

Air conditioning a department store. M. E. Fine. il Dom Eng 180:96-8+ D '52

Air conditioning a must for self-service store. W. V. Mauer. il Heating-Piping 25:96 Ag '53

Air-conditioning plant for a departmental store. il Engineering 174:171 Ag 8 '52

Big new shopping center; central plant supplies steam for heating, chilled water for air conditioning. J. B. Olivieri. diags Heating-Piping 25:102-6 S '53

Biggest cooling machines for giant shopping center. C. Wampler. il Heating-Piping 25:112 Mr '53

Installing ducts for higher pressures. L. O. Paul. il Heating-Piping 25:98-101 Ap '53

Suburban stores need air conditioning; Famous-Barr's Southtown store in St Louis. A. G. Hillen. il Heating-Piping 25:89-91 Mr '53

Electric equipment

New life and light for Out West printing & stationery co., Colorado Springs. il Elec West 111:100-1 Jl '53

Fronts

American Builder's store front details. K. R. O'Neal. il plan diags Am Bld 75:228-9 Ja '53 [cont monthly]

Heating and ventilation

Heating store and building entrances. L. R. Fuller. il diags Heat & Ven 50:75-9 S '53

Lighting

Lighting a men's clothing store; data sheet. J. B. McCracken. il plan Illum Eng 48: 395-6 Ag '53

Make the overhead sell more light. il Elec West 111:105 Ag '53

Swivel downlights solve decorator's display room lighting problem. J. W. Parris. il Elec World 138:148 D 15 '52

See also

Department stores—Lighting

STORE location. See Retail trade—Store location

STORES (retail trade)

See also

Bakers and bakeries

Chain stores

Department stores

Drug stores

Florists' shops

Food stores

Market stores

Plumbing shops

Retail trade

Self service stores

Store buildings

STORES systems

Catalog your inventory and save. il Mod Ind 25:56-8+ F '53

Maintenance stockroom pays eight ways; Perfection stove co. A. D. Buschmann. il Factory Management 111:130-2 F '53

Minimum paperwork for effective stores control. G. R. Boutin. il Factory Management 110:142-4 O '52

Program for better handling of maintenance stores; Ethyl corp. A. S. Barton. il Factory Management 111:128-33 O '53

Shop inventory to prevent material leaks; Frank Yoder, inc. P. Lance. Sheet Metal Worker 44:65-6 Ap '53

See also

Gas companies—Stores systems

Inventories

Material control

Railroads—Stores systems

Repair parts

Storage

Tool rooms

STORM windows

Frame-up for putting up storm windows and screens. Consumers Res Bul 30:29 O '52

Plastic storm windows. Consumers Res Bul 30:10 N '52

STORMS

Electronic weather prediction urged to cut loss from storms. H. T. Orville. Elec Eng 72:375 Ap '53

Ionospheric storm-warning services. C. M. Minnis. Wireless Eng 30:103-8 My '53

Wild seas batter Redondo Beach, Calif. Eng N 150:24 Ja 22 '53

See also

Electric lines—Damage from storms

Hurricanes

Railroads—Damage from floods, storms, etc.

Tornadoes

Winds

STORYTELLING

How to tell a story without muffing it. D. A. Laird. Sales Management 70:76+ Mr 15 '53

STOVES

Answers to 13 questions sought in ICHAM's management workshop. Cer Ind 60:160-2 Ja '53

See also

Electric stoves

Gas stoves

Testing

Report on Jotul stove performance test. A. L. Vanslyke. il plans diag Pulp & Pa of Can 54:132-4+ Ag; 154+ S '53

STOWAGE

National cargo bureau will offer rules for safe stowage of cargo. C. E. McDowell. East Underw 53:80-1 D 12 '52

STRAIGHTENING

High speed straightening; Tube methods, inc. Steel 131:136+ N 10 '52

Quenching machine automatically straightens shafts. il Machine Design 25:140 Ja '53

Straighten a bent shaft. J. Zollinger. diags Am Mach 97:112 Ag 17 '53; Same. Rock Prod 56:104 Ag '53

STRAIGHTENING machines

Rotary tube and pipe straightening machine of improved design; Mackintosh-Hemphill co. il Mach 59:221 My '53

Speeder feed speeds tube straightening; Metal forming corp. il Am Mach 97:141 Ap 27 '53

Straightening machine salvages core rods. il Foundry 80:138 D '52

Sutton heavy-duty straightener. il Blast F & Steel Pl 41:1224 O '53

Tube straightener; rotary machine helps solve production headache. il Iron Age 170: 124 O 23 '52

STRAIN gages

Balancing and calibrating device for resistance strain gauge circuits. P. Savic. diag J Sci Instr 29:337-8 O '52

Counting strain gauge. J. B. Lambie. il diags Engineering 174:168-70 Ag 8 '52

Critical evaluation of the Norelco high angle X-ray spectrometer for elastic strain measurements. S. R. Maloof and H. R. Erard. diags R Sci Instr 23:687-92 D '52

Development of a cell for the installation of electrical resistance strain gages in concrete. H. E. Worley and R. C. Meyer. il diags Am Concrete Inst J 25:121-35 O '53

Foil strain gauge. Engineer 194:348-9 S 12 '52

Foil strain gauges. il Automobile Eng 43: 53-4 F '53

Foil strain gauges. il Engineer 195:398 Mr 13 '53

Foil strain gauges for torque and pressure measurement. Engineering 175:119 Ja 23 '53

Improved strain gauge. Engineering 174: 266 Ag 29 '52

Measuring the big stir. J. Y. Oldshue. il diag Can Chem Process 36:70-1 D '52

Method for preparing SR-4 strain gages for embedment in concrete. E. C. Thoma and R. E. Schneebeli. diags Am Concrete Inst J 24:305-16 D '52

New high range strain gage. J. A. Hurry and R. P. Woolley. il Rubber Age 73:799-800 S '53

Null method of measuring periodic strains. J. H. Littlewood and C. Maskery. il diags Engineering 175:350-2 Mr 13 '53

Simple gage shows plane stress. il Aviation W 57:33 N 17 '52

STRAIN gages—*Continued*
Strain gage accelerometers and pressure transmitters. G. O. Haglund. il diags Product Eng Hdbk p I 22-5 '53
Strain gage circuits from a bottle; silver paint can be used to make slip rings for strain gage circuits. D. K. Wright and J. R. Jeromson, jr. il Iron Age 171:102-3 Ap 30 '53
Strain gage on scale job. Steel 131:147 N 17 '52
Strain-gage remote metering. G. F. Stastny and R. S. Butts. il diags Tele-Tech 12:73-5+ Mr '53
Strain gage transducers for measurement and control. R. J. Fyffe and A. Arobone. il diags Product Eng 23:121-48 N '52
Strain gages control pugmill water. diag Brick & Clay Rec 121:28 D '52
Strain rosette analysis. H. Fealdman. diags Engineer 194:341-2 S 12 '52
Unbonded wire resistance strain gauge accelerometers. J. R. Bristow and F. G. Ellames. diags J Sci Instr 29:288-9 S '52
Use of electronic gages to determine the fatigue point in corrugated containers. C. S. MacNair. il diags Tappi 36:sup 138A-42A Ja '53
Use strain gauges to accurately align kilns. J. Sale. il diags Rock Prod 56:122 Je '53
Using SR-4 gages to measure strains in wire strand. A. Smislova and others. il Product Eng 24:214 Ap '53
Using strain gages in the power plant. il diags Power Eng 57:94 Ap '53
Vibrating-wire strain gauge for use in long-term tests on structures. R. J. Mainstone. bibliog il diags Engineering 176:153-6 Jl 31 '53
See also
Relaxometers

STRAINERS
How to clean heavy suction-line strainer. G. G. Avant. diag Power 96:143 D '52
Jets clean strainer. il Chem Eng 60:242 Mr '53
Kinney automatic self-cleaning strainer. diag Blast F & Steel Pl 41:340+ Mr '53
Manually-operated self-cleaning strainer. il Blast F & Steel Pl 41:540 My '53; Paper Tr J 136:28 My 22 '53

STRAINS and stresses
Accuracy of extrapolated creep-test relations for Plexiglas subjected to various stresses. J. Marin and Y. Pao. bibliog A S M E Trans 74:1231-40 O '52
Aid for the high-temperature designer; new parameter predicts how stressed materials behave. J. Miller. Gen Elec R 55:51-3 N '52
Analysis of rigid frames by an electronic digital computer. R. K. Livesley. diags Engineering 176:230-3, 277-8 Ag 21-28 '53
Application of high compression stresses to textile fibers. W. F. Busse and others. bibliog il Textile Res J 23:77-90 F '53
Behavior of materials under conditions of thermal stress. S. S. Manson. Machine Design 25:364+ O '53
Buckling stresses for flat plates and sections. E. Z. Stowell and others. bibliog(65 titles) il diags Am Soc C E Proc 77[no 77]:1-31 Jl '51; Discussion. 78 [no D-77]:1-3 D '52
Casting design for heavily loaded parts. E. T. Vincent. il diags Foundry 81:94-7+ Ja '53
Compressive buckling of stiffened plates. B. H. Falconer and J. C. Chapman. bibliog diags Engineer 195:789-91, 822-5 Je 5-12 '53
Cottrell-Bilby theory of yielding of iron. T. Yokobori. Phys R 88:1423 D 15 '52
Critical buckling shear stresses in thin cylinders; reference book sheet. J. J. Eden. diags Product Eng 24:225, 227 Ap '53
Determination of strains between enamel and iron by means of split rings. J. D. Walton jr., and B. J. Sweo. bibliog il diags Am Cer Soc J 36:335-41 O 1 '53
Development of a device for the direct measurement of compressive stress. R. W. Carlson and D. Pirtz. il diags Am Concrete Inst J 24:201-15 N '52; Discussion. 25:216^{1}-216^{16} pt 2 D '53
Development of stresses in Shasta dam. J. M. Raphael. bibliog il plan diags Am Soc C E Proc 78[[no 117]:1-21 F '52; Discussion. 79[no D-117]:1-12 Ja '53
Distribution of mechanical and thermal stresses in multilayer cylinders. R. A. Strub. bibliog il diags A S M E Trans 75:73-9; Discussion. 79-82 Ja '53
Domain pattern in silicon-iron under stress. L. J. Dijkstra and U. M. Martius. il diags Rs Mod Phys 25:146-50 Ja '53
Earthquake stresses in shear buildings. M. G. Salvadori. bibliog diags Am Soc C E Proc 79 [[no 177:]:1-23 Mr '53
Effect of rate of strain on the flow stress of gas turbine alloys at 1200 and 1500 F. M. J. Manjoine. il diags Am Soc T M Proc 50:931-48 bibliog(p947-8); Discussion. 949-50 '50
Effect of residual stresses on yielding and strain-ageing of carbon steel. N. H. Polakowski. bibliog Iron & Steel Inst J 172:369-76 D '52
Effect of slightly elevated-temperature treatment upon microscopic and submicroscopic residual stresses induced by small inelastic strains in metals. H. T. Corten and T. M. Elsesser. bibliog A S M E Trans 74:1297-302 N '52
Effect of straining rate on the compressive strength and elastic properties of concrete. D. Watstein. il diags Am Concrete Inst J 24:729-44 Ap '53
Effect of stress amplitude on statistical variability in fatigue life of 75S-T6 aluminum alloy. G. M. Sinclair and T. J. Dolan. bibliog A S M E Trans 75:867-70; Discussion. 870-2 Jl '53
Effect of tensile strain at low temperatures on deformation twinning in ingot iron. G. W. Geil and N. L. Carwile. bibliog il J Metals 5:Trans 213-17 sec 2 F '53
Errors of stress-strain testing. S. T. Bowell and I. C. Rush. Rubber Age 72:215-19 N '52
Experimental study of residual plastic strains produced by spherical impact. A. K. Mohamed and A. G. H. Coombs. bibliog il diags Iron & Steel Inst J 175:5-9 S '53
Failure of concrete under combined tensile and compressive stresses. G. M. Smith. il Am Concrete Inst J 25:137-40 O '53
Flow and fracture characteristics of the aluminum alloy 24S-T4 as affected by strain thermal history. S. I. Liu and E. J. Ripling. bibliog diags J Metals 5:Trans 66-8 Ja '53
Gear-tooth stresses and rating formulae. H. E. Merritt. bibliog diags Inst Mech Eng Proc (A) 166 no 2:196-205 '52; Same. Engineer 193:341-3, 384-7 Mr 7-14 '52; Discussion. Inst Mech Eng Proc (A) 166 no 2:205-16 '52; Engineer 193:348-9 Mr 7 '52
Graphical aid for combined stress problems; reference book sheet. J. P. Hatch. diags Product Eng 24:207 Ja '53
Grinding and lapping stresses in manganese oil-hardening tool steel. H. R. Letner and H. J. Snyder. bibliog il A S M E Trans 75:873-80; Discussion. 881-2 Jl '53
How much combined stress can a rivet take? T. R. Higgins and W. H. Munse. il diag Eng N 149:40-2 D 4 '52
How to apply method of slope deflection to thermal stress analysis of piping. E. A. Picardi. diags Pet Processing 8:368-72 Mr '53
Inelastic deformation of reinforced concrete in relation to ultimate strength. H. J. Cowan. bibliog diags Engineering 174:276-8 Ag 29 '52
Influence of aging on the Bauschinger effect in inelastically strained beams. T. M. Elsesser and others. bibliog diags A S M E Trans 74:1291-6 N '52
Influence of residual stress on behavior of thick-wall closed-end cylinders. J. H. Faupel and A. R. Furbeck. bibliog il diags A S M E Trans 75:345-54 Ap '53
Influence of strain rate on some tensile properties of steel. D. S. Clark and P. E. Duwez. bibliog il diags Am Soc T M Proc 50:560-75; Discussion. 576 '50
Instrumentation and strain measurement in welded wire fabric reinforced concrete slabs. E. W. Carlton and J. H. Senne. il plan diag Am Concrete Inst J 24:141-52 O '52
Internal stresses in cast iron. C. O. Burgess. diags Product Eng 23:266+ O '52
Internal stresses in castings; abstract. Metal Prog 63:222+ Ja '53

STRAINS and stresses—*Continued*

Limiting creep and stress rupture values for various ferrous and nonferrous materials in sheet form; tabulation; engineering file facts. Materials & Methods 36:139, 141, 143 D '52

Method of measuring post-yield strain. F. J. Woodcock and K. R. Weiss. bibliog diags Roy Aeronautical Soc J 57:49-51 Ja '53

Method of obtaining shear stress-strain graphs by interpretation of moment-twist data. P. H. Kaar. A S M E Trans 75:521-3 My '53

Partially plastic rotating discs. M. Zaid. bibliog diag J Aeronautical Sci 19:697-704 O '52

Plastic strength and deflections of continuous beams. K. E. Knudsen and others. bibliog(22 titles) diags Welding J 32:sup240-55 My '53

Plotting trajectories of principal stress in plane stress problems. P. B. Morice. diags Engineering 174:252-3 Ag 22 '52

Pressure test on flat aluminium alloy panels. C. J. Dickinson and H. R. Hadley. il diags Roy Aeronautical Soc J 57:46-9 Ja '53

Residual stresses in beams after bending. Engineer 194:864-5 D 26 '52

Residual stresses introduced during metal fabrication. K. R. Van Horn. bibliog(38 titles) il J Metals 5:Trans 405-22 Mr '53

Reverting of hard-drawn copper to soft condition under variable stress. J. N. Kenyon. il Am Soc T M Proc 50:1073-81; Discussion. 1082-4 '50

Some problems in flexural testing. F. A. Blakey. bibliog diags Engineer 196:98-100 Jl 24 '53

Strain patterns in Charpy impact specimens of 0.20 per cent C mild steel. E. S. Bumps. bibliog il J Metals 4:Trans 1067-70 O '52

Strain theory of hot tearing. W. S. Pellini. bibliog il diags Foundry 80:124-33+ N '52

Stress and deflections in axially loaded cylindrical containers. D. P. Timo. il Machine Design 24:169-72 N '52

Stress and plastic strain relations of a magnesium alloy. A. E. Johnson and N. E. Frost. diag Engineer 194:713-19 N 28 '52

Stress chart for spur and bevel gears; reference book sheet. H. M. Durham. Product Eng 23:203, 205 N '52

Stress concentrations in steel under cyclic load with particular reference to pressure vessels. E. Orowan. bibliog diags Welding J 31:sup273-82 Je '52; Discussion. 31:sup502-4; 32:sup222-3+ O '52, My '53

Stress corrosion cracking of commercially pure titanium. G. C. Kiefer and W. W. Harple. il Metal Prog 63:74-6 F '53

Stress-corrosion cracking of mild steels in nitrate solution. R. N. Parkins. bibliog 2pls diags Iron & Steel Inst J 172:149-62 O '52; Discussion. 174:140-2 Je '53

Stress-crazing of plastics. J. A. Sauer and C. C. Hsiao. bibliog il A S M E Trans 75: 895-901 Jl '53; Same. India Rubber World 128:355-60 Je '53; Discussion. A S M E Trans 75:901-2 Jl '53

Stress distribution and strength condition of two rolling cylinders pressed together. E. I. Radzimovsky. diags Ill U Eng Exp Sta Bul 408:1-40 '53 (pa 50c)

Stress failure in Big-Inch gas-transmission pipe. J. W. Lodge and G. K. Manning. diags Oil & Gas J 51:344-6+ N 17 '52; Same. Am Pet Inst Proc 32(5):35-41 '52

Stress relaxation in compression of rubber and synthetic-rubber vulcanizates immersed in oil. J. R. Beatty and A. E. Juve. bibliog diags A S M E Trans 75:605-12 My '53; Same. India Rubber World 127:357-62+ D '52; Same abr. Machine Design 25: 276+ F '53

Stress relaxation in elastomers. A. M. Bueche. bibliog J Chem Phys 21:614-16 Ap '53

Stress relaxation of fibrous materials. E. T. Kubu and D. J. Montgomery. bibliog il diags Textile Res J 22:765-82 D '52

Stress relief of gray iron. C. O. Burgess. bibliog il diags Foundry 81:112-14 Ag; 128-31+ S '53

Stress-rupture and creep testing of brittle materials. W. A. Maxwell and P. F. Sikora. il Metal Prog 62:97-9 N '52

Stress-strain relation in shear from twisting test of annulus. W. Ramberg and J. A. Miller. il diags J Res Nat Bur Stand 50:125-30 F '53

Stresses in a curved beam. A. D. Richards. diag Engineering 176:103-5 Jl 24 '53

Stresses in a pressure vessel with a hemispherical head. G. W. Watts and H. A. Lang. bibliog diag A S M E Trans 75:83-9; Discussion. 89-90 Ja '53

Stresses in deep beams. L. Chow and others. bibliog diags Am Soc C E Proc 78 [no 127]: 1-17 My '52; Discussion. 79 [no D-127]:1-6 F '53

Stresses in rotating parts. R. L. Lake and A. J. Durelli. il Machine Design 25:128-31 Jl '53

Structural applications of stainless steel. A. G. Dean. diags Engineer 195:882-4 Je 26 '53

Temperature expansion and contraction stresses in buried pipe lines. F. Karge. Pet Eng 24:D42+ O '52

Thermal stresses in a partially clamped elastic half-plane. J. H. Huth. bibliog diag J Ap Phys 23:1234-7 N '52

Thermal stresses in piping systems. W. E. Wilbur. diags Pet Refiner 32:143-8 Mr; 163-8 Ap; 174-8 My '53

Transgranular stress corrosion in chromium-nickel stainless steels. C. Edeleanu. bibliog 4pls Iron & Steel Inst J 173:140-6 F '53; Discussion. il 174:218; 175:390-2 Jl, D '53

Twisted square plate method and other methods for determining the shear stress-strain relation of flat sheet. W. Ramberg and J. A. Miller. bibliog il diags J Res Nat Bur Stand 50:111-23 F '53

Virtual work and the analysis of structures with the aid of models. T. M. Charlton. diags Engineer 194:604-6 N 7 '52

What causes stresses in brake beams. R. B. Cottrell. il Ry Loco & Cars 127:45-8 F '53

See also

Airplanes—Stresses
Beams and girders
Bending
Building
Columns
Concrete construction—Design
Creep of materials
Creep of metals
Deformation (mechanics)
Elasticity
Fatigue in metals
Friction, Internal
Glass—Strains and stresses
Graphic statics
Load (mechanics)
Notched bar testing
Photoelasticity
Poisson's ratio
Ships—Strains and stresses
Soil mechanics
Steel construction—Design
Strain gages
Strength of materials
Structural engineering—Design
Torsion
Welding—Stresses
Wind pressure

Brittle coating test

Influence of strain gradient on brittle coating sensitivity. A. J. Durelli and S. Okubo. il Product Eng 24:136-7 Ja '53

STRAPS, Steel. See Steel straps

STRATEGIC materials

New system for preventing transshipment of strategic goods explained by Office of international trade. For Comm W 48:14-15+ D 1 '52

OIT announces IC-DV procedure revisions. For Comm W 49:22 Mr 9 '53

Paley points up our potentials. Can Chem Process 37:14+ Ja '53

Strategic imports; where we stand. Materials & Methods 38:152+ Jl '53

Substantial progress reported in efforts to block flow of strategic commodities to Soviet bloc. R. G. Gibbs. Chem & Eng N 30:4812 N 17 '52

STRATEGY

New strategy for NATO. C. J. V. Murphy. il Fortune 47:80-5+ Ja '53

STRATFORD press

Elmer Gleason and the Stratford press. P. K. Thomajan. il Inland Ptr 130:40-2 F '53

STRATIGRAPHIC nomenclature, American commission on. See American commission on stratigraphic nomenclature

STRATOSPHERE. See Atmosphere, Upper

STRAW

Action of acid chlorite on wheat straw. V. D. Harwood. bibliog(34 ref) Tappi 35:549-55 D '52

STRAW—*Continued*

Cereal straw pulping in the United Kingdom. L. G. Hebbs. Tappi 36:sup 148A-50A Mr '53

Chemical composition of the internodes and nodes of soft wheat straw. S. D. Wells and B. L. Browning. il Tappi 36:sup 170A Je '53

Developments in straw and bagasse pulping; abstract. R. Duce and C. B. Tabb. Pulp & Pa of Can 54:90 Ja '53

Initial investigations of the Va-Purge process for straw pulping. H. J. Ostrowski. Pulp & Pa of Can 54:117-18 Jl '53

Paper from straw. A. E. Williams. il Chem Age (Lond) 68:177-81 Ja 24 '53

Place of agricultural residues in paper making today. C. B. Tabb. Chem & Ind p960-4 O 4 '52

Pulps from straw and sugarcane bagasse for manufacture of newsprint. E. C. Lathrop. Tappi 36:sup 142A-4A Ja '53

Recent advances in pulping straw in the United States. S. I. Aronovsky. Tappi 36: sup 167A-71A Ap '53

TAPPI fibrous agricultural residues conference, 6th, Peoria, Ill. Oct. 27-28; with abstracts of papers. Paper Tr J 136:29-30 Ja 2 '53;. Tappi 35:sup72A+ D '52; 36:sup74A-8A Ja '53

Use of the Va-Purge process in straw pulping for corrugating board manufacture. W. H. Palm and H. J. Ostrowski. il diags Pulp & Pa of Can 54:111-16 Jl '53; Same cond. Paper Ind 35:455-7 Jl '53

STRAWBERRIES

Detergents effective in removing mold from fruit. R. D. Haynes and others. il diag Food Eng 25:87+ Mr '53

Isolation and identification of kaempferol and quercetin from strawberries (fragaria chiloensis). B. L. Williams and S. H. Wender. bibliog Am Chem Soc J 74:5919-20 D 5 '52

STRAWBERRIES, Frozen

Frozen strawberries shipped coast to coast by rail without reicing. il diag Refrig Eng 61:882 Ag '53

STRAY currents

Fading menaces in the oil industry. G. F. Prussing. il Nat Safety N 68:20-2+ S '53

Stray-current corrosion. diag Oil & Gas J 52: 151 Je 15 '53

STREAM flow

Application of electronic flow routing analog. M. A. Kohler. il diags Am Soc C E Proc 78 [no 135]:1-11 Je '52; Discussion. 79 [no D-135]:1-7 Ap '53

Laminar to turbulent flow in a wide open channel. W. M. Owen. il diags Am Soc C E Proc 79 [no 188]:1-8 Ap '53

Stream competence and the graded stream profile. C. D. Holmes. bibliog Am J Sci 250:899-906 D '52

STREAM measurement

See also

Stream flow

STREAM pollution. See Water pollution

STREET cars

New Blackpool tramcar. il Elec R (Lond) 151:239-40 Ag 1 '52; Engineer 194:169 Ag 1 '52; Engineering 174:254-5 Ag 22 '52

Railcar for Leeds. il Engineer 196:85-6 Jl 17 '53; Engineering 176:124-5 Jl 24 '53

Single-deck high-speed tramcar for Leeds. il Engineering 176:254 Ag 21 '53

Trams have a future. il Elec J 151:202-3 Jl 17 '53; Elec R (Lond) 153:154-5 Jl 17 '53

STREET cleaning

Parking ban cuts cost of city street cleaning. Eng N 150:55 Mr 26 '53

STREET lighting

Antiquated lighting systems; abstract. Elec R (Lond) 151:1128 N 21 '52

Boulevard lighting. il Elec R (Lond) 151: 1268 D 12 '52

Discomfort glare; comparison of mercury, sodium and tungsten light sources. H. M. Ferguson and others. Elec R (Lond) 153: 355-8 Ag 14 '53

Dudley's new street lighting. il Elec R (Lond) 151:917-18 O 24 '52

Effect of temperature on fluorescent street lighting luminaires; abstract. J. E. Bock and J. S. Franklin. il Illum Eng 48:465-6 S '53

Fluorescent street lighting here and abroad. P. H. Houser. bibliog il Illum Eng 48:529-33 O '53

Fluorescent street lighting serves Patchogue utility. W. S. Oxley. il Elec World 138:172 N 17 '52

Lamps for street lighting. F. H. Pulvermacher. il Elec R (Lond) 153:72-5 Jl 10 '53

Lighting an elevated roadway. W. Henschel. il Illum Eng 48:75-6 F '53

Modern street lighting design. W. A. Porterfield. il Pub Works 84:71-2+ Ja '53

Pittsburgh lights up on installment plan. il Bsns W p 128-30 Jl 11 '53

Raising lighting standards. E. Howard. Electrician 149:860-1 S 19 '52

Seattle tries fluorescents; Alaska Way viaduct. il Elec West 110:98 My '53

Street light grows. il Elec West 111:104 Jl '53

Street lighting; experimental high-mounted unit. il Elec R (Lond) 152:386 F 13 '53

Street lighting improvements; fluorescent system at Abertillery. il Elec R (Lond) 151:493 S 5 '52

Street lighting in Plymouth. il Elec R (Lond) 152:88 Ja 9 '53

Street lighting; lighting data sheet. H. S. Nonneman. il Illum Eng 48:33 Ja '53

Techniques for photography of lighted streets. T. Knowles and D. A. Toenjes. bibliog il Illum Eng 48:49-56; Discussion. 56-8 Ja '53

Use of refractors in street lighting. diags Pub Works 84:82+ Ag '53

See also

Roads—Lighting

Control

Capsule radio control for street lighting. il Pub Works 84:94 Ap '53; Bsns W p68 Mr 21 '53; Electronics 26:18 Ap '53

Check street lighting relays with less time and effort. B. Breedlove. il diag Elec World 138:123+ O 20 '52

Street lighting control; methods of application. N. Axford. Electrician 149:913-14 S 26 '52

Street lighting photocell control calibration cabinet. W. N. Lindblad and L. C. Edwards. il diag Illum Eng 48:509-12 O '53

Exhibitions

A.P.L.E. exhibition, Harrogate. il Electrician 149:753-6 S 12 '52; Elec R (Lond) 151:532-8 S 12 '52

Safety aspects

Light and night traffic accidents. D. M. Baldwin. Illum Eng 48:515-16 O '53; Discussion. 48:635-6 D '53

Street lighting and road safety. E. Howard. Engineer 194:390-1 S 19 '52

Street lighting for pedestrians. W. B. Elmer. il diags Elec World 138:102-4+ N 3 '52

Street lighting, U.S.A.; abstracts. A. F. Dickerson. Engineer 194:390-1 S 19 '52; Electrician 149:917-18 S 26 '52

Standards

Street lighting standard revised by ASA. Safety Maint & Prod 105:58 Je '53

Tables, calculations, etc.

Street lighting engineering. diags Pub Works 83:66-8+ D '52

Testing

Test installation sells street lighting. il Elec World 139:202 My 18 '53

STREET lighting fixtures

Combined concrete street-lighting column and lantern. il Engineering 174:486 O 10 '52

Concrete lighting columns. D. F. Orchard. Electrician 149:919-20 S 26 '52

New lamp column. D. G. Sandeman. il diags Elec R (Lond) 152:83-4 Ja 9 '53

Street lighting fitting. il Elec J 150:1916-17 My 29 '53; Elec R (Lond) 152:1213-14 My 29 '53

Wooden streetlighting columns. il Electrician 149:859 S 19 '52

STREET names

Street naming, house numbering. plans Pub Works 84:68-9+ My '53

STREET openings

Holes without holdups; study of surface traffic interference. plan Pub Works 84:50-1+ Ja '53

STREET openings—*Continued*

Planned work area for street safety OK'd by cab drivers; Consolidated Edison's program. il Elec World 138:103 D 15 '52

STREET railroads

See also

Electric railroads
Rapid transit

STREET traffic

Are one-way streets a rush-hour transit cure? H. Bratter. Pub Util 51:74-87 Ja 15 '53

Baltimore to try new traffic systems. il Eng N 150:45-7 Je 11 '53

Changing picture in highway traffic. D. G. Mickle. il map Civil Eng 22:678-84 S '52

Congestion engineering. C. A. Church. Gen Elec R 56:44-6 Mr '53

Engineer's role in metropolitan traffic planning. L. Braff. Am Soc C E Proc 79 [no 191]:1-6 My '53

Facing up to Cleveland's traffic problems; abstract. Roads & Sts 96:91 S '53

Holes without holdups; study of surface traffic interference. plans Pub Works 84: 50-1+ Ja '53

How are you handling the parking problem? G. H. Stedman. J Retailing 28:69-80 Summer '52

Is urban transportation in danger of collapse? H. E. Jordan. Pub Util 50:903-8 D 18 '52

Keeping traffic moving during construction. E. R. Leiser. Pub Works 84:141-2 Ag '53

New traffic czar holds no brief for transit and Baltimore transit co. loves it; Henry A. Barnes. Bus Transportation 32:56-7 O '53

Off-center laning adds more street capacity in Los Angeles. J. Joseph. il plan Roads & Sts 96:68-9 Jl '53

Parking meters pay the bill. G. B. Arthur. il Pub Works 83:57-9+ D '52

Solution to transit problem offered; round-table sponsored by Architectural forum. Pub Util 51:386-7 Mr 12 '53

Traffic congestion in cities can be licked. Am Bsns 23:30+ S '53

Transit still beset by traffic snarls but more cities are planning remedies. il Bus Transportation 32:60 Ap '53

Tunnel and viaduct to ease Seattle's traffic troubles. R. W. Finke. il plan Civil Eng 22:1025-9 D '52

Wanted, a yardstick for traffic control. F. X. Welch. Pub Util 52:211-18 Ap 13 '53

Way to solve our urban traffic congestion; forum. Bus Transportation 32:25-7 Mr '53

STREETS

Suggestion for establishing street grades. H. L. Leibee and R. L. Smith. diags Pub Works 84:74-5 Ap '53

See also

City planning
Pavements
Roads
Snow removal
Street lighting
Street traffic

Drainage

Perforated pipe sumps handle water drainage. il Constr Methods 35:176 Mr '53

Ice control

How we get Florida streets in the winter. F. F. Harmon. il Pub Works 84:72-4 Ag '53

How we save money on snow and ice control; Oil City, Pa. A. E. Stanton. il Pub Works 83:65 D '52

Intersections

Curb curves at street corners. plan Pub Works 84:66-7 Je '53

Maintenance and repair

City starts all-weather street maintenance; Anderson, Ind. il Roads & Sts 96:111 Jl '53

How Austin paves streets with its own crew. P. R. Hoffman. Pub Works 84:69-70 Ja '53

How we do a better job of street patching. W. A. Coolidge. il Pub Works 84:81+ My '53

Keeping traffic moving during construction. E. R. Leiser. Pub Works 84:141-2 Ag '53

Municipally owned equipment reduces street costs! W. D. Frizzell. il Pub Works 83: 52-3+ N '52

No obligation to provide detour. A. W. Gray. Roads & Sts 96:92 F '53

Organizing a program for street rehabilitation. J. F. Base. il Pub Works 84:62-3 Ja '53

Small community gets a 40-block face lifting. il Roads & Sts 96:114-15 S '53

Street program being expanded. il Roads & Sts 96:53-5 Ap '53

Streets restored with emulsified asphalt. il Roads & Sts 95:82-3 O '52

STRENGTH of materials

Bolt design for repeated loading; new approach to strength calculations. E. I. Radzimovsky. bibliog(43 titles) diags Machine Design 24:135-46 N '52

Box-strength calculator. K. Q. Kellicutt and others. bibliog il Mod Packaging 26:121-3+ Mr '53

Determination of plate compressive strengths at elevated temperatures. G. J. Heimerl and W. M. Roberts. il U S Nat Advisory Com for Aeronautics 1950:251-6 '51

Effect of specimen length on the strength of a material with random flaws. K. E. Puttick and M. W. Thring. bibliog Iron & Steel Inst J 172:56-61 S '52

Flexural fatigue strength of anodized 24ST aluminum-alloy sheet. C. B. Cliett. diags Aeronautical Eng R 11:29-30+ D '52

Grain size, key to mechanical properties. H. A. Unckel. bibliog il Iron Age 170:148-52 D 18 '52

High-strength bolts, a new concept in structural connections. T. R. Higgins and E. J. Ruble. il Civil Eng 22:760-3+ S '52

How section size influences strength properties of sand castings. W. J. Reichenecker. diag Materials & Methods 38:80-1 Jl '53

Safety factor in construction. G. A. Gardner. Engineering 175:343-4 Mr 13 '53

Small additions raise strength of zirconium at elevated temperatures. A. D. Schwope and W. Chubb. bibliog J Metals 4:1138-40 N '52

Structural analysis of control rods. F. M. Hoblit. diags Product Eng 23:173-6 O '52

Why metals are weak. J. C. Fisher. il diags Gen Elec R 56:15-17 Jl '53

See also

Columns
Concrete—Strength
Deformation (mechanics)
Elasticity
Fatigue in metals
Glass—Strength
Graphic statics
Metals—Failure
Plastic materials—Strength
Steel—Strength
Strains and stresses
Textile fibers—Strength
Torsion

STREPTAMINE

Stereochemical studies in the amino-desoxyinositol series; D,L-*myo*-inosamine-4, D,L-*epi*-inosamine-2 and streptamine. H. Straube-Rieke, H. A. Lardy and L. Anderson. bibliog il Am Chem Soc J 75:694-7 F 5 '53

STREPTOCOCCI

Bacteriological studies of sludge digestion; facultative anaerobe isolated from digested sludge. T. C. Buck, jr. and others. il Sewage & Ind Wastes 25:993-1002 bibliog(43 titles, p 1001-2) S '53

Bacteriological studies of sludge digestion; optimum pH at which sludge digests when inoculated with streptococcus diploidus. C. E. Keefer and others. Sewage & Ind Wastes 25:1174-8 O '53

Enumeration of bacterium coli and streptococcus faecalis. L. A. Allen. Chem & Ind p 125 F 7 '53

Prevention of rheumatic fever. bibliog Pub Health Rep 68:12-15 Ja '53

STREPTOLIN

Production, isolation and components of the antibiotic streptolin. L. M. Larson, H. Sternberg and W. H. Peterson. bibliog Am Chem Soc J 75:2036-9 My 5 '53

Streptolin; preliminary investigation and separation of acid hydrolysis products. E. E. Smissman and others. bibliog Am Chem Soc J 75:2029-31 My 5 '53

Streptolin; the structure and synthesis of isolysine. E. E. van Tamelen and E. E. Smissman. bibliog Am Chem Soc J 75: 2031-5 My 5 '53

STREPTOMYCES

Chartreusin, a new antibiotic produced by streptomyces chartreusis, a new species. B. E. Leach and others. bibliog Am Chem Soc J 75:4011-12 Ag 20 '53

Streptomyces antibiotics; isolation of neomycin A. R. L. Peck and others. bibliog Am Chem Soc J 75:1018-21 Mr 5 '53

STREPTOMYCIN
Complex salts of dihydrostreptomycin. V. V. Bogert and I. A. Solomons. bibliog Am Chem Soc J 75:2355-6 My 20 '53
Streptohydrazid. F. C. Pennington, P. A. Guercio and I. A. Solomons. Am Chem Soc J 75:2261 My 5 '53
Streptomycin now considered effective for four-year period. Oil Paint & Drug Rep 163:4 Mr 23 '53
Streptomycin; synthesis of 3,6-dimethyl-N-methyl-D-glucosamine. J. Fried and D. E. Walz. bibliog Am Chem Soc J 74:5468-72 N 5 '52
Streptomycin; the structure of mannosidostreptomycin. J. Fried and H. E. Stavely. bibliog Am Chem Soc J 74:5461-8 N 5 '52

Analysis
Streptomycin purification and crystallization. L. J. Heuser, M. A. Dolliver and E. T. Stiller. bibliog Am Chem Soc J 75:4013-17 Ag 20 '53

Bibliography
Literature on streptomycin, 1944-1952. S. A. Waksman. rev ed 553p $5 Rutgers univ. press, New Brunswick, N.J. '52

STRESSES. See Strains and stresses

STRETCHING
Effects of moderate biaxial stretch-forming on tensile and crazing properties of acrylic plastic glazing. B. M. Axilrod and others. bibliog il diag J Res Nat Bur Stand 49: 331-42 N '52; Same cond. Mod Plastics 30: 117-18+ D '52
Stretch forming aluminum. E. V. Sharpnack. diags Sheet Metal Worker 44:109 Jl '53
Vise jaws reduce stretching costs; Kindelberger jaws. J. Starr. il Tool Eng 29:55 N '52

STRETCHING machines
Giant stretcher will straighten extrusions. Mach 60:167 S '53
Hydra-curve flexible jaws for stretch-forming machines. il Mach 60:212-13 S '53
New wrinkle in stretch wrap forming. M. J. Connington and W. F. Thurber. il Steel 132:102-3 Ap 27 '53
Stretch forming machine shapes extruded aluminum parts; Consolidated Vultee aircraft corp.'s San Diego plant. il Iron Age 170:137-9 D 18 '52
300-ton stretch press for increasing Canberra production. il diag Automotive Ind 107:52-3 O 15 '52

STRETCHTYPE process. See Newspapers—Printing

STRIKES
Chapter in the steel story. E. B. George. il Dun's R 60:26-7+ S '52
Court restraining order issued in IBEW strike. Elec West 110:138 Ap '53
Dave McDonald's flub. Fortune 47:92+ Ap '53
First work stoppage hits Ohio A-plant in rash of strikes at AEC projects. Eng N 150: 30 F 5 '53
How to fight wildcats. Steel 132:77-8 My 11 '53
New York gets a new look as bus strike hits city. il Bus Transportation 32:62-3 F '53
New York's bus drivers get stalled. il Fortune 47:78 Mr '53
Philadelphia railroads rescue thousands otherwise stranded by four-day strike of transit lines; illustrations with text. Ry Age 134:12 Ja 26 '53
Reluctant strikers. il Fortune 46:77-8 N '52
Rubber cages its wildcats. Bsns W p 116 N 29 '52
Should Taft-Hartley act outlaw polecat strikes? C. E. Bonnett. Comm & Fin Chr 177:1210 Mr 19 '53
Strike; attrition, not negotiation; International Harvester strike at Chicago punctuated by violence. K. W. Bennett. il Iron Age 170:71 N 20 '52
Strike ends at Savannah River H-plant. Eng N 150:29 F 26 '53
Strike is legal at Anheuser-Busch. Bsns W p 156 D 6 '52
Strikes for same-union subcontractors does not violate Taft-Hartley. Eng N 149:32 D 4 '52
Strikes in public utility industries. F. A. Hartley, jr. Pub Util 52:20-2 Jl 2 '53
Suburban sales hit by deliverers' strike. Ed & Pub 86:7 F 7 '53
10c package hike ends Detroit utility strike. Bsns W p 162 N 15 '52
Unions calling off strikes since election. Bsns W p 172-3 N 22 '52
See also
Picketing
Railroad strikes

Law
Law that's not invoked, Jersey phone strike. il Bsns W p 170+ Ap 25 '53

Statistics
Analysis of work stoppages during 1952. A. J. Herlihy and others. U S Bur Labor Statistics Bul 1136:1-37; pa 25c Supt. of doc. '53
Strikes in 1952. Iron Age 171:54 Ja 29 '53
Work stoppages, 1928-1952; tabulation. Iron Age 171:482 Ja 1 '53
Work stoppages; tabulation. Steel 132:194 Ja 5 '53

Great Britain
Austin strike. Economist 167:44+ Ap 4 '53
Strikes in 1952. Economist 167:690 Je 6 '53
Verdict on the Austin strike; Austin motor company's Birmingham factory, February-May. Economist 167:465-6 My 16 '53

United States
Negotiations, arbitration, and strikes. Mo Labor R 75:433-6 O '52

STRIPPING operations. See Coal mines and mining—Stripping operations

STROBOSCOPIC instruments
High-intensity rapid-flash stroboscope. il Engineering 175:31 Ja 2 '53
Meter testing; abstract. A. J. Baggott. Elec R (Lond) 152:439 F 20 '53
Precision measurement of shaft speeds; use of 440-cycle tone from station WWV as standard. O. V. Riley. il diags Electronics 24:104-5 O '51; Same abr. Product Eng Hdbk p E23 '53
Stroboscopic analysis; developments in measuring and testing methods for high speed machinery. il Automobile Eng 43: 19-22 Ja '53
Stroboscopic apparatus for investigating pressure rise in spark-ignition engines. J. G. Lavender. il diag Engineering 176:135-6 **Jl 31 '53**
Stroboscopic developments. il Automobile Eng 43:306 Jl '53
Stroboscopic images and the determination of angular speed. J. A. Macinante and W. Dollar. bibliog il diags Engineering 175: 132-5 Ja 30 '53

STROECKER, Monroe D. B.
Detroit news appoints Stroecker department head. J. L. Collings. por Ed & Pub 86:58 Ja 24 '53

STROMBERG-CARLSON company
Earnings outlook bright. Barron's 33:31 Mr 30 '53
Security I like best. B. L. Prime. Comm & Fin Chr 177:2186+ My 21 '53

STRONG, Cobb and company, inc.
Security I like best. C. D. Pulis. Comm & Fin Chr 177:190+ Ja 15 '53

STRONTIUM
Equilibria in aqueous systems containing Sr^{2+}, K^{+}, Na^{+} and Cl^{-}. G. O. Assarsson. bibliog J Phys Chem 57:207-10 F '53
Use of radioactive isotopes in a study of evaporation from thermionic cathodes. W. F. Leverton and W. G. Shepherd. diag J Ap Phys 23:787-93 Jl '52

Analysis
Determination of calcium and strontium in a mixture. G. O. Assarsson and A. Balder. bibliog Anal Chem 24:1679 O '52
Flame photometric determination of calcium, strontium, and barium in a mixture. O. Hinsvark, S. H. Wittwer and H. M. Sell. Anal Chem 25:320-2 F '53

Isotopes
Average energy of Sr^{90}-Y^{90} as a function of absorber. R. H. Goeckermann and W. H. Seitzer. J Chem Phys 20:1655 O '52
Disintegration of Sr^{91} and Y^{91m}. D. P. Ames and others. bibliog diag Phys R 91:68-74 Jl 1 '53

STRONTIUM—Isotopes—*Continued*

Evidence for a 25.5-day Sr-76-sec Rb chain. P. Kruger and N. Sugarman. bibliog Phys R 90:158-9 Ap 1 '53

Evidence of a mixed $E1+M2$ transition and the angular momenta of the Sr^{88} levels. R. M. Stegen. diags Phys R 90:321-2 Ap 15 '53

Internal conversion of the Sr^{88} gamma-rays. F. R. Metzger and H. C. Amacher. bibliog Phys R 88:147-8 O 1 '52

Magnetic analysis of the $Sr^{88}(d,p)Sr^{89}$ reaction. C. E. McFarland and F. B. Shull. Phys R 89:489 Ja 15 '53

Neutron capture cross sections for production of Sc^{46} and Sr^{85}. W. S. Lyon. Phys R 89:1307 Mr 15 '53

Nuclear magnetic moment of Cr^{53} and Sr^{87}. C. D. Jeffries and P. B. Sogo. Phys R 91:1286 S 1 '53

Some neutron deficient strontium isotopes. S. V. Castner and D. H. Templeton. Phys R 88:1126-8 D 1 '52

Variations in isotopic abundances of strontium. L. T. Aldrich and others. Phys R 89:631-2 F 1 '53

STRONTIUM chloride

Differential diffusion coefficient of strontium chloride in dilute aqueous solution at 25°. H. S. Harned and F. M. Polestra. bibliog Am Chem Soc J 75:4168-9 S 5 '53

Thermodynamics of ionized water in strontium chloride solutions from electromotive force measurements. H. S. Harned and T. R. Paxton. bibliog J Phys Chem 57:531-5 My '53

STRONTIUM compounds

Dissociation constants of the alkaline-earth salts of some monocarboxylic acids. C. A. Colman-Porter and C. B. Monk. Chem Soc J p4363-8 N '52

STRONTIUM manganite

Catalytic activity of lanthanum and strontium manganite. G. Parravano. bibliog Am Chem Soc J 75:1497-8 Mr 20 '53

STRONTIUM titanate

High temperature heat contents of meta- and orthotitanates of barium and strontium. J. P. Coughlin and R. L. Orr. bibliog Am Chem Soc J 75:530-1 F 5 '53

Lattice constants and dielectric properties of barium titanate, barium stannate, strontium titanate bodies. R. H. Dungan and others. bibliog Am Cer Soc J 35:318-21 D 1 '52

Some electrical properties of strontium titanate. A. Linz, jr. Phys R 91:753-4 Ag 1 '53

STROPHANTHUS

Cardio-active glycosides of strophanthus sarmentosus P.DC. sarmentoside B and its relation to an original sarmentobioside. R. K. Callow and D. A. H. Taylor. Chem Soc J p2299-304 Je '52

Glycosides of the seeds of strophanthus amboensis E. and Pax. M. R. Salmon, R. Foppiano and W. G. Bywater. bibliog Am Chem Soc J 74:4536-7 S 20 '52

Glycosides of the seeds of strophanthus schuchardti Pax. R. Foppiano, M. R. Salmon and W. G. Bywater. bibliog Am Chem Soc J 74:4537-8 S 20 '52

Occurrence of panstroside. R. Foppiano and M. R. Salmon. Am Chem Soc J 74:4709 S 20 '52

Some reactions of sarverogenin. D. A. H. Taylor. Chem Soc J p4832-5 D '52

STROPHEODONTA

North American and European stropheodontids; their morphology and systematics. A. Williams. (Memoir 56) bibliog 67p, 13pls Geological soc. of America, 419 W. 117th st, New York 27 '53 ($1.50)

STRUCTURAL clay products institute

Annual meeting, on board Queen of Bermuda, Nov. 8-15. Brick & Clay Rec 121:32-5+ D '52

STRUCTURAL engineering

Frame for testing structures. B. H. Falconer and S. R. Sparkes. il diags Engineer 194:869-71 D 26 '52

International association for bridge and structural engineering 4th congress, Cambridge. Engineering 174:297-8, 427-8, 493-5 S 5, O 3, 17 '52

Safety factor in construction. G. A. Gardner. Engineering 175:343-4 Mr 13 '53

Vibrating-wire strain gauge for use in long-term tests on structures. R. J. Mainstone. bibliog il diags Engineering 176:153-6 Jl 31 '53

See also

Building
Columns
Concrete construction
Foundations
Steel construction
Strains and stresses
Strength of materials
Wind pressure

Design

Aluminium as a structural material. M. Bridgewater. il diags Engineering 175:762-5, 793-5, pl 24 Je 12-19 '53; Abstract. Metallurgia 48:11-17 Jl '53

Applying graphical methods to square footing designs; procedure in design of stack and tower foundations. C. H. Fork. plans diags Pet Refiner 31:145-50 N '52

Axial tension and bending interaction curves for members loaded inelastically. D. O. Brush and O. M. Sidebottom. il diags A S M E Trans 75:63-71; Discussion. 71-2 Ja '53

Buckling stresses for flat plates and sections. E. Z. Stowell and others. bibliog(65 titles) il diags Am Soc C E Proc 77 [no 77]:1-31 Jl '51; Discussion. 78 [no D-77]:1-3 D '52

Collapsing load of a strut with elastically-fixed ends. M. J. Gercke. Engineering 176:67-70 Jl 17 '53

Continuous frames with intermediate hinged joints analyzed with existing charts. K. A. Kelly. diags Civil Eng 23:109-10 F '53

Curved roof on cables spans big arena; livestock judging pavilion at Raleigh, N.C. F. S. Merritt. il diags Eng N 150:31-4+ F 5 '53

Deflections in gridworks and slabs. W. W. Ewell and J. I. Abrams. plans diags Am Soc C E Proc 77 [no 89]:1-22 S '51; Discussion. 78 [no D-89]:1-22 D '52

Design of rectangular footings. C. H. Fork. diags Pet Refiner 32:110-11 F '53

Flexure of double cantilever beams. F. E. Wolosewick. diags Am Soc C E Proc 78 [no 158]:1-11 N '52

Nondestructive differential-pressure test for thin shells. J. C. New. diag Machine Design 24:314+ D '52

Plastic collapse loads for plane frames. B. G. Neal and P. S. Symonds. bibliog diags Engineer 194:315-19, 363-4 S 5-12 '52

Plotting trajectories of principal stress in plane stress problems. P. B. Morice. diags Engineering 174:252-3 Ag 22 '52

Quick slide-rule calculations for design of uniformly loaded beams. M. B. Shany. diags Civil Eng 22:1037 D '52

Stiffness charts for gusseted members under axial load. J. E. Goldberg. bibliog diags Am Soc C E Proc 79 [no 179]:1-15 Mr '53

Stresses in a curved beam. A. D. Richards. diag Engineering 176:103-5 Jl 24 '53

Stresses in deep beams. L. Chow and others. bibliog diags Am Soc C E Proc 78 [no 127]:1-17 My '52; Discussion. 79 [no D-127]:1-6 F '53

Structural forms; with time saver standards. S. Howard. diags Arch Rec 110:171+ D '51; 112:211+ S; 237+ O; 209 N '52

Torsion of I-type and H-type beams. J. E. Goldberg. diags Am Soc C E Proc 78 [no 145]:1-20 Ag '52; Discussion. 79 [no D-145]:1-3 My '53

Train design engineers in construction realities. G. B. Woodruff. il Civil Eng 22:858-60 O '52

See also

Beams and girders
Bridge design
Concrete construction—Design
Dams—Design
Steel construction—Design
Wood construction—Design

Model testing

New business; slab analysis by photograph; Presan corp. il Eng N 149:44 O 16 '52

Scope and limitations of the photoelastic method of stress analysis. H. T. Jessop. bibliog il diags Roy Aeronautical Soc J 57:125-32 Mr '53; Same cond. Engineering 174:833-4 D 26 '52; Discussion. Roy Aeronautical Soc J 57:132-40 Mr '53

Use of models in structural analysis. J. Wright. diags Engineering 175:710-12, 741-3 Je 5-12 '53

STRUCTURAL engineering—Model testing—*Continued*

Virtual work and the analysis of structures with the aid of models. T. M. Charlton. diags Engineer 194:604-6 N 7 '52

Tables, calculations, etc.

Influence lines for support moments in continuous beams. R. C. Coates. diags Engineering 174:230-1 Ag 22 '52

Multiply-loaded and continuously-loaded struts. W. J. Duncan. diags Engineering 174:180-2, 202-3 Ag 8-15 '52

Rapid computation of flexural constants. T. G. Morrison. diags Am Soc C E Proc 79 [no 170]:1-10 F '53

STRUCTURES, Theory of

Plane frames not obeying Hooke's law. J. W. H. King. Engineer 196:4-6 Jl 3 '53; Discussion. T. M. Charlton. 196:114 Jl 24 '53

Structural modifications in redundant structures. H. F. Michielsen and A. Dijk. J Aeronautical Sci 20:286-8 Ap '53

See also

Building

Columns

Graphic statics

Strains and stresses

Strength of materials

STRUTS

Collapsing load of a strut with elastically-fixed ends. M. J. Gercke. Engineering 176: 67-70 Jl 17 '53

Forms of sections for struts. C. G. Watson. diags Engineer 196:133-6 Jl 31 '53

Multiply-loaded and continuously-loaded struts. W. J. Duncan. diags Engineering 174:180-2, 202-3 Ag 8-15 '52

Stability and strength of thin-walled steel struts. A. H. Chilver. bibliog il diags Engineer 196:180-3 Ag 7 '53

STRUVE function

Struve function of order three-halves. K. Christoph and others. J Res Nat Bur Stand 50:21-9 Ja '53

STRYCHNOS

Isolation of novacine, an alkaloid from strychnos nuxvomica, L. and its identification as *N*-methyl-*sec.-pseudo*brucine. W. F. Martin and others. Chem Soc J p3603-4 S '52

STUD welding. See Electric welding, Arc

STUDEBAKER corporation

It takes more than style to stay in the race; new Studebaker. il Bsns W p 104-8+ Ja 31 '53

Studebaker net climbs; 1952 sales a record. Barron's 33:18 Mr 16 '53

Studebaker's first hundred years. C. H. Vivian. il Comp Air Mag 57:328-34 D '52

Why Studebaker laid off 6,200 production workers. H. O. Brayer. il Am Bsns 23:16-17+ O '53

STUDENTS

See also

College students

Engineering students

Insurance requirements

See also

Insurance, Student

STUDENTS, Interchange of

Rhodes scholars; role in world opinion and events. Economist 167:885-6 Je 27 '53

STUDIOS

See also

Moving picture studios

Radio broadcasting stations

Television studios

STURGIS, Samuel Davis, 1897-

Named army chief of engineers. por Elec World 138:111 N 17 '52

Sturgis to take command of engineers. por Eng N 149:69 N 20 '52

Tough problems await the army's new Chief of engineers. por Eng N 150:71-2 Ap 16 '53

STYRENE (and polymers)

β-ray initiation of polymerization of styrene and methyl methacrylate. W. H. Seitzer, R. H. Goeckermann and A. V. Tobolsky. Am Chem Soc J 75:755-6 F 5 '53

Cereals on display in styrene shelves. il Mod Plastics 30:119 N '52

Chain transfer in the polymerization of styrene; compounds containing halogens, oxygen and nitrogen. R. A. Gregg and F. R. Mayo. bibliog Am Chem Soc J 75:3530-3 Jl 20 '53

Chloromethylation of polystyrene. G. D. Jones. bibliog Ind & Eng Chem 44:2686-93 N '52

Convenient small osmometer. G. A. Hanks and S. G. Weissberg. bibliog il diag J Res Nat Bur Stand 49:393-6 D '52

Diffusion of benzene and methylene chloride vapors into polystyrene. F. A. Long and R. J. Kokes. bibliog Am Chem Soc J 75: 2232-7 My 5 '53

Dipole loss in polystyrene and derivatives. E. B. Baker and others. J Chem Phys 21: 159 Ja '53

Electron microscope study of plasticized latices. E. B. Bradford. il J Ap Phys 23:609-12 Je '52

Extrusion of polystyrene; abstract. E. Kropscott. Tool Eng 31:134 S '53

Flexible cast to immobilize patients during X-ray treatments. il Mod Plastics 30:197 N '52

High-impact polystyrene; abstract. E. L. Kropscott. India Rubber World 128:212 My '53

High impact styrene copolymers. R. B. Seymour and R. H. Steiner. il Chem Eng 60: 254+ Ja '53

Hydroperoxides as initiators for the polymerisation of styrene. W. Cooper. Chem Soc J p 1267-71 Ap '53

Ionic polymerization; copolymerization of styrene, *p*-chlorostyrene and α-methylstyrene with meta and para substituted styrenes catalyzed by stannic chloride. C. G. Overberger and others. bibliog Am Chem Soc J 74:4848-53 O 5 '52

Lawn mower rolls on copolymer. il Mod Plastics 30:102-3 Ap '53

Light scattering by pure polystyrene. F. Bueche. J Ap Phys 23:1280-1 N '52

New strength for styrene. il Mod Plastics 30:91-8 N '52

Odd pollution problem; Dow Chemical styrene control. E. M. Adams and E. J. Schneider. Chem Eng 60:327-8 F '53

Physical properties of sodium-catalyzed polymers. M. H. Reich, R. E. Schneider and W. K. Taft. bibliog Ind & Eng Chem 44:2914-22 D '52

Polymerization; a comparison of the action of organosodium reagents and of the Alfin catalyst on styrene. A. A. Morton and E. Grovenstein, jr. bibliog Am Chem Soc J 74:5434-6 N 5 '52

Polymerization and copolymerization reactions with Alfin catalysts in relation to masterbatch preparation. R. A. Stewart and H. L. Williams. bibliog Ind & Eng Chem 45:173-82 Ja '53

Polymerisation of styrene by titanic chloride. P. H. Plesch. diag Chem Soc J p 1653-66 Je '53

Preparation and polymerization of *p*-alkylstyrenes; effect of structure on the transition temperatures of the polymers. C. G. Overberger and others. bibliog Am Chem Soc J 75:3326-30 Jl 20 '53

Preparation and polymerization of *p*-sulfonamidostyrene. R. H. Wiley and C. C. Ketterer bibliog Am Chem Soc J 75:4519-21 S 20 '53

Properties of high-impact polystyrene. C. J. Snyder. Materials & Methods 36:11+ D '52

Properties of ion-exchange resins in relation to their structure; swelling and shrinkage of sulphonated polystyrenes of different cross-linking. K. W. Pepper, D. Reichenberg and D. K. Hale. diag Chem Soc J p3129-36 Ag '52

Reaction between styrene and ring disulfides; copolymerization effected by the chain transfer reaction. A. V. Tobolsky and B. Baysal. Am Chem Soc J 75:1757 Ap 5 '53

Specimen charging in the electron microscope and some observations on the size of polystyrene latex particles. S. G. Ellis. bibliog il diags J Ap Phys 23:728-32 Jl '52

Spectrophotometric investigations of organic complexes from copolymerization monomers; the instantaneous complex formation of parasubstituted styrenes and maleic anhydride. E. R. Garrett and R. L. Guile. Am Chem Soc J 75:3958-60 Ag 20 '53

Styrenation of esters of bisphenol-epichlorohydrin condensates. J. W. McNabb and H. F. Payne. bibliog Ind & Eng Chem 44: 2394-7 O '52

STYRENE (and polymers)—*Continued*

Styrene, another promising petrochemical. P. W. Sherwood. bibliog il Pet Processing 8:724-6+, 902-6 My-Je '53

Styrene dispenser. il Mod Plastics 30:172 F '53

Styrene-paneled awning. il Mod Plastics 30:180 O '52

Styroflex coaxial cable meets demand for high-power low-loss broadcast cable. il Elec Eng 72:468 My '53

Suspension polymerization of styrene. W. S. Kaghan and R. N. Shreve. bibliog il diag Ind & Eng Chem 45:292-7 F '53

Synthesis and polymerization of some fluorinated styrenes. M. Prober. bibliog Am Chem Soc J 75:968-73 F 20 '53

Tritiation of multiple bonds; synthesis of tritiated styrene. I. A. Berstein, W. Bennett and M. Fields. diag Am Chem Soc J 74:5763-4 N 20 '52

Vacuum bottles in the modern manner; molded of high impact styrene. il Mod Plastics 30:105-7 O '52

Viscosity-concentration law parameters for polystyrene in benzene. D. Cleverdon, D. Laker and P. G. Smith. bibliog J Ap Chem 3:15-19 Ja '53

Volume-time-temperature relationship of polystyrene. J. J. Millane and S. M. McLaren. bibliog diags J Ap Chem 2:554-6 S '52

Analysis

Application of volume characteristics of sulfonated polystyrene resins as a tool in analytical chemistry; determination of pH and dissociation constants of acids. C. Calmon. bibliog Anal Chem 25:490-2 Mr '53

Manufacture

Fabricating polystyrene. Can Chem Process 37:41 Mr '53

STYRENE oxide

Structure of styrene oxide dimers; ultraviolet spectra of 2,5-diphenyl-1,4-dioxanes and related compounds. M. J. Kland-English, R. K. Summerbell and I. M. Klotz. bibliog Am Chem Soc J 75:3709-12 Ag 5 '53

STYROFLEX. See Styrene (and polymers)

STYRYL compounds

Halogen derivatives of phenyl styryl ketone; bromo- and chloro-derivatives. R. D. Abell and W. Siddall. Chem Soc J p2804-7 S '53

Halogen derivatives of phenyl styryl ketone; bromo-chloro-derivatives; two cases of extra isomers. R. D. Abell. Chem Soc J p2807-9 S '53

SUBCONTRACTING

See also

Contracts, Government—Subcontracting

SUBJECT headings

Music subject headings, used on printed catalog cards of the Library of Congress. 133p $1.50 Library of Congress, Washington, D.C., for sale by the Supt. of doc. '52

Subject headings for children's materials. E. Rue and E. Laplante. 149p $4 American library assn, 50 E. Huron st, Chicago 11 '52

SUBLIMATION, Heat of

Appearance potential of C^+ in the mass spectra of some substituted methanes and the heat of sublimation of carbon. H. Branson and C. Smith. bibliog J Chem Phys 20:1047 Je '52

SUBLIMATION apparatus

Apparatus for purification by sublimation. E. M. Abrahamson. diag Anal Chem 25:203 Ja '53

SUBMARINE boats

Arctic submarine. R. D. McWethy. il U S Naval Inst Proc 78:954-7 S '52

Carbon monoxide toxicity in submarine operations; report of a case. H. J. Alvis and C. W. Tanner. A M A Archives Ind Hygiene & Occup Med 6:404-6 N '52

Designing a submarine power plant. W. W. Kuyper. il diag Gen Elec R 56:26-7+ S '53

Electric Boat yard launches target-trainer submarine. il Marine Eng 58:86 S '53

Reactor that even looks safe; experiments for navy's second atom-powered sub. il Bsns W p76 N 8 '52

So they named it General Dynamics. il Fortune 47:134-7+ Ap '53

Sphere is atomic sub lab. il Eng N 150:32-4 Ap 9 '53

Submarines of the Confederate navy. C. H. Blair. il U S Naval Inst Proc 78:1114-21 O '52

Air conditioning

Navy's new submarines air conditioned. H. S. Dewey. il diag Heating-Piping 25:96-7 F '53

Rescue and escape

Guardian angels of the submarines; navy's rescue vessels stand ready to save sunken craft with compressed air. W. N. Johnson. il diag Comp Air Mag 58:17-19 Ja '53

Submarine rescue and escape. H. J. Alvis. A M A Archives Ind Hygiene & Occup Med 6:293-304 O '52

SUBMARINE canyons. See Canyons, Submarine

SUBMARINE diving. See Diving, Submarine

SUBMARINE telegraph. See Telegraph, Submarine

SUBMARINE topography. See Ocean bottom

SUBMARINE warfare

Anti-sub copter. Aviation W 57:16-17 D 15 '52

Navy builds anti-submarine blimp fleet. il Aviation W 58:50-1 Ap 20 '53

See also

Mine sweepers

SUBMERGED combustion. See Combustion, Submerged

SUBMERGIBLE pumps. See Pumps, Submergible

SUBROGATION of insurer

Examines public relations aspects of some subrogation work at New York meeting. Nat Underw 57:2 My 14 '53

SUBSCRIPTION television. See Television broadcasting—Finance

SUBSIDENCES (earth movements)

Does oil withdrawal cause earthquakes? remedial measures to overcome subsidence in California may increase recovery. R. Sneddon. il map plan Pet Eng 24:A59-60+ O '52

Land subsidence repairs mount into millions. maps Eng N 150:42-3 F 5 '53

SUBSIDIES

Air-mail subsidies; recent court rulings may trim carriers' take. S. Altschul. Barron's 33:13-14 My 25 '53

CAB cuts estimated subsidies. Aviation W 57:89 O 20 '52

CAB okays NWA Stratocruiser subsidy. L. Moore. Aviation W 58:77-8 Ja 26 '53

Coming demise of a ministry? cost of the food subsidies. Economist 165:142-3 O 18 '52

11,873 names of farm subsidy recipients listed. Ed & Pub 85:15 D 27 '52

European export subsidies. Economist 164:769-70 S 27 '52

Pioneer subsidy; CAB turns down higher mail rate for Martins. Aviation W 58:73-5 Mr 23 '53

Senators push mail subsidy separation. Aviation W 58:26 Mr 30 '53

Subsidy accord: transportation segments agree aid must end. K. Johnsen. Aviation W 57:85-7 O 27 '52

U.S. airline subsidy payments; tabulation. Aviation W 58:197 Mr 2 '53

See also

Ship subsidies

SUBSTITUTES

Substitute chromium sources reduce production costs of stainless steel. N. B. McFarlane. il J Metals 4:1284-5 D '52

SUBSTITUTION (chemistry)

Addition and substitution with the bromine cation in aqueous solution. D. C. Abbott and C. L. Arcus. Chem Soc J p2934-5 Jl '52

Comparative activation of nucleophilic substitution in 4-substituted-2-nitro-chlorobenzenes. J. F. Bunnett and others. bibliog Am Chem Soc J 75:642-5 F 5 '53

Cyclic intermediates in substitution reactions; the alkaline hydrolysis of ε-bromocaproic and ζ-bromoenanthic acids. H. W. Heine, E. Becker and J. F. Lane. bibliog Am Chem Soc J 75:4514-15 S 20 '53

Effect of alkyl substitution on antioxidant properties of phenols. J. I. Wasson and W. M. Smith. bibliog Ind & Eng Chem 45:197-200 Ja '53

SUBSTITUTION (chemistry)—*Continued*

Effect of opposed disubstitution on intensities of even-even electronic transitions. H. McConnell. bibliog J Chem Phys 20:1978 D '52

Effect of substituents on the protolytic constants of anilinium type protolytes. M. Kilpatrick and C. A. Arenberg. bibliog Am Chem Soc J 75:3812-21 Ag 5 '53

Effects of isotopic substitution on the rates of chemical reactions. J. Bigeleisen. bibliog J Phys Chem 56:823-8 O '52

Electron distribution in molecules; F^{19} nuclear magnetic shielding and substituent effects in some benzene derivatives. H. S. Gutowsky and others. bibliog il diag Am Chem Soc J 74:4809-17 O 5 '52

General nature of the proportionality of polar effects of substituent groups in organic chemistry. R. W. Taft, jr. bibliog Am Chem Soc J 75:4231-8 S 5 '53

Homolytic aromatic substitution: competitive experiments on the phenylation of benzene, nitrobenzene, chlorobenzene, and pyridine; partial rate factors for nitrobenzene. D. R. Augood, D. H. Hey and G. H. Williams. diags Chem Soc J p2094-102 Je '52

Homolytic aromatic substitution; ratio of isomerides formed in the phenylation of chlorobenzene; competitive experiments on the phenylation of *p*-dichlorobenzene and 1 : 3 : 5-trichlorobenzene; partial rate factors for chlorobenzene. D. R. Augood, D. H. Hey and G. H. Williams. Chem Soc J p44 Ja '53

Kinetics of aromatic halogen substitution; relative reactivities of monosubstituted benzenes. P. W. Robertson, P. B. D. de la Mare and B. E. Swedlund. Chem Soc J p782-8 Mr '53

Kinetics of chlorine replacement by ethylate ion in ethanol solutions of symmetrical trichlorobenzene. T. R. Rubin and A. A. Brooks. bibliog Am Chem Soc J 75:2517-19 My 20 '53

Mechanism, kinetics, and stereochemistry of octahedral substitutions; edge-displacement as a hypothesis linking mechanism with stereochemistry of substitution. D. D. Brown, C. K. Ingold and R. S. Nyholm. Chem Soc J p2674-80 S '53

Mechanism, kinetics, and stereochemistry of octahedral substitutions; kinetics and molecularity of nucleophilic substitutions in the *cis*-dichlorobisethylenediaminecobalt(III) ion. D. D. Brown and C. K. Ingold. Chem Soc J p2680-96 S '53

Mechanism, kinetics, and stereochemistry of octahedral substitutions; steric course of some unimolecular substitutions in the *cis*-dichlorobisethylenediaminecobalt(III) ion. D. D. Brown and R. S. Nyholm. diags Chem Soc J p2696-701 S '53

Mechanism of aromatic side-chain reactions, with special reference to the polar effects of substituents; mesomeric effects of elements of the oxygen group. J. W. Baker, G. F. C. Barrett and W. T. Tweed. Chem Soc J p2831-9 Jl '52

Mechanism of substitution at a saturated carbon atom; effect of temperature on the competition between unimolecular solvolytic and non-solvolytic substitutions of di-*p*-tolymethyl chloride; activation in the fast step of unimolecular non-solvolytic substitution. A. R. Hawdon, E. D. Hughes and C. K. Ingold. Chem Soc J p2499-503 Jl '52

Mechanism of substitution at a saturated carbon atom; kinetic effect of common-ion and of non-common-ion salts on the aqueous solvolysis of diphenylmethyl halides; a demonstration of the unimolecular mechanism of solvolysis. O. T. Benfey, E. D. Hughes and C. K. Ingold. Chem Soc J p2488-93 Jl '52

Mechanism of substitution at a saturated carbon atom; kinetic effects of hydroxide and alkoxide ions on the rate-controlling and product-forming stages of unimolecular solvolysis of *tert.*-butyl and diphenylmethyl halides. O. T. Benfey, E. D. Hughes and C. K. Ingold. Chem Soc J p2494-8 Jl '52

Mechanism of substitution reactions in complex ions; kinetics of aquation of some cobalt(III) complex ions. R. G. Pearson, C. R. Boston and F. Basolo. bibliog Am Chem Soc J 75:3089-92 Jl 5 '53

Mechanism of substitution reactions in complex ions; stereochemical changes accompanying some reactions of cobalt(III) complexes. F. Basolo, B. D. Stone and R. G. Pearson. bibliog diags Am Chem Soc J 75:819-23 F 20 '53

Meta substituents in aromatic nucleophilic substitution. M. Liveris and others. Chem & Ind p 1222 D 13 '52

Quantum mechanical calculations of orientation in aromatic substitution. J. D. Roberts and A. Streitwieser, jr. Am Chem Soc J 74:4723-5 S 20 '52

Reagent in aromatic nucleophilic substitution. G. D. Leahy and J. Miller. Chem & Ind p40 Ja 10 '53

Role of neighboring groups in replacement reactions; some conversions of cyclopentane and indan derivatives. S. Winstein and R. M. Roberts. bibliog Am Chem Soc J 75:2297-300 My 20 '53

S_N mechanism in aromatic compounds. J. Miller, A. L. Beckwith and G. D. Leahy. Chem Soc J p3550-6 S '52

Studies of the localization theory of organic reactions; the effects of substituents. R. D. Brown. Chem Soc J p2229-33 Je '52

Substitution and elimination rate studies on some deutero-isopropyl bromides. V. J. Shiner, jr. bibliog Am Chem Soc J 74:5285-8 N 5 '52

Vibration frequencies of the halogenated methanes and the substitution product rule. K. S. Pitzer and E. Gelles. bibliog J Chem Phys 21:855-8 My '53

SUBTILIN

New sulfur-containing amino acid from subtilin. G. Alderton. bibliog Am Chem Soc J 75:2391-2 My 20 '53

SUBURBAN development

Fringe areas in California. Bsns W p 148+ Jl 18 '53

Organization of suburban areas. J. T. Ramsaur and W. N. Long. Am Water Works Assn J 45:236-40 Mr '53

Suburbia; its taxes ache. Bsns W p 146 Jl 18 '53

Water service for suburban areas. bibliog Am Water Works Assn J 45:697-722 Jl '53

See also

Land—Subdivision

SUBURBAN propane gas corporation

Preferred stock sold. Comm & Fin Chr 176:1967 N 24 '52

To sell gas, sell appliances. il Bsns W p 190+ N 22 '52

SUBVERSIVE activities

Subversives in U.N.; Congress will find out how American reds got Secretariat jobs. F. Morley. Barron's 32:5 D 8 '52

SUBWAY stations

Install high-speed public escalators. il Eng N 149:52 D 11 '52

SUBWAYS

See also

New York (city)—
Subways

Belt conveyors (passenger)

Cleveland considering belt conveyor subway. il Arch Rec 113:36 Ja '53

Goodyear designs conveyor for New York City's subway system. Rubber Age 71:791 S '52; il Arch Rec 112:14 S '52; plan Civil Eng 22:905 O '52; Machine Design 24:245 O '52; Comp Air Mag 57:317 N '52; Mech Eng 74:826-7 O '52

Personnel conveyors; a look into the future. il Steel 131:58-9 D 1 '52

Train that never stops. il Bsns W p32 Jl 11 '53

Unveil model of passenger conveyor. il Machine Design 25:255-6 Je '53

Construction

Canada's first subway; Toronto rapid transit system. il plan Ry Age 134:78+ Je 1 '53

Rock surgery under busy Manhattan. J. C. Pierce. il diag Comp Air Mag 57:335-8 D '52

Tunnel excavated after it is built to expedite traffic in street; subway tunnel in Stockholm. il diags Eng N 150:65-6 My 21 '53

Two major New York subways get double-track connection. A. C. Maevis. il map Eng N 150:38-40, cover Ap 23 '53

SUBWAYS—*Continued*

Cost

Subway extension, Pa.; unit prices. Eng N 150:54 F 26; 98 Mr 12 '53

SUCCESS

Formula for success. W. M. Fechteler. il U S Naval Inst Proc 78:1122-5 O '52

SUCCINIC acid

Cofactor requirements for the decarboxylation of succinate. H. R. Whiteley. bibliog Am Chem Soc J 75:1518-19 Mr 20 '53

Interrelation of succinic acid dehydrogenase with apodehydrase and codehydrase. E. Waldschmeidt-Leitz and H. Sprinz. Science 116:488-9 O 31 '52

Supposed rotational isomerism in the succinic acid series. G. D. Buckley. Chem Soc J p 1325-8 My '53

Triesters of carboxymethylmercaptosuccinic acid. R. Filler and R. W. Sneed. Am Chem Soc J 75:2765 Je 5 '53

SUCCINIC anhydride

Friedel-Crafts succinoylation of anthracene; synthesis of 1′- and 4′-hydroxy-1 : 2-benzanthracene. R. Schoental. Chem Soc J p4403-6 N '52

SUCCINIMIDE

Anticonvulsants; a study of N,α,β-alkylsuccinimides. C. A. Miller and L. M. Long. bibliog Am Chem Soc J 75:373-5 Ja 20 '53

Ionization constant and rate of hydrolysis of succinimide. H. F. Walton and A. A. Schilt. bibliog Am Chem Soc J 74:4995-6 O 20 '52

SUCCINYLCHOLINE

Substrate competition between procaine and succinylcholine diiodide for plasma cholinesterase. F. F. Foldes and others. bibliog il Science 117:383-6 Ap 10 '53

SUCKER rods

How to prevent failures in sucker-rod joints. A. A. Hardy. bibliog il diags Oil & Gas J 51:371-4+ N 17 '52

To reduce sucker rod stresses by rod weight compensator. J. R. Brennan. il diags Pet Eng 25:B 110+ My '53

SUCROSE. See Sugar

SUDAN

See also

Railroads—Sudan

Politics and government

In the southern Sudan. map Economist 166: 88 Ja 10 '53

London, Cairo and the Sudan. Economist 166: 63-4 Ja 10 '53

Statesmanship and the Sudan. Economist 165:394 N 8 '52

Sudan, it may be the world's next independent nation. il Bsns W p 168-70 F 21 '53

Towards Sudanese self-government. Economist 164:763-4 S 27 '52

SUEZ canal

Egypt and the Canal zone. Economist 166: 880-1 Mr 28 '53

SUEZ canal company

Annual general meeting, Paris, June 9. Economist 167:938 Je 27 '53

Big ditch; continues to pay off. Barron's 33: 5-6 Jl 13 '53

SUGAR

Adaptation of some bact. coli strains to utilise sucrose. N. M. Mims and C. Hinshelwood. Chem Soc J p663-6 F '53

Bottlers' sugar standards OK'd. H. E. Korab. il Food Eng 25:82-3 Mr '53

Chemical synthesis of sucrose. R. U. Lemieux and G. Huber. bibliog Am Chem Soc J 75:4118 Ag 20 '53

Jack Frost in miniature; replica of package on tablet wrapper; National sugar co. il Mod Packaging 26:109 F '53

Sugar synthesis. R. U. Lemieux and G. Huber. Oil Paint & Drug Rep 164:58 S 14 '53

Transmittancy of commercial sugar liquors; dependence on concentration of total solids. V. R. Deitz and others. bibliog J Res Nat Bur Stand 49:365-9 D '52

See also

Beets and beet sugar — Octabenzoylsucrose

Blood—Sugar — Sugars

Manufacture and refining

Conditions product for pumping; Refined syrups & sugars, inc. W. J. Mathews. plan Food Eng 25:98+ Ja '53

Laboratory evaluation of granular carbons. W. R. Fetzer, E. K. Crosby and C. E. Engel. bibliog diags Anal Chem 24:1558-63 O '52

SUGAR, Invert

Chemical effects of ultrasonics. V. Griffing. bibliog J Chem Phys 20:939-42 Je '52

Degradation of D-glucose, D-fructose and invert sugar in carbonate-buffered water solutions. L. J. Heidt and C. M. Colman. Am Chem Soc J 74:4711-13 S 20 '52

SUGAR, Liquid

Ultraviolet lamps keep liquid sugar sterile. il Elec World 138:106 D 29 '52

SUGAR, Substitutes for

Making good sugar-free drinks; Brookdale beverage co. R. M. Sandri. il Food Eng 25: 79+ My '53

SUGAR analysis

Analysis of a mixture of glucose, maltose, and fermentable oligosaccharides; improved yeast fermentation method. S. C. Pan, L. W. Nicholson and P. Kolachov. bibliog diags Anal Chem 25:231-7 F '53

Detection of deoxy-sugars, glycals, and methyl pentoses in paper partition chromatography. J. T. Edward and D. M. Waldron. Chem Soc J p3631-4 S '52

Further studies on the separation of the borate complexes of sugars and related compounds by ion-exchange chromatography. L. P. Zill, J. X. Khym and G. M. Cheniae. bibliog Am Chem Soc J 75:1339-42 Mr 20 '53

Kestose; a trisaccharide formed from sucrose by yeast invertase. N. Albon and others. Chem Soc J p24-7 Ja '53

New spray reagents for paper chromatography of reducing sugars. L. Sattler and F. W. Zerban. Anal Chem 24:1862 N '52

Two-dimensional paper chromatography using one-dimensional apparatus; application to sugars of spent sulfite liquor. L. A. Boggs. bibliog diag Anal Chem 24:1673-5 O '52

See also

Fructose—Analysis — Polysaccharides—Analysis

Glucose—Analysis

Pentoses—Analysis

SUGAR cane

Wanted, a good sugar cane harvester. A. G. Keller. S A E J 61:86 Ja '53

See also

Bagasse

SUGAR factories

Sugar beet plant ranks among continent's finest. J. A. Swan. il diag Can Chem Process 36:48+ N '52

Equipment

Conditions product for pumping; Refined syrups & sugars, inc. W. J. Mathews. plan Food Eng 25:98+ Ja '53

Industrial tv eyes it for you; sees how much cane is coming on conveyors in sugar mill. il Food Eng 25:93 Jl '53

New sugar centrifugal separates continuously. il diag Food Eng 25:185 O '53

Power

Beet sugar production; modernization of generation and factory electrical equipment. il Elec R (Lond) 151:846-8 O 17 '52; Electrician 149:983-4 O 3 '52

Electric power plant in beet-sugar factory; British sugar corporation. il Engineering 174:710 N 28 '52

General Electric alternator for operating in high ambient temperatures. il diag Engineering 175:281 F 27 '53

Waste

Treatment and re-use of water in beet sugar manufacturing. G. S. Fleming. plan Sewage & Ind Wastes 24:1382-8 N '52

See also

Bagasse

SUGAR handling

Bulk granulated sugar by truck. il Food Eng 25:73+ Ap '53

How to plan bulk sugar handling. E. W. Meeker. il plans diags Food Eng 25:129+ Ag '53

Mechanical trimming of bulk cargo; Merton overhead loader. il Engineer 194:649-50 N 14 '52; Engineering 174:676 N 21 '52

SUGAR handling—*Continued*

Stretch-out with storage; Godchaux sugars, inc. il Mod Packaging 26:122-3 Je '53

Sugar moves in bulk; blowing with air. il Chem Eng 59:226 N '52

SUGAR industry and trade

Domino sugar; nominated for packaging's Hall of fame. il Mod Packaging 26:116-21+ S '52

World sugar output may outrace demand. Barron's 33:17-18 Jl 6 '53

Securities

Blight on the sugar shares. F. L. Walters. Mag of Wall St 91:466-7+ Ja 24 '53

Will sugar depression continue? with statistical summary of sugar companies. F. W. Walters. Mag of Wall St 92:508-9+ Jl 25 '53

Ecuador

Ecuador now exports more sugar. For Comm W 49:18 F 23 '53

Output of sugar in Ecuador increased. For Comm W 49:16 Ja 19 '53

Great Britain

Commonwealth sugar discussions. Economist 167:690-1 Je 6 '53

United Kingdom's sugar beet production down. For Comm W 48:9 N 17 '52

Hawaiian Islands

Mobile radio aids Hawaiian sugar industry. il Electronics 25:204+ D '52

Indonesia

Indonesia's big sugar crop to be kept for home use. For Comm W 48:16 N 3 '52

Japan

Japan raises sugar consumption; imports higher; controls ended. For Comm W 49:17 My 11 '53

Pakistan

Pakistan sugar output increased. For Comm W 49:19 F 9 '53

SUGAR plantations

Mobile radio aids Hawaiian sugar industry. il Electronics 25:204+ D '52

SUGARS

Action of Grignard reagents on anhydrosugars of ethylene oxide type; the behaviour of 4 : 6-benzylidene 2 : 3-anhydro-α-methyl-D-alloside towards ethyl- and phenyl-magnesium halides. G. N. Richards and L. F. Wiggins. Chem Soc J p2442-6 Ag '53

Agent from E. coli causing hemorrhage and regression of an experimental mouse tumor; the component monosaccharides. M. Ikawa and others. bibliog Am Chem Soc J 74:5219-20 O 20 '52

1,6-Anhydro-D-glycero-β-D-ido-heptopyranose. J. W. Pratt, N. K. Richtmyer and C. S. Hudson. bibliog Am Chem Soc J 75:4503-7 S 20 '53

Anomerization of sugar acetates; glucose pentaacetates in acetic acid-acetic anhydride mixtures catalyzed by sulfuric and perchloric acids. E. P. Painter. bibliog Am Chem Soc J 75:1137-46 Mr 5 '53

Chemical interactions of amino compounds and sugars; *p*H dependency. M. L. Wolfrom, D. K. Kolb and A. W. Langer, jr. bibliog Am Chem Soc J 75:3471-3 Jl 20 '53

Chemical interactions of amino compounds and sugars; the repeating unit in browning polymers. M. L. Wolfrom and others. Am Chem Soc J 75:1013 F 20 '53

Deoxy-sugars; conversion of D-glucal into furan derivatives. F. Shafizadeh and M. Stacey. Chem Soc J p3608-10 S '52

2-Hydroxyacetylfuran from sugars. R. E. Miller and S. M. Cantor. Am Chem Soc J 74:5236-7 O 20 '52

Interconversion and degradation of reducing sugars by anion exchange resins. L. Rebenfeld and E. Pacsu. Am Chem Soc J 75:4370-1 S 5 '53

Preparation of higher-carbon sugars from D-mannose including crystalline D-manno-L-*manno*-octose. J. V. Karabinos, R. M. Hann and C. S. Hudson. bibliog Am Chem Soc J 75:4320-4 S 5 '53

Reaction of amino-compounds with sugars; the action of ammonia on glucose, maltose, and lactose. L. Hough, J. K. N. Jones and E. L. Richards. Chem Soc J p2005-9 Jl '53

Reactions of aliphatic amines with sugars. J. G. Erickson. Am Chem Soc J 75:2784 Je 5 '53

Sodium borohydride as a reducing agent in the sugar series. M. L. Wolfrom and K. Anno. bibliog Am Chem Soc J 74:5583-4 N 20 '52

Some reactions of sugars catalysed by a cation-exchange resin. W. H. Wadman. Chem Soc J p3051-5 Ag '52

Structures of the oxazoline derivatives of monosaccharides. J. T. Edward and E. F. Martlew. Chem & Ind p 1034 O 18 '52

Sugar nitrates; removal of nitrate and toluene-*p*-sulphonyl groups from esters of substituted methyl-D-glucosides. E. G. Ansell and J. Honeyman. Chem Soc J p2778-89 Jl '52

See also

Aldoses
Arabinose
Beets and beet sugar
Carbohydrates
Disaccharides
Fermentation
Fructose
Glucose
Idoheptulose
Isomaltose
Ketoses
Pentoses
Planteose
Polysaccharides
Ribose
Sedoheptulose
Sorbose
Stachyose
Sugar
Xyloheptaose
Xylose
Xylulose

Analysis

See Sugar analysis

SUGGESTION systems

Aldens analyzes suggestions. F. C. Minaker. Am Bsns 23:36-7 Jl '53

How to devise an employee suggestion plan. C. G. White. N A C A Bul 34:230-7 O '52

Invitation to think! suggestion system; Second national bank, Houston, Tex. W. L. Rapp. il Bankers Mo 70:22+ F '53

Suggestion day spurs employe ideas; Remington Rand, inc. F. A. Denz. Mill & Factory 52:137-8 Ja '53

Suggestion plans pay off. il Steel 132:61 Mr 30 '53

Suggestion system that really clicks; Gates rubber co. il Factory Management 111:104-6 S '53

Suggestion system that works; Shuford mills. N. L. Brown. il Textile World 103:87-9+ Jl '53

Suggestions about suggestions. W. Sheffer. Power Eng 57:76 My '53

Suggestions pay-off in millions; how plans operate at General Motors and Ford. R. D. Raddant. Iron Age 170:95-6 N 13 '52

SUGIOL

9-Ketoferruginol and its identity with sugiol. C. W. Brandt and B. R. Thomas. Chem Soc J p2442-3 Je '52

SUHLER, Lester

Enthusiastic about direct mail. por Ptr Ink 241:94 O 24 '52

SULFAMATES

Analysis

Amperometric titration of sulfamates with the dropping mercury cathode. S. T. Hirozawa and R. C. Brasted. bibliog Anal Chem 25:221-6 F '53

SULFAMIC acid

Anodizing aluminum with sulfamic acid. S. Tajima and others. bibliog il diag Metal Finishing 50:67-71 O; 65-9+ N '52

Configuration of undissociated sulfamic acid. E. C. Lingafelter, L. F. Kells and H. V. Tartar. bibliog Am Chem Soc J 74:4973-4 O 5 '52

Direct evidence of the influence of sulfamic acid linkages on the activity of heparin-like anticoagulants. J. Doczi, A. Fischman and J. A. King. Am Chem Soc J 75:1512-13 Mr 20 '53

Use of sulphamic acid derivatives in the application of oxidation blacks; Solanile black. C. Zuber and B. Jomain. Soc Dyers & Col J 68:241-8 Jl '52; Abstract. Am Dyestuff Rep 41:750 N 10 '52

SULFAMIDE

Systems ammonia-sulfamide and sulfuric acid-sulfamide. H. H. Sisler and D. M. Rosenbaum. diag Am Chem Soc J 74:6130-1 D 5 '52

SULFANILAMIDE

Itaconic acid derivatives of sulfanilamide. P. L. Paytash, M. J. Thompson and M. E. Fykes. Am Chem Soc J 74:4549-52 S 20 '52

N-substituted glycosylamines derived from sulphanilamide and *p*-aminosalicylic acid. R. Bognár and P. Nánási. Chem Soc J p 1703-8 Je '53

SULFATASES

Histochemical demonstration of aryl sulfatase. A. M. Rutenburg and others. bibliog il Science 116:539-43 N 14 '52

Sulfatase activity; abstract. H. Goldenberg and others. Chem & Eng N 31:876+ Mr 2 '53

SULFATES

Aromatic sulphonation; isomeric ratios in the sulphonation of trimethyl-phenyl- and -*p*-tolyl-ammonium methyl sulphates. J. C. D. Brand and A. Rutherford. Chem Soc J p3927-31 O '52

Effect of pressure on diffusion in water and in sulfate solutions. R. B. Cuddeback and others. bibliog J Chem Phys 21:589-97 Ap '53

Formation of dithionate and sulfate in the oxidation of sulfur dioxide by manganese dioxide and air. A. E. Back and others. bibliog pl U S Bur Mines Rep of Invest 4931:1-14 '52

Rate law and mechanism for the reaction of cerium(IV) and bromide ion in aqueous sulfate media. E. L. King and M. L. Pandow. bibliog Am Chem Soc J 75:3063-8 Jl 5 '53

Some factors influencing the solubility of amine sulphates; abstract. M. Kapel. Chem Age (Lond) 67:495 O 11 '52

Sulphate formation in sulphite pulping. M. S. Anderson and G. S. McKnight, jr. bibliog Tappi 36:151-3 Ap '53

Sulfatoalkyl amines. W. A. Reeves and J. D. Guthrie. bibliog Am Chem Soc J 75:4101-2 Ag 20 '53

See also

Cement, Effect of sulfates on

Concrete, Effect of sulfates on

Thiosulfates

Analysis

Determination of soluble sulfates in clay. L. G. Tubbs. Am Cer Soc Bul 32:181-2 My 15 '53

Determination of sulphate and sulphonate anion-active detergents in sewage. P. N. Degens, jr. and others. bibliog J Ap Chem 3:54-61 F '53

Find scumming sulphates by quick method. L. G. Tubbs. il Brick & Clay Rec 122:59 F '53

Instrument for the control of soluble sulfates in ceramic raw materials. W. E. Brownell. il Am Cer Soc Bul 32:45-6 F 15 '53

Metallic-cation removal as an aid in volumetric sulfate determinations. W. G. Hunt, jr. Am Water Works Assn J 45:535-8 My '53

New reagent for the precipitation of sulphate. R. Belcher and D. Gibbons. Chem Soc J p4216-18 N '52

Photonephelometric microdetermination of sulfate and organic sulfur. G. Toennies and B. Bakay. bibliog Anal Chem 25:160-5 Ja '53

Substituted benzidines and related compounds as reagents in analytical chemistry; reagents for the precipitation of sulphate. R. Belcher, A. J. Nutten and W. I. Stephen. Chem Soc J p 1334-7 My '53

SULFENIC acids

Derivatives of sulfenic acids; reaction of 2,4-dinitrobenzenesulfenyl chloride with some symmetrical alkynes. N. Kharasch and S. J. Assony. bibliog Am Chem Soc J 75:1081-2 Mr 5 '53

Derivatives of sulfenic acids; reactions of sulfenyl halides with the *cis*- and *trans*-2-butenes. N. Kharasch and A. J. Havlik. bibliog Am Chem Soc J 75:3734-7 Ag 5 '53

Derivatives of sulfenic acids; studies of some α-nitro sulfides and sulfones. N. Kharasch and J. L. Cameron. bibliog Am Chem Soc J 75:1077-81 Mr 5 '53

Derivatives of sulfenic acids; the reaction of 2,4-dinitrobenzenesulfenyl chloride with alcohols. N. Kharasch, D. P. McQuarrie and C. M. Buess. bibliog Am Chem Soc J 75:2658-60 Je 5 '53

SULFENYL chlorides

Urea and related compounds; the reaction of arylureas with aromatic sulphinyl and sulphenyl chlorides. F. Kurzer. Chem Soc J p549-56 F '53

SULFENYL halides

Derivatives of sulfenic acids; reactions of sulfenyl halides with the *cis*- and *trans*-2-butenes. N. Kharasch and A. J. Havlik. bibliog Am Chem Soc J 75:3734-7 Ag 5 '53

SULFHYDRYL group. See Mercapto group

SULFIDES

Biological deterioration of polysulfide polymers employed as linings for gasoline storage tanks. F. H. Allen and D. Fore, jr. il Ind & Eng Chem 45:374-7 F '53

Oxidation of aryl trityl sulfides with hydrogen peroxide. D. C. Gregg, C. A. Blood, jr. and D. E. Weiman. Am Chem Soc J 75:4344 S 5 '53

Polyalkylene sulfides; termination by disulfide formation. C. S. Marvel, C. W. Hinman and H. K. Inskip. Am Chem Soc J 75:1997-8 Ap 20 '53

Reaction of *n*-butyl nitrate with alkaline hydrosulfides. R. T. Merrow, S. J. Cristol and R. W. Van Dolah. bibliog Am Chem Soc J 75:4259-65 S 5 '53

Rearrangement of benzyl sulfides to mercaptans and of sulfonium ions to sulfides involving the aromatic ring by alkali amides. C. R. Hauser, S. W. Kantor and W. R. Brasen. bibliog Am Chem Soc J 75:2660-3 Je 5 '53

Studies with boron trichloride and organic sulphides; the preparation and properties of di-*n*-butyl sulphide-boron trichloride. M. F. Lappert. Chem Soc J p2784-8 S '53

Sulfide resistance of chromium steels. W. L. Nelson. Oil & Gas J 51:101 Mr 2 '53

White water treatment; effect of sulfides on digestion. W. Rudolfs and H. R. Amberg. bibliog diag Sewage & Ind Wastes 24:1108-20, 1278-87, 1402-9 S-N '52

See also

Galena

Analysis

Determination of sulfides in kraft black liquor; abstract. O. Bethge. Paper Ind 35:478 Jl '53

Photometric determination of sulfide and reducible sulfur in alkalies. M. S. Budd and H. A. Bewick. bibliog diag Anal Chem 24:1536-40 O '52

Spectrophotometric determination of aliphatic sulfides. S. H. Hastings. Anal Chem 25:420-2 Mr '53

SULFILIMINE

Isomerisation of sulphilimines. A. S. F. Ash and F. Challenger. Chem Soc J p2792-6 Jl '52

SULFINIC acids

Decomposition of arylthiolsulphonic acids; identification of thiolsulphonic and sulphinic acids as benzylthiuronium derivatives. F. Kurzer and J. R. Powell. Chem Soc J p3728-34 O '52

Reaction of 1,1-diarylethylenes with thionyl chloride; preparation of 2,2-diarylethene-1-sulfinic acids and some N-aryl-2,2-diphenylethene-1-sulfinamides. S. Patai and A. Patchornik. bibliog Am Chem Soc J 74:4494-6 S 20 '52

Sulfination of organolithium derivatives of thiophene and furan. W. E. Truce and E. Wellisch. bibliog Am Chem Soc J 74:5177-9 O 20 '52

SULFINYL chlorides

Urea and related compounds; the reaction of arylureas with aromatic sulphinyl and sulphenyl chlorides. F. Kurzer. Chem Soc J p549-56 F '53

SULFITE liquor

Another bend to a new twist; desugared lignin sulfite. il Chem & Eng N 30:5196 D 8 '52

Attisholz yeast from waste sulphite liquor. Tappi 36:sup 104A+ Je '53

SULFITE liquor—*Continued*

Can the oxygen demand in sulphite waste liquor effluent be measured by permanganate consumption? E. Schmidt. Tappi 36:291-4 Jl '53

Challenge of lignin. H. B. Marshall. Pulp & Pa of Can 54:112-15 Ap '53

Consolidated puts $500,000 plant for evaporating liquor into operation. il Paper Ind 35:39-40 Ap '53; Same cond. Paper Tr J 136:12 Mr 13 '53; Same cond. Tappi 36:sup 100A+ Ap '53

Consolidated's spent liquor plant starts up. il Paper Tr J 136:12 Mr 13 '53

Degradation of cotton and wood pulp with acids and sulfite waste liquor; abstract. N. Hartler and O. Samuelson. Paper Ind 34:1498+ Mr '53

Ethyl alcohol from waste liquor sulphite. il diag Can Chem Process 36:32-4 O '52

Evaporation and recovery of ammonia-base waste sulphite liquor. L. C. Jenness and others. bibliog diags Tappi 36:337-42 Ag '53; Abstract. Paper Tr J 136:103 F 20 '53

Evaporator has Scotch touch; new unit for recovery of waste sulphite liquor. diags Chem Eng 60:140-2+ Mr '53

Improvements in the manufacture of industrial alcohol from sulfite waste liquor during the last ten years; abstract. H. G. Joseph. Sewage & Ind Wastes 25:705 Je '53

Marathon's expanded chemical production. Paper Tr J 136:12 Ja 30 '53

Medium pressure steam concentration of waste sulphite liquor. J. P. O'Donoghue, jr. and others. flow diags il diags Pulp & Pa of Can (Convention no) 54:230-8 [F] '53

Neutral sulphite semichemical spent liquor recovery; abstract. G. H. Chidester. Tappi 36:sup 145A My '53

New vanillin process from waste liquor sulphite. diag Can Chem Process 36:58+ O '52

Northern spins the valves on new Rosenblads and liquor burner. il Paper Tr J 137:44 O 16 '53

Problems connected with waste sulphite liquor collection, evaporation and burning. V. P. Edwardes. diags Paper Tr J 136:14-18 F 27 '53

Progress in stream improvement; spent sulfite liquor problem. W. M. Van Horn. bibliog(48 ref) il Paper Ind 34:1456-8 Mr '53

Progress in the utilization of spent sulphite liquor. W. M. Hearon. bibliog(45 ref) Tappi 36:sup 14A+ S '53

Proving ground for sulfite roadbinder built in Wisconsin. il Paper Ind 35:650 S '53

Recent work on evaporator coefficients in the concentration of waste liquor; abstracts. H. E. Snow. Paper Tr J 136:14 Je 5 '53; Pulp & Pa of Can 54:135-6 Jl '53

Rhinelander Paper puts $400,000 evaporating plant into operation. il diag Paper Ind 34:1074-6 D '52

Silk purses from sow's ears; Marathon's Chemical division. il Chem W 72:42-4 F 7 '53; Same. Tappi 36:sup 107A-8A Ap '53

Solid-gas equilibria in burning sulfite spent liquors; abstract. L. G. Sillen and T. Andersson. Paper Ind 34:1266 Ja '53

Some economic aspects of burning sulphite waste liquor. W. J. Darmstadt and F. H. Richter. Tappi 36:sup 171A-4A Je '53

Spent sulphite liquor pollution abatement programs in the Pacific Northwest. H. R. Amberg. Paper Tr J 136:20-1+ F 27 '53

Spent sulphite liquor studies; use of spent liquor in reconditioning asphalt road surfaces. A. J. Wiley and others. il Tappi 36:162-5 Ap '53; Abstract. Paper Tr J 136:100 F 20 '53

Success indicated in roadbinder experiment; spent sulphite liquor. Paper Ind 34:946 N '52

Sulfite pulp waste liquor recovery; abstract. A. Pollack and R. S. Aries. Sewage & Ind Wastes 25:728 Je '53

Sulfox process for recovering chemicals from sulphite mills. R. S. Aries and A. Pollak. bibliog flow sheets Tappi 35:sup 142A-6A D '52

Sulphite liquor as a stabilizer. J. E. Hurtubise. Road & Eng Constr 90:190-2 N '52

30 million gallons of waste liquor contributed for Wisconsin road-building. Paper Ind 34:1440 Mr '53

Utilization of ammonia-base sulphite liquor. J. B. Martin. Tappi 36:sup 175A-6A Je '53

Utilization of sulfite pulp mill wastes and their markets. S. R. P. Annett and W. E. Stobo. il Paper Ind 34:1109-11 D '52

Waste liquor recovery from sulfite mills by new process; Sulfox process. Water & Sewage Works 100:sup88A Jl '53

Wisconsin pulp makers get yeast chemicals from waste. il Bsns W p70+ N 29 '52

See also

Lignosol

Analysis

Two-dimensional paper chromatography using one-dimensional apparatus; application to sugars of spent sulfite liquor. L. A. Boggs. bibliog diag Anal Chem 24:1673-5 O '52

Bibliography

Utilization of waste sulphite liquor; a bibliography of the literature published during 1952. H. B. Marshall and J. M. Neate. Pulp & Pa of Can 54:125-35 Je; 113-26 Ag '53

SULFITES

Effect of salt concentration and temperature on the ultraviolet absorption spectra of aqueous thiosulfate and sulfite. D. P. Ames and J. E. Willard. bibliog Am Chem Soc J 75:3267-8 Jl 5 '53

Formation of sulphites, phosphites, and phosphates of alcohols containing an aryl group. W. Gerrard and B. D. Shepherd. Chem Soc J p2069-74 Jl '53

Improvement of properties of bright nickel baths by means of sulfurous acid and sulfites; abstract. H. Komusaari. Metal Finishing 51:71 Jl '53

Influence of sulfite on the methane fermentation of sodium and calcium acetates; abstract. M. A. Noordam-Geldewagen and others. Sewage & Ind Wastes 24:1437-8 N '52

Reaction of bisulfite with epoxy compounds. R. T. E. Schenck and S. Kaizerman. bibliog Am Chem Soc J 75:1636-41 Ap 5 '53

Analysis

Field estimation of sulfites in waters. S. Sussman and I. L. Portnoy. Anal Chem 24:1652-4 O '52

SULFONAMIDES

Aminoalkanesulphonamides and alkanedisulphonamides. J. W. Griffin and D. H. Hey. Chem Soc J p3334-40 S '52

Antitubercular studies; 4-aminobenzamides and 4-aminobenzenesulfonamides. P. Truitt, G. Sammons and D. Zachry. bibliog Am Chem Soc J 74:5961-3 D 5 '52

Cleavage of sulfonamides. D. I. Weisblat, B. J. Magerlein and D. R. Myers. bibliog Am Chem Soc J 75:3630-2 Ag 5 '53

Cleavage of sulfonamides with aqueous hydrobromic acid and phenol. H. R. Snyder and H. C. Geller. bibliog Am Chem Soc J 74:4864-6 O 5 '52

Community program for the prevention of rheumatic fever recurrence. M. A. Smith. bibliog Pub Health Rep 68:16-19 Ja '53

Quinone imides; the reaction of primary aromatic amines with 2,3,5,6-tetrachloro-*p*-quinonedibenzenesulfonimide. R. Adams and B. H. Braun. bibliog Am Chem Soc J 74:5869-71 D 5 '52

See also

Sulfanilamide

SULFONATES

Alkarylsulfonates as conditioners in wet-twisting cotton tire cord. J. C. Ambelang and others. bibliog Ind & Eng Chem 45:204-10 Ja '53

Metathetical reactions of silver salts in solution; the synthesis of alkyl sulfonates. W. D. Emmons and A. F. Ferris. Am Chem Soc J 75:2257 My 5 '53

Studies in stereochemistry; differences in the reactivity of diastereomerically related alkyl halides and sulfonates in the S_N2 and E_2 reactions. D. J. Cram and F. A. A. Elhafez. bibliog Am Chem Soc J 74:5851-9 D 5 '52

SULFONATES—*Continued*

Analysis

Determination of sulphate and sulphonate anion-active detergents in sewage. P. N. Degens, jr. and others. bibliog J Ap Chem 3:54-61 F '53

SULFONATION

Aromatic sulphonation; correlation of the velocity of sulphonation with the *J*-function of sulphuric acid. J. C. D. Brand and W. C. Horning. Chem Soc J p3922-7 O '52

Aromatic sulphonation; isomeric ratios in the sulphonation of trimethyl-phenyl-and-*p*-tolyl-ammonium methyl sulphates. J. C. D. Brand and A. Rutherford. Chem Soc J p3927-31 O '52

Evidence for α-sulfonation in the reaction of palmitic acid with sulfur trioxide. J. K. Weil, L. P. Witnauer and A. J. Stirton. bibliog Am Chem Soc J 75:2526-7 My 20 '53

Improved method of preparing sulfonated 1-naphthol for carbohydrate tests. A. W. Devor. Anal Chem 24:1626 O '52

Side-chain sulfonation of phenylalkanoic acids. W. E. Truce and C. E. Olson. Am Chem Soc J 75:1651-3 Ap 5 '53

Synthesis of cresol; sulfonation of toluene; caustic fusion of toluenesulfonic acid. S. V. Englund, R. S. Aries and D. F. Othmer. bibliog Ind & Eng Chem 45:189-97 Ja '53

SULFONES

Action of phenylhydrazine on the periodate degradation products of β-D-glucopyranosyl sulfones. E. Blanchfield and T. Dillon. bibliog Am Chem Soc J 75:647-8 F 5 '53

Basic reductive fission of sulphones. R. E. Dabby, J. Kenyon and R. F. Mason. Chem Soc J p4881-2 D '52

t-Butyl sulfone. J. E. Woodbridge. Am Chem Soc J 75:2528-9 My 20 '53

Conjugation in sulphones. E. S. Waight. Chem Soc J p2440-2 Je '52

Cyclic sulfones; preparation of 2,5-di-(halophenyl)- 3,4 - dihydroxythiophene-1-dioxides. C. G. Overberger and others. bibliog Am Chem Soc J 75:2075-7 My 5 '53

Derivatives of sulfenic acids; studies of some α-nitro sulfides and sulfones. N. Kharasch and J. L. Cameron. bibliog Am Chem Soc J 75:1077-81 My 5 '53

Heterocyclic vinyl ethers; the synthesis of 1,4-dithiadiene and 1,4-dithiadiene disulfone. W. E. Parham, H. Wynberg and F. L. Ramp. bibliog Am Chem Soc J 75:2065-9 My 5 '53

Internal condensation of 2,4-diphenyl-1-butanesulfonyl chloride to a five- in preference to a seven-membered cyclic sulfone. W. E. Truce, D. D. Emrick and R. E. Miller. bibliog Am Chem Soc J 75:3359-61 Jl 20 '53

Polarities and ultra-violet spectra of phenyl *p*-tolyl azoxysulphone and its dialkylamino-derivatives. H. C. Freeman and others. Chem Soc J p3384-9 S '52

Possible occurrence of geometrical isomerism among the diazosulphones. H. C. Freeman and others. Chem Soc J p3381-4 S '52

2 : 2′ : 4 : 4′-Tetranitrodiphenyl sulphoxide and 2 : 2′ : 4 : 4′-tetranitrodiphenyl sulphone. H. Bradbury, F. J. Smith and F. A. Talman. Chem Soc J p 1184-6 Ap '53

Three analogs of bis-(*o*-chlorobenzylidene)-4,4′-diaminodiphenyl sulfone. E. D. Bergmann and D. Lavie. bibliog Am Chem Soc J 74:4948-9 O 5 '52

SULFONIC acids

Decomposition of arylthiolsulphonic acids; identification of thiolsulphonic and sulphinic acids as benzylthiuronium derivatives. F. Kurzer and J. R. Powell. Chem Soc J p3728-34 O '52

Dibenzofuran-2-sulfonic and 3-nitro-8-sulfonic acids as reagents for amines and amino acids. R. Wendland, J. Rode and R. Meintzer. bibliog Am Chem Soc J 75:3606-8 Jl 20 '53

Molecular refractions of the SO_3 and SO_2Cl groups in *p*-ethylbenzenesulfonyl chloride and the methyl, ethyl and *n*-butyl esters of *p*-ethylbenzenesulfonic acid. R. H. Wiley and R. P. Davis. bibliog Am Chem Soc J 74:6142-4 D 5 '52

Phase equilibria in sulphonic acid-water systems. D. Taylor and G. C. Vincent. Chem Soc J p3218-24 Ag '52

Preparation of arylalkanesulphonic acids. C. A. Bunton and E. A. Halevi. Chem Soc J p4541 N '52

Preparation of β-H-perfluoro alkanesulfonic acids. R. J. Koshar, P. W. Trott and J. D. LaZerte. Am Chem Soc J 75:4595-6 S 20 '53

Reaction of 2,4-dinitrobenzenesulfonic acid with free amino groups of proteins. H. N. Eisen, S. Belman and M. E. Carsten. bibliog Am Chem Soc J 75:4583-5 S 20 '53

Substituted benzidines and related compounds as reagents in analytical chemistry; the oxidation potentials of naphthidine, 3 : 3′-dimethylnaphthidine, and their sulphonic acids. R. Belcher, A. J. Nutten and W. I. Stephen. Chem Soc J p3857-61 O '52

Sulfonic acid esters of 2-nitro-2-methyl-1-propanol. R. N. Boyd and R. H. Hansen. bibliog Am Chem Soc J 75:3737-9 Ag 5 '53

Analysis

Analysis of sulfuric acid and acid sludges from petroleum processes. F. T. Weiss and others. bibliog Anal Chem 25:277-84 F '53

SULFONIUM compounds

Preparation and properties of triphenylsulfonium polyhalides. W. A. Bonner. bibliog Am Chem Soc J 74:5078-82 O 20 '52

Rearrangement of benzyl sulfides to mercaptans and of sulfonium ions to sulfides involving the aromatic ring by alkali amides. C. R. Hauser, S. W. Kantor and W. R. Brasen. bibliog Am Chem Soc J 75:2660-3 Je 5 '53

Stereochemistry of the formation and decomposition of dimethyl-α-phenethylsulfonium bromide. S. Siegel and A. F. Graefe. bibliog Am Chem Soc J 75:4521-5 S 20 '53

SULFONYL chlorides

Internal condensation of 2,4-diphenyl-1-butanesulfonyl chloride to a five- in preference to a seven-membered cyclic sulfone. W. E. Truce, D. D. Emrick and R. E. Miller. bibliog Am Chem Soc J 75:3359-61 Jl 20 '53

Preparation of β-ketosulfonyl chlorides. W. E. Truce and C. W. Vriesen. bibliog Am Chem Soc J 75:2525 My 20 '53

SULFONYL compounds

Action of lithium aluminium hydride on *NN′*-diarylsulphonyl derivatives of dianthranilide, and photo-peroxides of 9 : 10-diarylanthracene. A. Mustafa. Chem Soc J p2435-7 Je '52

α,β-Unsaturated sulfonyl compounds in the Diels-Alder reaction. H. R. Snyder and D. P. Hallada. bibliog Am Chem Soc J 74:5595-7 N 20 '52

1,2-Bis-(arylsulfonyl)-ethenes in the Diels-Alder reaction. W. E. Truce and R. J. McManimie. bibliog Am Chem Soc J 75:1672-3 Ap 5 '53

Cyanamides; sulphonyl derivatives related to dicyandiamide and melamine. F. Kurzer and J. R. Powell. Chem Soc J p2531-7 S '53

Some α-arylsulfonamido acids and amides. R. H. Wiley, N. R. Smith and J. P. Johansen. Am Chem Soc J 74:6298-9 D 20 '52

Sulphonyl-compounds derived from dicyandiamide and melamine. F. Kurzer and J. R. Powell. Chem & Ind p 195-6 F 28 '53

SULFONYL group

Acylation and allied reactions catalysed by strong acids; evidence for the existence of sulphonyl cations $(R{\cdot}SO_2^+)$. H. Burton and H. B. Hopkins. Chem Soc J p4457-61 N '52

SULFOXIDES

Stereochemistry of Raney nickel action; the optical course of sulfoxide desulfuration. W. A. Bonner. bibliog Am Chem Soc J 74:5089-90 O 20 '52

2 : 2′ : 4 : 4′-Tetranitrodiphenyl sulphoxide and 2 : 2′ : 4 : 4′-tetranitrodiphenyl sulphone. H. Bradbury, F. J. Smith and F. A. Talman. Chem Soc J p 1184-6 Ap '53

SULFUR

Corrosion of iron and steel by aqueous suspensions of sulphur. T. W. Farrer and F. Wormwell. bibliog Chem & Ind p 106-7 Ja 31 '53

Easy ways you can strain-test sulfur-compound pipe jointing. W. J. Eney and others. Il Eng N 149:38 O 16 '52

SULFUR—*Continued*

Effect of dissolved sulphur on the surface tension of liquid copper. C. F. Baes, jr. and H. H. Kellogg. bibliog diags J Metals 5:Trans 643-8 My '53

ph of sulfur. J. E. Baer. Chem & Eng N 31: 1904-5 My 4 '53

Infrared spectra of oriented rhombic sulfur crystals with polarized radiation. G. M. Barrow. bibliog diags J Chem Phys 21:219-22 F '53

Iron sulfide ores; Minnesota ores may yield new sulfur, manganese sources. Iron Age 171:141 F 19 '53; Mech Eng 75:326 Ap '53

Optical absorption of sulfur. A. M. Bass. bibliog J Chem Phys 21:80-2 Ja '53

Papermakers challenge the sulfur shortage; cheap source of sulfur dioxide in spent oxide and dirty sulfur. S. Schwartz. flow diag Paper Tr J 136:18-19 Ja 30 '53

Preliminary magnetic study of purple sulfur. T. Freund and others. J Chem Phys 21:180 Ja '53

Processed spent oxide hailed as sulfur source. R. S. Aries. Paper Ind 34:964 N '52

Purple sulfur, a new allotropic form. F. O. Rice and C. Sparrow. bibliog Am Chem Soc J 75:848-50 F 20 '53

Reactions of toluic acids with sulfur; stilbenedicarboxylic acids. W. G. Toland, jr., J. B. Wilkes and F. J. Brutschy. bibliog Am Chem Soc J 75:2263-4 My 5 '53

Sulphur, 1952. L. M. Williams, jr. Eng & Min J 154:106-7 F '53

Sulphur surface treatment increases wear resistance; Sulfinuz. Automotive Ind 109: 109-10 O 1 '53

Synthesis of acetomorpholide and thioacetomorpholide from morpholine and sulfur. N. O. Brace. Am Chem Soc J 75:357-8 Ja 20 '53

Use of sulphur in kraft pulp mills. J. E. Vassie. Tappi 36:367-8 Ag '53

See also

Gas, Natural—Sulfur content

Gasoline—Sulfur content

Iron—Sulfur content

Oil fuel—Sulfur content

Petroleum—Sulfur content

Petroleum refining—Sulfur removal

Steel—Sulfur content

Vulcanization

Analysis

Determination of sulfur in petroleum distillates by X-ray absorption. A. Y. Mottlau and C. E. Driesens, jr. Anal Chem 24: 1852-4 N '52

Determination of sulfur in the presence of halogens. R. R. Jay. Pet Eng 25:C49 Ja '53

Elemental sulfur in crude oil. B. H. Eccleston, M. Morrison and H. M. Smith. bibliog diag Anal Chem 24:1745-8 N '52

Estimation of elemental sulfur by ultraviolet absorption. N. G. Heatley and E. J. Page. Anal Chem 24:1854 N '52

Gravimetric determination of sulphur in basic steelmaking slags. Iron & Steel Inst J 174: 28-30 My '53

How to obtain free sulfur in LPG. J. H. Shively and H. Levin. Pet Processing 8:913 Je '53

New technique for polarography of water-insoluble compounds. G. E. O. Proske. bibliog Anal Chem 24:1834-6 N '52

Photonephelometric microdetermination of sulfate and organic sulfur. G. Toennies and B. Bakay. bibliog Anal Chem 25: 160-5 Ja '53

Polarographic determination of reducible sulphur in paper. L. Gordon and others. diags Tappi 36:204-6 My '53

Recent developments in quantitative organic microanalysis. W. Kirsten. bibliog(62 ref) il diags Anal Chem 25:74-86 Ja '53

Spectrophotometric determination of aliphatic sulfides. S. H. Hastings. Anal Chem 25:420-2 Mr '53

Stoichiometric combustion method for the determination of sulphur in slags. C. J. B. Fincham and F. D. Richardson. Iron & Steel Inst J 172:53-5 S '52

Isotopes

Diffusion in liquid sulfur. R. L. Saxton and H. G. Drickamer. diag J Chem Phys 21: 1362-3 Ag '53

Effect of pressure on diffusion in CS_2 organic mixtures. R. C. Koeller and H. G. Drickamer. bibliog J Chem Phys 21:575-88 Ap '53

Effect of pressure on diffusion in liquid sulfur. D. R. Cova and H. G. Drickamer. diag J Chem Phys 21:1364-5 Ag '53

Magnetic moments of Si^{29}, S^{33}, Zn^{67}, As^{75}, Se^{77}, Te^{123}, and Te^{125}. H. E. Weaver, jr. bibliog il diags Phys R 89:923-30 Mr 1 '53

Nuclear quadrupole resonance in rhombic sulfur and the quadrupole moments of S^{33} and S^{35}. H. G. Dehmelt. bibliog Phys R 91: 313-14 Jl 15 '53

States of S^{33} and Si^{29} from (d,p) stripping. J. R. Holt and T. N. Marsham. Phys R 89: 665-6 F 1 '53

Tracer studies on the formation of sulfur from hydrogen sulfide and sulfur dioxide in aqueous solutions. H. B. van der Heijde and A. H. W. Aten, jr. bibliog Am Chem Soc J 75:754-5 F 5 '53

Manufacture

Construction continues apace on new sulfur plant. il Chem & Eng N 30:4486-7 O 27 '52

Frasch heads South. map Chem Eng 60:128+ Ja '53

Fuel research and sulphur recovery; work of the Fuel research board in 1951. il Chem Age (Lond) 67:623-6 N 8 '52

Making sulphur recovery pay; modified Claus process. il Chem Eng 60:138+ F '53

Marcus Hook refinery gets sulphur from sour gases. Chem Eng 60:150+ Mr '53

Mexico's sulfur recovery plant ranks second largest in the world. S. Schwartz. il Pet Refiner 32:95-6 F '53

Seaborne plant drops anchor. il map Chem W 71:68-9+ O 18 '52

Sulphur from H_2S; pictured flow sheet. Chem Eng 59:210-13 O '52

Sulphur process by Mines branch, Ottawa uses iron sulphide sources. A. F. G. Cadenhead. Can Chem Process 37:106 S '53

Sulphur recovery from low-grade surface deposits. T. P. Forbath. bibliog il Min Eng 5:Trans 881-5 S '53

Sulfur recovery; Girdler corp. flow diag Pet Refiner 31:254-5 S '52

Sulfur-recovery plant at Keystone has capacity of 15 tons daily. D. H. Huff and R. A. Graff. flow diag il Oil & Gas J 51:118-19+ F 16 '53

Sulfur recovery practices in oil industry. R. A. Graff. bibliog flow charts il Pet Eng 25:C19+ Ap '53

Sulphur solidification apparatus announced. S. Schwartz. Pulp & Pa of Can 54:204 Je '53

Sulfur via the belt line. D. P. Thornton, jr. il Pet Processsing 8:389-91 Mr '53

Transportation

Tank barge to carry sulphur from mines to acid plant. Chem Eng 59:236 N '52

SULFUR, Liquid

Diffusion in liquid sulfur. R. L. Saxton and H. G. Drickamer. diag J Chem Phys 21: 1362-3 Ag '53

Effect of pressure on diffusion in liquid sulfur. D. R. Cova and H. G. Drickamer. diag J Chem Phys 21:1364-5 Ag '53

Friction loss of molten sulphur in pipe; data sheet. Pulp & Pa of Can 54:143 Je '53

Metering liquid sulfur. E. S. Boe, C. E. Butterworth and J. R. West. Chem Eng Prog 49:73-7 F '53

SULFUR bacteria

Bacterial attack on buried piping regarded as serious cause of rapid corrosion. C. G. Deuber. il Am Gas J 178:31+ F; 23+ Mr '53

Influence of ferrous iron on bacterial corrosion. M. E. Adams and T. W. Farrer. bibliog J Ap Chem 3:117-20 Mr '53

Little bugs, big problems; causes and effects of the presence of sulfate reducing bacteria in oil field waters. O. B. Williams. il World Oil 136:170+ Je '53

SULFUR burners

Cooking acid preparation in the sulfite process. M. J. Barsalou. bibliog il diags Paper Tr J 135:135-8+ N 14 '52

SULFUR chlorides

Conductance of aluminum chloride in sulfuryl chloride on adding benzophenone or sulfur monochloride. A. R. Pray and C. R. McCrosky. bibliog Am Chem Soc J 74:4719-21 S 20 '52

Methylsulfur trichloride and analogous compounds. I. B. Douglass, K. R. Brower and F. T. Martin. bibliog Am Chem Soc J 74:5770-2 N 20 '52

SULFUR compounds

Effect of sulfur compounds in the causticizing equilibrium. K. A. Kobe and J. A. Wilkinson. bibliog il diags Ind & Eng Chem 45:307-12 F '53

Electric moments of some sulfur and selenium compounds. M. T. Rogers and K. J. Gross. bibliog Am Chem Soc J 74:5294-6 N 5 '52

Houdriforming reactions; studies with sulfur compounds. H. Heinemann, H. Shalit and W. S. Briggs. bibliog Ind & Eng Chem 45:800-2 Ap '53

Organometallic and organometalloidal fluorine compounds; trifluoromethyl derivatives of sulphur. G. A. R. Brandt, H. J. Emeléus and R. N. Haszeldine. Chem Soc J p2198-205 Je '52

See also

Mercaptans
Sulfides
Sulfonamides
Sulfones
Sulfur oxides
Sulfuric acid
Thionic acids

Analysis

Catalytic oxidation procedure for determining sulphur compounds in kraft mill cases. H. W. Bialkowsky and G. G. DeHaas. bibliog diag Pulp & Pa of Can 53:99-105 O '52; Same. Tappi 36:330-6 Jl '53

SULFUR dioxide

Activity of solid catalysts. W. B. Argo and J. M. Smith. bibliog flow diag diag Ind & Eng Chem 45:298-302 F '53

Chlorine dioxide generation by reduction of sodium chlorate with sulphur dioxide. J. B. Heitman. bibliog flow diag il Tappi 36:419-23 S '53

Continuous updraft sintering recovers more SO_2 for smelter. W. R. Burrow. il diags Eng & Min J 153:90-4 N '52

Formation of dithionate and sulfate in the oxidation of sulfur dioxide by manganese dioxide and air. A. E. Back and others. bibliog pl U S Bur Mines Rep of Invest 4931:1-14 '52

High-temperature corrosion rates of several metals with hydrogen sulfide and sulfur dioxide. M. Farber and D. M. Ehrenberg. bibliog flow diag il diag Electrochem Soc J 99:427-34 O '52

Mechanism of sulphur dioxide absorption in aqueous media. R. P. Whitney and others. bibliog Tappi 36:172-5 Ap '53

Operating engineer looks at the common refrigerants. E. L. Forbes. Refrig Eng 60:1182-4+ N '52

Papermakers challenge the sulfur shortage; cheap source of sulfur dioxide in spent oxide and dirty sulfur. S. Schwartz. flow diag Paper Tr J 136:18-19 Ja 30 '53

Reduction of chromium wastes by sulfur dioxide. H. B. Channon. Sewage & Ind Wastes 25:923-9 Ag '53

Relative effect of traces of hydrogen sulfide and sulphur dioxide on the corrosion of copper. J. Byrne and others. Blast F & Steel Pl 41:780-1 Jl '53

Sulfite pulping sulfur dioxide preparation. E. C. Uebrick. il diags Paper Tr J 135:153-7 N 14 '52

Tracer studies on the formation of sulfur from hydrogen sulfide and sulfur dioxide in aqueous solutions. H. B. van der Heijde and A. H. W. Aten, jr. bibliog Am Chem Soc J 75:754-5 F 5 '53

Analysis

Analysis of sulfuric acid contact plant exit gas; critical review of analytical methods for acid mist and sulfur dioxide. J. B. Lombardo. bibliog(110 ref) diags Anal Chem 25:154-60 Ja '53

Determination of sulfur dioxide by color-changing gels. G. D. Patterson, jr. and M. G. Mellon. bibliog Anal Chem 24:1586-90 O '52

Polarographic analysis using flowing samples; continuous automatic measurement of sulfur dioxide in corn steep liquor. L. D. Wilson and R. J. Smith. diags Anal Chem 25:334-6 F '53

Problems encountered in field use of Thomas autometer. P. M. Giever. A M A Archives Ind Hygiene & Occup Med 6:445-9 N '52

Sulphur recovery improved by tail-gas analyzer. A. P. Massa. diag Chem Eng 60:173 F '53

Manufacture

SO_2 by fluidization; pictured flow sheet. Chem Eng 60:238-41 Ja '53

Physiological effect

Death after repeated exposures to refrigerant gases. J. Mendeloff. bibliog il A M A Archives Ind Hygiene & Occup Med 6:518-24 D '52

SULFUR dioxide, Liquid

Hi-purity liquid SO_2 from roaster gases; Chemical Engineering pictured flow sheet. Chem Eng 60:274-7 Ap '53

Manufacture

C-I-L set-up for dreaming. Can Chem Process 36:14+ N '52

Plaudits for the persistent; liquid sulfur dioxide plant in Canada. map Chem W 71:46+ N 15 '52

SO_2 unit on stream. il Can Chem Process 36:44+ N '52

$2 million sulfur dioxide plant begins operation in Ontario. Paper Ind 34:1100+ D '52

SULFUR fluoride

Bond moments and derivatives in CF_4, SiF_4, and SF_6 from infrared intensities. P. N. Schatz and D. F. Hornig. bibliog diags J Chem Phys 21:1516-30 S '53

Electron diffraction study of disulfur decafluoride. R. B. Harvey and S. H. Bauer. bibliog Am Chem Soc J 75:2840-6 Je 20 '53

SULFUR hexafluoride

Calculation of some electronic energy levels of sulfur hexafluoride. A. B. F. Duncan. bibliog J Chem Phys 20:951-60 Je '52

Dielectric breakdown of sulfur hexafluoride in nonuniform fields; abstract. C. N. Works and T. W. Dakin. Elec Eng 72:624 Jl '53

Formation of negative ions of sulfur hexafluoride. A. J. Ahearn and N. B. Hannay. bibliog J Chem Phys 21:119-24 Ja '53

Investigation of the arc-quenching behavior of sulphur hexafluoride; abstract. H. J. Lingal and others. Elec Eng 72:335 Ap '53

SULFUR industry and trade

Brimstone stakes new claims. Bsns W p 186+ O 25 '52

Demand and supply. Tech R 55:306-7 Ap '53

First quarter export quotas set for crude and refined sulfur. For Comm W 49:22 Ja 5 '53

Is there a sulfur shortage? map Chem & Eng N 31:1968-70 My 11 '53

Licensing distinctions removed on agricultural sulfur quota. For Comm W 48:20 D 29 '52

Non-metallics; with tabulation, estimated new free world sulphur production, 1952-55. Eng & Min J 154:164-5 Jl '53

Second-quarter sulfur export quotas set. For Comm W 49:32 Mr 23 '53

Sulphur, acid; enough again. Chem Eng 60:190-1 Mr '53

Sulfur export quotas established. For Comm W 50:28 Jl 20 '53

Sulphur, 1952. J. C. Carrington. il Min Cong J 39:79-81 F '53

Sulphur productive capacity increased 900,000 tons. Paper Tr J 136:18 Ja 2 '53; Paper Ind 34:1221-2 Ja '53

Sulphur use limitations revoked because of betterment in supply. Oil Paint & Drug Rep 162:3+ N 10 '52

Sulphur world quota system is continued. Oil Paint & Drug Rep 162:3+ D 29 '52

Sulphuric acid target set; sulphur goal cut. Oil Paint & Drug Rep 163:3+ Ja 12 '53

Texas Gulf vs. Freeport Sulphur. H. L. Blackburn. Mag of Wall St 91:536+ F 7 '53

SULFUR industry and trade—*Continued*

Canada

Canada to cut imports of sulphur from U.S. J. Montagnes. Barron's 33:10 Jl 6 '53

Expanding sulphur picture. Can Chem Process 37:24+ S '53

Mills develop sulphur supply in Canada. Ed & Pub 86:11 Ap 11 '53

Sulphur and pyrites in Canada; abstract. T. H. Jones. Pulp & Pa of Can 53:108 D '52

Europe

Sulphur deficit seen continuing in Europe. Oil Paint & Drug Rep 162:3+ N 17 '52

Great Britain

Relaxing sulphur controls. Economist 166: 601 F 28 '53

Greece

Sulfur development planned in Greece. For Comm W 48:21 D 22 '52

Mexico

Mexican sulfur fever. map Chem W 72:12 Ja 3 '53

Mexico challenges sulphur shortage. S. Schwartz. bibliog il Eng & Min J 154:77-9 Je '53

SULFUR mines and mining

Subaqueous mining

Freeport mines sulphur by boat and barge at Bay Ste Elaine. K. T. Price. il Eng & Min J 153:98-102 D '52

New drilling barge for sulfur exploration. W. F. Rose. il Oil & Gas J 51:108-9 O 6 '52

Problem; build this sulfur plant in swamp; Freeport's Bay Ste Elaine operation. il Bsns W p48-50 N 22 '52

Seaborne plant drops anchor. il map Chem W 71:68-9+ O 18 '52

Sulphur development offshore needed; Manufacturing chemists association statement. Oil Paint & Drug Rep 163:3+ Je 1 '53

Sulphur offshore bill gets Senate approval. Oil Paint & Drug Rep 163:3+ Je 29 '53

Sulphur offshore legislation routed to Senate. Oil Paint & Drug Rep 163:3+ Je 22 '53

Sulphur plant makes voyage; amphibious mining plant positioned over Louisiana marshland sulphur deposit. il Eng N 149:25 O 9 '52

Sulphur plant that floats in production. il Min Cong J 39:66 Ja '53

Minnesota

Investigation of iron sulfide deposits in southcentral Aitkin county and Carlton county, Minn. J. Pennington and V. C. Davis. 7pls U S Bur Mines Rep of Invest 4937:1-33 '53

Utah

Cove Creek sulphur. C. R. King. flow sheet il Min Eng 5:375-8 Ap '53

SULFUR nitride

Vibrational spectra and structure of nitrogen tetrasulfide. E. R. Lippincott and M. C. Tobin. bibliog diags J Chem Phys 21:1559-65 S '53

SULFUR oxides

Air-preheater design as affected by fuel characteristics. H. Karlsson and W. E. Hammond. bibliog il diags A S M E Trans 75: 711-18; Discussion. 718-22 Jl '53

Extent of dimerization of sulfur monoxide. E. A. Evans, A. B. Scott and J. L. Huston. bibliog diag Am Chem Soc J 74:5525-7 N 5 '52

Flue gas removal of sulphur oxides; no commercially successful recovery so far. Chem Age (Lond) 67:827-9 D 20 '52

Removal of oxides of sulphur from flue gases. R. L. Rees. bibliog Engineer 194:842-4 D 19 '52; Abstracts. Elec J 149:1931-2 D 19 '52; Elec R (Lond) 151:1340 D 19 '52

Thermodynamics of some simple sulfur-containing molecules. W. H. Evans and D. D. Wagman. bibliog(56 ref) J Res Nat Bur Stand 49:141-8 S '52

See also
Sulfur dioxide
Sulfur trioxide

SULFUR trioxide

Evidence for α-sulfonation in the reaction of palmitic acid with sulfur trioxide. J. K. Weil, L. P. Witnauer and A. J. Stirton. bibliog Am Chem Soc J 75:2526-7 My 20 '53

Methanesulphonic acid-sulphur trioxide complex; detection by Raman spectroscopy. I. Sandeman. Chem Soc J p 1135-8 Ap '53

Rotations within crystalline trimethylamine sulfur trioxide. H. Shimizu and D. McLachlan, jr. bibliog diags Am Chem Soc J 75:4352-4 S 5 '53

Separation of mixtures with triethylamine-sulfur trioxide. W. B. Hardy and M. Scalera. Am Chem Soc J 74:5212-14 O 20 '52

Solutions in sulphuric acid; the electrical conductivity of the water-sulphur trioxide system in the region of the composition of sulphuric acid. R. J. Gillespie and S. Wasif. diags Chem Soc J p204-8 Ja '53

SULFURIC acid

Action of sulfuric acid and oleum on carbamic esters. T. I. Bieber. bibliog Am Chem Soc J 75:1409-12 Mr 20 '53

Action of sulfuric acid on isocyanic esters. T. I. Bieber. bibliog Am Chem Soc J 75: 1405-8 Mr 20 '53

Anion-exchange studies; separation of sulfuric acid from metal sulfates by anion exchange. K. A. Kraus, F. Nelson and J. F. Baxter. Am Chem Soc J 75:2768-70 Je 5 '53

Anodic behavior of iron in H_2SO_4. J. H. Bartlett and L. Stephenson. bibliog diag Electrochem Soc J 99:504-12 D '52

Anomerization of sugar acetates; glucose pentaacetates in acetic acid-acetic anhydride mixtures catalyzed by sulfuric and perchloric acids. E. P. Painter. bibliog Am Chem Soc J 75:1137-46 Mr 5 '53

Aromatic nitration; the ultraviolet spectra of aromatic nitro compounds in sulfuric acid. G. S. Hammond and F. J. Modic. bibliog Am Chem Soc J 75:1385-8 Mr 20 '53

Aromatic sulphonation; correlation of the velocity of sulphonation with the *J*-function of sulphuric acid. J. C. D. Brand and W. C. Horning. Chem Soc J p3922-7 O '52

Basicity of hydrocarbons; cryoscopy of conjugated hydrocarbon and carbinol solutes in sulphuric acid. V. Gold, B. W. V. Hawes and F. L. Tye. diag Chem Soc J p2167-72 Je '52

Basicity of hydrocarbons; ultra-violet absorption spectra of conjugated hydrocarbons in sulphuric acid solution. V. Gold and F. L. Tye. Chem Soc J p2172-80 Je '52

British sulphuric acid industry; in retrospect and with a research prospect; abstract. A. Fleck. Chem & Ind p 1127-8 N 15 '52

Chart shows corrosion of copper bearing Ni-resist by H_2SO_4 as function of temperature and concentration. M. G. Fontana. Ind & Eng Chem 45:sup91A-2A+ Mr '53

Corrosion resistance to H_2SO_4 under nonoxidizing conditions. M. G. Fontana. Ind & Eng Chem 45:sup93A-5A Ap '53

Cryoscopic constants of dissociating solvents (with special reference to nitric and sulphuric acids). P. A. H. Wyatt. Chem Soc J p 1175-80 Ap '53

Decomposition of sulphuric acid in town's gas flames. R. F. Littlejohn and G. Whittingham. diags Chem Soc J p3304-8 Ag '52

Dielectric dispersion in sulphuric acid. J. C. D. Brand, J. C. James and A. Rutherford. diags Chem Soc J p2447-56 Ag '53

Effect of alkali and strong acid on the ultraviolet absorption spectrum of lignin and related compounds. O. Goldschmid. bibliog Am Chem Soc J 75:3780-3 Ag 5 '53

Effects of air agitation in sulfuric acid anodizing. R. C. Spooner. il diag Metal Finishing 51:78-81 Mr '53

Electrolytic reduction of perrhenate; studies in sulfuric acid. P. Wehner and J. C. Hindman. bibliog Am Chem Soc J 75:2873-7 Je 20 '53

Evidence for preferential one-step divalent changes in the molybdate-catalyzed reduction of perchlorate by stannous ion in sulfuric acid solution. G. P. Haight, jr. and W. F. Sager. bibliog Am Chem Soc J 74: 6056-9 D 5 '52

SULFURIC acid—*Continued*

Freezing point curves of concentrated aqueous sulfuric acid. J. E. Kunzler and W. F. Giauque. bibliog Am Chem Soc J 74:5271-4 N 5 '52

Hydrogen isotope exchange between anthracene and sulfuric acid. V. Gold and F. A. Long. bibliog Am Chem Soc J 75:4543-7 S 20 '53

Influence of potassium dichromate on stainless steel in deaerated sulphuric acid. I. D. G. Berwick. Chem & Ind p408-9 Ap 25 '53

Interaction of triphenylmethanol, fluoren-9-ol, and diphenylmethanol with hydrazoic acid in the presence of sulphuric acid. C. L. Arcus and R. J. Mesley. Chem Soc J p 178-81 Ja '53

Ionisation of guanidine and of amino-acids in sulphuric acid. G. Williams and M. L. Hardy. Chem Soc J p2560-3 S '53

Ionization of saturated *n*-aliphatic dicarboxylic acids in sulphuric acid. L. A. Wiles. Chem Soc J p996-7 Mr '53

Kinetics and mechanism of aromatic nitration; variation of the rate of aromatic nitration in sulphuric acid media with composition of the solvent. R. J. Gillespie and D. G. Norton. Chem Soc J p971-9 Mr '53

Kinetics and mechanism of methyl-silicon cleavage by sulfuric acid. L. H. Sommer, W. P. Barie and J. R. Gould. Am Chem Soc J 75:3765-7 Ag 5 '53

Nitration in sulphuric acid; kinetics of nitration of the trimethylphenylammonium ion. T. G. Bonner, F. Bowyer and G. Williams. Chem Soc J p3274-80 Ag '52

Nitration in sulphuric acid; the rates of nitration of nitrobenzene and pentadeuteronitrobenzene. T. G. Bonner, F. Bowyer and G. Williams. Chem Soc J p2650-2 S '53

Nitration of guanidine in sulphuric acid; kinetics of *N*-nitration of the guanidinium ion and denitration of nitroguanidine. G. Williams and R. J. J. Simkins. Chem Soc J p 1386-92 My '53

Nitration of guanidine in sulphuric acid; the reversible conversion of guanidine nitrate into nitroguanidine. R. J. J. Simkins and G. Williams. diag Chem Soc J p3086-94 Ag '52

Pickle liquor; new process recovers sulfate for reuse by steel mills. Iron Age 171:134 Ap 16 '53

Potentiometric study of the reduction by potassium iodide of potassium bromate in sulphuric and hydrochloric acid solutions. H. T. S. Britton and H. G. Britton. Chem Soc J p3887-92 O '52

Potentiometric titration of iodic acid with potassium iodide in sulphuric and hydrochloric acid solutions. H. T. S. Britton, R. E. Cockaday and J. K. Foreman. Chem Soc J p3877-9 O '52

Reactions of carboxylic acids in sulfuric acid. C. M. Welch and H. A. Smith. bibliog Am Chem Soc J 75:1412-15 Mr 20 '53

Reactions of some barbituric acid derivatives in concentrated sulfuric acid. E. W. Maynert and E. Washburn. bibliog Am Chem Soc J 75:700-4 F 5 '53

Reduction of atmospheric pollution from sulphuric acid recovery processes; abstract. N. W. Clauss. Nat Safety N 67:46+ Je '53

Reuse waste pickling liquors. A. G. Gray. diag Steel 132:130+ Ap 27 '53

Solubility and absorption spectrum of iodine in sulfuric acid solutions. J. G. Bower and R. L. Scott. bibliog Am Chem Soc J 75:3583-5 Jl 20 '53

Solubility of ferrous sulphate in aqueous solutions of sulphuric acid. W. Bullough, T. A. Canning and M. I. Strawbridge. J Ap Chem 2:703-7 D '52

Solutions in sulphuric acid; electrical conductivity measurements. R. J. Gillespie and S. Wasif. Chem Soc J p221-31 Ja '53

Solutions in sulphuric acid; the densities and viscosities of some sulphuric acid solutions. R. J. Gillespie and S. Wasif. Chem Soc J p215-21 Ja '53

Solutions in sulphuric acid; the electrical conductivity of solutions of hydrogen disulphates and the self-dissociation of sulphuric acid. R. J. Gillespie and S. Wasif. Chem Soc J p964-70 Mr '53

Solutions in sulphuric acid; the electrical conductivity of the water-sulphur trioxide system in the region of the composition of sulphuric acid. R. J. Gillespie and S. Wasif. diags Chem Soc J p204-8 Ja '53

Solutions in sulphuric acid; transport-number measurements. R. J. Gillespie and S. Wasif. diag Chem Soc J p209-15 Ja '53

Studies on cellulose acetate; combination of sulfuric acid during the acetylation of cellulose and the mechanism of acetylation. T. Araki. bibliog Textile Res J 22:630-6 O '52

Substitution in polymethylbenzenes; the course of the nitration of durene in sulfuric acid- chloroform mixtures. G. Illuminati and M. P. Illuminati. bibliog Am Chem Soc J 75:2159-61 My 5 '53

Sulphur, acid; enough again. Chem Eng 60:190-1 Mr '53

Sulphuric acid data from UK reported. Oil Paint & Drug Rep 163:5 Ap 13 '53

Sulfuric acid isomerization of methylalkanes, dimethylalkanes and dimethylcyclohexanes. A. K. Roebuck and B. L. Evering. bibliog Am Chem Soc J 75:1631-5 Ap 5 '53

Sulphuric acid target set; sulphur goal cut. Oil Paint & Drug Rep 163:3+ Ja 12 '53

Sulphuric triple play; Shell's alcohol plant helps make alumina and ammonium sulphate in Filtrol's new plant. il Chem Eng 59:226+ O '52

System $Al_2(SO_4)_3$-H_2SO_4-H_2O. D. Taylor and H. Bassett. Chem Soc J p4431-42 N '52

System $Cr_2(SO_4)_3$-H_2SO_4-H_2O. D. Taylor. Chem Soc J p2502-3 Ag '53

System $MnSO_4$-H_2SO_4-H_2O. D. Taylor. Chem Soc J p2370-5 Je '52

Systems ammonia-sulfamide and sulfuric acid-sulfamide. H. H. Sisler and D. M. Rosenbaum. diag Am Chem Soc J 74:6130-1 D 5 '52

Thermodynamics of aqueous 2-propanol-sulfuric acid solutions from electromotive force measurements. W. N. Whitten and J. E. Land. Am Chem Soc J 75:2202-4 My 5 '53

Two promising methods for recovering sulphuric acid from phosphogypsum. Can Chem Process 37:112 S '53

Use of sulphuric acid in a totally enclosed reaction system; abstract. J. L. Edgar. Chem & Ind p 16-17 Ja 3 '53

Vapour pressure of the system sulphuric acid-disulphuric acid. J. C. D. Brand and A. Rutherford. diag Chem Soc J p3916-22 O '52

Venting drum plug employing a carbon disk. T. W. Rodes. il diags Ind & Eng Chem 44:sup 137A-8A+ N '52

Analysis

Absolute sulfuric acid, a highly accurate primary standard. J. E. Kunzler. bibliog diags Anal Chem 25:93-103 Ja '53

Analysis of sulfuric acid and acid sludges from petroleum processes. F. T. Weiss and others. bibliog Anal Chem 25:277-84 F '53

Analysis of sulfuric acid contact plant exit gas; critical review of analytical methods for acid mist and sulfur dioxide. J. B. Lombardo. bibliog(110 ref) diags Anal Chem 25:154-60 Ja '53

Manufacture

Britain's first flash roasting plant; Titan Products. il Chem Age (Lond) 68:45-8 Ja 10 '53

British sulphuric acid industry; a retrospect and a research prospect. A. Fleck. bibliog il map diag Chem & Ind p 1184-93 D 6 '52

FluoSolids reactor at Alcan's Arvida plant centrally instrumented. il diag Can Chem Process 37:42+ Je 1 '53

Sulphuric acid in an enclosed system; use of sulphur derived from crude petroleum. J. L. Edgar. Chem Age (Lond) 67:797-9 D 13 '52

Sulphuric acid production at Silvertown; chemical firm's post-war reconstruction progress. il diag Chem Age (Lond) 68:371-3 Mr 7 '53

Theory of the Kachkaroff sulphuric acid process. S. Nordengren. bibliog diag Chem Age (Lond) 68:269-73 F 14 '53

SULFURIC acid—*Continued*

Physiological effect

Inhalation of sulfuric acid mist by human subjects. M. O. Amdur and others. bibliog A M A Archives Ind Hygiene & Occup Med 6:305-13 O '52

Statistics

Acid in abundance? with table of British production of sulphuric acid, 1949-1952. Economist 165:568 N 22 '52

British sulphuric acid industry; a retrospect and a research prospect. A. Fleck. bibliog il map diag Chem & Ind p 1184-93 D 6 '52

Sulphuric acid industry. Chem & Ind p 148 F 14 '53

Sulphuric acid, oleum data for UK. Oil Paint & Drug Rep 164:5 S 28 '53

SULFUROUS acid

Improvement of properties of bright nickel baths by means of sulfurous acid and sulfites; abstract. H. Komusaari. Metal Finishing 51:71 Jl '53

SULFURYL chloride

Conductance of aluminum chloride in sulfuryl chloride on adding benzophenone or sulfur monochloride. A. R. Pray and C. R. McCrosky. bibliog Am Chem Soc J 74:4719-21 S 20 '52

SULFURYL fluoride

Infrared spectrum of SO_2F_2. W. D. Perkins and M. K. Wilson. bibliog diags J Chem Phys 20:1791-4 N '52

SULLIVAN, Edward S.

U.S. Sullivans take over Ireland. pors Bsns W p 126-8+ Ap 25 '53

SULLIVAN, Sam

Laredo's writing shoe merchant. Fortune 47:165 Ja '53

SULTONES

Reactions of acrolein and related compounds; preparation of sultones. C. W. Smith, D. G. Norton and S. A. Ballard. bibliog Am Chem Soc J 75:748-9 F 5 '53

SULZER, Robert, 1873-1953

Sketch. por Engineer 196:18 Jl 3 '53; Engineering 176:21 Jl 3 '53

SULZER boiler. See Boilers—Sulzer boiler

SUMATRA

See also

Petroleum industry and trade—Sumatra

SUMMER

Looks like a hot summer. L. M. Balee. il Heating-Piping 25:85 My '53

SUMMER resorts

We built our agency insuring summer resorts. B. L. Boutin. Rough Notes 96:25+ Je '53

SUMMERFIELD, Arthur Ellsworth, 1899-

Business team in the post office. por Bsns W p98+ Je 27 '53

Eisenhower is still naming names. por(p29) Bsns W p30 D 6 '52

SUN

Proton-proton reaction and energy production in the sun. E. A. Frieman and L. Motz. bibliog Phys R 89:648-50 F 1 '53

See also

Eclipses, Solar
Radio noise, Solar
Solar power
Solar radiation
Spectrum, Solar

Corona

New giant telescopes in New Mexico will study sun's corona. il Elec Eng 71:1053-4 N '52

See also

Coronagraph

Spectrum

See Spectrum, Solar

SUN breaks

Concrete canopies pay for themselves. il Eng N 150:64 Ja 8 '53

SUN oil company

Five companies paying dividends in stock and cash; with comparative balance sheet items. Mag of Wall St 92:224 My 16 '53

Sun tells why it won't publish cost figures. W. W. Wright. Nat Pet N 44:27-30 S 24 '52

SUNCOOK. See Pembroke, New Hampshire

SUNDAY pictorial newspapers (1920) limited

Statement by the chairman. C. H. King. Economist 167:699-700 Je 6 '53

SUNLIGHT

Calculation of the polarization of a sunlit sky composed of pure air molecules. A. Hammad. Opt Soc Am J 43:184-7 Mr '53

Color in industrial wastes; effect of light on certain wastes. W. Rudolfs and W. D. Hanlon. Sewage & Ind Wastes 25:66-9 Ja '53

Conversion of sunlight into chemical energy available in storage for man's use. L. J. Heidt and A. F. McMillan. diag Science 117:75-6 Ja 23 '53

Effects of soils and sunlight on dilute concentrations of sodium pentachlorophenate. C. G. Dobrovolny and W. T. Haskins. Science 117:501-2 My 8 '53

Simple technique for investigating the effect of humidity on the fading and degradation of dyed fabrics by sunlight, and some observations on dyed cotton. D. Ashton and M. E. Probert. bibliog diags Textile Inst J Trans 44:T 1-11 Ja '53

SUNRAY oil corporation

Low-priced stocks headed for higher levels. J. S. Williams. Mag of Wall St 91:239 N 29 '52

Stock offered. Comm & Fin Chr 177:2134 My 18 '53

SUNRISE supermarkets corporation

Debenture and stock offering. Comm & Fin Chr 178:55 Jl 6 '53

SUPERCHARGERS

See also

Airplanes—Cabins—Supercharging
Automobile engines—Superchargers
Diesel engines—Superchargers

Maintenance and repair

Turbocharger maintenance. C. F. Harms. il diag Diesel Power 30:46-9 O '52

Manufacture

Supercharger rotors machined with good setups; Pesco products division of the Borg-Warner corp. G. E. Campbell. il Iron Age 170:100-1 O 2 '52

SUPERCONDUCTIVITY. See Electric conductivity

SUPERCONDUCTORS. See Electric conductors

SUPERCOOLING

Dielectric properties of supercooled liquids. G. N. Roberts. bibliog Am Chem Soc J 75:2264-6 My 5 '53

Study of the supercooling of drops of some molecular liquids. D. G. Thomas and L. A. K. Staveley. diags Chem Soc J p4569-77 D '52

Supercooling and dendritic freezing in alloys; abstract. W. C. Winegard and B. Chalmers. Metal Prog 64:202+ O '53

Ultrasonic velocity, density, and compressibility of supercooled H_2O and D_2O. R. T. Lagemann and others. bibliog J Chem Phys 21:819-21 My '53

SUPERHEATED steam

Hunter Machine's new Vapojet cloth dryer. il Mod Textiles Mag 34:47 My '53; Textile World 103:108 Je '53

Hydrothermal synthesis. G. W. Morey. bibliog diags Am Cer Soc J 36:279-85 S 1 '53

Superheated vs. saturated steam. T. W. Reynolds. diags Heat & Ven 50:84-6 Je '53

SUPERHEATERS

Application of additives to fuel oil and their use in steam-generating units. J. B. McIlroy and others. il diag Power 97:86-8 Mr '53

Laboratory investigation of superheater-tubing materials in contact with synthetic combustion atmospheres at 1350 F. C. J. Slunder and others. diag A S M E Trans 75:1015-19 Ag '53

Power relief valve aids superheater venting in h-p, h-t boiler start-ups. J. W. Mackenzie. il diag Power Eng 57:58-9+ Mr '53

Suction gas superheaters for Freon-12 systems. diags Heat & Ven 50:82-4 Mr; 127-8 Ap '53

Suction gas superheaters in refrigerant circuit; detail sheet. diags Heat & Ven 50:9-10 Mr '53

SUPERIOR, Lake

Shorelines of the glacial Great Lakes in Cook county, Minn. R. P. Sharp. bibliog maps diags Am J Sci 251:109-39, pl 1-2 F '53

SUPERIOR biochemicals of Canada

Toward greater Canadian production. il Can Chem Process 36:83 S '52

SUPERMALLOY

Gyromagnetic ratio of supermalloy. G. G. Scott. Phys R 89:618 F 1 '53

SUPER MARKET institute

Sizing up a retailer. Bsns W p52+ My 23 '53

Supermarkets. Bsns W p58-9 Je 6 '53

SUPERMARKETS. See Market stores

SUPERSATURATION

Condensation of nitrogen in a hypersonic nozzle. W. W. Willmarth and H. T. Nagamatsu. bibliog il J Ap Phys 23:1089-95 O '52

Diffusion in supersaturated solutions; glucose solutions. J. K. Gladden and M. Dole. bibliog Am Chem Soc J 75:3900-4 Ag 20 '53

SUPERSONIC waves. See Ultrasonic waves

SUPERSONIC wind tunnels. See Wind tunnels

SUPERVISORY workers

ABC's of supervision. Oil & Gas J 51:121-8+ F 16 '53

Case study in testing supervisors. M. L. Rock. Personnel 29:170-4 S '52

Developing managerial talent is a continuing process; report of panel on manufacturing management. S A E J 61:32-4 S '53

Economic education of supervisors. M. M. Blair. World Oil 135:73-5 O '52

How boiler supervisors can educate themselves for other positions; report of Master boiler makers' association. Ry Mech & Elec Eng 126:62-3 N '52

How do you rate as a drilling supervisor? sample test for self-appraisal. il Oil & Gas J 51:172-3 S 29 '52

How GE picks a new boss. J. M. Bertotti. Textile World 103:132-3+ S '53

How supervisors can communicate better. K. Davis. Personnel J 31:417-20 Ap '53

How to give orders. A. E. Schneider. Mill & Factory 51:93 O '52

How to select better supervisors; abstract. M. Radom. Paper Tr J 136:45 Ap 17 '53

If you want subordinates to grow train 'em to delegate responsibility. L. F. Zerfoss. Factory Management 111:262+ S '53

Incentives for supervisors; case studies. R. S. Rice and others. Factory Management 111: 96-105 Jl '53

Influence; a key to effective leadership in the first-line supervisor. D. C. Pelz. Personnel 29:209-17 N '52

Job evaluation for management and supervisory positions. J. A. Keller. Paper Ind 35:670 S '53

Leadership test; how a canny Scot proved its value. Factory Management 110:226+ D '52

Let supervisors participate. F. E. Mathews. Pet Refiner 32:217-18 My '53

Management development plan for utilities. T. E. Hurns. Pub Util 52:416-24 S 24 '53

Outlook for women as food-service managers and supervisors. A. W. Mitchell. il U S Women's Bur Bul 234-2:1-54 bibliog(p52-4); pa 20c Supt. of doc. '52

Personnel; the job you can't avoid. M. J. Wise, jr. Textile World 103:181+ S '53

Put your own know-how to work in employee relations. F. A. Cook. Textile World 103: 139+ Jl '53

Role of the supervisor in safety work. W. H. Senyard. Elec Eng 72:391-3 My '53

Supervision's part in effective cost control. A. C. Croft. Iron & Steel Eng 30:107-9 Je '53

Supervisor and his job. R. M. Rice. Textile World 103:71-2+ Ap '53

Supervisor's part in management development. F. T. De Vyver. Textile World 103: 153+ Je '53

Supervisor's role in industrial relations program. J. C. Arnell and others. il Elec World 138:119-42 N 17 '52

Supervisors' support asked to help bring about better labor relations. W. J. Kenefick. Elec World News ed 138:44 S 29 '52

These ideas can help you get cooperation from your workers. M. A. Cross. Textile World 103:136+ Ap '53

Urge new status for supervisors as transit takes fight to Congress. Bus Transportation 32:50 My '53

What makes a good supervisor? V. E. McCoy. il Ry Age 133:94-7 N 3 '52

What the supervisor can do about labor turnover. M. J. Wise, jr. Textile World 103: 143+ O '53

Where do you stand? D. J. Wood. Mill & Factory 52:75-8 Je '53

See also

Foremen

Sales managers

Rating

Supervisors don't criticize enough. C. J. Lilley. Personnel J 31:209-12 N '52

Training

Baltimore & Ohio supervisory development program. Ry Age 133:40-2 D 22 '52

Case discussions and role playing pep up supervisor training. L. A. Allen. Mill & Factory 51:97-100 D '52

Don't blame your supervisors. J. H. Jordan. Personnel J 31:291-3 Ja '53

Forced leadership training. E. E. Jennings. Personnel J 31:176-9 O '52

How does industry train its supervisors? Mill & Factory survey. Mill & Factory 53:67-8 S '53

How management can do a better managing job; Cleveland transit system. Bus Transportation 32:36-7+ Mr '53

How to train supervisors. F. H. Willibrand. Oil & Gas J 51:321-2+ N 17 '52; Same. Am Pet Inst Proc 32(4):25-9; Discussion. 29-31 '52

Management education in a small company. V. C. Crisafulli and R. Simon. Personnel J 31:247-50 D '52

Materials handling training for supervisors. W. J. Grohs and R. W. Mallick. il Factory Management 110:84-7 N '52

Need a supervisor training program? L. A. Allen. il Mill & Factory 52:75-8 My '53

New approach to training in leadership and human relations. M. P. Miller. Textile World 103:139+ Ag '53

Personnel development at Pacific mills, limited. L. S. McGill. Pulp & Pa of Can 54: 90-4 Mr '53

Raising the level of management; a refresher course on supervisory and management duties; Leeds & Northrup co. C. R. Cary and H. H. Carey. Personnel 29:355-60 Ja '53

Republic's postgrad course. Bsns W p 121 F 28 '53

Role-playing as a practical training technique. W. G. O'Donnell. Personnel 29:275-89 N '52

Selection and development of first-line supervision; Fisher body division, General motors corp. R. R. Nordyke. Personnel 29: 321-32 Ja '53

Skills in conference leadership. N. Cantor. Personnel J 31:135-7 S '52

Supervisors crave more training; Ford motor co. D. G. Baird. Mill & Factory 51:128-9 N '52

Supervisors work overtime to build a sound management training program; Ryan aeronautical co. Mill & Factory 53:93 Jl '53

Supervisory development, research approach; Monsanto chemical co. B. P. Hazeltine and R. L. Berra. Personnel 30:60-7 Jl '53

Supervisory selection backwards; Cities service refining corporation gives training to every employee in your plant, then picks the best trainees. W. E. Bennett. il Factory Management 110:126-9 N '52

Three-step plan trains new supervisors; Carboloy department of General Electric. R. G. Brierley. il Am Mach 97:170-1 Mr 16 '53

Training men on own time; Ryan aeronautical co. Am Bsns 23:47-8 Mr '53

Training supervisors, for what? B. B. Lucas, jr. Coal Age 58:102-3 F '53

What's being done about supervisory training. M. P. Miller. Textile World 102:169+ N '52

Bibliography

Reading for supervisory training. M. E. Hunt, comp. (Business literature v. 26, no. 1) p65-6 Business library, Newark public lib, Newark, N.J. S '53

SUPPLY and demand
Elasticity of demand for the exports of a single country. F. B. Horner. R Econ & Stat 34:326-42 N '52
Measuring depression factors. W. I. King. Comm & Fin Chr 178:270 Jl 23 '53

SURETY and fidelity insurance. See Insurance, Surety and fidelity

SURETY association of America
Annual meeting, 45th, New York, May 14. Weekly Underw 168:1427 My 23 '53
Great pioneers of suretyship. East Underw 53:90+ D 12 '52

SURETYSHIP and guaranty
Arkansas revises contractors' bond provisions and engineer licensing law. Eng N 150:27-8 Ap 9 '53
Dangers of personal surety in probate cases reviewed. H. W. Nichols. Nat Underw 56:26 D 18 '52
Suretyship, a stabilizing factor in construction industry. E. R. Higgins. il Civil Eng 22:656-8+ S '52

SURFACE active substances
Adsorption of surface active materials in aerosol droplets. G. A. H. Elton. Chem & Ind p407 Ap 25 '53
Determination of surface active agents. G. R. Lewis and L. K. Herndon. bibliog Sewage & Ind Wastes 24:1456-66 D '52
Foaming of non-ionic surface active agents. M. N. Fineman, G. L. Brown and R. J. Myers. bibliog J Phys Chem 56:963-6 N '52
Improved apparatus for the study of foams. C. Walling, E. E. Ruff and J. L. Thornton, jr. bibliog diag J Phys Chem 56:989-93 N '52
P. J. Wood translation of J. P. Sisley's book. J. W. McCutcheon. Soap & San Chem 28:111 D '52
Polyhydroxyamine. Chem Eng 60:230+ F '53
Properties and uses of non-ionics. E. H. Wolfe and C. Marchant. Can Chem Process 37:46+ Jl '53
Quick cure for fertilizers. il Chem W 71:50-2 N 22 '52
Role of surface active agents in wetting. F. M. Fowkes. bibliog diags J Phys Chem 57:98-103 Ja '53
Soiling and soil retention in textile fibers; suspending power of surfactants. J. Compton and W. J. Hart. Ind & Eng Chem 45:597-602 Mr '53
Some unusual applications of synthetic surface-active agents; abstract. J. L. Moilliet. Chem & Ind p 1198 D 6 '52
Sorption of synthetic surface-active compounds by textile fibers. A. S. Weatherburn and C. H. Bayley. bibliog Textile Res J 22:797-804 D '52
Studies in the corrosion of metals occasioned by aqueous solutions of some surface-active agents. T. K. Ross and H. Holness. bibliog il J Ap Chem 2:520-31 S '52
Surface-active agents increase oil recovery. R. A. Caro and others. diag Oil & Gas J 51:62-3+ D 29 '52
Surface activity of naturally occurring emulsifiers. G. F. Dasher. bibliog Science 116:660-3 D 12 '52
Wettability in surface-active agent water flooding. T. F. Moore and H. A. Blum. bibliog il diags Oil & Gas J 51:108-9+ D 8 '52
See also
Shampoos
Wetting agents

SURFACE area of particles. See Particles

SURFACE phenomena
Applications of radiotracers to the study of surfaces. J. E. Willard. bibliog J Phys Chem 57:129-34 F '53
Exchange reaction between deuterium and ammonia on the surface of metal powders. J. R. Gutmann. bibliog diag J Phys Chem 57:309-12 Mr '53
Investigation of the surface reaction of oxygen with carbon on tungsten with the field emission microscope. R. Klein. bibliog il diag J Chem Phys 21:1177-80 Jl '53
Isotopic exchange rates as criteria of surface heterogeneity. R. P. Eischens. bibliog diag Am Chem Soc J 74:6167-71 D 20 '52
Kinetics of active centers in surface-catalyzed reactions. N. Thon and H. A. Taylor. bibliog Am Chem Soc J 75:2747-50 Je 5 '53
Kinetics of surface reactions in the case of interactions between adsorbed molecules. K. J. Laidler. bibliog J Phys Chem 57:318-19 Mr '53
Mechanisms of surface-catalyzed reactions; the parahydrogen conversion on tungsten. K. J. Laidler. bibliog J Phys Chem 57:320-1 Mr '53
Oxygen-induced surface conductivity on germanium. E. N. Clarke. Phys R 91:756-7 Ag 1 '53
Radioactive monolayers; a new approach to surface research. D. E. Beischer. bibliog il diag J Phys Chem 57:134-8 F '53
Spreading of liquid metals on solid surfaces; surface chemistry of high-energy substances. A. Bondi. diags Chem R 52:417-58 bibliog(p456-8) Ap '53
Surface chemistry of bone; the hydration shell. W. F. Neuman, T. Y. Toribara and B. J. Mulryan. bibliog diags Am Chem Soc J 75:4239-42 S 5 '53
Surface isomerisation; the surface-catalysed racemisation of 2-phenylbutane. A. G. Davies and G. A. H. Elton. Chem Soc J p3298-300 Ag '52
Surface properties of germanium. W. H. Brattain and J. Bardeen. diags Bell System Tech J 32:1-41 Ja '53
Transition layers on glass surfaces and their relation to alkali content. P. P. Sutton and others. J Chem Phys 21:1313-14 Jl '53
See also
Accommodation coefficients
Adsorption
Catalysis
Electric double layer
Films
Films, Metallic
Foam
Friction
Surface tension

SURFACE plates
Why don't we standardize surface-plate specs? R. J. Rahn. diags Am Mach 97:169 Je 8 '53

SURFACE tension
Alteration of surface properties of gold and silver as indicated by contact angle measurements. F. E. Bartell and J. T. Smith. bibliog diags J Phys Chem 57:165-72 F '53
Calculated surface tensions of some organic substances in the solid state. J. W. Mitchell and G. A. H. Elton. Chem Soc J p839-43 Mr '53
Critical micelle concentrations by a bubble pressure method. A. S. Brown and others. diag J Phys Chem 56:701-5 Je '52
Determination of the surface tension and viscosity of liquid chlorine trifluoride. A. A. Banks, A. Davies and A. J. Rudge. diags Chem Soc J p732-5 Mr '53
Effect of dissolved sulphur on the surface tension of liquid copper. C. F. Baes, jr. and H. H. Kellogg. bibliog diags J Metals 5:Trans 643-8 My '53
Experimental determination of the surface tension of magnesium oxide. G. Jura and C. W. Garland. bibliog Am Chem Soc J 74:6033-4 D 5 '52
Fluorinated esters; surface tension and parachor studies. R. Filler. bibliog Am Chem Soc J 75:3016-17 Je 20 '53
How surface tension affects flooding in packed columns. W. M. Newton and others. bibliog diag Pet Refiner 31:141-3 O '52
Measurement of surface tension of sewage. D. R. Bowers. bibliog Sewage & Ind Wastes 24:1069-76, 1447-55 S, D '52
Relationship of colloids to the surface tension of urine. R. A. Ravich. bibliog Science 117:561-3 My 22 '53
Surface tension at elevated temperatures; furnace and method for use of the sessile drop method; surface tension of silicon, iron and nickel. W. D. Kingery and M. Humenik, jr. bibliog diags J Phys Chem 57:359-63 Mr '53
Surface tension of liquid silicon and germanium. P. H. Keck and W. Van Horn. Phys R 91:512-13 Ag 1 '53
Surface tension of molten alkali borates. L. Shartsis and W. Capps. bibliog Am Cer Soc J 35:169-72 Jl 1 '52

SURFACES
Activity of fresh metal surfaces. Engineer 195:894-5 Je 26 '53
Analysis of multilayer gas adsorption isotherms using the concept of surface heterogeneity. J. M. Honig. bibliog J Phys Chem 57:349-51 Mr '53

SURFACES—*Continued*

Chemical behavior as influenced by surface condition; abstract. U. R. Evans. Metal Prog 63:134+ F '53

Condition for the creeping of a liquid past a mercury seal. R. S. Jessup. diags J Ap Phys 23:543-5 My '52

Contributions of the single surfaces to the diapoint coordinates. M. Herzberger. Opt Soc Am J 42:544-6 Ag '52

Crystalline character of abraded surfaces; abstract. P. Gay and P. Hirsch. Metal Prog 63:138+ F '53

Determination of surface geometry and structure by microscopy and diffraction. C. F. Tufts. bibliog il diags Anal Chem 24:1700-4 N '52

Development of stepwise isotherms on carbon black surfaces. M. H. Polley, W. D. Schaeffer and W. R. Smith. bibliog J Phys Chem 57:469-71 Ap '53

Electrical conductivity of mechanically disturbed germanium surfaces. E. N. Clarke and R. L. Hopkins. bibliog Phys R 91:1566-7 S 15 '53

Electron diffraction investigation of polished surfaces. T. S. Renzema. J Ap Phys 23:1412 D '52

Free surface properties of explosive-driven metal plates. R. G. Shreffler and W. E. Deal. il diags J Ap Phys 24:44-8 Ja '53

Influence of pickling on subsequent surface treatment such as plating, etc.; surface properties of pickled metals; abstract. R. Petri. Metal Finishing 51:79-80 Ag '53

Interaction of plane shock waves and rough surfaces. R. E. Duff. il diag J Ap Phys 23:1373-9 D '52

Interferometric examination of polished diamond surfaces. E. M. Wilks. il Opt Soc Am J 43:84-7 F '53

It will pay you to examine surface treatment methods. A. G. Gray. il Steel 132:92-4+ My 18 '53

Nature of the coefficient of friction. J. T. Burwell and E. Rabinowicz. bibliog diag J Ap Phys 24:136-9 F '53

Properties of freshly formed surfaces. C. C. Addison and D. Litherland. diag Chem Soc J p 1143-67 Ap '53

Relation between bond and the surface physics of masonry units. J. C. Thornton. il diags Am Cer Soc J 36:105-20 Ap 1 '53

Structure of metal surfaces; investigation of mechanically and electropolished surfaces by the electron microscope; abstract. H. Raether. Metal Finishing 51:81-2 O '53

Symposium on the properties of metallic surfaces. Engineering 174:689, 750-1, 797, 828-9 N 28, D 12-26 '52; Engineer 194:724-5, 758-9 N 28-D 5 '52

Thermodynamic functions for surfaces of crystals. S. H. Bauer. bibliog Am Chem Soc J 75:1004-5; Reply. 1006-7 F 20 '53

Use of the flying-spot scanner to study photosensitive surfaces. J. I. Pantchechnikoff and others. bibliog il diags R Sci Instr 23:465-7 S '52

Why study surface properties of paper materials; abstract. J. W. Beamesderfer. Paper Tr J 136:12 Je 5 '53

Why study the surface properties of materials of paper manufacture? abstract. E. F. Thode. Pulp & Pa of Can 54:136 Jl '53

See also

Adsorption
Bearing surfaces
Boundary value problems
Contact angle
Films
Glass—Surface
Metal finishing
Specific surface

Smoothness testing

How you can specify surface finishes. il diags Steel 132:74-8 Ja 19 '53

Piezo-electric element measures surface roughness. Product Eng 23:201 O '52

Pneumatic gauging applied to the measurement of surface finish. M. Graneek and H. L. Wunsch. diags Engineer 194:387-9 S 19 '52; Same. Engineering 175:505-7 Ap 17 '53

Surface-finish projector; Techne (Cambridge), limited. il diag Engineering 175:72 Ja 16 '53

Which method to evaluate surface roughness? I. Goldman. il diags Materials & Methods 36:89-93 D '52

SURGERY

Mechanical air drying of hands following preoperative scrubbing. P. E. Walker. Pub Health Rep 68:317-19 Mr '53

Psychological impact of cancer surgery. A. Sutherland. Pub Health Rep 67:1139-43 N '52

Surgical experiment; need for better techniques in use of surgical material and devices within the body. J. S. Barr. il Standardization 23:399-402+ D '52

See also

Fractures

SURGERY, Plastic

Plastic surgical closure of chronic open wounds of the leg. P. W. Greeley. Ind Med 22:22-3 Ja '53

See also

Skin grafting

SURGICAL instruments and apparatus

Heart and lung machine. il Engineer 196:150-1 Jl 31 '53

SURGICAL supplies

℞ for convenience; troubles with a saturating resin for casts are solved with a bag-in-a-can. il diags Mod Packaging 26:90-1+ Jl '53

SURGICAL sutures. See Sutures

SURINAM

Economic conditions

Economic conditions abroad. For Comm W 48:6 D 1 '52

SURPLUS products

See also

Machine tool industry—Surplus tools

SURVEYING

American congress on surveying and mapping 12th annual meeting, Washington, June 11-13. Science 116:681-2 D 19 '52

Well-elevation services and how they operate. C. M Davis. il maps Oil & Gas J 51:158-9 Ap 20 '53

See also

Magnetic surveying
Photographic surveying
Roads—Surveying
Topographical maps

SURVEYING, Aerial

Aerial photography pays off in Maryland. W. F. Childs, jr. il Pub Works 84:83-4 Ag '53

First air survey made for Costa Rica. il maps Pet Eng 24:B 12+ O '52

Geologists take to helicopters. Comp Air Mag 58:84 Mr '53

Rapid aerial survey of Gulf stream with camera and radiation thermometer. H. Stommel and others. Science 117:639-40 Je 5 '53

Snow surveys made on the wing. il Elec West 110:81 My '53

Waboden diary; story of magnetic storms vs airborne geophysicists. M. Briggs-Smith. il Eng & Min J 154:84-7 Mr '53

See also

Mapping, Aerial

SURVEYING instruments

Method of reconnaissance geological survey. J. V. Harrison. il Am Assn Pet Geologists Bul 36:2040-3 O '52

Suspension transit speeds surveying. il diag Coal Age 57:116 N '52

SURVEYORS' tape

Resistance thermometers in the 50 metre comparator at the National physical laboratory. J. S. Clark and L. O. C. Johnson. diag Engineer 196:260-1 Ag 28 '53

SURVIVAL (after airplane accidents, etc.)

Physiological aspects of prolonged flight at high altitudes and survival in emergencies. U. C. Luft. Aeronautical Eng R 12:56-60+ Ap '53

Survival worldwide. P. H. Nesbitt. Aeronautical Eng R 12:55 Mr '53

SUSPENSION bridges. See Bridges, Suspension

SUSPENSIONS

Flow of concentrated suspensions. P. S. Williams. J Ap Chem 3:120-8 Mr '53

Settling rate of suspensions in solids contact units. A. A. Kalinske. diags Am Soc C E Proc 79 [no 186]:1-8 Ap '53

Suspension polymerization of styrene. W. S. Kaghan and R. N. Shreve. bibliog il diag Ind & Eng Chem 45:292-7 F '53

SUSPENSIONS—*Continued*
Treatment of the viscosity of concentrated suspensions. R. Simha. bibliog J Ap Phys 23:1020-4 S '52

SUTHERLAND, Joseph Hollis
Everybody's Uncle Joe. G. Boyo. por Mod Textiles Mag 34:36+ Mr '53

SUTHERLAND paper company
Low-priced stocks headed for higher levels. J. S. Williams. Mag of Wall St 91:239 N 29 '52

SUTURES
New line for surgery. I. W. Sizer. il diags Tech R 55:255-8 Mr '53

SWAGING
Punching, swaging, and blanking in a progressive die. F. Strasser. diags Mach 59: 207-8 Ag '53
Swaged housing ring grooves to retain axial thrust bearings. C. H. Avery and A. G. Brisack. il diags Product Eng 23:149-52 N '52

SWAGING machines
Silent rotary swaging machine. il Engineer 194:123 Jl 25 '52; Engineering 174:153 Ag 1 '52

SWAMP buggy. See Motor trucks, Amphibious

SWASHPLATE mechanisms. See Mechanical movements

SWEATERS

Advertising

Grand'mère posts sold out sign after sweater queen contest. J. C. Cumming. il Sales Management 69:89-90+ O 15 '52

SWEDEN
See also
Aeronautics, Military—Sweden
Airplanes, Military—Sweden
Electric lines—Sweden
Forests and forestry—Sweden
Hydroelectric plants—Sweden
Iron mines and mining—Sweden
Medical service, Industrial—Sweden
Paper industry and trade—Sweden

Commercial policy

Controls on international trade. For Comm W 48:8 D 15 '52

Economic conditions

Economic conditions abroad (cont). For Comm W 48:3+ N 24 '52; 49:4+ F 2 '53
European competition strengthens as Korean boom fades. il Steel 131:76-7 D 8 '52
Sweden's economic prospects. Economist 167: 526-7 My 23 '53

Politics and government

Conservative revival in Sweden. Economist 165:110 O 11 '52

SWEDISH pottery. See Pottery, Swedish

SWEET potatoes
Effect of carbon monoxide on respiration in the sweet potato, ipomoea batatas Lan. G. C. Webster. bibliog Science 117:530-1 My 15 '53

SWEETENING agents
Corn sweeteners help processors in many ways. R. F. Cohee, jr. il Food Eng 25:74-6+ Je '53

SWELLING
Swelling and aggregation of colloid particles during the sol-gel transition. P. K. Katti. bibliog J Chem Phys 20:1980-1 D '52
Ultrasonic-wave study of swollen Buna-N rubber. A. W. Nolle and F. F. Mifsud. bibliog J Ap Phys 24:5-14 Ja '53
See also
Coal—Swelling
Rubber—Swelling
Textile fibers—Swelling

SWIMMING pools
Swimming pool classification program in West Virginia. R. S. Jacobson. Pub Health Rep 67:899-902 S '52
Waterstops water at Chicago pool. il diags Constr Methods 35:101-2 Ag '53

Lighting

Syracuse university swimming pool; illustrations with text. R. H. Goodman. Illum Eng 48:405 Ag '53

SWIMMING pools, Concrete
Simplification of construction cuts cost of swimming pool. H. M. McClure. il plan diags Am Bld 75:140-2+ F '53

SWIMMING suits. See Bathing suits

SWINDLERS and swindling
Con men at work; misuse of FHA-insured loans. Bsns W p 154 My 9 '53

SWINE
Antibiotics and endocrine stimulants as promoters of growth in fattening pigs. R. S. Barber and others. Chem & Ind p410 Ap 25 '53
Influence of procaine penicillin on the efficiency of food utilization by pigs. K. L. Robinson and others. Chem & Ind p 18-19 Ja 3 '53

Diseases

Anthrax in Ohio swine; abstract. H. G. Geyer. Pub Health Rep 67:982-3 O '52
Role of swine diseases in diseases of man; abstract. R. E. Shope. Pub Health Rep 67: 983-4 O '52

Feeding

Equipment for heat-treating garbage used for hog food. diags Pub Works 84:83-4+ My '53
Factors affecting cereals as a food. J. Duckworth. Chem & Ind p 1139-45 bibliog(134 ref, p 1144-5) N 22 '52
Highlights from APWA survey on swine feeding methods of garbage disposal. Pub Works 84:88 My '53
Many states may bar feeding raw garbage to swine. Pub Works 84:83-4 Mr '53

SWINNERTON, Allyn Coats, 1897-1952
Memorial. R. M. Garrels. bibliog por(pl 16) Geol Soc Proc 1952:143-5 Je '53

SWITCHBOARDS
Current limiting reactance calculator aids switchboard design; engineering reference sheet. A. Conangla. Elec World 138:127 D 1 '52
See also
Telephone switchboards

SWITZERLAND
See also
Electric apparatus industry—Switzerland
Hydroelectric plants—Switzerland
Income—Switzerland

Commercial policy

Controls on international trade. For Comm W 49:7 Ja 5 '53

Economic conditions

Economic conditions abroad (cont). For Comm W 48:6 N 17; 4 D 22 '52; 49:7 F 9; 50:4 Jl 20 '53

SWORDS
Japanese sword. F. D. McCorkle. il U S Naval Inst Proc 78:1354-5 D '52

SYDNONES
Cyclic meso-ionic compounds; further studies on the stereochemistry of the sydnones, with a description of a heterodyne capacitance meter for dielectric-constant measurements in the range 2-3. R. A. W. Hill and L. E. Sutton. diags Chem Soc J p 1482-90 My '53

SYLVANIA electric products, inc.
Shifting the weight at Sylvania. Bsns W p 114-15 My 2 '53

SYMBIOSIS
Algae symbiosis in oxidation ponds; growth characteristics of chlorella pyrenoidosa cultured in sewage. W. J. Oswald and others. bibliog Sewage & Ind Wastes 25: 26-37 Ja '53
Algae symbiosis in oxidation ponds; photosynthetic oxygenation. W. J. Oswald and others. bibliog diag Sewage & Ind Wastes 25:692-705 Je '53

SYMBOLS
Cycle charting, with handligs; quick new way to analyze and improve your materials handling methods. W. W. Phillips and S. W. Earle. Factory Management 111:105-7 Ag '53
Proposed revision of American standard letter symbols for aeronautical sciences. R. C. Hopgood. Aeronautical Eng R 12:41-55 Ja '53
See also
Electric symbols
Radio symbols

SYMONDS, Henry Gardiner, 1903-
Businessmen in the news. por Fortune 47: 37 Ja '53

SYMPATHOMIMETIC substances

Compounds containing the pyrrolidine ring; analogs of sympathomimetic amines. R. V. Heinzelman and B. D. Aspergren. bibliog Am Chem Soc J 75:3409-13 Jl 20 '53

SYMPHONY orchestras. See Orchestras

SYNAGOGS

Park Forest synagogue planned for expansion. il Arch Rec 112:374 O '52

SYNCHROCYCLOTRON. See Cyclotron

SYNCHRONIZERS

Fluid flow synchroniser. il diag Engineer 195:708 My 15 '53

SYNCHRONIZING

Demonstrator teaches synchronizing. E. M. Humphries. il diags Elec World 139:128-9 Ap 20 '53

Frame synchronization for color television. D. Richman. diags Electronics 25:146-50 O '52

Miller transitron; abstract. O. C. Wells. diag Electronics 26:246+ Ap '53

Paralleling synchronous frequency changers. H. H. Roth. il diags Iron & Steel Eng 30:113-15 Ja '53

See also

Synchroscope

SYNCHRONOGRAPH

Surge generator; portable, low-cost unit makes lightning stand still. J. M. Clayton. Iron Age 171:150 F 12 '53

SYNCHRONOUS condensers. See Electric capacitors

SYNCHRONOUS generators. See Electric generators, Synchronous

SYNCHRONOUS motors. See Electric motors, Synchronous

SYNCHROSCOPE

Cathode-ray synchroscope and automatic synchronizer; abstract. M. A.-H. Ahmed. diags Elec Eng 72:808 S '53

Testing

Synchroscopes quickly tested by disc transmission system. il Iron Age 170:219 N 6 '52

SYNCHROTRON

Characteristics of the synchrotron beam. M. Camac. diags R Sci Instr 24:290-7 Ap '53

Design and operation of a 30-Mev synchrotron. D. W. Fry and others. bibliog il diags Inst E E Proc 97 pt 1:305-19 N '50; Discussion. 97 pt 1:334-9; 100 pt 1:56-8 N '50, Mr '53

Far ultraviolet radiation from the Cornell synchrotron. P. L. Hartman and D. H. Tomboulian. Phys R 91:1577-8 S 15 '53

Focusing method for large accelerators. T. Kitagaki. diags Phys R 89:1161-2 Mr 1 '53

100 billion volts? Sci Am 187:41-2 N '52

Proton synchrotron at Birmingham university. il plans diags Engineer 195:271-4, 305-7 F 20-27 '53

Stability of orbits in a strong-focusing synchrotron. S. Lundquist. diags Phys R 91:981-3 Ag 15 '53

Strong-focusing synchroton, a new high energy accelerator. E. D. Courant and others. diags Phys R 88:1190-6 D 1 '52

SYNDETS. See Cleaning composition

SYNERGISM

Synergistic actions of carbon dioxide with DDT in the central nervous system. G. H. Pollock and R. I. H. Wang. bibliog Science 117:596-7 My 29 '53

SYNGE, Richard Laurence Millington, 1914-

Nobel awards point to chemistry as key to medical advances. por(cover) Chem & Eng N 31:155 Ja 12 '53

Nobel prize awards. por Chem Age (Lond) 67:664 N 15 '52

SYNNEMATIN

Separation of synnematin into components A and B by paper chromatography. B. H. Olson and others. il Science 117:76-8 Ja 23 '53

SYNTHESIS

Application of low-temperature processes to hydrogen-rich gases. J. S. Bardin and D. W. Beery. diags Pet Refiner 32:99-102 F '53

Autosynthesis. C. Hinshelwood. Chem Soc J p 1947-56 Je '53

Biosynthesis of estrone and β-estradiol in the perfused ovary. N. T. Werthessen and others. bibliog Science 117:380-1 Ap 10 '53

Biosynthesis of guayule rubber. India Rubber World 127:640+ F '53

Biosynthetic pathways; the biosynthesis of lysine by torulopsis utilis. M. Strassman and S. Feinhouse. bibliog Am Chem Soc J 75:1680-4 Ap 5 '53

Hydrothermal synthesis. G. W. Morey. bibliog diags Am Cer Soc J 36:279-85 S 1 '53

New urea synthesis process. W. F. Bland. flow diag il diags Pet Processing 7:1457-60 O '52

Phillips synthesize pyridines; Petrochemical plant opens new source of supply. J. M. Folz and others. flow diag il Pet Processing 7:1802-3 D '52

Studies in stereochemistry; the rule of steric control of asymmetric induction in the syntheses of acyclic systems. D. J. Cram and F. A. A. Elhafez. bibliog Am Chem Soc J 74:5528-35 D 5 '52

Sugar synthesis. R. U. Lemieux and G. Huber. Oil Paint & Drug Rep 164:58 S 14 '53

Synthesis of ammonia at low pressure. L. B. Hein. bibliog flow diag il diags Pet Processing 7:1462-7 O '52

Synthesis of fatty acids and fats in ripening oilseeds; abstract. T. F. Hilditch. Chem & Ind p320 Ap 4 '53

See also

Biological chemistry

Chichibabin synthesis

Fischer-Tropsch process

Hydrocarbons—Synthesis

Photosynthesis

SYNTHETIC detergents. See Cleaning compositions

SYNTHETIC organic chemical manufacturers association

MCA and SOCMA make plans for cooperative action. Chem & Eng N 30:5258 D 15 '52

Meeting, New York, March 11. Chem & Eng N 31:1190 Mr 23 '53

SYNTHETIC products

See also

Plastic materials

Resinous products

Rubber, Artificial

Textile fibers, Synthetic

SYPHILIS

Intrastate evaluations of syphilis serology. A. V. Hardy. Pub Health Rep 67:1036-8 O '5[illegible]

Obstacles to eradicating congenital syphilis. J. J. Wright and others. bibliog Pub Health Rep 67:1179-84 D '52

Selective case finding in syphilis control. G. Moore and M. T. Foster. bibliog Pub Health Rep 68:167-72 F '53

Would preassess state laws on premarital examination. P. K. Condit and A. F. Brewer. Pub Health Rep 68:136-7 Ja '53

Diagnosis

Capillary tube technique for serologic screening of syphilis. C. R. Freeble, jr. and B. Orsburn. Pub Health Rep 68:341-4 Mr '53

Reactivity of VDRL antigen suspensions made at various temperatures. P. Fugazzotto. Pub Health Rep 68:304-8 Mr '53

Venereal disease research laboratory Kahn, and Kolmer tests for syphilis. S. Olansky and others. Pub Health Rep 67:923-6 S '52

SYRACUSE, New York

Streets

How we get Florida streets in the winter. F. F. Harmon. il Pub Works 84:72-4 Ag '53

SYRIA

Commerce

Syrian exports and imports increase. For Comm W 49:2 Je 29 '53

Economic conditions

Economic conditions abroad. For Comm W 49:6 Je 15 '53

Politics and government

Prospects for Syria. map Economist 167:913-14 Je 27 '53

SYRINGES

Disposable injectables; pre-packaged parenterals in new throw-away syringes. il Mod Packaging 26:108-12+ Ja '53

High-speed injectables; one-shot syringe packaging of antibiotics. il diag Mod Packaging 26:94-5 Ag '53

SYSTOX. See Insecticides

SZILARD-CHALMERS reaction
Szilard-Chalmers reaction with inorganic compounds of iodine. R. E. Cleary, W. H. Hamill and R. R. Williams, jr. bibliog Am Chem Soc J 74:4675-9 S 20 '52

T

T-test. See Standard deviation

TCC process. See Gasoline—Manufacture

TABER, John, 1880-
Portrait. Bsns W p28 N 8 '52

TABLE coverings

Advertising

Fashion as reason for related selling is new theme of this advertiser; Simtex tablecloth. M. Beuick. il Ptr Ink 241:43-5 N 14 '52

TABLE mountain, South Africa
Floodlighting Table mountain. H. D. Einhorn. il map diag Illum Eng 47:529-33 O '52

TABLETS (medicine)
Electronic tablet counter; Warner-Chilcott laboratories. il Mod Packaging 26:154-7+ Ap '53

TABLEWARE
Bacterial cleanability of various types of eating surfaces. Glass Ind 34:377 Jl '53
Comparison of plastic and ceramic dinnerware. R. W. Cline and E. Schramm. bibliog diags Am Cer Soc Bul 32:349-53 O 15 '53
Directions in dinnerware design. F. Forst. Am Cer Soc Bul 31:320-1 S 15 '52
Effect of residual compressive stress in a hotel-china glaze on some physical durability properties of the glaze. W. J. Koch and others. Am Cer Soc J 35:240-2 S 1 '52
Potters unveil new designs for dinnerware fair. il Cer Ind 61:74-5 S '53

Testing

Effect of fluxes on the properties of semivitreous dinnerware. J. C. Kyonka and R. L. Cook. bibliog Am Cer Soc Bul 32:233-81 Jl 15 '53

TABLEWARE, Plastic
Comparison of plastic and ceramic dinnerware. R. W. Cline and E. Schramm. bibliog diags Am Cer Soc Bul 32:349-53 O 15 '53
Dish washing eliminated; restaurant service system utilizes disposable plastic-surfaced paper plate liners. il Mod Plastics 30:80-1 Ja '53
Place for plastic dishes. il Ry Age 134:84-5 Ap 20 '53
Plastics vs. china tableware; abstract. R. Gould. Cer Ind 60:170 Ja '53

Advertising

How advertising that introduced new type product is now selling it; Melmac dinnerware. M. Beuick. il Ptr Ink 242:44-5 F 13 '53

TABULATING machines
Tab machines handle 70 jobs at Caterpillar Tractor. il Am Bsns 22:20+ O '52
See also
Punched card system

TABULATION
Struve function of order three-halves. K. Christoph and others. J Res Nat Bur Stand 50:21-9 Ja '53
Your tabulating installation needs attention. J. L. Marley. N A C A Bul 34:516-23 D '52

TACHOMETERS
Linear scale velocity meter. R. S. Mackay. il diags Electronics 25:158-61 O '52
Performance characteristics of the induction generator tachometer. S. Davis. il diags Product Eng 24:168-78 Ja '53
Radioactive spot makes tachometer for high temperature use. R. L. Belcher. diag Chem Eng 59:204 D '52

TACKYPYKNOSIS (term)
Explanation of tackypyknosis. R. N. Thompson. J Phys Chem 56:766-7 Je '52

TACOMA

Sewerage

Tacoma treatment plant reduces Puget Sound pollution. A. R. MacPherson. flow diag il Pub Works 83:65-6 N '52

TACONITE
Five steel companies push taconite plans. il map Eng N 149:40-2 D 11; 39-40+ D 18 '52; 150:28-9 Ja 1 '53
Hardening of pellets from magnetic taconite concentrates; abstract. G. V. Woody. Blast F & Steel Pl 41:212 F '53
Heat hardening of pellets made from taconite concentrates. G. V. Woody. diags Blast F & Steel Pl 41:314-17 Mr '53
Iron from taconites. J. C. Pierce. il map Comp Air Mag 57:300-3 N '52
Magnetic reflux classifier. L. A. Roe. bibliog il diag Min Eng 5:Trans 312-15 Mr '53
Mines bureau reports on taconite-blasting experiments. Blast F & Steel Pl 41:1082 S '53
New devices, new flowsheets liven iron ore processing. L. J. Bechaud, jr. Eng & Min J 154:124-7 F '53
New recovery process for taconite. Blast F & Steel Pl 41:656 Je '53
Oliver makes initial taconite shipment. il Min Cong J 39:60 Jl '53
Oliver's new taconite plant tuning up. il Eng & Min J 154:100-2+ Ag '53
Power for processing taconite. il Eng & Min J 153:103+ D '52
Progress with heat-hardening of taconite pellets on traveling grate. Eng & Min J 154:184-5 F '53
Reduction-oxidation process for the treatment of taconite; abstract. Stephens and others. Steel 132:128+ Je 1 '53
Reserve mining company building large plant to process taconite. C. Longenecker. il Blast F & Steel Pl 41:189-91 F '53
Reserve mining co. starts taconite plant at Babbitt. il Eng & Min J 153:72-9 N '52
Taconite brings the modern mining town. il maps Eng N 149:34-6+ O 23 '52
Taconite; Mesabi's answer to the iron ore shortage. flow charts il map Iron Age 171:127-34 Mr 12 '53
Who will supply power for processing taconite? il map Elec World News ed 138:32-3 N 24 '52

TAFT, Robert Alphonso, 1889-1953
Portrait. Bsns W p29 N 8 '52
Temptations of Taftism. Economist 167:642-4 Je 6 '53

TAFT-HARTLEY law. See Labor laws and legislation—United States—Taft-Hartley law

TAGS
See also
Safety tags

TAILINGS
By-product of zinc and lead processing; recovering dolomitic agricultural limestone from tailings in processing ore. L. D. Minsk. il Rock Prod 56:188+ Ag '53
Chuquicamata sulphide plant; tailing disposal. R. M. Kuralt. il maps Min Eng 4:1189-91 D '52
De-sliming tailings for backfilling at Kerr-Addison. H. R. Rice. il diag Can Min J 74:53-7 Ag '53
Filling with unclassified tailing in modified cut-and-fill stopes, Dayrock mine, Wallace, Idaho. P. H. Toepfer. bibliog 2pls U S Bur Mines Information Circ 7649:1-14 '52
Tailing disposal problems of Alberta tar-sands; with cost data. L. E. Djingheuzian. bibliog il Can Min J 74:69-75 My '53
Tailings dredge on Great Bear lake. H. R. Rice. il Can Min J 74:59-61 Jl '53

TAILSTOCKS. See Lathes—Tailstocks

TAIPING rebellion. See China—Taiping rebellion

TAIWAN. See Formosa

TAKA amylase. See Amylases

TAKORADI, Gold Coast

Harbor

Takoradi harbour extensions. il(p528) Engineering 175:532-3 Ap 24 '53

TALARA, Peru
This is Talara, leading oil town. il World Oil 136:281-3 My '53

TALC

Further developments in low-loss steatite bodies using Yellowstone talc. R. S. Lamar. bibliog Am Cer Soc Bul 32:12-15 Ja 15 '53

Historical background development on use of talc in ceramic bodies. W. W. Gaskins. bibliog(40 ref) Am Cer Soc Bul 31:392-5 O 15 '52

Raw material control by the talc producer. W. W. Gaskins. il Am Cer Soc Bul 32:162-3 Ap 15 '53

Steatite deposits of Bheraghat, Jabalpur district, M.P., India. V. N. Chhibber. il Econ Geol 48:53-7 Ja '53

TALKING books

Talking books at popular prices; Audio book co. il Bsns W p 130 Ap 18 '53

Talking books for the blind. Franklin Inst J 254:420-2 N '52; Same abr. Elec Eng 71:1051-2 N '52

TALL oil

Crossett produces high grade whole tall oil. Paper Tr J 136:46 Ja 16 '53

Farac Oil introduces new high rosin tall oil. Paint Oil & Chem R 116:39 Ja 29 '53

Investigation of the collecting effects of fatty acids in tall oil on oxide minerals, particularly on ilmenite. R. T. Hukki and O. Vartiainen. bibliog il Min Eng 5:Trans 818-20 Ag '53

New developments in tall oil. A. E. Griffin. Paper Tr J 137:20-2 Jl 3 '53

Tall oil in asphalt products. bibliog(52 titles) Tappi 36:sup 108A-11A Ag '53

TALLOW

Detergents; tallow market? il Chem W 72:57-8 F 21 '53

Now, fatty alcohols from tallow. diag Chem Eng 60:118 Mr '53

Synthetic detergent gains bring growing tallow surplus. Chem & Eng N 31:555 F 9 '53

TAMARIND seed

Composition of tamarind seed kernel powder. P. B. Sarkar and A. K. Mazumdar. bibliog Textile Inst J Trans 43:T453-4 Ag '52; Discussion. il 44:T401-3 Ag-S '53

Constitution of the polysaccharide from tamarind seed. E. V. White and P. S. Rao. bibliog Am Chem Soc J 75:2617-19 Je 5 '53

TAMPING machines

Junior Vibrosoil soil-compacting machine. il Engineering 175:192 F 6 '53

Vibratory soil compactor; A.-B. Vibro-Verken. il Engineering 176:60 Jl 10 '53

TANGANYIKA

Economic relations

United States

Uganda, Tanganyika get MSA assistance. For Comm W 50:8 Jl 20 '53

TANGANYIKA sisal growers' association

Speech at annual dinner. E. F. Hitchcock. Economist 165:426-7 N 8 '52

TANK barges

Tank barge to carry sulphur from mines to acid plant. Chem Eng 59:236 N '52

See also
Loading and unloading—Tank barges

TANK cars

Freeing tank cars of vapors. il Sheet Metal Worker 44:59-60 Ap '53; Same abr. Oil & Gas J 51:130 O 6 '52

Tank cars; A.A.R. Mechanical division committee report. Ry Loco & Cars 127:70-2 Ag '53

Cleaning

Atomizer cleans tank cars. diags Oil & Gas J 51:138 Ap 13 '53

Dow cleans its own tank cars. il Chem Eng 60:118 Ap '53

Tank car clean-up; inside and out. il Chem W 72:40-2 Ja 10 '53

Tank car time out cut 16 to one. il diag Ry Age 134:83 Mr 23 '53; Same. Ry Loco & Cars 127:90 Ap '53

TANK roofs. See Oil tanks—Roofs

TANK ships

Big cargoes, big ships. Tech R 55:85-6 D '52

Cast-iron heating pipes for oil tankers. il diag Engineering 175:601 My 8 '53

Chicago Socony joins Lakes fleet. il Marine Eng 58:52 O '53

Docking and navigating electronic system for tankers. il Marine Eng 58:106+ Ja '53

First gas turbine tanker. Elec R (Lond) 152:538 Mr 6 '53

Gas-turbine operating experience in the tanker Auris. Engineering 174:639-40 N 14 '52

Gas-turbine tanker completes first year. Marine Eng 58:51 Ja '53

Keel laying for 45,000-ton tanker. il Marine Eng 58:79 Je '53

New audio electronic system developed for tankers. Marine Eng 58:68 S '53

Records smashed by new Sun supertanker. Marine Eng 58:54 Ap '53

Sinclair's little supertanker, P. C. Spencer, makes good. il plans diags Marine Eng 58:52-64 Ag '53

Steamship, World enterprise. Engineer 195:892-3 Je 26 '53

Sun Oil enters supertanker field with Delaware Sun class ships. il plans diags Marine Eng 58:50-66 S '53

Sun's first super tanker joins fleet. il Marine Eng 58:79 Mr '53

Symposium on control of internal corrosion of tankers; abstracts and discussion. W. B. Jupp and others. Marine Eng 58:64-7 F '53

Tanker tonnage keeps pace with soaring world demand for petroleum products. J. J. Winterbottom. il Oil & Gas J 51:190+ D 22 '52

Thar's gold in them hulls; lease backs for tankers. Fortune 46:79 Ag '52; Excerpts. J Account 94:751 D '52

Todd shipyard launches tanker for Socony-Vacuum at Houston. il Marine Eng 58:81 Je '53

United States still boasts largest tanker fleet. Marine Eng 58:75-6 Mr '53

What low tanker rates mean to oil markets. il Nat Pet N 45:17-18 My 13 '53

World tanker fleet continues to increase. Pet Eng 25:D 113 My '53

See also
Loading and unloading—Tank ships
Tank barges

Cleaning

Tank-cleaning plant at Cardiff docks. il Engineering 176:149 Jl 31 '53

TANK truck drivers

Drivers classified; abstract. R. High. Nat Pet N 45:24-5 My 27 '53

TANK trucks

Big rigs are safer. F. Breese. il Nat Pet N 44:47-9 O 22 '52

Bulk granulated sugar by truck. il Food Eng 25:73+ Ap '53

Designing an efficient oil truck terminal; P. B. Mutrie motor trans., inc. il Nat Pet N 45:57-8 Ja 28 '53

Jobbers plan big investment in rolling stock. Nat Pet N 44:33-5 N 26 '52

Oil trailer output certain to lag behind estimated demand for 1952. H. Ridder. Nat Pet N 44:60 S 24 '52

Oil truckers report soaring costs caused by New York ton-mile tax. H. E. Bjorkback. Nat Pet N 45:31+ Ja 28 '53

Pneumatic tanks for bulk cement. J. Grindrod. il Rock Prod 56:118 Mr '53

Tank truckers expect more business despite anti-truck attack of rails; National tank truck carriers' 5th annual convention, Boca Raton, Fla. Nat Pet N 45:56-7 My 13 '53

Tank trucks equipped with milk receiving unit. il Food Eng 25:159 Ap '53

Through the desert by tank truck. F. Breese. Nat Pet N 45:31-2 Mr 11 '53

Truck tankers; versatile-plus in carrying liquid foods; Arrow transportation co. il Food Eng 25:71+ Jl '53

Use of truck tank vehicles booms in past 14 years. J. E. Boice. Nat Pet N 45:41-2 Ap 29 '53

See also
Loading and unloading—Tank trucks

Accidents

Harmful publicity can cancel out good safety record of tank trucks. H. Ridder. Nat Pet N 45:62 Mr 25 '53

TANK trucks—*Continued*

Safety measures

Defense of tank truck safety record brings prompt action from advertiser. H. Ridder. Nat Pet N 45:56-7 Ap 8 '53

Proper gas-freeing of truck tanks; abstract. R. G. Wilson. Nat Pet N 45:24 My 27 '53

TANKS

How to compute tank sizes for products terminals. R. B. Rodgers and S. Hallberg. World Oil 135:257-8 N '52

Laminex fiber glass tanks. il Rubber Age 73:794 S '53

Tank construction for products storage. L. J. Cogan. il Pet Eng 24:A76-8 D '52

See also

Air receivers
Airplanes—Fuel tanks
Boilers
Gasoline tanks
Oil tanks
Pressure vessels
Septic tanks
Settling tanks
Sewage tanks
Tank ships
Tank trucks
Water tanks

Cleaning

How to clean storage tanks; use of chemical solvents. R. P. Robinson and E. W. Hudgens. il Pet Eng 25:C16+ Ap '53

Manufacture

Automatic field welding of girth joints of large storage tanks. P. C. Arnold. il diags Welding J 32:399-406 My '53

Improved methods speed output of missle fuel storage tanks. Iron Age 171:116 Ap 30 '53

Measurement

Contents of cylindrical tanks and standpipes; nomograph. W. F. Schaphorst. Water & Sewage Works 100:131 Mr '53

Cubic feet, gallons, pounds, and tons of water in rectangular tanks. W. F. Schaphorst. Water & Sewage Works 100:R 132 My '53

Quick capacity chart for horizontal tanks. Roads & Sts 95:109 N '52

Simplified method for tank content conversion to help accountants verify liquid inventory. R. H. Browse. diag J Account 95:60-3 Ja '53

Painting

See also

Oil tanks—Painting

Ventilation

Are vented vessels safe? il Heating-Piping 24:86-7 N '52

TANKS, Aluminum

Aluminum tanks and pressure vessels. E. V. Sharpnack. diags Product Eng 24:183-5 Ap '53

Custom engineered structures for chemical plant. il Can Chem Process 37:36+ Je 1 '53

TANKS, Concrete

Lining

Biological deterioration of polysulfide polymers employed as linings for gasoline storage tanks. F. H. Allen and D. Fore, jr. il Ind & Eng Chem 45:374-7 F '53

TANKS, Military

Army tank facts. Automotive Ind 108:101-2 F 1 '53

Northrop plant producing range finders for tanks; illustrations with text. Mach 59:194-5 My '53

Manufacture

Cadillac tank plant. S. Bell. il Comp Air Mag 58:9-11 Ja '53

Cleaning cast steel armor; Cast armor division of American steel foundries. E. F. Ross. il Foundry 81:178+ Ag '53

Effluent-treatment plant for tank factory. il map plan diags Engineering 174:681-4, pl 55-6 N 28 '52

Fisher T-48 tank plant fully conveyorized. J. Geschelin. il Automotive Ind 108:48-51 Ap 1 '53

From open fields to tank production in 18 months; Chrysler Delaware tank plant. T. Mac New. il Automotive Ind 107:34-7+ D 15 '52

How Dixie powers fighting tanks; Michoud ordnance plant. E. J. Tangerman. il Am Mach 97:145-54 Ap 27 '53

Made over machines, fixtures get production moving; production of army CD-80 tank transmissions at Buick motor division. D. F. Taylor. il Iron Age 170:101-4 O 23 '52

Moving tons or ounces, all in day's work at Cadillac tank plant; illustrations with text. S A E J 61:60-4 My '53

Roller hearth furnaces toughen tank feet. H. M. Webber. il diag Steel 132:100-1 Ap 27 '53

Self-propelled fixtures expedite operations at Budd's tank plant. T. Mac New. il Automotive Ind 108:66-70 Ja 1 '53

Self propelled fixtures; transfer machines handle four-ton armor plate weldment; Massey-Harris co. J. S. Kis, jr. and R. M. Olsen. il Iron Age 170:108-10 O 2 '52

Straight line setup for casting tank hulls. T. Mac New. il Automotive Ind 109:70-2 Ag 1 '53

V-12 tank engine production at Chrysler plant. J. Geschelin. il Automotive Ind 107:50-3 D 15 '52

Working-height handling moves tank springs at Maremont; illustrations with text. R. A. Graham. Am Mach 97:114-18 Ag 3 '53

Transmission

New grinding fixtures increase tank transmission production. J. B. Doll. il Mach 59:190-2 Ja '53

Great Britain

Britain's new tank. Economist 166:761-2 Mr 14 '53

TANKS, Plastic

All-plastic tank battery. il Oil & Gas J 51:161 Ap 20 '53

Plastic tank stops corrosion. il Chem Eng 59:218 D '52

Plastic tanks will save aluminum. Aviation W 58:59-60+ My 18 '53

Tanks for everything. il Mod Plastics 30:100-3 F '53

TANKS, Steel

Custom engineered structures for chemical plant. il Can Chem Process 37:36+ Je 1 '53

Gallows frame sets big, fragile tanks. il Constr Methods 35:106-8 Ap '53

Impactools cut tank erection costs. il Comp Air Mag 58:275 O '53

Methods for estimating construction costs; new cost data; field-erected storage tanks. F. L. Plummer. il diag Tappi 36:sup 14A+ Jl '53

See also

Water tanks, Steel

Cathodic protection

Brine corrosion of steel vessels. C. O. Smith. diags World Oil 136:206+ My '53; Same. Pet Eng (Ref annual) 25:B62+ Jl 15 '53; Same cond. Oil & Gas J 51:230+ Ap 27 '53

Improvement in tank bottom protection. H. Schmoldt. il diags Pet Eng 25:D29-30+ My '53

Protection

Concrete coat for outdoor tanks. il Factory Management 111:121 O '53

See also

Tanks, Steel—Cathodic protection

TANNATES

Role of tannates and phosphates in the preservation of ancient buried iron objects. T. W. Farrer, L. Biek and F. Wormwell. il J Ap Chem 3:80-4 F '53

TANNERIES

Waste

Tannery effluent disposal. Chem Age (Lond) 67:570 O 25 '52

TANNERS council of America

Annual meeting, 36th, Chicago. Chem & Eng N 30:4620+ N 3 '52

TANNIN solutizer process. See Gasoline—Manufacture

TANNING

Effects of tannage on the properties of leather. Franklin Inst J 255:143-4 F '53

TANNING materials

Textile and leather chemicals. Published in weekly numbers of Oil, paint and drug reporter

See also

Tannins

TANNING materials—*Continued*

Prices

Textile and leather chemicals; 1952 market trends. Oil Paint & Drug Rep 163:55 sec 2 Ja 26 '53

TANNINS

Chemicals from Douglas-fir bark. E. F. Kurth. Tappi 36:sup 119A-21A Jl '53

Investigations on natural tannins; acidic condensation reactions between phenols and $\alpha\beta$-unsaturated carbonyl compounds. D. W. Clayton and others. Chem Soc J p581-6 F '53

Roles of the amino and hydroxyl groups of collagen in its reactions with formaldehyde, tannic acid and quinone. R. W. Green. bibliog Am Chem Soc J 75:2729-32 Je 5 '53

Trying for tannin. il Ind & Eng Chem 45: sup 15A+ Mr '53

TANTALATES

Niobate and tantalate dielectrics. E. Wainer and C. Wentworth. bibliog Am Cer Soc J 35:207-14 Ag 1 '52

TANTALUM

Chemical engineering materials of construction; less common metals. L. F. Yntema and W. R. Bekebrede. il Ind & Eng Chem 44:2364-70 bibliog(148 ref, p2369-70) O '52

Chemistry of niobium and tantalum; reduction in solution. R. E. Elson. bibliog Am Chem Soc J 75:4193-5 S 5 '53

Easing a metals shortage. Bsns W p62+ Mr 7 '53

Electron ejection from Ta by He^+, He^{++}, and He_2^+. H. D. Hagstrum. Phys R 91:543-51 Ag 1 '53

Field emission from tantalum in the normal and superconducting state. R. Gomer and J. K. Hulm. il J Chem Phys 20:1500-2 S '52

Heat capacities of superconducting and normal tantalum. R. D. Worley and others. bibliog Phys R 91:1567-8 S 15 '53

High temperature magnetic susceptibility of V, Nb, Ta, W, and Mo. C. J. Kriessman. bibliog diag Rs Mod Phys 25:122-6 Ja '53

Photon absorption cross sections in bismuth and tantalum. J. Halpern and others. bibliog Phys R 88:679-80 N 1 '52

Properties, heat treatment, corrosion resistance, etc.; engineering file facts. Materials & Methods 37:127 Je '53

Radiation damage and recovery in Cu, Ag, Au, Ni, and Ta. J. W. Marx and others. bibliog diags Phys R 88:106-12 O 1 '52

Reaction of tantalum with hydrogen chloride, hydrogen bromide and tantalum pentachloride; action of hydrogen on tantalum pentachloride. R. C. Young and C. H. Brubaker, jr. Am Chem Soc J 74:4967 O 5 '52

Solubility of oxygen in, and the oxides of, tantalum. R. J. Wasilewski. bibliog Am Chem Soc J 75:1001-2 F 20 '53

Superconductive transition in tantalum. H. Preston-Thomas. Phys R 88:325-7 O 15 '52

Analysis

Analytical chemistry of niobium and tantalum; atmospheric chlorination of hydrolyzed oxide precipitates. C. F. Hiskey, L. Newman and R. H. Atkinson. diags Anal Chem 24:1988-91 D '52

Inorganic chromatography on cellulose; determination of tantalum and niobium in low-grade phosphatic and siliceous ores. R. A. Mercer and A. F. Williams. Chem Soc J p3399-403 S '52

Inorganic chromatography on cellulose; the quantitative determination of tantalum and niobium in complex minerals, ores, and synthetic materials. A. F. Williams. Chem Soc J p3155-63 Ag '52

Isotopes

Cross section for $Ta^{181}(\gamma,2n)Ta^{179}$ at 17.6 Mev. J. H. Carver and others. bibliog Phys R 89:658-9 F 1 '53

Excitation of a 16-microsecond state in Ta^{181} by capture of bremsstrahlung. H. N. Brown and R. A. Becker. Phys R 90:328 Ap 15 '53

$(\gamma,2n)$ Reaction in Ta. E. A. Whalin and A. O. Hanson. Phys R 89:324-5 Ja 1 '53

Nuclear moments of Ta^{181}. B. M. Brown and D. H. Tomboulian. bibliog diags Phys R 88:1158-62 D 1 '52

Successive neutron capture in Ta. J. W. Mihelich. Phys R 91:427 Jl 15 '53

Testing

Embrittlement of zirconium and tantalum in hydrochloric acid. L. B. Golden, I. R. Lane, jr. and W. L. Acherman. bibliog il Ind & Eng Chem 45:782-6 Ap '53

TANTALUM alloys

Titanium-tungsten and titanium-tantalum systems. D. J. Maykuth and others. bibliog il diag J Metals 5:Trans 231-7 sec 2 F '53

TANTALUM foil

Tantalum-foil capacitors save space. L. W. Foster. Electronics 26:242+ My '53

TANTALUM hydroxide

Relative toxicity of lanthanum, tantalum, and thorium compounds in the developing chick embryo. L. J. Machlin and others. bibliog A M A Archives Ind Hygiene & Occup Med 6:441-4 N '52

TANTALUM oxide

High-temperature heat contents of tantalum and niobium oxides. R. L. Orr. bibliog Am Chem Soc J 75:2808-9 Je 20 '53

Photoconduction in anodic Ta_2O_5. L. Apker and E. A. Taft. Phys R 88:58-9 O 1 '52

Solubility of oxygen in, and the oxides of, tantalum. R. J. Wasilewski. bibliog Am Chem Soc J 75:1001-2 F 20 '53

TAPE

Simple tasks for tapes; drawings with text. S. Worth. Mill & Factory 52:114-16 Ap '53

TAPE, Adhesive. See Adhesive tape

TAPE, Measuring. See Measuring tape

TAPE recorders. See Sound—Recording and reproducing—Magnetic recording

TAPERS

Reel and cable used to generate tapers on a lathe. J. Sobkowiak. diags Mach 59:206-7 D '52

Useful shop gages for accurate checking of tapers. W. M. Halliday. diags Mach 59:203-4 N '52

TAPPING

Actual minutes for tapping; tabulation; reference book sheet. V. G. Hotchkiss. Am Mach 97:157, 159 Je 22 '53

Compounds extend tap life. Steel 132:84 Ja 12 '53

Fundamentals of production tapping. R. H. Cowan. il diags Mach 59:170-4 Ap; 175-8 My '53

Hand tapping aided by simple drillpress fixture. F. T. O'Grady. diag Am Mach 97:175 My 11 '53

How to tap, mill and broach titanium. V. L. Coughlin. il diags Iron Age 171:186-8 Mr 5 '53

TAPPING machines

1953 American Machinist production preview. il Am Mach 97:167-9 Ja 19 '53

Pneumatic power units; Gildersleeve design and tool co. il Engineer 195:292-3 F 20 '53; Engineering 175:254 F 20 '53

TAPS

Proper use of taps. il diags Mill & Factory 51:89-92 O '52

Tap holder is quickly made. diags Mill & Factory 52:137 Je '53

Taps; reference sheet. diags Tool Eng 31: 79-81 Jl '53

You can save money by sharpening taps correctly. diags Iron Age 179:186 Ap 2 '53

TAR

Action of light on tar fractions. C. R. Kinney and M. B. Dell. bibliog diags Ind & Eng Chem 45:809-14 Ap '53

Pumping, transmission and burning of tar and pitch. W. A. Pond. Iron & Steel Eng 30:94-7; Discussion. 98-9 Jl '53

Dehydration

Report of tar dehydration subcommittee. Am Gas Assn Proc 1952:845-7

TAR distillation

Action of light on tar fractions. C. R. Kinney and M. B. Dell. bibliog diags Ind & Eng Chem 45:809-14 Ap '53

Thermal cracking of alkyl phenols; mechanism of dealkylation. B. W. Jones and M. B. Neuworth. bibliog diag Ind & Eng Chem 44:2872-6 D '52

TAR distillation plants

Employees

Occupational skin cancer in a group of tar workers. R. E. W. Fisher. A M A Archives Ind Hygiene & Occup Med 7:12-18 Ja '53; Abstract. Nat Safety N 67:60+ My '53

TAR sand. See Bituminous sand

TARGET airplanes. See Airplanes, Target

TARIFF

World trade group pushes low tariffs, license agreements. Ind Marketing 38:54+ Mr '53

See also

Commercial policy

Commercial treaties and agreements

Free ports and zones

Free trade and protection

Angola, West Africa

Angola lowers surtax on foreign imports. For Comm W 50:16 Jl 6 '53

Belgium

Transmission tax on imports up. For Comm W 49:10-11 Ap 27 '53

Benelux union

Benelux revises its import tariff. For Comm W 49:8 My 4 '53

Canada

Blow strongly, sweet tariff. M. R. Hecht. Can Chem Process 36:10+ N '52

Canada frees some goods of duties; tightens control on tourist imports. For Comm W 49:9 Mr 16 '53

Canada must stiffen its tariff. V. G. Bartram. Oil Paint & Drug Rep 163:5 Ja 19 '53

Customs tariff; rates levied on importation of construction equipment and materials. Roads & Eng Constr 91:374+ Je '53

Duties lowered for raw materials. For Comm W 48:17-18 D 1 '52

Chemicals

Canadian tariffs; tough or tender? Can Chem Process 37:10+ Ag '53

Colombia

Colombia importing more goods under export certificate plan. For Comm W 49:8+ My 18 '53

Modifies electric-lamp classes; Defines poplin permitted entry. For Comm W 50:18 Jl 6 '53

New Colombian controls aim to curb inflation. For Comm W 50:7 Jl 13 '53

Ecuador

Ecuador grants imports lower exchange rate For Comm W 49:9 My 18 '53

France

France installs new procedure for valuing imports for duty purposes. For Comm W 49:7 Mr 30 '53

French Equatorial Africa

Import tariff revisions; list. For Comm W 48:8 N 10 '52

Great Britain

Customs and excise revenue; charts. Economist 166:901 Mr 28 '53

Resort to tariffs? Economist 165:840-1 D 20 '52

Greece

Greece readjusts taxes on imports. For Comm W 49:9 Je 29 '53

Special import tax imposed; list. For Comm W 48:8+ D 22 '52

Guatemala

Guatemala raises import duties on many items. For Comm W 49:11 Mr 16 '53

India

India lowers duties on U.S. automobile parts. For Comm W 50:17 Jl 6 '53

Revised customs tariff now in effect in India. For Comm W 49:5 Ap 6 '53

Italy

Revised Italian customs tariff retains most import duty rates. For Comm W 50:16 Jl 6 '53

Mexico

Export and import tariff modifications. For Comm W 48:9 N 10; 21 N 17; 19 D 1 '52; 49:10 Ap 13; 12+ Ap 27; 17 Je 8; 16 Je 15 '53

Import tariff modifications; list (cont). For Comm W 48:22-3 N 17 '52

Peru

Import duty increases; list. For Comm W 48:15 N 24 '52

New Peruvian tax on nonessentials. For Comm W 49:9 Je 1 '53

United States

Aid for increased trade. Bsns W p 172 F 28 '53

Escape clause investigations reported. For Comm W 48:28 O 27 '52

Flood the U.S. with foreign goods? F. S. Blackall. il Steel 132:67 Ap 27 '53

Free trade is inevitable. Fortune 47:96-9+ Mr '53

Free world's first line of defense. G. A. Price. Comm & Fin Chr 177:2197+ My 21 '53; Abstract. Elec World News ed 139:46 My 11 '53

How mining leaders view the sliding-scale tariff. Eng & Min J 154:130 Je '53

How restrictive are U.S. tariffs and quotas? J. F. Chapman. Harvard Bsns R 31:117-24 Jl '53

Industrialists disagree on world trade issue; should U.S. lower tariffs? Ind Marketing 38:72-3+ Mr '53

Lip service to foreign trade; unions stand. Fortune 47:74 My '53

Long look at tariffs. Bsns W p 188 My 16 '53

1953; turning point for U.S. tariffs. Bsns W p 160-2 Mr 21 '53

On tariffs; businessmen change, but slowly. Bsns W p 136-8 D 13 '52

Our outdated tariff policy, an impediment to world peace. W. L. Pierson. Comm & Fin Chr 177:1962 My 7 '53

Should the U.S. lower tariffs on manufactured products? J. S. Coleman; H. W. Rose. il Mod Ind 25:57-8+ My '53; Discussion. Dun's R & Mod Ind 62:181-5 Ag '53

Tariff; self-interest is the best reason for lowering it. Barron's 33:1 F 23 '53

Things you ought to know about 1953 tariff legislation. J. Shoenfeld. Sales Management 70:36+ Ja 15 '53

Trade, not aid. Bsns W p 172 D 13 '52

True picture of the tariffs. H. Dubois. Mag of Wall St 92:163-5+ My 2 '53

U.S. import duties; are they going up again? Bsns W p25-6 Ap 18 '53

U.S. is not a high tariff country. F. G. Singer. Comm & Fin Chr 178:210+ Jl 16 '53

What is the attitude of American industry toward protective tariffs? Mill & Factory 52:71-2 Ap '53

Ceramic materials

Nepheline syenite tariff urged. Oil Paint & Drug Rep 164:3+ S 21 '53

Chemicals

Canada anxious for lower U.S. tariffs on Canadian goods. Chem & Eng N 31:336+ Ja 26 '53

Customs legislation provisions made as foreign price guards. Oil Paint & Drug Rep 164:3+ Jl 27 '53

Customs simplification bill dangers outlined. Oil Paint & Drug Rep 163:3+ Je 1 '53

Fissures in the wall. Chem W 72:23-4+ Mr 14 '53

National security called prime tariff factor. H. H. Fowler. Oil Paint & Drug Rep 164:5+ S 14 '53

Tariffs via the test tube. il Chem W 71:52-3+ D 27 '52

Coal tar products

US to retain present coaltar tariff method. Oil Paint & Drug Rep 163:5+ My 18 '53

Fish

Tug of war on tariff for tuna trade. il Bsns W p 113 N 29 '52

Oils and fats

Imports regulations changes set. Oil Paint & Drug Rep 163:3+ Je 15 '53

TARIFF—United States—Oils and fats—*Cont.*

Thirty-year history of the Bureau of raw materials. J. B. Gordon. Soap & San Chem 28:42-5+ S '52

Paper

Customs court cases. W. B. Bullock. Paper Ind 34:724, 1096+, 1218+; 35:201, 537, 649 S, D '52-Ja, My, Ag-S '53

Customs officials rule on bagasse board. Paper Tr J 135:24 D 26 '52

Pottery

Expect new plea for higher tariff on imported household chinaware. Cer Ind 60:72 Mr '53

TARIFF (export duties)

Egypt

Egypt raises credit permitted for exports to dollar, sterling areas. For Comm W 49:5 Ap 6 '53

French West Africa

Export duty reductions. For Comm W 48:8 D 22 '52

TARIRIC acid

Higher aliphatic compounds; a synthesis of tariric and petroselinic acids. P. B. Lumb and J. C. Smith. Chem Soc J p5032-5 D '52

TARNISHING of metals

Linear film growth in tarnishing reactions. R. C. Williams and P. R. Wallace. J Chem Phys 21:1294-5 Jl '53

Magic leaf tarnish remover. il Consumers Res Bul 32:28 Jl '53

TARPAULINS, Plastic

Plastic tarp eases load. il Steel 131:298 O 13 '52

TARTARIC acid

Stereochemistry of complex inorganic compounds; a partial resolution of racemic mixtures of organic acids by means of preferential coördination. A. D. Gott and J. C. Bailar, jr. Am Chem Soc J 74:4820-2 O 5 '52

TASKER, Cyril, 1899-1953

Sketch. por Heat & Ven 50:136 Jl '53

TASTE

Some like it hot, some like it cold. Bsns W p64 O 25 '52

Study of the taste of fluoridated water. G. J. Cox and J. W. Nathans. Am Water Works Assn J 44:940-2 O '52

See also

Flavor

TATE and Lyle, limited

Statement by the president. Lord Lyle. Economist 167:698 Je 6 '53

TATUM, Edward Lawrie, 1909-

1953 Remsen lecturer. por(cover) Chem & Eng N 31:2099 My 18 '53

TAURINE

Ionization constants of taurine and its activity coefficient in hydrochloric acid solutions from electromotive force measurements. E. J. King. bibliog Am Chem Soc J 75:2204-9 My 5 '53

TAUTOMERISM

Cyclic polyolefins; valence tautomerism of 1,3,5-cyclooctatriene and bicyclo[4.2.0]octa-2,4-diene. A. C. Cope and others. bibliog Am Chem Soc J 74:4867-71 O 5 '52

Effect of solvents on the tautomeric equilibria of 4-arylazo-1-naphthols and the *ortho*-effect. A. Burawoy and A. R. Thompson. Chem Soc J p 1443-7 My '53

Nature of the internal hydrogen bond; tautomerism of 1-arylazo-2-naphthols. A. Burawoy, A. G. Salem and A. R. Thompson. Chem Soc J p4793-8 D '52

Ring-chain tautomerism of hydroxy aldehydes. C. D. Hurd and W. H. Saunders, jr. bibliog diag Am Chem Soc J 74:5234-9 N 5 '52

Some adsorption colors and their significance for thermochromic and tautomeric effects; experiments with anthrone derivatives, nitrotoluenes, spiropyrans and xanthhydrols. A. Schönberg, A. Mustafa and W. Asker. bibliog Am Chem Soc J 74:5640-3 N 20 '52

Tautomerism of *N*-heteroaromatic amines; infra-red spectroscopic evidence. C. L. Angyal and R. L. Werner. Chem Soc J p2911-15 Jl '52

TAX administration

See also

United States—Internal revenue, Bureau of

TAX consultants

Watch out for the tax experts! E. W. Fair. Refrig Eng 61:171+ F '53

TAX evasion and avoidance

Borrowed capital loopholes; Mahoney motor co. bibliog J Account 94:752-3 D '52

BIR cracks down on non-profit research institutes. Product Eng 23:201 N '52

Capital gains; to hold or sell and pay tax is investor's problem. J. M. Templeton. Barron's 32:9 N 17 '52

Capitalizing stock losses to avoid taxes. R. Colston. Mag of Wall St 91:243+ N 29 '52

Deferring income is smart management now. Bsns W p 178+ N 15 '52

Flexible five per cent. B. Ruml. il Dun's R 60:1, 21-2+ S '52

How to minimize your taxes on your 1952 investment income. A. C. Strasburger. Mag of Wall St 91:62-3+ O 18 '52

Meeting the six goals of executive compensation. J. K. Lasser and M. M. Goldstein. il Dun's R 61:25-6+ Je; 25-6+ Jl '53

Minors or trusts as members of partnerships. L. B. Brown. Trusts & Estates 92:181-2 Mr '53

Some cases where attempts to use receivables as a tax-saving device have failed. R. Deutsch. J Account 94:576-9 N '52

Tax aspects and trends in executive compensation. V. H. Rothschild, 2d. Comm & Fin Chr 178:6+ Jl 2 '53

Tax-avoidance gifts. A. W. May. Comm & Fin Chr 176:2329+ D 18 '52

Tax-free split? Du Pont management is cool toward proposal for using spinoff. Bsns W p60+ Ap 11 '53

TAX exempt securities. See Taxation, Exemption from

TAX exemptions. See Taxation, Exemption from

TAX limitation. See Taxation, Limitation of

TAXATION

Economic education; new way to tell workers about taxes; illustrations with text. Factory Management 111:102-3 Ja '53

Opportunity for the G.O.P.; taxation without misrepresentation. Fortune 46:105-6 D '52

See also

Assessment
Debts, Public
Excess profits tax
Excise tax
Gift tax
Income tax
Inheritance tax
Mine taxation
Municipal taxation
Sales tax
Tariff
Tariff (export duties)
Taxation of securities

also subdivision Taxation under special subjects, e.g.

Cigaret industry and trade
Corporations
Insurance companies
Loans, Bank
Motor trucks
Partnership
Petroleum industry and trade
Railroads

Accounting

Tax clinic. J. K. Lasser, ed. Published in monthly numbers of Journal of accountancy

Law

AIA federal tax committee makes 58 proposals to improve federal taxation. J Account 94:719-20+ D '52

Interesting tax rulings. V. R. Wolder. Comm & Fin Chr 177:2525+ Je 11 '53

Progressive tax changes in 1952. V. R. Wolder. Comm & Fin Chr 176:2331+ D 18 '52

See also

American law institute

Study and teaching

Training tax assistants. W. H. Harrison, jr. Edison Elec Inst Bul 21:196-8+ Je '53

Belgium

Belgium takes steps to raise tax rates. For Comm W 49:8 Ap 27 '53

Bolivia

Bolivia increases direct taxes. For Comm W 49:22 Mr 16 '53

TAXATION—*Continued*

British Columbia

Tax tangle hampers B.C. tree farming. I. Mahood. Paper Tr J 136:12 Ja 2 '53

California

Fringe areas in California. Bsns W p 148+ Jl 18 '53

Canada

Canadian budget based on prospect for continuation of prosperity. For Comm W 49:6+ Mr 16 '53

Genius of Canada's fiscal policy; appraisal of tax system as a factor in free economy. J. H. Perry. Trusts & Estates 92:457-8 Je '53

Rental-purchase agreements generate tax and accounting problems. M. F. Macdonald. Roads & Eng Constr 91:126+ My '53

Taxes in Canada. J. H. Perry. Comm & Fin Chr 177:1537 Ap 9 '53

Valuation of assets for Canadian tax purposes. J. K. Allison. Trusts & Estates 92:453-6 Je '53

Colombia

Colombia makes extensive changes in its system of levying taxes. For Comm W 49:15+ Ap 6 '53

Cuba

Cuba establishes new luxury taxes. For Comm W 49:7-8 F 16 '53

Cuba raises taxes on business in Island; U.S. firms affected. For Comm W 49:5 Ja 26 '53

Denmark

Yield from direct taxes in Denmark increases. For Comm W 49:8 F 9 '53

Egypt

Egypt raises taxes; needs more revenue. For Comm W 48:12 O 6 '52

Germany

Germany cuts its taxes. Economist 166:366-7 F 7 '53

Great Britain

British budget allows for tax cuts, aims at higher industrial output. For Comm W 49:7 Je 8 '53

British crusade against high taxes. P. Einzig. Comm & Fin Chr 177:596 F 5 '53

Budget analysed. Economist 167:169-75 Ap 18 '53

Customs and excise revenue; charts. Economist 166:901 Mr 28 '53

Fiscal lever. Economist 166:124-5 Ja 17 '53

Little help for industry. Economist 166:467-8 F 21 '53

No concessions on purchase tax. Economist 167:760 Je 13 '53

Ireland

Ireland awaits more taxes. Economist 167:210 Ap 25 '53

Ireland's unchanging taxes. Economist 167:429 My 16 '53

Irish budget provides for expenses to be paid from current revenue. For Comm W 49:5 Je 8 '53

Michigan

Footing the bill. Bsns W p64+ Jl 11 '53

Netherlands

Netherlands proposes tax relief measures. For Comm W 49:6 My 25 '53

Ohio

Tax limitation in Ohio. G. W. Thatcher. Land Econ 28:373-9 N '52

Puerto Rico

Tax holiday. Bsns W p64 Jl 11 '53

Siam (Thailand)

Extensive tax changes made in Thailand. For Comm W 49:31 Ap 27 '53

Sweden

Writeoff pace. Bsns W p90+ Ap 4 '53

United States

AIA federal tax committee makes 58 proposals to improve federal taxation. J Account 94:719-20+ D '52

Appealing to the people. Bsns W p27-8 My 23 '53

Balanced budget, tax cut feasible this year! W. A. McDonnell. Comm & Fin Chr 177:1557 Ap 9 '53

Budget and tax outlook. Nat City Bank p 138-42 D '52

Businessmen read the tax outlook. Bsns W p27 F 28 '53

Effects cancel out, so far; studies compiled by Harvard's business school. Bsns W p 104-6+ Je 13 '53

Eisenhower's tax program; text. Comm & Fin Chr 177:2185+ My 21 '53

Federal sales tax? U.S. Treasury ponders Canada's success with it. J. C. W. Schaie. Barron's 33:9 Je 29 '53

Federal tax notes. S. J. Foosaner. Trusts & Estates 92:65-7 Ja '53 [cont monthly]

Large and small lead and zinc miners reach unanimity on sliding scale import tax. Min Eng 5:268-9 Mr '53

Manufacturers excise taxes hit rebuilding; questions prepared by the Automotive engine rebuilders association. Diesel Power 30:56-7 O '52

Objectives of Treasury's tax policies. M. B. Folsom. Comm & Fin Chr 177:1735+ Ap 23 '53

Our tax mess. M. G. Roebling. Comm & Fin Chr 177:1861 Ap 30 '53

Outlook for federal tax changes. E. P. Tuttle. Comm & Fin Chr 177:1521+ Ap 9 '53

Overhauling the tax laws. Bsns W p31-2 Je 13 '53

President's tax proposals. Nat City Bank p62-5 Je '53

Pushing closer to tax limitation. F. E. Packard. map Bankers Mo 70:14+ Ja '53

Recommends tax reforms. G. K. Funston. Comm & Fin Chr 177:1435 Ap 2 '53

Should the silver profits tax be removed? H. M. Bratter. Eng & Min J 154:75-7+ Ag '53

Suggestions for federal tax revisions. A. W. Miller. Comm & Fin Chr 177:1958 My 7 '53

Suggestions for tax revisions. F. Maytag, 2d. Comm & Fin Chr 177:2074-5 My 14 '53

Tax clinic. J. K. Lasser, ed. Published in monthly numbers of Journal of accountancy

Tax shelter for the family. W. J. Casey and J. K. Lasser. Comm & Fin Chr 177:1339 Mr 26 '53

Tax tangle. Barron's 33:1 Je 1 '53

Taxes. R. W. Babson. Comm & Fin Chr 177:1860 Ap 30 '53

Taxes; aids and cautions. M. C. Price and others. Credit & Fin Management 55:8+ F '53

Taxes in the United States triple in the past decade; federal government gets lion's share of the increase. J Account 95:66-8 Ja '53

Taxing the source of welfare and security. D. B. Woodward. Comm & Fin Chr 177:2082-3 My 14 '53; Excerpts. East Underw 54:3+ Ap 24 '53

We're going to get a lot of changes in our tax laws. J. K. Lasser. Comm & Fin Chr 176:2489+ D 25 '52

What can we do about taxes? J. J. Mann. Comm & Fin Chr 177:1740+ Ap 23 '53

What hit tax collections? Bsns W p25-6 Jl 11 '53

What will happen to taxes? Bsns W p25-6 Ja 17 '53

When can Congress reduce taxes? R. Magill. Comm & Fin Chr 176:1536-7 O 23 '52

Your blueprint for 1953, as altered by taxes. T. B. Meek. Comm & Fin Chr 176:2494+ D 25 '52

Your tax bill, $79 billion. J. T. Roberts. Mag of Wall St 91:383-5+ Ja 10 '53

See also

Corporations—Taxation

Excess profits tax

Gift tax

Income tax—United States

Tariff—United States

United States—Internal revenue, Bureau of

Uruguay

Uruguay establishes new tax regulations. For Comm W 50:10 Jl 20 '53

TAXATION, County

County tax structure clarified by public relations. P. Thomson. Pub Works 84:87 Ag '53

TAXATION, Double

Crushing incentive for equity investment. E. T. McCormick. Comm & Fin Chr 178:270 Jl 23 '53

Double taxation of dividends, a triple penalty on the investor. G. K. Funston. Comm & Fin Chr 178:271 Jl 23 '53; Discussion. R. Spitz. 178:357 Jl 30 '53

TAXATION, Exemption from

Ask tax ruling for profit sharing plans. East Underw 54:12 F 27 '53

Charitable trusts; guides to compliance for tax exemption. R. N. Gresham. Trusts & Estates 91:931-3 D '52

$5,000 gross income exemption proposal by tax unit smacks of discrimination. Nat Underw (Life ed) 56:6 D 26 '52

More tax-exempt plants; industrial-plant bonds. Bsns W p 148+ N 22 '52

Outlook for tax-exempt bonds. H. C. Taylor. Comm & Fin Chr 176:1919+ N 20 '52

Profit-sharing plans with deferred compensation. V. R. Wolder. Comm & Fin Chr 176:2503 D 25 '52

When a sale is a loan; Supreme court of Indiana decision that purported sale of conditional sales contracts was a loan; Wayne pump co. vs. Dept. of treasury. F. C. Fiechter, jr. Burroughs Clearing House 37:75-6 My '53

TAXATION, Limitation of

Needed, a constitutional limit on taxation. C. R. Sheaffer. Comm & Fin Chr 176:2037 N 27 '52

Pushing closer to tax limitation. F. E. Packard. map Bankers Mo 70:14+ Ja '53

Tax limitation in Ohio. G. W. Thatcher. Land Econ 28:373-9 N '52

TAXATION, State

Corporations prove valuable source for state taxes. Steel 132:79 My 11 '53

Fundamentals of state death taxes. East Underw 54:4 Je 12 '53

TAXATION of securities

Appeal of Canadian mutual funds. A. Chippindale. Comm & Fin Chr 177:9+ sec 2 Je 25 '53

Attractive tax features of discount bonds should make them useful as tax-planning instruments. A. Morris. J Account 95:305-9 Mr '53

Capitalizing stock losses to avoid taxes. R. Colston. Mag of Wall St 91:243+ N 29 '52

Eyeing tax laws in stock trading. E. W. Stern. Comm & Fin Chr 177:1008 Mr 5 '53

How to minimize your taxes on your 1952 investment income. A. C. Strasburger. Mag of Wall St 91:62-3+ O 18 '52

Tax exempts; rising yields make them more attractive to more investors. C. ter Kuile. Barron's 33:11 Je 15 '53

See also

Stock transfer tax

Taxation, Exemption from

TAXICAB dispatching. See Radio telephone—Taxicab dispatching

TAXICABS

Cleaning

Automotive fleet cleaning. E. Weller. il Soap & San Chem 28:44-5+ N '52

Radio equipment

Complying with the FCC rules. C. I. Fonger. Radio Com 12:13+ N '52

Radio dispatching system for large taxicab fleet operation. A. R. Vallarino and S. W. Lewinter. diags Elec Eng 71:232-5 Mr '52; Same. Elec Com 30:55-60 Mr '53; Same abr. Radio Com 12:14-15+ N '52

Great Britain

Taxis and taxes. Economist 167:135-6 Ap 18 '53

TAXONOMY. See Classification

TAYLOR, Charles Gillies, 1883-1953

Sketch. East Underw 54:1+ Je 12 '53

Tributes. East Underw 54:4+ Je 19 '53

TAYLOR, H. Birchard

Presentation of the Elliott Cresson medals. por Franklin Inst J 254:457-9 D '52

TAYLOR, Jessie

Sally Joy Brown of Chicago tribune, a friend indeed. Ed & Pub 86:33 Ja 3 '53

TAYLOR, Kenneth Wiffin

New finance man. por Bsns W p 170 Ja 24 '53

TAYLOR, Telford, 1908-

Portrait. Dun's R 60:142 O '52

TAYLOR wine company

Taylor's wines; art of wine maker projected into sales through art of packaging. il Mod Packaging 26:94-8 N '52

TEA

Counter-and-stacker attachment delivers tea bags ready for loading in carton. il Mod Packaging 26:91 N '52

Japan's tea output, price rise; export volume falls. For Comm W 48:15 D 29 '52

Now the tea bag gets a new competitor. C. H. Newman. Sales Management 70:93-4+ Ja 15 '53

TEA industry and trade

Indonesia

Production of tea in Indonesia decreased. For Comm W 49:18 Mr 9 '53

Iran

Iran raises tea output; still must import tea. For Comm W 49:17 Mr 9 '53

Japan

Japanese tea industry has prosperous year. For Comm W 49:23 My 4 '53

TEACHERS

Drama served at teacher dinners. S. Mack. Am Gas Assn Proc 1952:238-9

Teachers make themselves scarce. Economist 167:79 Ap 11 '53

Telling the teachers about instalment credit; Philadelphia educators symposium on consumer credit. F. Parker. Burroughs Clearing House 37:36-7+ Je '53

See also

Chemistry teachers

College professors and instructors

Engineering colleges—Professors and instructors

TEACHERS insurance and annuity association of America

Equity annuity plans get green light on tax aspects. Nat Underw (Life ed) 56:4 O 31 '52

TEACHING

See also

Color in teaching

Employees, Training of

also subdivision Study and teaching under special subjects, e.g.

Chemistry

Engineering

Aids and devices

How Chevron helps kids drill for oil; model kits supplied to schools. A. McNay. il Sales Management 69:134+ O 15 '52

Teaching aids for heat transfer and thermodynamics. W. J. King. diags J Eng Educ 43:167-70 N '52

Tomorrow's engineers read the comics; General Electric's experiment. D. Van Avery. il Gen Elec R 56:20-2 S '53

See also

Moving pictures in education

TEAK

U.S. imports of teak increasing; with table of imports of teak lumber, 1940-51. For Comm W 48:21 D 22 '52

TEAMSTERS union. See International brotherhood of teamsters, chauffeurs, warehousemen and helpers of America

TECHNETIUM

Analysis

Distribution of the subgroup VII elements between pyridine and 4*N* NaOH. W. Goishi and W. F. Libby. bibliog Am Chem Soc J 74:6109 D 5 '52

Isotopes

Influence of the chemical state on the lifetime of a nuclear isomer, Tc^{99m}. K. T. Bainbridge and others. bibliog il diags Phys R 90:430-9 My 1 '53

Investigation of the beta-spectra of Be^{10}, K^{40}, Tc^{99}, and Cl^{36}. L. Feldman and C. S. Wu. bibliog il diag Phys R 87:1091-9 S 15 '52

Isomeric transitions in Tc^{93} and Tc^{96}. H. T. Easterday and H. A. Medicus. bibliog diag Phys R 89:752-4 F 15 '53

TECHNICAL assistance program. See United nations—Technical assistance program

TECHNICAL association of the pulp and paper industry

Address of the president. K. P. Geohegan. Tappi 36:sup 12A+ Mr '53

Annual meeting, New York; program. Paper Tr J 136:34-6 Ja 30 '53; Tappi 36:sup 10A+ Ja '53

Annual meeting, 38th, New York, Feb. 16-19. Chem & Eng N 31:870+ Mr 2 '53

Annual meeting, 38th, New York, Feb. 16-19. Oil Paint & Drug Rep 163:7+ F 23 '53

Annual meeting, 38th, New York, Feb. 16-19. Paper Ind 34:1475-7 Mr '53

Annual meeting, 38th, New York, Feb. 16-19; abstracts of papers. Tappi 36:sup42A+ Mr '53

Annual meeting, 38th, New York, Feb. 16-19; with abstracts of papers. Paper Tr J 136: 86-7 F 20 '53

Engineering conference, 7th, Chicago, Oct. 13-16; abstracts of papers. Paper Tr J 135: 28-33 O 24 '52; Paper Ind 34:1001-2+ N '52; Tappi 35:74A+ N '52

Personal development through local section activity. R. G. Macdonald. Tappi 36:sup 147A-50A Je '53

What you should know about the TAPPI engineering conference. W. C. Bloomquist. Tappi 36:sup74A+ Ag '53

TECHNICAL education

Technical institute; its relation to engineering education and trade training. C. W. Beese. J Eng Educ 43:236-40 D '52

See also

Apprentices

Chemical education

Employees, Training of

Engineering colleges

Engineering education

Forestry schools and education

Industrial education

Textile education

Vocational education

also Foundry educational foundation; Massachusetts institute of technology

TECHNICAL information

Engineering and aeronautical information services; Association of special libraries and information bureaux 27th annual conference; discussion. Engineering 174:403 S 26 '52

Selecting material for science-technology libraries. R. H. Phelps. Special Lib 44:89-92 Mr '53

TECHNICAL institute. See Technical education

TECHNICAL libraries

How to start an industrial library. D. J. Foskett. bibliog Aslib Proc 5:3-8 F '53

Selecting material for science-technology libraries. R. H. Phelps. Special Lib 44:89-92 Mr '53

Technical library of the Quartermaster research and development laboratories. R. L. Martin. Special Lib 44:96-8 Mr '53

See also

Business libraries

Engineering colleges —Libraries

TECHNICAL literature

Technical and scientific publications in the British Isles. J. T. Kemp. Special Lib 43: 344-7 N '52

Translations available in the USA. L. Goldman. Special Lib 43:354-7 N '52

See also

Chemical literature

Scientific literature

TECHNICAL periodicals

Periodical literature for electrical engineers. R. C. Coile. J Doc 8:209-26 D '52

TECHNICAL products

See also

Automobile parts

Equipment industries

Industrial market

Machinery industry

TECHNICAL reports

Library organization and management of technical reports literature. B. M. Fry. (Studies in lib. sci. no. 1) 140p pa $2.25 Catholic univ. of America press, Washington 17, D.C. '53

TECHNICAL workers

Keeping tabs on U.S. technical manpower. Bsns W p96+ My 9 '53

Technicians in tool engineering. W. W. Rogers. il Tool Eng 31:66-8 Jl '53

Training in industry. K. R. Sturley. bibliog Inst E E Proc 100 pt 1:22-3 Ja '53

See also

Chemical workers

Electric workers

Engineers

Laboratory workers

Radio workers

Research workers

TECHNICAL writing

Plea for simplicity. H. M. Mathis. Chem Eng Prog 48:585 N '52

Presenting technical information; conference. Elec J 150:123-4 Ja 9 '53

Technical writing can be effective. A. J. Casser. Machine Design 25:260+ Mr '53

Technical writing grows into new profession; publications engineering. R. T. Hamlett. il Inst Radio Eng Proc 40:1157-60 O '52

See also

Engineering reports

Radio writing

TECHNICOLOR, inc.

Speculation in color and depth. I. U. Cobleigh. Comm & Fin Chr 176:1519+ O 23 '52

TECHNOLOGY

Applying science to industry. Chem Age (Lond) 68:309-10 F 21 '53

Pledge of faith in America's future. A. C. Jacobs. Mech Eng 74:980-2 D '52

Prediction of technical change. S. C. Gilfillan. R Econ & Stat 34:368-85 N '52

Technology in a troubled world. W. C. Foster. Mech Eng 74:784-6+ O '52

See also

Building

Ceramics

Chemistry, Technical

Concrete

Dyes and dyeing

Electric engineering

Engineering

Food technology

Glass manufacture

Inventions

Machinery

Manufactures

Metallurgy

Paper making

Pottery

Printing

Radio communication

Railroad engineering

Rubber

Soap

Steel

Technical education

Textile industry

Bibliography

Select list of standard British scientific and technical books. E. R. McColvin, comp. 4th ed rev & enl 72p Aslib, 4 Palace Gate, London, W.8 '52

Terminology

Rose by any other name; work of the Anglo-American committee on technical terminology. H. S. Osborne. Standardization 24: 19-20+ Ja '53

TECHNOMETRY (term)

Why depend on a hunch? applications of technometry. J. G. Glover. il Dun's R 60: 26-7+ O '52

TEEGARDEN, Lindsey W.

Businessmen in the news. por Fortune 47:63 Ap '53

TEETH

Diseases and defects

Ammoniated dentifrices and hamster caries; further studies on the effects of ingestion. D. F. Mitchell and others. bibliog Science 116:537-8 N 14 '52

Effect of fluoridated public water supplies on dental caries prevalence. F. A. Arnold, jr. and others. bibliog Pub Health Rep 68:141-8 F '53

Effects of fluoride in North Dakota water supplies. A. E. Williamson and J. H. Svore. Am Water Works Assn J 45:873-8 Ag '53

Fluoridation not guarantee that everyone will have perfect teeth. W. E. White. Munic Util 91:48-9 Mr '53

Fluoridation of domestic water supplies in North America as a means of controlling dental caries; abstract. Am Water Works Assn J 45:sup78+ O '53

Fluorides and dental disease; abstract. F. A. Whitlock. Am Water Works Assn J 44:sup56+ O '52

Health commissioner looks at fluoridation. A. E. Heustis. Am Water Works Assn J 45: 889-92 Ag '53; Abstract. Water & Sewage Works 100:303 Ag '53

Laboratory investigations on the relation of fluorine to dental caries on Tyneside and district; abstract. G. N. Jenkins and others. Am Water Works Assn J 45:sup80+ My '53

TEETH—Diseases and defects—*Continued*
Prevention of dental caries by rock phosphate in the diet of the rat. J. F. McClendon and J. Gershon-Cohen. Science 117:595-6 My 29 '53
Water fluoridation and dental research. H. R. Frye and I. N. Hill. bibliog Am Water Works Assn J 44:947-56 O '52

TEFLON
Calorimetric properties of polytetrafluoroethylene (Teflon) from 0° to 365°K. G. T. Furukawa and others. J Res Nat Bur Stand 49:273-8 O '52
Effect of pressure on the melting point of Teflon tetrafluoroethylene resin. P. L. McGeer and H. C. Duus. J Chem Phys 20:1813-14 N '52
Fluorocarbons face fame and fortune; specific applications. il Mod Plastics 30:83-7+ D '52
How to tell quality in Teflon. I. D. Press. il Materials & Methods 38:64-6 Jl '53
Polytetrafluorethylene, its properties and uses. L. W. Cornell. Machine Design 25: 274+ Jl '53
Research discloses transitions in Teflon. Machine Design 25:177-8 Jl '53
Teflon joined by fusion bonding. H. G. Henry. il diag Materials & Methods 38:114-15 O '53
Transitions and phases of polytetrafluoroethylene (Teflon). C. E. Weir. bibliog J Res Nat Bur Stand 50:95-7 F '53
Transitions in Teflon. Product Eng 24:185 My '53

TELECOMPUTING corporation
Security I like best. R. E. Anderson. Comm & Fin Chr 176:1518+ O 23 '52

TELEGRAPH
Wire and cable in the telegraph industry; abstract. W. F. Markley. Elec Eng 72: 410 My '53
See also
Radio telegraph
Railroads—Telegraph

History

Building America by telegraph. H. P. Corwith. Midwest Eng 5:9-10+ N '52

Picture transmission

See Phototelegraphy

Rates

Arabian telegraph rates up. For Comm W 48:23 O 13 '52

Greece

Greek telecommunications aided under Marshall plan. For Comm W 48:25 D 22 '52

TELEGRAPH, Submarine
Estimated size of the Grand Banks turbidity current. P. H. Kuenen. bibliog Am J Sci 250:874-84 D '52
Turbidity currents and submarine slumps, and the 1929 Grand Banks earthquake. B. C. Heezen and M. Ewing. map Am J Sci 250:849-73 bibliog(p871-3) D '52

TELEGRAPH companies
See also
American telephone and telegraph company
Western union telegraph company

TELEGRAPH keys
Better electronic key. J. D. Gallagher. il diags Radio & Tv N 49:52-4 Ja '53
Dot anticipator for the electronic key. R. E. Brann. il diags Q S T 37:18-21 Jl '53
Modernize your bug. J. F. Clemens. il diag Radio & Tv N 49:39 Ap '53
Ultimatic; the key with a memory. J. Kaye. il diags Q S T 37:11-15+ F '53

TELEGRAPHERS
Telegraphers sign two-year pact with United press. Ed & Pub 86:59 Ja 10 '53

TELEMETERING
Acoustic firing error indicator. M. C. Eliason and W. G. Hornbostel. il diags Electronics 25:98-101 O '52
Better communications for utilities. R. T. King. Pub Util 50:780-8 N 20 '52
Broadcast remote control. il diags Electronics 26:200+ Je '53
Broadcast transmitter remote control system. G. W. Lee. il diag Electronics 26: 138-41 Je '53
Control of outlet regulators on Tennessee natural gas lines. D. H. Woods. map Oil & Gas J 51:125 N 3 '52
Differential inductance telemeter equipment for force and moment measurements. R. W. F. Gould. diags Roy Aeronautical Soc J 57: 416-19 Je '53
Fault clearing, control, and communication; microwave does all three in Baltimore. C. Wasserman. il map Elec World 139:82-3 Ja 12 '53
F-m recording in guided missiles. A. A. Gerlach. il diags Electronics 26:108-11 Ja '53
Frequency-shift carrier-current equipment for telemetering and other control functions. R. W. Beckwith. bibliog diags Elec Eng 71:1026-31 N '52
High-altitude research. E. Burgess. il diags Engineer 194:338-40 S 12 '52
How Covington protects telemetric control on district and feeder line regulators. H. S. Harris. il diags Gas Age 111:21-3+ F 26 '53
Low-noise amplifier for 200 mc. R. Lowell. bibliog il diags Tele-Tech 12:106-7+ Je '53
Measuring liquid content of tanks by remote control. il diags Oil & Gas J 52:124 Je 8 '53
Microwave control of pump station raises line capacity at minimum cost. J. R. Ellis. il Oil & Gas J 51:258-9+ N 17 '52; Same. Am Pet Inst Proc 32(5):29-34 '52; Same cond. Nat Pet N 44:64-5 N 12 '52
Microwave on a 1000-mile pipe line system. P. J. Brewster. il diag Pet Eng 25:D77+ My '53
Miniature airborne telemetering system. H. M. Hill, jr. il diags Tele-Tech 11:68-72+ D '52
New developments in remote control of pumping stations. M. Hyde. il diags Oil & Gas J 51:202-3+ O 13 '52
Nonlinear filtering and waveshape multiplexing. R. E. Scott and others. diags Electronics 25:146+ D '52
Operating remote control broadcast stations. P. Whitney. il diags Tele-Tech 12:72-5+ S '53
Platte pipe line communications and controls systems. M. L. Long. il diag Oil & Gas J 51:91-2+ Ap 6 '53
Power for microwave system must be very reliable and permit quick changeover. F. C. Krings. Elec World News ed 139:34 F 16 '53
Push-button control of natural-gas flow; Houston pipe line co. J. F. Collerain and E. M. DeMouche. il diags Oil & Gas J 51: 254-6+ O 13 '52
Radio telemetering. E. D. Whitehead and J. Walsh. bibliog diags Inst E E Proc 100 pt 3:45-56; Discussion. 57-9 Mr '53
Remote measurement and control. W. E. Rufleth. il diags Pet Eng 24:D20+ O '52
Strain-gage remote metering. G. F. Stastny and R. S. Butts. il diags Tele-Tech 12:73-5+ Mr '53
Telemeter offers gas industry opportunity to read meters outside premises. il Gas Age 112:25-7 Ag 13 '53
Telemetering. G. C. Wilson. il diags Instruments 26:127-9 Ja '53
Telemetering and direct frequency measurement. P. M. Erlandson. diags Tele-Tech 11:52-3+ O; 62-3+ N '52
Telemetering for system operation. R. H. Dunn and C. H. Chambers. bibliog diags Inst E E Proc 100 pt 1:39-51 Mr '53; Abstract. Elec R (Lond) 151:1079 N 14 '52; Discussion. Inst E E Proc 100 pt 1:51-6 Mr '53; Elec R (Lond) 151:1079-80 N 14 '52; Elec J 149:1515-16 N 14 '52
Telemetering solves tie line problems; Central power & light co., Texas. P. Taylor. il map diag Elec World 138:100-2 D 15 '52
Telemetering system for a large electrostatic accelerator. C. W. Johnstone and others. il diags Inst Radio Eng Proc 40:1664-74 D '52
Teletype controls provide efficiency and convenience; National cooperative refinery association's products pipe line. C. H. Hohnadel. il diag World Oil 135:276+ N '52
Transmit tank gages over telephone wire. il diag Pet Processing 8:948-9 Je '53
Wide-band data transmitter. D. J. Gray and others. bibliog diags Electronics 26:168-70 S '53

TELEPATHY

Neutrino communication system. M. H. Shamos. Inst Radio Eng Proc 41:1060-1 Ag '53

TELEPHONE

Communications for civil defense. C. A. Armstrong. map diag Elec Eng 72:218-22 Mr '53

Delay curves for calls served at random. J. Riordan. bibliog Bell System Tech J 32:100-19 Ja '53

Working curves for delayed exponential calls served in random order. R. I. Wilkinson. Bell System Tech J 32:360-83 Mr '53

See also

Bell telephone system

Electric communication

Electric lines—Inductive interference

Radio communication—Wire line connections

Radio telephone

Railroads—Telephone

Telephone, Carrier current

United States independent telephone association

Apparatus and supplies

Automatic assembly of small parts saves money. W. G. Patton. il Iron Age 171:206-7 My 7 '53

Automatic communications system. J. D. Lane. il diag Electronics 25:168+ O '52

Automatic recognition of spoken digits. K. H. Davis and others. diag Acoustical Soc Am J 24:637-42 N '52

Bell wraps solderless connections for joint economy. C. Emerson. il Am Mach 97:100-1 Ag 31 '53

Conservation through progress; research in the telephone industry. M. J. Kelly. Metal Prog 63:90+ Mr '53

Effect of packaging on corrosion of zinc plated equipment; abstract. K. G. Compton and others. Metal Prog 62:194 N '52

Ferrite core inductors. H. A. Stone, jr. bibliog il diags Bell System Tech J 32:265-91 Mr '53

How to conceal telephone wires, keep desks neat. A. R. Hutchinson. il Standardization 23:407 D '52

Improved circuit for the telephone set. A. F. Bennett. il diags Bell System Tech J 32:611-26 My '53

Indian telephone industries. il Elec J 151:423-4 Ag 7 '53

Investigation of the selenium rectifier for contact protection. H. F. Herbig and J. D. Winters. il diags Elec Com 30:96-105 Je '53

More plastics in a telephone. L. W. Droel. il Mod Plastics 30:89-91 D '52

New general-purpose relay for telephone switching systems. A. C. Keller. il diags Bell System Tech J 31:1023-67 N '52; Same cond. Elec Eng 71:1007-12 N '52

Progressive die has two tap heads; baseplates for Type 500 telephone set manufactured at Western electric co. G. W. Piper. il diags Am Mach 97:126-7 Mr 2 '53

Solderless wrapped connections. J. W. McRae and others. il diags Bell System Tech J 32:523-610 My '53

Special-purpose relays. L. J. Nijs and R. A. H. Faict. il diags Elec Com 29:260-5 D '52

Subscriber toll dialing tape reader; abstract. W. H. Blashfield. diag Elec Eng 72:786 S '53

Telephone amplifying apparatus; patent. diags Electronics 26:254+ Ag '53

Voice-operated telephone; automatic digit recognizer. Franklin Inst J 255:269-70 Mr '53; Abstract. il Elec Eng 72:274-5 Mr '53

Dial telephone

See Telephone, Automatic

Intercommunicating systems

See Intercommunicating systems

Laws and regulations

Privately-owned microwave circuits and telephone company facilities. J. Courtney. Commun Eng 13:13+ Ja '53

Long distance

AT&T long lines moves from New York. Pub Util 50:922 D 18 '52

Telephone numbers get a party line; why dial names are being standardized. J. H. Collins. Pub Util 52:346-53 S 10 '53

Noise

Shielding factor of underground cable sheaths; abstract. F. Jones. diags Inst E E Proc 100 pt 2:195-6 Ap '53

Theory of magnetic effects on the noise in a germanium filament. H. Suhl. il Bell System Tech J 32:647-64 My '53

Picture transmission

See Phototelegraphy

Private wire systems

Communications evolution; scattered operations of Union of California are linked by effective automatic telephone system. R. Sneddon. il Pet Eng 25:A82+ F '53

Radio telephone connection

Israel intercity vhf telecommunication systems. L. C. Simpson. il diags RCA R 14:100-24 Mr '53

Privately-owned microwave circuits and telephone company facilities. J. Courtney. Commun Eng 13:13+ Ja '53

Rates

Bell System asks FCC for rate boosts. Pub Util 52:443 S 24 '53

Developments in the past year; telephone rate regulation. F. Rockwood. Pub Util 50:590-6 O 23 '52

Fair return; recent court decisions question original cost utility standard. E. R. Abrams. Barron's 33:23-4 Mr 23 '53

Maryland denies additional rate boost for Chesapeake & Potomac telephone co. Pub Util 51:38-9 Ja 1 '53

Michigan commission reversed in rate case. Pub Util 52:309-10 Ag 27 '53

New England Telephone & Telegraph wins rate boost. Pub Util 52:38-9 Jl 2 '53

New Jersey Bell presents new rate plea. Pub Util 52:106 Jl 16 '53

North Carolina high court to review rate case. Pub Util 52:444-5 S 24 '53

Pennsylvania Bell wins rate increase. Pub Util 51:37-8 Ja 1 '53

Statistics

Telephone statistics of the world. Elec Com 30:129-33 Je '53

Cuba

Phone service inadequate for needs. For Comm W 48:29 N 17 '52

Denmark

Danish telephone cables. il map Elec J 150:448-51 F 6 '53

Great Britain

British telephone service. Elec R (Lond) 153:472 Ag 28 '53

By the right number; telephone calls to be queued. Electrician 149:765-6 S 12 '52

Gas and water telephones. Economist 165:666-7 D 6 '52

Some telecommunication developments in the South West. A. C. Warren. Inst E E Proc 100 pt 1:24-5 Ja '53

Telephone area; abstract. J. R. Sutcliffe. Inst E E Proc 100 pt 1:81 Mr '53

Greece

Greek telecommunications aided under Marshall plan. For Comm W 48:25 D 22 '52

India

Indian telephone industries. il Elec J 151:423-4 Ag 7 '53

Israel

Israel intercity vhf telecommunication systems. L. C. Simpson. il diags RCA R 14:100-24 Mr '53

Netherlands

Netherlands telephone network and the Arnhem district exchange. J. C. Schooneman. il diags Elec Com 29:293-313 D '52

Turkey

Radio-telephone link between Turkey and the West. il Engineer 195:363 Mr 6 '53; Engineering 175:358 Mr 20 '53; Elec J 150:681 F 27 '53

TELEPHONE, Automatic

AT&T long lines moves from New York. Pub Util 50:922 D 18 '52

Bell engineers aim for an all-automatic system. il maps Bsns W p62-4+ My 23 '53

By the right number; telephone calls to be queued. Electrician 149:765-6 S 12 '52

Common control telephone switching systems. O. Myers. bibliog diags Bell System Tech J 31:1086-120 N '52

New general purpose relay for telephone switching systems. A. C. Keller. il diags Bell System Tech J 31:1023-67 N '52; Same cond. Elec Eng 71:1007-12 N '52

Study of non-blocking switching networks. C. Clos. diags Bell System Tech J 32:406-24 Mr '53

Subscriber toll dialing tape reader; abstract. W. H. Blashfield. diag Elec Eng 72:786 S '53

Telephone numbers get a party line; why dial names are being standardized. J. H. Collins. Pub Util 52:346-53 S 10 '53

Throwdown machine for telephone traffic studies. G. R. Frost and others. il diags Bell System Tech J 32:292-359 Mr '53

XY toll ticketing system. H. L. Foote. il diag Elec Eng 72:517-22 Je '53

Testing

Automatic line insulation test equipment for local crossbar systems. R. W. Burns and J. W. Dehn. il diags Bell System Tech J 32:627-46 My '53

Test set for recording impulses. L. J. Nijs. il diag Elec Com 30:9-11 Mr '53

TELEPHONE, Carrier current

Application of power-line carrier by analogue computer studies. J. D. Moynihan. bibliog diags Elec Eng 72:58-62 Ja '53

Carrier-current intercom. I. Gottlieb. il diag Radio & Tv N 48:45+ D '52

Carrier-current transmitter. G. R. Anglado. diag Radio & Tv N 48:152 N '52

Carrier radio aids mine communications. il Electronics 26:200 My '53

Co-ordination *M1* and *N1* telephone carrier systems; abstract. E. P. Smith and others. diag Elec Eng 72:780 S '53

Factors affecting selection of power-line carrier. R. C. Cheek. bibliog il diags Westinghouse Eng 13:121-5 Jl '53

Performance of rectifier modulators. D. G. Tucker. diags Inst E E Proc 99 pt 3:400-4 N '52

Telecommunications for the 1952 Olympic games. il Elec Com 29:266-7 D '52

Telemetering solves tie line problems; Central power & light co., Texas. P. Taylor. il map diag Elec World 138:100-2 D 15 '52

Type O carrier telephone. J. A. Coy and E. K. Van Tassel. il diags Elec Eng 72:418-23 My '53

Why and how of telephone line carriers. R. H. Miller. diags Elec West 110:93-6 Ap '53

TELEPHONE and general trust, limited

Statement by the chairman. A. Roger. Economist 167:122 Ap 11 '53

TELEPHONE booths

We worked all angles to get production off the shelf; enameling of a phone booth corner shelf. W. E. Burns. il Cer Ind 61:63 Jl '53

TELEPHONE cables

Bell System cable sheath problems and designs. F. W. Horn and R. B. Ramsey. il maps diags Elec Eng 70:1070-5 D '51; Abstract. Metal Prog 63:164+ F '53

Cable laying in wild West calls for big tractor power; illustrations with text. Constr Methods 35:137 F '53

Danish telephone cables. il map Elec J 150:448-51 F 6 '53

First plastic telephone cables in Denmark. il Elec J 150:372 Ja 30 '53

These three gadgets ease cable-laying; illustrations with text. Constr Methods 35:63 Mr '53

Coaxial cables

Coaxial cable system handles both telephone and tv signals. il Elec Eng 72:182 F '53; Same. Franklin Inst J 255:164 F '53

Mathematical theory of laminated transmission lines. S. P. Morgan, jr. diags Bell System Tech J 31:883-949, 1121-206 S-N '52

Transmission properties of laminated Clogston type conductors. E. F. Vaage. diags Bell System Tech J 32:695-713 My '53

Sheathing

Bit about sheathing. H. G. Burd. Elec World 138:172 D 15 '52

TELEPHONE companies

Independent telephone industry growing. D. C. Power. Pub Util 52:321-2 Ag 27 '53

See also

American telephone and telegraph company

Bell telephone system

General telephone corporation

International telephone and telegraph corporation

Pacific telephone and telegraph company

Advertising

Operations key to telephone advertising. il Ed & Pub 86:66 F 21 '53

Employees

Approval of industry-wide bargaining under the Taft-Hartley law. J. A. Beirne. Pub Util 51:629-30 My 7 '53

Bell system-CWA open contract talks. Pub Util 51:440-1 Mr 26 '53

CWA-Bell strike settlements. Pub Util 52:443-4 S 24 '53

Employees hold hobby show; New York telephone co. M. L. Briggs. il Am Bsns 23:30-1+ Jl '53

Law that's not invoked, Jersey phone strike. il Bsns W p 170+ Ap 25 '53

Phone union dispute taken to court. Pub Util 51:304 F 26 '53

Useful pointers on finding girl power. J. H. Collins. Pub Util 52:26-33 Jl 2 '53

See also

Communications workers of America

Finance

Rate of return allowed telephone utilities; with chart. O. Ely. Pub Util 50:858-60 D 4 '52

Law

Developments in the law; communications utilities. T. B. Milne. Pub Util 52:528-44 O 8 '53

Public relations

Public relations needs of the telephone industry. C. F. Mason. Pub Util 52:69-77 Jl 16 '53

Regulation

See also

Telephone—Rates

Taxation

Bell officials criticize unfair taxes. Pub Util 52:246-7 Ag 13 '53

House committee hears tax complaints. Pub Util 52:372-4 S 10 '53

Phone taxes criticized. Pub Util 52:107-8 Jl 16 '53

TELEPHONE exchanges

Netherlands telephone network and the Arnhem district exchange. J. C. Schooneman. il diags Elec Com 29:293-313 D '52

Power

48-volt power plant at Paille exchange in Brussels. J. Miesse and V. C. Meeuws. il diags Elec Com 29:278-92 D '52

Reserve power for telephone exchanges. il Diesel Power 31:58 S '53

TELEPHONE in business

Anybody answering? all too often the traveler holds the phone. J. C. W. Schaie. Barron's 33:3 Ja 26 '53

See also

Gas companies—Telephone

Insurance, Life—Agents—Telephone calls

TELEPHONE lines

Mathematical theory of laminated transmission lines. S. P. Morgan, jr. diags Bell System Tech J 31:883-949, 1121-206 S-N '52

Maintenance and repair

Automatic line insulation test equipment for local crossbar systems. R. W. Burns and J. W. Dehn. il diags Bell System Tech J 32:627-46 My '53

TELEPHONE lines—*Continued*

Winter maintenance

Telephone men against the snow. H. F. Unger. Pub Util 51:159-65 Ja 29 '53

TELEPHONE recorders

Automatic communications system. J. D. Lane. il diag Electronics 25:168+ O '52

Electronic secretary takes phone messages; J. S. Martin co. Sheet Metal Worker 44:50+ My '53

Speeding loan applications by means of telephone recording; Bank of the commonwealth, Detroit. il Burroughs Clearing House 37:15-16 Mr '53

TELEPHONE rentals, limited

Statement by the chairman. F. T. Jackson. Economist 167:943-4 Je 27 '53

TELEPHONE research

Conservation through progress; research in the telephone industry. M. J. Kelly. Metal Prog 63:90+ Mr '53

Economics of high-speed photography. A. C. Keller. Soc Motion Picture & Tv Eng J 59:365-8 N '52

TELEPHONE service, Rural

Court rules on REA act. Pub Util 52:106-7 Jl 16 '53

Indiana co-op faces court fight. Pub Util 51:39 Ja 1 '53

More REA telephone loans approved. Pub Util 50:920 D 18 '52

REA reviews 1952 rural phone loan activity. Pub Util 51:169 Ja 29 '53

Warns against monopoly trends. C. Wickard. Pub Util 50:503-4 O 9 '52

TELEPHONE switchboards

By the right number; telephone calls to be queued. Electrician 149:765-6 S 12 '52

Filton exchange. il Elec J 149:1777 D 5 '52; Elec R (Lond) 151:1281-2 D 12 '52

TELEPHONE wire

New wires for subscribers' lines. N. Sidenmark and others. il diags Elec J 151:557-64 Ag 21 '53

TELEPROMPTER

Now anybody can be a good speaker. il Sales Management 70:16-18 pt 2 Ja 1 '53

TELESCOPE

Home-made astronomical telescope. A. G. Ingalls. il diags Sci Am 187:98-101 N '52

Hot joints detected by telephone. P. J. Sandiford. il Elec World 139:140+ Ap 20 '53

Laboratory method for determining the angles subtended by distant objects. K. Grossfield. diags Opt Soc Am J 42:754-5 O '52

New giant telescopes in New Mexico will study sun's corona. il Elec Eng 71:1053-4 N '52

University of California gets bargain spyglass. P. N. Mann. il(p32) Cer Ind 61:142 O '53

Mirrors

Optical problems at the Palomar observatory. I. S. Bowen. il Opt Soc Am J 42:795-800 N '52

TELETYPE

Automatic teletype system handles airline communications operations. il Elec Eng 72:466-7 My '53; Same cond. Pub Util 51:630-1 My 7 '53

Frequency discriminator for narrow-band f-m. E. C. Miller. il diags Electronics 26:128-9 F '53

Inexpensive radioteletype converter. M. Bernstein. diags Q S T 37:44-5+ Ja '53

Inter-office teletypewriting system. il Ry Age 134:36 Je 29 '53

New army teletypewriter relay station. il diag Electronics 26:198 My '53

Radio telegraph printing. Elec J 150:1723-4 My 15 '53

System cuts order handling time from four days to one day; Dow chemical co. W. F. Stumpfig. il Am Bsns 23:13+ Ag '53

Teletype controls provide efficiency and convenience; National cooperative refinery association's products pipe line. C. H. Hohnadel. il diag World Oil 135:276+ N '52

Teletype redeal. Bsns W p57-8 Jl 4 '53

Tide-Water installs teletypewriters. il Pet Eng 25:D52 F '53

TELETYPE tape

Intermittent-feed computer tape reader; five-phototube input system for digital computers reads teleprinter punched tape. B. G. Welby. il diags Electronics 26:115-17 F '53

TELETYPESETTERS

Arbiter rules against union on tape issue. Ed & Pub 85:12 D 20 '52

Outside tape issue in Quad-City strike. Ed & Pub 85:11 D 20 '52

Preventive maintenance schedule recommended for telesetters. Ed & Pub 86:61 Ap 11 '53

Wall Street journal develops Electro-Typesetter to operate composing machines from news room. il Inland Ptr 130:34-5 Ja '53; Ed & Pub 85:12 D 20 '52

TELEVISION

Bing's mirror to reflect in December; device for magnetic tape recording of video signals. il Electronics 26:8 F '53

Community television continues to expand. Electronics 26:6+ Mr '53

Dx television. S. Johnson. il diag Radio & Tv N 48:52-3+ D '52

Evolution of television. V. K. Zworykin. Elec Eng 72:209 Mr '53

Kinescope recording film exposure control. R. E. Lovell and R. M. Fraser. il diag Soc Motion Picture & Tv Eng J 60:226-34 Mr '53

Radio progress during 1952; video techniques. bibliog Inst Radio Eng Proc 41:466 Ap '53

Scanning-current linearization by negative feedback. A. W. Keen. Inst Radio Eng Proc 40:1215 O '52

Television recording. W. D. Kemp. bibliog diags Soc Motion Picture & Tv Eng J 60:367-84 Ap '53

Television's increasing service to utility industry. C. B. Jolliffe. Comm & Fin Chr 176:1628+ O 30 '52

You and u.h.f. H. J. Schulman. il Radio & Tv N 49:48-9+ Mr '53

See also

Moving picture industry—Television competition

Moving picture theaters—Television

Newspapers—Television competition

Bibliography

RCA technical papers, third quarter, 1952. RCA R 13:573-4 D '52

RCA technical papers, fourth quarter, 1952. RCA R 14:125-7 Mr '53

RCA technical papers; first quarter, 1953. RCA R 14:297-8 Je '53

Radio progress during 1952. Inst Radio Eng Proc 41:470 Ap '53

Color

Adjacent-channel color-television. Tele-Tech 12:74 Ja '53

Color tv; House inquiry. Radio & Tv N 49:14+ Je '53

Color television in medical education. il Arch Rec 113:195+ F '53

Color television; its status today and a look into the future. W. R. G. Baker. il diags Tele-Tech 12:54-6+ Jl '53

Color tv projection system for theaters. diags Electronics 25:178+ O '52

Color television signal receiver demodulators. D. H. Pritchard and R. N. Rhodes. diags RCA R 14:205-26 Je '53

Color tv; the day draws near. Bsns W p46 Jl 4 '53

Color tv; the picture clears. Bsns W p28-9 Ap 4 '53

Color to the rescue of tv's boom. Bsns W p 132+ Jl 25 '53

Colorimetric analysis of RCA color television system. D. W. Epstein. diag RCA R 14:227-58 Je '53

Colorimetry in color television. F. J. Bingley. diags Inst Radio Eng Proc 41:838-51 Jl '53

Compatible color tv receiver. K. E. Farr. bibliog il(cover) diags Electronics 26:98-104 Ja '53

Congress investigates color tv. il Tele-Tech 12:138-9 Je '53

Congress starts probe of color tv. Electronics 26:5 Ap '53

Final NTSC color tv standards. diags Tele-Tech 12:63+ S '53

TELEVISION—Color—*Continued*

Frame synchronization for color television. D. Richman. diags Electronics 25:146-50 O '52

Gamma correction in constant luminance color television systems. S. Applebaum. diags Inst Radio Eng Proc 40:1185-95 O '52

Generation of NTSC color signals. J. F. Fisher. diags Inst Radio Eng Proc 41:338-43 Mr '53

Improved tri-color tv picture tube. il diags Tele-Tech 12:71 F '53

Large-screen color tv system; patent. diags Tele-Tech 12:100 S '53

Lock-in performance of an afc circuit. G. W. Preston and J. C. Tellier. diag Inst Radio Eng Proc 41:249-51 F '53

Measurement and control of the color characteristics of a flying-spot color signal generator. R. C. Moore and others. il diag Inst Radio Eng Proc 41:730-3 Je '53

Medical color tv. Tele-Tech 11:99 O '52

Optimum utilization of the radio frequency channel for color television. R. D. Kell and A. C. Schroeder. RCA R 14:133-43 Je '53

Phase indicator for color television. K. Schlesinger and L. W. Nero. il diags Electronics 25:112-14 O '52

Post deflection focusing chromatron, a single or mutli-gun tri-color cathode-ray tube. R. Dressler. il diags Inst Radio Eng Proc 41:851-8 Jl '53

Principles and development of color television systems. G. H. Brown and D. G. C. Luck. bibliog diags RCA R 14:144-204 Je '53

Recent progress in colour-television technique in the United States. A. Jensen. diags Inst E E Proc 100 pt 3:39-40 Ja '53

Recommendations of the National television system committee for a color television signal. A. V. Loughren. bibliog diags Soc Motion Picture & Tv Eng J 60:321-36 Ap '53

Review of work on dichroic mirrors and their light-dividing characteristics. M. E. Widdop. plan diags Soc Motion Picture & Tv Eng J 60:357-66 Ap '53

Revised specifications for field test of NTSC compatible color television. W. R. G. Baker. diag Inst Radio Eng Proc 41:666-7 My '53

Rotating screen color tv tube. I. Rehman and others. bibliog il Electronics 26:214+ S '53

Subjective study of color synchronization performance. M. I. Burgett, jr. diags Inst Radio Eng Proc 41:979-83 Ag '53

Synchronization in color television. D. G. Fink. bibliog diags Electronics 26:170-5 My '53

Synchronous demodulator for color tv. R. B. McGregor. diags Electronics 25:214+ O '52

Tv-gamma control; patent. diags Electronics 26:248+ S '53

Terminology

Color tv glossary. Radio Com 12:19 O '52; Same. Electronics 25:208+ N '52; Same. Elec Eng 71:1120-2 D '52

Standards on television; definitions of color terms, part 1, 1953. Inst Radio Eng Proc 41:344-7 Mr '53 (reprints 50c)

Industrial applications

Bankavision. G. A. Mooney. il Banking 45:34+ My '53

Closed circuit tv; new industrial tool. il Elec West 109:89 O '52

Closed-circuit tv operation. J. B. Klindworth. il plans diags Radio Com 12:11-13+ O '52

Dage industrial tv camera. H. E. Ennes. il diags Radio & Tv N 50:31-4+ Jl '53

Electronic eyes for industry. il Comp Air Mag 58:139-40 My '53

Industrial tv eyes it for you; sees how much cane is coming on conveyors in sugar mill. il Food Eng 25:93 Jl '53

Industrial tv monitors production. il Electronics 26:16+ Mr '53

Industrial television system demonstrated by RCA. Elec Eng 71:1055-6 N '52

Industry is opening its eyes to tv. Bsns W p48 Je 13 '53

Industry tunes in tv to see where human eyes can't look. il Mill & Factory 53:129-30 S '53

More industries try tv. Steel 131:107+ D 1 '52

More uses for tv and films. il Mod Ind 25:131-2 Mr '53

Tv covers industry's blind spots. il Bsns W p40-2+ My 30 '53

Television for monitoring stack emission. E. R. Thomas and W. L. Norvell. il diags Elec Eng 72:224-7 Mr '53

Tv; how can your plant use it? G. G. Carr. il Iron Age 170:47-8 O 23 '52

Television in hot strip mill helps avoid pileups. il Iron Age 171:154-5 My 21 '53; Steel 132:188+ My 25 '53

Television in industry. G. H. Wilson. il diags Elec Eng 72:125-30 F '53

Tv new tool for power engineers. H. de Soto. il diags Power Eng 57:88-9 O '53

Tv pictures combustion conditions inside furnaces; Port Jefferson installation of Long Island lighting co. L. M. Exley. il diag Elec World 139:92-5 F 9 '53

Tv sees where you can't look. il diags Power 97:78-83 Ap '53

Television use in industry and science. H. E. Taylor, jr. Comm & Fin Chr 177:1006+ Mr 5 '53

With industrial tv one operator controls four conveyors. il Factory Management 111:113 Ap '53

See also

Television in industry

Medical applications

Medical color tv. Tele-Tech 11:99 O '52

Photographic aspects

Grey-scale generator. G. E. Hamilton and R. Ilowite. il diags Electronics 25:143-5 N '52

Televising a symphony orchestra. R. Bretz. il diag Soc Motion Picture & Tv Eng J 60:559-71 My '53

Unique measuring system predetermines picture quality; abstract. O. H. Schade. Elec Eng 72:568-9 Je '53

Scientific applications

Flying-spot microscope. F. Roberts and others. il diags Electronics 26:137-9 Jl '53

Television use in industry and science. H. E. Taylor, jr. Comm & Fin Chr 177:1006+ Mr 5 '53

Standards

Final NTSC color tv standards. diags Tele-Tech 12:63+ S '53

Terminology

Color tv glossary. Radio Com 12:19 O '52; Same. Electronics 25:208+ N '52; Same. Elec Eng 71:1120-2 D '52

TELEVISION, Stereoscopic

How 3-D motion picture and tv systems operate. diags Tele-Tech 12:66-7+ My '53

Image forming system for tv and film to produce enhanced illusions of depth and roundness. diags Tele-Tech 12:220+ Ag '53

Low-cost 3-D tv. il diags Electronics 26:196+ Jl '53

3-D invades television. il Bsns W p28 My 9 '53

3-D tv on ABC. diag Tele-Tech 12:155 Je '53

TELEVISION, Submarine

Oceanographic television equipment. Engineer 195:835 Je 12 '53

TELEVISION advertising

Acme beer's tv round table; it's more than a sales builder. E. Stoutenburgh, jr. Sales Management 70:124+ Ja 15 '53

Animated tv ads. Bsns W p46 Ja 3 '53

Brown's cow cuts local tv costs. il Sales Management 69:91 N 20 '52

Commercial tv developing in Britain. For Comm W 49:13 Mr 9 '53

Do super tv commercials pay? il Sales Management 69:100+ D 15 '52

Ernie and Bea at the United transit co. tell transit story on Providence tv. il Bus Transportation 32:40-2 O '53

Future of tv rests on live shows. P. Phillips. Adv Agency 45:121 D '52

Greyhound sponsors national tv show. Bus Transportation 32:59 F '53

How Antell adapted tv sales pitch to newspapers. C. D. Kasher. Ed & Pub 85:16 O 25 '52

TELEVISION advertising—*Continued*

How the flying red horse covers Los Angeles. il Sales Management 69:110-11 D 1 '52

It's a tv device and it sells best via tv spots. J. Bentia. il Sales Management 69:118+ O 15 '52

Liberal magazines open up on job that advertising did for G.O.P. T. M. Jones. il Ptr Ink 241:38+ D 26 '52

Missing link; dealer cannot supply product. J. H. Lavenson. Ptr Ink 242:81 F 20 '53

New Schwerin-NBC report lists. il Ptr Ink 241:62+ N 21 '52

Prepare tv cooking school films for gas utilities. Am Gas Assn Mo 35:10 Ap '53; Am Gas J 178:72 My '53; il Gas Age 111:40-1 My 7 '53

Prudential agents report television advertising has made selling easier. Nat Underw (Life ed) 57:2 Ap 3 '53

Television advertising and production handbook. I. Settel and others. 480p bibliog(p458-60) $6 Thomas Y. Crowell co, 432 Fourth av, New York 16 '53

Tv; businessmen neglect a medium. Bsns W p 144 Mr 21 '53

Tv by 1955. L. Kent and D. W. Twedt. Ptr Ink 242:40-1 Ja 23 '53

Tv costs more, but; panel discussion. R. H. Wight. il Ptr Ink 241:31-2 D 19 '52

Tv market comes into sharp focus. Mod Ind 24:120+ N '52

Tv widens home service promotion coverage. il Am Gas Assn Mo 35:8-10+ Jl-Ag '53

What makes tv commercials click? L. Carter. Adv Agency 45:28+ N '52

What sponsors don't like about tv food shows. Sales Management 69:144+ O 15 '52

Which serves the advertiser best, film or live tv? panel discussion. R. H. Wight. Ptr Ink 241:27-9 O 31 '52

Who's going to foot the bill? Bsns W p43-4 My 23 '53

Why be stingy with tv bows? S. Abbey. Adv Agency 46:28+ Ja '53

Why is tv misused? over-indulgence in film. E. Lessere. Adv Agency 46:90 Ja '53

Why writer DeVoto thinks television's terrible. Sales Management 70:140 Mr 15 '53

See also
Advertising agencies—Television departments

Copy

60 seconds, to sell! G. D. Roscoe. Adv Agency 45:28+ O '52

Tv; it's needless limitations inherited from other media. G. Montgomery. Adv Agency 45:24+ D '52

Cost

Agency forum; are costs of television pricing out of line with its advertising value? Adv Agency 45:59+ N '52

Home demonstrators

How to present home demonstrators on radio and tv. D. H. McCollum. il Ptr Ink 242:34-5 Ja 30 '53

Prize contests

Station WLW gives away house and cars, to snag off-hour audience. il Bsns W p72+ Jl 18 '53

Testing

Your product's tv-quotient; how will your product look on television? il Mod Ind 24:53-6 O '52

TELEVISION antennas

Album of antennas; illustrations with text. Gen Elec R 56:44-8 My '53

Community antennas bring tv to fringe areas; systems use master high-gain antennas and amplifiers. J. M. Carroll. il diags Electronics 25:106-11 D '52

Experimentally determined radiation characteristics of conical and triangular antennas. G. H. Brown and O. M. Woodward, jr. bibliog il diags RCA R 13:425-52 D '52

High-gain loop antenna for television broadcasting. A. G. Kandoian and others. il diags Tele-Tech 11:42-4+ N '52; Same. Elec Com 29:268-77 D '52

Maintenance of tv antennas. M. Bettan and A. S. Price. il Radio & Tv N 49:39+ Mr '53

Multiple television and frequency-modulation transmitting antenna installation on the Empire State building. J. B. Dearing and others. il diags Inst Radio Eng Proc 41:324-37 Mr '53

Pattern for tv profit; radiation characteristics of tv antennas, and how to use them to best advantage; descriptions of vhf and uhf-tv antennas. R. F. Allison and others. il diags Radio Com 12:14-18+ O; 18-19+ N '52

Printed tv antenna applied with air-gun stapler. il Electronics 25:268 N '52

Radiation conductance of axial and transverse slots in cylinders of elliptical cross section. J. Y. Wong. diags Inst Radio Eng Proc 41:1172-7 S '53

Rhombic relay antennas. R. C. Webb. diag Electronics 26:186+ Mr '53

Skewed antenna at WJZ-TV. M. W. Scheldorf. il diags Electronics 25:130-1 O '52; Correction. 26:393-4 F '53

Television aerials; performance measurements. G. W. Luscombe. diags Wireless Eng 30:82-90 Ap '53

U.h.f. antennas. M. S. Kiver. il diags Radio & Tv N 48:36-8+ D '52; 49:36-8+ Ja; 56-8+ F; 54-5+ Mr '53

Uhf-tv radiators using slot arrays. R. J. Stegen. il diags Electronics 26:152-5 Jl '53

U.h.f.-v.h.f. antenna coupler. E. Finkel and J. C. Sarayiotes. il diag Radio & Tv N 49:63 My '53

Uhf-vhf cabinet antenna. il Tele-Tech 12:79 F '53

V.h.f. fringe antennas. W. H. Buchsbaum. il diags Radio & Tv N 49:50-2+ Ap '53

V.h.f.-u.h.f. antenna design. L. F. B. Carini. il Radio & Tv N 49:42 F '53

WJZ-TV auxiliary antenna. J. Preston. il diags Tele-Tech 11:38-9 O '52

Testing

Antenna measurements. H. Harris and H. Greenberg. il diags Radio & Tv N 49:62-3+ Ap '53

TELEVISION apparatus

Distributed amplifier theory. D. V. Payne. diags Inst Radio Eng Proc 41:759-62 Je '53

Instrument electronics. M. H. Aronson. diags Instruments 25:1446+ O '52

Line selector checks television waveforms. E. M. Buyer. il diag Electronics 26:153-5 S '53

Miniature tvi wavetraps. R. P. Turner. il diags Radio & Tv N 48:41 N '52

Modulation and frequency indicator for vhf and uhf. R. Grimm. il diags Tele-Tech 12:86-7+ Ag '53

Rf performance of a uhf triode. H. W. A. Chalberg. il diags Inst Radio Eng Proc 41:46-50 Ja '53

Research and engineering progress, 1952; electronics. il Gen Elec R 56:42-6 Ja '53

Standards converter for international tv. A. V. Lord. bibliog(20 titles) il diags Electronics 26:144-7 Ag '53

See also
Cathode ray tubes
Graphechon
Television antennas
Television cameras
Television receiving apparatus
Television transmitters

Exhibitions

National radio and television show, 19th, London. W. E. Miller. il Elec R (Lond) 151:482-6 S 5 '52

National radio exhibition, 19th, London, Aug. 26-Sept. 6. il diag Wireless Eng 29:275-9 O '52

Patents

Patent news. Tele-Tech 12:195+ Ap '53

Rating

Tv boosters and a tv receiver. Consumers Res Bul 30:27-9 N '52

Testing

High-power uhf water load for accurate power measurements. B. E. Nelson. il diag Tele-Tech 12:72-3+ Ag '53

Quality control in component manufacturing. Tele-Tech 12:112+ Ap '53

TELEVISION apparatus industry

Clear picture; makers of television sets may sell seven million this year. A. Glenn. Barron's 33:9 F 9 '53

Dealer forums help increase sales 25 per cent; Radio Merchandise Sales. N. Kelne. il Ptr Ink 242:78+ F 20 '53

Electronigraphs, year-end glance at electronics industry figures; charts. Electronics 26:5-6+ Ja '53

Muntz keeps branching out. Bsns W p99-100+ Jl 25 '53

Outlook for appliance and television industries. R. D. Siragusa. Comm & Fin Chr 177:2190+ My 21 '53

Radio and television sets, production; new series; monthly averages for radio sets, 1924-1946; monthly radio and television figures, 1947-1951. Survey of Cur Bsns 32:20 O '52

Radio-tv firms add other lines. Electronics 26:14 Mr '53

Television; its realities and eventualities; dynamic quality of electronics industry. P. A. Just. Comm & Fin Chr 177:993+ Mr 5 '53

Tv's pot of gold. Bsns W p34 D 6 '52

Top management reviews its paychecks; compensation of principal executives in the radio and television industry. Electronics 26:14 F '53

Video; producers tune in on brisk demand. T. Metaxas. diag Iron Age 170:37-8 O 16 '52

Video vista for '53. I. U. Cobleigh. Comm & Fin Chr 177:1004 Mr 5 '53

Advertising

It's a tv device and it sells best via tv spots. J. Bentia. il Sales Management 69:118+ O 15 '52

Directories

Directory of representatives serving tv-radio and electronic manufacturing; listed alphabetically under states and cities. Tele-Tech 11:149-56+ N '52

Directory of the West Coast electronic manufacturers. Tele-Tech 12:99-102 Ag '53

Electronic industries directory, 1953. il Tele-Tech 12:195-336 Je '53

Station and studio equipment directory. Tele-Tech 11:113+ O '52

Finance

Financial roundup. Electronics 26:20+ Ja '53

Securities

Changed outlook for television-electronics; with statistical data on electronics and television companies. S. Devlin. Mag of Wall St 92:22-5+ Ap 4 '53

Electronics industry enters dynamic age; with data on electronics and television companies. L. A. Lukens. Mag of Wall St 91:70-2+ O 18 '52

Radio-tv stock price analysis; price ranges of 120 electronic industries stocks, 1945-1953; with dividends paid and per cent yield. Tele-Tech 12:156-7 F '53

Statistics

Radio and television receivers; charts and tables. Steel 132:187 Ja 5 '53

Statistics of the tv-radio-electronic industries, 1952-1953. Tele-Tech 12:3, 46-8, cover Ja '53

Tv by 1955. L. Kent and D. W. Twedt. Ptr Ink 242:40-1 Ja 23 '53

Television expands overseas. Electronics 26:16+ F '53

Canada

Tv in Canada. J. Montagnes. Barron's 33:15 F 9 '53

Great Britain

Who owns television sets? Economist 167:896 Je 27 '53

Pacific coast

Impact of electronic research on the development of the West. A. M. Zarem. Tele-Tech 12:60-1+ Ag '53

TELEVISION apparatus on aircraft

How the navy drone got its eye; illustrations with text. Aviation W 57:36 D 1 '52

TELEVISION apparatus on ships

Television ship-to-shore transmitters. Engineer 195:891 Je 26 '53

TELEVISION boosters

Rating

See Television apparatus—Rating

TELEVISION broadcasting

Broadcasting tv in the uhf band. J. Epstein and D. W. Peterson. bibliog il diags Electronics 25:102-9 N '52

Experimental uhf broadcast. R. P. Wakeman. il diag Electronics 25:168+ N '52

Facing the future in radio and television broadcasting. D. Sarnoff. Comm & Fin Chr 177:1961+ My 7 '53

Impact of television on sound broadcasting; discussion. Inst E E Proc 100 pt 3:60 Mr '53

Shooting live television shows on film. K. Freund. il Soc Motion Picture & Tv Eng J 60:9-19 Ja '53

Video inset system. J. L. Hathaway and F. L. Hatke. diags Electronics 26:150-3 Ap '53

Business applications

See also
Sales conventions—Television conventions

Educational programs

Educational tv goes grass-roots. Electronics 26:20+ Ap '53

Teaching a city economics; Rochester, N.Y. il Bsns W p78-80+ Je 20 '53

Television and forestry; abstract. F. E. Carlson. Pulp & Pa of Can 54:86+ F '53

See also
Television in education

Finance

Have television on a pay-as-you-go basis! H. C. Bonfig. Comm & Fin Chr 177:2311 My 28 '53

New pay-as-you-watch system; Boxoffice television. il Radio & Tv N 50:93 Ag '53

Subscription television; hope of small town tv stations. H. C. Bonfig. Comm & Fin Chr 177:1002+ Mr 5 '53

Who's going to foot the bill? Bsns W p43-4 My 23 '53

Government news

Soap opera treatment of news sources feared. J. Foster. Ed & Pub 85:42+ D 6 '52

Inaugurations

Television coverage of the presidential inauguration. E. C. Wilbur and H. L. Grelck. il plans diags RCA R 14:259-68 Je '53

International aspects

CBC signs television pact with U.S. firms. For Comm W 49:21 Ja 26 '53

International tv is here; hook-up between Great Britain, France and Belgium. A. V. J. Martin. il map diag Radio & Tv N 48:31-3+ D '52

Let's get action on trans-Atlantic tv! editorial. Tele-Tech 11:33 Ag '52; Discussion. map 11:66-7+ O '52

Standards converter for international tv. A. V. Lord. bibliog(20 titles) il diags Electronics 26:144-7 Ag '53

Local industry programs

Bank tour on television; Central national bank, Cleveland. Trusts & Estates 92:498 Jl '53

150,000 persons attend a tv bank tour; Central national bank of Cleveland, subject on Life in Cleveland series. H. J. Wills. il Burroughs Clearing House 37:28 My '53

Medical programs

Surgery in your living room. Franklin Inst J 254:345-7 O '52

Moving pictures

Animation for individual television stations. E. F. Hiser. diags Soc Motion Picture & Tv Eng J 59:293-9 O '52

Bell system plans for broadband network facilities. F. Loomis. il plan diags Tele-Tech 12:78-80+ Ap '53

Film for tv. H. J. Seitz. bibliog il diags Radio & Tv N 50:35-7+ Ag '53

TELEVISION broadcasting—Moving pictures—*Continued*

Film projection using image-orthicon cameras. R. D. Chipp. il Soc Motion Picture & Tv Eng J 60:1-8 Ja '53

New market for films; in Britain and elsewhere. Economist 166:103-4 Ja 10 '53

New professional television projector. W. E. Stewart. il Soc Motion Picture & Tv Eng J 60:390-8; Discussion. 398-9 Ap '53

Synchro-Lite powered 16mm projector. R. E. Putman and E. H. Lederer. il diag Soc Motion Picture & Tv Eng J 60:385-9 Ap '53

Time-zone delay of television programs by kinescope recording. R. E. Lovell. il Soc Motion Picture & Tv Eng J 60:235-9 Mr '53

Multiple outlet system

Community antennas bring tv to fringe areas; systems use master high-gain antennas and amplifiers. J. M. Carroll. il diags Electronics 25:106-11 D '52

Tv signal distribution methods. E. M. Noll. il diags Radio & Tv N 49:46-7+ F '53

News

Televising today's news. R. H. Peterson. il Radio & Tv N 49:55 Ja '53

Tv fights for its crowning glory. Bsns W p32 My 30 '53

When U.S. television covered coronation. il map Bsns W p28-31 Je 6 '53

Phonevision

Have television on a pay-as-you-go basis! H. C. Bonfig. Comm & Fin Chr 177:2311 My 28 '53

Political aspects

See also
Television broadcasting—Inaugurations

Political conventions

Television coverage of the national political conventions. R. W. Ralston and B. D. Wickline. il plans Elec Eng 72:383-9 My '53

Political programs

Election night; test for polls and robot brains. il Bsns W p30-2 N 1 '52

Television and the election. A. Campbell and others. Sci Am 188:46-8 My '53

Program rating

Two differing slants on handling television. T. S. Irvin. Ed & Pub 86:50 F 14 '53

Programs

Inventors get to strut their stuff on tv; DuMont television show called the Big idea. il Bsns W p94-5 D 27 '52

Radio and tv network programs. Published in monthly numbers of Advertising agency

Two ways to sharpen up tv programming. G. N. Montgomery. Adv Agency 46:24+ Mr '53

Using water demands to rate television programs; Toledo, Ohio. G. J. Van Dorp. Pub Works 84:64-5+ Mr '53

Propaganda

Television assumes role in cold war; East and West stations vie in divided Berlin. il Electronics 26:20+ F '53

Safety programs

Radio and tv carry Congress story. il Nat Safety N 66:46+ D '52

Slide films

Slides and opaques for television film chains, PH22.94. diag Soc Motion Picture & Tv Eng J 60:418-20 Ap '53

Social aspects

Science and society. R. J. F. Boyer. Inst Radio Eng Proc 40:1636-7 D '52

Why water charts zigzag at night. Bsns W p44-6 My 2 '53

Sound effects

Gunshot generator for television studios. J. L. Hathaway and R. E. Lafferty. il diags Electronics 26:140-4 F '53

Sports

Sports for theater tv. Bsns W p76+ Jl 18 '53

Subscription programs

See Television broadcasting—Finance

Canada

Canadian tv industry opens new stations. For Comm W 48:16 N 3 '52

Television facilities of the Canadian broadcasting corporation. J. E. Hayes. il Soc Motion Picture & Tv Eng J 59:398-405 N '52

Tv too highbrow. Bsns W p98 N 1 '52

Europe

Tv covers coronation. A. V. J. Martin. il map Tele-Tech 12:136-7 Je '53

Germany

Television assumes role in cold war; East and West stations vie in divided Berlin. il Electronics 26:20+ F '53

Great Britain

B.B.C. transmitters open. il maps Electrician 149:467-9 Ag 15 '52

BBC's alternative. Economist 167:889 Je 27 '53

Britsh broadcasting developments. I. Jacob. Engineering 176:24 Jl 3 '53

British snub commercial tv. Bsns W p 112+ Jl 11 '53

British tv relay uses traveling-wave tubes. D. C. Rogers and P. F. C. Burke. il diags Electronics 26:156-60 Je '53

Coronation broadcasts. Engineer 195:805+ Je 5 '53

Future of television; advisory committee report. Elec R (Lond) 153:153-4 Jl 17 '53

100-kw erp Sutton Coldfield television broadcasting station. P. A. T. Bevan. il map plans diags Inst Radio Eng Proc 41:196-218 F '53

Some telecommunication developments in the South West. A. C. Warren. Inst E E Proc 100 pt 1:24-5 Ja '53

Sound and television broadcasts at the coronation. Engineering 175:724 Je 5 '53

Television space for sale. Economist 167:751-3 Je 13 '53

Wenvoe television station. il Elec R (Lond) 151:333-5 Ag 15 '52

Wenvoe transmitting station. il Engineer 194:229 Ag 15 '52; Engineering 174:249-50 Ag 22 '52

What's ahead in British broadcasting. S. P. McMinn. Tele-Tech 12:8+ Ag '53

Mexico

Launching big-scale television in set-poor Mexico. il Bsns W p 116-20 Ja 10 '53

TELEVISION cabinets

Manufacture

Compression molded phenolics used for large tv cabinets. K. Rose. il Materials & Methods 38:226+ O '53

Finish first, glue last. L. B. Reed. il Elec West 110:90 Mr '53

TELEVISION cables

Pattern for tv profit. R. F. Allison and others. il diag Radio Com 12:18-19+ N '52

Some telecommunication developments in the South West. A. C. Warren. Inst E E Proc 100 pt 1:24-5 Ja '53

Styroflex coaxial cable meets demand for high-power low-loss broadcast cable. il Elec Eng 72:468 My '53

TELEVISION cameras

Dage industrial tv camera. H. E. Ennes. il diags Radio & Tv N 50:31-4+ Jl '53

Film projection using image-orthicon cameras. R. D. Chipp. il Soc Motion Picture & Tv Eng J 60:1-8 Ja '53

Industrial television system demonstrated by RCA. Elec Eng 71:1055-6 N '52

Long-focus lens for television cameras. il Engineer 196:60 Jl 10 '53

Multicon; new tv camera tube. H. Smith. il diag Tele-Tech 12:57+ Jl '53

Oceanographic television equipment. Engineer 195:835 Je 12 '53

Remote control caps tv camera lens. C. J. Auditore. diag Electronics 26:222+ Ap '53

Simple tv camera dissolve unit. R. M. Crotinger. il diags Tele-Tech 12:108+ Ap '53

Television camera equipment of advanced design. L. L. Pourciau. il diags Soc Motion Picture & Tv Eng J 60:166-80 F '53

TELEVISION cameras—*Continued*

Video inset system. J. L. Hathaway and F. L. Hatke. diags Electronics 26:150-3 Ap '53

TELEVISION City. See Columbia broadcasting system

TELEVISION in education

Physics experiments to be televised for Cornell students. Elec Eng 71:1035 N '52

Teaching by television at Houston university. il Bsns W p30-2 My 2 '53

TELEVISION in industry

Closed circuit tv lets group see details of process. il Inland Ptr 131:61 Je '53

Cost of television; closed-circuit. Bsns W p73 Jl 4 '53

Sales meeting features color telecast. C. Day. il Ptr Ink 241:28+ D 19 '52

Television for business meetings. V. M. Ratner. Harvard Bsns R 31:64-70 My '53 (reprints $1)

Using television in British bank operation; records produced in the country are telecast to London for viewing. F. Plachy. il Burroughs Clearing House 37:36-7+ O '52

Will televise LTF developments for New York lithographic group. il Inland Ptr 130:52 Mr '53

TELEVISION in medical education

Color television in medical education. il Arch Rec 113:195+ F '53

TELEVISION in military education

Signal corps mobile television system. J. S. Auld. flow chart il plan diags Soc Motion Picture & Tv Eng J 59:462-71 D '52

TELEVISION industry

Electronics; an integrated, mature and progressive industry. R. W. Galvin. Comm & Fin Chr 177:1026-7 Mr 5 '53

Highlights from A.N.A.'s 43d annual meeting, tv in '54. S. W. Dean, jr. Adv Agency 45:64+ N '52

Lifting of freeze on new station construction opens large tv markets. A. B. Du Mont. Comm & Fin Chr 177:1538 Ap 9 '53

Radio-tv service industry news. Published in monthly numbers of Radio and television news

Television and motion picture prospects. H. L. Golden. Comm & Fin Chr 177:1953+ My 7 '53

Tv and the electric industry. A. B. Marvin. Pub Util 51:357-63 Mr 12 '53

Television sales boom in Canada. Electronics 26:16+ Ja '53

Will tv push radio out? il Bsns W p27 D 27 '52

See also

Television apparatus industry

Advertising

We've been gypped by bait advertising; food freezer plans and slick tv repair deals. Sales Management 70:97-8 F 1 '53

Directories

1952-53 motion picture and television almanac. C. S. Aaronson, ed. 24th ed 1010p Quigley publications, 1270 6th av, New York '52 ($5)

Finance

Dent in the glamor of tv shares. Bsns W p56+ F 21 '53

Soaring costs shape tv's future. Bsns W p46 D 27 '52

Statistics

Statistics of the tv-radio-electronic industries, 1952-1953. Tele-Tech 12:3, 46-8, cover Ja '53

World-wide roundup of tv statistics. Tele-Tech 12:146 Je '53

Cuba

Tv industry in Cuba expected to double. For Comm W 49:14 Mr 9 '53

Germany

Tv progressing in West and East Berlin. For Comm W 48:19 D 8 '52

TELEVISION libraries

Canadian broadcasting corporation radio and television library in Montreal. K. M. Greer. Special Lib 43:407-8 D '52

TELEVISION masts

Portable aluminium test masts. il diag Engineer 196:87 Jl 17 '53; Engineering 176:127 Jl 24 '53; Elec J 151:204 Jl 17 '53; Metallurgia 48:104 S '53

TELEVISION projection

Color tv projection system for theaters. diags Electronics 25:178+ O '52

Eidophor system of theater television. E. I. Sponable. il plan diags Soc Motion Picture & Tv Eng J 60:337-43 Ap '53

Experimental system for slightly delayed projection of television pictures. P. Mandel. bibliog il diags Inst Radio Eng Proc 40:1177-84 O '52

Fischer large-screen projection system. E. Baumann. bibliog il diags Soc Motion Picture & Tv Eng J 60:344-56 Ap '53

Large-screen color tv system; patent. diags Tele-Tech 12:100 S '53

TELEVISION receiving apparatus

Auxiliary speakers for television receivers. R. W. Wolfe. diag Radio & Tv N 49:122 Ap '53

Bent-neck tv picture tube. il Tele-Tech 12:102 Ag '53

Cabinetry. J. Markell. il diags Radio & Tv N 48:35-7+ N '52

Cathode-interface effects in tv receiver design. F. M. Dukat and I. E. Levy. Electronics 26:169-71 Ap '53

Color television signal receiver demodulators. D. H. Pritchard and R. N. Rhodes. diags RCA R 14:205-26 Je '53

Combination uhf and vhf tv receiver design. H. F. Rieth. il Tele-Tech 12:74-5+ F '53

Compatible color tv receiver. K. E. Farr. bibliog il(cover) diags Electronics 26:98-104 Ja '53

Curing a focus problem. J. Jacobson. diags Radio & Tv N 49:112+ Mr '53

Current tv topics. W. H. Buchsbaum. il diags Radio & Tv N 49:50-1+ F '53

Custom audio. H. Becker. il Radio & Tv N 48:46-7 N '52

Design considerations for combination uhf and vhf receivers. W. B. Whalley. bibliog diags Tele-Tech 11:36-8+ N '52

Design of export television receivers. G. D. Hulst. il diags Electronics 26:174-6 Ag '53

Designing trouble; free series tube heater strings. M. B. Knight. diags Tele-Tech 12:76-7+ Ap '53

Development of a uhf grounded-grid amplifier. C. E. Horton. il diags Inst Radio Eng Proc 41:73-9 Ja '53

DX-ing with the Admiral tv model 19B1. G. R. Anglado. Radio & Tv N 49:96 My '53

Eliminating Barkhausen effect in television receivers. Radio & Tv N 49:94 F '53

Field plotting in deflection yoke design. E. Sieminski. bibliog il diags Electronics 25:122-6 O '52

For fringe areas. J. Dines. diags Radio & Tv N 49:52-3 My '53

Frame synchronization for color television. D. Richman. diags Electronics 25:146-50 O '52

G-E's internal magnetic focus system. il Radio & Tv N 49:82 Je '53

Germanium diode as video detector. W. B. Whalley and others. diags Inst Radio Eng Proc 41:638-44 My '53

High-efficiency 90° cathode-ray sweep system. C. E. Torsch. il diag Tele-Tech 12:108-10+ Je '53

Improved blanking circuit. S. Cuker. diag Electronics 25:260+ N '52

Improved tri-color tv picture tube. il diags Tele-Tech 12:71 F '53

Improving video amplifier operation. C. E. Cohn. Radio & Tv N 49:154 Mr '53

Internal magnetic focus gun provides sharper television picture definition. il Elec Eng 72:466-7 My '53

Latest disc-cathode developments. diag Electronics 25:236+ N '52

Low-copper sweep yoke. C. E. Torsch. Electronics 25:250+ O '52

Modern booster. D. H. Carpenter. il diags Radio & Tv N 49:70-2 Ap '53

New designs for 1953. W. H. Buchsbaum. il diags Radio & Tv N 49:46-7+ Ja '53

One-channel converter for uhf television. Wen Yuan Pan. il diags Electronics 25:134-8 D '52

TELEVISION receiving apparatus—*Continued*

Post deflection focusing chromatron, a single or multi-gun tri-color cathode-ray tube. R. Dressler. il diags Inst Radio Eng Proc 41:851-8 Jl '53

Practical analysis of vertical deflection circuits. M. B. Knight. il diags Tele-Tech 12:62-6+ Jl '53

Printed tv antenna applied with air-gun stapler. il Electronics 25:268 N '52

Push-pull amplifiers for increased video output. A. Newton. diags Electronics 26:228+ S '53

Radio progress during 1952; receivers. bibliog il Inst Radio Eng Proc 41:471-2 Ap '53

Receiver changes to improve fringe reception. P. Stevens. il diags Radio & Tv N 49:42-4+ Mr; 48-9+ Ap '53

Reducing radiation from tv receivers. P. S. Rand. il diags Electronics 26:130-5 My '53

Rotating screen color tv tube. I. Rehman and others. bibliog il Electronics 26:214+ S '53

Self-focus picture tubes. E. M. Noll. il diags Radio & Tv N 48:122+ N '52

Servomechanism theory applied to afc circuit design. G. D. Doland. diags Tele-Tech 12:95-7+ My '53

Short-term market pays off. Bsns W p44 My 16 '53

Simple anti-flutter circuit. J. K. Frieborn. diags Radio & Tv N 50:38-9+ Ag '53

Simplified horizontal deflection generator. A. Newton. diags Electronics 26:170-1 Jl '53

Sound system for your tv set. J. P. Shields. il diags Radio & Tv N 49:54-5+ F '53

Study of transistor circuits for television. G. C. Sziklai and others. il diags Inst Radio Eng Proc 41:708-17 Je '53

Subjective study of color synchronization performance. M. I. Burgett, jr. diags Inst Radio Eng Proc 41:979-83 Ag '53

Synchronous demodulator for color tv. R. B. McGregor. diags Electronics 25:214+ O '52

Tv dial; key to uhf. il Bsns W p66+ Mr 14 '53

Tv has a chemical face. Chem W 71:36+ D 27 '52

Tv horizontal deflection design. J. Narrace. diags Tele-Tech 12:70-2+ Ja; 90-3 F '53

Television receiver agc systems. E. S. White. diags Electronics 26:146-9 Mr '53

Tv signal distribution methods. E. M. Noll. il diags Radio & Tv N 49:46-7+ F '53

Testing uhf-tv mixer crystals. N. DeWolf. bibliog il diags Electronics 26:156-60 Ap '53

Theory of afc synchronization. W. J. Gruen. diags Inst Radio Eng Proc 41:1043-8 Ag '53

Tiny Alnico magnet built into tv electron gun tube. il Iron Age 171:178 Ap 2 '53

Transfer characteristics and mu factor of picture tubes. K. Schlesinger. diag Inst Radio Eng Proc 41:528-32 Ap '53

Tubes for uhf application. diags Electronics 26:222+ My '53

Uhf oscillator design notes. K. A. Pullen. diag Tele-Tech 12:80-1+ F '53

Uhf triode design in terms of operating parameters and electrode spacings. L. J. Giacoletto and H. Johnson. bibliog diags Inst Radio Eng Proc 41:51-8 Ja '53

Using c-r tubes with internal pole pieces. C. V. Fogelberg and others. il diags Electronics 25:102-5 O '52

You and u.h.f. H. J. Schulman. il Radio & Tv N 49:48-9+ Mr '53

See also

Television cabinets

Control

Automatic control of tv picture brightness. T. S. Dix, jr. diag Electronics 26:202+ S '53

Installation

Built-in entertainment center. il diags Am Bld 75:106 F '53

Multiple installation for tv receivers. N. C. Fulmer. il diags Radio & Tv N 49:50 Mr '53

Manufacture

Adhesive joining of wood-to-steel increases tv cabinet production. il Materials & Methods 37:82-4 Ja '53

Approach to automation; mechanized dip soldering of television receivers. K. M. Lord. il Electronics 26:130-7 Je '53; Excerpts. Am Mach 97:104-5 Ag 17 '53

Coil-handling trays. il Electronics 25:274+ N '52

Deflection yoke production techniques. il Electronics 26:286-7+ Je '53

Keyed mandrels and dereelers speed winding of coils. il Electronics 26:260+ Ap '53

Production-line gas test for picture tubes. R. E. Ostrowski. il diags Electronics 26:178-9 Ap '53

Soldering 1000 leads in one mechanized operation; General electric co. K. M. Lord. il Factory Management 111:108-9 Jl '53

Tv alignment techniques. il Electronics 26:340+ Mr '53

Television picture tubes. il Westinghouse Eng 13:174-5 S '53

Unitized assembly lines. C. Brunetti. Tele-Tech 12:160+ Ag '53

Noise

Noise immunity circuits. M. S. Kiver. diags Radio & Tv N 49:54-6+ My; 54-5+ Je '53

Television snow. W. H. Buchsbaum. il diags Radio & Tv N 48:58-9+ N '52

Power supply

High-voltage power supplies. diags Electronics 25:170+ N '52

Tv parts replacement guide; tv power transformers. Radio & Tv N 49:42 My; 51+ Je; 50:63+ Jl '53

Troubleshooting tv high-voltage supplies. M. H. Lowe. diags Radio & Tv N 50:48-9+ Ag '53

Voltage-multiplying circuits. G. P. Rumble. diags Q S T 37:25-6 Ja '53

Rating

1953 tv receivers. il Consumers Res Bul 30:5-9 D '52; 31:13-15 Ja; 8 Mr; 32:29-30 Jl '53

Repair

Audels television service manual. E. P. Anderson. 406p $2 Theo. Audel & co, 49 W. 23d st, New York 10 '53

Faster tv servicing through circuit tracing. M. S. Kiver. diags Radio & Tv N 50:54-6+ Jl '53

Know your 1953 Du Mont telesets. J. Roche. diags Radio & Tv N 49:67-70+ My '53

Know your 1953 Emerson tv receivers. B. Kutny. il diags Radio & Tv N 50:52-5+ Ag '53

Know your 1953 Philco tv receivers. D. Lerner. il diags Radio & Tv N 49:58-61+ Je '53

Know your 1953 RCA tv receiver. il diags Radio & Tv N 50:48-51+ Jl '53

Locating tv intermittents. W. H. Buchsbaum. diags Radio & Tv N 48:46-7+ D '52

Service bench note; Raytheon model C2002A. R. A. Hunholz. Radio & Tv N 50:129 Jl '53

Service hints on Admiral tv sets. diags Radio & Tv N 49:118-22 Ap '53

Service hints on Du Mont tv sets. diag Radio & Tv N 49:106+ My '53

Service hints on Emerson tv sets. diags Radio & Tv N 50:126-9 Ag '53

Service hints on Philco tv sets. diags Radio & Tv N 49:120-3 Je '53

Service hints on RCA tv sets. diags Radio & Tv N 50:118-20 Jl '53

Sinusoidal sweep expansion. S. E. Lehnert. diags Radio & Tv N 48:74+ N '52

Specialize for profit. Y. O. Johnson. Radio & Tv N 49:90+ My '53

Tv parts replacement guide. Radio & Tv N 49:42 My; 51+ Je; 50:63+ Jl '53

Television servicing for radiomen. H. P. Manly. 448p $4 Frederick J. Drake & co, 117 Green Bay road, Wilmette, Ill. '53

Troubleshooting tv high-voltage supplies. M. H. Lowe. diags Radio & Tv N 50:48-9+ Ag '53

Unusual tv trouble. R. Blitzer. diag Radio & Tv N 50:120 Jl '53

Testing

Crt tester-sparker. D. Gnessin and H. D. Suesholtz. il diag Radio & Tv N 49:104+ Mr '53

Defect-indicating diagrams for deflection yoke test set. il diags Electronics 26:224+ F '53

TELEVISION receiving apparatus—Testing—*Continued*

D.c. distribution in tv receivers. W. H. Buchsbaum. diags Radio & Tv N 49:48-51+ Je '53

Evaluating afc systems for television receivers. G. Howitt. diags Electronics 25: 132-5 N '52

Signal tracing in high-voltage tv circuits. A. Liebscher. il diag Radio & Tv N 49: 50-1+ Ja '53

Tv troubleshooting with an ammeter. N. B. Cook. Radio & Tv N 49:90 Mr '53

U.h.f. tv test equipment. W. H. Buchsbaum. il diag Radio & Tv N 49:40-1+ My '53

Tuning

Cavity tuner for uhf television. H. Fogel and S. Napolin. il diags Electronics 26:101-3 F '53

Stable triode oscillator for uhf tv receivers. K. E. Loofbourrow and C. M. Morris. il diags Electronics 25:118-21 D '52

Tuner for complete uhf-tv coverage without moving contacts. R. J. Lindeman and C. E. Dean. bibliog il diags Inst Radio Eng Proc 41:61-72 Ja '53

Uhf tuning devices. N. G. Altman and F. M. Barr. il diags Tele-Tech 12:66-8+ F '53

TELEVISION relay systems

British tv relay uses traveling-wave tubes. D. C. Rogers and P. F. C. Burke. il diags Electronics 26:156-60 Je '53

Ekco amplifier converter; new tv re-transmitting equipment. il Electrician 149:537-8 Ag 22 '52

50-watt fm magnetron for relay service. D. P. Kennedy. il diags Tele-Tech 12:66-8 Ag '53

Global microwave system for tv and communications. A. J. Forman. maps diags Tele-Tech 11:40-1+ N '52

Microwave picture, 1953. map Tele-Tech 12: sec 2 F '53

Microwave relay link for television. il map Elec Com 30:2-8 Mr '53

Microwave tv relay; st link carries network or local programs to KBTV on mountaintop. H. A. Jones. il Radio Com 12:11-12 D '52

New microwave relay. il Tele-Tech 12:157 Ap '53

Television microwave equipment provides simultaneous picture-sound relaying. il Elec Eng 72:566 Je '53

TELEVISION stations

Contract let for new tv station in Canada. For Comm W 49:22 Je 1 '53

More new television stations on air. Electronics 26:18+ Ja '53

New tv grants since freeze lift; tabulation. Radio & Tv N 49:70 F; 76 Mr; 74 Ap; 148 My; 84 Je; 50:75 Jl; 16 Ag; 16 S; 166 O; 160 N '53 (to be cont)

Pattern for tv profit; studio and station design. R. F. Allison and others. il plans diags Radio Com 12:18-23 My; 14-20 Je; 22-4+ Jl; 11-13+ Ag; 13-16+ S; 14-18+ O; 18-19+ N; 13-17 D '52

Present and potential tv stations in the United States; map. Comm & Fin Chr 177: 1538 Ap 9 '53

There's construction ahead for tv. il map Eng N 149:21-4 D 11 '52

Turning an idea into a tv station. Bsns W p 152+ F 14 '53

WATV moves transmitter location to Empire State building. plan Tele-Tech 11:59 N '52

Wenvoe television transmitting station. Engineering 175:126 Ja 23 '53

Control rooms

Television control room layout. R. D. Chipp. il plans Tele-Tech 11:48-51 O '52

Directories

New tv stations on the air. Radio & Tv N 49:148 Mr; 110 Ap; 86 My; 124 Je; 50:75 Jl; 112 Ag; 148 S; 132 O; 162 N '53

Tv station data; personnel, addresses, and equipment for vhf and uhf stations now operating. Tele-Tech 12:102-4 My; 341+ Je '53

Timetable of new tv stations coming on the air; geographical listing. Tele-Tech 11:47 D '52; 12:49 Ja; 93+ F; 105 Mr; 102 Ap '53

Equipment

B.B.C. transmitters open. il maps Electrician 149:467-9 Ag 15 '52

Coaxial switch for rapid transmitter changing. J. T. Wilner. il diags Electronics 26: 140-1 Jl '53

100-kw erp Sutton Coldfield television broadcasting station. P. A. T. Bevan. il map plans diags Inst Radio Eng Proc 41:196-218 F '53

Station and studio equipment directory. Tele-Tech 11:113+ O '52

Television facilities of the Canadian broadcasting corporation. J. E. Hayes. il Soc Motion Picture & Tv Eng J 59:398-405 N '52

Tv station planning. L. E. Anderson and W. O. Hadlock. il plans diag Tele-Tech 12:98-100+ My; 122-6+ Je '53

Telojector for tv stations projects transparencies automatically in sequence. il Elec Eng 72:372-3 Ap '53

Test scope checks tv broadcasts. C. H. Moulton. il diags Electronics 26:138-40 Ja '53

Wenvoe television station. il Elec R (Lond) 151:333-5 Ag 15 '52

Wenvoe transmitting station. il Engineer 194:229 Ag 15 '52; Engineering 174:249-50 Ag 22 '52

See also

Television antennas

Television transmitters

TELEVISION stations, College

Teaching by television at Houston university. il Bsns W p30-2 My 2 '53

TELEVISION stations, Newspaper

Civic booster editorials come alive on tv; Milwaukee (Wis.) journal. Ed & Pub 85: 48 O 11 '52

One-station beefs fan monopoly complaints. Ed & Pub 85:46 O 4 '52

Tafts buy Columbus tv station WTVN. Ed & Pub 86:45 Ja 17 '53

Trammell third man in Knight-Cox station. J. Walker. Ed & Pub 85:12 D 13 '53

Two differing slants on handling television. T. S. Irvin. Ed & Pub 86:50 F 14 '53

TELEVISION studios

A.G.A. establishes kitchen studio for tv and films. il Am Gas Assn Mo 35:11 Mr '53

How CBS designs for tv. il Bsns W p32-3 N 29 '52

Look at CBS' $12-million tv studio in Los Angeles. il plans Eng N 149:34-6 N 20 '52

N.A.R.T.B. report discusses design of tv studios. Arch Rec 112:38+ D '52

Pattern for tv profit; studio and station design. R. F. Allison and others. il plans diags Radio Com 12:18-23 My; 14-20 Je; 22-4+ Jl; 11-13+ Ag; 13-16+ S; 14-18+ O; 18-19+ N; 13-17 D '52

Television City. il Fortune 47:141-4 Ap '53

Tv-radio center; WCAU's new headquarters in Philadelphia. il plans diags Arch Forum 97:148-51 S '52

There's construction ahead for tv. il map Eng N 149:21-4 D 11 '52

Air conditioning

Air conditioning tv stations. F. F. Stevenson. il diag Heating-Piping 25:98-102 My; 108-11 Jl; 77-81 Ag '53; Discussion. 25:69-70 O '53

Another world's biggest; new CBS Television City in Los Angeles. il Dom Eng 181:102-5+ Ja '53

Check of air conditioning noises in television studios. T. W. Reynolds. Heat & Ven 50:111 Mr '53

Control rooms

Television control room layout. R. D. Chipp. il plans Tele-Tech 11:48-51 O '52

Equipment

Grey-scale generator. G. E. Hamilton and R. Ilowite. il diags Electronics 25:143-5 N '52

Inexpensive tv prompter. il Tele-Tech 11:47+ N '52

Miniature plug-in broadcast amplifiers. J. Stork. il diags Tele-Tech 11:60-1+ D '52

Station and studio equipment directory. Tele-Tech 11:113+ O '52

Tv station planning. L. E. Anderson and W. O. Hadlock. il plans diag Tele-Tech 12: 98-100+ My; 122-6+ Je '53

Television switcher for broadcasters. H. E. Thomas. il diags Electronics 26:120-3 Ja '53

TELEVISION studios—Equipment—*Continued*

Unusual service continuity required; CBS Television City studios in Hollywood. il Elec West 109:84-6 D '52

Lighting

Good lighting; a tv problem. R. Blount. il Gen Elec R 56:37-40 S '53

TELEVISION theaters. See Moving picture theaters—Television

TELEVISION towers

Toronto's 500-ft. tv tower. R. C. Leslie and G. M. Robinson. il plan diag Roads & Eng Constr 90:83-6+ D '52

TELEVISION transmission

Bell system plans for broadband network facilities. F. Loomis. il plan diags Tele-Tech 12:78-80+ Ap '53

Broadcasting tv in the uhf band. J. Epstein and D. W. Peterson. bibliog il diags Electronics 25:102-9 N '52

Field strength of KC2XAK, 534.75 mc recorded at Riverhead, N Y. G. S. Wickizer. map Inst Radio Eng Proc 41:140-2 Ja '53

Influence of echoes on television transmission. P. Mertz. bibliog diags Soc Motion Picture & Tv Eng J 60:573-96 My '53

Lock-in performance of an afc circuit. G. W. Preston and J. C. Tellier. diag Inst Radio Eng Proc 41:249-51 F '53

Modulation and frequency indicator for vhf and uhf. R. Grimm. il diags Tele-Tech 12: 86-7+ Ag '53

Some pointers on television intereference. F. R. Roe. il Elec West 110:84-6 My '53

Some possibilities for the compression of television signals by recoding. E. C. Cherry. and G. G. Gouriet. diags Inst E E Proc 100 pt 3:9-18 Ja '53

Spectrum equalization; use of differentiating and integrating circuits. G. G. Gouriet. bibliog il diags Wireless Eng 30:112-23 My '53

Transmission of microwaves through plexiglas windows. il Electronics 26:226+ Mr '53

Video inset system. J. L. Hathaway and F. L. Hatke. diags Electronics 26:150-3 Ap '53

Frequency allocation

Spectrum of FCC frequency allocations, 1953; chart in six colors. Tele-Tech 12:supp Ja '53 (reprints, folded chart 50c; chart for framing $1)

U.h.f. tv channels; table. Radio & Tv N 49: 47 Ap '53

Uhf-tv frequencies and wavelengths; tabulation. J. M. De Bell, jr. and others, comps. Tele-Tech 12:89 F '53

Interference

Auroral effects on television. R. E. Thayer. il Inst Radio Eng Proc 41:161 Ja '53

Cathode-interface effects in tv receiver design. F. M. Dukat and I. E. Levy. Electronics 26:169-71 Ap '53

$5 low-pass filter. J. G. Rountree. il diag Radio & Tv N 49:47+ Je '53

Handling tvi complaints due to poor tv sets. E. M. Shook. Q S T 37:51+ Je '53

Harmonic radiation from external nonlinear systems. M. Seybold. diags Q S T 37:11-18+ Ja '53

If you are creating tv interference FCC now cracks down. il Factory Management 111: 126-9 Jl '53

Ignition interference with television reception; abstract. A. H. Ball and W. Nethercot. Elec J 150:524 F 13 '53

Miniature tvi wavetraps. R. P. Turner. il diags Radio & Tv N 48:41 N '52

Novice 35-watter; simple construction with tvi precautions. L. G. McCoy. il diag Q S T 37:32-4 Ja '53

Progress report on tvi committees. G. S. Turner. Q S T 37:48-9+ F '53

Reducing radiation from tv receivers. P. S. Rand. il diags Electronics 26:130-5 My '53

Simple anti-flutter circuit. J. K. Frieborn. diags Radio & Tv N 50:38-9+ Ag '53

Spook; another weird effect to haunt tv. M. B. Knight. il Radio & Tv N 49:64-5 Mr '53

Tvi hints for the u.h.f. man. E. P. Tilton. il diags Q S T 37:16-20 Ap '53

Tvi reduction in strong-signal areas. N. Johnson. il Q S T 37:17-18 My '53

Tv interference signals. R. B. Gary. diags Radio & Tv N 50:38+ Jl '53

Tv interference; the utility's story. il diag Elec World 139:116-17 Ap 20 '53

Television snow. W. H. Buchsbaum. il diags Radio & Tv N 48:58-9+ N '52

TELEVISION transmitters

B.B.C. television transmitting station; Kirk o'Shotts. il map Engineer 194:227-9 Ag 15 '52; Engineering 174:204-5 Ag 15 '52

Coaxial switch for rapid transmitter changing. J. T. Wilner. il diags Electronics 26: 140-1 Jl '53

Experimental 850-mc tv transmitter. G. A. Olive. bibliog il diags Electronics 25:110-15 N '52

Fringe-area tv booster transmitter. Electronics 26:218+ Mr '53

High-power uhf klystron. il diags Tele-Tech 11:60-1 O '52

New uhf transmitting tubes. diags Electronics 26:198 Je '53

Radio progress during 1952; radio transmitters. bibliog Inst Radio Eng Proc 41: 466-70 Ap '53

Spiral-beam tube modulates one kw at uhf. C. L. Cuccia. il diags Electronics 26:130-4 Ap '53

Wenvoe transmitting station. il Engineer 194:229 Ag 15 '52; Engineering 174:249-50 Ag 22 '52

Power supply

High-power klystrons at uhf. D. H. Preist and others. bibliog il diag Inst Radio Eng Proc 41:20-5 Ja '53

One-kilowatt tetrode for uhf transmitters. W. P. Bennett and H. F. Kazanowski. bibliog il diags Inst Radio Eng Proc 41:13-19 Ja '53

TELEVISION workers

Collective bargaining; radio, television, and electronics industry. A. Bercowitz and others. U S Bur Labor Statistics Bul 1089: 1-32; pa 20c Supt. of doc. '52

TELLER, Edward, 1908-

Hidden struggle for the H-bomb. Fortune 47: 109-10+ My '53

TELLERS. See Banks and banking—Tellers

TELLURIDES

Application of polarization figures and rotation properties to the identification of certain telluride minerals. D. H. Hase. bibliog Econ Geol 47:807-14 D '52

See also

Cesium telluride

Rubidium telluride

TELLURIUM

Concerning the low temperature specific heat of tellurium. W. DeSorbo. J Chem Phys 21:764-5 Ap '53

Polarography of tellurium(IV). E. Norton, R. W. Stoenner and A. I. Medalia. bibliog Am Chem Soc J 75:1827-30 Ap 20 '53

Total fast neutron cross sections of Co, Ga, Se, Cd, Te, Pt, Au, Hg, and Th. M. Walt and others. Phys R 89:1271-2 Mr 15 '53

Zeeman effect in the spectra of tellurium. J. B. Green and R. A. Loring. Phys R 90: 80-2 Ap 1 '53

Analysis

Volumetric determination of tellurium in organic compounds. F. H. Kruse, R. W. Sanftner, and J. F. Suttle. bibliog Anal Chem 25:500-2 Mr '53

Isotopes

Magnetic moments of Si^{29}, S^{33}, Zn^{67}, As^{75}, Se^{77}, Te^{123}, and Te^{125}. H. E. Weaver, jr. bibliog il diags Phys R 89:923-30 Mr 1 '53

Spin and parity of the 2.3-Mev excited state of Te^{124}. F. R. Metzger. Phys R 90:328-9 Ap 15 '53

State of chemical combination of $iodine^{131}$ formed by neutron irradiation of tellurium in organic liquids. F. J. Keneshea, jr. and M. Kahn. bibliog Am Chem Soc J 74:5254-5 N 5 '52

TELLURIUM alloys

How to work tellurium copper; reference book sheet. H. Ashley. il Am Mach 97:199 O 12 '53

TELLURIUM fluorides

Ditellurium decafluoride. W. D. English and J. W. Dale. Chem Soc J p2498-9 Ag '53

New pyridine complexes of tellurium tetrafluoride. E. E. Aynsley and G. Hetherington. Chem Soc J p2802-3 S '53

Preparation and properties of tellurium tetrafluoride. J. H. Junkins, H. A. Bernhardt and E. J. Barber. bibliog diag Am Chem Soc J 74:5749-51 N 20 '52

TEMPERATURE

Anomalous behavior of the *g*-factor of FeCr spinels as a function of temperature. S. van Wieringen. Phys R 90:488 My 1 '53

Calculation of the temperature and pressure coefficients of conductivity and the ultrasonic effect in dilute electrolytes from Onsager's theory. S. Barnartt. bibliog diags J Chem Phys 21:908-11 My '53

Collision diameters of some gases as functions of temperature. I. Glassman and B. L. Harris. bibliog J Phys Chem 56:797-9 Je '52

Correlation of vapour pressure, temperature, and molar entropy of vaporisation. L. H. Thomas. Chem Soc J p 1233-7 Ap '53

Effect of temperature on sewage treatment processes. W. E. Howland. bibliog Sewage & Ind Wastes 25:161-9 F '53

Effect of temperature on the duration of the $^3P^2$ metastable level of neon. F. A. Grant and A. D. Krumbein. bibliog il diags Phys R 90:59-62 Ap 1 '53

Electrolytic interaction of nylon with sodium hydroxide solutions at different temperatures. F. T. Wall and P. M. Saxton. bibliog J Phys Chem 57:370-5 Mr '53

Equilibrium temperature of an unheated icing surface as a function of air speed. B. L. Messinger. bibliog diag J Aeronautical Sci 20:29-42 Ja '53

Equivalent temperatures; reference data. Heat & Ven 50:166 O '53

Ferromagnetism at very high frequencies; temperature dependence of the magnetic spectrum of a ferrite. G. T. Rado and others. bibliog Phys R 88:909-15 N 15 '52

Influence of temperature and state on infrared absorption spectra; methyl iodide. I. L. Mador and R. S. Quinn. bibliog J Chem Phys 20:1837-42 D '52

Influence of temperature on the spectrum of 9 : 10-diphenylanthracene. J. C. D. Brand and J. R. Davidson. Chem Soc J p352-4 Ja '53

Metal-cutting temperatures and tool wear. A. O. Schmidt. bibliog il diags Tool Eng 29: 33-5 Jl; 51-4 Ag '52; Excerpts. Metal Prog 64:186+ Jl '53

Physical properties of liquid fluorine. G. W. Elverum, jr. and R. N. Doescher. diag J Chem Phys 20:1834-6 D '52

Possibility of a theoretical calculation of the critical temperature. J. van Dranen. J Chem Phys 20:1175 Jl '52

Reversal of spontaneous magnetization as a function of temperature in LiFeCr spinels. E. W. Gorter and J. A. Schulkes. bibliog Phys R 90:487-8 My 1 '53

Salting-out of non-electrolytes; the effect of ionic size, ionic charge, and temperature. T. J. Morrison. Chem Soc J p3814-18 O '52

Semi-empirical equation for the vapor pressure of liquids as a function of temperature. A. A. Frost and D. R. Kalkwarf. bibliog J Chem Phys 21:264-7 F '53

Some predicted effects of temperature gradients on diffusion in crystals. W. Shockley. diags Phys R 91:1563-4 S 15 '53

Super-sensitive thermo- and vapor-sensing elements and their useful temperature range. H. A. Pohl. R Sci Instr 23:770 D '52

Surface tension at elevated temperatures; furnace and method for use of the sessile drop method; surface tension of silicon, iron and nickel. W. D. Kingery and M. Humenik, jr. bibliog diag J Phys Chem 57:359-63 Mr '53

Temperature coefficient of heterogeneous reactions. A. C. Riddiford. bibliog J Phys Chem 56:745-8 Je '52

Temperature dependence of drift mobility in germanium. R. Lawrence. Phys R 89:1295 Mr 15 '53

Temperature dependence of electrical resistance. W. V. Houston. bibliog Phys R 88: 1321-3 D 15 '52

Temperature dependence of the elastic moduli and internal friction of silica and glass. J. W. Marx and J. M. Sivertsen. bibliog diags J Ap Phys 24:81-7 Ja '53

Temperature dependence of the naphthalene bands at 3200-2900A. R. H. Knipe and others. bibliog il J Chem Phys 21:376-7 F '53

Temperature dependence of the optical absorption of β-Ag_2S. K. Lehovec. bibliog J Chem Phys 21:54-7 Ja '53

Temperature dependence of the viscosity of associated liquids. T. A. Litovitz. bibliog J Chem Phys 20:1088-9 Jl '52; Correction. 20: 1980 D '52

Temperature dependence of the viscosity of liquids. F. Gutmann and L. M. Simmons. bibliog J Ap Phys 23:977-8 S '52

Temperature dependence of Young's modulus and internal friction of single crystals of beta-brass. R. A. Artman. il J Ap Phys 23:475-82 Ap '52

Temperature distribution along a semi-infinite sweat-cooled plate. N. Ness. diags J Aeronautical Sci 19:760-8 N '52

Temperature gradient method for determining firing range of ceramic bodies. R. L. Stone. il diags Am Cer Soc J 36:140-2 Ap 1 '53

Temperature gradient owing to radiation absorption. G. B. Shook. J Ap Phys 23:931-2 Ag '52

Temperature gradients in turbulent gas streams; nonuniform flow. W. G. Schlinger and others. bibliog il diags Ind & Eng Chem 45:662-6 Mr '53

Temperature rise in a heat-producing solid behind a surface defect. W. Karush and G. Young. diag J Ap Phys 23:1191-3 N '52

Thermal mutarotation of some methylated D-fructoses. D. J. Bell. Chem Soc J p 1231-3 Ap '53

Time-temperature dependence of linear viscoelastic behavior. F. Schwarzl and A. J. Staverman. bibliog J Ap Phys 23:838-43 Ag '52

Transitions and phases of polytetrafluoroethylene (Teflon). C. E. Weir. bibliog J Res Nat Bur Stand 50:95-7 F '53

Two-path method for eliminating the effects of self-absorption on temperature for isothermal flames. S. S. Penner. J Chem Phys 20:1341-2 Ag '52

Vapor pressure of water and temperature conversion chart. K. A. Kobe. Pet Refiner 32:173 My '53

Variation of the viscosity of ethyl chloride vapor with temperature. M. El Nadi. bibliog J Phys Chem 57:589-91 Je '53

Variation of transistor parameters with temperature. A. Coblenz and H. L. Owens. diags Inst Radio Eng Proc 40:1472-6 N '52

See also

Air conditioning
Atmospheric temperature
Boiling points
Cold
Color temperature
Cooling
Earth temperature
Electric lamps—Temperature
Heat
Melting points
Metals—Temperature effect
Petroleum—Well temperature
Plastic materials—Temperature effect
Rubber—Temperature effect
Steel—Testing—Temperature effect
Temperature, Low
Thermal analysis
Thermochemistry

Measurement

Analysis of maximum temperatures in workpieces. A. O. Schmidt. bibliog diags Tool Eng 31:53-8 Jl '53

Automatic surface follower for measuring the rate of evaporation of molten metals undergoing vacuum distillation. M. J. Spendlove and H. W. St Clair. il diags R Sci Instr 23: 471-5 S '52

Checks heat of hot steel with electronic device. Steel 131:262+ O 13 '52

Furnace heat absorption in a spreader-stoker-fired steam generator; variation in furnace heat absorption as shown by measurement of temperature of exposed side. F. G. Feeley, jr. and E. C. Miller. plan diags A S M E Trans 75:925-40; Discussion. 940-2 Jl '53

Heat standards; NBS materials permit wider, more accurate heat measurements. Iron Age 171:159-60 F 26 '53

TEMPERATURE—Measurement—*Continued*

How a temperature-indication error was found and remedied. J. H. Pennell. diag Elec World 139:116+ Mr 9 '53

Instrumenting temperature measurements. il Can Chem Process 37:76-7 Je 1 '53

Inwall temperatures of blast furnaces. S. J. Paisley. diag Instruments 25:1571+ N '52

Laboratory simulation of aerodynamic heating for transient temperature measurements. L. H. Wilson and J. B. Falk. diags Aeronautical Eng R 12:39-41 F '53

Measurement of transient surface temperatures. R. A. Huggins and others. bibliog il diags R Sci Instr 23:467-70 S '52

NACA sonic-flow-orifice temperature probe in high-gas-temperature measurement. P. L. Blackshear, jr. diags A S M E Trans 75:51-4; Discussion. il 55-8 Ja '53

New developments in systems for measurement and control of humidity and temperature in ceramic driers. J. R. Green. il diags Am Cer Soc Bul 32:18-22 Ja 15 '53

Rotor temperature measurement and control in the ultracentrifuge. D. F. Waugh and D. A. Yphantis. diags R Sci Instr 23:609-14 N '52

Temperature distribution during the flash welding of steel. E. F. Nippes and others. il Welding J 30:sup585-601; 32:sup 113-22 D '51, Mr '53

Temperature distribution in carbon hearths. R. D. Westbrook. bibliog diags Iron & Steel Eng 30:141-4 Mr '53; Same. Blast F & Steel Pl 41:413-17+ Ap '53

Temperature effects in differential colorimetry; method of measurement. R. Bastian. bibliog diags Anal Chem 25:259-62 F '53

Temperature gradients in turbulent gas streams; measurement of temperature, energy, and pressure gradients. W. G. Schlinger and others. bibliog diags Ind & Eng Chem 45:864-70 Ap '53

Temperature scales and silicate research. R. B. Sosman. Am J Sci Bowen vol p517-28 '52

Temperature-sensitive phosphor used to measure surface temperatures in aerodynamics. L. C. Bradley, 3d. il diags R Sci Instr 24:219-20 Mr '53

Temperature standardisation at the National bureau of standards. il diag Engineer 194:735-7 N 28 '52

Thermistors for depth thermometry. W. R. Ree, jr. bibliog il diag Am Water Works Assn J 45:259-63 Mr '53

See also

Bolometers
Calorimeters and calorimetry
Pyrometers and pyrometry
Temperature, Low
Thermal analysis
Thermocouples
Thermometers and thermometry

Physiological effect

Clothing and climate from a physiological point of view. L. P. Herrington. bibliog il Am Dyestuff Rep 42:62-6+ F 2 '53

Combating heat and humidity. W. Schweisheimer. Paper Ind 35:671 S '53

Comparison of physiological adjustments of clothed women and men to sudden changes in environment. T. Inouye and others. bibliog Heating-Piping 25:125-30 My '53

Controlling heat exposure. il diag Nat Safety N 67:34-5+ My '53

Effect of relative humidity on heat loss of men exposed to environments of 80, 76, and 72 F. T. Inouye and others. bibliog Heating-Piping 25:109-15 Ag '53

Examination of heat stress indices; usefulness of such indices for predicting responses of African mine laborers. C. H. Wyndham and others. A M A Archives Ind Hygiene & Occup Med 7:221-33 Mr '53; Abstract. Nat Safety N 67:46 Je '53

Fever from infection not corrected by environment. R. W. Keeton. Heating-Piping 25:107 Mr '53

Hot environments and man. D. H. K. Lee. Refrig Eng 61:375-6 Ap '53

How temperature affects efficiency. C. W. Wing, jr. Heating-Piping 25:80-2 O '53

Industrial heat exposures; evaluation and control. G. F. Haines, jr. and T. Hatch. il diags Heat & Ven 49:93-104 N '52

Physiological adjustments of clothed human beings to sudden change in environment; first hot moist and later comfortable conditions F. K. Hick and others. il Heating-Piping 24:107-10 F '52; Abstract. Heat & Ven 50:85-6 Mr '53

Working efficiency of Africans in heat; effect of various saturated air temperatures, wind velocities, and rates of work. C. H. Wyndham and others. bibliog A M A Archives Ind Hygiene & Occup Med 7:234-40 Mr '53

See also

Cold—Physiological effect

Regulation

Automatic controls improve furnace operation. L. Walter. diags Iron Age 171:108-11 Ap 30 '53

Regulating room temperature to save fuel. Consumers Res Bul 31:26 Ap '53

Temperature and humidity control; Humicon system. il diag Elec R (Lond) 152:1313-15 Je 5 '53

Temperature control in greenhouses. N. J. Janisse. il plan Heat & Ven 50:80-3 S '53

Temperature control of jet-engined aircraft. E. W. Still. il diags Roy Aeronautical Soc J 57:89-102 F '53

Temperature control; use of electronic methods. il Chem Age (Lond) 68:454 Mr 21 '53

See also

Cryostats
Temperature regulators
Thermostats

TEMPERATURE, Animal and human

Effect of relative humidity on heat loss of men exposed to environments of 80, 76, and 72 F. T. Inouye and others. bibliog Heating-Piping 25:109-15 Ag '53

Temperature changes produced in tissue during ultrasonic irradiation. W. J. Fry and R. B. Fry. Acoustical Soc Am J 25:6-11 Ja '53

Temperatures produced in tissues by ultrasound; experimental study using various technics. J. F. Herrick. bibliog il Acoustical Soc Am J 25:12-16 Ja '53

Weight and body temperature in mammals. S. Rodbard. bibliog Science 117:256-7 Mr 6 '53

TEMPERATURE, Low

Apparatus for tension testing at subatmospheric temperatures; abstract. E. T. Wessel and R. D. Olleman. diag Product Eng 24:276+ Mr '53

Armed forces symposium on low-temperature testing of rubber, 2d. India Rubber World 128:221 My '53; Rubber Age 73:238 My '53

Atomic heat of germanium below 4°K. P. H. Keesom and N. Pearlman. bibliog diag Phys R 91:137-53 S 15 '53

Atomic heat of silicon below 100°K. N. Pearlman and P. H. Keesom. bibliog Phys R 88:398-405 O 15 '52

Atomic theory of liquid helium near absolute zero. R. P. Feynman. bibliog Phys R 91:1301-8 S 15 '53

Cold brittleness of polyethylene. M. M. Renfrew and A. J. Freeman. il Mod Packaging 26:121-3+ Ag '53

Color centers in alkali halides at 5°K. W. H. Duerig and J. J. Markham. bibliog Phys R 88:1043-9 D 1 '52

Electrical resistance of graphite at low temperatures. J. M. Reynolds and others. bibliog Phys R 91:1152-5 S 1 '53

Hall effect in zinc crystals at low temperatures. J. K. Logan and J. A. Marcus. bibliog diags Phys R 88:1234-8 D 15 '52

Heat capacity of KCl below 4°K. P. H. Keesom and N. Pearlman. bibliog Phys R 91:1354-5 S 15 '53

Heat conduction in alloys at low temperatures. I. Estermann and J. E. Zimmerman. bibliog diags J Ap Phys 23:578-88 My '52

Low temperature heat capacities of inorganic solids; heat capacity of ammonium chromium alum. H. L. Johnston, J. Hu and W. S. Horton. Am Chem Soc J 75:3922-4 Ag 20 '53

Low temperature knocks out compressor. R. A. Line. il Power 96:114-15 N '52

Low-temperature physics proceedings of NBS semicentennial symposium. bibliog il diags U S Nat Bur Stand Circ 519:1-291; $1.75 Supt. of doc. '52

TEMPERATURE, Low—*Continued*

Low temperature second virial coefficients for a Lennard-Jones gas. L. F. Epstein. J Chem Phys 20:1670-2 N '52

Low temperature second virial coefficients for a 6-9 potential. G. M. Roe and others. bibliog J Chem Phys 20:1665-9 N '52

Low temperature spectroscopy in the farther ultraviolet region. W. J. Potts, jr. bibliog il diags J Chem Phys 21:191-5 F '53

Low-temperature test chamber. il diag Engineering 175:332-3 Mr 13 '53

Low temperature transformation in ferrites. L. R. Bickford, jr. bibliog il diags Rs Mod Phys 25:75-9 Ja '53

Low temperatures in electronics. Electronics 26:222+ Jl '53

Magnetic refrigerator for maintaining temperatures below 1°K. C. V. Heer and others. bibliog il Phys R 91:412-13 Jl 15 '53

Magnetic study of low temperature transformation in magnetite. H. J. Williams and R. M. Bozorth. Rs Mod Phys 25:79-80 Ja '53

Magnetoresistance of bismuth crystals at low temperatures. P. B. Alers and R. T. Webber. bibliog Phys R 91:1060-5 S 1 '53

Magnetoresistance of Mg, Cu, Sb, and Al at liquid helium temperatures. G. B. Yntema. bibliog Phys R 91:1388-94 S 15 '53

Mechanism of transition in magnetite at low temperatures. H. J. Williams and others. bibliog diags Phys R 91:1107-15 S 1 '53

Minimum of electrical resistance at low temperatures. D. K. C. MacDonald. bibliog Phys R 88:148-9 O 1 '52

Optical cell for use with liquid helium. W. H. Duerig and I. L. Mador. bibliog il R Sci Instr 23:421-4 Ag '52

Parallel susceptibility of an antiferromagnet at low temperatures. J. R. Tessman. Phys R 88:1132-7 D 1 '52

Properties of the Cr+++ ion in the paramagnetic alums at low temperatures. R. P. Hudson. bibliog Phys R 88:570-2 N 1 '52

Pure research: long-shot bet; cryogenics program. il Bsns W p 158-9 Ja 17 '53

Resistivity of lanthanum, cerium, praseodymium, and neodymium at low temperatures. N. R. James and others. bibliog Phys R 88:1092-8 D 1 '52

Simplified analysis of two stage low temperature refrigeration systems. H. P. Soumerai. flow diag Refrig Eng 61:746-50+ Jl '53

Some properties of superconductors below 1°K. T. S. Smith and others. Phys R 89:654 F 1 '53

Some properties of superconductors below 1°K; Zr, Hf, Cd, and Ti. T. S. Smith and J. G. Daunt. bibliog Phys R 88:1172-6 D 1 '52

Specific heat of lead in the temperature range 1°K to 75°K. M. Horowitz and others. bibliog Phys R 88:1182-6 D 1 '52

Specific heat of small particles at low temperatures. G. Jura and K. S. Pitzer. diags Am Chem Soc J 74:6030-2 D 5 '52

Spin paramagnetism of Cr+++, Fe+++, and Gd+++ at liquid helium temperatures and in strong magnetic fields. W. E. Henry. bibliog diag Phys R 88:559-62 N 1 '52

Superconductivity below 1°K. M. C. Steele. Phys R 87:1137-8 S 15 '52

Superconductivity; new electronic horizon. il Tele-Tech 12:83+ S '53

Welding for low-temperature service; abstract. R. W. Bennett. Metal Prog 63:190+ My '53

See also

Cold
Cryogenic laboratories
Cryostats
Freezing
Refrigeration and refrigerating machinery
Testing laboratories—Cold rooms

TEMPERATURE indicating paint. See Paint, Temperature indicating

TEMPERATURE regulators

Electronic temperature controller. il Automotive Ind 107:62 O 15 '52; Product Eng 23:212 O '52

Electronic temperature controller for laboratory use; Mullard, ltd. il Engineer 194:833 D 19 '52; Engineering 175:128 Ja 23 '53

Gardsman portable temperature controller. il Rubber Age 72:262 N '52

High temperature resistance thermometer temperature controller. W. B. Crandall and P. M. Hackett. il diag Am Cer Soc Bul 31:377-9 O 15 '52

Temperature and humidity control equipment; Tem-Con system. diag Engineer 196: 15 Jl 3 '53; Engineering 176:171 Ag 7 '53

TEMPERING

Effect of silicon on the tempering of martensite; abstract. A. G. Allten and P. Payson. Metal Prog 62:134 N '52

Heat treating aluminum alloys; tempering oils for aging 75S. G. C. Close. il Light Metal Age 10:8-9 D '52

Mechanism and kinetics of the first stage of tempering; abstract. C. S. Roberts and others. Metal Prog 62:130+ N '52

Physical properties of steel as functions of the tempering temperature. A. A. Peebles. Engineering 175:613-15 My 15 '53

Tempering of cyanided links. V. Evans. Metal Prog 63:114 F '53

TEMPLETS

How to get faster, better, less expensive plant layout drawings without drafting. G. L. Thuering. plan diags Factory Management 110:88-9 O '52

Templates of detail profiles promote drafting efficiency. M. Harper and M. G. Casady. il Product Eng 23:178-80 N '52

Templet speeds casting layout. B. Mansberger. diag Am Mach 97:181 Mr 16 '53

TENNESSEE

Tennessee story; taxes, legislation and finance. il Manuf Rec 121:110-15 N '52

See also

Copper mines and mining—Tennessee
Mines and mineral resources—Tennessee

Economic conditions

Tennessee story; Tennessee's markets expanding rapidly; with tables of financial data and map showing principal raw materials and transportation facilities. il Manuf Rec 121:75-82 N '52

Industries and resources

Tennessee story. il map Manuf Rec 121:73-120 N '52

TENNESSEE gas transmission company

Bond offering oversubscribed. Comm & Fin Chr 177:727 F 16 '53

Gas compromise; Tennessee Gas offers to split New England market at a price. Bsns W p28-9 Jl 11 '53

Pipeline plan. Bsns W p 136 Ap 18 '53

Plans financing; proposed acquisition and merger. Comm & Fin Chr 177:1583 Ap 13 '53

Stock sold. Comm & Fin Chr 177:2013-14 My 11 '53

TENNESSEE Valley authority

AGC contractors oppose wage hike. Eng N 150:26 Ja 1 '53

Collective-bargaining in the field of job classification. J. D. Schneider. Personnel 30: 49-53 Jl '53

Freedom for TVA captive cities. G. A. Dondero. Pub Util 52:455-7 S 24 '53

GOP urged to push TVA's growth. G. Clapp. Elec World 138:92-3 D 15 '52

Health conservation activities. O. M. Derryberry. il Pub Health Rep 68:327-33 Mr '53

TVA and the Tennessee valley, what of the future. H. A. Curtis. Land Econ 28:333-40 N '52

TVA dam construction is bustling. il Eng N 150:24 Ja 1 '53

TVA fertilizer distribution policy investigation needed, House told. E. C. Gathings. Oil Paint & Drug Rep 163:3+ F 16 '53

TVA office shift. Elec World News ed 139:8 Mr 30 '53

TVA reveals expansion program. G. R. Clapp. Pub Util 51:117-19 Ja 15 '53

TVA's challenge. Bsns W p33 D 13 '52

TVA's report and a criticism. Pub Util 51:182-4 Ja 29 '53

Bibliography

Bibliography for the TVA program. B. L. Foy, comp. 34p Technical library, Tennessee Valley authority, Knoxville '52

Bibliography for the TVA program. B. L. Foy, comp. 37p Technical lib, Tennessee Valley authority, Knoxville '53

TENNESSEE Valley authority—Bibliography —*Continued*

Indexed bibliography of the Tennessee Valley authority; cumulative supplement, Jan. 1951-Dec. 1952. B. L. Foy, comp. 50p, 19p Technical lib, Tennessee Valley authority, Knoxville '53

TENNESSEE Valley project

Progress of the Tennessee Valley authority. il map plan diags Engineer 195:794-6, 818-22 Je 5-12 '53

TENNEY, Ashton M.

Tenney and his friends. R. E. Ellsworth. pors Mod Textiles Mag 34:36+ Ag '53

TENNIS rackets

Electrostatic spray painting of tennis racket frames. Engineer 194:360-1 S 12 '52

TENSIOMETERS

Instrument measures tension of filling being unwound. il Textile World 103:158 My '53

Measurement of strip tension in tandem mills. R. B. Sims. il diags Engineering 174:232-3, 262-4 Ag 22-29 '52

Paper tensiometer. N. B. Rohrbaugh and G. E. Cassidy. il diag Paper Tr J 137:14-15 Jl 10 '53

Tensiometer increases Glatfelter production. R. Schuessler. il diag Paper Ind 34:1463-4 Mr '53

Wire tension meter reduces coil rejects. E. J. Saxl. il Electronics 25:282+ N '52

TENSORS

Energy-momentum tensor of the electromagnetic field inside matter. N. L. Balazs. diag Phys R 91:408-11 Jl 15 '53

Tensor force interaction between a shell closed except for a single vacancy and an external nucleon. J. Hope. Phys R 89:884-5 F 15 '53

TEOSINTE

Nutritive value of teosinte. I. E. Melhus and others. bibliog Science 117:34-5 Ja 9 '53

TERBIUM

Isotopes

Energy levels associated with the radioactive decay of Gd^{153} and Tb^{161}. J. M. Cork and others. diags Phys R 88:685-6 N 1 '52

TEREPHTHALALDEHYDE

Dihalogeno-substituted terephthalaldehydes and *p*-tolualdehydes. J. R. Naylor. Chem Soc J p4085-6 O '52

TEREPHTHALATES

Active (+) menthyl (−) menthyl nitroterephthalates. P. J. Hearst and C. R. Noller. Am Chem Soc J 74:4709-10 S 20 '52

TEREPHTHALIC acid

Separation of *iso-* and terephthalic acids by means of the thallous salts. D. Bryce-Smith. Chem & Ind p244 Mr 14 '53

Structure-property relationships in polyethylene terephthalate co-polyesters. O. B. Edgar and E. Ellery. pl Chem Soc J p2633-43 Jl '52

Terephthalic acid for the terylene process. P. W. Sherwood. Can Chem Process 37:56+ Je 20 '53

TEREPHTHALYL chloride

Elevation of the intrinsic viscosity of peanut protein by treatment with terephthalyl dichloride. G. E. Mann. bibliog Am Chem Soc J 75:3526-9 Jl 20 '53

TER MEULEN method. See Nitrogen—Analysis

TERMINALS

Largest ocean terminal nears finish. Eng N 149:148 N 13 '52

See also

Airport buildings
Ferry terminals
Freight handling
Motor bus lines—Terminals
Ore docks
Petroleum pipe lines—Terminals
Petroleum shipping terminals
Port of New York authority—Bus terminal
Ports
Produce terminals
Railroads—Terminals

TERMITES

Longer life for your house. Consumers Res Bul 30:30 O '52

Termite and the cell. M. Lüscher. il Sci Am 188:74-6+ My '53

TERPENES

Allylic bromination of unsaturated terpene hydrocarbons, and the synthesis of αβ-unsaturated alcohols. A. K. Macbeth, B. Milligan and J. S. Shannon. Chem Soc J p2574-6 S '53

Chemistry of the triterpenes. R. G. Curtis and others. Chem Soc J p457-75 F '53

Chemistry of the triterpenes and related compounds; elucidation of the structure of polyporenic acid. C. A. Bowers and others. Chem Soc J p2548-60 S '53

Chemistry of the triterpenes; some aspects of the chemistry of tetracyclic triterpenes. M. C. Dawson, T. G. Halsall and R. E. H. Swayne. Chem Soc J p590-4 F '53

Chemistry of the triterpenes; the action of hydrogen chloride on butyrospermol. M. C. Dawson and others. Chem Soc J p586-9 F '53

Sesquiterpenoids; tricyclic derivatives of caryophyllene. D. H. R. Barton, T. Bruun and A. S. Lindsey. Chem Soc J p2210-19 Je '52

Studies in the terpene series; hydrogenolysis of pinane in a flow type apparatus in the presence of hydrogenation catalysts. V. N. Ipatieff, F. J. Pavlik and H. Pines. diag Am Chem Soc J 75:3179-81 Jl 5 '53

Studies in the terpene series; skeletal isomerization and hydrogen transfer of cyclic olefins in the presence of alumina-hydrogen chloride and silica-alumina catalysts. H. Pines, R. C. Olberg and V. N. Ipatieff. bibliog Am Chem Soc J 74:4872-6 O 5 '52

Terpenoids; the triterpenes of the cactus lemaireocereus thurberi. C. Djerassi, L. E. Geller and A. J. Lemin. bibliog Am Chem Soc J 75:2254-6 My 5 '53

Triterpene resinols and related acids; ursa-11 : 13(18)-dienol. J. D. Easton, W. Manson and F. S. Spring. Chem Soc J p943-4 Mr '53

Triterpenoids; phyllanthol, the first hexacarbocyclic triterpenoid. D. H. R. Barton and P. de Mayo. Chem Soc J p2178-81 Jl '53

Triterpenoids; some derivatives of siaresinolic acid. D. H. R. Barton and others. Chem Soc J p3751-9 O '52

Triterpenoids; some further observations on the constitution of lanostadienol (lanosterol). C. S. Barnes and others. Chem Soc J p2339-47, 571-6 Je '52, F '53

Triterpenoids; some stereospecific reactions in the lanostadienol (lanosterol) series. C. S. Barnes and D. H. R. Barton. Chem Soc J p 1419-22 My '53

Triterpenoids; the crystal structure of lanostenyl iodoacetate. J. Fridrichsons and A. M. Mathieson. diags Chem Soc J p2159-67 Jl '53

Triterpenoids; the lanosterol analogue of provitamin D_3. D. H. R. Barton and B. R. Thomas. Chem Soc J p 1842-7 Je '53

Triterpenoids; the streochemistry of (lanosterol). C. S. Barnes and others. Chem Soc J p576-9 F '53

See also

Humulene
Triterpenes

TERPHENYL

Absorption and fluorescence spectra of *p*-terphenyl in toluene. C. F. Ravilious. R Sci Instr 23:760 D '52

Solubility of *p*-terphenyl in *o-* and *m*-terphenyls and in biphenyl. R. J. Good and others. bibliog Am Chem Soc J 75:436-42 Ja 20 '53

TERRAMYCIN

Terramycin for throat and respiratory ailments. Can Chem Process 36:88 S '52

Terramycin; structure of aureomycin and terramycin. C. R. Stephens and others. bibliog Am Chem Soc J 74:4976-7 O 5 '52

Terramycin; the synthesis of indanone degradation products of terramycin. L. H. Conover. bibliog Am Chem Soc J 75:4017-20 Ag 20 '53

TERRAZZO

Terrazzo panels give new school a distinctive finish. il Am Bld 74:224+ S '52

TERYLYENE. See Dacron

TESTIMONIALS in advertising. See Advertising copy—Testimonials

TESTING

Apparatus for tension testing at subatmospheric temperatures; abstract. E. T. Wessel and R. D. Olleman. diag Product Eng 24:276+ Mr '53

Black light spots defects in materials. N. E. Walters. il Materials & Methods 36:105-7 N '52

Pulse techniques applied to dynamic testing. J. R. Leslie. bibliog il diags Am Soc T M Proc 50:1314-23; Discussion. 1324-6 '50

What's ahead the next ten years in inspection and testing. Am Mach 96:I 1-9 Mid-N '52

See also

Impact
Laboratories
Magnetic testing
Testing laboratories
Testing machines
Textile testing
Weathering

also subdivision Testing under various subjects, e.g.

Corrosion and anticorrosives
Hardness
Metals
Pipes
Plastic materials
Steel

TESTING laboratories

Air jet operates environmental controls in test chamber. il diags Product Eng 24:152-3 Ja '53

Building links research and display; Certain-teed products corp. il Eng N 149:41 N 20 '52

Chemistry and Diesels; General motors Diesel limited, London, Ontario. M. Siverns. il Can Chem Process 37:82-3 Ap '53

Environmental testing at Sperry. R. Brown. il Aero Digest 66:54-6 Je '53

Environmental testing; Sperry gyroscope co. il Mech Eng 75:150-1 F '53

How to road test an axle in a quiet lab. il Bsns W p 116-18 Ja 24 '53

International Harvester unifies engineering facilities. il Automotive Ind 107:48-9+ D 15 '52

New setup to test air accessories; Hydro-Aire's new facility. W. J. Coughlin. il Aviation W 57:68 N 3 '52

Technical center for product development; National malleable & steel castings co. il Ry Age 135:76-7 O 19 '53

Test chambers. il Tool Eng 29:100 D '52

This new plant will test traction motors. il Ry Age 133:60-2 D 15 '52

See also

American gas association—Appliance testing laboratory
Electric laboratories

Cold rooms

Cold room study of starting fluids. H. D. Young. il diags Pet Eng 25:C10+ F '53

Private laboratory operates at 90 below zero temperatures; Polar laboratory constructed by the Perfection stove co. il Sheet Metal Worker 44:64-5 D '52

Equipment

Admiralty test house for gas turbines. il Engineer 195:452-5 Mr 27 '52; Same. Engineering 175:385-7 Mr 27 '53

Development of oil fuel burning equipment. il Engineer 196:185 Ag 7 '53; Engineering 176:119 Jl 24 '53

Jet engine test plant; Coventry works of the Standard motor co. il diags Engineer 195:666-7 My 8 '53; Engineering 175:588-9, pl 18 My 8 '53

Safety measures

Test cell protection at Westinghouse jet engine plant; vapor analyzing and alarm instruments. il Automotive Ind 107:33+ O 15 '52

Weather rooms

Extreme temperature chamber aids testing at Northrop aircraft. il Materials & Methods 37:176+ Ja '53

TESTING machines

Aircraft tyre testing. il Engineer 194:804-5 D 12 '52; Engineering 174:787-9 D 19 '52

Automatic pipe tester cuts inspection costs. J. B. Delaney. il Iron Age 171:104-5 Ja 8 '53

Axle tester provides laboratory proving ground. il Steel 132:83 F 16 '53

Baldwin-Emery testing machine. il Mach 59:226 D '52; Automotive Ind 107:77 O 1 '52; Rubber Age 72:256+ N '52

Baldwin universal testing machines. il Mach 59:209 Mr '53

Boeing takes no chances on quality. R. Bloomberg. il Mill & Factory 52:98-9 Mr '53

B.S.R.A. ship-structure research station at Glengarnock. il Engineering 174:531-3 O 24 '52

Creep testing in compression for simple creep assessment. A. H. Sully. il diags Product Eng 24:150-3 Ap '53

Development of a test method for gear lubricants on the IAE machine. Inst Pet J 38:705-11 S '52

Equipment for compression-creep tests at high temperatures. A. E. Johnson and N. E. Frost. diags Engineering 176:28-9 Jl 3 '53

Experimental bench testing techniques for truck and bus components; abstracts. G. F. Roddewig. il Automotive Ind 108:46+ Mr 1 '53; S A E J 61:20-3; Discussion. 23-6 Mr '53

Experiments with the Kohler-Molins folding tester; abstract. S. Köhler. il diag Paper Ind 35:580-1 Ag '53

Fatigue and creep testing of aircraft-engine materials. il diag Engineering 175:353-4 Mr 20 '53

Fatigue testing; General Motors research fatigue-testing machine. il Mech Eng 75:321 Ap '53

Fatigue testing; its machines and methods. T. R. Breunich. il diags Product Eng 24:128-34 F; 148-54 Mr '53

Frame for testing structures. B. H. Falconer and S. R. Sparkes. il diags Engineer 194:869-71 D 26 '52

From test machine to gear-box; problems associated with the translation of laboratory test results into predictions of field-service performance of gear lubricants. J. R. Hughes. bibliog Inst Pet J 38:712-18 S '52

Get rid of unfit springs with shop-made testers. A. G. Lyons. il Bus Transportation 32:52 S '53

Lehigh university to build world's largest testing machine. il Eng N 150:86 F 5 '53

Lock nut and nut fatigue testing machine; Lester lock nut and washer co. il diags Engineer 194:284-5 Ag 29 '52

Low-temperature test chamber. il diag Engineering 175:332-3 Mr 13 '53

Machine for measuring load and deformation of rubber under cyclical compression. D. M. Davies. il diags Engineering 176:196-8 Ag 14 '53

Machine for tensile testing at controlled temperatures and constant true strain rates. E. L. Bartholomew, jr. and others. il diags R Sci Instr 24:196-202 Mr '53

Mechanical testing of gear lubricants. J. R. Hughes and R. Tourret. il diags Engineering 175:200-3, 257-9 F 13, 27 '53

Naval construction testing frame. Engineer 196:88 Jl 17 '53; il Engineering 176:115-16 Jl 24 '53

New fatigue machine tests prestressed concrete. il Eng N 149:76 O 9 '52

1953 American Machinist production preview. il Am Mach 97:241-4 Ja 19 '53

Operation of Sutherland ink rub tester. M. Galbraith. Mod Packaging 26:132+ Ja '53

Optical dynamic weighbar for a fatigue-testing machine. P. G. Forrest. il diags Engineering 174:801 D 19 '52

Preliminary investigation of the adaptability of the General Electric puncture tester to the testing of structural insulation board. J. A. Van den Akker and others. bibliog il Tappi 36:111-23 Mr '53

Simple high-speed air spinner for centrifugal testing of small mechanical devices. C. F. Bild and P. F. Vial. il diag A S M E Trans 75:515-18; Discussion. 518-19 My '53

Space oscillator for field or laboratory testing. il Product Eng 23:218 D '52

Special device tests for leakage in valve seating; Whittington vacuum testing machine. il Automotive Ind 108:61 My 1 '53

Special equipment for testing landing gear. W. F. Bradley. il Automotive Ind 107:61+ O 1 '52

Static-dynamic load machine for high pressure. E. T. Fleischhauer and E. G. Dorsey, jr. il diag A S M E Trans 75:381-3 Ap '53

TESTING machines—*Continued*

Structural research establishment at Glengarnock. il plan diags Engineer 194:609-11 N 7 '52

Tensile testing machine. il Engineering 174:224 Ag 15 '52

Tester meets tough specs; modified machine has 600,000 pound compression capacity for aircraft landing gear. il Steel 131:97 O 6 '52

Testing and performance of lubricants for high-speed gears. J. Greenwood and R. W. Morton. Inst Pet J 38:732-46 S '52

Testing machine setups duplicate operating conditions. il diag Automotive Ind 107:50-2 O 1 '52

Testing machines; Watertown arsenal's 72-yr. old test unit gets new life. il Iron Age 170:167 S 4 '52; J Metals 4:1038 O '52

Testing nuts and bolts for resistance to vibration; Lester vibrator machine. il diag Engineering 175:54-5 Ja 9 '53

Three-mass space oscillator. R. K. Bernhard. il diags Machine Design 25:157-63 Je '53

Vacuum testing on production lines. L. E. Sterns. il diag Tool Eng 29:60-2 D '52

See also

Dynamometers

Textile testing machines

TESTOSTERONE

Improved method of preparing testosterone, dihydrotestosterone and some of their esters. A. Ercoli and P. de Ruggieri. bibliog Am Chem Soc J 75:650-3 F 5 '53

11-Oxygenated steroids; partial syntheses of 11-ketotestosterone and of adrenosterone. H. L. Herzog and others. bibliog Am Chem Soc J 75:266-9 Ja 20 '53

Steroids; synthesis of 11 β-hydroxytestosterone and 11-ketotestosterone. O. Mancera, G. Rosenkranz and F. Sondheimer. Chem Soc J p2189-91 Jl '53

TETANUS

Tetanus toxoid test evaluates potency; abstract. J. Ipsen, jr. Pub Health Rep 68:274 F '53

TETRABORANE. See Boron hydrides

TETRACARBOXYBUTANE

Potential uses in resins, plasticizers, adhesives, modified and synthetic oils. Chem Eng 60:260-1 Mr '53

TETRACHLOROBENZENE

Microthermal analysis of the system 1,2,3,4-tetrachlorobenzene-pentachlorobenzene. C. J. Arceneaux. bibliog il Anal Chem 25:486-9 Mr '53

TETRACHLOROCYCLOHEXANE

Partial additive chlorination of the benzene ring; the isomers of benzene tetrachloride. H. D. Orloff and others. bibliog diags Am Chem Soc J 75:4243-9 S 5 '53

TETRACHLORODIBORINE. See Boron chlorides

TETRACHLOROIODIDES

Spectrophotometric study of the tetrachloroiodide complex in acetonitrile. A. I. Popov and J. N. Jessup. bibliog Am Chem Soc J 74:6127-8 D 5 '52

TETRACYCLINE

Terramycin; tetracycline. L. H. Conover and others. bibliog Am Chem Soc J 75:4622-3 Ag '53

Tetracycline. J. H. Boothe and others. Am Chem Soc J 75:4621 S 20 '53

Tetracycline, new powerful antibiotic drug, discovered. Oil Paint & Drug Rep 164:4+ S 28 '53

TETRACYCLONE. See Tetraphenylcyclopentadienone

TETRADECAHEPTAENE

1,3,5,7,9-Decapentaene and 1,3,5,7,9,11,13-tetradecaheptaene. A. D. Mebane. bibliog Am Chem Soc J 74:5227-9 O 20 '52

TETRAENE

Cyclic polyolefins; conversion of cyclooctatetraenyl phenyl ketone to an acyclic tetraene. A. C. Cope and D. J. Marshall. bibliog Am Chem Soc J 75:3208-11 Jl 5 '53

TETRAETHYL lead

Automatic TEL blending of gasoline for delivery into products pipe line. H. R. Hoyt. il diag Oil & Gas J 51:241+ O 13 '52

Analysis

Method for determination of tetraethyllead in gasoline. W. S. Levine. il Pet Eng 25:C37-8+ My '53

Save time in TEL analyses; X-ray photometer. H. W. Kellogg and others. diags Pet Processing 7:1430-2 O '52

TETRAETHYL pyrophosphite

Tetraethyl pyrophosphite as a reagent for the preparation of anilides. J. Blodinger and G. W. Anderson. Am Chem Soc J 74:5514-15 N 5 '52

TETRAETHYLENEPENTAMINE

Determination of copper in wood pulps with tetraethylenepentamine. R. M. Kingsbury and C. L. Lake. bibliog Tappi 35:527-8 N '52

TETRAFLUOROBENZENE

Vibrational spectra of fluorinated aromatics; 1,2,4,5-tetrafluorobenzene. E. E. Ferguson and others. J Chem Phys 21:1464-9 S '53

TETRAFLUOROETHYLENE

Electron diffraction investigation of the molecular structures of ketene, carbonyl fluoride and tetrafluoroethylene. T. T. Broun and R. L. Livingston. bibliog Am Chem Soc J 74:6084-91 D 5 '52

Mercury-photosensitised reactions of tetrafluoroethylene. B. Atkinson. diag Chem Soc J p2684-94 Jl '52

Polytetrafluoroethylene; abstract and discussion. W. C. Fergusson. Chem & Ind p 105-6 Ja 31 '53

Raw materials for electric cable making; polytetrafluoroethylene (P.T.F.E.). V. H. Wentworth. il Electrician 149:337-40 Ag 1 '52

Thermal decomposition of tetrafluoroethylene. B. Atkinson and A. B. Trenwith. Chem Soc J p2082-7 Jl '53

See also

Teflon

TETRAFLUOROPROPYLENE

1,3,3,3-Tetrafluoropropylene oxide. E. T. McBee, O. R. Pierce and H. W. Kilbourne. bibliog Am Chem Soc J 75:4091-2 Ag 20 '53

TETRAHYDROCARBAZOLE

Peroxides of tetrahydrocarbazole and related compounds; a synthesis of 5 : 6-dimethoxy-*cyclo*pentane*spiro*-2-ψ-indoxyl. R. J. S. Beer and others. Chem Soc J p4351-3 N '52

Peroxides of tetrahydrocarbazole and related compounds; autoxidation of substituted tetrahydrocarbazoles. R. J. S. Beer, T. Broadhurst and A. Robertson. Chem Soc J p4946-51 D '52

Peroxides of tetrahydrocarbazole and related compounds; 8-bromo-1 : 2 : 3 : 4-tetrahydrocarbazole. R. J. S. Beer, T. Broadhurst and A. Robertson. Chem Soc J p2440-2 Ag '53

1 : 2 : 3 : 4-Tetrahydro-6-hydroxycarbazole and 3-hydroxycarbazole. A. H. Milne and M. L. Tomlinson. Chem Soc J p2789-91 Jl '52

TETRAHYDROFURAN

Dehydration of 4-hydroxy-2,2,4,5,5-pentamethyltetrahydrofuran (acetylene studies). M. Sulzbacher and E. D. Bergmann. bibliog Am Chem Soc J 75:3859 Ag 5 '53

Effect of ring size on the infrared spectra of cyclic ethers; characteristic frequencies of trimethylene oxides and tetrahydrofurans. G. M. Barow and S. Searles. bibliog Am Chem Soc J 75:1175-7 Mr 5 '53

TETRAHYDROISATIN

Synthesis and properties of some 4,5,6,7-tetrahydroisatins. L. Horwitz. bibliog Am Chem Soc J 75:4060-3 Ag 20 '53

TETRAHYDROMETHYL pyridindole

Synthesis of 5 : 6 : 7 : 8-tetrahydro-1-methyl-β-carboline. G. R. Clemo and R. J. W. Holt. Chem Soc J p 1313-14 Ap '53

TETRAHYDRONAPHTHALENE. See Tetralin

TETRAHYDRONAPHTHOL

Resolution and reactions of 1 : 2 : 3 : 4-tetrahydro-1-naphthol; a new preparation of 1 : 2 : 3 :4-tetrahydro-1-naphthyl hydroperoxide. A. G. Davies and A. M. White. Chem Soc J p3300-3 Ag '52

TETRAHYDROPAPAVEROLINE

*iso*Quinoline alkaloids; the oxidation of tetrahydropapaveroline. J. Harley-Mason. Chem Soc J p 1465-6 My '53

TETRAHYDROPHTHALIC anhydride

Some derivatives of *cis*-1 : 2 : 3 : 6 -tetrahydrophthalic anhydride. J. E. Gill and J. Munro. Chem Soc J p4630-2 D '52

TETRAHYDROPORPHINE

Attempted preparation of a simple tetrahydroporphine. G. D. Dorough and J. R. Miller. bibliog Am Chem Soc J 74:6106-8 D 5 '52

TETRAHYDROPYRAN

Preparation of 4 : 4′-bistetrahydropyranyl and of ethane-1 : 1 : 2 : 2-tetra-acetic acid. C. T. Blood, N. J. Cartwright and R. P. Linstead. Chem Soc J p2268-72 Je '52

TETRAHYDROQUINOLIZINE

Synthesis of 1,2-benzo-7,8-(2′,3′-indolo)-tetrahydroquinolizine. V. Boekelheide and C. Liu. bibliog Am Chem Soc J 74:4920-3 O 5 '52

TETRAHYDROQUINOXALINE

Chemotherapy of filariasis; monoacyl derivatives of 1 : 2 : 3 : :4-tetrahydroquinoxaline. J. S. Morley. Chem Soc J p4002-8 O '52

Tetrahydroquinoxalines; a new route from *o*-amino-*N*-2-hydroxyethylanilines. G. R. Ramage and G. Trappe. Chem Soc J p4406-9 N '52

TETRAHYMENA. See Protozoa

TETRALIN

Dicyclic hydrocarbons; 1,2,3,4-tetrahydronaphthalene and 1-alkyl-1,2,3,4-tetrahydronaphthalenes. W. Karo, R. L. McLaughlin and H. F. Hipsher. bibliog Am Chem Soc J 75:3233-5 Jl 5 '53

Podophyllotoxin studies; reductive methods in the synthesis of tetralin lactones from α-tetralone derivatives. G. N. Walker. Am Chem Soc J 75:3393-7 Jl 20 '53

Reaction of indane and tetralin with excess of acetylating agent. G. Baddeley, E. Wrench and R. Williamson. Chem Soc J p2110-15 Jl '53

TETRALONE

1,4-Dimethoxy-5-methyl-6-tetralone and 1,4-dimethoxy-5,5-dimethyl-6-tetralone. T. R. Lewis, W. B. Dickinson and S. Archer. bibliog Am Chem Soc J 74:5321-4 N 5 '52

Methoxy 3-carbethoxy-1-tetralones. G. N. Walker. Am Chem Soc J 75:4108-9 Ag 20 '53

Synthesis of 3′, 4′-dimethoxyphenylindanones and tetralones. G. N. Walker. Am Chem Soc J 75:3387-90 Jl 20 '53

TETRAMETHYLAMMONIUM iodide

Addition of iodine to tetramethylammonium iodide. H. W. Foote and M. Fleischer. bibliog J Phys Chem 57:122-5 Ja '53

TETRAMETHYL compounds

Mass spectra of the tetramethyl compounds of carbon silicon, germanium, tin, and lead. V. H. Dibeler. bibliog J Res Nat Bur Stand 49:235-9 O '52

TETRAMETHYL germanium

Vibrational spectra and thermodynamic functions of lead tetramethyl, tin tetramethyl and germanium tetramethyl. E. R. Lippincott and M. C. Tobin. bibliog Am Chem Soc J 75:4141-7 S 5 '53

TETRAMETHYLHYDRAZINE

Trimethylhydrazine and tetramethylhydrazine. J. B. Class, J. G. Aston and T. S. Oakwood. bibliog Am Chem Soc J 75:2937-9 Je 20 '53

TETRAMETHYL lead

Mass spectra of the tetramethyl compounds of carbon silicon, germanium, tin and lead. V. H. Dibeler. bibliog J Res Nat Bur Stand 49:235-9 O '52

Studies of bond rupture in the decay of RaD as tetramethyl lead. R. R. Edwards and others. bibliog J Chem Phys 21:1555-8 S '53

Vibrational spectra and thermodynamic functions of lead tetramethyl, tin tetramethyl and germanium tetramethyl. E. R. Lippincott and M. C. Tobin. bibliog Am Chem Soc J 75:4141-7 S 5 '53

TETRAMETHYLNAPHTHALENE

2,3,6,7-Tetramethylnaphthalene. W. L. Mosby. bibliog Am Chem Soc J 75:3600-1 Jl 20 '53

TETRAMETHYL tin

Vibrational spectra and thermodynamic functions of lead tetramethyl, tin tetramethyl and germanium tetramethyl. E. R. Lippincott and M. C. Tobin. bibliog Am Chem Soc J 75:4141-7 S 5 '53

TETRAMETHYLXANTHINE

1 : 3 : 7 : 8-Tetramethylxanthine. H. Bader and J. D. Downer. Chem Soc J p 1641 My '53

TETRAPHENYLBUTYLENE glycol

Dehydration products of 1,1,4,4-tetraphenyl-1,4-butanediol. W. J. Wasserman and M. C. Kloetzel. bibliog Am Chem Soc J 75:3036-8 Je 20 '53

TETRAPHENYLCYCLOPENTADIENONE

Absorption spectra of tetracyclones. S. B. Coan, D. E. Trucker and E. I. Becker. bibliog Am Chem Soc J 75:900-3 F 20 '53

Reduction of tetracyclone. N. O. V. Sonntag and others. bibliog Am Chem Soc J 75:2283-92 My 20 '53

TETRAPHENYLETHYLENE

Extra Laue reflections of tetraphenylethylene crystal. M. N. Dutt. il J Chem Phys 21:1609-10 S '53

TETRAPHENYLHEXADIENEYNE

Synthesis and properties of 1,2,5,6-tetraphenylhexa-1,5-diene-3-yne. S. Israelashvili and J. Edlitz-Pfeffermann. bibliog Am Chem Soc J 74:5780-2 N 20 '52

TETRAZAPORPHINE

Conjugated macrocycles; tetra*cyclo*hexenotetrazaporphin. G. E. Ficken and R. P. Linstead. Chem Soc J p4846-54 D '52

Conjugated macrocycles; tetrazaporphin and its metallic derivatives. R. P. Linstead and M. Whalley. Chem Soc J p4839-46 D '52

TETRAZOLES

Dialkylaminoalkylation of some 5-monosubstituted tetrazoles. B. Elpern. bibliog Am Chem Soc J 75:661-2 F 5 '53

Analysis

X-ray diffraction patterns for some tetrazole derivatives. L. A. Burkardt and D. W. Moore. Anal Chem 24:1579-85 O '52

TETRAZOLIUM compounds

Reduction of tetrazolium salts by an isolated bacterial flavoprotein. A. F. Brodie and J. S. Gots. bibliog Science 116:588-9 N 28 '52

TETRONIC acids

Infra-red spectroscopy and structural chemistry; the infra-red spectra of some tetronic acids. L. A. Duncanson. Chem Soc J p 1207-11 Ap '53

TEXAS

Drought burns out corn roots as U.S. gives $8-million in aid. il Bsns W p34 Jl 4 '53

See also

Aluminum industry and trade—Texas
Canals—Texas
Gas, Natural—Texas
Insurance, Workmen's compensation—Texas
Petroleum—Texas
Petroleum industry and trade—Texas
Petroleum laws and regulations—Texas

Industries and resources

Industrial building booms in Gulf Coast region. il Eng N 150:136-8 Ja 15 '53

TEXAS and Pacific railway

Railroad securities. Comm & Fin Chr 177:1752 Ap 23 '53

TEXAS CITY, Texas

Texas City case argued before United States Supreme court. East Underw 54:28 Ap 17 '53

U.S. brief in Texas City case lauds Appeal court. Nat Underw 56:1 O 23 '52

U.S. wins Texas City case. East Underw 54:20 Je 12 '53; Nat Underw 57:2+ Je 11 '53; Weekly Underw 168:1607 Je 13 '53

TEXAS company

Annual report. Comm & Fin Chr 177:1372 Mr 30 '53

Texaco washes hands of Department of justice deal; ruling on motions set for Oct. 1. Nat Pet N 44:37-8 O 1 '52

TEXAS eastern production corporation

Common stock offering. Comm & Fin Chr 177:2135 My 18 '53

TEXAS electric service company

Securities offered. Comm & Fin Chr 177:1684 Ap 20 '53

TEXAS gas transmission corporation

Texas Gas is still growing. il map World Oil 136:252-3 Ap '53

TEXAS industries, inc.

Debentures offered. Comm & Fin Chr 177:2398 Je 1 '53

TEXAS power and light company

Preferred stock offering oversubscribed. Comm & Fin Chr 177:2135 My 18 '53

TEXAS utilities company

Common stock offered. Comm & Fin Chr 177:2460 Je 8 '53

Texas Utilities; it may be a billion-dollar system by 1960; with financial data, 1942-1952. P. Sutor. Barron's 32:13+ N 3 '52

TEXTBOOKS

See also

Chemistry—Textbooks

TEXTILE analysis

Analysis of staple fiber mixtures; abstract. D. C. Fisher and E. D. Roberts. Am Dyestuff Rep 41:749-50 N 10 '52

Quantitative separation of fibre mixtures by flotation. S. H. Mhatre and G. P. Tawde. bibliog diag Textile Inst J Trans 44:T70-5 F '53

TEXTILE associations

See also

National federation of textiles

TEXTILE chemicals

Alphabetical list of new products developed since Nov. 1951. Am Dyestuff Rep 41:815-30 D 8 '52

Chemical modification of cellulose aids rayon stabilization. A. R. Wachter. il Textile World 103:122-3+ My '53

Chemistry and the textile industry. W. Akers. Textile Inst J 44:P657-65 S '53

Ethylene oxide derivatives and their uses in the textile industry. G. Trinchieri. bibliog Am Dyestuff Rep 41:729-32+ N 10 '52

Glycerine, it has many uses in textiles. E. S. Pattison. bibliog Mod Textiles Mag 34:69-70 S '53

Let's get up to date on sequestering agents. J. V. Boone. Textile World 103:104-5 Mr '53

More chemicals for textiles. il Chem Eng 60:359-60+ F '53

Textile and leather chemicals. Published in weekly numbers of Oil, paint and drug reporter

Textile chemicals; C&EN annual review. M. Harris and D. Frishman. Chem & Eng N 31:43-5 Ja 5 '53

Textile odors and deodorants; 1952 intersectional contest. diag Am Dyestuff Rep 42:67-9 F 2 '53

See also

Carboxymethylcellulose

Starch

Surface active substances

Wetting agents

Prices

Textile and leather chemicals; 1952 market trends. Oil Paint & Drug Rep 163:55 sec 2 Ja 26 '53

TEXTILE chemistry

Mechanical properties of high polymers. P. C. Scherer and J. E. Johnson. Mod Textiles Mag 34:51-2+ Je; 63+ Ag '53

Synthesis and applicability of block and graft copolymers. H. F. Mark. bibliog Textile Res J 23:294-8 My '53

See also

Dyes and dyeing—Chemistry

Resinous products—Textile use

Textile fibers, Synthetic

TEXTILE color card association

Yearly activities reviewed. M. H. Rorke. Oil Paint & Drug Rep 164:51 Ag 3 '53

TEXTILE design

All that glitters is not gold; it's aluminum; Metlon, a non-tarnishing yarn. il Sales Management 70:56-9+ Mr 15 '53

Art by the yard. B. Bradshaw. J Retailing 29:83-4+ Summer '53

Elementary fabric design. T. Friedl. diags Rayon 33:36+ Jl; 34-5+ Ag '52; [cont as] Mod Textiles Mag 33:97+ S; 73+ O; 75-7 N; 53-4 D '52

Functional properties in textile design. J. B. Dickson. Textile Inst J 44:P514-36; Discussion. P536-40 Ag '53

Fundamental aspects of the design of knitted fabrics. P. J. Doyle. bibliog il Textile Inst J 44:P561-73; Discussion. P573-8 Ag '53

Photographic prints. M. Siegel. il Mod Textiles Mag 34:58-9 Ag '53

Practical fabric design and analysis. V. Lobl. il Mod Textiles Mag 34:40+ Ja; 51+ F; 41+ Mr; 47-8+ Ap; 83-4+ Je; 42-4+ Jl '53

Seven rules for successful tricot designs. J. H. Blore. diags Textile World 103:108-11 O '53

You must allow for bulk in designing for new fibers. J. B. Dickson. Textile World 103:135+ Mr '53

TEXTILE drying

Dielectric heating and drying of textiles; abstract. Alexander and Meek. Am Dyestuff Rep 41:748 N 10 '52

Relaxed drying helps resin-finished goods. M. T. Fleming. il diags Mod Textiles Mag 34:72+ Je '53

Some aspects of the drying and heating of textiles; the stability of thermal modifications of fibres in subsequent treatments. J. M. Preston and S. P. Gundavda. Soc Dyers & Col J 68:511 D '52

See also

Drying apparatus—Textiles

TEXTILE education

Textile education and the challenge of the future. M. J. Lydon. Textile Res J 23:130-5 F '53

TEXTILE engineering

Functional properties in textile design. J. B. Dickson. Textile Inst J 44:P514-36; Discussion. P536-40 Ag '53

Profession and practice of textile technology. D. B. Moore. Textile Inst J 44:P206-14 Je '53

Textile engineering. A. V. Pringle. Engineering 174:771-3 D 12 '52

TEXTILE fabrics

American association of textile technologists 2d annual symposium, New York, Feb. 3; abstracts of papers. Mod Textiles Mag 34:48-9+ Mr '53

Bids for comfort. il Chem W 71:42+ D 6 '52

Consumer looks at 1953 fabrics. J. B. Quig. Mod Textiles Mag 34:76-8+ S '53

Fiber blends; inner structure. A. L. Snyder. il Mod Textiles Mag 34:31-2 Jl '53

Fiber conversion-factor tables make fabric-matching easier. J. B. Dickson. Textile World 103:128-30 F '53

Scientific aspects of the design of a full skirt. G. W. H. Stevens. Textile Inst J 44:P247-57 Jl '53

Some relations of fiber properties to fabric hand. R. M. Hoffman and L. F. Beste. bibliog il diags Textile Res J 21:66-77 F '51; Discussion. M. M. Cross. 23:592-3 Ag '53

See also

Automobile fabrics

Bleaching

Braid

Carpets

Corduroy

Cotton fabrics

Crinoline

Duck (textile)

Glass fabrics

Knit goods

Laundry

Lining fabrics

Mildew

Net fabrics

Nylon fabrics

Photography on textiles

Pile fabrics

Rayon fabrics

Ribbon

Saran

Silk

Sizing (textiles)

Table coverings

Textile fibers

Textile finishing

Textile printing

Textile research

Tire fabrics

Waterproofing of textiles

Woolen and worsted fabrics

Bibliography

Abstracts. Published in monthly numbers of Journal of the Textile institute

Bonded web

Annual output of bonded fabrics exceeds 25 million pounds in '52. il Chem & Eng N 30:4832+ N 17 '52

Avondale's nonwoven fabrics are made by a continuous process; Plastavon. T. B. Winston. il Textile World 103:102-3+ Jl '53

Bonded fabric development; abstract. A. W. Boese. Am Dyestuff Rep 42:45 Ja 19 '53

Methods of producing bonded-fiber fabrics. H. E. Shearer. bibliog il diags Am Dyestuff Rep 41:874-9 D 22 '52; Excerpts. Textile World 102:141 D '52

Nonwoven fabrics. J. Campbell. il Mod Textiles Mag 34:31+ F '53

Cleaning

See Cleaning

TEXTILE fabrics—*Continued*

Coating

Modifications of technique add versatility to vinyl coatings. T. J. Kerr. diag Textile World 102:147+ D '52

Test procedures are diverse for vinyl-coated fabrics. T. J. Kerr. Textile World 103:141, 276+ F '53

Bibliography

Rubber division library bibliography; drying of adhesive-coated fabrics. 5 l Rubber division lib, Univ. of Akron, Akron 4, Ohio '52

Defects

Characterization of warp streaks in woven fabrics; development and use of the Streakmeter. H. F. Hume and others. diags Textile Res J 23:123-9 F '53

How to analyze warp streaks in continuous filament fabrics; Streakmeter. H. F. Hume and others. diag Textile World 103:120-1 Ag '53

How you can reduce seconds caused by barré cloth. R. B. Pressley. il Textile World 103:112-13+ Ja '53

Relation between certain defects in dyed fabrics and mechanical damage in wet processing. D. M. Cates and others. bibliog il Textile Res J 22:623-30 O '52

Weaving investigations; periodic patterning in fabrics. R. Foster. il Textile Inst J 43:P742-51; Discussion. P751-4 S '52

Electrostatic properties

Advisory committee on static electricity New York section; report. Am Dyestuff Rep 41:783-4 N 24 '52

Electrical resistance measurements on fibers and fiber assemblies. S. P. Hersh and D. J. Montgomery. bibliog diags Textile Res J 22:805-18 D '52

From philosopher's toy to industry's headache; story of static electricity. S. M. Edelstein. bibliog il Am Dyestuff Rep 42:70-5 F 2 '53

Solve that static problem! Mod Textiles Mag 34:61+ Je '53

Static prevention; vinyl polymers treated with high alkylsulfates of guanidine; patent. Am Dyestuff Rep 42:17-18 Ja 5 '53

Statiquiz; based on an interview with Dr E. A. Robinson and R. Schaubhut. Mod Textiles Mag 34:62 Je '53

Heat transmission

Clothing and climate from a physiological point of view. L. P. Herrington. bibliog il Am Dyestuff Rep 42:62-6+ F 2 '53

Prediction of equilibrium thermal comfort from physical data on fabrics. H. B. Hardy, jr. and others. bibliog il Textile Res J 23:1-10 Ja '53

Inflammability

Flammability hazards of fabrics. J. M. Church. bibliog il Chem & Eng N 31:325-9 Ja 26 '53

Flammability test to prevent fabrics fires. Standardization 24:53 F '53

Further study of factors involved in measuring flammability of consumer textiles. E. P. Johnstone. Am Dyestuff Rep 42:96-8 F 16 '53

Moisture content

Clothing and climate from a physiological point of view. L. P. Herrington. bibliog il Am Dyestuff Rep 42:62-6+ F 2 '53

Narrow fabrics

Quick pattern-changing methods feature narrow-fabric weaving. R. B. Pressly. il Textile World 103:112-13+ O '53

Shuttleless narrow-fabric loom weaves 2,000 ppm. R. C. Scott. il Textile World 103:110-11+ Ja '53

Nonwoven

See Textile fabrics—Bonded web

Protection

Battle against decay. il diags Fortune 47:148-51+ F '53

How to choose textile fungicides. C. C. Yeager. Textile World 103:137+ Jl '53

Preservation of textiles; the use of metallic naphthenates; abstract. A. E. Williams. Am Dyestuff Rep 42:2 Ja 5 '53

See also

Cotton fabrics—Protection
Fireproofing of textiles
Waterproofing of textiles

Shrinkage

Report of ISO subcommittee on shrinkage of fabrics. Standardization 23:288 S '52

Standard method of determination of shrinkage on washing of woven rayon and synthetic fibre fabrics. Textile Inst J 44:S 1-4 Jl '53

See also

Cotton fabrics—Shrinkage
Knit goods—Shrinkage
Rayon fabrics—Shrinkage
Woolen and worsted fabrics—Shrinkage

Soiling

See Soiling of textiles

Standards

Better service, goal of textile program. il Standardization 24:52-3 F '53

Strength

Tensile strength testing of fabrics; results of an international exchange. Textile Inst J 44:P603-28; Discussion. P628-31 Ag '53

Testing

Achieving the specified purpose. A. W. Bayes. Textile Inst J 44:P632-9; Discussion. P639-41 Ag '53

Characterization of warp streaks in woven fabrics; development and use of the Streakmeter. H. F. Hume and others. diags Textile Res J 23:123-9 F '53

Fabric evaluations based on physiological measurements of comfort. J. H. Andreen and others. il Textile Res J 23:11-22 Ja '53

Measurement of fabric thickness. R. E. Seaman. il diag Textile Res J 23:262-6 Ap '53

Mechanics of elastic performance of textile materials; some aspects of elastic behavior at low strains. W. J. Hamburger and others. bibliog diags Textile Res J 22:695-729 N '52; Correction. 22:829 D '52

Nature of a fabric surface; thickness-pressure relationships. H. Bogaty and others. il Textile Res J 23:108-14 F '53

Prediction of equilibrium thermal comfort from physical data on fabrics. H. B. Hardy, jr and others. bibliog il Textile Res J 23:1-10 Ja '53

Serviceability testing as a means of assessing suitability for purpose. C. P. Tattersfield and H. A. Thomas. bibliog il diag Textile Inst J 44:P541-57; Discussion. P558-60 Ag '53

Tensile strength testing of fabrics; results of an international exchange. Textile Inst J 44:P603-28; Discussion. P628-31 Ag '53

Theory of water-resistant fabrics. G. H. Segall. bibliog il Textile Res J 22:736-41 N '52: Abstract Textile World 102:110+ D '52

Two-dimensional load-extension tester for woven fabrics. C. H. Reichardt and others. bibliog il diags Textile Res J 23:424-8 Je '53

See also

Cotton fabrics—Testing
Textile fabrics—Inflammability

Water resistance

Swelling capacities of fibers in water. L. A. Welo and others. bibliog diags Textile Res J 22:254-73 Ap '52; Discussion. 23:64-5 Ja '53

Theory of water-resistant fabrics. G. H. Segall. bibliog il Textile Res J 22:736-41 N '52; Abstract. Textile World 102:110+ D '52

TEXTILE fabrics, Effect of light on

Some effects of light on textiles; abstract. Am Dyestuff Rep 41:788 N 24 '52

TEXTILE fabrics, Interior decoration

Watch this swatch switch! Schumacher's printed portfolio for interior decorators. N. Kelne. il Ptr Ink 241:58-9 O 17 '52

TEXTILE fibers

Amontons' law and fibre friction. H. G. Howell and J. Mazur. bibliog il diags Textile Inst J Trans 44:T59-69 F '53

TEXTILE fibers—*Continued*

Chemical engineering materials of construction; fibers. C. S. Grove, jr., J. L. Vodonik, and R. S. Casey. il Ind & Eng Chem 44: 2318-24 bibliog(179 ref, p2323-4) O '52

Comparative properties of natural fibers. R. C. Scott, comp. il Textile World 103:117-18 S '53

Engineering approach to the analysis and design of textile structures. W. J. Hamburger and M. M. Platt. diags Textile Inst J 44:P475-510 bibliog(39 ref, P309-10); Discussion. P510-13 Ag '53

Here's a fiber family tree. G. M. Moisson; R. C. Scott, comps. il Textile World 103: 109-28 S '53

Irregularity of slivers. H. C. Picard. bibliog Textile Inst J Trans 42:T503-9; 43:T251-61; 44:T307-16 D '51, Je '52, Jl '53

Laws of static friction. H. G. Howell. bibliog Textile Res J 23:589-91 Ag '53

Measurement of friction between single fibers; physicochemical views of interfiber friction. N. Gralén and others. bibliog diags Textile Res J 23:623-9 S '53

Measurements of the influence of finishing agents on the friction of fibres. H. L. Röder. bibliog il diags Textile Inst J Trans 44:T247-65 Je '53

Mechanical conditioning of textile fibers. G. Susich. il Textile Res J 23:545-72 bibliog (39 titles, p571-2) Ag '53

Properties of textile materials; fundamental properties of fibres; length, fineness, density. H. J. Woods. Textile Inst J 44:P39-47 F '53

Properties of textile materials; rigidity, stiffness, and crease-resistance of fibres. R. Meredith. diags Textile Inst J 43:P785-92 O '52

Quantitative separation of fibre mixtures by flotation. S. H. Mhatre and G. P. Tawde. bibliog diag Textile Inst J Trans 44:T70-5 F '53

Some relations of fiber properties to fabric hand. R. M. Hoffman and L. F. Beste. bibliog il diags Textile Res J 21:66-77 F '51; Discussion. M. M. Cross. 23:592-3 Ag '53

Sorption of surface active compounds by textile fibers; abstract. A. S. Weatherburn. Can Chem Process 36:93-4 O '52

Sorption of synthetic surface-active compounds by textile fibers. A. S. Weatherburn and C. H. Bayley. bibliog Textile Res J 22: 797-804 D '52

Study of soiling and soil retention in textile fibers. J. Compton and W. J. Hart. bibliog Textile Res J 23:158-68, 418-23 Mr, Je '53

Textile fibres; variations on some familiar themes. J. R. Whinfield. Chem & Ind p226-9 Mr 14 '53

See also

Bast fibers
Cotton fibers
Flax
Jute
Silk
Wool

Bibliography

Abstracts. Published in monthly numbers of Journal of the Textile institute

Review of textile research and development during 1952; review of the literature. Textile Res J 23:314-72 bibliog(1997 titles, p317-72) My '53

Blending

Where are we going in blends? J. Campbell. il Mod Textiles Mag 33:31+ N '52

Identification

Rapid identification of fibers by the Christiansen effect. B. Norwick. bibliog Textile Res J 23:259-61 Ap '53

Use of solvents in fiber identification; abstract. W. R. Wilson. Am Dyestuff Rep 42: 47 Ja 19 '53

Measurement

Bending modulus of fibers measured with the resonance frequency method. E. M. Kärrholm and B. Schröder. bibliog diags Textile Res J 23:207-24 Ap '53

Calculation of the variance-length curve from the length distribution of fibres. H. Breny. bibliog Textile Inst J 44:P 1-14 Ja '53

Fiber conversion-factor tables make fabric-matching easier. J. B. Dickson. Textile World 103:128-30 F '53

Improved vibroscope. S. L. Dart and L. E. Peterson. il diags Textile Res J 22:819-22 D '52

Machine for measuring the length of single fibres. S. L. Anderson and R. C. Palmer. il diags Textile Inst J Trans 44:T95-115 Mr '53

Measurement of fibre orientation in card webs. G. A. J. Orchard. diag Textile Inst J Trans 44:T380-5 Ag-S '53

Vibroscopic method for determination of fiber cross-sectional area. D. J. Montgomery and W. T. Milloway. diags Textile Res J 22:729-35 N '52

Moisture content

Electrical resistance of textile materials; influence of moisture content. J. W. Hearle. diags Textile Inst J Trans 44:T 117-43 Ap '53

Should fibers be sold on a moisture-free basis? J. K. Frederick, jr. Mod Textiles Mag 34:33+ Je '53

Strength

Properties of textile materials; tensile strength, breaking extension and stress-strain relations of fibres. R. Meredith. Textile Inst J 43:P755-64 S '52; Correction. 43: P792 O '52

Swelling

Influence of stress on the swelling of animal fibres. O. Ripa and J. B. Speakman. Textile Inst J Trans 43:T517-18 S '52

Some aspects of the drying and heating of textiles; the stability of thermal modifications of fibres in subsequent treatments. J. M. Preston and S. P. Gundavda. Soc Dyers & Col J 68:511 D '52

Swelling capacities of fibers in water. L. A. Welo and others. bibliog diags Textile Res J 22:254-73 Ap '52; Discussion. 23:64-5 Ja '53

Testing

Application of high compression stresses to textile fibers. W. F. Busse and others. bibliog il Textile Res J 23:77-90 F '53

General case of friction of a string round a cylinder. H. G. Howell. bibliog diag Textile Inst J Trans 44:T359-62 Ag-S '53

Investigation of the frictional properties of textile fibers under variable fiber stress. B. G. Hood. il diags Textile Res J 23:495-505 Jl '53

Shearing of filaments and yarns. S. Backer. il Textile Res J 23:438-40 Je '53

Stick-slip; method for determining frictional qualities of filament yarns and staple. G. W. Bartlett and others. il Mod Textiles Mag 34:51+ Ap; 50+ My '53; Textile Res J 23: 647-57 S '53

Stress relaxation of fibrous materials. E. T. Kubu and D. J. Montgomery. bibliog il diags Textile Res J 22:765-82 D '52

Tensile behavior of some protein fibers. G. Susich and W. Zagieboylo. bibliog Textile Res J 23:405-17 Je '53

TEXTILE fibers, Synthetic

Acrylic plant arises; Decatur, Ala. plant of Chemstrand corp. il Chem Eng 59:220 O '52

Adventures in synthetic fibres; abstract and discussion. D. Traill. Chem & Ind p 150 F 14 '53

Aliphatic building blocks for petrochemical textiles. P. W. Sherwood. bibliog il Pet Processing 7:1633-8, 1804-7+ N-D '52

American association of textile technologists 2d annual symposium, New York, Feb. 3; abstracts of papers. Mod Textiles Mag 34: 48-9+ Mr '53

Bleaching the new fibers. E. Weller. Mod Textiles Mag 34:56-7 Jl '53

Brazil expands output of synthetic fibers. For Comm W 48:19 O 13 '52

Changes in synthetic yarn production. Mod Textiles Mag 34:77-9 Mr '53

Check these tips for running synthetics on wool systems. M. J. Koroskys. Textile World 103:111 F '53

TEXTILE fibers, Synthetic—*Continued*

Chemical engineering materials of construction; fibers; with data on properties of dynel, Dacron, Orlon. C. S. Grove, jr., J. L. Vodonik and R. S. Casey. il Ind & Eng Chem 44:2318-24, 2371-5 bibliog(179 ref, p2323-4) O '52

Chemistry's part in finishing synthetic textiles. il Can Chem Process 37:32+ Ag '53

Consumer looks at 1953 fabrics. J. B. Quig. Mod Textiles Mag 34:76-8+ S '53

Current problems and future trends in synthetic fibers. J. H. Dillon. bibliog Textile Res J 23:298-312 My '53

Du Pont's new textured yarns. D. F. Holmes. il diags Mod Textiles Mag 34:52-4+ Ag '53

Fibre architecture with special reference to molecular constitution. S. J. Allen. bibliog(27 ref) diags Textile Inst J 44:P286-304; Discussion. P304-6 Ag '53

For trouble-free drafting you have to be alert! J. McComb. Mod Textiles Mag 33:36+ N '52

Forget your spinning habits; test the yarn. J. McComb. il Mod Textiles Mag 33:31+ D '52

Fundamental improvements in regenerated cellulose fiber structure. N. Drisch and L. Soep. bibliog il Textile Res J 23:513-21 Ag '53

Here's a fiber family tree. G. M. Moisson; R. C. Scott, comps. il Textile World 103:109-28 S '53

Hosiery and the endless march of new fibers. V. T. Hartquist. Am Dyestuff Rep 41:781-3 N 24 '52

How cotton meets the threat of synthetics. G. Buck. Mod Textiles Mag 34:76+ O '53

Impact of man-made fibers on the rubber industry. J. W. Illingworth. bibliog il Rubber Age 73:657-63 Ag '53

Knitting and the new fibers. R. C. Shook. Mod Textiles Mag 34:32+ Ap '53

Long road of trial facing our newer synthetic fibers. Chem & Eng N 31:666 F 16 '53

Man at the crossroads; Rene Bouvet. R. E. Ellsworth. Mod Textiles Mag 34:38+ S '53

Man-made confusion on man-made fibers; Ladies' home journal training sessions for department store personnel. il Sales Management 70:34+ pt 2 Ja 1 '53

Man-made fiber output ebbed during past year. Mod Textiles Mag 34:74 Mr '53

Man-made fiber production first quarter '53. Mod Textiles Mag 34:98 Je '53

Man-made fibres. C. E. Coke. Can Chem Process 36:74+ O '52

Man-made fibers keep climbing. il Chem Eng 60:205 Mr '53

Man-made fibers; Modern textiles magazine roundup. G. Boyo. il Mod Textiles Mag 34:41-56 S '53

Miracle(?) fibers. J. M. Reeves. Mod Ind 25:76+ Ap '53

Modern Textiles handbook. L. Mauer and H. Wechsler. il diags Mod Textiles Mag 33:42-3+ O; 42-5 N; 41+ D '52; 34:50-1+ Ja; 42-4+ F; 82-3+ Mr; 78+ Ap; 65-6 My '53

New fibers mean new markets. Chem W 72:82+ F 28 '53

New synthetic fibers. F. J. Soday. Textile Res J 23:277-9 My '53

New text for textiles; Canadian synthetic textile plants and equipment. Can Chem Process 37:22 Ag '53

New wool-like fibres; abstract and discussion. D. Traill. Chem & Ind p217 Mr 7 '53

1953 table of commercial synthetic yarns and fibers. R. C. Scott, comp. Textile World 103:113-16 S '53

Outlook and trends in the hosiery industry. W. G. Knerr. Am Dyestuff Rep 41:736-8 N 10 '52

Patents and abstracts; reports on manufacturing and processing of synthetic textiles (cont). P. Wengraf. Mod Textiles Mag 33:79+ N; 84-5 D '52; 34:105 Mr '53

Processing of Acrilan acrylic fiber; abstract. G. G. Whytlaw. Am Dyestuff Rep 42:47-8 Ja 19 '53

Processing synthetics on the woolen system. R. A. Smith. Textile World 102:80-3+ S '52; 103:141, 248 Ja '53

Production of rayon, acetate and synthetic yarns in the United States. Mod Textiles Mag 34:100A-100H S '53

Progress in acrylics. G. Boyo. il Mod Textiles Mag 34:50-2 S '53

Progress in making carpetings. G. Boyo. il Mod Textiles Mag 34:34-5 My '53

Search for new polymers; dye affinity and tensile strength; abstract. J. A. Somers. Am Dyestuff Rep 41:628 S 29 '52

Should fibers be sold on a moisture-free basis? J. K. Frederick, jr. Mod Textiles Mag 34:33+ Je '53

Sky's the limit; texturing. Bsns W p 130+ Jl 4 '53

Steady advance of synthetics stimulates textile activity. J. A. Daly. Manuf Rec 121:68-9+ N '52

Synthetic fibres for Canadian textiles. Can Chem Process 37:56+ Ag '53

Synthetic fibers; what they contribute, how they are used to make finer upholstery fabrics; based on papers by W. F. Bird and G. P. Carver, jr. S A E J 61:44-7 S '53

Synthetic polymer fibres. B. P. Ridge. bibliog Textile Inst J 44:P48-65 F '53; Abstract. Chem & Ind p 11 Ja 3 '53

Synthetics, boon to knitted jersey fabrics. M. Thal. Mod Textiles Mag 34:63 Jl '53

Textile men inherit the problems. Bsns W p40+ F 14 '53

Textile wet processing; present-day synthetic fibers and blends. E. J. Chornyei. il Am Dyestuff Rep 41:661-5 O 13 '52

Textile World's synthetic-fiber table. G. M. Moisson, comp. il Textile World 103:119-28 S '53 (reprints 50c)

They do something about ideas! W. H. Charch and his investigators. R. E. Ellsworth. Mod Textiles Mag 34:36+ Jl '53

Tooling up for long-draft synthetics. R. E. Ellsworth and J. McComb. il Mod Textiles Mag 34:32-3+ Ja '53

Using the man-made fibers in interlock fabrics. D. Singer. il diags Mod Textiles Mag 34:41-2+ O '53

Versatile designing and weaving spark mill's multifiber program; Mooresville mills. R. B. Pressley. il Textile World 103:92-3+ Jl '53

What's good and bad about synthetic fibers. J. H. Dillon. Textile World 103:89-100+ Mr '53

Whither man-made fibres? A. H. Wilson. Textile Inst J 44:P 130-44 Ap '53

Yarns and fabrics in the rubber industry. J. W. Illingworth. bibliog il diags Textile Inst J 44:P328-43; Discussion. P343-6 Ag '53

You must allow for bulk in designing for new fibers. J. B. Dickson. Textile World 103:135+ Mr '53

See also

Dacron
Dyes and dyeing—Synthetic fibers
Dynel
Nylon
Nylon fibers
Orlon
Rayon
Saran
Wool, Artificial

Blending

Blends on the uptrend. R. C. Shook. Mod Textiles Mag 34:45+ Mr '53

Consider these points in blending with nylon, Orlon, and Dacron. J. B. Quig. Textile World 103:129+ S '53

Dyeing the blends. J. M. Morahan. Mod Textiles Mag 33:33-4+ N '52

Fiber blends; inner structure. A. L. Snyder. il Mod Textiles Mag 34:31-2 Jl '53

Finishing the blends. Mod Textiles Mag 34:34-5 Mr '53

Here's a quiz on Kharafleece. il Mod Textiles Mag 34:45+ Ap '53

Low drafts are best for blends on French combs. il Textile World 103:117+ Ap '53

Machinery organization for blended yarns. S. L. Fuller. Textile World 103:106-7+ Ag '53

Practical ideas on blending. J. McComb. Mod Textiles Mag 34:54+ Mr '53

Quality yarns from the blends. J. McComb. Mod Textiles Mag 34:36+ Ap '53

History

Technical developments leading to present man-made fibers. J. B. Quig. bibliog diags Textile Res J 23:280-8 My '53

TEXTILE fibers, Synthetic—*Continued*

Identification

Birefringence and refractive index of synthetic fibers with special reference to their identification. A. N. J. Heyn. bibliog(26 ref) diag Textile Res J 22:513-22 Ag '52; Discussion. 23:258-9 Ap '53

Identification of synthetic fibers by their refractive indices and birefringence. A. N. J. Heyn. il diags Textile Res J 23:246-51 Ap '53

Modern Textiles handbook; fiber identification. L. Mauer and H. Wechsler. Mod Textiles Mag 34:65-6 My '53

Manufacture

Application of ultrasonics to textile processes. A. A. de Araujo. bibliog Am Dyestuff Rep 41:615-19 S 29 '52

Optical properties

Birefringence and refractive index of synthetic fibers with special reference to their identification. A. N. J. Heyn. bibliog(26 ref) diag Textile Res J 22:513-22 Ag '52; Discussion. 23:258-9 Ap '53

Identification of synthetic fibers by their refractive indices and birefringence. A. N. J. Heyn. il diags Textile Res J 23:246-51 Ap '53

Rating

Newer synthetics versus wool and rayon in hose for men. il Consumers Res Bul 30:21-3 D '52

Statistics

Record of a record breaker; synthetic fibers. Chem W 72:49 F 28 '53

Testing

Application of high compression stresses to textile fibers. W. F. Busse and others. bibliog il Textile Res J 23:77-90 F '53

Checking evenness with Uster's model C. M. E. Herndon. il Mod Textiles Mag 34:75-6 F '53

Checking on regularity tests. A. G. C. Pilavachi. Mod Textiles Mag 34:70 O '53

TEXTILE finishing

ASME checks upon dyeing and finishing developments. J. B. Goldberg. Textile World 103:119+ Ag '53

Chemical boost for textiles. Bsns W p72 O 25 '52

Chemistry's part in finishing synthetic textiles. il Can Chem Process 37:32+ Ag '53

Creaseproofing; glucose ureides plus formaldehyde; patent. Am Dyestuff Rep 41:769 N 24 '52

Cure water spotting on off-loom acetates. C. F. Bishop. Mod Textiles Mag 34:58 Ap '53

Cutting is the key to successful corduroy finishing; Vanetta corduroy corp. G. M. Moisson. il diag Textile World 103:146-9 S '53

Factors in plant development; finishing industrialist's point of view. K. A. Stott. Textile Inst J 43:P845-51; Discussion. P851-4 N '52

Flexibility aids efficiency in dyeing and finishing synthetic blends; Reeves brothers, inc. G. M. Moisson. il Textile World 103:102-3 Ap '53

Loom-finished-fabric techniques need exploring; abstract. F. Fortess and G. C. Ward. Textile World 102:108-9 D '52

Measurements of the influence of finishing agents on the friction of fibres. H. L. Röder. bibliog il diags Textile Inst J Trans 44:T247-65 Je '53

Methylcelluloses and cellulose-glycollate in finishing processes; abstract. Jahn. Am Dyestuff Rep 41:748 N 10 '52

New machines, processes, and products spark finishing progress. G. M. Moisson. Textile World 103:100-2 F '53

Reducing the charge. il Chem W 71:65-7 N 15 '52

Silicone resins add more pluses to your acetate. P. Duggan and F. Fortess. il Mod Textiles Mag 34:31+ Mr '53

Textile wet processing; contribution by New England authorities. bibliog il Am Dyestuff Rep 41:657-65 O 13 '52

Treatment of textiles with vapors containing different gases; abstract. R. Haller. Am Dyestuff Rep 42:4, 28 Ja 5 '53

See also

Bleaching
Cotton finishing
Creasing of textiles
Dyes and dyeing
Embossing (textiles)
Rayon finishing
Sizing (textiles)
Textile fabrics—Coating
Waterproofing of textiles
Woolen and worsted finishing

TEXTILE finishing machines

All-purpose calendar for circular-knit finishing. diag Textile World 102:176 N '52

Cost-cutting equipment offered for wet processing and finishing. il diags Textile World 102:121-5+ N '52

Heat setting machine for synthetic fabrics; patent. diags Am Dyestuff Rep 42:49 Ja 19 '53

New drying and wet-processing ranges available; Proctor & Schwartz, inc. il diag Textile World 103:146+ Ja '53

New finishing machines include shearers and a crabber. Textile World 103:156 O '53

See also

Dyeing machines

TEXTILE industry

Answer man; R. J. McConnell. R. E. Ellsworth. Mod Textiles Mag 34:38+ Je '53

Everybody's Uncle Joe; Joseph Hollis Sutherland. G. Boyo. Mod Textiles Mag 34:36+ Mr '53

Highlights of the past year. P. J. Wood. Am Dyestuff Rep 41:839-40 D 8 '52

Innocent on 7th avenue. G. Boyo. Mod Textiles Mag 33:36+ D '52

1953 annual review and forecast. Textile World 103:91-106+ F '53

Profession and practice of textile technology. D. B. Moore. Textile Inst J 44:P206-14 Je '53

Return to normal; textile mill owners cheered by lower inventories, better demand. F. Henle. Barron's 33:9+ F 23 '53

Science and the textile industry. B. Lockspeiser. Textile Inst J 43:P893-902 D '52

Textile men inherit the problems. Bsns W p40+ F 14 '53

See also

Carpets
Clothing trade
Cotton trade
Dye industry
Dyes and dyeing
Hosiery trade
Knit goods
Rayon industry
Sanforizing
Silk
Silk trade
Tenney, Ashton M.
Textile fibers
Textile fibers, Synthetic
Textile mills
Weaving
Wool trade

Advertising

How du Pont assured a market for Orlon before making it. M. Reinsberg. il Ind Marketing 37:46-8+ S '52

Textile retailer a pro, agencyman tells meeting. B. Goldsmith. Ed & Pub 85:22 O 11 '52

Twelve rules for planning a high-spot retail promotion. J. V. Keim. il Sales Management 70:50+ F 15 '53

Bibliography

Abstracts. Published in monthly numbers of Journal of the Textile institute

Abstracts from British and foreign journals and patents. Published in monthly numbers of Journal of the Society of dyers and colourists

Review of textile research and development during 1952; review of the literature. Textile Res J 23:314-72 bibliog(1997 titles, p317-72) My '53

Directories

How to contact fiber producers. R. C. Scott, comp. Textile World 103:110-11 S '53

Securities

Textiles, will they recover? with table on position of leading textile companies. J. S. Williams. Mag of Wall St 92:448-9+ Jl 11 '53

TEXTILE industry—*Continued*

Statistics

Simplified processing sparks modernization as mill commitments again top $500,000,000 in 1951. R. C. Scott. Textile World 102:108-9+ N '52

Textile products, Nov.-Dec. 1951-Jan.-Nov. 1952. Survey of Cur Bsns 33:S38-40 Ja '53 [cont monthly]

World position of textiles in 1952; tabulation. Textile World 103:139 Mr '53

Canada

New text for textiles; Canadian synthetic textile plants and equipment. Can Chem Process 37:22 Ag '53

Synthetic fibres for Canadian textiles. Can Chem Process 37:56+ Ag '53

Cuba

Cuban textile output low in first quarter. For Comm W 49:11 My 18 '53

Gloom over Muralla st.; Cuba's textile scandal. Mod Textiles Mag 34:54 Ja '53

Europe

Industry, American and European plan; report of study made at request of European textile firm. R. W. Jacoby. il Dun's R 60: 28-9+ S '52; Same. Am Dyestuff Rep 41: 611-12+ S 29 '52

Great Britain

British jute mills now active following 1952 drop in trade. For Comm W 49:23 Ap 13 '53

Defense orders aiding recovery of textile industries in U.K. For Comm W 48:5 D 29 '53

Lancashire aggrieved. Economist 167:242-3 Ap 25 '53

Recovery in textiles; with graph, 1950-52. Economist 165:411 N 8 '52

Some aspects of capital development. P. W. S. Andrews. Textile Inst J 44:P687-97 S '53

Textiles in April. Economist 167:760+ Je 13 '53

Textiles in retrospect. Economist 166:439 F 14 '53

Southern states

Steady advance of synthetics stimulates textile activity. J. A. Daly. Manuf Rec 121: 68-9+ N '52

United States

Textile mills; profit picture; overcapacity still a threat. F. Henle. Barron's 33:9-10+ Jl 27 '53

TEXTILE institute

Annual meeting, 43d, Bristol, April 29. Textile Inst J 44:P 189-94 Je '53

Proceedings of annual conference, Llandudno, Wales, May 25-29. Textile Inst J 44:P285-656 Ag '53

TEXTILE laboratories

After a 65-yr. delay, Springs builds a general office; illustrations with text. R. B. Pressley. Textile World 102:127-9 D '52

TEXTILE machinery

Cluett-Peabody installs new slashers and controls. F. Suss. il diag Textile World 103:137+ F '53

Cost-cutting equipment offered during the past year. il diags Textile World 102:110-35+ N '52

Interpret machine variations with analysis of variance. N. L. Enrick. diag Textile World 103:130-1+ Jl '53

Machinery organization for blended yarns. S. L. Fuller. Textile World 103:106-7+ Ag '53

Major machine advancements hit the mills in 1952. R. C. Scott. Textile World 103:96-8 F '53

Metal-finishing process relieves yarn friction; vapor blasting. il Textile World 103: 150 Jl '53

Percent of size on warps is automatically controlled; Shirley automatic size box. il diag Textile World 103:152 F '53

Select V-belts to do a specific job. T. G. Hicks. il diags Textile World 103:128-9+ Ag '53

See also

Braiding machines
Carding machines
Cotton machinery
Dyeing machines
Electric driving—Textile mills
Hosiery machines
Knitting machines
Looms
Rolls (textile machinery)
Sanforizing
Spinning machinery
Textile finishing machines
Textile printing machines
Textile testing machines
Woolen and worsted machinery

Control

Control of moving webs. J. A. Baring. il diags Machine Design 25:151-7 S '53

Exhibitions

Iron curtain textile machines return to pre-1939 standards; Leipzig fair. il Textile World 103:124-5 My '53

Southern textile exposition, 17th, Greenville, S.C. Oct. 6-11. il Mod Textiles Mag 33: 52-4 N '52

What was new at Greenville show. il Textile World 102:136-45+ N '52

History

Textile engineering. A. V. Pringle. Engineering 174:771-3 D 12 '52

Lubrication

What you should know about lubrication. H. Miedendorp. Mod Textiles Mag 34:72-3 My '53

Tension devices

Instrument measures tension of filling being unwound. il Textile World 103:158 My '53

Loom brake release gives constant warp tension. il Textile World 103:158 Ja '53

TEXTILE machinery industry

Great Britain

Engineering outlook; textile machinery. Engineering 175:296-9 Mr 6 '53

TEXTILE mills

Big-city mill cultivates a small-town spirit. M. B. Andrews. Textile World 103:141 Jl '53

Do you believe in signs? M. B. Andrews. il Textile World 103:164+ Ja '53

Factors in plant development conference, Manchester, England, Sept. 24. Textile Inst J 43:P829-79 N '52

Glass insulation, how mills are using it. il Textile World 103:112-13 Jl '53

Modern textile mill. il Mod Textiles Mag 33: 72-4 N '52

Simplified processing sparks modernization as mill commitments again top $500,000,000 in 1951. R. C. Scott. Textile World 102:108-9+ N '52

See also

Carpet factories
Cotton mills
Electric driving—Textile mills
Hosiery mills
Knitting mills
Rayon mills
Water supply for textile mills
Woolen and worsted mills

Accounting

Factors in plant development; accountant's point of view. E. H. Davison. Textile Inst J 43:P868-75; Discussion. P875-8 N '52

Air conditioning

Controlled humidification is a must. H. Miedendorp. Mod Textiles Mag 34:92-3 Je '53

Cost-cutting equipment offered for air conditioning and heating. il Textile World 102: 134+ N '52

New fibers need complete mill air conditioning. A. H. Bahnson, jr. il Mod Textiles Mag 33:72+ D '52

Costs

Use of constants speeds doffer-cost calculations. N. H. Pomfret. Textile World 103: 131+ F '53

Electric equipment

Eight enemies of electric motors. Textile World 103:264+ My '53

TEXTILE mills—Electric equipment—*Cont.*

Electricity in the jute industry. il Elec R (Lond) 152:1205-9 My 29 '53

Engineering safety into electric equipment. C. F. Hedlund. Elec Eng 72:771-6 S '53

Five electrical problems and how to solve them. T. O. Sills. il Textile World 103:106-7 Mr '53

How to maintain insulation in air circuit breakers. Textile World 103:202+ Ag '53

How to select textile motors. F. D. Snyder. diags Textile World 103:128-9+ O '53

How to take care of electric motors. J. L. Watts. diags Textile World 103:126-7+ F '53

Jute industries; manufacture of carpet and twine. il Elec R (Lond) 153:273-6 Ag 7 '53

Jute weaving. il Elec R (Lond) 153:89-91 Jl 10 '53

Lace manufacture; electricity supply arrangements at a Tiverton factory. il Elec R (Lond) 152:237-40 Ja 30 '53

Proper overload protection prevents motor failures. M. R. Brice. il diags Textile World 103:122-3+ Ag '53

Synchronous motors can improve your plant power factor. J. C. Moore. il Textile World 103:131+ Ja '53

Employees

See Textile workers

Equipment

Alphabetical list of new products developed since Nov. 1951; equipment. il diags Am Dyestuff Rep 41:830-8+ D 8 '52

Automatic controls eliminate guesswork. H. Miedendorp. il Mod Textiles Mag 34:72+ F '53

Avoid unnecessary manual handling. H. Miedendorp. il Mod Textiles Mag 34:94+ S '53

Cost-cutting equipment offered during the past year. il diags Textile World 102:110-35+ N '52

Flexibility aids efficiency in dyeing and finishing synthetic blends; Reeves brothers, inc. G. M. Moisson. il Textile World 103:102-3 Ap '53

How Avondale mills quills, slashes, and weaves corduroy. R. B. Pressley. il Textile World 103:115-17+ My '53

No-strain-in-our-jobs is theme of materials-handling program; Firestone textiles. il diag Textile World 102:95-9 D '52

Textile instrumentation. il Mod Textiles Mag 34:32-3+ F '53

Tow carts fabricated by inert-gas metal-arc welding. il Welding J 31:1059 N '52

Verney-Brunswick's new look. J. R. Sanderson. il Mod Textiles Mag 34:49-50+ Jl '53

What was new at Greenville show. il Textile World 102:136-45+ N '52

See also
Textile machinery

Fires and fire protection

Bulletins alone won't do the trick! H. Miedendorp. Mod Textiles Mag 34:79-81 O '53

Engineering safety into electric equipment. C. F. Hedlund. Elec Eng 72:771-6 S '53

Stopping fires before they start; Celanese corp.'s Celriver plant. Mod Ind 25:83+ Ap '53

Heating and ventilation

Check your heating system it may need revamping. W. Sennhauser. il Textile World 103:116-17+ Ja '53

Make a heat survey to stop hidden losses. L. Walter. il Textile World 103:112-13+ Mr '53

Lighting

What is meant by good lighting. H. Miedendorp. il Mod Textiles Mag 34:82-3 Ag '53

See also
Nylon mills—Lighting

Maintenance and repair

Alabama mill men compare maintenance practices. Textile World 103:133+ Ja '53

Annual plant maintenance show and conference, 4th, Cleveland; abstracts of papers. Textile World 103:109+ Ap '53

Five electrical problems and how to solve them. T. O. Sills. il Textile World 103:106-7 Mr '53

How to get the most from a small-plant maintenance crew. W. E. Adams. Textile World 103:120+ My '53

It's important to clean your air washers. Textile World 102:212+ N '52

Maintenance duties are diversified. A. D. Buschman. Textile World 103:132+ Je '53

Seven ways Anderson mill uses electric tools. J. L. Burriss. il Textile World 103:162-3+ S '53

Management

Easy way to allow for machine interference. T. F. O'Connor. Textile World 102:100-1+ D '52

How to start a new weaving mill with one per cent seconds, 98 per cent efficiency. il Textile World 103:73-5+ Ap '53

Production department schedules and controls orders. T. Friedl. Textile World 103:93-5+ Je '53

Power

Cost-cutting equipment offered for power generation and transmission. il Textile World 102:135+ N '52

Garnetting plant saves money with Diesel-driven generator. E. H. Helliwell. il Textile World 103:143+ Ja '53

Quality control

Mohawk carpet mills controls quality by instrumentation. il diag Textile World 102:106-7 D '52

Quality control and the research function. O. P. Beckwith. bibliog Textile Res J 23:197-206 Mr '53

Quality control through statistical methods. N. L. Enrick. Mod Textiles Mag 34:32-3+ O '53 (to be cont)

Simple quality control works at E-Z mills. E. D. White. il Textile World 103:124-5 Ja '53

See also
Cotton mills—Quality control

Records

Piece-goods control system; let your control records prove out your inventory. W. Brouillard. Textile World 103:95+ Jl '53

Safety measures

Management and supervisors share responsibility for safety. R. G. Sharp. Textile World 103:286+ Je '53

Red Springs celebrates a new world's safety record. M. B. Andrews. Textile World 103:183+ S '53

Safety; activities at three mills. T. B. Winston. il Textile World 103:89-96 Mr '53

Waste

Abating pollution. Chem Eng 59:326+ O '52

How much money per year does waste yarn cost you? W. C. Westbrook. Textile World 103:106-7+ Ap '53

How to cut down yarn-waste costs. Textile World 103:107 Ap '53

Practical approach to textile pollution abatement and waste treatment. D. W. Snyder. Am Dyestuff Rep 41:745-6 N 10 '52

Special treatment for industrial wastes at a city plant. A. J. Van Breda. flow diag il Pub Works 83:54-6+ N '52

Waste water need not be pollution. H. Miedendorp. il Mod Textiles Mag 34:72-3 Jl '53

See also
Cotton mills—Waste
Rayon mills—Waste

TEXTILE oils

You can reduce press-offs with this yarn-oil system. H. B. LeFeaux. il diag Textile World 103:104-5 Ja '53

See also
Wool oiling

TEXTILE patents

Patent digest. P. Wengraf. Published in biweekly numbers of American dyestuff reporter

Patents and abstracts; reports on manufacturing and processing of synthetic textiles (cont). P. Wengraf. Mod Textiles Mag 33:79+ N; 84-5 D '52; 34:105 Mr '53

TEXTILE printing

Chemistry's part in finishing synthetic textiles. il Can Chem Process 37:32+ Ag '53

Efficiency of vat-color ageing depends on temperature control. T. N. Patrick. Textile World 103:147+ Je '53

Fabric behavior in dry cleaning; stencil prints. A. E. Johnson. il Mod Textiles Mag 34:41+ My '53

Optical illusions by printing. R. Sansone. il Mod Textiles Mag 34:59-62 O '53

Printing acrylic and polyester fibers. Am Dyestuff Rep 42:99-107 F 16 '53

Reduction properties of vat dyes. W. J. Marshall and R. H. Peters. bibliog 3pls diags Soc Dyers & Col J 68:289-99 Ag '52

See also

Aniline black

Photography on textiles

Silk screen printing

Patents

Chintz; polymerizable resins applied in thin layers, preferably by printing. diags Am Dyestuff Rep 42:17 Ja 5 '53

Colored oil-in-water emulsions; pigments and resins in outer phase. Am Dyestuff Rep 42:51 Ja 19 '53

Onium dyestuffs, printing methods. Am Dyestuff Rep 42:48-9 Ja 19 '53

Pigment dyeing; resin pretreatment. Am Dyestuff Rep 41:746-7 N 10 '52

Printing vat dyes; thickened with oil-in-water emulsions. Am Dyestuff Rep 41:770 N 24 '52

Printing vat dyes; thickened with water-in-oil emulsions. Am Dyestuff Rep 41:627-8 S 29 '52

Testing

Swiss standards association textiles; textile testing methods; tr. by C. Z. Draves. Am Dyestuff Rep 41:701-17 O 27 '52

TEXTILE printing machines

New tipping machine places color on embossed fabrics. J. F. Schiess. Mod Textiles Mag 34:60 Ap '53

Selvage-marking machine prints or leafblocks automatically. il Textile World 102:178 N '52

TEXTILE research

Achieving the specified purpose. A. W. Bayes. Textile Inst J 44:P632-9; Discussion. P639-41 Ag '53

American association of textile chemists and colorists 173d general research committee meeting, Philadelphia, Sept. 12. Am Dyestuff Rep 41:694-5 O 27 '52

Amontons' law and fibre friction. H. G. Howell and J. Mazur. bibliog il diags Textile Inst J Trans 44:T59-69 F '53

Application of ultrasonics to textile processes. A. A. de Araujo. bibliog Am Dyestuff Rep 41:615-19 S 29 '52

Applications of a theory of the spinning balloon. M. Hannah. bibliog diags Textile Inst J Trans 43:T519-35 O '52

Engineering approach to the analysis and design of textile structures. W. J. Hamburger and M. M. Platt. diags Textile Inst J 44:P475-510 bibliog(39 ref, P509-10); Discussion. P510-13 Ag '53

Exact pattern of a concentration-dependent diffusion in a semi-infinite medium. H. Fujita. bibliog Textile Res J 22:757-60, 823-7 N-D '52

Factors in plant development; research point of view. D. W. Hill. Textile Inst J 43:P855-64; Discussion. P864-7 N '52

Fibre architecture with special reference to molecular constitution. S. J. Allen. bibliog(27 ref) diags Textile Inst J 44:P286-304; Discussion. P304-6 Ag '53

Fundamental improvements in regenerated cellulose fiber structure. N. Drisch and L. Soep. bibliog il Textile Res J 23:513-21 Ag '53

How to organize and operate an industrial textile research program. W. F. Luther. Mod Textiles Mag 34:107+ S '53

Industry doubles expenditures for research in six years. W. A. Newell. Textile World 103:102-3+ F '53

Man at the crossroads; Rene Bouvet. R. E. Ellsworth. Mod Textiles Mag 34:38+ S '53

Mechanical conditioning of textile fibers. G. Susich. il Textile Res J 23:545-72 bibliog(39 titles, p571-2) Ag '53

Mechanics of elastic performance of textile materials; factors affecting the translation of certain mechanical properties of cordage fibers into cordage yarns. M. M. Platt and others. bibliog diags Textile Res J 22:641-67 O '52; Discussion. 22:827-9 D '52

Mechanics of elastic performance of textile materials; some aspects of elastic behavior at low strains. W. J. Hamburger and others. bibliog diags Textile Res J 22:695-729 N '52; Correction. 22:829 D '52

Method of determining the concentration dependence of the diffusion coefficient. H. Fujita and A. Kishimoto. bibliog Textile Res J 22:94-5; 23:59-63 F '52, Ja '53

Photography as a textile tool. M. Siegel. il Mod Textiles Mag 34:32-3+ Ag '53

Photomicrography with the Polaroid-Land camera. E. R. Schwarz. il Mod Textiles Mag 34:35+ Ag '53

Quality control and the research function. O. P. Beckwith. bibliog Textile Res J 23:197-206 Mr '53

Science and the textile industry. B. Lockspeiser. Textile Inst J 43:P893-902 D '52

Sorption of synthetic surface-active compounds by textile fibers. A. S. Weatherburn and C. H. Bayley. bibliog Textile Res J 22:797-804 D '52

Stress relaxation of fibrous materials. E. T. Kubu and D. J. Montgomery. bibliog il diags Textile Res J 22:765-82 D '52

Textile education and the challenge of the future. M. J. Lydon. Textile Res J 23:130-5 F '53

Textile research institute annual meeting, New York, Nov. 17-18; highlights from three papers. il Textile World 103:122-4 F '53

Theory of water-resistant fabrics. G. H. Segall. bibliog il Textile Res J 22:736-41 N '52

They do something about ideas! W. H. Charch and his investigators. R. E. Ellsworth. Mod Textiles Mag 34:36+ Jl '53

See also

Rayon research

Textile laboratories

Bibliography

Review of textile research and development during 1952; review of the literature. Textile Res J 23:314-72 bibliog(1997 titles, p317-72) My '53

TEXTILE research institute

Annual meeting, New York, Nov. 17-18. Chem & Eng N 30:5056 D 1 '52

Annual meeting, New York, Nov. 17-18; abstracts of papers. Mod Textiles Mag 34:73+ Ja '53

TEXTILE schools

Textile school outgrows itself; Lowell textile institute. il Bsns W p 124-6+ F 28 '53

TEXTILE standards

Argument about standards. Economist 166:760 Mr 14 '53

Laboratory investigation of methods for the determination of shrinkage on washing of woven rayon and synthetic fibre fabrics. bibliog Textile Inst J 44:S5-41 Jl '53

TEXTILE technologists, American association of. See American association of textile technologists

TEXTILE terms

Textile terms and definitions. diag Textile Inst J 44:S42-5 Jl '53

Textile terms and definitions committee; grist, lustre and dumb yarn. Textile Inst J 43:P814-16 O '52

TEXTILE testing

Electrical resistance of textile materials. J. W. S. Hearle. bibliog diags Textile Inst J Trans 44:T 117-98 Ap '53

T-test techniques. T. R. Bainbridge. bibliog Mod Textiles Mag 33:35+ O; 35+ D '52

See also

Dye testing

Textile fabrics—Testing

Textile fibers—Testing

Yarn—Testing

TEXTILE testing machines

Checking evenness with Uster's model C. M. E. Herndon. il Mod Textiles Mag 34:74-6 F '53

Device for the measurement of thread slippage. H. E. Cowles. diags Textile Inst J Trans 44:T293-7 Je '53

TEXTILE testing machines—*Continued*

Grips for single fibre testing. H. Parkin. il Textile Inst J Trans 44:T403-4 Ag-S '53

New testing equipment shown at Textile research institute meeting. il Textile World 103:122-4 F '53

Single-fiber load-elongation tester for cotton. R. S. Orr and J. N. Grant. bibliog il diags Textile Res J 23:505-9 Jl '53

Two-dimensional load-extension tester for woven fabrics. C. H. Reichardt and others. bibliog il diags Textile Res J 23:424-8 Je '53

TEXTILE workers

Burlington believes in economic education down the line. M. B. Andrews. Textile World 103:148 Ap '53

Comic books are serious aids to community education. M. B. Andrews. il Textile World 103:145+ My '53

Earnings in synthetic textiles, March 1952. C. Rubenstein and J. F. Laciskey. Mo Labor R 75:281-5 S '52

Employee morale depends on job satisfaction. D. Williams. Textile World 103:117+ O '53

Everyone at Bangor mills benefits from retirement plan. R. C. Scott. Textile World 102:130-1 D '52

Here's a program for employee selection; Fieldcrest mills. J. E. Gardner. Textile World 103:132-3+ S '53

Here's how to help new employees get started. F. T. De Vyver. Textile World 102:169+ D '52

How to establish a policy and make it work; pointers for supervisors. F. T. De Vyver. Textile World 103:141+ Mr '53

How to make rating easier. J. E. Gardner. Textile World 103:164+ F '53

New approach to training in leadership and human relations. M. P. Miller. Textile World 103:139+ Ag '53

Personnel; the job you can't avoid. M. J. Wise, jr. Textile World 103:181+ S '53

Put your own know-how to work in employee relations. F. A. Cook. Textile World 103: 139+ Jl '53

Russell Manufacturing says Merry Christmas to its town. M. B. Andrews. Textile World 102:170+ D '52

Saxapahaw tradition; planning for village charm. M. B. Andrews. Textile World 102: 188+ N '52

Stability in 1953 may bring solutions to major problems. M. P. Miller. Textile World 103: 104-5 F '53

Supervisor and his job. R. M. Rice. Textile World 103:71-2+ Ap '53

Supervisor's part in management development. F. T. De Vyver. Textile World 103: 153+ Je '53

These ideas can help you get cooperation from your workers. M. A. Cross. Textile World 103:136+ Ap '53

This company newspaper helps the mill community; Textiles review, Textiles-incorporated. M. B. Andrews. il Textile World 103: 145+ O '53

To be a group leader, learn the various approaches. A. Uris. Textile World 103:126-7 Mr '53

What the supervisor can do about labor turnover. M. J. Wise, jr. Textile World 103:143+ O '53

What to emphasize in training new employees. J. E. Gardner. Textile World 103: 162+ Ja '53

What workers think of their job, boss, company. E. J. Benge. Textile World 103:142-3+ S '53

What's being done about supervisory training. M. P. Miller. Textile World 102:169+ N '52

See also

Cotton mills—Employees

Loom fixers

Rayon mills—Employees

United textile workers of America

Woolen and worsted mills—Employees

TEXTILE workers union of America

Trouble by the yard; civil war in textile. Fortune 46:84, 86 D '52

Union secession. Bsns W p 117 D 20 '52

TEXTILE world (periodical)

My baby is 65 years old this month. H. G. Lord. Textile World 103:83 Ja '53

TEXTRON, inc.

To distribute Indian Head stock holdings. Comm & Fin Chr 177:985 Mr 2 '53

THAILAND. See Siam (Thailand)

THALHIMER brothers, inc.

Stock offered. Comm & Fin Chr 177:1477 Ap 6 '53

THALLIUM

Electrical resistivity of indium-thallium solid solutions. J. W. Stout and L. Guttman. Phys R 88:713-14 N 15 '52

Electrodeposition behavior of cadmium and of thallium at mercury cathodes. L. B. Rogers and C. Merritt, jr. diag Electrochem Soc J 100:131-5 Mr '53

Electron traps in the thallium-activated potassium chloride phosphor. P. D. Johnson and F. E. Williams. bibliog diags J Chem Phys 21:125-30 Ja '53

Rate of the reaction between thallium(III) and iron(II) in perchloric acid solution. O. L. Forchheimer and R. P. Epple. bibliog Am Chem Soc J 74:5772-4 N 20 '52

Salt and acid effects on the thallous-thallic exchange reaction. R. W. Dodson. bibliog Am Chem Soc J 75:1795-7 Ap 20 '53

Some optical properties of potassium iodide-thallium phosphors. P. H. Yuster and C. J. Delbecq. bibliog diag J Chem Phys 21:892-8 My '53

Superconductivity of indium-thallium solid solutions. J. W. Stout and L. Guttman. bibliog Phys R 88:703-12 N 15 '52

Thallium. L. Sanderson. Can Min J 73:72-3 N '52

Thermodynamic study of liquid metallic solutions; approximate thermodynamic data from the phase diagram for the systems copper-bismuth, copper-lead and copper-thallium. O. J. Kleppa. Am Chem Soc J 74:6047-51 D 5 '52

Analysis

Detection and determination of thallium. J. R. A. Anderson. bibliog(61 ref) Anal Chem 25:108-12 Ja '53

Determination of thallium by radioactivation; application to potassium iodide. C. J. Delbecq, L. E. Glendenin and P. H. Yuster. bibliog Anal Chem 25:350-1 F '53

Isotopes

Half-life of thallium-204. G. Harbottle. Phys R 91:1234 S 1 '53

Scintillation spectrometer study of the decay of Tl^{204}. E. der Mateosian and A. Smith. bibliog diag Phys R 88:1186-90 D 1 '52

THALLIUM compounds

Nuclear magnetic resonance in thallium compounds. H. S. Gutowsky and B. R. McGarvey. bibliog diag Phys R 91:81-6 Jl 1 '53

Separation of *iso*- and terephthalic acids by means of the thallous salts. D. Bryce-Smith. Chem & Ind p244 Mr 14 '53

Unusual reactions of thallium; alkoxides and aryloxides of thallium as oxidising agents. L. P. McHatton and M. J. Soulal. Chem Soc J p2771-3 Jl '52

THALLIUM fluoride

Complex fluorides; the structural chemistry of some complex fluorides of potassium, rubidium, cæsium, ammonium, and thallium. B. Cox and A. G. Sharpe. Chem Soc J p 1783-4 Je '53

THALLIUM halides

Investigation of crystal growth by thermal etching and oriented overgrowth. A. Smakula and M. W. Klein. bibliog il J Chem Phys 21:100-4 Ja '53

THALLIUM iodides

Thallium tri-iodide and related compounds. A. G. Sharpe. Chem Soc J p2165-7 Je '52

THALLIUM pyrophosphate

Polarographic study of thallium pyrophosphate complexes. P. Senise and P. Delahay. bibliog Am Chem Soc J 74:6128-30 D 5 '52

THAMES river

Structural engineering on Thameside. E. Granter. Engineering 174:582 O 31 '52

THAWING

Freeze-thaw studies of latex paint polymers. F. A. Digioia and R. E. Nelson. bibliog Ind & Eng Chem 45:745-8 Ap '53

Steam cleaner thaws mains and sewers in Leduc, Alta. Munic Util 90:10 D '52

THEATER
See also
American broadcasting-Paramount theaters, inc.

Stage setting and scenery

On stage with plastics; for structural units, set props, and other equipment. il Mod Plastics 30:94-7+ S '52

Great Britain

London theatre. Economist 166:852-3 Mr 28 '53

New York (city)

Broadway's worst season yet. Bsns W p32-3 Jl 4 '53

New Broadway season; so far, so-so. il Bsns W p 108-10+ D 6 '52

New York may get new theaters in multipurpose buildings. il Eng N 150:50-2+ Ap 9 '53

THEATERS

New York may get new theaters in multipurpose buildings. il Eng N 150:50-2+ Ap 9 '53

Theater codes relaxed; investors plan quietly; New York city's building code to permit construction of joint-purpose office-and-theater structures. Eng N 150:50 Je 25 '53

See also
Moving picture theaters

Electric equipment

Mobile theatre. il Elec R (Lond) 152:505-7 Mr 6 '53

Lighting

Royal festival hall electrical installation; discussion of paper by J. G. Hunter. diag Elec J 149:1945-6 D 19 '52

THEATERS, Open air
See also
Moving picture theaters, Open air

THEATERS, Portable

Mobile theatre. il Elec R (Lond) 152:505-7 Mr 6 '53

THEBAINONE

Conversion of *trans* to *cis* fusions of rings II and III in the morphine series. M. Gates and R. Helg. bibliog Am Chem Soc J 75:379-81 Ja 20 '53

THEFT

More severity with thieves urged. B. Barber. Weekly Underw 168:267 Ja 24 '53

Warfare against theft and pilferage in New York. B. Barber. Weekly Underw 168:938+ Ap 4 '53

See also
Embezzlement
Motor truck robberies
Shoplifting

THENOIC acid

Vapour pressure and lattice energy of hydrogen-bonded crystals; 2-thenoic, 2-furoic, and pyrrole-2-carboxylic acids. R. S. Bradley and A. D. Care. diag Chem Soc J p 1688-90 Je '53

THENOYLTRIFLUORACETONE. See Trifluoroacetone

THEOBROMINE

Titration of theobromine in nonaqueous solutions. A. Poulos. Anal Chem 24:1858-9 N '52

THEODORSEN circulation function

Additional values of $C(k)$. W. B. Brower and R. H. Lassen. J Aeronautical Sci 20:148-50 F '53

Application of Theodorsen's theory to propeller design. J. L. Crigler. diags U S Nat Advisory Com for Aeronautics 1949:83-99 '51

Theodorsen function in incompressible flow and C-function in supersonic flow. C. Chang. bibliog diags J Aeronautical Sci 19:717-18 O '52

THEOLOGICAL seminaries

Contemporary design amidst collegiate Gothic; classroom building for graduate study, Concordia seminary, Clayton, Mo. il plans Arch Rec 112:159-63 O '52

THEOPHYLLINE

Some alkyl homologs of theophylline. J. H. Speer and A. L. Raymond. bibliog Am Chem Soc J 75:114-15 Ja 5 '53

THERAPEUTICS
See also
Chemotherapy
Electrotherapeutics
Psychotherapy
Radiotherapy
Vaccines
X rays—Therapeutic use

THERAPY, Occupational. See Occupational therapy

THERAPY, Physical. See Physical therapy

THERBLIGS (term)

Studies in relationships of therbligs. G. Nadler and J. W. Wilkes. il Advanced Management 18:20-2 F '53

THERMAL analysis

Differential thermal analyses as a means of predicting firing behavior of structural clay materials. J. O. Everhart and R. R. Van der Beck, jr. Am Cer Soc Bul 32:239-41 Jl 15 '53

Differential thermal analysis. R. C. Patterson. il Am Cer Soc Bul 32:117-18 Ap 15 '53

Liquidus$\rightleftharpoons$solidus relations in the system iron-cobalt in the range 0-30 atomic per cent cobalt. G. B. Harris and W. Hume-Rothery. bibliog diags Iron & Steel Inst J 174:212-18 Jl '53

THERMAL insulation. See Insulation (heat)

THERMIONIC emission. See Electrons—Thermionic emission

THERMISTOR bolometers. See Bolometers

THERMISTORS. See Electric resistors

THERMIT process. See Welding—Thermit process

THERMOCHEMISTRY

Equilibrium $Ge(s) + GeO_2(s) = 2GeO(g)$; the heat of formation of germanic oxide. W. L. Jolly and W. M. Latimer. bibliog Am Chem Soc J 74:5757-8 N 20 '52

Heat of formation of disodium methylphosphonate. R. Thompson. Chem Soc J p3292-5 Ag '52

Heat of formation of phenyl radical and the related bond dissociation energies. M. Szwarc and D. Williams. J Chem Phys 20:1171-2 Jl '52

Heats of formation and potential barriers for the internal rotation in hydrocarbon molecules. K. Ito. bibliog Am Chem Soc J 75:2430-5 My 20 '53

Heats of formation of hafnium oxide and hafnium nitride. G. L. Humphrey. bibliog Am Chem Soc J 75:2806-7 Je 20 '53

Heats of formation of stannic and stannous oxides from combustion calorimetry. G. L. Humphrey and C. J. O'Brien. bibliog Am Chem Soc J 75:2805-6 Je 20 '53

High-speed chemistry. L. P. Lessing. il diags Sci Am 188:29-35 My '53

Some crystal energetic relationships in oxysalts. H. Ramberg. J Chem Phys 20:1532-7 O '52

Thermochemistry and pyrolysis of bishydroxymethyl peroxide. A. D. Jenkins and D. W. G. Style. Chem Soc J p2337-40 Ag '53

Thermochemistry of calcium and calcium iodide in ammonia at -33°. S. P. Wolsky, E. J. Zdanuk and L. V. Coulter. bibliog diag Am Chem Soc J 74:6196-9 D 20 '52

Thermochemistry of organo-arsenic compounds; cacodyl, As_2Me_4. C. T. Mortimer and H. A. Skinner. Chem Soc J p4331-4 N '52

Thermochemistry of organo-arsenic compounds; esters of arsenious acid. T. Charnley, C. T. Mortimer and H. A. Skinner. Chem Soc J p 1181-4 Ap '53

Thermochemistry of organo-boron compounds; esters of boric acid. T. Charnley, H. A. Skinner and N. B. Smith. Chem Soc J p2288-91 Je '52

Thermochemistry of plagioclase and alkali feldspars. F. C. Kracek and K. J. Neuvonen. Am J Sci Bowen vol p293-318 bibliog (p316-18) '52

Thermochemistry of the alkali and alkaline earth metals and halides in liquid ammonia at -33°. L. V. Coulter. bibliog J Phys Chem 57:553-8 Je '53

THERMOCHEMISTRY—*Continued*

Vapor phase heats of hydrobromination of the isomeric butenes. J. R. Lacher and others. Am Chem Soc J 74:5291-2 N 5 '52

See also

Combustion
Combustion, Heat of
Combustion analysis
Dissociation, Heat of
Flash points
Melting points
Solution, Heat of
Specific heat
Thermal analysis
Thermodynamics
Vapor pressure
Vaporization, Heat of

THERMOCHROMISM

Experiments with 1,2-benzophenazine-3,4-quinone; thermochromic effects based on lactam-lactim tautomerism. A. Schönberg, A. Mustafa and S. M. A. Zayed. bibliog Am Chem Soc J 75:4302-4 S 5 '53

Highly polarizable C=C double bonds (fulvenes and thermochromic ethylenes). E. D. Bergmann. bibliog Am Chem Soc J 75:2761-2 Je 5 '53

Low-temperature photochromism and its relation to thermochromism. Y. Hirshberg and E. Fischer. diags Chem Soc J p629-36 F '53

Nature of the thermal color change in zinc oxide. C. K. Coogan and A. L. G. Rees. bibliog J Chem Phys 20:1650-1 O '52

Paramagnetism in a thermochromic compound. W. G. Nielsen and G. K. Fraenkel. bibliog diag J Chem Phys 21:1619 S '53

Some adsorption colors and their significance for thermochromic and tautomeric effects; experiments with anthrone derivatives, nitrotoluenes, spiropyrans and xanthhydrols. A. Schönberg, A. Mustafa and W. Asker. bibliog Am Chem Soc J 74:5640-3 N 20 '52

Some thermochromic spirans. C. F. Koelsch and W. R. Workman. bibliog Am Chem Soc J 74:6288-9 D 20 '52

Thermochromism of diphenylmethyleneanthrone. R. J. W. Le Fèvre and I. Youhotsky. Chem Soc J p 1318-19 Ap '53

Thermochromism of dixanthylenes. A. Schönberg, A. Mustafa and M. E. El-Din Sobhy. bibliog Am Chem Soc J 75:3377-8 Jl 20 '53

THERMOCOUPLES

Average temperatures by parallel-connected thermocouples. B. E. Drimmer. diag J Ap Phys 24:225-6 F '53

Behaviour of plantinum/platinum-rhodium thermocouples at high temperatures. M. K. McQuillan. J Sci Instr 29:301-2 S '52

Bismuth thermocouples. A. B. Kaufman. il Instruments 25:762+ Je '52; Abstract. Metal Prog 62:174+ D '52

Boiler tube temperatures. il Heat & Ven 50:84 Jl '53

Designing an accurate immersion thermocouple. R. E. Bish. il Foundry 81:193+ Ag '53

Fast thermocouples as control-system elements sensing exhaust-gas temperatures in aircraft gas turbines. J. S. Alford and C. R. Heising. il diag A S M E Trans 75:7-13; Discussion. 13-14 Ja '53

Iron-constantan thermocouple tables. Heat & Ven 50:86 O '53

Non-linearity in a voltmeter using cathode-follower and thermocouple. D. G. Tucker. diags J Sci Instr 30:11-13 Ja '53

Porcelain enamel; life of thermocouple protective tubes extended. il Iron Age 171:157 My 21 '53

Progress on temperature measurement; abstract. D. G. Harris. Metal Prog 63:194+ Je '53

Quick-immersion thermocouple for liquid steel; review of present-day techniques with practical and theoretical studies. D. Manterfield and others. diags Iron & Steel Inst J 172:387-402 D '52

Recording and indicating instruments for temperature measurements down to 10°K using copper-constantan thermocouples. E. V. Larson and R. Mayer. il diags R Sci Instr 23:692-4 D '52

Shunted thermocouple vacuum gauge. N. A. Florescu. diag J Sci Instr 29:298 S '52

Special thermocouple for measuring transient temperatures. D. Bendersky. il diags Mech Eng 75:117-21 F '53; Discussion. 75:587-8 Jl '53

Temperature measurement by electrical means. diags Can Chem Process 37:26+ Ag '53

Temperature standardisation at the National bureau of standards. il diag Engineer 194:735-7 N 28 '52

Thermocouple temperatures in a diffusion cloud chamber. H. L. Morrison and G. J. Plain. bibliog R Sci Instr 23:607-9 N '52

Trends in refinery instrumentation; fabrication and calibration of thermocouples. S. D. Ross and J. Procopi. bibliog il diags Pet Eng 24:C41-4 N '52

Trends in refinery instrumentation; thermocouples and extension wire. S. D. Ross and J. Procopi. bibliog il diags Pet Eng 24:C39-40+ O '52

Versatile equipment for thermocouple switching using a Post office type uniselector. H. Burton and S. F. Suffolk. il diag J Sci Instr 29:50-2 N '52

Testing

Routine calibration of precious-metal thermocouples at the palladium point. E. G. Knowles and R. C. Jewell. diags Iron & Steel Inst J 172:409-12 D '52

THERMODYNAMICS

Adsorption studies on clay minerals; a formulation of the thermodynamics of exchange adsorption. G. L. Gaines, jr. and H. C. Thomas. diag J Chem Phys 21:714-18 Ap '53

Application of the cell method to the statistical thermodynamics of solutions; critical solution phenomena. A. Bellemans. bibliog J Chem Phys 21:369-70 F '53

Application of the cell method to the statistical thermodynamics of solutions; experimental. V. Mathot and A. Desmyter. bibliog diag J Chem Phys 21:782-8 My '53

Application of the cell model to the statistical thermodynamics of solutions; volume change of mixing in solutions of molecules slightly different in size. I. Prigogine and A. Bellemans. bibliog J Chem Phys 21:561-2 Mr '53

Attack of metals by free radicals and atoms. F. W. Thompson and A. R. Ubbelohde. bibliog J Ap Chem 3:27-36 Ja '53

Calculated thermodynamic properties of GeF_4. F. L. Voelz. J Chem Phys 20:1662 O '52

Calorimetric properties of polytetrafluoroethylene (Teflon) from 0° to 365°K. G. T. Furukawa and others. J Res Nat Bur Stand 49:273-8 O '52

Condensed gas calorimetry; heat capacity, heat of fusion, heat of vaporization, vapor pressures and entropy of diborane between 13°K. and the boiling point (180.32°K.). J. T. Clarke, E. B. Rifkin and H. L. Johnston. bibliog Am Chem Soc J 75:781-5 F 20 '53

Condition for the creeping of a liquid past a mercury seal. R. S. Jessup. diags J Ap Phys 23:543-5 My '52

Constant-pressure combustion charts including effects of diluent addition. L. R. Turner and D. Bogart. bibliog U S Nat Advisory Com for Aeronautics 1949:315-39 '51

Cooperative orientation effects in solutions. J. A. Barker. bibliog J Chem Phys 20:1526-32 O '52

Discussion on the thermodynamics of steelmaking. bibliog diags Iron & Steel Inst J 173:264-75 Mr '53

Effect of isotopic substitution on the entropy, enthalpy, and heat capacity of ideal gases; systems in thermal equilibrium; chemically reacting systems. J. Bigeleisen. J Chem Phys 21:1333-9 Ag '53

Electrode phenomena and the thermodynamics of irreversible processes. P. Van Rysselberghe. bibliog diags J Phys Chem 57:275-80 Mr '53

Enthalpy of petroleum fractions; new charts and recent experimental data. C. R. Bauer and J. F. Middleton. bibliog Pet Refiner 32:111-13 Ja '53

Film boiling termination mechanism. J. W. Marx and B. I. Davis. bibliog diags J Ap Phys 23:1354-7 D '52

Fluctuations and irreversible processes. L. Onsager and S. Machlup. Phys R 91:1505-15 S 15 '53

THERMODYNAMICS—*Continued*

Furnace heat absorption in a spreader-stoker-fired steam generator; furnace heat-absorption efficiency as shown by enthalpy of gases leaving the furnace. J. W. Myers and R. C. Corey. bibliog diags A S M E Trans 75:909-23 Jl '53

Heat capacity of mercury from 15 to 333°K.; thermodynamic properties of solid liquid and gas; heat of fusion and vaporization. R. H. Busey and W. F. Giauque. bibliog Am Chem Soc J 75:806-9 F 20 '53

High-temperature chemistry is still in early infancy. L. Brewer. Chem & Eng N 31: 1972+ My 11 '53

High temperature thermodynamic properties of molybdenum trioxide. L. A. Cosgrove and P. E. Snyder. bibliog Am Chem Soc J 75:1127-8 Mr 5 '53

Investigation of sound vibrations in a tube containing a heat source. J. L. Neuringer and G. E. Hudson. diag Acoustical Soc Am J 24:667-74 N '52

Irreversible phenomena in metallurgy. R. A. Oriani. bibliog diags J Phys Chem 56:1025-30 D '52

Irreversible processes with application to helium II and the Knudsen effect in gases. O. K. Rice. bibliog Phys R 89:793-9 F 15 '53

Kinetics and thermodynamics of the steady state system of catalase with hydrogen peroxide. R. F. Beers, jr. and I. W. Sizer. bibliog J Phys Chem 57:290-3 Mr '53

Liquid ring compressor; some thermodynamic characteristics. H. E. Adams. diag Tappi 36:193-9 My '53

Logical relations among the principles of statistical mechanics and thermodynamics. J. S. Thomsen. bibliog diags Phys R 91: 1263-6 S 1 '53

Macroscopic equations of transport. J. G. Kirkwood and B. Crawford, jr. bibliog J Phys Chem 56:1048-51 D '52

Nernst memorial lecture. J. R. Partington. bibliog Chem Soc J p2860-7 S '53

Nonequilibrium thermodynamics of the sedimentation potential and electrophoresis. S. R. de Groot and others. bibliog J Chem Phys 20:1825-9 D '52

One-dimensional irreversible gas flow in nozzles. Y. R. Mayhew and G. F. C. Rogers. Engineering 175:355-8 Mr 20 '53

Practical thermodynamics. G. G. Brown and C. Sliepcevich. Chem Eng Prog 48:493-6 O '52

Production of high temperature gases in shock tubes. E. L. Resler and others. il diags J Ap Phys 23:1390-9 D '52

Quasi-chemical treatment of mixtures of oriented molecules. H. Tompa. bibliog J Chem Phys 21:250-8 F '53

Raman and infrared spectral data, assignments, potential constants, and calculated thermodynamic properties for oxalyl chloride. J. S. Ziomek and others. bibliog diags J Chem Phys 21:90-100 Ja '53

Raman effect spectrum, structure, force constants, and thermodynamic properties of bromine pentafluoride. C. V. Stephenson and E. A. Jones. bibliog diag J Chem Phys 20: 1830-4 D '52

Relativistic statistical thermodynamics. A. E. Scheidegger and R. V. Krotkov. bibliog Phys R 89:1096-100 Mr 1 '53

Simplified algebraic method for obtaining thermodynamical formulas. H. A. Bent. J Chem Phys 21:1408-9 Ag '53

Simplified relation between thermodynamics and molecular distribution functions for a mixture. B. H. Zimm. J Chem Phys 21:934-5 My '53

Snow thermodynamics offers better understanding of mechanical properties of snow. R. W. Gerdel. il Civil Eng 22:1022-4 D '52

Some applications of the thermodynamic theory of irreversible processes to physical metallurgy. E. S. Machlin. bibliog J Metals 5:Trans 437-45 Mr '53

Some thermodynamic properties of formic acid. W. Waring. bibliog Chem R 51:171-83 Ag '52

Statistical mechanics of dynamical systems with integrals other than energy. H. Grad. bibliog J Phys Chem 56:1039-48 D '52

Statistical mechanics of irreversibility. H. B. Callen and others. bibliog Phys R 88:1382-6 D 15 '52

Statistical method of Gibbs in irreversible thermodynamics. R. T. Cox. bibliog J Phys Chem 56:1030-3 D '52

Statistical thermodynamics of rubber elasticity. H. M. James and E. Guth. diags J Chem Phys 21:1039-49 Je '53

Studies on coördination compounds; a method for determining thermodynamic equilibrium constants in mixed solvents. L. G. Van Uitert and C. G. Haas. bibliog Am Chem Soc J 75:451-5 Ja 20 '53

Substituted methanes; infrared spectral data, assignments, potential constants, and calculated thermodynamic properties for CF_3Br and CF_3I. P. R. McGee and others. J Chem Phys 21:242-6 F '53

Substituted methanes; Raman and infrared spectra, assignments, potential constants, and calculated thermodynamic properties for $CHClBr_2$ and $CDClBr_2$. D. A. Pontarelli and others. bibliog J Chem Phys 20:1949-54 D '52

Theorem of irreversible thermodynamics. R. F. Greene and H. B. Callen. Phys R 88: 1387-91 D 15 '52

Theory of fusion and condensation. A. J. F. Siegert. bibliog Phys R 90:97-101 Ap 1 '53

Thermal distributions in Jeffery-Hamel flows between nonparallel plane walls. K. Millsaps and K. Pohlhausen. bibliog diags J Aeronautical Sci 20:187-96 Mr '53

Thermodynamic analysis of the Plank cycle; maximum efficiency in a carbon dioxide system. O. Almoslino. diags Refrig Eng 61: 1090-5 O '53

Thermodynamic and kinetic constants for the diborane-borine equilibrium. S. H. Bauer, A. Shepp and R. E. McCoy. bibliog Am Chem Soc J 75:1003-4 F 20 '53

Thermodynamic functions for surfaces of crystals. S. H. Bauer. bibliog Am Chem Soc J 75:1004-5; Reply. 1006-7 F 20 '53

Thermodynamic functions from Mayer's theory of ionic solutions. J. C. Poirier. bibliog J Chem Phys 21:965-85 Je '53

Thermodynamic functions of 2,2,3-trimethylbutane. D. W. Scott and G. Waddington. bibliog Am Chem Soc J 75:2006-7 Ap 20 '53

Thermodynamic properties and the characteristic CH_2 frequencies of *n*-paraffins. W. B. Person and G. C. Pimentel. bibliog Am Chem Soc J 75:532-8 F 5 '53

Thermodynamic properties of ammonia at high temperatures and pressures. E. R. Grahl. bibliog Pet Processing 8:562-5 Ap '53

Thermodynamic properties of chlorine trifluoride. A. Weber and S. M. Ferigle. J Chem Phys 20:1497 S '52

Thermodynamic properties of diacetylene. S. M. Ferigle and A. Weber. J Chem Phys 20:1657 O '52

Thermodynamic properties of gaseous difluorodichloromethane (Freon-12). J. F. Masi. bibliog diag Am Chem Soc J 74:4738-41 O 5 '52; Correction. 75:2276-7 My 5 '53

Thermodynamic properties of hydrocarbons and related compounds. K. S. Pitzer and R. R. Brattain. bibliog Oil & Gas J 51:352-6 N 17 '52; Same. Am Pet Inst Proc 32(1):176-80 '52

Thermodynamic properties of indium(III) oxide. M. F. Stubbs, J. A. Schufle and A. J. Thompson. bibliog diag Am Chem Soc J 74:6201-3 D 20 '52

Thermodynamic properties of methyl nitrate. P. Gray and P. L. Smith. Chem Soc J p2380-5 Ag '53

Thermodynamic properties of 2-methyl-2-propanethiol from 0 to 1000°K. J. P. McCullough and others. bibliog diag Am Chem Soc J 75:1818-24 Ap 20 '53

Thermodynamic properties of saturated water. R. W. Haywood. bibliog diags Inst Mech Eng Proc (B) 1B no 2:49-57; Discussion. 58-63 '52

Thermodynamic properties of silicon monoxide; an experimental study of the equilibria $SiO_2 + Si \rightleftharpoons 2SiO$ and $SiO_2 + H_2 \rightleftharpoons SiO + H_2O$. N. C. Tombs and A. J. E. Welch. bibliog diag Iron & Steel Inst J 172:69-78 S '52

THERMODYNAMICS—*Continued*

Thermodynamic properties of sodium-aluminum and potassium-aluminum silicates. K. K. Kelley and others. bibliog 4pls U S Bur Mines Rep of Invest 4955:1-21 '53

Thermodynamic properties of sodium vapor. A. Benton and T. H. Inatomi. bibliog J Chem Phys 20:1946-8 D '52

Thermodynamic properties of solid nickel-gold alloys. L. L. Seigle and others. bibliog diag J Metals 4:Trans 1320-7 D '52; Discussion 5:Trans 728-9 sec 2 My '53

Thermodynamic properties of the diatomic interhalogens from spectroscopic data. L. G. Cole and G. W. Elverum, jr. bibliog J Chem Phys 20:1543-51 O '52

Thermodynamic properties of the liquid ternary system bismuth-cadmium-tin. S. Mellgren. bibliog Am Chem Soc J 74:5037-40 O 20 '52

Thermodynamic properties of the oxides and their vaporization processes. L. Brewer. Chem R 52:1-75 bibliog(p65-75) F '53

Thermodynamic properties of the three monomethylcyclopentenes and nine dimethylcyclopentenes. H. J. Hrostowski and G. C. Pimentel. bibliog Am Chem Soc J 75:539-42 F 5 '53

Thermodynamic study of liquid metallic solutions; approximate thermodynamic data from the phase diagram for the systems copper-bismuth, copper-lead and copper-thallium. O. J. Kleppa. Am Chem Soc J 74:6047-51 D 5 '52

Thermodynamic study of liquid metallic solutions; the systems zinc-bismuth and zinc-lead. O. J. Kleppa. bibliog Am Chem Soc J 74:6052-6 D 5 '52

Thermodynamic study of the equilibrium $2Cu(s) + H_2S(g) = Cu_2S(\gamma) + H_2(g)$. A. A. Brooks. bibliog diag Am Chem Soc J 75:2464-7 My 20 '53

Thermodynamic study of the zinc-indium system. W. J. Svirbely and S. M. Selis. bibliog Am Chem Soc J 75:1532-5 Ap 5 '53

Thermodynamics in ceramics. W. D. Kingery and J. F. Wygant. bibliog diags Am Cer Soc Bul 31:165-8, 213-17, 251-5, 294-7, 344-7, 386-8 My 15-O 15 '52

Thermodynamics of aqueous 2-propanol-sulfuric acid solutions from electromotive force measurements. W. N. Whitten and J. E. Land. Am Chem Soc J 75:2202-4 My 5 '53

Thermodynamics of chelation; bond energy effects in chelate ring formation. C. G. Spike and R. W. Parry. Am Chem Soc J 75:3770-2 Ag 5 '53

Thermodynamics of chelation; the statistical factor in chelate ring formation. C. G. Spike and R. W. Parry. bibliog Am Chem Soc J 75:2726-9 Je 5 '53

Thermodynamics of combustion gases; temperatures and composition of the combustion products of oxyacetylene flames. H. E. Edwards and others. U S Bur Mines Rep of Invest 4958:1-7 '53

Thermodynamics of combustion gases; temperatures of methane-air and propane-air flames at atmospheric pressure. R. W. Smith, jr. and others. bibliog U S Bur Mines Rep of Invest 4938:1-3 '53

Thermodynamics of combustion gases; temperatures of methane-air, propane-air, and ethylene-air flames. R. W. Smith, jr. and others. bibliog U S Bur Mines Rep of Invest 4983:1-21 '53

Thermodynamics of coprecipitation; dilute solid solutions of AgBr in AgCl. F. Vaslow and G. E. Boyd. bibliog Am Chem Soc J 74:4691-5 S 20 '52

Thermodynamics of dissociating solvents. K. W. Dunning and W. J. Dunning. Chem Soc J p2993-7 Ag '52

Thermodynamics of ionized water in strontium chloride solutions from electromotive force measurements. H. S. Harned and T. R. Paxton. bibliog J Phys Chem 57:531-5 My '53

Thermodynamics of metal nitrides and of nitrogen in iron and steel. J. Pearson and U. J. C. Ende. bibliog Iron & Steel Inst J 175:52-8 S '53

Thermodynamics of metallurgical carbides and of carbon in iron. F. D. Richardson. Iron & Steel Inst J 175:33-51 bibliog(94 ref, p50-1) S '53

Thermodynamics of some simple sulfur-containing molecules. W. H. Evans and D. D. Wagman. bibliog(56 ref) J Res Nat Bur Stand 49:141-8 S '52

Thermodynamics of the helium film. O. K. Rice and B. Widom. Phys R 90:987 Je 1 '53

Use of the Joule-Thomson effect to measure the work equivalent of heat; thermodynamic theory. J. R. Roebuck. bibliog J Ap Phys 23:1119-21 O '52

Viscosity, thermal conductivity and specific heat of dry air at elevated pressures and temperatures. I. Granet and P. Kass. bibliog Pet Refiner 31:113-14 O '52

See also

Boiling
Entropy
Equation of state
Evaporation
Free energy
Jacobians
Melting points
Specific heat
Statistical mechanics
Vapor pressure

Study and teaching

Teaching aids for heat transfer and thermodynamics. W. J. King. diags J Eng Educ 43:167-70 N '52

THERMOELECTRIC effect

Electrical conductivity and thermoelectric power of (BaSr)O and BaO. J. R. Young. diags J Ap Phys 23:1129-38 O '52

Electrical properties of porous semiconductors. E. B. Hensley. diags J Ap Phys 23:1122-9 O '52

THERMOELECTRICITY

Thermal conductivity, electrical resistivity, and thermoelectric power of graphite. W. W. Tyler and A. C. Wilson, jr. bibliog diag Phys R 89:870-5 F 15 '53

Thermoelectric cooling; based on papers by N. Forsberg and others. Refrig Eng 61:878-9 Ag '53

Thermoelectric study of the electrical forming of germanium rectifiers. M. Kikuchi and T. Onishi. bibliog diags J Ap Phys 24:162-6 F '53

Thermogalvanic potentials; the application of thermodynamics to thermogalvanic data. H. Levin and others. bibliog(76 ref) diags Electrochem Soc J 98:388-94; 99:475-82 O '51, D '52

Thermopile generator produces electricity from a gas flame; El Paso natural gas company is using this method to protect pipe line from corrosion. R. J. Emerson. il map diag World Oil 135:310+ O '52

See also

Thermocouples

THERMOFOR catalytic reforming process. See Gasoline—Manufacture

THERMOLUMINESCENCE. See Luminescence

THERMOMETERS, Clinical

Manufacture

Aging changes in clinical thermometers. L. C. Liberatore and R. E. Wilson. diags Am Cer Soc J 35:203-6 Ag 1 '52

Rating

Clinical thermometers. Consumers Res Bul 31:24-5 Ja '53

THERMOMETERS, Cooking

Meat thermometers. il Consumers Res Bul 30:24-6 D '52

THERMOMETERS and thermometry

Carbon thermometer-heaters for use at low temperatures; effects of particle size and adsorption of hydrogen or helium. T. H. Geballe and others. bibliog R Sci Instr 23:489-92 S '52

Checked your temperature lately? R. H. Wilcox. il Mill & Factory 52:125-30 Ap '53

Comparison of filled thermal systems. diags Can Chem Process 37:64+ Je 20 '53

Construction of filled thermal systems. il diags Can Chem Process 37:42+ Je 20 '53

Electronic recorder with range and precision adequate for the platinum resistance thermometer; abstract. A. J. Williams, jr. diag Elec Eng 72:57 Ja '53

Electronic resistance thermometer. il Metallurgia 47:265-6 My '53

High temperature resistance thermometer temperature controller. W. B. Crandall and P. M. Hackett. il diag Am Cer Soc Bul 31:377-9 O 15 '52

THERMOMETERS and thermometry—*Cont.*

Instrumentation handbook; temperature measurement-control. R. L. Nichols. Pet Refiner 31:104-6 D '52

Instrumenting temperature measurements. il Can Chem Process 37:76-7 Je 1 '53

Newly developed high-precision resistance thermometer recorder with automatic range extension. R. H. Müller. Anal Chem 24:sup21A-2A D '52

Optical thermometer for induction heating. il Electronics 26:330+ Mr '53

Resistance thermometers in the 50 metre comparator at the National physical laboratory. J. S. Clark and L. O. C. Johnson. diag Engineering 196:260-1 Ag 28 '53

Temperature measurement by electrical means. diags Can Chem Process 37:26+ Ag '53

Temperature standardisation at the National bureau of standards. il diag Engineer 194:735-7 N 28 '52

Thermometer installation. Can Chem Process 37:72-3 Jl '53

See also

Atmospheric temperature

Bolometers

Calorimeters and calorimetry

Color temperature

Pyrometers and pyrometry

Temperature—Measurement

THERMOS bottles

Vacuum bottles in the modern manner; molded of high impact styrene. il Mod Plastics 30:105-7 O '52

THERMOSTATS

Automatic temperature control; thermostats for many purposes; Rheostatic co. il Elec R (Lond) 151:627-30 S 19 '52

Felden electronic thermostat. il Engineer 195:437 Mr 20 '53

Flameproof thermostat. il Engineering 174:158 Ag 1 '52

Fundamentals of bimetal performance. C. F. Alban. Machine Design 25:274+ Ag '53

Furnace constant temperature controller and its modification as a programme controller. J. R. Beattie and A. J. Milne. bibliog diags J Sci Instr 29:290-2 S '52

Inexpensive thermostat. W. F. Linke. diag J Chem Educ 29:492 O '52

Minneapolis-Honeywell decorative round thermostat. il Heat & Ven 50:114 S '53

Practical notes on gas burner service. il diags Sheet Metal Worker 44:72+ Ag; 52-3 S; 45:43-4 O '53

Room thermostats and their applications. W. G. Holzbock. il diags Heat & Ven 50:95-105 My '53

Small thermostat for lube and water temperature control. il diags Diesel Power 31:78-9 Jl '53

Some of the points to watch in locating thermostats. Sheet Metal Worker 44:sup31 Ag '53

Thermal relay for protecting induction motors. il diag Engineer 194:731-2 N 28 '52; Engineering 174:757 D 12 '52; Elec R (Lond) 151:1181-2 N 28 '52

Thermostats show level of asphalt. diag Eng N 150:64 Ja 8 '53; Nat Safety N 67:48+ Ja '53; Pet Processing 7:1842 D '52; Safety Maint & Prod 105:54 F '53

Use of the bimetal disc thermostat as a defrost control. E. F. Kurtz. il diags Refrig Eng 61:531-3+ My '53

Testing

Apparatus for testing switching performance of thermostats. J. Carlebach. diag J Sci Instr 30:26 Ja '53

THESES. See Dissertations, Academic

THIACYCLOBUTANE. See Trimethylene sulfide

THIACYCLOPENTANE

Thiacyclopentane; heat capacity, heats of fusion and vaporization, vapor pressure, entropy, heat of formation and thermodynamic functions. W. N. Hubbard and others. bibliog Am Chem Soc J 74:6025-30 D 5 '52

THIAFLUORENE

Direct conversion of thionaphthen into derivatives of 9-thiafluorene. W. Davies, N. W. Gamble and W. E. Savige. Chem Soc J p4678-83 D '52

THIAMIN. See Vitamins—Vitamin B_1

THIANAPHTHENOPYRIDINE

Thianaphtheno[3,2-c]pyridine and certain derivatives. D. B. Capps and C. S. Hamilton. bibliog Am Chem Soc J 75:697-9 F 5 '53

THIAPENTANE. See Ethyl sulfide

THIAZOLES

New synthesis of the thiazole fragment of vitamin B_1. T. E. Londergan, N. L. Hause and W. R. Schmitz. bibliog Am Chem Soc J 75:4456-8 S 20 '53

Polymethine dyes from 4:5-disubstituted thiazoles. E. B. Knott. Chem Soc J p4099-106 N '52

Preparation of 2-substituted-4-methyl-5-carbethoxythiazoles; condensation of ethyl acetoacetate with substituted thioureas. M. K. Rout and H. K. Pujari. bibliog Am Chem Soc J 75:4057-8 Ag 20 '53

Preparation of thiazole Grignard reagents and thiazolyllithium compounds. R. P. Kurkjy and E. V. Brown. bibliog Am Chem Soc J 74:6260-2 D 20 '52

Some alkyl thiazolephosphonates. N. D. Dawson and A. Burger. bibliog Am Chem Soc J 74:5312-14 N 5 '52

Thiazolethiols and their derivatives. J. J. D'Amico. bibliog Am Chem Soc J 75:102-4 Ja 5 '53

THIAZOLIDINE

Attempted cyclization of N-chloroacetylthiazolidines. J. C. Sheehan and A. K. Bose. Am Chem Soc J 74:4957-8 O 5 '52

Syntheses in the penicillin field; 4-formyl*iso*oxazolones and derived thiazolidines. A. H. Cook and G. Shaw. Chem Soc J p4466-9 N '52

THIAZOLIDONE

Colour of organic compounds; a comparison of isomeric dyes from 3-alkyl-2-thiothiazolid-4- and -5-ones. R. A. Jeffreys and E. B. Knott. Chem Soc J p4632-7 D '52

Microbiologically active 4-thiazolidones. F. C. Pennington and others. bibliog Am Chem Soc J 75:109-14 Ja 5 '53

Structure and synthesis of a new, thiazolidone antibiotic. W. M. McLamore and others. bibliog Am Chem Soc J 75:105-8 Ja 5 '53

THIAZOLINE

Cyclisation, ring-fission, and acyl-migration reactions in the thiazoline field. J. C. Crawhall and D. F. Elliott. Chem Soc J p3094-102 Ag '52

THICKNESS measurement

Accuracy of electromagnetic coating thickness measuring apparatus; abstract. J. H. Zaat. Metal Finishing 51:78-9 F '53

Automatic metal gaging using X-rays; abstract. J. F. Howell. il diag Machine Design 25:162 My '53

Beta rays now gage paper thickness. il Elec West 109:98 O '52

Checking gear tooth thickness with variable center-distance gage. L. D. Martin. il Mach 60:205-6 O '53

Fine measurement of paper thickness by air pressure; Aerosensor. diag Paper Tr J 137:56 O 16 '53

Gaugemeter for strip mills. R. B. Sims. il diag Engineering 175:33-5 Ja 9 '53

Hand gage accurately measures paint coat thickness. il Iron Age 171:139 Mr 12 '53

Measurement of fabric thickness. R. E. Seaman. il diag Textile Res J 23:262-6 Ap '53

Measurement of the thickness of capacitor paper. W. Souder and S. B. Newman. bibliog U S Nat Bur Stand Circ 532:1-10; pa 15c Supt. of doc. '52

Metal thicknesses revised. Standardization 23:405 D '52

Paint coating thickness meters. R. Quarendon. il diag Engineer 196:130-3, 162-6 Jl 31-Ag 7 '53

Radiation thickness or weight gauge. il Paper Tr J 135:23 N 7 '52

Radioactive thickness gage controls paper weight. G. J. Leighton. il diags Electronics 25:112-13 D '52

Tracer method for the thickness measurement of thin Bi films. J. J. Antal and A. H. Weber. bibliog il R Sci Instr 23:424-6 Ag '52

THICKNESS measurement—*Continued*
Ultrasonic thickness measurement. il diag Electronics 26:144+ Ja '53
X-ray gage controls rolling mill equipment. Mach 59:187 Je '53; Iron Age 171:182-4 Ap 2 '53
X-ray gaging irons out strip variables. B. H. McGar. il Steel 132:110 My 18 '53
See also
Betameters

THIENYL compounds
4-Nitro-2-thenaldehyde. G. Gever. bibliog Am Chem Soc J 75:4585 S 20 '53

THIENYL group
Kinetics of anionotropic rearrangement; a comparison of the effects of the phenyl, furyl, and thienyl groups on reactivity. E. A. Braude and J. S. Fawcett. Chem Soc J p4158-62 N '52

THIENYL sulfides
Preparation and properties of some ω-(N,N-dialkylamino) alkyl-3-thienyl sulfide hydrochlorides. W. H. Houff and R. D. Schuetz. bibliog Am Chem Soc J 75:2072-4 My 5 '53

THIMMES, James Garret
Portrait. Bsns W p 157 N 15 '52

THIOACETALS. See Acetals

THIOACETOACETIC acid
Dipole moment of thioacetoacetic ester in solution. C. F. Ferraro, J. J. Draney and M. Cefola. bibliog Am Chem Soc J 75:1206-8 Mr 5 '53

THIOBENZOIC acid. See Mercaptobenzoic acid

THIOCYANATES
Enhancement of the reducing properties of metallic mercury in presence of thiocyanate and cyanide; its analytical applications; abstract. F. Burriel-Marti. Chem Age (Lond) 67:561 O 25 '52
Reaction of alkali thiocyanates with epoxides. C. C. Price and P. F. Kirk. bibliog Am Chem Soc J 75:2396-400 My 20 '53
Spectrophotometric determination of uranium by thiocyanate method in acetone medium. C. E. Crouthamel and C. E. Johnson. bibliog Anal Chem 24:1780-3 N '52

Analysis

Colorimetric determination of cyanide and thiocyanate. J. M. Kruse and M. G. Mellon. bibliog Anal Chem 25:446-50 Mr '53
Colorimetric determination of cyanide, cyanate, and thiocyanate in sewage and plating wastes. J. M. Kruse and M. G. Mellon. bibliog Sewage & Ind Wastes 24:1254-9 O '52; Same. Metal Finishing 51:99-102 Je '53

THIOCYANIC acid
o-Mercapto-azo-compounds; action of thiocyanic acid on diazotised *o*-nitroarylamines. A. Burawoy and C. Turner. Chem Soc J p959-62 Mr '53
Structure of HNCS from microwave spectra. G. C. Dousmanis and others. J Chem Phys 21:1416-17 Ag '53

THIODIALANINE
New synthesis of cystine and lanthionine. R. O. Atkinson, F. Poppelsdorf and G. Williams. Chem Soc J p580-1 F '53

THIOHYDANTOINS. See Hydantoins

THIOINDOXYL
Thio-oxindole, thioindoxyl, and certain carbonyl derivatives. R. H. Glauert and F. G. Mann. Chem Soc J p2127-35 Je '52

THIOKOL
Biological deterioration of polysulfide polymers employed as linings for gasoline storage tanks. F. H. Allen and D. Fore, jr. il Ind & Eng Chem 45:374-7 F '53
Development of thiokol polymer protective coatings for steel. A. P. Massa, H. Colon and W. F. Schurig. bibliog il Ind & Eng Chem 45:775-82 Ap '53

THIOLS. See Mercaptans

THIOLUTIN. See Antibiotic substances

THIONAPHTHALENE
1 : 2-Dihydro-2-thianaphthalene derivatives; further examples of the conversion of 1 : 2-dihydro-1-keto-2-thianaphthalenes into indanones. J. J. Brown and G. T. Newbold. Chem Soc J p4397-403 N '52

THIONAPHTHENE
Bromination, iodination and phenylation of thianaphthenes. R. Gaertner. Am Chem Soc J 74:4950-1 O 5 '52
Direct conversion of thionaphthen into derivatives of 9-thiafluorene. W. Davies, N. W. Gamble and W. E. Savige. Chem Soc J p4678-83 D '52

THIONIC acids

Analysis

Determination of polythionic acids. R. R. Jay. bibliog Anal Chem 25:288-90 F '53

THIONOCARBAMIC acid
Associating effect of the hydrogen atom; the S-H-N bond; esters of thion- and dithio-carbamic acids. A. A. Burrows and L. Hunter. Chem Soc J p4118-22 N '52

THIONYL chloride
Kinetics and mechanism of the reaction between thionyl chloride and dibutyl sulfite. P. D. Bartlett and H. F. Herbrandson. bibliog Am Chem Soc J 74:5971-4 D 5 '52
Reaction of 1,1-diarylethylenes with thionyl chloride; preparation of 2,2-diarylethene-1-sulfinic acids and some N-aryl-2,2-diphenylethene-1-sulfinamides. S. Patai and A. Patchornik. bibliog Am Chem Soc J 74:4494-6 S 20 '52
Reactions in carboxylic acid-thionyl chloride systems. W. Gerrard and A. M. Thrush. Chem Soc J p2117-20 Jl '53
Stereochemistry of the reactions of *cis*- and *trans*-2-chlorocyclohexanol with thionyl chloride. H. C. Stevens and O. Grummitt. bibliog Am Chem Soc J 74:4876-9 O 5 '52

THIOÖXINDOLE
*mero*Cyanines derived from thio-oxindole; *mero*cyanines having a dimethin chain attached to the 3-thionaphthen nucleus. R. H. Glauert and F. G. Mann. Chem Soc J p2135-44 Je '52
*mero*Cyanines derived from thio-oxindole; *mero*cyanines having a tetramethin, hexamethin or diazadimethin chain attached to the 3-thionaphthen nucleus. R. H. Glauert and F. G. Mann. Chem Soc J p5012-16 D '52
Thio-oxindole, thioindoxyl, and certain carbonyl derivatives. R. H. Glauert and F. G. Mann. Chem Soc J p2127-35 Je '52

THIOPHENE
Attempted dehydrogenation 3,4-disubstituted thiolanes. A. I. Kosak and R. L. Holbrook. bibliog Science 117:231 F 27 '53
Dipole moments of furan and thiophen measured in the dissolved and in the gaseous state. B. Harris, R. J. W. Le Fèvre and E. P. A. Sullivan. Chem Soc J p 1622-6 My '53
New synthesis of arsonic acids; coupling of furan, thiophen, and β-2-thienylacrylic acid with arsanilic acid. W. Freund. Chem Soc J p3073-5 Ag '52
Novel N-alkylation reaction. I. A. Kaye, C. L. Parris and N. Weiner. bibliog Am Chem Soc J 75:744-5 F 5 '53
3-Substituted thiophenes; alkamine esters of phenyl-3-thienylglycolic acid. E. Campaigne and R. C. Bourgeois. bibliog Am Chem Soc J 75:2702-4 Je 5 '53
Sulfination of organolithium derivatives of thiophene and furan. W. E. Truce and E. Wellisch. bibliog Am Chem Soc J 74:5177-9 O 20 '52
Thiophen derivatives of potential biological interest; the chemistry of 5-substituted thiophen-2-aldehydes. N. P. Buu-Hoï, N. Hoán and D. Lavit. Chem Soc J p4590-3 D '52
Thiophen derivatives of potential biological interest; tuberculostatic thiophen compounds. N. P. Buu-Hoï and others. Chem Soc J p547-9 F '53
Thiosemicarbazones of thiophene derivatives. E. Campaigne and others. bibliog Am Chem Soc J 75:988-9 F 20 '53
Vapor phase halogenation of thiophene and 2-methylthiophene. C. D. Hurd and H. J. Anderson. bibliog Am Chem Soc J 75:3517-20 Jl 20 '53

Analysis

Colorimetric determination of thiophen in pure benzoles by the alloxan and isatin reagents. K. H. V. French. J Ap Chem 2:664-6 N '52
Determination of thiophene by oxidative decomposition with nitric acid. L. S. Levitt and E. Howard, jr. bibliog Anal Chem 25:196-7 Ja '53

THIOPHENE—Analysis—*Continued*
Thiophenes in shale-oil naphtha. I. W. Kinney, jr., J. R. Smith and J. S. Ball. bibliog Anal Chem 24:1749-54 N '52

THIOPHOSGENE
Excited electronic states and molecular vibrations of thiophosgene. J. Duchesne. bibliog J Chem Phys 21:548-9 Mr '53

THIOPHRENE
Attempted dehydrogenation of 3,4-disubstituted thiolanes. A. I. Kosak and R. L. Holbrook. bibliog Science 117:231 F 27 '53

THIOPHTHENE
Orientation of substitution in the isomeric thiophthens; the synthesis of solid thiophthen [thiopheno(3′ : 2′-2 : 3)thiophen]. F. Challenger and J. L. Holmes. Chem Soc J p 1837-42 Je '53

THIOSEMICARBAZIDE
Spectrophotometric investigations of some complexes of ruthenium; ruthenium reactions with thiosemicarbazide, 4-phenylthiosemicarbazide and diphenylthiocarbazide. R. P. Yaffe and A. F. Voigt. bibliog Am Chem Soc J 74:5043-6 O 20 '52

THIOSEMICARBAZONES
Preparation of *p*-acetaminobenzaldehyde thiosemicarbazone. A. Das and S. L. Mukherjee. bibliog Am Chem Soc J 75:1241-2 Mr 5 '53
Thiosemicarbazones of thiophene derivatives. E. Campaigne and others. bibliog Am Chem Soc J 75:988-9 F 20 '53

THIOSULFATES
Effect of salt concentration and temperature on the ultraviolet absorption spectra of aqueous thiosulfate and sulfite. D. P. Ames and J. E. Willard. bibliog Am Chem Soc J 75:3267-8 Jl 5 '53

THIOSULFURIC acid
Dissociation constants of thiosulphuric acid. F. M. Page. Chem Soc J p 1719-24 Je '53

THIOURACIL
Adrenal hypertrophy in the white leghorn cockerel after treatment with thiouracil and thyroidectomy. D. M. Morris. Science 117:61-2 Ja 16 '53

THIOUREA
Addition reactions of quinones; the reaction of cysteine and thiourea and its derivatives with some quinones. H. Burton and S. B. David. Chem Soc J p2193-6 Je '52
Emil Alphonse Werner; research on thiourea. W. R. Fearon. Chem Soc J p2947-52 Jl '52
Preparation of 2-substituted-4-methyl-5-carbethoxythiazoles; condensation of ethyl acetoacetate with substituted thioureas. M. K. Rout and H. K. Pujari. bibliog Am Chem Soc J 75:4057-8 Ag 20 '53
Reaction of osmium tetroxide with thiourea. R. D. Sauerbrunn and E. B. Sandell. bibliog Am Chem Soc J 75:3554-6 Jl 20 '53
Thiourea adducts of *n*-paraffins. R. L. McLaughlin and W. S. McClenahan. Am Chem Soc J 74:5804-5 N 20 '52
Thioureas and thiouronium salts; some reactions of 1,1,3-trimethyl-2-thiourea. H. Z. Lecher and K. Gubernator. bibliog Am Chem Soc J 75:1087-92 Mr 5 '53

THIOXANTHONES. See Xanthione

THIURONIUM compounds
Thioureas and thiouronium salts; some reactions of 1,1,3-trimethyl-22-thiourea. H. Z. Lecher and K. Gubernator. bibliog Am Chem Soc J 75:1087-92 Mr 5 '53

THIXOTROPY.
Explanation of tackypyknosis. R. N. Thompson. J Phys Chem 56:766-7 Je '52
Rheological system for analyzing the flow properties of pseudoplastic and thixotropic pseudoplastic materials. R. N. Thompson and G. D. Hansen. Tappi 36:sup 172A-4A F '53

THOMAS, Charles Allen, 1900-
C. A. Thomas receives gold Oscar for Monsanto's annual report. por Chem & Eng N 30:4734+ N 10 '52
Perkin medal. pors Chem & Eng N 31:330-1, cover Ja 26 '53
Portrait. Bsns W p 110 Mr 14 '53
Wins Perkin medal for 1953. por Oil Paint & Drug Rep 162:5+ D 1 '52

THOMAS, Lowell, 1892-
Portrait. Fortune 47:93 Ja '53

THOMAS, Norman (Mattoon), 1884-
Tells of journalism career. N. Thomas. por Ed & Pub 86:55 Ja 17 '53

THOMAS, Robert J. 1912-
Second ADR award presented to Lyle, Iannarone and Thomas. por Am Dyestuff Rep 41:865 D 22 '52

THOMAS autometer. See Sulfur dioxide—Analysis

THOMASCOLOR, inc.
SEC accounting series release no.73; the Thomascolor case. J Account 95:83-96+ Ja '53

THOMPSON, Claribel
If you love people, you understand them is philosophy of Claribel Thompson; editor of Lone Star's employee paper. W. C. Grant. pors Gas Age 111:42-4+ My 7 '53

THOMPSON, Ernest Othmer, 1892-
Portrait. Bsns W p 104 F 21 '53

THOMPSON, Joseph Hamilton, 1900-
Sketch. por Explosives Eng 31:36-7 Mr '53

THOMPSON, Roy J.
Picture interview. Nat Pet N 45:28-9 Ap 8 '53

THOMPSON, Tommy
Designer of ATF's new Quillscript type face. L. H. Allen. pors Inland Ptr 130:36-7 Ja '53

THOMPSON, William
Businessmen in the news. por Fortune 46:47 D '52

THORIA. See Thorium oxide

THORIUM
Angular distribution of fission fragments in the photofission of thorium. E. J. Winhold and others. diags Phys R 87:1139-40 S 15 '52
Chemistry of thorium; some observations on thorium hypophosphate. T. Moeller and G. Q. Dawson. bibliog Am Chem Soc J 75:3572-4 Jl 20 '53
Thorium. L. Sanderson. Can Min J 74:68-9 Jl '53
Thorium and its sources in the western hemisphere. A. J. Strod. bibliog Am Cer Soc Bul 32:122-3 Ap 15 '53
Total fast neutron cross sections of Co, Ga, Se, Cd, Te, Pt, Au, Hg, and Th. M. Walt and others. Phys R 89:1271-2 Mr 15 '53

Analysis

Amperometric titration method for thorium in the presence of the rare earths of monazite sand. L. Gordon and C. R. Stine. bibliog Anal Chem 25:192-4 Ja '53
Determination of microgram quantities of thorium in water; extension of colorimetric method. A. E. Taylor and R. T. Dillon. bibliog Anal Chem 24:1624-5 O '52
Gravimetric determination of thorium and rare earth elements in magnesium alloys. G. B. Wengert and others. bibliog Anal Chem 24:1636-8 O '52
Method for determination of small amounts of rare earths and thorium in phosphate rocks. C. L. Waring and H. Mela, jr. bibliog Anal Chem 25:432-5 Mr '53
Spectrophotometric determination of aluminum in thorium; extraction of aluminum with 8-quinolinol in chloroform. D. W. Margerum, W. Sprain and C. V. Banks. bibliog Anal Chem 25:249-52 F '53
Spectrophotometric determination of thorium in monazite sands. C. V. Banks and C. H. Byrd. bibliog(51 ref) Anal Chem 25:416-19 Mr '53
Studies of the solvent extraction behavior of the transition elements; isolation of gram quantities of Th^{230} (ionium) from a pitchblende residue. D. F. Peppard and others. bibliog Am Chem Soc J 75:4576-8 S 20 '53

Bibliography

Bibliography and index of literature on uranium and thorium and radioactive occurrences in the United States; Arizona, Nevada, and New Mexico. M. Cooper. Geol Soc Bul 64:197-234 F '53

Isotopes

Alpha-gamma angular correlation in radiothorium. J. Battey and others. bibliog Phys R 89:182-5 Ja 1 '53
Influence of the nuclear quadrupole moment on the α-γ angular correlation in radiothorium. A. Abragam and R. V. Pound. Phys R 89:1306-7 Mr 15 '53
Interaction of uranyl ions with $UX_1(Th^{234})$ in acid solution. I. Adler and J. Steigman. bibliog J Phys Chem 57:440-3 Ap '53

THORIUM—Isotopes—*Continued*

Isotope shifts in thorium—Th 230 and Th 232. G. L. Stukenbroeker and J. R. McNally, jr. bibliog il Opt Soc Am J 43: 36-41 Ja '53

Peptization of UX_1 by various metallic ions; a possible mechanism. I. Adler and J. Steigman. diag J Phys Chem 57:443-8 Ap '53

Proton induced reactions of thorium—fission yield curves. H. A. Tewes and R. A. James. bibliog Phys R 88:860-7 N 15 '52

Radiations of Th^{231}(UY). M. S. Freedman and others. bibliog diag Phys R 89:302-9 Ja 1 '53

Radiochemical studies on the fission of Th^{232} with Li+D neutrons. A. Turkevich and others. bibliog Phys R 89:552-5 F 1 '53

Radiochemical studies on the photofission of thorium. D. M. Hiller and D. S. Martin, jr. bibliog Phys R 90:581-5 My 15 '53

See also

Ionium

THORIUM chloride

Relative toxicity of lanthanum, tantalum, and thorium compounds in the developing chick embryo. L. J. Machlin and others. bibliog A M A Archives Ind Hygiene & Occup Med 6:441-4 N '52

THORIUM compounds

Chemistry of thorium; some observations on the 8-quinolinol chelates of thorium. T. Moeller and M. V. Ramaniah. bibliog Am Chem Soc J 75:3946-9 Ag 20 '53

THORIUM hypophosphate

Chemistry of thorium; some observations on thorium hypophosphate. T. Moeller and G. Q. Dawson. bibliog Am Chem Soc J 75: 3572-4 Jl 20 '53

THORIUM oxides

Arc-melting of non-metallic materials and a re-determination of the beryllia-thoria system. G. A. Geach and M. E. Harper. bibliog il Metallurgia 47:269-71 My '53

Magnetic susceptibility of urania-thoria solid solutions. J. K. Dawson and M. W. Lister. Chem Soc J p5041-2 D '52

Optical properties of crystalline thoria. O. A. Weinreich and W. E. Danforth. Phys R 88:953-4 N 15 '52

Phosphorescence of thoria. C. E. Mandeville and H. O. Albrecht. il Phys R 90:992-3 Je 1 '53

Vapor pressure of thorium oxide from 2050 to 2250°K. E. Shapiro. bibliog diag Am Chem Soc J 74:5233-5 O 20 '52

THORIUM phosphates

Radiometric determination of the solubilities of thorium and certain rare earth metal hypophosphates. T. Moeller and G. H. Quinty. bibliog Am Chem Soc J 74:6123 D 5 '52

THORIUM selenides

Crystal structures of $ThSe_2$ and Th_7Se_{12}. R. W. M. D'Eye. Chem Soc J p 1670-2 Je '53

Thorium-selenium system. R. W. M. D'Eye, P. G. Sellman and J. R. Murray. pl Chem Soc J p2555-62 Jl '52

THOUGHT and thinking

Can executives be taught to think? P. Stryker. Fortune 47:138-41+ My '53

Solve design problems with a creative approach. L. W. Guth. Gen Elec R 56:55-8 Jl '53; Same cond. Machine Design 25:348+ O '53

THREAD cutting

Chase acme threads in one lathe cut. D. Lorimer. diags Am Mach 96:147 O 27 '52

Form-grinding of worm threads. W. A. Tuplin. diags Mach 59:174-9 D '52

How to chase cast-brass threads. O. F. Lambert. il diags Am Mach 97:122 Mr 30 '53

Thread cutter. il Tool Eng 29:117 D '52

Thread cutting in power plant maintenance work. C. A. Lee. diags Power Eng 56:82 D '52

See also

Screw threads

THREAD rolling

Flexible metal hose raises efficiency of thread-rolling machine. il Mach 60:194 S '53

Thread rolling; 19,440 pieces per hour. il Steel 132:143 My 4 '53

THREADING machines

Landmaco machine precision threads large-diameter work. il Am Mach 97:180 Jl 6 '53; Automotive Ind 109:65 Jl 15 '53

Lindner thread grinder handles pitch angles as high as 40°. il Am Mach 97:194 Ap 27 '53

1953 American Machinist production preview. il Am Mach 97:167-9 Ja 19 '53

Sheffield small thread grinder for close tolerances, fine pitch threads. il Am Mach 96:167 D 8 '52

Thread-milling cutters; reference book sheet. E. Zook. diags Am Mach 97:131, 133 Mr 30 '53

What's ahead the next ten years in machining. Am Mach 96:E21-2 Mid-N '52

THREE states natural gas company

Stock sold. Comm & Fin Chr 177:2502 Je 8 '53

THREITAN

Threitan and erythritan and their reaction with periodate. H. Klosterman and F. Smith. bibliog Am Chem Soc J 74:5336-9 N 5 '52

THREONINE

Chemistry of antimycin A; the structure of antimycic acid. G. M. Tener, E. E. van Tamelen and F. M. Strong. bibliog Am Chem Soc J 75:3623-5 Ag 5 '53

Reaction of formaldehyde with D-threonine. D. C. Carpenter. bibliog Franklin Inst J 225:209-14 Mr '53

Analysis

Simultaneous estimation of threonine and serine. B. A. Neidig and W. C. Hess. bibliog Anal Chem 24:1627-8 O '52

THROAT

See also

Trachea

THROMBIN

Effect of toluidine blue on the coagulation of fibrinogen by thrombin. T. J. Haley and B. Rhodes. bibliog Science 117:604-6 My 29 '53

Effects of ionic strength on the interaction of bovine fibrinogen and thrombin. D. F. Waugh and M. J. Patch. bibliog J Phys Chem 57:377-82 Mr '53

THRUST bearings. See Bearings, Thrust

THULE, Greenland

Construction details bared on Thule air base project. V. B. Smith. il Eng N 149:21-3 O 2 '52

THURMAN, Charles Hubbard

E&MJ salute for outstanding service. por Eng & Min J 154:123 O '53

THURSTON chemical company

Stock offerings. Comm & Fin Chr 176:2169 D 8 '52

THYMIDINE

Involvement of thymidine in the utilization of 5-amino-4-imidazole-carboxamide. J. M. Weaver and W. Shive. bibliog Am Chem Soc J 75:4628 S 20 '53

Nucleotides; mononucleotides derived from thymidine; identity of thymidylic acid from natural sources with thymidine-5′ phosphate. A. M. Michelson and A. R. Todd. Chem Soc J p951-6 Mr '53

Analysis

Isolation of thymidine by means of the chromatopile. W. Drell. bibliog Am Chem Soc J 75:2506 My 20 '53

THYMINE

Improved colorimetric method for the quantitative estimation of thymine; abstract. E. D. Day and W. A. Mosher. Franklin Inst J 254:423 N '52

THYMOTIDES

Spontaneous optical resolution of solvated tri-*o*-thymotide. A. C. D. Newman and H. M. Powell. diags Chem Soc J p3747-51 O '52

THYRATRON

Fast-response high-current thyratron power supplies for inductive loads. J. H. Burnett. diags Elec Eng 72:627-30 Jl '53

Free-wheeling thyratrons cut autopilot weight. C. G. Yates. il diags Electronics 26: 103-5 Mr '53

Hydrogen thyratron. il R Sci Instr 23:510-11 S '52

Improving gas-tube grid circuit reliability. J. H. Burnett. bibliog diags Elec Eng 72:341-6 Ap '53; Same. Tele-Tech 12:70-2+ Ap '53

Initial conduction interval in high speed thyratrons. J. B. Woodford, jr. and E. M. Williams. il diags J Ap Phys 23:722-4 Jl '52

THYRATRON—*Continued*
Press safety control uses radioactive wristband. M. E. Simonton and J. Yeiser. il diags Electronics 26:114-15 Ja '53
Simple a.c. mains operated thyratron relay. G. K. M. Pfestorf. diag J Sci Instr 29:378 N '52
Suppressor grid control of thyratrons. H. L. Armstrong. diag Electronics 26:208+ F '53
Using arc-discharge tubes in regulated low-voltage supplies. G. E. Boggs. diags Radio Com 12:25+ O '52

THYROID gland
Adrenal hypertrophy in the white leghorn cockerel after treatment with thiouracil and thyroidectomy. D. M. Morris. Science 117:61-2 Ja 16 '53
Antithyroid activity of some compounds that inhibit peroxidase. I. N. Rosenberg. bibliog Science 116:503-5 N 7 '52
Stimulation *in vitro* of phospholipid synthesis in thyroid tissue by thyrotrophic hormone. M. E. Morton and J. R. Schwartz. bibliog Science 117:103-4 Ja 30 '53
See also
Thyroxine

THYROXINE
Reaction of thyroxine with aromatic isocyanates. A. Rodgman and W. R. Franks. bibliog Am Chem Soc J 74:6296-7 D 20 '52
Synthesis of thyroxine and related substances; a synthesis of D-thyroxine. J. Elks and G. J. Waller. Chem Soc J p2366-70 Je '52
Synthesis of thyroxine and related substances; diphenylamines. R. C. Cookson. Chem Soc J p643-54 F '53
Synthesis of thyroxine and related substances; some further analogues of thyroxine. J. H. Barnes and others. Chem Soc J p 1448-64 My '53

THYROXINE, Analogs of
Synthesis of thyroxine and related substances; the preparation of some simple analogues of thyroxine. J. H. Barnes and others. Chem Soc J p764-77 Mr '53

TIDE water associated oil corporation
Security I like best. A. Huber. Comm & Fin Chr 176:2490 D 25 '52

TIDES
Pneumatic tide generator. diags Comp Air Mag 58:24 Ja '53

TIE-in advertisements. See Advertising, National—Local tie-in

TIGLIC acid
Ultraviolet-induced isomerization of tiglic acid to angelic acid. S. W. Pelletier and W. L. McLeish. bibliog Am Chem Soc J 74:6292-3 D 20 '52

TIGRETT, Isaac Burton, 1879-
I. B. Tigrett becomes corporate chairman of the Gulf, Mobile & Ohio. por Ry Age 133:96-7 D 1 '52

TILE construction
Evaporative cooling of a residential roof; test results at the Acme ceramic housing project. R. A. Bacon and W. E. Long. il diags Heat & Ven 49:79-82 N '52
Pre-stressed tile beams; Stahlton process. L. R. Whitaker. il diags Brick & Clay Rec 122:50-1 My '53; Discussion. S. J. Galvin. 123:10 Jl '53
University of California engineers test ceramic prestressing system. il Eng N 150:210 F 19 '53

TILES
Heller report reviewed. D. Whitlock. Brick & Clay Rec 123:42-4 Ag; 48-50 S '53
Krager does it with tile; U.S. tile and plumbing co. il Dom Eng 180:91-3+ D '52
Prestressing; tensioned ceramics show promise for building. il Iron Age 170:104 D 4 '52
You can eliminate green efflorescence. A. J. Hammer. Brick & Clay Rec 123:37+ S '53
See also
Concrete tile
Drain tile
Tile construction

Manufacture

European brick and tile making. T. W. Garve. flow sheet il plan diags Am Cer Soc Bul 32:171-7 My 15 '53
How Robco controls glazed tile. il Brick & Clay Rec 122:36-7 Je '53
How water affects glazes. J. R. Hill. il Brick & Clay Rec 121:63 O '52
Hydraulic dry pressing. L. A. Lassman. il Brick & Clay Rec 123:56 Jl '53
Makes dry pressed hollow tile on a George press; Kendrick brick and tile co. il Brick & Clay Rec 123:56-7 S '53
Manufacturing promenade tile. M. W. Blair. diags Brick & Clay Rec 123:53-5 Ag '53
Ridding iron ups standard output 20 per cent; Orange county ceramic tile mfg. co. il Cer Ind 60:72-3 Mr '53
Strain gages control pugmill water. diag Brick & Clay Rec 121:28 D '52
Structural clay products glazing. R. R. Danielson and others. bibliog il diags Brick & Clay Rec 121:52-62 S; 70-1+ N '52
Tile defects; sizing can be fouled up anywhere. H. Schatzkin. Cer Ind 59:93+ D '52

TILESTON and Hollingsworth company
Second-team directors score for Tileston & Hollingsworth. Paper Tr J 137:18 Ag 28 '53

TILLING, Thomas, limited
Statement by the chairman. W. L. Fraser. Economist 167:255 Ap 25 '53

TILLS. See Glacial geology

TIMBER
See also
Forests and forestry
Lumber
Lumbering
Mine timber
Trees
Wood

TIME clocks
Why the time clock? Aesop Glim. Ptr Ink 242:72 Mr 13 '53

TIME keeping
Timekeeping for incentives and process control. G. R. Myers. N A C A Bul 34:246-53 O '52
See also
Time clocks

TIME series
Statistical errors in measurements on random time functions. W. B. Davenport, jr. and others. bibliog J Ap Phys 23:377-88 Ap '52
Theory of time series for waveform-transmission systems; abstract. W. E. Thomson. bibliog Inst E E Proc 100 pt 3:112-14 Mr '53

TIME signals, Radio
Precision measurement of shaft speeds; use of 440-cycle tone from station WWV as standard. O. V. Riley. il diags Electronics 24:104-5 O '51; Same abr. Product Eng Hdbk p E23 '53
Three-tone oscillator broadcasts time signal. S. Feldman. il diags Electronics 26:162-3 S '53

TIME study
Allocation of machines to operators. T. F. O'Connor. Inst Mech Eng Proc (B) 1B no 1:19-25; Discussion. 25-32 '52
Annual time study and methods conference, 8th, New York, April 16-17; program. Advanced Management 18:18 F '53
Arc welding time standards; management data sheet. P. Broadstone. Factory Management 111:154, 156 Ja '53
Bringing delivery route costs under standards. W. D. Holdsworth. N A C A Bul 34:254-62 O '52
Control of brickmaking costs through motion-time-analysis. A. B. Segur. Am Cer Soc Bul 32:47-8 F 15 '53
How management can use timestudy. P. Carroll. Advanced Management 17:2-5 Ag '52
How to reduce lease operating expenses by methods studies. R. C. Filson. diags World Oil 136:60-1+ F '53
Important facts about time study men. Factory Management 111:126-7 F '53
Incentive standards reduce costs in metal-finishing operations. A. F. Cuoco and A. S. Hylicke. Tool Eng 31:68-74 Ag '53
Looking at work; recommended syllabus for time study technicians. Economist 165:418 N 8 '52
New motion time method defined; General electric co. H. C. Geppinger. il diags Iron Age 171:106-8 Ja 8 '53
New time study program; how to put it over. P. J. Latzer. Personnel 29:476-9 My '53
Predetermined time standards. Factory Management 111:134-9 S '53

TIME study—*Continued*

Predetermined time values told us to break with tradition; H. H. Brown shoe co. O. Woerner and J. Indeck. il Factory Management 110:88-9 N '52

Putting piece rates in order; Hercules steel products co. il Mod Ind 26:13-14+ Jl '53

Selling time study on the job. G. S. Odiorne. Personnel 30:33-4 Jl '53

Time for screw-machine parts; nomograph; reference book sheet. I. Zórich. Am Mach 97:181 S 14 '53

Time study rating as measurement. E. S. Buffa. Advanced Management 18:20-2 Mr '53

Time study research. C. L. M. Kerkhoven. Advanced Management 17:22-5 N '52

What do your foremen do? G. Nadler. Mill & Factory 53:88-92 O '53

See also

Motion study

Production standards

Delay allowances

Check your ratio delay; p charts improve methods for determining downtime. G. Nadler and D. H. Denholm. Iron Age 170:110-13 N 27 '52

Easy way to allow for machine interference. T. F. O'Connor. Textile World 102:100-1+ D '52

Terminology

Glossary of terms used in methods, time study, and wage incentives. Iron Age 171: 156-8+ Je 4; 142-5 Je 11 '53 (reprints $1)

TIME study (of machinery)

How to figure machining time by the Direct Data method. P. Anjanos. diags Mill & Factory 52:121-3 My '53

Time for drilling mild steel; reference book sheet. V. G. Hotchkiss. Am Mach 97:149 Ag 3 '53

TIMEKEEPING. See Time keeping

TIMEPIECES

See also

Watches

TIMING devices

Gel-time meter. R. E. Burnett. Franklin Inst J 254:557 D '52

Linear scale velocity meter. R. S. Mackay. il diags Electronics 25:158-61 O '52

Multi-duty synchronous process timer. Engineer 194:564 O 24 '52

Paced-piece maker helps trainees reach standard sooner. F. L. Hertig. il Factory Management 111:150-1 O '53

Photographic exposure timers providing compensation for supply-voltage variations. R. J. Hercock and D. M. Neale. bibliog diags Inst E E Proc 99 pt 2:507-15 O '52

Test set for recording impulses. L. J. Nijs. il diag Elec Com 30:9-11 Mr '53

Time totalizer measures elapsed time intervals. il Product Eng 24:256 Ap '53

Timer cuts Heliarc welding costs. il Welding J 32:742-3 Ag '53

Timing belts drive spindles in duplicator. il diags Product Eng 24:162-5 My '53

Testing

Simple high-speed air spinner for centrifugal testing of small mechanical devices. C. E. Bild and P. F. Vial. il diag A S M E Trans 75:515-18; Discussion. 518-19 My '53

TIN

Chemical engineering materials of construction; tin and its alloys. R. J. Nekervis. bibliog(102 ref) il Ind & Eng Chem 44: 2360-4 O '52

Evidence for preferential one-step divalent changes in the molybdate-catalyzed reduction of perchlorate by stannous ion in sulfuric acid solution. G. P. Haight, jr. and W. F. Sager. bibliog Am Chem Soc J 74: 6056-9 D 5 '52

Molecular evaporation of group IVB elements. R. E. Honig. J Chem Phys 21:573-4 Mr '53

Multiplicity of neutrons from the interaction of μ^- mesons at rest in Pb, Bi, Sn, and Al. M. Widgoff. bibliog diag Phys R 90:891-9 Je 1 '53

Recovery of tin from scrap tinplate. A. J. Krombholz. flow chart il Iron & Steel Eng 30:98-105; Discussion. 105-6 Mr '53

Screw dislocations in thin rods. J. D. Eshelby. diags J Ap Phys 24:176-9 F '53

Studies in the corrosion of metals occasioned by aqueous solutions of some surface-active agents; tin. T. K. Ross. il J Ap Chem 2:526-31 S '52

Tin and tin alloys; engineering file facts. Materials & Methods 37:127 Mr '53

Tin in canned foods; reduced limits recommended. Chem Age (Lond) 68:175 Ja 24 '53

US weighing Bolivian tin offer of one-year accord. Oil Paint & Drug Rep 162:3 D 29 '52

Velocity of sound in superconducting lead and tin. H. Bömmel and J. L. Olsen. Phys R 91:1017-18 Ag 15 '53

See also

Tin plate

Analysis

Photometric determination of impurities in tin. W. C. Coppins and J. W. Price. bibliog Metallurgia 48:149-56 S '53

Semi-quantitative spot test for tin in magnesium and aluminium alloys. J. Clark. and W. Stross. Metallurgia 46:215-16+ O '52

Spot testing for rapid identification of tin, cadmium and zinc of very thin coatings. F. Breh. Metal Prog 63:88-9 F '53

Tin assay shortcut speeds control. C. Goldberg. Iron Age 171:130-1 My 28 '53

Volumetric procedure for analysis of tin in copper-base alloys. R. Rapport. il Foundry 81:115 Ag '53

Isotopes

De Haas-van Alphen effect in enriched tin isotopes. T. G. Berlincourt. bibliog Phys R 88:242-8 O 15 '52

Gamma-rays from Sn^{125}. C. E. Mandeville and others. Phys R 88:554-5 N 1 '52

Measurement and interpretation of the *K* Auger intensities of Sn^{113}, Cs^{137}, and Au^{198}. C. D. Broyles and others. bibliog diag Phys R 89:715-24 F 15 '53

Search for double beta-decay in Sn^{124} and Zr^{96}. J. A. McCarthy. bibliog diags Phys R 90: 853-7 Je 1 '53

Prices

Nonferrous prices; tabulation. Steel 132:173 Ja 5 '53

Straits tin, prompt price, 1938-1952; tabulation. Iron Age 171:421 Ja 1 '53

Tin price recovery seen by some metal dealers. Barron's 33:35-6 Ap 13 '53

TIN, Molten

Influence of ramming and of sintering on the penetration of molten metals into compacted silica-sand mixes. T. P. Hoar and others. bibliog 2pls diags Iron & Steel Inst J 175:19-29 S '53

TIN alloys

Chemical engineering materials of construction; tin and its alloys. R. J. Nekervis. bibliog(102 ref) il Ind & Eng Chem 44:2360-4 O '52

Electrodeposition of zinc-tin alloy. E. Bertorelle and F. Fogliani. diag Chem Age (Lond) 68:253-4 F 7 '53

Thermodynamic properties of the liquid ternary system bismuth-cadmium-tin. S. Mellgren. bibliog Am Chem Soc J 74:5037-40 O 20 '52

Tin and tin alloys; engineering file facts. Materials & Methods 37:127 Mr '53

Tin-base bearing metals; engineering file facts. Materials & Methods 37:129 Mr '53

Tin-nickel alloy and nickel/chromium coatings; abstract and discussion. S. C. Britton and others. Chem & Ind p 1152-3 N 22 '52

TIN bromides

Stability constants of the stannous bromide complexes from 0 to 45° from electromotive force measurements. C. E. Vanderzee. bibliog Am Chem Soc J 74:4806-8 O 5 '52

TIN cans

Plate qualities required in can manufacturing. S. L. Flugge. Iron & Steel Eng 29:127-9; Discussion. 129-30 D '52

TIN chlorides

Chlorostannates of hydrazine and 3 : 5 : 5-trimethylpyrazoline. W. Pugh and A. M. Stephen. Chem Soc J p4138-41 N '52

Effect of the isomeric transition in Br^{80} on its reactivity with the tetrachlorides of carbon, silicon, germanium, and tin. C. C. Coffin and W. D. Jamieson. J Chem Phys 20:1324-5 Ag '52

TIN chlorides—*Continued*

Electrolytic dissociation of dimethyltin dichloride. E. G. Rochow and D. Seyferth. bibliog Am Chem Soc J 75:2877-8 Je 20 '53

Ionic polymerization; copolymerization of styrene, *p*-chlorostyrene and α-methylstyrene with meta and para substituted styrenes catalyzed by stannic chloride. C. G. Overberger and others. bibliog Am Chem Soc J 74:4848-53 O 5 '52

Polymerisation of α-methylstyrene catalysed by stannic chloride in ethyl chloride solution. F. S. Dainton and R. H. Tomlinson. Chem Soc J p 151-60 Ja '53

Preparation of carrier-free Sb^{125} from neutron irradiated stannous chloride. J. D. Robinson and M. Kahn. bibliog Am Chem Soc J 75:2004-6 Ap 20 '53

TIN compounds

Bond refractions for compounds of tin, silicon, lead, mercury, and germanium. W. T. Cresswell and others. Chem & Ind p 19 Ja 3 '53

Compounds of the dimethyltin cation and their similarity to compounds of divalent tin and lead. E. G. Rochow, D. Seyferth and A. C. Smith, jr. bibliog Am Chem Soc J 75:3099-101 Jl 5 '53

Exaltation of refraction in branched-chain organometallic compounds; tertiary alkyl tin compounds. R. West, M. H. Webster and G. Wilkinson. Am Chem Soc J 74:5794-5 N 20 '52

Fragments of chemistry; silicon, germanium, and tin. C. A. Kraus. J Chem Educ 29:488-91 O '52

Hydrazine; the bromostannates and bromostannites of hydrazine, dimethyl ketazine, and pentan-3-one hydrazone. W. Pugh. Chem Soc J p2491-3 Ag '53

Hydrazine; the hydrazinium salts of complex fluoro-acids of tin, antimony, and bismuth. W. Pugh. Chem Soc J p 1934-6 Je '53

Organo-tin compounds and stabilizers. Chem Age (Lond) 68:5-7 Ja 3 '53

Organotin compounds containing an azo linkage. H. Gilman and S. D. Rosenberg. bibliog Am Chem Soc J 74:5580-2 N 20 '52

Preparation of some trialkyltin-lithium compounds. H. Gilman and S. D. Rosenberg. Am Chem Soc J 75:2507-9 My 20 '53

Reaction of triphenyltin hydride with methyllithium. H. Gilman and S. D. Rosenberg. bibliog Am Chem Soc J 75:3592-3 Jl 20 '53

Some complex organic salts of stannous tin. E. H. Baker and F. C. Tompkins. Chem Soc J p4518-19 N '52

Analysis

Mass spectra of the tetramethyl compounds of carbon silicon, germanium, tin, and lead. V. H. Dibeler. bibliog J Res Nat Bur Stand 49:235-9 O '52

TIN halides

Direct synthesis of organotin halides; preparation of dimethyltin dichloride. A. C. Smith, jr. and E. G. Rochow. bibliog diag Am Chem Soc J 75:4103-5 Ag 20 '53

New preparative methods for organotin halides. A. C. Smith, jr. and E. G. Rochow. Am Chem Soc J 75:4105-6 Ag 20 '53

TIN industry and trade

Tin truce talks open. Economist 167:839+ Je 20 '53

Regulation

Tin allocation curbs are dropped by NPA. Oil Paint & Drug Rep 163:4+ Ja 5 '53

Statistics

Tin, 1952. W. P. Shea. Eng & Min J 154:84-5+ F '53

U.S. tin imports, consumption, smelter output, world tin; tabulations. Steel 132:177 Ja 5 '53

Bolivia

Bolivia takes over tin. il Bsns W p 148-50 N 15 '52

Tin takeover; can Bolivia afford it? Bsns W p 166 N 22 '52

We got what we deserved in Bolivia. Fortune 46:101 N '52

Great Britain

Freeing non-ferrous metals; with tables of production and consumption, 1948-1952. Economist 165:638-40 N 29 '52

TIN iodides

Effect of pressure on diffusion in the system CCl_4-SnI_4. E. P. Doane and H. G. Drickamer. bibliog J Chem Phys 21:1359-61 Ag '53

TIN mines and mining

Bolivia

Future of Bolivian tin mines doubtful under present management. P. Reed. Eng & Min J 153:137-8 D '52

Operations of Patino mines and enterprises at Llallaqua-Uncia mine, Bolivia. K. O'Donnell. flow sheets il plan diags Can Min J 73:41-6 D '52

Congo, Belgian

Geomines; major open-pit tin producer in the Belgian Congo. H. Barzin. flow sheets il Eng & Min J 153:86-9 N '52

TIN oxides

Heats of formation of stannic and stannous oxides from combustion calorimetry. G. L. Humphrey and C. J. O'Brien. bibliog Am Chem Soc J 75:2805-6 Je 20 '53

X-ray diffraction studies in the system Al_2O_3-SnO_2-TiO_2. W. O. Milligan and B. G. Holmes. bibliog J Phys Chem 57:11-14 Ja '53

TIN plate

Canning; dual-plate gains favor. J. B. Delaney. Iron Age 171:37 Ja 8 '53

Detinners; the tin coat gets thinner. T. Metaxas. Iron Age 171:40-1 Ja 15 '53

Export quota set for production tin plate. 1st and 2d quarter. For Comm W 48:27 D 1 '52; 49:23 Ja 26 '53

New angles on competition. J. B. Delaney. il Iron Age 171:77 Mr 19 '53

Plate qualities required in can manufacturing. S. L. Flugge. Iron & Steel Eng 29:127-9; Discussion. 129-30 D '52

Recovery of tin from scrap tinplate. A. J. Krombholz. flow chart il Iron & Steel Eng 30:98-105; Discussion. 105-6 Mr '53

Secondary tin-plate export quota set; change in licensing policy announced. For Comm W 48:28 D 1 '52

Manufacture

Flash welding and high speed cold reduction of strip steel for tin plate. J. Wargo and R. C. Brunner. il Iron & Steel Eng 30:59-64 Ag '53

Kaiser opens electrolytic tin line. il Steel 131:112 D 8 '52

New tin plate mill now operating; Fontana plant of the Kaiser steel corp. Blast F & Steel Pl 41:347 Mr '53

Replacements for palm oil in cold rolling steel. R. C. Williams. bibliog Iron & Steel Eng 30:65-6 Ag '53; Same cond. Steel 131:102 O 6 '52; Discussion. Iron & Steel Eng 30:66-8 Ag '53

Temper mill drives at the Trostre tinplate works. il diags Engineer 196:265-8 Ag 28 '53

Tinplate; fastest line in production. il Iron Age 171:80-1 My 21 '53

Tin plate now being manufactured by completely modern West Coast mill; Kaiser steel corp. T. G. Simison and M. C. King. il Blast F & Steel Pl 41:489-96+ My '53

Tinplate production in South Wales; new plant at Trostre. il Metallurgia 46:169-74 O '52; diags Engineer 194:413-14, 447-9, 481-4 S 26-O 10 '52; Engineering 174:382 S 19 '52; Electrician 149:829-32, 1097-100 S 19, O 10 '52

Trostre tin-plate works of the Steel company of Wales. il Engineering 174:649-52, pl 51 N 21 '52

Prices

Tinplate at Pittsburgh, 1931-1952; tabulation. Iron Age 171:410 Ja 1 '53

TIN plating

Automatic tinning speeds production. il Elec World 139:106 My 4 '53

Coating test for tinned copper conductors; abstract. M. Zuercher and J. Lueder. Metal Finishing 50:84-5 N '52

TIN plating—*Continued*
Electrodeposition of tin-nickel alloy plate from chloride-fluoride electrolytes. J. W. Cuthbertson and others. bibliog Electrochem Soc J 100:107-19 Mr '53; Excerpts. Metal Finishing 51:64-9 Jl '53
Electrometallurgy of tin and its alloys. E. S. Hedges and J. W. Cuthbertson. bibliog Chem & Ind p 1250-4 D 27 '52
Oil mist tames tinning problems. il Steel 132:80+ Ja 12 '53
Some properties of tin-II sulfate solutions and their role in electrodeposition of tin; solutions with only tin-II sulfate present. C. A. Discher. Electrochem Soc J 100:45-51 Ja '53

TIN sulfates
Some properties of tin-II sulfate solutions and their role in electrodeposition of tin; solutions with only tin-II sulfate present. C. A. Discher. Electrochem Soc J 100:45-51 Ja '53

Analysis

Precipitation of basic stannic sulfate from homogeneous solution. H. H. Willard and L. Gordon. Anal Chem 25:170-2 Ja '53

TIN sulfides
Heat capacities at low temperatures and entropies at 298.16°K. of stannic and stannous sulfides. E. G. King and S. S. Todd. Am Chem Soc J 75:3023-4 Je 20 '53

TIN tetramethyl. See Tetramethyl tin

TIRE chains
Merchandising tire chains. il Nat Pet N 44:74 O 1 '52
New approach to tire chain design solves old problem. Iron Age 171:145 My 28 '53

TIRE fabrics
Alkarylsulfonates as conditioners in wet-twisting cotton tire cord. J. C. Ambelang and others. bibliog Ind & Eng Chem 45:204-10 Ja '53
How Aldora mills makes tire cord. E. D. White. il Textile World 103:108-11 Ag '53
Impact of man-made fibers on the rubber industry. J. W. Illingworth. bibliog il Rubber Age 73:657-63 Ag '53
Longer lasting rayon tires. K. C. Bass. il diag Mod Textiles Mag 34:31+ Ag '53
New, stronger tire rayon is safer, more durable; Super Cordura. il Textile World 103:106-7 O '53
Truck tires of nylon. H. G. Harper. Roads & Eng Constr 90:126+ D '52
Yarns and fabrics in the rubber industry. J. W. Illingworth. bibliog il diags Textile Inst J 44:P328-43; Discussion. P343-6 Ag '53
See also
Rayon cords

Testing

Characterization of cord fatigue in tires. K. R. Williams, J. W. Hannell and J. M. Swanson. bibliog Ind & Eng Chem 45:796-800 Ap '53
Streamline your tire cord tests. R. C. Crawford. diags Mod Textiles Mag 34:48+ Ja '53

TIRE factories

Equipment

Tyre curing. il Automobile Eng 42:414 O '52
Tire plant in the country; McCreary tire & rubber co. J. C. Pierce. il Comp Air Mag 58:94-9 Ap '53

TIRE industry and trade
Amoco, tire firms press quantity discount appeal. Nat Pet N 45:84 F 4 '53
Court decision postponed in tire discount case. Nat Pet N 44:35 N 19 '52
Court dismisses tire suits against FTC. Nat Pet N 44:19 D 3 '52
Court holds fate of FTC bid to kill opposition to tire carload discount. Nat Pet N 44:13-14 O 22 '52
Court trial of FTC tire discount rule approved. India Rubber World 128:653 Ag '53
Goodrich makes up its mind. Bsns W p 140-2+ My 16 '53
See also
Firestone tire and rubber company

Finance

Tire makers; trends in sales and profits, March quarter, representative rubber and tire manufacturers. M. J. Saada. Barron's 33:9-10 My 4 '53

Regulation

Quantity-limit rule and the rubber tire industry. W. W. Leigh. bibliog J Marketing 17:136-55 O '52

Statistics

Shipments of car, truck and bus tires, 1943-1952; tabulations. Automotive Ind 108:99 Mr 15 '53
Tires and tubes, Nov.-Dec. 1951-Jan.-Nov. 1952. Survey of Cur Bsns 33:S37 Ja '53 [cont monthly]
U.S. exports of tires and tubes, 1950-1951; tabulation. Automotive Ind 108:123 Mr 15 '53

Brazil

Brazilian tire industry sees increased production in 1952. Rubber Age 72:375 D '52
Tire industry in Brazil. India Rubber World 127:513+ Ja '53

France

French tire industry makes marked gains. For Comm W 48:30 D 15 '52

TIRE rims
Rimming the Nation's trucks; Goodyear tire and rubber co.'s rim plant. il Steel 132:151 My 4 '53

TIRES, Airplane
Combat tire report from Korea. R. P. Martin. Aviation W 57:36 D 29 '52

Testing

Aircraft tyre testing. il Engineer 194:804-5 D 12 '52; Engineering 174:787-9 D 19 '52

TIRES, Automobile
Goodrich makes up its mind. Bsns W p 140-2+ My 16 '53
Industry agrees on tire rotation need. F. C. Sturtevant. Nat Pet N 45:69 Ap 1 '53
Outlines problems of tire improvement; abstract. A. W. Bull. S A E J 61:125-6+ Je '53
Tires for modern cars. J. J. Robson. Rubber Age 73:386 Je '53
Tubeless tyre. il Engineer 195:763 My 29 '53; Engineering 175:736 Je 5 '53; Automobile Eng 43:286 Jl '53
Tubeless tire has a future. il Bsns W p41-2 Ap 4 '53
Tubeless tire possibilities as original equipment. Automotive Ind 107:52+ O 1 '52
Tubeless tires as factory equipment on passenger cars. Automotive Ind 109:105-6 Ag 1 '53
See also
Tire fabrics

Manufacture

Recent developments in rubber calenders. N. J. Elder. il diags India Rubber World 128:482-4 Jl '53
Tyre curing. il Automobile Eng 42:414 O '52
Use of Hi-Sil in natural rubber white sidewall compounds. R. F. Wolf and others. il Rubber Age 72:765-9 Mr '53

Prices

Second-line tire price controversy. India Rubber World 127:244 N '52

Rating

Automobile tires. il Consumers Res Bul 31:10-12 Ja '53
Effectiveness of winterized and mud-snow tires. Consumers Res Bul 31:25-6 Ja '53

Retreading and recapping

Pays off in more tire recaps; electric steam generator; Muligany tire shop. il Elec West 110:97 Mr '53

Testing

Characterization of cord fatigue in tires. K. R. Williams, J. W. Hannell and J. M. Swanson. bibliog Ind & Eng Chem 45:796-800 Ap '53
Effect of severity of service on the relative abrasion resistance of natural rubber, GR-S-10, and GR-S-100. C. C. Biard and J. F. Svetlik. India Rubber World 127:363-4 D '52
Measurement of treadwear of commercial tires. R. D. Stiehler and others. bibliog il Rubber Age 73:201-8 My '53

TIRES, Automobile—Testing—*Continued*

Study of the factors affecting the friction of tread compounds on ice. C. S. Wilkinson, jr. bibliog il diags India Rubber World 128:475-81 Jl '53

Tire safety at high speeds. J. J. Robson. il S A E J 61:51-3 Ag '53

Ultrasonic method of tire inspection. W. E. Morris and others. bibliog il diags R Sci Instr 23:729-34 D '52; Abstract. Electronics 26:224+ Ap '53

TIRES, Motor truck

Increased truck tire demand forecast. H. S. Firestone, jr. India Rubber World 127:99 O '52

Truck-tire changer. diags Oil & Gas J 51:117+ D 8 '52

Truck tires of nylon. H. G. Harper. Roads & Eng Constr 90:126+ D '52

Testing

Measurement of treadwear of commercial tires. R. D. Stiehler and others. bibliog il Rubber Age 73:201-8 My '53

TIRES, Rubber

Balloon tires; Rolligons. il Mill & Factory 52:250+ My '53

Easy tire mounting; pneumatic tire and rim mounting machine. il diag Safety Maint & Prod 105:22 My '53

LeTourneau develops rubber-tired railroad. il Rubber Age 73:804 S '53

Watermelon tires; Rolligons. il Bsns W p31 Mr 21 '53

See also

Rubber, Artificial—
Tire use
Tires, Automobile

Bibliography

Rubber division library bibliography; tire design and manufacturing, 1941-1951. 30 l Rubber division lib, Univ. of Akron, Akron 4, Ohio '52

Care

Better tire care increases profits. il Constr Methods 34:112-13+ O '52

Keep 'em rolling on good tires; Shen-Penn production co. il Coal Age 58:76-82 Ap '53

Tire life in off-highway service. L. W. Fox. il S A E J 61:26-8 Ja '53

Manufacture

Calendering line for rubber. il diag Westinghouse Eng 13:128-9 Jl 13 '53

Tire molds, an advanced example of the casting art; Goodyear tire & rubber co. il diags Metal Prog 63:97-104 F '53

Tire plant in the country; McCreary tire & rubber co. J. C. Pierce. il Comp Air Mag 58:94-9 Ap '53

Testing

Something new in tire testing; abstract. G. Reinsmith. Rubber Age 72:784 Mr '53

Static conductivity measuring device; patent. diag Electronics 26:244+ S '53

TISHCHENKO reaction

Study of the mixed Tischtschenko reaction. I. Lin and A. R. Day. bibliog Am Chem Soc J 74:5133-5 O 20 '52

TISSUE paper

Record year for tissues forecast. R. A. Fyfe. Paper Tr J 136:143 F 20 '53

Sanitary tissues. C. M. Howell. diags Paper Tr J 135:345-54 N 14 '52

Manufacture

Closure of a tissue machine whitewater system. J. Mardon and R. M. Toller. diags Pulp & Pa of Can 54:81-6 Ja '53

Hoberg starts up new number one machine. il Paper Tr J 135:12 D 19 '52; Paper Ind 34:1204-5 Ja '53

TISSUES

Chemical characterization and submicroscopic structure of elastic tissue; abstract. E. W. Dempsey. Science 116:520 N 14 '52

Histological changes in the tissues of the hibernating marmot following whole body irradiation. K. C. Brace. bibliog Science 116:570-1 N 21 '52

Mechanism of acoustic absorption in tissue. W. J. Fry. bibliog Acoustical Soc Am J 24:412-15 Jl '52

Preparation of wet ashed tissues for liquid counting. C. T. Bahner and others. Science 115:597-8 My 30 '52; Discussion. 116:640 D 5 '52

Suspension bath for the study of isolated tissues in the presence of surface active agents. J. P. Green and others. diag R Sci Instr 24:183-4 F '53

Temperature changes produced in tissue during ultrasonic irradiation. W. J. Fry and R. B. Fry. Acoustical Soc Am J 25:6-11 Ja '53

Temperatures produced in tissues by ultrasound; experimental study using various technics. J. F. Herrick. bibliog il Acoustical Soc Am J 25:12-16 Ja '53

See also

Cells
Histochemistry
Mitochondria
Muscle
Nerves
Tumors

Analysis

Composition of mammalian desoxyribonucleic acids. E. Chargaff and R. Lipshitz. bibliog Am Chem Soc J 75:3658-61 Ag 5 '53

Determination of cholesterol in microgram quantities of tissue. D. J. Cavanaugh and D. Glick. bibliog il diags Anal Chem 24:1839-41 N '52

Microgram and submicrogram determination of phosphate; applications of sealed tube digestion and capillary cell spectrophotometry. F. L. Schaffer, J. Fong and P. L. Kirk. bibliog il diags Anal Chem 25:343-6 F '53

Molecular structure of the galactogen from beef lung. M. L. Wolfrom, G. Sutherland and M. Schlamowitz. bibliog Am Chem Soc J 74:4883-6 O 5 '52

Culture

Establishing long-term cultures of mammalian normal, solid tumor, and ascites tumor cells on glass. R. N. Hull. bibliog Science 117:223-5 F 27 '53

Culture mediums

Collection and storage of chicken plasma for tissue culture. V. Armaghan and others. bibliog il diag Science 117:156-8 F 13 '53

Culture of cell suspensions and some results. H. Grossfeld. il Science 116:597-9 N 28 '52

Ultrafilterable growth factor for tissue culture. S. Rosenberg and P. L. Kirk. bibliog Science 117:566 My 22 '53

TITANATES

Electrical conductivity of some alkaline earth titanates. E. K. Weise and I. A. Lesk. bibliog J Chem Phys 21:801-6 My '53

See also

Barium titanate

TITANIA (gem)

Titania gems. diags Consumers Res Bul 30:19-20 N '52

TITANIUM

Accelerating new material use; titanium in current and future aircraft. J. Van Hamersveld. Machine Design 25:318+ O '53

Air industry use of titanium booms. Aviation W 57:15 N 10 '52

Approach to melting reactive metals eliminates use of refractory containers. T. T. Magel and others. il diags J Metals 4:1286-8 D '52

Be cagey with titanium. J. A. Boyd. Am Mach 97:129 S 14 '53

Behaviour of titanium, vanadium and zirconium towards fusion reagents. R. S. Young and K. G. A. Strachan. Chem & Ind p 154-5 F 14 '53

Certain aspects of the galvanic corrosion behavior of titanium. D. Schlain. bibliog 16pls U S Bur Mines Rep of Invest 4965:1-22 '53

Charging processes on anodic polarization of titanium. C. D. Hall, jr. and N. Hackerman. bibliog J Phys Chem 57:262-8 Mr '53

Chemical engineering materials of construction; less common metals. L. F. Yntema and W. R. Bekebrede. il Ind & Eng Chem 44:2364-70 bibliog(148 ref, p2369-70) O '52

Corrosion of titanium and other alloys studied. W. L. Williams. Iron Age 171:179-80 Ap 2 '53

TITANIUM—*Continued*

Creep properties of commercially pure titanium. W. R. Kiessel and M. J. Sinnott. bibliog diags J Metals 5:Trans 331-8 sec 2 F '53

Creep properties of titanium. D. R. Luster and others. Materials & Methods 37:100-3 Je '53

Cutting titanium down to size; Aircraft gas turbine division, General electric co. B. L. Coughlin. il diags Mill & Factory 53:114-17 S '53

Equipment and design. C. O. Brown. Ind & Eng Chem 45:sup87A-8A+ Ja '53

Flat-die forging of cast-titanium ingots. J. F. Nelson. il Mach 60:164-8 O '53

Forging of titanium requires special techniques. G. S. Tracy. il Mach 59:202-5 Je '53

Forming and welding of titanium. F. H. Stevenson. il Welding J 31:1035-41 N '52

Green light for titanium aircraft. Steel 131:52-3 D 1 '52

Growth spirals originating from screw dislocations on electrolytically produced titanium crystals; abstract. M. A. Steinberg. J Metals 4:1041-2 O '52

Guideposts to titanium cutting. V. J. Gauthier. il Steel 132:76-9 Mr 23 '53

Hall effect in titanium. G. W. Scovil. J Ap Phys 24:226-7 F '53

Hot spinning improves workability of titanium. A. S. Rose. il diags Iron Age 171:119-21 F 19 '53

How GE works titanium in production of jet-engine parts. V. L. Coughlin. il diags Am Mach 97:176-81 F 16 '53

How to descale titanium. A. E. Durkin. bibliog Materials & Methods 38:107-9 O '53

How to grind titanium. L. P. Tarasov. il Am Mach 96:135-46 N 10 '52

How to tap, mill and broach titanium. V. L. Coughlin. il diags Iron Age 171:186-8 Mr 5 '53

Increasing knowledge will spur greater use of Zr and Ti. il Chem & Eng N 31:1415-16 Ap 6 '53

Industry urged to use more titanium; symposium abstract. il Materials & Methods 36:9 N '52

Influence of carbon content on the acid resistance of titanium- and niobium-stabilized 18 Cr, 8-14 Ni steels. H. T. Shirley and J. E. Truman. 2pls Iron & Steel Inst J 172:377-80 D '52

Internal grinding of titanium now possible. E. J. Krabacher. Am Mach 97:201-2 Mr 16 '53

It's easy to braze titanium. H. L. Meredith. il Am Mach 97:120-1 Mr 30 '53

Learning to work titanium. Bsns W p48-9 N 1 '52

Light metals; American foundrymen's society annual meeting, Chicago; abstracts of papers. Foundry 81:162+ Je '53

Logarithmic growth law for the oxidation of titanium. J. T. Waber, G. E. Sturdy and E. N. Wise. Am Chem Soc J 75:2269-70 My 5 '53

Low temperature heat capacities of inorganic solids; heat capacity of titanium from 15 to 305°K. C. W. Kothen and H. L. Johnston. Am Chem Soc J 75:3101-2 Jl 5 '53

Mechanical properties and strain aging effects in titanium; abstract. F. D. Rosi and others. Metal Prog 62:174-6 N '52

Method of centrifugally casting titanium. O. W. Simmons and others. il diag Metal Prog 63:72-4 Mr '53

Middleweight metal grows up. il Steel 131:63 O 20 '52

More jet metal. Bsns W p 128 Ap 11 '53

More progress in titanium. Mod Ind 24:110+ O '52

Navy has large titanium program. E. L. Beardman. J Metals 5:138-9 F '53

New demands lead to new directions in engineering materials. T. C. Du Mond. Materials & Methods 37:85-6 Je '53

New materials in air picture. Aviation W 58:104+ Mr 2 '53

New metal, titanium; its application and processing. R. W. Parcel. il S A E J 60:29-32 D '52

New titanium process gives quality control. Bsns W p 110+ Je 27 '53

Passivity of titanium in hydrochloric acid solutions. D. Schlain and J. S. Smatko. bibliog il Electrochem Soc J 99:417-22 O '52

Production advancements in titanium. C. Ayres. il diag Light Metal Age 10:12-13 D '52

Promise of titanium. Economist 165:414 N 8 '52

Properties, heat treatment, corrosion resistance, etc.; engineering file facts. Materials & Methods 37:125 Je '53

Pure silver forms strongest brazed joints in titanium. H. L. Meredith. il Iron Age 171:143-6 Mr 26 '53

Research and development of methods of vapor deposited coatings for titanium and titanium alloys; abstract. Metal Prog 63:192+ Mr '53

Research findings on brazing and soldering titanium. H. L. Meredith. il diag Automotive Ind 109:34-7+ Ag 15 '53

Some properties of superconductors below 1°K; Zr, Hf, Cd, and Ti. T. S. Smith and J. G. Daunt. bibliog Phys R 88:1172-6 D 1 '52

Status of titanium and titanium alloys. Product Eng Hdbk p B 10-13 '53

Strain sensitivity of commercial purity titanium. J. L. Wyatt. J Metals 4:Trans 1050 O '52

Studies in the deoxidation of iron; deoxidation by titanium. E. L. Evans and H. A. Sloman. bibliog pl Iron & Steel Inst J 174:318-24 Ag '53

Surface contamination and quality in titanium fabrication. V. C. Petersen. il Materials & Methods 38:72-3 Jl '53

Titanium, a survey. P. L. Teed. bibliog map diags Roy Aeronautical Soc J 57:189-207 Ap '53; Same cond. Engineer 195:203-5, 235-7 F 6-13 '53; Same cond. Engineering 175:251-2, 341-2, 413 F 20, Mr 13, 27 '53; Discussion. il Roy Aeronautical Soc J 57:207-12; Reply. 212-14 Ap '53

Titanium and other alloys in corrosive environments; abstract. W. L. Williams. Automotive Ind 108:88+ F 15 '53

Titanium and zirconium castings now practicable. W. E. Kuhn. il diag Materials & Methods 36:94-5 D '52

Titanium can be case hardened by nitriding. E. J. Silk. il Iron Age 170:166-70 N 13 '52

Titanium can be deep drawn; Worcester pressed steel co. J. W. Gulliksen. il Iron Age 171:136-9 F 12 '53

Titanium can replace manganese for sulfur control of steel. J. D. Roach and R. S. Stewart. bibliog Iron Age 171:150-3 Je 4; 126-8 Je 11 '53

Titanium casting research tests shell molded refractories. J. G. Kura. il diags Iron Age 170:88-92 O 30 '52

Titanium conference covers problems, sets base for industrial research. Am Mach 96:160 O 27 '52

Titanium evaluated for ordnance. B. S. Mesick. J Metals 5:136-7 F '53

Titanium forging experience mounts. R. J. Bullock. il Steel 131:104-7 D 15 '52

Titanium; headache with a future. L. R. Frazier. il Aviation W 57:42+ N 3 '52

Titanium in airframes; abstract. E. R. Kostoch. Automotive Ind 108:90+ F 15 '53

Titanium is vital to the air force. J. N. Dick. J Metals 5:133-5 F '53

Titanium may be your solution to critical corrosion problems. Pet Processing 8:155 F '53

Titanium, 1952. A. F. Tumin. Eng & Min J 154:93-4 F '53

Titanium, our number one problem metal. D. I. Brown. bibliog il maps diags Iron Age 170:260-79 O 9; 105-13 O 16 '52

Titanium outlook. il diag Eng & Min J 154:142-5+ Jl '53

Titanium; rutile and ilmenite deposits along Australia's eastern coastline. J. Loughlin. diag Light Metal Age 11:16-17+ F '53

Titanium sponge production rise seen stemming from new accord. Oil Paint & Drug Rep 164:3 Ag 10 '53

Titanium status. W. C. Beck. Mech Eng 74:1014-15 D '52

Titanium; straining to fill needs. R. M. Lorz. Iron Age 171:94 Je 18 '53

Titanium tests; Ryan studies new uses in aircraft structures. il Aviation W 58:41 My 4 '53

Titanium today; abstract. R. S. Radcliffe. Metal Prog 62:190+ N '52

TITANIUM—*Continued*

Titanium, today and tomorrow; based on papers by C. I. Bradford and others. il diags S A E J 61:20-4 My; 56-65 Je '53

Total cross sections of chlorine, sodium, titanium, and bromine for fast neutrons. H. R. Dvorak and R. N. Little, jr. bibliog diag Phys R 90:618-22 My 15 '53

Treatment of titaniferous magnetite ore from Iron mountain, Wyo. A. E. Back and others. bibliog 5pls U S Bur Mines Rep of Invest 4902:1-15 '52

Twinning in single crystals of titanium; abstract. T. S. Liu and M. A. Steinberg. J Metals 4:1043 O '52

U.S. will push titanium expansion. Product Eng 23:198-9 N '52

Utilization of titanium and other alloys in corrosive environments. W. L. Williams. Machine Design 25:298+ Je '53

Vapor pressures of inorganic substances; titanium between 1587 and 1764°K., and copper between 1143 and 1292°K. J. W. Edwards, H. L. Johnston and W. E. Ditmars. bibliog Am Chem Soc J 75:2467-70 My 20 '53

What's ahead the next ten years in materials and components. Am Mach 96:A8 Mid-N '52

Working titanium at North American. G. A. Fairbairn. il Mach 59:182-7 Jl '53

Analysis

Determination of small amounts of chlorides in titanium sponge. M. Codell and J. J. Mikula. bibliog Anal Chem 24:1972-3 D '52

Determination of titanium in pigments and ores; titrimetric method. J. A. Rahm. diag Anal Chem 24:1832-3 N '52

Determination of titanium in titanium metal. J. M. Thompson. diags Anal Chem 24:1632-4 O '52

Isotopes

Activity assignment to titanium 51. W. R. Hammond and others. bibliog Phys R 90:157 Ap 1 '53

Angular correlation of gamma-rays in Ti^{48}. P. S. Jastram and C. E. Whittle. diags Phys R 87:1133-4 S 15 '52

Excited levels in Ti^{48}. M. M. Miller. Phys R 88:516-17 N 1 '52

Neutron capture γ-rays from titanium, chromium, iron, nickel, and zinc. B. B. Kinsey and G. A. Bartholomew. bibliog diags Phys R 89:375-85 Ja 15 '53

Nuclear energy levels in the region of the 28-neutron shell. G. F. Pieper. bibliog diags Phys R 88:1299-305 D 15 '52

Metallography

Arc melts of titanium-rich alloys. G. Welter and others. bibliog il diag Can Min J 74:59-69 Mr '53

Determination of the orientation of single crystals of titanium. A. T. Churchman. bibliog Metallurgia 48:50-1 Jl '53

Grain refinement of titanium. H. P. Leighly and H. L. Walker. il Metal Prog 62:116+ D '52

Lattice parameter of beta titanium at room temperature. B. W. Levinger. bibliog J Metals 5:Trans 195 F '53

Mechanism of plastic flow in titanium; determination of slip and twinning elements. F. D. Rosi and others. bibliog il diags J Metals 5:Trans 257-65 sec 2 F '53

Microstructure and mechanical properties of iodide titanium. F. C. Holden and others. bibliog il diags J Metals 5:Trans 238-42 sec 2 F '53

Nature of the line markings in titanium and alpha titanium alloys. C. M. Craighead and others. il J Metals 4:Trans 1317-19 D '52

Preferred orientations in iodide titanium. C. J. McHargue and J. P. Hammond. bibliog diags J Metals 5:Trans 57-61 Ja '53; Discussion. 5:Trans 1563 sec 2 N '53

Properties and structure of titanium after 30-min. heating at 1200 to 2000°F. E. Walden and L. A. Dixon. il Metal Prog 64:88-9 Ag '53

Recommended techniques for polishing titanium for metallographic examination. R. Osadchuk and others. Metal Prog 64: 129-31+ O '53

Titanium-carbon phase diagram. I. Cadoff and J. P. Nielsen. bibliog il diags J Metals 5:Trans 248-52 sec 2 F '53; Discussion. 5:Trans 1564-5 sec 2 N '53

Transformation characteristics of three per cent Al-five per cent Cr titanium alloy. L. S. Busch. il J Metals 5:146-9 F '53

Testing

Stress-corrosion cracking of commercially pure titanium. G. C. Kiefer and W. W. Harple. il Metal Prog 63:74-6 F '53

Stress-rupture characteristics of unalloyed titanium plotted. F. B. Cuff, jr. and N. J. Grant. il Iron Age 170:134-9 N 20 '52

Uniform test procedures evaluate corrosion resistance of titanium. G. C. Kiefer. Iron Age 170:170-3 D 4 '52

Welding

Effect of alloying elements on welds in titanium. G. E. Faulkner and others. il diags Welding J 32:sup481-97 O '53

Effect of atmospheric contaminants on arc welds in titanium. J. C. Barrett and others. il Welding J 32:sup283-91 Je '53

Effects of carbon, oxygen and nitrogen on welds in titanium. D. C. Martin. il diags Welding J 32:sup 139-54 Mr '53

Forming and welding of titanium. F. H. Stevenson. il Welding J 31:1035-41 N '52

How we weld titanium; Rohr aircraft corp. T. R. Bradley. il Am Mach 96:123-5 O 13 '52

Joining titanium. E. F. Holt and others. Materials & Methods 38:176 Ag '53

Practical aspects of welding titanium alloys. J. J. Chyle and I. Kutuchief. il diags Welding J 32:sup65-73 F '53

Restoration of ductility in alloy titanium welds. A. J. Rosenberg and others. il Welding J 32:708-14 Ag '53

Thermal cycles in the arc welding of ½-in. titanium plate. E. F. Nippes and others. bibliog il diags Welding J 32:sup461-74 S '53

Welding of titanium alloys. C. B. Voldrich. il diag Welding J 32:497-515 Je '53

Welding titanium. il Iron Age 170:275-7 O 9 '52

TITANIUM alcoholates

Structural chemistry of the alkoxides; normal alkoxides of silicon, titanium, and zirconium. D. C. Bradley and others. Chem Soc J p2025-30 Jl '53

TITANIUM alloys

ABC of titanium alloys. W. L. Finlay and others. il diags Metal Prog 62:73-8 N '52

Application of titanium sheet-strip limited by presently available alloys. J. W. Sweet. il J Metals 5:143-5 F '53

Arc melts of titanium-rich alloys. G. Welter and others. bibliog il diag Can Min J 74:59-69 Mr '53

Constitution of titanium-rich Ti-Cr-Al alloys at 1800° and 1400°F. J. L. Taylor and P. Duwez. bibliog J Metals 5:Trans 253-6 sec 2 F '53

Crystal structure of titanium alloys reviewed. diag Iron Age 170:204-5 D 4 '52

Effect of alloying elements on welds in titanium. G. E. Faulkner and others. il diags Welding J 32:sup481-97 O '53

Heat treatment of high-strength titanium-base alloys; abstract. W. M. Parris and others. Metal Prog 64:167 O '53

Heat treatment of titanium-rich titanium-iron alloys; abstract. H. W. Worner. Metal Prog 64:128+ S '53

High temperature modification of $TiCr_2$. B. W. Levinger. J Metals 5:Trans 196 F '53

Low temperature aging in titanium alloys. W. M. Parris and others. J Metals 5:Trans 178-9 F '53

Martensite habit plane in quenched Ti-Mn alloys. You Chao Liu and H. Margolin. bibliog il diags J Metals 5:Trans 667-70 My '53

Mechanical properties and strain aging effects in titanium; abstract. F. D. Rosi and others. Metal Prog 62:174-6 N '52

Mechanical properties of high purity Ti-Al alloys. H. R. Ogden and others. J Metals 5:Trans 267-72 sec 2 F '53

TITANIUM alloys—*Continued*

Nature of the line markings in titanium and alpha titanium alloys. C. M. Craighead and others. il J Metals 4:Trans 1317-19 D '52

New designations for titanium alloys. Materials & Methods 38:6 Ag '53

New materials; abstracts of SAE annual meeting papers. S A E J 61:80A-80C F '53

NAA reveals titanium experience. il Aviation W 58:21-2+ F 2 '53

Phase TiAg. R. J. Van Thyne and others. il J Metals 5:Trans 670-1 My '53

Production of titanium aircraft parts. W. L. Finlay. diags Tool Eng 31:131-2 O '53

Status of titanium and titanium alloys. Product Eng Hdbk p B 10-13 '53

Titanium, a survey. P. L. Teed. bibliog Roy Aeronautical Soc J 57:199-205 Ap '53; Same cond. Engineer 195:235-7 F 13 '53; Same cond. Engineering 175:341-2, 413 Mr 13, 27 '53; Discussion. il Roy Aeronautical Soc J 57:207-12; Reply. 212-14 Ap '53

Titanium alloys for aircraft engine forgings; abstract. L. R. Frazier. Automotive Ind 108:86 F 15 '53

Titanium-carbon phase diagram. I. Cadoff and J. P. Nielsen. bibliog il diags J Metals 5:Trans 248-52 sec 2 F '53; Discussion. 5:Trans 1564-5 sec 2 N '53

Titanium-chromium phase diagram. F. B. Cuff and others. il J Metals 4:Trans 848-53 Ag '52; Discussion. 5:Trans 743-4 sec 2 My '53

Titanium-manganese system. D. J. Maykuth and others. bibliog il J Metals 5:Trans 225-30 sec 2 F '53; Discussion. 5:Trans 1566-8 sec 2 N '53

Titanium-nickel phase diagram. H. Margolin and others. bibliog il J Metals 5:Trans 243-7 sec 2 F '53

Titanium-tungsten and titanium-tantalum systems. D. J. Maykuth and others. bibliog il diag J Metals 5:Trans 231-7 sec 2 F '53

Transformation characteristics of three per cent Al-five per cent Cr titanium alloy. L. S. Busch. il J Metals 5:146-9 F '53

Transformation kinetics and mechanical properties of titanium-aluminum-chromium alloys; abstract. H. D. Kessler and M. Hansen. Metal Prog 64:174+ O '53

Transformation kinetics and mechanical properties of titanium-aluminum-molybdenum alloys; abstract. H. D. Kessler and M. Hansen. Metal Prog 64:168+ O '53

Two laboratory furnaces for melting titanium alloys. J. A. Rees and R. J. L. Eborall. il diags Metallurgia 46:186-90 O '52

What the ferrous metallurgist should know about titanium. R. I. Jaffee. diags Iron Age 171:162-6 Ap 2 '53

TITANIUM carbide

Oxidation products which contribute to the oxidation resistance of TiC-base cermets. H. M. Greenhouse. il Am Cer Soc J 35:271-4 O 1 '52

These are new high-temperature materials. P. Schwarzkopf. il Am Mach 97:147-50 Ap 13 '53

Titanium carbide alloys in tooling. W. L. Kennicott. il diags Tool Eng 30:61-4 Ap '53; Excerpt. Automotive Ind 108:88+ Ap 15 '53

TITANIUM chlorides

Molecular addition compounds of titanium tetrachloride with several ethers. P. M. Hamilton and others. bibliog Am Chem Soc J 75:2881-3 Je 20 '53

Polymerisation of styrene by titanic chloride. P. H. Plesch. diag Chem Soc J p 1653-66 Je '53

Studies on the behaviour of halides of the transition metals with ammonia; the reaction of titanium tetrachloride with ammonia. G. W. A. Fowles and F. H. Pollard. diag Chem Soc J p2588-93 S '53

Titanic chloride as an intermediate in coulometric analyses. P. Arthur and J. F. Donahue. Anal Chem 24:1612-14 O '52

Titanium tetrachloride as a catalyst in the Friedel-Crafts reaction; addition compounds. N. M. Cullinane, S. J. Chard and D. M. Leyshon. Chem Soc J p4106-8 N '52

TITANIUM compounds

Organic compounds of titanium; abstract. A. Thomas. Paint Oil & Chem R 116:21-2 Ap 23 '53

Organotitanium compounds; isolation of a compound containing the titanium-carbon bond. D. F. Herman and W. K. Nelson. bibliog Am Chem Soc J 75:3877-82 Ag 20 '53

Organotitanium compounds; stability of the titanium-carbon bond. D. F. Herman and W. K. Nelson. bibliog Am Chem Soc J 75:3882-7 Ag 20 '53

Spectrophotometric studies of empirical formulas of complex ions. A. E. Harvey, jr. and D. L. Manning. bibliog Am Chem Soc J 74:4744-6 O 5 '52

Titanium chloride alkoxides. D. C. Bradley, D. C. Hancock and W. Wardlaw. Chem Soc J p2773-8 Jl '52

TITANIUM dioxide. See Titanium oxides

TITANIUM metallurgy

Arc melts of titanium-rich alloys. G. Welter and others. bibliog il diag Can Min J 74:59-69 Mr '53

New low-cost process turns titanium-oxide into titanium. Product Eng 23:196 D '52

Ore treatment yields titania, iron, and byproducts. flow sheet Chem & Eng N 30:5270 D 15 '52

Soda sinter process for treating low-grade titaniferous ores. R. T. MacMillan and others. 10pls U S Bur Mines Rep of Invest 4912:1-62 bibliog (p61-2) '52

Titanium, our number one problem metal. D. I. Brown. il maps diags Iron Age 170:262-3 O 9; 105-13 O 16 '52

Titanium production and fabrication at Republic steel corp. T. E. Perry. il J Metals 5:150-1 F '53

Titanium production at Rem-Cru. W. L. Finlay and others. il diags J Metals 5:140-2 F '53

Two laboratory furnaces for melting titanium alloys. J. A. Rees and R. J. L. Eborall. il diags Metallurgia 46:186-90 O '52

History

Early history of titanium. M. A. Hunter. il J Metals 5:130-2 F '53

TITANIUM ores

See also

Ilmenite

TITANIUM oxides

Electrical properties of titanium dioxide semiconductors. R. G. Breckenridge and W. R. Hosler. bibliog diags Phys R 91:793-802 Ag 15 '53

Fundamental aspects in research on titania-opacified enamels. S. S. Cole. bibliog Am Cer Soc J 35:181-8 Jl 1 '52

Melting point of titanium dioxide. P. D. S. St Pierre. diag Am Cer Soc J 35:188 Jl 1 '52

Properties of some high titania dielectric ceramics. E. F. Graf. Am Cer Soc Bul 31:279-82 Ag 15 '52

Structural chemistry of the alkoxides; amyloxides of silicon, titanium, and zirconium. D. C. Bradley, R. C. Mehrotra and W. Wardlaw. Chem Soc J p2027-32 Je '52

Structural chemistry of the alkoxides; secondary alkoxides of silicon, titanium, and zirconium. D. C. Bradley, R. C. Mehrotra and W. Wardlaw. Chem Soc J p5020-3 D '52

Structural chemistry of the alkoxides; tertiary alkoxides of silicon, titanium, zirconium, and hafnium. D. C. Bradley, R. C. Mehrotra and W. Wardlaw. Chem Soc J p4204-9 N '52

Titanium dioxide rectifier. Engineer 194:392 S 19 '52; R Sci Instr 23:515 S '52

Titanium pigments. W. B. Anderson. Paper Tr J 136:158-60 F 20 '53

X-ray diffraction studies in the system Al_2O_3-SnO_2-TiO_2. W. O. Milligan and B. G. Holmes. bibliog J Phys Chem 57:11-14 Ja '53

See also

Anatase

Rutile

TITANOMAGNETITES

Heat capacities at low temperatures and entropies at 298.16°K. of titanomagnetite and ferric titanate. S. S. Todd and E. G. King. bibliog Am Chem Soc J 75:4547-9 S 20 '53

TITLES of honor and nobility
Coronation honours list. Metallurgia 47:276+ Je '53; Engineering 175:759-60 Je 12 '53; Elec J 150:2007-8 Je 5 '53; Elec R (Lond) 152:1360-2 Je 12 '53
Honours list. Engineering 175:54 Ja 9 '53; Elec J 150:118-19 Ja 9 '53; Elec R (Lond) 152:78-9 Ja 9 '53
In the new year honours list. Metallurgi 47:2 Ja '53

TITO (Josip Broz) 1892-
Tito strengthens his hand with West. por Bsns W p 130-2 Ap 4 '53

TITRATION. See Volumetric analysis

TOASTMASTERS. See Public speaking

TOBACCO
Mexico's flue-cured tobacco yield high. For Comm W 49:16 F 16 '53
Plug-lid tobacco tin; new top construction gives tighter force fit with easier opening. il Mod Packaging 26:109 S '52
Shading costs. il Ind & Eng Chem 45:sup 13A+ Ap '53
Tobacco production in Indonesia decreased. For Comm W 49:11 Ja 26 '53
See also
Nicotine

Analysis

Separation and determination of nicotine and nornicotine in tobacco. F. G. Houston. bibliog Anal Chem 24:1831-2 N '52

Physiological effect

Cigarette smoke and the incidence of primary neoplasm of the lung in the albino mouse. J. M. Essenberg. il diag Science 116:561-2 N 21 '52

TOBACCO barns
New tobacco barn is designed to cut high fire losses; use of gypsum sheathing. il plan diags Am Bld 74:164-5 S '52

TOBACCO industry and trade
Kentucky burley; ten seconds a sale; tobacco auction. il Bsns W p86-8+ Ja 31 '53
See also
Cigar industry and trade
Cigaret industry and trade
also Imperial tobacco company (of Great Britain and Ireland), limited; Lorillard, P., company

Accounting

Fixed asset procedures of a tobacco manufacturer. F. Judd. N A C A Bul 34:678-85 Ja '53

Finance

What investors should know about the tobacco industry. H. L. Hilyard. Comm & Fin Chr 177:2078-9 My 14 '53

Securities

New look at the tobaccos; with table on position of leading tobacco companies. H. F. Travis. il Mag of Wall St 92:446-7+ Jl 11 '53

Statistics

Leaf and manufactured products; Nov.-Dec. 1951-Jan.-Nov. 1952. Survey of Cur Bsns 33:S30 Ja '53 [cont monthly]

Canada

Canada's big tobacco crop hard to market. For Comm W 48:29 D 15 '52

Great Britain

British consumption of leaf tobacco lower. For Comm W 49:11 Ap 6 '53
Drain on tobacco stocks. Economist 166:512 F 21 '53

India

Plantings for India's 1952-53 tobacco crop may be larger. For Comm W 48:22 D 22 '52

Philippine Islands

Philippine tobacco trade up; crop low. For Comm W 48:16 N 10 '52

Rhodesia

Tobacco; Southern Rhodesia's key crop. map Economist 166:646 Mr 7 '53

Sweden

Sweden increases tobacco use. For Comm W 49:24 Ap 27 '53

TOBACCO mosaic virus
Inhibition of tobacco mosaic virus biosynthesis by 2-thiopyrimidines. F. L. Mercer and others. bibliog Science 117:558-9 My 22 '53
Solution of tobacco mosaic virus in the aqueous phase of a chloroform-water emulsion and application of this phenomenon in virus assay. I. R. Schneider. bibliog Science 117:30-1 Ja 9 '53
Studies on the biosynthesis of tobacco mosaic virus; abstract. B. Commoner. Science 116:518-19 N 14 '52

TOBACCO research
Supplementing the senses. il Chem W 72:36+ Mr 28 '53

TOBACCO workers
Exposure of Connecticut tobacco workers to parathion. R. A. Schaefer and G. H. Vance. il A M A Archives Ind Hygiene & Occup Med 7:193-6 Mr '53

TOBEY manufacturing corporation
Tobey's aluminum trucks. Fortune 47:202 Mr '53

TOBIN, Richard Griswold, d 1953
Sketch. por Credit & Fin Management 55:25 My '53

TOBIN, William J.
Portrait. Sales Management 69:25 D 1 '52

TOCOPHEROL
Occurrence of δ-tocopherol in seaweed. F. Brown. bibliog Chem & Ind p 174 F 21 '53
See also
Vitamins—Vitamin E

TODD, E. Kenneth
Rockford dailies bought by E. K. Todd and F. W. Justs. por Ed & Pub 85:11+ N 1 '52

TODHUNTER, Richard T.
Half-century club; careers epitomizing contributions to coal-mining progress. por Coal Age 58:100-1 Ja '53
My 66 years in deep mining; interview. pors Coal Age 58:138-40 My '53

TOILET goods
Aerosol output expected to total 95 million units in 1953. Chem & Eng N 31:2192 My 25 '53
American male likes to smell nice, too. il Bsns W p 148+ My 9 '53
Decals automatically applied. il Mod Packaging 26:101-3+ D '52
Let's face facts on consumer buying trends. D. Rennick. Oil Paint & Drug Rep 163:64-5 My 18 '53
Repeal of excise tax on toilet preparations urged. D. Factor. Oil Paint & Drug Rep 163:57-8 My 18 '53
Shulton's Old Spice for men; nominated to packaging's Hall of fame. il Mod Packaging 27:102-7+, cover S '53
See also
Cosmetics
Perfumery
Soap

Advertising

Closer ad scrutiny urged. S. L. Mayham. Oil Paint & Drug Rep 163:58-9 My 18 '53
How Mennen uses dailies to sell products to men. R. B. McIntyre. il Ed & Pub 85:18 O 11 '52

TOILET goods association
Annual meeting, 18th, New York, May 12-14; with abstracts of papers. Oil Paint & Drug Rep 163:57-70 My 18 '53

TOKYO

Architecture

Tokyo's new landmark; Marunouchi building; illustration with text. Bsns W p 138-9 D 13 '52

Harbor

Land reclamation planned for Japan; Tokyo harbor plan under way. map Eng N 150:54 Je 11 '53

TOLAN. See Diphenylacetylene

TOLEDO, Ohio
Plan completion of major expressway. Eng N 149:119 D 4 '52

Sewerage

Proposed sewage works improvements. T. B. Henry. map plan Sewage & Ind Wastes 24:1339-48 N '52

TOLEDO, Ohio—*Continued*

Water supply

Atrocious timing, but still needed; impact of water rate increase on the citizens of Toledo. Pub Works 83:82 D '52

TOLEDO blade (newspaper)

Toledo blade finally proves its real age. Ed & Pub 86:35 Ja 3 '53

TOLEDO Edison company

Common stock offered. Comm & Fin Chr 177: 239 Ja 19 '53

TOLEDO plan. See Pensions, Industrial—Finance

TOLERANCE

Assigning tolerances for maximum economy. E. W. Pike and T. R. Silverberg. bibliog diags Machine Design 25:139-46 S '53

Dimensions and tolerances for mass production. E. Buckingham. diags Mach 59:163-9 My; 172-9 Je; 180-5 Ag; 60:176-85 S; 197-203 O '53

Factors of safety in tolerance specifications. N. G. Meagley. Product Eng 24:155-9 Mr '53

How to control coordinate tolerances. A. L. Levitt. diags Am Mach 96:166-7 O 13 '52

How to evaluate assembly tolerances. R. H. Johnson. diags Product Eng 24:179-81 Ja '53

Manufacturing tolerances; the Pilot + 2 limit system. F. W. M. Lee. Automobile Eng 43:263-6 Je '53; Same abr. Am Mach 97:137-41 Je 8 '53; Same cond. Machine Design 25:116-22 Ag '53; Same cond. Tool Eng 31:54-8 Ag '53

Quality control methods; their use in design; determining practical tolerances. D. Shainin. il Machine Design 25:150-5 Ja '53

Quality control methods; their use in design; processes and natural tolerances. D. Shainin. il Machine Design 24:173-9 D '52

Re-set pawl tolerance held by powder metallurgy; National cash register co. il diag Am Mach 96:126-7 O 13 '52

Tolerance charts control production machining; Pratt & Whitney aircraft. C. J. Marks. diags Am Mach 97:114-16 Mr 2 '53

Tolerances for angles; reference book sheet. V. H. Russell. diags Am Mach 97:193, 195 My 11; 155, 157 My 25 '53

TOLL booths. See Bridges—Toll booths

TOLLS

See also
Roads—Tolls

TOLMACHOFF, Innokenty Pavlovich, 1872-1950

Memorial. H. Johnson. por(pl 17) Geol Soc Proc 1952:147-54 bibliog(p 150-4) Je '53

TOLOXYPROPANEDIOL

Skeletal muscle spasm empirically treated with mephenesin (Tolserol) and diathermy; analysis of one hundred and six cases as compared with fifty-nine control cases. W. R. Nesbitt. bibliog Ind Med 21:599-601 D '52

TOLSEROL. See Toloxypropanediol

TOLUALDEHYDE

Dihalogeno-substituted terephthalaldehydes and *p*-tolualdehydes. J. R. Naylor. Chem Soc J p4085-6 O '52

TOLUENE

Absorption and fluorescence spectra of *p*-terphenyl in toluene. C. F. Ravilious. R Sci Instr 23:760 D '52

t-Alkyl groups; orientation of *t*-alkylation products of toluene and ethylbenzene. M. J. Schlatter and R. D. Clark. bibliog Am Chem Soc J 75:361-9 Ja 20 '53

Bromination of hydrocarbons; photochemical and thermal bromination of toluene; bond dissociation energies. H. R. Anderson, jr. and others. bibliog diags J Chem Phys 21: 1258-67 Jl '53

Cosden produces nitration-grade aromatics. Pet Refiner 32:90 F '53

Hyperconjugation; charge distributions in propylene and some methylbenzenes. V. A. Crawford. Chem Soc J p2058-61 Jl '53

Hyperconjugation; conjugation and hyperconjugation energies. C. A. Coulson and V. A. Crawford. Chem Soc J p2052-8 Jl '53

Industrial viewpoints on separation processes. K. H. Hachmuth. bibliog il diags Chem Eng Prog 48:617-26 D '52

Isomerization of the methylbenzenes. D. A. McCaulay and A. P. Lien. bibliog Am Chem Soc J 74:6246-50 D 20 '52

Moisture in paper by toluene distillation; TAPPI tentative standard T 484 m-53. diag Tappi 36:sup 137A-9A Ap '53

Orienting influence of the methyl group in toluene in the Gomberg reaction. R. H. Wilson. bibliog J Ap Chem 3:37-9 Ja '53

Polymethylbenzene complexes of iodine and iodine monochloride. L. J. Andrews and R. M. Keefer. bibliog Am Chem Soc J 74:4500-3 S 20 '52

Rayleigh's ratio (absolute turbidity levels) for benzene, carbon tetrachloride, and toluene. R. F. Stamm and P. A. Button. bibliog diags J Chem Phys 21:1304-5 Jl '53

Substitution in polymethylbenzenes; a new route to isodurene derivatives. G. Illuminati and G. Marino. bibliog Am Chem Soc J 75: 4593-4 S 20 '53

Syntheses of benzene, toluene and benzoic acid labeled in the ring with isotopic carbon. M. Fields and others. bibliog Am Chem Soc J 74:5498-9 N 5 '52

Synthesis of cresol; sulfonation of toluene; caustic fusion of toluenesulfonic acid. S. V. Englund, R. S. Aries and D. F. Othmer. bibliog Ind & Eng Chem 45:189-97 Ja '53

Xylene and toluene; hazards and precautions; data sheet. il Nat Safety N 68:38-9+ Ag '53

Analysis

Dielectric method of determining solvent content of dewaxing mixes; methyl ethyl ketone and toluene. H. D. LeRosen, L. V. Wike and S. W. Denton. bibliog Anal Chem 24:1620-2 O '52

Manufacture

Aromatics recovery by hydroforming and phenol extraction. J. J. Swift and others. flow diag il diag Pet Processing 8:81-7 Ja '53

First complete Udex benzene-toluene-xylene plant makes nitration-grade products. D. P. Thornton, jr. flow diag il Pet Processing 8:384-7 Mr '53

New Hydroforming unit produces petrochemicals and AvGas. J. J. Swift and others. il diags Pet Refiner 32:105-9 F '53

TOLUENE sulfonate

Reaction of α- and β-cholestanyl *p*-toluenesulfonates with methanol. H. R. Nace. bibliog Am Chem Soc J 74:5937-8 D 5 '52

Role of neighboring groups in replacement reactions; polarimetric acetolysis rate of *trans*-2-acetoxycyclohexyl *p*-toluenesulfonate. S. Winstein and R. Heck. bibliog Am Chem Soc J 74:5584-6 N 20 '52

TOLUENESULFONIC acid

Synthesis of cresol; sulfonation of toluene; caustic fusion of toluenesulfonic acid. S. V. Englund, R. S. Aries and D. F. Othmer. bibliog Ind & Eng Chem 45:189-97 Ja '53

TOLUENESULFONYL compounds

Benzyl tosylates; preparation and properties. J. K. Kochi and G. S. Hammond. bibliog Am Chem Soc J 75:3443-4 Jl 20 '53

Benzyl tosylates; the application of the Hammett equation to the rates of their solvolysis. J. K. Kochi and G. S. Hammond. bibliog Am Chem Soc J 75:3445-51 Jl 20 '53

Benzyl tosylates; the relative conjugative aptitudes of the acetylenic and ethylenic bonds. J. K. Kochi and G. S. Hammond. bibliog Am Chem Soc J 75:3452-8 Jl 20 '53

Studies in stereochemistry; the question of the structure of the phenonium tosylate ion-pairs that occur as intermediates in the solvolyses of the stereoisomeric 4-phenyl-3-hexyl tosylates. D. J. Cram and F. A. A. Elhafez. bibliog Am Chem Soc J 75:3189-95 Jl 5 '53

Sugar nitrates; removal of nitrate and toluene-*p*-sulphonyl groups from esters of substituted methyl-D-glucosides. E. G. Ansell and J. Honeyman. Chem Soc J p2778-89 Jl '52

TOLUIC acid

Reactions of toluic acids with sulfur; stilbenedicarboxylic acids. W. G. Toland, jr., J. B. Wilkes and F. J. Brutschy. bibliog Am Chem Soc J 75:2263-4 My 5 '53

Thermal rearrangement of methyl benzoate. K. B. Wiberg. bibliog Am Chem Soc J 75: 2665-6 Je 5 '53

See also
Phenylacetic acid

TOLUIDINE blue
Effect of toluidine blue on the coagulation of fibrinogen by thrombin. T. J. Haley and B. Rhodes. bibliog Science 117:604-6 My 29 '53

TOLYL group
Analogs and hexaphenylethane; hexaaryldisilanes containing phenyl and *p*-tolyl groups. H. Gilman and T. C. Wu. bibliog Am Chem Soc J 75:3762-5 Ag 5 '53

TOMATO paste
Tomato-paste process improved by new idea. diag Food Eng 25:73+ F '53

TOMATOES
Adds life; guards quality of prepackaged tomatoes; New England tomato co. C. R. Havighorst. il Food Eng 25:127+ Jl '53
Economical use of fibreboard; study of master shipping containers for pre-packaged tomatoes. B. C. Robertson and W. A. Aronow. il diags Mod Packaging 26:141-3 N '52
Packaged gas-fired heating boiler extends Old Sol's growing season. J. Kanda. il Power 97:126-7 F '53
Tomato packing; use of electricity for grading and storing. il Elec R (Lond) 151: 497-9 S 5 '52

Grading

Color grading by electronics; tomatoes in California. T. J. Smith. il diag Food Eng. 25:53 S '53
More precise grading with new sampling table. N. W. Desrosier and others. il Food Eng 25:92-3+ My '53

TONSILS
Separation and properties of a mucoprotein from a lymphatic organ. E. L. Hess, W. Ayala and A. Herranen. bibliog Am Chem Soc J 74:5410-14 N 5 '52

TOOL engineering
Big tooling job completed in record time; Jonco aircraft corp. D. K. Andrews. il Steel 131:80-2 O 6 '52
Developing special machines to increase production and reduce costs. R. L. Kessler. il Tool Eng 30:70-4 My '53; Same cond. Automotive Ind 108:50-3+ Ap 15 '53
Engineering procedure in product designing. R. L. McWilliams. plan Tool Eng 31:37-41 Jl '53
Industrial development depends on cooperative research. W. E. Mahin. bibliog il Tool Eng 29:49-54 N '52
Scheduling designers' work load; Leeds and Northrup co. A. E. Maiter. il Tool Eng 30:44 Ja '53
Technicians in tool engineering. W. W. Rogers. il Tool Eng 31:66-8 Jl '53

Study and teaching

Training apprentices in tool engineering. S. P. Burns. il Tool Eng 31:35-8 S '53

Tables, calculations, etc.

Tool engineers' data book. G. J. Gruen. 219p $5.50 Book division, Reinhold pub. corp, 330 W. 42d st, New York 36 '53

TOOL industry

Advertising

How's the do-it-yourself market doing? Sales Management 69:186+ N 10 '52

TOOL racks
Larson three-row tool holder. il Consumers Res Bul 31:27 My '53

TOOL rooms
Gage and tool control for multi-plant operation. T. J. Bizzoco. Tool Eng 31:49-51 Ag '53
Keeping track of and maintaining portable tools; repair shop of a New York subway division. M. Axler. il Mill & Factory 52: 128-9 My '53
Simple tool-crib control system speeds service. J. Lawler, jr. il Iron Age 171:112-14 Ap 30 '53
Tool room heat treatment installation. il Metallurgia 46:252 N '52
What is your tool-grinding cost? E. L. Dangle and J. J. Demchak. il Am Mach 97: 132-3 S 14 '53

TOOL steel
Alloy tool steels with nitrogen; tr. by S. L. Case, from a Russian book, by V. I. Prosvirin and others. Iron Age 170:163-5 N 6 '52
Bigger tool steel bars; the inside story. D. P. Hughes. il Steel 131:96-7 N 3 '52
Carbide precipitation, secondary hardening, and red hardness of high-speed steel. K. Kuo. bibliog Iron & Steel Inst J 174:223-8 Jl '53
Close checks produce top tool steels. L. C. Grimshaw. il Steel 132:102+ F 9 '53
Conference on cold extrusion of steel, London. Metal Prog 64:74-7 Ag '53
Discontinuous grain growth in high speed steel; abstract. A. H. Grobe and others. Metal Prog 64:232+ O '53
Effect of a prequench on the martensite reaction in tool steel. J. J. Gilman. il J Metals 4:Trans 1300-1 D '52
Effect of quenching and tempering on residual stresses in manganese oil hardening toolsteel; abstract. H. J. Snyder. Metal Prog 62:162+ N '52
Grain growth in high speed steel; abstract. E. Kula and M. Cohen. Metal Prog 64:212+ O '53
High speed and tool steel bars; shipments, 1951-1952; tabulation. Steel 132:162 Ja 5 '53
High speed tool steel; prices, 1947-1952; tabulation. Iron Age 171:410 Ja 1 '53
How cold treatments improve performance of materials. J. L. Everhart. il Materials & Methods 37:115-18 F '53
Limitations of investment cast tool alloys. D. Von Ludwig. il Tool Eng 30:51-5 Je '53
Short cycle for hardening high-C, high Cr toolsteel. J. Y. Riedel. il diags Metal Prog 63:67-70 F '53
Structure of carbides in alloy steels; carbide formation in high-speed steels. H. J. Goldschmidt. bibliog 2pls diag Iron & Steel Inst J 170:189-204 Mr '52; Discussion. 172:283-4 N '52
Tool materials for punches and dies. L. F. Spencer. bibliog il diags Tool Eng 30:35-40 My '53
Tool steel directory, tool steels, die steels and carbides; including charts showing chemical and physical properties, and forging and heat treating temperatures for most tool steel on the United States and Canadian markets. Iron Age 171:306-12+ Ja 1 '53
Tool steels don't just happen. D. P. Hughes. il Tool Eng 31:58 O '53
Trends in hollow drill steel. W. H. McCormick and R. W. Persons. il diag Min Cong J 38:58-61 D '52; Abstract. Steel 131:300+ O 13 '52; Discussion. Min Cong J 38:61-3 D '52
Unique steel selection method reduces die costs. il Mach 60:188-91 O '53

Testing

Grinding and lapping stresses in manganese oil-hardening tool steel. H. R. Letner and H. J. Snyder. bibliog il A S M E Trans 75: 873-80; Discussion. 881-2 Jl '53
Sub-zero hand-tool failures suggest new steels and treatments. S. Tour. Am Mach 96:154-5 N 24 '52

TOOLMAKERS
Making die makers in two years; New York trade school. E. J. Clement. il Mill & Factory 52:94-6 Ap '53
Mobility of tool and die makers, 1940-1951; survey of the work experience, training, and personal characteristics of the workers in a critical occupation. S. Swerdloff and others. U S Bur Labor Statistics Bul 1120: 1-67; pa 35c Supt. of doc. '53; Abstract. Mo Labor R 75:605-10 D '52

TOOLS
Cut costs of tool design-and-make. R. A. Petersen. diags Am Mach 97:130-1 Ag 17 '53
Diamond tools; rustproof holders resist corrosion, retain size. il Iron Age 171:135 F 19 '53
Economics in action; what would you do without tools. il Coal Age 58:108 Mr '53
Grinding shaving tools on an optical grinder. N. Palmer. diag Am Mach 96:160 N 24 '52
Hand and power tools. bibliog il Nat Safety N 67:183+ Mr '53
How Chrysler saves money on tools. D. G. Baird. il diags Mill & Factory 53:98-9 Ag '53
Machine developed for surface finishing hand tools. il Metal Finishing 51:111-12 Ja '53

TOOLS—*Continued*

Maximum tool-and-gage control. H. M. Baldwin and A. A. Tumser. il Factory Management 110:110-12 O '52

New British power tool; F. H. Bourner and co. il Elec J 150:2288 Je 26 '53

1953 American Machinist production preview. il Am Mach 97:193-209 Ja 19 '53

Power impact tool cuts repair cost on heavy equipment. Roads & Sts 96:87 Ap '53

Ramset powder-actuated tool in action. il Marine Eng 58:112+ Ja '53

Sears opens industrial store, dips toe in light tool market. B. Enos. il Ind Marketing 38:59 O '53

Small hand tools in supply-demand balance. Steel 132:65 F 23 '53

Special tools for speedier repair. il diags Diesel Power 30:52-5 O '52

Sub-zero hand-tool failures suggest new steels and treatments. S. Tour. Am Mach 96:154-5 N 24 '52

Supa-Dynamic power driving tool. il diag Engineer 195:904 Je 26 '53; Elec R (Lond) 152:1483 Je 26 '53

Tool drawings to meet shop needs. E. M. Hofmann. diags Tool Eng 30:47-51 F '53

Tooling a shop for Diesels. il Diesel Power 30:71-3 O '52

Tooling applications of hard facing alloys. L. V. LaRou. il Tool Eng 30:65-9 Je '53

Welding tools and dies. H. S. Card. il Tool Eng 30:58-62 Je '53

What's ahead the next ten years in tools and tooling; small tools. Am Mach 96:C 11 Mid-N '52

See also

Cutting tools
Electric tools, Portable
Gages
Machine tools
Machinery
Pneumatic tools
Saws
Tool rooms
Tool steel

TOOLS, Garden. See Garden tools

TOOLS, Plastic

Plastic tooling comes of age. L. R. Miller. il Aero Digest 66:37-8+ Ja '53

TOOTHBRUSHES

Dr West's toothbrush nominated to packaging's Hall of fame. il Mod Packaging 26:88-93+, cover Ag '53

TOPOGRAPHICAL maps

Topographic mapping in Kentucky. P. M. Miles. Am Soc C E Proc 78[no 151]:1-9 S '52

TOPOGRAPHICAL surveying

See also

Photographic surveying

TORNADO insurance. See Insurance, Tornado

TORNADOES

Beating the twister to town. il Bsns W p 194+ Je 20 '53

Block at a time, Waco, Tex. Bsns W p31 My 23 '53

Deadly pause before twister hit and flattened Georgia town. il Bsns W p27 My 9 '53

Disaster without warning; Norton co. il Factory Management 111:112A-112F Jl '53

Indian legend costs Waco plenty. Bsns W p76+ Je 13 '53

Michigan, Ohio and Massachusetts hard hit by tornados, insurance loss in the millions. Nat Underw 57:1 Je 11 '53

Norton story; how company met disaster, and the lessons it learned. il Cer Ind 61:74+ Ag '53

Operation tornado! il Dom Eng 182:120-1+ O '53

Sound construction withstands Worcester blow. il Nat Underw 57:25-6 Je 25 '53

Storm detector radar tracked recent Worcester, Mass. tornado. diag Elec Eng 72:757 Ag '53

Torpedoed by a tornado, but back in production in 62 hours; Norton co. il Mill & Factory 53:97 Ag '53

Twister strikes at Norton. T. Mac New. il Automotive Ind 109:79 Jl 1 '53

Waco plumbing firms hit hard by big tornado! il Dom Eng 181:78-9+ Je '53

Worcester plants pick themselves up. il Bsns W p30-1 Je 20 '53

Worcester tornado deals heavy damage; Ohio and Michigan hard hit. F. S. Merritt. il Eng N 150:21-4 Je 18 '53

See also

Insurance, Tornado

TORONTO

City of Toronto and twelve suburbs to be federated as metropolitan municipality. Roads & Eng Constr 91:96 Mr '53

Indians had a word for it, a place of meeting. G. A. Purdy. Chem Eng Prog 49:sup 17-18 Mr '53

Metropolitan road system to be established in greater Toronto. map Roads & Eng Constr 91:125-7+ Ap '53

Planned community rises. il Eng N 150:49-50 My 21 '53

Sanitary affairs

Examination of household refuse. L. A. Campbell. bibliog Can Chem Process 36:90+ N '52

Sewerage

Water-supply and sewerage to be under unified control in greater Toronto. il map plan Munic Util 91:15-19+ F '53

Subway

Canada's first subway. il plan Ry Age 134:78+ Je 1 '53

Water supply

Water-supply and sewerage to be under unified control in greater Toronto. il map plan Munic Util 91:15-19+ F '53

TORONTO stock exchange

Metal rumors spark a rush. Bsns W p48-9 Mr 14 '53

One hundredth anniversary dinner, Toronto, Oct. 24. pors Comm & Fin Chr 176:1633-43 O 30 '52

Role in Canada's economic growth. L. M. Frost. Comm & Fin Chr 176:1613+ O 30 '52

TORPEDO boat destroyers

Destroyer duty. G. W. Rahill. il U S Naval Inst Proc 78:1080-9 O '52; Discussion. 79:201 F '53

TORPEDOES

Ultrasonic recorder gages torpedo depth. C. E. Goodell. il diags Electronics 26:118-21 F '53

TORQUE

Calculation of torque of a three-phase motor of the synchronous or induction type. S. A. Swann. bibliog Elec J 151:101-5 Jl 10 '53

Effect of tension on torque and roll force in cold strip rolling. W. C. F. Hessenberg and R. B. Sims. bibliog Iron & Steel Inst J 168:155-64 Je '51; Discussion. 172:28-40 S '52

Electronic prevention of drill breakage. il Engineering 175:278-9 F 27 '53

Flashover torque of a d-c generator; abstract. O. C. Coho. Elec Eng 72:638 Jl '53

Foil strain gauges for torque and pressure measurement. Engineering 175:119 Ja 23 '53

Hydraulic torque generator; Airatork engineering co. il diags Engineer 195:258 F 13 '53; Engineering 175:169 F 6 '53

Hydraulic torque loader facilitates gear testing. il Machine Design 25:175 S '53

Instantaneous starting torque. il diags Machine Design 25:200 O '53

Synchronous motor torque requirements for steel mill applications. W. A. Thomas. il Iron & Steel Eng 30:73-81; Discussion. 81-3 Ag '53

Torque chart; designed to figure torque and driving force where fractional horsepower is to be transmitted at very high speed. P. Swain. Power 96:95 N '52

Torque-operated wattmeter for three-cm microwaves; abstract. A. L. Cullen and I. M. Stephenson. bibliog diags Inst E E Proc 99 pt 2:516-17 O '52

TORQUE converters

Advantages and disadvantages of torque converter type transmissions for medium and heavy duty trucks and tractors in both multiple stop and long distance operation. P. L. Gillan and W. S. Coleman. il S A E J 61:38-41 O '53

EMD's hydraulic switcher. il diag Diesel Power 31:83 Jl '53

Fork-lift truck transmission with torque converter designed to meet materials handling requirements. il diag Tool Eng 31:99 S '53

Four-speed transmission for use with torque converters. il Automotive Ind 107:69 O 1 '52

Hydraulic torque converter; common-law spouse of heavy-duty truck. W. B. Gibson. S A E J 61:40-1 Ag '53

TORQUE converters—*Continued*
Hydraulic torque converter, its effect on the power train. R. M. Schaefer and J. A. Winter. S A E J 61:58-9 F '53
Jaeger enters loader field with torque-converter unit. il Eng N 150:176+ Ap 16 '53
Let's put in a torque converter; abstract. R C. Zeidler. S A E J 61:50 Ag '53
New Chrysler transmission has high-ratio torque converter. J. Geschelin. il diags Automotive Ind 109:48-50+ Ag 1 '53
New industrial drives; Twin disc clutch co. il Automotive Ind 108:90+ Je 1 '53; Coal Age 58:114+ Jl '53
New Plymouth torque converter. F. G. Lawrence. Steel 132:57-8 F 16 '53
Torque converters for tractor-trailers; abstract. P. L. Gillan and W. S. Coleman. Automotive Ind 109:136+ Jl 1 '53
Torque converters supply flexibility and economy. M. L. Cooper. il diags World Oil 135:154-5+ N '52
Torque multiplication changed automatically. il diag Product Eng 24:214 Ja '53
Trucks with torque converters. F. Byars. il Min Eng 5:284-5 Mr '53
Two torque converter items offered by Fuller. Eng N 149:92+ N 27 '52

TORSION
Combined tension-torsion creep-time relations for aluminum alloy 2S-O J. Marin and others. bibliog il diag Am Soc T M Proc 50:1054-70; Discussion. 1071-2 '50
Effect of torsional flexibility on the rolling characteristics at supersonic speeds of tapered unswept wings. W. A. Tucker and R. L. Nelson. diags U S Nat Advisory Com for Aeronautics 1950:425-52 '51
Home-made apparatus makes accurate torsion tests. W. F. Saunders. il Civil Eng 22:1036 D '52
Mechanical behavior of nylon filaments in torsion. W. G. Hammerle and D. J. Montgomery. bibliog Textile Res J 23:595-604 S '53
Torsion of I-type and H-type beams. J. E. Goldberg. diags Am Soc C E Proc 78 [no 145]:1-20 Ag '52; Discussion. 79 [no D-145]:1-3 My '53
Torsion texture of 70-30 brass and Armco iron. W. A. Backofen and B. B. Hundy. J Metals 5:Trans 61-2 Ja '53
Torsional-flexural buckling of columns. H. L. Langhaar. bibliog Franklin Inst J 255:101-12 F '53
Torsional vibration notes with solutions for an untuned viscous damper and flexible coupling with nonlinear elasticity. F. P. Porter. diags A S M E Trans 75:241-62; Discussion. 262-8 F '53
Tube of least weight for given torsional stiffness. H. B. Howard. il Roy Aeronautical Soc J 57:45-6 Ja '53

TORSION pendulum. See Pendulum

TORULOPSIS. See Yeasts

TOSYLATES. See Toluenesulfonyl compounds

TOTE boxes
Got small parts to handle? here's an answer; Nestier tote boxes. il Factory Management 111:128-9 F '53

TOURIST camps, hostels, etc.
Hotels that look like motels; Holiday inn. Bsns W p62+ Mr 14 '53
New look in motels; Orchard court motel, Lake Zurich, Ill. il plan diags Am Bld 74: 107-9 O '52
Rags to riches; wayside cabin evolves into luxury motel. N. Willatt. Barron's 33:15-16 Ap 13 '53

Advertising

Motels are good prospects. M. E. Gerlach. il Inland Ptr 131:36-7+ My '53

Safety measures

Home away from home; in motels, hotels, cabins and trailers, tourists by the million face hazards. F. F. Beik. Nat Safety N 67: 30-1+ My '53

TOURIST trade
Case history of a vacationland; Ulster-Greene counties; development work of Central Hudson gas & electric corp. E. M. Huben. Edison Elec Inst Bul 20:423-5 D '52
One billion travel dollars go abroad. F. P. Sasscer. Survey of Cur Bsns 33:9-11 Je '53; Abstract. For Comm W 49:20 Je 29 '53
Wish you were here; annual vacation rush off to a fast start. F. Henle. Barron's 33:9-10 Je 8 '53
See also
Tourist camps, hostels, etc.

Mexico

Mexican tourist business attracts U.S. investors. D. Grahame. Barron's 32:25 D 1 '52

Tennessee

Your work is near your play in Tennessee. il Manuf Rec 121:117-20 N '52

TOWBOATS
Automatic pilot speeds river barges. il Electronics 26:20 F '53
B&O adds fourth tug to new harbor fleet. il Marine Eng 58:55 O '53
CO_2 fire-extinguishing system protects new Esso tugs. il Marine Eng 58:63+ Mr '53
Chotin fleet adds powerful towboat. il Marine Eng 58:75-6 Je '53
Dalzell tug tests de Schelde propeller. il Marine Eng 58:68+ Je '53
Diesel towboat goes into coal trade. il Marine Eng 58:77-9 O '53
Modern tugs and brave men operate Abitibi's 185-mile lifeline. il map Paper Ind 35:315-16 Je '53
More Diesels for the JCL. il Diesel Power 31:62-4 Ag '53
Motor tug for Aden port trust. il Engineering 175:106-7 Ja 23 '53
New towboat joins U.S. Steel fleet. il Marine Eng 58:77-8 F '53
New waterways queen pushes oil from Gulf to jobber's terminals. il Nat Pet N 44:21 D 3 '52
Safety measures on logging craft. il Nat Safety N 68:42+ Ag '53
Shallow-draft tugboat has high maneuverability. il Marine Eng 58:67-8 S '53
Sperry develops midget electronic pilot, called Lever Pilot, for river towboats. il Marine Eng 58:122+ Mr '53
Staten Island yard launches Erie tugboat. il Marine Eng 58:59 Jl '53
Steam tug Horus for Suez canal. il Engineering 175:493 Ap 17 '53
Suez Canal tug Horus. il Engineer 195:680 My 8 '53
Tugs and towage. Economist 167:799-800 Je 20 '53
Twin Diesel towboats enter river service. il Marine Eng 58:81-3 Ap '53

TOWELS

Rating

Bath towels. il Consumers Res Bul 31:22-3 Ja '53
Dish towels. il Consumers Res Bul 31:27-9 Mr '53

TOWER clocks
Clock tower at Nailsworth. T. R. Robinson. il diag Engineer 195:722-3 My 22 '53

TOWER of Pisa. See Pisa—Campanile

TOWERS
Tower to provide office, living space; combination office and apartment building designed by Frank Lloyd Wright for the H. C. Price construction co. il plan Eng N 150:23 Je 4 '53
See also
Electric lines—Poles and towers

TOWERS, Aluminum
Triangulation tower of army's is lighter. Midwest Eng 5:23 F '53

TOWERS, Steel
Design of a light-weight 275-kv transmission tower. P. J. Ryle. il diag Engineering 175: 225-7 F 20 '53
Steel towers; antenna 1218 ft high aids USAF in developing radio use. Iron Age 171:173-4 F 5 '53
Toronto's 500-ft. tv tower. R. C. Leslie and G. M. Robinson. il plan diag Roads & Eng Constr 90:83-6+ D '52

TOWNES, William A.
Takes editor's post on Los Angeles news. por Ed & Pub 86:11 F 7 '53

TOWNSHIP roads. See Roads, Township

TOXAPHENE
Toxaphene blending grows fast. il Chem Eng 60:132+ Ja '53

TOXINS and antitoxins
Chromatography in the purification of staphylococcal enterotoxin. M. S. Bergdoll and others. bibliog Science 116:633-4 D 5 '52
Diphtheria toxin. A. M. Pappenheimer, jr. il Sci Am 187:32-6 O '52
See also
Botulinum toxin

TOXOPLASMOSIS
Toxoplasmosis. R. D. Manwell and H. P. Drobeck. il Sci Am 188:86-8+ F '53

TOY industry and trade
German toy trade maintains record; U.S. best market. For Comm W 49:23 Ap 27 '53
Santa Claus is going to town; Nation's toymakers will post record sales this year. il Steel 131:45 D 22 '52
Toyland, U.S.A.; playing Santa is profitable business this year. F. Henle. Barron's 32:9-10 D 15 '52

Advertising
Learn-as-you-play idea earns all-year market for toys; Playskool mfg. co. D. J. Atchison. il Sales Management 69:30-2 N 10 '52

TOY trains. See Railroads—Models

TOYS
Brand name toys train buyers young. il Bsns W p 136-7 Jl 25 '53
30 toys under one name; Right-Time toys. il Mod Packaging 27:135 S '53

TOYS, Mechanical
Industrial toys. il Fortune 46:132-6 D '52

TOYS, Plastic
Chemistry and toymaker. W. H. Shearon, jr. il Chem & Eng N 30:5236-9 D 15 '52
Craft kit. il Mod Plastics 30:178 Ap '53

TRACE analysis
Absorption characteristics of the dithizone mixed color system. R. G. Milkey. Anal Chem 24:1675-6 O '52
Catalytic determination of submicrogram quantities of silver. A. L. Underwood, A. M. Burrill and L. B. Rogers. bibliog Anal Chem 24:1597-601 O '52
Chemical analyses in the submicromolar region. L. B. Rogers. bibliog J Chem Educ 29:612-15 D '52
Determination of trace impurities in magnesium by activation analysis. G. J. Atchison and W. H. Beamer. bibliog Anal Chem 24:1812-15 N '52
Determination of trace metals in crudes and other petroleum oils; analysis for iron, nickel, vanadium, and copper. O. I. Milner and others. bibliog diags Anal Chem 24:1728-32 N '52
Determination of trace metals in petroleum fractions. J. H. Karchmer and E. L. Gunn. bibliog Anal Chem 24:1733-41 N '52
Determination of traces of cobalt in soils; a field method. H. Almond. bibliog il Anal Chem 25:166-7 Ja '53
Determining low concentrations of hafnium in zirconium; a spectrographic method. D. M. Mortimore and L. A. Noble. bibliog diag Anal Chem 25:296-8 F '53
Spectrographic determination of trace elements in lubricating oils. R. F. Meeker and R. C. Pomatti. bibliog diags Anal Chem 25:151-4 Ja '53
Spectrophotometric determination of aluminum in thorium; extraction of aluminum with 8-quinolinol in chloroform. D. W. Margerum, W. Sprain and C. V. Banks. bibliog Anal Chem 25:249-52 F '53

TRACE elements
Putting specks back into purity; symposium on impurity phenomena at General Electric research laboratory. il Bsns W p52+ Jl 18 '53
Trace elements. W. D. McElroy and C. P. Swanson. il Sci Am 188:22-5 Ja '53
See also
Plants—Trace elements

TRACERLAB, inc.
On the firing line; atomic isotope trade, a going concern. J. Chamberlain. Barron's 33:3+ My 18 '53
Tracerlab; middleman for radioactives. Bsns W p68-70 Jl 25 '53

TRACERS, Radioactive. See Radioactive tracers

TRACHEA
Insect breathing. C. M. Williams. il diags Sci Am 188:28-32 F '53

TRACHELANTHIC acid
Trachelanthic and viridifloric acids. R. Adams and B. L. VanDuuren. bibliog Am Chem Soc J 74:5349-51 N 5 '52

TRACHOMA. See Conjunctivitis

TRACK bolts. See Rail fastenings

TRACTOR industry and trade
Industry previews and reviews. Automotive Ind 108:53 Ja 15 '53
Pulling tractors out of a hole. il Bsns W p76+ Ja 17 '53
See also
Caterpillar tractor company

Advertising
New model makes anniversary news; Ford tractors. R. G. Silbar. il Ptr Ink 242:41 F 20 '53

Statistics
Farm and non-farm tractor shipments, 1942-1952; tractor shipments by type and hp ratings, 1950-1952; tabulations. Automotive Ind 108:98 Mr 15 '53

Russia
Russian tractors, or potential war machines? il Automotive Ind 108:38-42 F 15 '53
Russians shun frills on Stalinetz tractor. il diag Product Eng 23:154-9 O '52

TRACTORS
All-purpose fence builder. il Constr Methods 35:174 Mr '53
Cable laying in wild West calls for big tractor power; illustrations with text. Constr Methods 35:137 F '53
Case introduces Diesel tractor. il Diesel Power 31:53 Ag '53
Don't make your tractor tracks too wide. E. A. Braker. Roads & Sts 96:126 Ja '53; Same cond. Min Cong J 38:55 O '52
Elements of agricultural tractor performance. P. H. Southwell. Engineering 175:6-8 Ja 2 '53
Ford golden jubilee tractor. il Automotive Ind 108:59+ Ja 1 '53
Hired hand; farm tractor with a trick transmission set records in making up and breaking out pipe. W. E. Smith, jr. il World Oil 135:254 N '52
Hydraulic lifts in tractors; abstract. H. E. Ashfield. Engineer 195:490 Ap 3 '53
Influence of speed on the performance characteristics of implements; abstract. E. G. McKibben and I. F. Reed. S A E J 60:118+ N '52
Latest features of the Pneumatractor. il diag Automotive Ind 108:54-5 My 15 '53
Little rig deepens cellar after entry thru window. il Constr Methods 35:61-3 Ja '53
Logging with tractors; equipment, logging arch and winches; abstract. H. F. Wahl. S A E J 60:112+ N '52
Minneapolis-Moline's Model U Diesel. il Diesel Power 31:49 F '53
Putterer, inventor, manufacturer; bantam-size riding tractor. Fortune 47:167 F '53
Range of agricultural tractors. il Engineering 175:464 Ap 10 '53
Russian tractors, or potential war machines? il Automotive Ind 108:38-42 F 15 '53
Russians shun frills on Stalinetz tractor. il diag Product Eng 23:154-9 O '52
Sheppard builds them strong, but makes them simple. R. H. Lewis. il diag Constr Methods 35:110+ O '53
SAE National tractor meeting, Milwaukee. Automotive Ind 109:53+ O 1 '53
SAE National tractor meeting, Milwaukee, Sept. 8-11. S A E J 60:71-5+ O '52; Automotive Ind 107:48+ O 1 '52
Thanks for the lift! illustrations with text. Constr Methods 35:61 F '53
Tractor can haul hydraulic pullshovel. il Eng N 150:96+ Ja 29 '53
Use of Diesels almost universal for German farm tractors. O. V. Drtina. il diags Automotive Ind 109:66-8 Ag 1 '53
Where's the exhaust pipe? il Constr Methods 35:137 Je '53
See also
Agricultural machinery

TRACTORS—*Continued*

Clutches

Caterpillar develops oil-type tractor clutch. il Automotive Ind 109:69+ S 1 '53

Design

Measurements in tractor design and development. R. P. Wehrle. il Instruments 25:1582-6 N '52

History

Steam power in farming. K. W. Williams. il Engineering 174:212 Ag 15 '52

Maintenance and repair

Adapt your crawler to the tracks at hand. il diag Constr Methods 34:87-8 N '52
Automatic track rail welder; Armor welding service. il Elec West 109:106 O '52
Automatic welding builds up track links. il Constr Methods 35:105-6+ Ja '53
Extending drive sprocket life. il Roads & Sts 96:84-6 My '53
School for wide open spaces; Finning tractor & equipment co., ltd. il Constr Methods 35:50 Jl '53
Unionmelt welding helps move mountains. il Welding J 32:626 Jl '53

Manufacture

Forming and drawing heavy stampings for IHC crawler tractor. J. C. O'Rourke. il Automotive Ind 107:70-1 O 1 '52
Machining techniques in a new tractor engine plant. C. H. Wick. il Mach 59:163-71 Je '53
Outstanding operations on Ford's new tractor engine. J. Geschelin. il Automotive Ind 108:48-51 F 1 '53
Pit type carburizing furnaces provide flexible setup; Caterpillar tractor co. D. J. Wright. il diags Automotive Ind 107:46-7+ D 15 '52
Statistical quality control makes tolerances behave; report of panel discussion. I. W. Schoeninger. S A E J 61:23-6 Je '53
Tractor finishing takes the automotive road; J. I. Case co. il Am Mach 97:184-6 S 14 '53

Specifications

1953 tractors; tabulations. Automotive Ind 108:158-63 Mr 15 '53

Steering gear

Power steering would lessen fatigue of farm tractor operation. F. M. Ison. S A E J 61:61-2 Ja '53

Testing

Factors affecting the efficiency of farm tractors; abstract and discussion. C. W. Smith and L. F. Larsen. S A E J 61:62-3 Ja '53

Transmission

Advantages and disadvantages of torque converter type transmissions for medium and heavy duty trucks and tractors in both multiple stop and long distance operation. P. L. Gillan and W. S. Coleman. il S A E J 61:38-41 O '53

TRACTORS, Garden
Outdoor power tools; coming up fast. il Bsns W p58-9+ Ap 4 '53

TRACTORS, Industrial
Assembly train; Lockheed uses tractor to keep line moving. il Iron Age 171:177-8 F 5 '53
Diesel-engined industrial tractor. il Engineering 174:160 Ag 1 '52
Ferguson small industrial tractor. il Engineering 175:60 Ja 9 '53
Fork trucks and tractors reduce handling time at Cone mills; illustrations with text. Textile World 103:139 Ja '53
Industrial tractor; David Brown tractors, ltd. il Engineer 195:294 F 20 '53; Engineering 175:253 F 20 '53
Lansing Bagnall heavy industrial Diesel-engined tractor. il Engineering 176:160 Jl 31 '53

TRADE agreements
Anti-recession contract; St Louis local of AFL's teamsters' union. Bsns W p 130 Ja 31 '53
Auto contracts; an eye on the future. Bsns W p25 My 30 '53
Collective agreements in the U.S.S.R. Int Labour R 66:477-84 N-D '52
Continuous contract. J. W. Teele. Harvard Bsns R 31:103-12 My '53
Contracts; new dogma develops. il Bsns W p 168-9 Ap 18 '53
Discarding established customs not in union labor contracts! N. C. Rockwood. Rock Prod 56:79+ Ja '53
Labor-management contract provisions, 1952. U S Bur Labor Statistics Bul 1142:1-18; pa 20c Supt. of doc. '53
Long-term safety. Bsns W p 149 F 28 '53
Management gets tougher; labor gains less in 1953. Steel 132:49 Je 15 '53
Passing show; unionization of woods labour and relations with woods labour unions. M. MacLaggan. Pulp & Pa of Can 54:67-9 Ja '53
Patter protests; GM-Ford terms. il Bsns W p 166 Je 13 '53
Post-Korea union contract trends surveyed; tabulation. Steel 132:47 Mr 30 '53
Reuther sires another living document; GM and UAW come to terms on revision of five-year labor pact. R. D. Raddant. Iron Age 171:82+ My 28 '53
Shift operations and differentials in union contracts, 1952. M. Levine and J. Nix. Mo Labor R 75:495-8 N '52
Strategy in union negotiations. B. H. Fitzpatrick. Personnel J 31:330-2 F '53
Supervisor's role in making the labor agreement work. C. B. Boulet. Elec World 138:136-9 N 17 '52
Workers can kill a union shop; NLRB decision. Bsns W p 148 N 8 '52
See also
Collective bargaining

Wage clauses

Added raises for the skilled? Bsns W p 137-9 Je 27 '53
Annual wage; United steelworkers (CIO) bargaining with Aluminum co. of America. Bsns W p 139-40 Je 27 '53
Bargaining problems due with new living-cost index; abstract. Management R 41:656-7 O '52
Battle of the index; escalator clauses will be a source of labor unrest. Fortune 47:80+ Mr '53
C of L; down. Bsns W p 157 Ap 11 '53
Dim view of two-way escalator. Bsns W p 166 Ap 25 '53
Escalators and the productivity racket. M. Palyi. Comm & Fin Chr 177:1309+ Mr 26 '53
Escalators shift gears; readjustment of wages to the new cost-of-living index. Steel 132:42 Ja 12 '53
New cost-of-living index creates problems. H. Unterberger. Inland Ptr 131:42-3 Ap '53
Raises are smaller in 1953. Bsns W p 122-3 Jl 11 '53
Shoring up the floor under wages. Bsns W p 148+ N 1 '52
Special care in writing call-in clauses in union contracts. N. C. Rockwood. Rock Prod 56:75+ Je '53
Steel bargaining for everybody. Bsns W p 179 My 9 '53
Unions to demand productivity wage. Eng N 149:32 O 9 '52
Wage chronology; San Francisco printing, 1939-51. M. W. Robbins. Mo Labor R 75:289-98 S '52
Wage chronology series. Mo Labor R 75:408-12, 522-44, 630-8 O-D '52
Wages and productivity. J. Backman. il Dun's R 61:23-4+ Ja '53
Wages; what will index revision do? A. K. Rannells. Iron Age 170:19 D 25 '52
Worry agenda. Bsns W p 164 Je 13 '53

TRADE associations
Calendar of meetings, 1953. Steel 132:487-8+ Ja 5 '53
Metalworking meetings scheduled for 1953. Iron Age 171:477-8 Ja 1 '53

TRADE associations—*Continued*

Trade associations; how to grow with them. Steel 132:76-7 Mr 9 '53

See also

Advertising, Association

Conventions

Insurance associations

Trade unions

also names of associations e.g.

American petroleum institute

Building trades employers' association

Glass container manufacturers institute

National association of manufacturers

National association of oil equipment jobbers

National association of securities dealers

National paint, varnish and lacquer association

National petroleum association

Printing industry of America, inc.

Advertising service

See Advertising, Association

Directories

Associations and societies, Canada. Roads & Eng Constr 91:222+ Je '53

Engineering societies; alphabetical listing of professional societies, industry associations and technical organizations serving the radio-tv-electronic and allied fields. Tele-Tech 12:298 Je '53

Trade associations and technical societies in the metalworking industry. Iron Age 171: 470-6 Ja 1 '53

See also

American ceramic society

Safety work

American gas association executive safety committee, its aims and ultimate goals. E. H. Hacker. Am Gas Assn Proc 1952: 122-5

Signed up for safety; accident and fire prevention program developed by Hardware mutuals. T. H. Allen. il Nat Safety N 68: 116-17+ O '53

Service

Home touring and emergency services of the Automobile association. R. C. Evans. maps Aslib Proc 4:255-62; Discussion. 262-4 N '52

Statistical work

Role of industry statistics in modern business life. G. S. Rose. Special Lib 43:401-6 D '52

TRADE characters. See Advertising characters

TRADE directories

Ceramic data book with suppliers catalogs and buyers' directory of equipment and materials. 670p Industrial publications, 5 South Wabash av, Chicago 3 '52

Chemical Week Buyers' guide issue. Chem W 71:1-774 pt 2 N 1 '52

Classified index of products used in waterworks and sewage field. Water & Sewage Works 100:R 1-14 My '53

Condensed review of some recently developed materials, arranged alphabetically by trade names; with names and addresses of manufacturers. Mach 59:176-8 N '52

Condensed review of some recently developed materials arranged alphabetically by trade names; with names and addresses of manufacturers. Mach 60:185-7 O '53

Diesel engine directory; manufacturers of engines and plant accessories. Diesel Power 31:47-73 Ja; 53-74 Jl '53

Directory for modernization; modern plant products; power field equipment and the companies that make it. Power 97:107-213 Mid-S '53

Directory of trade names and producers of protective coatings. Chem Eng 59:171-90 D '52

Directory section of the 1953-1954 Electronics buyers' guide. Electronics 26:D 1-188 Mid-Je '53

Gas engineering and appliance directory. Gas Age 111:81-159 Je 18 '53

Industrial directory of Wales and Monmouthshire, 1952. 2d ed 339p 10s 6d Industrial assn. of Wales and Monmouthshire, Aberdare House, Mount Stuart square, Cardiff, Wales '52

International heating and ventilating exposition, 11th, Chicago, Jan. 26-30; exhibitors and their exhibits. Sheet Metal Worker 44: 105-12 Ja '53

Who's who among your suppliers; agents representing manufacturers of paper mill equipment, paper making materials and chemicals. Paper Tr J 136:91-304 Je 19 '53

See also subdivision Directories under various headings, e.g.

Airplane accessories industry

Airplane industry and trade

Diesel engines

Equipment industries

Gas appliance industry

Importing

Machinery industry

Petroleum refineries

Printing supplies industry

TRADE fairs. See Fairs

TRADE-in policies

Old houses for new? NAHB offers a trade-in plan to ease the buyer's down payment. Eng N 150:151-2 My 14 '53

TRADE journals

Business papers, a cosmic tool of executive development. W. K. Beard, jr. Advanced Management 18:28-30 Ja '53; Excerpts. Oil & Gas J 52:255+ My 18 '53

Capital goods replacement challenges business papers, advertisers. J. F. Fitzsimmons. Ind Marketing 38:116+ Ja '53

How to take good pictures for business paper publicity. R. A. Wolters. il Ind Marketing 38:53-6 Ag '53

NBP urges standardized audit to include both paid and unpaid circulation. D. Bruner. Ptr Ink 241:29+ N 28 '52

See also

Advertising mediums—Trade journals

Editors

44 awards go to business paper editors as content improves; Industrial Marketing's annual business publication competition. il Ind Marketing 38:92-3 Jl '53

Terminology

Glossary of business paper publishing terms. pa $2 Associated business publications, 205 E. 42d st, New York 17 '52

Great Britain

Tradesman's friend. Economist 166:262-4 Ja 31 '53

TRADE marks

How to make your trade-mark tell the symbol truth. K. Bernhard. il Ptr Ink 242:44-5 F 27 '53

Mutual's Mister Plus. il Adv Agency 45:82-3+ N '52

Pulling as a team; Thomas' coach-and-four provides unifying trademark in coordination and clean-up of line of baked goods. il Mod Packaging 26:136-7 S '52

Trade mark sketch for the industrial manager. R. E. Woodhams. Tappi 36:sup20A+ Ap '53

Trade-marks for today. Mod Ind 24:99 D '52

Advertising

Elsie Daisy; framing her in yellow daisy gives Borden's identifying symbol. il Mod Packaging 26:92-3 N '52

Law

Trademark coverage strengthened by court; Lanham trademark law. Oil Paint & Drug Rep 162:5+ D 29 '52

Protection

How to protect your trade-mark; du Pont booklet points way. Ind Marketing 37:142+ S '52

Indian association of trade-mark owners organized to check counterfeiting. For Comm W 50:12 Jl 13 '53

TRADE names

Brand name toys train buyers young. il Bsns W p 136-7 Jl 25 '53

Catching bogus shirtmakers; foreign fakes in Hong Kong. Bsns W p98-9 Jl 4 '53

Chemical Week Buyers' guide issue. Chem W 71:752-70 pt 2 N 1 '52

Condensed review of some recently developed materials, arranged alphabetically by trade names; with names and addresses of manufacturers. Mach 59:161-78 N '52

TRADE names—*Continued*

Condensed review of some recently developed materials arranged alphabetically by trade names; with names and addresses of manufacturers. Mach 60:169-87 O '53

Directory of trade names and producers of protective coatings. Chem Eng 59:171-90 D '52

Electronic industries directory; brand and trade name index. Tele-Tech 12:293-8 Je '53

Fungicidal chemicals. C. C. McDonnell. Soap & San Chem 29:127+ Ja '53

Heating, piping, and air conditioning equipment for industry and large buildings. Heating-Piping 25:sup 100d-16d Ja '53

Management grapples legalities, sales punch to find new product names. Ind Marketing 37:56-7+ S '52

Product-tradename directory; manufacturers of products and equipment used in warm air heating, air conditioning, ventilating, sheet metal work. Sheet Metal Worker 44: 204-10 Ja '53

Second battle of the scents; Colonia, inc. and Pope publishing corp. il Bsns W p47-8+ My 16 '53

Trade name index; products in or related to the field of electronics. Electronics 26:D 150-67 Mid-Je '53

Trade names; construction equipment. Roads & Eng Constr 91:310+ Je '53

What's in a name? millions! W. Boyd. il Adv Agency 46:56-7+ F '53

TRADE practices

Soil conditioners; the fight goes on; with editorial comment. il Bsns W p43-6 Ja 31 '53

Wax, floor polish trade practice rules revamped. Oil Paint & Drug Rep 163:3 Mr 23 '53

See also

Dealer relations
Discount, Trade
Federal trade commission
Price cutting
Price fixing
Price fixing, Resale
Price policies
Restraint of trade
Sales policies

TRADE schools

Making die makers in two years; New York trade school. E. J. Clement. il Mill & Factory 52:94-6 Ap '53

TRADE secrets

Employment agreements; contracts between employers and employees offer protection of trade secrets and processes. A. W. Gray. bibliog Machine Design 24:114-16 N '52

Sharing secrets brings rewards. F. C. Ball. il Cer Ind 60:76+ Mr '53

Trade secrets; courts consider them property. A. W. Gray. bibliog Metal Finishing 51:75-7 F '53

TRADE symbols

Federal court opinion based on market research findings; trade symbol; Household finance corporation vs. Federal finance corporation. H. M. Cobb. J Marketing 17:289-91 Ja '53

TRADE union newspapers. See Newspapers, Trade union

TRADE unions

Captive-audience doctrine in NLRB elections. W. L. Daykin. Personnel 30:38-45 Jl '53

Conflicts within the local union. L. R. Sayles and G. Strauss. Harvard Bsns R 30:84-92 N '52

Do state laws hurt unions? Bsns W p 174 My 9 '53

How do you evaluate a union? Bsns W p 146 D 13 '52

New views of unions. Bsns W p 139-40 Ap 4 '53

Open shop bastion wavers in Rochester, N.Y. il Bsns W p 161-2 My 16 '53

Passing show; unionization of woods labour and relations with woods labour unions. M. MacLaggan. Pulp & Pa of Can 54:67-9 Ja '53

Unions promote savings bonds. Banking 45: 124 My '53

What the worker really thinks of his union. L. R. Sayles and G. Strauss. Harvard Bsns R 31:94-102 My '53

What to do when the union knocks at your door. J. M. Black and J. G. Piccolli. Factory Management 111:108-12 Je '53

See also

Arbitration, Industrial
Boycott
Foremen—Unionization
Housing projects, Trade union
Insurance agents—Unions
Labor and laboring classes
Newspapers, Trade union
Open and closed shop
Picketing
Strikes
Trade agreements

also names of unions, e.g.

Air line pilots association, International
American federation of labor
American newspaper guild
Association of Catholic trade unionists
Congress of industrial organizations
Engineers and scientists of America
International association of machinists
International brotherhood of teamsters, chauffeurs, warehousemen and helpers of America
International confederation of free trade unions
International longshoremen's association
International typographical union
International union of electrical, radio and machine workers
International union of operating engineers
Seafarers international union of North America
Textile workers union of America
United automobile workers of America
United mine workers of America
United rubber workers of America
United steelworkers of America

Benefit funds

Fringe with tassels; John L. Lewis defies the WSB on tonnage royalty assessments. F. Morley. Barron's 32:3 O 13 '52

UMWA fund spent $138 million in year. Coal Age 58:135 O '53

Communist problem

Checking on non-Communist oaths. Bsns W p 146+ N 8 '52

Double trouble. Bsns W p 152-3 My 23 '53

False T-H oath. Bsns W p 115 N 29 '52

How can you rid unions of reds? Bsns W p41-2 Jl 25 '53

How to handle red unionists. J. M. Gambatese. Eng & Min J 154:96-100 My '53

Non-Communist affidavits. Fortune 46:90 D '52

Squeeze on leftwing unions. Bsns W p 153 D 6 '52

Tightening up on Communists. Bsns W p 165-6 My 16 '53

Cooperation with management

Arbitrating industrial efficiency. A. H. Myers. Harvard Bsns R 31:60-8 Jl '53

Lapointe machine tool co. relations with union and success of cooperative plan subject of study. T. Metaxas. Iron Age 170:98-9 D 11 '52

Union and management team up for charity; Seattle's Orthopedic hospital. il Bsns W p 168-9 Ap 25 '53

Directories

Directory of labor unions in the United States, 1953; national and international unions, state labor organizations. W. Paschell. U S Bur Labor Statistics Bul 1127:1-46; pa 35c Supt. of doc. '53

Dues and fees

Financing of union activities. K. R. Petshek and W. Paschell. Mo Labor R 75:373-80 O '52

What does it cost to join a union? Bsns W p 154 D 6 '52

Educational work

Case studies in union leadership training, 1951-52. G. W. Brooks and others. U S Bur Labor Statistics Bul 1114:1-23; pa 20c Supt. of doc. '52

Finance

Financing of union activities. K. R. Petshek and W. Paschell. Mo Labor R 75:373-80 O '52

TRADE unions—*Continued*

Health service

Quest for glory. il Chem W 72:21-2+ F 28 '53
Union health center fosters employee health. J. A. Langbord. A M A Archives Ind Hygiene & Occup Med 6:474-6 D '52
United mine workers of America welfare and retirement fund medical care program; abstracts. W. F. Draper. Nat Safety N 68:117-20 S '53; Pub Health Rep 68:120 Ja '53

Insurance plans

How a Texas union runs its own insurance business. il Bsns W p 138-40 F 14 '53
Washington AFL queries insurers on union A.&H. bids. Nat Underw (Life ed) 57:7 Je 26 '53
See also
Pensions, Industrial
—Finance

International aspects

See also
International confederation of free trade-unions

Investments

Where unions put their money. Bsns W p 172-3 Ap 18 '53

Jurisdictional disputes

Pier 57's deck stringers are awarded to dockbuilders. il Eng N 150:28-30 Ja 29 '53
Unions call on the boss. il Bsns W p 110-14 F 7 '53
See also
International union of electrical, radio and machine workers

Law

High court test for featherbedding. il Bsns W p 169-70 O 25 '52
No union business on company time. Bsns W p 175 Mr 28 '53
Unions wonder; restrictive labor laws in Arizona and Nevada. Bsns W p 177 N 22 '52

Membership

Unions switch their strategy; social as well as economic arguments. il Bsns W p 154-6 My 23 '53

Officials

AFL officials indicted in St Louis; indictments charging 12 construction leaders with extortion and racketeering. Eng N 150:28 Je 4 '53
Case studies in union leadership training, 1951-52. G. W. Brooks and others. U S Bur Labor Statistics Bul 1114:1-23; pa 20c Supt. of doc. '52
Next American labor movement. D. Bell. il Fortune 47:120-3+ Ap '53
Why labor leaders act that way. W. H. Peterson. Factory Management 111:262-4+ Mr '53

Political activities

Democrats and labor. C. Van Devander. Barron's 33:7-8 Ja 12 '53
Labor weighs its chances. Bsns W p 115-16 F 7 '53
Picking up the pieces; labor surveys the new Congress. Fortune 46:83-4 D '52
Tension with the G.O.P.; lip service to foreign trade; unions stand. Fortune 47:73-4+ My '53
Unions and the election. Fortune 46:89-90+ O '52
Voice of labor; CIO and the Eisenhower administration. Barron's 33:1 Je 8 '53

Statistics

Labor union membership, 1898-1952; tabulation. Steel 132:196 Ja 5 '53

Canada

Development of labour relations. C. Jordan. il Pulp & Pa of Can 54:160-2 My '53
Labor relations in Canada. P. Conroy. Comm & Fin Chr 177:1445 Ap 2 '53
Third of working force in Canadian labor unions. J. Montagnes. Barron's 33:21 My 11 '53

Czechoslovakia

Czech trade unions reorganised. Economist 164:765-6 S 27 '52

Great Britain

Nationalized industry; reassessment and appraisal by the trade unions. Elec R (Lond) 153:401-3 Ag 21 '53
Three guilty men. Economist 167:802 Je 20 '53
Unions and productivity. Economist 167:8 Ap 4 '53

Japan

Japanese trade unions in trouble. Economist 166:743-4 Mr 14 '53

Southern states

South; big target for unionizing. map Bsns W p 148 F 28 '53

United States

AFL, CIO sign no-raid agreement. Bsns W p 162-3 Je 13 '53
Coming developments in labor relations. S. H. Slichter. Comm & Fin Chr 177:1642+ Ap 16 '53
Current labor trends and labor problems. S. H. Slichter. Am Gas Assn Prog 1952: 15-24
Featherbedding upheld by Supreme court. Bsns W p 175-6 Mr 14 '53
Hints of a McDonald-Lewis tie. Bsns W p 105-6 Jl 4 '53
Labor. Published in monthly numbers of Fortune
Labor highlights for 1953. il Steel 132:45-6 Ja 19 '53
Labor in midpassage. J. B. S. Hardman. Harvard Bsns R 31:39-48 Ja '53
Labor outlook; fair and calm. Steel 132: 47-8 Mr 23 '53
Labor union membership, 1898-1952; tabulation. Steel 132:196 Ja 5 '53
Meeting of minds, to correct uneconomic labor demands. T. L. Godey. Mag of Wall St 91:452-5 Ja 24 '53
New government policy in labor relations; trade unionism vs. right of self-organization. L. Wolman. Comm & Fin Chr 176: 2226 D 11 '52
New labor policy shapes up. Steel 131:60-1 N 17 '52
Next American labor movement. D. Bell. il Fortune 47:120-3+ Ap '53
No raiding; new labor monopoly. J. C. Wells. il Mill & Factory 53:75-7 S '53
Raiding; it costs too much. Bsns W p 160 My 16 '53
Time of decision for labor. W. T. Wilson. Mag of Wall St 92:312-14+ Je 13 '53
Union-management conference, no panacea of labor peace. C. E. Bonnett. Comm & Fin Chr 178:352 Jl 30 '53
Unionizing office workers. Bsns W p 121 Jl 18 '53
Unity; talks but no real urge. Bsns W p 154+ Ap 11 '53
What labor wants in 1953. Bsns W p 142-3 Ja 17 '53

TRADE waste

Abatement of stream pollution caused by industrial wastes. R. Eliassen. Pub Health Rep 68:43-5 Ja '53
Bond of technology brings better liaison on water problems; ACS symposium. Chem & Eng N 31:1292 Mr 30 '53
Color in industrial wastes. W. Rudolfs and W. D. Hanlon. Sewage & Ind Wastes 24: 1502-8; 25:66-9 D '52-Ja '53
Controlling industrial pollution of the Passaic river; abstract. F. J. DeHooge. Water & Sewage Works 100:309 Ag '53
Critical review of literature on the toxicity of industrial wastes and their components to fish. P. Doudoroff and M. Katz. Sewage & Ind Wastes 25:802-39 bibliog(155 titles, p834-9) Jl '53
Critical review of the literature of 1952 on sewage, waste treatment, and water pollution. Sewage & Ind Wastes 25:633-53 bibliog(149 titles, p649-53) Je '53
Data on the industrial waste problems of cities. Pub Works 84:63-4+ S '53
Destruction of phenols by oxidation with ozone. S. J. Niegowski, bibliog Ind & Eng Chem 45:632-4 Mr '53
Effect of detergents on sewage and water treatment; symposium. il Chem & Eng N 31:1072-9 Mr 16 '53

TRADE waste—*Continued*

Federation of sewage and industrial wastes association 25th annual meeting, New York, Oct. 6-9; industrial wastes session. Water & Sewage Works 100:27-33 Ja '53

Fish kills by industrial poisons. Sewage & Ind Wastes 25:590 My '53

How does industry make a pollution and waste survey? J. E. Cooper. Water & Sewage Works 100:195-8 My '53; Abstract. Pub Works 84:61 Jl '53

Industrial waste treatment progress reviewed at annual Purdue conference. Eng N 150:23 My 14 '53

Industrial wastes; community problem. E. B. Besselievre. il Pub Works 83:74-6+ D '52; 84:68-70+ F '53

Industrial wastes symposium. Water & Sewage Works 99:516-17 D '52

Industrial water pollution abatement. R. F. Weston. il Chem & Eng N 31:134-8 Ja 12 '53

Management looks at waste. J. F. Crist. Manuf Rec 122:34-5 My '53

National policy on the discharge of trade effluents into public sewers; abstract. Sewage & Ind Wastes 25:121-2 Ja '53

New Jersey sewage and industrial wastes association 38th annual meeting, Atlantic City, March 11-13; with abstracts of papers. Water & Sewage Works 100:199-203 My '53

Nutritional requirements in the biological stabilization of industrial wastes. E. N. Helmers and others. bibliog il Sewage & Ind Wastes 22:1200-6; 23:884-99; 24:496-507; 25:596-604 S '50, Jl '51, Ap '52, My '53

Objectives for quality control in Ontario. Munic Util 91:38+ Jl '53

Pollution-control problem. A. E. Berry. il Munic Util 91:19-22+ Jl '53

Recovery of metals from industrial wastes. Chem Age (Lond) 68:385-7 Mr 7 '53

Research on industrial wastes as related to water quality; abstract. C. C. Ruchhoft. Pub Works 84:61 Jl '53

Role of industry in the Ohio River valley pollution control program; abstract. E. J. Cleary. Water & Sewage Works 100:365-6 S '53

Sewage works developments during the year 1952. E. S. Chase. il Water & Sewage Works 100:45-55 F '53

Sound management required for effective waste control. Chem & Eng N 31:2068-9 My 18 '53

Southern municipal and industrial wastes conference, 2d, Chapel Hill. Eng N 150:26 Mr 26 '53

Survey of research facilities and projects, 1953. H. Heukelekian and W. H. Wisely. Sewage & Ind Wastes 25:1077-91 S '53

Symposium on continuous analysis of industrial water and industrial waste water. (Special tech. pub. no. 130) 54p Am. soc. for testing materials, 1916 Race st, Philadelphia 3 '53

Trade wastes and river pollution; abstract. B. A. Southgate. Chem & Ind p349 Ap 11 '53

Water conservation, a by-product of industrial waste control. J. L. Partin. il Sewage & Ind Wastes 25:1050-9 S '53

Workable industrial waste control. N. W. Anderson. Sewage & Ind Wastes 25:937-40 Ag '53

See also

Acid waste
Canneries—Waste
Chemical plants—Waste
Chromium plating—Waste
Coal mines and mining—Waste
Coal waste
Coke plants—Waste
Dairy waste
Electroplating—Waste
Federation of sewage and industrial wastes associations
Fumes
Metal working plants—Waste
Oil waste
Packing houses—Waste
Paper mills—Waste
Petroleum—Water problem
Petroleum waste
Rayon mills—Waste
Refuse disposal
Sewage disposal
Sewerage
Steel works—Waste
Sugar factories—Waste
Sulfite liquor
Textile mills—Waste
Waste, Utilization of
Water pollution
Woolen and worsted mills—Waste

Analysis

Analytical methods for industrial wastes; symposium. bibliog diags Anal Chem 24:1872-95 D '52

Color

Color in industrial wastes. W. Rudolfs and W. D. Hanlon. Sewage & Ind Wastes 25:314-24, 484-9 Mr-Ap '53

Disposal plants

Activated sludge application to industrial waste treatment. E. B. Besselievre. bibliog flow sheets il Pub Works 84:71-3+ S '53

Anaerobic digestion of packing plant wastes. W. J. Fullen. flow diags plan Sewage & Ind Wastes 25:576-85 My '53

Approach to action on the industrial waste problem; program of Naugatuck Chemical. W. E. Williams. Water & Sewage Works 100:170-1 Ap '53

Asbestos waste treatment solves pollution problem. R. W. Simpson and others. flow diag il diags Water & Sewage Works 100:248-52 Je '53

Automatic brine-disposal plant small but efficient. D. H. Stormont. il Oil & Gas J 51:114 Ja 12 '53

Bacteria by the bagful for speeding biological action in industrial waste plants. diag Chem Eng 60:120 Ap '53

Biological treatment of industrial wastes. W. Rudolfs and H. Heukelekian. bibliog (45 ref) il Chem Eng Prog 48:449-54 S '52

Chemical wastes disposal at Pratt & Whitney aircraft. A. J. Burdoin. flow diags il Sewage & Ind Wastes 24:435-58; Discussion. 458-61 Ap '53

Effluent-treatment plant for tank factory. il map plan diags Engineering 174:681-4, pl 55-6 N 28 '52

How to fight pollution; Timken roller bearing co. R. A. Dilley. il Factory Management 110:121-5 N '52

How to keep pollution out of streams. K. S. Watson. il Mill & Factory 51:113-17 D '52

Industrial plant gets deluxe sewage works; Link-Belt co. il Eng N 150:45 F 5 '53

Industrial waste treatment in Iowa. P. Bolton. Am Soc C E Proc 78[no 149]:1-15 S '52

Instrumentation in chromium waste treatment. W. N. Greer. flow diag il Sewage & Ind Wastes 25:930-4 Ag '53

Lagoons are simple devices for processing industrial wastes. H. R. Murdock. Ind & Eng Chem 45:sup 105A-6A+ Ap '53

Metal-finishing wastes treatment at the Meadville, Pa., plant of Talon, inc. H. W. McElhaney. flow diag il Sewage & Ind Wastes 25:475-82; Discussion. A. K. Graham. 482-3 Ap '53

Methods for treating metal-finishing wastes. Metal Prog 64:130+ Ag '53

Milk waste treatment by activated sludge. P. M. Thayer. flow diag il plans Water & Sewage Works 100:34-7 Ja '53

1952 industrial wastes forum. Sewage & Ind Wastes 25:706-28 Je '53

Operating and economic factors involved in the study of a packinghouse waste problem. H. O. Halvorson. Sewage & Ind Wastes 25:170-4; Discussion. M. D. Sanders. flow diags 174-6 F '53

Operation of an OCO water system on a board mill's white water. J. H. Wright. Tappi 36:sup 122A-4A Jl '53

Oxidation of cotton kier wastes; with cost data. N. L. Nemerow. bibliog Sewage & Ind Wastes 25:1060-4 S '53

Pilot plant for treatment of kraft mill wastes. W. A. Moggio and H. W. Gehm. flow diag il Sewage & Ind Wastes 25:305-10 Mr '53

Plating room waste water disposal. S. F. O'Connor. il diags Metal Finishing 51:56-8+ F '53

Plating waste treatment. C. F. Paulson. il diag Metal Prog 64:84-7 Ag '53

Present practice in treating papermaking effluent. H. W. Gehm. diags Paper Tr J 136:22-4 F 27 '53

Prevention of pollution by oil. C. Koons. bibliog diags Am Gas Assn Proc 1952:667-77

Problems connected with waste sulphite liquor collection, evaporation and burning. V. P. Edwardes. diags Paper Tr J 136:14-18 F 27 '53

TRADE waste—Disposal plants—*Continued*

Problems in the disposal of phenol waste in coke plants. G. E. Muns and C. V. Thompson. flow sheet diags Blast F & Steel Pl 41:761-9 Jl '53; Excerpts. Iron & Steel Eng 30:109-11 Ag '53

Rayon waste recovery and treatment. H. L. Jacobs. flow sheet Sewage & Ind Wastes 25:296-302; Discussion. C. E. Renn. 302-4 Mr '53

Recent developments in design of small milk waste disposal plants. J. P. Horton and H. A. Trebler. flow sheet diag Sewage & Ind Wastes 25:941-9 Ag '53

Recent developments in the treatment of pulp and paper mill effluents. A. B. Horlock and R. S. Jobin. bibliog(27 ref) diag Paper Tr J 137:16-18+ Jl 31 '53

Reduction of plating waste losses by reclaim tanks; Delco-Remy division, General motors corp. C. F. Hauri. il diags Sewage & Ind Wastes 25:586-90 My '53

Rendering plant waste treatment studies. M. L. Granstrom. flow diag Sewage & Ind Wastes 23:1012-16; 24:1478-88 Ag '51, D '52

Report on new developments and equipment of General American transportation corporation. B. K. Duffy and F. E. Seery. il Am Gas Assn Proc 1952:575-7

Separation of solids in deinking waste by coagulation and filtration. J. O. Thompson and others. bibliog Tappi 36:207-10 My '53

Slaughterhouse waste digestion. W. Rudolfs and V. Del Quercio. bibliog diags Water & Sewage Works 100:60-4 F '53

Solving industrial waste disposal problems in South Dakota. R. J. Stapf and C. E. Carl. il Pub Works 84:76-8+ Ag '53

Studies of biochemical oxidation by direct methods; oxidation and purification of industrial wastes by activated sludge. I. Gellman and H. Heukelekian. bibliog Sewage & Ind Wastes 25:1196-209 O '53

Surface and underground disposal of chemical wastes at Victoria, Texas. H. O. Henkel. Sewage & Ind Wastes 25:1044-9 S '53

Synthetic ion exchange materials in industrial waste treatment. A. B. Mindler. il Water & Sewage Works 100:288-90 Jl '53

Treatment and re-use of water in beet sugar manufacturing. G. S. Fleming. plan Sewage & Ind Wastes 24:1382-8 N '52

Treatment of chromium and other plating room waste waters. M. E. Hodges. il plan Metal Finishing 51:60-4 O '53

Treatment of finishing process wastes at the Ternstedt instrument plant. A. W. Sundwick and J. S. Delos. flow diag plan Sewage & Ind Wastes 25:44-7 Ja '53

Treatment of formaldehyde wastes by activated sludge methods; abstract. T. Waldmeyer. Sewage & Ind Wastes 25:351-2 Mr '53

Treatment of metal finishing wastes. A. G. Gray. flow diags il diag Metal Prog 62:77-81 D '52

Treatment of milk waste. N. D. Woolings. flow diags plans diags Munic Util 90:25-8+ D '52

Trickling filter application to industrial waste treatment. E. B. Besselievre. flow sheets il Pub Works 84:75-9+ Mr '53

Waste water need not be pollution. H. Miedendorp. il Mod Textiles Mag 34:72-3 Jl '53

Water symposium; steel industry in Pennsylvania; approach to problem of water pollution. C. S. Cassells and others. il plans diags Iron & Steel Eng 30:68-82; Discussion. 82-3 Mr '53

What size waste system do you need? chart. L. J. Murphy. Mill & Factory 52:79 My '53

White water treatment. W. Rudolfs and H. R. Amberg. bibliog diag Sewage & Ind Wastes 24:1108-20, 1278-87, 1402-9, 1509-11; 25:70-8, 191-200 S '52-F '53

Why and how of treating rendering plant wastes. L. S. Farrell. il Water & Sewage Works 100:172-5 Ap '53

Radioactive waste

Efficiency of filter beds for treating radioactive waste; abstracts. L. Gemmell. Am Water Works Assn J 45:sup68+ Mr '53; Nat Safety N 67:46 Mr '53

Radioactive contamination, continuing problem in water supply engineering. R. J. Morton. bibliog il diag Civil Eng 22:722-5 S '52

Removal of radioactive iodine by laboratory trickling filters. M. W. Carter. bibliog il Sewage & Ind Wastes 25:560-5 My '53

Testing

Rapid procedure for estimating organic materials in industrial wastes. J. G. Niedercorn and others. Sewage & Ind Wastes 25:950-2 Ag '53

TRADERS finance corporation, ltd.

Security I like best. W. H. Oppenheimer. Comm & Fin Chr 176:1614 O 30 '52

TRADING areas. See Shopping areas

TRAFFIC departments, Industrial

If you ship process products. S. P. Smith. Chem Eng 60:222-5 Mr '53

Reciprocity in traffic doesn't pay. H. G. Huhn. Ry Age 133:55 N 17 '52

See also

National industrial traffic league

TRAFFIC engineering

Changing picture in highway traffic. D. G. Mickle. il map Civil Eng 22:678-84 S '52

Congestion engineering. C. A. Church. Gen Elec R 56:44-6 Mr '53

Engineer's role in metropolitan traffic planning. L. Braff. Am Soc C E Proc 79 [no 191]:1-6 My '53

Bibliography

Selected references relating to mass transit. (Information circ. no. 23) 9 l Institute of transportation and traffic engineering, Univ. of California, Berkeley 4 '52

TRAFFIC lines

Comparison of paint films of various thicknesses as traffic stripes. C. J. Keese. bibliog il Roads & Sts 95:99-101 D '52

New stripe materials better than paint. C. J. Keese. il Roads & Sts 95:56-8+ O '52

Some results from road tests of traffic paints. F. G. Smith. Can Chem Process 37:63-4 Je 1 '53

TRAFFIC regulations

Off-center laning adds more street capacity in Los Angeles. J. Joseph. il plan Roads & Sts 96:68-9 Jl '53

Parking meters pay the bill. G. B. Arthur. il Pub Works 83:57-9+ D '52

Penn turnpike cuts top vehicle speeds. Eng N 150:27 Ja 29 '53

Traffic law enforcement. F. M. Kreml. S A E J 60:36-47 N '52

See also

Street traffic

TRAFFIC signals

Electro-mechanical traffic controller has jack-mounted components. il diag Product Eng 24:172-3 My '53

Signal device reduces collisions at intersections. Roads & Eng Constr 91:60 Jl '53

Traffic-actuated signals effective on one-way bridge. il Roads & Sts 95:102 D '52

TRAFFIC surveys

California highway planning survey aided by Census Bureau interviews. il Eng N 150:43 Mr 26 '53

TRAGER, James Garfield, jr.

Heart-stopping adventures of Trager the intrepid; youthful copy writer on Canadian Club. S. H. Margolis and M. Silverstein. por Ptr Ink 242:40+ Ja 30 '53

TRAILERS

Aluminum trailers. il Welding J 32:333-4 Ap '53

Augusta's pipe trailer. S. Anthony. il Water & Sewage Works 100:221 Je '53

Automatic chassis lubrication for trailers. Automobile Eng 43:245 Je '53

Cement in bulk to site. il Metallurgia 48:139 S '53

How goosenecks simplify hauling. il Constr Methods 34:86 O '52

Light-alloy bodies on lorries for bulk transport. il Engineering 175:473 Ap 10 '53

Modern truck trailer; abstract. K. W. Tantlinger. il S A E J 61:48-50 Mr '53

Oil trailer output certain to lag behind estimated demand for 1952. H. Ridder. Nat Pet N 44:60 S 24 '52

TRAILERS—*Continued*

120-ton trailer. il Engineer 195:776 My 29 '53

Payload-upping trailer carriage. il Food Eng 25:68+ S '53

Research trailer equipped with engineering facilities, living quarters. il Oil & Gas J 51:132 F 9 '53

Revenue motor bus factory sales, 1941-1951; motor bus factory sales by type of bus, 1946-1952; truck trailer shipments by type, 1949-1952; shipments by months, 1950-1952; tabulations. Automotive Ind 108:97 Mr 15 '53

Simon portable grain handling equipment. il Engineer 196:155-6 Jl 31 '53

Tippers and trailers. il Automobile Eng 43:83-4 F '53

Torque converters for tractor-trailers; abstract. P. L. Gillan and W. S. Coleman. Automotive Ind 109:136+ Jl 1 '53

Tractor-trailer design requirements; abstracts. W. P. Davis. Automotive Ind 107:47+ S 15 '52; S A E J 60:51-2 D '52

Trailers on the upgrade. Steel 132:54 Ap 27 '53

Truck trailers; production, by types, 1951-1952; yearly totals, 1949-1951; tabulations. Steel 132:184 Ja 5 '53

200-ton road trailer. il plan diags Engineer 195:828-30 Je 12 '53

U.S. trailer and trailer chassis production, 1948-1952. Iron Age 171:443 Ja 1 '53

See also

Automobile trailers

Fruehauf trailer company

Transportation

B.R.T. favors trailers-on-flats. W. P. Kennedy. Ry Age 135:11 Jl 27 '53

Canadian Pacific, Canadian National inaugurate trailers on flats service. il Ry Age 133:13 D 8 '52

GM unveils trailer transport. N. C. Dezendorf. il diags Ry Age 135:80-2 O 5 '53

New Haven poses 20 questions on piggy-backs. Ry Age News ed 135:34 O 12 '53

New terminals for piggy backs. il Ry Age 135:82-3 O 5 '53

Piggy-back brightest hope. D. V. Fraser. Ry Age 135:15 O 19 '53

Piggy-back car loads over sides. il Ry Age 134:19 Je 1 '53

Piggy-back transport. W. A. Bauer. Steel 132:153 Je 15 '53

Piggy backs, good or bad? trailers-on-flat-car service. J. S. Gallagher, jr. il Ry Age 134:80-3 Ap 20 '53

Trouble for trailerships. il Bsns W p 190+ Ap 25 '53

Trucks; will they ride the rails; Van-Car corp. gets tax writeoff for special flat cars to haul truck trailers. K. W. Bennett. Iron Age 171:82 Mr 19 '53

TRAILERS, Automobile. See Automobile trailers

TRAILERS, Industrial

Get the most out of the least plant handling space; determining in-plant trailer train aisle widths. J. J. Sichman. il diags Steel 131:101-2 N 10 '52

How the army coats 200 vehicles a day. D. Markstein. il Mill & Factory 51:106 D '52

TRAIN ferries

C&O cross-lake ferry service. il map Ry Age 135:77-9 Ag 24 '53

Chesapeake & Ohio operates largest Lakes carferry. il plans diags Marine Eng 58:42-57 Mr '53

TRAMCARS. See Street cars

TRAMP shipowners association, American. See American tramp shipowners association

TRANS-CANADA highway. See Roads—Canada

TRANSCONTINENTAL bus system, inc.

ICC examiner's report calls for disapproval of Continental purchase of American system. Bus Transportation 32:66 Ap '53

Stock offered. Comm & Fin Chr 177:2135-6 My 18 '53

Transcontinental; what it is now and where it's going. Bus Transportation 32:58-61 Ag '53

TRANSCONTINENTAL gas pipe line corporation

New president. Bsns W p 189-90 My 9 '53

TRANSDUCERS

Carrier amplifier has zero drift; stress and strain recording oscillographs for aircraft testing. A. Perone. il diags Electronics 25:131-3 D '52

Strain gage transducers for measurement and control. R. J. Fyffe and A. Arobone. il diags Product Eng 23:121-48 N '52

Transducer circuits. T. R. Breunich. diags Product Eng Hdbk p I 29-31 '53

See also

Electroacoustic transducers

Electromechanical transducers

Testing

Sinusoidal calibration table for vibration type transducers. C. M. Fields and R. S. Nevin. il diag Product Eng 23:172-3 D '52

TRANSFER mechanism

Automation, and the transfer type of machine tool; abstract. S. I. Rice. il Automotive Ind 108:46-7 My 15 '53

Colonial transfer press built to insert and automatically gage valve guides. il Mach 59:211 N '52

Cross Transfer-Matic for machining tractor cylinder blocks. il Mach 59:207 Mr '53

Cylinder blocks machined on transfer unit. il Automotive Ind 107:74 N 1 '52

Four-way transfer machine for drilling and tapping cylinder blocks; Modern industrial engineering co. il Mach 59:221-2 My '53

Self propelled fixtures; transfer machines handle four-ton armor plate weldment; Massey-Harris co. J. S. Kis, jr. and R. M. Olsen. il Iron Age 170:108-10 O 2 '52

Transfer machine combines rough and finish milling. il Iron Age 171:147 Ap 23 '53

Transfer machine; compound drilling at high production rates possible. il Iron Age 171:167-8 Ap 23 '53

Transfer machine for main bearing caps. il Automotive Ind 107:75 D 1 '52

Transfer-type machine tools can be standardized. W. G. Patton. il Iron Age 171:129-32 F 12 '53

Vacuum transfer from wire to press section. D. A. Ely. il Paper Tr J 136:18-19 Je 26 '53

TRANSFERENCE numbers. See Ionization, Electrolytic

TRANSFORMATIONS (mathematics)

See also

Laplace transformation

TRANSFORMER oil. See Insulating oil

TRANSISTORS

Analysis of vacuum tube and transistor circuits. L. A. Zadeh. diags Inst Radio Eng Proc 41:989-92 Ag '53

Application of transistors to high-voltage low-current supplies. G. W. Bryan, jr. il diags Inst Radio Eng Proc 40:1521-3 N '52

Build this transistor receiver. R. K. Dixon. il diags Radio & Tv N 49:35-7+ F '53

Care of transistors. R. P. Turner. il diags Radio & Tv N 49:40-1 F '53

Cathode-ray tube plots transistor curves. J. Kurshaw and others. il diags Electronics 26:122-7 F '53

Collector-base impedance of a junction transistor. R. L. Pritchard. diag Inst Radio Eng Proc 41:1060 Ag '53

Common-collector transistor amplifier at carrier frequencies. F. R. Stansel. diags Inst Radio Eng Proc 41:1096-102 S '53

Complementary symmetry transistor circuits. R. D. Lohman. il diags Electronics 26:140-3 S '53

Control of frequency response and stability of point-contact transistors. B. N. Slade. il Inst Radio Eng Proc 40:1382-4 N '52

Developmental germanium *p-n-p* junction transistor. R. R. Law and others. bibliog il Inst Radio Eng Proc 40:1352-7 N '52

Developmental transistorized equipments. il Tele-Tech 12:75 Ja '53

Dynamics of transistor negative-resistance circuits. B. G. Farley. diags Inst Radio Eng Proc 40:1497-508 N '52

Effect of electrode spacing on the equivalent base resistance of point-contact transistors. L. B. Valdes. diags Inst Radio Eng Proc 40:1429-34 N '52

Effects of space-charge layer widening in junction transistors. J. M. Early. diags Inst Radio Eng Proc 40:1401-6 N '52

TRANSISTORS—*Continued*

Equipments for measuring junction transistor admittance parameters for a wide range of frequencies. L. J. Giacoletto. bibliog il diags RCA R 14:269-96 Je '53
Experiments illustrate transistor applications. J. D. Fahnestock. il diags Electronics 26:112-13 Mr '53; Abstract. Product Eng 24:310+ My '53; Discussion. R. H. Spencer. Electronics 26:426+ Ap '53
Factors in the design of point-contact transistors. B. N. Slade. diag RCA R 14:17-27 Mr '53
Four-terminal *p-n-p-n* transistors. J. J. Ebers. bibliog diags Inst Radio Eng Proc 40:1361-4 N '52
F-m transistor oscillator. H. H. Wieder and N. Cass. diags Electronics 26:198+ Jl '53
Frequency variations of current-amplification factor for junction transistors. R. L. Pritchard. bibliog Inst Radio Eng Proc 40:1476-81 N '52
Fused impurity *p-n-p* junction transistors. J. S. Saby. bibliog il Inst Radio Eng Proc 40:1358-60 N '52
GE demonstrates new junction transistors. Nat Safety N 67:100+ My '53
Germanium transistors. J. S. Saby. il diags Gen Elec R 55:21-4+ S '52; Same cond. Product Eng 23:270+ D '52
Germanium triode for experimental and prototype equipment. diags Engineer 196:28 Jl 3 '53; Engineering 176:126-7 Jl 24 '53
Graphical analysis of some transistor switching circuits. L. P. Hunter and H. Fleisher. diags Inst Radio Eng Proc 40:1559-62 N '52
Hall effect. O. Lindberg. diags Inst Radio Eng Proc 40:1414-19 N '52
High-voltage, medium-power rectifier. C. L. Rouault and G. N. Hall. il Inst Radio Eng Proc 40:1519-21 N '52
Impurities create an industry. il Tech R 55:143-5 Ja '53
Interpretation of α-values in *p-n* junction transistors. F. S. Goucher and M. B. Prince. diags Phys R 89:651-3 F 1 '53
John Q. meets the transistor. il Electronics 26:5-6 Ja '53
Junction transistor circuit applications. P. G. Sulzer. bibliog diags Electronics 26:170-3 Ag '53
Junction transistor equivalent circuits and vacuum-tube analogy. L. J. Giacoletto. bibliog diags Inst Radio Eng Proc 40:1490-3 N '52
Junction transistor tetrode for high-frequency use. R. L. Wallace, jr. and others. diags Inst Radio Eng Proc 40:1395-400 N '52; Abstract. Electronics 26:112-13 Ja '53
Large current amplifications in filamentary transistors. W. van Roosbroeck. J Ap Phys 23:1411-12 D '52
Low-distortion transistor audio oscillator. P. G. Sulzer. il diags Electronics 26:171-3 S '53
Low-drain transistor audio oscillator. D. E. Thomas. il diags Inst Radio Eng Proc 40:1385-95 N '52
Matrix representation of transistor circuits. J. Shekel. bibliog diags Inst Radio Eng Proc 40:1493-7 N '52
Measurement of minority carrier lifetime in germanium. L. B. Valdes. bibliog il diags Inst Radio Eng Proc 40:1420-3 N '52
Measurement of the small signal parameters of transistors. G. Knight, jr. and others. diags Inst Radio Eng Proc 141:983-9 Ag '53
Method of designing transistor trigger circuits. F. C. Williams and G. B. B. Chaplin. bibliog diags Inst E E Proc 100 pt 3:228-44 Jl '53; Excerpts. Elec R (Lond) 152:379 F 13 '53; Discussion. Inst E E Proc 100 pt 3:245-8 Jl '53
Microminiature variable inductors for transistorization. J. W. Eng. bibliog il Tele-Tech 12:74-5+ Ag '53
New tetrode junction transistor. diag Tele-Tech 11:38 N '52
New transistors beat the heat; developments of designers at national convention of the Institute of radio engineers. P. Klass. il Aviation W 58:42+ My 4 '53
Noise in transistor amplifiers. E. Keonjian and J. S. Schaffner. Electronics 26:104-7 F '53
Optical position encoder and digit register. H. G. Follingstad and others. bibliog il diags Inst Radio Eng Proc 40:1573-83 N '52
Oscilloscopic display of transistor static electrical characteristics. N. Golden and R. Nielsen. diags Inst Radio Eng Proc 40:1437-9 N '52
Overrated? transistor hearing aids. Bsns W p 106+ Ap 25 '53
Phase-bistable transistor circuit. H. Baker and others. diags Inst Radio Eng Proc 41:1119-24 S '53
Portable transistor fm-receiver. R. C. Ballard. il diag Tele-Tech 12:79+ Ag '53
Power rectifiers and transistors. R. N. Hall. bibliog diags Inst Radio Eng Proc 40:1512-18 N '52
Power requirements for transistor circuits. J. Dalfonso. bibliog Electronics 26:204+ Je '53
Precision transistor oscillator. il diag Tele-Tech 12:93+ Mr '53
Preparation of germanium single crystals. L. Roth and W. E. Taylor. bibliog il diag Inst Radio Eng Proc 40:1338-41 N '52; Correction. 41:218 F '53
Present status of transistor development. J. A. Morton. bibliog il diags Bell System Tech J 31:411-42 My '52; Same. Aeronautical Eng R 11:34-45+ My '52; Same. Inst Radio Eng Proc 40:1314-26 N '52
Printed circuitry for transistors. S. F. Danko and R. A. Gerhold. il Inst Radio Eng Proc 40:1524-8 N '52
Properties of junction transistors. K. D. Smith. bibliog il diags Tele-Tech 12:76-8+ Ja '53
p-n Junctions by impurity introduction through an intermediate metal layer. L. D. Armstrong. diag Inst Radio Eng Proc 40:1341-2 N '52
Pulse duration and repetition rate of a transistor multivibrator. G. E. McDuffie, jr. diags Inst Radio Eng Proc 40:1487-9 N '52
Recent developments in transistor electronics. W. Shockley. Inst E E Proc 100 pt 3:36-8 Ja '53
Regenerative amplifier for digital computer applications. J. H. Felker. bibliog il diags Inst Radio Eng Proc 40:1584-96 N '52
Silicon *p-n* junction alloy diodes. G. L. Pearson and B. Sawyer. bibliog il Inst Radio Eng Proc 40:1348-51 N '52
Space-charge limited emission in semiconductors. W. Shockley and R. C. Prim. bibliog diags Phys R 90:753-8 Je 1 '53
Study of transistor circuits for television. G. C. Sziklai and others. il diags Inst Radio Eng Proc 41:708-17 Je '53
Symmetrical properties of transistors and their applications. G. C. Sziklai. il diags Inst Radio Eng Proc 41:717-24 Je '53
Terminology and equations for linear active four-terminal networks including transistors. L. J. Giacoletto. bibliog diags RCA R 14:28-46 Mr '53
Theory of alpha for *p-n-p* diffused junction transistors. E. L. Steele. diags Inst Radio Eng Proc 40:1424-8 N '52
Transient analysis of junction transistor amplifiers. W. F. Chow and J. J. Suran. diags Inst Radio Eng Proc 41:1125-9 S '53
Transistor aging troubles producers. Aviation W 57:18-19 N 24 '52
Transistor amplifier; cutoff frequency. D. E. Thomas. diags Inst Radio Eng Proc 40:1481-3 N '52
Transistor band spotter. P. G. Sulzer. il diags Radio & Tv N 49:52-3+ Je '53
Transistor broadcast regenerator. P. G. Sulzer. diag Electronics 26:200 Je '53
Transistor characteristics at low and medium frequencies. L. J. Giacoletto. diags Tele-Tech 12:97-9+ Mr '53
Transistor code practice oscillator. L. E. Garner, jr. il diags Radio & Tv N 49:40-1+ Ap '53
Transistor-controlled magnetic amplifier. R. H. Spencer. il diags Electronics 26:136-40 Ag '53
Transistor development in America. il diags Engineer 195:886-9 Je 26 '53
Transistor developments indicate commercial use soon. Machine Design 25:189-90 Ag '53
Transistor electric organ. L. E. Garner, jr. il diag Radio & Tv N 50:64-5 Jl '53

TRANSISTORS—*Continued*

Transistor electronics; imperfections, unipolar and analog transistors. W. Shockley. bibliog diags Inst Radio Eng Proc 40:1289-313 N '52

Transistor equations; reference sheet. F. R. Stansel. diags Electronics 26:156, 158 Mr '53

Transistor frequency standard. P. G. Sulzer. diags Electronics 26:206+ My '53

Transistor negative-impedance converters. J. G. Linvill. il diags Inst Radio Eng Proc 41:725-9 Je '53

Transistor not a work horse, yet. D. G. Fink. Materials & Methods 38:250+ O '53

Transistor-operated photocell relay. L. E. Garner, jr. il diags Radio & Tv N 49:64-5+ My '53

Transistor operation; stabilization of operating points. R. F. Shea. diags Inst Radio Eng Proc 40:1435-7 N '52; Correction. 41:992 Ag '53

Transistor, or 25 miles on a hunk of germanium. G. M. Rose. il diags Q S T 37:13-15+ Mr '53

Transistor organs. J. D. Fahnestock. il diags Electronics 26:156+ F '53

Transistor oscillator circuit. L. Fleming. diag Electronics 26:196+ Je '53

Transistor physics simplified. S. P. Gentile and P. J. Barotta. il diags Radio & Tv N 50:44-6+ Jl; 46-7 Ag '53

Transistor receiver. M. E. Quisenberry. il diag Radio & Tv N 50:122 Jl '53

Transistor research aid. Steel 132:83 F 16 '53

Transistor reversible binary counter. R. L. Trent. bibliog il diags Inst Radio Eng Proc 40:1562-72 N '52

Transitor riddle. Chem W 72:34+ F 7 '53

Transistor shift register and serial adder. J. R. Harris. diags Inst Radio Eng Proc 40:1597-602 N '52

Transistor sine-wave clipper. L. E. Garner, jr. il diags Radio & Tv N 49:50-1+ My '53

Transistor standards. Bsns W p48 My 9 '53

Transistor trigger circuits. A. W. Lo. bibliog il diags Inst Radio Eng Proc 40:1531-41 N '52

Transistorize your audio amplifiers. C. W. Martel. diags Radio & Tv N 49:40-1+ Mr '53

Transistorized hearing aids. J. D. Fahnestock. il diags Electronics 26:154-5 Ap '53

Transistorized superhet receiver; abstract. E. Toth. diag Electronics 26:202+ Ag '53

Transistors; abstract. W. Shockley. Chem & Eng N 31:1742-3 Ap 27 '53

Transistors and the military. I. R. Obenchain, jr. and W. J. Galloway. Inst Radio Eng Proc 40:1287-8 N '52

Transistors enter commercial field. N. B. Krim. Product Eng 24:197 Mr '53

Transistors in airborne equipment. O. M. Stuetzer. Inst Radio Eng Proc 40:1529-30 N '52

Transistors in our civilian economy. J. W. McRae. Inst Radio Eng Proc 40:1285-6 N '52

Transistors in switching circuits. A. E. Anderson. il diags Inst Radio Eng Proc 40:1541-58 N '52; Correction. 40:1732-3 D '52; Same. Bell System Tech J 31:1207-49 N '52

Transistors in terms of vacuum tubes. H. E. Hollmann. il diags Tele-Tech 12:74-6+ My '53

Transistors in trigger circuits. S. Walter. diags Inst Radio Eng Proc 41:1190 S '53

Transistors in wide range of experimental applications. E. W. Engstrom. Franklin Inst J 254:560-1 D '52

Transistors; key to electronic simplicity. L. E. Tomlinson. il diags Aero Digest 66:22-7 Ap '53

Transistors, new use for antimony? Eng & Min J 154:99 Je '53

Transistors operate at 300 mc. G. M. Rose and B. N. Slade. il diag Electronics 25:116-18 N '52

Transistors; theory and application. A. Coblenz and H. L. Owens. bibliog il diags Electronics 26:98-102 Mr; 138-41 Ap; 162-5 My; 166-71 Je; 158-63 Jl; 156-61 Ag; 156-61 S '53

Twenty-five cent oscillator. J. Fahnestock. diag Electronics 26:194+ Mr '53

Typical block diagrams for a transistor digital computer. J. H. Felker. diags Elec Eng 71:1103-8 D '52

Unipolar field-effect transistor. G. C. Dacey and I. M. Ross. diags Inst Radio Eng Proc 41:970-9 Ag '53

Unipolar field-effect transistor. W. Shockley. bibliog diags Inst Radio Eng Proc 40:1365-76 N '52

Using a transistor to increase relay sensitivity. L. E. Garner, jr. il diag Radio & Tv N 49:39+ Je '53

Variation of transistor parameters with temperature. A. Coblenz and H. L. Owens. diags Inst Radio Eng Proc 40:1472-6 N '52

Year of the transistor. F. Bello. il diags Fortune 47:128-33+ Mr '53

Control uses

Control applications of the transistor. E. F. W. Alexanderson. bibliog diags Inst Radio Eng Proc 40:1508-11 N '52

Transistor-controlled garage door. A. H. Forbes and R. L. Riddle. diags Electronics 26:222+ Je '53

Manufacture

Potting transistors. il Electronics 26:274-6 Ag '53

Noise

Experimental investigation of transistor noise. E. Keonjian and J. S. Schaffner. diags Inst Radio Eng Proc 40:1456-60 N '52

Noise analyzer for transistor production. R. F. Merrithew. diags Electronics 26:136-7 My '53

Theory of noise in *p-n* junctions and related devices. R. L. Petritz. bibliog diags Inst Radio Eng Proc 40:1440-56 N '52

Transistor noise in circuit applications. H. C. Montgomery. bibliog diags Inst Radio Eng Proc 40:1461-71 N '52

Testing

Methods and equipment for transistor testing. B. J. O'Neill and A. Gutterman. bibliog il diags Electronics 26:172-5 Jl '53

TRANSIT radio, inc.

Transit Radio gets the death blow in Cincinnati and Washington. Bsns W p46+ Je 6 '53

TRANSITION, Heat of

Effect of the rate of cooling on the allotropic transformation temperatures of uranium. P. Duwez. bibliog J Ap Phys 24:152-6 F '53

TRANSLATION

Lingua ex machina. Ind & Eng Chem 44:sup 11A+ D '52

Bibliography

Index translationum; international bibliography of translations. v 4 565p $10 Columbia univ. press, 2960 Broadway, New York 27 '52

Translations available in the USA. L. Goldman. Special Lib 43:354-7 N '52

TRANSPLANTATION (physiology)

Ciba tissue transplantation symposium. B. O. Rogers. Science 117:sup3 My 15 '53

Heterotransplantation of human tumors into cortisone-treated rats. C. Hoch-Ligeti and Y. T. Hsü. bibliog il Science 117:360-1 Ap 3 '53

TRANSPORTATION

Statistical methods and operational research in transport. F. A. A. Menzler. Engineer 194:737-40 N 28 '52; Abstract. Engineering 174:738 D 5 '52

Transport and communications. Published in Foreign commerce weekly

Way to solve our urban traffic congestion; forum. Bus Transportation 32:25-7 Mr '53

See also

Aeronautics, Commercial
Airlines
Airplanes
Automobiles
Barges
Carriers
Commerce
Conveying machinery (long distance)
Delivery of goods
Electric railroads
Freight car service
Freight cars
Freight handling
Freight ships
Highway transportation
Mechanical handling
Merchant marine
Mine haulage
Motor bus lines

TRANSPORTATION—See also—*Continued*

Motor ships
Motor trucks in freight service
Motor vehicles
Packing for shipment
Petroleum pipe lines
Pipe lines
Pneumatic conveying
Ports
Postal service
Railroads
Rapid transit
River traffic
Road traffic
Roads
Shipment of goods
Shipping
Ships
Steamboat lines
Street traffic
Streets
Terminals
Towboats
Traffic departments, Industrial
Trailers
Trolley buses
Waterways

History

Transport commission's collection of road, rail and sea relics. Engineering 175:691 My 29 '53

Laws and regulations

Development of the regulation of transportation during the past seventy-five years. J. B. Prizer. Pub Util 52:605-35 O 22 '53

Regulatory outlook for transportation. J. W. Bricker. Comm & Fin Chr 178:11 Jl 2 '53

Shipment of animal disease organisms and vectors. Science 117:339-40 Mr 27 '53

Statistics

Transportation equipment, Nov.-Dec. 1951-Jan.-Nov. 1952. Survey of Cur Bsns 33:S40 Ja '53 [cont monthly]

Alabama

Alabama story. il Manuf Rec 122:92-4 Je '53

Chicago

Transportation in Chicago. V. E. Gunlock. Midwest Eng 5:3-4+ S '52

Ethiopia

Ethiopia developing its roads, transport service. For Comm W 49:14 Ap 20 '53

Great Britain

British freight rates are increased; other transport changes debated. For Comm W 48:25 D 22 '52

British transport commission's 5th annual report. Engineer 195:892 Je 26 '53

British Transport's surplus in 1952. Economist 167:835 Je 20 '53

New money for transport; higher prices for the transport user. Economist 165:406-7 N 8 '52

New Transport act. G. Saville. Elec R (Lond) 153:443-4 Ag 28 '53

Third try for transport; new bill. Economist 165:361-2 N 8 '52

Transport and productivity. C. T. Brunner. Engineer 194:528, 561-2 O 17-24 '52

Transport bill. Engineer 194:650 N 14 '52

Transport in committee; new bill. Economist 165:603-4 N 29 '52

India

Indian transport. Engineering 175:658 My 22 '53

Ireland

Irish transport co. combats its deficit. For Comm W 48:24 D 1 '52

Middle Atlantic states

Resources for the chemical industry in the United States; transportation. O. Swiedler. Ind & Eng Chem 45:520-4 Mr '53

New England

Transportation. R. M. Edgar. bibliog Ind & Eng Chem 44:2541-4 N '52

Tennessee

Tennessee story; transportation facilities link state with Nation's leading markets. il Manuf Rec 121:103-6 N '52

United States

American society of traffic and transportation conference and seminar, Pittsburgh, Sept. 10-11; abstracts of papers. Ry Age 135:11-12 S 21 '53

Experts foresee expansion of transportation market. W. W. Parrish and others. Ind Marketing 38:28+ Je '53

Gearing government to transport needs; abstract. R. B. Murray. Ry Age 134:11 My 4 '53

Planning future of transport industry not a duty of Congress. E. C. Johnson. Ry Age 134:11 Ja 12 '53

Self-interest of American business requires fight for private transportation. W. White. Ry Age 134:14 Ja 19 '53

Techniques and trends; transportation; major projects. il Eng N 150:120-2+ F 19 '53

Transportation and communications; Nov.-Dec. 1951-Jan.-Nov. 1952. Survey of Cur Bsns 33:S22-3 Ja '53 [cont monthly]

Transportation changes have effect on economy. W. H. Rodda. Weekly Underw 167:1009+ O 18 '52

Transportation conference and forum, Rochester, N.Y. May 21-22. Ry Age 134:11-12 Je 1 '53

Transport's future on three fronts; panel discussion. il Ry Age News ed 135:9-11 S 28 '53

TRANSPORTATION, Military

See also

Airlines—Military use
Airplanes, Military transport
Motor vehicles, Military
United States—Army—Transportation corps
United States—Military sea transportation service

TRANSPORTATION in war

See also

Railroads in war

TRANSPORTATION insurance. See Insurance, Transportation

TRANSURANIUM elements

Participation of *f* orbitals in bonding in uranium and the transuranium elements. R. E. Connick and Z. Z. Hugus, jr. bibliog Am Chem Soc J 74:6012-15 D 5 '52

TRANSVAAL

See also

Gold mines and mining—Transvaal

TRANS WORLD airlines

Stock offering. Comm & Fin Chr 176:2067 D 1 '52

TWA had record gross last year. Barron's 33:12 Ja 26 '53

TWA interest in Viscount reported. Aviation W 57:86-7 N 3 '52

TWA Pacific bid; airline wants overseas and inland Asia routes. Aviation W 58:94-5 Ja 5 '53

Two big four airlines report top salaries. Aviation W 58:89 Ap 13 '53

U.S. Sullivans take over Ireland. il Bsns W p 126-8+ Ap 25 '53

TRAUMA

Trauma and peripheral vascular disease. M. M. Fisher. bibliog Ind Med 21:538-42 N '52

TRAVEL

Americans spend record sum on foreign travel. For Comm W 49:4 F 2 '53

One billion travel dollars go abroad. F. P. Sasscer. Survey of Cur Bsns 33:9-11 Je '53; Abstract. For Comm W 49:20 Je 29 '53

Tourist travel being promoted in Lebanon. For Comm W 49:6 F 16 '53

Travel on the cuff; Go Europe n' sign, inc. Bsns W p 146 My 2 '53

See also

Air travel
Railroads—Passenger traffic
Tourist trade

Advertising

Advertising expands this business by tapping present customers; 23-year-old international travel service of AAA. il Ptr Ink 242:39-40 Ja 9 '53

Best campaigns of 1952; travel. B. Tyler. il Adv Agency 46:63 F '53

How to sell a mid-winter specialty in midsummer; air travel to Miami. il Ptr Ink 242:66+ Ja 23 '53

Which ad pulled best. il Ptr Ink 242:27+ Ja 2 '53

TRAVELERS insurance company

50th anniversary of Travelers schools. C. Axman. East Underw 54:3+ Ja 23 '53

TRAVELING stores
Chattanooga gas co. rolls appliance showroom to the customer's door. il Am Gas J 178:75 My '53
Salesmobile promotes seeing is selling theme. F. C. Sturtevant. il Nat Pet N 44:61+ N 5 '52

TRAVELING wave tubes. See Vacuum tubes—Traveling wave tubes

TRAYS (containers)
Top-of-basket display; simple aluminum foil tray for top layer. il Mod Packaging 26: 112-13 Ag '53

TREATIES
See also
Commercial treaties and agreements
Germany—Treaties
United States—Treaties

TREE felling
How to grub trees near houses. il Roads & Sts 96:46 Ag '53

TREE planting
Piece work in reforestation in northern Sweden. Pulp & Pa of Can 53:178+ O '52
Preliminary observations on planting in the clay belt. E. Bonner. Pulp & Pa of Can 54: 116+ Ja '53

TREES
Effects of chemical treatment of pulpwood trees. D. C. McIntosh. bibliog il Tappi 36:sup 150A-60A Ag '53
See also
Aspen
Douglas fir
Mammea americana
Pine
Spruce
Woodlots

Diseases and pests

Effects of beetle infestations on watersheds. D. S. Nordwall. Am Water Works Assn J 45:797-803 Ag '53
Expanded research in insect and disease control urged. Paper Ind 34:1332-3 F '53
Forest insect problem. W. L. Baker. Science 117:sup3 My 22 '53
Her job is unusual, C. W. Fritz seeks wood fungi. Pulp & Pa of Can 54:146+ S '53
See also
Spruce budworms

TREMATODES
Life history of echinoparyphium flexum (Linton 1892) (Dietz 1910) (trematoda; echinostomidae). H. H. Najarian. bibliog Science 117:564-5 My 22 '53
Snail intermediate host of the rabbit parasite hasstilesia tricolor (trematoda; brachylaemidae). W. B. Rowan. bibliog Science 117: 559-60 My 22 '53

TRENCHING machinery
Building roads with a ditch digger. il Pub Works 84:95 S '53
He bought a digger and got out of the hole on trenching job costs! il Dom Eng 182: 106-7+ O '53
Lays 300 to 400 feet of tile per hour. il Constr Methods 35:56 My '53
Method for trenching in wet unstable soil. A. Rawn. diag Water & Sewage Works 100:282-3 Jl '53
Submarine pipeline is too high, so jet-action trencher lowers it 17 ft. and weights hold it there at elevation -80. H. T. Perez. il Constr Methods 35:50-3 Ag '53
This heavy dozer blade did 70 miles of trenching. il Roads & Sts 95:63 N '52
Tractor-trencher advantages shown by Citizens gas and coke utility. il Am Gas J 178:19 Mr '53
Trencher builds low-cost road in Texas. il diags Eng N 150:40+ Ap 30 '53

TREPANNING
Graphite blocks trepanned to save $20 each. E. Walker. il diags Am Mach 96:122-3 N 10 '52
Time cut by trepanning. Steel 131:312+ O 13 '52; il Iron Age 170:130+ O 23 '52
Trepanning tool saves material. F. W. Coulson. diags Am Mach 91:116 Ag 31 '53

TRESPASS
Pennsylvania court favors absolute liability in trespass case tried originally on negligence theory alone. Weekly Underw 167: 1269 N 8 '52

TRIANGLES
Derivation of formula for right triangles with integral sides. W. E. Howland. J Eng Educ 43:430 Mr '53
Right triangles with integral sides. F. C. Bragg. J Eng Educ 43:124-5 O '52

TRIANGULENE
Aromatic hydrocarbons; triangulene derivatives. E. Clar and D. G. Stewart. bibliog Am Chem Soc J 75:2667-72 Je 5 '53

TRIARCH corporation, limited
Financial group forms Canadian concern. Comm & Fin Chr 178:119 Jl 9 '53

TRIAZINES
3-Amino-*as*-triazines. J. G. Erickson. Am Chem Soc J 74:4706 S 20 '52
Formation of 1,3,5-triazines by the reaction of α-cyanocarbonyl compounds with guanidine. P. B. Russell and others. bibliog Am Chem Soc J 74:5403-5 N 5 '52
Solvent effects in the conversion of nitriles to perhydro-*s*-triazines. W. D. Emmons and others. Am Chem Soc J 74:5524-5 N 5 '52
Some reactions in the 1,3,5-triazine series. A. Burger and E. D. Hornbaker. bibliog Am Chem Soc J 75:4579-80 S 20 '53
Ultraviolet absorption spectra of derivatives of symmetric triazine; amino triazines. R. C. Hirt and D. J. Salley. bibliog J Chem Phys 21:1181-4 Jl '53

TRIAZO compounds
Heats of combustion of diazoaminobenzene, benzotriazole and 2-triazoethanol. T. F. Fagley, E. Klein and J. F. Albrecht, jr. bibliog Am Chem Soc J 75:3104-6 Jl 5 '53

TRIAZOLES
3 : 5-Diamino-1-aryl-1 : 2 : 4-triazoles as potential antimalarials. J. P. Thurston and J. Walker. Chem Soc J p4542 N '52
Preparation of 3 : 5-dimethyl-1-phenyl-1 : 2 : 4-triazole. A. A. Komzak and J. B. Polya. bibliog J Ap Chem 2:666-8 N '52
Triazoles; unsymmetrical Einhorn-Brunner and related Pellizzari reactions. M. R. Atkinson and J. B. Polya. Chem Soc J p3418-22 S '52

TRIBROMOCHLOROMETHANE
Substituted methanes; potential constants for CBr_3Cl. A. G. Meister and F. L. Voelz. J Chem Phys 21:158 Ja '53,

TRIBROMOFLUORANTHENE
4 : 11 : 12-Tribromofluoranthene. N. Campbell, W. K. Leadill and J. F. K. Wilshire. Chem Soc J p4615-18 D '52

TRIBROMOTROPOLONE
Rearrangement of halotropones; chloride exchange in tribromotropolone. W. V. Doering and L. H. Knox. bibliog Am Chem Soc J 74: 5683-7 N 20 '52

TRICALCIUM phosphate. See Calcium phosphates

TRICHLOROACETIC acid
Gravimetric estimation of proteins precipitated by trichloroacetic acid. F. L. Hoch and B. L. Vallee. bibliog Anal Chem 25: 317-20 F '53

TRICHLOROBENZENE
Homolytic aromatic substitution; ratio of isomerides formed in the phenylation of chlorobenzene; competitive experiments on the phenylation of *p*-dichlorobenzene and 1 : 3 : 5-trichlorobenzene; partial rate factors for chlorobenzene. D. R. Augood, D. H. Hey and G. H. Williams. Chem Soc J p44-50 Ja '53
Trichlorobenzenes. Chem Eng 60:263 Ap '53

TRICHLOROETHANE
Dielectric dispersion in the microwave region of six tetrasubstituted methanes in the solid state. J. G. Powles and others. bibliog diags J Chem Phys 21:136-41 Ja '53
Electron diffraction investigation of the molecular structures of 1,1,1-trichloroethane, 2,2-dichloropropane and 2-chloro-2-methylpropane. J. W. Coutts and R. L. Livingston. bibliog Am Chem Soc J 75:1542-7 Ap 5 '53
Infrared spectrum of methyl chloroform. P. Venkateswarlu. J Chem Phys 20:1810 N '52
Mechanisms of the thermal decompositions of 1 : 4-dichlorobutane and 1 : 1 : 2-trichloroethane. R. J. Williams. Chem Soc J p 113-16 Ja '53
Methylchloroform; the infrared spectrum from 130-430 cm.$^{-1}$, the energy levels and potential for internal rotation and the thermodynamic properties. K. S. Pitzer and J. L. Hollenberg. bibliog Am Chem Soc J 75:2219-21 My 5 '53
Vibrational assignments for 1,1,1-trichloroethane. M. Z. El-Sabban and others. J Chem Phys 20:1810-11 N '52

TRICHLOROETHYLENE

Dehalogenation reaction; dechlorination of the copolymers vinyl acetate/*trans*-dichloroethylene and vinyl acetate/trichloroethylene. T. Alfrey, jr., H. C. Haas and C. W. Lewis. Am Chem Soc J 74:4856-8 O 5 '52

Gases produced by inert arc welding. J. J. Ferry and G. B. Ginther. bibliog Welding J 32:396-8 My '53

Trichloroethylene. C. B. Shepherd. bibliog il diags Chem & Eng N 31:234-7 Ja 19 '53

TRICHLOROMETHANE. See Chloroform

TRICHLOROMETHYL propene

Kinetics and mechanisms of nucleophilic displacements in allylic systems; the reactions of 3 : 3 : 3-trichloro-2-methylprop-1-ene with nucleophilic reagents. P. B. D. de la Mare and C. A. Vernon. Chem Soc J p3628-31 S '52

Reactions of ketene diethylacetal with 1,1,1-trichloro-2-methyl-2-propene. D. G. Kundiger and K. H. Froman. Am Chem Soc J 75:1744-5 Ap 5 '53

TRICHLORONITROPROPANE

1,1,1-Trichloro-2-arylamino-3-nitropropanes. F. Brower and H. Burkett. bibliog Am Chem Soc J 75:1082-4 Mr 5 '53

TRICHLOROPHENOXYACETIC acid

Herbicides. P. Frisselle and D. Stillman, jr. il Chem & Eng N 31:1175-7 Mr 23 '53

Toxicity of 2,4-dichlorophenoxyacetic acid and 2,4,5-trichlorophenoxyacetic acid; a report on their acute and chronic toxicity in dogs. V. A. Drill and T. Hiratzka. A M A Archives Ind Hygiene & Occup Med 7:61-7 Ja '53

Analysis

Spectrophotometric determination of small quantities of 2,4-dichlorophenoxyacetic acid and 2,4,5-trichlorophenoxyacetic acid using partition chromatography. N. Gordon. bibliog diag Anal Chem 24:1968-71 D '52

TRICHLOROSILANE

Raman spectra of vinyl- and dichlorovinyltrichlorosilane. H. Murata. J Chem Phys 21:181-2 Ja '53

TRICHLOROTRIFLUOROETHANE

Infrared and Raman spectra of fluorinated ethanes; the series CF_3CF_3, CF_3CF_2Cl, CF_3CFCl_2, and CF_3CCl_3. J. R. Nielsen and others. bibliog J Chem Phys 21:383-93 Mr '53

TRICKLING filters. See Sewage disposal—Filtration

TRI-CONTINENTAL corporation

Capital Administration-Tri-Continental merger. P. A. Johnston. Barron's 33:37-8 Mr 16 '53

Security I like best. S. Katzenstein. Comm & Fin Chr 177:2+ Ja 1 '53

Tri-Cap merger is final step in unifying plan. Comm & Fin Chr 177:1562 Ap 9 '53

TRICRESYL phosphate

Peppier gas. Bsns W p32 My 16 '53

Service experience with TCP fuel additive. C. R. Johnson and D. N. Harris. il S A E J 61:36-41 S '53

TRIESTE

Bridging the Adriatic; Trieste dispute. Economist 164:733-4 S 27 '52

TRIESTERS

Triesters of carboxymethylmercaptosuccinic acid. R. Filler and R. W. Sneed. Am Chem Soc J 75:2765 Je 5 '53

TRIETHANOLAMINE

Non-yellowing triethanolamine. W. Wolff. Soap & San Chem 28:97 D '52

Quaternary ammonium compounds with bactericidal properties. H. Sturm and others. Ind & Eng Chem 45:186-8 Ja '53

TRIETHYLAMINE

Separation of mixtures with triethylamine-sulfur trioxide. W. B. Hardy and M. Scalera. Am Chem Soc J 74:5212-14 O 20 '52

Thermodynamical study of the water-triethylamine system near its lower critical point. A. Bellemans. bibliog J Chem Phys 21:368-9 F '53

TRIETHYLENE glycol

Separation of phenols from coal-tar hydrocarbons by means of glycerol and aqueous triethylene glycol; development of a process. A. P. C. Cumming. flow diags J Ap Chem 3:98-106 Mr '53

TRIFLUOROACETALDEHYDE

Trifluoroacetaldehyde. F. Brown and W. K. R. Musgrave. Chem Soc J p5049-50 D '52

TRIFLUOROACETATES

Metathetical reactions of silver salts in solution; the synthesis of acyl trifluoroacetates. A. F. Ferris and W. D. Emmons. bibliog Am Chem Soc J 75:232-3 Ja 5 '53

TRIFLUOROACETIC acid

Conductivities of five substances in trifluoroacetic acid. J. H. Simons and K. E. Lorentzen. diags Am Chem Soc J 74:4746-50 O 5 '52

Dielectric constant of trifluoroacetic acid. W. Dannhauser and R. H. Cole. bibliog Am Chem Soc J 74:6105 D 5 '52

Electrolytic reduction of perrhenate; studies in perchloric, ethanesulfonic, trifluoroacetic and hydrochloric acids. J. C. Hindman and P. Wehner. bibliog Am Chem Soc J 75:2869-72 Je 20 '53

Infrared and Raman spectroscopy studies of light and heavy trifluoroacetic acids. N. Fuson and others. bibliog J Chem Phys 20:1627-34 O '52

N-trifluoroacetyl derivatives of carcinogenic amines. E. Sawicki and F. E. Ray. Am Chem Soc J 75:2266-7 My 5 '53

Oxidation reactions with pertrifluoroacetic acid. W. D. Emmons and A. F. Ferris. Am Chem Soc J 75:4623-4 S 20 '53

Studies of trifluoroacetic acid; the synthesis of 2-benzoyl 4 : 6-benzylidene methyl-α-D-glucopyranoside and its conversion into the isomeric 3-benzoate by an acyl migration. E. J. Bourne, A. J. Huggard and J. C. Tatlow. Chem Soc J p735-41 Mr '53

Studies of trifluoroacetic acid; trifluoroacetyl derivatives of amines. E. J. Bourne and others. Chem Soc J p4014-19 O '52

Vapor phase association of trifluoroacetic acid. R. E. Lundin, F. E. Harris and L. K. Nash. bibliog Am Chem Soc J 74:4654-6 S 20 '52

TRIFLUOROACETONE

Concerning the behavior of aqueous thenoyltrifluoroacetone. E. H. Cook and R. W. Taft, jr. bibliog Am Chem Soc J 74:6103-4 D 5 '52

Reaction of trifluoroacetone with acetylene. P. Tarrant, D. A. Warner and R. E. Taylor. bibliog Am Chem Soc J 75:4360-2 S 5 '53

TRIFLUOROACETYL hypofluorite

Trifluoracetyl hypofluorite. G. H. Cady and K. B. Kellogg. diag Am Chem Soc J 75:2501-2 My 20 '53

TRIFLUOROBENZENE. See Trifluorotoluene

TRIFLUOROCROTONIC acid

Reactions of fluorocarbon radicals; alternative synthesis for γγγ-trifluorocrotonic acid. R. N. Haszeldine. Chem Soc J p922-3 Mr '53

TRIFLUOROETHANE

Complete symmetry group for internal rotation in CH_3CF_3 and like molecules. H. T. Minden. J Chem Phys 20:1964-5 D '52

Normal coordinate analysis of CF_3CH_3 based on a Urey-Bradley potential function. Chi Yuan Pan and J. R. Nielsen. bibliog J Chem Phys 21:1426-7 Ag '53

TRIFLUOROIODOMETHANE

Infrared spectra of CF_3Br and CF_3I. S. R. Polo and M. K. Wilson. J Chem Phys 20:1183 Jl '52

Infrared spectral data and tentative assignments for CF_3Br and CF_3I. P. R. McGee and others. J Chem Phys 20:1044 Je '52

Raman and infrared spectra of CF_3Br and CF_3I. W. F. Edgell and C. E. May. bibliog J Chem Phys 20:1822-3 N '52

Substituted methanes; infrared spectral data, assignments, potential constants, and calculated thermodynamic properties for CF_3Br and CF_3I. P. R. McGee and others. J Chem Phys 21:242-6 F '53

TRIFLUOROMETHYL benzene

Near ultraviolet absorption spectra of 1,4 bis-(trifluoromethyl)benzene and 1,3,5 tris-(trifluoromethyl)benzene. C. D. Cooper and F. W. Noegel. bibliog il J Chem Phys 20:1903-7 D '52

TRIFLUOROMETHYL benzimidazole

Trifluoromethylbenziminazoles. A. Sykes and J. C. Tatlow. Chem Soc J p4078-9 O '52

TRIFLUOROMETHYL group

Derivatives of *o*-, *m*-, and *p*-aminobenzotrifluoride; azomethines containing the trifluoromethyl group. P. M. Maginnity and J. L. Eisenmann. bibliog Am Chem Soc J 74:6119-21 D 5 '52

Vapor dipole moments of some organic molecules containing the trifluoromethyl group. J. J. Conradi and N. C. Li. bibliog diags Am Chem Soc J 75:1785-8 Ap 20 '53

TRIFLUOROPROPENE

Addition of free radicals to unsaturated systems; the direction of radical addition to 3 : 3 : 3-trifluoropropene. R. N. Haszeldine. Chem Soc J p2504-13 Jl '52

TRIFLUOROTOLUENE

Fluorescence studies of some simple benzene derivatives in the near ultraviolet; benzotrifluoride. M. L. N. Sastri and H. Sponer. bibliog il J Chem Phys 20:1428-31 S '52

Normal coordinate analysis of the nonplanar vibrations of 1,3,5-trifluorobenzene. E. Ferguson. diag J Chem Phys 21:886-90 My '53

Reactions of certain nitrogen-containing compounds derived from benzotrifluoride. R. A. Cartwright and J. C. Tatlow. Chem Soc J p 1994-8 Jl '53

TRIFLUOROTOLUIDINE

Formation and deamination of brominated *m*-aminobenzotrifluorides. P. Tarrant and M. R. Lilyquist. bibliog Am Chem Soc J 75:3034-5 Je 20 '53

TRIGLYCERIDES. See Glycerides

TRIHYDROXYISOFLAVONE

Synthesis of 5 : 7 : 2′-trihydroxy*iso*flavone. W. Baker and others. Chem & Ind p 1058 O 25 '52

TRILOBITES

Color in trilobites of Trenton age. M. W. Garretson. Science 117:17 Ja 2 '53

Trilobites from the lower Champlainian formations of the Appalachian valley. B. N. Cooper. (Memoir 55) 69p, 19pls bibliog(p45-6) Geological soc. of America, 419 W. 117th st, New York 27 '53

Ventral cephalic sutures in Cambrian trilobites. F. Rasetti. Am J Sci 250:885-98, pl 1 bibliog(p897-8) D '52

TRIMERIZATION. See Polymerization

TRIMETHOXYBENZOIC acid

Eudesmic acid; its identity with 3 : 4 : 5-trimethoxybenzoic acid. A. J. Birch and Mrs P. Elliott. Chem Soc J p355-6 Ja '53

TRIMETHYLALUMINUM. See Aluminum trimethyl

TRIMETHYLAMINE

Behavior of tetraborane toward trimethylamine and ethanol. A. B. Burg and F. G. A. Stone. bibliog diag Am Chem Soc J 75:228-9 Ja 5 '53

System silicon tetrafluoride-trimethylamine. C. J. Wilkins and D. K. Grant. Chem Soc J p927-32 Mr '53

TRIMETHYL boron. See Boron trimethyl

TRIMETHYLCYCLOHEXYLPENTANE

Synthesis of 2,2,4-trimethyl-4-phenylpentane and 2,2,4-trimethyl-4-cyclohexylpentane; reactions of 2,2,4-trimethyl-4-phenylpentane. H. Pines, R. Myerholtz, jr. and V. N. Ipatieff. bibliog Am Chem Soc J 75:937-9 F 20 '53

TRIMETHYLGALLIUM. See Gallium trimethyl

TRIMETHYLHEXANOL

Phthalates of 3 : 5 : 5-trimethylhexan-1-ol. D. G. Jones and G. H. Whitfield. Chem Soc J p2795-7 S '53

TRIMETHYLHYDRAZINE

Trimethylhydrazine and tetramethylhydrazine. J. B. Class, J. G. Aston and T. S. Oakwood. bibliog Am Chem Soc J 75:2937-9 Je 20 '53

TRIMETHYLPHENOL. See Isopseudocumenol; Pseudocumenol

TRIMETHYLPHENYL ammonium

Nitration in sulphuric acid; kinetics of nitration of the trimethylphenylammonium ion. T. G. Bonner, F. Bowyer and G. Williams. Chem Soc J p3274-80 Ag '52

TRIMETHYLPHENYLPENTANE

Synthesis of 2,2,4-trimethyl-4-phenylpentane and 2,2,4-trimethyl-4-cyclohexylpentane; reactions of 2,2,4-trimethyl-4-phenylpentane. H. Pines, R. Myerholtz, jr. and V. N. Ipatieff. bibliog Am Chem Soc J 75:937-9 F 20 '53

TRIMETHYLPYRAZOLINE

Chlorostannates of hydrazine and 3 : 5 : 5-trimethylpyrazoline. W. Pugh and A. M. Stephen. Chem Soc J p4138-41 N '52

TRIMETHYLQUINOLINE

Synthesis and nitration of 2,6- and 2,7-dimethylquinoline and 2,5,8-trimethylquinoline. D. M. Bowen, R. W. Belfit, jr. and R. A. Walser. bibliog Am Chem Soc J 75:4307-11 S 5 '53

TRIMETHYLSILYL group

Conjugative ability of the trimethylsilyl group. R. A. Benkeser and H. R. Krysiak. bibliog Am Chem Soc J 75:2421-5 My 20 '53

Electrical effect of the trimethylsilyl group. J. D. Roberts and C. M. Regan. bibliog Am Chem Soc J 75:4102-3 Ag 20 '53

Kinetics and mechanism of methyl-silicon cleavage by sulfuric acid. L. H. Sommer, W. P. Barie and J. R. Gould. Am Chem Soc J 75:3765-7 Ag 5 '53

TRIMETHYLSTYRENE oxide

Reaction of 2,4,6-trimethylstyrene oxide with phenol. C. O. Guss. bibliog Am Chem Soc J 75:3177-9 Jl 5 '53

TRIMETHYLTRICOSANOIC acid

Anodic syntheses; new syntheses of 3 : 13 : 19-trimethyltricosanoic acid. R. P. Linstead and others. Chem Soc J p 1538-41 My '53

TRIMETHYLENE oxide

Effect of ring size on the infrared spectra of cyclic ethers; characteristic frequencies of trimethylene oxides and tetrahydrofurans. G. M. Barrow and S. Searles. bibliog Am Chem Soc J 75:1175-7 Mr 5 '53

TRIMETHYLENE sulfide

Reactions of trimethylene sulfide with chlorine and bromine. J. M. Stewart and C. H. Burnside. bibliog Am Chem Soc J 75:243-4 Ja 5 '53

Thiacyclobutane; heat capacity, heats of transition, fusion and vaporization, vapor pressure, entropy, heat of formation and thermodynamic functions. D. W. Scott and others. bibliog Am Chem Soc J 75:2795-800 Je 20 '53

TRINIDAD

See also

Petroleum industry and trade—Trinidad

TRINIDAD petroleum development company, limited

Statement by the chairman. K. Moore. Economist 165:424-5 N 8 '52

TRINITROBENZENE

Reduction of picryl chloride to 1,3,5-trinitrobenzene. A. H. Blatt and E. W. Tristram. bibliog Am Chem Soc J 74:6273-4 D 20 '52

Spectroscopic study of the benzene-*s*-trinitrobenzene molecular complex. D. M. G. Lawrey and H. McConnell. bibliog Am Chem Soc J 74:6175-7 D 20 '52

State of anthracene, *sym*-trinitrobenzene and their 1 : 1 complex in liquid sulfur dioxide solution. N. N. Lichtin, R. E. Weston, jr. and J. D. White. bibliog Am Chem Soc J 74:4715-16 S 20 '52

TRINITROFLUORENONE

Studies on carcinogenic hydrocarbons; dissociation constants and free energies of formation of complexes with 2,4,7-trinitrofluorenone. K. H. Takemura, M. D. Cameron and M. S. Newman. Am Chem Soc J 75:3280-2 Jl 5 '53

TRINITRONAPHTHALENE

Preferential reduction of nitro-groups in polynitro-compounds; 1 : 3 : 6-, 1 : 3 : 8-, and 1 : 4 : 5-trinitronaphthalene. E. R. Ward and L. A. Day. Chem Soc J p4529-30 N '52

TRINITROSTYRENE

Synthesis of 2,4,6-trinitrostyrene and some intermediates. C. F. Bjork and others. bibliog Am Chem Soc J 75:1988-9 Ap 20 '53

TRINITROTRIPHENYLAMINE

4,4′4″-Trinitrotriphenylamine. R. I. Walter. bibliog Am Chem Soc J 75:2771-2 Je 5 '53

TRINITY college, Hartford

Many in insurance are alumni of Trinity college. East Underw 53:16 D 12 '52

TRIODES. See Vacuum tubes

TRIOXANE

Vapor phase depolymerization of trioxane. A. W. Schnizer, G. J. Fisher and A. F. MacLean. diag Am Chem Soc J 75:4347-8 S 5 '53

TRIPHENYLAZOMETHANE

Some decompositions of triphenylphenylazomethane in presence of quinones. A. J. Betterton and W. A. Waters. Chem Soc J p329-31 Ja '53

TRIPHENYLBUTANE

Reaction of 1 : 4-diphenyl- and 1 : 1 : 4-triphenyl-butane with N-bromosuccinimide. S. Israelashvili and F. Bergmann. Chem Soc J p 1070-2 Ap '53

TRIPHENYLENE

Friedel-Crafts reactions of triphenylene. N. P. Buu-Hoï and P. Jacquignon. Chem Soc J p941-2 Mr '53

TRIPHENYLETHYLENE

Triphenylethylenes. W. Tadros and A. Latif. Chem Soc J p3823-5 O '52

Triphenylethylenes and related compounds. W. Tadros, Y. Akhnookh and G. Aziz. Chem Soc J p 186-9 Ja '53

TRIPHENYLMETHANE

Effect of the anion on the conductive properties of triphenylmethane dye salts. R. C. Nelson. J Chem Phys 20:1327-8 Ag '52

TRIPHENYLMETHANOL

Interaction of triphenylmethanol, fluoren-9-ol, and diphenylmethanol with hydrazoic acid in the presence of sulphuric acid. C. L. Arcus and R. J. Mesley. Chem Soc J p 178-81 Ja '53

TRIPHENYLMETHYL

Electron distribution in triphenylmethyl; hyperfine structure of the paramagnetic resonance absorption of $(C_6H_5)_3C^{13}$. S. I. Weissman and J. C. Sowden. Am Chem Soc J 75:503 Ja 20 '53

TRIPHENYLMETHYLARSONIUM perchromate

Triphenylmethylarsonium perchromate. F. P. Dwyer and N. A. Gibson. bibliog Chem & Ind p 153-4 F 14 '53

TRIPHENYLMETHYL compounds

Kinetic evidence for the triphenylcarbonium ion as a reaction intermediate and measurement of its relative reactivity with seven nucleophilic reagents. C. G. Swain, C. B. Scott and K. H. Lohmann. bibliog Am Chem Soc J 75:136-40 Ja 5 '53

TRIPHENYL phosphate

Retention of air-borne particulates in the human lung. H. D. Landahl and others. diags A M A Archives Ind Hygiene & Occup Med 3:359-66; 6:508-11 Ap '51, D '52

TRIPHENYLTETRAZOLIUM chloride

Effect of triphenyltetrazolium chloride on oat embryo respiration. G. O. Throneberry and F. G. Smith. bibliog Science 117:13-15 Ja 2 '53

TRIPHOSPHOTHIAMINE

Presence of the triphosphothiamine (TPT) in the liver. A. Rossi-Fanelli and others. bibliog il Science 116:711-13 D 26 '52

TRIPLE point

Triple point temperature of tritium oxide. W. M. Jones. bibliog diags Am Chem Soc J 74:6065-6 D 5 '52

TRIPTERYGIUM wilfordii

Alkaloids from tripterygium wilfordii Hook; isolation and structure of wilforzine. M. Beroza. bibliog Am Chem Soc J 75:2136-8 My 5 '53

TRISACCHARIDES

New crystalline trisaccharide from partial acid hydrolysis of guaran and the structure of guaran. R. L. Whistler and D. F. Durso. bibliog Am Chem Soc J 74:5140-1 O 20 '52

New trisaccharide produced from sucrose by mould invertase. J. S. D. Bacon and D. J. Bell. Chem Soc J p2528-30 S '53

See also

Kestose

TRITANOPIA. See Color blindness

TRITERPENES

Chemistry of the triterpenes; the action of formic acid on lupeol. T. R. Ames and others. Chem Soc J p2868-72 Jl '52

Chemistry of the triterpenes; the conversion of lupeol into germanicol (*iso*-lupeol); the structure of lupeol hydrochloride. T. G. Halsall, E. R. H. Jones and G. D. Meakins. Chem Soc J p2862-7 Jl '52

TRITERPENOIDS

Molecular rotations of polycyclic compounds; general principles and the correlation of the triterpenoids with the steroids. W. Klyne. Chem Soc J p2916-32 Jl '52

Triterpenoids of alstonia verticillosa. O. C. Musgrave and H. M. Wagner. Chem Soc J p2937 Jl '52

TRITIUM

Beta-spectrum of tritium and the mass of the neutrino. L. M. Langer and R. J. D. Moffat. bibliog Phys R 88:689-94 N 15 '52

Cross section and angular distribution of the $D(d,p)T$ reaction. W. A. Wenzel and W. Whaling. bibliog Phys R 88:1149-54 D 1 '52

Cross section and angular distribution of the $He^3(d,p)He^4$ nuclear reaction. T. W. Bonner and others. bibliog diag Phys R 88:473-6 N 1 '52

Cross section for the reaction $D(d,p)H^3$. C. F. Cook and J. R. Smith. bibliog diag Phys R 89:785-6 F 15 '53

Determination of specific activities of tritium-labeled compounds with liquid scintillators. E. C. Farmer and I. A. Berstein. bibliog Science 117:279-80 Mr 13 '53

Elastic scattering of 10-Mev deuterons by H^3 and He^3. J. C. Allred and others. bibliog diags Phys R 88:425-30 N 1 '52

Light source for phototubes. Electronics 26:202+ Jl '53

Liquid scintillation counting of tritium-labeled water and organic compounds. F. N. Hayes and R. G. Gould. bibliog Science 117:480-2 My 1 '53

Little increase in world's tritium supply seen during atomic age. W. F. Libby. Chem & Eng N 31:1980 My 11 '53

Measurement of the (n,H^3) cross section in nitrogen and its relationship to the tritium production in the atmosphere. E. L. Fireman. bibliog Phys R 91:922-6 Ag 15 '53

Radioisotope used in constant light source. Materials & Methods 36:11+ N '52

Reactions $T(p,n)He^3$ and $T(p,\gamma)He^4$. H. B. Willard and others. bibliog Phys R 90:865-7 Je 1 '53

Recovery and purification of tritium and He^3 used in ion accelerators. K. W. Allen and E. Almqvist. bibliog diags R Sci Instr 24:70-1 Ja '53

Self-diffusion and structure of liquid water; measurement of the self-diffusion of liquid water with H^2, H^3 and O^{18} as tracers. Jui Hsin Wang, C. V. Robinson and I. S. Edelman. Am Chem Soc J 75:466-70 Ja 20 '53

Study of the $He^3(d,n)He^4$ reaction. J. P. Conner and others. bibliog diags Phys R 88:468-73 N 1 '52

Test of tritium as a labeling device in a biological study. W. G. Verly and others. bibliog Am Chem Soc J 74:5941-3 D 5 '52

See also

Tritons (tritium ions)

TRITIUM compounds

Diffusion in the system CH_4-TCH_3 to 300 atmospheres pressure. Q. R. Jeffries and H. G. Drickamer. J Chem Phys 21:1358 Ag '53

Tritiation of multiple bonds; synthesis of tritiated styrene. I. A. Berstein, W. Bennett and M. Fields. diag Am Chem Soc J 74:5763-4 N 20 '52

TRITIUM oxide. See Water—Heavy water

TRITONS (tritium ions)

Angular distribution of alpha-particles from the reaction of deuterons with tritons. T. F. Stratton and G. D. Freier. Phys R 88:261-3 O 15 '52

Angular distributions of protons and tritons from deuteron-induced reactions on Be^9. H. W. Fulbright and others. bibliog Phys R 88:700-2 N 15 '52

Beta-decay of the triton. J. M. Blatt. bibliog Phys R 89:86-92 Ja 1 '53

Elastic scattering of deuterons by tritons. W. R. Stratton and others. bibliog Phys R 88:257-61 O 15 '52

Proton triton interaction. J. S. McIntosh and others. bibliog Phys R 88:752-9 N 15 '52

Theory of hydrogen three. R. L. Pease and H. Feshbach. bibliog diag Phys R 88:945-50 N 15 '52

Triton-induced activities in magnesium and aluminum. E. Iwersen and others. Phys R 91:1229-31 S 1 '53

TROLLEY bus brakes. See Brakes, Trolley bus

TROLLEY buses

New Italian trolleybus. il diag Electrician 149:332 Ag 1 '52

1953 bus show in print; illustrations with text. Bus Transportation 32:84-5 Ag '53

Second thought on the trolley-bus; abstract. J. E. Frith. Elec R (Lond) 151:678 S 26 '52

Trolley bus developments. il Automobile Eng 43:239-45 Je '53

Brakes

See Brakes, Trolley bus

Electric equipment

Automatic aceleration equipment for trolley-buses. il Elec J 151:573-4 Ag 21 '53

New control for trolley coaches; abstract. N. H. Willby. il Elec Eng 71:1118 D '52

Lighting

Improved fluorescent lighting system for trolleybuses. Engineer 195:137 Ja 23 '53

Lubrication

Service tests in rear axles of buses and trolley-buses. H. E. Styles and A. T. Wilford. Inst Pet J 38:775-82 S '52

Maintenance and repair

Metal spray, welding rod turn old parts into gold; Atlanta transit co. il Bus Transportation 32:30-1 Mr '53

Specifications

1953 motor and trolley bus front end specifications; tabulation. diags Bus Transportation 32:75 Je '53

1953 trolley bus specifications; tabulation. Bus Transportation 32:73 F '53

Statistics

Nation's trolley bus fleet expands to new record high. il Bus Transportation 32:38-9 F '53

TROMEXAN

Isolation and characterization of a metabolic product of 3,3′-carboxymethylenebis-(4-hydroxycoumarin) ethyl ester (tromexan) from human urine. J. J. Burns, S. Wexler and B. B. Brodie. bibliog Am Chem Soc J 75:2345-6 My 20 '53

TRONA

Trona→soda ash; on recently-discovered mineral resources of Green River formation a new intermountain chemical industry is being built. il diag Chem Eng 60:118+ My '53

See also

Soda ash

TROPHOBLAST

Intra-ocular hemorrhagic reaction induced by ectoplacental trophoblast in hypophysectomized mice. C. Grobstein and R. O. Scow. Science 117:137-8 F 6 '53

TROPICAL diseases

See also

Pinta

TROPICS

Sleeping comfort in humid atmospheres; Panama Canal zone. J. A. McKinley. bibliog Refrig Eng 61:168-70+ F '53

Tropical building design and construction symposium. J. L. Sarin. Science 117:582-3 My 29 '53

See also

Building—Tropics

TROPINE

cis- and *trans*-tropine (tropanol). P. F. Smith and W. H. Hartung. Am Chem Soc J 75:3859-60 Ag 5 '53

Configuration of tropine and pseudotropine. A. Nickon and L. F. Fieser. bibliog Am Chem Soc J 74:5566-70 N 20 '52

Configurations of tropine and of *pseudo*tropine. G. R. Clemo and K. H. Jack. Chem & Ind p 195 F 28 '53

Stereochemistry of the tropane alkaloids. G. Fodor, K. Nádor and O. Kovács. Chem Soc J p721-7 Mr '53

Stereochemistry of the tropines. B. L. Zenitz and others. bibliog il Am Chem Soc J 74:5564-6 N 20 '52

Stereoisomeric quaternary ammonium derivatives of tropine having a pseudo-asymmetric nitrogen atom. S. P. Findlay. bibliog Am Chem Soc J 75:3204-8 Jl 5 '53

TROPOLONE

Formation constants of metal complexes of tropolone and its derivatives; tropolone. B. E. Bryant, W. C. Fernelius and B. E. Douglas. bibliog Am Chem Soc J 75:3784-6 Ag 5 '53

Synthesis of α-phenyltropolone from tropolone. W. V. Doering and J. R. Mayer. bibliog Am Chem Soc J 75:2387-8 My 20 '53

Synthesis of substituted tropolones. W. V. Doering and L. H. Knox. bibliog Am Chem Soc J 75:297-303 Ja 20 '53

Tropolones by isomerization; 3,7-dibenzyltropolone. N. J. Leonard and G. C. Robinson. bibliog Am Chem Soc J 75:2143-7 My 5 '53

Tropolones; further reactions of tropolone. J. W. Cook, R. A. Raphael and A. I. Scott. Chem Soc J p4416-19 N '52

Tropolones; halogeno*cyclo*heptatrienones. B. J. Abadir and others. Chem Soc J p2350-3 Je '52

See also

Nootkatin

TROPONE. See Cycloheptatrienone

TROUT

Mortality of trout P. R. Needham. il Sci Am 188:81-4+ My '53

TROYER, Johannes

Johannes Troyer's ornaments are modern design. L. H. Allen. por Inland Ptr 129:41 S '52

TRUCKS

Hand truck has ¼-ton hydraulic lift. il Eng N 150:75 Ja 1 '53

Walkie-type fork truck operates in six-ft. aisles. il Iron Age 171:224 My 7 '53

See also

Electric trucks, Industrial
Motor trucks
Motor trucks, Industrial
Trailers

TRUCKS, Dragline

Tow conveyor cuts freight handling costs. il Elec World 139:192+ My 18 '53

TRUMAN, Harry S. 1884-

Truman delivers farewell state of the Union message. por Comm & Fin Chr 177:89+ Ja 8 '53

TRUMPET

Acoustical properties of trumpets. J. Igarashi and M. Koyasu. il diags Acoustical Soc Am J 25:122-8 Ja '53

TRUSSES

Aluminum trusses carry hangar roof. il Eng N 150:66 Mr 12 '53

Expansion-attic truss offers new way to make small houses bigger at minimum cost. il plans diag House & Home 2:110-11 S '52

One-story Vierendeel trusses ideally suited to school building. R. H. Courland. il plans diags Civil Eng 22:878-82 O '52

Tv-radio center uses special truss to increase studio flexibility; Tele-Truss. il diags Arch Forum 97:148-51 S '52

Trusses being lowered with threaded rods. J. Ward. il diags Roads & Sts 96:48-9+ Ja '53

See also

Rafters

TRUST associations

Georgia bankers association's Trust division annual meeting, Atlanta, April 10. Trusts & Estates 92:330-2+ My '53

New Jersey bankers association 24th annual trust and banking conference, Asbury Park, Nov. 19-20. Trusts & Estates 91:915-16 D '52

New York state bankers association annual Trust division conference, 6th, Syracuse, Oct. 17. Trusts & Estates 91:816-17 N '52

Virginia bankers association meeting, April 24. Trusts & Estates 92:355-7 My '53

TRUST companies

Annual reports show many record totals. Trusts & Estates 92:92+, 211-16, 293-302, 369-70 F-My '53

Trust companies association of Canada 1st annual meeting and Trust companies association of Ontario meeting, Toronto, May 7; with table of volume of trust funds administered by Canadian trust companies. Trusts & Estates 92:396-9 Je '53

TRUST companies—*Continued*

United States trust co. of New York marks centennial. Trusts & Estates 92:246 Ap '53

See also

Banks and banking—Trust departments
Investment trusts
also American bankers association—Trust division

Accounting

See also

Trusts and trustees—Accounting

Advertising

Attention arresters in trust ads (cont). Trusts & Estates 91:670, 925; 92:56, 282, 360-1, 462, 527 S, D '52-Ja, Ap-Jl '53
Trust advertising budgets. Trusts & Estates 92:283-4 Ap '53

Educational work

Forums round up. Trusts & Estates 92: 281, 358-9 Ap-My '53

Investments

See Trusts and trustees—Investments

Law

See Trusts and trustees

New business

Merchandising vs. selling; trust service must be sold. A. M. McNickle. Trust & Estates 92:178-80 Mr '53
Opportunities for trust companies in public relations and new business. O. E. Manning. Trusts & Estates 92:448-9 Je '53
Selling a trust service. W. P. J. Drakeley, jr. Trusts & Estates 92:492-4+ Jl '53
Three ways to build business. G. T. Stephenson. Banking 45:49+ S '52
To sell or not to sell; a proven new trust business approach. E. S. MacNeill. Trusts & Estates 91:665-9 S '52

Public relations

Opportunities for trust companies in public relations and new business. O. E. Manning. Trusts & Estates 92:448-9 Je '53

Service

New frontiers in trust service. A. Journeay. Burroughs Clearing House 36:32-3+ Ag '52; Abstract. Trusts & Estates 91:815 N '52

Canada

Canadian equities in Canadian trust accounts. Trusts & Estates 91:913; 92:444 D '52, Je '53

TRUST receipts

Decision of United States district court, Maryland in Redisco corporation case. F. C. Fiechter, jr. Burroughs Clearing House 37: 78+ Ap '53
Importance of identifying borrowing corporations by their proper names. Banking 45: 76 Mr '53

TRUSTS, Industrial

Antitrust case; sand and gravel companies face contempt charges. Eng N 150:27 Ap 30 '53
Antitrust policy. Bsns W p34 N 29 '52
Anti-trust policy and the big buyer; further misgivings about the A&P case. D. Dewey. J Marketing 17:280-4 Ja '53
Anti-trust suit against DuPont enterprise opens. Paint Oil & Chem R 115:37 N 20 '52
Competition in investment banking; Department of justice's anti-trust suit. P. L. Howell. Comm & Fin Chr 177:3+ Ja 1 '53; Abstract. Pub Util 51:307+ F 26 '53
Construction industry has big stake in new approach to antitrust cases. Eng N 150:22 Ap 9 '53
New look coming in antitrust. Bsns W p29 Jl 4 '53
Patents pending; squabble in England over shell-molding improvements may have repercussions in the United States. Bsns W p44+ Ap 18 '53
Trial date set in Utah antitrust case. Nat Pet N 45:20 Mr 11 '53
Trust busters will not wither away under the G.O.P. J. C. Perham. Barron's 32:3 D 15 '52

See also

Competition
Du Pont de Nemours, E.I., and company
Monopolies
Petroleum industry and trade—United States—Anti-trust suit
Petroleum industry and trade—Western states—Anti-trust suit
Price fixing
Restraint of trade

International trusts

Comity and the oil companies. Economist 165:556-7 N 22 '52
Shell molding cartel. Product Eng 24:223 My '53
U.N. strikes at cartels. Bsns W p 158-9 My 16 '53

See also

Petroleum industry and trade—Trust investigation

Law

New antitrust policies needed to eliminate jungle of administrative rulings, conflicting laws, and differing judicial determinations. R. G. Gibbs. Chem & Eng N 31:6 Ja 5 '53
Note to Mr Brownell. Fortune 47:107-8 F '53
Which way will antitrust policy head now? Bsns W p32-3 Ap 11 '53

Germany

Krupp and the new Ruhr. Economist 166: 578+, 644-5 F 28-Mr 7 '53

TRUSTS and trustees

Big league trustees for poor man; common or commingled trust fund. Bsns W p60+ Je 27 '53
Divided-loyalty rule; caveat to draftsmen to avoid absolute liability of trustee; with citation of cases. R. D. Niles. Trusts & Estates 91:734-8 O '52
Draftsmanship; wills and trusts; ABA committee report. Trusts & Estates 91:772-3 O '52
Fiduciary law and procedure; ABA committee report. Trusts & Estates 91:752-61 O '52
Fiduciary transfers; ABA committee report. Trusts & Estates 91:765-7 O '52
Foreign corporation trustee's authority. F. C. Fiechter, jr. Burroughs Clearing House 37:75-6 Ap '53
Lawyer's proposals in aid of trust business. D. Williams. Trusts & Estates 91:624-5 S '52
Louisiana's new trust law. L. Oppenheim. Trusts & Estates 92:362-5 My '53
Management for estate-owned business; case studies proposed as guidance tool. J. B. Pope. Trusts & Estates 91:917-22 D '52
1953 legislation on trusts and estates. Trusts & Estates 92:290, 371-2, 471, 541-3, 604-5 Ap-Ag '53
1952 state legislation on trusts and estates; ABA committee report. Trusts & Estates 91:774-5 O '52
Pennsylvania bankers association Trust division, mid-winter conference, Harrisburg, Dec. 12. Trusts & Estates 92:50-3 Ja '53
Practical estate conservation plan. D. M. Schuyler. Nat Underw (Life ed) 57:16-17+ Mr 6 '53
Recent fiduciary decisions. Published in monthly numbers of Trusts and estates
Rights of non-resident trust companies to act as fiduciary under laws of various states as of April, 1953; tabular summary. Trusts & Estates 92:534 Jl '53
Suggested proxy shortcuts. W. H. T. Snyder. Trusts & Estates 92:278-9 Ap '53
To pay or not to pay; questions confronting trustees. R. A. Jones. Trusts & Estates 92:326-9+ My '53
Trust business needs a sound economy! R. A. Wilson. Comm & Fin Chr 177:794-5 F 19 '53; Same cond. Trusts & Estates 92: 84-5 F '53
Trustees as economic leaders. W. H. Brenton. Trusts & Estates 92:120-1 F '53
Use of trusts in small estates. J. C. Stephens, jr. Trusts & Estates 92:242-4 Ap '53

TRUSTS and trustees—*Continued*

Wills for oil men; scope of powers and administrative techniques. T. A. Knight. Trusts & Estates 91:888-90 D '52

See also

Banks and banking—Trust departments
Employees' trusts
Foundations, Charitable and educational
Insurance trusts
Investment trusts
Pension trusts

also American bankers association—Trust division

Accounting

Place of the C.P.A. in probate court accounting. L. L. Tanguy. Trust & Estates 92:174-6 Mr '53

Probate accounting hints. H. Schnare. Trusts & Estates 92:521 Jl '53

Trust accounting procedure in oil and gas interests. C. W. Breeding. Trusts & Estates 91:938-42 D '52

Bibliography

Trust and probate literature, 1951-52; ABA committee report. Trusts & Estates 91:776-82 O '52

Charitable trusts

Charitable trusts; guides to compliance for tax exemption. R. N. Gresham. Trusts & Estates 91:931-3 D '52

Redressing charity. Economist 166:61-2 Ja 10 '53

What is charitable? legal and tax limits of trusts and gifts. H. S. Shefelman. bibliog Trusts & Estates 91:654-7 S '52

Common trust funds

Common fund equity holdings with list of equities. Trusts & Estates 92:113-15 F '53

Common trust funds in recession. M. A. Georgen. Trusts & Estates 92:523 Jl '53

Common trust funds in small banks. W. R. S. Eaton. Trusts & Estates 92:520 Jl '53

Common trust funds pass billion. Trusts & Estates 92:47 Ja '53

High stock markets; the time to start a common trust fund? symposium. Trusts & Estates 91:712-15+, 842-6 O-N '52

New business aspects of common funds; what new business is attracted? symposium. Trusts & Estates 91:857-62 N '52

Preferreds in common trust funds; with list. Trust & Estates 92:190-2 Mr '53

Employees' trusts

See Employees' trusts

Insurance requirements

Changes made in liability coverage on fiduciary banks. Nat Underw 57:35 Ap 9 '53; Same. Weekly Underw 168:1090 Ap 18 '53

Investments

Canadian equities in Canadian trust accounts. Trusts & Estates 91:913; 92:444 D '52, Je '53

Investing under prudent man rule; New York experience reviewed. B. H. Torrance. Trusts & Estates 91:838-41 N '52

Mutuals made legal for trust investment in Pennsylvania. Trusts & Estates 92:487 Jl '53

New prudent man investment statute held constitutional, as applied to existing trusts. Banking 45:76+ Mr '53

Pennsylvania governor signs bill allowing trustee investment in funds. C. G. Burke. Comm & Fin Chr 177:2766-7 Je 25 '53

Problems of trust investments in 1953. R. C. Behrens. Comm & Fin Chr 177:682+ F 12 '53; Same. Trusts & Estates 92:111-12+ F '53

Prudent man rule for trust investments; ABA committee report. Trusts & Estates 91:770-1+ O '52

Round-up of trust investment views; poll of investment officers. Trusts & Estates 92:21-7 Ja '53

Selection of securities. H. M. Bardt. Trusts & Estates 91:742-4 O '52

Trust investment program for prosperity and readjustment. B. H. Torrance. Trusts & Estates 92:17-19 Ja '53

Trust investments; fundamental principles lawyers should know. L. S. Headley. Trusts & Estates 91:739-42 O '52

Pension trusts

See Pension trusts

Principal and income

Allocating stock dividends; need for retrospective law to avoid income and principal problems. D. Ives. Trusts & Estates 91:851-6 N '52

Tax problems

Capital gains and losses of estates and trusts. A. A. Armstrong. Trusts & Estates 92:135-6 F '53

Charitable trusts; guides to compliance for tax exemption. R. N. Gresham. Trusts & Estates 91:931-3 D '52

Income of decedents; report of ABA committee on state and federal taxation. bibliog Trusts & Estates 91:745-50 O '52

Minors or trusts as members of partnerships. L. B. Brown; J. W. Ervin. Trusts & Estates 92:181-2, 274-5 Mr-Ap '53

Tax hint-of-month; Clifford rule. E. S. MacNeill. Banking 45:67 My '53

Tax hint-of-the-month; sprinkling or spraying trusts. E. S. MacNeill. Banking 45:54-5 Ap '53

What is charitable? legal and tax limits of trusts and gifts. H. S. Shefelman. bibliog Trusts & Estates 91:654-7 S '52

What is indirect payment of premiums? R. H. Forster. Trusts & Estates 91:923-4 D '52

Taxation

Clifford regulations invalid; circuit court voids short-term trust rules. L. W. Kennedy. Trusts & Estates 92:166-8 Mr '53

Drafting allocation clauses; locating tax incidence of receipts and expenses between principal and income. A. Mannheimer and H. L. Wheeler, jr. Trusts & Estates 92:400-1 Je '53

Tax changes needed; 15 suggestions on estate and trust taxation. C. A. Bethel. Trusts & Estates 92:91 F '53

Trusts should be examined carefully if used as a method to minimize taxes. bibliog J Account 95:72-3 Ja '53

TRYPAFLAVIN

Anisotropic dissolution and the orientation of the phosphorescent dye, trypaflavin, in the crystal of citric acid. D. Yamamoto. il diags J Chem Phys 20:1974-5 D '52

TRYPANOCIDES

Cinnolines and other heterocyclic types in relation to the chemotherapy of trypanosomiasis. J. McIntyre, J. C. E. Simpson and J. S. Morley. Chem Soc J p2606-22 Jl '52

Cinnolines and other heterocyclic types in relation to the chemotherapy of trypanosomiasis; general introduction; quaternary salts of amino-cinnolines, -quinazolines, and -quinolines. J. R. Keneford and others. Chem Soc J p2595-602 Jl '52

Cinnolines and other heterocyclic types in relation to the chemotherapy of trypanosomiasis; synthesis of 4 : 4′-diamino-6 : 6′-azoquinoline metho-salts. P. E. Macey and J. C. E. Simpson. Chem Soc J p2602-5 Jl '52

Potential trypanocides of the *N*-heterocyclic series; compounds derived from phenanthridine-9-aldehydes. A. G. Caldwell. Chem Soc J p2035-41 Je '52

Synthesis of trypanocides; 4-amino-6-(2-amino-1 : 6-dimethylpyrimidinium - 4-amino)-1 : 2-dimethylquinolinium (Antrycide) salts and related compounds. A. D. Ainley and others. Chem Soc J p59-70 Ja '53

Synthesis of trypanocides; some pyrimidylaminoquinoline derivatives. P. A. Barrett, F. H. S. Curd and W. Hepworth. Chem Soc J p50-8 Ja '53

Trypanocides of the phenanthridine series; the effect of changing the quarternary grouping in dimidium bromide. T. I. Watkins. Chem Soc J p3059-64 Ag '52

TRYPSIN

C-terminal groups of trypsinogen, DFP-trypsin and carboxypeptidase. E. W. Davie and H. Neurath. bibliog Am Chem Soc J 74:6305-6 D 20 '52

Studies on crystalline trypsin, soybean trypsin inhibitor and inhibitor-trypsin compound with the ultracentrifuge. E. Sheppard and A. D. McLaren. bibliog diags Am Chem Soc J 75:2587-91 Je 5 '53

TRYPTOPHAN

5-Hydroxytryptophan decarboxylase; a new route of metabolism of tryptophan. S. Udenfriend, C. T. Clark and E. Titus. Am Chem Soc J 75:501-2 Ja 20 '53

Inhibition of the α-chymotrypsin-catalyzed hydrolysis of nicotinyl-L-tryptophanamide and of methyl hippurate by indole. H. T. Huang and C. Niemann. bibliog Am Chem Soc J 75:1395-401 Mr 20 '53

New research casts tryptophan in role of antipellagra factor; abstract. C. A. Elvehjem. Chem & Eng N 30:4947-8 N 24 '52

New syntheses of DL-tryptophan; a synthesis from indole and 2-thio-5-thiazolidone. D. O. Holland and J. H. C. Nayler. Chem Soc J p285-7 Ja '53

New syntheses of DL-tryptophan; syntheses from ethyl α-aceto-β-3-indolylpropionate and ethyl α-cyano-β-3-indolylpropionate. D. O. Holland and J. H. C. Nayler. Chem Soc J p280-5 Ja '53

Redetermination of the kinetic constants for the system α-chymotrypsin-nicotinyl-L-tryptophanamide. H. T. Huang and C. Niemann. bibliog Am Chem Soc J 74:4713-14 S 20 '52

Resolution of DL-tryptophan by paper chromatography. K. Closs and C. M. Haug. il Chem & Ind p 103 Ja 31 '53

Synthesis of 4-methyl-, 5-methyl-, 6-methyl- and 4,6-dimethyltryptophans. H. R. Snyder, H. R. Beilfuss and J. K. Williams. bibliog Am Chem Soc J 75:1873-6 Ap 20 '53

Use of anthrone reaction for determination of carbohydrates in the presence of serum protein. M. R. Shetlar. bibliog Anal Chem 24:1844-6 N '52

Use of various aminomalonates in the syntheses of α-substituted tryptophans. H. M. Kissman and B. Witkop. bibliog Am Chem Soc J 75:1967-74 Ap 20 '53

TSVETKOFF, Muriel

She's the power behind better business in San Francisco today. pors Bsns W p84-6+ Je 20 '53

TUBE bending

Bending hollow rectangular tubing at Raytheon; fabrication of radar wave guides. H. F. Clarke. il Mach 59:170-4 My '53

Pointers on bending thin-wall conduit; illustrated instructions. Power 97:128-9 My '53

Tube bending with simple tools; drawings with text. S. V. Worth. Mill & Factory 52:88-9 F '53

TUBE bending machines

Bending thin-wall tubing; North American aviation, inc. F. Pesak. il diags Mach 60:147-51 S '53

TUBE investments, limited

Statement by the chairman. I. Stedeford. Economist 165:574-5 N 22 '52

TUBE mills

Fine grinding capacity increased; Liberty limestone co. L. D. Minsk. flow diag il Rock Prod 56:115 Je '53

Fine grinding in tube mills. B. M. Pearson. Rock Prod 55:106-8 D '52

Rod mill grinding for fine aggregates; abstract. R. S. Barneyback. Rock Prod 56:140-1 Ap '53

Rod-mill rolls that are really quiet. il diags Eng & Min J 154:122+ My '53

TUBERCULIN

Histoplasmin and tuberculin sensitivity in Texas infants and children. G. B. Forbes and C. C. Chang. Pub Health Rep 68:320-2 Mr '53

Tuberculin sensitivity in Alaska. E. S. Weiss. bibliog maps Pub Health Rep 68:23-7 Ja '53

TUBERCULOSIS

Aminophenoxazines as possible antitubercular agents. B. Boothroyd and E. R. Clark. Chem Soc J p 1499-508 My '53

Antitubercular studies; 4-aminobenzamides and 4-aminobenzenesulfonamides. P. Truitt, G. Sammons and D. Zachry. bibliog Am Chem Soc J 74:5961-3 D 5 '52

Antitubercular studies; derivatives of 1-(4-nitrophenacyl)-4-alkylpyridium bromides. P. Truitt, J. R. Buttram and R. Herd. Am Chem Soc J 74:5448-9 N 5 '52

Antituberculous compounds; benzothiazole and benzoxazole derivatives. L. Katz. bibliog Am Chem Soc J 75:712-14 F 5 '53

Antituberculous compounds; some reactions of quaternary compounds derived from *NN*-disubstituted thioamides. D. A. Peak and F. Stansfield. Chem Soc J p4067-75 O '52

Chemotherapy of experimental tuberculosis; the synthesis of acid hydrazides, their derivatives and related compounds. H. L. Yale and others. bibliog Am Chem Soc J 75:1933-42 Ap 20 '53

Chemotherapy of tuberculosis; some *N*-substituted nicotinamides and nicotinamidines. J. N. Baxter and J. Cymerman-Craig. Chem Soc J p 1490-3 My '53

Deaths from tuberculosis at all-time low mark. Weekly Underw 168:1194 Ap 25 '53

Lipoid-water partition coefficients of some aromatic bases. J. Cymerman-Craig and A. A. Diamantis. Chem Soc J p 1619-21 My '53

New antituberculosis drug? R. J. Anderson. Pub Health Rep 67:848-50 S '52

New class of antitubercular compounds. C. F. Huebner and others. Am Chem Soc J 75:2274-5 My 5 '53

Positive approach to a tuberculosis nursing program. D. E. Roberts. bibliog Pub Health Rep 68:338-40 Mr '53

Practical management of the recalcitrant tuberculous patient. C. Northrop and others. Pub Health Rep 67:894-8 S '52

Some facts. Safety Maint & Prod 104:110-11 O '52

Synthesis of potential antibacterial agents; a pyrimidine analogue of chaulmoogric acid. T. D. Heyes and J. C. Roberts. Chem Soc J p4935-7 D '52

Thiophen derivatives of potential biological interest; tuberculostatic thiophen compounds. N. P. Buu-Hoï and others. Chem Soc J p547-9 F '53

Tuberculin sensitivity in Alaska. E. S. Weiss. bibliog maps Pub Health Rep 68:23-7 Ja '53

Tuberculosis control in Connecticut. Pub Health Rep 67:1203-13 D '52

Tuberculosis control problem and modern therapy; APHA conference report. Pub Health Rep 68:112-14 Ja '53

Tuberculosis remains as number one bacteria-caused disease; abstract. H. C. Hinshaw. Chem & Eng N 31:1400-1 Ap 6 '53

Tuberculostatic hydrazides and their derivatives. N. P. Buu-Hoï and others. Chem Soc J p 1358-64 My '53

Bibliography

Tuberculosis and mental illness; a selected bibliography, 1803-1952. 27p Veterans administration, Washington 25 '53

Statistics

Reported tuberculosis morbidity, January-June 1952. Pub Health Rep 68:351-2 Mr '53

Reported tuberculosis morbidity, United States, 1949-1951. R. J. Anderson and H. I. Sauer. map Pub Health Rep 67:1101-8 N '52

TUBES

Convective heat-transfer and flow-friction behavior of small cylindrical tubes; circular and rectangular cross sections. W. M. Kays and A. L. London. bibliog A S M E Trans 74:1179-89 O '52

Designing with tubular sections. L. F. Spector. il diags Machine Design 24:117-24 N '52

Effects of internal roughness on pressure drop and heat transfer of integral finned tubes. V. R. S. Arni and J. E. Myers. bibliog il diag Refrig Eng 61:757-9+ Jl '53

Electrical, chemical industries require smaller pressure tubing. il Iron Age 171:136 Ap 16 '53

Heating tube failures, cause and prevention. J. J. B. Rutherford. bibliog il Pet Processing 8:62-9 Ja '53; Same cond. Oil & Gas J 51:97 Mr 2; 119 Mr 9; 155-6 Mr 16; 189 Mr 30; 123-4 Ap 6; 145 Ap 13; 165 Ap 20 '53

How to repair a tubular handle. F. C. Geibig. il diag Welding J 32:49 Ja '53

Laboratory investigation of superheater-tubing materials in contact with synthetic combustion atmospheres at 1350 F. C. J. Slunder and others. diag A S M E Trans 75:1015-19 Ag '53

TUBES—*Continued*

Laminar-flow forced convection in rectangular tubes. S. H. Clark and W. M. Kays. bibliog il A S M E Trans 75:859-66 Jl '53

Locating dimensions for tube welding fixtures. H. W. Smith. diags Tool Eng 31:47-8 S '53

New tubing fittings cut leakage. G. L. Christian. il Aviation W 58:66 Mr 30 '53

Small-signal impedance of short tubes. A. W. Nolle. bibliog Acoustical Soc Am J 25:32-9 Ja '53

Telescoping tubes spotwelded faster. il Aviation W 57:28+ O 27 '52

Telescoping tubes; unique answer to betatron support problems. R. J. Stamp. il diags Machine Design 25:155-6 F '53

Tiny tubes; specialty has many uses. R. L. Hatschek. il Iron Age 171:74 My 28 '53

Tube of least weight for given torsional stiffness. H. B. Howard. il Roy Aeronautical Soc J 57:45-6 Ja '53

Manufacture

Big tube dies, new 18-in. tube reducing machine. il Iron Age 171:160 Je 4 '53

Indexing machine automatically welds tubular assembly. B. Weight. il diag Mach 59:162-3 Mr '53

Investigation of the piercing process by means of model wax billets. J. L. Holmquist. il diags Iron & Steel Eng 29:53-65; Discussion. 65-8 D '52

Jumbo dies compression-form tubing. il Steel 132:120+ My 25 '53

Machine to cold reduce 18-in. tubing. G. B. Brown. diags Iron & Steel Eng 30:80-6 Ap '53; Abstract. Steel 132:90-1 F 9 '53

Manufacture and manipulation of seamless tubes; Messrs. Accles and Pollock, limited. il Engineering 176:161-5, 176, 193-5, 208, 225-7, 240 Ag 7-21 '53

New machines to reduce large tubing. il diag Machine Design 25:226 F '53

Seamless sizes grow; Superior tube co. il Steel 132:129-30 F 2 '53

Tube expanding machine. il Tool Eng 31:103 O '53

Tube finishing speeded; Turner brass works. il Steel 131:289-90 O 13 '52

Tube flaring at high-production rate on Parker machine. il Am Mach 97:201 S 14 '53

Yoder mills developed for high-speed welding of non-ferrous tubing. il Mach 59:212-13 Ag '53

Testing

Development of a flaw detector for tubes. R. D. Kodis. il diags Am Soc T M Proc 50:1196-206 '50

Process control in gun tube manufacture. H. C. Dill and F. B. Stern, jr. il Metal Prog 63:161-2 Je '53

Ultrasonic testing used for small-diameter tubing. A. J. Pardus. il diags Iron Age 171:110-13 Ja 29 '53

TUBES (containers)

Flexible vinyl tube. il Mod Packaging 27:114-17 O '53

Food in polyethylene collapsible tubes; cheese spreads. il Mod Packaging 26:201 S '52; Mod Plastics 30:178 O '52

TUBES, Aluminum

Large aluminum tube for cable sheathing. il Engineering 175:596 My 8 '53

Sheathing cable with aluminium. il diags Metallurgia 46:175-8 O '52

Manufacture

Aluminum; weld tubes from strips. W. V. Packard. il Iron Age 170:40 N 27 '52

TUBES, Copper

Forming high-frequency conductors. G. W. Lee. diags Commun Eng 13:27 Mr '53

Joining copper tube and soldered fittings. D. L. Mills. il Heat & Ven 49:105-6 D '52

Square copper bus; greater current carrying capacity, strength in square tube bus. il Iron Age 170:117 O 16 '52

Manufacture

Resistance heating anneals copper tubing; Super cold corp. il Elec West 109:105 O '52

TUBES, Flexible

Flexible metal hose raises efficiency of thread-rolling machine. il Mach 60:194 S '53

Flexible pipe replaces chute, protects highly-polished surfaces. H. Welsbacher. il Am Mach 97:150 S 28 '53

Flexible tubing ducts. il Materials & Methods 37:110 My '53

Flexible tubing housing. il Materials & Methods 36:112 D '52

Large diameter tube provides a testing enclosure. il Heat & Ven 49:82 D '52

Metal flex-hose connections stop pump bearing strain. il Power Eng 57:85 S '53

TUBES, Plastic

Plastic tubing for prestressing cables. il Eng N 150:180 F 19 '53

Rotary tubes as experimental trickling filters. E. F. Gloyna and others. il diags Sewage & Ind Wastes 24:1355-7 N '52

See also

Pipes, Plastic

TUBES, Steel

Bushings from tubing have finer finish, cost less. il Iron Age 170:81 D 25 '52

Centrifugally cast steel tubing. T. E. Rybka. il diags Materials & Methods 37:104-7 F '53

Construction of a tubular steel skip bridge. il Engineer 194:831-2 D 19 '52; Engineering 174:722-3 D 5 '52

Economic aspects of overhead equipment for d.c. railway electrification; abstracts. O. J. Crompton and G. A. Wallace. il Engineer 195:146 Ja 23 '53; Engineering 175:185 F 6 '53

Guide for stainless steel buyers. Steel 132:108-17 sec 2 Je 22 '53

Protection of tubular structures from the weather by metallizing. A. Clift. il Metal Prog 62:100-4 N '52

Simplified ball bearing fabricated from steel tubing. E. W. Batterson. il Materials & Methods 38:62-3 Jl '53

Speedy plating of small diameter steel tubing. il Iron Age 170:174-5 N 6 '52

Stainless tubing in radar screens. il Materials & Methods 38:116-18 O '53

Tube straightener; rotary machine helps solve production headache. il Iron Age 170:124 O 23 '52

Use of steel tube evaporators for home freezers. R. E. Cappel. Refrig Eng 61:971-2 S '53

Use small-diameter tubing for good linkage. il diag Iron Age 171:146 Mr 19 '53

See also

Pipes, Steel

Manufacture

Both ends of tubing finished simultaneously; Pines air-operated, end-finishing machines. il Mach 59:209 My '53

Brazed, welded tubing coated for corrosion protection. H. Chase. il Iron Age 171:118-19 Ja 29 '53

Casting of ingots for seamless tubemaking. G. Bowman. il diags Metallurgia 47:129-36 Mr '53; Same. Engineering 175:286-7, 381-3 F 27, Mr 20 '53

Centerless grinder; abrasive belts speed production of extruded tubing. Iron Age 171:189 F 5 '53; il Machine Design 25:341+ Ap '53

Electrical engineering in the steel-tube industry; abstracts. H. E. Knight. Inst E E Proc 100 pt 1:10-11 Ja '53; Elec R (Lond) 151:1003 N 7 '53

How National Tube hot extrudes stainless steel tubing; Ugine-Sejournet process used. D. I. Brown. il diags Iron Age 171:129-33 Mr 19 '53

Machine to cold reduce 18 inch tubing; abstract. G. B. Brown. Steel 131:106+ O 6 '52

National Tube now extruding tubes and shapes at Gary. il Blast F & Steel Pl 41:397-8 Ap '53; Same. Mill & Factory 52:252+ Je '53; Same. Iron & Steel Eng 30:155+ Mr '53; Abstract. Steel 132:67 Mr 9 '53

Oil casing by the mile, automatically; illustrations with text. Am Mach 97:130-1 S 14 '53

Shift to gas as precise industrial tool. F. O. Hess. Am Gas J 177:18 D '52

TUBES, Steel—Manufacture—*Continued*

Timken operates modern outlet table. il Blast F & Steel Pl 41:546 My '53

Tubing; Republic mill's a natural. il diag Iron Age 171:68 Je 25 '53

Wet belt grinding speeds production of extruded cylindrical stock. D. Olton and H. N. Dyer. il diag Am Mach 96:106-7 D 8 '52

Standards

SAE standard double-wall and single-wall steel tubing; data sheets. Mach 59:255 Ag '53

TUCSON gas, electric light and power company

Adds 50,000th meter. il Elec World 138:114 N 17 '52

Security I like best. C. Stolle. Comm & Fin Chr 178:346+ Jl 30 '53

TUDOR, Ralph

Name top consultant to Interior post. por Eng N 150:24 F 5 '53

Named Under secretary of the Interior. por Civil Eng 23:183 Mr '53

TUMBLERS, Plastic

Circular carrier; new construction principle for take-home pack provides for counter stacking; Boonton molding company's new plastic tumblers. il Mod Packaging 26:110-11 Je '53

TUMBLING barrels

Precision tumbling produces fine finish; Slidabrading. R. DePastina. il diags Am Mach 97:113-15 Jl 6 '53

Roto-Finish small barrel finishing machine. il Engineer 196:141 Jl 31 '53

Slidabrading; faster, cheaper way to precision-finish small parts. R. De Pastina. il Factory Management 111:106-8 Ja '53

Tumbling barrel; Abbott ball co. il Metal Finishing 51:87 My '53; Same. Materials & Methods 38:130+ Jl '53; Same cond. Am Mach 97:190 S 28 '53

Tumbling barrel; Hupp corp. il Metal Finishing 50:83-4 D '52

Tumb-L-Matic pocket tumbler. il Rubber Age 72:110 O '52

TUMBLING bodies. See Falling bodies

TUMORS

Agent from E. coli causing hemorrhage and regression of an experimental mouse tumor; the component monosaccharides. M. Ikawa and others. bibliog Am Chem Soc J 74:5219-20 O 20 '52

Comparative antifibromatogenic action of cortical steroids. A. Lipschutz and others. bibliog(45 ref) Science 116:448-52 O 24 '52

Computational procedure for the isotope method of brain tumor localization. A. Langer and R. Loevinger. diag Science 117:247-8 Mr 6 '53

Establishing long-term cultures of mammalian normal, solid tumor, and ascites tumor cells on glass. R. N. Hull. bibliog Science 117:223-5 F 27 '53

Heterotransplantation of human tumors into cortisone-treated rats. C. Hoch-Ligeti and Y. T. Hsü. bibliog il Science 117:360-1 Ap 3 '53

Influence of amino acids upon incidence of tumors in tu^{50j} stock of D. melanogaster. S. Mittler. bibliog Science 116:657-9 D 12 '52

TUNA fish

Pace-setting fish cannery; French sardine co. J. Joseph. flow sheet il Food Eng 25:81-4+ F '53

Tug of war on tariff for tuna trade. il Bsns W p 113 N 29 '52

TUNG oil

Detecting adulterants in tung oil; abstract. T. P. Hilditch and A. Mendelowitz. Paint Oil & Chem R 116:19 F 12 '53

Paint industry voices opposition to tung oil import restrictions. D. L. Boland. Oil Paint & Drug Rep 163:3+ My 18 '53

Tung oil, nuts quota is set up for imports. Oil Paint & Drug Rep 163:3+ Ap 13 '53

TUNG-SOL electric, inc.

Newcomers on the New York stock exchange. J. S. Williams. Mag of Wall St 91:666 Mr 7 '53

TUNGSTEN

Accommodation coefficient technique applied to a study of molecular oxygen film on tungsten. J. L. Morrison and W. E. Grummitt. bibliog J Chem Phys 21:654-8 Ap '53

Bariated tungsten emitters. R. C. Hughes and P. P. Coppola. J Ap Phys 23:1261-2 N '52

Characteristics of the high current tungsten arc in argon, helium, and their mixtures. M. Skolnik and T. B. Jones. bibliog il diags J Ap Phys 23:643-52 Je '52; Same. Welding J 32:sup55-64 Ja '53

Chemical reactions in barium oxide on tungsten emitters. R. C. Hughes and others. bibliog il diags J Ap Phys 23:635-41 Je '52

Electronic and lattice specific heats in W, Mo, and Re. M. Horowitz and J. G. Daunt. bibliog Phys R 91:1099-106 S 1 '53

High temperature magnetic susceptibility of V, Nb, Ta, W, and Mo. C. J. Kriessman. bibliog diag Rs Mod Phys 25:122-6 Ja '53

Investigation of the surface reaction of oxygen with carbon on tungsten with the field emission microscope. R. Klein. bibliog il diag J Chem Phys 21:1177-80 Jl '53

Mechanisms of surface-catalyzed reactions; the parahydrogen conversion on tungsten. K. J. Laidler. bibliog J Phys Chem 57:320-1 Mr '53

Method for studying the mobility of chemisorbed films; oxygen on tungsten. R. Gomer and J. K. Hulm. Am Chem Soc J 75:4114-15 Ag 20 '53

Photoemission of tungsten in the region of predicted Schottky deviations. E. E. Buder and others. bibliog diag Phys R 91:561-6 Ag 1 '53

Physical processes in the *L* cathode. D. L. Schaefer and J. E. White. bibliog il diags J Ap Phys 23:669-74 Je '52

Polarography of tungsten(VI); catalytic reduction of perchlorate. H. A. Laitinen and W. A. Ziegler. bibliog Am Chem Soc J 75:3045-8 Jl 5 '53

Polarography of tungsten(VI) in hydrochloric acid; mechanism of the tungsten(V)-tungsten(III) wave. H. A. Laitinen, K. B. Oldham and W. A. Ziegler. bibliog Am Chem Soc J 75:3048-50 Jl 5 '53

Properties, heat treatment, corrosion resistance, etc.; engineering file facts. Materials & Methods 37:127 Je '53

Salt bath case hardening with molybdenum and tungsten. il Materials & Methods 37:94-7 Mr '53

Thermionic emission from oxide-coated tungsten filaments. C. P. Hadley. bibliog J Ap Phys 24:49-52 Ja '53

Tungsten-cobalt-carbon system. P. Rautala and J. T. Norton. bibliog il diags J Metals 4:Trans 1045-50 O '52; Discussion. 5:Trans 744-6 sec 2 My '53

Tungsten in the lamp industry. G. Moritz. il Illum Eng 48:397-401 Ag '53

Tungsten in the lamp industry. G. R. Moritz and W. E. Anderson. il Westinghouse Eng 13:82-7 My '53

Tungsten, 1952. R. W. Geehan. Eng & Min J 154:97-8 F '53

Tungsten, 1952. C. H. Segerstrom, jr. Min Cong J 39:121 F '53

Use of thoriated tungsten electrodes in inert gas-shielded arc welding; investigation of potential hazard; abstract. A. J. Breslin and W. B. Harris. Nat Safety N 67:94+ Ap '53

X-ray study of cold work in thoriated tungsten. M. McKeehan and B. E. Warren. J Ap Phys 24:52-6 Ja '53

Analysis

Absorptiometric determination of tungsten in steel. Iron & Steel Inst J 172:413-15 D '52

Isotopes

Half-life of W^{187}. G. G. Eichholz. bibliog Phys R 89:525-6 Ja 15 '53

Radioactive decay of tungsten 187. J. M. Cork and others. bibliog diag Phys R 89:1291-2 Mr 15 '53

TUNGSTEN, Powdered

High-density alloys for heavy-weight applications. K. Rose. il Materials & Methods 37:86-9 Ap '53

TUNGSTEN alloys

High-density alloys for heavy-weight applications. K. Rose. il Materials & Methods 37:86-9 Ap '53

Recent developments in hard metals; abstract. E. J. Sanford. Metal Prog 64:132+ S '53

TUNGSTEN alloys—*Continued*

Systems zirconium-molybdenum and zirconium-wolfram. R. F. Domagala and others. bibliog il J Metals 5:Trans 72-9 Ja '53

Titanium-tungsten and titanium-tantalum systems. D. J. Maykuth and others. bibliog il diag J Metals 5:Trans 231-7 sec 2 F '53

TUNGSTEN carbide

Automatic hard-facing of tungsten carbide. il Mach 59:196 D '52

Blast hole drilling at the Tennessee copper co.; tungsten carbide insert bits. E. Flournoy. il diags Min Cong J 39:78-80+ Ap '53

Carbide rolls save. il Steel 132:95-6 Je 22 '53

Carbide shell core production mechanized; Carboloy department of General electric co. il Tool Eng 30:112 My '53; Steel 132:92+ F 23 '53

Carbide tipped hammers cut pulverizing costs. W. E. Fawcett. il Iron Age 170:114-16 N 27 '52

Carboloy cemented carbide, hardest man-made metal. K. R. Beardslee. il Gen Elec R 56:51-5 My '53

Header dies; standardized carbide nibs cut costs, improve production. diags Iron Age 171:134-5 Je 11 '53

Recent developments in hard metals. E. J. Sandford. Engineer 195:633 My 1 '53

Role of the binder phase in cemented tungsten carbide-cobalt alloys. J. Gurland and J. T. Norton. bibliog il diag J Metals 4: Trans 1051-6 O '52

Tungsten carbide by pyrolysis of tungsten hexacarbonyl. D. T. Hurd, H. R. McEntee and P. H. Brisbin. bibliog diags Ind & Eng Chem 44:2432-5 O '52

Tungsten carbide drilling takes the lead. A. H. Hubbell. il Eng & Min J 154:111-16 F '53

Tungsten carbide insert blades speed milling of gear cases. il Iron Age 171:187-8 Ap 2 '53

Tungsten carbide molds used to make grinding wheels. Iron Age 171:154 Mr 19 '53

Tungsten-carbide shell cores. E. Altholz. il Mach 59:159-64 Ap '53

Tungsten-cobalt-carbon system. P. Rautala and J. T. Norton. bibliog il diags J Metals 4:Trans 1045-50 O '52; Discussion. 5:Trans 744-6 sec 2 My '53

Wire rolling; Knowles Loom rolls stainless steel wire for loom reeds. il Iron Age 171: 154+ Ap 9 '53

See also

Cutting tools, Carbide

TUNGSTEN carbide coating

Carbide hardfacing by new inert-gas-arc method. J. J. Barry. il diag Materials & Methods 37:80-1 Ja '53

Carbide plating. Automobile Eng 43:186 My '53

Flame-plating. Mech Eng 75:155-6 F '53; il Mill & Factory 52:99 Ap '53

New process permits many metals to be tungsten carbide coated. il J Metals 4: 1036-7 O '52

New way to stop wear; Linde air products co.'s Flame-Plating. Mod Ind 24:109-10 O '52; il Mill & Factory 51:133 N '52; Chem & Eng N 31:159-60 Ja 12 '53

Plating; making metals tougher. diag Iron Age 170:43 O 2 '52

Processes; flame plating applies hard surface. il diags Product Eng 23:200-1 O '52

TUNGSTEN hexacarbonyl

Tungsten carbide by pyrolysis of tungsten hexacarbonyl. D. T. Hurd, H. R. McEntee and P. H. Brisbin. bibliog diags Ind & Eng Chem 44:2432-5 O '52

TUNGSTEN lamps. See Electric lamps, Tungsten

TUNGSTEN metallurgy

Milling tungsten ores at the Getchell mine. K. Kunze. il Min Cong J 39:31-3 Ja '53

TUNGSTEN mines and mining

California

United States Vanadium's tungsten mine in California. R. L. Behme. il diag Explosives Eng 31:39-44+ Mr '53

Montana

Investigation of the combination silver-tungsten mine, Granite county, Mont. M. E. Volin and others. 8pls U S Bur Mines Rep of Invest 4914:1-26 '52

TUNGSTEN ores

Improved flowsheet increases recovery and mill capacity; Nevada-Massachusetts co. flow sheet il Eng & Min J 154:96-7 Ja '53

Milling tungsten ores at the Getchell mine; abstract. K. Kunze. Min Cong J 38:111 O '52

TUNGSTEN oxides

Antiparallel dipole arrangement in tungsten trioxide. R. Ueda and J. Kobayashi. diags Phys R 91:1565 S 15 '53

Thermal and electrical properties and crystal structure of tungsten oxide at high temperatures. S. Sawada. Phys R 91:1010-11 Ag 15 '53

Analysis

Identification of molybdenum and tungsten oxides by X-ray powder patterns. A. Magnéli and others. bibliog Anal Chem 24: 1998-2000 D '52

TUNGSTEN steel

Carbides in chromium, molybdenum, and tungsten steels. K. Kuo. bibliog pl diags Iron & Steel Inst J 173:363-75 Ap '53

TUNISIA

Ballots and bullets in Tunisia. Economist 167:355 My 9 '53

Economic conditions

Economic conditions abroad. For Comm W 48:5+ D 22 '52

TUNNEL lighting

New approach to underpass lighting. H. G. Hrivnatz. il Illum Eng 48:121-3 Mr '53

Pleasing, adequate tunnel lighting; Russian hill, San Francisco. M. R. Humber. il Elec West 110:88-9 My '53

TUNNEL lining

Big equipment speeds construction of Boqueron tunnels. E. D. Phinney. Civil Eng 23:156+ Mr '53

Buggy carries steel liners into hydro tunnel. il Elec World 139:169-70 My 18 '53

Lining pumped for B&O tunnel number one. il diag Constr Methods 34:64+ N '52

Loose rock fill challenges tunnel drivers; vehicular underpass of steel liner plates under Louisville & Nashville railroad. il Roads & Sts 96:94+ My '53; Ry Age 134: 120-1 Je 15 '53

Steel liner plates simplify tunnel construction. il Pub Works 84:85-6 Ap '53

TUNNEL roofs

Pinning up an aqueduct roof. J. C. Pierce. il map diags Comp Air Mag 58:128-30 My '53

Roof-bolting the Delaware aqueduct. D. H. Platt. 18pls U S Bur Mines Information Circ 7652:1-9 '52

TUNNEL ventilation

Airfoil fans serve parkway tunnels. il Heat & Ven 50:111 S '53

Giant lungs for new parkway tunnels in Pittsburgh. il Power 97:98 Ag '53

Seattle cuts tunnel costs with unit ventilation. il map diag Eng N 150:43-4 My 7 '53

Sub-arctic tunnel; problems in piping and ventilation; Aluminum company of Canada's hydroelectric power project. il Heat & Ven 49:122+ N '52

TUNNELS and tunneling

Aerial tramway serves Kemano tunnels; Aluminum company of Canada's powerhouse construction. il Eng N 149:42-3 N 20 '52

Alcan in British Columbia; methods spur underground powerhouse, tunnels. L. L. Wise. il plans diags Constr Methods 34: 72-3+ D '52

Alcan tunnelers better record again. il Comp Air Mag 58:172 Je '53

Alcan tunnelers set new record. il Comp Air Mag 57:346-7 D '52

Big Tom project nearing completion. L. A. Luther. il map Comp Air Mag 57:339-43 D '52

Bombay tunnels complete. map Eng N 149: 60 O 23 '52

Compact compressor-hoists of welded design speed Montreal tunnel job. A. R. Jacobs. il Roads & Eng Constr 91:126+ Ag '53

Difficult tunneling in England. Comp Air Mag 58:77 Mr '53

East Delaware tunnel; gallery of up-to-date tunneling techniques. il diag Eng N 150:32+ Mr 26 '53

TUNNELS and tunneling—*Continued*

Exhibit saves lumber waste on tunnel job. A. M. Rawn. il Civil Eng 23:108 F '53

First holing through for Niagara bore. il Eng N 149:24 O 16 '52

Giant tunnels feed Niagara power station. il Power 97:170+ O '53

Hard rock mining job at Kitimat power site. il Min Eng 4:1044-5 N '52

Isabella dam in California's Kern valley. P. Sturtevant and G. Sturtevant. il Explosives Eng 30:186-9+ N '52

Long Capitol tunnel nears completion. il map Constr Methods 35:124-6+ O '53

More Canadian kilowatts at Niagara. H. R. Rice. il map diags Comp Air Mag 58:210-17, 244-50 Ag-S '53

New tunneling achievements reached in driving big Ontario hydro tubes. H. W. Richardson. il plans diag Constr Methods 35:64-6+ Mr '53

Ontario hydro project at Niagara falls. H. R. Rice. il diags Can Min J 74:77-83 Je '53

Opening-out of Brotherton railway tunnel. il(p440) Engineering 174:447-8 O 3 '52

Pantographs give tunnel cross-section. il Eng N 149:40 N 27 '52

Rock tunnels in coal mining. W. B. Fraser. il plans diag Can Min J 73:57-9 O '52

Short rounds lick mica schist on fast tunnel job. H. T. Perez. il diag Constr Methods 35:58-61 My '53

Soil freezing for tunnel construction; abstract. P. O. Persson. diag Refrig Eng 61: 403 Ap '53

Sub-arctic tunnel; problems in piping and ventilation; Aluminum company of Canada's hydroelectric power project. il Heat & Ven 49:122+ N '52

Tunnel under tracks to link buildings; Thompson products, inc. E. L. Fountain. il Factory Management 111:148 F '53

Tunnel, viaducts join rail stations and transform central Brussels. G. N. Balbachevsky. il plan diags Eng N 149:40-2 O 9 '52

Tunnelers make record at Niagara falls. H. R. Rice. il Comp Air Mag 58:169-70 Je '53

Tunneling through a canyon wall. J. E. Witte. il maps diags Roads & Sts 96:73-7 Mr '53

Tunnels and underground penstocks require a million cu. yd. rock excavation; Alcan-British Columbia hydro project. W. G. Huber. il plans diag Civil Eng 23:102-7 F '53

Twin bores show achievements in modern tunneling; illustrations with text. Eng & Min J 154:77-9 My '53

World tunnel record claimed. H. R. Rice. Can Min J 73:58-9 D '52

See also

Aqueducts

Subways

Tunnel lining

Cost

Lincoln Tunnel shaft, New York city; unit prices. Eng N 149:99 O 23 '52

Repair

Men and machines blitz earthquake damage; Southern Pacific railroad. il Constr Methods 34:55-6 O '52

Vehicular tunnels

Alternate tunnel route proposed; Norfolk planners urge change to course for Hampton Roads bridge and tunnel. Eng N 150: 46 F 26 '53

Big equipment speeds construction of Boqueron tunnels. E. D. Phinney. il Civil Eng 23:154-6+ Mr '53

Boqueron tunnels carry Autopista through Andean foothills. R. Smillie. il diags Civil Eng 23:152-3 Mr '53

Caracas-la Guaira highway to cost $7 million a mile. il map Eng N 149:60+ N 6 '52

Elizabeth river and Baytown tunnels compared. S. Steuerman and H. A. Foster. il maps plan diags Civil Eng 22:1010-16 D '52

Elizabeth River crossing. il diags Engineer 195:178-82 Ja 30 '53

Giant lungs for new parkway tunnels in Pittsburgh. il Power 97:98 Ag '53

Hampton Roads; tunnel-bridge-causeway connecting Willoughby Split and Phoebus, Va. Eng N 149:25-6 O 2 '52

Highway subway constructed under runways of Los Angeles international airport. L. Aldrich. il diags Civil Eng 23:236-40 Ap '53

Highway tunnels under runways; Los Angeles international airport. il Eng N 150:54 Ja 8 '53

Loose rock fill challenges tunnel drivers; vehicular underpass of steel liner plates under Louisville & Nashville railroad. il Roads & Sts 96:94+ My '53; Ry Age 134: 120-1 Je 15 '53

New York Port authority reveals third tube plans. Eng N 149:57-8 O 23 '52

Pleasing, adequate tunnel lighting; Russian hill, San Francisco. M. R. Humber. il Elec West 110:88-9 My '53

Push work on first Cuban auto tunnel. il Eng N 150:55-6 Ja 22 '53

San Francisco tunnel open to traffic. il Eng N 149:48 D 25 '52

San Francisco's Broadway tunnel completed. R. G. Wadsworth. il map diags Civil Eng 23:241-5 Ap '53

San Francisco's Broadway tunnel under Russian Hill. R. L. Behme. il Explosives Eng 31:22-7 Ja '53

Seattle cuts tunnel costs with unit ventilation. il map diag Eng N 150:43-4 My 7 '53

Third Lincoln tube. plan Eng N 149:25 O 2 '52

Third longest vehicular tunnel to be completed in Japan in 1956. il Eng N 150:54+ Je 18 '53

Tunnel and viaduct to ease Seattle's traffic troubles. R. W. Finke. il plan Civil Eng 22:1025-9 D '52

TUNNELS and tunneling, Subaqueous

Elizabeth river and Baytown tunnels compared. S. Steuerman and H. A. Foster. il maps plan diags Civil Eng 22:1010-16 D '52

Elizabeth River crossing. il diags Engineer 195:178-82 Ja 30 '53

New York Port authority reveals third tube plans. Eng N 149:57-8 O 23 '52

Push work on first Cuban auto tunnel. il Eng N 150:55-6 Ja 22 '53

Third Lincoln tube. plan Eng N 149:25 O 2 '52

Third longest vehicular tunnel to be completed in Japan in 1956. il Eng N 150:54+ Je 18 '53

TURBIDIMETERS

Find scumming sulphates by quick method. L. G. Tubbs. il Brick & Clay Rec 122:59 F '53

Turbidimeter for water. D. H. Matheson. diags Power 97:130 Mr '53

TURBIDITY

Color in industrial wastes; color of suspended solids, and applications for waste color characteristics. W. Rudolfs and W. D. Hanlon. Sewage & Ind Wastes 24:1502-8 D '52

Rayleigh's ratio (absolute turbidity levels) for benzene, carbon tetrachloride, and toluene. R. F. Stamm and P. A. Button. bibliog diags J Chem Phys 21:1304-5 Jl '53

TURBINES

Banki inward-flow hydraulic turbine. il diags Power Eng 57:85+ O '53

First pump turbine to be installed in United States is ordered by TVA. Elec World 138: 112 N 17 '52

First U.S. reversible pump-turbine unit. Elec West 110:85 Mr '53

4·75mw turbo-alternator set; Lower White River hydro-electric power station, Jamaica. Engineer 194:661-2 N 14 '52

McNary turbines set record for size. H. A. Doell. il Elec West 110:98-9 Ap '53

Mean flow in Kaplan turbines. R. E. Meyer. bibliog diag A S M E Trans 74:1283-9 O '52

Pump-turbine unit at Hiwassee aids TVA. H. Wiersema. il Elec World News ed 139: 36-7 My 11 '53

Record-size pump-turbine to be installed at TVA's Hiwassee project. R. A. Elliot and D. H. Mattern. il map diag Civil Eng 23: 172-5 Mr '53

TVA pump-turbine started; Allis-Chalmers to build Hiwassee Dam power system. Steel 131:125 N 24 '52

See also

Air turbines

Gas turbines

Steam turbines

TURBINES—*Continued*

Blades

Microscope for edges of turbine blades. il Engineering 176:192 Ag 7 '53

Control

Control of hydro-electric plant. A. C. H. Frost and W. Brittlebank. bibliog diags Inst E E Proc 98 pt 1:129-43 My '51; Discussion. 98 pt 1:144-54; 100 pt 1:121-5 My '51, My '53

Water turbine governors; abstract and discussion. N. G. Dennis. Engineer 194:660-1 N 14 '52

Design

Modern trends in hydraulic-turbine design in Europe. G. A. Bovet. il diags A S M E Trans 75:975-88; Discussion. 988-93 Ag '53

Manufacture

Giant size, plus accuracy makes turbine building tough; Baldwin-Lima-Hamilton corp.; illustrations with text. G. H. De Groat. Am Mach 96:168-9 N 10 '52

Huge aluminum-bronze casting requires 25,000 pounds of metal. il Foundry 81:208 My '53

Hydraulic turbine construction in America; Allis-Chalmers manufacturing co. il Engineer 194:296-9 Ag 29 '52; Discussion. J. R. Finniecome. 194:728 N 28 '52

Repair

Stainless steel cuts turbine maintenance. H. H. Gnuse, jr. il Elec World 139:148+ Mr 23 '53

Testing

Cavitation laboratory for hydraulic turbines. H. Ulmann and R. S. Sproule. flow diag il diag Mech Eng 75:194-8 Mr '53

TURBINES, Gas. See Gas turbines

TURBOJET engines, Aircraft. See Gas turbines, Aircraft

TURBULENCE

Calculator solves fluid flow problem. il Chem Eng 59:224 N '52

Comparison between the longitudinal correlation and the time correlation in a turbulent flow. F. N. Frenkiel. Phys R 88:1380-2 D 15 '52

Design of low-turbulence wind tunnels. H. L. Dryden and I. H. Abbott. bibliog il diags U S Nat Advisory Com for Aeronautics 1949:387-98 '51

Effect of Reynolds number in turbulent-flow range on flame speeds of Bunsen burner flames. L. M. Bollinger and D. T. Williams. bibliog il diag U S Nat Advisory Com for Aeronautics 1949:231-8 '51

Effects of density fluctuations on the turbulent skin friction of an insulated flat plate at high supersonic speeds. T. Y. Li and H. T. Nagamatsu. J Aeronautical Sci 18:696-7 O '51; Discussion. E. R. Van Driest. 20:360-2 My '53

Energy transference between wave numbers in isotropic turbulence. H. Sato. J Ap Phys 23:698-9 Je '52

Experimental investigation of convective heat transfer to air from a flat plate with a stepwise discontinuous surface temperature. S. Scesa and F. M. Sauer. bibliog il diag A S M E Trans 74:1251-5 O '52

Extension of Heisenberg's model of turbulence to critical Reynolds numbers. E. N. Parker. bibliog Phys R 90:221-3 Ap 15 '53

Friction factors for turbulent flow in pipes. E. F. Wilsey. bibliog Am Soc C E Proc 79 [no 197]:1-6 Je '53

Further experiments on the flow and heat transfer in a heated turbulent air jet. S. Corrsin and M. S. Uberoi. bibliog il diag U S Nat Advisory Com for Aeronautics 1950:859-75 '51

Heat transfer to molten lead-bismuth eutectic in turbulent pipe flow. H. A. Johnson and others. bibliog diags A S M E Trans 75:1191-8 Ag '53

IMFL anemoclinometer; an instrument for the investigation of a fluctuating velocity vector. A. Martinot-Lagarde and others. bibliog il diags R Sci Instr 23:661-6 D '52

Invariants in the turbulence in compressible viscous fluids. M. Z. E. Krzywoblocki. Franklin Inst J 254:317-22 O '52

Investigation with an interferometer of the turbulent mixing of a free supersonic jet. P. B. Gooderum and others. bibliog il diags U S Nat Advisory Com for Aeronautics 1950:289-305 '51

Laminar to turbulent flow in a wide open channel. W. M. Owen. il diags Am Soc C E Proc 79 [no 188]:1-8 Ap '53

Mass transfer between solid wall and fluid streams. C. S. Lin, R. W. Moulton and G. L. Putnam. bibliog il diags Ind & Eng Chem 45:636-46 Mr '53

Material transfer in turbulent gas streams; concentric flow. W. G. Schlinger and B. H. Sage. bibliog il diags Ind & Eng Chem 45:657-61 Mr '53

Measurement of turbulent velocity fluctuations by the method of electromagnetic induction. L. M. Grossman and A. F. Charwat. il diags R Sci Instr 23:741-7 D '52

Quadruple velocity correlations and pressure fluctuations in isotropic turbulence. M. S. Uberoi. bibliog J Aeronautical Sci 20:197-204 Mr '53

Relation between time averages and ensemble averages in the statistical dynamics of continuous media. C. Eckart. bibliog Phys R 91:784-90 Ag 15 '53

Simplified formulation of the similarity concepts in isotropic turbulence. C. C. Lin. J Aeronautical Sci 20:286 Ap '53

Spectrum of energy in turbulent shear flow. C. M. Tchen. bibliog J Res Nat Bur Stand 50:51-62 Ja '53

Temperature gradients in turbulent gas streams; measurement of temperature, energy, and pressure gradients. W. G. Schlinger and others. bibliog diags Ind & Eng Chem 45:864-70 Ap '53

Temperature gradients in turbulent gas streams; nonuniform flow. W. G. Schlinger and others bibliog il diags Ind & Eng Chem 45:662-6 Mr '53

Transport of momentum, mass, and heat in turbulent jets. L. G. Alexander and others. il diags Ill U Eng Exp Sta Bul 413: 1-88 bibliog(76 titles, p85-8) '53 (pa 75c)

TURKEY

See also

Electric apparatus industry—Turkey	Investments, Foreign (in Turkey)
Highway transportation—Turkey	Petroleum industry and trade—Turkey
Hydroelectric plants —Turkey	Railroads—Turkey
	Telephone—Turkey

Commerce

Turkey's trade troubles. Economist 167:14 Ap 4 '53

Economic conditions

Economic conditions abroad. For Comm W 48: 7 N 17 '52

Growing pains in Turkey. Economist 165:169-70 O 18 '52

Economic relations

United States

Allotments made to Austria and Turkey. For Comm W 50:7 Jl 20 '53

Foreign relations

Gesture to Turkey; control of the Straits. Economist 167:803 Je 20 '53

History

East and West over five centuries; Turkey and Europe, 1453 and 1953; political moods and changes. Economist 167:580-1 My 30 '53

TURKEY red

Turkey red dyeing in Scotland; its heyday and decline. R. A. Peel. bibliog Soc Dyers & Col J 68:496-505 D '52

TURKEYS

Diseases and pests

Isolation of salmonella schwarzengrund from turkey poults. W. Henderson. Science 116: 669 D 12 '52

TURNER, Charles Maynard

Rates and research go together at Cincinnati Gas & Electric; sketch. por Elec World News ed 139:32-3 Mr 2 '53

TURNER and Newall, limited

Statement by the chairman. W. W. F. Shepherd. Economist 166:53-4 Ja 3 '53

TURNING
Cutters team up on workpiece. il diag Steel 132:121 Je 8 '53
Great grandpa did contour turning. A. V. Reed and N. Tweddle. il Am Mach 96:119-21 N 10 '52
High-speed turning research at Jones & Lamson. diags Mach 59:221-3 Jl '53
How much material is removed in turning and boring? L. J. Murphy. Mill & Factory 53:126 S '53
Modern tooling turns axle shafts. R. LeGrand. il diags Am Mach 97:134-5 My 25 '53
Practical approach to optimum machining; chip studies reveal what happens during turning. A. B. Albrecht. il diag Am Mach 97:121-5 My 25 '53
Production rate of turning crankshafts increased seven times; Continental motors corp. il Automotive Ind 109:51+ S 1 '53
Rings hung up for upside-down turning. il Am Mach 96:113 O 27 '52
Rotary tool speeds turning radius. W. F. Smith. il Am Mach 97:158 Jl 6 '53
Turning fixture. F. E. Riley. diags Tool Eng 31:40-1 S '53
What's ahead the next ten years in machining; turning and boring. Am Mach 96:E7-10 Mid-N '52
See also
Lathes

TURNTABLES, Phonograph. See Phonograph—Turntables

TURPENTINE
Peroxides from turpentine; pinane hydroperoxide. G. S. Fisher, J. S. Stinson and L. A. Goldblatt. bibliog Am Chem Soc J 75:3675-8 Ag 5 '53

TUSCALOOSA formation
Reclassification of outcropping Tuscaloosa group in Alabama. C. W. Drennen. bibliog maps Am Assn Pet Geologists Bul 37:522-38 Mr '53

TUTIN
Picrotoxin and tutin; methylation and methanolysis. J. C. Benstead and others. Chem Soc J p2292-9 Je '52

TWENTIETH century-Fox film corporation
Twentieth century-Fox stockholders vote on cumulative voting system. Bsns W p29 My 9 '53

TWENTIETH century fund
Making a continent a research project. map Bsns W p 154-6+, 160-2 Je 27 '53
National debt. Bsns W p 110-11 Ja 17 '53

TWINING, Nathan Farragut, 1897-
Air force chief. Aviation W 58:33-4 My 25 '53

TWISTING machines
British cotton-system twister has creel underneath. il Textile World 103:160 Je '53
Control your vibration on high-speed twister spindles. H. H. Wornıser. Textile World 103:125, 208 Mr '53
New rings mean new life for twisters. J. H. Kennedy. il Textile World 102:116+ D '52; Correction. 103:135 Ja '53
New twister has adjustable gauge. il Textile World 102:151-2 D '52

TWISTING paper. See Paper, Twisting

2,4-D. See Dichlorophenoxyacetic acid

2,4,5-T. See Trichlorophenoxyacetic acid

TYLER, Texas

Industries

New appliance plant highlights drive for industrial prominence. Manuf Rec 122:33+ Ja '53

TYPE and type founding
Check type often to insure good face. Inland Ptr 130:66 N '52
Cheltenham, that honest type! could it become popular again? P. Fisher. Inland Ptr 130:48-9 O '52
Deseret alphabet; noble experiment. R. R. Karch. il Inland Ptr 130:44-5 F '53
Designer of ATF's new Quillscript type face; Tommy Thompson. L. H. Allen. il Inland Ptr 130:36-7 Ja '53
Ed Gillespie, dean of advertising typographers. W. K. Schori. il Inland Ptr 130:40-1+ Ja '53
How much has Europe influenced today's American type faces? R. Hopper. il Inland Ptr 131:44-6 Ap '53
Several changes made in Monomelt. C. F. Carlson. Ed & Pub 85:59 O 11 '52
Trend in type faces is toward modern look and readability. T. B. Stanley. il Ptr Ink 241:46-8+ N 14 '52
See also
Advertisements—
  Typography
Printing—Specimens

TYPE metal
Asks solution to problem of high metal loss. W. K. Schori. Inland Ptr 130:58-9 O '52

TYPESETTING
Technique of angle cutting for printers. S. C. Garsten. Inland Ptr 130:58-9 Ja; 62-3 F; 65 Mr; 131:67 Ap; 66-7 My; 63 Je '53
Tells how to use points and picas in markup. W. K. Schori. Inland Ptr 130:64 N '52
See also
Phototypesetting
  machines
Printing, Practical
also International typographic composition association

TYPESETTING machines
Amazing Grantype set either slug or single types; 1909 invention. F. DeWitt. diags Inland Ptr 131:47 My '53
See also
Phototypesetting
  machines

TYPEWRITERS
Remington Rand develops new super typewriter. il Marine Eng 58:118+ F '53
You can get along with fewer typists; abstract. Management R 41:601-2 S '52

Manufacture

How to organize production processes; Olivetti applies technique to typewriter building in Italy. A. Sanvenero. il Am Mach 97:133-7 F 16 '53

TYPHUS fever
Complement fixation tests for murine typhus on small mammals. R. Keaton and others. bibliog Pub Health Rep 68:28-30 Ja '53
Three studies on domestic rats and murine typhus control. Pub Health Rep 67:1131-2 N '52

TYPOGRAPHICAL union, International. See International typographical union

TYPOGRAPHY. See Printing—Typography

TYROSINE
Ascorbic acid and the oxidation of tyrosine. B. N. La Du, jr. and D. M. Greenberg. Science 117:111-12 Ja 30 '53
Detection and differentiation of 3 : 4-and 2 : 5-dihydroxyphenyl compounds related to tyrosine. C. E. Dalgliesh. Chem Soc J p3943-5 O '52
Determination of coupled aromatic nuclei in an azo protein. C. E. Weill. bibliog Anal Chem 24:1617-18 O '52
Formation of tyrosine melanin. G. R. Clemo and F. K. Duxbury. Chem Soc J p3844-8 O '52
Formation of tyrosine melanin; the use of carboxyl-labelled tyrosine and dihydroxyphenylalanine in melanin formation. G. R. Clemo, F. K. Duxbury and G. A. Swan. Chem Soc J p3464-8 S '52
Kinetics of the α-chymotrypsin catalyzed hydrolysis of acetyl-L-tyrosinhydroxamide in aqueous solutions at 25° and *p*H 7.6. D. S. Hogness and C. Niemann. bibliog Am Chem Soc J 75:884-90 F 20 '53

TYSON, Robert Carroll, 1905-
They're reshuffling Big Steel. por Bsns W p27-8 D 6 '52

U

U.A.W. See United automobile workers of America

UNESCO. See United nations educational, scientific and cultural organization

UGANDA
See also
Mines and mineral
  resources—Uganda

UGANDA—*Continued*

Directories

Saben's commercial directory and handbook of Uganda, 1953-54. 432p 25s Saben and co, P.O. box 650, Kampala, Uganda '53

Economic relations

United States

Uganda, Tanganyika get MSA assistance. For Comm W 50:8 Jl 20 '53

UGINE-SEJOURNET extrusion process. See Extrusion process

ULCERS

See also

Stomach—Ulcers

ULLMANN reaction

Use of dimethylformamide in the Ullmann reaction. N. Kornblum and D. L. Kendall. Am Chem Soc J 74:5782 N 20 '52

ULTRACENTRIFUGES. See Centrifuges

ULTRAMARINE

Short-cycle syntheses of ultramarine blue. C. A. Kumins and A. E. Gessler. bibliog il diag Ind & Eng Chem 45:567-72 Mr '53

ULTRASONIC waves

Calculation of the temperature and pressure coefficients of conductivity and the ultrasonic effect in dilute electrolytes from Onsager's theory. S. Barnartt. bibliog diags J Chem Phys 21:908-11 My '53

Chemical effects of ultrasonics. V. Griffing. bibliog J Chem Phys 20:939-42 Je '52

Dielectric and ultrasonic relaxation in glycerol. T. A. Litovitz and D. Sette. bibliog J Chem Phys 21:17-22 Ja '53

Echo whale finders; Kelvin and Hughes, ltd. il diag Engineer 194:756-7 D 5 '52; Engineering 175:90-1 Ja 16 '53

Effect of high-frequency sound waves on an air-propane flame. C. J. Kippenhan and H. O. Croft. bibliog il diags A S M E Trans 74:1151-4; Discussion. 1154-5 O '52

Effect of ultrasonic waves on hydrogen overvoltage. E. Yeager, T. S. Oey and F. Hovorka. bibliog diags J Phys Chem 57:268-75 Mr '53

Effectiveness of plastic focusing lenses with high intensity ultrasonic radiation. J. A. Bronzo and J. M. Anderson. il Acoustical Soc Am J 24:718-20 N '52

Effects of ultrasonic radiation on the viscosity of cellulose solutions. R. F. Schwenker, jr. and J. C. Whitwell. bibliog Textile Res J 23:436-7 Je '53

Energy transfer by collisions in *cis-* and *trans-*dichloroethylene vapors. D. Sette and others. bibliog J Chem Phys 20:1899-902 D '52

Fixed path ultrasonic interferometer for absorption measurements on gases. J. F. W. Bell. bibliog diag Acoustical Soc Am J 25:96-100 Ja '53

Investigation of rotational isomers with ultrasound. J. Karpovich. J Chem Phys 21:1120-1 Je '53

Longitudinal and transverse ultrasonic waves in a synthetic rubber. A. W. Nolle and P. W. Sieck. diag J Ap Phys 23:888-94 Ag '52

Magnetically induced ultrasonic velocity changes in polycrystalline nickel. S. J. Johnson and T. F. Rogers. bibliog diags J Ap Phys 23:574-7 My '52

Metallic corrosion influenced by ultrasonic waves. S. Yamaguchi. il J Ap Phys 23:1057-8 S '52

New method for the visualization and measurement of ultrasonic fields. G. S. Bennett. bibliog il Acoustical Soc Am J 24:470-4 S '52

Relaxation time of equilibrium systems as related to ultrasonic absorption and reaction kinetics. M. Manes. J Chem Phys 20:1658 O '52

Ultrasonic absorption in liquid mixtures and structural effects. D. Sette. bibliog J Chem Phys 21:558 Mr '53

Ultrasonic attenuation in magnetic single crystals. S. Levy and R. Truell. diag Rs Mod Phys 25:140-5 Ja '53

Ultrasonic attenuation measurements in germanium. R. Truell and J. Bronzo. Phys R 90:152 Ap 1 '53

Ultrasonic delay lines. D. L. Arenberg. Electronics 26:210+ Jl '53

Ultrasonic porpoise communications. H. N. Morris and others. il diags Electronics 26:208+ Ag '53

Ultrasonic propagation in xenon in the region of its critical temperature. A. G. Chynoweth and W. G. Schneider. bibliog diag J Chem Phys 20:1777-83 N '52

Ultrasonic recorder gages torpedo depth. C. E. Goodell. il diags Electronics 26:118-21 F '53

Ultrasonic velocity, density, and compressibility of supercooled H_2O and D_2O. R. T. Lagemann and others. bibliog J Chem Phys 21:819-21 My '53

Ultrasonic velocity, dispersion, and absorption in dry, CO_2-free air. C. Ener and others. Acoustical Soc Am J 24:474-7 S '52

See also

Shock waves

Sound—Velocity

Industrial applications

Application of ultrasonics to textile processes. A. A. de Araujo. bibliog Am Dyestuff Rep 41:615-19 S 29 '52

Bendix to build ultrasonic probe for split second control of fluid processes. il Chem & Eng N 31:1690 Ap 20 '53

Branson ultrasonic equipment for detecting flaws in rails. il Engineer 196:15 Jl 3 '53; Engineering 176:11 Jl 3 '53

Cleaning by sound. il Bsns W p70 Mr 21 '53

Compact emulsifier employs ultrasonics. il Food Eng 25:147+ Je '53

Complex cuts easy for ultrasonic tool; Raytheon manufacturing co. il Factory Management 111:140-1 Ag '53

Detrex ultrasonic degreaser employs ceramic transducer. il Am Mach 97:144 Mr 30 '53; Machine Design 25:248 My '53; Mach 59:185 My '53; Materials & Methods 37:144 My '53; Aviation W 58:82 Ap 27 '53; Factory Management 111:150-1 Je '53

Effects of vibration during solidification of castings. W. Rostoker and M. J. Berger. bibliog il Foundry 81:100-5+ Jl '53

Harnessing sound; uses range from boiling eggs to fusing metals. R. L. Holman. Barron's 33:15 Mr 16 '53

How ultrasonic soldering works. L. Walter. diags Am Mach 97:126-8 S 14 '53

Influence of supersonic wave field on bright nickel plating; abstract. A. Roll. Metal Finishing 51:83 Mr '53

Inspection and measurement by ultrasonics. R. H. Frank. il diags Instruments 25:1720-1+ D '52; Same abr. Steel 130:99-102 Je 16 '52; Same abr. Product Eng 23:256+ O '52

Measurement of dynamic modulus in adhesive joints at ultrasonic frequencies. A. G. H. Dietz and others. il diags Am Soc T M Proc 50:1414-27 '50

Miniature ultrasonic flaw detector. il Metallurgia 47:211 Ap '53; Engineer 195:424 Mr 20 '53; Engineering 175:363 Mr 20 '53; Elec J 150:886 Mr 13 '53

Non-destructive testing reveals casting defects. J. N. Anspach. diags Am Mach 97:123 Mr 2 '53

Some metallurgical applications of ultrasonics. A. E. Crawford. bibliog il diags Metallurgia 47:109-13 Mr '53

Sonic energy, industry's new production and inspection tool. C. W. Boyce. il diag Factory Management 111:84-95 Mr '53

Sound waves save ingredients in cooking operations at Schultheis brewery. G. W. Schroder. il Food Eng 25:48-50 F '53; Discussion. 25:183-4 Ap '53

Spot-checking corrosion; immersed ultrasonic inspection. D. H. Stormont. il Oil & Gas J 51:75 Mr 16 '53

Supersonic rock crusher. il Eng & Min J 154:109 Mr; 112 Je '53

Supersonics test concrete structures. J. R. Leslie. il diag Elec World 139:79 My 4 '53

Two operations for the future; cold sterilization, ultrasonic processing. diag Food Eng 25:87 O '53

Ultrasonic cleaning pays off for small parts. il diag Steel 131:92-3 N 3 '52

Ultrasonic degreaser. il Metal Finishing 51:88 F '53

ULTRASONIC waves—Industrial applications—*Continued*

Ultrasonic equipment for descaling boilers; Crustex. il diag Engineer 195:638-9 My 1 '53; Engineering 175:619 My 15 '53

Ultrasonic inspection insures dependable jet-engine parts. C. V. Garrett. il diags Mach 59:194-201 Jl '53

Ultrasonic inspection of sub-surface defects. il Product Eng 24:212-13 Mr '53

Ultrasonic inspection of welded pressure vessels; Barnsley works. il diags Engineer 196: 199-202 Ag 14 '53

Ultrasonic method of tire inspection. W. E. Morris and others. bibliog il diags R Sci Instr 23:729-34 D '52; Abstract. Electronics 26:224+ Ap '53

Ultrasonic soldering; abstract. E. A. Neppiras. Metal Prog 63:170+ Ap '53

Ultrasonic soldering in the foundry. Engineering 174:647 N 14 '52

Ultrasonic soldering in the foundry. il Metallurgia 46:251-2 N '52

Ultrasonic testing of a large engine crankshaft; abstract. W. A. Black. Iron & Steel Eng 30:108-9 Ag '53

Ultrasonic testing of a large engine crankshaft at Republic steel corp. W. A. Black. il diags Blast F & Steel Pl 41:1065-6+ S '53

Ultrasonic testing of castings. T. A. Dickinson. il diag Foundry 81:221-2+ S '53

Ultrasonic testing used for small-diameter tubing. A. J. Pardus. il diags Iron Age 171:110-13 Ja 29 '53

Ultrasonic thickness measurement. il diag Electronics 26:144+ Ja '53

Ultrasonic tinning techniques for aluminum. A. E. Crawford. bibliog il plan diags Electronics 25:102-5 D '52

Ultrasonic-wave study of swollen Buna-N rubber. A. W. Nolle and J. F. Mifsud. bibliog J Ap Phys 24:5-14 Ja '53

Ultrasonic waves used for industrial cleaning. il Iron & Steel Eng 30:131-2 Ap '53; Iron Age 171:150-1 Ap 9 '53

Ultrasonics; a sound method of cleaning. R. E. Homan. il diag Am Mach 97:120-4 Jl 6 '53

Ultrasonics in industry. Economist 165:185-6 O 18 '52

Ultrasonics in maintenance planning and product quality control. R. L. Rectenwald. Iron & Steel Eng 30:144-5 S '53

Ultrasonics, the answer to aluminum soldering? L. Walter. il diags Materials & Methods 38:59-61 Jl '53

Viscosity analyzer; Ultra-Viscoson. G. Weber. il Oil & Gas J 51:103 Ap 20 '53

Medical use

Biophysical mode of action of biologic and therapeutic ultrasonic reactions. J. F. Lehmann. bibliog il Acoustical Soc Am J 25: 17-25 Ja '53

Temperatures produced in tissues by ultrasound; experimental study using various technics. J. F. Herrick. bibliog il Acoustical Soc Am J 25:12-16 Ja '53

Ultrasonic therapy unit. T. A. Dickinson. il diag Electronics 25:202+ N '52

Physiological effect

Symposium on ultrasound in biology and medicine, University of Illinois, May 1952. W. J. Fry and others. bibliog il Acoustical Soc Am J 25:1-25 Ja '53

ULTRAVIOLET microscope. See Microscope and microscopy—Ultraviolet microscope

ULTRAVIOLET rays

Absorption by pyrimidines of plane polarized ultraviolet light. L. E. Lyons. bibliog J Chem Phys 20:1814 N '52

Color in industrial wastes; effect of light on certain wastes. W. Rudolfs and W. D. Hanlon. Sewage & Ind Wastes 25:66-9 Ja '53

Disruption of mitochondria of saccharomyces by ultraviolet irradiation. A. Sarachek and G. F. Townsend. bibliog il Science 117:31-3 Ja 9 '53

Irradiation-induced photoconductivity in magnesium oxide. H. R. Day. bibliog Phys R 91:822-7 Ag 15 '53

Kinetics of the reaction of potassium ferrocyanide and nitrosobenzene; the catalytic action of mercuric ions and ultraviolet light. S. Ašperger, I. Murati and O. Čupahin. Chem Soc J p 1041-6 Ap '53

Ultraviolet-induced isomerization of tiglic acid to angelic acid. S. W. Pelletier and W. L. McLeish. bibliog Am Chem Soc J 74: 6292-3 D 20 '52

Ultraviolet radiant energy from the sun observed at 11,190 feet. R. Stair. bibliog J Res Nat Bur Stand 49:227-34 S '52

Biological effect

Induced and other variations in bacterial cultures; the effect of ultra-violet irradiation on bact. coli with special reference to nutritional mutants. A. C. R. Dean and C. Hinshelwood. Chem Soc J p2817-31 Jl '52

Protection of bacteria against radiation effects. H. A. Whitehead. bibliog Science 116:459-60 O 24 '52

Industrial applications

Black light spots defects in materials. N. E. Walters. il Materials & Methods 36:105-7 N '52

Keeping orange juice fresh. C. E. Wright. il Food Eng 24:93+ N '52

Killing germs with invisible ultraviolet radiation. L. J. Buttolph. il Gen Elec R 56:8-10 My '53

Lamps

Home freezer broods chicks at 20 F; infrared lamps provided direct heat. W. Kollmayr. il Elec World 139:140+ Mr 9 '53

Lights out for insects; black light lamps used. il Elec World 138:140 O 6 '52

Sanitization of air by ultraviolet radiations. R. Nagy and others. il Westinghouse Eng 13:66-9 Mr '53

Ultraviolet lamps keep liquid sugar sterile. il Elec World 138:106 D 29 '52

Measurement

Intensity measurements in the vacuum ultraviolet. K. Watanabe and E. C. Y. Inn. bibliog Opt Soc Am J 43:32-5 Ja '53

Physiological effect

Effect of ultraviolet radiation on sulfhydryl and disulfide containing amino acids. K. Schocken. bibliog Science 116:544-6 N 14 '52

ULTRAVIOLET spectrum. See Spectrum, Ultraviolet

UMBELLULONE

Structure of umbellulone dibromide. R. H. Eastman and A. Oken. bibliog Am Chem Soc J 75:1029-32 Mr 5 '53

UMBREIT, Stanton, 1895-

Sketch. por Metal Prog 63:82-4 Ap '53

UMBRELLAS

Style is what sells them. il Bsns W p 188+ Mr 21 '53

UMSTADTER, Harold

Number one irrigation man. Fortune 47:172 Ja '53

UNCLAIMED policies. See Insurance, Life—Policy settlement—Unclaimed policies

UNDERDEVELOPED areas. See Backward regions

UNDERGROUND construction

Army discloses data on sub-Pentagon; underground communications center for the three military services at Fort Ritchie, Md. il Eng N 149:28 N 13 '52

Buses load underground in new terminal. il plan Eng N 150:41-2+ Ap 9 '53

See also

Electric plants (central stations)—Underground stations

Garages, Underground

UNDERGROUND corrosion. See Corrosion and anti-corrosives—Underground corrosion

UNDERGROUND factories. See Factories, Underground

UNDERGROUND garages. See Garages, Underground

UNDERGROUND structures

Factory service lines go underground; Lily-Tulip cup corporation's new plant in Springfield, Mo. il plan diag Eng N 149: 30-2+ D 25 '52

Hard luck clover leaf for utilities; effect of Los Angeles freeway. J. H. Collins. Pub Util 51:30-6 Ja 1 '53

UNDERGROUND structures—*Continued*

Underground oil storage; Edholm container uses excavations or caverns and ground water to store fuel oil. D. Ball. diags Pet Eng 24:A49-50+ D '52

See also

Electric plants (central stations)—Underground stations

Pipe lines

Sewerage

Sewers, Concrete

Tunnels and tunneling

UNDERGROUND water. See Water, Underground

UNDERPINNING. See Shoring and underpinning

UNDERTAKERS' buildings. See Mortuary chapels

UNDERWEAR

Advertising

This slide film sells retail brass; Union underwear co. N. Kelne. il Ptr Ink 242:39 Mr 13 '53

Manufacture

High quality underwear demands up to date methods; Russell mfg. co. E. D. White. il Textile World 103:126-7 Ag '53

Reduce tuck stitches in your underwear fabrics. J. H. Blore. il Textile World 103:78-9 Ap '53

UNDERWRITERS' laboratories

UL and the lighting industry. F. K. Hanlin. il Illum Eng 48:357-60 Jl '53

UNEMPLOYMENT

Great Britain

Manpower trends; with table of analysis of civil employment, end 1950-Oct. 1952. Economist 165:778 D 13 '52

UNFILLED orders. See Orders, Unfilled

UNIFIED field theory

Criticism of a recent unified field theory. C. P. Johnson, jr. Phys R 89:320-1; Reply. A. Einstein. 321 Ja 1 '53

Fields unified? Sci Am 188:54-5 My '53

Gravitation and electrodynamics; modification of Einstein's unified field theory. B. Kurşunoğlu. bibliog Phys R 88:1369-79 D 15 '52

Unified field theory and Born-Infeld electrodynamics. G. Rickayzen and B. Kurşunoğlu. Phys R 89:522-3 Ja 15 '53

UNILEVER limited. See Lever brothers and Unilever, limited

UNION bag and paper corporation

Stock offered. Comm & Fin Chr 176:2169 D 8 '52

UNION carbide and carbon corporation

Dial of Union Carbide & Carbon. Fortune 46:136-7 N '52

Five medium priced growth stocks; with comparative balance sheet items. Mag of Wall St 91:75 O 18 '52

Investment audit. S. Devlin. Mag of Wall St 91:298-300+ D 13 '52

UNION-CASTLE mail steamship company, limited

Statement by the chairman. G. P. Christopher. Economist 167:627-8 My 30 '53

UNION corporation, limited

Statement by the chairman. P. M. Anderson. Economist 167:776-7 Je 13 '53

UNION electric company of Missouri

Public utility securities. O. Ely. Comm & Fin Chr 177:18 Ja 1 '53

UNION labor life insurance company

Excellent 1952 enjoyed by Union labor life co. Weekly Underw 168:1193 Ap 25 '53

UNION of pure and applied chemistry, International. See International union of pure and applied chemistry

UNION Pacific railroad

Annual report, year ended Dec. 31, 1952. Ry Age News ed 134:31-3 My 11 '53; Same. Comm & Fin Chr 177:1866-7 Ap 30 '53

Five unusual candidates for stock splits; with comparative balance sheet items. Mag of Wall St 92:92 Ap 18 '53

UNION reinsurance of Zurich, Switzerland

Union reinsurance enters United States. East Underw 54:16 Ja 9 '53

UNION screen plate company of Canada, limited

Brief histories of some of our original 1903 advertisers or their successors. Pulp & Pa of Can 54:299-300+ My '53

UNION shops. See Open and closed shop

UNION sulphur and oil corporation

Securities offered. Comm & Fin Chr 177:1303 Mr 23 '53

UNION tank car company

Debentures sold. Comm & Fin Chr 177:2136 My 18 '53

Five diversified stocks with strong investment appeal; with comparative balance sheet items. Mag of Wall St 92:397 Je 27 '53

UNIONMELT welding. See Electric welding—Unionmelt process

UNISKAN extrusion process. See Extrusion process

UNISOL process. See Gasoline—Manufacture

UNIT heaters. See Gas heaters; Heaters; Steam heaters

UNIT processes

Chemical engineering unit operations; eighth annual review. bibliog il diag Ind & Eng Chem 45:15-98 Ja '53 (reprints 75c)

Dynamic behavior of linear production systems. D. P. Campbell. flow diags Mech Eng 75:279-83 Ap '53

Ion exclusion; a unit operation utilizing ion exchange materials. R. M. Wheaton and W. C. Bauman. bibliog Ind & Eng Chem 45:228-33 Ja '53

Symposium on unit processes. bibliog flow diags il diags Ind & Eng Chem 45:270-322 F '53

What is selling continuous nitration? il diag Chem Eng 60:130+ Mr '53

See also

Adsorption

UNITED air lines

CAB starts action on United aircoach. Aviation W 58:81 F 16 '53

Enforcement action on coach begins. Aviation W 58:77-8 F 9 '53

Running phantom jet transports. Bsns W p92+ My 30 '53

Seven companies likely to increase dividends in 1953; with comparative balance sheet items. Mag of Wall St 91:401 Ja 10 '53

UAL earns record $10.5-million profit. Aviation W 58:71-2 Mr 23 '53

United reports salaries. Aviation W 58:25-6 Ap 20 '53

UNITED aircraft corporation

UAC profits reach all-time high. S. Altschul. Aviation W 58:46-7 Ap 6 '53

UNITED artists corporation

Happy ending. Bsns W p 121-2 F 28 '53

UNITED automobile workers of America (International union, United automobile, aircraft and agricultural implement workers of America)

Auto contracts; an eye on the future. Bsns W p25 My 30 '53

Auto escalator creaks. Bsns W p 141-2 Ja 17 '53

Auto reopening. Bsns W p 148 D 13 '52

Autos; will escalator break down? R. D. Raddant. Iron Age 171:53-4 Ja 29 '53

Battle of the index; escalator clauses will be a source of labor unrest. Fortune 47:80+ Mr '53

Election results at Ford local 600. Bsns W p 168 My 16 '53

Labor; ponder Ike-Reuther talks; continuance of old index hurts new contract chances. R. D. Raddant. Iron Age 171:91 F 12 '53

Quick new contracts for auto workers. Steel 132:70 Je 1 '53

Reuther sires another living document; GM and UAW come to terms on revision of five-year labor pact. R. D. Raddant. Iron Age 171:82+ My 28 '53

Stronger, tighter UAW looks ahead. Bsns W p 170-3 Mr 28 '53

Union isn't skeptical; plant, jobs are saved; Spicer mfg. co. Pottstown plant. Bsns W p 142 N 8 '52

UAW showdown; local 600. Bsns W p 155 My 2 '53

UAW wants work guarantee. Bsns W p 177 F 21 '53

United front; AFL's machinists and CIO's auto workers. Bsns W p 169 Je 20 '53

Why UAW wants a floor under pay. Bsns W p 118 N 29 '52

UNITED biscuit company of America
Five diversified stocks with strong investment appeal; with comparative balance sheet items. Mag of Wall St 92:398 Je 27 '53
12 promising specialties. P. Dobbs. Mag of Wall St 92:122+ Ap 18 '53

UNITED carbon company
Building up big oil and gas business. Barron's 32:19-20 O 6 '52
Comparative analysis. R. Colston. Mag of Wall St 92:173+ My 2 '53

UNITED cement, lime and gypsum workers international union
Voice of labor on Taft-Hartley act. F. C. Jones. Rock Prod 55:53+ N '52

UNITED construction workers
United construction workers lose court fight to NLRB. Eng N 149:32 N 20 '52

UNITED dairies, limited
Statement by the chairman. L. Maggs. Economist 164:791-2 S 27 '52

UNITED distillers of America, inc.
Schenley eyes Dant as a boost to sales. Bsns W p30 F 21 '53

UNITED engineering and foundry company
United Engineering sales increase. Blast F & Steel Pl 41:sup98 Ap '53

UNITED engineering trustees
Annual report for 1951-1952. Mech Eng 75: 91-2 Ja '53

UNITED fruit company
Storm warnings in Latin America. Bsns W p 164 Mr 21 '53

UNITED gas corporation
Annual statement. Comm & Fin Chr 177:1414 Mr 30 '53

UNITED gas improvement company
Merger effective. Comm & Fin Chr 177:145-6 Ja 12 '53
Public utility securities. O. Ely. Comm & Fin Chr 178:129 Jl 9 '53

UNITED glass bottle manufacturers, limited
Statement by the chairman. L. A. Elgood. Economist 167:485 My 16 '53

UNITED KINGDOM. See Great Britain

UNITED mine workers of America
After Lewis, what? Coal Age 58:70-7 Je '53
Annual meeting, 41st, Cincinnati, Oct. 7-15. Coal Age 57:134-6 N '52
Coal crisis for next Congress? Bsns W p 165-6 O 25 '52
Coal hearing ends in warning. Bsns W p 173-4 N 22 '52
Fringe with tassels; John L. Lewis defies the WSB on tonnage royalty assessments. F. Morley. Barron's 32:3 O 13 '52
In coal; new kind of wage deal? Bsns W p 104-5 Jl 4 '53
Meeting, 41st, Cincinnati. Mo Labor R 75: 641-3 D '52
Miners dig Democrats out of a hole; return to coal pits. Bsns W p 144 N 1 '52
UMWA fund spent $138 million in year. Coal Age 58:135 O '53
United mine workers of America welfare and retirement fund medical care program; abstracts. W. F. Draper. Nat Safety N 68: 117-20 S '53; Pub Health Rep 68:120 Ja '53

District 50

Drive to unionize a whole town bogs down, leaves scars. il Bsns W p 146-8 N 1 '52

UNITED nations
Assembly in perspective; General assembly session, 7th. Economist 167:309-10 My 2 '53
Chinese seat in Uno; political and legal aspects. Economist 167:449-50 My 16 '53
From Korea to Manhattan. Economist 165: 72-3 O 11 '52
House warming for Uno. Economist 165:243 O 25 '52
Let's by-pass UN in Korea. R. A. Taft. Comm & Fin Chr 177:2301+ My 28 '53
Nationalization endorsed; oil dealt major blow by U.N. approval of Bolivia-Uruguay resolution. D. M. Duff. Oil & Gas J 51:149 D 22 '52
New start for Uno? Economist 165:820-1 D 20 '52
Next round with Mr Vyshinsky. Economist 166:551-2 F 28 '53
Private lives of nations. Economist 165:3-4 O 4 '52
Shaping up at Uno. Economist 165:393 N 8 '52
Sniping at the colonial powers. Economist 165:830-1 D 20 '52
Stocktaking for Uno. Economist 165:515-16 N 22 '52
Subversion tales at Uno. Economist 166:861 Mr 28 '53
Time and money at Uno. Economist 165:696+ D 6 '52
Treaty law; Senate thinks it begins to endanger national sovereignty; relationship of United States to the United nations. F. Morley. Barron's 32:5 D 22 '52
United nations begins program to promote rural electrification. Elec Eng 72:98 Ja '53
Uno's staff and their hosts. Economist 167: 29-30 Ap 4 '53
Uno's week of trial. Economist 165:546 N 22 '52
U.N. validates rights of members to nationalize wealth and resources. R. S. Byfield. Manuf Rec 122:28+ Ja '53
Yearbook of the United nations, 1951. 1030p $12.50 Columbia univ. press, 2960 Broadway, New York 27 '52
Yearbook of the United nations, 1952. 981p $12.50 Columbia univ. press, 2960 Broadway, New York 27 '53

Commission on narcotic drugs

Narcotics commission meeting, 8th, New York. Oil Paint & Drug Rep 163:5 Ap 6 '53

Economic and social council

U.N. strikes at cartels. Bsns W p 158-9 My 16 '53

Employees

Subversives in U.N.; Congress will find out how American reds got Secretariat jobs. F. Morley. Barron's 32:5 D 8 '52
Two masters; the UN assembly points up divided loyalties in its Secretariat; Communists among the Americans. F. Morley. Barron's 32:3 O 20 '52

Headquarters

United nations delegates to inaugurate General assembly building. il plan Eng N 149: 26-7 O 9 '52
U.N. headquarters blocks no traffic; illustrations with text. Eng N 150:46-7 My 28 '53
UN lighting high in safe maintenance. il Safety Maint & Prod 104:17 D '52

Communication facilities

United nations communications facilities. H. B. Rantzen. il Tele-Tech 11:51-3+ D '52; 12:73-4+ Ja '53

Security council

Inside view of Security Council countries. W. A. Robertson. Comm & Fin Chr 178:1+ Jl 2 '53; Discussion. 178:253+, 345+ Jl 23, 30 '53

Technical assistance program

International labour organisation and technical assistance. Int Labour R 66:391-418 N-D '52
United nations expanded program for technical assistance. B. J. Bok. Science 117:67-70 Ja 23 '53
Uno passes the hat. Economist 166:642-3 Mr 7 '53

UNITED nations educational, scientific and cultural organization
Annual meeting, 7th, Paris. Chem & Eng N 31:402+ F 2 '53
Building Paris doesn't want; proposed headquarters. il plans diags Arch Rec 112:11-14 D '52
Informal meeting of representatives of associations for the advancement of science. G. Wendt. Science 117:94-6 Ja 30 '53
Tropical building design and construction symposium. J. L. Sarin. Science 117:582-3 My 29 '53
Trouble in UNESCO. Sci Am 188:30 Ja '53
UNESCO'S science program. Sci Am 188:45 Ap '53

UNITED nations Korean reconstruction agency
South Korea; $1.5-billion to rebuild. Bsns W p 150-2 Je 20 '53

UNITED packinghouse workers of America
Double trouble. Bsns W p 152-3 My 23 '53

UNITED paramount theaters, inc.
Merger of ABC and Paramount. J. D. C. Weldon. Mag of Wall St 91:644-5+ Mr 7 '53
Movies, tv join hands. Bsns W p34 N 22 '52

UNITED parcel service
Yardstick to measure executives. Bsns W p62+ Je 6 '53

UNITED Park City mines company
On the road to a ghost town? merger brings jobs nearer, in Park City, Utah. il Bsns W p80-2+ Je 27 '53

UNITED rubber, cork, linoleum and plastic workers of America
Rubber cages its wildcats. Bsns W p 116 N 29 '52
Rubber workers; sitdowns, short days, and caution. il Bsns W p 158-61 Ap 11 '53

UNITED shoe machinery corporation
Mills of antitrust still grind on. Fortune 47: 59 Ap '53
Shoe decision aftermath. Bsns W p 140 Mr 14 '53
Shoe machines ordered on sale. Bsns W p41 F 28 '53

UNITED STATES
America looks ahead. S. Bridges. Comm & Fin Chr 177:2071+ My 14 '53
Canadian views United States-Canadian interrelations. S. Armour. Comm & Fin Chr 178:258+ Jl 23 '53

Advisory board on economic growth and stability

Steering in one direction. Bsns W p33 Je 27 '53

Aeronautics, Bureau of (navy)

Bureau of aeronautics representatives; directory. Aero Digest 65:114+ O '52

Agriculture, Department of

Graduate school, USDA. P. V. Cardon. Science 117:sup3 Mr 13 '53
Plant food subsidizing to reflect budget cut. Oil Paint & Drug Rep 163:5 Ap 20 '53
Shakeup urged in flood control. Eng N 149: 21 D 18 '52

Bibliography

New serial publications of the United States Department of agriculture and the state experiment stations. W. M. Alleman. Special Lib 44:66-9 F '53

Air coordinating committee

ACC faces tough civil-military decisions. Aviation W 58:68+ F 23 '53
New ACC chairman is commerce official; other members. Aviation W 58:72 Mr 23 '53
Some policy revisions certain. Aviation W 57:13 N 17 '52

Air service

AF aircraft deliveries hit postwar high. R. Hotz. Aviation W 57:13-14 D 22 '52
Air force chief and vice-chief of staff. Aviation W 58:33-4 My 25 '53
Air force counters charges of extravagant construction. Eng N 150:26 Ja 8 '53
Air materiel command procurement districts. il map Aero Digest 65:53-4+ O '52
Air power future awaits JCS meeting. R. Hotz. Aviation W 58:13-14 Je 1 '53
Flight of the Fillilоо Bird. A. S. Hill. il U S Naval Inst Proc 79:44-9 Ja '53
Heavy press program gets the ax. Steel 132: 44 Je 29 '53
Hidden struggle for the H-bomb; scientists' campaign to reverse U.S. military strategy. il Fortune 47:109-10+ My '53
Mouthful; air force cancels contracts for presses. Bsns W p 108+ Je 27 '53
Organization of Department of the air force; chart. Aviation W 58:23 F 9 '53
Pentagon and U.S. over-regulation. G. Loening. Aviation W 58:35-6+ Ja 19 '53
Pentagon warns new air power plan would scuttle SAC. Aviation W 58:13-15 Ap 13 '53
Services blueprint dual-economy plants. R. Hotz. Aviation W 57:13 D 29 '52
Twining's policy. Aviation W 58:16 Je 1 '53
USAF climbs toward 143-wing level. R. Hotz. il Aviation W 58:42-9 Mr 2 '53
U.S. air force combat airplane. il Aero Digest 65:26-32+ O '52
USAF crashes. A. McSurely. Aviation W 58:17 Ja 12 '53
USAF tightens Japanese air defenses. R. P. Martin. il Aviation W 58:13-16 F 16 '53
USAF to buy 20,000 planes in three years. R. Hotz. Aviation W 57:13-14 D 15 '52
U.S. military aircraft procurement program. il maps Aero Digest 65:18-22 O '52

Air research and development command

Air force research and development centers. map Automotive Ind 108:72 F 1 '53
Air research and development program. O. G. Haywood, jr. J Eng Educ 43:373-7 Mr '53

Appropriations and expenditures

Bark and bite; Wilson budget and the aircraft makers. R. P. Cooke. Barron's 33:3+ Je 15 '53
Meeting our military and economic problems. J. W. Martin, jr. Comm & Fin Chr 178:3+ Jl 2 '53
Weapons battle gets hot and heavy. il Bsns W p28-9 My 30 '53

Arnold engineering development center

AF supports Aero in Congress; chiefs recommend that company be continued as operator of AEDC project. Aviation W 58:16-17 F 2 '53
AEDC project; USAF tosses Tullahoma problem to Congress. Aviation W 58:17 Mr 23 '53
Aro gets 3,500-mph. windtunnel. il Aviation W 58:36 My 4 '53
House approves Aro as AEDC operator. Aviation W 58:16 Mr 30 '53
Supersonic test center. il map plan Eng N 150:30-2+, cover Ap 30 '53

Barracks and quarters

Labor requirements for building air force housing. K. R. Murphy and E. M. Gordon. Mo Labor R 75:263-8 S '52

Equipment and supplies

Spares study; economies in AF spares set up by special group. Aviation W 58:16 F 16 '53

Officers

Truman promotes 25 USAF officers. Aviation W 57:14-15 D 15 '52

Safety program

Great safety record in building Arctic base. East Underw 54:33 F 6 '53

Air service, Navy

Developments in naval aircraft ordnance. W. H. Huff. il Aero Digest 66:68+ Ap '53
Naval air looks to new strength. il Aviation W 58:52-6+ Mr 2 '53
Naval aircraft; new designs promise more business for plane makers. R. P. Cooke. Barron's 33:9-10 Mr 16 '53
Naval combat airplane. il Aero Digest 65: 62-4+ O '52
Navy confirms aircraft cutbacks. Aviation W 57:16-17 D 8 '52

Appropriations and expenditures

Anti-spending bill is aired; Coudert's bill, HR 2. Bsns W p 152-4 Ap 25 '53
Budget facts. R. R. Hughes. Banking 46:43+ Jl '53
Federal appropriations cuts to save South $2.8 billions. M. Smith. Manuf Rec 122:38 S '53
Let's have a run off of unspent appropriations! G. M. Humphrey. Comm & Fin Chr 177:1958 My 7 '53
Record postwar air spending predicted. R. Hotz. Aviation W 58:12-14 Ja 19 '53
Roll out the barrel; Congress and public works appropriations. J. C. W. Schaie and J. C. Perham. Barron's 33:3 Jl 13 '53
Unexpended balances of appropriations. H. F. Byrd. Comm & Fin Chr 177:202 Ja 15 '53

See also
Budget—United States
United States—Armed services—Appropriations and expenditures

Armed forces medical library

Armed forces medical library catalog, 1952. 813p $17.50 Card division, Library of Congress, Washington 25 '53

UNITED STATES—*Continued*

Armed services

New Chiefs. J. Chamberlain. Barron's 33:3+ Jl 20 '53
New joint chiefs. Bsns W p28-9 My 16 '53
Riley group chides services on construction. Eng N 149:26 O 23 '52
See also
Industrial college of the armed forces
United States—Air service
United States—Army
United States—Navy

Appropriations and expenditures

Federalizing of Charles E. Wilson. Fortune 47:89-90 My '53
Military budget for fiscal '54. Bsns W p34 N 8 '52
Military spending to hold pace. Eng N 150: 83-4 F 19 '53
Tapering off defense expansion. Bsns W p27-8 Jl 18 '53
What is the mystery in $110 billion defense appropriations? J. T. Roberts. Mag of Wall St 92:8-10+ Ap 4 '53

Commissariat

Hot food for fighters; army food container, insulated with shredded urea foam. il Mod Plastics 30:87-8 S '52

Defense military personnel records center

Efficient files center planned; Defense military personnel records center. il Eng N 149: 72 N 27 '52

Equipment and supplies

What's needed and what's coming in military earth-moving equipment. Constr Methods 35:150+ F '53

Forces in Europe

Joint construction agency; new command post for military construction in France. W. G. Bowman. il map Eng N 150:33-6+ Je 11 '53

Joint construction agency

JCA; new command post for military construction in France. W. G. Bowman. il map Eng N 150:33-6+ Je 11 '53

Records

See also United States—Armed services—Defense military personnel records center

Army

Watch on the Rhine; U.S. soldiering invokes German respect. C. Mayer. Barron's 33:7-8 F 9 '53
See also
Army newspapers

Chemical corps

Army revamps buying program for chemicals. Oil Paint & Drug Rep 163:4+ Mr 30 '53
Chemical corps medical laboratories. J. H. Wills. Science 116:sup3 O 24 '52

Civilian employees

Training plan for the personnel staff; developing civilian personnel managers in the army. O. F. Peterson. Personnel 29:484-92 My '53

Desertions

It took some digging to get deserter story. Ed & Pub 86:10 Ja 10 '53

Engineer corps

Impact of the corps of engineers on the progress of the Nation during the past one hundred years. L. A. Pick. Midwest Eng 5:7-8+ O '52
Shakeup urged in flood control. Eng N 149:21 D 18 '52
Tough problems await General Sturgis, the army's new Chief of engineers. Eng N 150: 71-2 Ap 16 '53

Equipment and supplies

Triangulation tower of army's is lighter. Midwest Eng 5:23 F '53

Laboratories

New and specialized laboratories of the Department of the army. K. D. Nichols. J Eng Educ 43:378-82 Mr '53

Safety program

N.Y.U. completes 89th army safety course. Nat Safety N 67:50 Ja '53
Safety in Korea. il Safety Maint & Prod 104: 36 N '52
Safety's Arctic outpost; Operation Blue Jay. il Nat Safety N 67:18-19+ F '53
27 per cent of turnpike accidents involve military personnel. C. E. McCandless. Safety Maint & Prod 105:62+ Mr '53

Signal corps

Signal corps mobile television system. J. S. Auld. flow chart il plan diags Soc Motion Picture & Tv Eng J 59:462-71 D '52
Signal corps procurement changed. Tele-Tech 11:47 O '52

Transportation corps

How to turn a beach into a port. il Bsns W p30-1 Jl 4 '53
Military railway service develops modern military rolling stock. H. A. Jacobs. il Ry Age 135:63-7 O 19 '53

Business advisory council

New advisory lineup. Bsns W p34 Ja 24 '53

Cabinet

Changing the guard; Eisenhower names Cabinet officers. Pub Util 50:917-19 D 18 '52
Eisenhower is still naming names. Bsns W p28-30 D 6 '52
Eisenhower puts business on the spot. Fortune 47:76 Ja '53
Eisenhower's Cabinet; a gamble. Bsns W p27-31 N 29 '52
Eisenhower's team. L. Stafford. pors Banking 45:51-6+ Ja '53
Oiling the gears of government. il Bsns W p28-9 Ja 31 '53
Problem; businessmen in government. Bsns W p27-8 Ja 24 '53
Proposes Adlai Stevenson for a post in General Eisenhower's Cabinet. A. Wilson. Comm & Fin Chr 176:1833 N 13 '52
Reaction favorable to new Cabinet officers. Nat Pet N 44:39-40 N 26 '52

Census, Bureau of

Census bureau trims its inorganics reports. Oil Paint & Drug Rep 164:5+ S 7 '53

Coast guard

Coast guard celebrates 163d anniversary. Marine Eng 58:77 S '53
Employ planes to scout ice packs in Atlantic; coast guard international ice observation and ice patrol services. Weekly Underw 168:657 Mr 7 '53

Commerce

Aid for increased trade. Bsns W p 172 F 28 '53
Balance of payment trends during the second quarter of 1952; with table. Survey of Cur Bsns 32:5-7 S '52
Can our imports pay for our exports? S. W. Anderson. For Comm W 49:12-13+ Mr 30 '53
Decline in exports. Mod Ind 24:88 N '52
Export trade strengthens U.S. economy; with tables for selected years, 1929-1952. For Comm W 50:12-16 Jl 27 '53
Exports of US reached second highest mark in '52. Oil Paint & Drug Rep 163:62 F 23 '53
Farm problem; one of the stickiest. Bsns W p 150-1 Jl 25 '53
Foreign assets up, buying lags. Bsns W p90+ Jl 4 '53
Foreign dollar position improved during first quarter. Survey of Cur Bsns 33:4-8 Je '53
Foreign trade under the new administration. J. Quirk. Comm & Fin Chr 177:1014+ Mr 5 '53
Foreign trade's role in the economy. Fortune 47:30 Mr '53
Gold, dollar reserves abroad continue rise. For Comm W 49:4 Mr 30 '53

UNITED STATES—Commerce—*Continued*

Have we a labor surplus? Bsns W p 162-3 Ap 25 '53
How Europeans feel toward Made in U.S.A. G. Hoffman. Dun's R 61:36+ My '53
International transactions of the United States; Nov.-Dec. 1951-Jan.-Nov. 1952. Survey of Cur Bsns 33:S20-2 Ja '53 [cont monthly]
Is importing goods bad for the United States? H. V. Procknow. Burroughs Clearing House 37:8-9 Mr '53
Japanese sail into West Coast markets. il Bsns W p 142-4+ Je 6 '53
Merchandise exports and imports; monthly, 1950-1952. Fed Res Bul 39:56 Ja '53 [cont monthly]
More foreign trade, not aid, universally advantageous. C. C. Higgins. Comm & Fin Chr 177:2314 My 28 '53
Our foreign-domestic trade dilemma. V. L. Horoth. Mag of Wall St 91:165-7+ N 15 '52
Outlook for foreign trade favorable. For Comm W 49:12-14 Ja 19 '53
U.S. businessmen change their tune. Bsns W p 126-7 My 30 '53
United States-Cuban trade may be expected to remain at high levels. O. G. Zorn. For Comm W 48:17 N 17 '52
United States exports to Far East increase; Japan leading market. For Comm W 49:3+ My 11 '53
U.S. foreign trade in 1952 near record. For Comm W 49:15 Mr 2 '53
U.S. foreign trade, 1951-1952; total trade; trade by areas and countries; commodity, exports and imports. For Comm W 49:22-7 Mr 23 '53 [cont quarterly]
U.S. foreign-trade pattern shifts. For Comm W 49:16-17+ Mr 16 '53
U.S. is not a high tariff country. F. G. Singer. Comm & Fin Chr 178:210+ Jl 16 '53
United States merchant marine plays vital role in distribution of world trade. E. W. Clark. For Comm W 49:16-17+ My 18 '53
U.S. water-borne imports and exports carried on dry-cargo vessels show decline. For Comm W 49:17-18 Ap 27 '53

See also
Export trade
Merchant marine—
United States

Europe, Eastern

See Europe, Eastern—Commerce

Far East

See Far East—Commerce

Latin America

See Latin America—Commerce

Philippine Islands

See Philippine Islands—Commerce

Commerce, Department of

Can there be one voice for business? Bsns W p 150+ Ap 4 '53
Chemical division establishment within Commerce dept. weighed. Oil Paint & Drug Rep 163:3+ Mr 30 '53
Chemical liaison setup now weighed by Weeks. Oil Paint & Drug Rep 163:3 Je 22 '53
Commerce department reorganization plan goes into effect this month. Oil Paint & Drug Rep 163:3+ Je 15 '53
Commerce department's new rubber set-up. India Rubber World 128:510 Jl '53
Commerce field offices offer easy way to market data. S. E. Cohen. il Ind Marketing 38:170+ O '53
Field offices provide practical service. C. Hayward. For Comm W 48:9+ D 29 '52
Ninety days of Mr Weeks. D. Norton-Taylor. Fortune 57:150-2+ My '53
Services of Commerce department extended to broader segment of business public. For Comm W 50:2 Jl 13 '53
United States Department of commerce publications. 795p $2.75 Supt. of doc. '52
Weeks wants industry men as chemicals aids. Oil Paint & Drug Rep 163:3+ Ap 6 '53

Commercial policy

Aid, not trade, our motto? H. Bratter. Banking 45:36 Ap '53
American view of benefits of imports in international trade. W. L. Pierson. Comm & Fin Chr 177:2752 Je 25 '53
Can we solve the trade, not aid problem? W. Lichtenstein. Comm & Fin Chr 177:2420+ Je 4 '53
Effects of the embargo on Soviet trade. N. Spulber. Harvard Bsns R 30:122-8 N '52
Foreign economic policy survey plans of US gathering momentum. Oil Paint & Drug Rep 164:3+ Ag 31 '53
Free nations need more trade, less aid. W. Williams. For Comm W 49:14-15+ My 18 '53
Free world can't trade on a one-way street. H. Ford, 2d. Comm & Fin Chr 177:773+ F 19 '53
Free world's first line of defense. G. A. Price. Comm & Fin Chr 177:2197+ My 21 '53
Freer trade; a more prosperous world. L. K. Macy. For Comm W 48:11+ N 3 '52
Freer trade for a stronger free world. P. G. Hoffman. Comm & Fin Chr 178:20-1 Jl 2 '53
Half a foreign policy. G. Cowles. Harvard Bsns R 31:113-16 Jl '53
How restrictive are U.S. tariffs and quotas? J. F. Chapman. Harvard Bsns R 31:117-24 Jl '53
More imports, less foreign aid gifts. H. V. Prochnow. Comm & Fin Chr 176:2223+ D 11 '52
New administration and foreign trade policy. S. W. Anderson. Comm & Fin Chr 177:1319+ Mr 26 '53
New system for preventing transshipment of strategic goods explained by Office of international trade. For Comm W 48:14-15+ D 1 '52
Nudging the inevitable, a proposal for freer foreign trade. R. G. Gettell. Comm & Fin Chr 177:2196+ My 21 '53
Reciprocal free trade with Canada. J. E. Whiteside. Comm & Fin Chr 176:2245 D 11 '52
Reduction of tariffs, simplification of customs procedures, and revision of trade policies proposed. R. G. Gibbs. Chem & Eng N 31:1066-7 Mr 16 '53
Seven-point program for improvement in world trade. H. Mallinson. Comm & Fin Chr 177:1129 Mr 12 '53
Shipments to Soviet block placed under new ban. For Comm W 50:24 Jl 13 '53
Strong economies promote world trade. E. E. Schnellbacher. For Comm W 49:15-16 Ap 20 '53
Trade law extension gets Cabinet backing. Oil Paint & Drug Rep 163:3+ My 11 '53
Trade, not aid program basic to mutual security. M. D. Thalberg. Comm & Fin Chr 177:1135 Mr 12 '53
Turn of the tide; flow of dollars abroad calls for new policies. Barron's 33:1 Jl 6 '53
U.S. government actions. Published in Foreign commerce weekly
Upholds Henry Ford 2d trade policy. L. H. Pink. Comm & Fin Chr 177:1560 Ap 9 '53
We must end handouts of United States dollars! H. W. Prentis, jr. Comm & Fin Chr 176:2219+ D 11 '52
What are we doing about world trade? M. A. Heilperin. Comm & Fin Chr 176:1734 N 6 '52
What's wrong with our foreign trade policies? E. S. Gregg. Comm & Fin Chr 177:885+ F 26 '53
White House wins on trade. Bsns W p31 Je 6 '53

See also
Export trade—Regulation
Imports
Tariff—United States

Commission on foreign economic policy

Foreign economic policy survey plans of US gathering momentum. Oil Paint & Drug Rep 164:3+ Ag 31 '53

Congress

First session; a period of inventory? Bsns W p28-9 Je 20 '53
G.O.P. policy committee. F. Morley. Barron's 33:3 Ja 5 '53

UNITED STATES—Congress—*Continued*

Labor weighs its chances. Bsns W p 115-16 F 7 '53

Rebellious Congress; its intention to reassert prerogative is already obvious. F. Morley. Barron's 33:3 F 2 '53

Naval affairs committees

Naval affairs committees, 1816-1947. R. G. Albion. il U S Naval Inst Proc 78:1226-37 N '52

Senate

New Senate; a conservative coalition will call the turn. F. Morley. Barron's 32:3 N 10 '52

Constitution

Bill of rights program urged by Bernays. Ed & Pub 85:57 D 20 '52

Council of economic advisers

CEA; advice from a veteran; review of Economics in the public service, by E. G. Nourse. Bsns W p 101-2+ Ap 18 '53

Economic advisers, new style. Bsns W p31 F 21 '53

Eisenhower decides CEA's size and chairman. Bsns W p28 Mr 7 '53

It's Congress' move. Bsns W p 196 Je 13 '53

Republicans need economists, too. Fortune 47:116+ Ap '53

Structure and functioning of Council of economic advisers. R. C. Turner. Comm & Fin Chr 177:2419+ Je 4 '53

Defense, Department of

Changing arms strategy? Bsns W p28-9 Ap 18 '53

Defense construction plans reshuffled. V. Smith. Eng N 149:21-3 N 6 '52

Defense department obligates $19.9 billion. Steel 132:72 Mr 16 '53

Defense team holdings revealed. Aviation W 58:14-15 F 2 '53

Emergency planning under one agency, one roof. Bsns W p 122-4 My 16 '53

Hot seat; who heads defense inherits a disorganized property. J. C. Perham. Barron's 32:3 N 17 '52

Industrial fund accounting in the Defense department. M. K. Zucker. N A C A Bul 34:635-43 Ja '53

Inquiry at the Pentagon. Fortune 47:90 My '53

New defense plan boosts civil control. Aviation W 58:14 My 11 '53

Organizing for defense. E. S. Duffield. Harvard Bsns R 31:29-42 S '53

Planning for permanent defense. il Bsns W p 121-2+ My 9 '53

Proposed reorganization plan for Defense department. R. G. Gibbs. Chem & Eng N 31: 2162+ My 25 '53

Who'll get the contracts? Bsns W p27 My 2 '53

Standardization and cataloging program

New catalog for defense; Defense department's standardization and cataloging program. J. W. Fowler. Dun's R 60:25-6+ N '52

Defense mobilization, Office of

Final control on materials, stockpiling sought for ODM by President Eisenhower. Nat Pet N 45:18 Ap 8 '53

ODM expansion study aimed at program halt. Oil Paint & Drug Rep 164:3+ S 7 '53

ODM shuffles aircraft production setup. A. McSurely. Aviation W 58:12-13 F 23 '53

Seventh quarterly report, 1952. Mo Labor R 75:521-2 N '52

Defenses

Defense report; study urges $16-billion air barrier buildup. Aviation W 58:15-16 Mr 23 '53

GOP defense setup nears completion. Aviation W 58:17 F 16 '53

New chiefs. J. Chamberlain. Barron's 33:3+ Jl 20 '53

New push on air defense. il Bsns W p 182+ Ap 18 '53

No need for defense stretch-out. L. H. Keyserling. Comm & Fin Chr 177:2206 My 21 '53

Our defense program. H. W. Baldwin. Harvard Bsns R 31:27-35 Jl '53

Permanent preparedness, a new economic factor. E. Graue. Comm & Fin Chr 177: 2070+ My 14 '53

Reconciling a defense economy with private enterprise. S. H. Slichter. Comm & Fin Chr 177:1317+ Mr 26 '53

Stage set for defense shakeup. K. Johnsen. Aviation W 58:14 Ja 12 '53

$35 billions more available for defense. K. Rannells. Automotive Ind 109:45+ Ag 15 '53

Vance plan for military preparedness adoption nears. R. M. Lorz. Iron Age 171:74 My 14 '53

See also

Civilian defense
Industrial mobilization
Petroleum administration for defense
United States—Air service
United States—Armed services
United States—Defense, Department of
United States—National security resources board
United States—Navy

Description and travel

Guide to America. E. Jenkins, ed. 734p $5 Public affairs press, 2153 Florida av, Washington 8, D.C. '53

Economic conditions

Balance sheet of America's strength. L. L. Colbert. Comm & Fin Chr 177:475+ Ja 29 '53

Basic changes in our economy. R. E. Wood. Comm & Fin Chr 177:591 F 5 '53

British concern over U.S. outlook. P. Einzig. Comm & Fin Chr 177:1222 Mr 19 '53

Business after the defense boom. Fortune 46: 112-17+ D '52

Can the U.S. economy stand the cold war? E. G. Nourse. Comm & Fin Chr 176:1822-3 N 13 '52

Capital investment and the economy in 1953. N. M. Koffsky. Comm & Fin Chr 176:1620 O 30 '52

Changed America. il Bsns W p 101-4+ Je 6 '53

Changed American market. map Bsns W p74-6+ Jl 4 '53

Defense expansion and civilian markets; review of 1952; with graphs, charts and tables. Survey of Cur Bsns 33:1-32 F '53

Economic and financial outlook. R. Rodgers. Comm & Fin Chr 176:7+ sec 2 N 13 '52

Economic consequences of peace in Korea. H. A. Bullis. Comm & Fin Chr 177:2733+ Je 25 '53

Economic-financial position of the U.S. today as compared to 1939. O. C. Lorenz. Mag of Wall St 91:56-8+ O 18 '52

Economic outlook. M. R. Gainsbrugh. Edison Elec Inst Bul 21:161-2+ My '53

Expansion in economic activity. Fed Res Bul 39:1-6 Ja '53

Expenditures in 1952. Fed Res Bul 38:1185-92 N '52

Forecast of 1953 business and securities markets. J. D. Weiss. Comm & Fin Chr 177:10 Ja 1 '53

Future production and employment in the United States. I. Lubin. Mo Labor R 75: 401-3 O '52

Government tries to strike balance between inflation and deflation. J. T. Roberts. Mag of Wall St 92:488-90+ Jl 25 '53

How stable is the economy? S. H. Slichter. Comm & Fin Chr 176:1520+ O 23 '52

If America slumps. Economist 166:917-28 Mr 28 '53

Impact of world affairs on domestic scene. A. W. Zelomek. Comm & Fin Chr 177:2320-1 My 28 '53

Is America going bankrupt? J. P. Wernette. Comm & Fin Chr 177:2415+ Je 4 '53

Let's not talk ourselves into depression. L. H. Keyserling. Comm & Fin Chr 177:1969 My 7 '53

Must we have a recession? S. H. Slichter. Comm & Fin Chr 177:1959+ My 7 '53

National income and product of the United States, 1952; with detailed tables, 1929-1952. Survey of Cur Bsns 33:6-32 Jl '53

National security, stability, and economic solvency. A. H. Hansen. Comm & Fin Chr 177:2301+ My 28 '53

UNITED STATES—Economic conditions—*Continued*

1953 survey of consumer finances; general financial position and economic outlook of consumers. I. Schweiger. Fed Res Bul 39:588-96 Je '53

No depression in next few years. K. W. H. Scholz. Nat Underw (Life ed) 56:23 N 21 '52

No reason to fear peace. G. M. Humphrey. Comm & Fin Chr 177:1729+ Ap 23 '53

Outlook for the domestic economy. J. Backman. Comm & Fin Chr 176:1615+ O 30 '52

Prosperity will continue through 1953! R. R. Dockson. Comm & Fin Chr 176:2116+ D 4 '52

Review of national income and product in the third quarter. Survey of Cur Bsns 32:3-6+ N '52

Review of national income and product; in the first quarter. Survey of Cur Bsns 33:2-7 My '53

Review of national income and product in the second quarter. Survey of Cur Bsns 33:3-6+ Ag '53

Road ahead. W. W. Townsend. Comm & Fin Chr 177:1731+ Ap 23 '53

Secretary Sawyer's survey of Europe. C. Sawyer and others. For Comm W 48:15-20 D 22 '52

Shift to high level economy sans inflation. W. M. Martin, jr. Comm & Fin Chr 177:1437 Ap 2 '53

Sustaining forces in business outlook. R. L. Reierson. Comm & Fin Chr 177:12-13 Ja 1 '53

Uneasy prosperity. R. G. Gettell. Comm & Fin Chr 177:289+ Ja 22 '53

U.S. economy; a penetrating look reveals more strength than weakness. S. H. Slichter. Barron's 33:5+ Ja 26 '53

U.S.-Soviet economic positions. P. Wohl. Mag of Wall St 92:387-9 Je 27 '53

Why consumers feel bullish; Federal Reserve survey. Bsns W p59 Je 27 '53

Why Russia believes the U.S. economy should collapse. J. T. Roberts. Mag of Wall St 91:108-10+ N 1 '52

See also

Business conditions
Income—United States
Inflation (finance)

Economic policy

After Korea, what? a realistic picture of economic and financial adjustments. J. T. Roberts. Mag of Wall St 92:152-4+ My 2 '53

Can the U.S. economy stand the cold war? A. W. May. Comm & Fin Chr 176:1917+ N 20 '52

CEA; advice from a veteran; review of Economics in the public service, by E. G. Nourse. Bsns W p 101-2+ Ap 18 '53

Creating stability by reversing new deal programs. T. L. Godey. Mag of Wall St 91:690-2+ Mr 21 '53

Economic policy for a free world. W. Lichtenstein. Comm & Fin Chr 176:2227+ D 11 '52

Economic stability through federal budget. W. Lindow. Comm & Fin Chr 176:2124+ D 4 '52

Forces eroding our free enterprise system. L. Ruthenburg. Comm & Fin Chr 178:253+ Jl 23 '53

Four straws in a strong wind. Fortune 47:23-4 Mr '53

Free exchange and free markets; objectives of fiscal policy. R. Leon. Comm & Fin Chr 176:2113+ D 4 '52

Government's role in preventing depression. E. G. Nourse. Comm & Fin Chr 177:582+ F 5 '53

He's watching for trouble; A. F. Burns. Bsns W p43-8+ Jl 18 '53

How to get along with Congress; state of the Union message. Bsns W p25-7 F 7 '53

Is the Kremlin running your business? Fortune 47:105-6 My '53

Key to Eisenhower's economics; sound money. Bsns W p80-2+ Mr 28 '53

Korean negotiators bring hopes of peace; easing Eisenhower's problems. il Bsns W p28-9 Ap 11 '53

Labor's view of economic outlook. B. Shishkin. Comm & Fin Chr 178:200 Jl 16 '53

Latin American boom; it brings no stability. map Bsns W p 162-5 Ap 18 '53

New normalcy; long war emergency plans are obsolete. Barron's 32:1 D 15 '52

Now, a fair break for business under our competitive system. S. Weeks. Comm & Fin Chr 177:2528-9 Je 11 '53

Our problem; preservation of liberty and free economy. R. A. Taft. Comm & Fin Chr 177:885+ F 26 '53

Permanent preparedness, a new economic factor. E. Graue. Comm & Fin Chr 177:2070+ My 14 '53

Pressure groups, inept government policies cause of inflation and instability. C. M. Shanks. Nat Underw (Life ed) 56:7 D 12 '52

Program for economic stability; with charts. H. Price. Mag of Wall St 91:220-2 N 29 '52

Props to ease our economy as defense spending tapers off. T. L. Godey. il Mag of Wall St 91:8-10+ O 4 '52

Republicans need economists, too. Fortune 47:116+ Ap '53

Republicans' unhappy legacy; inflation, taxes, interventionism. W. H. Peterson. Comm & Fin Chr 178:202+ Jl 16 '53

Safeguarding our mineral-dependent economy. T. S. Lovering. bibliog Geol Soc Bul 64:101-25 F '53

Structure and functioning of Council of economic advisers. R. C. Turner. Comm & Fin Chr 177:2419+ Je 4 '53

There's no shortage of dollars or commodities in a free economy. F. E. Wormser. Comm & Fin Chr 177:890+ F 26 '53

Uneasy triangle. C. E. Wilson. Comm & Fin Chr 177:287+ Ja 22 '53

Urgent job for the president-elect. Fortune 46:99-100 N '52

We have abandoned policy of lifting the economy by its bootstraps. V. B. Gerard. Comm & Fin Chr 177:2323 My 28 '53

What the Eisenhower administration should do to promote well-being of all the people. C. E. Merrill and W. H. Smith. Comm & Fin Chr 177:695 F 12 '53

See also

Industry and state—United States
Prices—Regulation
Taxation—United States
United States—Commercial policy
United States—Council of economic advisers
United States—Economic relations
Wages—Regulation

Economic relations

America's responsibilities in a free world. A. W. Robertson. Comm & Fin Chr 178:218 Jl 16 '53

Basis for a new foreign economic policy. W. W. Aldrich. Comm & Fin Chr 176:2013+ N 27 '52

Can we solve the trade, not aid problem? W. Lichtenstein. Comm & Fin Chr 177:2420+ Je 4 '53

Conclusions on U.S.-British economic talks. Comm & Fin Chr 177:1132 Mr 12 '53

First-quarter gold, dollar assets rise. For Comm W 49:5 Je 29 '53

For a comprehensive U.S. foreign economic policy. P. Cortney. Comm & Fin Chr 176:1721+ N 6 '52

Foreign aid in fiscal year 1952; with tables by program and by country, July 1945 through June 1952. C. E. Shepler. map Survey of Cur Bsns 32:6-11 O '52

Foreign aid; Mr Stassen's hard money hunch is the one to play. J. C. Perham. Barron's 32:5 D 1 '52

Foreign military aid by United States exceeds economic aid. For Comm W 49:4 Mr 30 '53

Free nations need more trade, less aid. W. Williams. For Comm W 49:14-15+ My 18 '53

Let us revamp our international economic program! W. L. Pierson. Comm & Fin Chr 176:2504 D 25 '52

Military expenditures dominate foreign aid in first quarter. For Comm W 49:23 Je 29 '53

More foreign trade, not aid, universally advantageous. C. C. Higgins. Comm & Fin Chr 177:2314 My 28 '53

More trade, less aid. J. P. Spang, jr. Comm & Fin Chr 176:2027+ N 27 '52

New allotments made to Greece and U.K. For Comm W 49:4 Je 15 '53

New look at foreign aid. E. R. Black. Comm & Fin Chr 177:284+ Ja 22 '53

UNITED STATES—Economic relations—*Cont.*

No magic panacea for basic economic ills! K. H. Campbell. Comm & Fin Chr 178:209 Jl 16 '53

Toward stable prosperity in a free world. D. Rockefeller. Comm & Fin Chr 177:1314+ Mr 26 '53

United States foreign aid in 1952; with tables. E. S. Kerber. Survey of Cur Bsns 33:13-19 Mr '53

United States foreign aid totals $5 billion in fiscal year 1952. For Comm W 48:27 O 27 '52

U.S. foreign assistance reviewed. For Comm W 48:27 D 1 '52

US will cut financial aid to industry abroad. Oil Paint & Drug Rep 164:3+ S 21 '53

We must end handouts of United States dollars! H. W. Prentis, jr. Comm & Fin Chr 176:2219+ D 11 '52

We must work toward new long-term tariff policy. C. R. Sligh, jr. Comm & Fin Chr 178:114-15 Jl 9 '53

Why not use the European arsenal? il Fortune 46:112 O '52

Working out a foreign economic policy. Bsns W p25-6 F 21 '53

Yardsticks for evaluating our foreign policy. Mrs J. G. Lee. Comm & Fin Chr 178:210+ Jl 16 '53

See also

Mutual security program

Bolivia

See Bolivia—Economic relations—United States

Brazil

See Brazil—Economic relations—United States

Europe

See Europe—Economic relations—United States

France

See France—Economic relations—United States

Great Britain

See Great Britain—Economic relations—United States

India

See India—Economic relations—United States

Latin America

See Latin America—Economic relations—United States

Executive departments

Dominance of the federal government over the states. A. T. Vanderbilt. bibliog(40 ref) Pub Util 51:399-414 Mr 26 '53

New executive team in Washington; with title, room number. Bsns W p 162-74 My 2 '53

Overhaul job on a lumbering machine. Bsns W p94+ F 21 '53

Senate committee refutes claims of multibillion dollar savings from Hoover commission reorganization of federal government. R. G. Gibbs. Chem & Eng N 30:4704 N 10 '52

Ten years' progress in management; federal administrative management. D. C. Stone. A S M E Trans 75:702-8 My '53

Use and misuse of authority by federal agencies. T. W. Christopher. Harvard Bsns R 30:48-58 N '52

Watch for a presidential office streamlining. E. C. Kreutzberg. Steel 131:82 D 15 '52

See also

Administration, Public

Federal mediation and conciliation service

Bigger state role is likely. Bsns W p53-4 Jl 25 '53

New boss conciliator; Whitley P. McCoy. Bsns W p 123+ Jl 11 '53

New mediator is on trial. Eng N 149:31-2 O 16 '52

Federal security agency

FSA status rise plan presented to Congress. Oil Paint & Drug Rep 163:3+ Mr 16 '53

Madame Secretary; in her new post Mrs Hobby will need more than a title. J. C. Perham. Barron's 33:3 Mr 23 '53

Food and drug administration

Ban on softeners. Bsns W p34 Ja 3 '53

FDA details steps taken to use its new plant inspection powers. Oil Paint & Drug Rep 164:3+ Ag 31 '53

FDA inspection power gets backing of ADMA. Oil Paint & Drug Rep 162:5 D 22 '52

FDA inspection power voided by high court. Oil Paint & Drug Rep 162:3+ D 15 '52

FDA inspection under review of high court. Oil Paint & Drug Rep 162:3 N 24 '52

FSA chief seeks swift plant inspection move. Oil Paint & Drug Rep 163:3+ F 9 '53

Teeth for FDA this session? Bsns W p76 Jl 18 '53

Foreign relations

Challenge from the Capitol. Economist 166:183-5 Ja 24 '53

Eisenhower regime's policy for defeating communism. J. F. Dulles. Comm & Fin Chr 177:474+ Ja 29 '53

For a tough and realistic foreign policy! W. L. Pierson. Comm & Fin Chr 177:1532+ Ap 9 '53

Let's by-pass UN in Korea. R. A. Taft. Comm & Fin Chr 177:2301+ My 28 '53

Lord of the manor; it's an attitude which will cause trouble in Europe. F. Morley. Barron's 33:3 F 16 '53

Needed; a new and long-term foreign policy. G. A. Sloan. Comm & Fin Chr 176:1533 O 23 '52

New administration's policies; point-by-point appraisal. T. L. Godey. Mag of Wall St 91:568-70 F 21 '53

Our complex foreign economics. H. Bratter. Banking 45:54 Ja '53

Revamp our foreign policy that is leading to world war; address at annual dinner of the 57th Congress of American industry. D. MacArthur. Comm & Fin Chr 176:2217+ D 11 '52

Reviewing our foreign policy. A. S. M. Monroney. Comm & Fin Chr 178:265+ Jl 23 '53

Robert's rules; using them with Communists the U.S. always loses. J. Chamberlain. Barron's 33:3 Jl 27 '53

Secretary Sawyer's survey of Europe. C. Sawyer and others. For Comm W 48:15-20 D 22 '52

Temptations of Taftism. Economist 167:642-4 Je 6 '53

Who will be boss in the cold war? Bsns W p64+ Ja 3 '53

Year of decision. W. L. Pierson. Comm & Fin Chr 177:480+ Ja 29 '53

See also

United States—Economic relations

United States—Treaties

Bibliography

United States and Europe; a bibliographical survey of thought expressed in American and British writings of 1951-1952. H. F. Conover. 255p pa $1.75 Card division, Library of Congress, Washington '53

France

See France—Foreign relations—United States

Latin America

See Latin America—Foreign relations—United States

Morocco

North Africa; how long can U.S. straddle the fence? il map Bsns W p 110-12 D 20 '52

Russia

See Russia—Foreign relations—United States

Forest service

Forest production goals; a critical analysis. H. J. Vaux and J. A. Zivnuska. bibliog Land Econ 28:318-27 N '52

Safety measures

Forest service unit cited for safety. Safety Maint & Prod 104:93-4 O '52

Health, education and welfare, Department of

Finding a GOP welfare plan. Bsns W p 116+ My 16 '53

HEW key policy post is assumed by Keefer. Oil Paint & Drug Rep 164:4 Ag 17 '53

UNITED STATES—*Continued*

History

Encyclopedia of American history. R. B. Morris, ed. 776p $6 Harper & brothers, 49 E. 33d st. New York 16 '53

Dictionaries

New dictionary of American history. M. Martin and L. Gelber. 695p $10 Philosophical library, 15 E. 40th st, New York 16 '52; Review. R. Ellard. Ed & Pub 85:54 D 13 '52

Spanish-American war

When T. R. streamlined the officers. L. W. Johnson. U S Naval Inst Proc 78:1310-13 D '52

Industries and resources

America's industrial inventory; with statistical tabulation of the annual rated capacity of many industries. J. A. Waring, jr. Dun's R 61:38-40+ F '53

Conservation plans on the grid; conference to be held in Washington next March. Bsns W p34 N 15 '52

Growth trends in the economy; with tabulated production trends of selected industries and products in the period 1940 to 1951. L. J. Paradiso and F. L. Hirt. Survey of Cur Bsns 33:5-10 Ja '53

Have we a labor surplus? Bsns W p 162-3 Ap 25 '53

Long look at materials; the national security resources board proposes legislation. Steel 132:40-1 Ja 12 '53

See also

Industrial mobilization

also subdivision United States under names of specific industries or resources, e.g. Agriculture; Gas industry; Petroleum industry and trade

Insular possessions

Puerto Rico and American policy toward dependent areas. R. Emerson. Ann Am Acad 285:9-15 Ja '53

Interior, Department of

Assistant Interior secretaries named. Eng N 150:23 F 12 '53

GOP puts its imprint on Interior. Elec World News ed 139:6-7 F 16 '53

Interior department starts to cut red tape. Eng N 150:26 My 21 '53

Interior takes closer look at problems. Eng N 150:27 F 26 '53

Interior's new contract between the Bonneville administration and private power companies in the Pacific Northwest. Pub Util 52:440-1 S 24 '53

Secretary McKay's heritage. Pub Util 51:184-7 Ja 29 '53

Shifts at Interior. Elec World News ed 139: 9 My 25 '53

Internal revenue, Bureau of

King committee reports. J Account 95:161-3 F '53

Revenue bureau relaxes depreciation policy. Bsns W p28 My 16 '53

International trade, Office of

OIT improves its trade list service. For Comm W 49:13 Je 29 '53

Office of international trade; operations. For Comm W 50:10-11 Jl 6 '53

Labor, Department of

Assistant secretaries wanted. Bsns W p 174 Mr 14 '53

Delays ahead. Bsns W p42+ Jl 25 '53

Eisenhower's labor liaison. Fortune 47:77-8+ Mr '53

Getting ready to be labor's advocate. Bsns W p 118+ D 20 '52

Slow going for Secretary. Bsns W p 135-6 Je 27 '53

Tension with the G.O.P. Fortune 47:73-4+ My '53

U.S. Labor dept.; how it serves industry. Mod Ind 24:63-4+ N '52

Merchant marine

See Merchant marine—United States

Military air transport service

Airlines set mobilization buildup. il Aviation W 58:212-14+ Mr 2 '53

Ground safety with the Pacific airlift. N. Burch. il map Nat Safety N 67:20-1+ Ap; 26-7+ My '53

MATS tests copter-ambulance shuttle. L. Moore. il Aviation W 57:71-2 D 1 '52

New planes assigned to reserve fleet. Aviation W 57:87 N 24 '52

Military sea transportation service

Shipbuilding impeded by navy policy. T. D. MacMullen. Marine Eng 57:74 N '52

National advisory committee for aeronautics

NACA charts our spheres of ignorance. D. A. Anderton. il Aviation W 58:36-8+ My 25 '53

NACA reports new techniques. il Aero Digest 66:17-20 F '53

Transonic data demands swamp NACA. R. Hotz. il Aviation W 58:16-17 My 18 '53

National bureau of standards

See United States—Standards, National bureau of

National security resources board

NSRB urges adoption of 17 Paley proposals. Oil Paint & Drug Rep 162:3+ D 29 '52

Resources report for Truman near; swift action urged for 50 proposals. Oil Paint & Drug Rep 162:3+ N 24 '52

Navy

Navy builds anti-submarine blimp fleet. il Aviation W 58:50-1 Ap 20 '53

See also

Airplane carriers
Oil reserves (United States navy)
United States—Air service, Navy
United States—Military sea transportation service
Warships—United States

Communications system

Navy builds nerve center. Eng N 149:26 N 27 '52

Construction battalions

Seabees celebrate 11th birthday; still at work on overseas projects. Eng N 150:75 Ja 8 '53

Electronics laboratory

Artificial men; they predict how humans will react; HOMI (human operator, mark 1). il Bsns W p 174-6 N 15 '52

Equipment and supplies

Investment in standardization; Bureau of ships. R. V. Vittucci. il Standardization 24:68-72 Mr '53

NPVLA presses for bigger slash in navy paint output. Oil Paint & Drug Rep 164: 3 Jl 6 '53

NPVLA urges cessation of navy paint manufacture. Oil Paint & Drug Rep 163:3+ Je 15 '53

Navy has large titanium program. E. L. Beardman. J Metals 5:138-9 F '53

History

Decade of transition; our early steam navy and merchant marine. R. T. Merrill. il plans diags U S Naval Inst Proc 78:1004-15 S '52

Laboratories

Navy's new radiological lab. il Eng N 150: 36+ Ap 2 '53

See also

Naval ordnance laboratory, White Oak, Maryland

Officers

Operation snowstorm. F. Lee. il U S Naval Inst Proc 78:1066-71 O '52

Training officers of the deck, carrier style. P. D. Stroop. il U S Naval Inst Proc 78: 1296-9 D '52

Wanted, 5000 middlemen. J. D. Harrington. il U S Naval Inst Proc 79:10-17 Ja '53

Rescue work

United States navy and the San Francisco fire. J. E. Pond. il U S Naval Inst Proc 78:982-93 S '52

UNITED STATES—*Continued*

Navy department

Yards and docks, Bureau of

Navy buildings; building types study. il map plans diags Arch Rec 112:165-96 S '52

Ordnance department

Pentagon and the Korean shell shortage. C. J. V. Murphy. il Fortune 47:93-4+ Mr '53

Politics and government

Advent of a new administration. Bsns W p 164 Ja 17 '53
Changing the business climate; what Eisenhower's election means. Bsns W p27-31 N 8 '52
Eisenhower shapes a businessman's government. Bsns W p30-2 Ja 17 '53
Getting ready for the big switch. il Bsns W p27-8 Ja 10 '53
Getting ready to take over; shift of power to Republican hands. Bsns W p27-31 N 15 '52
Hundred days of cutting back. Bsns W p25-6 My 2 '53
Inside Washington after the election; what to expect from the new administration. Mag of Wall St 91:174-5 N 15 '52
Let us not sell our children into slavery. J. R. Clark, jr. Comm & Fin Chr 177:201+ Ja 15 '53
New administration's policies; point-by-point appraisal. T. L. Godey. Mag of Wall St 91: 568-70+ F 21 '53
New guard; Senator Knowland represents a different G.O.P. J. Chamberlain. Barron's 33:5-6 Jl 6 '53
Next four years in government. W. S. Izzard. Comm & Fin Chr 176:1928+ N 20 '52
No hundred days; criticism of first hundred days of Eisenhower regime. F. Morley. Barron's 33:3 Ap 27 '53
Oiling the gears of government. il Bsns W p28-9 Ja 31 '53
Political realignment; next week's vote will determine more than the White House tenant. F. Morley. Barron's 32:3 O 27 '52
Seat of power shifts; government-in-embryo. il Bsns W p25-6 D 27 '52
State of the Union; check list for the new management of the U.S. government. Fortune 47:73-4+ Ja '53
Tapping latent talent; political amateurs enter government. R. W. Johnson. Dun's R 61:1+ Je '53
See also
Political parties—
United States
Republican party

Post office department

Business team in the post office. Bsns W p98+ Je 27 '53

President's commission on the health needs of the Nation

Nation's health. Sci Am 188:40+ F '53

President's materials policy commission

Paley report critique. B. F. Linz. Oil & Gas J 51:32 D 29 '52
That Paley report; panel discussion. Min Cong J 38:36-46+ D '52
What the Paley report means to U.S. miners. O. Herres. Eng & Min J 153:72-5 D '52

Price stabilization, Office of

Effects sweeping price decontrol move. Oil Paint & Drug Rep 163:3+ F 16 '53
OPS tries local boards. Bsns W p43-4 N 29 '52

Public health service

Disaster relief plans; U.S. Public health service is assuming an active role. Eng N 150:34 Je 4 '53
Professional examinations for public health service officers. S. H. Newman. bibliog Pub Health Rep 67:917-22 S '52
Public health service builds itself the latest in lab buildings; Environmental health center, Cincinnati. R. Raneri. il Eng N 150: 37 Je 18 '53
PHS drug list curbs government hospital stocks. Oil Paint & Drug Rep 163:3+ My 4 '53
State of the Nation's public health services; report on programs and problems, 1953. L. A. Scheele. Pub Health Rep 68:174-81 F '53

Public roads, Bureau of

Du Pont takes over as Public roads commissioner. Roads & Sts 96:57-8 My '53
MacDonald retires as Commissioner of public roads; F. V. du Pont takes over. Eng N 150:52+ Ap 2 '53

Quartermaster corps

Laboratories

Technical library of the Quartermaster research and development laboratories. R. L. Martin. Special Lib 44:96-8 Mr '53

Reclamation, Bureau of

New Bureau of reclamation chief faces retrenchment. Eng N 150:21-2 Ap 30 '53
New chief at USBR is a Texas engineer. Elec World 139:62 My 4 '53
Reclamation and the budget. Pub Util 50:919 D 18 '52
Reclamation asks $2.1 billion. Elec World News ed 139:21 Ja 5 '53
Straus resigns as Reclamation chief, Bureau urges $2.1-billion budget. Eng N 149:26 D 25 '52

Senate

See United States—Congress—Senate

Social conditions

Changed America. il Bsns W p 101-4+ Je 6 '53
Transients; management man has become the real migratory worker. W. H. Whyte, jr. il Fortune 47:112-17+ My '53

Social history

1900 to 1950; the big change. il Bsns W p 100-2+ D 6 '52

Southwestern power administration

Trimming down public power. Bsns W p34 Mr 7 '53

Standards, National bureau of

Are policy changes coming up? Bureau of standards is charged with condemning battery additive wrongly. Iron Age 171:82-3 Ap 9 '53
Astin dismissal. Science 117:sup3 Ap 17 '53
Astin uproar. Fortune 47:108+ My '53
Battery rejuvenator vs. the Bureau of standards. Consumers Res Bul 31:2+ My; 2+ Je '53
Bureau of standards case. Sci Am 188:53 My '53
Case of AD-X2. Bsns W p48+ Ja 10 '53
Defense research; the Bureau of standards is caught in the middle of the contract-award fracas. Steel 132:81 My 11 '53
Dismissal of NBS head. Chem & Eng N 31: 1524-6+ Ap 13 '53
Employee morale dropping at Bureau of standards. Chem & Eng N 31:2198+ My 25 '53
NBS purpose and function. R. G. Gibbs. Chem & Eng N 31:1506 Ap 13 '53
New adiabatic demagnetization apparatus at the National bureau of standards. D. de Klerk and R. P. Hudson. Rs Mod Phys 25:292 Ja '53
Punched-card bibliography of infrared spectra. E. C. Creitz. Science 117:sup3 Ap 3 '53
Research at the National bureau of standards; its importance and its fulfillment. A. V. Astin. Refrig Eng 61:756+ Jl '53
Standard samples. E. Wichers. Science 117: sup3 Ja 2 '53
Standards Bureau evaluation committee 1st meeting, April 29. Oil Paint & Drug Rep 163:7 My 4 '53
Standards in research. il Ind & Eng Chem 45:sup 15A+ Ap '53
Supplementary list of publications of the National bureau of standards, July 1, 1947 to June 30, 1952 (with subject and author indexes); is a supplement of National bureau of standards Circular 460, which is a catalog of publications from 1901 to June 30, 1947. 223p U.S. National bur. of standards, Washington; pa 75c Supt. of doc. '53

UNITED STATES—Standards, National bureau of—*Continued*

Test case for career men. il Bsns W p34 Ap 11 '53

Weeks keeps Astin as NBS head until new tests are completed. Chem & Eng N 31:1752-4 Ap 27 '53

Weeks reinstates Astin; NBS shakeup in making. Oil Paint & Drug Rep 164:3+ Ag 31 '53

State department

Like Topsy; the State department has grown too big too fast. F. Morley. Barron's 33:3 Ja 19 '53

State department reorganization aids Republican harmony. F. Morley. Barron's 33:6 Je 5 '53

Statistics

Business statistics; continuation of data published in 1951 statistical supplement. Survey of Cur Bsns 33:S 1-40 Ja '53 [cont monthly]

Can the Republicans get better figures? Bsns W p 112-14+ Je 13 '53

County and city data book, 1952; a statistical abstract supplement. W. Lerner and others, comps. 608p $4.25 U.S. Bur. of the census, Washington; for sale by Supt. of doc. '53

Financial, industrial, and commercial statistics. Published in monthly numbers of Federal reserve bulletin

Supreme court

Reading for D-days Supreme Court chore. C. Moulton. Ed & Pub 86:14 F 14 '53

Still laying down the law. Bsns W p29-30 D 27 '52

Supreme court docket. M. H. Woolsey. Fortune 46:141+ O '52

Decisions

Featherbedding. Bsns W p 175-6 Mr 14 '53

Labor laws; a matter of precedence. Bsns W p 174-5 Mr 28 '53

Synthetic rubber, Office of

Functions of the technical service branch of the Office of synthetic rubber; abstract. A. F. Reznicek. Rubber Age 72:775-6 Mr '53

Technical cooperation administration

Cooperative spirit in Latin America contributes to success of Point four program. C. O. Rowe. For Comm W 49:15+ My 4 '53

Treasury department

Government bond market and problems of Treasury financing. J. H. Grier. Comm & Fin Chr 177:2408+ Je 4 '53

Is Treasury's sound money policy feasible now? J. C. Cresswill. Mag of Wall St 92:376-8+ Je 27 '53

Principles of Treasury policy. W. R. Burgess. Comm & Fin Chr 177:2063+ My 14 '53

Strong man in the Treasury. Bsns W p77-8+ F 28 '53

Treasury's new team. Bsns W p70+ D 20 '52

Treaties

Treaty law; Senate thinks it begins to endanger national sovereignty; relationship of United States to the United nations. F. Morley. Barron's 32:5 D 22 '52

UNITED STATES gypsum company

Five outstanding candidates for stock-splits; with comparative balance sheet items. Mag of Wall St 91:297 D 13 '52

UNITED STATES independent telephone association

Annual meeting, 55th, Chicago. Pub Util 50:792-3 N 20 '52

UNITED STATES life insurance company

United States Life geared for aggressive expansion in A.&H. field. East Underw 54:46 Mr 27 '53

United States Life has joined H.&A. conference. East Underw 54:31 Ja 9 '53

UNITED STATES lines

Report on passenger traffic. Marine Eng 58:78 F '53

UNITED STATES merchant marine academy, Kings Point, New York

Kings Point graduates new officers for merchant marine and navy. il Marine Eng 58:53-4 O '53

UNITED STATES pharmacopeia

USP constitutionality upheld by high court of Wisconsin. Oil Paint & Drug Rep 163:56 Mr 16 '53

UNITED STATES potters association

Annual meeting, 74th. Cer Ind 60:156-9 Ja '53

UNITED STATES rubber company

Low-priced stocks headed for higher levels. J. S. Williams. Mag of Wall St 91:257+ N 29 '52

Sales of $850,151,566 in 1952 set record for U.S. Rubber. Rubber Age 72:800 Mr '53

Ten potential market leaders for 1953; with comparative balance sheet items. Mag of Wall St 91:643 Mr 7 '53

U.S. Rubber; new growth on old roots. D. L. Saunders. Barron's 33:13-16 Ap 27 '53

UNITED STATES savings and loan league

Annual convention, 60th, New York, Nov. 10. Burroughs Clearing House 37:19-20 D '52

UNITED STATES steel corporation

Annual report. Comm & Fin Chr 177:1414 Mr 30 '53

Behind the door; steel meets labor. il Bsns W p 150-1 My 23 '53

Bethlehem Steel and the intruder. R. A. Smith. il map Fortune 47:100-5+ Mr '53

Big Steel's jinx. Bsns W p32 Ap 4 '53

Hood of U.S. Steel. Fortune 47:146-7 F '53

Investment audit. G. W. Mathis. Mag of Wall St 91:76-8+ O 18 '52

Quarterly earnings report. Comm & Fin Chr 177:571 F 2 '53

Quarterly report. Comm & Fin Chr 177:1907 My 4 '53

They're reshuffling Big Steel. Bsns W p27-8 D 6 '52

U.S. Steel changes officers. Steel 131:53 D 1 '52

U.S. Steel spends $1.5 billion for construction and expansion. Eng N 150:45-6 Ja 1 '53

UNITED steelworkers of America

Annual wage. Bsns W p 139-40 Je 27 '53

Behind the door; steel meets labor. il Bsns W p 150-1 My 23 '53

First labor emergency. Bsns W p 178 F 21 '53

Murray; the union, his monument. Iron Age 170:92 N 13 '52

Steel compromise has a good chance. Bsns W p 148 My 2 '53

Steel; price rise will follow wage hike. J. B. Delaney. Iron Age 171:91-2 Je 18 '53

Steel; union holds all the deuces. J. B. Delaney. Iron Age 171:63-4 Ap 16 '53

Steelworkers planning far ahead. J. B. Delaney. Iron Age 171:146-7 My 7 '53

Strong union looks tough. J. B. Delaney. Iron Age 171:73 My 14 '53

Union policy won't change; Reuther's election. J. B. Delaney. Iron Age 170:96 D 11 '52

Why new USW chief must go after raises. il Bsns W p 121-3 Ja 10 '53

UNITED Sua Betong rubber estates, limited

Statement by the chairman. J. Hay. Economist 167:778-9 Je 13 '53

UNITED textile workers of America

AFL sets New England textile drive. Bsns W p 120+ N 29 '52

Trouble by the yard; civil war in textile. Fortune 46:84, 86 D '52

UNITED utilities, inc.

Offers additional common shares to stockholders. Comm & Fin Chr 177:1515 Ap 6 '53

UNITS

Units and standards of measurement employed at the National physical laboratory; light; photometry, colorimetry, and radiometry. Opt Soc Am J 42:858-61 N '52 (reprints 15c)

UNIVERSAL match corporation

Billions of matches; but the bright economic light comes from other sources. H. Murphy. Barron's 32:11-12 N 3 '52

Security I like best. C. E. Unterberg. Comm & Fin Chr 177:2062+ My 14 '53

UNIVERSE

Expanding universe. Sci Am 188:48+ Mr '53

UNIVERSITIES. See Colleges and universities

UNIVERSITY teachers of insurance, American association of. See American association of university teachers of insurance

UNSATISFIED judgment funds. See Insurance, Automobile—Unsatisfied judgment funds

UNSATURATED compounds

Allylic bromination of unsaturated terpene hydrocarbons, and the synthesis of αβ-unsaturated alcohols. A. K. Macbeth, B. Milligan and J. S. Shannon. Chem Soc J p2574-6 S '53

Anodic syntheses; unsaturated and hydroxy-acids; a direct stereochemical connection of oleic and elaidic with erucic and brassidic acids. D. G. Bounds, R. P. Linstead and B. C. L. Weedon. Chem Soc J p2393-400 Ag '53

Correlations between monocyclic and polycyclic unsaturated compounds from molecular rotation differences. J. A. Mills. Chem Soc J p4976-85 D '52

Free-electron model for discussing reactivity in unsaturated hydrocarbons. K. Fukui and others. diag J Chem Phys 21:174-6 Ja '53

Methyl-substituted αβ-unsaturated acids. P. C. Jocelyn and N. Polgar. Chem Soc J p 132-7 Ja '53

Participation of a neighboring carboxyl group in addition reactions; the mechanism of the reaction of bromine with γ,δ-unsaturated acids and esters. R. T. Arnold, M. D. Campos and K. L. Lindsay. bibliog Am Chem Soc J 75:1044-7 Mr 5 '53

Participation of a neighboring carboxyl group in addition reactions; the reaction of cyanogen iodide with γ,δ-unsaturated acids. R. T. Arnold and K. L. Lindsay. bibliog Am Chem Soc J 75:1048-9 Mr 5 '53

Reactions of iodine-amine complexes with unsaturated compounds; an investigation of the scope of the reaction with the iodine-morpholine complex. P. L. Southwick and D. R. Christman. bibliog Am Chem Soc J 75:629-32 F 5 '53

Reactions of unsaturated compounds; the oxidation of camphene by chromic oxide. W. J. Hickinbottom and D. G. M. Wood. Chem Soc J p 1906-8 Je '53

Selective reduction of the unsaturated compounds; deuterization of the Raney nickel catalysts. N. A. Khan. bibliog diag Science 117:130 F 6 '53

Some esters of unsaturated acids. V. Satta, M. L. Fein and E. M. Filachione. bibliog Am Chem Soc J 75:4101 Ag 20 '53

Unsaturation energies of aroxyl radicals. N. S. Hush. Chem Soc J p2375-80 Ag '53

UPHOLSTERERS international union of North America

New projects for the oldsters; retirement homes. Bsns W p 125-7 Jl 11 '53

Union democracy; trend in the making. Bsns W p 132 Je 27 '53

UPHOLSTERY

See also

Saran

UPPER atmosphere. See Atmosphere, Upper

URACIL

Permanganate oxidation of uracil and 5-nitrouracil. J. L. Fairley, L. L. Daus and B. Krueckel. bibliog Am Chem Soc J 75:3842-3 Ag 5 '53

Studies on uracil utilization in normal and acetaminofluorene-treated rats. R. J. Rutman and others. bibliog Science 117:282-3 Mr 13 '53

URANIA. See Uranium oxide

URANINITE

Argon 38 in pitchblende minerals and nuclear processes in nature. W. H. Fleming and H. G. Thode. Phys R 90:857-8 Je 1 '53

Geologic character of typical pitch-blende veins. D. L. Everhart and R. J. Wright. maps Econ Geol 48:77-96 bibliog(48 titles, p94-6) Mr '53

Studies of the solvent extraction behavior of the transition elements; isolation of gram quantities of Th^{230} (ionium) from a pitchblende residue. D. F. Peppard and others. bibliog Am Chem Soc J 75:4576-8 S 20 '53

URANIUM

Atomic energy commission reports progress of raw materials program. Oil Paint & Drug Rep 164:3+ Ag 24 '53

Carnotite; mining Colorado Plateau; hundreds of small mines supply U.S. with uranium, vanadium. il Iron Age 170:110 N 6 '52

Distribution of uranium in rich phosphate beds of the phosphoria formation. M. E. Thompson. U S Geol S Bul 988-D:45-67; pa 15c Supt. of doc. '53

Effect of the rate of cooling on the allotropic transformation temperatures of uranium. P. Duwez. bibliog J Ap Phys 24:152-6 F '53

Effect of uranium-vanadium deposits on the vegetation of the Colorado plateau. H. L. Cannon. Am J Sci 250:735-70, pl 1 bibliog(57 titles, p767-70) O '52

Electrodeposition of zinc on uranium metal. L. Silverman. Metal Finishing 50:75 N '52

Electrolytic production of quadrivalent uranium. H. K. El-Shamy and S. E. Zayan. Chem Soc J p384-6 F '53

Geology of the Uravan mineral belt; contributions to the geology of uranium, 1952. R. P. Fischer and L. S. Hilpert. maps U S Geol S Bul 988-A:1-13, pl 1-3[in pocket]; pa 35¢ Supt. of doc. '52

Infrared spectra and structure of uranyl and transuranium (*V*) and (*VI*) ions in aqueous perchloric acid solution. L. H. Jones and R. A. Penneman. bibliog J Chem Phys 21:542-4 Mr '53

Metallurgical research in uranium, manganese and nodular cast irons. L. W. Goodwin, ed. bibliog il diags Colorado School of Mines (Golden) Quarterly 47 no 1:1-87 '52 (pa $1.50)

New mill rolls uranium bars on production basis. il Iron Age 171:138 My 28 '53

New uranium mineral identified at Columbia; umohoite. Chem & Eng N 31:1880+ My 4 '53

Production of uranium in the U.S. Metal Prog 62:89 N '52

Second uranium plant on the Witwatersrand goldfields. Can Min J 74:77-8 Jl '53

Short-lived cerium isotopes from uranium fission. A. A. Caretto, jr. and S. Katcoff. bibliog Phys R 89:1267-8 Mr 15 '53

South African uranium production. Chem Age (Lond) 67:769-70 D 6 '52

Theory of the paramagnetism of uranyl-like ions. R. J. Elliott. bibliog Phys R 89:659-60 F 1 '53

Uranium hunt proposed. Oil & Gas J 51:76 D 8 '52

Uranium in the clay of a black radioactive shale. J. H. Brown, jr. and W. D. Keller. bibliog Science 116:632-3 D 5 '52

Uranium in the East Walker River area, Lyon county, Nevada. M. H. Staatz and H. L. Bauer, jr. map plan U S Geol S Bul 988-C:29-43, pl 4-7 [in pocket]; pa 35c Supt. of doc. '53

Uranium, 1952. B. Myers. il Eng & Min J 154:90-1 F '53

Uranium output up. Min Cong J 39:80 Mr '53

Uranium photofission yields. R. A. Schmitt and N. Sugarman. bibliog Phys R 89:1155-6 Mr 1 '53

Uranium profits on the Rand. Economist 166:387-8 F 7 '53

Uranium program continues to expand, 1952. T. E. Gillingham. il Min Cong J 39:82-4+ F '53

Uranium recovery scheme; South Africa. Can Min J 74:87-8 My '53

Uranium separation in South Africa. Can Min J 73:83 O '52

Uranium soars to prominence in South Africa's gold fields. il maps Eng & Min J 154:72-6 My '53

Uranium; sources and outlook. il map Eng & Min J 154:138-41 Jl '53

What the uranium prospector should know about radiation. R. J. Wright. Eng & Min J 154:92-5 Ja '53

See also

Uraninite

Analysis

Cement base for the hot filament mass spectrometer source. J. E. Hand. R Sci Instr 24:181 F '53

Coulometric determination of uranium. W. N. Carson, jr. bibliog diags Anal Chem 25:466-70 Mr '53

Fluorophotometric determination of uranium. G. R. Price, R. J. Ferretti and S. Schwartz. bibliog diags Anal Chem 25:322-31 F '53

URANIUM—Analysis—*Continued*

Spectrophotometric determination of uranium by thiocyanate method in acetone medium. C. E. Crouthamel and C. E. Johnson. bibliog Anal Chem 24:1780-3 N '52

Titration of uranium(IV) by electrolytically generated ceric ion. N. H. Furman, C. E. Bricker and R. V. Dilts. bibliog diag Anal Chem 25:482-6 Mr '53

Bibliography

Bibliography and index of literature on uranium and thorium and radioactive occurrences in the United States; Arizona, Nevada, and New Mexico. M. Cooper. Geol Soc Bul 64:197-234 F '53

Isotopes

Distributions-in-energy for alpha-particles and protons from U^{235} fission. D. L. Hill diag Phys R 87:1049-51 S 15 '52

Effects of a primeval endowment of U^{236}. D. B. Rosenblatt. bibliog Phys R 91:1474-5 S 15 '53

Energy spectrum of neutrons from thermal fission of U^{235}. B. E. Watt. diags Phys R 87:1037-41 S 15 '52

Fission asymmetry as a function of excitation energy of the compound nucleus. J. L. Fowler and others. Phys R 88:71-2 O 1 '52

Fission cross section of uranium-234. R. W. Lamphere. diag Phys R 91:655-8 Ag 1 '53

Fission neutron spectrum of U^{235}. D. B. Nicodemus and H. H. Staub. bibliog diag Phys R 89:1288-90 Mr 15 '53

Neutron energy spectrum from U^{235} thermal fission. D. L. Hill. diag Phys R 87:1034-7 S 15 '52

Photofission and photoneutron emission in uranium. R. B. Duffield and J. R. Huizenga. bibliog Phys R 89:1042-6 Mr 1 '53

Radiations of 6.7-day U^{237}. F. Wagner, jr. and others. bibliog Phys R 89:502-7 Ja 15 '53

Radiations of U^{240} and Np^{240}. J. D. Knight and others. bibliog Phys R 91:889-93 Ag 15 '53

Specific alpha-activities and half-lives of U^{234}, U^{235}, and U^{236}. E. H. Fleming, jr. and others. bibliog diags Phys R 88:642-52 N 1 '52

Study of the spectrum of the neutrons of low energy from the fission of U^{235}. T. W. Bonner and others. diags Phys R 87:1032-4 S 15 '52

Thermal neutron fission and capture cross section of U^{232}. R. Elson and others. Phys R 89:320 Ja 1 '53

Yield of Xe^{133} in the thermal neutron fission of U^{235}. S. Katcoff and W. Rubinson. bibliog diags Phys R 91:1458-69 S 15 '53

Metallography

Metallography of uranium; abstract. B. W. Mott and H. R. Haines. Metal Prog 63:192+ F '53

URANIUM alloys

Beryllium-uranium system. R. W. Buzzard. bibliog il diag J Res Nat Bur Stand 50:63-7 F '53

Vanadium-uranium constitutional diagram. H. A. Saller and F. A. Rough. il J Metals 5:Trans 545-6 Ap '53

URANIUM borohydride

Methyl derivatives of uranium(IV) borohydride. H. I. Schlesinger and others. Am Chem Soc J 75:222-4 Ja 5 '53

Uranium(IV) borohydride. H. I. Schlesinger and H. C. Brown. bibliog diags Am Chem Soc J 75:219-21 Ja 5 '53

URANIUM compounds

Inner complexes of uranium containing 1,3-dicarbonyl chelating groups. H. I. Schlesinger and others. bibliog Am Chem Soc J 75:2446-8 My 20 '53

Participation of *f* orbitals in bonding in uranium and the transuranium elements. R. E. Connick and Z. Z. Hugus, jr. bibliog Am Chem Soc J 74:6012-15 D 5 '52

URANIUM fluorides

Freezing point diagram and liquid-liquid solubilities of the system uranium hexafluoride-hydrogen fluoride. G. P. Rutledge, R. L. Jarry and W. Davis, jr. bibliog diag J Phys Chem 57:541-4 My '53

Some physical properties of uranium hexafluoride. D. R. Llewellyn. diags Chem Soc J p28-36 Ja '53

Vapor pressure and critical constants of uranium hexafluoride. G. D. Oliver, H. T. Milton and J. W. Grisard. bibliog Am Chem Soc J 75:2827-9 Je 20 '53

URANIUM hydride

Metal-hydrogen systems; the uranium-hydrogen system. T. R. P. Gibb, jr., J. J. McSharry and H. W. Kruschwitz, jr. bibliog Am Chem Soc J 74:6203-7 D 20 '52

URANIUM mines and mining

New developments in uranium mining; abstract. B. Burwell. Min Cong J 38:113 O '52

Small and independent uranium miners; abstract. H. W. Balsley. Min Cong J 38:92-3 O '52

Australia

Rum jungle; one of the world's most promising uranium finds. il map Min Eng 5:486-7 My '53

Colorado

Contract system spells good administration for U.S. Vanadium. il Min Eng 5:756 Ag '53

Northwest Territories, Canada

Tailings dredge on Great Bear lake. H. R. Rice. il Can Min J 74:59-61 Jl '53

Ontario

Recent finds highlight Ontario uranium picture. W. Wells. Barron's 33:14 Mr 9 '53

Saskatchewan

History of uranium discoveries, Lake Athabasca. A. H. Lang. bibliog il maps Can Min J 74:69-76 Je '53

Utah

Uranium jackpot. B. Meyers. il Eng & Min J 154:72-5 S '53

URANIUM nitrate

Production of better penicillin-producing strains by mutation induced by uranium nitrate. M. L. Gattani. Science 116:596-7 N 28 '52

URANIUM ores

Improve sampling practices. Min Cong J 39:69 My '53

New trends in prospecting for uranium ore; St Mary's channel, Saskatchewan. R. G. Hoiles. Can Min J 74:83-6 My '53

Prospecting for uranium. revised Oct. 1951 128p Published by the U.S. Atomic energy commission and the U.S. Geological survey; 45c Supt. of doc. '51

U.S. Vanadium's Uravan, Colo. mill doubles output. il Min Eng 4:1025-6 N '52

Uranium-copper deposits, Rum jungle, Australia. C. J. Sullivan and R. S. Matheson. il maps diags Econ Geol 47:751-8 N '52

Uranium deposits of the Grants District, New Mexico. C. C. Towle and I. Rapaport. il map Min Eng 4:1037-40 N '52

Uranium mineralization in the Sunshine mine, Idaho. P. F. Kerr and R. F. Robinson. bibliog il maps diags Min Eng 5:Trans 495-511 My '53

See also

Uraninite

URANIUM oxides

Annotated bibliography of selected references on the solid-state reactions of the uranium oxides. S. M. Lang. U S Nat Bur Stand Circ 535:1-95; pa 30c Supt. of doc. '52

Binary mixtures of UO_2 and other oxides. L. F. Epstein and W. H. Howland. Am Cer Soc J 36:334-5 O 1 '53

Magnetic susceptibility of urania-thoria solid solutions. J. K. Dawson and M. W. Lister. Chem Soc J p5041-2 D '52

Oxides of uranium; the system UO_2-MgO-O. J. S. Anderson and K. D. B. Johnson. Chem Soc J p 1731-7 Je '53

Preparation of refractories from uranium dioxide. R. E. Corwin and G. B. Eyerly. il Am Cer Soc J 36:137-9; Discussion. H. Z. Schofield. 140 Ap 1 '53

Toxicity of uranium dioxide influenced by particle size. H. H. Schrenk. Ind & Eng Chem 44:sup 107A-8A+ D '52

Uranium oxide phase equilibrium systems. W. A. Lambertson and M. H. Mueller. bibliog il Am Cer Soc J 36:329-34 O 1 '53

URANIUM X_1. See Thorium—Isotopes

URANIUM Y. See Thorium—Isotopes

URANYL compounds

Interaction of uranyl ions with $UX_1(Th^{234})$ in acid solution. I. Adler and J. Steigman. bibliog J Phys Chem 57:440-3 Ap '53

URANYL fluoride

Density and refractive index of uranyl fluoride solutions. J. S. Johnson and K. A. Kraus. Am Chem Soc J 75:4594-5 S 20 '53

URANYL oxalate

Solubility of uranyl oxalate in nitric acid. C. B. Amphlett and O. T. Davidge. Chem Soc J p2938-9 Jl '52

URANYL sulfate

Vapour pressure of aqueous solutions of beryllium sulphate and of uranyl sulphate at 25°. R. A. Robinson. Chem Soc J p4543-4 N '52

UREA

Carbon isotope effect in the acid hydrolysis of urea. J. A. Schmitt and F. Daniels. bibliog Am Chem Soc J 75:3564-6 Jl 20 '53

2-Cyanoamino-4 : 6-dimethylpyrimidine and complexes formed by pyrimidines with urea and related compounds. S. Birtwell. Chem Soc J p 1725-30 Je '53

Emil Alphonse Werner; research on urea. W. R. Fearon. Chem Soc J p2947-52 Jl '52

Guanidine from urea and ammonia. G. W. Watt and R. G. Post. bibliog Ind & Eng Chem 45:846-9 Ap '53

Interpretive analyses of urea-formaldehyde resins. P. P. Grad. bibliog il diags Paint Oil & Chem R 115:20-1+ D 18 '52; Correction. 116:6B Ja 29 '53

Kinetics of urea hydrolysis by urease. G. B. Kistiakowsky and A. J. Rosenberg. bibliog Am Chem Soc J 74:5020-5 O 20 '52

New urea formaldehyde resins for wet strength. Paper Ind 34:1352-3 F '53

Petrochem report; Grace Chemical will make ammonia, urea. il diag Oil & Gas J 52: 246-7 My 25 '53

Preparation of isocyanates by the thermal decomposition of substituted ureas. W. B. Bennett, J. H. Saunders and E. E. Hardy. bibliog Am Chem Soc J 75:2101-3 My 5 '53

Reactions of orthoesters with ureas; a new synthesis of pyrimidines. C. W. Whitehead. bibliog Am Chem Soc J 75:671-5 F 5 '53

Relative rates of hydrolysis of urea containing C^{14}, C^{13} and C^{12}. J. A. Schmitt, A. L. Myerson and F. Daniels. bibliog J Phys Chem 56:917-20 O '52

Symmetrical 1,3-bis-(alkane- and arylsulfonyl)-ureas. L. Field and F. A. Grunwald. bibliog Am Chem Soc J 75:934-7 F 20 '53

Synthesis of substituted ureas. W. H. Schuller and C. Niemann. bibliog Am Chem Soc J 75:3425-8 Jl 20 '53

Urea and related compounds; the reaction of arylureas with aromatic sulphinyl and sulphenyl chlorides. F. Kurzer. Chem Soc J p549-56 F '53

Urea-formaldehyde and melamine-formaldehyde condensations; mechanisms. H. P. Wohnsiedler. bibliog il Ind & Eng Chem 44:2679-86 N '52

Urea formaldehyde kinetic studies; polarographic studies in dilute solution. L. E. Smythe. Am Chem Soc J 75:574-6 F 5 '53

Urea-formaldehyde kinetic studies; reactions of methylenebisureas. L. E. Smythe. bibliog Am Chem Soc J 75:1508-10 Mr 20 '53

Urea serves as complexing reagent to remove paraffinic hydrocarbons; patent. diag Pet Processing 8:105 Ja '53

Utilization of kerosene stocks for jet fuels by treatment with urea. H. J. Hepp, E. O. Box, jr. and G. C. Ray. bibliog Ind & Eng Chem 45:112-15 Ja '53

Analysis

Qualitative detection of urea in commercial livestock feeds. G. L. Baker and L. H. Johnson. bibliog Anal Chem 24:1625-6 O '52

Manufacture

Five ways to make urea; but none is cheap or easy. Chem W 71:40+ D 13 '52

New urea synthesis process. W. F. Bland. flow diag il diags Pet Processing 7:1457-60 O '52

Swiss solve urea problems. il diags Chem Eng 59:219-20+ N '52

UREASE

Effects of electrolytes on urease activity. G. B. Kistiakowksy and others. bibliog Am Chem Soc J 74:5015-20 O 20 '52

Kinetics of urea hydrolysis by urease. G. B. Kistiakowsky and A. J. Rosenberg. bibliog Am Chem Soc J 74:5020-5 O 20 '52

Mechanism of the inhibition of urease. G. B. Kistiakowsky and W. H. R. Shaw. bibliog Am Chem Soc J 75:866-71 F 20 '53

Ureolytic activity of urease at pH 8.9. G. B. Kistiakowsky and W. H. R. Shaw. bibliog Am Chem Soc J 75:2751-4 Je 5 '53

URETHANS

Base-catalyzed decomposition of N-nitroso-N-cyclopentylurethan. F. W. Bollinger, F. N. Hayes and S. Siegel. bibliog Am Chem Soc J 75:1729-30 Ap 5 '53

Polyurethanes in varnishes; abstract. F. Hebermehl. Paint Oil & Chem R 116:34 Jl 30 '53

URETHRITIS

Search goes on for agent of nonspecific urethritis. B. M. Wagner and others. Pub Health Rep 68:110 Ja '53

URIDINE

Antimetabolites of uridine with two structural alterations. D. W. Visser, G. Barron and R. Beltz. bibliog Am Chem Soc J 75: 2017-19 Ap 20 '53

URIDINE phosphates

Nucleotides; a synthesis of uridine-5′ pyrophosphate, a breakdown product of the coenzyme uridine-diphosphate-glucose. N. Anand and others. Chem Soc J p3665-9 O '52

Nucleotides; *N*-chloroamides as reagents for the chlorination of diesters of phosphorous acid; a new synthesis of uridine-5′ pyrophosphate. G. W. Kenner, A. R. Todd and F. J. Weymouth. Chem Soc J p3675-81 O '52

Nucleotides; the action of ribonuclease on the 2′ : 3′-phosphates of uridine and cytidine. D. M. Brown, C. A. Dekker and A. R. Todd. Chem Soc J p2715-21 Jl '52

Nucleotides; the preparation of cyclic 2′ : 3′-phosphates of adenosine, cytidine, and uridine. D. M. Brown, D. I. Magrath and A. R. Todd. Chem Soc J p2708-14 Jl '52

URINE

Relationship of colloids to the surface tension of urine. R. A. Ravich. bibliog Science 117:561-3 My 22 '53

Urinary excretion of paranitrophenol following exposure to parathion. J. Lieben and others. il A M A Archives Ind Hygiene & Occup Med 7:93-8 F '53

See also

Diuresis

Diuretics

Analysis

Improvements in the rapid screening method for lead in urine. W. W. Woessner and J. Cholak. A M A Archives Ind Hygiene & Occup Med 7:249-54 Mr '53

Isolation and characterization of a metabolic product of 3,3′-carboxymethylenebis-(4-hydroxycoumarin) ethyl ester (tromexan) from human urine. J. J. Burns, S. Wexler and B. B. Brodie. bibliog Am Chem Soc J 75:2345-6 My 20 '53

Nicotinic acid metabolism; the metabolism of radioactive nicotinic acid and nicotinamide in the rat. P. Lin and B. C. Johnson. bibliog diags Am Chem Soc J 75:2974-7 Je 20 '53

Nicotinic acid metabolism; the use of paper chromatography in the study of nicotinic acid metabolism. B. C. Johnson and P. Lin. bibliog diags Am Chem Soc J 75:2971-3 Je 20 '53

Origin of 3,5-cycloandrostan-6β-ol-17-one (i-androsten-6β-ol-17-one) in urinary extracts. S. Teich and others. bibliog Am Chem Soc J 75:2523-5 My 20 '53

Procedure for the ion exchange chromatography of the amino acids of urine. M. E. Carsten. bibliog Am Chem Soc J 74:5954-9 D 5 '52

Rapid method for determination of urinary fluorine. R. F. Miller and P. H. Phillips. bibliog Anal Chem 25:172-3 Ja '53

UR-NAMMU, king of Sumer
Oldest laws. S. N. Kramer. Sci Am 188:26-8 Ja '53

URONIC acid
Uronic acid component of chondroitinsulfuric acid. M. L. Wolfrom and W. B. Neely. Am Chem Soc J 75:2778-9 Je 5 '53

UROPORPHYRIN
Synthesis of uroporphyrin. S. F. MacDonald and R. J. Stedman. Am Chem Soc J 75:3040-1 Je 20 '53

URSADIENOL
Triterpene resinols and related acids; ursa-11 : 13(18)-dienol. J. D. Easton, W. Manson and F. S. Spring. Chem Soc J p943-4 Mr '53

URSOLIC acid
Chemistry of western Australian plants; the occurrence of betulic, oleanolic, and ursolic acids. J. R. Anstee and others. Chem Soc J p4065-7 O '52

URUGUAY
See also
Cattle industry and trade—Uruguay
Grain trade—Uruguay
Petroleum industry and trade—Uruguay

Economic conditions

Economic conditions abroad (cont). For Comm W 48:5+ O 20; 4 D 1; 4 D 29 '52; 49:5 F 9; 3 Mr 30; 6 My 4; 4 Je 8 '53
Uruguay's brisk activity in exports results in optimism for economy. For Comm W 49:2 Mr 9 '53

USE and occupancy insurance. See Insurance, Use and occupancy

USED cars. See Automobile industry and trade—Used cars

USED machine tools. See Machine tools, Used

USNIC acid
Constitution of usnic acid. D. H. R. Barton and T. Bruun. Chem Soc J p603-9 F '53
Usnic acid; a revised structure for usnolic acid and the resolution of (±)-usnic acid. F. M. Dean and others. Chem Soc J p 1250-61 Ap '53
Usnic acid; *C*-diacetyl derivatives of phloroglucinol and *C*-methylphloroglucinol. F. M. Dean and A. Robertson. Chem Soc J p 1241-9 Ap '53

USNOLIC acid
Usnic acid; a revised structure for usnolic acid and the resolution of (±)-usnic acid. F. M. Dean and others. Chem Soc J p 1250-61 Ap '53

USTILAGO. See Rusts (botany)

UTAH
See also
Gas, Natural—Utah
Geology—Utah
Manganese mines and mining—Utah
Petroleum—Utah
Petroleum industry and trade—Utah

UTAH power and light company
Bonds offered. Comm & Fin Chr 176:1475 O 20 '52

UTERUS
Effect of estrogen on the isometric tension of rabbit uterine strips. A. I. Csapo and G. W. Corner. bibliog Science 117:162-4 F 13 '53

UTILITIES, Public. See Public utilities

UTILITY workers union of America
Resolutions adopted. Elec World 139:64 My 4 '53
10c package hike ends Detroit utility strike. Bsns W p 162 N 15 '52

V

V-PARTICLES
Cloud-chamber observations of the heavy charged unstable particles in cosmic rays. H. S. Bridge and others. bibliog il Phys R 90:921-33 Je 1 '53
Decay of a neutral *V* particle into two mesons. B. Dayton and D. Willard. il Phys R 91:348-50 Jl 15 '53
Decay of V^0 particles. R. B. Leighton and others. bibliog il diags Phys R 89:148-67 Ja 1 '53
Direct experimental evidence for the existence of a heavy positive *V* particle. C. M. York and others. il Phys R 90:167-8 Ap 1 '53
Disintegration of V° particles. R. W. Thompson and others. bibliog diags Phys R 90:329-30 Ap 15 '53
Kinetic energies of V_1^0 particles. J. Ballam and others. diag Phys R 91:1019-20 Ag 15 '53
Mean lifetimes of *V*-particles and heavy mesons. W. L. Alford and R. B. Leighton. bibliog il diags Phys R 90:622-9 My 15 '53
Production of $V_1°$ particles by negative pions in hydrogen. W. B. Fowler and others. il Phys R 91:1287 S 1 '53
Search for V° particles produced by 450-Mev protons. R. L. Garwin. bibliog diags Phys R 90:274-8 Ap 15 '53
Study of neutral *V* particles. W. B. Fretter and others. bibliog diags Phys R 89:168-80 Ja 1 '53
Study of neutral *V* particles observed in a multiplate cloud chamber. H. S. Bridge and others. bibliog il Phys R 91:362-72 Jl 15 '53
Unusual example of V^0 decay. R. W. Thompson and others. il Phys R 90:1122-3 Je 15 '53
V-particle and the composite pion. R. J. Finkelstein. Phys R 88:555-8 N 1 '52
V^0 particles produced at the cosmotron. W. B. Fowler and others. il Phys R 90:1126-7 Je 15 '53

VPI. See Dicyclohexylammonium nitrate

VACATION houses
See also
Week-end houses

VACATIONS
All at once or staggered. Bsns W p 139-40 My 30 '53
Cleveland's 175 vacation escalators. Mod Ind 25:96+ Je '53
Vacation shutdown trend grows. Steel 132:50 Je 8 '53

VACCINATION
Compulsory smallpox vaccination. N. A. George. Pub Health Rep 67:1135-8 N '52

VACCINES
Commercial availability of polio vaccine awaits further testing; abstract. H. R. Cox. Chem & Eng N 30:4478 O 27 '52
Hen's egg playing important role in fight against rabies. Franklin Inst J 254:353-4 O '52
National drug co. to make yellow fever vaccine. Oil Paint & Drug Rep 162:59 O 27 '52

VACCINIA
Development forms of vaccinia virus. W. H. Gaylord, jr. and J. L. Melnick. il Science 117:10-13 Ja 2 '53

VACCINIUM. See Blueberries

VACUUM
Britain's Vac-Pac. il Mod Packaging 26:110-11 My '53
Economical coatings by vacuum metallizing. M. Shepard. il Materials & Methods 37:97-9 Je '53
Economical finishing with vacuum metalizing. G. W. Carr. il Metal Finishing 50:60-4 N '52
High quality plating in a vacuum. flow diag il Mill & Factory 52:96-7 Mr '53
High vacuum creates miracle in plating. il Elec West 109:100 O '52
High vacuum metallizing. A. H. Hartman. il plan Mod Plastics 30:115-16+ O '52
How to cut costs by vacuum-forming extruded plastic sheet. D. Woodruff, jr. il Am Mach 97:153-8 S 14 '53
Maintaining vacuums; lesson in gasketing. Chem Eng 59:337 O '52
Metal finishing by high-vacuum metallization. G. H. Bancroft. il diag Metal Prog 64:87-90 S '53
Pilot set-up for vacuum forming. il Mod Plastics 30:95 D '52
Vacuum formed thermoplastics for large, thin parts. K. Rose. il Materials & Methods 37:94-5 My '53
Vacuum forming grows; method of forming thermoplastic sheets. Steel 132:145 My 4 '53

VACUUM—*Continued*

Vacuum-fusion analysis of molybdenum; abstract. M. W. Mallett and C. B. Griffith. Metal Prog 64:178+ O '53

Vacuum impregnation makes porosity-free castings. J. H. Leary. il Materials & Methods 38:91-3 S '53

Vacuum lock for routine solid analyses with a mass spectrometer. C. M. Stevens. diags R Sci Instr 24:148-51 F '53

Vacuum metallizing as a production process. J. G. Seiter. il diags Tool Eng 31:49-53 S '53

Vacuum metallizing of plastics. J. G. Seiter. il India Rubber World 128:493-6 Jl '53

Vacuum metallizing process. Electronics 26:324+ Mr '53

Vacuum-pressure system handles large reproductions. il diags Machine Design 25:139 Ja '53

Vacuum sealing of folding cartons. W. J. Cupo. il diags Mod Packaging 26:149-52+ D '52

Vacuum testing on production lines. L. E. Sterns. il diag Tool Eng 29:60-2 D '52

Vacuum tightness of welded and brazed aluminum containers. M. A. Miller and A. S. Russell. diags Welding J 32:116-18 F '53

Vacuum transfer from wire to press section. D. A. Ely. il Paper Tr J 136:18-19 Je 26 '53

See also

Electric furnaces,
Vacuum melting

VACUUM apparatus

Apparatus for controlled atmosphere research. G. R. Thomas and N. N. Lichtin. il diags R Sci Instr 23:738-40 D '52

Chemical engineering unit operations; high vacuum distillation. K. Hickman. bibliog (78 ref) il Ind & Eng Chem 45:44-6 Ja '53

Controlled gas leak. J. Morrison. diags R Sci Instr 24:230-1 Mr '53

Corrosion problems in steam-jet vacuum equipment. D. H. Jackson. il diags Chem Eng Prog 49:102-4 F '53

Evaporation from liquids in high vacuum. K. C. D. Hickman and D. J. Trevoy. bibliog il diags Chem Eng Prog 49:105-9 F '53

Flow visualization in high vacuums. R. G. Folsom. bibliog il diags Chem Eng Prog 48:542-8 N '52

High speed rotary vacuum seal. L. R. Sitney. diags R Sci Instr 23:505-6 S '52

High vacuum pipe connectors; joining metal pipes to glass pipes. J. Pollard. diags J Sci Instr 30:25-6 Ja '53

Measurement of small forces, particularly in a vacuum. G. C. Curtis. diag J Sci Instr 29:410-11 D '52

Multistage ejectors for high vacuum. V. V. Fondrk. diag Chem Eng Prog 49:3-7 Ja '53

Rubber ring gasket for conical vacuum joints. G. Medicus. diag R Sci Instr 23:647 N '52

Rubber solution gaskets for high vacuum work. G. Medicus. R Sci Instr 23:646 N '52

Sliding vane vacuum valve. R. K. Smith and L. W. Seagondollar. bibliog il R Sci Instr 23:767-8 D '52

Use of silicone rubber gaskets for high vacuum work. R. F. Gale and C. F. Machin. diags J Sci Instr 30:97-8 Mr '53

Vacuum bakeout ovens; cleaning of precision parts for mass spectrometers. il Electronics 26:276+ F '53

Vacuum cold trap. J. Hino and others. diag R Sci Instr 23:445-6 Ag '52

Vacuum facilities for the study of supersonic flow. G. J. Maslach. bibliog il diag Chem Eng Prog 48:594-8 D '52

Vacuum machines make short work of molding plastics. il Comp Air Mag 58:144 My '53

Vacuum valve to provide small controlled leak rates. R. Forman. il diag R Sci Instr 24:326-7 Ap '53

See also

Ejectors

VACUUM bottles. See Thermos bottles

VACUUM cleaners

Dust-free commutator grinding. il Ry Mech & Elec Eng 126:89 O '52

Let vacuums eat your dust! R. L. Stephenson. il Safety Maint & Prod 106:14-16 Jl '53

Repetition need not mean monotony; Lewyt corp. idea; demonstration sells vacuum cleaners. il Sales Management 70:12-14 pt 2 Ja 1 '53

Manufacture

Quality control in practice; Hoover co. J. W. Greve. il diags Tool Eng 31:69-78 Jl '53

Rating

Vacuum cleaners. il Consumers Res Bul 30:5-10 N '52

VACUUM cleaning

Cycloning dirty buses clean. il Bsns W p 104 Jl 18 '53

How to lay out piping for industrial vacuum cleaning. A. M. Brown. il plans Heating-Piping 24:81-3 D '52

VACUUM concrete corporation

Annual report. Comm & Fin Chr 177:2398 Je 1 '53

VACUUM containers

See also

Thermos bottles

VACUUM filters. See Filters and filtration (technical chemistry)—Vacuum filters

VACUUM gages

Shunted thermocouple vacuum gauge. N. A. Florescu. diag J Sci Instr 29:298 S '52

VACUUM pumps

Big vacuum pumps changing processes. Heating-Piping 24:82 N '52

Efficient vacuum pump. Bsns W p 116+ Ap 25 '53

High vacuum rotary pumps. Can Chem Process 36:72 O '52

High-vacuum vapor pumps. R. B. Lawrance. diags Chem Eng Prog 48:537-41; Discussion. 541 N '52

Liquid ring compressor; some thermodynamic characteristics. H. E. Adams. diag Tappi 36:193-9 My '53; Abstract. Paper Tr J 136:106 F 20 '53

Metropolitan-Vickers pumping plant for high-vacuum testing. il Engineering 175:700 My 29 '53

NRC rotary gas ballast vacuum pump. il Tool Eng 31:103 Ag '53

Pump, valve, and assembly for vacuum pump. il Product Eng 23:228 N '52

Pumping speed of a circular aperture in a diaphragm across a circular tube. A. J. Bureau and others. diags R Sci Instr 23:683-6 D '52

Some characteristics of an oil ejector pump. E. Tajima and others. R Sci Instr 24:323-5 Ap '53

Vacuum pump. Sci Am 188:36+ Ja '53

See also

Ejectors

VACUUM tube amplifiers. See Amplifiers, Vacuum tube

VACUUM tubes

Admittance of a diode with a retarding field. J. J. Freeman. diag J Ap Phys 23:743-5 Jl '52

All-metal vacuum valve. S. C. Brown and J. E. Coyle. diag R Sci Instr 23:570-1 O '52

Analogue multiplier tube. diags Tech R 55:307-8 Ap '53

Ball of fire discharge with a pronounced current saturation. G. K. Medicus. diag J Ap Phys 24:233-4 F '53

Damping of elastically supported element in a vacuum tube. S. Levy and others. il diag J Res Nat Bur Stand 50:71-4 F '53

Decay and recovery of the pulsed emission of oxide-coated cathodes. R. M. Matheson and L. S. Nergaard. diags J Ap Phys 23:869-75 Ag '52

Dependence of mutual conductance on frequency of aged oxide-cathode valves and its influence on their transient response; abstract. J. R. Tillman and others. bibliog diag Inst E E Proc 100 pt 3:175-6 My '53

Design of high vacuum valves. L. Riddiford and H. Lilley. bibliog diags J Sci Instr 29:296-7 S '52

Effect of filament voltage on the plate current of a diode. H. F. Ivey. J Ap Phys 23:1254-6 N '52

Effect of impurity migrations on thermionic emission from oxide cathodes. I. E. Levy. bibliog Inst Radio Eng Proc 41:365-8 Mr '53

VACUUM tubes—*Continued*

Effective cathode impedance. W. Chater and N. Golden. diag Electronics 25:184+ D '52

Electron coupler; a developmental tube for amplitude modulation and power control at ultra-high frequencies; engineering aspects. C. L. Cuccia. diags RCA R 14:72-99 Mr '53

Equivalences for the analysis of circuits with small nonlinearities. W. J. Cunningham. diags J Ap Phys 23:653-7 Je '52

Extension of the planar diode transit-time solution. N. A. Begovich. Inst Radio Eng Proc 37:1340-4 N '49; Discussion. W. E. Benham. 41:395-6 Mr '53

High-power industrial vacuum tubes having thoriated-tungsten filaments; abstract. R. B. Ayer. il Elec Eng 72:543 Je '53

Influence of initial velocities on electron transit time in diodes. J. T. Wallmark. bibliog diag J Ap Phys 23:1096-9 O '52

Inherent feedback in triodes. H. Stockman. bibliog diags Wireless Eng 30:94-6 Ap '53

Junction transistor equivalent circuits and vacuum-tube analogy. L. J. Giacoletto. bibliog diags Inst Radio Eng Proc 40:1490-3 N '52

Low-voltage filament supplies; a d.c. source for battery-tube filaments. E. J. Gauss. diags Q S T 37:35+ F '53

Navy releases authorized reliable tube list.. Tele-Tech 12:79 Mr '53

New rectifier tube for extremely high power and voltage levels. T. H. Rogers. bibliog il diags Elec Eng 72:51-6 Ja '53

New uhf transmitting tubes. diags Electronics 26:198 Je '53

Nickel base indirectly heated oxide cathode A. M. Bounds and P. N. Hambleton. bibliog diag Elec Eng 72:536-40 Je '53

O-ring sealed vacuum valves. P. A. Shatford. diags J Sci Instr 29:336-7 O '52

One-kilowatt tetrode for uhf transmitters. W. P. Bennett and H. F. Kazanowski. bibliog il diags Inst Radio Eng Proc 41:13-19 Ja '53

Optical studies of injected carriers; infrared absorption in germanium. R. Newman. Phys R 91:1311-12 S 15 '53

Optical studies of injected carriers; recombination radiation in germanium. R. Newman. Phys R 91:1313-14 S 15 '53

Phase detector uses gated beam tube. F. S. Holman, jr. diags Electronics 26:180-1 Ag '53

Potential distribution for space-charge limited current between a plane accelerating grid and parallel anode. E. G. Ramberg and L. Malter. diag J Ap Phys 23:1333-5 D '52

Proposed method of test for relative thermionic emissive properties of materials used in electron tubes. diags Am Soc T M Proc 50:142-58 '50

Rf performance of a uhf triode. H. W. A. Chalberg. il diags Inst Radio Eng Proc 41:46-50 Ja '53

Radio progress during 1952; electron tubes. bibliog il Inst Radio Eng Proc 41:452-60 Ap '53

Reliability of probe measurements in hot cathode gas diodes. G. Wehner and G. Medicus. bibliog il diags J Ap Phys 23:1035-46 S '52

Remountable, bakeable tubes by soldering joint technique. G. Medicus. diag R Sci Instr 23:647-8 N '52

Replenisher for hydrogen-filled tubes. J. H. Jupe. Electronics 26:220+ Ap '53

Screen dissipation of pentodes. S. C. Dunn. Wireless Eng 29:309-10 N '52

Self-heating thermionic vacuum tubes. E. G. Hopkins. J Ap Phys 23:1055 S '52

Space charge limited currents between inclined plane electrodes; approximate solutions. H. F. Ivey. diag J Ap Phys 24:227 F '53

Spiral-beam tube modulates one kw at uhf. C. L. Cuccia. il diags Electronics 26:130-4 Ap '53

Studies of the oxide cathode. L. S. Nergaard. bibliog diags RCA R 13:464-545 D '52

Teams help find the right tube. P. Klass. il Aviation W 58:66 My 18 '53

Technique of trustworthy valves. E. G. Rowe. il diags Inst Radio Eng Proc 40:1166-77 O '52

Thermal relays control heater voltage. C. D. Geer and W. C. Broekhuysen. diags Electronics 26:166+ Ja '53

Transient behaviour of thermionic filaments with temperature-limited emission. F. H. Hibberd. bibliog J Sci Instr 29:280-3 S '52

Transistors in terms of vacuum tubes. H. E. Hollmann. il diags Tele-Tech 12:74-6+ My '53

Tubes for communication equipment. Radio Com 12:20-1 N '52

Tubes for uhf application. diags Electronics 26:222+ My '53

Tubes; new kinds, many improvements. C. A. Scarlott. il Westinghouse Eng 13:26-7 Ja '53

Type 6X4 tube applications. W. R. Jones. diag Electronics 26:154+ F '53

Uhf triode design in terms of operating parameters and electrode spacings. L. J. Giacoletto and H. Johnson. bibliog diags Inst Radio Eng Proc 41:51-8 Ja '53

Use of radioactive isotopes in a study of evaporation from thermionic cathodes. W. F. Leverton and W. G. Shepherd. diag J Ap Phys 23:787-93 Jl '52

See also

Amplifiers, Vacuum tube
Cathode followers
Cathode ray tubes
Geiger-Müller counters
Graphechon
Klystron
Magnetron
Multivibrators
Photoelectric cells
Radio receiving apparatus
Radio rectifiers
Resnatron
Storage tubes
Thyratron
Voltmeters, Vacuum tube

Cold cathode

Circuit applications of cold-cathode trigger tubes; Measurements section discussion meeting. Inst E E Proc 100 pt 2:86-7 Ap '53; Abstract. Elec J 149:1523 N 14 '52

Ten-stage cold-cathode stepping tube. D. S. Peck. il diags Elec Eng 71:1136-9 D '52

Control uses

All-triode electronic switch. C. W. Spindler, jr. diag Electronics 25:172+ N '52

Automatic pinboy for bowling alleys. F. K. Powell, jr. il diag Electronics 26:148-9 Je '53

Beam switching tubes for computers and controls. S. Kuchinsky. il diags Tele-Tech 12:88-90+ S '53

Closed loop controls human centrifuge. T. F. Peirce. il diags Electronics 25:132-4 O '52

Contour tracer for automatic machinery; patent. diags Electronics 26:198+ S '53

Diode limiters simulate mechanical phenomena. C. D. Morrill and R. V. Baum. bibliog diags Electronics 25:122-6 N '52

Electron-microscope power monitor. F. W. Bishop. il diag Electronics 26:124-5 Ja '53

Electronic control for glass grinding machines. il diags Engineer 195:458-9 Mr 27 '53; Engineering 175:574-5 My 1 '53; Elec R (Lond) 152:797-9 Ap 10 '53

Electronic control; Lancashire dynamo electronic products, ltd. il Elec R (Lond) 152:181-5 Ja 23 '53

Electronic speed control; applications to d.c. motors; abstracts. J. C. Rankin. Elec R (Lond) 152:422 F 20 '53; il Elec J 150:604-6 F 20 '53

How adjustable speed electronic drives compare. T. R. Breunich. il diags Product Eng 23:189-96 N '52

How electronics controls guided missiles. J. M. Carroll. bibliog il diags Electronics 26:130-6 Jl '53

How to design vr tube circuits. R. C. Miles. diag Electronics 25:135-7 O '52

Industrial electronic design. C. R. Bates. Elec R (Lond) 153:347-8 Ag 14 '53

Linear current regulator. J. S. Waugh and others. diag R Sci Instr 23:441 Ag '52; Abstract. Electronics 25:256+ N '52

New electronic control system. R. H. Munch. diags Ind & Eng Chem 44:sup93A-4A+ N '52

New industrial motor control circuits. E. F. Kubler. diags Electronics 25:110-15 Mr '52; Same cond. Product Eng Hdbk p H 18-23 '53

VACUUM tubes—Control uses—*Continued*

Photographic exposure timers providing compensation for supply-voltage variations. R. J. Hercock and D. M. Neale. bibliog diags Inst E E Proc 99 pt 2:507-15 O '52

Remote volume control. C. R. Ellis. diags Radio & Tv N 48:64-5 N '52

Speed-sensing relay. J. H. Porter. diag Electronics 25:174+ N '52

Suppressor grid control of thyratrons. H. L. Armstrong. diag Electronics 26:208+ F '53

Switch provides d-c reference display; oscilloscope displays magnitude of nonvarying signal component. R. S. Mackay. il diags Electronics 25:122-3 D '52

Variations of triode characteristics with heater voltage. F. A. Benson and others. bibliog diag Elec J 151:481-3 Ag 14 '53

Voltage regulator tubes. W. R. Jones. diags Electronics 26:162+ Mr '53

Cooling

High-efficiency coolers for power tubes. M. B. Lemeshka and A. G. Nekut. il diags Tele-Tech 11:69-71+ N '52

Systematic cooling of air-borne electronic equipment. W. Robinson. bibliog il diags Aeronautical Eng R 12:81-91 My '53

Failure

Cathode-interface effects in tv receiver design. F. M. Dukat and I. E. Levy. Electronics 26:169-71 Ap '53

Electronic failure prediction. J. H. Muncy. il diags Tele-Tech 12:76-7 F '53

How to detect failing electronic tubes. il Product Eng 23:194-5 D '52

Prediction of electronic failures. Electronics 26:180+ F '53

Reliability of electron tubes. M. A. Acheson and E. M. McElwee. Inst Radio Eng Proc 40:1204-6 O '52

Generating action

Moving poles in nonlinear oscillating systems. W. B. Wrigley. diags Inst Radio Eng Proc 41:774-6 Je '53

Use of admittance diagrams in oscillator analysis. H. J. Reich. diags Inst Radio Eng Proc 41:522-8 Ap '53

See also

Oscillators

Industrial applications

Electronic devices should be useful in business based on information. Nat Underw 57: 8 Mr 5 '53

Electronic equipment in railroading. J. M. Carroll. bibliog il diags Electronics 26:130-5 Ag '53

Electronics in the modern office. R. W. Fairbanks. flow chart il diags Harvard Bsns R 30:83-98 S '52

Labor saving by the tube. I. U. Cobleigh. Comm & Fin Chr 177:1956-7 My 7 '53

Reservisor; memory drum-computer checks seat availability. C. Andrews. il diags Tele-Tech 11:57+ O '52

Tubes for industrial inspection and control. R. B. Immel. diags Product Eng 24:182-3 F '53

See also

Electric heating, Industrial—High frequency heating

Manufacture

Drawing integral eyelets on tube sockets. il diag Electronics 26:260+ Je '53

Ejection chutes for small wire parts. il Electronics 26:288+ S '53

Grid-winding machines for pencil triodes. il Electronics 25:262+ D '52

Induction sealing of pencil triodes. il Electronics 26:262+ F '53

Nickel in electronics. K. Jackson and R. O. Jenkins. Metallurgia 47:227-82 Je '53

Sealing metal to glass; problems of varying rates of expansion. R. H. Warring. diags Elec R (Lond) 151:301-4 Ag 8 '52

Terminal-pin twister. il Electronics 25:242+ D '52

Tools and talent make microwave tubes; illustrations with text. W. M. Stocker, jr. Am Mach 97:134-5 Je 22 '53

Tube burn-in setups. C. R. Schafer. il diags Electronics 25:288+ N '52

Ventilation system utilizes waste process heat to knock $12,000 off the fuel bill; Chatham electronics corp. A. Scala. diag Factory Management 111:96-8 O '53

Measurement uses

Bioelectric integrator gages strain and effort. A. Ford. il diags Electronics 26:172-4 Ap '53

Duo-diode modulation monitor. J. Lucas and D. Peters. il diag Radio & Tv N 48:55+ D '52

Electronic flowmeter is new method for measuring air currents or fluid flow. il diag Elec Eng 72:371-2 Ap '53; Same. Franklin Inst J 255:333-5 Ap '53; Same. Pet Processing 8:731+ My '53

Electronic gaging and sorting applications. A. C. Sanford. il Electronics 26:144-7 S '53

Oscilloscope calibrator. R. Graham. il diag Radio & Tv N 49:70-1+ Je '53

6BN6 gated-beam tube as a fast coincidence circuit. J. Fischer and J. Marshall. diags R Sci Instr 23:417-20 Ag '52

Vibrating-system decay-constant measurement. diag Electronics 25:160+ D '52

See also

Voltmeters, Vacuum tube

Miniature tubes

Reliability of filamentary subminiature tubes R. Wood. Tele-Tech 12:78-9+ Mr '53

Tube aging and testing techniques. il Electronics 26:236+ F '53

Noise

Cathode-follower as high-impedance input stage. D. A. Bell and H. O. Berktay. diags Wireless Eng 29:313-16 D '52

Effect of thermal-velocity spread on the noise figure in traveling-wave tubes. P. Parzen. bibliog diags J Ap Phys 23:394-406 Ap '52; Same. Elec Com 30:139-54 Je '53

Excess thermal noise due to current flow through (Ba Sr) oxide coating. K. Amakasu. diags J Ap Phys 23:1330-2 D '52

Flicker noise caused by an interface layer. W. W. Lindemann and A. van der Ziel. J Ap Phys 23:1410-11 D '52

Fluctuation noise in a microwave superregenerative amplifier. T. S. George and H. Urkowitz. diags Inst Radio Eng Proc 41: 516-21 Ap '53

Low-noise amplifier for 200 mc. R. Lowell. bibliog il diags Tele-Tech 12:106-7+ Je '53

New method of calculating microwave noise in electron streams. J. R. Pierce. diag Inst Radio Eng Proc 40:1675-80 D '52

Noise in interface resistance. H. O. Berktay. Wireless Eng 30:48-9 F '53

Noise in thermionic valves. J. H. Fremlin. diag Inst E E Proc 100 pt 3:91-2 Mr '53

Production of negative ions and noise in negative ion beams. W. L. Fite. bibliog diag Phys R 89:411-15 Ja 15 '53

Relation between the conductance and the noise power spectrum of certain electronic streams. J. J. Freeman. diag J Ap Phys 23:1223-5 N '52

Space charge reduction of low frequency fluctuations in thermionic emitters. T. B. Tomlinson. bibliog diags J Ap Phys 23: 894-9 Ag '52

Scientific applications

Digital to analog converter. M. Miller and others. il diags Electronics 25:127-9 O '52

High-speed counter uses ternary notation. R. Weissman. il diags Electronics 25: 118-21 O '52

Pulsed light measures flicker perception. F. H. Ireland. bibliog il diags Electronics 26: 189-91 Je '53

Stabilized time-division multiplier for differential analyzers. C. D. Morrill and R. V. Baum. diags Electronics 25:139-41 D '52

Timothy; robot electronic turtle. J. H. Kubanoff. il diags Radio & Tv N 49:35-8+ Ap '53

Specifications

General considerations in regard to specifications for reliable tubes. C. R. Knight and K. C. Harding. Inst Radio Eng Proc 40: 1207-10 O '52

VACUUM tubes—*Continued*

Temperature

Shielding and mounting effects on tube bulb temperatures. I. E. Levy. il diags Tele-Tech 12:72-3+ F '53

Tube envelope temperature. W. R. Jones. bibliog Electronics 26:250+ Ap '53

Testing

Compact filament and short checker. R. Baxter. il diags Radio & Tv N 50:134 Ag '53

Prediction of electronic failures. Franklin Inst J 255:140-3 F '53

Tube aging and testing techniques. il Electronics 26:236+ F '53

Vibration generator for electron tubes. il diag Tele-Tech 12:84-5 Ag '53

Vibration test for valves. C. C. Eaglesfield. diags Wireless Eng 30:57-60 Mr '53

Traveling wave tubes

Attenuation of wire helices in dielectric supports. R. W. Peter and others. bibliog diags RCA R 13:558-72 D '52

British tv relay uses traveling-wave tubes. D. C. Rogers and P. F. C. Burke. il diags Electronics 26:156-60 Je '53

Effect of thermal-velocity spread on the noise figure in traveling-wave tubes. P. Parzen. bibliog diags J Ap Phys 23:394-406 Ap '52; Same. Elec Com 30:139-54 Je '53

New developments in traveling-wave tubes. W. J. Dodds and others. il diags Electronics 26:130-3 F '53

Phase-modulation repeater employs a phase-modulation technique with traveling-wave tubes; patent. diags Electronics 26:252+ Jl '53

S-band sweep generator and test set. R. E. Larson. il diags Tele-Tech 12:116-18+ Je '53

Spatial harmonic t-w tube. diags Electronics 26:206+ Mr '53

Structure for traveling-wave tubes; patent. diags Electronics 26:204+ Ap '53

Theory of the large signal behavior of traveling-wave amplifiers. A. Nordsieck. Inst Radio Eng Proc 41:630-7 My '53

Traveling-wave amplifier tube; patent. diag Electronics 26:250+ Jl '53

Traveling-wave oscillator tunes electronically. H. R. Johnson and J. R. Whinnery. bibliog il diags Electronics 26:177-9 Ag '53

Travelling-wave tube as output amplifier in centimetre-wave radio links. D. C. Rogers. bibliog il diags Inst E E Proc 100 pt 3:151-6 My '53

Velocity modulation tubes

Debunching of electron beams constrained by strong magnetic fields. M. Chodorow and others. diag Inst Radio Eng Proc 41:999-1003 Ag '53

See also

Klystron

VALENCE

Determination of the valence of a heteropoly anion; dodecamolybdoceric(IV) acid and its salts; structural considerations. L. C. W. Baker, G. A. Gallagher and T. P. McCutcheon. bibliog Am Chem Soc J 75:2493-5 My 20 '53

Free-electron network model for conjugated systems; a demonstration model showing bond order and free valence in conjugated hydrocarbons. J. R. Platt. il J Chem Phys 21:1597-600 S '53

Studies in molecular orbital theory of valence; the transition state in Walden inversion type reactions. H. H. Jaffé. J Chem Phys 21:1618 S '53

VALENTINE'S day

Valentine's day promotion pays off; Belding Corticelli sewing kits. M. Mazor. il Ptr Ink 242:66+ F 20 '53

VALERIC acid

Effect of steam activation on multilayer adsorption from solution by carbon. R. S. Hansen, R. D. Hansen and R. P. Craig. bibliog J Phys Chem 57:215-19 F '53

VALEROIDINE

Stereochemistry of alkaloids. R. C. Cookson. bibliog Chem & Ind p337-40 Ap 11 '53

Stereochemistry of the tropane alkaloids; the configuration of scopolamine and of valeroidine. G. Fodor and Ö. Kovács. Chem Soc J p2341-4 Ag '53

VALINE

Amino-acids and peptides; γ-L-glutamyl-L-alanine, -L-valine, and -L-leucine. D. A. Rowlands and G. T. Young. Chem Soc J p3937-40 O '52

N-phenylacetyl-L-cysteinyl-D-valine. F. W. Holly and others. bibliog Am Chem Soc J 74:4539-40 S 20 '52

Synthesis of valine. P. T. Adams and B. M. Tolbert. bibliog Am Chem Soc J 74:6272-3 D 20 '52

VALLET, Victor E.

Portrait. Bsns W p94 My 23 '53

VALUABLE papers insurance. See Insurance, Valuable papers

VALUATION

How to present property appraisal data. R. I. Bradley. World Oil 136:68+ Ja '53

See also

Assessment
Depreciation
Insurance—Valuation of property
Insurance, Fire—Valuation of property
Inventories—Accounting
Mine valuation
Public utilities—Valuation
Real property—Valuation

VALUE, Burnside R.

New York city consultants elect head. por Eng N 150:70 F 5 '53

VALUE (moral and esthetic). See Worth

VALVES

Air valves. il Steel 132:49 Ja 19 '53

Bailey reducing valves. diag Engineer 195:294 F 20 '53; Engineering 175:320 Mr 6 '53

Butterfly control valves. C. A. Dally. il diags Instruments 25:1717-19+ D '52

Forty years with compressor valves. C. R. Neeson. il diags Refrig Eng 60:1292-5 D '52

Gasoline plant design; selection of valves. O. L. Lewis. Pet Eng 24:C27-8+ N '52

How do you know valve is closed? B. Dopp. il Heating-Piping 25:104-6 Ag '53

How to open a stuck valve. B. Dopp. diag Heating-Piping 25:104-6 O '53

How to size piping and valves for flashing mixtures. W. F. Allen, jr. bibliog il Power Eng 56:60-1+ My; 83-5 Je; 85 Ag '52; 57:94 O '53

How to use valves in solving today's control problems. C. S. Beard. il diags Paper Tr J 137:14-18+ O 9 '53

Inflatable steel seal for giant air valves. il Aviation W 57:28+ D 8 '52

Instrumentation handbook; control valve design and use. D. E. Hostedler. diag Pet Refiner 31:116-20 D '52

Keystone valve designed for low-pressure services has neoprene seat. il Marine Eng 58:130+ Je '53

Know common valves. F. J. Ardolino. il diags Power 97:109-11 Jl '53

Move over, steel; plastics for corrosion-resistant pumps and valves. Bsns W p 141 Je 13 '53

Pumps and valves. il Paper Tr J 137:157-64 S 18 '53

Refrigeration Q&A: special control valves for your system. T. Hicks. diags Power 97:118-19 S '53

Rules for installation of check valves to insure good operation and maintenance. Heat & Ven 49:130+ N '52

Sizing control valves. R. A. Rockwell. il Heating-Piping 24:98-9 N '52; Same. Pet Processing 7:1792 D '52; Same. Paper Ind 34:1242-3 Ja '53

Sizing the expansion valve in air conditioning systems. F. Y. Carter. diags Heat & Ven 50:93-6 Ap '53

Tips on selecting thermal expansion valves for refrigeration. M. L. Hoglund. il diag Mill & Factory 51:120-1 D '52

Valve panels control flow; Glidden co.'s Naval stores division. R. L. Hedberg. il Heating-Piping 24:93 D '52

Valves for gas mains. il diag Engineering 174:170 Ag 8 '52

See also

Automobile engines—Valves
Safety valves

VALVES—*Continued*

Cleaning

AB valve cleaning at Milwaukee shops. il Ry Loco & Cars 127:90 Je '53

Control

Pilot operated air control systems. H. L. Stewart. diags Product Eng 24:214-20 My '53

Electric control

Light, compact motor operated gate valve. il Product Eng 23:224 N '52

Maintenance and repair

How can we stop these valve leaks? diags Power 97:136+ Jl '53

Periodic valve inspection saves time and money. Power Eng 57:75 Jl '53

Manufacture

Carbide tooling pays dividends in machining valve castings. T. Cunningham. il Mach 59:173-9 Ag '53

Cast valve tappets redesigned for formed steel. K. Rose. il Materials & Methods 37:108 Mr '53

Machine builder solves a problem; National Acme solved machining problems for valve bodies. il Steel 131:108+ N 10 '52

VALVES, Hydraulic

Characteristics of fixed-dispersion cone valves. R. A. Elder and G. B. Dougherty. diags Am Soc C E Proc 78[no 153]:1-21 S '52

Contributions to hydraulic control. S. Lee and J. F. Blackburn. diags A S M E Trans 74:1005-9, 1013-16; 75:1163-80 Ag '52, Ag '53; Discussion. 74:1009-11 Ag '52

Control valves for direct-hydraulic presses; discussion. Engineer 195:141-3 Ja 23 '53

Hollow jet valves. G. H. Heiser. il Westinghouse Eng 13:140-1 Jl '53

How can we find underground valves? il Power 97:134-6 Jl '53

Hydraulic surge damping valves. il diag Product Eng 23:209 N '52

Hydraulic valve tappets. R. Brown-Waring. diags Automobile Eng 43:126-8 Mr '53

Hydrodynamic forces on hydraulic piston valves. T. E. Beacham. diags Engineering 174:588-91 N 7 '52

Large sluice valves; Los Peares hydroelectric station on the river Mino. il Engineer 194:233 Ag 15 '52

Low-pressure reciprocating seals for hydraulic control valves. B. Cooke. diags Inst Mech Eng Proc 165 (W.E.P. no 69):262-5, pl 1-2 '51; Discussion. Engineer 192:799-801 D 21 '51

New valve mechanism of the 1953 Powerglide transmission. il diags Automotive Ind 108:24-7+ Mr 1 '53

New valve simplifies hydraulic systems. diags Aviation W 58:41 Mr 9 '53

Operating experience with hydro plant valves. W. G. Weber. il diags Power Eng 56:110+ O '52; 57:84-5 Mr; 99-100 My '53

Some aspects of valve engineering in water supply; abstract. P. L. Boucher. Am Water Works Assn J 45:sup72+ My '53

Switch to butterfly-type gates leads to efficient refuse ejection; Hudson coal co. il diags Coal Age 58:131-3 My '53

Electric control

Integrated designs for solenoid operated shutoff valves. K. Jones. il diags Product Eng 24:186-90 My '53

Solenoid operated shutoff valves for aircraft hydraulic circuits. K. Jones. diags Product Eng 24:175-7 Mr '53

VANADIUM

Behavior of titanium, vanadium and zirconium towards fusion reagents. R. S. Young and K. G. A. Strachan. Chem & Ind p 154-5 F 14 '53

Carnotite; mining Colorado Plateau; hundreds of small mines supply U.S. with uranium, vanadium. il Iron Age 170:110 N 6 '52

Effect of uranium-vanadium deposits on the vegetation of the Colorado plateau. H. L. Cannon. Am J Sci 250:735-70, pl 1 bibliog(57 titles, p767-70) O '52

Effects of vanadium or chromium on the strain ageing of rimming steels. W. R. D. Jones and G. Coombes. bibliog il Iron & Steel Inst J 174:9-15 My '53

High temperature magnetic susceptibility of V, Nb, Ta, W, and Mo. C. J. Kriessman. bibliog diag Rs Mod Phys 25:122-6 Ja '53

Kinetics of the simultaneous reduction of oxygen and pervanadyl ion by iodide ion in acid solution. M. H. Boyer and J. B. Ramsey. bibliog Am Chem Soc J 75:3802-8 Ag 5 '53

Polarographic characteristics of vanadium complexed with ethylenediamine tetraacetic acid. R. L. Pecsok and R. S. Juvet, jr. bibliog Am Chem Soc J 75:1202-5 Mr 5 '53

Properties, heat treatment, corrosion resistance, etc.; engineering file facts. Materials & Methods 37:127 Je '53

Treatment of titaniferous magnetite ore from Iron mountain, Wyo. A. E. Back and others. bibliog 5pls U S Bur Mines Rep of Invest 4902:1-15 '52

Tristage crystallization process for utilizing western ferrophosphorus. L. H. Banning and others. flow sheet J Metals 5:Trans 423-30 Mr '53

U.S. Vanadium's Uravan, Colo. mill doubles output. il Min Eng 4:1025-6 N '52

Vanadium-oxygen solid solutions. A. U. Seybolt and H. T. Sumsion. bibliog il diag J Metals 5:Trans 292-9 sec 2 F '53

Vanadium; possibility of its production from indigenous sources. J. Sandor. bibliog flow sheets Metallurgia 46:268-74 D '52

Vanadium; uses, outlook, availability, price and suppliers, etc. map Iron Age 170:285 O 9 '52

World production of vanadium, by countries, 1940-1951; tabulation. Iron Age 171:424 Ja 1 '53

You can eliminate green efflorescence. A. J. Hammer. Brick & Clay Rec 123:37+ S '53

Analysis

Determination of trace metals in crudes and other petroleum oils; analysis for iron, nickel, vanadium, and copper. O. I. Milner and others. bibliog diags Anal Chem 24:1728-32 N '52

Separation of quadrivalent and quinquevalent vanadium from phosphoric acid by ion-exchange resins; some observations on the reduction of quinquevalent vanadium by ion-exchange resins. J. E. Salmon and H. R. Tietze. Chem Soc J p2324-6 Je '52

Isotopes

Angular distribution of protons from vanadium 52. J. S. King and W. C. Parkinson. bibliog Phys R 89:1080 Mr 1 '53

Disintegration scheme of V^{48}. P. L. Roggenkamp and others. bibliog diag Phys R 88:1262-5 D 15 '52

Energy levels in magnesium, vanadium, chromium, and manganese. H. J. Hausman and others. bibliog Phys R 88:1296-9 D 15 '52

Metastable state of V^{52}. T. Wiedling. diag Phys R 91:767 Ag 1 '53

Neutron capture γ-rays from scandium, vanadium, manganese, cobalt, and copper. G. A. Bartholomew and B. B. Kinsey. bibliog diags Phys R 89:386-95 Ja 15 '53

Nuclear spin of V^{50} by paramagnetic resonance. C. Kikuchi and others. il Phys R 88:142-3 O 1 '52

VANADIUM alloys

Vanadium-uranium constitutional diagram. H. A. Saller and F. A. Rough. il J Metals 5:Trans 545-8 Ap '53

VANADIUM compounds

Paramagnetic resonance absorption in salts of V and Mn. C. A. Hutchison, jr. and L. S. Singer. bibliog diags Phys R 89:256-62 Ja 1 '53

VANADIUM corporation of America

Sharp rise in steel production brightens prospects. Barron's 33:27 F 9 '53

Steel hormones and the ferro-alloy industry. W. C. Keeley. Comm & Fin Chr 176:1621+ O 30 '52

Vanadium corporation and its allied alloys. I. U. Cobleigh. Comm & Fin Chr 177:1424 Ap 2 '53

Vanadium corp. reports record profits, sales. Barron's 33:26 Mr 23 '53

VANADIUM nitrides
- Preparation of crystalline nitrides of vanadium and niobium. F. H. Pollard and G. W. A. Fowles. Chem Soc J p2444-5 Je '52

VANADIUM oxides
- Exchange of isotopic oxygen between vanadium pentoxide, gaseous oxygen and water. W. C. Cameron, A. Farkas and L. M. Litz. diags J Phys Chem 57:229-38 F '53
- Preparation of vanadium monoxide. M. Frandsen. Am Chem Soc J 74:5046 O 20 '52
- Vanadium oxide hydrogenation catalyst; the action of vanadium oxide catalyst on cyclohexene. V. I. Komarewsky and T. A. Erikson. Am Chem Soc J 75:4082-3 Ag 20 '53

VANCE plan. See United States—Defenses

VAN DE GRAAFF generator. See Electric generators, Electrostatic

VANDENBERG, Arthur Henrick, jr.
- Portrait. Bsns W p29 D 6 '52

VAN DER WAALS' equation
- Acoustic relaxation in a van der Waals gas. R. T. Beyer. bibliog Acoustical Soc Am J 24:714-15 N '52

VAN DER WAALS' forces
- Convergence of intermolecular force series. F. C. Brooks. bibliog Phys R 86:92-7 Ap 1 '52; Reply. G. M. Roe. 88:659 N 1 '52
- Diffusion in a central field due to van der Waals attraction. R. S. Bradley. bibliog diags J Phys Chem 57:307-9 Mr '53
- Van der Waals' *a* and ionization potential of inert gases. Y. P. Varshni. J Chem Phys 21:1119 Je '53

VANILLA
- Better artificial vanilla flavor; propenyl quaethol. C. A. Tyler. il Food Eng 25:62-3+ Ja '53

VANILLIC acid
- Reactions of vanillin and its derived compounds; amides of vanillic and 3-ethoxy-4-hydroxybenzoic acids. I. A. Pearl and D. L. Beyer. bibliog Am Chem Soc J 75:2627-30 Je 5 '53

VANILLIN
- Conversion of veratraldehyde to vanillin by nitrobenzene and alkali. W. J. Brickman and C. B. Purves. bibliog Am Chem Soc J 75:4336-7 S 5 '53
- New vanillin process from waste liquor sulphite. diag Can Chem Process 36:58+ O '52
- Reaction of vanillin with silver oxide in the presence of technical caustic. I. A. Pearl and D. L. Beyer. Ind & Eng Chem 44:2893-4 D '52
- Reactions of vanillin and its derived compounds; amides of vanillic and 3-ethoxy-4-hydroxybenzoic acids. I. A. Pearl and D. L. Beyer. bibliog Am Chem Soc J 75:2627-30 Je 5 '53
- Reactions of vanillin and its derived compounds; ethers of protocatechuic acid and their ethyl esters. I. A. Pearl and D. L. Beyer. bibliog Am Chem Soc J 75:2630-3 Je 5 '53
- Reactions of vanillin and its derived compounds; the reduction of vanillil. I. A. Pearl. bibliog Am Chem Soc J 74:4593-4 S 20 '52

VAN SYLKE, Donald D. 1883-
- 1953 Fisher award in analytical chemistry. por(cover) Chem & Eng N 31:1094 Mr 16 '53

VAPOR deposition. See Metal coating

VAPOR lock. See Automobile engines—Fuel feeding

VAPOR pressure
- Accuracy of the Knudsen effusion method for measuring vapor pressures. M. G. Rossman and J. Yarwood. J Chem Phys 21:1406-7; Reply. C. I. Whitman. 1407 Ag '53
- Calculation of vapor pressure curves from data at one temperature; a study of the Hildebrand rule. O. L. I. Brown. Am Chem Soc J 74:6096-8 D 5 '52
- Cluster theory of the saturated vapor pressure of helium isotope mixtures. W. Band and R. A. Nelson. bibliog Phys R 90:744-7 Je 1 '53
- Correlating total pressure of binary systems. R. Gilmont and others. bibliog Pet Refiner 32:167-72 My '53
- Correlation of vapour pressure, temperature, and molar entropy of vaporisation. L. H. Thomas. Chem Soc J p 1233-7 Ap '53
- Dimethylberyllium; vapour pressure and vapour-phase association. G. E. Coates, F. Glockling and N. D. Huck. Chem Soc J p4496-501 N '52
- Entropy of liquid He^3. Tien Chi Chen and F. London. bibliog Phys R 89:1038-40 Mr 1 '53
- Freezing point and vapor pressure data for solutions of carbon dioxide with some halogen substituted methanes. T. De Vries and W. N. Vanderkooi. Am Chem Soc J 75:2253-4 My 5 '53
- Metal ebulliometers for vapor pressure measurement. G. D. Oliver and J. W. Grissard. diags R Sci Instr 24:204-6 Mr '53
- Nomograph gives vapor pressures of saturated salt solutions. J. T. Hogan. Chem Eng 60:233 Mr '53
- Preliminary study of the oxidation and vapor pressure of chromium. E. A. Gulbransen and K. F. Andrew. bibliog Electrochem Soc J 99:402-6 O '52
- Semi-empirical equation for the vapor pressure of liquids as a function of temperature. A. A. Frost and D. R. Kalkwarf. bibliog J Chem Phys 21:264-7 F '53
- Vapor pressure and entropy of liquid He^3. D. ter Haar. Phys R 91:1018-19 Ag 15 '53
- Vapor pressure of acetylated amino acid ethyl esters. E. F. Mellon, S. J. Viola and S. R. Hoover. J Phys Chem 57:607-8 Je '53
- Vapour pressure of aqueous solutions of beryllium sulphate and of uranyl sulphate at 25°. R. A. Robinson. Chem Soc J p4543-4 N '52
- Vapor pressure of copper. H. N. Hersh. bibliog diag Am Chem Soc J 75:1529-31 Ap 5 '53
- Vapor pressure of germanic iodide; the entropies of germanic halides; the disproportionation of germanous iodide. W. L. Jolly and W. M. Latimer. bibliog Am Chem Soc J 74:5754-7 N 20 '52
- Vapor pressure of germanium. A. W. Searcy. bibliog Am Chem Soc J 74:4789-91 O 5 '52
- Vapor pressure of He^3-He^4 mixtures. R. A. Nelson and W. Band. Phys R 88:1431 D 15 '52
- Vapor pressure of silver. C. L. McCabe and C. E. Birchenall. bibliog diag J Metals 5:Trans 707-9 sec 2 My '53
- Vapor pressure of silver over silver-gold solid solutions. C. L. McCabe and others. bibliog J Metals 5:Trans 709-11 sec 2 My '53
- Vapour pressure of the system sulphuric acid-disulphuric acid. J. C. D. Brand and A. Rutherford. diag Chem Soc J p3916-22 O '52
- Vapor pressure of thorium oxide from 2050 to 2250°K. E. Shapiro. bibliog diag Am Chem Soc J 74:5233-5 O 20 '52
- Vapor pressure of water and temperature conversion chart. K. A. Kobe. Pet Refiner 32:173 My '53
- Vapor pressures and critical constants of pure ozone. A. C. Jenkins and C. M. Birdsall. bibliog flow sheet diags J Chem Phys 20:1158-61 Jl '52
- Vapor pressures and freezing points of the system nitrogen tetroxide-nitric oxide. A. G. Whittaker and others. bibliog diag Am Chem Soc J 74:4794-7 O 5 '52
- Vapor pressures of He^3-He^4 mixtures below the lambda-point. H. S. Sommers, jr. bibliog diags Phys R 88:113-27 O 1 '52
- Vapor pressures of inorganic substances; dissociation pressures of lithium hydroxide between 650° and 800° K. W. E. Ditmars and H. L. Johnston. diags Am Chem Soc J 75:1830-2 Ap 20 '53
- Vapor pressures of inorganic substances; gallium. R. Speiser and H. L. Johnston. Am Chem Soc J 75:1469-70 Mr 20 '53
- Vapor pressures of inorganic substances; titanium between 1587 and 1764°K., and copper between 1143 and 1292°K. J. W. Edwards, H. L. Johnston and W. E. Ditmars. bibliog Am Chem Soc J 75:2467-70 My 20 '53
- Vapor pressures of phthalate esters. A. C. Werner. bibliog diags Ind & Eng Chem 44:2736-40 N '52
- Vapor pressures of rhenium heptoxide and perrhenic acid. W. T. Smith, jr., L. E. Line, jr. and W. A. Bell. bibliog Am Chem Soc J 74:4964-6 O 5 '52

VAPOR pressure—*Continued*

Vapour pressures of some rare-earth halides. E. R. Harrison. bibliog diag J Ap Chem 2:601-2 O '52

Vapor pressures of some substituted benzotrifluorides. S. Kardon and J. H. Saylor. Am Chem Soc J 75:1997 Ap 20 '53

VAPOR recovery. See Petroleum refining—Vapor recovery; Petroleum storage—Vapor recovery

VAPORIZATION

Equilibrium flash vaporization of petroleum fractions at reduced pressures. K. K. Okamoto and M. van Winkle. bibliog flow diag diag Ind & Eng Chem 45:429-39 F '53

Flash vaporization; analysis of fluid mechanical and mass-transfer problems. R. R. Hughes, H. D. Evans and C. V. Sternling. bibliog flow sheet diags Chem Eng Prog 49:78-87 F '53

Free energy of vaporization of metals from 0° to 2000°C. J. W. Evans. bibliog J Metals 5:Trans 655-7 My '53

Relationship between all common vaporization or distillation curves. W. L. Nelson. Oil & Gas J 51:149-50 Mr 16 '53

Thermodynamic properties of the oxides and their vaporization processes. L. Brewer. Chem R 52:1-75 bibliog(p65-75) F '53

See also

Evaporation

VAPORIZATION, Heat of

Correlation of vapour pressure, temperature, and molar entropy of vaporisation. L. H. Thomas. Chem Soc J p 1233-7 Ap '53

Heat capacity, heat of fusion and heat of vaporization of hydrogen fluoride. J. Hu, D. White and H. L. Johnston. bibliog diag Am Chem Soc J 75:1232-6 Mr 5 '53

Investigation of the heat of vaporization of carbon. W. A. Chupka and M. G. Inghram. bibliog J Chem Phys 21:371-2 F '53

VAPORIZERS

From porcelain to plastics. il Mod Plastics 30:99-100 N '52

Insecticide vaporizers; they should not be used in homes. Consumers Res Bul 31:29 Mr '53

Lindane converters for insect control. G. S. Hensill and S. J. Leland. il Soap & San Chem 28:119-21+ N '52

See also

Sublimation apparatus

VAPORS

Design of cooler condensers for vapor-gas mixtures. G. H. Bras. bibliog Chem Eng 60:223-6 Ap; 238-40 My '53

Heat capacity of organic vapors; data for some aliphatic alcohols using an improved flow calorimeter requiring only 25 ml. of sample. G. C. Sinke and T. De Vries. bibliog Am Chem Soc J 75:1815-18 Ap 20 '53

High-temperature vapour cycles for heat engines. J. F. Alcock and E. J. Macnair. Engineering 175:325 Mr 13 '53

Magnetic properties of adsorbed vapors. W. O. Milligan and H. B. Whitehurst. bibliog J Phys Chem 56:1073-7 D '52

Permeation through and sorption of organic vapors by high polymers. J. A. Cutler and A. D. McLaren. bibliog Tappi 36:423-5 S '53

Sensitive method for determination of vapor composition. K. M. Sancier. diags Anal Chem 24:1563-6 O '52

Thermodynamic properties of sodium vapor. A. Benton and T. H. Inatomi. bibliog J Chem Phys 20:1946-8 D '52

These vapor separators cut concentrate losses 92 per cent; Minute maid corp. W. F. Mantey. il Food Eng 24:105+ N '52

See also

Adsorption
Electric precipitation
Evaporation
Fumes
Gases
Solvents
Steam
Supersaturation
Vapor pressure
Vaporization
Water vapor

VARIABLES (mathematics)

Bohm's interpretation of the quantum theory in terms of hidden variables. J. B. Keller. Phys R 89:1040-1 Mr 1 '53

VARIAN, Russell Harrison

On the frontier. por Fortune 47:88-9 Mr '53

VARIAN, Sigurd

On the frontier. por Fortune 47:88-9 Mr '53

VARIATION (biology)

Induced and other variations in bacterial cultures; the effect of ultra-violet irradiation on bact. coli with special reference to nutritional mutants. A. C. R. Dean and C. Hinshelwood. Chem Soc J p2817-31 Jl '52

VARIATION (statistics)

Interpret machine variations with analysis of variance. N. L. Enrick. diag Textile World 103:130-1+ Jl '53

Units for measuring variations in measurements; with data sheet, statistician's tables for appraising variability. W. J. Youden. il Metal Prog 64:91-6, 96B S '53

Use of ranks in one-criterion variance analysis. W. H. Kruskal and W. A. Wallis. Am Stat Assn J 47:583-621 bibliog(65 titles, p618-21) D '52

See also

Standard deviation

VARIETY stores

Open-door policy in operation; W. T. Grant co. G. F. Davis. Personnel 29:507-10 My '53

See also

Chain stores
Five- and ten-cent stores

VARLEY pumps and engineering, limited

Anniversary, 21st. Engineering 174:549 O 24 '52

VARNISH, Insulating

Cleaning, dipping and baking tips for your electrical varnish jobs. il Power 97:126-7 My '53

Electric drying tunnel increases production of varnished mica coil insulation strips. A. C. Sutton. il Elec World 138:146 D 15 '52

Modern varnishing practice. S. F. Philpott. il Elec R (Lond) 151:1043-50 N 14 '52

VARNISH and varnishing

Polyhydric alcohols as protective coating intermediates. bibliog il Paint Oil & Chem R 116:12-18+ My 7 '53

Polyurethanes in varnishes; abstract. F. Hebermehl. Paint Oil & Chem R 116:34 Jl 30 '53

VASCULAR system

Diseases

Trauma and peripheral vascular disease. M. M. Fisher. bibliog Ind Med 21:538-42 N '52

VASILEVSKII, Aleksandr Mikhailovich, 1905-

Portrait. Fortune 47:96 My '53

VASOPRESSOR action. See Blood vessels

VAT dyes. See Dyes and dyeing—Vat dyes

VEATCHINE

Structure of veatchine and garryine. M. F. Bartlett and others. bibliog Chem & Ind p 173 F 21 '53

VECTOR analysis

New universal right-hand rule. P. M. Honnell. bibliog diags Elec Eng 72:346-9 Ap '53

Operating characteristics of salient-pole machines. J. H. Walker. bibliog diags Inst E E Proc 100 pt 2:13-24 F '53

Problem of the dynamic vibration absorber. R. E. D. Bishop and D. B. Welbourn. diags Engineering 174:796 D 19 '52

Simplified vectorscope measures phase. W. L. Firestone and R. A. Richardson. il diags Electronics 26:180-2 S '53

Three-mass space oscillator. R. K. Bernhard. il diags Machine Design 25:157-63 Je '53

Transformer vector diagram. T. H. Barton and F. A. Benson. diags Electrician 149:601-2 Ag 29 '52

Vector addition; advantages of the polar form. J. G. Boggis. diags Electrician 149:325-8 Ag 1 '52

Vector method of solving vibration problems. C. H. Helmer. diags Engineering 174:620-1, 685-6 N 14, 28 '52

Vector solution of soil pressures. W. D. Bigler. diags Eng N 150:110+ Ap 16 '53

VEGETABLE oils. See Oils and fats

VEGETABLE parchment. See Parchment paper

VEGETABLES

Bacteriological study of irrigated vegetables. N. N. Norman and P. W. Kabler. bibliog Sewage & Ind Wastes 25:605-9 My '53

VEGETABLES—*Continued*

Washing and peeling. Food Eng 25:155 O '53

See also

Canned food

Cooling of fruits and vegetables

also names of vegetables, e.g.

Beans

Corn

Lettuce

Potatoes

Tomatoes

Analysis

Determination of arsenic in fruits and vegetables. J. C. Bartlet, M. Wood and R. A. Chapman. bibliog Anal Chem 24:1821-4 N '52

Prepackaging

Economical use of fibreboard; study of master shipping containers for pre-packaged tomatoes. B. C. Robertson and W. A. Aronow. il diags Mod Packaging 26:141-3 N '52

Films for produce. H. A. Schomer. il Mod Packaging 26:191-6 Ap '53

In-plant box former; tomato pre-packager's machine. il Mod Packaging 26:98-9+ F '53

Refrigeration of prepackaged fresh fruits and vegetables. H. A. Schomer. Refrig Eng 61:742-4+ Jl '53

Storage

Fruit and vegetable storage and packaging; report of British team which visited the U.S.A. Chem Age (Lond) 68:241-4 F 7 '53

Transportation

Foil liner for lettuce; crate liner of aluminum foil backed by wet-strength kraft delivers a premium crop. il Mod Packaging 26:130-2 D '52

Where railroads lose traffic to trucks. Ry Age 135:11-12 Jl 13 '53

VEGETABLES, Frozen

Farm-truck to freezer in 19 min.; Biscayne frozen foods. A. L. Stahl and C. J. John. il Food Eng 24:142-3+ N '52

VEHICLES

See also

Automobiles

Bicycles

Cars

Electric vehicles

Motor buses

Motor trucks

Motor vehicles

Trailers

VELOCITY

Simplified method for the absolute calibration of velocity gauges. D. S. Cohen. diag R Sci Instr 24:74-5 Ja '53

Velocity measurements of air-water mixtures. L. G. Straub and others. il diags Am Soc C E Proc 79 [no 193]:1-14 My '53

Velocity ratios of epicyclic gears. D. B. Welbourn. diags Engineering 176:198-9 Ag 14 '53

See also

Electrons—Velocity

Light—Velocity

Sound—Velocity

Speed variation

VENDING machines

Food vending in the factory. il Mod Ind 25:53-5 My '53

Pattern of distribution changes. G. C. Papineau. il Ptr Ink 241:48-9 D 12 '52

Sell it to you hot or cold. il Bsns W p70 F 14 '53

Slot-machine shopping. il Bsns W p71 Ap 4 '53

Solve today's selling problems with new ideas in mechanical vending. G. R. Schreiber. Paper Tr J 135:22+ O 24 '52

Vending fills the bill-of-fare. A. E. Yohalem. il Mill & Factory 51:96-7 O '52

Vending machine mechanism simplified. diag Machine Design 25:128 My '53

Vendors; the robots invade industry. T. Metaxas. Iron Age 171:65-6 F 19 '53

Want to gamble? sell by coin slot. Sales Management 69:73 O 15 '52

Where vending machines fall short. Bsns W p 154 F 21 '53

Insurance company use

Improved policy dispensing machine now in use. Weekly Underw 167:1319 N 15 '52

VENEREAL diseases

Venereal disease contact investigation. N. J. Fiumara and others. Pub Health Rep 68:289-94 Mr '53

VENETIAN blinds

Design data for slat-type sun shades for use in load estimating. G. V. Parmelee and D. J. Vild. il diags Heating-Piping 25:130-6 S '53

Shading of sunlit glass; experimental study of slat-type sun shades. G. V. Parmelee and others. bibliog il diags Heating-Piping 25:192-200 Ja '53

When dealers ask what is net to me? Hunter Douglas salesmen sales portfolio. Sales Management 69:87 N 1 '52

VENEZUELA

Congo, Indonesia, Venezuela loom as new world markets; with maps. Ind Marketing 38:47-50 Mr '53

Opportunities for the technical man in Venezuela. A. R. Beardsley. Chem Eng 59:157-8 N '52

See also

Bridges—Venezuela

Elections—Venezuela

Gas, Natural—Venezuela

Geology—Venezuela

Iron mines and mining—Venezuela

Labor laws and legislation—Venezuela

Petroleum—Venezuela

Petroleum industry and trade—Venezuela

Petroleum pipe lines—Venezuela

Petroleum workers—Venezuela

Commerce

Venezuela tightens import of U.S. pork. For Comm W 49:8 My 25 '53

Commercial policy

Controls on international trade. For Comm W 48:9 O 20 '52

Economic conditions

Economic conditions abroad (cont). For Comm W 49:3 Ja 5; 5 F 23; 5 My 4; 50:5 Jl 27 '53

Economic relations

United States

Clouds over Venezuela. Bsns W p 140 D 13 '52

Politics and government

Venezuela votes. map Economist 165:631-2 N 29 '52

VENOM

Snake venoms, their biochemistry and mode of action. N. Porges. bibliog Science 117:47-51 Ja 16 '53

VENTILATION

Air flow through ceiling pans. A. H. Gipson. il diags Heat & Ven 50:79-81 Je '53

Distributing air from a luminous plastic ceiling. L. G. Seigel and W. L. Bryan. il diags Heating-Piping 25:107-9 S '53

How to design ventilation for radiological hazards. W. W. McIntosh. il diags Heating-Piping 25:90-5 My; 98-102 Je; 98-102 Jl '53

Industrial ventilation conference, East Lansing, Mich.; abstracts of papers. il Heating-Piping 25:90-2 Ap '53

Mechanical ventilation can prevent grain spoilage. V. Marvin and C. C. Connolly, jr. il Elec World News ed 139:34-5 Mr 2 '53

Reports limited success in ventilation control; abstract. W. F. Wells. Pub Health Rep 68:240 F '53

See also

Air conditioning

Air diffusers

Air filters

Air pipes

Air pollution

Air purification

Cooling

Dust removal

Electric fans, Ventilating

Exhaust systems

Gas appliances—Ventilation

Heating

Humidity

Mine ventilation

Tunnel ventilation

Ventilators

also subdivision Heating and ventilation under special subjects, e.g.

Churches

Factories

Garages

Paper mills

Prisons

School buildings

Ships

Bibliography

Abstracts and reviews; books and pamphlets. Published in monthly numbers of Heating and ventilating

VENTILATION research
Air velocities in ventilating jets. G. L. Tuve. bibliog(25 titles) il diags Heating-Piping 25:181-91 Ja '53
ASHVE plans research program for 1953. I. W. Cotton. Heating-Piping 24:137 D '52
Bacteria and odor control problem in occupied spaces. R. L. Kuehner. bibliog(31 titles) diags Heating-Piping 24:113-19 D '52; Abstract. Heat & Ven 50:86 Mr '53; Discussion. Heating-Piping 25:143-6 Mr '53
Building conservation report stresses ASHVE research need; Building research advisory board for the Defense production administration. Heating-Piping 24:123 N '52
Designing for natural ventilation in classrooms. il diags Heat & Ven 50:99-100 Ja '53
1952 annual report, A.S.H.V.E. committee on research. map plan diag Heating-Piping 25:148-56 Mr '53
Unit ventilator performance in heating, cooling classrooms. W. G. Potter and F. G. Baker. il Heating-Piping 25:104-7 Ap '53

VENTILATORS
Clay flue liners for unusual venting system. il Heat & Ven 50:110 O '53
Diverters or draft hoods with dimensions of design; detail sheet. diags Heat & Ven 50:9-10 Je '53
How to control unit ventilators in school buildings. H. W. Alyea. diag Heating-Piping 25:92-5 O '53
Louvered skylight, ventilator combined. il diag Arch Rec 112:204-5 S '52
On-the-spot fume control; with portable ventilators. E. Kundig. il diag Safety Maint & Prod 104:64-7 D '52
Roof ventilators jack TVA hydro-plant output. il Power 96:94 N '52
Unit ventilator performance in heating, cooling classrooms. W. G. Potter and F. G. Baker. il Heating-Piping 25:104-7 Ap '53

VENTURE capital. See Capital

VENTURI meters
Calculation of compressible flow through a Venturi meter. E. Markland. Engineering 176:147 Jl 31 '53
Comprehensive metering of sewage at the world's largest treatment works; Chicago's West-Southwest plant. N. E. Anderson. flow diag il Water & Sewage Works 100:412-15 O '53
Pitot-Venturi flow element water service report. H. W. Stoll. il diags A S M E Trans 75:969-74 Jl '53
Silicon bronze weldment replaces cast iron in Venturi fabrication. il Am Mach 97:199 Mr 16 '53
Venturi as a meter for gas-solids mixtures. L. Farbar. bibliog flow diag il diags A S M E Trans 75:943-51 Jl '53

VENTURI scrubbers
Venturi scrubber at Bathurst. C. V. Callaghan. diag Pulp & Pa of Can 54:106-7 Ap '53

VENTURI tubes
Some problems of fluid-flow measuring devices. F. V. A. Engel. bibliog diags Engineering 176:6-10, 35-7 Jl 3-10 '53

VERACEVINE
Veratrine alkaloids; veracevine, the alkanolamine of cevadine and veratridine. S. W. Pelletier and W. A. Jacobs. bibliog Am Chem Soc J 75:3248-52 Jl 5 '53

VERATRALDEHYDE
Conversion of veratraldehyde to vanillin by nitrobenzene and alkali. W. J. Brickman and C. B. Purves. bibliog Am Chem Soc J 75:4336-7 S 5 '53

VERATRAMINE
Degradation of veratramine to benzene-1,2,3,4-tetracarboxylic acid. O. Wintersteiner, M. Moore and N. Hosansky. bibliog Am Chem Soc J 75:2781-2 Je 5 '53

VERATRINE
Isolation of desacetylneoprotoveratrine from veratrum viride Ait. M. W. Klohs and others. bibliog Am Chem Soc J 75:3595-6 Jl 20 '53
Veratrine alkaloids; veracevine, the alkanolamine of cevadine and veratridine. S. W. Pelletier and W. A. Jacobs. bibliog Am Chem Soc J 75:3248-52 Jl 5 '53

VERATRUM
Alkaloids of veratrum eschscholtzii Gray; the glycosides. M. W. Klohs and others. bibliog Am Chem Soc J 75:2133-5 My 5 '53
Hypotensive alkaloids from veratrum album protoveratrine A, protoveratrine B and germitetrine B. H. A. Nash and R. M. Brooker. bibliog Am Chem Soc J 75:1942-8 Ap 20 '53
Infrared spectrophotometric study of veratrum alkaloids. G. Papineau-Couture and R. A. Burley. bibliog Anal Chem 24:1918-21 D '52
Isolation of neoprotoveratrine and protoveratrine from veratrum viride Ait. M. W. Klohs and others. bibliog Am Chem Soc J 74:5107-10 O 20 '52
Veratrine alkaloids; the structure of isorubijervine; conversion to solanidine. S. W. Pelletier and W. A. Jacobs. bibliog Am Chem Soc J 75:4442-6 S 20 '53
Veratrobasine and geralbine, two new alkaloids isolated from veratrum album. A. Stoll and E. Seebeck. Am Chem Soc J 74:4728-9 S 20 '52

VERDET constant
Absolute Verdet constants for benzene over a range of temperatures and visible wave lengths. R. L. Custer and C. E. Waring. bibliog Am Chem Soc J 74:5726-8 N 20 '52

VEREIN deutscher ingenieure
Annual meeting, 83d, Essen, May 16-19. Engineer 195:830-1 Je 12 '53

VERMICULITE
Sales aid; a central intelligence service. il Chem W 72:48+ Ja 17 '53
Vermiculite concrete for roofs and wall panels. L. A. Castell. il Rock Prod 56:196-7 Je '53

VERMICULITE institute
Annual meeting, Edgewater Park, Miss. March 23-26. Concrete 61:31+ My '53; Rock Prod 56:110-11 Je '53

VERSENATE
Determination of calcium, magnesium, and iron in limestone by titration with Versenate. Kuang Lu Cheng, T. Kurtz and R. H. Bray. bibliog Anal Chem 24:1640-1 O '52
Determination of total iron in soils by disodium dihydrogen ethylenediamine tetraacetate titration. Kuang Lu Cheng, R. H. Bray and T. Kurtz. bibliog Anal Chem 25:347-8 F '53
Spectrophotometric titrations with ethylenediaminetetraacetic acid; determination of iron, copper, and nickel. P. B. Sweetser and C. E. Bricker. bibliog diags Anal Chem 25:253-5 F '53

VERSENE. See Ethylenediamine tetraacetic acid

VER STEEG, Karl, 1891-1952
Memorial. A. N. Strahler. bibliog por(pl 18) Geol Soc Proc 1952:155-8 Je '53

VERTEBRATES, Fossil

Bibliography

Bibliography of fossil vertebrates, 1944-1948. C. L. Camp and others. (Memoir 57) 465p Geological soc. of America, 419 W. 117th st, New York 27 '53 ($5.50)

VETERANS
Answer newspaper on benefit payments to patients treated in VA hospitals. Nat Underw 57:27 Ap 16 '53; Same. Nat Underw (Life ed) 57:2 Ap 10 '53
Companies pay for veterans' treatment if provided for in policy. East Underw 54:5 Ap 10 '53; Same. Weekly Underw 168:1029 Ap 11 '53
Out of the army, back to the plant; Armco steel corp. program for servicemen. il Mod Ind 24:97-8 O '52
See also
Hospitals, Military

Education

A.I.B. in uniform. Banking 45:61+ My '53
Criteria for selecting nationally recognized accrediting agencies issued by U.S. Office of education. R. G. Gibbs. Chem & Eng N 30:4460 O 27 '52

VETERANS—*Continued*

Housing

Builders hit GI loan snags. Eng N 149:70 O 30 '52

Compulsory home warranties urged after probe of GI and FHA housing. Eng N 149:27 D 11 '52

Housing project avoids freight-yard look; state aided Veterans' housing, Chelsea, Mass. il plans Arch Rec 113:124-5 Ja '53

VA tells how well its guarantees cover package and expandable mortgages. House & Home 2:63 S '52

Insurance

See Insurance, Military and naval service

Loans

Experience report on G.I. mortgage loans. C. A. Grentzner. il Burroughs Clearing House 36:38-9+ S '52

Inequality of interest rate, overall demand blamed for dip in VA home loans; decline of life insurance company investment activity. Nat Underw (Life ed) 57:15 Je 26 '53

Need for higher interest on GI loans. T. E. Lovejoy, jr. East Underw 54:8 Mr 27 '53

VA tells how well its guarantees cover package and expandable mortgages. House & Home 2:63 S '52

VA's new discount rules; will they cripple VA loans? Eng N 150:100 Je 11 '53

VETERANS administration

More mortgages at higher rates. Bsns W p27 My 9 '53

Teague investigation brings convictions. Eng N 150:103 Ja 8 '53

VA reorganization planned by experts. East Underw 53:11 D 5 '52

VA's new discount rules; will they cripple VA loans? Eng N 150:100 Je 11 '53

VETERANS' pensions. See Pensions, Military

VETERINARY medicine

Bonanza in the barnyard. il Chem W 72:44+ F 21 '53

Fine chemicals in veterinary medicine; abstract. J. Carmichael. Chem & Ind p 1172-3; Discussion. 1173-4 N 29 '52

Public health in veterinary medicine; from American veterinary medical association papers. Pub Health Rep 67:977-88 O '52

See also

Leptospirosis

Advertising

Drug ad censorship plan of Bureau of animal industry defended. Oil Paint & Drug Rep 164:3+ S 21 '53

Drug makers urge BAI to drop its advertising censorship plans. Oil Paint & Drug Rep 164:3+ O 5 '53

Drug, veterinary interests protest placing censorship on advertising. Oil Paint & Drug Rep 164:3+ S 14 '53

Tying ads and displays together. J. Harger. il Ptr Ink 242:45 F 6 '53

Regulation

Drug makers formally oppose new BAI plan. Oil Paint & Drug Rep 164:5+ O 12 '53

VIBRATION

Axially symmetric vibrations of a finite isotropic disk. R. R. Aggarwal. bibliog Acoustical Soc Am J 24:463-7, 663-6 S-N '52

Damping of elastically supported element in a vacuum tube. S. Levy and others. il diag J Res Nat Bur Stand 50:71-4 F '53

Effects of vibration during solidification of castings. W. Rostoker and M. J. Berger. bibliog il Foundry 81:100-5+ Jl '53

Flexural vibrations of thin cylinders. R. N. Arnold and G. B. Warburton. diags Inst Mech Eng Proc (A) 167 no 1:62-74; Discussion. 74-80 '53

Natural vibrations of rectangular quartz plates and determination of the dispersion of sound in ethyl ether. B. Özdoğan. diag Acoustical Soc Am J 24:541-2 S '52

Nodal pattern analysis. B. Grinsted. bibliog il diags Inst Mech Eng Proc (A) 166 no 3:309-21 '52; Discussion. 166 no 3:322-6 '52; 167 no 2:174-6 '53

Radial impact on an elastically supported ring. E. Wenk, jr. il diags Am Soc C E Proc 78 [no 157]:1-25 N '52

Steady-state forced vibration of continuous frames. C. T. G. Looney. diags Am Soc C E Proc 78 [no 136]:1-21 Je '52; Discussion. 79 [no D-136]:1-14 Ap '53

Torsional vibration notes with solutions for an untuned viscous damper and flexible coupling with nonlinear elasticity. F. P. Porter. diags A S M E Trans 75:241-62; Discussion. 262-8 F '53

Vibrations of a continuous beam under a constant moving force. E. Saibel and W. F. Z. Lee. bibliog diags Franklin Inst J 254:499-516 D '52

Vibrations of evaporating liquid drops. N. J. Holter and W. R. Glasscock. il diag Acoustical Soc Am J 24:682-6 N '52

See also

Airplanes—Vibration
Automobiles—Vibration
Balancing of machinery
Bridges—Vibration
Concrete—Vibration
Machinery—Vibration
Oscillations
Ships—Vibration
Sound waves

Measurement

Analyzing beam vibration. G. Sonnemann. bibliog diags Machine Design 25:123-8 Je '53

Apparatus for measuring internal friction in transversely vibrating metal reeds; Strobotac. W. R. Jewell. diags R Sci Instr 24:5-10 Ja '53

Circuit measures vibration decay constant. Product Eng 23:148-9 D '52

Electromechanical pick-up calibration by the interferometer method. C. A. Ziegler. diags Acoustical Soc Am J 25:135-7 Ja '53

Experimental study of natural vibrations of cantilevered triangular plates. P. N. Gustafson and others. bibliog il diags J Aeronautical Sci 20:331-7 My '53

How to measure machine-tool vibration. S. Heller. diags Am Mach 97:141 Jl 6 '53

Inexpensive, pocket-size gadget measures machine vibration. il Eng & Min J 153:121 D '52

Plastic models for vibration analysis. G. O. Sankey. il diag Machine Design 25:125-8 My '53

Portable preamplifier for vibration analysis. R. K. Vinycomb and L. D. Crawley. il diag Electronics 26:164-5 Jl '53

Reciprocity calibration of piezoelectric accelerometers. M. Harrison and others. diags Acoustical Soc Am J 24:384-9 Jl '52

Self-generating accelerometers. G. K. Guttwein and A. I. Dranetz. bibliog il diags Electronics 24:120-3 O '51; Same cond. Product Eng Hdbk p I 26-8 '53

Sinusoidal calibration table for vibration type transducers. C. M. Fields and R. S. Nevin. il diag Product Eng 23:172-3 D '52

Sound and vibration analysis. il diags Engineering 174:286-8 Ag 29 '52

Vibrating-system decay-constant measurement. diag Electronics 25:160+ D '52

Vibration measured, controlled by new test methods; Buick motor div., General motors corp. L. E. Muller. il diag Iron Age 171:137-9 F 26 '53

Vibration-pickup amplifier. L. E. Garner, jr. il diags Radio & Tv N 49:48-9+ Ja '53

Wide-range calibrator for vibration pickups. W. A. Yates and M. Davidson. bibliog il diags Electronics 26:183-5 S '53

VIBRATION absorbers

Field problem in instrumentation; isolating vibration from frequency meter. il Diesel Power 31:99 Ap '53

How to apply vibration isolators. R. J. Dickie. diags Electronics 25:126-30 D '52

New glass fiber mat has controlled resiliency. K. Rose. il Materials & Methods 37:176+ Ap '53

Numerical analysis of damped vibrating systems. E. S. Ault and W. J. Graff, jr. diags Machine Design 25:169-74 My '53

P.G.&E. reports good results from snubbers on Super-Inch. il Gas Age 112:44 Ag 13 '53

Problem of the dynamic vibration absorber. R. E. D. Bishop and D. B. Welbourn. diags Engineering 174:796 D 19 '52

VIBRATION absorbers—*Continued*

Suspension control; dynamic absorbers. il diags Automobile Eng 43:295-300 Jl '53

Torsional vibration notes with solutions for an untuned viscous damper and flexible coupling with nonlinear elasticity. F. P. Porter. diags A S M E Trans 75:241-62; Discussion. 262-8 F '53

Use of the centrifugal governor mechanism as a torsional vibration absorber. O. A. Pringle. diags A S M E Trans 75:59-61; Discussion. 61-2 Ja '53

VIBRATORS

Compacting concrete by vibration. H. S. Meissner. diags Am Concrete Inst J 24: 885-92 Je '53

Giving things the shakes. R. James. il Comp Air Mag 58:131-3 My '53

New vibration techniques on western project. il Roads & Sts 95:126 N '52

Review of methods for measuring the constants of piezoelectric vibrators. E. A. Gerber. bibliog diags Inst Radio Eng Proc 41: 1103-12 S '53

Rubber-tipped vibrators used on prestressed job. il diag Roads & Sts 96:104 F '53

Selecting and installing vibrators. F. Marich. diags Food Eng 25:77-9 Jl '53

Space oscillator for field or laboratory testing. il Product Eng 23:218 D '52

Testing nuts and bolts for resistance to vibration; Lester vibrator machine. il diag Engineering 175:54-5 Ja 9 '53

Three-mass space oscillator. R. K. Bernhard. il diags Machine Design 25:157-63 Je '53

Vibration generator for electron tubes. il diag Tele-Tech 12:84-5 Ag '53

What makes a good vibrator set-up? F. Marich. il diags Chem Eng 60:204-7 Ap '53

VIBROFLOTATION process. See Soils—Consolidation

VIBROSCOPE

Improved vibroscope. S. L. Dart and L. E. Peterson. il diags Textile Res J 22:819-22 D '52

Vibroscopic method for determination of fiber cross-sectional area. D. J. Montgomery and W. T. Milloway. diags Textile Res J 22:729-35 N '52

VICARA. See Textile fibers, Synthetic

VIDEO, inc.

Stock offered. Comm & Fin Chr 177:417 Ja 26 '53

VIDICON. See Television cameras

VIERENDEEL trusses. See Trusses

VIKINGS

Discovery of North America. J. H. L. Chambers, jr. il map U S Naval Inst Proc 79:64-72 Ja '53

VINEGAR

Analysis

Spectrophotometric study of dichromate-chromic salt mixtures; application to the determination of glycerol in vinegar. D. T. Englis and L. A. Wollerman. Anal Chem 24:1983-5 D '52

Manufacture

Operation of vinegar generators. R. J. Allgeier, R. T. Wisthoff and F. M. Hildebrandt. bibliog Ind & Eng Chem 45:489-94 F '53

Vinegar in volume; M. A. Gedney co. L. E. Slater. il Food Eng 25:88-9+ Jl '53

VINYL acetate

Copolymerization of benzene with vinyl acetate. W. H. Stockmayer and L. H. Peebles, jr. bibliog Am Chem Soc J 75:2278-9 My 5 '53

Copolymerization of vinyl acetate with a cyclic disulfide. W. H. Stockmayer, R. O. Howard and J. T. Clarke. Am Chem Soc J 75:1756-7 Ap 5 '53

Diffusion of acetone into polyvinyl acetate above and below the second-order transition. R. J. Kokes and others. bibliog J Chem Phys 20:1711-16 N '52

Formulating polyvinyl acetate emulsion paints; abstract. A. C. Fletcher. Paint Oil & Chem R 116:29 Jl 16 '53

Improved portland cement mortars with polyvinyl acetate emulsions. J. M. Geist, S. V. Amagna and B. B. Mellor. bibliog il Ind & Eng Chem 45:759-67 Ap '53

Interdiffusion of polyvinyl acetate with a series of solvents. A. T. Hutcheon and others. bibliog J Chem Phys 20:1232-6 Ag '52

Particle growth in the aqueous polymerization of vinyl acetate. W. J. Priest. bibliog J Phys Chem 56:1077-82 D '52

Reactions of vinyl acetate with aliphatic hydroxy compounds; a new synthesis of vinyl ethers. R. L. Adelman. bibliog Am Chem Soc J 75:2678-82 Je 5 '53

VINYLACETYLENE

Microwave spectrum of vinylacetylene. H. W. Morgan and J. H. Goldstein. J Chem Phys 20:1981 D '52

VINYL alcohol

High-polymer solutions; osmotic-pressure measurements with poly(vinyl alcohol) membranes. H. T. Hookway and R. Townsend. Chem Soc J p3190-5 Ag '52

Preliminary study of the sizing of staple Orlon and Dacron. W. C. Wylie, jr. Am Dyestuff Rep 42:11-13 Ja 5 '53

Studies of thermosetting polyvinyl alcohol systems. C. F. Brown. bibliog Rubber Age 72:211-14 N '52

Analysis

Analysis of phthalic acid esters of cellulose and of polyvinyl alcohol. C. J. Malm, L. B. Genung and W. Kuchmy. bibliog Anal Chem 25:245-9 F '53

VINYL chloride

Accelerated and outdoor weathering of colored vinyl films. F. G. Clark. bibliog il diags Ind & Eng Chem 44:2697-709 N '52

Aliphatic building blocks for petrochemical textiles; the monomers. P. W. Sherwood. bibliog Pet Processing 7:1809-10 D '52

Effective control of lead dust in the manufacture of vinyl plastics. A. E. Goss and A. M. Ross, jr. diags India Rubber World 127:652-6 F '53

Finishing nylon; durable coatings with polyvinylchloride; patent. Am Dyestuff Rep 42: 50-1 Ja 19 '53

Lucoflex solution to corrosion in chemical plants. il Can Chem Process 37:62+ F '53

Multi-screw extrusion of rigid vinyls. S. H. Greenwood. il India Rubber World 129:73-5 O '53

Plastic pipe; polyvinyl chloride extruded to shape has big potential. il Iron Age 170: 184-5 D 11 '52

Polyvinyl-chloride sheet in rigid form. Engineering 174:167 Ag 8 '52

Polyvinyl chloride tape approaches ideal material for pipe protection. G. M. Carter, jr. and T. J. Skotnicki. il Am Gas J 179: 14-15+ Jl '53

Processing of rigid polyvinyl chloride plastic. C. E. Parks. il India Rubber World 128: 631-4 Ag '53

Some factors affecting the solubility of polymers. P. A. Small. bibliog J Ap Chem 3:71-80 F '53

Two extrusion plastometers for use with polyvinyl chloride. R. Hayes. diags Chem & Ind p 1069-72 N 1 '52

Unplasticized polyvinyl chloride. J. L. Huscher. il Chem Eng 59:264+ N '52

Vinyl chloride polymerization procedure. S. G. Bankoff and R. N. Shreve. bibliog il Ind & Eng Chem 45:270-6 F '53

Vinyl plastics sponges. K. Rose. il Materials & Methods 37:104-5 Je '53

VINYL compounds

Coloring of vinyl dry blend compound. R. L. Lynch. bibliog India Rubber World 128: 65-8 Ap '53

Decyanoethylation of polyvinyl β-cyanoethyl ether. J. F. Wright and L. M. Minsk. bibliog Am Chem Soc J 75:98-101 Ja 5 '53

Diazonium fluoborates as initiators of vinyl polymerization. C. S. Marvel and others. Am Chem Soc J 75:3846-8 Ag 5 '53

Diethyl vinyl phosphate, divinyl benzene phosphonate and their polymers. R. W. Upson. bibliog Am Chem Soc J 75:1763-4 Ap 5 '53

Effect of structure of diacyl peroxides on their radical-induced decomposition in vinyl monomers. W. Cooper. Chem Soc J p2408-15 Je '52

VINYL compounds—*Continued*

Electron exchange-polymers; polymers and copolymers of vinylhydroquinone. M. Ezrin, I. H. Updegraff and H. G. Cassidy. Am Chem Soc J 75:1610-14 Ap 5 '53

Electron impact studies of the vinyl ion and radical. F. H. Field. bibliog J Chem Phys 21:1506-10 S '53

Evaluation of plasticizer performance in vinyl resins. T. C. Patton. bibliog India Rubber World 127:371-4 D '52

Formulation of industrial coatings with vinyl resins. E. J. Bromstead and others. bibliog Paint Oil & Chem R 115:22-4+ O 23 '52

Infra-red absorptions of vinyl and *iso*propenyl groups in polar compounds. W. H. T. Davison and G. R. Bates. Chem Soc J p2607-11 S '53

Liquid polymers of acrylic esters. C. E. Rehberg and J. Siciliano. bibliog Ind & Eng Chem 44:2864-6 D '52

Magnetic study of polymerization retardation. J. L. Ihrig and H. N. Alyea. bibliog diag Am Chem Soc J 75:2917-21 Je 20 '53

Migration of plasticizers from vinyl film. B. Coe. Rubber Age 72:220-2 N '52

Organo-tin compounds and stabilizers. Chem Age (Lond) 68:5-7 Ja 3 '53

Plasticizers for polyvinyl compounds. H. Jones and A. Hill. Paint Oil & Chem R 115:11+ N 20 '52

Polarographic behavior of methyl vinyl ketone and methyl vinyl sulfone. C. W. Johnson, C. G. Overberger and W. J. Seagers. bibliog Am Chem Soc J 75:1495-6 Mr 20 '53

Prime and paint with vinyls. il Chem Eng 59:198-9 O '52

Raman spectra of vinyl- and dichlorovinyltrichlorosilane. H. Murata. J Chem Phys 21:181-2 Ja '53

Reactions of vinyltrichlorosilane and vinyltriethoxysilane. G. H. Wagner and others. bibliog Ind & Eng Chem 45:367-74 F '53

Synthetic latex in scrub-resistant intumescent coatings. E. K. Stilbert and I. J. Cummings. bibliog il Ind & Eng Chem 45:748-54 Ap '53

Test procedures are diverse for vinylcoated fabrics. T. J. Kerr. Textile World 103:141, 276+ F '53

Vinyl floor coverings. R. W. Jackson. Can Chem Process 37:86+ My '53

2-Vinylimidazole and 1-methyl-2-vinyl-imidazole. J. K. Lawson, jr. bibliog Am Chem Soc J 75:3398-400 Jl 20 '53

Vinyl insulation for wire and cable. il Can Chem Process 37:56 My '53

Vinyl resins gelled or foamed. il Chem Eng 59:232+ D '52

Vinyl silicone resin treatment of glass fibers. M. H. Jellinek. Mod Plastics 30:150+ N '52

Vinyl-type monomers from petrochemicals. C. E. Schildknecht. Oil & Gas J 52:84+ Je 29 '53

Vinylene carbonate. M. S. Newman and R. W. Addor. Am Chem Soc J 75:1263-4 Mr 5 '53

Vinyls underfoot. Chem W 71:61-2 O 25 '52

VINYLCYCLOHEXENE

Thermal dimerization of butadiene, and the equilibrium between butadiene and vinylcyclohexene. N. E. Duncan and G. J. Janz. bibliog J Chem Phys 20:1644-5 O '52

VINYLCYCLOPROPANE

*cyclo*Propanes; the addition of ethyl sodiomalonate to ethyl *cyclo*propane-1 : 1-dicarboxylate and its 2-vinyl derivative. R. W. Kierstead, R. P. Linstead and B. C. L. Weedon. Chem Soc J p3616-21 S '52

*cyclo*Propanes; the malonate condensation with 1 : 4-dibromobut-2-ene; a convenient new route to vinyl*cyclo*propane derivatives. R. W. Kierstead, R. P. Linstead and B. C. L. Weedon. Chem Soc J p3610-16 S '52

Dehydration of methylcyclopropylcarbinol over alumina; a synthesis of vinylcyclopropane. V. A. Slabey. bibliog Am Chem Soc J 74:4930-2 O 5 '52

VINYL ethers

Heterocyclic vinyl ethers; benzo-1,4-dithiadiene. W. E. Parham, T. M. Roder and W. R. Hasek. bibliog Am Chem Soc J 75:1647-51 Ap 5 '53

Heterocyclic vinyl ethers; the synthesis of 1,4-dithiadiene and 1,4-dithiadiene disulfone. W. E. Parham, H. Wynberg and F. L. Ramp. bibliog Am Chem Soc J 75:2065-9 My 5 '53

Kinetics of ionic polymerisations; the side-chain effect in the vinyl ethers. D. D. Eley and J. Saunders. Chem Soc J p4167-73 N '52

Reactions of vinyl acetate with aliphatic hydroxy compounds; a new synthesis of vinyl ethers. R. L. Adelman. bibliog Am Chem Soc J 75:2678-82 Je 5 '53

VINYL pyridine

Addition compounds of chromium(VI) oxide with heterocyclic nitrogen bases; reactions with the lutidines, vinylpyridines, 2,4,6- collidine and α-picoline. H. H. Sisler and others. bibliog Am Chem Soc J 75:446-8 Ja 20 '53

Pyridylethylation of active nitrogen compounds; further studies of the reactions of 2-vinylpyridine with ketones. M. H. Wilt and R. Levine. bibliog Am Chem Soc J 75:1368-72 Mr 20 '53

VINYL pyrrolidone

Evaluation of polyvinylpyrrolidone preparations. G. B. Levy, I. Caldas, jr. and D. Fergus. bibliog Anal Chem 24:1799-803 N '52

Macromolecular properties of polyvinylpyrrolidone; molecular weight distribution. L. E. Miller and F. A. Hamm. bibliog J Phys Chem 57:110-22 Ja '53

Preparatory method for N-vinyl-2-pyrrolidone. B. Puetzer, L. Katz and L. Horwitz. Am Chem Soc J 74:4959-60 O 5 '52

VINYL sulfate

Metachromasy of rhodamine 6G produced by polyvinyl sulfate. M. Koizumi and N. Mataga. Am Chem Soc J 75:483-4 Ja 20 '53

VINYL trichlorosilane

Interesting side-reaction in the preparation of triphenylvinylsilane. L. F. Cason and H. G. Brooks. bibliog Am Chem Soc J 74:4582-3 S 20 '52

VINYON

Modern Textiles handbook; vinyon. L. Mauer and H. Wechsler. Mod Textiles Mag 34:80+ Ap '53

VIOLANTHRONE

Photoconductivity of violanthrone. H. Akamatu and H. Inokuchi. J Chem Phys 20:1481-3 S '52

VIRGINIA electric and power company

Bonds offered. Comm & Fin Chr 176:1569 O 27 '52

Private power; Roanoke Rapids project. Bsns W p31 Mr 21 '53

VIRGINIA state ports authority

Virginia ports authority pushes development program. Manuf Rec 122:37-8 Ap '53

VIRGINIAN railway

Profits upturn is likely. Barron's 33:21-2 Je 8 '53

VIRIAL coefficients

Adsorption on proteins and interactions between protein molecules in solution. T. L. Hill. J Chem Phys 21:1395-6 Ag '53

Compressibility of gaseous krypton; the virial coefficients and potential parameters of krypton. J. A. Beattie and others. bibliog J Chem Phys 20:1615-18 O '52

General relation between the density virial coefficients and the pressure virial coefficients. W. E. Putnam and J. E. Kilpatrick. J Chem Phys 21:951 My '53

Interaction coefficients of gas mixtures. R. A. Gorski and J. G. Miller. bibliog diag Am Chem Soc J 75:550-2 F 5 '53

Low temperature second virial coefficients for a Lennard-Jones gas. L. F. Epstein. J Chem Phys 20:1670-2 N '52

Low temperature second virial coefficients for a 6-9 potential. G. M. Roe and others. bibliog J Chem Phys 20:1665-9 N '52

Negative cluster concentrations. J. E. Kilpatrick. J Chem Phys 21:1366-7 Ag '53

Pressure virial coefficients in terms of cluster integrals. W. E. Putnam and J. E. Kilpatrick. J Chem Phys 21:1112 Je '53

Quantum-mechanical treatment of virial coefficients. J. E. Kilpatrick. bibliog J Chem Phys 21:274-8 F '53

Representation of gas properties in terms of molecular clusters. H. W. Woolley. bibliog J Chem Phys 21:236-41 F '53

VIRIAL coefficients—*Continued*

Second virial coefficient of benzene. P. G. Francis and others. bibliog J Chem Phys 20:1341 Ag '52

Third virial coefficient in polymer solutions. W. H. Stockmayer and E. F. Casassa. bibliog J Chem Phys 20:1560-6 O '52

Third virial coefficient of ethane. H. G. David and others. J Chem Phys 20:1973 D '52

VIRIDIFLORIC acid

Trachelanthic and viridifloric acids. R. Adams and B. L. VanDuuren. bibliog Am Chem Soc J 74:5349-51 N 5 '52

VIRUSES

APHA conference report; BW defense, general services of virus laboratories. Pub Health Rep 68:199-201 F '53

Development forms of vaccinia virus. W. H. Gaylord, jr. and J. L. Melnick. il Science 117:10-13 Ja 2 '53

Fossil virus. Sci Am 188:52+ Mr '53

Influenza virus. M. Burnet. il Sci Am 188: 27-31 Ap '53

Mechanism of virus attachment to host cells. L. J. Tolmach and T. T. Puck. Am Chem Soc J 74:5551-3 N 5 '52

Multiplication of bacterial viruses. G. S. Stent. il diags Sci Am 188:36-9 My '53

Sewage treatment and the virus of poliomyelitis. V. W. Langworthy. bibliog Sewage & Ind Wastes 25:290-2 Mr '53

Iron content

Iron content of an insect virus. C. F. Holoway and G. H. Bergold. bibliog Science 117:251-2 Mr 6 '53

VIRUSES, Plant

See also
Tobacco mosaic virus

VISCOMETERS. See Viscosimeters

VISCOSE

Effect of the cooking conditions on the viscose making properties of birch sulphite pulp; abstract. O. Perila. Pulp & Pa of Can 54:136-7 Jl '53

VISCOSIMETERS

Calibration of the rolling ball viscometer. H. W. Lewis. Anal Chem 25:507-8 Mr '53

Clay-slip testing with the vibrating-plate viscometer. G. W. Phelps and others. bibliog il Am Cer Soc J 36:60-5 F 1 '53

Direct determination of the flow curves of non-Newtonian fluids. I. M. Krieger and others. bibliog J Ap Phys 23:147-9; 24:134-6 Ja '52, F '53

Pasting of potato starch in Corn Industries recording viscometer. A. H. A. de Willigen. bibliog il Anal Chem 25:314-17 F '53

Theory of an oscillating cylinder viscometer. A. A. K. Ibrahim and A. M. Kabiel. J Ap Phys 23:754-6, 1190 Jl, O '52

Vibrating-plate viscometer, an aid in slip-casting control. J. G. Woodward. il Am Cer Soc Bul 31:389-91 O 15 '52

Vibration-plate viscometer. J. G. Woodward. il diag Acoustical Soc Am J 25:147-51 Ja '53

Viscometer for dextrin pastes. W. R. Fetzer, E. K. Crosby and R. E. Fullick. diags Anal Chem 24:1671-2 O '52

Viscometry and mud control. W. B. Lilienthal. il Oil & Gas J 51:124 O 27 '52

VISCOSITY

Acid-base titration, viscosity and density of α-, β- and γ-casein. N. J. Hipp, M. L. Groves and T. L. McMeekin. bibliog Am Chem Soc J 74:4822-6 O 5 '52

Collision diameters of some gases as functions of temperature. I. Glassman and B. L. Harris. bibliog J Phys Chem 56: 797-9 Je '52

Comparison of the effects of several solubilized C_6-hydrocarbons on the viscosity of a polysoap solution. U. P. Strauss and L. H. Layton. bibliog J Phys Chem 57:352-4 Mr '53

Configuration of flexible C_6 hydrocarbons in the vapour phase. G. A. M. Cummings, J. C. McCoubrey and A. R. Ubbelohde. Chem Soc J p2725-30 Jl '52

Coumarone-indene resins; viscosities of the molten resins. E. T. Pieski and A. C. Zettlemoyer. bibliog Ind & Eng Chem 45:167-73 Ja '53

Dependence of the intrinsic viscosity sodium polyacrylate on salt concentration. P. J. Flory and others. bibliog J Chem Phys 21: 164-5 Ja '53

Determination of the surface tension and viscosity of liquid chlorine trifluoride. A. A. Banks, A. Davies and A. J. Rudge. diags Chem Soc J p732-5 Mr '53

Difference in viscosity of *ortho-* and *para-*deuterium at low temperatures. E. W. Becker and others. Phys R 91:414 Jl 15 '53

Effects of structure on the viscosities of perfluoroalkyl ethers and amines. T. J. Brice and R. I. Coon. bibliog Am Chem Soc J 75:2921-5 Je 20 '53

Effects of ultrasonic radiation on the viscosity of cellulose solutions. R. F. Schwenker, jr. and J. C. Whitwell. bibliog Textile Res J 23:436-7 Je '53

Effects of viscous dissipation in the spherical acoustic resonator. H. G. Ferris. Acoustical Soc Am J 25:47-50 Ja '53

Elevation of the intrinsic viscosity of peanut protein by treatment with terephthalyl dichloride. G. E. Mann. bibliog Am Chem Soc J 75:3526-9 Jl 20 '53

Evaluating viscosity index improvers. E. J. Reeves. Pet Refiner 32:139-41 F '53

Fractionation of cellulose acetate. A. J. Rosenthal and B. B. White. bibliog diags Ind & Eng Chem 44:2693-6 N '52

How to determine the softening point of viscosity. R. K. Day. Cer Ind 60:64-5 Mr '53

Influence of variations in rotors, dies, and rate of shear on Mooney viscosity. G. E. Decker and F. L. Roth. il India Rubber World 128:339-43 Je '53

Liquid metals; the viscosity of mercury vapor and the potential function for mercury. L. F. Epstein and M. D. Powers. bibliog J Phys Chem 57:336-41 Mr '53

Nuclear magnetic relaxation in viscous liquids. R. L. Conger. J Chem Phys 21:937 My '53

Relation between dynamic viscosity and rigidity. A. A. K. Ibrahim. J Chem Phys 21: 1422 Ag '53

Some relations between intrinsic and specific viscosity in cellulose solutions at a controlled velocity gradient. V. W. Tripp, C. M. Conrad and T. Mares. bibliog J Phys Chem 56:693-6 Je '52

Stability of the laminar parabolic flow of a viscous fluid between parallel fixed walls. C. L. Pekeris. bibliog Phys R 74:191-9 Jl 15 '48; Discussion. T. Tatsumi. 87:1127-8 S 15 '52

Structure of the liquid state and viscosity of hydrocarbons. R. J. Moore, P. Gibbs and H. Eyring. bibliog diags J Phys Chem 57: 172-8 F '53

Studies in Newtonian flow; viscosity *vs* molecular weight in liquids; viscosity *vs* concentration in polymer solutions. A. K. Doolittle. J Ap Phys 23:418-26 Ap '52

Temperature dependence of the viscosity of associated liquids. T. A. Litovitz. bibliog J Chem Phys 20:1088-9 Jl '52; Correction. 20:1980 D '52

Temperature dependence of the viscosity of liquids. F. Gutmann and L. M. Simmons. bibliog J Ap Phys 23:977-8 S '52

Theory of the linear viscoelastic properties of dilute solutions of coiling polymers. P. E. Rouse, jr. bibliog J Chem Phys 21: 1272-80 Jl '53

Time-temperature dependence of linear viscoelastic behavior. F. Schwarzl and A. J. Staverman. bibliog J Ap Phys 23:838-43 Ag '52

Treatment of the viscosity of concentrated suspensions. R. Simha. bibliog J Ap Phys 23:1020-4 S '52

Variation of the viscosity of ethyl chloride vapor with temperature. M. El Nadi. bibliog J Phys Chem 57:589-91 Je '53

Viscosities of some lower aliphatic alcohols at constant volume. A. Jobling and A. S. C. Lawrence. bibliog J Chem Phys 20:1296-8 Ag '52

Viscosity and electrical resistivity of molten alkali borates. L. Shartsis and others. bibliog diag Am Cer Soc J 36:319-26 O 1 '53

Viscosity and rigidity of solutions of sodium thymonucleate. S. Katz and J. D. Ferry. bibliog Am Chem Soc J 75:1589-93 Ap 5 '53

VISCOSITY—*Continued*

Viscosity-concentration law parameters for polystyrene in benzene. D. Cleverdon, D. Laker and P. G. Smith. bibliog J Ap Chem 3:15-19 Ja '53

Viscosity of binary liquid mixtures. F. W. Lima. bibliog J Phys Chem 56:1052-4 D '52

Viscosity of liquid ammonia at high pressures. L. T. Carmichael and B. H. Sage. bibliog diags Ind & Eng Chem 44:2728-32 N '52

Viscosity of water; data sheet. Pulp & Pa of Can 54:142 Je '53

Viscosity, self-diffusion, and allied effects in solid polymers. F. Bueche. bibliog diags J Chem Phys 20:1959-64 D '52

Viscosity studies of system $CaO-MgO-Al_2O_3-SiO_2$; 35, 45, and 50 per cent SiO_2. J. S. Machin and others. Am Cer Soc J 35:322-5 D 1 '52

Viscosity, thermal conductivity and specific heat of carbon dioxide at elevated pressures and temperatures. I. Granet and P. Kass. bibliog Pet Refiner 31:137-8 N '52

Viscosity, thermal conductivity and specific heat of dry air at elevated pressures and temperatures. I. Granet and P. Kass. bibliog Pet Refiner 31:113-14 O '52

Viscosity, thermal conductivity and specific heat of nitrogen at elevated pressures and temperatures. I. Granet and P. Kass. bibliog Pet Refiner 32:149-50 Mr '53

Viscosity, thermal conductivity and specific heat of steam at elevated pressures and temperatures. I. Granet and P. Kass. bibliog Pet Refiner 32:179-81 My '53

See also

Plasticity

Measurement

Degradation of cellulose during mechanical processing; comparison of the evaluation by viscometric methods. J. C. Whitwell and R. F. Schwenker, jr. bibliog diags Textile Res J 23:175-85 Mr '53

Four viscosity standards changed. Pet Processing 8:525 Ap '53

Gas check; research on viscosity of gases at elevated temperatures and pressures. Mill & Factory 52:276+ Je '53

Instrument for measuring dynamic viscosities and rigidities. H. Markovitz and others. il diag R Sci Instr 23:430-7 Ag '52

Instrumentation for continuously recording viscosity of resins and polymers in large reactors, by the Chicago club. bibliog diags Paint Oil & Chem R 115:80-1+ D 4 '52; Abstract. Oil Paint & Drug Rep 162:78-80 N 24 '52

Measurement of dynamic shear viscosity and stiffness of viscous liquids by means of traveling torsional waves. H. J. McSkimin. bibliog il diags Acoustical Soc Am J 24:355-65 Jl '52

Measurement of viscosity; expressing rheological properties of greases. Chem Age (Lond) 68:209-11 Ja 31 '53

Measurements of the physical properties of active nitrogen. J. M. Benson. bibliog il diags J Ap Phys 23:757-63 Jl '52

Method for measuring the viscosity of glass; abstract. V. T. Slavyanskii. diag Glass Ind 34:544-5 O '53

New instrument measures viscosity continuously, accurately; Ultra-Viscoson. Iron Age 171:64-5 Ap 16 '53

Viscometric studies of cellulose in cotton in relation to mechanical processing. C. M. Conrad and R. A. Rusca. bibliog(42 ref) Textile Res J 23:168-74 Mr '53

Viscosities of several liquids. D. M. Mason, O. W. Wilcox and B. H. Sage. bibliog diag J Phys Chem 56:1008-10 N '52

Viscosity analyzer; Ultra-Viscoson. G. Weber. il Oil & Gas J 51:103 Ap 20 '53

Viscosity of lubricating oil-Freon-22 mixtures. J. L. Little. diags Refrig Eng 60:1191-5 N '52; Discussion. 61:62+ Ja '53

Viscosity of starch and starch products; TAPPI suggested method T 637 sm-53. diag Tappi 36:sup 139A-40A Ap '53

See also

Viscosimeters

VISES

Altered small vise does quick clamping. B. Erteschik. diag Am Mach 97:133 Ag 17 '53

Finding vee angle of female jaw for self-centering vise. A. R. Chasar. diags Mach 59:227 Jl '53

Portable pipe vise speeds threading and cutting. il World Oil 136:190 Ja '53

Vise jaws reduce stretching costs; Kindelberger jaws. J. Starr. il Tool Eng 29:55 N '52

VISIBILITY

Instrument for the evaluation of night visibility on highways. A. E. Simmons and D. M. Finch. bibliog il diags Illum Eng 48:517-23 O '53

Meeting lighting quality requirements in school classrooms. J. J. Neidhart. diag Illum Eng 48:311-15 Je '53

Visibility of black objects against an illuminated background. M. A. Bouman and E. W. M. Blokhuis. diag Opt Soc Am J 42:525-8 Ag '52

Visibility of school tasks. J. M. Ketch and C. J. Allen. il Illum Eng 48:299-305; Discussion. 305 Je '53

Visibility of stars and planets during twilight. R. Tousey and M. J. Koomen. Opt Soc Am J 43:177-83 Mr '53

Visual requirements for chalkboard lighting. R. G. Hopkinson. il Illum Eng 48:325-33 Je '53

See also

Luminosity

VISIBLE records. See Records, Visible

VISIBLE speech. See Speech, Visible

VISION. See Sight

VISITORS

Booklet to greet your plant visitors. il plans Sales Management 70:28-9 Ja 15 '53

Family party that worked; photo visit. Mod Ind 24:19-20+ D '52

How Gardner Board & Carton treats its visitors to tailor-made plant tours. il Paper Tr J 137:21 S 11 '53

Personal touch in the open house; G. D. Roper corp. il Mod Ind 26:76+ Jl '53

Small company, big open house feature full week of tours; Brillion iron works. R. Newcomb and M. Sammons. il Ind Marketing 37:116+ D '52

Ten practical tips on running open house. Factory Management 110:120-1 D '52

VISNAGIN, Analogs of

Furano-compounds; some analogues of kellin and visnagin. G. H. Phillips, A. Robertson and W. B. Whalley. Chem Soc J p4951-7 D '52

VISUAL instruction

Benefits from a bank's own slide-film program; Citizens state bank, Sheboygan Wis.; staff training and public relations. H. W. Sichter. il Burroughs Clearing House 37:30-1+ Jl '53

Oklahoma firm making training tools for industry; Technical training aids, inc. il Manuf Rec 122:39 Ap '53

Visuals clinic. Published quarterly as part 2 of Sales management, beginning Jan. 1, 1953

See also

Audio-visual instruction

Lantern slides

Moving pictures in education

Moving pictures in industry

VISUAL thresholds. See Optics, Physiological

VITAL statistics

Births and deaths; tables. Economist 167:211 Ap 25 '53

United States vital statistics, 1951-1952. Pub Health Rep 68:68-70 Ja '53

See also

Birth certificates

Birth rate

Demography

Longevity

Mortality—Statistics

Population—Statistics

VITALITY

See also

Longevity

VITAMINS

Nutrition studies expanded by vitamin research group. Chem & Eng N 31:1086+ Mr 16 '53

Synthesized vitamins for diet reinforcement. Can Chem Process 37:78 Ja '53

See also

Provitamins

VITAMINS—*Continued*

Analysis

New laboratory procedures speed up vitamin analysis. Chem & Eng N 31:552 F 9 '53

Paper chromatographic separation and determination of some water-soluble vitamins. J. A. Brown and M. M. Marsh. bibliog Anal Chem 24:1952-6 D '52

Testing

Vitamin assays; the relative roles of chemical, biological and microbiological tests; abstract. L. J. Harris. Chem & Ind p 1175 N 29 '52

Vitamin A

Excessive intake of vitamin A as a cause of congenital anomalies in the rat. S. Q. Cohlan. bibliog il Science 117:535-6 My 15 '53

Food intake and hepatic vitamin A in castrated mice. B. L. Truscott. bibliog Science 117:63-4 Ja 16 '53

Relationship between inorganic phosphorus and vitamin A in the rat and sheep. E. W. Klosterman and others. bibliog Science 116: 665-6 D 12 '52

Studies in the polyene series; the synthesis of o-tolyl and mesityl analogues of vitamin A acid. K. R. Bharucha and B. C. L. Weedon. diags Chem Soc J p 1571-7 My '53

Studies in the polyene series; the synthesis of two pentaene esters related to vitamin A. K. R. Bharucha and B. C. L. Weedon. Chem Soc J p 1578-84 My '53

Synthetic vitamin A aids food fortification. J. C. Bauernfeind and others. bibliog(41 ref) il Food Eng 25:81-2+ Je '53

Vitamin A_2

Studies in the polyene series; the structure and synthesis of vitamin A_2 and related compounds. K. R. Farrar and others. Chem Soc J p2657-68 Jl '52

Vitamin B complex

B complex market shifts; beta-alanine-derived vitamin B complex. il Chem Eng 60: 116 Ja '53

Synthetical experiments in the B group of vitamins. A. Cohen and others. Chem Soc J p4374-90 N '52

See also

Folic acid

Pantothenic acid

Vitamin B_1

Coenzyme function of thiamine pyrophosphate in pentose phosphate metabolism. B. L. Horecker and P. Z. Smyrniotis. bibliog Am Chem Soc J 75:1009-10 F 20 '53

Lipoic acid and thiamine; abstract. L. J. Reed. Chem & Eng N 31:1630 Ap 20 '53

New synthesis of the thiazole fragment of vitamin B_1. T. E. Londergan, N. L. Hause and W. R. Schmitz. bibliog Am Chem Soc J 75:4456-8 S 20 '53

Presence of the triphosphothiamine (TPT) in the liver. A. Rossi-Fanelli and others. bibliog il Science 116:711-13 D 26 '52

Removal of thiamin and riboflavin from milk for dietary use. L. F. Adamson. bibliog Science 117:253 Mr 6 '53

Thiamine pyrophosphate, a coenzyme of transketolase. E. Racker, G. De La Haba and I. G. Leder. Am Chem Soc J 75:1010-11 F 20 '53

Vitamin B_2

Effect of 2-aminofluorene on the utilization of S_{35} DL-methionine. A. W. Wase and others. bibliog Science 116:536-7 N 14 '52

Nucleotides; some preliminary experiments on a projected synthesis of flavinadenine dinucleotide; new methods for the preparation of riboflavin-4′ : 5′ phosphate. H. S. Forrest, H. S. Mason and A. R. Todd. Chem Soc J p2530-5 Jl '52

Removal of thiamin and riboflavin from milk for dietary use. L. F. Adamson. bibliog Science 117:253 Mr 6 '53

Vitamin B_6

Chemistry of vitamin B_6; derivatives of 5-desoxypyridoxine. D. Heyl, S. A. Harris and K. Folkers. bibliog Am Chem Soc J 75: 653-5 F 5 '53

Chemistry of vitamin B_6; homologs of 4-desoxypyridoxine. D. Heyl and others. Am Chem Soc J 75:4080-1 Ag 20 '53

Chemistry of vitamin B_6; some homologs of the vitamin B_6 group. D. Heyl and others. Am Chem Soc J 75:4079-80 Ag 20 '53

Vitamin B_{12}

Bacillus megatherium for biosynthesis of cobalamin. J. A. Garibaldi and others. bibliog Ind & Eng Chem 45:838-46 Ap '53

Ionic inhibition of growth in lactobacillus leichmanii 313 and its reversal with vitamin B_{12}. T. J. Bardos and H. L. Gordon. bibliog Am Chem Soc J 75:2019-20 Ap 20 '53

Irradiation of crystalline vitamin B_{12} with neutrons. P. Numerof and J. Kowald. diags Am Chem Soc J 75:4350-2 S 5 '53

Microbiological synthesis of vitamin B_{12} by propionic acid bacteria. A. Leviton and R. E. Hargrove. bibliog Ind & Eng Chem 44:2651-5 N '52

Neutron irradiation of crystalline vitamin B_{12}. D. T. Woodbury and C. Rosenblum. bibliog Am Chem Soc J 75:4364-5 S 5 '53

New source of revenue discovered in sewage sludge by Milwaukee sewage plant researchers. J. F. Friedrick and R. E. Zinn. Munic Util 91:18+ Je '53

Reduction of vitamin B_{12}. R. N. Boos and others. Science 117:603-4 My 29 '53

Vitamin-B_{12} and related factors; abstract and discussion. W. F. J. Cuthbertson. Chem & Ind p 169 F 21 '53

Vitamin B_{12}; crystalline α-ribazole phosphate and its synthesis. E. A. Kaczka and others. Am Chem Soc J 74:5549-50 N 5 '52

Vitamin B_{12} project announced; produce vitamin B_{12} concentrate from Milorganite. Sewage & Ind Wastes 25:881 Ag '53

Vitamin B_{12}; synthesis of the 1-D-ribosides of 5,6-dimethylbenzimidazole. F. W. Holly and others. bibliog Am Chem Soc J 74: 4521-5 S 20 '52

Yeast producer thrives on B_{12}. il diags Chem Eng 59:244+ N '52

Vitamin C

Ascorbic acid and physiological breakdown in the fruits of the pineapple. E. V. Miller and A. S. Heilman. Science 116:505-6 N 7 '52

Ascorbic acid and the oxidation of tyrosine. B. N. La Du, jr. and D. M. Greenberg. Science 117:111-12 Ja 30 '53

Ascorbic acid deficiency and cholesterol synthesis. R. R. Becker and others. bibliog Am Chem Soc J 75:2020 Ap 20 '53

Better color, better flavor in processed mushrooms by adding ascorbic acid. J. C. Bauernfeind and others. bibliog il Food Eng 24:89-92 D '52

Effect of gamma irradiation on the ascorbic acid content of green plants. A. R. Cooke. bibliog Science 117:588-9 My 29 '53

Synthesis of ascorbic acids by the osone-cyanide method. J. K. Hamilton and F. Smith. bibliog Am Chem Soc J 74:5162-3 O 20 '52

Synthesis of L-ascorbic-1-C^{14} acid from D-sorbitol. L. L. Salomon, J. J. Burns and C. G. King. bibliog Am Chem Soc J 74: 5161-2 O 20 '52

Vitamin C regulates rate of cholesterol formation. Chem & Eng N 31:1756-7 Ap 27 '53

Vitamin D

Improvement in the vitamin D line test. G. M. Shue, L. Friedman and C. D. Tolle. il Anal Chem 24:1841-3 N '52

Analysis

Separation of D vitamins from other sterols by paper chromatography and the quantitative determination of 7-dehydrocholesterol. R. B. Davis, J. M. McMahon and G. Kalnitsky. bibliog Am Chem Soc J 74:4483-4 S 20 '52

Vitamin E

Bibliography

Annotated bibliography of vitamin E, 1950 and 1951. P. L. Harris and W. Kujawski, comps. v 2 106p pa $2 National vitamin foundation, 150 Broadway, New York 7 '52

VITRIFIED clay pipes. See Pipes, Vitrified clay; Sewer pipes, Vitrified clay

VOCATIONAL education

Audio-visual aids and vocational training. H. Nozet. Int Labor R 66:338-53 O '52

See also

Apprentices
Chemical education
Employees, Training of
Engineering education
Industrial education
Journalism education
Technical education
Textile education
Trade schools

Directories

Vocational training directory of the United States. N. M. Cohen, comp. 138p pa $2.25 Nathan M. Cohen, 1434 Harvard st, N.W., Washington 9, D.C. '53

VOCATIONAL guidance

Industry accepts vocational guidance responsibility. E. J. Benge. Pet Refiner 31: 69+ O '52

Secondary school as a source of candidates for engineering training. H. A. Jager. J Eng Educ 43:159-66 N '52

Vocational guidance as a way to better agent recruiting. Nat Underw (Life ed) 57:10+ Ap 17 '53

VOICE

Problem of selective voice control. W. E. Kock. il Acoustical Soc Am J 24:625-8 N '52

See also

Speech

VOICE operated relays

Robot responds to spoken numbers; experimental unit in Bell labs. il Electronics 26: 14+ F '53; Elec Eng 72:274-5 Mr '53

Voice frequency tone signaling for mobile radio systems. C. L. Rouault. diags Tele-Tech 11:66-8+ N '52

VOIGT reaction

Use of 2-aminopyridine in the Voigt reaction. I. A. Kaye, C. L. Parris and W. J. Burlant. bibliog Am Chem Soc J 75:746-8 F 5 '53

VOLCANIC ash, tuff, etc.

Use of volcanic ash in commercial glazes. H. Riegger. il Cer Ind 60:82, 84 Mr '53

VOLCANOES

Geology of St Bartholomew, St Martin, and Anguilla, Lesser Antilles. R. A. Christman. bibliog maps Geol Soc Bul 64:65-96, pl 1-4 Ja '53

Relation between the mechanism of the formation of fault troughs and volcanic activity. B. G. Escher. Geol Soc Bul 63:749-56 bibliog(p 754-6) Ag '52

Volcanic snow in Anchorage. il Bsns W p28 Jl 18 '53

See also

Lava

VOLKSWAGEN. See Automobiles

VOLTA river

Volta River aluminium scheme. map Engineer 194:811-12 D 12 '52

VOLTAGE

Effect of accelerating voltage and specimen morphology on electron diffraction patterns. S. G. Ellis. J Ap Phys 23:1024-8 S '52

Fundamental electronic circuits; cathode-ray tube circuits for voltage and current analysis. R. B. Immel. diags Product Eng 24:182-3 Ja '53

Precision megohm ratio unit for high voltage measurements. J. N. Harris. il diags R Sci Instr 23:409-13 Ag '52

Restriking voltage transients; network analyser studies on the 132 kv grid. Electrician 149:854-5 S 19 '52

Two new instruments measure rapid voltage fluctuations. M. Fisher, jr. and others. diags Elec World 139:116-18+ F 23 '53

See also

High voltages
Voltmeters

VOLTAGE regulation

Adjustable voltage ore bridge drive at Otis works. E. C. Juhnke and C. B. Risler. il Iron & Steel Eng 30:87-92; Discussion. diag 92-6 Ap '53

A-c voltage regulation with ordinary transformers. W. G. Shepard. Electronics 26: 238+ Jl '53

Automatic phase angle and voltage control of unattended Marcus Hook substation; abstract. W. A. Derr and others. diag Elec Eng 72:164 F '53

Flicker control in arc furnace power supply. R. F. Lawrence and R. L. Tremaine. bibliog il diags Steel 132:102+ F 23; 96+ Mr 2 '53

Magamp regulation for synchronous machines. J. B. Barkle and others. diag Westinghouse Eng 12:204-7 N '52; Same abr. Mech Eng 74:915-16 N '52; Same cond. Power Eng 56:92-3+ O '52

Passive compensator for voltage flicker. P. A. Cartwright. bibliog il diags Elec Eng 71:1032-5 N '52

Quicker voltage regulator response does improve generator stability. H. A. Cornelius and others. diag Elec World 138:108-11 D 15 '52

Regulation systems, the key to higher production. W. R. Harris. il diags Blast F & Steel Pl 41:302-6 Mr '53

Under excited operation of large turbine generators on Pacific gas and electric co.'s system; abstract. V. F. Estcourt and others. Power 97:222+ My '53

Voltage regulation of 12-phase double-way rectifiers; abstract. R. L. Witzke and others. Elec Eng 72:617 Jl '53

VOLTAGE regulators

Automatic voltage regulators. A. H. Gray and D. R. Fenwick. il Elec R (Lond) 153: 455-8 Ag 28 '53

Compensator settings for regulators in open delta; engineering reference sheet. W. C. Sealey. diag Elec World 138:134 N 3 '52

Development of a modern amplidyne voltage regulator for large turbine generators; abstracts. W. A. Hunter and M. Temoshok. il Elec Eng 72:289 Ap '53; Power Eng 57: 96+ Jl '53

Diesel-electrics; how to keep 'em rolling; control for battery charging. M. D. Henshaw and B. L. Judy. il diags Ry Loco & Cars 127:105-11 S '53

Excitation systems, 1952 style; voltage regulators. W. A. Hunter and S. R. Folger. il diags Power Eng 56:88-91+ D '52

Gavco develops new regulator. P. Klass. il Aviation W 58:38 Mr 9 '53

How to design vr tube circuits. R. C. Miles. diag Electronics 25:135-7 O '52

Incandescent lamp bulbs in voltage stabilizers. W. J. Cunningham. diags J Ap Phys 23:658-62 Je '52

New-type a.c. regulator shown; Westinghouse mag-amplifier voltage unit. P. Klass. il diag Aviation W 57:63-4+ O 20 '52

Operating experience with regulating systems for the steel industry. W. R. Harris. il diags Iron & Steel Eng 29:113-22+ O '52

Potential transformers on voltage regulators. C. O. von Dannenberg. diags Power Eng 57:77 F '53

Power control with magnetic amplifiers. E. L. Harder. il diags Electronics 25:115-17 O '52

Tube life doubled in exciter voltage regulator. il Product Eng 24:254 My '53

Using arc-discharge tubes in regulated low-voltage supplies. G. E. Boggs. diags Radio Com 12:25+ O '52

Variations of triode characteristics with heater voltage. F. A. Benson and others. bibliog diag Elec J 151:481-3 Ag 14 '53

Voltage regulator tubes. W. R. Jones. diags Electronics 26:162+ Mr '53

Voltage regulator; uses magnetic amplifier; patent. diags Electronics 26:256+ S '53

VOLTAGE standards

Accurate radio-frequency microvoltages; abstract. M. C. Selby. il diags Elec Eng 72: 515 Je '53

VOLTMETERS

Automatic recording slide-back peak voltmeter. C. R. Ammerman. il diags R Sci Instr 24:161-4 F '53

Non-linearity in a voltmeter using cathode-follower and thermocouple. D. G. Tucker. diags J Sci Instr 30:11-13 Ja '53

Portable electrostatic voltmeter; W. G. Pye and co. il Engineer 194:774 D 5 '52

Portable pH meter and millivoltmeter. il Engineer 195:218 F 6 '53

VOLTMETERS, Vacuum tube
- Electrometer valve voltmeter of wide range. A. W. Brewer. diags J Sci Instr 30:91-2 Mr '53
- Electronic voltmeter in the amateur station. M. Seybold. il diags Q S T 37:28-32+ Je '53
- High impedance vtvm. F. R. Bradley and R. D. McCoy. diags Tele-Tech 12:96+ F '53
- Meterless v.t.v.m. L. E. Garner, jr. il diag Radio & Tv N 48:60-1+ D '52
- Oscilloscope as an a.c.-d.c. voltmeter. W. H. Buchsbaum. il diag Radio & Tv N 50:57+ Jl '53
- Peak-to-peak voltmeter probe; abstract. diag Electronics 26:198 Jl '53
- Pulse averaging circuit; voltmeter-type device. F. E. Boyd and N. W. Guinard. diags Electronics 26:188-9 Ag '53
- Q-meter correction chart for Q voltmeter loading. R. Lafferty. diag Tele-Tech 11:43 O '52
- Transient analysis by time selection. R. Winfield. il diags Electronics 26:184-7 Ag '53

VOLUME
- Application of volume characteristics of sulfonated polystyrene resins as a tool in analytical chemistry; determination of pH and dissociation constants of acids. C. Calmon. bibliog Anal Chem 25:490-2 Mr '53
- Calculation of areas, volumes, surfaces reduced to simple terms. diags Water & Sewage Works 100:R 129-31 My '53
- Free volume theory of multicomponent fluid mixtures. Z. W. Salsburg and J. G. Kirkwood. bibliog J Chem Phys 20:1538-43 O '52
- Gaussian approximation for the probability density of a molecule in a cell. G. Careri. diag J Chem Phys 20:1114-16 Jl '52
- Nomograph for the volume of cones and pyramids; reference book sheet. S. R. Heller, jr. diags Product Eng 23:207 N '52
- Nomograph gives liquid volume within a slanting tube. J. Lowe. diag Chem Eng 60: 211-12 Ap '53

VOLUME, Specific. See Specific volume

VOLUMETRIC analysis
- Acid-base titration, viscosity and density of α-, β- and γ-casein. N. J. Hipp, M. L. Groves and T. L. McMeekin. bibliog Am Chem Soc J 74:4822-6 O 5 '52
- Acidimetric titrations of salts of weak acids; equilibria in the copper(II)- mandelate system. L. Meites. bibliog Am Chem Soc J 75:2859-62 Je 20 '53
- Amperometric titration method for thorium in the presence of the rare earths of monazite sand. L. Gordon and C. R. Stine. bibliog Anal Chem 25:192-4 Ja '53
- Amperometric titration of sulfamates with the dropping mercury cathode. S. T. Hirozawa and R. C. Brasted. bibliog Anal Chem 25: 221-6 F '53
- Analysis of gas mixtures containing oxides of nitrogen. C. L. Johnson. bibliog diag Anal Chem 24:1572-5 O '52
- Analysis of gold and gold alloy solutions. E. A. Parker. bibliog Metal Finishing 51:56-60+ S '53
- Analysis of phthalic acid esters of cellulose and of polyvinyl alcohol. C. J. Malm, L. B. Genung and W. Kuchmy. bibliog Anal Chem 25:245-9 F '53
- Analysis of pyrazine; methods for assay and impurities. W. Seaman, J. T. Woods and W. Leibmann. Anal Chem 24:1949-52 D '52
- Automatic thermometric titrations. H. W. Linde, L. B. Rogers and D. N. Hume. bibliog diags Anal Chem 25:404-7 Mr '53
- Automatic titrator using electrolytically generated titrants. W. N. Carson, jr. bibliog diags Anal Chem 25:226-30 F '53
- Control of sewage chlorination by amperometric titration. W. L. Henderson. bibliog Sewage & Ind Wastes 24:1467-72 D '52
- Coulogravimetric determination of the halides; a new type of indirect analysis. W. M. MacNevin, B. B. Baker and R. D. McIver. Anal Chem 25:274-7 F '53
- Coulometric determination of uranium. W. N. Carson, jr. bibliog diags Anal Chem 25:466-70 Mr '53
- Determination of basic nitrogen in oils. V. Z. Deal, F. T. Weiss and T. T. White. bibliog(82 ref) Anal Chem 25:426-32 Mr '53
- Determination of calcium, magnesium, and iron in limestone by titration with Versenate. Kuang Lu Cheng, T. Kurtz and R. H. Bray. bibliog Anal Chem 24:1640-1 O '52
- Determination of chromium by oxidation in the presence of silver nitrate. S. Lynn and D. M. Mason. bibliog Anal Chem 24:1855 N '52
- Determination of fatty acids by potentiometric titration; microgram analysis. B. W. Grunbaum, F. L. Schaffer and P. L. Kirk. bibliog diag Anal Chem 25:480-2 Mr '53
- Determination of free acid in the presence of hydrolyzable ions. L. P. Pepkowitz, W. W. Sabol and D. Dutina. bibliog diags Anal Chem 24:1956-9 D '52
- Determination of microquantities of iodine in water solution by amperometric titrations. H. P. Kramer, W. A. Moore and D. G. Ballinger. bibliog Anal Chem 24:1892-4 D '52
- Determination of milligram and submilligram quantities of copper by the iodate titration of cuprous thiocyanate. K. Tantranon and B. B. Cunningham. bibliog Anal Chem 25: 194-5 Ja '53
- Determination of residual chlorine in metal finishing wastes. H. C. Marks and N. S. Chamberlin. bibliog Anal Chem 24:1885-7 D '52
- Determination of surface active agents. G. R. Lewis and L. K. Herndon. bibliog Sewage & Ind Wastes 24:1456-66 D '52
- Determination of the carboxyl content of oxidized starches. M. F. Mattisson and K. A. Legendre. bibliog Anal Chem 24:1942-4 D '52
- Determination of the valence of a heteropoly anion; dodecamolybdoceric(IV) acid and its salts; structural considerations. L. C. W. Baker, G. A. Gallagher and T. P. McCutcheon. bibliog Am Chem Soc J 75:2493-5 My 20 '53
- Determination of titanium in pigments and ores; titrimetric method. J. A. Rahm. diag Anal Chem 24:1832-3 N '52
- Determination of titanium in titanium metal. J. M. Thompson. diags Anal Chem 24: 1632-4 O '52
- Determination of total iron in soils by disodium dihydrogen ethylenediamine tetraacetate titration. Kuang Lu Cheng, R. H. Bray and T. Kurtz. bibliog Anal Chem 25:347-8 F '53
- Determination of total nonaqueous constituents in pulp mill liquors; application to all types of residual pulping liquors. J. H. Phillips and M. M. Rubright. bibliog diags Tappi 36:392-401 S '53
- Developments in the dead-stop end point titration technique. J. T. Stock. bibliog(33 ref) diags Metallurgia 46:209-12 O '52
- Differential potentiometric method of measuring acid and base dissociation constants. S. Kilpi. bibliog Am Chem Soc J 74:5296-8 N 5 '52
- Differential titration of amines. J. S. Fritz. bibliog Anal Chem 25:407-11 Mr '53
- Direct titration of gasoline mercaptans. G. E. Mapstone. Pet Processing 7:1655 N '52
- Estimation of sodium triphosphate; improvement in zinc titration method. R. N. Bell, A. R. Wreath and W. T. Curless. Anal Chem 24:1997-8 D '52
- 2-(*o*-Hydroxyphenyl)-benzimidazole as a reagent for the determination of mercury. J. L. Walter and H. Freiser. bibliog diag Anal Chem 25:127-30 Ja '53
- 2-(*o*-Hydroxyphenyl)benzoxazole as a volumetric reagent for cadmium. J. L. Walter and H. Freiser. Anal Chem 24:1985-6 D '52
- Improved protective colloid for use with dichlorofluorescein adsorption indicator. R. B. Dean and others. Anal Chem 24:1638-9 O '52
- Mechanism of the dead-stop end point; abstract. J. E. B. Randles. Chem Age (Lond) 67:499 O 11 '52
- Methyl purple vs methyl orange in alkalinity titrations. R. W. Frey. Water & Sewage Works 100:228 Je '53
- Nonaqueous titrations open pharmaceutical analysis field; abstract. C. W. Pifer. Chem & Eng N 31:672 F 16 '53

VOLUMETRIC analysis—*Continued*

Polarographic, potentiometric and spectrophotometric study of lead nitrate complexes. H. M. Hershenson, M. E. Smith and D. N. Hume. bibliog Am Chem Soc J 75:507-11 F 5 '53

Potentiometric study of the reaction between nitrous acid and hydriodic acid. H. T. S. Britton and H. G. Britton. Chem Soc J p3892-5 O '52

Potentiometric study of the reduction by potassium iodide of potassium bromate in sulphuric and hydrochloric acid solutions. H. T. S. Britton and H. G. Britton. Chem Soc J p3887-92 O '52

Potentiometric titration of halides of aluminum, gallium, indium and thallium with potassium in liquid ammonia. G. W. Watt, J. L. Hall and G. R. Choppin. bibliog J Phys Chem 57:567-70 Je '53

Potentiometric titration of iodic acid with potassium iodide in sulphuric and hydrochloric acid solutions. H. T. S. Britton, R. E. Cockaday and J. K. Foreman. Chem Soc J p3877-9 O '52

Reaction of sodium cyanide on cupric ammonia. R. K. McAlpine. bibliog Anal Chem 25:331-4 F '53

Recent developments in metallurgical analysis; titrimetric analysis. T. S. West. bibliog(81 ref) Metallurgia 47:45-51 Ja '53

Reduction by aluminum powder in aqueous solution; volumetric determination of iron. E. R. Riegel and R. D. Schwartz. bibliog Anal Chem 24:1803-6 N '52

Separation and determination of nicotine and nornicotine in tobacco. F. G. Houston. bibliog Anal Chem 24:1831-2 N '52

Silica sols; the titration of silica sols. K. C. Bryant. Chem Soc J p3017-20 Ag '52

Simple volumetric assay for sodium borohydride. D. A. Lyttle, E. H. Jensen and W. A. Struck. Anal Chem 24:1843-4 N '52

Some aspects of the double titration control test with respect to causticizing efficiency valuations. P. B. Borlew. bibliog Pulp & Pa of Can 54:94-7 Ja '53

Some factors which influence the iodine affinity of amylose as shown by potentiometric titration. E. F. Paschall and J. F. Foster. bibliog Am Chem Soc J 75:1177-80 Mr 5 '53

Spectrophotometric titrations with ethylenediaminetetraacetic acid; determination of iron, copper, and nickel. P. B. Sweetser and C. E. Bricker. bibliog diags Anal Chem 25:253-5 F '53

Surface areas of proteins; vapor phase titrations with polar gases. S. W. Benson and J. M. Seehof. bibliog diag Am Chem Soc J 75:3925-8 Ag 20 '53

System acetic acid-water-dimethylaniline; liquid phase behavior and analysis. L. Garwin and P. O. Haddad. bibliog Anal Chem 25:435-7 Mr '53

Titanic chloride as an intermediate in coulometric analyses. P. Arthur and J. F. Donahue. Anal Chem 24:1612-14 O '52

Titration of phenols in nonaqueous solvents. J. S. Fritz and R. T. Keen. bibliog Anal Chem 25:179-81 Ja '53

Titration of theobromine in nonaqueous solutions. A. Poulos. Anal Chem 24:1858-9 N '52

Titration of uranium(IV) by electrolytically generated ceric ion. N. H. Furman, C. E. Bricker and R. V. Dilts. bibliog diag Anal Chem 25:482-6 Mr '53

Titrations in nonaqueous solutions; effects of solvents for increasing sensitivity. C. W. Pifer, E. G. Wollish and M. Schmall. bibliog diag Anal Chem 25:310-14 F '53

Volumetric determination of persulfate in the presence of organic substances. I. M. Kolthoff and E. M. Carr. bibliog Anal Chem 25:298-301 F '53

Volumetric determination of tellurium in organic compounds. F. H. Kruse, R. W. Sanfter and J. F. Suttle. bibliog Anal Chem 25:500-2 Mr '53

Volumetric procedure for analysis of tin in copper-base alloys. R. Rapport. il Foundry 81:115 Ag '53

See also

Acidimetry
Colorimetric analysis
Fluorometric analysis
Iodometry

Apparatus

Conductance instrument for standardization of volumetric reagents. R. H. Müller and A. M. Vogel. diags Anal Chem 24:1590-2 O '52

Constant current conductance. R. P. Taylor and N. H. Furman. bibliog diags Anal Chem 24:1931-3 D '52

Determination of moisture in oils and greases. R. Y. Mecheim and J. N. Roark. diag Anal Chem 25:348-9 F '53

Direct semimicrodetermination of oxygen in organic substances; improved apparatus and procedure for use with carbon reduction-titrimetric carbon dioxide method. R. D. Hinkel and R. Raymond. bibliog diags Anal Chem 25:470-9 Mr '53

High frequency titrimetry. P. W. West. bibliog Chem Age (Lond) 68:133-7 Ja 17 '53

Modified Karl Fischer titration cell. D. E. Campbell. diag Anal Chem 25:203-4 Ja '53

Principles of high-frequency titrimetry. C. N. Reilley and W. H. McCurdy, jr. bibliog diags Anal Chem 25:86-93 Ja '53

Semimicro techniques employing small sealed vessels for determination of acids, bases, and esters. D. M. Smith, J. Mitchell, jr. and A. M. Billmeyer. bibliog il Anal Chem 24:1847-9 N '52

Simple assembly for conductometric titrations. E. B. Thomas and R. J. Nook. diag J Chem Educ 29:491-2 O '52

Titrimetry and direct concentration measurement by means of high frequency oscillators; abstract. P. W. West. Chem Age (Lond) 67:497-8 O 11 '52

Unitized rotating platinum electrode assembly for amperometric titration. E. J. Agazzi and others. bibliog il Anal Chem 24:1688 O '52

VOLUMETRIC apparatus

Piston type volume recorder. C. P. Luck. il diag J Sci Instr 29:333-4 O '52

Preparing crude rubber test specimens for oxygen-absorption measurements. W. J. Gowans. bibliog il Anal Chem 24:1648-9 O '52

VON BERGEN, Werner, 1897-

Ninth Olney medal awarded to Werner von Bergen. pors Am Dyestuff Rep 41:866-70 D 22 '52

VON LAUE, Max, 1879-

Von Laue honored for discovery of X-ray diffraction phenomenon. pors Chem & Eng N 30:5444-5 D 29 '52

VON WILLER, Harry Walter, 1896-

What it takes to be a railroad traffic vice-president. pors Bsns W p 128-30+ F 7 '53

VORTEX motion

Experimental study of the formation of a vortex ring at the open end of a cylindrical shock tube. F. K. Elder, jr. and N. de Haas. bibliog il J Ap Phys 23:1065-9 O '52

Formation of a vortex ring by giving an impulse to a circular disk and then dissolving it away. G. I. Taylor. J Ap Phys 24:104 Ja '53

Formation of vortex streets. G. Birkhoff. bibliog diag J Ap Phys 24:98-103 Ja '53

Potential and field of flow (induced velocity) of a plane vortex. J. L. Taylor. Roy Aeronautical Soc J 57:179-80 Mr '53

VORTEX tube

Electric dew point meter cooled by the Vortex tube. F. C. Hooper and I. S. Juhasz. bibliog il diags Refrig Eng 60:1196-7 N '52

VORTICES

Line-vortex theory for calculation of supersonic downwash. H. Mirels and R. C. Haefeli. bibliog diags U S Nat Advisory Com for Aeronautics 1950:635-50 '51

VORTRAPS. See Classifiers

VOTING

Time to vote; with table showing where laws allow employees time off to vote. map Banking 45:16 O '52

Why voters don't vote. Factory Management 110:83, 296 O '52

VOWELS

Auditory tests with synthetic vowels. R. L. Miller. il diag Acoustical Soc Am J 25:114-21 Ja '53

VOWELS—*Continued*

Influence of consonant environment upon the secondary acoustical characteristics of vowels. A. S. House and G. Fairbanks. bibliog Acoustical Soc Am J 25:105-13 Ja '53

VOZNESSENSKY, Nicolai A.

Case of Comrade Voznessensky. Economist 166:85-6 Ja 10 '53

VULCANIZATION

Aids in vulcanization of lignin-natural rubber coprecipitates; lead, copper, and bismuth oxides. T. R. Griffith and D. W. MacGregor. bibliog Ind & Eng Chem 45:380-6 F '53

Effect of oxygen concentration on aging of rubber vulcanizates. J. R. Shelton and W. L. Cox. bibliog Ind & Eng Chem 45:392-401 F '53

Fabrication; molding and curing; abstracts. J. E. Martin. India Rubber World 128:784 S '53; Rubber Age 73:803 S '53

Variables controlling the cross-linking reactions in rubber. B. C. Barton and E. J. Hart. bibliog Ind & Eng Chem 44:2444-8 O '52

Vulcanization characteristics of natural rubber. R. D. Stiehler and F. L. Roth. bibliog India Rubber World 127:783-90 Mr '53

Vulcanising thick sheets of rubber. E. C. B. Bott. bibliog Chem Age (Lond) 67:727-30 N 29 '52; Abstract. Chem & Ind p 1174-5 N 29 '52

Accelerators

Accelerator compounding; heat history and compounding. B. S. Garvey, jr. and others. il Rubber Age 73:361-8 Je '53

W

WHO. See World health organization

WACO, Texas

Block at a time rebuilding. Bsns W p31 My 23 '53

Indian legend costs plenty. Bsns W p76+ Je 13 '53

WAGE differentials

Foremen's pay differentials. Factory Management 111:89 O '53

Patterns of wage variations in the United States, 1951-1952; regional, intercity, and occupational variations. N. J. Samuels. Personnel 29:158-69 S '52

Shift operations and differentials in union contracts, 1952. M. Levine and J. Nix. Mo Labor R 75:495-8 N '52

WAGE payment plans

Applying incentives in the office; one company's system; abstract. Management R 41:790 D '52

Construction incentives. Constr Methods 34:132 O '52

Controversy is still going strong. Bsns W p 112-14 Mr 7 '53

Incentive pay plan for engineers. H. B. Richmond. Tele-Tech 12:76-7+ S '53

Incentives pay off at Reznor. il Steel 132:50-1 Je 15 '53

Job evaluation; building the wage and salary structure. J. A. Keller. Paper Ind 35:343-4 Je '53

NAM can't see productivity pay. Bsns W p 176 F 21 '53

New wage chronology series. Published in Monthly labor review

Productivity as a factor in wage determination; abstracts. A. M. Fisher and F. Rudge. Brick & Clay Rec 121:78 O '52; Elec World News ed 138:41 O 13 '52

Productivity; profits for everyone; Couch-Uthe co. installs production value sharing plan. R. M. Lorz. il Iron Age 171:78 Mr 26 '53

Standards deterioration under wage incentives. H. E. Wrapp. J Bsns 26:9-14 Ja '53

Ten years' progress in management; wage incentives. P. Carroll. bibliog A S M E Trans 75:671-5 My '53

Three way pay; an aid to productivity. R. H. Bavier. Mill & Factory 53:94-6 S '53

Trends in incentives for production and maintenance employees. J. W. Roberts. Advanced Management 18:49-52 Ja '53

Union tells Australian workers to return company bonus; Australian paper manufacturers, ltd. incentive payment scheme. Paper Tr J 136:12 Ap 24 '53

Unions to demand productivity wage. Eng N 149:32 O 9 '52

Wages and salaries, how to administer them. D. Tver. Pet Refiner 31:104-5 O '52

Watch out for incentive snares. M. K. Sheppard. Steel 132:59-61 Je 15 '53

See also

Bonus system
Overtime
Payrolls
Piece work
Profit sharing
Salesmen—Salaries and commissions
Trade agreements—Wage clauses
Vacations

Cost of living adjustment

Auto escalator creaks. Bsns W p 141-2 Ja 17 '53

BLS' new C-of-L index. Bsns W p 132-3 Mr 7 '53

Why UAW wants a floor under pay. Bsns W p 118 N 29 '52

See also

Trade agreements—Wage clauses

Group bonus

Paying men to pull together; Scanlon plan. B. Seltzer. Am Bsns 23:20 My '53

Some psychological conflicts caused by group bonus methods of payment; abstract. N. M. Davis. Nat Safety N 67:56+ Ap '53

Guaranty of earnings

Annual wage; United steelworkers (CIO) bargaining with Aluminum co. of America. Bsns W p 139-40 Je 27 '53

Can industry guarantee an annual wage? Mill & Factory survey. Mill & Factory 53:67-8 Jl '53

Management's new problem. il Bsns W p96+ Ap 11 '53

Next American labor movement. D. Bell. il Fortune 47:120-3+ Ap '53

2,000 hours' pay guaranteed by Rice-Stix dry goods co., St Louis. Bsns W p 162 Ap 11 '53

UAW wants work guarantee. Bsns W p 177 F 21 '53

Warns industry on guaranteed annual wage. W. E. Fisher. Comm & Fin Chr 177:1759 Ap 23 '53; Same abr. Paper Tr J 136:46 Ap 17 '53

Bibliography

Guaranteed annual wage and employment plans. P. M. Mullady. (Bibliog. ser. no. 1) 32p New York state school of industrial and labor relations, Cornell univ. Ithaca, N.Y. '52

WAGE scales

Salary grade for each point value. D. C. Childs. Personnel J 31:173-5 O '52

WAGE stabilization board

Captain of the team. Fortune 46:86+ D '52

Carrying on for the Wage board. Bsns W p 116-17 D 20 '52

Wage controls in the balance. Bsns W p 159 N 15 '52

Construction industry stabilization commission

CISC blueprints autonomy plan. Eng N 149:29 D 25 '52

CISC seeks full autonomy. Eng N 149:31 D 18 '52

WAGE surveys

Making sense out of salary surveys. J. B. Harker. Personnel J 31:131-4 S '52

WAGES

Earnings in forging industry, 1937-1952; tabulation. Iron Age 171:452 Ja 1 '53

Hidden payroll. W. T. Simons and M. C. Brown. il Eng & Min J 154:100-1 S '53

See also

Bonus system
Executives—Salaries
Labor and laboring classes
Overtime
Payrolls
Pensions, Industrial
Profit sharing
Railroads—Wages
Salaries
Salesmen—Salaries and commissions
Wage payment plans

WAGES—*Continued*

Dismissal wage

Severance pay demand set by UAW for aircraft industry. Bsns W p 150 N 8 '52

Economic aspects

How hidden wages affect corporate profits. T. L. Godey. Mag of Wall St 91:59-61 O 18 '52

Productivity-wage relationship. Comm & Fin Chr 177:1451 Ap 2 '53

Upward wage pressures will lessen. A. J. Wickens. Comm & Fin Chr 176:1930 N 20 '52

Wages and productivity. J. Backman. il Dun's R 61:23-4+ Ja '53

See also
Wages—Regulation

Law

Bonus problems and solutions. H. M. Duffy. Am Bsns 23:28 S '53

Report hits wage law enforcement. Eng N 150:28 F 26 '53

Some problems raised by the wage and hour law. H. A. Wecht. N A C A Bul 34:719-28 F '53

Wage-hour violations costly for firms in the banking industry. W. R. McComb. Bankers Mo 70:51 Ap '53

See also
Minimum wage

Regulation

Bank salaries and wages; discontinued services, rules changes, regulations checklist. Banking 45:141 O '52

Chapter in the steel story. E. B. George. il Dun's R 60:26-7+ S '52

Coal crisis for next Congress? Bsns W p 165-6 O 25 '52

Controls for the future. Bsns W p 148 Ja 10 '53

End of controls; what of wages? W. T. Wilson. Mag of Wall St 91:624-6+ Mr 7 '53

How income-tax sanctions have been applied in wage and price control violations. J. P. Goedert. J Account 95:352-4 Mr '53

Insurers reassured by wage-hour ruling on group dividends; U.S. Labor department ruling. Nat Underw (Life ed) 57:5-6 Je 19 '53

Leaders cheer end of wage controls. Eng N 150:29 F 12 '53

Lessons of price and wage controls. A. M. Ross. Comm & Fin Chr 177:14+ Ja 1 '53

Regional Wage board continues crackdown on overpayments. Eng N 150:32 Ja 15 '53

Salary lid's off. Bsns W p 118 Mr 7 '53

Time to kill controls? Bsns W p72-3 Ja 3 '53

Wage and salary regulations affecting random rate banks. W. Powers. Banking 45: 52-3+ D '52

Wage and salary stabilization changes. Banking 45:116 S '52

Wage stabilization board revises pay regulations. Inland Ptr 130:74 D '52

What back pay? Supreme court decision. Bsns W p 143-4 Ja 17 '53

Winding up wage lid cases. Bsns W p 108 Jl 4 '53

See also
Wage stabilization board

Statistics

Aircraft and parts wages, 1948-1952; tabulation. Iron Age 171:443 Ja 1 '53

Earnings in synthetic textiles, March 1952. C. Rubenstein and J. F. Laciskey. Mo Labor R 75:281-5 S '52

Earnings of production workers, 1951-1952; chart and tabulations. Automotive Ind 108: 328 Mr 15 '53

Employment and earnings in gray and malleable iron and steel foundries; tabulations. Iron Age 171:450 Ja 1 '53

Employment and earnings, metalworking plant data; tabulations. Iron Age 171:479-88 Ja 1 '53

Employment costs of important companies compared; relation between wages, sales and profits. Mag of Wall St 92:315 Je 13 '53

Metalworking wages and hours; production workers; employment; tabulations. Steel 132:194 Ja 5 '53

New wage chronology series. Published in Monthly labor review

Occupational wage survey, Atlanta, Ga. March 1953. B. J. Fahres. U S Bur Labor Statistics Bul 1116-18:1-19; pa 20c Supt. of doc. '53

Occupational wage survey; Baltimore, Maryland, Oct. 1952. L. B. Woytych. U S Bur Labor Statistics Bul 1116-6:1-20; pa 25c Supt. of doc. '53

Occupational wage survey; Boston, March 1953. H. H. Hall. U S Bur Labor Statistics Bul 1116-17:1-24; pa 20c Supt. of doc. '53

Ocupational wage survey, Buffalo, New York (Erie and Niagara counties) April 1953. T. Allison. U S Bur Labor Statistics Bul 1116-20:1-21; pa 20c Supt. of doc. '53

Occupational wage survey; Chicago, March 1953. W. C. Linn. U S Bur Labor Statistics Bul 1116-15:1-28; pa 25c Supt. of doc. '53

Occupational wage survey; Cleveland, Ohio, Oct. 1952. W. C. Linn. U S Bur Labor Statistics Bul 1116-3:1-23; pa 20c Supt. of doc. '53

Occupational wage survey; Dallas, Texas, Aug. 1952. B. J. Fahres. U S Bur Labor Statistics Bul 1116-1:1-16; pa 15c Supt. of doc. '52

Occupational wage survey; Denver, Colo., Nov. 1952. J. L. Dana. U S Bur Labor Statistics Bul 1116-8:1-19; pa 20c Supt. of doc. '53

Occupational wage survey; Kansas City, Missouri, Oct. 1952. W. C. Linn. U S Bur Labor Statistics Bul 1116-4:1-17; pa 25c Supt. of doc. '53

Occupational wage survey; Los Angeles, Feb. 1953. W. P. O'Connor. U S Bur Labor Statistics Bul 1116-14:1-26; pa 25c Supt. of doc. '53

Ocupational wage survey; Milwaukee, Wis., April 1953. W. Strevig. U S Bur Labor Statistics Bul 1116-19:1-21; pa 20c Supt. of doc. '53

Occupational wage survey; Minneapolis-St Paul, Minn., Nov. 1952. W. C. Linn. U S Bur Labor Statistics Bul 1116-7:1-21; pa 20c Supt. of doc. '53

Occupational wage survey, New York, N.Y. Feb. 1953. N. J. Samuels. U S Bur Labor Statistics Bul 1116-16:1-27; pa 25c Supt. of doc. '53

Occupational wage survey; Newark-Jersey City, N.J., Nov. 1952. F. C. Grella. U S Bur Labor Statistics Bul 1116-11:1-21; pa 20c Supt. of doc. '53

Occupational wage survey; Philadelphia, Pa., Oct. 1952. N. J. Samuels. U S Bur Labor Statistics Bul 1116-5:1-21 '53

Occupational wage survey; Portland, Oregon, Sept. 1952. J. L. Dana. U S Bur Labor Statistics Bul 1116-2:1-16; pa 20c Supt. of doc. '53

Occupational wage survey; Providence, R.I., Dec. 1952. H. H. Hall. U S Bur Labor Statistics Bul 1116-10:1-18; pa 20c Supt. of doc. '53

Occupational wage survey; St Louis, Mo., Dec. 1952. W. C. Linn. U S Bur Labor Statistics Bul 1116-12:1-20; pa 20c Supt. of doc. '53

Our average weekly wage statistics require revision. E. B. Weiss. Ptr Ink 242:42 F 6 '53

Shipbuilding employment, 1948-1952; tabulation. Iron Age 171:443 Ja 1 '53

Shipments of non-ferrous castings; wages and hours in non-ferrous foundries and pressed metal shops. Iron Age 171:453 Ja 1 '53

Steel employment, wages, hours and payrolls, 1937-1952; tabulations. Steel 132:195 Ja 5 '53

Survey shows big range in foremen's pay. Am Bsns 23:47 Je '53

Union wages and hours; baking industry, July 1, 1952. J. F. Laciskey. U S Bur Labor Statistics Bul 1123:1-43 '53

Union wages and hours; building trades, July 1, 1952. A. Moros. U S Bur Labor Statistics Bul 1124:1-40; pa 25c Supt. of doc. '53

Union wages and hours; local transit operating employees, Oct. 1, 1952. A. Moros. U S Bur Labor Statistics Bul 1133:1-12; pa 15c Supt. of doc. '53

WAGES—Statistics—*Continued*

Union wages and hours; printing industry, July 1, 1951. J. F. Laciskey. U S Bur Labor Statistics Bul 1062:1-43; pa 25c Supt. of doc. '52

Union wages and hours; printing industry, July 1, 1952. J. F. Laciskey. U S Bur Labor Statistics Bul 1134:1-35; pa 20c Supt. of doc. '53

Wage rates in the building trades; tabulation. H. M. Stanton. Sheet Metal Worker 44:91 Ja '53

Wages and hours in selected industries, 1951-1952; tabulations. Steel 132:196 Ja 5 '53

Wages and related benefits for 40 labor markets, 1951-1952. L. E. Lewis and others. U S Bur Labor Statistics Bul 1113:1-62; pa 35c Supt. of doc. '52

Wages in the industrial chemical industry. J. A. Wells. Mo Labor R 75:285-9 S '52

Wages; Nov.-Dec. 1951-Jan.-Nov. 1952. Survey of Cur Bsns 33:S 13-15 Ja '53 [cont monthly]

What industry pays its foremen. Bsns W p 146 Mr 21 '53

What's indirect labor worth? figures compiled by the Bureau of labor statistics. Factory Management 110:145 O '52; 111:81 My; 145 S '53

White collar compensation; a study of salary levels, trends, and differentials. F. W. Mueller. Management R 41:591-600 S '52

Woolen and worsted textiles earnings in April-May 1952. J. F. Laciskey. Mo Labor R 75:403-8 O '52

See also

Wage differentials

Atlanta

Occupational wage survey, Atlanta, Ga. March 1953. B. J. Fahres. U S Bur Labor Statistics Bul 1116-18:1-19; pa 20c Supt. of doc. '53

Baltimore, Maryland

Occupational wage survey; Baltimore, Oct. 1952. L. B. Woytych. U S Bur Labor Statistics Bul 1116-6:1-20; pa 25c Supt. of doc. '53

Boston

Occupational wage survey; Boston, March 1953. H. H. Hall. U S Bur Labor Statistics Bul 1116-17:1-24; pa 20c Supt. of doc. '53

Buffalo, New York

Occupational wage survey, Buffalo, New York (Erie and Niagara counties) April 1953. T. Allison. U S Bur Labor Statistics Bul 1116-20:1-21; pa 20c Supt. of doc. '53

California

1953 California wage survey; sewage treatment plants. Sewage & Ind Wastes 25:978-83 Ag '53

Canada

Slight increase in 1952 average wages in the pulp and paper industry. Pulp & Pa of Can 54:189-91 Jl '53

Chicago

Occupational wage survey; Chicago, March 1953. W. C. Linn. U S Bur Labor Statistics Bul 1116-15:1-28; pa 25c Supt. of doc. '53

Cleveland, Ohio

Occupational wage survey; Cleveland, Ohio, Oct. 1952. W. C. Linn. U S Bur Labor Statistics Bul 1116-3:1-23; pa 20c Supt. of doc. '53

Dallas, Texas

Occupational wage survey; Dallas, Texas, Aug. 1952. B. J. Fahres. U S Bur Labor Statistics Bul 1116-1:1-16; pa 15c Supt. of doc. '52

Denver

Occupational wage survey; Denver, Colo., Nov. 1952. J. L. Dana. U S Bur Labor Statistics Bul 1116-8:1-19; pa 20c Supt. of doc. '53

Germany

West German workers sign new wage pacts. For Comm W 49:4 Je 29 '53

Great Britain

Wage inflation in Britain. P. Einzig. Comm & Fin Chr 177:20 Ja 1 '53

Wage restraint; engineers' claim for wage increase. Economist 167:339-40 My 9 '53

Wages magnifier. Economist 167:502 My 23 '53

Japan

Wage developments in Japan during the occupation. A. W. Shurcliff. Mo Labor R 75:395-9 O '52

Jersey City, New Jersey

Occupational wage survey; Newark-Jersey City, N.J., Nov, 1952. F. C. Grella. U S Bur Labor Statistics Bul 1116-11:1-21; pa 20c Supt. of doc. '53

Kansas City, Missouri

Occupational wage survey; Kansas City, Oct. 1952. W. C. Linn. U S Bur Labor Statistics Bul 1116-4:1-17; pa 25c Supt. of doc. '53

Los Angeles

Occupational wage survey; Los Angeles, Feb. 1953. W. P. O'Connor. U S Bur Labor Statistics Bul 1116-14:1-26; pa 25c Supt. of doc '53

Milwaukee

Occupational wage survey; Milwaukee, Wis., April 1953. W. Strevig. U S Bur Labor Statistics Bul 1116-19:1-21; pa 20c Supt. of doc. '53

Minneapolis

Occupational wage survey;' Minneapolis-St Paul, Minn., Nov. 1952. W. C. Linn. U S Bur Labor Statistics Bul 1116-7:1-21; pa 20c Supt. of doc. '53

New York (city)

Occupational wage survey, New York, N.Y. Feb. 1953. N. J. Samuels. U S Bur Labor Statistics Bul 1116-16:1-27; pa 25c Supt. of doc. '53

Newark, New Jersey

Occupational wage survey; Newark-Jersey City, N.J., Nov. 1952 F. C. Grella. U S Bur Labor Statistics Bul 1116-11:1-21; pa 20c Supt. of doc. '53

Philadelphia

Occupational wage survey; Philadelphia, Pa., Oct. 1952. N. J. Samuels. U S Bur Labor Statistics Bul 1116-5:1-21 '53

Portland, Oregon

Occupational wage survey; Portland, Oregon, Sept. 1952. J. L. Dana. U S Bur Labor Statistics Bul 1116-2:1-16; pa 20c Supt. of doc. '53

Providence, Rhode Island

Occupational wage survey; Providence, R.I., Dec. 1952. H. H. Hall. U S Bur Labor Statistics Bul 1116-12:1-20; pa 20c Supt. of doc. '53

Russia

Soviet society; from the dacha set down. il Fortune 47:125-9+ F '53

St Louis, Missouri

Occupational wage survey; St Louis, Mo., Dec. 1952. W. C. Linn. U S Bur Labor Statistics Bul 1116-12:1-20; pa 20c Supt. of doc. '53

St Paul

Occupational wage survey; Minneapolis-St Paul, Minn., Nov. 1952. W. C. Linn. U S Bur Labor Statistics Bul 1116-7:1-21; pa 20c Supt. of doc. '53

San Francisco

Wage chronology; San Francisco printing, 1939-51. M. W. Robbins. Mo Labor R 75:289-98 S '52

United States

Added raises for the skilled? Bsns W p. 137-9 Je 27 '53

Can you deduct retroactive wage increases? Bsns W p 152 F 28 '53

Earnings in paint and varnish industry, June 1952. A. N. Jarrell. Mo Labor R 75:519-21 N '52

WAGES—United States—*Continued*
Earnings in power laundries in June 1952. O. Hollberg. Mo Labor R 75:518-19 N '52
Earnings in selected industries, late 1951 and early 1952. Mo Labor R 75:413-24 O '52
Earnings in the wood furniture industry, July 1952. J. F. Laciskey. Mo Labor R 75: 629-30 D '52
Employment and wages in the United States. W. S. Woytinsky and others. 777p $7.50 Twentieth century fund, 330 W. 42d st, New York 18 '53
End of controls; what of wages? W. T. Wilson. Mag of Wall St 91:624-6+ Mr 7 '53
Finding what's behind shop-office pay gaps. Bsns W p 158 My 23 '53
Labor costs in pulp and paper industry, 1939-1953. Paper Tr J 137:24 Jl 24 '53
New wage chronology series. Published in Monthly labor review
New wage demands. Nat City Bank p69-71 Je '53
1953 wages, 1948 prices; costs continue to soar; price tags unchanged. B. F. Linz. Oil & Gas J 51:285-6 Ja 26 '53
Raise pattern? United Steelworkers and New Jersey Bell telephone co. Bsns W p 178-9 My 9 '53
Raises are smaller in 1953. Bsns W p 122-3 Jl 11 '53
Reports reveal upward wage trend of 10 to 15 cents an hour. Eng N 150:30 Je 4 '53
Steady wage line. Fortune 47:91-2 Ap '53
Time of decision for labor. W. T. Wilson. Mag of Wall St 92:312-14+ Je 13 '53
Wage differences among 40 labor markets. T. P. Kanninen. Mo Labor R 75:620-3 D '52
Wage policies since World war II; movements of wages and prices. S. H. Slichter. bibliog Comm & Fin Chr 176:2122+ D 4 '52; Discussion. N. I. Stone. 177:894 F 26 '53
Wages continue up in all metalworking lines. 1951-1952; tabulation. Am Mach 97:141-4 Ja 19 '53
Wages in liquor distilleries in April 1952. J. A. Wells. Mo Labor R 75:515-17 N '52
Wages in pulp, paper, and paperboard mills, April 1952. F. W. Mohr. Mo Labor R 75: 626-9 D '52
Wages won't skyrocket in 1953. Bsns W p 132-3 F 14 '53
What labor wants in 1953. Bsns W p 142-3 Ja 17 '53

WAGNER, Philip Marshall, 1904-
Bacchus in Baltimore; Boordy vineyard. Fortune 47:190 My '53

WAGNER baking corporation
Farm price decline widens margins. Barron's 33:35 Mr 30 '53

WAGNER rearrangement
Studies in the Wagner rearrangement; chrysene-5,6-C_1^{14}. C. J. Collins and others. bibliog Am Chem Soc J 75:397-402 Ja 20 '53
Studies in the Wagner rearrangement; further evidence for a steric effect. C. J. Collins, L. S. Ciereszko and J. G. Burr, jr. bibliog Am Chem Soc J 75:405-8 Ja 20 '53
Studies in the Wagner rearrangement; the dehydration of 2-phenyl-1-acenaphthenol-1-C^{14}. W. A. Bonner and C. J. Collins. bibliog Am Chem Soc J 75:3831-4 Ag 5 '53
Studies in the Wagner rearrangement; the directive effects of the methyl and methoxyl groups. C. J. Collins and B. M. Benjamin. bibliog Am Chem Soc J 75:1644-7 Ap 5 '53
Studies in the Wagner rearrangement; the steric effect of an ortho methyl group. B. M. Benjamin and C. J. Collins. bibliog Am Chem Soc J 75:402-5 Ja 20 '53

WAGON jobbers. See Jobbers, Wagon

WAKEFIELD, Lowell
He made a million at old game; fishing for Alaska king crab. R. M. Harmer. por Am Bsns 22:22+ N '52

WAKSMAN, Selman Abraham, 1888-
Four worlds to conquer; antibiotic research. pors Chem W 71:28+ D 6 '52
Nobel awards point to chemistry as key to medical advances. por(cover) Chem & Eng N 31:155 Ja 12 '53

WALDEN inversion
Steroids and Walden inversion. C. W. Shoppee and G. H. R. Summers. pl Chem Soc J p3361-81 S '52
Steroids and Walden inversion; acetolysis of the coprostanyl halides. R. J. Bridgewater and C. W. Shoppee. Chem Soc J p 1709-15 Je '53
Steroids and Walden inversion; epimerisation at $C_{(17)}$. J. Elks and C. W. Shoppee. Chem Soc J p241-5 Ja '53
Steroids and Walden inversion; the reconversion D-homosteroids into steroids. R. J. W. Cremlyn, D. L. Garmaise and C. W. Shoppee. Chem Soc J p 1847-52 Je '53
Studies in molecular orbital theory of valence; the transition state in Walden inversion type reactions. H. H. Jaffé. J Chem Phys 21:1618 S '53

WALDRON, John, corporation
John Waldron's 125th. Tappi 35:sup 109A-11A N '52

WALES
See also
Steel works—Wales

Directories

Industrial directory of Wales and Monmouthshire, 1952. 2d ed 339p 10s 6d Industrial assn. of Wales and Monmouthshire, Aberdare House, Mount Stuart square, Cardiff, Wales '52

WALKER, Elmer Everett
Captain of the team. por Fortune 46:86+ D '52

WALKER, Tom P. 1891-
New president takes over at Transcontinental gas pipe line corp. por Bsns W p 189-90 My 9 '53

WALL board
Metal corner that protects wallboard. il Am Bld 74:196-7 N '52
Sale I never forgot; sold the home office on larger, thicker and heavier wall panels. W. H. Upson, jr. Ptr Ink 242:60 Mr 13 '53
Synthetic lumber. Mech Eng 74:821-2 O '52

Manufacture

Latest in wood; continuous panel, high grade, low cost; Bartrev press. il Materials & Methods 38:8+ Jl '53
Wood extrusion press makes lower cost material. il Materials & Methods 38:8+ S '53

WALL coverings, Plastic
Vinyl surfaced wall covering. il Mod Plastics 30:154 Mr '53

WALL paper. See Wallpaper

WALL paper manufacturers, limited
Statement by the chairman. A. Whittle. Economist 165:651-2 N 29 '52

WALL Street
See also
New York stock exchange

WALLACE, Robert Charles, 1881-
SLA convention speakers at the forum on Canadian resources. por Special Lib 44: 152 Ap '53

WALLBOARD. See Wall board

WALLER, Fred
Inventor of motion-picture technique. por Fortune 46:48 N '52
Portrait. Fortune 47:92 Ja '53

WALLPAPER
How a bright distributor hangs more wallpaper. H. C. Schroder. il Sales Management 69:33-4+ N 10 '52
United Wallpaper makes it easier for the lady to buy. il Sales Management 70:92+ F 15 '53
Waking up to do-it-yourself. il Bsns W p42-4 Jl 4 '53

WALLS
Curtain wall construction appeals to builders. C. F. Block. il Cer Ind 61:74-5+ O '53
Fundamental considerations in the design of exterior walls for buildings; abstract. N. B. Hutcheon. Roads & Eng Constr 91:148+ Ag '53
New construction technique; finished walls in one operation; panel of lightweight concrete aggregates with center core of fiberglas. il diags Am Bld 75:230-2+ Ja '53
Plastic or mastic coverings for exterior walls of houses. F. L. Browne. Paint Oil & Chem R 116:36-7 Ag 13 '53

WALLS—*Continued*
Thermal performance of frame walls. G. O. Handegord and N. B. Hutcheon. diags Heating-Piping 24:113-18 Mr '52; 25:117-22; Discussion. 122 Ag '53
See also
Foundations

WALLS, Brick
Acoustic wall for aero-engine tests. plan diags Engineering 176:201 Ag 14 '53
Blame MgO expansion in mortars. J. W. McBurney. Brick & Clay Rec 122:32+ Ap '53
Building the SCR brick wall. il diags Am Bld 75:236-9+ Ja '53
How to use SCR brick on foundation walls. diags Am Bld 74:190-4 N '52
Insulation takes lead, bricks trail in brewery wall. R. H. Langer. il Constr Methods 35:83+ Ja '53
Precast masonry units speed economical home construction. il plans diags Am Bld 74:138-41 O '52

WALLS, Concrete
Bracing walls for multistory buildings. N. B. Green. diags Am Concrete Inst J 24:233-48 N '52
Building faced with tiled concrete panels. L. Lindin. il diags Concrete 60:24-6+ O '52
Contractor sandblasts masonry walls to bring out color and texture. Concrete 61:25 Je '53
Marietta nears large-scale expansion of precast concrete panel facilities. Concrete 61:34 Ja '53
New twist in wall construction pays off. il Constr Methods 35:59-60 Ap '53
Precast concrete in laboratory design for handling radioactive materials. il diags Concrete 60:16+ O '52
Precast panels form house wall veneer. il diag Concrete 61:20 F '53
Wall panels of assembled soffit block. il Concrete 61:10+ O '53

Testing

Fire tests on expanded slag block walls. il Concrete 60:3-7 N '52

WALLS, Glass
How to use a glass wall room divider. il plan diags Am Bld 74:108-9 D '52

WALLS, Interior
How to use a glass wall room divider. il plan diags Am Bld 74:108-9 D '52
Walls roll where they are wanted in flexible house. il plans Eng N 150:27 Ja 1 '53
See also
Partitions

WALLS, Stone
Project glacier. E. H. Cameron. il Tech R 55:319-21+ Ap '53

WALNUT shells
Deburring in a nutshell; application of crushed walnut shells. il Mill & Factory 51:98 O '52

WALNUTS
Italian walnut crop large; markets vary. For Comm W 49:11 Ja 26 '53

WALTHAM watch company
Doubled sales in 1952. Barron's 33:13 Ap 13 '53
Townspeople rally for Waltham. il Mod Ind 25:9-10+ Ap '53
Waltham ticks again. T. D. Durrance. il Am Bsns 23:10-11+ O '53

WANAMAKER, Pearl Anderson, 1899-
School building controversy flares in Washington; Taxpayers' association fights Wanamaker proposal for additional funds. por Eng N 150:79-80 Ja 22 '53

WAR
How long will the cold war last? J. Burnham. Banking 45:34-5+ S '52
Road to survival. F. D. Hole. Science 116:462 O 24 '52
See also
Aeronautics, Military
Air raids
Airlines in war
Atomic warfare
Biological warfare
Communication, Military
Electricity in war
Military engineering
Munitions
Peace
Radio broadcasting stations—War measures
Railroads in war
Strategy

Economic aspects

Is the Kremlin running your business? Fortune 47:105-6 My '53

WAR, Maritime
See also
Submarine warfare

WAR, Principles of
Principles of war. R. L. Conolly. il U S Naval Inst Proc 79:sup 14, 1-9 Ja '53

WAR correspondents
Munsan train hums with press once a week. Ed & Pub 85:34 O 18 '52
PIO says reporters absent from front. W. A. Colton. Ed & Pub 86:8 F 7 '53
Reporters fight war of tedium in Korea. R. Schakne. Ed & Pub 86:11 Ja 24 '53

WAR criminals. See World war, 1939-1945—War criminals

WAR measures
See also
Industrial mobilization
Railroads in war

WAR memorials
Huge cast bronze memorial to honor U.S. marine corps. P. Dwyer. il Foundry 81:104-7+ O '53
Large bronze statue honors war dead. il Foundry 81:176 Ja '53

WAR news
White Horse mountain covered by army PIO. A. M. Bernhardt. il Ed & Pub 85:12 N 1 '52

WAR veterans. See Veterans

WARD, Frederick Townsend, 1831-1862
Mandarin from Salem. R. O. Patterson. por U S Naval Inst Proc 79:156-67 F '53

WARD, Thomas W., limited
Statement by the chairman. G. Wood. Economist 165:421-3 N 8 '52

WARE, Dorothy Ford, d 1952
Tribute. Special Lib 44:33 Ja '53

WAREHOUSE receipts
Criteria for credit on warehouse receipts. L. M. Albedi. Credit & Fin Management 55:14-15 Je '53
Seasonal financing through field warehousing. V. L. Amato. N A C A Bul 34:238-43 O '52

WAREHOUSES
Atlantic steel company opens new warehouse. Manuf Rec 121:41 D '52
Fire-resistant and efficient new Central of Georgia nitrate warehouse. il diag Ry Age 135:80-2 Ag 24 '53
Four-step construction of warehouses; Prock construction co. T. Brown. il Constr Methods 35:55-61 Ag '53
From start to finish, 30 days, 176 working hours. il Constr Methods 35:159-60 S '53
Incentives in the warehouse. K. Boaz. Factory Management 111:113-15 S '53
Latest tools for warehouse expansion. Mod Ind 25:121-2+ F '53
Lift warehouse halves across water; illustrations with text. Constr Methods 34:124 D '52
Low cost warehouse with prestressed girders. il diags Eng N 150:41-3 Je 11 '53
Mechanized handling makes old warehouse good as new; Morris paper co. A. T. Gaudreau. il plan Factory Management 111:96-9 Ap '53
Navy buildings; one-story general warehouses. il plans Arch Rec 112:190 S '52
Precast warehouses go up fast, and cheaply. H. T. Perez. il Constr Methods 35:104-5+ S '53
Production efficiency in warehousing; office-warehouse of Kroger co. il Mod Ind 24:21-2+ O '52
Steel decking vs wood; tobacco warehouse in Kentucky. il Sheet Metal Worker 44:42+ D '52
They didn't spare the distribution; Wolf's huge new Detroit warehouse. il Food Eng 24:145-7 N '52
Tilt-up construction cuts cost on airline warehouse. il Am Concrete Inst J 24:sup40 Ap '53; Bsns W p44 My 9 '53; Eng N 150:41 Mr 5 '53
Warehouse project at Atlanta; Atlantic coast line cooperating with Champion terminal warehouses, inc. il plan Ry Age 134:68-9 My 4 '53
Warehouse tilted up for $5 per sq ft. il Eng N 149:37 O 16 '52
See also
Freight houses

WAREHOUSES—*Continued*

Equipment

Warehousing; storage of bar and tube stock simplified with special unit. il Iron Age 171: 252+ My 7 '53

Fires and fire protection

Warehouses have largest average fire loss in any type of industry. J. T. W. Babcock. East Underw 54:29 Je 12 '53; Same. Nat Safety N 68:109-10 S '53

Heating and ventilation

Designing a well-heated warehouse. il Eng N 149:45 O 23 '52

Direct-fired heaters; warehouse in Ft. Wayne. Heat & Ven 49:128+ N '52

WAREHOUSING

Nevada gains new industrial income through free port law. B. Armstrong. Sales Management 69:62-4 N 10 '52

Steel warehouses; business still good. il Steel 132:65-6 Mr 9 '53

Warehouses; variety draws customers. R. L. Hatschek. Iron Age 171:42 Ap 30 '53

See also

Warehouse receipts

WARM air heating. See Heating, Warm air

WARNER, John, 1897-

AIC gold medal presented to Carnegie Tech's J. Warner. por(cover) Chem & Eng N 31:2181 My 25 '53

WARNER and Swasey company

Security I like best. W. F. Kurtz. Comm & Fin Chr 177:2186 My 21 '53

WARNER brothers pictures, inc.

Earnings. Comm & Fin Chr 177:417 Ja 26 '53

WARRANTY

Seal of royal use. il Bsns W p66-7 My 30 '53

WARREN bituminous paving company, ltd.

Celebrating its fiftieth anniversary of paving work. Roads & Eng Constr 90:60 D '52

WARREN brothers company

Rising outlays on roads, highways keeping Warren Brothers busy. Barron's 33:24 Je 8 '53

Security I like best. W. H. Crowell. Comm & Fin Chr 177:2734 Je 25 '53

Three by nine analysis of some unlisted stocks. H. J. King. Comm & Fin Chr 177: 1208 Mr 19 '53

WARREN petroleum corporation

Five attractive stocks for capital gains; with comparative balance sheet items. Mag of Wall St 91:471 Ja 24 '53

Security I like best. A. Huber. Comm & Fin Chr 176:2014 N 27 '52

Warren Petroleum prospers in bottled gas business. Barron's 32:19 D 29 '52

WARSHIPS

Gas-turbine progress report; naval vessels. W. A. Dolan, jr. and A. A. Hafer. il diags A S M E Trans 75:185-99 bibliog(146 titles, p 197-9) F '53

Principal characteristics of warship design; abstract and discussion. A. Servello. Engineering 174:754-5 D 12 '52

Speed characteristics of the treaty cruisers. W. P. Hughes, jr. il U S Naval Inst Proc 79:182-93 F '53

See also

Airplane carriers

Mine sweepers

Submarine boats

Torpedo boat destroyers

Great Britain

Gas turbines for the Royal navy. il Engineeer 194:873-4 D 26 '52

Naval construction in 1952. R. V. B. Blackman. il Engineer 195:31-3, 50-2, 110-13 Ja 2-16 '53

Royal navy, 1952. il Engineer 195:5-7, pl 3-4, 45-7, 89-91 Ja 2-16 '53

Japan

Shinano; the jinx carrier. L. L. Moore. il U S Naval Inst Proc 79:142-9 F '53

United States

Naval construction in 1952. R. V. B. Blackman. il Engineer 195:110-13 Ja 16 '53

Navy construction program expanded to 4,139 vessels; tabulation. Marine Eng 57:67-71 N '52

Navy construction program expanded to 5824 vessels; tabulation with cost data. Marine Eng 58:81-6 O '53

Navy has large titanium program. E. L. Beardman. J Metals 5:138-9 F '53

Recent developments in naval propulsion gears; abstract. I. Monk and others. Marine Eng 58:60; Discussion. 60-2 F '53

WARTS

Culture in the developing chicken embryo of a filtrable agent from verruca vulgaris. J. A. Bivins. bibliog Science 117:300-1 Mr 20 '53

WASHERS (machinery)

Nuts and washers. J. E. Hyler. il diags Mill & Factory 51:116-20 N '52

Unusual die produces metal-and-felt washers. plan diags Mach 59:208-10 Ja '53

Standards

Dimensions of American standard internal-external tooth lock-washers; data sheet. diags Mach 59:253 Ja; 257 F '53

Standard spring and tooth lock-washer and machine screw assemblies; data sheet. diags Mach 59:243 Mr '53

WASHING

See also

Laundry

WASHING apparatus

Movable car washer does good job. il Ry Age 134:34-5 Ja 19 '53; Ry Loco & Cars 127: 61 F '53

$74 device solved washer problem. B. Schmidt and A. Guillot. il Bus Transportation 32:46 My '53

WASHING machines

See also

Bottle washing machines

Advertising

New high to Easy washing machine corp. Aesop Glim. il Ptr Ink 242:72 Mr 13 '53

This co-op ad plan solves eight headaches; Beatty washing machines. D. B. Beatty. il Ptr Ink 241:33-4 N 7 '52

Manufacture

Redesigning burning tools cuts costs; Ingersoll product div., Borg-Warner corp. il Cer Ind 59:62-3 N '52

Screw mechanism groups cabinets for better finishes. il diag Iron Age 171:208-9 My 7 '53

Merchandizing

Sales promotion clinic for water connected appliances; clothes washers. J. M. Wicht. Dom Eng 181:101+ Mr '53

Rating

Tests of Apex and Universal automatic washing machines. il Consumers Res Bul 31:15-16 Mr '53

Washing machines. il Consumers Res Bul 30:11-13 D '52

WASHING machines (for metal parts)

Ipsen automatic parts washer eliminates rinsing operation. il Am Mach 97:230 My 11 '53; Mach 59:220 My '53

WASHINGTON, D.C.

Long Capitol tunnel nears completion. il map Constr Methods 35:124-6+ O '53

Sewerage

Operating experiences with detergents at Washington, D.C. R. E. Fuhrman and J. E. Rice. Sewage & Ind Wastes 25:277-80; Discussion. 280-3 Mr '53

Water supply

Fluoridation experiences. N. E. Jackson. Pub Works 83:104 D '52

Reinforced concrete clear-water basin built to be leak-proof. il map Eng N 150:42-3 My 21 '53

Washington story of fluoridation. N. E. Jackson and E. A. Schmitt. il map diag Water & Sewage Works 99:435-44 N '52

WASHINGTON (state)

See also

Hydroelectric plants—Washington (state)

Roads—Washington (state)

WASHINGTON, Mount

Jets; tested on icy mountain perch. il Iron Age 171:120-1 Mr 5 '53

WASHINGTON award

Dr Gustav Egloff receives the Washington award for 1953. il Elec Eng 72:375 Ap '53

WASHINGTON gas light company

Bonds offered. Comm & Fin Chr 177:2684 Je 22 '53

Stock offering underwritten. Comm & Fin Chr 177:1907-8 My 4 '53

WASHINGTON national insurance company

Washington National makes top state changes January 1. East Underw 53:1+ D 26 '52

WASHINGTON university, St Louis

School of medicine

Research laboratories, School of medicine. il plans Arch Rec 112:109-14 S '52

WASHINGTON water power company

FPC, public bodies get WWP-Puget merger plan. Elec World 139:88+ My 4 '53

League formed to combat proposed merger with Puget Power & Light. Elec World News ed 139:43 Mr 16 '53

Merger would up earnings; study of Washington Water Power proposal for purchase of Puget Sound Power & Light. Elec World News ed 138:42 O 27 '52

Puget directors to vote this week on merger. F. McLaughlin. Elec World News ed 139:42 Mr 30 '53

Puget vote favors PUD's; Washington Water Power still wants to buy. Elec World 138:82 N 3 '52

WWP is ready to negotiate a deal on Feb. 28 with Puget Sound P&L stockholders. Elec World News ed 139:42 F 16 '53

WWP OKs plan to merge with Puget Sound Power & Light. Elec World 139:127 Mr 23 '53

WWP-Puget plan opposed. Elec World News ed 139:44 My 25 '53

Will Puget go public or private? il Elec World 138:90-1 O 20 '52

WASHROOMS. See Lavatories

WASSELL, Helen

Expert in emulsions. por Chem W 71:40 D 27 '52

WASTE

Exhibit saves lumber waste on tunnel job. A. M. Rawn. il Civil Eng 23:108 F '53

See also

Canneries—Waste
Conservation of resources
Dairy waste
Electroplating—Waste
Metal waste
Metal working plants—Waste
Paper mills—Waste
Salvage (waste, etc.)
Scrap material
Scrap metal
Trade waste
Waste fuel
Waste heat
Waste paper
Wood waste

WASTE, Utilization of

Dictionary of discards. F. M. Rich. 143p $3.50 Association press, 291 Broadway, New York 7 '52

Sulphuric triple play; Shell's alcohol plant helps make alumina and ammonium sulphate in Filtrol's new plant. il Chem Eng 59:226+ O '52

See also

Citrus fruit—By-products
Salvage (waste, etc.)
Sulfite liquor

WASTE disposal. See Refuse disposal; Sewage disposal; Trade waste—Disposal plants

WASTE fuel

Can a pulp mill be made self-supporting in fuel? G. Edling. Paper Tr J 136:14-18 Ap 10 '53

WASTE heat

Application of the gas turbine for recovery of waste heat. W. Gregson. diags Engineering 174:740-1 D 5 '52

Can a pulp mill be made self-supporting in fuel? G. Edling. Paper Tr J 136:14-18 Ap 10 '53

Catalytic combustion of odor-producing agents; heat recovery. L. C. McCabe. il diag Ind & Eng Chem 45:sup 109A-10A+ Mr '53

Chuquicamata sulphide plant; waste heat power plant. B. F. Koch. flow sheet il diag Min Eng 4:1207-9 D '52

Don't let heat go up your flue; burning carbon monoxide in cracking unit flue gas; oxidation catalyst method. W. C. Uhl. flow diag il Pet Processing 7:1444-6 O '52

Engines cooled by boiling heat transfer. O. B. Freeman. diags Pet Eng (Ref annual) 25:E22+ Jl 15 '53; Same cond. Oil & Gas J 51:171-4+ F 23 '53

Greater heat recovery from catalytic flue gas; new catalytic oxidation unit. G. Weber. flow diag il diag Oil & Gas J 51:346-7+ O 13 '52

Heat recovery in industrial furnaces. A. Clift and C. Knight. diags Iron & Steel Inst J 172:327-39 N '52

Hot air recovery system saves thousands each month in cold cash; Minnesota & Ontario paper co. il Factory Management 110:152-3 N '52

Power-house at Maple Lodge sewage disposal works. il Engineer 194:687-8 N 21 '52; Engineering 174:628-9 N 14 '52

Recover waste heat in plant exhaust air to cut steam and fuel costs. H. McCall. il diag Power 97:84-5 Mr '53

Refrigerating plant comprising a centrifugal compressor and a turboexpander as prime mover, both using the same working agents; abstract. F. Chistiakoff and A. Plotnikoff. diags Refrig Eng 61:50-1 Ja '53

Ventilation system utilizes waste process heat to knock $12,000 off the fuel bill; Chatham electronics corp. A. Scala. diag Factory Management 111:96-8 O '53

Wheel for recovering heat lost in ventilation. il Sheet Metal Worker 44:54 Ap '53

WASTE heat boilers. See Boilers, Waste heat

WASTE paper

Examination of household refuse in Toronto. L. A. Campbell. bibliog Can Chem Process 36:90+ N '52

Facts concerning the waste paper industry and its relationship to pulp in the paper and paperboard industries. P. White. Paper Tr J 135:279-81 N 14 '52

'52 in review and a look-see at '53 for the waste paper industry. L. Golen. Paper Tr J 136:150-1 F 20 '53

Preparing, cleaning and treating waste paper; abstract. F. Madsen. diag Paper Ind 35:692 S '53

Separation of solids in deinking waste by coagulation and filtration. J. O. Thompson and others. bibliog Tappi 36:207-10 My '53

Shortages of raw materials will require public cooperation in collection of solid wastes. H. R. Murdock. Ind & Eng Chem 44:sup 117A-18A N '52

Standardized classifications needed for waste paper grades. Paper Tr J 135:7 O 31 '52

Waste paper in relation to the paper industry. E. Weaver. Paper Tr J 135:30-1 N 21 '52

Waste paper, its collection and usage. J. A. Benedetto and R. A. Graham. Paper Tr J 135:276-8 N 14 '52

Waste paper problems. H. J. Perry. Paper Tr J 136:84-5 F 20 '53

Waste paper utilization problems. H. J. Perry. Paper Tr J 136:14-15 Mr 27 '53

Waste papers provided one-third of the paper and board furnish in 1952. C. S. Baker. Paper Tr J 136:152 F 20 '53

WASTE products

Annual report of Kalamazoo anti-pollution group encouraging; may be possible to utilize sludge from paper mill deinking wastes. Paper Ind 34:833-4 O '52

From waste to product via research; rice mills. il Can Chem Process 36:26-8 D '52

Sources of b.o.d. in brewery wastes. F. Hale. bibliog Sewage & Ind Wastes 25:1187-90 O '53

Waste material now valuable by-product; feed recovery at Hiram Walkers. il Can Chem Process 37:28+ My '53

See also

Bagasse
Bark
Blast furnace gas
Canneries—Waste
Citrus fruit—By-products
Coal waste
Coke-oven gas
Cotton waste
Cottonseed
Farm produce—By-products
Flue dust
Flue gas
Lignin
Metal waste
Paper making—By-products
Rags

WASTE products—See also—*Continued*
Refuse as fertilizer
Rubber—Reclaiming
Salvage (waste, etc.)
Scrap metal
Sewage sludge
Slag
Straw
Sulfite liquor
Tailings
Trade waste
Waste, Utilization of
Waste paper
Wood waste

WATCH factories

Equipment

Contemporary methods of watch production. R. A. Fell and P. Indermuhle. diags Inst Mech Eng Proc (A) 167 no 2:190-7, pl 1-2 '53; Same. Engineer 195:34-6, 74-6 Ja 2-9 '53; Discussion. Inst Mech Eng Proc (A) 167 no 2:198-208 '53

WATCHES

How to beat the imports; Elgin national watch co. il Cer Ind 59:78-9+ O; 56-8 N '52

See also
Elgin national watch company
Waltham watch company

Advertising

Before this ad runs; these three big steps create national brand demand; Omega watches. il Ptr Ink 241:28 D 26 '52

Manufacture

Contemporary methods of watch production. R. A. Fell and P. Indermuhle. diags Inst Mech Eng Proc (A) 167 no 2:190-7, pl 1-2 '53; Same. Engineer 195:34-6, 74-6 Ja 2-9 '53; Discussion. Inst Mech Eng Proc (A) 167 no 2:198-208 '53

Miniature metals mill produces precision stock; Hamilton watch co. il Machine Design 25:242 O '53

Vest pocket steel mill used by Hamilton Watch to make hair- and mainsprings of special alloys; illustrations with text. H. E. Linsley. Am Mach 97:130-1 Jl 20 '53

WATER

Adsorption on monolayers; adsorption of the isomeric hexanes on condensed stearic acid monolayers and on clean water surfaces. K. E. Hayes and R. B. Dean. bibliog J Phys Chem 57:80-3 Ja '53

Beta- and gamma-induced Čerenkov radiation in water. M. A. Greenfield and others. Opt Soc Am J 43:42-3 Ja '53

Bound water in silica gel. I. Shapiro and H. G. Weiss. bibliog J Phys Chem 57:219-21 F '53

Composition of acetic acid-water mixtures. J. J. Kipling. Chem Soc J p2858-62 Jl '52

Densities of mixtures; water and methanol. G. Chapas. Am Chem Soc J 74:6275 D 20 '52

Distribution of 8-quinolinol between water and chloroform as a function of *p*H. T. Moeller and F. L. Pundsack. Am Chem Soc J 75:2258-9 My 5 '53

Effect of water on the burning velocities of cyanogen-oxygen-argon mixtures. R. S. Brokaw and R. N. Pease. bibliog Am Chem Soc J 75:1454-7 Mr 20 '53

Effect of water on the decomposition of benzoyl peroxide. C. F. H. Tipper. Chem Soc J p2966-71 Ag '52

Equilibrium in the exchange of hydrogen between phosphine and water. R. E. Weston, jr. and J. Bigeleisen. bibliog J Chem Phys 20:1400-2 S '52

Experimental investigation of the nucleon cascade in water. C. B. A. McCusker and others. diag Phys R 89:1172-7 Mr 15 '53

Hydrogen bonding and the interactions of water molecules. E. S. Campbell. bibliog J Chem Phys 20:1411-20 S '52

Hydrogen explosions from water decomposition in fires are rare. Safety Maint & Prod 104:48 O '52

Integrating reclamation and disposal of waste water. A. M. Rawn and others. bibliog il Am Water Works Assn J 45:483-90 My '53

Introduction to water. G. E. Symons. il Water & Sewage Works 100:22-6 Ja '53

Isotopic method determines water content. Can Chem Process 36:61 O '52

LCAO MO self-consistent field calculation of the ground state of H_2O. F. O. Ellison and H. Shull. bibliog J Chem Phys 21:1420-1 Ag '53

Local coefficients of mass transfer by evaporation of water into an air jet. M. Spielman and M. Jakob. bibliog il A S M E Trans 75:385-92; Discussion. 392-4 Ap '53

Mechanism by which aluminum ions alter the electrokinetics of the zinc sulfide-water interface. M. Bender. bibliog J Phys Chem 57:466-8 Ap '53

New apparatus for studying the evaporation of water through monolayers. F. Sebba and N. Sutin. diag Chem Soc J p2513-16 Jl '52

New reagent for the direct determination of water; solution of bromine and sulfur dioxide in chloroform; abstract. T. S. West. Chem Age (Lond) 67:561-2 O 25 '52

Non-exchange of oxygen between water and some compounds of nitrogen. F. Bonner and J. Bigeleisen. Am Chem Soc J 74:4944-5 O 5 '52

Oxygen exchange between nitric acid and water. C. A. Bunton, E. A. Halevi and D. R. Llewellyn. Chem Soc J p4913-24 D '52

Oxygen exchange between nitric acid and water; catalysis by nitrous acid. C. A. Bunton, E. A. Halevi and D. R. Llewellyn. Chem Soc J p2653-7 S '53

Partial molal volumes of cadmium nitrate and water in concentrated aqueous solutions. W. W. Ewing and C. H. Herty, 3d. J Phys Chem 57:245-6 F '53

Permeation of water and isoöctane through plugs of microscopic particles of crushed quartz. R. T. Johansen and others. bibliog diag J Phys Chem 57:40-5 Ja '53

Prospective chemistry of cement and concrete; structure of water and the part it can play in concrete. N. C. Rockwood. diags Rock Prod 56:174+ Ag '53

Range of alpha-particles in water. H. G. de Carvalho and H. Yagoda. bibliog il diag Phys R 88:273-8 O 15 '52

Relative acidity of water, methanol and other weak acids in isopropyl alcohol solution. J. Hine and M. Hine. bibliog Am Chem Soc J 74:5266-71 N 5 '52

Review of physico-chemical data on the state of supercritical fluids. F. G. Smith. diags Econ Geol 48:14-38 bibliog(108 titles, p34-8) Ja '53

Self-diffusion and structure of liquid water; measurement of the self-diffusion of liquid water with H^2, H^3 and O^{18} as tracers. Jui Hsin Wang, C. V. Robinson and I. S. Edelman. Am Chem Soc J 75:466-70 Ja 20 '53

Solubility of water in normal perfluoroheptane. G. J. Rotariu, D. W. Fraga and J. H. Hildebrand. Am Chem Soc J 74:5783 N 20 '52

Subsolidus reactions in oxide systems in the presence of water at high pressures. E. F. Osborn. bibliog diags Am Cer Soc J 36:147-51 My 1 '53

System $Cr_2(SO_4)_3$-H_2SO_4-H_2O. D. Taylor. Chem Soc J p502-3 Ag '53

System cobaltous chloride-water-*t*-butyl alcohol at 25°. L. I. Katzin and J. R. Ferraro. bibliog Am Chem Soc J 75:3825-7 Ag 5 '53

System water-dioxane-hydrogen chloride. R. A. Robinson. Am Chem Soc J 74:6125 D 5 '52

Ternary system; isopropyl ether-HCl-H_2O. D. E. Campbell, A. H. Laurene and H. M. Clark. bibliog Am Chem Soc J 74:6193-6 D 20 '52

Ternary systems ferrous chloride-hydrogen chloride-water, ferric chloride-ferrous chloride-water. F. A. Schimmel. bibliog Am Chem Soc J 74:4689-91 S 20 '52

Theory of radiation chemistry; track effects in radiolysis of water. A. H. Samuel and J. L. Magee. bibliog J Chem Phys 21:1080-7 Je '53

Thermodynamic properties of saturated water. R. W. Haywood. bibliog diags Inst Mech Eng Proc (B) 1B no 2:49-57; Discussion. 58-63 '52

Ultrasonic velocity, density, and compressibility of supercooled H_2O and D_2O. R. T. Lagemann and others. bibliog J Chem Phys 21:819-21 My '53

Vapor pressure of water and temperature conversion chart. K. A. Kobe. Pet Refiner 32:173 My '53

WATER—*Continued*

Velocity measurements of air-water mixtures. L. G. Straub and others. il diags Am Soc C E Proc 79 [no 193]:1-14 My '53

Viscosity of water; data sheet. Pulp & Pa of Can 54:142 Je '53

Water corrosion of structural materials. C. R. Breden and others. Metal Prog 64:194+ Ag '53

See also

Air conditioning equipment—Water requirements
Cooling water
Dehydration
Drinking water systems
Drying
Erosion
Feed water
Fire service (water supply)
Floods
Humidity
Hydraulic engineering
Hydraulics
Hydrolysis
Irrigation
Lakes
Moisture
Pumping
Rain and rainfall
Rivers
Sea water
Solution (chemistry)
Steam
Water supply and other headings beginning Water
Waterways
Waves
Wells

Analysis

Control of fluoridation. R. S. Jacobson. bibliog Am Water Works Assn J 44:1169-73 D '52

Determination of copper ion by a modified sodium diethyldithiocarbamate procedure; iron, zinc, and lead interference eliminated. C. A. Noll and L. D. Betz. Anal Chem 24:1894-5 D '52

Determination of fluoride in water by the aluminum-hemotoxylin method. M. J. Price and O. J. Walker. bibliog Anal Chem 24:1593-5 O '52

Determination of heavy metals and silica in chromate-treated cooling waters. S. Sussman and I. L. Portnoy. bibliog Anal Chem 24:1644-6 O '52

Determination of microgram quantities of thorium in water; extension of colorimetric method. A. E. Taylor and R. T. Dillon. bibliog Anal Chem 24:1624-5 O '52

Determination of microquantities of iodine in water solution by amperometric titrations. H. P. Kramer, W. A. Moore and D. G. Ballinger. bibliog Anal Chem 24:1892-4 D '52

Determination of phenols by the *p*-nitrosodimethylaniline method. R. H. Hill and L. K. Herndon. bibliog Sewage & Ind Wastes 24:1389-96 N '52; Discussion. I. Nusbaum. 25:311-13 Mr '53

Determination of pyridine and pyridine-base compounds in river water and industrial wastes. R. C. Kroner, M. B. Ettinger and W. A. Moore. bibliog Anal Chem 24:1877-81 D '52

Field estimation of sulfites in waters. S. Sussman and I. L. Portnoy. Anal Chem 24:1652-4 O '52

How to test for sea water contamination in drinking water. Pub Works 84:104 F '53

Induced reaction method for determination of fluoride ion. J. L. Lambert. Anal Chem 25:271-4 F '53

Instrumentation in the laboratory. J. H. Wyatt. bibliog diags Am Water Works Assn J 45:129-44 F '53

Metallic-cation removal as an aid in volumetric sulfate determinations. W. G. Hunt, jr. Am Water Works Assn J 45:535-8 My '53

New reagent for the titration of water. R. Belcher and T. S. West. Chem Soc J p 1772-6 Je '53

Polarograms of oxygen in lake water. K. G. Wood. Science 117:560-1 My 22 '53

Review of analytical chemistry. S. K. Love and L. L. Thatcher. Anal Chem 25:65-74 bibliog(183 ref, p72-4) Ja '53

Simplified field test for iron in water. M. Lieber. Water & Sewage Works 100:229 Je '53

Symposium on continuous analysis of industrial water and industrial waste water. (Special tech. pub. no. 130) 54p Am. soc. for testing materials, 1916 Race st, Philadelphia 3 '53

Bacteriology

Action of ozone on tastes and odors and coliform organisms. M. P. Powell. Am Water Works Assn J 44:1144-50 D '52

Aerobic and anaerobic iron corrosion in water mains. C. A. H. V. Kühr and L. S. Van der Vlugt. bibliog(28 titles) il Am Water Works Assn J 45:33-46 Ja '53

Bacteriological analysis of drinking waters; abstract. R. Buttiaux. Am Water Works Assn J 45:sup72+ Jl '53

Bacteriological study of irrigated vegetables. N. N. Norman and P. W. Kabler. bibliog Sewage & Ind Wastes 25:605-9 My '53

Concentrometer method of applying molecular filter membranes. A. Goetz. bibliog il diags Am Water Works Assn J 45:933-44 S '53

Controls might be relaxed on bathing water quality. Pub Works 84:93-4 Jl '53

Critical review of the literature of 1952 on sewage, waste treatment, and water pollution; bacteriology. bibliog Sewage & Ind Wastes 25:656-9 Je '53

Domestic and European molecular filter membranes. H. F. Clark and others. Am Water Works Assn J 44:1052-6 N '52

Limitations of standard bacteriological methods in evaluating sanitary quality of water; abstract. F. W. Gilcreas. Sewage & Ind Wastes 25:235-6 F '53; Same. Am Water Works Assn J 45:sup68+ Jl '53

New bacteriological technique for testing water and sewage; MF Millipore filters. J. H. Bush. bibliog il diag Water & Sewage Works 100:151-3 Ap '53

New medium for bacteriological analysis with molecular filter membranes. G. S. Yee and others. bibliog il Am Water Works Assn J 45:945-51 S '53

Should bacteriological standards for drinking water be reevaluated? M. Levine. Am Water Works Assn J 45:927-32 S '53

Use of the membrane filter in the bacteriological examination of water. E. W. Taylor. Chem & Ind p 124-5 F 7 '53

Water quality yardsticks. W. L. Mallmann. bibliog Am Water Works Assn J 45:917-25; Discussion. 925-6 S '53

Deactivation and deaeration

Deaerating heater proves versatile tool in large, expanding plants. V. J. Calise and R. K. Stenard. il diags Power 97:78-80+ F '53

Estimation of dissolved oxygen in de-aerated water. J. Arnott and J. McPheat. Engineering 176:103 Jl 24 '53

Electric properties

Dielectric properties of water in solutions. G. H. Haggis and others. bibliog diags J Chem Phys 20:1452-65 S '52

Hardness

Stable indicator solutions for complexometric determination of total hardness in water. E. M. Diskant. bibliog Anal Chem 24:1856-7 N '52

Heavy water

Collision lengths of neutral, penetrating-shower-producing cosmic radiation in light and heavy water. D. Froman and others. bibliog diags Phys R 91:707-12 Ag 1 '53

Dielectric properties of ice and solid D_2O. R. P. Auty and R. H. Cole. bibliog diags J Chem Phys 20:1309-14 Ag '52

Incorporation of tritium oxide into growing chlorella pyrenoidosa cells. D. Weinberger and J. W. Porter. Science 117:636-8 Je 5 '53

Infrared spectra of heavy water adsorbed on silica gel. G. C. Pimentel, C. W. Garland and G. Jura. diag Am Chem Soc J 75:803-5 F 20 '53

Isotopic method determines water content. H. J. Morowitz and H. P. Broida. Franklin Inst J 254:537-8 D '52

Luminescence behavior in tritium oxide. W. M. Jones. J Chem Phys 20:1974 D '52

Luminescence of ice and tritiated ice. L. I. Grossweiner and M. S. Matheson. J Chem Phys 20:1654-5 O '52

Measurement of the transport mean free path of thermal neutrons in D_2O by a boron poisoning method. S. W. Kash and D. C. Woods. Phys R 90:564-6 My 15 '53

WATER—Heavy water—*Continued*

Microwave spectrum of HDO. D. W. Posener and M. W. P. Strandberg. J Chem Phys 21:1401-2 Ag '53

Phase relationships in the pyridine series; the miscibility of some pyridine homologues with deuterium oxide. J. D. Cox. Chem Soc J p4606-8 D '52

Some heavy water rotational absorption lines. C. K. Jen and others. J Chem Phys 21:520-5 Mr '53

Triple point temperature of tritium oxide. W. M. Jones. bibliog diags Am Chem Soc J 74:6065-6 D 5 '52

Two D_2O microwave absorption lines. C. I. Beard and D. R. Bianco. bibliog J Chem Phys 20:1488-9 S '52

Ultra-high-frequency rotational line of HDO. Y. Beers and S. Weisbaum. Phys R 91:1014 Ag 15 '53

Ultrasonic velocity, density, and compressibility of supercooled H_2O and D_2O. R. T. Lagemann and others. bibliog J Chem Phys 21:819-21 My '53

Vibration-rotation spectrum of D_2O. W. S. Benedict and others. bibliog J Chem Phys 21:1301-2 Jl '53

Vibration-rotation spectrum of HDO. W. S. Benedict and others. bibliog J Chem Phys 21:1302-3 Jl '53

Analysis

Measurement of deuterium oxide concentration in water samples by the mass spectrometer. H. W. Washburn, C. E. Berry and L. G. Hall. bibliog Anal Chem 25:130-4 Ja '53

Standards

Judicial aspects of water quality criteria. E. C. Borgeson and others. Sewage & Ind Wastes 25:325-34 Mr '53

See also

Water supply—
Standards

Temperature

Thermistors for depth thermometry. W. R. Ree, jr. bibliog il diag Am Water Works Assn J 45:259-63 Mr '53

Testing

Detectability of low-level radioactivity in water. A. S. Goldin and others. bibliog Am Water Works Assn J 45:73-80 Ja '53

New filter used for testing drinking water. Pub Works 84:104 My '53

WATER, Distilled

See also

Sea water—Desalting

WATER, Underground

Application of ground-water hydrology to the development of industrial water supplies; abstract. N. A. Rose. Paper Tr J 136:96+ F 20 '53

Ground-water movement controlled through spreading. P. Baumann. il diags Am Soc C E Proc 77[no 86]:1-38 Ag '51; Discussion. 78[no D-86]:1-14 Jl '52

Miniature current meter fits inside of diamond drill hole to measure flow in limestone cavities. G. F. Sowers. il Civil Eng 23:176 Mr '53

Providing large industrial water supplies by induced filtration. F. H. Klaer, jr. bibliog diag Min Eng 5:Trans 620-4 Je '53

Recharging ground water reservoirs with wells and basins. M. L. Brashears. bibliog Min Eng 5:Trans 1029-32 O '53

Resistivities of water from subsurface formations. M. L. Ayers and others. maps Pet Eng 24:B36+ D '52

Selected procedures for analyzing aquifer test data. R. H. Brown. diags Am Water Works Assn J 45:844-66 Ag '53

Sewage reclamation by spreading basin infiltration. R. Stone and W. F. Garber. bibliog diags Am Soc C E Proc 77[no 87]:1-20 S '51; Discussion. 78[no D-87]:1-10 Jl '52

Unconfined ground-water flow to multiple wells. V. E. Hansen. il diags Am Soc C E Proc 78[no 142]:1-18 Ag '52

Underground oil storage; Edholm container uses excavations or caverns and ground water to store fuel oil. D. Ball. diags Pet Eng 24:A49-50+ D '52

See also

Springs
Wells

Prospecting

Earth resistivity in groundwater studies in Illinois. M. B. Buhle. maps Min Eng 5:Trans 395-9 Ap '53

Florida

Water from inside-city wells; Jacksonville. C. E. Wright. il Pub Works 84:70-1 Mr '53

Illinois

Earth resistivity in groundwater studies in Illinois. M. B. Buhle. maps Min Eng 5:Trans 395-9 Ap '53

India

Self-potential anomalies due to subsurface water flow at Garimenapenta, Madras state, India. M. B. R. Rao. bibliog maps Min Eng 5:Trans 400-3 Ap '53

Louisiana

Formation waters in southwest Louisiana. B. C. Timm and J. J. Maricelli. bibliog maps diags Am Assn Pet Geologists Bul 37:394-409 F '53

Mexico

Structural localization of ground water in limestones; Big Bend district, Texas-Mexico. G. A. Kiersch and P. W. Hughes. bibliog maps diags Econ Geol 47:794-806 D '52

Texas

Structural localization of ground water in limestones; Big Bend district, Texas-Mexico. G. A. Kiersch and P. W. Hughes. bibliog maps diags Econ Geol 47:794-806 D '52

WATER and sewage conference, Western Canada. See Western Canada water and sewage conference

WATER closets

Brand new threat to the privy; aerobic process that works on recirculated water; sewerless toilet. Eng N 149:39+ O 30 '52

WATER companies

Meter shops

Plainfield, N.J. meter repair shop. G. M. Haskew. il Am Water Works Assn J 44:1027-9 N '52

Records

Perpetual inventories. M. C. Stout. il Am Water Works Assn J 45:423-30 Ap '53

Securities

Water stocks. I. U. Cobleigh. Comm & Fin Chr 177:292 Ja 22 '53

Stores systems

Perpetual inventories. M. C. Stout. il Am Water Works Assn J 45:423-30 Ap '53

WATER conditioning foundation

Annual meeting, 4th, Chicago. Dom Eng 181:118 My '53

WATER conduits

California proposes diversion of Feather River water to southern California. A. D. Edmonston. map Civil Eng 23:229-31 Ap '53

Power regained by cleaning Santeetlah tunnels. B. J. Fletcher. Edison Elec Inst Bul 20:431-3 D '52

See also

Aqueducts
Water pipes

WATER conduits, Concrete

Hydrostatic pressures under a canal measured accurately. P. H. S. Follett. il diag Civil Eng 23:248-9 Ap '53

WATER conservation

APHA conference report; water conservation. Pub Health Rep 68:234-6 F '53

Ground-water movement controlled through spreading. P. Baumann. il diags Am Soc C E Proc 77[no 86]:1-38 Ag '51; Discussion. 78[no D-86]:1-14 Jl '52

Pollution abatement through water conservation; symposium. G. A. Howell and others. plans Sewage & Ind Wastes 24:1368-81 N '52

Water conservation, a by-product of industrial waste control. J. L. Partin. il Sewage & Ind Wastes 25:1050-9 S '53

WATER consumption

Per capita use of water in public schools. K. S. Wisnieski and M. Garber. Pub Works 84:97-8 Jl '53

Using water demands to rate television programs; Toledo, Ohio. G. J. Van Dorp. Pub Works 84:64-5+ Mr '53

Water requirements. Water & Sewage Works 100:R62-3 My '53

What about increased water use and water shortages? Public Works questionnaire. Pub Works 84:82+ My '53

Why water charts zigzag at night. Bsns W p44-6 My 2 '53

See also

Air conditioning equipment—Water requirements
Water meters

WATER cooling. See Cooling of water; Cooling towers

WATER departments

Buildings

Ridgewood, N.J. service building. J. A. Carr. il Am Water Works Assn J 44:1030-2 N '52

Equipment

Construction equipment for a modern water department. H. Graeser and J. D. Henry. il Pub Works 84:64-7 My '53

Labor saving equipment speeds the work. L. M. Bailey. il Pub Works 84:55 Ja '53

Safety measures

Safety program for the water utility; Kansas City Water department. J. B. Ramsey and H. L. Roose. Am Water Works Assn J 45:23-32 Ja '53

WATER distribution

Complete water metering under way in the city of Ottawa. W. E. MacDonald. il diags Munic Util 91:46+ Ap '53; Same cond. Am Water Works Assn J 45:909-16 S '53

Details of two Far North water systems. S. S. Copp. Pub Works 84:70 S '53

1952 summer water service problems. Am Water Works Assn J 45:580-2 Je '53

Radial-cone tank is important unit in Stamford's improved water system. W. B. Young. il Munic Util 90:13+ D '52

Seventy-five years private water-supply operation ends in Windsor, Ont. il Munic Util 91:19+ Mr '53

Some aspects of valve engineering in water supply; abstract. P. L. Boucher. Am Water Works Assn J 45:sup72+ My '53

Use of fluoride as a tracer in distribution system studies. G. V. Levin and N. E. Jackson. maps Am Water Works Assn J 45:264-74 Mr '53

Water supply problems in annexed areas; panel discussion. Am Water Works Assn J 45:551-6 Je '53

See also

Aqueducts
Drinking water systems
Hydrants
Hydraulics
Pumping stations
Water conduits
Water hammer
Water pipes
Waterworks

Cost

Novel cost basis for water pipeline. Eng N 150:104 My 21 '53

Waterworks distribution system, Michigan; unit prices. Eng N 149:87 O 16 '52

Cross connections

Toledo's cross-connection program. P. Kiel and E. Hoyt. plan diags Pub Works 84:78-9+ S '53

Tables, calculations, etc.

How electric calculators solve water system distribution problems. G. W. Reid and L. B. Wolfenson. bibliog il diags Pub Works 84:78-9+ O '53

WATER drops. See Drops

WATER flow

Effect of entrance conditions on diffuser flow. J. M. Robertson and D. Ross. il Am Soc C E Proc 78 [no 141]:1-24 Jl '52; Discussion. 79 [no D-141]:1-6 Je '53

Flow of water in concrete pipe lines; nomograph. F. T. Mavis. Water & Sewage Works 100:R 128 My '53

Ground-water movement controlled through spreading. P. Baumann. il diags Am Soc C E Proc 77[no 86]:1-38 Ag '51; Discussion. 78[no D-86]:1-14 Jl '52

Heat transfer to low pressure sprays of water in a steam atmosphere. S. Weinberg. bibliog diags Inst Mech Eng Proc (B) 1B no 6:240-53, pl 1-2; Discussion. il 253-8 '52

Hydroextraction techniques for permeability measurement. M. M. Haruni and J. A. Storrow. bibliog il diags Ind & Eng Chem 44:2751-67 N '52

Mean flow in Kaplan turbines. R. E. Meyer. bibliog diag A S M E Trans 74:1283-9 O '52

Measurement of turbulent velocity fluctuations by the method of electromagnetic induction. L. M. Grossman and A. F. Charwat. il diags R Sci Instr 23:741-7 D '52

Pitot-Venturi flow element water service report. H. W. Stoll. il diags A S M E Trans 75:969-74 Jl '53

Pressure drop in annuli containing transverse fin tubes. F. W. Braun, jr. and J. G. Knudsen. flow sheet il diag Chem Eng Prog 48:517-22 O '52

Unconfined ground-water flow to multiple wells. V. E. Hansen. il diags Am Soc C E Proc 78[no 142]:1-18 Ag '52

See also

Dams
Floods
Hydraulics
Run-off
Stream flow

WATER gages

For greater safety, best control, pick right boiler water-level gage. F. Ptacek. il diags Power 97:82-4+ Ag '53

Gage glass erosion. Power Eng 57:76 My '53

Install gage glasses right for long service. S. Elonka. il Power 97:106-7 Ag '53

Train night watchmen to check boiler water gages. Power Eng 57:78 F '53

WATER hammer

American standard specifications for short-body cast-iron fittings, three inch to twelve inch, for 250-psi water pressure plus water hammer. diags Am Water Works Assn J 44:1065-74 N '52

Electrical analogies and electronic computers; surge and water hammer problems. H. M. Paynter. bibliog il diags Am Soc C E Proc 78[no 146]:1-28 Ag '52

Pressure surges at large pump installations. J. Parmakian. bibliog il plans diags A S M E Trans 75:995-1004; Discussion. 1004-6 Ag '53

Standard allowances for water hammer; panel discussion. S. L. Kerr and others. bibliog il diags Am Water Works Assn J 44:977-91; Discussion. 991-5 N '52

Techniques for evaluation of noise-reducing piping components. D. B. Callaway and others. diags Acoustical Soc Am J 24:725-30 N '52

Water hammer in pipe-lines. L. E. Adams. Engineering 174:148 Ag 1 '52; Discussion. P. Linton. 174:212-13 Ag 15 '52; Reply. 174:380-1 S 19 '52

What causes this water hammer? diags Power 97:134+ Mr '53

What causes water hammer in this tail-pipe? Power Eng 57:105 O '53

WATER heaters

Hot-water supply from tankless heaters. Consumers Res Bul 31:21 Mr '53

Lick your storage-heater problems by proper application, auxiliaries. F. P. Lankow. il diags Power 97:108-9 Ag '53

Putting new life into water heaters. il Bsns W p 106-8+ F 28 '53

See also

Electric water heaters
Gas water heaters

Standards

FHA water heater standards. Elec World 139:115 Ap 20 '53

WATER imbibition. See Petroleum—Production methods

WATER laws and legislation

Arizona legislators counter court ruling by halting well drilling. Eng N 150:28 Mr 26 '53

WATER laws and legislation—*Continued*

Nebraskans gird for new battle over Platte River diversion scheme. map Eng N 150:22 Ja 29 '53

Stream classification and water use zoning. J. C. Frederick. il map Pub Works 84:82-3+ Ap '53

Water law in the United States, with particular reference to the western states. S. T. Harding. Civil Eng 22:696-701+ S '52

See also

Water rights

Waterworks—Laws and regulations

WATER level indicators

Does your water-level alarm whistle work? L. R. Greif. diag Power Eng 57:77 Jl '53

See also

Water gages

WATER measurement

Contents of cylindrical tanks and standpipes; nomograph. W. F. Schaphorst. Water & Sewage Works 100:131 Mr '53

Measurement of water by circular orifice at end of discharge pipe. diag Water & Sewage Works 100:R61 My '53

Rating curves for flow over drum gates. J. N. Bradley. il plan diags Am Soc C E Proc 79 [no 169]:1-18 F '53

Study determines lake evaporation and tests new measurement methods. il Eng N 150:71 Mr 19 '53

See also

Water meters

WATER meters

Complete water metering under way in the city of Ottawa. W. E. MacDonald. il diags Munic Util 91:46+ Ap '53; Same cond. Am Water Works Assn J 45:909-16 S '53

Electric recording water meter. J. K. Tuthill. il plan diags Ill U Eng Exp Sta Circ 65:1-18 '52 (pa 20c)

16,000 meter setting in a hurry; Levittown, now building in Bucks county, Pa. R. L. Hubbard. il diag Pub Works 84:61-3 My '53

Sizing and maintenance of meters at Akron. L. W. Bausher. Am Water Works Assn J 45:405-8 Ap '53

Repair

Meter parts blast cleaned. Steel 131:113 D 1 '52

Plainfield, N.J. meter repair shop. G. M. Haskew. il Am Water Works Assn J 44:1027-9 N '52

Repair shop and test program for large and small meters. J. E. Moses. il Water & Sewage Works 100:146-8 Ap '53

Testing

Meter testing and repair in the one-man water works. L. A. Gutsch and J. L. Ford. Am Water Works Assn J 45:249-51 Mr '53

Repair shop and test program for large and small meters. J. E. Moses. il Water & Sewage Works 100:146-8 Ap '53

WATER pipes

Augusta's pipe trailer. S. Anthony. il Water & Sewage Works 100:221 Je '53

Community water pipe line serves four producing areas in north Oklahoma. K. B. Barnes. il plan diag Oil & Gas J 51:189-91 O 13 '52

Experimental approaches to the study of noise and noise transmission in piping systems. W. L. Rogers. bibliog il diags Heating-Piping 25:139-45 Jl '53; Abstract. Dom Eng 182:202+ Ag '53; Discussion. Heating-Piping 25:130-1 Ag '53

How a submarine water main was laid. A. R. MacPherson. il Pub Works 84:76+ Jl '53

90-mile water pipeline in west Texas. J. O. Smith. il Explosives Eng 31:45-8 Mr '53

102 inch water main for M.W.B. Engineer 196:59-60 Jl 10 '53

Piping problems simplified with high-temperature hot water distribution. F. L. Moesel. plan diags Arch Rec 113:192-4 F '53

Portland builds a new pipe line. G. B. Arthur. il Pub Works 84:80-1+ Ag '53

San Francisco water lines completed. il map Eng N 150:46+ Ja 8 '53

Sub-surface trestle carries water main. il Eng N 150:55 Ap 16 '53

Water main casing jacked under 14 sets of railroad tracks. il Constr Methods 34:92-3+ N '52

Water main tests contractor's ingenuity; installation of water supply main carrying water from Cambridge to Boston. il Eng N 149:44-6 N 13 '52

See also

Aqueducts

Hot water heating

Hot water supply

Pipe fittings

Pipe joints

Pipe laying

Plumbing

Water distribution

Water hammer

Waterworks

Cathodic protection

Performance of magnesium galvanic anodes in underground service; abstract. O. Osborn and H. A. Robinson. Am Water Works Assn J 45:sup62 Ap '53

Chlorination

See Water pipes—Sterilization

Cleaning

Blowing out service lines. S. H. Davis. il Water & Sewage Works 100:R79 My '53

Breaking a water system bottleneck; Mitchell, S.D. V. C. Francis. il plan Pub Works 84:67-8 Jl '53

Power regained by cleaning Santeetlah tunnels. B. J. Fletcher. Edison Elec Inst Bul 20:431-3 D '52

Corrosion

Aerobic and anaerobic iron corrosion in water mains. C. A. H. V. Kühr and L. S. Van der Vlugt. bibliog(28 titles) il Am Water Works Assn J 45:33-46 Ja '53

Cast-iron pipe coatings and corrosion. J. R. Baylis. il diags Am Water Works Assn J 45:807-31 Ag '53

Control of the treatment of water in building piping systems. A. T. Dempster. bibliog diag Am Water Works Assn J 45:81-8 Ja '53

Corrosion in closed circulating water systems. S. Sussman and J. B. Fullman. il diag Heat & Ven 50:77-82 O '53

Dechlorination linked to corrosion in water distribution systems. D. B. Williams. bibliog il Water & Sewage Works 100:106-11 Mr '53

Studies of the corrosion of water pipe; abstract. J. R. Baylis. Water & Sewage Works 99:452 N '52

Detection

How can we find underground valves? il Power 97:134-6 Jl '53

Practical application of applied geophysics to utility operations. G. M. MacLeod. il Munic Util 91:17-18 Mr '53

Failure

Water main burst in New York city. il Water & Sewage Works 100:353 S '53

Freezing

Details of two Far North water systems. S. S. Copp. Pub Works 84:70 S '53

Freezing of water in pipes and vessels. R. S. Dill. diags Heat & Ven 50:95-101 O '53

Soil temperatures in water works practice. R. F. Legget and C. B. Crawford. bibliog diags Am Water Works Assn J 44:923-39 O '52

Steam cleaner thaws mains and sewers in Leduc, Alta. Munic Util 90:10 D '52

Lining

Cast-iron pipe coatings and corrosion. J. R. Baylis. il diags Am Water Works Assn J 45:807-31 Ag '53

Cement-mortar linings and coatings for steel pipe. R. C. Kennedy. Am Water Works Assn J 45:113-15 F '53

Developments in tests of coatings for steel pipe. G. E. Burnett and C. B. Masin. il Am Water Works Assn J 44:893-911 O '52

Mortar lining extends penstock life and restores original capacity. P. H. Yelton. il Elec World 139:106-8 F 9 '53

Revision of American standards for pit cast pipe and cement mortar lining. Am Water Works Assn J 45:404 Ap '53

Location

Water industry problems in highway construction. R. Fuller. Pub Works 84:76+ My '53

WATER pipes—*Continued*

Protection

See also
Water pipes—Cathodic protection
Water pipes—Freezing

Service pipes

Survey of service line installation practices. Am Water Works Assn J 44:1021-3 N '52

Standards

American standard specifications for cast iron pipe centrifugally cast in metal and sand lined molds, for water or other liquids. diags Am Water Works Assn J 45:189-230 F '53

American standard specifications for mechanical joint for cast iron pressure pipe and fittings. diags Am Water Works Assn J 45:431-42 Ap '53 (reprints 35c)

American standard specifications for short-body cast-iron fittings, three inch to twelve inch, for 250-psi water pressure plus water hammer. diags Am Water Works Assn J 44:1065-74 N '52

Revision of American standards for pit cast pipe and cement mortar lining. Am Water Works Assn J 45:404 Ap '53

Standard allowances for water hammer; panel discussion. S. L. Kerr and others. bibliog il diags Am Water Works Assn J 44:977-91; Discussion. 991-5 N '52

Tentative standard specifications for cast-iron pressure fittings. diags Am Water Works Assn J 45:321-48 Mr '53

Tentative standard specifications for steel pipe flanges. diags Am Water Works Assn J 44:969-76 O '52

Sterilization

Disinfection of water mains. W. H. Collier. il Munic Util 90:14-16+ D '52

Revised main disinfection procedure. M. P. Crabill. Am Water Works Assn J 45:832-4 Ag '53

Tentative procedure for disinfecting water mains. Am Water Works Assn J 45:835-43 Ag '53 (reprints 25c)

Tables, calculations, etc.

Application of Dr J. S. Blair's formula for flow in water pipes. S. Alpay. Inst Mech Eng Proc 165 (W.E.P. no 69):278 '51

Hydraulics of single pipe lines. D. R. Taylor. Water & Sewage Works 100:257-9 Jl '53

Relative carrying capacities of pipe lines of equal smoothness. E. L. Neubling, comp. Water & Sewage Works 100:R213 My '53

WATER pipes, Asbestos cement

Standards

American water works association tentative standard specifications for asbestos-cement water pipe. Am Water Works Assn J 45:773-8 Jl '53

WATER pipes, Cast iron

Cast-iron pipe coatings and corrosion. J. R. Baylis. il diags Am Water Works Assn J 45:807-31 Ag '53

Cast iron water pipe; prices, 1933-1952; tabulation. Iron Age 171:410 Ja 1 '53

Ductile iron; new engineering material for water works construction. C. T. Haller. bibliog il Am Water Works Assn J 44:912-22 O '52

New material, ductile iron, developed for water mains. il Civil Eng 23:124 F '53

Standard allowances for water hammer; cast-iron pipe. T. F. Wolfe. Am Water Works Assn J 44:980-3 N '52

WATER pipes, Concrete

Pressure pipe project in Pakistan. F. L. Fitzpatrick. il Rock Prod 56:145-7 My '53

Prestressed-concrete pipe failure halts Canadian job. Eng N 150:47 F 19 '53

Standard allowances for water hammer; concrete pressure pipe. H. F. Kennison. Am Water Works Assn J 44:988-91 N '52

Failure

Prestressed-concrete pipe failure is attributed to wire corrosion. Eng N 150:24 My 7 '53

Manufacture

Collapsible inner form simplifies pipe-casting in trenches. il diags Constr Methods 34:74-5 N '52

Producing pipe for Seattle water project; United concrete corp. A. R. Macpherson. il Rock Prod 56:157-8 My '53

Tables, calculations, etc.

Flow of water in concrete pipe lines; nomograph. F. T. Mavis. Water & Sewage Works 100:R 128 My '53

WATER pipes, Copper

Five simple rules for copper water tube solder joints. J. S. Coe. il Dom Eng 181:95+ Mr '53; Same. Heating-Piping 25:88-9 My '53

Refresher course in plumbing; how to size and design copper water tube systems. A. I. Heim. il Dom Eng 181:88+ F '53

WATER pipes, Plastic

Experience with plastic tubing for water service installations. J. G. Carns, jr. and M. E. Flentje. diags Water & Sewage Works 99:446-7 N '52

Plastic service pipe; panel discussion. M. K. Socha and others. Am Water Works Assn J 45:757-63 Jl '53; Abstract. Water & Sewage Works 100:346-7 S '53

Testing

Plastic pipe for water services. J. N. Spaulding. Am Water Works Assn J 45:476-82 My '53

WATER pipes, Steel

Cement-mortar linings and coatings for steel pipe. R. C. Kennedy. Am Water Works Assn J 45:113-15 F '53

Coatings for steel water pipe. W. H. Cates. bibliog Am Water Works Assn J 45:103-12 F '53

Developments in tests of coatings for steel pipe. G. E. Burnett and C. B. Masin. il Am Water Works Assn J 44:893-911 O '52

Standard allowances for water hammer; steel pipe. W. H. Cates. bibliog Am Water Works Assn J 44:983-4 N '52

WATER pollution

Abatement of stream pollution caused by industrial wastes. R. Eliassen. Pub Health Rep 68:43-5 Ja '53

APHA conference report; water conservation. Pub Health Rep 68:234-6 F '53

Appraisal of a chemical waste problem by fish toxicity tests. L. A. Gillette and others. Sewage & Ind Wastes 24:1397-401 N '52

Aquatic organisms as an aid in solving waste disposal problems. R. Patrick. bibliog Sewage & Ind Wastes 25:210-14; Discussion. 214-17 F '53

Biological analysis of streams. H. R. Murdock. Ind & Eng Chem 44:sup95A-7A D '52

Biological effects of pollution in Michigan waters. E. W. Surber. maps Sewage & Ind Wastes 25:79-86 Ja '53

Can the oxygen demand in sulphite waste liquor effluent be measured by permanganate consumption? E. Schmidt. Tappi 36:291-4 Jl '53

Clean streams policy, progress aired. Eng N 149:24 N 20 '52

Computation of pollution in a vertically mixed estuary. H. Stommel. diags Sewage & Ind Wastes 25:1065-71 S '53

Controlling industrial pollution of the Passaic river; abstract. F. J. DeHooge. Water & Sewage Works 100:309 Ag '53

Critical review of literature on the toxicity of industrial wastes and their components to fish. P. Doudoroff and M. Katz. Sewage & Ind Wastes 25:802-39 bibliog(155 titles, p834-9) Jl '53

Critical review of the literature of 1952 on sewage, waste treatment, and water pollution. Sewage & Ind Wastes 25:653-83 bibliog(250 titles, p672-81) Je '53

Current stream pollution regulatory situation. L. L. Hedgepeth. Water & Sewage Works 100:354-6 S '53

Directory of engineers in charge of water pollution control. Water & Sewage Works 100:R215 My '53

Discharge of sewage and industrial wastes to estuaries; abstract. B. A. Southgate and W. S. Preddy. Am Water Works Assn J 45:sup78 S '53

WATER pollution—*Continued*

Effect of kraft mill wastes on stream bottom fauna. J. N. Wilson. bibliog maps Sewage & Ind Wastes 25:1210-18 O '53

Engineer-directors in charge of water pollution control agencies. Water & Sewage Works 100:180 Ap '53

How does industry make a pollution and waste survey? J. E. Cooper. Water & Sewage Works 100:195-8 My '53

How to keep pollution out of streams. K. S. Watson. il Mill & Factory 51:110-13 N; 113-16 D '52

Increased pressure on industry expected in stream pollution; National council for stream improvement. Chem & Eng N 31:867-8 Mr 2 '53

Industrial waste in town of 2,400 equals domestic sewage from city of 74,000; pollution of Spanish river. J. Wilkinson. Munic Util 91:22+ F '53

Industrial water pollution abatement. R. F. Weston. il Chem & Eng N 31:134-8 Ja 12 '53

Industry's progress in pollution control; abstract. A. E. Griffin. Eng N 150:27 Ap 2 '53

Investigation of wood-fibre discharges into the Spanish river. I. G. Simmonds. Munic Util 90:19-24+ D '52

Judicial aspects of water quality criteria. E. C. Borgeson and others. Sewage & Ind Wastes 25:325-34 Mr '53

Measurement of toxicity of substances to fish; abstract. D. W. M. Herbert. Sewage & Ind Wastes 24:1439-40 N '52

National council for stream improvement research and development activities, 1952. Tappi 36:sup 163A-6A Ap '53

Objectives for quality control in Ontario. Munic Util 91:38+ Jl '53

Ohio villages balk at pollution control. il Eng N 150:46-7 Je 18 '53

Ohio wields new water pollution club. Eng N 149:24 O 9 '52

Orsanco's sewage treatment standards set for another 300 miles of Ohio river. map Eng N 150:23 Ap 9 '53

Oxygen resources of San Diego bay. I. Nusbaum and H. E. Miller. bibliog map Sewage & Ind Wastes 24:1512-27 D '52

Pennsylvania asks court to back pollution law. Eng N 150:28 F 5 '53

Pollution abatement through water conservation; symposium. G. A. Howell and others. plans Sewage & Ind Wastes 24:1368-81 N '52

Pollution-control problem. A. E. Berry. il Munic Util 91:19-22+ Jl '53

Pollution in water supplies from shallow wells and measures for its prevention; abstract. N. R. Knowles. Am Water Works Assn J 45:sup68 Mr '53

Pollution loads and their effect on plant operation. J. R. Baylis and J. C. Vaughn. Munic Util 91:28-30+ Ag '53

Pollution of sea-water by oil. Engineering 174:151-2 Ag 1 '52

Pollution of the Spanish river studied biologically. R. G. Ferguson. Munic Util 91:31-2+ F '53

Pollution study of the Red Clay Creek drainage basin. A. J. Kaplovsky and others. map diags Sewage & Ind Wastes 25:963-70, 1072-6 Ag-S '53

Practical approach to textile pollution abatement and waste treatment. D. W. Snyder. Am Dyestuff Rep 41:745-6 N 10 '52

Prevention of pollution by oil. C. Koons. bibliog il diags Am Gas Assn Proc 1952:667-77

Problems and progress in reducing phenolic tastes; panel discussion. R. B. Adams and others. Am Water Works Assn J 45:491-501 My '53

Progress in abating stream pollution in 1952. H. R. Murdock. Ind & Eng Chem 45:sup 108A+ Ja '53

Progress in stream improvement. W. M. Van Horn. bibliog(128 ref) il Paper Ind 34:1456-8; 35:70-1, 331-3 Mr-Ap, Je '53

Progress in water pollution control. C. E. Schwob and L. B. Dworsky. il maps Pub Health Rep 67:1080-8 N '52

Raritan clean-up now split in two. Eng N 149:26 O 16 '52

Rational approach to industrial waste disposal problems. R. N. Giles. bibliog Sewage & Ind Wastes 24:1495-501 D '52

Reducing pollution by cotton finishing wastes. Pub Works 84:125 S '53

River Derwent pollution. Elec R (Lond) 151:1329-30 D 19 '52

Role of industry in the Ohio River valley pollution control program; abstract. E. J. Cleary. Water & Sewage Works 100:365-6 S '53

Sewage treatment and water pollution research in England; Water pollution research laboratory. Pub Works 83:88-9 N '52

Sources and control of river pollution. R. D. Hoak. il Instruments 25:1714-16+ D '52

Spanish river investigation. A. V. DeLaporte. il map Munic Util 90:36+ N '52

Spent sulphite liquor pollution abatement programs in the Pacific Northwest. H. R. Amberg. Paper Tr J 136:20-1+ F 27 '53

Standardized method for determining toxicity of pure compounds to fish. L. Freeman. bibliog Sewage & Ind Wastes 25:845-8 Jl '53

Statewide standards unsound as devices to stop water pollution; ACS symposium. Chem & Eng N 31:1300+ Mr 30 '53

Still at odds; Raritan River factions find no agreement as upstream group's report is released. Eng N 150:26 My 28 '53

Stream pollution. H. A. Rothchild. Tappi 36:sup 129A-33A Ja '53

Stream pollution by coal mine wastes. H. F. Hebley. bibliog(27 titles) Min Eng 5:Trans 404-12 Ap '53

Stream pollution problems are rooted within the mistakes of community planning. H. R. Murdock. Ind & Eng Chem 45:sup 102A+ Mr '53

Streams and sewage treatment. D. E. Bloodgood. il Water & Sewage Works 100:56-9 F '53

Survey of research facilities and projects, 1953. H. Heukelekian and W. H. Wisely. Sewage & Ind Wastes 25:1077-91 S '53

Systematic analysis of organic industrial wastes. H. Braus, F. M. Middleton and C. C. Ruchhoft. bibliog diags Anal Chem 24:1872-6 D '52

Toxicity of combinations of certain inorganic compounds to daphnia magna Straus. L. Freeman and I. Fowler. bibliog Sewage & Ind Wastes 25:1191-5 O '53

Toxicity of some organic insecticides to fish. P. Doudoroff and others. bibliog Sewage & Ind Wastes 25:840-4 Jl '53

Trade wastes and river pollution; abstract. B. A. Southgate. Chem & Ind p349 Ap 11 '53

Waste control at oil refineries. R. F. Weston. bibliog(32 ref) flow diags il diags Chem Eng Prog 48:459-67 S '52

Water pollution control in Georgia. Pub Works 84:111-13 F '53

Water pollution control; preliminary report, Assembly of the state of California interim committee on air and water pollution; abstract. Am Water Works Assn J 44:sup66+ O '52

Water pollution problem, get ready to tackle it! M. Nord. bibliog il Pet Refiner 31:125-30 O '52

Water pollution research in 1952. Engineer 195:704 My 15 '53

Water pollution research, 1951; abstract. Sewage & Ind Wastes 25:507-8 Ap '53

Water symposium; steel industry in Pennsylvania; approach to problem of water pollution. C. S. Cassels and others. il plans diags Iron & Steel Eng 30:68-82; Discussion. 82-3 Mr '53

Wisconsin anti-pollution progress compares favorably with European efforts. Paper Ind 34:1324 F '53

See also

Algae
Chemical plants—Waste
Sewage disposal
Trade waste
Water—Bacteriology
Water purification
Water supply—Salt water intrusion

WATER power

French explore sea depths for power and fresh water. il Eng N 150:38+ Mr 12 '53

WATER power—*Continued*

One hundred years of water power. W. F. Uhl. il Civil Eng 22:731-5 S '52

See also

Hydroelectric plants

Turbines

Canada

Water power in Labrador. Elec J 151:484 Ag 14 '53

Europe

Hydro-electric potential in Europe and its gross, technical and economic limits. Engineer 196:54-5 Jl 10 '53

Oregon

Power potential of Oregon streams listed. Eng N 150:45 Je 25 '53

WATER purification

Accurate pH control aids in better water treatment. il Pub Works 83:105 N '52

Algae control in the smaller waterworks. D. H. Matheson. Munic Util 91:54+ Ap '53

Balking algae in beverage water. N. F. Insalata. il Food Eng 24:72-4+ D '52

Control of the treatment of water in building piping systems. A. T. Dempster. bibliog diag Am Water Works Assn J 45:81-8 Ja '53

Destruction of phenols by oxidation with ozone. S. J. Niegowski. bibliog Ind & Eng Chem 45:632-4 Mr '53

Elements of water and sewage chemistry. il Pub Works 84:84-5+ O '53

pH measurement and control in water treatment plants. R. H. Babcock. il diags Water & Sewage Works 100:272-8 Jl '53

Multiple-treatment units for water purification; with cost data. E. H. Aldrich. il Am Water Works Assn J 44:1107-16 D '52

Outstanding achievements in water supply and treatment. H. E. Jordan. il Civil Eng 22:719-21 S '52

Packaged waterworks pays off. il diag Eng N 150:33-4+ Ja 1 '53

Paper mill process water purification. Paper Tr J 136:27 Je 26 '53

Reservoir treatment by improved methods. R. L. Derby and F. W. Townsend. il diags Water & Sewage Works 100:211-16 Je '53

Statewide standards unsound as devices to stop water pollution; ACS symposium. Chem & Eng N 31:1300+ Mr 30 '53

Tentative standard specifications for aluminum sulfate. Am Water Works Assn J 44:1075-84 N '52

Turbidity and odor problems overcome in filter plant design; Springfield, Tenn. J. W. Finney, jr. il diag Pub Works 83:60-1+ N '52

Water for education; University of North Carolina's new water treatment plant. M. D. Saunders. il Water & Sewage Works 100:142-5 Ap '53

Water magic; abstract. F. S. Gibbs. Water & Sewage Works 99:451-2 N '52

Water purification unit developed by army meets severe tests. Water & Sewage Works 11:sup 100A+ F '53

We save $12,150 a year by purifying our water; Empire worsted mills, inc. M. R. Klarquist. il Textile World 103:121+ Mr '53

See also

Feed water purification

Filters and filtration

Filtration plants

Resinous products—Water treatment

Water softening

Chlorination

Application of chlorine in the treatment of water; abstract. E. A. Whitlock. Am Water Works Assn J 45:sup66+ Jl '53

Chlorination of variable flows. J. B. Hazen. diag Am Water Works Assn J 45:465-8 My '53

Chlorine and chlorine dioxide for control of algae odors. C. R. Harlock and M. R. Dowlin. Water & Sewage Works 100:74-5 F '53

Corrosion of mild steel and brass in chlorinated water. F. Wormwell and T. J. Nurse. il J Ap Chem 2:685-92 D '52

Dechlorination linked to corrosion in water distribution systems. D. B. Williams. bibliog il Water & Sewage Works 100:106-11 Mr '53

Effect of free residual chlorination on nitrogen compounds in water. M. J. Taras. bibliog Am Water Works Assn J 45:47-61 Ja '53

How modern chlorination started. H. A. Faber. bibliog il Water & Sewage Works 99:455-9 N '52

Recommended procedures in the use of chlorine at water and sewage plants. Am Water Works Assn J 45:1060-74 O '53; Same. Sewage & Ind Wastes 25:1235-49 O '53; Same cond. Water & Sewage Works 100:390-4 O '53 (to be cont)

Rural water supply and sewerage; disinfection of rural surface water supplies with chlorine. J. H. Sorrels and P. J. A. Zeller. (Bul. no. 128) 14p Texas engineering experiment station, Texas A and M college system, College Station, Texas '52

San Diego aqueduct capacity restored by chlorination. L. Streicher. il map Water & Sewage Works 100:333-7 S '53

Tentative standard specifications for hypochlorites. Am Water Works Assn J 45:1117-22 O '53 (reprints 20c)

Coagulation

Activated silica as a coagulant aid in water purification. il Munic Util 91:32-3+ S '53

Activated silica treatment of raw and waste waters. A. B. Middleton. bibliog flow diags il Water & Sewage Works 100:85-7 F '53

Activation of silica for use in water treatment. C. A. Black. Am Water Works Assn J 45:1101-7 O '53; Abstract. Water & Sewage Works 100:265 Jl '53; Discussion. A. E. Griffin. Am Water Works Assn J 45:1107-9 O '53; Water & Sewage Works 100:265 Jl '53

Removing radioactive materials from water by coagulation. W. J. Lacy. bibliog Water & Sewage Works 100:410-11 O '53

Color removal

How to cure red water troubles. P. S. Davy. il diag Pub Works 84:62-3+ F '53

Red water and its prevention. P. S. Davy. il Am Water Works Assn J 45:10-18 Ja '53

Corrosion control

Corrosion control experience in Cedar Rapids, Iowa. A. K. Cherry. il Water & Sewage Works 100:253-6 Jl '53

Recirculating-water systems need expert treatment supervision. S. T. Powell. il diags Power 97:86-9+ S '53

Water treatment for corrosion in condensate return lines. N. C. Stratton; R. B. Conlan. Heat & Ven 50:107-8 S '53

Demineralization

Demineralizer slices process-water costs for the electronics industry; Sylvania electric products, inc. E. H. Clohessey. il Power 97:89 Mr '53

Mixed bed vs two-step demineralization of high pressure boiler feed water. M. E. Gilwood and C. Calmon. diags Paper Tr J 136:22-5 My 22 '53; Same. Blast F & Steel Pl 41:660-2, 788-91 Je-Jl '53; Same abr. Can Chem Process 37:36+ Je 20 '53

Mixed-bed vs two-step demineralizing. M. E. Gilwood and C. Calmon. flow diag il diag Power 97:73-6 My '53

Permanent cartridge demineralizer provides high-purity water. il Elec Eng 72:540 Je '53

Water impurities and electroplating. J. B. Smith. flow diag il Metal Finishing 51:69-72+ F '53

Electrolytic treatment

Improved water treatment ups beverage quality. P. S. Roller. bibliog il diag Food Eng 24:69-71+ N '52

Fluoride removal

Defluoridation of municipal water supplies. F. J. Maier. bibliog il diag Am Water Works Assn J 45:879-88 Ag '53; Abstract. Water & Sewage Works 100:302-3 Ag '53

History

History of water supply, 1850 to present. G. E. Symons. il Water & Sewage Works 100:191-4 My '53

WATER purification—*Continued*

Iron removal

Iron and manganese removal. E. Nordell. flow diag il Water & Sewage Works 100: 181-5 My '53

Lime treatment

American water works association tentative standard specifications for quicklime and hydrated lime. Am Water Works Assn J 45:89-102 Ja '53

Automatically controlled lime treatment for the water supply of Halifax, N.S. G. L. Renner. map plan diags Munic Util 91:23-8+ S '53

Manganese removal

Copper catalysis for manganese oxidation. F. L. Futral and R. S. Ingols. Am Water Works Assn J 45:804-6 Ag '53

Iron and manganese removal. E. Nordell. flow diag il Water & Sewage Works 100: 181-5 My '53

Ozone treatment

Action of ozone on tastes and odors and coliform organisms. M. P. Powell and others. Am Water Works Assn J 44:1144-50 D '52

Ozone sterilization of the water supply of Nice and coastal communities; abstract. H. Bernier. Am Water Works Assn J 44: sup54 O '52

Radioactive water

Critical review of the literature of 1952 on sewage, waste treatment, and water pollution. Sewage & Ind Wastes 25:538-47 bibliog(51 titles, p545-7) My '53

Detectability of low-level radioactivity in water. A. S. Goldin and others. bibliog Am Water Works Assn J 45:73-80 Ja '53

Radioactive contamination, continuing problem in water supply engineering. R. J. Morton. bibliog il diag Civil Eng 22:722-5 S '52

Removing radioactive materials from water by coagulation. W. J. Lacy. bibliog Water & Sewage Works 100:410-11 O '53

To combat radio-active water caused by atom bomb explosions. E. S. Nuspliger. il Paper Tr J 136:20-1 F 13 '53

Water and the atomic energy industry; abstract. A. Wolman and A. E. Gorman. Engineering 175:618 My 15 '53

Silica removal

Silica removal characteristics of highly basic anion exchangers. M. E. Gilwood and others. bibliog diag Am Water Works Assn J 44:1057-64 N '52

Silver process

Effective slime control with colloidal silver. il Paper Ind 35:459 Jl '53

Water disinfectant; Movidyn; colloidal suspension of metallic silver. Chem Eng 60: 264+ Mr '53

Study and teaching

Short courses and correspondence courses for water plant operators. H. K. Gidley. bibliog Am Water Works Assn J 45:67-71 Ja '53

Taste and odor removal

Actinomycetes in the Oklahoma City water supply. J. K. G. Silvey and A. W. Roach. bibliog il Am Water Works Assn J 45: 409-16 Ap '53

Action of ozone on tastes and odors and coliform organisms. M. P. Powell. Am Water Works Assn J 44:1144-50 D '52

Chlorine and chlorine dioxide for control of algae odors. C. R. Harlock and M. R. Dowlin. Water & Sewage Works 100:74-5 F '53

Correction of tastes and odors resulting from detergents. J. G. Filicky and others. Munic Util 91:27-8+ Jl '53

Problems and progress in reducing phenolic tastes; panel discussion. R. B. Adams and others. Am Water Works Assn J 45:491-501 My '53

Research on industrial wastes as related to water quality; abstract. C. C. Ruchhoft. Pub Works 84:61 Jl '53

Slurry feeding of activated carbon. J. R. Baylis. il diag Am Water Works Assn J 44:1161-8 D '52

Taste and odor problems during spring runoff; panel discussion. J. F. Erdei and others. diag Am Water Works Assn J 44:1127-43 D '52

WATER rates

Atrocious timing, but still needed; impact of water rate increase on the citizens of Toledo. Pub Works 83:82 D '52

Demand charge approved for water service in air-cooling. J. R. Pierce. Water & Sewage Works 100:314 Ag '53; Same. Am Water Works Assn J 45:870-2 Ag '53

Making a water utility solvent. E. D. Bonine. Am Water Works Assn J 45:457-8 My '53

Rates for recovery of capital and operating costs of fire protection service. R. H. Ellis. Munic Util 91:27-8+ My '53

Selling rate adjustments to citizens; panel discussion. L. N. Thompson and others. Am Water Works Assn J 44:1151-60 D '52; Abstract. Water & Sewage Works 99:259-60 Jl '52

Water rates; abstract. L. E. Ayers. Water & Sewage Works 100:305 Ag '53

WATER repellents

Smiling at the rain. il Chem W 71:40-2 D 6 '52

WATER rights

California files answer on Colorado water rights. Elec West 110:178 Je '53

Court cuts FPC's licensing powers. Elec World 139:58-9 Ja 12 '53; Excerpts. Eng N 150:25 Ja 15 '53

Irrigation water rights in the humid areas. H. T. Critchlow. Am Soc C E Proc 78[no 140]:1-6 Jl '52

Water law in the United States, with particular reference to the western states. S. T. Harding. Civil Eng 22:696-701+ S '52

WATER sampling

See also

Feed water sampling

WATER softeners

Rating

Water softening. il Consumers Res Bul 31:25-30 F '53

WATER softeners, Domestic

Filters and conditioners for the water supply. Consumers Res Bul 32:17-19 Ag '53

Short course in water softener hookups. J. Hosford. diags Dom Eng 181:90-1 My '53

Water conditioning foundation looks for bigger softening sales. Dom Eng 181:118 My '53

WATER softening

Accelator water softening plant; lime-soda reagents. il Chem Age (Lond) 68:317-18 F 21 '53

Corrosion control experience in Cedar Rapids, Iowa. A. K. Cherry. il Water & Sewage Works 100:253-6 Jl '53

Effects of synthetic detergent pollution on the operation of a public water supply softening plant; abstract. R. L. Culp and H. A. Stoltenberg. Water & Sewage Works 100:309 Ag '53

How cities save money on water softening. il Pub Works 84:70 Je '53

Miami in the limelight and at a profit! Miami lime reclamation plant. C. F. Wertz. il Water & Sewage Works 100:98-103 Mr '53

Municipal and home water softening. T. E. Larson. Am Water Works Assn J 45:557-60; Discussion. G. W. Bostrom. 560-1 Je '53

Revolutionary sludging. W. Randall. Chem Age (Lond) 68:141-2 Ja 17 '53

Salt well furnishes brine for softening; New Smyrna Beach, Fla. C. E. Wright. il Pub Works 83:63-4 D '52

Water-softener sludge put to work; used to treat metal plating wastes by Ranco, inc. diags Eng N 149:45 O 9 '52

Water softening. il Consumers Res Bul 31: 25-30 F '53

Water softening and conditioning problems; solution by chemical equilibrium methods. D. H. Caldwell and W. B. Lawrence. bibliog Ind & Eng Chem 45:535-48 Mr '53

Water treatment engineering; raw water treatment. L. W. Fitzpatrick. Power Eng 57:70-3 Mr '53

See also

Feed water purification

WATER storage

Computing requirements for elevated water storage. J. E. Kiker, jr. Pub Works 84:74-5+ My '53

Control of water pressure on suburban distribution lines; abstract. J. S. Williams. Water & Sewage Works 100:345-6 S '53

Kern River storage dam completed. il Eng N 150:39 My 28 '53

See also

Dams

Reservoirs

WATER supply

Bond of technology brings better liaison on water problems; ACS symposium. Chem & Eng N 31:1292 Mr 30 '53

Evaluating water supply requirements for a region. J. R. Stockton. Am Water Works Assn J 45:459-64 My '53

Increasing water resources through weather modification. I. P. Krick. bibliog il maps diags Am Water Works Assn J 44:996-1020 N '52

Intakes on variable streams. V. C. Lischer and H. O. Hartung. il diags Am Water Works Assn J 44:873-92 O '52

Water; special editorial report. maps diags Power 96:71-118 S '52; Abstract. Mech Eng 74:1022 D '52

Water works practices; operation, maintenance, management; hydrologic cycle. G. E. Symons. diag Water & Sewage Works 100:260-2 Jl '53

Water works practices; operation, maintenance, management; source of supply, surface water. G. E. Symons. il map Water & Sewage Works 100:357-60 S '53

What about increased water use and water shortages? Public Works questionnaire. Pub Works 84:82+ My '53

See also

Aqueducts
Dams
Feed water
Filters and filtration
Filtration plants
Fire service (water supply)
Hot water supply
Hydrants
Hydraulic engineering
Irrigation
Plumbing
Pumping machinery
Pumping stations
Rain and rainfall
Reservoirs
Rivers
Water, Underground
Water conservation
Water consumption
Water distribution
Water meters
Water pollution
Water purification
Water supply engineering
Watersheds
Waterworks
Wells

also subdivision Water supply under names of cities, e.g. Bombay; London; New York (city)

Bibliography

Reading meter; condensation; abstracts of waterworks literature. Published in monthly numbers of Journal of the American waterworks association

Fluorine content

APHA conference report; water fluoridation programs and community health. Pub Health Rep 68:220-3 F '53

British investigation of water fluoridation practice. Munic Util 91:34+ S '53

Census of fluoridation in the United States and Canada, 1952; committee report. Am Water Works Assn J 45:893-908 Ag '53

Considerations in supplying fluoridated water to industry. W. V. Weir. bibliog Am Water Works Assn J 45:369-75 Ap '53

Control of fluoridation. R. S. Jacobson. bibliog Am Water Works Assn J 44:1169-73 D '52

Court decisions on municipal water fluoridation. W. W. Land and E. K. Mosenthal. bibliog Am Water Works Assn J 45:387-96 Ap '53

Effect of fluoridated public water supplies on dental caries prevalence. F. A. Arnold, jr. and others. bibliog Pub Health Rep 68:141-8 F '53

Effects of fluoride in North Dakota water supplies. A. E. Williamson and J. H. Svore. Am Water Works Assn J 45:873-8 Ag '53

Fluoridation. Consumers Res Bul 30:29 O '52

Fluoridation. Sci Am 187:38-9 O '52

Fluoridation costs and problems. H. C. Medbery. il diag Am Water Works Assn J 45:745-56 Jl '53

Fluoridation equipment and facilities. il Pub Works 84:113-15 Je '53

Fluoridation experiences in a small water plant; Brookville, Pa. R. P. Ferringer. il Water & Sewage Works 100:68-70 F '53

Fluoridation experiences in Washington, D.C. N. E. Jackson. Pub Works 83:104 D '52

Fluoridation not guarantee that everyone will have perfect teeth. W. E. White. Munic Util 91:48-9 Mr '53

Fluoridation of domestic water supplies in North America as a means of controlling dental caries; abstract. Am Water Works Assn J 45:sup78+ O '53

Fluoridation planning and operating experience; symposium. N. E. Jackson and others. il Am Water Works Assn J 45:275-88 Mr '53

Fluoridation record at Sheboygan, Wis. Water & Sewage Works 100:41 Ja '53

Fluoridation safety established beyond any reasonable doubt. Water & Sewage Works 100:262 Jl '53

Fluorides and dental disease; abstract. F. A. Whitlock. Am Water Works Assn J 44:sup56+ O '52

Free-flowing fluorides for lucky Lake township. Water & Sewage Works 100:343 S '53

Health commissioner looks at fluoridation. A. E. Heustis. Am Water Works Assn J 45:889-92 Ag '53; Abstract. Water & Sewage Works 100:303 Ag '53

Impact of municipal water fluoridation on the food and beverage industries. G. S. Bratton. Am Water Works Assn J 45:364-8 Ap '53

Laboratory investigations on the relation of fluorine to dental caries on Tyneside and district; abstract. G. N. Jenkins and others. Am Water Works Assn J 45:sup80+ My '53

Latest flouridation results at Grand Rapids, Mich. Water & Sewage Works 100:169 Ap '53

Natural and applied fluoridation census; supplemental report. Am Water Works Assn J 44:943-6 O '52

Natural-fluoride well water added to Portsmouth surface supply. X. D. Murden. Am Water Works Assn J 45:363 Ap '53

Operator's viewpoint on water fluoridation. J. D. Lesslie. il Water & Sewage Works 100:14-16 Ja '53

Public opinion survey shows greater demand for fluoridation. Water & Sewage Works 100:290 Jl '53

Rational approach to fluoridation. J. E. McKee. bibliog Am Water Works Assn J 45:376-85; Discussion. C. N. Sawyer. 385-6 Ap '53

Review of practical fluoridation. H. F. Munroe. bibliog il diag Ind & Eng Chem 45:105-11 Ja '53

Study of the taste of fluoridated water. G. J. Cox and J. W. Nathans. Am Water Works Assn J 44:940-2 O '52

Tempest in a reservoir. il Chem W 72:18-19 F 14 '53

Use of fluoride as a tracer in distribution system studies. G. V. Levin and N. E. Jackson. maps Am Water Works Assn J 45:264-74 Mr '53

Washington story of fluoridation. N. E. Jackson and E. A. Schmitt. il map diag Water & Sewage Works 99:435-44 N '52

Water fluoridation and dental research. H. R. Frye and I. N. Hill. bibliog Am Water Works Assn J 44:947-56 O '52

What should a city do to its water? Bsns W p66+ Mr 21 '53

Why fluoridation? Can Chem Process 36:85-6 N '52

History

History of water supply, biblical times to 1850. G. E. Symons. diag Water & Sewage Works 100:95-7 Mr '53

Nitrogen content

Effect of free residual chlorination on nitrogen compounds in water. M. J. Taras. bibliog Am Water Works Assn J 45:47-61 Ja '53

Polluted water from the leaching of igneous rock. R. S. Ingols and A. T. Navarre. Science 116:595-6 N 28 '52

WATER supply—*Continued*

Salt water intrusion

Experiments with fresh-water barrier to prevent sea water intrusion. P. Baumann. maps diags Am Water Works Assn J 45:521-34 My '53

How to test for sea water contamination in drinking water. Pub Works 84:104 F '53

Pulp mill process water from a salt contaminated river. A. A. Broz. map Tappi 36:sup 161A-2A S '53

Standards

Should bacteriological standards for drinking water be reevaluated? M. Levine. Am Water Works Assn J 45:927-32 S '53

California

California proposes diversion of Feather River water to southern California. A. D. Edmonston. map Civil Eng 23:229-31 Ap '53

California reservoir advances. map Eng N 149:42 N 27 '52

Expansion of the Colorado River aqueduct system. R. B. Diemer. map Am Water Works Assn J 45:397-404 Ap '53

See also

Central Valley project, California

Hetch Hetchy water supply project

Canada

Control over water and sewage works by provincial authorities. Munic Util 91:20-1+ Mr; 25-6+ Je '53

Directory of Canadian waterworks systems. Munic Util 91:12+ Ja '53

Government officials in charge of Canadian public water supplies and sewerage systems. Munic Util 91:10 Ja '53

Metered water services in Canada; tabulation. Munic Util 91:8 Ja '53

Statistics of Canadian waterworks systems, by provinces; tabulation. Munic Util 91:8 Ja '53

Georgia

Polluted water from the leaching of igneous rock. R. S. Ingols and A. T. Navarre. Science 116:595-6 N 28 '52

Water pollution control in Georgia. Pub Works 84:111-13 F '53

India

Storm along the Indus; Hindu and Moslem fight over life-giving water. J. C. Perham. map Barron's 32:7-8 D 22 '52

Kuwait

Water for Kuwait. map Economist 167:28-9 Ap 4 '53

Massachusetts

Radioactive fallout in Massachusetts surface waters. H. A. Thomas, jr. and others. Am Water Works Assn J 45:562-8 Je '53

Newfoundland

Modern water and sewage works for group of Newfoundland towns. A. C. Northover. il Munic Util 91:23-4+ Je '53

North Dakota

Effects of fluoride in North Dakota water supplies. A. E. Williamson and J. H. Svore. Am Water Works Assn J 45:873-8 Ag '53

Oklahoma

Drought conditions in Oklahoma; abstract. M. B. Cunningham. Water & Sewage Works 100:306-7 Ag '53

Ontario

Objectives for quality control. Munic Util 91:38+ Jl '53

Western Ontario waterworks organization launched at meeting, Chatham, Nov. 7. Munic Util 90:19-20 N '52

Pakistan

Storm along the Indus; Hindu and Moslem fight over life-giving water. J. C. Perham. map Barron's 32:7-8 D 22 '52

Scotland

Works of the Stirlingshire and Falkirk water board. E. W. Denholm. Engineer 194:348 S 12 '52

Texas

ASCE section offers Texas water policy. Eng N 149:28 D 4 '52

It's our water! J. H. Hodges. il Bankers Mo 70:20+ Ja '53

United States

Cost, benefit standards spelled out for water resource development. Eng N 150:25 F 5 '53

Dry-up department; and Oklahoma City. Bsns W p 136 Jl 11 '53

Ike's views on water policy are revealed in state of the Union message. Elec World 139:83 F 9 '53

U.S. water consumption at record level of 170 billion gallons per day. R. G. Gibbs. Chem & Eng N 30:4596+ N 3 '52

Water group formed for resources study. Oil Paint & Drug Rep 164:4+ S 14 '53

Water policy action proposed. Elec World News ed 139:9 F 2 '53

Water supply developments during the year 1952. C. H. Capen. il Water & Sewage Works 100:1-11 Ja '53

West Virginia

Installation and performance of radial collector wells in Ohio River gravels. H. K. Gidley. maps diags Am Water Works Assn J 44:1117-26 D '52

Western states

Stream flow forecast below normal. R. A. Work and C. E. Houston. il map Elec West 110:77-80 My '53

Water law in the United States, with particular reference to the western states. S. T. Harding. Civil Eng 22:696-701+ S '52

WATER supply, Rural

Domestic water systems; pumps, windmills, etc.; tabulated statistics. Steel 132:192 Ja 5 '53

How to select the right system. diag Dom Eng 182:97 O '53

Rural water supply and sewerage; disinfection of rural surface water supplies with chlorine. J. H. Sorrels and P. J. A. Zeller. (Bul. no. 128) 14p Texas engineering experiment station, Texas A and M college system, College Station, Texas '52

Sales assist for water systems dealers. Dom Eng 181:92-3 My '53

Use the air waves to push water systems! G. E. Trisler. Dom Eng 182:157+ S '53

Water system problems answered; Manual of water supply and equipment. diags Dom Eng 182:94-6+ O '53

Water system sales up 11 percent! Dom Eng 182:138 O '53

Why push water systems? M. B. MacNeille. Dom Eng 181:93+ My '53

WATER supply engineering

APHA conference report; new methods in examination of water and sewage. Pub Health Rep 68:245-7 F '53

Aqueduct spans valleys with Yokohama water. il diags Eng N 150:53-4+ Mr 19 '53

Bombay water supply. map diags Engineer 194:570-1, 602-4 O 31-N 7 '52

Long-range water supply planning for Wichita. R. H. Hess. map Am Water Works Assn J 44:1043-51 N '52

Planning gave Portland a great water system. G. B. Arthur. il Pub Works 84:60-1+ Ja '53

Report of committee on water supply engineering of the Sanitary engineering division for the period ending Sept. 30, 1951. Am Soc C E Proc 79 [no 164]:1-33 bibliog(121 titles, p27-33) Ja '53

Water supply of Oakdale colliery. H. B. Fletcher. il Water & Sewage Works 100:71-3 F '53

See also

Aqueducts

Filters and filtration

Hetch Hetchy water supply project

Pumping stations

Reservoirs

Water distribution

Water pipes

Waterworks

WATER supply for armies

Army unveils electric water purifier. Eng N 149:36 N 13 '52; Same. Mech Eng 74:913 N '52; Same. Water & Sewage Works 100:sup 100A+ F '53

WATER supply for breweries

pH control ups quality, boosts process yields; Acme brewing co. il diag Food Eng 25:66-7+ Mr '53

WATER supply for factories

Considerations in supply fluoridated water to industry. W. V. Weir. bibliog Am Water Works Assn J 45:369-75 Ap '53

Demineralizer slices process-water costs for the electronics industry; Sylvania electric products, inc. E. H. Clohessey. il Power 97:89 Mr '53

Development of an industrial water system; abstract. R. C. Lewis. il Pub Works 84:60 Jl '53

Dow conquers sea water corrosion. D. P. Thornton, jr. il Pet Processing 7:1640-3 N '52

Equitable utilization of stream resources by industries. E. B. Phelps. il Water & Sewage Works 99:495-7 D '52

How to regulate process water pressure. il diags Power 97:154-6 O '53

Impact of municipal water fluoridation on the food and beverage industries. G. S. Bratton. Am Water Works Assn J 45:364-8 Ap '53

Industrial water use. bibliog Am Water Works Assn J 45:289-95 Mr '53

Industrial water use; panel discussion. W. J. Lauterbach and others. bibliog Am Water Works Assn J 44:1033-42 N '52

Integrating reclamation and disposal of waste water. A. M. Rawn and others. bibliog il Am Water Works Assn J 45:483-90 My '53

New boom intake, will it cut screening costs? G. Rodemeyer. diags Power Eng 57:62-3+ F '53; Discussion. 57:57+ My '53

Pollution abatement through water conservation; symposium. G. A. Howell and others. plans Sewage & Ind Wastes 24:1368-81 N '52

Production clinic. E. G. Thomssen. Soap & San Chem 28:95+ S '52

Symposium on continuous analysis of industrial water and industrial waste water. (Special tech. pub. no. 130) 54p Am. soc. for testing materials, 1916 Race st, Philadelphia 3 '53

Treatment and re-use of water in beet sugar manufacturing. G. S. Fleming. plan Sewage & Ind Wastes 24:1382-8 N '52

Water conservation, a by-product of industrial waste control. J. L. Partin. il Sewage & Ind Wastes 25:1050-9 S '53

See also

Cooling towers
Cooling water
Drinking water systems
Water supply for paper mills
Water supply for textile mills

Cost

How much does industrial water supply cost? R. Hazen. map Eng N 150:30-2+ F 26 '53

WATER supply for mines

Chuquicamata sulphide plant; water supply. W. E. Rudolph and R. E. Baylor. il map Min Eng 4:1210-12 D '52

Water supply for Oakdale colliery. H. B. Fletcher. il Water & Sewage Works 100:71-3 F '53

WATER supply for paper mills

Closure of a tissue machine whitewater system. J. Mardon and R. M. Toller. diags Pulp & Pa of Can 54:81-6 Ja '53

Determination of phenyl mercuric salts in the paper mill system. A. Schwerdle. bibliog Tappi 36:94-6 F '53

Effective slime control with colloidal silver. il Paper Ind 35:459 Jl '53

Modification of the feedwater treatment system at Port Arthur division, Provincial paper, limited. E. E. Valley and R. T. Hanlon. il diags Pulp & Pa of Can (Convention no) 54:190-4+ [F] '53

Paper mill process water purification. Paper Tr J 136:27 Je 26 '53

Pulp mill process water from a salt contaminated river. A. A. Broz. map Tappi 36:sup 161A-2A S '53

To combat radio-active water caused by atom bomb explosions. E. S. Nuspliger. il Paper Tr J 136:20-1 F 13 '53

Water for papermaking, past, present, and future; abstract. C. A. Snavely. Paper Tr J 136:96 F 20 '53

WATER supply for petroleum industry

Better pump, cheaper bromination. F. Breese. diag Pet Processing 7:1785 D '52

Community water pipe line serves four producing areas in north Oklahoma. K. B. Barnes. il plan diag Oil & Gas J 51:189-91 O 13 '52

Conditioning water for secondary-recovery in midcontinent oil fields. J. W. Watkins and others. bibliog 33pls U S Bur Mines Rep of Invest 4930:1-86 '52; Excerpts. Pet Eng 25:B51-6+ My '53

Here is a successful skimming basin design. il Pet Refiner 32:176 Ap '53

How four oil refineries use water. R. N. Simonsen. plans Sewage & Ind Wastes 24:1372-7 N '52

How to design a radial flow settling basin. H. H. Elliston. diag World Oil 136:182-3 Mr '53

Treatment of sewage for industrial utilitization at Moose Jaw. J. E. Haack. flow sheet Munic Util 90:20-1+ O '52

Water supplies for oil refineries; abstract. M. Benger. Chem Age (Lond) 68:285-6 F 14 '53; Same. Chem & Ind p 170-1 F 21 '53

WATER supply for plating

Decontaminating plating solutions. Mech Eng 75:151-2 F '53; Excerpt. Iron Age 170:220 N 6 '52

Water chiller ups production of electroplating tanks. M. L. Hoglund. il Heating-Piping 25:108-9 Mr '53

Water impurities and electroplating. J. B. Smith. bibliog(68 ref) flow diag il diag Metal Finishing 51:69-72+ F; 65-9 Mr '53

WATER supply for power plants

Bearings, glands need clean water too; station cooling-water services clog up from iron and solids. P. Snyder. il Power 97:86-7 Jl '53

Industrial water use; electric utility industry. C. J. McLean. Am Water Works Assn J 44:1037-42 N '52

New boom intake, will it cut screening costs? G. Rodemeyer. diags Power Eng 57:62-3+ F '53; Discussion. 57:57+ My '53

Power from hot water. flow diag il diags Engineer 194:719-21 N 28 '52; Engineering 174:660-1, 691-3 N 21-28 '52

Recirculating-water systems need expert treatment supervision. S. T. Powell. il diags Power 97:86-9+ S '53

Water; special editorial report. maps diags Power 96:103-17 S '52; Abstract. Mech Eng 74:1022 D '52

See also

Feed water purification

WATER supply for schools

Per capita use of water in public schools. K. S. Wisnieski and M. Garber. Pub Works 84:97-8 Jl '53

WATER supply for ships

How sailors obtain fresh water. Nat Safety N 67:84 My '53

WATER supply for textile mills

Automatic system regulates pH, assures clean process water; James Lees & sons co. J. Tyler. flow diag il Textile World 103:122-3+ O '53

We save $12,150 a year by purifying our water; Empire worsted mills, inc. M. R. Klarquist. il Textile World 103:121+ Mr '53

WATER tanks

Cubic feet, gallons, pounds, and tons of water in rectangular tanks. W. F. Schaphorst. Water & Sewage Works 100:R 132 My '53

Diesel water tanks; report of Master boiler makers' association. il diags Ry Mech & Elec Eng 126:63-5 N '52

Operation of pneumatic storage tanks. J. B. Wilkinson. Water & Sewage Works 100:R80-1 My '53

Manufacture

Fillet and butt joints are welded by manual hidden arc. il Steel 132:160 Ap 6 '53

WATER tanks, Plastic

Navy tries plastics for water tanks. H. N. Wallin. Materials & Methods 38:170+ Ag '53

WATER tanks, Steel

Radical-cone tank is important unit in Stamford's improved water system. W. B. Young. il Munic Util 90:13+ D '52

Painting

Repainting steel water tanks. J. O. Jackson. il Water & Sewerage Works 100:R70-1 My '53

WATER towers

Cat moves tower 300 yards. il Iron Age 171: 119 Mr 5 '53

CAA blasted on tower hazard; obstruction on a runway approach path at Youngstown airport. A. McSurely. Aviation W 58: 15-16 Ja 26 '53

1,900-ton tower moves on steel balls. il plan Constr Methods 35:78+ F '53; Munic Util 91:23+ Mr '53

WATER tube boilers. See Boilers, Water tube

WATER usage in air conditioning. See Air conditioning equipment—Water requirements

WATER vapor

Controlling water vapor inside main reduction gear case. il diag Marine Eng 58:76 O '53

Determination of water vapor in natural gas by direct chemical method. W. F. Brickell. bibliog il diags Am Gas Assn Proc 1952: 753-60; Same. Pet Eng 24:D58+ N '52

Dielectric dispersion of water vapor adsorbed on silica gel. K. Kamiyoshi and T. Odake. bibliog J Chem Phys 21:1295-6 Jl '53

Infrared spectra of H_2O and CO_2 at 500°C. J. H. Taylor and others. bibliog il diags J Chem Phys 20:1884-98 D '52

Millimeter wavelength dispersion of water vapor. G. Birnbaum. bibliog diag J Chem Phys 21:57-61 Ja '53

Rotational intensity distributions of OH and OD in an electrodeless discharge through water vapor. H. P. Broida and W. R. Kane. bibliog Phys R 89:1053-9 Mr 1 '53

See also

Humidity

WATER waste

See also

Water conservation

WATER wheels

See also

Turbines

WATERMAN pen company

New team adds life to old company. F. Dixon. Am Bsns 23:22-3 Jl '53

WATERPROOF paper. See Paper, Waterproof

WATERPROOFING

New membrane materials use no organic fibers. Eng N 150:120+ My 21 '53

Sprayed plastics find new uses in building. il House & Home 2:112-13 S '52

Tough waterproofing problem solved by new masonry paint. il Am Bld 74:169 S '52

Waterproofing concrete block buildings. Pub Works 83:112 D '52

WATERPROOFING of textiles

Silicone resins add more pluses to your acetate. P. Duggan and F. Fortess. il Mod Textiles Mag 34:31+ Mr '53

Synthesis of water-repellent dyes. C. C. DeWitt and P. D. Shroff. bibliog(31 ref) Ind & Eng Chem 45:302-7 F '53

Water repellent animal fibers; dilute soap and aluminum salt solutions; patent. Am Dyestuff Rep 42:19 Ja 5 '53

Water repellent textiles treated with silicone oil emulsions; patent. Am Dyestuff Rep 42:18 Ja 5 '53

WATERSHEDS

Effects of beetle infestations on watersheds. D. S. Nordwall. Am Water Works Assn J 45:797-803 Ag '53

Erosion control in reservoir areas; task group report. Am Water Works Assn J 45:790-6 bibliog(56 titles, p794-6) Ag '53; Abstract. Water & Sewage Works 100:348-9 S '53

Management of small watersheds. D. J. Guy. Am Water Works Assn J 45:450-3; Discussion. E. S. Hopkins. 453-6 My '53

Bibliography

Bibliography on erosion control and watershed management. Am Water Works Assn J 45:795-6 Ag '53

WATERWAYS

Effect of water transportation on forest utilization in eastern Canada; abstract. R. D. Collier. Pulp & Pa of Can 54:88 F '53

Gulf intracoastal waterway needs new look to handle oil volume. D. J. Warren. il Nat Pet N 45:63-4 Mr 25 '53

Oil hauls on inland waterways grow as efficiency and speed increase. M. C. Dupree. il Nat Pet N 45:43-5 Ap 29 '53

See also

Barges
Canals
Lakes
Rivers
St Lawrence waterway and power project
Thames river

Belgium

Belgium to improve inland waterways. For Comm W 48:24 O 6 '52

United States

See also

Inland waterways corporation

WATERWORKS

A.W.W.A. Illinois section 43d annual meeting, Chicago, March 18-20; with abstracts of papers. Water & Sewage Works 100:222-6 Je '53

A.W.W.A. New Jersey section fall meeting, Atlantic City, Oct. 23-25; with abstracts of papers. Water & Sewage Works 100:17-21 Ja '53

Control over water and sewage works by provincial authorities. Munic Util 91:20-1+ Mr; 25-6+ Je; 25-6+ Jl '53

Maryland-Delaware water and sewage association annual meeting, 26th, Ocean City, Md. May 21-22; with abstracts of papers. Water & Sewage Works 100:315-17 Ag '53

Metropolitan water board's works in 1952. il Engineer 195:150-1 Ja 23 '53

Missouri holds joint meeting of water and sewage groups, Jefferson City, Sept. 21-23. Water & Sewage Works 99:498-501 D '52

N.P.A. approves 703 additional water and sewage projects costing almost $350,000,000; tabulated by states. Water & Sewage Works 100:70 F '53

North Carolina's annual school for water works operators, 13th, Aug. 18-22. il Water & Sewage Works 99:460-2 N '52

Pennsylvania water and sewage associations annual conferences, State College, Aug. 25-29. Water & Sewage Works 99:512-19 D '52

Phoenix averts a water famine; with cost data. D. Smith. il Pub Works 84:73-4 F '53

Report of the committee on water works practice for the year ending Dec. 31, 1952. Am Water Works Assn J 45:301-8 Mr '53

Techniques and trends; water supply and sanitation; major projects. il Eng N 150: 144-6+ F 19 '53

Water and sewage works reference and data section, 1953. Water & Sewage Works 100:R 1-223 My '53

Water supply developments during the year 1952. C. H. Capen. il Water & Sewage Works 100:1-11 Ja '53

Water supply problems of a fast growing community; Park Forest water co. R. Enzweiler. Am Water Works Assn J 44:1024-6 N '52

Water works practices; operation, maintenance, management. G. E. Symons. il map Water & Sewage Works 100:22-6, 95-7, 191-4, 260-2, 357-60 Ja, Mr, My, Jl, S '53

See also

Aqueducts
Dams
Filters and filtration
Filtration plants
Hydrants
Pumping stations
Pumps
Reservoirs
Water distribution
Water purification
Water supply engineering

Accounting

Billing and accounting practices at Louisville. B. E. Payne. Am Water Works Assn J 44: 1099-106 D '52

Cost control; building net revenue. W. V. Weir. Am Water Works Assn J 45:116-20 F '53; Same. Water & Sewage Works 100: 65-7 F '53

Postcard billing for water and sewage utilities. D. L. Maffitt. il Water & Sewage Works 100:217-20 Je '53

WATERWORKS—Accounting—*Continued*

Proposed revision of utility accounting system. Am Water Works Assn J 45:1090-100 O '53

Bibliography

Reading meter; condensation; abstracts of waterworks literature. Published in monthly numbers of Journal of American water works association

Water and sewage information; where to find it. L. H. Enslow. Water & Sewage Works 100:R 16-17 My '53

Water works digest. Published in monthly numbers of Public works

Costs

Cost indexes for water works property. H. H. Fick. Am Water Works Assn J 45:779-89 Ag '53

How new pumps cut water plant power costs. R. G. Vollendorf. il Pub Works 84:89-90 Ag '53

Waterworks, Indiana; unit prices. Eng N 150:82 My 21; 71 My 28 '53

Design

Packaged waterworks pays off. il diag Eng N 150:33-4+ Ja 1 '53

Directories

Directory of Canadian waterworks systems. Munic Util 91:12+ Ja '53

Electric equipment

Hinged motor. W. F. Schaphorst. diags Water & Sewage Works 99:sup97A-8A N '52

pH measurement and control in water treatment plants. R. H. Babcock. il diags Water & Sewage Works 100:272-8 Jl '53

Practical electricity in the plant. M. C. Smith. diags Water & Sewage Works 100:186-90 My '53

Employees

Educational program of Michigan section. D. Feben. Am Water Works Assn J 45:62-6 Ja '53

Instructional courses and certification for waterworks personnel. G. H. Strickland. Munic Util 91:21+ My '53

Organizing water and sewage works personnel on a regional basis. Munic Util 91:16 Je '53

Short courses and correspondence courses for water plant operators. H. K. Gidley. bibliog Am Water Works Assn J 45:67-71 Ja '53

Status of training courses and certification in the United States. Am Water Works Assn J 45:971-96 S '53

Equipment

Air conditioned chemical conveyor solves water treatment problem. F. L. Andreoli. il Water & Sewage Works 100:227-8 Je '53

Automatically controlled lime treatment for the water supply of Halifax, N.S. G. L. Renner. map plan diags Munic Util 91:23-8+ S '53

Chlorinated rubber finishes in water and sewage works. F. K. Shankweiler. il Water & Sewage Works 100:230-3 Je '53

Classified index of products used in waterworks and sewage field. Water & Sewage Works 100:R 1-14 My '53

Ductile iron; new engineering material for water works construction. C. T. Haller. bibliog il Am Water Works Assn J 44:912-22 O '52

First stage of waterworks improvement program completed in Fredericton. il plan diag Munic Util 91:21-2+ Ag '53

Fluoridation equipment and facilities. il Pub Works 84:113-15 Je '53

Guides for selecting chemical feeders. P. A. Coffman, jr. il diags Water & Sewage Works 100:338-43 S '53

How new pumps cut water plant power costs. R. G. Vollendorf. il Pub Works 84:89-90 Ag '53

Investigate pneumatic conveyors for handling bulk chemicals. G. N. Havens. il diags Pub Works 83:50-1+ N '52

Many unusual features in extensions to Scarborough waterworks. E. M. Proctor. il Munic Util 91:37-42+ Ap '53

Materials for chemical handling equipment. L. R. Honnaker and M. L. Monack. il diags Am Water Works Assn J 45:469-75 My '53

New water plant rehabilitates a town; Graham, N.C. J. L. Morrison. il Pub Works 83:71-2 D '52

Reinforced concrete clear-water basin built to be leak-proof. il map Eng N 150:42-3 My 21 '53

Salt well furnishes brine for softening; New Smyrna Beach, Fla. C. E. Wright. il Pub Works 83:63-4 D '52

Stationary storage of liquid chlorine. A. S. Woodward and L. L. Hedgepeth. Am Water Works Assn J 45:738-44 Jl '53; Same. Water & Sewage Works 100:310-13 Ag '53

Washington story of fluoridation. N. E. Jackson and E. A. Schmitt. il map diag Water & Sewage Works 99:435-44 N '52

Extension rules

Main extension policy at Grand Rapids. F. Wegner. Am Water Works Assn J 45:694-6 Jl '53; Abstract. Water & Sewage Works 100:303-4 Ag '53

Water service for suburban areas. bibliog Am Water Works Assn J 45:697-722 Jl '53

Water supplies for large urban and adjacent areas; panel discussion. Munic Util 91:76+ Ap '53

Finance

Financial man looks at the water business. G. I. McKelvey, jr. Am Water Works Assn J 45:349-56 Ap '53

Making a water utility solvent. E. D. Bonine. Am Water Works Assn J 45:457-8 My '53

Water authorities in Pennsylvania; panel discussion. S. C. Braucher and others. Am Water Works Assn J 45:153-69 F '53

Laboratories

Instrumentation in the laboratory. J. H. Wyatt. bibliog diags Am Water Works Assn J 45:129-44 F '53

Laws and regulations

Court decisions on municipal water fluoridation. W. W. Land and E. K. Mosenthal. bibliog Am Water Works Assn J 45:387-96 Ap '53

Legal liability of utilities for service. H. Raines. bibliog Am Water Works Assn J 45:241-8 Mr '53

Legal problems confronting water works management. J. H. Murdoch, jr. Am Water Works Assn J 44:1085-91 D '52; Same. Water & Sewage Works 100:R 18-20 My '53

Maintenance and repair

Use and operational control of mechanical equipment. J. Rian. Am Water Works Assn J 44:1092-8 D '52

Management

Administration of small water plants. W. R. LaDue. Am Water Works Assn J 45:5-9 Ja '53

Current water works headaches. E. D. Hawkins. Am Water Works Assn J 45:231-5 Mr '53

Management and operation of Saginaw-Midland water supply system. A. Eckert. Am Water Works Assn J 45:1075-8 O '53

Management of municipal water utilities. J. C. Doerfer. Am Water Works Assn J 45:357-62 Ap '53

Management problems today. L. R. Howson. Am Water Works Assn J 45:1-4 Ja '53; Same. Water & Sewage Works 100:12-13 Ja '53

Report of the committee on water works administration for the year ending Dec. 31, 1952. Am Water Works Assn J 45:296-300 Mr '53

Water industry problems in highway construction. R. Fuller. Pub Works 84:76+ My '53

Power

Why Osawatomie changed from oil to gas for electric and water works plant; with cost data. J. Higgins. il Gas Age 112:28-30 S 24 '53

WATERWORKS—*Continued*

Public relations

Field contacts with the public. F. A. McCanlies. Am Water Works Assn J 45:443-9 My '53

Operation of small water works. A. E. Clark. Water & Sewage Works 100:104-5 Mr '53

Promoting better public understanding of what water works service is worth; panel discussion. M. B. Cunningham and others. Am Water Works Assn J 45:997-1011 O '53; Abstract. Water & Sewage Works 100:305-6 Ag '53

Selling rate adjustments to citizens; panel discussion. L. N. Thompson and others. Am Water Works Assn J 44:1151-60 D '52; Abstract. Water & Sewage Works 99:259-60 Jl '52

Water works superintendent; his duties and relations with customers and community. H. Wilkens, jr. Pub Works 84:85-6+ My '53

Purchasing

Purchasing waterworks supplies and services. H. A. Hunter. Water & Sewage Works 100:R21 My '53

Records

Essentials of distribution system records. F. E. Alderman. plan Am Water Works Assn J 45:417-22 Ap '53

Safety measures

Application of safety program to water works industry. R. J. Faust. Am Water Works Assn J 45:19-22 Ja '53

Fundamental principles of handling chlorine. V. W. Langworthy. il diags Water & Sewage Works 100:234-8, 318-22, 361-4 Je, Ag-S '53

Safety in water works. W. R. La Due. Water & Sewage Works 100:89-94 Mr '53

Safety program for the water works industry. Am Water Works Assn J 45:952-70 S '53

Safety symposium. R. J. Faust and others. Water & Sewage Works 100:307 Ag '53

Statistics

Survey of operating data for water works in 1950; tabulations. Am Water Works Assn J 45:583-678 Je '53; Correction. 45:1334 D '53

Taxation

Assessment procedure for public utilities property; panel discussion. Munic Util 91:66+ Ap '53

War measures

Civil defense for water supplies. F. H. Kingsbury. il Pub Works 84:65-6+ Ap '53

Waste

Disposal of wastes from water treatment plants. H. H. Mace. il Pub Works 84:73+ Jl '53

WATSON, Kenneth M. 1903-

Man of the month. por Chem Eng 59:290 O '52

WATSON, Thomas John, 1914-

Stimulating the thoughts. por Fortune 47:140 My '53

WATT, C. M.

Half-century club; careers epitomizing contributions to coal-mining progress. por Coal Age 58:85 Ag '53

WATT hour meters

First aid for plant w-hour meters. il diag Power 97:126-7 Jl '53

WATTMETERS

Conversation about a wrong-way wattmeter. F. J. Schneaubelt. diag Power Eng 57:78 My '53

Oil-cooled load wattmeter. R. M. See. il diags Radio & Tv N 49:38-9 F '53

Torque-operated wattmeter for three-cm microwaves; abstract. A. L. Cullen and I. M. Stephenson. bibliog diags Inst E E Proc 99 pt 2:516-17 O '52

WATTS, Oliver Patterson, 1865-

Pioneer teacher of electrochemistry. O. A. Hougen. Electrochem Soc J 99:sup277C-8C O '52

WAVE guides

Attenuation and surface roughness of electroplated waveguides. F. A. Benson. bibliog il diag Inst E E Proc 100 pt 3:213-16 Jl '53

Bending hollow rectangular tubing at Raytheon; fabrication of radar wave guides. H. F. Clarke. il Mach 59:170-4 My '53

Broad-band matching with a directional coupler. W. C. Jakes, jr. diags Inst Radio Eng Proc 40:1216-18 O '52

Calculation of a waveguide-loaded resonator for interdigital magnetrons. G. Hok. bibliog diags Inst Radio Eng Proc 41:763-9 Je '53

Chart for TE_{11} mode piston attenuator; reference sheet. C. M. Allred. Electronics 26:142 Ja '53

Concept and measurement of impedance in periodically loaded wave guides. E. T. Jaynes. diags J Ap Phys 23:1077-84 O '52

Dielectric image line. D. D. King. diag J Ap Phys 23:699-700 Je '52

Energy states of overlapping impurity carriers in semiconductors. C. Erginsoy. bibliog Phys R 88:893-4 N 15 '52

Ferrites at microwaves. N. G. Sakiotis and H. N. Chait. bibliog diags Inst Radio Eng Proc 41:87-93 Ja '53

Gaseous discharge super-high-frequency noise sources. H. Johnson and K. R. Deremer. bibliog il diags Inst Radio Eng Proc 39:908-14 Ag '51; Discussion. H. L. Steele, jr. 40:1603-4 N '52

High-powered microwave dummy loads. T. N. Anderson. il diags Tele-Tech 12:92-4+ My '53

Influence of bends on ellipticity on the attenuation and propagation characteristics of the H_{01} circular waveguide mode; abstract. G. D. Sims. bibliog Inst E E Proc 100 pt 3:115-16 Mr '53

Integral in the theory of wave-guide-fed slots. H. E. Fettis. J Ap Phys 23:1409 D '52

Launching of electromagnetic waves on a cylindrical conductor. R. B. Dyott. bibliog diags Inst E E Proc 99 pt 3:408-13 N '52

Low-loss waveguide transmission. S. E. Miller and A. C. Beck. bibliog il diags Inst Radio Eng Proc 41:348-58 Mr '53

Magnesium waveguide characteristics. Electronics 26:198+ Ap '53

Milled block simplifies microwave construction. il Electronics 26:189+ F '53

New non-reciprocal waveguide medium using ferrites. E. H. Turner. diags Inst Radio Eng Proc 41:937 Jl '53

New waveguide molding process. il Tele-Tech 12:166 My '53

Optimum piston position for wide-band coaxial-to-waveguide transducers. W. W. Mumford. il diags Inst Radio Eng Proc 41:256-61 F '53

Pipe-lines for microwaves. Elec R (Lond) 153:15-18 Jl 3 '53

Radar plumbing can be lightened; Farranti cuts the size and weight of waveguides in half. P. Klass. il Aviation W 57:56 O 27 '52

Radiation from a dielectric wave guide. R. M. Whitmer. diags J Ap Phys 23:949-53 S '52

Simple graphical analysis of a two-port waveguide junction. J. E. Storer and others. diags Inst Radio Eng Proc 41:1004-13 Ag '53

Simultaneous radiation of odd and even patterns by a linear array. C. B. Watts, jr. il diags Inst Radio Eng Proc 40:1236-9 O '52

Standard waveguide spark gap. D. Dettinger. diag Inst Radio Eng Proc 40:1604 N '52

Survey of waveguides and lines. bibliog diags Electronics 26:198-9+ Mr '53

Symmetrical ridge waveguides. M. H. Cohen and R. E. Webster. diag Inst Radio Eng Proc 41:1189-90 S '53

Synthesis of narrow-band direct-coupled filters. H. J. Riblet. bibliog diags Inst Radio Eng Proc 40:1219-23 O '52

Theory of wave-guide-fed slots radiating into parallel plate regions. H. Gruenberg. diag J Ap Phys 23:733-7 Jl '52; Discussion. L. Lewin. 24:232 F '53

Three-probe method of impedance measurement at microwave frequencies. W. J. Duffin. diags Wireless Eng 29:317-20 D '52

Transvar directional coupler. K. Tomiyasu and S. B. Cohn. bibliog diags Inst Radio Eng Proc 41:922-6 Jl '53

WAVE guides—*Continued*

Uhf and microwave matching termination. R. C. Ellenwood and W. E. Ryan. diags Inst Radio Eng Proc 41:104-7 Ja '53

Waveguide attenuation and its correlation with surface roughness. F. A. Benson. bibliog il Inst E E Proc 100 pt 3:85-90 Mr '53

Waveguide transmission lines for uhf. Tele-Tech 11:86 N '52

Wide-band phase-delay circuit. H. Sohon. Inst Radio Eng Proc 41:1050-2 Ag '53

Wide-band waveguide phase-shifter. G. J. Halford. diag Inst E E Proc 100 pt 3:117-24; Discussion. 140-2 My '53

Bibliography

Radio progress during 1952; antennas, waveguides, and transmission lines. il Inst Radio Eng Proc 41:495-7 Ap '53

Specifications

Rigid waveguide specifications. Commun Eng 13:32 My '53

WAVE mechanics

Absorption of slow π^- mesons by He^4 nuclei. A. G. Petschek. bibliog Phys R 90:959-67 Je 1 '53

Adiabatic correlation rules for reactions involving polyatomic intermediate complexes and their application to the formation of $OH(^2\Sigma^+)$ in the H_2-O_2 flame. K. E. Shuler. bibliog diags J Chem Phys 21:624-32 Ap '53

Analytical method for the approximate determination of the eigenfunctions and energies of electrons in atoms. R. Gáspár. J Chem Phys 20:1863-5 D '52

Angular distribution of scattering and reaction cross sections. J. M. Blatt and L. C. Biedenharn. bibliog Rs Mod Phys 24:258-72 O '52

Application of the Fermi-Thomas model in computing the dipole moment of iodine chloride. H. Glazer and H. Reiss. bibliog diag J Chem Phys 21:903-7 My '53

Approximate treatment of the effect of centrifugal distortion on the rotational energy levels of asymmetric-rotor molecules. D. Kivelson and E. B. Wilson, jr. bibliog J Chem Phys 20:1575-9 O '52

Approximate wave functions for unbound relativistic particles in a Coulomb field. G. K. Horton and R. T. Sharp. Phys R 89:885-6 F 15 '53

Atomic theory of the λ transition in helium. R. P. Feynman. bibliog Phys R 91:1291-301 S 15 '53

Binding energy calculation on He^4 with single-particle wave functions. P. G. Wakely. bibliog Phys R 90:724-5 My 15 '53

Bohm's interpretation of the quantum theory in terms of hidden variables. J. B. Keller. Phys R 89:1040-1 Mr 1 '53

Calculation of nuclear binding energies with single-particle oscillator wave functions. E. H. Kronheimer. bibliog Phys R 90:1003-4 Je 1 '53

Collisional excitation of F_2O. H. Aroeste. bibliog diags J Chem Phys 21:870-5 My '53

Combinatorial solution of the two-dimensional Ising model. M. Kac and J. C. Ward. diags Phys R 88:1332-7 D 15 '52

Complementarity in angular-momentum states. B. A. Lippmann. Phys R 91:1213-15 S 1 '53

Conservation of isotopic spin in nuclear reactions. R. K. Adair. bibliog Phys R 87:1041-3 S 15 '52

Convergence of the adiabatic nuclear potential. A. Klein. bibliog diags Phys R 91:740-8 Ag 1 '53

Conversion of an amplified Dirac equation to an approximately relativistic form. W. A. Barker and Z. V. Chraplyvy. bibliog Phys R 89:446-51 Ja 15 '53

Correlation energy in the ground state of He I. L. C. Green and others. bibliog Phys R 91:35-9 Jl 1 '53

Coulomb functions for heavy nuclear particles. W. D. Barfield and A. A. Broyles. Phys R 88:892 N 15 '52

Diffraction in time. M. Moshinsky. diags Phys R 88:625-31 N 1 '52

Divergence of perturbation expansion. A. Petermann. bibliog Phys R 89:1160-1 Mr 1 '53

Effect of opposed disubstitution on intensities of even-even electronic transitions. H. McConnell. bibliog J Chem Phys 20:1978 D '52

Electronic energy bands in metals. G. Parzen. bibliog diag Phys R 89:237-43 Ja 1 '53

Electronic states in crystals under large over-all perturbations. P. Feuer. bibliog diag Phys R 88:92-100 O 1 '52

Electrostatic energy matrices of the configuration f^4. E. F. Reilly. bibliog Phys R 91:876-8 Ag 15 '53

Energy band structure in silicon crystal. E. Yamaka and T. Sugita. Phys R 90:992 Je 1 '53

Energy levels of light nuclei. A. Ajzenberg and T. Lauritsen. diags Rs Mod Phys 24:321-402 bibliog(p396-402) O '52

Equivalent potentials. R. Jost and W. Kohn. bibliog diags Phys R 88:382-5 O 15 '52

F-center wave functions and electronic *g*-values in KCl crystals. A. H. Kahn and C. Kittel. bibliog Phys R 89:315 Ja 1 '53

First-order meson wave equations. H. S. Green. bibliog Phys R 89:965-7 Mr 1 '53

Free electron wave function as approximations to MO wave functions for conjugated molecules. H. H. Jaffé. diags J Chem Phys 20:1646 O '52

Generalization of the WKB method to radial wave equations. R. H. Good, jr. bibliog diags Phys R 90:131-7 Ap 1 '53

Generalized self-consistent field method. J. C. Slater. bibliog Phys R 91:528-30 Ag 1 '53

Hindered rotation involving two asymmetric groups. D. G. Burkhard. bibliog diag J Chem Phys 21:1541-9 S '53

Interactions of closed shell ions. G. L. Montet and others. bibliog J Chem Phys 20:1057-63 Jl '52

Intrinsic parity of elementary particles. G. C. Wick and others. Phys R 88:101-5 O 1 '52

Iterative procedures and the helium wave equation. J. H. Bartlett. Phys R 88:525-6 N 1 '52

Localized functions in molecules and crystals. G. F. Koster. bibliog diags Phys R 89:67-77 Ja 1 '53

Low temperature diamagnetism of electrons in a cylinder. W. Band. diag Phys R 91:249-55 Jl 15 '53

Method of solving the wave equation in a region of rapidly varying complex refractive index. J. J. Gibbons and R. L. Schrag. J Ap Phys 23:1139-42 O '52

Molecular compounds and their spectra; the interaction of electron donors and acceptors. R. S. Mulliken. bibliog diags J Phys Chem 56:801-22 O '52

Momentum space wave functions; the deuteron ground state. E. E. Salpeter and J. S. Goldstein. bibliog Phys R 90:983-6 Je 1 '53

Movable critical points of a nonlinear wave equation. T. Tietz. Phys R 90:495 My 1 '53

Natural line shape. F. Low. diags Phys R 88:53-7 O 1 '52

New approach to the problem of higher order corrections in the meson theory of nuclear forces. J. Werle. Phys R 89:527-9 Ja 15 '53

New form for the statistical postulate of quantum mechanics. N. Wiener and A. Siegel. bibliog Phys R 91:1551-60 S 15 '53

Nonadditivity of the repulsive potential of helium. P. Rosen. J Chem Phys 21:1007-12 Je '53

Non-adiabatic treatment of the relativistic two-body problem. M. M. Lévy. bibliog diags Phys R 88:72-82 O 1 '52

Noncentral force matrix elements for the nuclear d^2 configuration. L. W. Longdon. Phys R 90:1125-6 Je 15 '53

Perturbations of atomic *g* values. M. Phillips. bibliog Phys R 88:202-5 O 15 '52

Power-series expansion of the unitary operator $U(t,t_0)$. S. T. Ma. Phys R 91:392 Jl 15 '53

Proof that probability density approaches $|\psi|^2$ in causal interpretation of the quantum theory. D. Bohm. Phys R 89:458-66 Ja 15 '53

WAVE mechanics—*Continued*

Quantum-mechanical calculation of the rates of some chemical reactions. E. Bauer and T. Wu. bibliog J Chem Phys 21:726-33 Ap '53; Discussion. S. Golden. 21:2071-2; Reply. 2072 N '53

Quantum mechanical calculations of orientation in aromatic substitution. J. D. Roberts and A. Streitwieser, jr. Am Chem Soc J 74:4723-5 S 20 '52

Quantum-mechanical partition function. H. S. Green. bibliog J Chem Phys 20:1274-81 Ag '52

Quantum-mechanical treatment of aliphatic compounds; paraffins. R. D. Brown. Chem Soc J p2615-21 S '53

Quantum-mechanical treatment of virial coefficients. J. E. Kilpatrick. bibliog J Chem Phys 21:274-8 F '53

Radiation of a high energy electron in a constant magnetic field. M. Neuman. bibliog Phys R 90:682-9 My 15 '53

Radiative corrections to nuclear forces in pseudoscalar theory. K. A. Brueckner. diags Phys R 91:761-2 Ag 1 '53

Reduction of relativistic two-particle wave equations to approximate forms. Z. V. Chraplyvy. bibliog Phys R 91:388-91 Jl 15 '53

Semilocalized orbitals; relationship of *n*-center orbitals, two-center orbitals, and bond properties. C. R. Mueller. J Chem Phys 20:1600-4 O '52

Separation of the rotational coordinates from the *N*-particle Schroedinger equation. C. F. Curtiss. J Chem Phys 21:1199-208 Jl '53

Some overlap integrals involving *d* orbitals. H. H. Jaffé. bibliog J Chem Phys 21:258-63 F '53

Some properties of the Racah and associated coefficients. L. C. Biedenharn and others. bibliog Rs Mod Phys 24:249-57 O '52

Spatial correlation of electrons in molecules. J. E. Lennard-Jones. bibliog diags J Chem Phys 20:1024-9 Je '52

Spectrum of discrete eigenvalues in a negative atomic ion. T. Wu. Phys R 89:629-30 F 1 '53

Structure of the nucleon. R. G. Sachs. Phys R 87:1100-10 S 15 '52

Structures as an aid in understanding π-electron spectra. W. T. Simpson. bibliog Am Chem Soc J 75:597-603 F 5 '53

Studies of atomic self-consistent fields; calculation of Slater functions. P. Löwdin. bibliog Phys R 90:120-5 Ap 1 '53

Study of three-center integrals useful in molecular quantum mechanics. R. S. Barker and H. Eyring. bibliog J Chem Phys 21:912-17 My '53

Tamm-Dancoff formalism and the symmetric pseudoscalar theory of nuclear forces. A. Klein. bibliog diags Phys R 90:1101-15 Je 15 '53

Theoretical and experimental status of the collective electron theory of ferromagnetism. E. P. Wohlfarth. bibliog Rs Mod Phys 25:211-19 Ja '53

Theory of complex spectra. S. Meshkov. bibliog Phys R 91:871-6 Ag 15 '53

Theory of Coulomb excitation of nuclei. K. Alder and A. Winther. bibliog Phys R 91:1578-9 S 15 '53

Theory of spin waves in ferromagnetic media. C. Herring and C. Kittel. Phys R 81:869-80 Mr 1 '51; Correction. 88:1435 D 15 '52

Theory of the rotational spectra of allene-type molecules. M. Mizushima. bibliog diags J Chem Phys 21:1222-4 Jl '53

Transition probabilities; dipole velocity computations for C_2 and N_2^+; the question of degree of hybridization. H. Shull. J Chem Phys 20:1095-102 Jl '52

Two-center heteronuclear hybrid Coulomb-exchange integrals. R. O. Brennan and J. F. Mulligan. bibliog J Chem Phys 20:1635-44 O '52

Two-electron self-consistent field. A. O. Williams, jr. bibliog Phys R 90:803-7 Je 1 '53

Two-particle potential from the Bethe-Salpeter equation. W. Macke. diag Phys R 91:195 Jl 1 '53

Use of a single scale factor in atomic wave functions. C. W. Scherr. bibliog J Chem Phys 21:1237-42 Jl '53

Use of free electron model wave functions in the derivation and representation of LCAO MO wave functions of conjugated molecules. H. H. Jaffé. bibliog J Chem Phys 21:1287-92 Jl '53

Variational method for radiationless transitions. B. H. Bransden and A. Dalgarno. Phys R 88:148 O 1 '52

Variational principle for scattering. H. Feshbach and S. I. Rubinow. bibliog Phys R 88:484-7 N 1 '52

Vibrational and centrifugal effects on nuclear interactions and rotational moments in molecules. N. F. Ramsey. bibliog Phys R 87:1075-9 S 15 '52

WKB-type approximation to the Schrödinger equation. S. C. Miller, jr. and R. H. Good, jr. bibliog Phys R 91:174-9 Jl 1 '53

Wave function of a relativistic system. F. J. Dyson. Phys R 91:1543-50 S 15 '53

Wave functions and energy levels for Cu^+ as found by the Slater approximation to the Hartree-Fock equations. G. W. Pratt, jr. bibliog Phys R 88:1217-24 D 15 '52

See also

Field theories (physics)
Quantum electrodynamics
Resonance (chemistry)
Scattering of particles and rays

WAVE meters. See Wavemeters

WAVEMETERS

Handy handful; miniature grid-dip meter using magic-eye indicator. C. V. Chambers. il diags Q S T 37:29-31+ Mr '53

Microwave devices for magnetron production testing. M. Nowogrodzki. il diags Tele-Tech 11:36-7+ O '52

Versatile wavemeter. J. Roberson. il diags Radio & Tv N 48:70-1+ N '52

WAVES

Gravity waves. U S Nat Bur Stand Circ 521:1-287; $1.75 Supt. of doc. '52

Long-period waves or surges in harbors. J. H. Carr. il diags Am Soc C E Proc 78 [no 123]:1-16 Ap '52; Discussion. 79 [no D-123]:1-13 Mr '53

Measurement of wave heights in the model of Table Bay harbour. B. W. Wilson. il plan diags Engineering 176:245-7, 267 Ag 21-28 '53

Storms forecast by ocean waves. il U S Naval Inst Proc 79:180-1 F '53

Wave forces on breakwaters. R. Y. Hudson. bibliog diags Am Soc C E Proc 78 [no 113]:1-22 Ja '52; Discussion. il 78 [no D-113]:1-11 N '52

See also

Electric waves
Light
Radiation
Radio waves
Shock waves
Sound waves
Supersonic waves
Vibration

WAXES

Antioxidant for waxes di-tertiary-butyl-para-cresol. R. F. Seubert and E. D. Andrews. bibliog diag Mod Packaging 26:153-4 D '52

Canada's wax figure. W. Reucassel. Can Chem Process 37:10+ F '53

Dielectric method of determining solvent content of dewaxing mixes; methyl ethyl ketone and toluene. H. D. LeRosen, L. V. Wike and S. W. Denton. bibliog Anal Chem 24:1620-2 O '52

Inhibiting oxidation of waxes used on wrappers and cartons. R. F. Seubert and E. D. Andrews. Tappi 36:sup 174A-5A Je '53

Metal-cutting with wax lubricants. J. B. Carse and A. E. Budner. Tool Eng 30:65-72 Ap '53

Oils, fats and waxes. Published in weekly numbers of Oil, paint and drug reporter

Petroleum waxes dominate field. B. H. Clary. Oil & Gas J 51:103 Ja 12 '53

See also

Carnauba wax
Floor wax
Montan wax
Paraffin
Petroleum refining—Wax removal

Analysis

Detection of additives in vegetable waxes; the use of instrumental analysis. C. J. Marsel and others. diag Soap & San Chem 28:127+ N; 181+ D '52

Determination of n-paraffins in commercial petroleum waxes. H. Schindler and A. Kinsel. Pet Eng 25:C66-7 Ap '53

Determination of oil content of paraffin and microcrystalline waxes. J. E. Blaylock. il diags Pet Refiner 31:133-5 N '52

WAXES—*Continued*

Manufacture

Wax fractionation; wax manufacturing; Texaco development corp. flow diags Pet Refiner 31:206-7 S '52

WAYBILLS

They do yard paper work faster; new work unit helps Southern Pacific clerks at Taylor yard. il Ry Age 134:42-3 F 2 '53

WAYNE university

Fine arts center planned. il Arch Rec 112:22 N '52

WEALTH

Top five per cent; their share of U.S. income has shrunk. Bsns W p56-8 My 16 '53

See also

Capital
Economics
Income
Profit
Prosperity

WEAPONS

Air power and new weapons. H. S. Vandenberg. il Aeronautical Eng R 12:18-19+ Ap '53

See also

Atomic bombs
Atomic weapons
Guided missiles

WEAR of metals. See Metals—Wear

WEATHER

Measuring the weather. A. D. Hay. il diags Heating-Piping 25:98-101 Mr; 93-6 Ap; 104-5 My '53

See also

Cold
Droughts
Hot weather
Humidity
Rain and rainfall
Snow
Winds

Business aspects

Load forecasts reflect weather conditions. C. R. Williams and F. A. Leslie. il Elec World 139:86-8 Ap 6 '53

Role of the weather correction in load forecasting. A. Thomas and J. J. Drummond. Edison Elec Inst Bul 21:306-10 Ag '53

She sells weather. Sales Management 69:110+ O 1 '52

What the weather is doing to business. Bsns W p25 My 16 '53

WEATHER control

Tomorrow's weather. il maps Fortune 47:144-9+ My '53

See also

Meteorological research
Rain making

WEATHER forecasting

Crystal ball viewed long range. D. G. Van Ornum. map Elec West 110:77-8 Mr '53

Looks like a hot summer. L. M. Balee. il Heating-Piping 25:85 My '53

Measuring the weather. A. D. Hay. il diag Heating-Piping 25:98-101 Mr '53

Reaching for better forecasts. il Bsns W p82+ My 9 '53

Severe winter ahead. H. P. Gillette. Roads & Sts 95:112-13 N '52; Same. Water & Sewage Works 99:522-4 D '52

Storms forecast by ocean waves. A. W. Haslett. il U S Naval Inst Proc 79:180-1 F '52

See also

Hurricanes
Radio meteorographs

WEATHER forecasts

She sells weather. Sales Management 69:110+ O 1 '52

Tomorrow's weather. il maps Fortune 47:144-9+ My '53

WEATHERING

Accelerated and outdoor weathering of colored vinyl films. F. G. Clark. bibliog il diags Ind & Eng Chem 44:2697-709 N '52

Correlation between laboratory accelerated freezing and thawing and weathering at Treat Island, Maine. T. B. Kennedy and K. Mather. il Am Concrete Inst J 25:141-72 O '53

Exposure test wall for natural building stones. il Am Soc T M Proc 50:229-30 '50

Modification of Atlas twin-arc Weather-Ometer. J. W. Tamblyn and G. M. Armstrong. bibliog il Anal Chem 25:460-5 Mr '53

Weathering and crack resistance of black polyethylene for wire and cable. W. A. Haine and others. bibliog il diag Elec Eng 71:1113-17 D '52

Wood siding left to weather naturally. F. L. Browne. il Arch Rec 112:197-9 N '52

WEATHERPROOFING of wire. See Electric wire—Weatherproofing

WEAVER, Charles H.

Portrait. Bsns W p 108 Mr 14 '53

WEAVER, Warren, 1894-

Warren Weaver, AAAS president-elect. C. I. Barnard. por Science 117:174-6 F 20 '53

WEAVING

Are your weave-room methods as modern as these? il Textile World 102:117-19+ D '52

Cost-cutting equipment offered for weaving. il Textile World 102:117-18+ N '52

Factors in plant development; weaving industrialist's point of view. J. P. Crump. Textile Inst J 43:P836-41; Discussion. P841-4 N '52

How Avondale mills quills, slashes, and weaves corduroy. R. B. Pressley. il Textile World 103:115-17+ My '53

How much money per year does waste yarn cost you? W. C. Westbrook. Textile World 103:106-7+ Ap '53

How to cut down yarn-waste costs. Textile World 103:107 Ap '53

How to start a new weaving mill with one per cent seconds, 98 per cent efficiency. il Textile World 103:73-5+ Ap '53

Jute weaving. il Elec R (Lond) 153:89-91 Jl 10 '53

Positive-action leno motion uses no doups. H. M. Brown. il diags Textile World 103:169+ S '53

Practical fabric design and analysis. V. Lobl. il Mod Textiles Mag 34:40+ Ja; 51+ F; 41+ Mr; 47-8+ Ap; 83-4+ Je; 42-4+ Jl '53

Quick pattern-changing methods feature narrow-fabric weaving. R. B. Pressly. il Textile World 103:112-13+ O '53

Quilling, weaving, and cloth-grading tips from Belton weaving mill. J. H. Hill. il Textile World 102:120-1 D '52

Versatile designing and weaving spark mill's multifiber program; Mooresville mills. R. B. Pressley. il Textile World 103:92-3+ Jl '53

Weaving investigations; periodic patterning in fabrics. R. Foster. il Textile Inst J 43:P742-51; Discussion. P751-4 S '52

Weft pirn. H. L. Muschamp. diags Textile Inst J 43:P793-813 O '52

You can change fabric weights yet retain fabric strength. J. B. Dickson. Textile World 103:149+ Je '53

See also

Cotton weaving
Looms
Nylon weaving
Rayon weaving
Shuttles
Woolen and worsted weaving

WEBB, Del E., construction company

Contractor to build and own seventh largest city in Arizona. il Eng N 150:59+ Ja 15 '53

WEBB and Knapp, inc.

Teaming up? Bsns W p 128+ Jl 25 '53

WEBER, Ernst, 1901-

Sketch. por Inst Radio Eng Proc 40:1154 O '52

WEBSTER, Harold Tucker, 1885-1952

Sketch. E. Knoll. por Ed & Pub 85:50 S 27 '52

WEBSTER-CHICAGO corporation

Dealers back regime. Comm & Fin Chr 177:1843 Ap 27 '53

WEEDS

See also

Railroads—Weed removal
Reservoirs—Weed removal

Control

Bright prospects for herbicide, CIPC. il Chem Eng 60:226 Ja '53

Chemical treatment of right-of-ways; engineering reference sheet. Elec World 138:124 D 1 '52

Chemical weed killers aid good housekeeping. C. W. Scamman. il map Pet Eng 25:A59-60+ Mr '53

Crabgrass killer's effect seen dependent on soil. Oil Paint & Drug Rep 164:61 S 14 '53

Crop spraying equipment. il Engineer 195:223 F 6 '53

WEEDS—Control—*Continued*

First basal spray gives 90 per cent kill. L. A. Phillips. il Elec World 138:122+ N 3 '52

Herbicides. P. Frisselle and D. Stillman, jr. il Chem & Eng N 31:1175-7 Mr 23 '53

Kent county cuts brush, and then sprays chemicals. O. S. Hess. Road & Sts 96:88-9 My '53

Mechanical weed-spraying equipment. il Engineering 175:190-1 F 6 '53

New weed killer; cotton-field weed remover; Spencer chemical co.'s HO-NO-MO. Oil & Gas J 51:97 F 16 '53

Northeastern weed control conference, New York. Chem & Eng N 31:428 F 2 '53

Selective action of herbicides; abstract. G. E. Blackman. Chem & Ind p 1128 N 15 '52

Selective herbicides and principles of selective toxicity; abstract and discussion. G. E. Blackman. Chem & Ind p273-4 Mr 21 '53

Southern Bell switches to chemical brush control. il Elec World 139:122-3 Mr 23 '53

What about roadside weed and brush control? H. A. Martin; R. M. Dawson. Roads & Eng Constr 91:203-4+ Mr '53

WEEHAWKEN, New Jersey

Tennis courts go up in price as town fights bi-state agency. il Eng N 150:46-8 Je 25 '53

WEEK-end houses

Louisiana weekend house. il plan diags Arch Rec 112:139-41 S '52

Weekend residence of Ralph L. Pope. il plan Arch Rec 113:137-9 Ja '53

WEEKS, Sinclair, 1893-

Can there be one voice for business? pors Bsns W p 150+, cover Ap 4 '53

Eisenhower is still naming names. por Bsns W p28-30 D 6 '52

Ninety days of Mr Weeks. D. Norton-Taylor. pors Fortune 47:150-2+ My '53

Test case for career men. por Bsns W p34 Ap 11 '53

WEGEMANN, Carroll Harvey, 1879-1952

Memorial. C. E. Dobbin. bibliog por(pl 19) Geol Soc Proc 1952:159-62 Je '53

WEIGHING

Air-gap weighing cuts overfill; new net weight packaging principle. il diag Food Eng 25:62-3+ Mr '53

Automatic weighing of crude oil proves accurate volume gauge. L. E. Slagle and D. C. Meyers. flow diag il diag World Oil 135:246-8+ O '52

Pneumatic weighing in continuous batching process. D. W. Glover. il diags Instruments 26:118-20 Ja '53

Watching your industrial weight. Mod Ind 25:145-6+ My '53

See also

Balances

WEIGHING machines

Air controls overweight in packaging. diag Comp Air Mag 58:230 Ag '53

Belt weighs continuously. Steel 131:112 D 8 '52

Chassis suspension system incorporates weight indicator. diag Automotive Ind 108:69 Ap 1 '53

Checking the weight of small packages; Hy-Tra-Lec check weigher. il Engineering 174:771 D 12 '52

First air-control weigher; General Mills. il diags Mod Packaging 26:122-5+ Ap '53

Quality control assured with proper weighing devices. il Brick & Clay Rec 123:67 O '53

Strain gage transducers for measurement and control. R. J. Fyffe and A. Arobone. il diags Product Eng 23:139-45 N '52

Trucks weighed at 50 miles per hour. il Pub Works 83:64 N '52

Weighing machine reduces manual handling. il Iron Age 171:211 My 7 '53

See also

Poidometers
Scales

WEIGHT (physiology)

Caloric intake in relation to physique in children. P. S. Peckos. bibliog Science 117:631-3 Je 5 '53

Relation of adrenal weight to body weight in mammals. J. J. Christian. bibliog Science 117:78-80 Ja 23 '53

WEIGHTS and measures

Coils of steel wire, weight or length of rods, etc.; nomograph. Water & Sewage Works 100:373 S '53

Determining weights of piping assemblies; data sheet. J. E. Brock. diags Heating-Piping 24:111-12 D '52

Estimating the weight of joints in cylindrical vessels; reference book sheet. V. Tatarinov. diags Product Eng 23:213, 215 D '52

Formulas useful in determining weights of castings; data sheet. diags Foundry 81:149-50 Jl; 151-2 Ag; 265-6 S; 255-6 O; 203-4 N '53 (to be cont)

Report of the thirty-seventh national conference on weights and measures. U S Nat Bur Stand Misc Pub 206:1-105; pa 40c Supt. of doc. '53

Weight of blue-tempered spring steel, per lineal foot; tabulation; data sheet. A. L. Snape, comp. Mach 59:259 Je; 271 Jl '53

See also

Balances
Electric measurements
Gages
Measuring instruments
Specific gravity

Law

Weights and measures case reference book (through July 1952 court decisions). K. M. Schwarz and others, comps. U S Nat Bur Stand Circ 540:1-97; $1.25 Supt. of doc. '53

WEIGHTS and measures, International bureau of. See International bureau of weights and measures

WEIL, Richard, 1907-

Trained intuition. por Fortune 47:138 My '53

WEINGARTEN, J., inc.

Supermarket that will try anything. il Bsns W p90-4 Jl 11 '53

WEIRS (measuring)

Weir plates helpful in sewer gaging. A. W. Sweeton, 3d. il diags Civil Eng 23:40 Ja '53

WEIZMANN, Chaim, 1874-1952

Dr Chaim Weizmann. Economist 165:460-1 N 15 '52

Dr Weizmann's contribution to the British chemical industry. E. Shamash. Chem Age (Lond) 67:759-61 D 6 '52

Sketch. E. D. Bergmann. Chem Soc J p2840-4 S '53

Sketch. F. A. Freeth. Chem & Ind p 130 F 7 '53

WELCH grape juice company

Story of Welch's grape juice. il Adv Agency 46:56-9+ Mr '53

WELCH'S grape juice. See Grape juice

WELDING

Correct welding procedure. L. P. Spencer. il diags Sheet Metal Worker 44:42+ O; 51-4 N; 36-8+ D '52; 59-62+ F; 74+ Mr; 70-2+ Ap; 63+ Je; 102-3+ Ag; 87-9 S; 45:61-2+ O '53 (to be cont)

Distortion in welded work; abstract. A. R. Jenkins. Metallurgia 46:185 O '52

Factors in the selection of welding processes. J. J. Chyle. il diags Welding J 32:585-96 Jl '53; Same cond. S A E J 60:30-8 O '52; Excerpts. Product Eng 24:229 Ap '53

How expansion and contraction effect welding results. L. M. Amburgey. diags Welding J 32:142-4 F '53

How to weld grounding cables; powdered metal, firing charge; illustrated instructions. il diag Power 97:123-5 Mr '53

Locating dimensions for tube welding fixtures. H. W. Smith. diags Tool Eng 31:47-8 S '53

Maintenance weldry saves money, time, space; illustrations with text. T. L. Dempsey. Mill & Factory 51:92-3 N '52

Marine welding practice; abstract. H. N. Pemberton. Elec R (Lond) 152:352 F 13 '53

Nature of heat in the welding process. R. T. Howard. il diags Welding J 32:127-31 F '53

Netherlands welding society annual report. Welding J 32:sup 154 Mr '53

1953 American Machinist production preview. il Am Mach 97:227-33 Ja 19 '53

Postwar trends in German welding technology. H. Von Hofe. il diags Metal Prog 63:130-4+ Ja '53

WELDING—*Continued*

Pressure welding attracts interest; work can be done cold or at elevated temperatures. C. Bruno and G. W. Birdsall. il Steel 132: 90-1 Je 8 '53

Protect the part during welding. E. E. Olson. il Welding J 32:632 Jl '53

Provide for expansion and contraction. J. A. Fluharty. il diags Welding J 32:620-1 Jl '53

Recent developments in the fusion welding of iron and steel. J. W. Shedden and W. I. Pumphrey. bibliog il Metallurgia 48:78-85 Ag '53

Recrystallization welding. J. M. Parks. bibliog(29 titles) il diags Welding J 32:sup209-22 My '53

Surface alloying in brazing and related techniques. R. Humphrey and R. D. Wasserman. il diags Welding J 31:1135-40 D '52; Abstract. Metal Prog 63:211-12 Ap '53

This method will help you in joining pipe at odd angles. W. R. Hart. il Oil & Gas J 51:121 D 8 '52

Tricky problems in welded ship repair. M Forman. diags Welding J 32:715-20 Ag '53

Welding in marine engineering. H. N. Pemberton. diags Inst Mech Eng Proc (A) 167 no 1:48-61, pl 1-8 '53; Same abr. Engineering 175:73-6, 80, 122-5 Ja 16-23 '53; Same cond. Engineer 195:131-3, 160-2 Ja 23-30 '53

Welding in the electrical industry. J. Heuschkel. Elec Eng 71:1095-100 D '52

Welding review and forecast. il Iron Age 171:303 Ja 1 '53

Welding; see 60 per cent market expansion. R. M. Lorz. il Iron Age 171:78 F 12 '53

Welding tools and dies. H. S. Card. il Tool Eng 30:58-62 Je '53

Welding's fast growth beats general industry rate by 250 per cent. T. J. Jefferson and others. il Ind Marketing 37:34+ D '52

What's ahead the next ten years in joining and assembly. Am Mach 96:F2-6 Mid-N '52

See also

Brazing
Electric welding
Electric welding, Arc
Hard facing
Oxyacetylene welding
Positioners, Welding

also subdivision Welding or Welding operations under special subjects, e.g.

Airplanes
Aluminum
Bridges
Cast iron
Copper
Magnesium
Piping (power plants)
Rail joints
Shipbuilding
Steel
Steel, Stainless
Steel, Structural
Steel construction
Titanium

Bibliography

Current welding literature. Published in monthly numbers of Welding journal

Cold welding

Cold pressure welding. il Mech Eng 74:1016 D '52

Cold pressure welding for aluminum wire. il Electronics 25:222+ D '52

Firms to boost Koldweld process. il Aviation W 57:76+ N 3 '52; Product Eng 23:198 N '52

Heatless, fluxless welding. il Machine Design 25:114 Ja '53

Koldweld process expands. Steel 131:144 N 10 '52

Putting the squeeze on cold welding. N. Grossman. il diags Product Eng 24:176-81 F '53

Welding aluminum and copper without heat. A. Stout. il Sheet Metal Worker 44:27-8 D '52

Exhibitions

Welding goes out on its own; American welding society exposition and convention, Houston. Bsns W p 132+ Jl 4 '53

Failure

Brittle fracture in steel; Iron and steel institute symposium. Engineering 176:70-3 Jl 17 '53

Failures and defects encountered in the construction of welded ships. R. D. Bradway. diags Welding J 31:1111-21 D '52

Incidence of cracking in welding type 347 steels. L. K. Poole. bibliog il Welding J 32:sup403-12 Ag '53

Initiation and propagation of brittle fracture in structural steels. P. P. Puzak and others. bibliog il diags Welding J 31: sup561-81 D '52

Investigation of structural failures of welded ships. M. L. Williams and G. A. Ellinger. bibliog(26 titles) il Welding J 32:sup498-527 O '53

Stress corrosion cracking of welds; abstract. W. Rädeker. Welding J 32:611 Jl '53

Structural failures in welded ships. il diags Welding J 32:sup342-6 Jl '53; Same cond. Engineer 195:856-8 Je 19 '53; Abstracts. Iron Age 171:148+ Mr 12 '53; Eng N 150:64 Ap 23 '53

Studies continue on welded ships. il Materials & Methods 38:148+ Jl '53

Hygienic aspects

See also
Electric welding, Arc—Hygenic aspects

Patents

Abstracts of current welding patents. V. L. Oldham. Published in monthly numbers of Welding journal

Safety measures

How to reduce fire hazards in welding. W. L. Thackrey. Oil & Gas J 51:269+ O 13 '52

On-the-spot fume control; with portable ventilators. E. Kundig. il diag Safety Maint & Prod 104:64-7 D '52

Welding torch fires. H. E. Beaven. Factory Management 111:132-3 Jl '53

Specifications

Welding specification and the contractor. R. G. Strong and A. G. Barkow. Pet Eng 25: D35-7 Mr '53

Stresses

Distortion control in structural fabrication. G. Cape and L. Jehu. il diags Welding J 31:1009-16 N '52

Effect of strain-rate on twinning and brittle fracture. D. Rosenthal and C. C. Woolsey, jr. bibliog(35 ref) il diags Welding J 31: sup475-92 O '52; Correction. 32:sup304 Je '53

Effect of stresses on strength of circumferentially welded cylinders. L. J. Privoznik. il diags Welding J 31:sup587-95 D '52

Embrittlement of high-strength ferritic welds. P. P. Puzak and W. S. Pellini. bibliog il diags Welding J 31:sup521-6 N '52; Discussion. H. C. Campbell and R. P. Wentworth. 32:sup73-4 F '53

Factors which determine the performance of aluminum alloy weldments. W. R. Apblett, jr. and others. bibliog il diags Welding J 31:sup596-606 D '52

Mechanics of the explosion bulge test. C. E. Hartbower. bibliog il diags Welding J 32: sup333-41 Jl '53

Preheat vs . low- and high-temperature stress-relief treatments. E. P. DeGarmo. il diag Welding J 31:sup233-7 My '52; Same cond. Metal Prog 63:168+ Mr '53

Qualitative study of residual stresses in welds by photoelasticity. M. Mark. bibliog il Welding J 32:sup374-7 Ag '53

Relation of preheating to embrittlement and microcracking in mild steel welds. A. E. Flanigan and T. Micleu. diags Welding J 32:sup99-106 F '53

To what extent does stress relieving occur at 200-300° C? R. Gunnert. bibliog il diags Welding J 32:sup292-301 Je '53

Study and teaching

Metal processing at M.I.T.; teaching of metal working, casting, and welding. H. F. Taylor. il Tech R 55:97-100+ D '52

Testing

Effect of strain-rate on twinning and brittle fracture. D. Rosenthal and C. C. Woolsey, jr. bibliog(35 ref) il diags Welding J 31: sup475-92 O '52; Correction. 32:sup304 Je '53

WELDING—Testing—*Continued*

Flush welds withstand impact better than reinforced welds. C. E. Hartbower. il Iron Age 171:136-9 Je 25 '53

Inspection techniques for quality welding. L. Gilbert and W. B. Bunn. il Welding J 32:614-19 Jl '53

Instrumentation and strain measurement in welded wire fabric reinforced concrete slabs. E. W. Carlton and J. H. Senne. il plan diag Am Concrete Inst J 24:141-52 O '52

Latest isotope weld testing technique. diag Power Eng 57:93 O '53

Load-carrying capacity of fillet weld connections. F. Koenigsberger and H. W. Green. il diags Welding J 32:859-63 S '53

Magnaflux for quality control of pipe-line welds. G. L. C. Dehn. il diags Welding J 32:721-7 Ag '53

New method of inspecting pipe line welds saves money and promotes safety; gamma ray inspection or radiography. W. C. Grant. il Gas Age 110:19-22 N 6 '52

Thermit process

Thermit welding of concrete reinforcing bars. il Welding J 32:850-3 S '53

Thermite ignition assured. C. P. Brockett. J Chem Educ 29:525 O '52

X-ray inspection

Hot radiography cuts weld inspection time. A. Gobus. il Steel 131:72-3 O 27 '52; Excerpts. Product Eng 24:268+ F '53

Industrial X-ray; portable unit permits more complete weld inspection on ships. il Iron Age 171:199-200 Mr 5 '53

Inspection techniques for quality welding. L. Gilbert and W. B. Bunn. il Welding J 32:614-19 Jl '53

New inspection technique of hot radiography saves many hours on big welding jobs. il Mill & Factory 53:138 Jl '53

150-kv X-ray equipment for the radiography of circumferential welds in gas-turbine rotors. F. W. Waterton. bibliog il diags Inst E E Proc 100 pt 2:105-12 Ap '53; Same cond. Engineering 174:774-5 D 12 '52; Discussion. Inst E E Proc 100 pt 2:112-14 Ap '53; Elec J 149:1585-6 N 21 '52; Elec R (Lond) 151:1125-6 N 21 '52

Pint-size unit speeds radiographic inspection. il Steel 131:103 N 10 '52

Radiographic inspection assures good welds on Providence distribution line. L. S. Fletcher. il Gas Age 111:45-7 Ap 9 '53

Radiography in a Clyde shipyard; abstract. E. J. Duffy. Engineer 194:847-8 D 19 '52

Two thousand feet of seam inspected with one radiographic shot. Elec Eng 71:1023 N '52; Iron Age 170:132+ O 23 '52

IIW collection of reference radiographs of welds. il Welding J 32:sup324 Jl '53

WELDING machines

See also

Electric welding machines

Manufacture

New plant becomes a good neighbor; Airco equipment manufacturing division of Air reduction co. il Mill & Factory 52:99 Ja '53

WELDING research

British welding research association activities. K. Winterton. il Metallurgia 46:181-5 O '52

Copper in type 347 weld metal. R. P. Wentworth. il Welding J 32:347-51 Jl '53

Current welding research problems. Welding J 32:sup305-15 Jl '53

Effect of atmospheric contaminants on arc welds in titanium. J. C. Barrett and others. il Welding J 32:sup283-91 Je '53

Effect of specimen geometry on impact transition temperature. R. S. Zeno and J. L. Dolby. bibliog diags Welding J 32:sup 190-7 Ap '53

Effects of electrodes and heat treatments on mild steel weldments. E. F. Nippes and A. Lesnewich. bibliog(29 titles) il diags Welding J 32:sup353-74 Ag '53

Evaluation of brittle failure research. E. F. Sweeney. bibliog(46 titles) diags Welding J 32:sup 1-13 Ja '53

Factors which determine the performance of aluminum alloy weldments. W. R. Apblett, jr. and others. bibliog il diags Welding J 31:sup596-606 D '52

Heat-treatment effects of transition temperature of a ship steel. E. B. Evans and L. J. Klingler. bibliog il diags Welding J 32:sup417-31 S '53

Investigation on peening. P. L. Calamari and others. il diag Welding J 32:sup387-402 Ag '53

Mechanics of the explosion bulge test. C. E. Hartbower. bibliog il diags Welding J 32:sup333-41 Jl '53

Pressure vessel research committee launches the second phase of its program. Welding J 32:sup431+ S '53

Recrystallization welding. J. M. Parks. bibliog(29 titles) il diags Welding J 32:sup209-22 My '53

Some considerations on weldability of aluminum alloys. J. Koziarski. bibliog(57 ref) il diags Welding J 32:970-86 O '53

Statistical analysis of behavior in the transition temperature zone. R. W. Vanderbeck and others. bibliog Welding J 32:sup325-32 Jl '53; Correction. 32:sup460 S '53

S.S. Ocean Vulcan sea trials. Welding J 32:sup528 O '53

Structural research establishment at Glengarnock. il plan diags Engineer 194:609-11 N 7 '52

Thermal cycles in the arc welding of ½-in. titanium plate. E. F. Nippes and others. bibliog il diags Welding J 32:sup461-74 S '53

To what extent does stress relieving occur at 200-300° C? R. Gunnert. bibliog il diags Welding J 32:sup292-301 Je '53

Welded joints between dissimilar metals in high-temperature service. R. W. Emerson and W. R. Hutchinson. il diag Welding J 31:sup 126-41 Mr '52; Same cond. Metal Prog 63:194-6+ Ja '53

Welding metallurgy of nodular cast iron. E. E. Hucke and H. Udin. il diags Welding J 32:sup378-85 Ag '53

Welding of thick plates of high-strength aluminum alloys. D. C. Martin and others. bibliog il diags Welding J 32:sup 161-71 Ap '53

Welding research; British welding research association. il Automobile Eng 43:33-7 Ja '53

WELDING rods

Specifications

Specifications for copper and copper alloy welding rods; tabulation; data sheet. Metal Prog 64:96B O '53

WELDING shops

Gas or arc welding shops, resistance welding shops, by states; tabulations. Iron Age 171:460 Ja 1 '53

Operational controls. D. C. Wright. Welding J 32:328-31 Ap '53

Management

Problems involving the human element in welding. D. P. O'Connor. Welding J 32:727-9 Ag '53

Quality control

Quality control for spot welding in a job shop. P. G. Poetto. Welding J 31:1017-22 N '52

WELDING society, American. See American welding society

WELFARE work in industry

Gas Age training course; welfare. W. L. Riehl. Gas Age 110:46-8 D 4 '52

See also

Day nurseries
Employees' benefit plans
Employees' counselors
Medical service, Industrial

WELLPOINT system

Electricity dries wet silt; principle known as electro-osmosis. il diag Eng N 150:36+ Ap 30 '53

How wellpoints aided anchorage excavation; suspension bridge over the Lempa river in El Salvador. B. J. Prugh. il plan diag Eng N 150:39-40 My 21 '53

Permanent wellpoints keep sewage tanks from floating. il Eng N 150:47 Mr 26 '53

WELLPOINT system—*Continued*
Wellpoint with improved filter. Engineering 176:182 Ag 7 '53
Wellpoints can do many jobs. B. J. Prugh. il diags Constr Methods 35:72-4+ Je '53

WELLS, Graham C.
Sketch. por East Underw 54:8 F 13 '53

WELLS
Fundamentals of water well operation and maintenance. E. W. Bennison. il Am Water Works Assn J 45:252-8 Mr '53
Improving well yields by use of vibratory explosives. H. A. Mylander. il diag Water & Sewage Works 99:502-11 D '52; Same cond. Am Water Works Assn J 44:39-48 Ja '52
Installation and performance of radial collector wells in Ohio River gravels. H. K. Gidley. maps diags Am Water Works Assn J 44:1117-26 D '52
Oil field techniques for water well drilling. H. A. Mylander. bibliog il Am Water Works Assn J 45:764-72 Jl '53
Pollution in water supplies from shallow wells and measures for its prevention; abstract. N. R. Knowles. Am Water Works Assn J 45:sup68 Mr '53
Recharging ground water reservoirs with wells and basins. M. L. Brashears. bibliog Min Eng 5:Trans 1029-32 O '53
Unconfined ground-water flow to multiple wells. V. E. Hansen. il diags Am Soc C E Proc 78[no 142]:1-18 Ag '52
Water from inside-city wells; Jacksonville, Florida. C. E. Wright. il Pub Works 84:70-1 Mr '53
See also
Petroleum—Well drilling
Water, Underground

Abandoned wells

Preparation of recommended procedure for sealing abandoned wells; committee report. Am Water Works Assn J 44:961-4 O '52
Standard specifications for deep wells; sealing abandoned wells. Am Water Works Assn J 44:965-8 O '52

WENGER, Paul Eugéne Etienne, 1888-
Paul E. Wenger. R. E. Oesper. por(front) J Chem Educ 30:66-7 F '53

WENTE, Carl Frederick, 1889-
Businessmen in the news. por Fortune 46:62 O '52

WENZLICK, Roy, 1894-
Chart-loving real estate analyst. por Bsns W p89-90+ F 28 '53

WERNER, Emil Alphonse, 1864-1951
Sketch. W. R. Fearon. Chem Soc J p2947-52 Jl '52

WEST, Clarence J. 1886-1953
Sketch. por Tappi 36:sup108A F '53; Paper Ind 34:1372 F '53; Paper Tr J 136:11 F 6 '53

WEST coast pipeline company
There's profit in pipelines. Bsns W p66-7 D 6 '52

WEST INDIES
See also
Caribbean region

WEST INDIES, British
Caribbean federation. Economist 167:809 Je 20 '53
Constitution for the Caribbean. map Economist 167:69-71 Ap 11 '53
West Indian teamwork. Economist 167:349 My 9 '53

WEST PENN electric company
Earnings increase seen. Barron's 32:19 O 13 '52
Five diversified stocks with strong investment appeal; with comparative balance sheet items. Mag of Wall St 92:398 Je 27 '53
Offering to stockholders. Comm & Fin Chr 177:571 F 2 '53

WEST RIDING worsted and woollen mills, limited
Statement by the chairman. J. Keeling. Economist 166:447-8 F 14 '53

WEST VIRGINIA pulp and paper company
Progress report. il map Paper Tr J 136:14-17 F 13 '53
West Vaco and Hinde & Dauch to merge. map Paper Tr J 137:14-16 Ag 28 '53; Same abr. Paper Ind 35:640 S '53

WESTCHESTER county, New York
Westchester gets ninth large firm in new offices-to-suburbs trend. il map Eng N 149:46-7 D 25 '52

WESTCOTT, Ted
Turning an idea into a tv station. por Bsns W p 152+ F 14 '53

WESTERN air lines
Bonanza strikes gold on Coast; its fight with WAL may alter CAB policy on feeders. W. J. Coughlin. Aviation W 57:92+ O 13 '52
Western faces new route setback. il Aviation W 57:90-1 O 20 '52
Western granted route extension. Aviation W 57:16 O 13 '52

WESTERN Canada water and sewage conference
Annual meeting, 4th, Winnipeg, Sept. 24-27. Munic Util 90:17-19+ O '52

WESTERN electric company
You hear the voice with a smile through Western Electric's service with standards. K. B. Clarke. il map Standardization 23:332-8 O '52

WESTERN insurance information service
New service office is opened in California. East Underw 53:30 O 31 '52; Nat Underw 56:10 O 30 '52

WESTERN insurance securities company
Security I like best. W. E. Buffett. Comm & Fin Chr 177:1522 Ap 9 '53

WESTERN light and telephone company, Inc.
Stock offered. Comm & Fin Chr 176:2211; 177:2788 D 8 '52, Je 29 '53

WESTERN Maryland railway
Railroad securities. Comm & Fin Chr 177:1874 Ap 30 '53

WESTERN metal congress
ASM sessions, Los Angeles, March 23-27. Steel 132:86-90 Mr 30 '53
Congress, Los Angeles, March 23-27; abstracts of papers. Iron Age 171:139-41 Ap 9 '53

WESTERN metal exposition
Exposition, 8th, Los Angeles. Metal Finishing 51:74-6 My '53
Western metals show, Los Angeles. Iron Age 171:91 Ap 2 '53

WESTERN natural gas company
Common stockholders offered preferred shares. Comm & Fin Chr 176:2439 D 22 '52

WESTERN Pacific railroad
Pending lawsuit important to Western Pacific common. Barron's 32:17-18 D 1 '52

WESTERN petroleum refiners association
Annual meeting, San Antonio, March 23-25. Pet Eng 25:C24-5 My '53

WESTERN society of engineers
Washington award dinner. Midwest Eng 5:6-7+ Mr '53
Year book containing the constitution, bylaws, awards, officers, membership list, etc. Midwest Eng 5:1-136 pt 2 F '53

WESTERN union telegraph company
Telegraph service greatly improved in 1952. W. P. Marshall. Pub Util 51:104-5 Ja 15 '53
Teletype redeal. Bsns W p57-8 Jl 4 '53
What hath God wrought in suburban Baltimore? il Bsns W p 142-3 Je 13 '53

WESTINGHOUSE air brake company
LeTourneau sale; Westinghouse Air Brake plans to buy part of machinery business. Eng N 150:101 My 7 '53
Westinghouse Air Brake buys R. G. LeTourneau, inc. Roads & Eng Constr 91:76 My '53; Comm & Fin Chr 177:2136-7 My 18 '53
Westinghouse Air Brake reaches out. Bsns W p 182 My 16 '53

WESTINGHOUSE electric corporation
Educational activities. Tappi 35:sup 102A-4A O '52
Making research the key to profits; quick project pays off fast; investing two years to revamp a product; pure research; long shot bet. il Bsns W p 150+ Ja 17 '53
Recharging of Westinghouse. E. P. Smith. il Fortune 46:118-23+ D '52
Seven companies likely to increase dividends in 1953; with comparative balance sheet items. Mag of Wall St 91:401 Ja 10 '53
Specters from abroad haunt Westinghouse. Bsns W p 152 Je 20 '53

WESTINGHOUSE electric corporation—*Cont.*
Westinghouse Electric expands. Elec World News ed 138:46 O 13 '52
Westinghouse seeks places to spend construction money. Eng N 149:84-6 O 2 '52

WESTMINSTER bank, limited
Statement by the chairman. Lord Aldenham. Economist 166:311-13 Ja 31 '53

WESTON electrical instrument corporation
Stock offered. Comm & Fin Chr 177:2294 My 25 '53

WESTPAN hydrocarbon company
Security I like best. B. Benjamin. Comm & Fin Chr 177:2406+ Je 4 '53

WETTING
Effect of wettability on the electrical resistivity of sand. G. V. Keller. bibliog diags Oil & Gas J 51:62-5 Ja 5 '53
Relationship between various surface properties of wool fibers; wettability. J. Lindberg. bibliog Textile Res J 23:585-8 Ag '53
Role of surface active agents in wetting. F. M. Fowkes. bibliog diags J Phys Chem 57:98-103 Ja '53
Spreading of liquid metals on solid surfaces; surface chemistry of high-energy substances. A. Bondi. diags Chem R 52:417-58 bibliog(p456-8) Ap '53
Wetting characteristics of cellulose derivatives; interrelations of contact angles. B. R. Ray and F. E. Bartell. bibliog J Phys Chem 57:49-56 Ja '53

WETTING agents
Alkarylsulfonates as conditioners in wet-twisting cotton tire cord. J. C. Ambelang and others. bibliog Ind & Eng Chem 45:204-10 Ja '53
Effect of a wetting agent on the hydrolysis of highly methylated cotton cellulose. R. E. Reeves and B. J. Barrett. Textile Res J 23:510-12 Jl '53
Effects of wetting agents on the physical properties of clay bodies. R. E. Pyle and P. R. Jones. Am Cer Soc Bul 31:233-6 Jl 15 '52
Eljer solves the raw material dusting problem. il Cer Ind 59:92 D '52
Surface active agent phenomena in dust abatement. P. L. Walker, jr., E. E. Petersen and C. C. Wright. bibliog Ind & Eng Chem 44:2389-93 O '52
Wetting agent, F-126. Chem Eng 59:200+ O '52
Wetting agents studied in flooding. Oil & Gas J 51:65-6 N 3 '52
See also
Surface active substances

WHALE oil
Whale oil base. Chem Eng 59:328-30 O '52
Whale oil process afloat. il diag Can Chem Process 36:38-9 O '52

WHALES
Whale cardiogram. il Sci Am 187:68-70 O '52

WHALING
Echo whale finder; Kelvin and Hughes, ltd. il diag Engineer 194:756-7 D 5 '52; Engineering 175:90-1 Ja 16 '53
Electrical harpooning of whales. Elec R (Lond) 151:804 O 10 '52
Norwegian whaling increases. For Comm W 49:14 F 2 '53
Radio buoy for marking whales. il Engineering 175:255 F 20 '53

WHALING vessels
Argentine whale-factory ship Juan Peron. il Engineering 174:197-9, pl 8-9 Ag 15 '52

WHARVES
Deep wharf cells stand by themselves. J. H. Patterson. il Eng N 150:36 Ap 23 '53
Piles placed in drilled holes are used to hold new wharf on steep slope. il diag Eng N 150:48 My 14 '53
Savannah dedicates new state docks. il Manuf Rec 121:40-1 O '52
$31 million planned for New Orleans' port. il Eng N 149:60+ O 9 '52
United Fruit opens new banana wharf. Eng N 150:55 Ja 15 '53

WHARVES, Concrete
Deep-water wharf on the Gambia river. il diags Engineering 175:1-5, pl 1 Ja 2 '53

WHEAT
Alternaria within pericarp of wheat seed. S. R. Bose. Science 117:16 Ja 2 '53
Argentina's big wheat crop in good demand. For Comm W 48:30 D 15 '52
CCC aids wheat market. Barron's 32:27 O 6 '52
CCC program may result in wheat market rise. Barron's 33:27-8 Ap 27 '53
Ecuador expects top wheat production. For Comm W 48:19 O 13 '52
Enterprise on the prairies. C. M. Williams. Harvard Bsns R 31:97-102 Mr '53
Falling wheat. Economist 167:835-6 Je 20 '53
Majority for wheat agreement; International wheat agreement. Economist 167:326-7 My 2 '53
Mischievous pact; wheat agreement helps neither agriculture nor trade. Barron's 33:1 Ja 26 '53
Payments authorized under new wheat pact. For Comm W 50:23 Jl 13 '53
Quality of cereals and their industrial uses; biscuit flour. J. Sword. bibliog Chem & Ind p389-97 Ap 25 '53
Quality of cereals and their industrial uses; the by-products of wheat and their nutritive values. J. G. Hay. bibliog Chem & Ind p 185-90 F 28 '53
Relief wheat cargo en route to Pakistan. For Comm W 50:20 Jl 13 '53
U.S. agrees to export more wheat under international pact. For Comm W 49:3+ Ap 27 '53
Wheat agreement breakdown. Economist 167:176 Ap 18 '53
Wheat in the balance. Economist 167:110+ Ap 11 '53
Wheat prospects good. Economist 167:616 My 30 '53
Wheat support program battles record supplies. Barron's 33:19-20 Je 22 '53
See also
International wheat council

Prices

Britain's price for wheat. Economist 167:314 My 2 '53
Has grain seen the worst? Bsns W p 161-2+ Jl 25 '53
Wheat catches it again. Bsns W p70+ F 21 '53
Wheat prices seem close to seasonal bottom. Barron's 33:35-6 Ja 19 '53

Transportation

Winter wheat loadings and the carriers. Comm & Fin Chr 178:219 Jl 16 '53

WHEAT germ
Fermentation products of wheat germ; identification of methoxy- and 2 : 6-dimethoxy-*p*-benzoquinone; infra-red absorption of some quinones and 1 : 2-dicarbonyl compounds. D. J. Cosgrove and others. Chem Soc J p4821-3 D '52
Isolation of Δ^7-stigmastenol from wheat. D. R. Idler, A. A. Kandutsch and C. A. Baumann. bibliog Am Chem Soc J 75:4325-7 S 5 '53

WHEATSTONE bridge
Wheatstone bridge for admittance determinations of highly conducting materials at low frequencies; abstract. H. P. Schwan and K. Sittel. Elec Eng 72:483 Je '53

WHEELER, James W.
American engineers win trophy; Musick memorial trophy awarded to Lindberg and Wheeler for developing Sperry engine analyzer. por Aeronautical Eng R 11:17-18 D '52

WHEELING steel corporation
May raise dividend; first quarter earnings. Barron's 33:19-20 Je 1 '53
Security I like best. L. Levy. Comm & Fin Chr 177:2510 Je 11 '53

WHEELS
Design of wheels for electric overhead travelling cranes. H. B. Lloyd. diags Engineer 195:429-30 Mr 20 '53
See also
Car wheels
Crane wheels
Grinding
Locomotives—Wheels
Locomotives, Diesel—Wheels

WHEELS, Steel

Manufacture

Continuous forge rolls up wheel records; Taylor bros. & co., ltd. il plan Steel 132:112+ F 2 '53

WHEELS, Steel—Manufacture—*Continued*

Forge for continuous production of solid railway wheels and disc centres; Taylor brothers and co. il plan diags Engineering 174:713-16, pl 57, 752-4, pl 58 D 5-12 '52; Engineer 194:753-6 D 5 '52; Iron & Steel Eng 30:124+ F '53

Wheel forging; English plant turns out 60 railway wheels an hour in new setup; Trafford Park steel works. il Iron Age 171:183-4 F 5 '53

WHELAND company

Aluminum; another firm wants in. R. M. Stroupe. Iron Age 170:38 O 30 '52

Wheland to make aluminum. Eng N 150:124 F 5 '53

WHEY

New whey to make paint. Paint Oil & Chem R 116:58 F 12 '53

Speeds whey handling; Lake-to-lake dairy cooperative. flow diag il Food Eng 25: 96+ Mr '53

WHIPPLE, Harvey, 1884-1952

Tribute. por Am Concrete Inst J 24:sup6-7 Ap '53

WHISKY

Blending and bottling plant for whisky; Distillers agency, limited. il diag Engineering 175:153-6 Ja 30 '53

One-market saturation selling wins leadership for Laurel Springs. C. J. Knapp. il Sales Management 69:53-4+ N 20 '52

Whiskey; its shares need stimulants. Bsns W p 100-2 Ap 4 '53

Whiskey sales off, except for straights. Bsns W p78+ F 7 '53

See also

Distilling industries

Advertising

Heart stopping adventures of Trager the intrepid; youthful copy writer on Canadian Club. S. H. Margolis and M. Silverstein. il Ptr Ink 242:40+ Ja 30 '53

How we advertise Old Charter whiskey. S. B. Monasch. il Adv Agency 46:78+ F '53

Local-level ads put Dant bourbon among top sellers. Ed & Pub 86:34 Ap 11 '53

Taxation

Battle over the Saylor bill. Bsns W p33 Mr 28 '53

WHISKY bottles

Changing contours; new bottle design for Calvert Reserve and Publickers Philadelphia brand. il Mod Packaging 26:128-30 O '52

WHISTLES

Marine electric whistle for ocean-going ships. il Engineering 175:735 Je 5 '53

WHITAKER, John Clarke, 1891-

Businessmen in the news. por Fortune 47:40 Ja '53

WHITE, Francis

New ambassadors for Russia and Mexico. por Bsns W p26 F 28 '53

WHITE, Francis Wilford, 1893-

Businessmen in the news. por Fortune 47:52 My '53

WHITE, J. G., engineering corporation

Completes executive changes. Eng N 150:60 Je 18 '53

WHITE, James C.

Sketch. Mech Eng 75:263 Mr '53

WHITE, Roy Barton, 1883-

Businessmen in the news. por Fortune 47:37 Ja '53

Howard E. Simpson, salesman, heads the B&O; R. B. White, board chairman. por Ry Age 135:97-9 S 7 '53

WHITE, Thomas Dresser, 1901-

Air force vice-chief of staff. Aviation W 58:33-4 My 25 '53

WHITE, William, 1897-

How do you doctor an ailing railroad? por(cover) Bsns W p86-8 Ja 3 '53

White of the New York Central. por Fortune 47:126-7+ Mr '53

WHITE

Characteristics of 300 degree white baked enamel finishes. F. E. Guth. il Illum Eng 48:77-81 F '53

Physical characteristics of white pigments; abstract. W. Hughes. Paint Oil & Chem R 116:19 F 12 '53

WHITE collar workers. See Office workers

WHITE fir. See Fir

WHITE HOUSE, Washington, D.C.

Air conditioning a necessity. C. Stempf and H. A. Caldwell. il Heating-Piping 25:88-9 F '53

Curious case of the President's bathtub. B. Smith. il Dom Eng 180:310-12+ N '52

White House goes modern. il Dom Eng 180: 311+ N '52

WHITE MOUNTAIN high altitude research station

White Mountain high altitude research station. S. F. Cook and N. Pace. map Science 116:697-700 D 26 '52

WHITE Pine copper company

White Pine Copper. R. H. Ramsey. flow sheets il map plans diags Eng & Min J 154:72-87 Ja '53

WHITE precipitates. See Mercury compounds

WHITE river

Probable Illinoian age of part of the Missouri river, South Dakota. C. R. Warren. bibliog map diags Geol Soc Bul 63:1143-55 N '52

WHITE shoe dressings. See Shoe dressings

WHITEHEAD, Edward

Schweppes-U.S. deal. pors Bsns W p 130 My 30 '53

WHITEHEAD, James Farnum, 1918-

Trying to figure where the shoe industry is going. pors Bsns W p 138-40 Jl 25 '53

WHITE'S auto stores, inc.

White's auto stores benefiting from its Southwest location. Barron's 32:21+ D 29 '52

WHITEWARE. See Pottery

WHITING corporation

Offering of preferred shares. Comm & Fin Chr 176:1774 N 10 '52

WHITNEY, John Hay, 1904-

Portrait. Bsns W p34 Ja 24 '53

WHITTAKER, Wallace S.

Hotel chain with wings. por Bsns W p 167-9 Mr 28 '53

WHITTAKER'S function

Asymptotic expansion of the Whittaker's function $W_{k,m}(z)$ for large values of k, m, z. C. Chang and others. bibliog diags Franklin Inst J 255:215-36, 319-31 Mr-Ap '53

WHOLESALE prices. See Prices, Wholesale

WHOLESALE trade

See also

Jobbers

Accounting

Action reports for a magazine wholesaler. W. K. Tarrant. N A C A Bul 34:66-75 S '52

Statistics

Fourteen important ratios for wholesaling and retailing; with tables. R. A. Foulke. Dun's R 60:32-3+ N '52

Revision of business sales, orders, and inventories; with detailed tables; orders, 1946-51; manufacturers' sales and inventories, 1949-51; wholesale sales, selected periods, 1948-52; wholesale inventories, 1948-52. Survey of Cur Bsns 32:12-18 O '52

WICHITA, Kansas

Water supply

Long-range water supply planning. R. H. Hess. map Am Water Works Assn J 44: 1043-51 N '52

WICKARD, Claude Raymond, 1893-

Wickard quits as REA head. por Elec World 139:109 Mr 23 '53

WICKHAM, Sir Henry Alexander, 1846-1928

British pioneer. E. V. Lane. pors Rubber Age 73:649-56 Ag '53

WIDMEYER, Jimmy

Businessmen in the news. por Fortune 46: 48 D '52

WIEBEL, Arthur V. 1907-

A. V. Wiebel. por Explosives Eng 30:172-3 N '52

WIEN bridge

Wien bridge oscillator design. K. K. Clarke. diag Inst Radio Eng Proc 41:246-9 F '53

WIEN effect. See Electrolytes—Conductivity

WIESENBERGER, Arthur, 1896-
Special situations; sketch. B. Lefferts. por Barron's 33:5-6 My 25 '53

WIGGINS airways
Wiggins wins CAB renewal hearing. Aviation W 57:48-9 D 29 '52

WILDCAT strikes. See Strikes

WILDLIFE
Coordination of silvicultural systems and wildlife management; abstract. D. R. M. Scott and C. D. Fowle. Pulp & Pa of Can 54:94-5 F '53
Examples of wildlife habitat betterment through modifications of forest practices in the Lake states; abstract. E. Swift. Pulp & Pa of Can 54:84+ F '53
Wildlife management in the Yukon territory; abstract. F. Fraser. Pulp & Pa of Can 54:88+ F '53

WILEY, Alexander, 1884-
Portrait. Bsns W p29 N 8 '52

WILFORDINE
Alkaloids from tripterygium wilfordii Hook; the structure of wilforine, wilfordine, wilforgine and wilfortrine. M. Beroza. bibliog Am Chem Soc J 75:44-9 Ja 5 '53

WILFORINE
Alkaloids from tripterygium wilfordii Hook; the structure of wilforine, wilfordine, wilforgine and wilfortrine. M. Beroza. bibliog Am Chem Soc J 75:44-9 Ja 5 '53

WILHELM, Richard Herman, 1909-
Man of the month. por Chem Eng 60:284 F '53

WILKIE, David J.
400 at dinner honor Wilkie AP auto editor. por Ed & Pub 85:16 N 29 '52

WILLGERODT reaction
Extension of the Willgerodt reaction. R. T. Gerry and E. V. Brown. Am Chem Soc J 75:740-1 F 5 '53
Studies in the mechanism of the Willgerodt reaction; direction of migration of the functional group in aliphatic ketones. E. Cerwonka, R. C. Anderson and E. V. Brown. bibliog Am Chem Soc J 75:28-30 Ja 5 '53
Studies in the mechanism of the Willgerodt reaction; nature of the labile intermediate. E. Cerwonka, R. C. Anderson and E. V. Brown. bibliog Am Chem Soc J 75:30-3 Ja 5 '53

WILLIAMS, Albert J. 1903-
Presentation of the John Price Wetherill medals. por Franklin Inst J 254:460-3 D '52

WILLIAMS, Claude A.
Pipe line portrait. A. Reese. por World Oil 135:257-8 D '52

WILLIAMS, Clyde Elmer, 1893-
Businessmen in the news. por Fortune 46:47 D '52

WILLIAMS, Harrison, 1873-
Businessmen in the news. por Fortune 46:58 O '52

WILLIAMS, Rowland L.
Feucht to succeed Williams as North Western's head. por Ry Age 133:42-3 D 29 '52

WILLIAMS, W. Walter, 1894-
Portrait. Bsns W p29 D 6 '52

WILLIAMS Deacon's bank, limited
Statement by the chairman. E. A. Carpenter. Economist 166:175-7 Ja 17 '53

WILLIAMSON, James and son, ltd.
Statement by the chairman. Earl Peel. Economist 167:123 Ap 11 '53

WILLIAMSPORT, Pennsylvania

Sanitary affairs

Technique of build-up industrial health in a single community. J. D. Harley. A M A Archives Ind Hygiene & Occup Med 6:478-81 D '52

WILLIS, John Augustine
Half-century club; careers epitomizing contributions to coal-mining progress. por Coal Age 58:85 Ag '53

WILLS
Definition; per stirpes. E. S. MacNeill. Banking 45:66-7 My '53
Definitions; lawful issue. E. S. MacNeill. Banking 45:69 Mr '53
Drafting a simple will for a moderate sized estate. J. Ritchie, 3d. Trusts & Estates 91:724-8 O '52
Draftsmanship; wills and trusts; ABA committee report. Trusts & Estates 91:772-3 O '52
How not- and how-to make legacies of corporate stock. Banking 45:55-6 N '52
Should you have a will? P. H. Topping. Life Ins Courant 58:47-8 My '53
Unwisdom of codicils. E. S. MacNeill. Banking 45:66+ Je '53
Where there's a will. Published in monthly numbers of Trusts and estates
Wills for oil men; scope of powers and administrative techniques. T. A. Knight. Trusts & Estates 91:888-90 D '52
See also
Gifts (law)
Perpetuities
Probate law

WILLSTÄTTER, Richard Martin, 1872-1942
Willstätter memorial lecture. R. Robinson. por(pl) Chem Soc J p999-1026 Mr '53

WILLYS-OVERLAND motors, inc.
Big three; will it be big four? K-F-Willys merger creates new automotive giant. Iron Age 171:159 My 7 '53
Estimates $61,391,612 net after K-F deal. Comm & Fin Chr 177:1623 Ap 13 '53
Kaiser-Frazer absorbs Willys as new subsidiary. Automotive Ind 108:19+ My 15 '53
Merger; K-F, Willys take vows. Iron Age 171:109 Ap 2 '53
Why Kaiser bought Willys. Bsns W p32 Mr 28 '53
Willys; rugged as its jeeps. H. C. Tuttle. Steel 131:80 D 8 '52

WILSON, Bernard T.
Turning an idea into a tv station. por Bsns W p 152+ F 14 '53

WILSON, Charles Edward, 1886-
Businessmen in the news. por Fortune 47:60 Mr '53

WILSON, Charles Erwin, 1890-
Changing arms strategy? por Bsns W p28-9 Ap 18 '53
Eisenhower's Cabinet; a gamble. por Bsns W p28-9 N 29 '52
Federalizing of Charles E. Wilson. por Fortune 74:89-90 My '53
G.M's Wilson; he can restore faith in competitive capitalism. Barron's 32:1 N 24 '52
Planning for permanent defense. Bsns W p 121-2+ My 9 '53
Portrait. Bsns W p29 Mr 21 '53

WILSON, Ralph L. 1899-
Sketch. por Metal Prog 63:90-2 Je '53

WILSON'S disease. See Hepatolenticular degeneration

WINCHES
Old axles, wheels, tires make pipe-lowering winches. il diag Constr Methods 35:105-6+ Ag '53
Selection and application of winches and allied equipment. H. J. Troche and B. A. Cooper. diags Am Gas Assn Proc 1952:393-401
Use unique winch system for car movement. il Brick & Clay Rec 123:64 O '53

WINCHES, Electric
Improved cargo winch. il Elec R (Lond) 151:257-8 Ag 1 '52

WIND. See Winds

WIND gages. See Anemoclinometer

WIND instruments
Densified woodwinds fabricated from phenolic impregnated stabilized wood. il Mod Plastics 30:101+ N '52
See also
Trumpet

WIND power
Britain tries a new approach to power from the wind; anemoplant. il diag Elec World News ed 139:32-4 Ap 13 '53
Possibilities of wind power. il Engineering 176:33 Jl 10 '53
Wind-driven generator. il diags Engineer 195:242 F 13 '53; Engineering 175:213-14 F 13 '53; Elec R (Lond) 152:377-9 F 13 '53
Wind power progress. il diags Elec J 150:528 F 13 '53
Wind to vacuum to power. J. Grindrod. il diags Power Eng 57:91+ S '53

WIND pressure
Wind effects on car stability; abstract. W. E. Lay and P. W. Lett, jr. S A E J 61:34-5 S '53
See also
Anemometers

WIND tunnels

Airframe test house and wind tunnel. il plan diag Engineer 196:146-8 Jl 31 '53; Engineering 176:144, 150-1 Jl 31 '53

Amateur scientist. A. G. Ingalls. diags Sci Am 188:112-14 Ap '53

Aro gets 3,500-mph. windtunnel. il Aviation W 58:36 My 4 '53

Automatic reduction of wind-tunnel data. V. S. Haneman and others. il plan diags Aeronautical Eng R 12:42-7 F '53

Blockage corrections for three-dimensional-flow closed-throat wind tunnels, with consideration of the effect of compressibility. J. G. Herriot. bibliog diags U S Nat Advisory Com for Aeronautics 1950:771-83 '51

Design of low-turbulence wind tunnels. H. L. Dryden and I. H. Abbott. bibliog il diags U S Nat Advisory Com for Aeronautics 1949:387-98 '51

Effect of screens in wide-angle diffusers. G. B. Schubauer and W. G. Spangenberg. bibliog il diags U S Nat Advisory Com for Aeronautics 1949:545-84 '51

Engineering highlights of 1952; wind-tunnel drives. C. A. Scarlott. il Westinghouse Eng 13:24-5 Ja '53

Experimental study of a hypersonic wind-tunnel diffuser. P. P. Wegener and R. K. Lobb. bibliog il diag J Aeronautical Sci 20:105-10 F '53

Heat cycle low Reynolds number transonic tunnel. R. L. Chuan. il J Aeronautical Sci 20:59-60 Ja '53

Linear theory of boundary effects in open wind tunnels with finite jet lengths. S. Katzoff and others. bibliog il diags U S Nat Advisory Com for Aeronautics 1950:509-45 '51

Miniature supersonic wind tunnel. P. W. Powers. il diags Aeronautical Eng R 11:38-42 D '52

Modern wind tunnel balance. L. E. Leavy and C. G. Saunders. il plan diags Roy Aeronautical Soc J 57:491-502 Ag '53

Most powerful electric motors installed in wind tunnel. il Elec Eng 72:852 S '53

Pushing air with 54,000 hp; Boeing airplane co.'s wind tunnel. il Power 97:93 S '53

Rotating machine. il Mech Eng 75:156 F '53

U.K. industry team builds tunnel. il Aviation W 58:50 F 16 '53

Variation of heat transfer with Mach number in wind tunnels having constant supply conditions. M. Sibulkin and G. R. Eber. J Aeronautical Sci 20:288-9 Ap '53

Wind tunnel investigations on rotating blades of aerofoil section. K. H. Khalil. bibliog il diags Inst Mech Eng Proc (A) 166 no 4:419-26 '52; Same cond. Engineer 194:221-3 Ag 15 '52; Discussion. Inst Mech Eng Proc (A) 166 no 4:426-8 '52

Windtunnel is a firing range. il Aviation W 57:35 O 20 '52

Wind tunnels require largest motors, compressors. il Machine Design 25:218 Mr '53

Models

Scale-model tunnel blows big wind. Aviation W 57:26+ D 8 '52

WINDING

New methods for detecting yarn faults during winding; Linra Photo-Slubber. J. A. Matthew and J. L. Spencer-Smith. il diags Textile Inst J Trans 44:T77-89 Mr '53

WINDING machines

Double-coil winding fixture. E. C. McMein. diag Mach 59:195-6 F '53

Experimental study of pirn-winding. R. Conrad and G. J. Siddall. Textile Inst J 44:P215-22 Je '53

Fixed stroke converted into variable stroke. L. Kasper. diags Mach 59:197-8 Mr '53

How to improve winding of yarn-grading boards. E. F. Wallace. il Textile World 103:111 Mr '53

Quilling machine handles all yarns and yarn sizes. il Textile World 103:152 O '53

Sensitive feed arrangement for coil-winding machine. P. Grodzinski. diag Mach 59:207 Ap '53

See also

Paper winders

Tension control

Tension regulating device for coiling machines. P. Grodzinski. diag Mach 60:208 O '53

WINDOW cleaning

Electrical window cleaning. il Elec J 150:536 F 13 '53

Modern glass cleaners. M. A. Lesser. bibliog il Soap & San Chem 28:46-9+ S '52

WINDOW displays. See Show windows

WINDOW frames, Aluminum

Beveled aluminum framing with insulating core made in stock window sizes. il diag House & Home 2:178+ S '52

WINDOW frames, Concrete

Precast frame for air conditioners. P. V. Taylor. il Concrete 60:26 D '52

Specialize in precast window frames; Livesay window co. P. V. Taylor. il Rock Prod 56:259+ Ag '53

WINDOWLESS construction

Acme opens new windowless office. il Brick & Clay Rec 121:32 O '52

Comfort cooling keeps absentees at one per cent at Auto Specialties' windowless plant. P. A. Messer. il Factory Management 111:90-1 F '53

Windowless structures; a study in blast-resistant design; abstract. Arch Rec 112:17 O '52

WINDOWS

Air infiltration through weatherstripped and non-weatherstripped windows. diags Am Bld 74:56+ N '52

Bright outlook ahead for window makers. Steel 132:69 Mr 9 '53

Fireplace and corner window; detail plate. K. R. O'Neal. il plan diags Am Bld 74:154-5 N '52

Hurricane panels. il Mod Plastics 30:178 F '53

Picture window that disappears and screens itself. il diag Am Bld 75:196-7 F '53

Pittsburgh Plate Glass all-glass insulating window. il Glass Ind 34:315 Je '53; Eng N 150:120 My 21 '53

Specifying glass for windows in the future. diags Cer Ind 60:75-6 My '53

This curtain pocket permits clear view. il plans diag Am Bld 74:103 N '53

Versatile new window serves the whole house. il diags Am Bld 74:186-8 N '52

Window and door details; detail plate. K. R. O'Neal. il diags Am Bld 75:154-5 F '53

Windows for protection against high-intensity gamma radiation. Glass Ind 34:435+ Ag '53

See also

Airplanes—Windows
Glass
Ships—Windows
Show windows
Skylights
Stained glass

WINDS

Atmospheric winds and temperatures to 50-kilometers altitude as determined by acoustical propagation studies. J. M. Richardson and W. B. Kennedy. bibliog map diags Acoustical Soc Am J 24:731-41 N '52

Case of the vibrating stack. D. J. Bergman. Midwest Eng 5:11-12 My '53

Hydrodynamic effects of gales on Lake Erie. G. H. Keulegan. bibliog map diags J Res Nat Bur Stand 50:99-109 F '53

Jet stream from 10,000 to 40,000 feet above the surface of the earth. J. Namias. il diags Sci Am 187:26-31 O '52

Jet was chasing its tail; jet stream, recently discovered meteorological phenomenon. il map Gen Elec R 56:42-7 Jl '53

Possibility of soaring on traveling waves in the jet stream. J. Kuettner. il map Aeronautical Eng R 11:22-8 D '52

Variation of wind velocity and gusts with height. R. H. Sherlock. bibliog maps diags Am Soc C E Proc 78 [no 126]:1-26 Ap '52; Discussion. 79 [no D-126]:1-20 Mr '53

See also

Hurricanes
Tornadoes
Wind pressure

WINDSOR, Ontario

Water supply

Seventy-five years private water-supply operation ends in Windsor, Ont. il Munic Util 91:19+ Mr '53

WINE

Bacchus in Baltimore; Boordy vineyard. Fortune 47:190 My '53

Gift wine. il Mod Packaging 26:114-15+ My '53

WINE—*Continued*

How to choose wine without seeming dumb. il Sales Management 69:68 N 1 '52

Moroccan wines vie with French vintage. For Comm W 48:16 N 3 '52

Portuguese production and exports of port wine down. For Comm W 48:19 O 27 '52

Taylor's wines; art of wine maker projected into sales through art of packaging. il Mod Packaging 26:94-8 N '52

These packages found new buyers in a neglected market. il Sales Management 70:30-2 F 15 '53

Treasure hunt stirs point-of-purchase push for California wines. E. A. Rossi. il Sales Management 69:30-2+ D 15 '52

Vintner's custom. Economist 165:803-4 D 20 '52

Wine on the U.S. dinner table; Fromm & Sichel, inc. launches Chateau Masson line. il Bsns W p48+ N 8 '52

Wine; upward and westward again. Bsns W p42 My 2 '53

Advertising

Drive designed to boost tie-in wine ad copy. C. Watson. Ed & Pub 86:16 F 7 '53

Mogen David Wine opens special spring effort. Ed & Pub 86:24 F 14 '53

Manufacture

Use of disintegrator to replace crusher raises yield, halves labor; A. Perelli-Minetti & sons. il diag Food Eng 25:61+ Mr '53

WINERIES

Equipment

Multi-flavor filler for combination packaging; one rotary machine fills four wines simultaneously in Garrett plant. il diags Mod Packaging 26:122-3+ D '52

Use of disintegrator to replace crusher raises yield, halves labor; A. Perelli-Minetti & sons. il diag Food Eng 25:61+ Mr '53

WINNE, Harry Alonzo, 1888-

Portrait. Bsns W p 116 Mr 14 '53

WINNIPEG, Manitoba

Sewerage

Planning of sewer maintenance. F. G. Denson. il Munic Util 90:24-6+ O '52

WINTER construction

Useful tips on winter building. il diags Am Bld 74:123-7 N '52

You can doze in winter. il diags Constr Methods 35:50-3 Ja '53

See also

Concrete construction in winter

WINTER sports

See also

Skis and skiing

WIRE

High-pressure wire gage using gold-chrome wire. H. E. Darling and D. H. Newhall. il diag A S M E Trans 75:311-14 Ap '53

Major causes of color discoloration on building wire. Rubber Age 72:70 O '52

Silhouette lighting of small diameter wires. W. Allphin. il Illum Eng 47:567-70 O '52; Discussion. diags 48:58-60 Ja '53

Manufacture

See also

Wire drawing

WIRE, Aluminum

Cold pressure welding for aluminum wire. il Electronics 25:222+ D '52

WIRE, Copper

Manufacture

Profit analysis for the magnet wire industry. G. L. Faulkner. N A C A Bul 34:35-47 S '52

Transfer car eliminates overhead handling; Bridgeport brass co. W. J. Krailing. il diag Tool Eng 31:50-2 Jl '53

Testing

Coating test for tinned copper conductors; abstract. M. Zuercher and J. Lueder. Metal Finishing 50:84-5 N '52

Reverting of hard-drawn copper to soft condition under variable stress. J. N. Kenyon. il Am Soc T M Proc 50:1073-81; Discussion. 1082-4 '50

WIRE, Steel

Coils of steel wire, weight or length of rods, etc.; nomograph. Water & Sewage Works 100:373 S '53

Guide for stainless steel buyers. Steel 132:118 sec 2 Je 22 '53

Manufacturer's bright wire; prices, 1933-1952; tabulation. Iron Age 171:410 Ja 1 '53

Manufacture

Carbide rolls save. il Steel 132:95-6 Je 22 '53

Drawing of steel wire at elevated and subnormal temperatures. F. C. Thompson and others. bibliog diags Iron & Steel Inst J 173:36-51 Ja '53

In 18-8 stainless wire use right draw speeds for better electrical properties. S. Storchheim. il Iron Age 171:135-8 Ap 9 '53

Wire rolling; Knowles Loom rolls stainless steel wire for loom reeds. il Iron Age 171:154+ Ap 9 '53

Testing

Using SR-4 gages to measure strains in wire strand. A. Smislova and others. il Product Eng 24:214 Ap '53

WIRE cloth

Circular wire-knitting machine. il Engineering 176:117-18 Jl 24 '53

Instrumentation and strain measurement in welded wire fabric reinforced concrete slabs. E. W. Carlton and J. H. Senne. il plan diag Am Concrete Inst J 24:141-52 O '52

Micro-straining as adjunct to rapid sand filtration of water. A. W. Consoer. il Eng N 150:36-8 Ap 9 '53

Nine-acre screen protects new highway from falling rocks. A. Wintle. il Pub Works 84:49 Ja '53

Resistance to air flow of wire gauzes. W. J. D. Annand. bibliog diags Roy Aeronautical Soc J 57:141-6 Mr '53

Steel mesh solves woodpecker problem. W. L. Rush. il Elec World 139:116 F 9 '53

Wire belt conveyors. J. F. Reid. il diags Food Eng 25:90-2+ Jl; 72-3+ Ag '53

WIRE cutting

Pressure-pad cutoff die clips wire square. H. Dahl. diags Am Mach 97:140 Ag 3 '53

WIRE drawing

Die inspection tool; Profiloscope. il Engineer 195:735 My 22 '53; Engineering 175:621 My 15 '53; Metallurgia 48:101-2 Ag '53

Drawing of steel wire at elevated and subnormal temperatures. F. C. Thompson and others. bibliog diags Iron & Steel Inst J 173:36-51 Ja '53

In 18-8 stainless wire use right draw speeds for better electrical properties. S. Storchheim. il Iron Age 171:135-8 Ap 9 '53

WIRE forming machines

Chain-driven intermittent rotary movement. L. Kasper. diags Mach 59:203-4 D '52

Circular wire-knitting machine. il Engineering 176:117-18 Jl 24 '53

Gear and clutch mechanism for variable operating conditions. W. M. Halliday. diags Mach 59:200-2 F '53

Linear movement reduced by differential chain drive mechanism. L. Kasper. diags Mach 59:207-8 My '53

Simple cam made practical by increasing speed. L. Kasper. diags Mach 60:207-8 O '53

WIRE handling

Wire handling; collapsible ram simplifies movement of coiled wire in mill. il Iron Age 171:256+ My 7 '53

WIRE rope

Cutoff technique reduces time requirements fifty per cent. R. D. Meyers. il diags World Oil 136:124 F '53

Design working loads for operating wire rope. L. C. Torell. Eng & Min J 153:97+ D '52; Same. Eng N 130:38-9 Ja 29 '53

Five miles of wire rope in constant use; Jova brick works. il Brick & Clay Rec 122:40-1+ Ja '53

Has your drilling rig got a groove in? wire rope costs in drilling can be reduced by installing a special system. J. Menneer. il Pet Eng 24:B97-8 O '52

How to handle and install wire rope properly. W. C. Richards. il diags Coal Age 58:112+ S '53; Same. Iron & Steel Eng 30:120+ Je '53; Same abr. Roads & Sts 96:72 S; 106+ O '53

WIRE rope—*Continued*

How to increase drilling line service. J. N. Kemple. World Oil 135:160+ D '52

How to protect your wire rope from excess wear and weather. L. E. Dressler. il Roads & Sts 95:102 O '52

How to spool wire line for maximum service; interview with F. L. Lebus. W. Rose. il Oil & Gas J 51:215+ S 29 '52

Make your wire rope have a long life line. Brick & Clay Rec 122:79 Ap '53

More competition in wire rope: il Steel 132:71 Ap 6 '53

Replacement of rock bolts with used hoisting rope cuts cost of holding ground. R. S. Haflidson and others. il plan diags Eng & Min J 154:100-2 Ja '53

Role of wire rope in deep drilling. C. M. Zerr. il Pet Eng 24:B99-102+ N '52

Simple equipment rebuilds wire rope guard rail. il Roads & Sts 95:66+ N '52

Too little, too late, or why cut off good rope. C. M. Zerr. il Pet Eng 25:B93-4+ My '53

Trouble-shooting on wire rope. il Mill & Factory 52:130-1 Ja '53

Use and care of wire rope. il diags Oil & Gas J 51:348 D 22 '52; 124 Ja 12; 144 F 9; 99 Mr 2; 123 Mr 9; 357 Mr 23; 197 Mr 30; 52:135 My 11; 269 My 25; 117 Je 1; 137 Je 8 '53

What kind of a sling do you need for the job? W. C. Richards. il diags Mill & Factory 52:108-10 Ap '53; Same. Constr Methods 35:114+ Ap '53; Abstract. Steel 132:140 Ap 6 '53

Wire rope cappings. R. Saxton. il Can Min J 74:60-1 Ja '53

Wire rope consumption by industry groups; tabulation. Iron Age 171:467 Ja 1 '53

Wire rope with plastic core produced by J&L. il Iron & Steel Eng 30:132+ My '53; Excerpt. Steel 132:146 Ap 27 '53; Abstract. Iron Age 171:62 Ap 16 '53

See also

Cables

Advertising

Hikes readership, traces sales of $200,000 to wire rope drive. il Ind Marketing 37:144 S '52

Safety measures

How safe are your slings? W. C. Richards. il diags Nat Safety N 68:22-3+ Ag '53; Same, with tables. Oil & Gas J 52:329 Je 22; 107 Jl 6; 146 Jl 13 '53

Wire rope. il Nat Safety N 67:160+ Mr '53

WIRE rope fastenings

Know your rope fittings. W. C. Richards. il Oil & Gas J 51:153 D 1; 131 D 8; 145 D 15 '52

WISCONSIN central railway

Security I like best. C. B. Cooke, jr. Comm & Fin Chr 178:2+ Jl 2 '53; Correction. 178:102 Jl 9 '53

WISCONSIN electric power company

Public utility securities. O. Ely. Comm & Fin Chr 178:273 Jl 23 '53

WISCONSIN public service corporation

Bonds offered. Comm & Fin Chr 177:2053 My 11 '53

Investor interest increasing. Barron's 33:20 F 2 '53

Public utility securities. O. Ely. Comm & Fin Chr 176:2422 D 18 '52

WISE owl club. See Eye—Protection

WITNESSES

See also

Accountants as witnesses

Engineers as witnesses

WITTMER, John Jay, 1895-1951

J. J. Wittmer. S. C. Franco. por Ind Med 21:491-5 O '52

WIVES

See also

Bankers' wives

Engineers' wives

WOLCOTT, Jesse Paine, 1893-

Portrait. Bsns W p29 N 8 '52

WOLF, Clarence R.

Holly and sand go hand in hand; New Jersey silica sand co. D. G. Fenton. por Rock Prod 55:90 D '52

WOLFER, William

W. Wolfer retires at 80 from lifetime in industry. por Inland Ptr 130:50 N '52

WOLFF-KISHNER reaction

Alicyclic compounds; the formation of *cyclo*propanes in the Kishner-Wolff reduction of αβ-unsaturated carbonyl compounds. S. G. Beech, J. H. Turnbull and W. Wilson. Chem Soc J p4686-90 D '52

WOLLASTONITE

Low loss electrical bodies from wollastonite. W. M. Jackson, 2d. Am Cer Soc Bul 32:306-8 S 15 '53

Wollastonite bodies as low-loss dielectrics. N. H. Snyder and J. H. Koenig. Am Cer Soc Bul 31:246-7 Jl 15 '52

WOMAN

Books; review of Second sex, by Simone de Beauvoir. A. Stone. Sci Am 188:105-7 Ap '53

See also

Advertising—Women, Appeal to

Newspapers—Women's section

Railroads—Women passengers

Women as engineers

Working women

Employment

Developing a program for counseling bank women. M. DeMartini. il Burroughs Clearing House 37:32-3+ Mr '53

Equal safety for women. Safety Maint & Prod 105:83 Mr '53

1952 handbook of facts on women workers. bibliog U S Women's Bur Bul 242:1-121; pa 30c Supt. of doc. '52

Report of the National conference on equal pay, March 31 and April 1, 1952. U S Women's Bur Bul 243:1-25; pa 15c Supt. of doc. '52

Safety for women in industry. J. Michael. il Safety Maint & Prod 106:11-12+ Ag '53

Summary of state labor laws for women, 1953. 7 l U. S. Women's bur, Washington 25 '53

Useful pointers on finding girl power. J. H. Collins. Pub Util 52:26-33 Jl 2 '53

Virginia transit co. will add more women drivers to overcome manpower shortage. Bus Transportation 31:71 N '52

Where women work; how to utilize their skills effectively and safely. Nat Safety N 67:5 Mr '53

Women keep planes in the air; California central airlines. R. M. Harmer. il Am Bsns 23:32+ Je '53

Working wife, $96.30 a week. K. Hamill. il Fortune 47:158-60+ Ap '53

See also

Business women

Office workers

Servants

Women as engineers

Occupations

More women, in more jobs, with more confidence. il Chem W 71:10-12 D 27 '52

Outlook for women as food-service managers and supervisors. A. W. Mitchell. il U S Women's Bur Bul 234-2:1-54 bibliog(p52-4); pa 20c Supt. of doc. '52

Outlook for women as occupational therapists. il U S Women's Bur Bul 203-2:1-51 bibliog(p48-51); pa 20c Supt. of doc. '52

Outlook for women as physical therapists. il U S Women's Bur Bul 203-1:1-51 bibliog(p48-51); pa 20c Supt. of doc. '52

Outlook for women in professional nursing occupations. il U S Women's Bur Bul 203-3,rev:1-80 bibliog(p77-9); pa 30c Supt. of doc. '53

Talent without tears; a Radcliffe experiment expands. B. Lefferts. Barron's 33:7 Mr 9 '53

See also

Insurance women

Social workers

Women as engineers

Women in advertising

WOMEN as aviators

See also

Cochran, Jacqueline

WOMEN as bank employees. See Bank employees

WOMEN as bankers

See also

Association of bank women

WOMEN as chemists

More women, in more jobs, with more confidence. il Chem W 71:10-12 D 27 '52

See also

Wassell, Helen

WOMEN as engineers

Educating women for engineering. L. G. McDowell. Midwest Eng 5:9-10 O '52

More women in key engineering jobs not far off. J. J. Thompson. Mech Eng 75:429 My '53; Same. Elec World News ed 139:48 Ap 13 '53

Plan for training women in engineering. F. C. Morris. J Eng Educ 43:174-6 N '52

Welcome sign is out for women engineers. W. V. Kahler. Midwest Eng 5:5-6+ S '52

Women are missing. E. C. Kellogg. Iron Age 171:79 Ap 9 '53

See also

Society of women engineers

WOMEN as executives

Opportunities for women at the administrative level. F. M. Fuller and M. B. Batchelder. Harvard Bsns R 31:111-28 Ja '53

Woman's place in management. V. Green. Am Gas Assn Proc 1952:178-84; Same cond. Am Gas Assn Mo 34:11-12+ N '52

WOMEN as investors

Bache holds brokerage office show. il Comm & Fin Chr 177:1238 Mr 19 '53

Women's forum pushes Learn by doing plan. N. Willatt. Barron's 32:21-2 D 1 '52

WOMEN as journalists

See also

Taylor, Jessie

WOMEN as plumbers

U.S. has it's lady plumbers too! il Dom Eng 182:96-7+ Ag '53

WOMEN as purchasers

Intimate data gathered on her shopping habits. T. S. Irvin. Ed & Pub 85:44 O 4 '52

Working woman; a $20 billion market. D. B. Hertz. Adv Agency 46:98+ Ap '53

WOMEN engineers, Society of. See Society of women engineers

WOMEN in advertising

Can women fill executive posts in industrial advertising? B. Aitchison. Ind Marketing 38:16+ Ap '53

How do women executives fit into industrial advertising? il Ind Marketing 37:136+ O '52

Women earn place in industrial advertising, watch your step, men! F. Borden. Ind Marketing 38:68-9+ O '53

WOMEN in insurance. See Insurance women

WOMEN in the petroleum industry

Oil women, a better industry their goal; Association of desk and derrick clubs of North America, 1st annual convention, Houston. Nat Pet N 44:33-4 S 24 '52

Oil women spud in own organization; National association of desk and derrick clubs of North America. M. M. Lyman. Pet Eng 24:E3 O '52

WOMEN'S apparel

Helping an oldtimer make a comeback; new styles, new weaves and finishes for cotton. Bsns W p54-6+ O 25 '52

How a small company lives, and grows, in the hazardous garment industry; Tabak sports wear. J. H. Collins. il Sales Management 70:94+ Mr 1 '53

See also

Corsets

Advertising

Beautiful but dumb ads; in women's wear field. K. Groesbeck. Adv Agency 46:94+ Mr '53

WOMEN'S finance forum of America

Women's forum pushes Learn by doing plan. N. Willatt. Barron's 32:21-2 D 1 '52

WONDERMATCH corporation

Stock offered. Comm & Fin Chr 177:417 Ja 26 '53

WOOD, Randolph

Mail-order records. Fortune 47:178 My '53

WOOD, Robert Elkington, 1879-

Businessmen in the news. por Fortune 46:50 N '52

WOOD

Controlling deterioration of cooling tower lumber. D. R. Baker. Pet Eng 24:D67-8+ N '52

Diffusion of dissolved materials through wood. E. A. Behr, D. R. Briggs and F. H. Kaufert. bibliog J Phys Chem 57:476-80 Ap '53

Role of wood in industry. C. C. Heritage. Paper Ind 35:341-2 Je '53

Wood and wood base materials. K. Rose. il Materials & Methods 38:117-32 S '53 (reprints 25c)

Wood as an engineering material. L. J. Markwardt. il Civil Eng 22:749-54 S '52

Wood structure. S. Williams. il Sci Am 188:64-7 Ja '53

See also

Aspen
Bark peeling
Birch
Bridges, Wooden
Cellulose
Douglas fir
Eucalyptus
Forests and forestry
Hard woods
Holocellulose
Lignin
Lumber
Lumbering
Oak
Pine
Plywood
Spruce
Teak
Wood construction
Wood preservation
Wood pulp

Analysis

Analysis of pine heartwood components; abstract of papers by G. Lindstedt and others. diag Paper Ind 34:1020 N '52

Chemical composition of grand fir bark. E. F. Kurth and G. M. Tokos. bibliog Tappi 36:301-4 Jl '53

Chemical composition of the bast fibers of Douglas-fir bark. H. J. Kiefer and E. F. Kurth. bibliog il Tappi 36:14-19 Ja '53

Chemical methods; standards for wood, pulp, and paper. Tappi 35sup:116A-18A N '52

Extractives of aspenwood and bark. B. L. Browning and L. O. Bublitz. bibliog Tappi 36:418-19 S '53

Hemicelluloses present in aspen wood (populus tremuloides). J. K. N. Jones and L. E. Wise. Chem Soc J p2750-6, 3389-93 Jl, S '52

Recent studies on the morphology of cellulose fibers and their significance for fiber to resin bonding. B. G. Rånby. bibliog Tappi 36:sup8A+ Je '53

Chemistry

Anthocyanidin of louro inamui. E. Cocker and W. Cocker. Chem Soc J p5035-6 D '52

Chemical nature of the extractives from white fir bark. H. L. Hergert and E. F. Kurth. bibliog il Tappi 36:137-44 Mr '53

Chemistry of extractives from hardwoods. F. E. King and others. Chem Soc J p3211-15, 4580-4, 4752-6 Ag, D '52; p 1055-9, 1192-5 Ap '53

Chemistry of the cellulosic wood fiber. L. E. Wise and M. A. Buchanan. bibliog il Paper Ind 34:1229-32 Ja '53

Chemistry of the wood cell wall. W. G. Campbell and I. R. C. McDonald. Chem Soc J p2644-50, 3180-6 Jl-Ag '52

Chemistry of western Australian plants; oleanolic acid acetate from eucalyptus calophylla bark. D. E. White and L. S. Zampatti. Chem Soc J p5040 D '52

Cyclitols present in sugar pine (pinus lambertiana Dougl.) C. E. Ballou and A. B. Anderson. bibliog Am Chem Soc J 75:648-50 F 5 '53

Existence of a lignin-carbohydrate union in wood; abstract. P. Traynard and others. Paper Ind 35:478-9 Jl '53

Flavonoids of various prunus species; the flavonoids in the wood of prunus yedoensis. M. Hasegawa and T. Shirato. bibliog Am Chem Soc J 74:6114-15 D 5 '52

International congress of pure and applied chemistry, 13th, Stockholm and Uppsala, July 29-August 7; symposia on the chemistry of wood and pulp. Paper Ind 35:664-7 S '53

Latest word; silvichemistry. Tappi 36:sup96A-7A Ag '53

Lignin-carbohydrate bond in wood. E. E. Harris. bibliog(35 ref) Tappi 36:402-5 S '53

Occurrence of cinnamic acid in sugar pine (pinus lambertiana Dougl.). A. B. Anderson. Am Chem Soc J 74:6099 D 5 '52

Physicochemical study of a water-soluble polysaccharide from Douglas-fir (pseudotsuga taxifolia). J. O. Thompson and others. bibliog il Tappi 36:319-24 Jl '53

Preliminary separations of maple hydrol lignin. M. Granath and C. Schuerch. bibliog Am Chem Soc J 75:707-9 F 5 '53

WOOD—Chemistry—*Continued*

Recent advances in wood chemistry. A. J. Stamm. Paper Ind 34:1233-4 Ja '53

Russell formula for gymnosperm lignin. M. A. Smith and others. bibliog Tappi 36:342-5 Ag '53

What is wood as a chemical raw material? J. L. McCarthy and C. C. Heritage. Pulp & Pa of Can 54:189-92 My '53

See also

Lignin

Decay

Method for the estimation of decay in Douglas-fir wood chips. W. L. Pearl. bibliog Tappi 36:133-6 Mr '53

Joining to metal

Adhesive joining of wood-to-steel increases tv cabinet production. il Materials & Methods 37:82-4 Ja '53

Adhesives for bonding wood to metal. H. W. Eickner and R. F. Blomquist. Product Eng 24:251-2+ Ja '53

Moisture absorption

Diffusion and penetration mechanism of liquids into wood. A. J. Stamm. bibliog(34 titles) Pulp & Pa of Can 54:54-63 F '53

Storage

See Wood storage

WOOD, Compressed

Densified woodwinds; fabricated from phenolic impregnated stabilized wood. il Mod Plastics 30:101+ N '52

WOOD, Laminated

Densified woodwinds; fabricated from phenolic impregnated stabilized wood. il Mod Plastics 30:101+ N '52

How the flooring is made for Reading reconstruction piers. il Ry Age 133:46 D 22 '52

Laminated timber association formed; American institute of timber construction. Eng N 149:145 N 13 '52

Laminated timber permits flexibility of design. A. D. Freas. il Civil Eng 22:756-9 S '52

Plywood girders and glued laminated beams; with time-saver standards. S. Howard. diags Arch Rec 113:183, 185 Ja '53

Resins extend the forests; plywood, laminated timbers, and conversion of wood waste offer increasing markets for plastics. R. D. Behm. il Mod Plastics 30:100-4+ O '52

WOOD as fuel

See also

Boilers—Wood firing

WOOD construction

Here's an idea for a simple shop, warehouse or barn. il Constr Methods 34:76+ N '52

Plywood girders and glued laminated beams; with time-saver standards. S. Howard. diags Arch Rec 113:183, 185 Ja '53

Structural forms; general considerations of wood as structural material; with time-saver standards. S. Howard. diags Arch Rec 112:211+ S '52

Structural forms; long spans in wood; with time saver standards. S. Howard. diags Arch Rec 112:237+ O; 209 N '52

Tilt-up wood frame walls cut labor costs. il diag Eng N 149:30-1 N 27 '52

Wood as an engineering material. L. J. Markwardt. il Civil Eng 22:749-54 S '52

Wood siding left to weather naturally. F. L. Browne. il Arch Rec 112:197-9 N '52

See also

Bridges, Wooden

Plywood

Design

Formula for tapered timber columns. E. I. Fiesenheiser. diags Eng N 150:90 Mr 26 '53

Laminated timber permits flexibility of design. A. D. Freas. il Civil Eng 22:756-9 S '52

WOOD distillation

Chemical utilization of wood. C. Greaves and H. Schwartz. Can Chem Process 37:42+ S '53

Distillation of hardwood in a fluidized bed. L. W. Morgan, G. M. Armstrong, jr. and H. C. Lewis. bibliog diags Chem Eng Prog 49:98-101 F '53

Products from the destructive distillation of Douglas-fir lignin. T. L. Fletcher and E. E. Harris. bibliog flow diag diag Tappi 35:536-9 D '52

WOOD finishing

See also

Floor finishes

WOOD floors. See Floors, Wood

WOOD flour

New wood flour moldings compete with plastics. J. Starr. il Materials & Methods 37:92-3 Mr '53

WOOD grinders

Grinders and grinding. W. F. Daniell. il diags Paper Tr J 135:128-35 N 14 '52

High-load grinding. A. J. Winchester and A. M. Cuthbertson. Pulp & Pa of Can (Convention no) 54:195-201 [F] '53

Manufacture of groundwood. H. L. Hayes. flow diag Paper Tr J 135:121-3 N 14 '52

Plow for distributing wood to grinder block pins. C. O. Williams. il diags Pulp & Pa of Can 53:132 O '52

WOOD handling

Anglo-Canadian shore and sea cranes increase efficiency in wood handling. il Paper Ind 35:206 My '53

How wood is handled and barked by Keyes fibre co. il diag Paper Tr J 136:14-16 My 22 '53

New log handling system at H.&W's Mobile mill. il Paper Tr J 137:26+ Jl 10 '53

Plow for distributing wood to grinder block pins. C. O. Williams. il diags Pulp & Pa of Can 53:132 O '52

WOOD preservation

American wood preservers association 49th annual meeting, Cleveland, April 28-30. Ry Age 134:83+ My 4 '53

Creosoted timber bridges for county highways. W. D. Keeney. il Pub Works 84:68-9+ Je '53

Here's an idea for a simple shop, warehouse or barn. il Constr Methods 34:76+ N '52

It pays to treat tops of standing poles. S. J. Pearson. il Elec West 110:97 Ap '53

Longer life for boxed-heart Douglas fir ties. il Ry Age 134:44-5 F 2 '53

Mine-timber preservation by the collar method. E. Roberts. bibliog 6pls U S Bur Mines Rep of Invest 4980:1-14 '53

New preservative treatment for poles. Elec World 138:136+ D 15 '52

No electrical hazard from pentachlorophenol. F. S. Glaza and R. M. Gooch. Elec World 139:88 Mr 9 '53

Preserving wood poles; Cobra process. il diags Elec R (Lond) 152:739-41 Ap 3 '53

Solvent recovery cuts costs. il Chem Eng 60:150+ My '53

WOOD preservatives

Retention by wood of copper and zinc from aqueous solutions of their salts. B. A. Ripley-Duggan. bibliog J Ap Chem 2:593-600 O '52

Testing

Evaluation of wood preservatives. R. H. Colley. bibliog(258 titles) flow chart il Bell System Tech J 32:120-69, 425-505 Ja-Mr '53

WOOD products

Chemical utilization of wood. C. Greaves and H. Schwartz. Can Chem Process 37:42+ S '53

Chemicals and trees. A. F. Cadenhead. Can Chem Process 37:96 S '53

Chipping chemicals out of timber. Bsns W p 126+ Jl 4 '53

Products from the destructive distillation of Douglas-fir lignin. T. L. Fletcher and E. E. Harris. bibliog flow diag diag Tappi 35:536-9 D '52

Wood and wood base materials. K. Rose. il Materials & Methods 38:117-32 S '53 (reprints 25c)

Wood fibers and tree bark yield effective lost-circulation material. T. R. Frost and R. A. Waldron. Oil & Gas J 51:289+ S 29 '52

See also

Cellulose

Fiber board

Lignin

WOOD pulp

Acid pulping with sodium sulphate liquors. G. A. Richter. Tappi 36:228-33 My '53

Correlation of pulpwood from company forests with mill requirements; panel discussion. J. E. McCaffrey and others. Pulp & Pa of Can 54:172+ Ag '53

Degradation of cotton and wood pulp with acids and sulfite waste liquor; abstract. N. Hartler and O. Samuelson. Paper Ind 34:1498+ Mr '53

Diffusion and penetration mechanism of liquids into wood. A. J. Stamm. bibliog(34 titles) Pulp & Pa of Can 54:54-63 F '53

Dispute FAO conclusions on world pulp supplies; pulp and paper committee of the Organization for European economic cooperation. Paper Tr J 137:11 S 11 '53

Effect of high-energy cathode rays on cellulose. J. F. Saeman, M. A. Millett and E. J. Lawton. bibliog il Ind & Eng Chem 44:2848-52 D '52

Hardwood joins the paper parade. Bsns W p46 My 9 '53

How International at Natchez doubled pulp production. il Paper Tr J 137:26-8 Ag 14 '53

International congress of pure and applied chemistry, 13th, Stockholm and Uppsala, July 29-August 7; symposia on the chemistry of wood and pulp. Paper Ind 35:664-7 S '53

Low consistency refining of groundwood tailings. A. J. Horstman. il Pulp & Pa of Can (Convention no) 54:163-5 [F] '53

Manufacture of groundwood. H. L. Hayes. flow diag Paper Tr J 135:121-3 N 14 '52

Mechanical pulping. T. E. Kloss. flow diag Paper Tr J 135:123-4+ N 14 '52

Mixture of structures in a mechanical pulp as a key to the knowledge of its technological properties. W. Brecht and K. Klemm. bibliog diags Pulp & Pa of Can 54:72-80 Ja '53

Outlook for wood pulp. J. L. Ritchie. Paper Tr J 136:135-7 F 20 '53

Preparation of wood. H. J. Arnold. flow diag Paper Tr J 135:110-12 N 14 '52

Progress made at all divisions of Rayonier. C. B. Morgan. il Paper Tr J 136:38-43 My 15 '53

Purified hardwood pulps for chemical conversion; aspen sulphite and prehydrolysis-sulphate pulps. F. A. Simmonds and others. bibliog Tappi 36:103-10 Mr '53

Reviews the economy of the pulp, paper and board industries. W. L. Neubrech. Paper Tr J 135:21-2 D 12 '52

Role of wood in industry. C. C. Heritage. Paper Ind 35:341-2 Je '53

Semichemical pulp from sawmill waste; abstract. H. Sihtola. plan Paper Ind 34:1376 F '53

Studies in continuous alkaline pulping. W. J. Nolan and others. diag Tappi 34:529-38; 35:505-10; 36:406-17 D '51, N '52, S '53

Tree improvement and its potentialities. K. B. Pomeroy. il diag Paper Tr J 137:18-19 Ag 7 '53

Va-Purge process, a revolution in chemical pulping. diags Can Chem Process 37:46+ Je 20 '53

What will the pulp mills buy? J. R. McGuire. Pulp & Pa of Can (Convention no) 54:284+ [F] '53

Wood pulps from woods and mill residues. H. R. Josephson. Paper Ind 35:179-80 My '53

See also
Wood grinders

Analysis

Chemical methods; standards for wood, pulp, and paper. Tappi 35:sup 116A-18A N '52

Chemical pumps evaluated by screen analysis; abstract. H. Schroeter. Paper Ind 34:1498 Mr '53

Colorimetric determination of pentosans in highly refined pulp. A. S. O'Brien and T. L. Davis. bibliog Tappi 35:499-505 N '52

Determination of copper in wood pulps with tetraethylenepentamine. R. M. Kingsbury and C. L. Lake. bibliog Tappi 35:527-8 N '52

Determination of pentosans in highly purified wood pulps; furfural analysis methods. E. D. Smith and L. N. Rogers. Tappi 36:390-2 S '53

Determination of total gas in stock. J. D. Boadway. diag Tappi 36:sup 128A-9A Jl '53

Nitration as an analytical tool in the study of wood pulps. Ö. Bryde and others. bibliog Tappi 36:353-9 Ag '53

Routine determination of lignin in semichemical pulps by a modified Tingle procedure. P. E. Trout and others. Tappi 36:123-6 Mr '53

Cleaning

Clean pulp from unbarked hardwoods; Centri-Cleaner. diags Paper Ind 34:861-2 O '52

Statistics

How and what the industry did in '52. W. L. Neubrech. il Tappi 36:sup 16A+ My '53; Excerpts. Paper Tr J 136:14-18 Ap 3 '53

Market pulp outlook. R. R. Porter. Paper Tr J 136:138-40 F 20 '53

Pulpwood and waste paper, wood pulp; Nov.-Dec. 1951-Jan.-Nov. 1952. Survey of Cur Bsns 33:S36 Ja '53 [cont monthly]

United States production of wood pulp and consumption of wood pulp, pulpwood and other fibrous materials in the manufacture of paper and board, by kinds, 1952, 1951, and 1950; tabulation. Tappi 36:sup 112A Mr '53

Testing

Bleachability test for highly lignified pulps. H. Girdler. Tappi 36:sup 128A Ap '53

Deterioration losses in stored southern pine pulpwood. R. M. Lindgren. bibliog Tappi 36:260-4 Je '53

Physical properties of slash pine semichemical kraft pulp and of its fully chlorited component. F. C. Keeney. bibliog il Tappi 35:555-63 D '52

St Lawrence rapid routine groundwood testing equipment. J. H. Bardsley. il diag Pulp & Pa of Can 53:92-7 D '52

Zero-span breaking length of pulp; TAPPI suggested method T 231 sm-53. diags Tappi 36:sup 114A-16A Jl '53

Transportation

Handling sheet and wet-lap bales from storage to carrier. plan diags Pulp & Pa of Can 53:119-22 O '52

This car keeps wet wood pulp from freezing. il Ry Age News ed 135:15 O 12 '53; Same. Paper Ind 35:648 S '53; Same abr. Paper Tr J 137:24 Ag 14 '53

Alaska

Japan eyes Alaskan pulpwood; Northwest interests critical. Paper Ind 34:1331-2 F '53

Australia

Establishing pine plantations for pulpwood production in Australia. J. D. Brooks. Pulp & Pa of Can 53:168+ O '52

Canada

Billion dollar industry. Pulp & Pa of Can 53:76-86 D '52

Utilization of hardwoods. L. Rioux. Pulp & Pa of Can 53:115-16+; Discussion. 119+ D '52

Finland

Bridging the gap between the bush and the mill. T. Wegelius. il plan Pulp & Pa of Can (Convention no) 54:166-9 [F] '53

Great Britain

British pulp controls eased for 1953. Paper Tr J 135:14 D 19 '52

New Zealand

New Zealand's new kraft pulp mill makes first export shipment. il Paper Tr J 137:12 O 2 '53

Saskatchewan

Saskatchewan now approaches realization of pulpwood industry. J. H. Brockelbank. map Pulp & Pa of Can 53:94 O '52

Scandinavia

What British think of Scandinavian pulp maneuvers; abstract. W. Whiteley. Paper Tr J 136:46 Ap 17 '53

WOOD pulp—*Continued*

South America

South America pulp and paper resources. Tappi 36:sup93A Jl '53

Southern states

South's pulpwood, 1952. Tappi 36:sup94A-5A Ag '53

Sweden

Recent developments in the Swedish pulp industry; abstract. L. Stockman. il diag Paper Ind 35:814-15 O '53

WOOD research

Current research in wood fibres at the University of British Columbia. R. W. Wellwood and J. W. Wilson. Pulp & Pa of Can 54:121-4 Je '53
Expanding the horizons of wood carbohydrates. E. J. Howard. bibliog Pulp & Pa of Can 54:116-20 Ap '53
Forest products research laboratory annual report. Engineer 194:704 N 21 '52
Lumber makers plan $1,100,000 research program to find new products, markets. S. E. Cohen. il Ind Marketing 38:168-72 S '53
Scientific research in Australia; third annual report of the Commonwealth scientific and industrial research organization. Engineering 174:764-5 D 12 '52
Timber research; Forest products research board report. Engineering 174:698 N 28 '52
Work of the Forest products research laboratory. R. H. Farmer. Chem & Ind p 1064-8 N 1 '52

WOOD storage

Bridging the gap between the bush and the mill. T. Wegelius. il plan Pulp & Pa of Can (Convention no) 54:166-9 [F] '53
Deterioration losses in stored southern pine pulpwood. R. M. Lindgren. bibliog Tappi 36:260-4 Je '53
Timber storage. Nat Safety N 67:170-1 Mr '53
Wood storage problems in the pulp and paper industry. H. C. Crandall. Paper Tr J 136:26-7 Ap 24 '53

WOOD waste

Burning wood shavings cuts fuel bill 20 per cent, Grand Trunk Western shops. il Ry Locomotives & Cars 127:57 Ja '53
Continuous production of timber board; Bartrev process. il Engineer 195:806-8 Je 5 '53; Engineering 175:748-9, 752 Je 12 '53; Pulp & Pa of Can 54:122-5 S '53
Industrial waste guide; wood naval stores. H. H. Black and V. A. Minch. bibliog flow diag Sewage & Ind Wastes 25:462-74 Ap '53
Investigation of wood-fibre discharges into the Spanish river. I. G. Simmonds. Munic Util 90:19-24+ D '52
Latest in wood; continuous panel, high grade, low cost; Bartrev press. il Materials & Methods 38:8+ Jl '53
Low consistency refining of groundwood tailings. A. J. Horstman. il Pulp & Pa of Can (Convention no) 54:163-5 [F] '53
Method for the estimation of decay in Douglas-fir wood chips. W. L. Pearl. bibliog Tappi 36:133-6 Mr '53
New automatic machine makes board from wood waste. il Paper Ind 35:554-6 Ag '53
New barking equipment and methods permit utilization of sawmill waste. flow diag il Paper Ind 35:181-3 My '53
Pinitol from sugar pine stump wood. A. B. Anderson. bibliog diags Ind & Eng Chem 45:593-6 Mr '53
Production of chips from sawmill refuse wood from a kraft pulp mill; abstract. V. L. Mauerman. Tappi 35:sup 109A-10A D '52
Revolution in lumber; cheap, strong hardboards are among new products made from yesterday's waste. il House & Home 2:144+ S '52
Semichemical pulp from sawmill waste; abstract. H. Sihtola. plan Paper Ind 34:1376 F '53
Synthetic lumber. Mech Eng 74:821-2 O '52
To burn wood efficiently choose properly designed combustion chamber. M. F. Anders. il diags Power 97:90-3 Ap '53
Wood extrusion press makes lower cost material. il Materials & Methods 38:8+ S '53
Wood pulp from woods and mill residues. H. R. Josephson. Paper Ind 35:179-80 My '53
Wood waste makes low cost power. D. L. Gusler. il plan diag Power Eng 57:72-5+ Ap '53
Wood waste problem in Australia; abstract. R. F. Turnbull. Pulp & Pa of Can 53:152+ N '52
See also
Bark
Fiber board

WOODCHUCKS

Hibernation and cortical electrical activity in the woodchuck (marmota monax). C. P. Lyman and P. O. Chatfield. bibliog Science 117:533-4 My 15 '53

WOODEN bridges. See Bridges, Wooden

WOODEN ships. See Ships, Wooden

WOODHEAD, Jonas, and sons, limited

Statement by the chairman. A. Kyle. Economist 166:518 F 21 '53

WOODING, Walter H. 1910-

Wooding wins Lincoln gold medal for 1953. por Welding J 32:1001-2 O '53

WOODLEY petroleum company

Debentures and preferred stock offered. Comm & Fin Chr 177:2137 My 18 '53

WOODLOTS

Appalachian coal companies grow timber as a crop. B. Rhodes. il Min Cong J 39:27-30 Ja '53
Markets and marketing; key to better woodlot management. N. W. Adams. Pulp & Pa of Can 53:121-2; Discussion. 122 D '52
Some views on woodlot management. L. H. Paquet. Pulp & Pa of Can 54:78+ F '53
Tax tangle hampers British Columbia tree farming. I. Mahood. Paper Tr J 136:12 Ja 2 '53
Western mines grow own timber on tree farms. H. Olson. il Min Cong J 38:56-9 N '52

WOODRUFF, Elmer Grant, 1872-1952

Sketch. A. L. Beekly. bibliog por Am Assn Pet Geologists Bul 37:192-4 Ja '53

WOODWORKING

Dielectric heating cuts woodworking costs. R. E. Nelson. bibliog il diags Electronics 26:178-83 Je '53

WOODWORKING machinery

Carbides increase production of wood products; Rockwell manufacturing co. R. C. DuBrucq. il diags Tool Eng 31:59-62 Jl '53
Edwards woodworking machines. il Engineering 176:284-5 Ag 28 '53
Floor planer. il Engineering 175:64 Ja 9 '53
Making small trees into large lumber. L. B. Reed. il Elec West 110:90-1 Ja '53
Motocylinder for reciprocating-motion applications. J. C. Marshall and D. L. Treder. il diags Westinghouse Eng 13:72-3 Mr '53

History

Woodworking machinery; history of development from 1852-1952. J. H. Mansfield. il Mech Eng 74:983-95 D '52

Safety devices

Dangerous machinery. F. E. Sugden. Elec R (Lond) 152:473 F 27 '53

WOODWORKING shops

Employees

Earnings in selected industries, late 1951 and early 1952; millwork industry. L. E. Lewis. Mo Labor R 75:424 O '52

WOOL

Coiling of wool fibres immersed in various liquids. Y. E. Goldsworthy and W. R. Lang. bibliog Textile Inst J Trans 44:T230-44 My '53
Corrugated fibrous webs as insulation fillers. E. R. Frederick. il Textile Res J 23:45-53 Ja '53
Crimping of wool fibers. M. Horio and T. Kondo. bibliog il diag Textile Res J 23:373-86; Discussion. E. H. Mercer. 387 Je '53
Effect of moisture on compressibility of natural high polymers. C. E. Weir. bibliog J Res Nat Bur Stand 49:135-9 S '52
Great adventure of fiber structure. W. T. Astbury. il diags Textile Inst J 44:P81-97 Mr '53

WOOL—*Continued*

Heterogeneity of the keratin fibers. E. H. Mercer. bibliog(34 ref) il diags Textile Res J 23:388-97 Je '53; Discussion. 23:938-9 D '53

Microfiltration with resin-impregnated wool filters. E. D. Kane. bibliog il diags Ind & Eng Chem 45:860-4 Ap '53

Microscopic study of molecular complex formation and soil removal. D. G. Stevenson. bibliog il diags Textile Inst J Trans 44: T 12-35 Ja '53

New method of producing the Allwörden reaction. E. H. Mercer and R. L. Golden. bibliog il diags Textile Res J 23:43-4 Ja '53; Discussion. A. Parisot and M. Leveau. 23: 440-1 Je '53

Occurrence of anthrax bacilli in the carpet-wool industry in the United States. R. S. Lloyd. bibliog A M A Archives Ind Hygiene & Occup Med 6:421-34 N '52

Osmotic active substances of the Allwörden reaction. G. J. Schuringa and others. bibliog Textile Res J 23:645-6 S '53

Recent developments in resin-wool air cleaners. H. C. Murphy. Heating-Piping 25:108 Ap '53

Relationship between various surface properties of wool fibers. J. Lindberg. bibliog (111 ref) diags Textile Res J 23:67-76, 225-36, 573-88 F, Ap, Ag '53

Relationship of fineness in wool top, noil, card sliver, and grease wool. E. M. Pohle and others. il Textile Res J 23:663-71 S '53

Some types of Chinese carpet wools. Chang Soon Ying and others. bibliog il Textile Inst J 44:P 171-82 My '53

Sorption of hydrogen chloride by wool. P. Larose. bibliog Textile Res J 23:91-8 F '53

Technique for visualising the position of staple fibres in a sliver, and its application to drafting problems. J. Green and J. Ingham. diags Textile Inst J Trans 43: T473-88 S '52

Water repellent animal fibers; dilute soap and aluminum salt solutions; patent. Am Dyestuff Rep 42:19 Ja 5 '53

See also

Bleaching—Wool
Dyes and dyeing—Wool
Wool carding and other headings beginning Wool
Woolen and worsted fabrics

Analysis

Method for the quantitative determination of Ardil in admixture with wool. R. Preston and N. Warburton. Textile Inst J Trans 44:T298-305 Je '53

Blending

Blending and testing are keys to good wool-waste processing. G. Zellnik. il Textile World 103:110-13 My '53

Here's a quiz on Kharafleece. il Mod Textiles Mag 34:45+ Ap '53

Method for the quantitative determination of Ardil in admixture with wool. R. Preston and N. Warburton. Textile Inst J Trans 44:T298-305 Je '53

Chemistry

Combination of wool with acids. B. Olofsson. Soc Dyers & Col J 68:506-10 D '52

Modification of wool by the application of linear synthetic polyamides; pretreatment of wool. D. L. C. Jackson. bibliog il Textile Res J 23:616-22 S '53

Preparation of microbiologically resistant wool by means of chemical modification. H. Zahn and H. Wilhelm. bibliog(28 ref) Textile Res J 23:604-13 S '53

Reaction between wool and nickelammonium hydroxide; the adsorption of nickel by wool from solutions of nickelammonium hydroxide. J. W. Bell and C. S. Whewell. bibliog Soc Dyers & Col J 68:299-305 Ag '52

Reaction of formaldehyde and phenols with wool. K. G. Johnson. bibliog(65 titles) il Textile Res J 23:443-62 Jl '53

Relationship between various surface properties of wool fibers; methods for estimating wool fiber modification. J. Lindberg. bibliog(39 ref) diags Textile Res J 23:67-76 F '53

Relationship between various surface properties of wool fibers; sorption of dyes and acids in wool fibers. J. Lindberg. bibliog Textile Res J 23:573-84 Ag '53

Selective absorption of optical antipodes by proteins. W. Bradley and G. C. Easty. Chem Soc J p 1519-24 My '53

Textile chemist and his keys. W. von Bergen. Am Dyestuff Rep 41:870-3 D 22 '52

Felting

Felting in laundering of wool blends. H. Bogaty and others. bibliog Textile Res J 23:114-18 F '53

Measurement

Estimation of the length of wool fibres in combed slivers by wool experts. F. Monfort. Textile Inst J 44:P29-38 F '53

Fibre ellipticity and its effect on diameter measurement. S. L. Anderson and F. Benson. Textile Inst J 44:P98-104 Mr '53

Machine for measuring the length of single fibres. S. L. Anderson and R. C. Palmer. il diags Textile Inst J Trans 44:T95-115 Mr '53

Microtome for use in measuring fineness of wool fibres by transverse sections. C. L. de Cuenca. il Textile Inst J 43:P729-33 S '52

Moisture content

Saturation moisture absorption of wool. G. King and F. L. Warburton. Textile Inst J Trans 43:T516-17 S '52

Nylon mixtures

Bradford system; use low draft, tension, twist for processing nylon blends. Textile World 103:130-1+ Je '53

Prices

Wool prices recovering from brief January dip. Barron's 33:35-6 F 2 '53

Re-use

Blending and testing are keys to good wool-waste processing. G. Zellnik. il Textile World 103:110-13 My '53

Careful handling means good garnetting. E. H. Helliwell. il Textile World 103:128-9 Ja '53

Shrinkproofing

Non-felting wool and wool mixtures. F. C. Wood. bibliog Soc Dyers & Col J 68:485-95 D '52

Shrinkproofing wool with peroxide; metal salt pretreatment; patent. Am Dyestuff Rep 42:18-19 Ja 5 '53

Testing

Blending and testing are keys to good wool-waste processing. G. Zellnik. il Textile World 103:110-13 My '53

Determination of nep counts. K. K. Schiller. Textile Res J 23:437-8 Je '53

Influence of stress on the swelling of animal fibres. O. Ripa and J. B. Speakman. Textile Inst J Trans 43:T517-18 S '52

Stress relaxation of fibrous materials. E. T. Kubu and D. J. Montgomery. bibliog il diags Textile Res J 22:765-82 D '52

Testing of the irregularity of blended yarns and rovings using apparatus of the dielectric capacity type. H. Locher. diags Textile Inst J 44:P698-700 S '53; Discussion. 44:P811-12 D '53

WOOL, Artificial

Milk casein and peanut protein fibres. R. L. Wormell. flow sheet il Textile Inst J 44: P258-68; Discussion. P268-71 Jl '53

WOOL baling

Reusable bands cut wool-baling costs. S. Rappaport. il Textile World 103:173 S '53

WOOL carding

84-in. woolen cards pay off at New England mill. M. J. Koroskys. il Textile World 103: 84 Ja '53

Extra fancy on woolen card increases carding action 60 per cent. W. Hodgson. il Textile World 103:102+ O '53

WOOL cleaning

Modification of wool by the application of linear synthetic polyamides; pretreatment of wool. D. L. C. Jackson. bibliog il Textile Res J 23:616-22 S '53

WOOL fat

Behaviour of wool wax and its constituents in water-in-oil emulsions. J. Tiedt and E. V. Truter. bibliog J Ap Chem 2:633-8 N '52

Constitution of the hydroxyacids of wool wax. D. H. S. Horn and others. bibliog Chem & Ind p 106 Ja 31 '53

Wool wax; synthesis of some *iso*-acids. F. W. Hougen and others. Chem Soc J p98-102 Ja '53

Analysis

Components of wool wax; the aliphatic alcohols. J. Tiedt and E. V. Truter. Chem Soc J p4628-30 D '52

WOOL oiling

Mills use colloidal silica to make better wool emulsions. il Textile World 103:119 F '53

WOOL research

Coiling of wool fibres immersed in various liquids. Y. E. Goldsworthy and W. R. Lang. bibliog diag Textile Inst J Trans 44: T230-44 My '53

Crimping of wool fibers. M. Horio and T. Kondo. bibliog il diag Textile Res J 23: 373-86; Discussion. E. H. Mercer. 387 Je '53

For better wool. il Chem W 72:32+ Mr 14 '53

Osmotic active substances of the Allwörden reaction. G. J. Schuringa and others. bibliog Textile Res J 23:645-6 S '53

Properties of apparel wools; the mechanical behavior of top and roving made on the French worsted system. H. M. Burte. bibliog il diags Textile Res J 23:469-80 Jl '53

Relationship between various surface properties of wool fibers. J. Lindberg. bibliog (111 ref) diags Textile Res J 23:67-76, 225-36, 573-88 F, Ap, Ag '53

Supercontraction of modified keratin fibers. L. G. Beauregard and others. bibliog Textile Res J 23:642-3 S '53

WOOL scouring

Wool-blend scouring requires special care. Textile World 102:252+ D '52

WOOL trade

Russian bear invades bullish wool market. Barron's 33:27-8 Je 8 '53

Textiles; new capital for woolen and worsted firms. H. J. Walter. il Trusts & Estates 91:636-7 S '52

Wool market firmed by textile recovery. Barron's 32:27-8 O 27 '52

History

Wool trade. K. G. Ponting. bibliog Textile Inst J 44:P 157-70 My '53

Securities

Wools in a bear market. I. U. Cobleigh. Comm & Fin Chr 176:2016 N 27 '52

China

Some types of Chinese carpet wools. Chang Soon Ying and others. bibliog il Textile Inst J 44:P 171-82 My '53

Germany

German wool textile trade better; with tables. For Comm W 48:15 N 3 '52

Great Britain

British wool textile industry sees good prospects for 1953. For Comm W 49:13 F 2 '53

Futures for tops. Economist 166:759 Mr 14 '53

Healthier conditions in wool. Economist 166: 442 F 14 '53

Larger woollen exports. Economist 166:893-4 Mr 28 '53

See also

West Riding worsted and woollen mills, limited

WOOL washing

Cleaning efficiency of detergents and washing methods in laundering wool. M. S. Furry and E. M. O'Brien. Am Dyestuff Rep 41: 861-2 D 22 '52

Laundering of wool; effect of detergents and washing methods on fabric properties. M. S. Furry and E. M. O'Brien. bibliog Am Dyestuff Rep 41:763-9 N 24 '52

WOOL wax. See Wool fat

WOOL workers. See Carpet factories—Employees; Woolen and worsted mills—Employees

WOOLEN and worsted fabrics

Cleaning efficiency of detergents and washing methods in laundering wool. M. S. Furry and E. M. O'Brien. Am Dyestuff Rep 41: 861-2 D 22 '52

See also

Carpets

Mixtures

Ardil protein fiber blends best with wool. il Textile World 103:125+ F '53

Felting in laundering of wool blends. H. Bogaty and others. bibliog Textile Res J 23:114-18 F '53

Non-felting wool and wool mixtures. F. C. Wood. bibliog Soc Dyers & Col J 68:485-95 D '52

Some properties of serges made from blends of wool with acrylic type synthetics. H. Bogaty and others. bibliog Textile Res J 23:536-44 Ag '53

Tooling up for long-draft synthetics. R. E. Ellsworth and J. McComb. il Mod Textiles Mag 34:32-3+ Ja '53

Where are we going in blends? J. Campbell. il Mod Textiles Mag 33:31+ N '52

Protection

Microscopical and biological examination of wool; abstract. J. L. Stoves. Am Dyestuff Rep 41:887 D 22 '52

Shrinkage

Laundering of wool; effect of detergents and washing methods on fabric properties. M. S. Furry and E. M. O'Brien. bibliog Am Dyestuff Rep 41:763-9 N 24 '52

WOOLEN and worsted finishing

Non-felting wool and wool mixtures. F. C. Wood. bibliog Soc Dyers & Col J 68:485-95 D '52

Processing of wool with hydrogen peroxide; abstract. Am Dyestuff Rep 41:788 N 24 '52

Textile wet processing; woolen textiles. Am Dyestuff Rep 41:657-8 O 13 '52

WOOLEN and worsted machinery

Bradford system; use low draft, tension, twist for processing nylon blends. Textile World 103:130-1+ Je '53

Check these tips for running synthetics on wool systems. M. J. Koroskys. Textile World 103:111 F '53

Improved Truslow blender tints and sprays oil. diag Textile World 103:149 My '53

Processing synthetics on the woolen system. R. A. Smith. Textile World 102:80-3+ S '52; 103:141, 248 Ja '53

Tooling up for long-draft synthetics. R. E. Ellsworth and J. McComb. il Mod Textiles Mag 34:32-3+ Ja '53

WOOLEN and worsted manufacture

Blending and testing are keys to good wool-waste processing. G. Zellnik. il Textile World 103:110-13 My '53

Properties of apparel wools; the mechanical behavior of top and roving made on the French worsted system. H. M. Burte. bibliog il diags Textile Res J 23:469-80 Jl '53

Wool systems flow chart. J. H. Kennedy. Textile World 103:89-100 Ag '53

WOOLEN and worsted mills

See also

Carpet factories

Employees

Wage chronology; American woolen co. Mo Labor R 75:522-4 N '52

Woolen and worsted textiles earnings in April-May 1952. J. F. Laciskey. Mo Labor R 75: 403-8 O '52

Equipment

See also

Woolen and worsted machinery

Lighting

Lighting for pin drafting machines and three blade shear. il diags Illum Eng 47:576-8 O '52

Safety measures

Lots of color makes plant safe; Star woolen co. R. Levi. Safety Maint & Prod 106:20 S '53

WOOLEN and worsted mills—*Continued*

Waste

This weave-room waste check-up reduced loss of wool. M. J. Koroskys. Textile World 103:144 S '53

Great Britain

Wool textile workers return; recovery in trade. Economist 165:778+ D 13 '52

WOOLEN and worsted spinning

End breakages in worsted cap spinning. P. P. Townend and L. T. Yu. bibliog Textile Inst J Trans 44:T363-79 Ag-S '53

Ends-down studies pinpoint worsted spinning troubles. M. J. Koroskys. Textile World 103:114+ Mr '53

How gill reducers are being used by mills. W. P. Rutley. il Textile World 102:111+ D '52

Instrument for measuring the forces developed during mule spinning. J. Angus and J. G. Martindale. il diags Textile Inst J Trans 43:T565-78 D '52

Tables, calculations, etc.

Sum chart at Rochambeau Worsted controls sliver variation. L. F. Payette. il Textile World 103:94-5 Ap '53

WOOLEN and worsted weaving

This weave-room waste check-up reduced loss of wool. M. J. Koroskys. Textile World 103:144 S '53

WOOLEN and worsted yarn

Calculation of the variance-length curve from the length distribution of fibres. H. Breny. bibliog Textile Inst J 44:P 1-14 Ja '53

Yarn preparation; French or modern? J. McComb. Mod Textiles Mag 34:31-2 My '53

Nylon mixtures

Review these ideas for running nylon blends on the woolen system. diag Textile World 103:135+ O '53

Wool and nylon staple blends on the Bradford open drawing worsted system. H. Beevers and others. Textile Inst J Trans 44:T335-46 Jl '53

Testing

Influence of twist on the regularity of the apparent diameter of worsted yarns. A. Barella. bibliog il Textile Inst J 43:P734-41 S '52

WOOLWORTH, F. W., and company, limited

Statement by the chairman. S. V. Swash. Economist 166:450 F 14 '53

Woolworth's expanding sales. Economist 166:436+ F 14 '53

WOOLWORTH, F. W., company

Dimes have changed. I. U. Cobleigh. Comm & Fin Chr 177:776 F 19 '53

Five outstanding entrenched stocks; with comparative balance sheet items. Mag of Wall St 91:183 N 15 '52

Woolworth, world's largest retailer; an investment audit. H. F. Travis. Mag of Wall St 91:710-12+ Mr 21 '53

Woolworth's $35-million. Bsns W p68 My 30 '53

WORCESTER bus company (formerly Worcester street railway)

Back on the rails. Bsns W p 136 My 16 '53

WORCESTER county, Massachusetts

Worcester plants pick themselves up. il Bsns W p30-1 Je 20 '53

WORCESTER street railway. See Worcester bus company

WORDS

Concrete's etymological offspring. Am Concrete Inst J 24:682-4 Mr '53

Words; precision tools. A. M. Sullivan. Dun's R 60:23-4+ O '52

See also

Advertising copy—Language, style, etc.
English language
Technical writing

WORK

See also

Labor and laboring classes

WORK, Right to. See Right to labor

WORK clothes

Denims go East; Levi Strauss new plant in Knoxville. Bsns W p 158 F 21 '53

How work clothes got the new look. il Bsns W p46-8+ N 15 '52

See also

Clothing, Protective

WORK function

Slope of logarithmic plots of the Fowler-Nordheim equation. J. M. Houston. Phys R 88:349 O 15 '52

Work functions and chemical potentials. P. Van Rysselberghe. bibliog J Chem Phys 21:1550-1 S '53

WORK sampling

Work sampling; fast way to get facts on handling. W. P. Smith. diags Factory Management 111:70-1 My '53

Work sampling; newest way to check maintenance efficiency. E. H. Mac Niece. Factory Management 111:110-12 Jl '53

You can use work sampling this way to measure indirect work for cost control. C. A. Bogenrief. Factory Management 110:113-14 D '52

WORK simplification. See Efficiency, Industrial

WORKBENCHES

Portable work-bench aids field maintenance of reclosers. G. E. Hill, jr. il diags Elec World 138:118+ N 3 '52

WORKERS' educational association

Self-improvement and the state. Economist 167:285-6 My 2 '53

WORKING papers. See Accountants—Working papers

WORKING women

New trends in women's clothing. Safety Maint & Prod 105:50-1 Mr '53

Working woman; a $20 billion market. D. B. Hertz. Adv Agency 46:98+ Ap '53

Statistics

Women as workers; a statistical guide. J. S. Campbell and others. 112p U.S. Women's bur; pa 50c Supt. of doc. '53

WORKMEN'S compensation

Case of workmen's compensation advance payment. P. D. Williams. Nat Underw 57:6 Mr 19 '53

Compensation laws in relation to dental and jaw injuries. L. S. Morvay. Ind Med 21:473-6 O '52

Dental service provisions under workmen's compensation laws. Safety Maint & Prod 105:56 Mr '53

Introduction to workmen's compensation. R. D. Gidel. Nat Safety N 67:26+ Ja '53

National Council produces new workmen's compensation injury table. Nat Underw 57:3 Je 11 '53

Newer concept. Safety Maint & Prod 105:58 Mr '53

Noise is news; claims for loss of hearing in industrial jobs menace plants financially. il Mod Ind 25:48-52 F '53

Rising compensation costs in the gas utility industry. G. J. Stone. Am Gas Assn Proc 1952:116-22

State compensatory provisions for occupational diseases. G. G. Morgis and S. J. Davenport. bibliog U S Bur Mines Information Circ 7650:1-125 '52

Study of medical aspects of workmen's compensation. T. J. Miley. Safety Maint & Prod 106:72-4+ O '53

What the agent should know about workmen's compensation. D. T. Ratcliffe. Rough Notes 96:22+ Ap '53

What's the law? H. M. Grosman, ed. Safety Maint & Prod 106:42-6 O; 38-40 N '53

Workmen's compensation laws in 1951. Safety Maint & Prod 104:69-70 D '52

See also

Accidents, Industrial
Insurance, Employers' liability
Insurance, Workmen's compensation

British Columbia

Your industry and the public interest. D. Corbett. Pulp & Pa of Can 54:212+ Je '53

New York (state)

New York commissioner discusses compensation. Weekly Underw 168:526 F 21 '53

Publishes booklet of Sayer's transcripts; begins compensation study; Commerce and industry association of New York. East Underw 54:43 Ap 17 '53

WORKMEN'S compensation—*Continued*

Ontario

How Ontario rehabilitates its industrially injured. D. D. McRae. Paper Tr J 136:16-17 Mr 13 '53; Same. Pulp & Pa of Can 54:202+ Jl '53

Quebec (province)

How our employees are protected in Quebec. W. L. Bennett. Pulp & Pa of Can 54:274+ My '53

Texas

Texas compensation insurance bill survives early attacks. World Oil 136:60 Ap '53

WORKMEN'S compensation insurance. See Insurance, Workmen's compensation

WORLD congress of journalists

Journalists' congress, Chile. Ed & Pub 85:76 D 13 '52

WORLD health organization

Drug trade concerned over WHO name work. Oil Paint & Drug Rep 162:5 O 27 '52

International sanitary regulations. K. Stowman. Pub Health Rep 67:972-6 O '52

Occupational health activities and objectives. M. I. Roemer and O. L. Da Costa. A M A Archives Ind Hygiene & Occup Med 7:111-17 F '53

WHO drug names draw joint protest to State dept. from ADMA and APMA. Oil Paint & Drug Rep 163:3+ Mr 30 '53

WHO drug nomenclature procedure now undergoing complete overhaul. Oil Paint & Drug Rep 163:3+ Je 8 '53

WHO subcommittee picks names for world non-proprietary drugs; list. Oil Paint & Drug Rep 162:7+ O 27; 5+ D 22; 4+ D 29 '52; 163:56 Mr 2; 57 My 25 '53

WORLD medical congress

World medical congress. P. Verga and C. Massenti. Science 117:40 Ja 9 '53

WORLD peace congress, Vienna, 1952

Peace without goodwill; World peace congress. Economist 165:766 D 13 '52

WORLD peace council, Budapest, 1953

Meeting, Budapest. Economist 167:893-4 Je 27 '53

WORLD politics

End of the two-world pattern. il Bsns W p27-30 Je 27 '53

Inside view of the United nations; Security Council countries. W. A. Robertson. Comm & Fin Chr 178:1+ Jl 2 '53; Discussion. 178:253+, 345+ Jl 23, 30 '53

WORLD war, 1939-1945

Naval operations

German attacks on the Murmansk run. A. E. Sokol. il map U S Naval Inst Proc 78:1326-41 D '52

German minesweepers in World war II. F. Ruge. il U S Naval Inst Proc 78:994-1003 S '52

Pick up at sea. J. M. Maupin. il U S Naval Inst Proc 78:1238-41 N '52

Strategic aspects of the battle off Formosa. S. Fukudome. il U S Naval Inst Proc 78:1285-95 D '52

With Kurita in the battle for Leyte gulf. T. Koyanagi. il maps U S Naval Inst Proc 79:119-33 F '53

See also

Pearl harbor, Attack on, 1941

War criminals

Epitaph on Oradour. Economist 166:491-2 F 21 '53

Murder, or high strategy? U.S. embassy, Kremlin, and Katyn Forest massacre. W. H. Standley and A. A. Ageton. il U S Naval Inst Proc 78:1052-65 O '52

Germany

German attacks on the Murmansk run. A. E. Sokol. il map U S Naval Inst Proc 78:1326-41 D '52

Morocco

Landing in Morocco, Nov. 1942. H. K. Hewitt. il map U S Naval Inst Proc 78:1242-53 N '52

Poland

Murder, or high strategy? U.S. embassy, Kremlin, and Katyn Forest massacre. W. H. Standley and A. A. Ageton. il U S Naval Inst Proc 78:1052-65 O '52

WORLD'S fairs

World's fair. J. Thompson. Ptr Ink 242:118 F 27 '53

WORM gearing. See Gearing, Worm

WORMS, intestinal and parasitic

See also

Anthelmintics

WORTH

Do you know any really important people? J. C. Drake. Ptr Ink 241:116 D 5 '52

WOUNDS

See also

Causalgia

Hand—Wounds and injuries

Head—Wounds and injuries

WOW meters. See Radio instruments

WRAPPING machines

Automatic paper roll wrapping machine. il Paper Tr J 136:30 F 6 '53

Bacon wrapping machine produces tight package. il Food Eng 25:160-1 S '53

Bumper-wrapping machine cuts packing, shipping costs. il Iron Age 171:210 My 7 '53

Mechanical fingers; top-folding Phillips' outer wrap. il Mod Packaging 26:104-6 My '53

Ream wrapper and labeler. il Paper Tr J 136:34 My 1 '53

S-H automatic roll wrapping machine. A. C. Attendu. il Pulp & Pa of Can 53:109 D '52

Maintenance and repair

Smooth packaging operations require alert machine maintenance. B. A. Engelbach. il Food Eng 25:113+ Ap '53

WRAPPING materials

Anti-mold wrapping; Milpure. Bsns W p72+ Jl 25 '53

Pre-combined ham wrap. il Mod Packaging 26:134-5 Ap '53

See also

Aluminum foil

Cellophane

Paper, Waxed

Paper board

Parchment paper

Plastic films

Wrapping paper

WRAPPING paper

Antioxidants for food papers; butylated hydroxyanisole. R. W. Bentz. il Mod Packaging 27:141-3 S '53

Blood resistance of butchers' wrapping paper. Tappi 36:sup 124A S '53

See also

Soap wrapping paper

WRECKING

Broad Street station passes. C. H. Vivian. il Comp Air Mag 58:104-10 Ap '53

Scaffold goes inside to topple tower. il Constr Methods 35:156 My '53

WRENCHES

Chain wrench. il Engineer 195:294 F 20 '53

How to make pipe wrenches last longer; illustrated instructions; data sheet. Heating-Piping 25:114 My '53

Use of torque wrench to determine load in roof bolts; slotted-type bolts. A. J. Barry and others. bibliog 4pls U S Bur Mines Rep of Invest 4967:1-7 '53

WRIGHT, Frank Lloyd, 1869-

Florida Southern college revisited for glimpses of the administration group in Wright's organic campus. il plans Arch Forum 97:120-7 S '52

WRIGHT, John David, 1905-

Businessmen in the news. por Fortune 47:54 My '53

Portrait. Bsns W p 113 Ap 11 '53

WRIGHT, Sir Johnstone, 1883-1953

Sketch. por Engineer 196:113-14 Jl 24 '53; Engineering 176:148 Jl 31 '53

WRIGHT brothers

Memorial

Wright memorial observances. Aviation W 57:15 D 29 '52

WRISLEY, Allen B., company

1862-1952, 90th anniversary. il Soap & San Chem 28:50-2+ S '52

WROUGHT iron

Fabricated wrought iron brings new economies. il diags Am Bld 74:54+ D '52

Wrought iron; it's new indoors. il Bsns W p52-4+ Mr 21 '53

WULFF process. See Acetylene—Manufacture

WYOMING

See also

Petroleum—Wyoming

Petroleum industry and trade—Wyoming

X

X DISEASE in cattle. See Cattle—Diseases and pests

X RAY apparatus

Electronic fluoroscope. F. Marshall. il diag Westinghouse Eng 13:70-1 Mr '53

G-E midget type X-ray machine. il Mach 59:214 N '52; Foundry 80:280-1 N '52; Materials & Methods 36:149 N '52; Steel 131:103 N 10 '52

Industrial X-ray; portable unit permits more complete weld inspection on ships. il Iron Age 171:199-200 Mr 5 '53

Interference films on glass; some observations during acid leaching of X-ray plate glass. S. Anderson and D. D. Kimpton. Am Cer Soc J 36:175-9 Je 1 '53

Latex particle size determination using diffraction peaks obtained with the point focusing X-ray monochromator. W. E. Danielson and others. bibliog il J Ap Phys 23:860-5 Ag '52

Metallurgical applications of X-ray fluorescent analysis. P. K. Koh and B. Caugherty. bibliog J Ap Phys 23:427-33 Ap '52

New device makes X-ray images 1,000 times brighter. Elec Eng 72:605 Jl '53

New X-ray technique for thin coatings and trace elements. il Materials & Methods 36: 150+ D '52

Point focusing X-ray monochromator for the study of low angle diffraction. L. Shenfil and others. bibliog il diags J Ap Phys 23:854-9 Ag '52

Spiral-scanning X-ray reflection goniometer for the rapid determination of preferred orientations. A. N. Holden. il diags R Sci Instr 24:10-12 Ja '53

Study in diffraction microscopy with special reference to X-rays. A. V. Baez. il diags Opt Soc Am J 42:756-62 O '52

Use of X-ray film for the quantitative measurement of diffraction line intensities. K. E. Beu. il R Sci Instr 24:103-8 F '53

Versatile rack system; aid in developing new products. R. A. Lambert and D. Halliday. il Elec R (Lond) 152:69-70 Ja 9 '53

Watson tilting table for radiography. il Engineering 176:224 Ag 14 '53

X-ray image amplifier for medical use. Franklin Inst J 255:264-5 Mr '53; Electronics 26:218+ Ap '53

See also

Betatron
Electron accelerators
Metals—X ray inspection
Spectrometers, X ray
Synchrotron

X RAY cameras

Camera for texture mapping by X-ray diffraction. C. J. Milner and J. A. James. bibliog il diags J Sci Instr 30:77-83 Mr '53

Cameras for use with a fine focus X-ray tube. J. W. Jeffery. bibliog diags J Sci Instr 29: 385-8 D '52

Low-temperature X-ray powder camera. N. C. Tombs. il J Sci Instr 29:364 N '52

Oscillating specimen holder for an X-ray microbeam camera. P. Gay and A. Kelly. diag J Sci Instr 29:287-8 S '52

Simple attachment for low temperature use of an X-ray diffraction camera. E. A. Wood. il diag R Sci Instr 24:325-6 Ap '53

X-ray motion picture camera and printer for 70mm film. S. A. Weinberg and others. il diag Soc Motion Picture & Tv Eng J 60: 31-7 Ja '53

X RAY films

Automatic X-ray film processing unit. diag Metallurgia 48:99-100 Ag '53

British manufacture of X-ray film. Engineering 175:157 Ja 30 '53

X RAY gages. See Gages, X-ray

X RAY microscope

Scanning X-ray microscope. H. H. Pattee, jr. bibliog diag Opt Soc Am J 43:61-2 Ja '53

X RAY photometers. See Photometers, X ray

X RAY spectrometers. See Spectrometers, X ray

X RAY tubes

Spectral distribution of radiation from X-ray tubes. J. R. Greening. Opt Soc Am J 42: 685-6 S '52

Power supply

Medium-power X-ray generator; Roentgen 100. il Engineer 196:156 Jl 31 '53

X RAYS

Chemical actions of ionising radiations in solutions; the action of X-rays on ammonia in aqueous solution. T. Rigg, G. Scholes and J. Weiss. Chem Soc J p3034-8 Ag '52

Color centers and trapped charge in KCl and KBr. D. Dutton and R. Maurer. bibliog diag Phys R 90:126-30 Ap 1 '53

Effect of X-ray irradiation on the self-diffusion coefficient of Na in NaCl. D. Mapother. Phys R 89:1231-2 Mr 15 '53

Electromagnetic spectrum of radium D. P. E. Damon and R. R. Edwards. bibliog il Phys R 90:280-4 Ap 15 '53

Enhancement of X-ray induced absorption bands in alkaline earth compounds. J. H. Schulman and others. bibliog J Chem Phys 20:1966-7 D '52

Fast electron and X-ray decomposition of the alkyl halides. R. H. Schuler and W. H. Hamill. bibliog diag Am Chem Soc J 74: 6171-4 D 20 '52

Investigation of the thermoluminescence of fluorite colored by X-ray irradiation. J. J. Hill and J. Aron. bibliog J Chem Phys 21: 223-8 F '53

Kinetics of thermal denaturation of X-rayed egg albumin. H. Fricke. bibliog J Phys Chem 56:789-95 Je '52

Penetration and diffusion of hard X-rays; polarization effects. L. V. Spencer and C. Wolff. bibliog diag Phys R 90:510-14 My 15 '53

Pilot studies of soil density measurements by means of X-rays. D. Berdan and R. K. Bernhard. bibliog il diags Am Soc T M Proc 50:1328-38; Discussion. 1338-42 '50

Production of characteristic X-rays by protons to 1.7- to 3-Mev energy. H. W. Lewis and others. bibliog diag Phys R 91:943-6 Ag 15 '53

Production of iodine from solutions of potassium iodide irradiated with hard X-rays. E. R. Johnson. J Chem Phys 21:1417-18 Ag '53

Production of monochromatic X-radiation for microradiography by excitation of fluorescent characteristic radiation. T. H. Rogers. diag J Ap Phys 23:881-7 Ag '52

Radioactivity induced in yeast by 100 Mev X-radiation. G. C. Baldwin and L. B. Clark. Science 117:9-10 Ja 2 '53

Radiolysis of liquid methyl iodide. R. C. Petry and R. H. Schuler. bibliog Am Chem Soc J 75:3796-802 Ag 5 '53

Saturation in the X-ray coloration of corundum single crystals. R. A. Hunt and R. H. Schuler. Phys R 89:664 F 1 '53

X-ray line broadening of plastically deformed marble. D. Rosenthal and M. Kaufman. bibliog J Ap Phys 23:600-1 My '52

X-rays from mesic atoms. M. Camac and others. bibliog Phys R 88:134 O 1 '52

X-rays from the π-mesic atom. A. M. L. Messiah and R. E. Marshak. Phys R 88:678 N 1 '52

See also

Crystallography—X ray studies
Diagnosis, Radioscopic
Gamma rays
Metals—X ray inspection
Radiography
Welding—X ray inspection
X ray apparatus

Absorption

Absorption of high energy X-rays in various materials. H. Janzen. bibliog diag Phys R 88:653-4 N 1 '52

Calculated X-ray mass absorption coefficients of glass components. G. F. Brewster. Am Cer Soc J 35:194-7 Ag 1 '52

Determination of gamma-ray energies from beta-ray spectroscopy and a table of critical X-ray absorption energies. R. D. Hill and others. bibliog R Sci Instr 23:523-8 O '52

X-ray absorption in a crystal set at the Bragg angle. H. N. Campbell. bibliog il J Ap Phys 22:1139-42 S '51; Discussion. G. N. Ramachandran. 23:500 Ap '52

X-ray *K* absorption edges of covalently bonded Cr, Mn, Fe, and Ni. G. Mitchell and W. W. Beeman. bibliog J Chem Phys 20:1298-301 Ag '52

X RAYS—*Continued*

Diffraction

Camera for texture mapping by X-ray diffraction. C. J. Milner and J. A. James. bibliog il diags J Sci Instr 30:77-83 Mr '53

d Spacing calculator for X-ray diffraction. V. W. Palen. diags Chem Eng 59:206 D '52

Determination of the texture of rolled sheet from X-ray diffraction photographs. A. E. De Barr and B. Roberts. il diags Iron & Steel Inst J 164:285-7 Mr '50; Abstract. Metal Prog 63:210-11 Ap '53

Diffraction of X-rays by liquid alloys of sodium and potassium. N. S. Gingrich and R. E. Henderson. bibliog J Chem Phys 20: 1117-20 Jl '52

Identification of molybdenum and tungsten oxides by X-ray powder patterns. A. Magnéli and others. bibliog Anal Chem 24: 1998-2000 D '52

Instrument frontier. il diags Fortune 46:146-9+ D '52

Latex particle size determination using diffraction peaks obtained with the point focusing X-ray monochromator. W. E. Danielson and others. bibliog il J Ap Phys 23:860-5 Ag '52

Line-broadening of martensite in nickel steels. R. A. Smith. bibliog Iron & Steel Inst J 173:147-52 F '53

Low angle X-ray diffraction with long wavelengths. B. Henke and J. W. M. DuMond. bibliog il diag Phys R 89:1300 Mr 15 '53

Phase study of the PbO-PbBr$_2$ system by X-ray diffraction. F. W. Lamb and L. M. Niebylski. bibliog diags Am Chem Soc J 75:511-18 F 5 '53

Picrates of alkylpyridines; identification by X-ray diffraction powder patterns. G. J. Janz and R. Solomon. bibliog Anal Chem 25:454-7 Mr '53

Point focusing X-ray monochromator for the study of low angle diffraction. L. Shenfil and others. bibliog il diags J Ap Phys 23: 854-9 Ag '52

Production control tool; X-ray diffraction is proving a powerful analytical tool in the chemical and related fields. J. S. Buhler. il diags Can Chem Process 37:66-7 Ag '53

Reference data for orienting quartz plates by X-ray diffraction. C. Barclay and L. T. Sogn. diags U S Nat Bur Stand Circ 543: 1-7; pa 15c Supt. of doc. '53

Retained austenite determinations by X-ray methods. B. L. Averbach. J Metals 5:Trans 87-8 Ja '53

Standard X-ray diffraction powder patterns. H. E. Swanson and E. Tatge. 2v U S Nat Bur Stand Circ 539:1-95 bibliog(p87-93); 1-63 pa ea 45c Supt. of doc. '53

Study in diffraction microscopy with special reference to X-rays. A. V. Baez. il diags Opt Soc Am J 42:756-62 O '52

Study of oxide-coated cathode by X-ray diffraction method. E. Yamaka. J Ap Phys 23:498-9, 937-40 Ap, S '52

X-ray diffraction patterns for some tetrazole derivatives. L. A. Burkardt and D. W. Moore. Anal Chem 24:1579-85 O '52

X-ray diffraction studies in the system Al$_2$O$_3$-SnO$_2$-TiO$_2$. W. O. Milligan and B. G. Holmes. bibliog J Phys Chem 57:11-14 Ja '53

X-ray diffraction study of the hafnium-hydrogen system. S. S. Sidhu and J. C. McGuire. il diag J Ap Phys 23:1257-61 N '52

X-ray diffraction, von Laue's brainchild, marks 40th year. Chem & Eng N 30:5445 D 29 '52

X-ray investigation of several contaminated barium sulfate precipitates. C. A. Streuli, H. A. Scheraga and M. L. Nichols. bibliog Anal Chem 25:306-10 F '53

X-ray study of cold work in thoriated tungsten. M. McKeehan and B. E. Warren. J Ap Phys 24:52-6 Ja '53

X-ray study of glass fibers. B. K. Banerjee. il Am Cer Soc J 36:294-8 S 1 '53

Industrial applications

Analysis; minute quantities of elements identified in thin films. Iron Age 170:194+ N 6 '52; Tool Eng 30:55 F '53

Cadmium sulfide crystal acts as high-speed level checker. Elec Eng 72:377 Ap '53; Factory Management 111:87 Je '53; il Mill & Factory 53:140 S '53

CdS detector checks propeller thickness. J. F. Howell. il diags Electronics 26:159-61 My '53

Fill check by X-ray. H. Schreiber. il diags Mod Packaging 26:197-9 Ap '53

Now beams monitor fill-levels and lift barrier on packaging speeds; Pabst brewing co. G. Cram. il Food Eng 25:47+ Je '53

Opportunist in X-rays. Fortune 47:218 My '53

Rental; new idea in X-ray. D. Goodman. Am Mach 97:152-3 Jl 6 '53

Training of radiologists for industry. J. C. Rockley. Engineer 195:448-52 Mr 27 '53

X-ray absorption gage checks artillery shells. G. M. Ettinger. il diags Electronics 26:142-5 Ap '53

X-ray in the laboratory. G. E. Neapole. il Can Chem Process 37:70-1 Je 20 '53

X-ray pattern of sericin and silk wax from bombyx mori. E. H. Mercer and F. H. Meyer. bibliog il Textile Res J 23:243-6 Ap '53

X-ray where you want them; Resotron 250 industrial X-ray unit. il Factory Management 110:150-1 D '52

See also

Metals—X ray inspection

Welding—X ray inspection

Measurement

Angular shift of the transmitted X-ray beam near the Bragg angle. L. C. Brown and others. bibliog J Ap Phys 23:1054 S '52

Device for calculating complex X-ray structure factors. D. C. Phillips. diag J Sci Instr 29:299 S '52

Use of a Geiger counter for the measurement of X-ray intensities from small single crystals. H. T. Evans, jr. il R Sci Instr 24: 156-61 F '53

X-ray measurement of the cyclotron rf dee voltage. F. H. Harlow. R Sci Instr 23:501 S '52

Physiological effect

Direct effect of X-rays on bacterial viruses, modified by physical state, in relation to the target theory. C. S. Bachofer. bibliog Science 117:280-2 Mr 13 '53

Effect of X-rays on micronuclear number in paramecium aurelia. R. P. Geckler and R. F. Kimball. Science 117:80-1 Ja 23 '53

Frequency of dicentric bridges in meiosis in the grasshopper gesonia punctifrons, produced by different dosages of X-rays. S. P. Ray-Chaudhuri and I. Sarkar. diags Science 116:479-82 O 31 '52

Histological changes in the tissues of the hibernating marmot following whole body irradiation. K. C. Brace. bibliog Science 116:570-1 N 21 '52

Influence of peripheral cholinergic blocking drugs on survival time in X-ray irradiated mice. T. J. Haley and B. M. Rhodes. bibliog Science 117:139-40 F 6 '53

Influence of X-irradiation and atabrine upon feathering in the chick. C. D. Douglass and others. il Science 117:274 Mr 13 '53

Ultraviolet microscopy of the living cell's response to lethal X-radiation. P. O. Montgomery and S. Warren. bibliog il Science 117:589-91 My 29 '53

Protection

Absorption by concrete of X-rays and gamma-rays. B. E. Foster. bibliog Am Concrete Inst J 25:45-63 S '53

Protection against X-rays and therapy of radiation sickness with β-mercaptoethylamine. Z. M. Bacq and others. bibliog Science 117:633-6 Je 5 '53

Protective effect against X-irradiation of methyl linoleate in the rat. H. J. Deuel, jr. and others. bibliog Science 117:254-5 Mr 6 '53

Safety-designed rooms make X-rays behave. il Safety Maint & Prod 104:23-4+ D '52

Study of the X-irradiation protection afforded by cobalt. W. Parr and others. bibliog Science 117:155-6 F 13 '53

Scattering

New effect of cold work on powder X-ray patterns. S. Annaka. il J Chem Phys 20: 1662-3 O '52

X RAYS—Scattering—*Continued*

Small angle scattering of X-rays from cold-worked solids. D. L. Dexter. bibliog Phys R 90:1007-12 Je 15 '53

Small angle X-ray scattering from compact identical particles. R. M. Frank and K. L. Yudowitch. bibliog Phys R 88:759-60 N 15 '52

X-ray study of potassium laurate solutions. D. E. Andersen and G. B. Carpenter. bibliog Am Chem Soc J 75:850-6 F 20 '53

Therapeutic use

Electrical technology in medicine; International congress of radiology 7th meeting, Copenhagen. Elec R (Lond) 153:448-9 Ag 28 '53

Progress in radiography; exhibition, Copenhagen. Elec R (Lond) 153:307-8 Ag 7 '53

XAN, John, 1893-

Winner of ACS award teaches more than chemistry. por(cover) Chem & Eng N 31:1874 My 4 '53

XANTHATES

Further studies on the Chugaev reaction and related reactions. G. L. O'Connor and H. R. Nace. bibliog Am Chem Soc J 75:2118-23 My 5 '53

Peptides; selective degradation by removal of the terminal amino-acid bearing a free amino-group; the use of alkyl alkoxydithioformates (dialkyl xanthates). G. W. Kenner and H. G. Khorana. Chem Soc J p2076-81 Je '52

XANTHINEACETIC acid

Some xanthineacetic acid derivatives. F. H. McMillan and H. M. Wuest. Am Chem Soc J 75:1998-2000 Ap 20 '53

XANTHINE oxidase

Nature of the xanthine oxidase factor. E. C. De Renzo and others. bibliog Am Chem Soc J 75:753 F 5 '53

XANTHIONE

Xanthones and thioxanthones; the preparation and properties of 9-oxa-1-aza-anthrone and 9-thia-1-aza-anthrone. F. G. Mann and J. A. Reid. Chem Soc J p2057-62 Je '52

XANTHONE

Chemistry of fungi; asperxanthone and a preliminary examination of aspergillin. N. A. Lund, A. Robertson and W. B. Whalley. Chem Soc J p2434-9 Ag '53

Polarography of *p*-chlorobenzophenone and xanthone. R. A. Day, jr. and R. E. Biggers. Am Chem Soc J 75:738-9 F 5 '53

Xanthones and thioxanthones; the preparation and properties of 9-oxa-1-aza-anthrone and 9-thia-1-aza-anthrone. F. G. Mann and J. A. Reid. Chem Soc J p2057-62 Je '52

XANTHOPTERIN

Pteridine synthesis: leucopterin and xanthopterin. A. Albert and H. C. S. Wood. bibliog J Ap Chem 2:591-2 O '52

XANTHOTOXIN

Furochromones and coumarins; demethylation of xanthotoxin, khellin and khellol with aniline hydrochloride and magnesium iodide. A. Schönberg and G. Aziz. bibliog Am Chem Soc J 75:3265-6 Jl 5 '53

XENON

Drift velocities of ions in krypton and xenon. R. N. Varney. bibliog Phys R 88:362-4 O 15 '52

Ionization probability curves for krypton and xenon near threshold. R. E. Fox and others. bibliog Phys R 89:555-8 F 1 '53

Ultrasonic propagation in xenon in the region of its critical temperature. A. G. Chynoweth and W. G. Schneider. bibliog diag J Chem Phys 20:1777-83 N '52

Isotopes

Average charge on the daughter atoms produced in the decay of A^{37} and Xe^{131m}. M. L. Perlman and J. A. Miskel. bibliog diags Phys R 91:899-902 Ag 15 '53

Gamma-gamma directional correlations in Co^{59}, Xe^{131}, and Hg^{198}. D. Schiff and F. R. Metzger. bibliog diag Phys R 90:849-52 Je 1 '53

Three new neutron deficient xenon isotopes. B. Dropesky and E. O. Wiig. Phys R 88:683-4 N 1 '52

Yield of Xe^{133} in the thermal neutron fission of U^{235}. S. Katcoff and W. Rubinson. bibliog diags Phys R 91:1458-69 S 15 '53

XEROGRAPHY

Haloid's hunch pays off. il Bsns W p 186-8 Mr 28 '53

Improved equipment for reproducing drawings. il diags Mach 59:233 D '52

XEROX. See Photomechanical processes

XIMENYNYL alcohol

Infra-red spectra of methyl ximenynate and ximenynyl alcohol. N. H. E. Ahlers and S. P. Ligthelm. Chem Soc J p5039 D '52

XYLENE

Cosden produces nitration-grade aromatics. Pet Refiner 32:90 F '53

Dichlorination of *o*-xylene. C. Boyars. bibliog Am Chem Soc J 75:1989-90 Ap 20 '53

Isomerization of the methylbenzenes. D. A. McCaulay and A. P. Lien. bibliog Am Chem Soc J 74:6246-50 D 20 '52

Spectroscopic studies in the near ultraviolet of the three isomeric dimethylbenzene vapors; absorption spectra of meta and ortho dimethylbenzene. C. D. Cooper and H. Sponer. bibliog il J Chem Phys 20:1248-59 Ag '52

Spectroscopic studies in the near ultraviolet of the three isomeric dimethylbenzene vapors; fluorescence of *meta*-dimethylbenzene. V. R. Rao and M. L. N. Sastri. il J Chem Phys 20:1552-3 O '52

Xylene and toluene; hazards and precautions; data sheet. il Nat Safety N 68:38-9+ Ag '53

Manufacture

First complete Udex benzene-toluene-xylene plant makes nitration-grade products. D. P. Thornton, jr. flow diag il Pet Processing 8:384-7 Mr '53

XYLENOL

Retardation of benzaldehyde autoxidation; a comparative study of the actions of *p*-cresol, *m*-2-xylenol, and their oxidation products. W. A. Waters and C. Wickham-Jones. Chem Soc J p2420-7 Je '52

XYLITOL

2 : 3-4 : 5-Di*iso*propylidene derivatives of aldehydo-L-xylose and L-xylitol. E. J. Bourne, G. P. McSweeney and L. F. Wiggins. Chem Soc J p3113-14 Ag '52

New derivatives of 2,3,4,5-dibenzylidene-D,L-xylitol and 2,4 : 3,5-dimethylene-L-xylitol. A. T. Ness, R. M. Hann and C. S. Hudson. bibliog Am Chem Soc J 75:132-4 Ja 5 '53

XYLOFURANOSE

α- and β-D-xylofuranose tetrabenzoates and certain other derivatives of D-xylose. H. G. Fletcher, jr. bibliog Am Chem Soc J 75:2624-7 Je 5 '53

Formation of 3-methyl 1 : 2-isopropylidene xylofuranose. R. A. Laidlaw. Chem Soc J p2941-3 Jl '52

XYLOHEPTAOSE

Crystalline xyloheptaose. R. L. Whistler and C. Tu. Am Chem Soc J 75:645-7 F 5 '53

XYLOPIC acid

Xylopic acid. H. A. Fahim and I. R. Shimi. Chem Soc J p712 F '53

XYLOSE

α- and β-D-xylofuranose tetrabenzoates and certain other derivatives of D-xylose. H. G. Fletcher, jr. bibliog Am Chem Soc J 75:2624-7 Je 5 '53

Derivatives of L-xylose. R. K. Ness and H. G. Fletcher, jr. bibliog Am Chem Soc J 74:5341-3 N 5 '52

2 : 4-3 : 5-Diethylidene aldehydo-L-xylose and its derivatives. E. J. Bourne, W. M. Corbett and M. Stacey. Chem Soc J p2810-12 Jl '52

2 : 3-4 : 5-Di*iso*propylidene derivatives of aldehydo-L-xylose and L-xylitol. E. J. Bourne, G. P. McSweeney and L. F. Wiggins. Chem Soc J p3113-14 Ag '52

D-Xylosamine. M. L. Wolfrom and K. Anno. bibliog Am Chem Soc J 75:1038-9 Mr 5 '53

Xylose isomerase. R. M. Hochster and R. W. Watson. bibliog Am Chem Soc J 75:3284-5 Jl 5 '53

XYLULOSE
Synthesis of sugars from simpler substances; enzymic synthesis of 5-deoxy-D-xylulose. P. A. J. Gorin, L. Hough and J. K. N. Jones. Chem Soc J p2140-2 Jl '53

XYLYL hydroperoxide
Reaction between αα-dimethylbenzyl hydroperoxide and ferrous salts. W. S. Wise and G. H. Twigg. Chem Soc J p2172-7 Jl '53

XYLYL sulfates
Characterization of xylylhydrogen-sulphates. W. Cocker and D. O'Meara. Chem & Ind p63 Ja 17 '53

Y

YACHTS and yachting
Motor yacht Tonquin. il Engineer 194:157-8 Ag 1 '52; Engineering 174:188-9 Ag 8 '52
On the wind; German boatyards are producing some stiff competition. B. Lefferts. Barron's 33:5 Ja 12 '53

YALE and Towne manufacturing company
Plant expansion spurring Yale & Towne operations. Barron's 33:25-6 Ap 6 '53

YALE university
High-pressure research in Chemical engineering department. B. F. Dodge. bibliog il diags A S M E Trans 75:331-43 Ap '53

School of engineering

Yale's 100 years of engineering. il Eng N 149:72 N 20 '52

YALTA conference. See Crimea conference, 1945

YARDS and docks, Bureau of. See United States—Navy department—Yards and docks, Bureau of

YARN
All that glitters is not gold; it's aluminum; Metlon, a non-tarnishing yarn. il Sales Management 70:56-9+ Mr 15 '53
Checking evenness with Uster's model C. M. E. Herndon. il Mod Textiles Mag 34:75-6 F '53
Cost-cutting equipment offered during the past year; yarn preparation. il diags Textile World 102:110-12+ N '52
Du Pont's new textured yarns. D. F. Holmes. il diags Mod Textiles Mag 34:52-4+ Ag '53
Forget your spinning habits; test the yarn. J. McComb. il Mod Textiles Mag 33:31+ D '52
Machinery organization for blended yarns. S. L. Fuller. Textile World 103:106-7+ Ag '53
Mechanics of elastic performance of textile materials; factors affecting the translation of certain mechanical properties of cordage fibers into cordage yarns. M. M. Platt and others. bibliog diags Textile Res J 22:641-67 O '52; Discussion. 22:827-9 D '52
Metallic-yarn-making problems include laminating, slitting; Melton corp. R. C. Scott. il Textile World 103:134-6 S '53
1953 table of commercial synthetic yarns and fibers. R. C. Scott, comp. Textile World 103:113-16 S '53
Production of rayon, acetate and synthetic yarns in the United States. Mod Textiles Mag 34:100A-100H S '53
Ready for the loom; co-operation between research, engineering and production departments at Canadian celanese limited. E. A. Murphy. il diag Can Chem Process 37:40+ Ag '53
They're doing things with metallic yarns! Melton corp. A. Brucks. il Mod Textiles Mag 34:34-5 S '53

See also
Cotton yarn
Nylon yarn
Rayon yarn
Woolen and worsted yarn

Moisture content

Advance of a liquid front along a glass yarn. W. B. Palmer. bibliog Textile Inst J Trans 44:T391-400 Ag-S '53; Correction. 44:T658 D '53
Measurement of yarn weight and moisture content by transverse vibration. D. O. Sproule. diags Textile Inst J Trans 43:T455-62 S '52

Numbering

Make your own balance to check yarn number. A. Sactouris. diags Textile World 103:161 Ag '53

Standards

Report of ISO subcommittee on yarn testing standards. Standardization 23:289 S '52

Tables, calculations, etc.

Calculation of the variance-length curve from the length distribution of fibres. H. Breny. bibliog Textile Inst J 44:P 1-14 Ja '53
Changes in synthetic yarn production. Mod Textiles Mag 34:77-9 Mr '53
Fiber conversion-factor tables make fabric-matching easier. J. B. Dickson. Textile World 103:128-30 F '53
Mechanics of bent yarns. S. Backer. bibliog il diags Textile Res J 22:668-81 O '52
Weight measurement of yarn irregularity. B. K. Chakrabarti. bibliog Textile Res J 23:99-107 F '53

Testing

Device for examination of thickness of a running thread. S. Kawata and K. Segawa. il Textile Res J 23:643-4 S '53
Differences between averages; true or false? A. G. C. Pilavachi. Mod Textiles Mag 34:90+ S '53
Does an average tell enough? A. G. C. Pilavachi. Mod Textiles Mag 34:67+ Je '53
Impact properties of yarns made from different fibers. H. F. Schiefer and others. bibliog il Textile Res J 23:489-94 Jl '53
Measurement of yarn weight and moisture content by transverse vibration. D. O. Sproule. diags Textile Inst J Trans 43:T455-62 S '52
New methods for detecting yarn faults during winding; Linra Photo-Slubber. J. A. Matthew and J. L. Spencer-Smith. il diags Textile Inst J Trans 44:T77-89 Mr '53
Optical yarn-evenness tester measures cross-sectional irregularities. W. M. Palmer. diag Textile World 102:254 D '52
Stick-slip; method for determining frictional qualities of filament yarns and staple. G. W. Bartlett and others. il Mod Textiles Mag 34:51+ Ap; 50+ My '53; Textile Res J 23:647-57 S '53
What's in a sample? A. G. C. Pilavachi. Mod Textiles Mag 34:54 Jl '53

YAWS. See Frambesia

YEARBOOKS (statistical, historical, etc.)
Information please almanac, 1953. J. Kieran, ed. 928p $2 Macmillan co, 60 5th av, New York 11 '53
International year book and statesmen's who's who, 1953. 72;569;449p (£8 8s) Burke's Peerage, 180 Fleet st, London '53
New international year book, 1952. H. E. Vizetelly, ed. 624p $10 Funk and Wagnalls, 153 E. 24th st, New York 10 '53
Statistical yearbook, 1952. v4 554p $7.50 United nations, Dept. of economic affairs; for sale by Columbia univ. press, 2960 Broadway, New York 27 '52

See also
India—Yearbooks
Moving picture industry—Yearbooks
Pakistan—Yearbooks

YEAST ribonucleic acid. See Ribonucleic acid

YEASTS
Biosynthetic pathways; the biosynthesis of lysine by torulopsis utilis. M. Strassman and S. Weinhouse. bibliog Am Chem Soc J 75:1680-4 Ap 5 '53
2-Desoxy-D-glucose as an inhibitor in the aerobic glucose metabolism of yeast. G. E. Woodward. Franklin Inst J 254:553-5 D '52
Disruption of mitochondria of saccharomyces by ultraviolet irradiation. A. Sarachek and G. F. Townsend. bibliog il Science 117:31-3 Ja 9 '53
Flocculence in yeast. S. Pomper and D. W. McKee. bibliog Science 117:62-3 Ja 16 '53
Mutation of mating type in saccharomyces cerevisiae. S. Pomper and D. W. McKee. bibliog Science 117:455-6 Ap 24 '53
Origin of the carboxyl group of histidine in yeast. J. W. Davis and others. bibliog Am Chem Soc J 75:2252-3 My 5 '53

YEASTS—*Continued*

Radioactivity induced in yeast by 100 Mev X-radiation. G. C. Baldwin and L. B. Clark. Science 117:9-10 Ja 2 '53

10,000,000th pound of torula yeast shipped by Rhinelander. Paper Ind 35:650 S '53

Zymonic acid, a new metabolic product of some yeasts grown in aerated culture; structure studies. F. H. Stodola, O. L. Shotwell and L. B. Lockwood. bibliog Am Chem Soc J 74:5415-18 N 5 '52

Analysis

Cytosine deaminase of yeast. J. Kream and E. Chargaff. bibliog Am Chem Soc J 74:5157-60 O 20 '52

Isolation of dipalmitoleyl-L-α-glycerylphosphorylcholine from yeast; a new route to (dipalmitoyl)-L-α-lecithin. D. J. Hanathan and M. E. Jayko. bibliog Am Chem Soc J 74:5070-3 O 20 '52

Manufacture

Application of scientific principles to the manufacture of yeast; abstract and discussion. M. Pyke. Chem & Ind p 1100-1 N 8 '52

Attisholz yeast from waste sulphite liquor. Tappi 36:sup 104A+ Je '53

Charmin's new yeast plant progresses. Paper Tr J 137:11-12 S 25 '53

Hoberg and Northern report progress in pollution battle. Paper Ind 35:537-8 Ag '53; Excerpt. Tappi 36:sup97A-8A Ag '53

Hoberg plans $2,500,000 torula yeast plant to combat pollution. Paper Ind 34:1210 Ja '53

Rhinelander Paper puts $400,000 evaporating plant into operation. il diag Paper Ind 34:1074-6 D '52; Same. Paper Tr J 135:11-12+ D 26 '52; Same cond. Tappi 36:sup 87A-9A Ja '53

Yeast factory at Dovercourt; Standard yeast co. flow diag il Engineering 176:76-7 Jl 17 '53

YELLOW fever

Barrier zone required for sylvan yellow fever. N. W. Elton. Pub Health Rep 68:102-3 Ja '53

National drug co. to make yellow fever vaccine. Oil Paint & Drug Rep 162:59 O 27 '52

Thanks to yellow fever; floating hospitals. E. A. Fay. il U S Naval Inst Proc 78:1342-7 D '52

YOGURT

Millions in yogurt; Dannon made the product suit the package. il Mod Packaging 26:130-1 N '52

YOHIMBINE

Stereochemistry of alkaloids. R. C. Cookson. bibliog Chem & Ind p337-40 Ap 11 '53

YOKOHAMA, Japan

Water supply

Aqueduct spans valleys with Yokohama water. il diags Eng N 150:53-4+ Mr 19 '53

YORK, Pennsylvania

Industries

What does York have that others don't have? A. N. Wecksler. il map Mill & Factory 52:75-8 Mr '53

YORK corporation

Five attractive stocks for capital gains; with comparative balance sheet items. Mag of Wall St 91:471 Ja 24 '53

Low-priced stocks headed for higher levels. J. S. Williams. Mag of Wall St 91:260 N 29 '52

YORKSHIRE insurance company of New York

Yorkshire moves to establish multiple line insurer here. East Underw 54:1+ Ja 16 '53; Same. Nat Underw 57:3 Ja 15 '53

YORKTOWN, Virginia

Bridges

Special design features of the Yorktown bridge. M. N. Quade. diags Am Soc C E Proc 79 [no 168]:1-15 Ja '53

YOST, Ken

Evangelist of human relations. pors Mod Ind 25:41-3 Ap '53

YOUNG men's Christian association buildings

Overhead canopy modernizes Y.M.C.A. il diag Illum Eng 48:253 My '53

YOUNG'S modulus. See Elasticity

YOUNGSTOWN, Ohio

Industries

Youngstown catches a new industry on the rise. il Bsns W p 182-4+ Mr 21 '53

YOUNGSTOWN sheet and tube company

Youngstown sheet and tube company increases service to the Midwest. C. Longenecker. il plan diags Blast F & Steel Pl 41:898-925 Ag '53

YOUTH

Has the comer really gone? E. E. De Graff. Ptr Ink 242:114 F 20 '53

National policy on youth employment. Mo Labor R 75:299 S '52

They're willing to work. Bsns W p 196 Je 13 '53

This shortage is serious. Brick & Clay Rec 121:79 N '52

Where to, young man? Z. C. Barnes. Ptr Ink 241:82 D 26 '52; Replies. 242:72+ F 20 '53

See also

Junior achievement movement

National 4-H foundation

YTTERBIUM

Preparation of samarium and ytterbium metals. A. H. Daane, D. H. Dennison and F. H. Spedding. bibliog Am Chem Soc J 75:2272-3 My 5 '53

YTTRIUM

Analysis

Purification of yttrium by precipitation with sodium nitrite. O. M. Hilal and M. El-Abbady. Chem Soc J p2935-6 Jl '52

Isotopes

Assignment of Y^{92} and Y^{94}. G. L. Schott and W. W. Meinke. bibliog Phys R 89:1156-7 Mr 1 '53

Average energy of Sr^{90}-Y^{90} as a function of absorber. R. H. Goeckermann and W. H. Seitzer. J Chem Phys 20:1655 O '52

Disintegration of Sr^{91} and Y^{91m}. D. P. Ames and others. bibliog diag Phys R 91:68-74 Jl 1 '53

Radioactive decay of Y^{91}. F. I. Boley and D. S. Dunavan. Phys R 90:158 Ap 1 '53

Studies in low concentration chemistry; the radiocolloidal properties of yttrium-90. G. K. Schweitzer, B. R. Stein and W. M. Jackson. bibliog Am Chem Soc J 75:793-5 F 20 '53

Three new neutron deficient isotopes of yttrium. A. A. Caretto, jr. and E. O. Wiig. Am Chem Soc J 74:5235-6 O 20 '52

YTTRIUM fluoride

Crystal structures of YF_3 and related compounds. A. Zalkin and D. H. Templeton. bibliog diags Am Chem Soc J 75:2453-8 My 20 '53

YUCCA

Steroidal sapogenins; Markogenin (22b-spirostane-2ξ,3β-diol); a new sapogenin isolated from yucca. M. E. Wall and others. bibliog Am Chem Soc J 75:4437-40 S 20 '53

YUGOSLAVIA

See also

Agriculture—Yugoslavia

Chemical industries—Yugoslavia

Communist party (Yugoslavia)

Forests and forestry—Yugoslavia

Petroleum industry and trade—Yugoslavia

Commercial policy

Controls on international trade. For Comm W 48:7 O 20 '52

Representation of foreign firms by Yugoslav state agencies regulated. For Comm W 50:10 Jl 13 '53

Economic conditions

Economic conditions abroad (cont). For Comm W 48:5+ N 24; 7 D 15; 5 D 22 '52; 49:6+ Ja 5; 7 Ap 13 '53

Jugoslav economic crisis. Economist 165:396+ N 8 '52

YUGOSLAVIA—*Continued*

Economic policy

Tito strengthens his hand with West. il Bsns W p 130-2 Ap 4 '53

Yugoslavia's domestic economy. A. W. May. Comm & Fin Chr 178:201, 257+, 349+ Jl 16, 23, 30 '53

Economic relations

Russia

Yugoslavia and Soviet exploitation of her satellites. A. W. May. Comm & Fin Chr 178:105+ Jl 9 '53

United States

IBRD loan to benefit Yugoslav industry. For Comm W 49:4 Mr 2 '53

Foreign relations

Great Britain

After the visit of Marshall Tito. Economist 166:850-2 Mr 28 '53

Russia

Complications for President Tito. Economist 167:807 Je 20 '53

Politics and government

Miracle in Yugoslavia. V. L. Horoth. Mag of Wall St 92:83-5+ Ap 18 '53

Under President Tito. Economist 166:220 Ja 24 '53

YUKON

Industrial empire in the Yukon; Frobisher, ltd. il map Bsns W p41-2+ Mr 14 '53

Wildlife management in the Yukon territory; abstract. F. Fraser. Pulp & Pa of Can 54:88+ F '53

See also

Mines and mineral resources—Yukon

Z

ZANUCK, Darryl Francis, 1902-

Businessmen in the news. por Fortune 47:52 My '53

ZEEMAN effect

Apparatus for Zeeman effect measurements on microwave spectra. J. R. Eshbach and M. W. P. Strandberg. bibliog diags R Sci Instr 23:623-8 N '52

Atomic oxygen *g*-factors. E. B. Rawson and R. Beringer. Phys R 88:677-8 N 1 '52

Nuclear electric quadrupole spectra in solids. R. Bersohn. bibliog J Chem Phys 20:1505-9 O '52

Zeeman effect in rotational spectra of asymmetric-rotor molecules. B. F. Burke and M. W. P. Strandberg. Phys R 90:303-8 Ap 15 '53

Zeeman effect in the spectra of tellurium. J. B. Green and R. A. Loring. Phys R 90:80-2 Ap 1 '53

ZELLERBACH, James David, 1892-

Businessmen in the news. por Fortune 47:61 Ap '53

Portrait. Fortune 47:97 Mr '53

ZELLER'S limited

Twenty-year sales rise continues. Barron's 33:17 Jl 27 '53

Zeller's, Grant join in what may be a trend. Bsns W p88 N 29 '52

ZENGER, John Peter, 1697-1746

Life and times of John Peter Zenger. J. W. Brown. pors Ed & Pub 86:11+ Mr 14; 14 Mr 21; 12+ Mr 28; 12+ Ap 4; 12+ Ap 11 '53

ZENITH radio corporation

Overrated? transistor hearing aids. Bsns W p 106+ Ap 25 '53

ZEOLITES

How cities save money on water softening. il Pub Works 84:70 Je '53

Mechanism of cation and anion exchange capacity. M. A. Cook and others. bibliog J Phys Chem 57:1-6 Ja '53

Our first year with a hot lime and zeolite feedwater treatment plant. M. R. Rivers and K. J. Linehan. Tappi 36:sup 130A-2A F '53

ZERN, Ed

Man in the red suit. S. H. Margolis and M. Silverstein. Ptr Ink 241:36-7+ N 7 '52

ZETHRENE. See Dibenzonaphthacene

ZHUKOV, Georgi Konstantinovich, 1895-

Politics of the red army. Fortune 47:90+ My '53

Portrait. Fortune 47:96 My '53

ZIEGLER, Charles M.

AASHO presidency goes to Ziegler. por Eng N 149:53 D 25 '52

ZIMMER, H. Ward

Shifting the weight at Sylvania. pors Bsns W p 114-15, cover My 2 '53

ZINC

Anelasticity of zinc. S. Takahashi. il J Ap Phys 23:866-8 Ag '52; Discussion. J. W. Marx. 23:1406-7 D '52

Automatic zinc sampler saves handling time. F. J. Meek. il diag J Metals 5:404 Mr '53

Bend plane phenomena in the deformation of zinc monocrystals. J. J. Gilman and T. A. Read. bibliog il diags J Metals 5:Trans 49-55 Ja '53

Binding of metal ions by ACTH; a property correlated with biological activity. J. E. Carr and others. bibliog Science 116:566-8 N 21 '52

Coefficient of expansion study of a lead-zinc glaze. F. K. Pence. Am Cer Soc Bul 31:483-5 D 15 '52

Creep of zinc single crystals. L. Slifkin and W. Kauzmann. bibliog diag J Ap Phys 23:746-53 Jl '52

Creep of zinc single crystals. E. H. Weinberg; D. O. Thompson. J Ap Phys 23:1277-8 N '52

Dissolution of metals over the temperature range of 25 to -60°; the dissolution of zinc in hydrochloric acid-methyl alcohol-water solutions. J. Y. Welsh and A. B. Garrett. bibliog J Phys Chem 56:727-30 Je '52

Effect of climate and atmospheric pollution on corrosion. J. C. Hudson and J. F. Stanners. il J Ap Chem 3:86-96 F '53

Electron diffraction studies on the oxidation of pure copper and pure zinc between 200° and 500°C. E. A. Gulbransen and W. R. McMillan. bibliog il Electrochem Soc J 99:393-401 O '52

Equilibrium of solid α-silver-zinc alloys with zinc vapor. G. Scatchard and R. A. Westlund, jr. bibliog diags Am Chem Soc J 75:4189-93 S 5 '53

Grain boundary diffusion of zinc in copper. R. Flanagan and R. Smoluchowski. J Ap Phys 23:785-7 Jl '52

Hall effect in zinc crystals at low temperatures. J. K. Logan and J. A. Marcus. bibliog diags Phys R 88:1234-8 D 15 '52

Inorganic corrosion inhibitors in acid solution. C. V. King and others. bibliog Electrochem Soc J 99:423-6 O '52

Kinking in zinc single-crystal tension specimens. J. Washburn and E. R. Parker. bibliog il diags J Metals 4:Trans 1076-8 O '52; Discussion. 5:Trans 737-8 sec 2 My '53

Physical adsorption on single crystal zinc surfaces. T. N. Rhodin. bibliog diag J Phys Chem 57:143-8 F '53

Polarographic study of the influence of temperature on the rate of oxygen consumption by iron, lead, and zinc. P. Delahay and others. bibliog Electrochem Soc J 99:414-16 O '52

Relative diffusion rates of zinc and copper in alpha brass. R. W. Balluffi and B. H. Alexander. il diag J Metals 4:Trans 1315-16 D '52

Retention by wood of copper and zinc from aqueous solutions of their salts. B. A. Ripley-Duggan. bibliog J Ap Chem 2:593-600 O '52

Spun and drawn zinc parts have many applications. E. V. Gent. il diags Materials & Methods 36:102-4 D '52

Thermodynamic study of liquid metallic solutions; the systems zinc-bismuth and zinc-lead. O. J. Kleppa. bibliog Am Chem Soc J 74:6052-6 D 5 '52

See also

American zinc institute

Galvanizing

Zinc metallurgy

ZINC—*Continued*

Analysis

Determination of small amounts of zinc in aluminum alloys; rapid electrogravimetric method utilizing isotope dilution technique. K. Theurer and T. R. Sweet. bibliog diag Anal Chem 25:119-21 Ja '53

Spot testing for rapid identification of tin, cadmium and zinc of very thin coatings. F. Breh. Metal Prog 63:88-9 F '53

Isotopes

Decay of Zn^{69}. R. B. Duffield and L. M. Langer. bibliog Phys R 89:854-5 F 15 '53

Magnetic moments of Si^{29}. S^{33}, Zn^{67}, As^{75}, Se^{77}, Te^{123}, and Te^{125}. H. E. Weaver, jr. bibliog il diags Phys R 89:923-30 Mr 1 '53

Neutron capture γ-rays from titanium, chromium, iron, nickel, and zinc. B. B. Kinsey and G. A. Bartholomew. bibliog diags Phys R 89:375-85 Ja 15 '53

$Zn^{64}(d,\alpha n)Cu^{61}$ reaction. C. S. Cook and F. T. Porter. bibliog Phys R 90:429 My 1 '53

Prices

Lead and zinc; true price relationship runs counter to OPS ceilings. W. F. Boericke. Barron's 33:13 Ja 12 '53

Lead, zinc; seek sliding scale duty. Iron Age 177:80-1 My 26 '53

Nonferrous prices; tabulation. Steel 132:173 Ja 5 '53

Zinc market jitters may soon be over. Barron's 32:27-8 D 22 '52

Zinc price shift; basing point system is on the way out. Bsns W p32 Jl 25 '53

Zinc pricing system ended in action by American Smelting. Oil Paint & Drug Rep 164: 5+ Jl 20 '53

ZINC, Molten

Automatic surface follower for measuring the rate of evaporation of molten metals undergoing vacuum distillation. M. J. Spendlove and H. W. St Clair. il diags R Sci Instr 23:471-5 S '52

Liquid blanket reduces oxidation of molten zinc. A. A. Paterson. il diag Steel 132: 136+ Ap 13 '53

ZINC, Powdered

Average zinc powder price, 1948-1952; tabulation. Iron Age 171:454 Ja 1 '53

ZINC alloys

Copper-zinc constitution diagram, redetermined in the vicinity of the beta phase by means of quantitative metallography. L. H. Beck and C. S. Smith. bibliog il J Metals 4:Trans 1079-83 O '52

Electrodeposition of zinc-tin alloy. E. Bertorelle and F. Fogliani. diag Chem Age (Lond) 68:253-4 F 7 '53

Equilibrium of solid α-silver-zinc alloys with zinc vapor. G. Scatchard and R. A. Westlund, jr. bibliog diags Am Chem Soc J 75:4189-93 S 5 '53

Fused die castings for car window frames and ventilating panes. H. Chase. il Materials & Methods 38:119 O '53

GMOODIE means co-operation; name of new stamping die alloy, developed by GM research for overseas operations. il Steel 132: 75 Ap 20 '53

High aluminum zinc-base die-casting alloys. O. A. Carson. Can Min J 74:70-3 Jl '53

Low-cost methods speed die construction; Allied products corp. W. C. Miller. il Am Mach 96:93-6 D 8 '52

Reversal of the strain-induced martensitic transformation in the copper-zinc system. J. E. Reynolds, jr. and M. B. Bever. il J Metals 4:Trans 1065-6 O '52

Thermodynamic study of the zinc-indium system. W. J. Svirbely and S. M. Selis. bibliog Am Chem Soc J 75:1532-5 Ap 5 '53

ZINC cadmium sulfide

Multiple emission bands in zinc cadmium sulfide phosphors. E. B. Fehr and others. bibliog diag Opt Soc Am J 42:917-22 D '52

ZINC chloride

Conductivities and densities of the system ammonium chloride-zinc chloride-methanol from -50° to 20°C. L. R. Dawson and others. bibliog Electrochem Soc J 99:536-41 D '52

How to braze and solder zirconium. W. G. Schickner and others. il Steel 132:118-19 My 4 '53

ZINC coating

Comparative protection afforded by cadmium and zinc coatings; abstract. G. Schikorr. Metal Finishing 50:70-1 D '52

Fighting corrosion at a Gulf Coast terminus by metalizing parts with zinc. F. L. Resen. il diag Oil & Gas J 52:273-4 Je 22 '53

Zinc-protected talkers. il Steel 132:103-4 Je 22 '53

See also

Galvanizing

ZINC compounds

Complex ions of zinc and pyridine. C. J. Nyman. bibliog Am Chem Soc J 75:3575-6 Jl 20 '53

Polarographic analysis of the serum albumin-mercury and zinc complexes. H. A. Saroff and H. J. Mark. bibliog Am Chem Soc J 75:1420-6 Mr 20 '53

Polarographic study of the hydrazine complexes of zinc. R. L. Rebertus, H. A. Laitinen and J. C. Bailar, jr. bibliog Am Chem Soc J 75:3051-3 Jl 5 '53

ZINC ferrates

High frequency dispersion in nickel zinc ferrites. H. P. J. Wijn and others. bibliog Rs Mod Phys 25:91-2 Ja '53

Neutron diffraction studies of zinc ferrite and nickel ferrite. J. M. Hastings and L. M. Corliss. bibliog diags Rs Mod Phys 25:114-19; Discussion. 119-21 Ja '53

ZINC hydrosulfite

Recent investigation of variables in zinc hydrosulphite bleaching of groundwood; abstract. E. T. Barnes. Paper Tr J 136:23 Ap 10 '53

ZINC industry and trade

Large and small lead and zinc miners reach unanimity on sliding scale import tax. Min Eng 5:268-9 Mr '53

Lead and zinc. il Eng & Min J 154:130-7 Jl '53

Some aspects of the zinc industry in 1952. R. G. Kenly. il Min Cong J 39:106-7+ F '53

Zinc users plead for stability. il Steel 132:57 My 4 '53

See also

American zinc institute

Statistics

Imports and consumption of zinc in the U.S.; zinc prices and exports; tabulations. Iron Age 171:422-3 Ja 1 '53

Slab zinc, mine production, standard specifications, consumption of slab zinc in U.S.; tabulations. Steel 132:175 Ja 5 '53

Zinc, 1952. C. R. Ince. Eng & Min J 154: 82-4+ F '53

Great Britain

Freeing non-ferrous metals; with tables of production and consumption, 1948-1952. Economist 165:638-40 N 29 '52

United Kingdom returns zinc to private trade; increase in dollar costs not expected. For Comm W 48:6 D 22 '52

Zinc and exchange control. Economist 165: 782 D 13 '52

ZINC metallurgy

Ammonia; ammonium carbonate leaching of low grade zinc ores. W. J. Wendt. bibliog flow sheet Eng & Min J 154:84-90 S '53

Developments in milling practice in southeast Missouri; St Joseph lead co. N. A. Stockett. il Min Cong J 39:84-8 Ap '53

Electrometallurgy

Arc smelting for zinc; Sterling process. Steel 131:268 O 13 '52

Cerro de Pasco's new electrolytic refinery heralds Peruvian ascendancy as zinc producer. D. I. Griffis. flow sheet Eng & Min J 154:130 Ja '53

Electrolytic zinc plant at Monsanto, Illinois. T. I. Moore and L. A. Painter. flow diag il plans diags J Metals 4:Trans 1149-59 N '52

Further development of the Sterling process. W. M. Peirce. il diag Min Cong J 39:46-9+ Mr '53

ZINC mines and mining

British Columbia

Costs cut by change to sublevel long-hole benching; Reeves MacDonald. J. B. Huttl. diag Eng & Min J 154:100-1 Ap '53

ZINC mines and mining—*Continued*

Colorado

Resurrection cuts mining costs, makes lower grade ore economic. C. N. Stout and J. S. Wright. il plans Min Eng 5:45-8 Ja '53

Missouri

St. Joseph Lead's Indian Creek development. C. K. Bain. flow sheet il plans diag Min Eng 5:Trans 899-904 S '53

New Jersey

Diamond drilling for zinc ore at Andover-Sulphur Hill iron mines Sussex county, N.J. G. L. Neumann. 2pls U S Bur Mines Rep of Invest 4911:1-13 '52

New York (state)

Guymard lead-zinc deposit, Orange county, N.Y. G. L. Neumann. 2pls U S Bur Mines Rep of Invest 4909:1-10 '52

Lead-zinc deposits of southwestern St Lawrence county, N.Y. G. L. Neumann. 5pls U S Bur Mines Rep of Invest 4907:1-25 '52

North America

North American zinc-lead mines react to depressed market by shutting down, curtailing production. Eng & Min J 153:147-50+ D '52

Peru

Chilete mine, mill go into high gear; Northern Peru mining and smelting co. il Eng & Min J 154:129-30 Ja '53

United States

Dip in zinc mine output improves price prospects. Barron's 33:35-6 Ap 6 '53

Plight of lead-zinc mines causes government concern; abstract. F. E. Wormser. Eng & Min J 154:131 Ag '53

Utah

Investigation of lead-zinc deposits at the Harrington-Hickory mine, Beaver county, Utah. J. W. Townsend. 8pls U S Bur Mines Rep of Invest 4953:1-20 '53

Washington (state)

American smelting & refining co.'s Van Stone mine. J. B. Huttl. flow sheet il Eng & Min J 154:72-6 Ap '53

Zinc bonanza; Washington may outstrip famed tri-state area. R. H. Syring. Barron's 33:11+ F 9 '53

ZINC ores

Barvue milling plant sets sights for greater output. il diags Min Eng 5:783-5 Ag '53

Diamond drilling for zinc ore at Andover-Sulphur Hill iron mines, Sussex county, N.J. G. L. Neumann. 2pls U S Bur Mines Rep of Invest 4911:1-13 '52

ZINC oxides

Influence of Al_2O_3, ZnO, and K_2O on the opacity of fluoride-opacified glasses. R. J. Callow. Am Cer Soc J 35:120-2 My 1 '52; Excerpts. Glass Ind 33:661+ D '52

Kinetic study of photo-oxidations on the surface of zinc oxide in aqueous suspensions. M. C. Markham and K. J. Laidler. bibliog J Phys Chem 57:363-9 Mr '53

Liquid dinitrogen tetroxide solvent system; reactions of sodium, calcium, and zinc oxides with dinitrogen tetroxide and its thermal dissociation products. C. C. Addison and J. Lewis. Chem Soc J p 1874-9 Je '53

Nature of the thermal color change in zinc oxide. C. K. Coogan and A. L. G. Rees. bibliog J Chem Phys 20:1650-1 O '52

New and more efficient type of leaded zinc oxide pigment for use in house paints. C. H. Adams. Paint Oil & Chem R 116:10 Ja 15 '53

Photochemical synthesis of hydrogen peroxide at zinc oxide surfaces. T. R. Rubin and others. bibliog Am Chem Soc J 75:2850-3 Je 20 '53

Zinc oxide in latex; influence of zinc oxide on colloidal stability. H. C. Jones and C. A. Klaman. bibliog Rubber Age 73:63-70 Ap '53

ZINC phosphates

Drums come clean and rust-inhibited. il Steel 132:84 Mr 23 '53

ZINC phthalocyanine

Molecular images with the projection microscope; the ionization potential of zinc phthalocyanine. R. Gomer and D. A. Speer. bibliog il J Chem Phys 21:73-80 Ja '53

ZINC plating

Effect of packaging on corrosion of zinc plated equipment; abstract. K. G. Compton and others. Metal Prog 62:194 N '52

Electrodeposition of zinc on uranium metal. L. Silverman. Metal Finishing 50:75 N '52

Small parts barrel through plating; cold heading department of the Ford motor co.'s River Rouge plant. H. Chase. il Steel 132:88-90 F 23 '53

See also
Galvanizing

ZINC selenide

Intensification in zinc selenide phosphors. S. Larach. J Chem Phys 21:756 Ap '53

ZINC silicates

Field dependent fluorescence of vitreous Zn_2SiO_4 phosphor. A. Bramley and J. E. Rosenthal. Phys R 87:1125 S 15 '52

Interaction of manganese activator ions in zinc-orthosilicate phosphors. S. Larach and J. Turkevich. bibliog diag Phys R 89:1060-5 Mr 1 '53

Paramagnetic resonance of manganese activated zinc orthosilicates. E. G. Spencer and others. bibliog J Chem Phys 20:1177-8 Jl '52

ZINC sulfide

Copper-activated zinc sulfide phosphors with new emission characteristics. H. C. Froelich. Opt Soc Am J 42:982 D '52

Effects of neutron bombardment on a zinc sulfide phosphor. A. W. Smith and J. Turkevich. bibliog J Chem Phys 21:367-8 F '53

Electrical measurements on electroluminescent lamps with zinc sulfide phosphors. C. W. Jerome and W. C. Gungle. bibliog diags Electrochem Soc J 100:34-8 Ja '53

Electronic transitions in the luminescence of zinc sulfide phosphors. R. H. Bube. bibliog diag Phys R 90:70-80 Ap 1 '53

Growth of zinc sulfide single crystals. W. W. Piper. diag J Chem Phys 20:1343 Ag '52

Mechanism by which aluminum ions alter the electrokinetics of the zinc sulfide-water interface. M. Bender. bibliog J Phys Chem 57:466-8 Ap '53

Nature of fluorescent centers and traps in zinc sulfide. H. A. Klasens. bibliog diags Electrochem Soc J 100:72-80 F '53

Optical measurements on electroluminescent zinc sulfide. J. F. Waymouth. Electrochem Soc J 100:81-4 F '53

Uniform, nonhydrogenous screens of ZnS-type phosphors. D. O. Caldwell and J. R. Armstrong. il R Sci Instr 23:508 S '52

ZINC thiocyanate

Polarographic study of the zinc thiocyanate complexes. R. E. Frank and D. N. Hume. bibliog Am Chem Soc J 75:1736-8 Ap 5 '53

ZINCATE process. See Aluminum—Protection

ZINN, Walter Henry

Portrait. Bsns W p 101 Mr 14 '53

ZINSSER, John Sharman, 1894-

Businessmen in the news. por Fortune 47:60 Ap '53

ZIPPERS. See Fastenings

ZIRCON

Alpha-radiation damage in zircon. P. M. Hurley and H. W. Fairbairn. J Ap Phys 23:1408 D '52

Investigation of the thermal dissociation, reassociation, and synthesis of zircon. C. E. Curtis and H. G. Sowman. bibliog Am Cer Soc J 36:190-8 Je 1 '53

Method for determining the age of igneous rocks using the accessory minerals. E. S. Larsen, jr. and others. bibliog Geol Soc Bul 63:1045-52 O '52

Mining and concentration of ilmenite and associated minerals at Trail Ridge, Fla. J. H. Carpenter and others. flow sheet il Min Eng 5:Trans 789-95 Ag '53

Zircon and its foundry applications. W. M. Peterson. il Foundry 81:92-5 Ap '53

ZIRCONIA. See Zirconium oxides

ZIRCONIUM

Approach to melting reactive metals eliminates use of refractory containers. T. T. Magel and others. il diags J Metals 4:1286-8 D '52
Behaviour of titanium, vanadium and zirconium towards fusion reagents. R. S. Young and K. G. A. Strachan. Chem & Ind p 154-5 F 14 '53
Chemical engineering materials of construction; less common metals. L. F. Yntema and W. R. Bekebrede. il Ind & Eng Chem 44:2364-70 bibliog(148 ref, p2369-70) O '52
Diffusion and solubility of nitrogen in beta zirconium. M. W. Mallett and others. bibliog Electrochem Soc J 100:103-6 Mr '53
Ductile welding of zirconium. F. G. Cox. il Welding J 32:sup92-8 F '53
Effect of small additions of oxygen on lattice constants and hardness of zirconium. R. M. Treco. bibliog il J Metals 5:Trans 344-8 sec 2 F '53
End of the trail; zirconium. diags Chem W 72:32+ Ja 10 '53
High-temperature experiments with zirconium and zirconium compounds. W. J. Kroll and others. 5pls U S Bur Mines Rep of Invest 4915:1-31 bibliog(32 titles, p30-1) '52
Hot-wire process for zirconium. R. B. Holden and B. Kopelman. diags Electrochem Soc J 100:120-5 Mr '53
How to braze and solder zirconium. W. G. Schickner and others. il Steel 132:118-19 My 4 '53
Increasing knowledge will spur greater use of Zr and Ti. il Chem & Eng N 31:1415-16 Ap 6 '53
Kinetics of thermal reorientations in cold rolled zirconium. R. K. McGeary and B. Lustman. bibliog il diags J Metals 5:Trans 284-91 sec 2 F '53; Discussion. 5:Trans 1573-7 sec 2 N '53
Latest developments in zirconium; Western metal congress symposium; abstracts of papers. il Materials & Methods 37:174+ My '53
Magnesium casting alloys containing zirconium. F. P. Streiter. bibliog il Metal Prog 63:75-82 Mr '53
Metal zirconium and its place in nuclear power plants. E. C. Miller. il diag Metal Prog 63:67-74 My '53
Properties, heat treatment, corrosion resistance, etc.; engineering file facts. Materials & Methods 37:125 Je '53
Small additions raise strength of zirconium at elevated temperatures. A. D. Schwope and W. Chubb. bibliog il J Metals 4:1138-40 N '52
Some aspects of the solution chemistry of zirconium. B. A. J. Lister and L. A. McDonald. diags Chem Soc J p4315-30 N '52
Some properties of superconductors below 1°K; Zr, Hf, Cd, and Ti. T. S. Smith and J. G. Daunt. bibliog Phys R 88:1172-6 D 1 '52
Thermal expansion of zirconium between 298°K. and 1600°K. G. B. Skinner and H. L. Johnston. bibliog J Chem Phys 21:1383-4 Ag '53
Titanium and zirconium castings now practicable. W. E. Kuhn. il diag Materials & Methods 36:94-5 D '52
Westinghouse ups zirconium output. il Elec World News ed 139:34 Mr 16 '53
Zirconium; from rarity to reactors. C. A. Scarlott. il Westinghouse Eng 13:171-3 S '53
Zirconium is on the way. Bsns W p 126 Ja 24 '53
Zirconium, metals' sleeping beauty. W. E. Shoupp. Midwest Eng 5:11-12+ Mr '53; Excerpts. Marine Eng 58:127 Ap '53; Elec Eng 74:472-3 My '53
Zirconium; newest light metal. C. F. Ayres. il Light Metal Age 10:10-11+ O '52
Zirconium shortage eases. il Product Eng 24:224 My '53
Zirconium snubs. il Bsns W p66+ Mr 7 '53
Zirconium; uses, outlook, availability, price and suppliers, etc. il map Iron Age 170:286-7 O 9 '52
Zirconium vital in submarine reactor. il Chem & Eng 31:1762-3 Ap 27 '53

Analysis

Analysis of zirconium; detection, separation and estimation of hafnium content. T. O. Portcastle. bibliog Chem Age (Lond) 68:389-92 Mr 7 '53
Determination of zirconium in steels using *p*-bromo- or *p*-chloromandelic acid. J. J. Klingenberg and R. A. Papucci. bibliog Anal Chem 24:1861-2 N '52
Determining low concentrations of hafnium in zirconium; a spectrographic method. D. M. Mortimore and L. A. Noble. bibliog diag Anal Chem 25:296-8 F '53
Extraction of zirconium and hafnium with various β-diketones. E. M. Larsen and G. Terry. bibliog Am Chem Soc J 75:1560-2 Ap 5 '53
Separation and detection of zirconium and hafnium on paper strips. N. F. Kember and R. A. Wells. il Chem & Ind p 1129 N 15 '52
X-ray spectroscopy as a control method in the production of zirconium and hafnium. D. M. Mortimore and P. A. Romans. bibliog il diag Opt Soc Am J 42:673-7 S '52

Isotopes

Gamma-radiations from Zr^{95} and Nb^{95}. C. E. Mandeville and others. bibliog diag Phys R 89:559-61 F 1 '53
Nuclear levels associated with zirconium 95 and niobium 95. J. M. Cork and others. Phys R 90:579-81 My 15 '53
Radiation from Zr^{97} and Nb^{97}. C. E. Mandeville and others. bibliog Franklin Inst J 254:381-9 N '52
Radiations from Zr^{89}. F. J. Shore and others. bibliog diags Phys R 91:1203-11 S 1 '53
Search for double beta-decay in Sn^{124} and Zr^{96}. J. A. McCarthy. bibliog diags Phys R 90:853-7 Je 1 '53
Zr^{92}-Mo^{92} and Zr^{94}-Mo^{94} pairs and the Zr^{96}-Mo^{96}-Ru^{96} triplet. J. S. Geiger and others. bibliog diags Phys R 89:621-3 F 1 '53

Metallography

Simplified procedure for the metallography of zirconium and hafnium and their alloys; abstract. F. M. Cain, jr. il Metal Prog 63:174+ My '53

Testing

Embrittlement of zirconium and tantalum in hydrochloric acid. L. B. Golden, I. R. Lane, jr. and W. L. Acherman. bibliog il Ind & Eng Chem 45:782-6 Ap '53

ZIRCONIUM, Powdered

Production of zirconium by fused salt electrolysis; abstract. M. E. Sibert and M. A. Steinberg. Metal Prog 62:178+ N '52
Zirconium now fabricated by powder metallurgy methods. H. S. Kalish. bibliog il Materials & Methods 37:101-3 F '53

ZIRCONIUM alcoholates

Structural chemistry of the alkoxides; normal alkoxides of silicon, titanium, and zirconium. D. C. Bradley and others. Chem Soc J p2025-30 Jl '53

ZIRCONIUM alloys

Allotropy in the phase $ZrCr_2$. W. Rostoker. J Metals 5:Trans 304 sec 2 F '53
Comparison of zirconium with better known commercial metals. A. D. Schwope. il Metal Prog 63:75-81 My '53
High-temperature experiments with zirconium and zirconium compounds. W. J. Kroll and others. 5pls U S Bur Mines Rep of Invest 4915:1-31 bibliog(32 titles, p30-1) '52; Excerpts. Chem Age (Lond) 68:247-50 F 7 '53
Magnesium-rich side of the magnesium-zirconium constitution diagram. J. H. Schaum and H. C. Burnett. il diags J Res Nat Bur Stand 49:155-62 S '52
System zirconium-chromium. R. F. Domagala and others. bibliog il J Metals 5:Trans 279-83 sec 2 F '53
System zirconium-copper. C. E. Lundin and others. bibliog il diags J Metals 5:Trans 273-8 sec 2 F '53
Systems zirconium-molybdenum and zirconium-wolfram. R. F. Domagala and others. bibliog il J Metals 5:Trans 73-9 Ja '53
Zr-Hf system. R. B. Russell. J Ap Phys 24:232-3 F '53
Zirconium; newest light metal. C. F. Ayres. il Light Metal Age 10:10-11+ O '52

ZIRCONIUM carbide
Reactions during sintering of a zirconium carbide-niobium cermet. W. G. Lidman and H. J. Hamjian. bibliog il Am Cer Soc J 35:236-40 S 1 '52

ZIRCONIUM chlorides
Action of alcohols on zirconium tetrachloride and zirconium chloride alkoxides. D. C. Bradley and others. Chem Soc J p4960-3 D '52

ZIRCONIUM compounds
High-temperature experiments with zirconium and zirconium compounds. W. J. Kroll and others. 5pls U S Bur Mines Rep of Invest 4915:1-31 bibliog(32 titles, p30-1) '52
Inorganic complex compounds containing polydentate groups; zirconium(IV) complexes with 2-nitroso-1-naphthol. H. B. Jonassen and W. R. deMonsabert. Am Chem Soc J 74:5298-301 N 5 '52
Thermal decomposition of $MeCl_4 \cdot 2C_6H_5COOR$ type compounds. F. W. Chapman and others. bibliog Am Chem Soc J 74:5277-9 N 5 '52

ZIRCONIUM iodides
Hot-wire process for zirconium. R. B. Holden and B. Kopelman. diags Electrochem Soc J 100:120-5 Mr '53

ZIRCONIUM metallurgy
Metallurgy of zirconium. E. T. Hayes and W. W. Stephens. il diag Metal Prog 63:97-110 My '53
Metallurgy of zirconium; its extraction, fabrication, and properties; abstract. A. D. Merriman. Metal Prog 62:162+ D '52

ZIRCONIUM oxides
Compression strength of porous sintered alumina and zirconia; ninth communication to ceramography. E. Ryshkewitch. il Am Cer Soc J 36:65-8 F 1 '53
Preparation of zirconium alkoxides. D. C. Bradley and others. Chem Soc J p2032-5 Je '52
Reactions of acetyl chloride with zirconium alkoxides. D. C. Bradley and others. Chem Soc J p4609-12 D '52
Structural chemistry of the alkoxides; amyloxides of silicon, titanium, and zirconium. D. C. Bradley, R. C. Mehrotra and W. Wardlaw. Chem Soc J p2027-32 Je '52
Structural chemistry of the alkoxides; secondary alkoxides of silicon, titanium, and zirconium. D. C. Bradley, R. C. Mehrotra and W. Wardlaw. Chem Soc J p5020-3 D '52
Structural chemistry of the alkoxides; tertiary alkoxides of silicon, titanium, zirconium, and hafnium. D. C. Bradley, R. C. Mehrotra and W. Wardlaw. Chem Soc J p4204-9 N '52
Thermal stress failure of pure refractory oxides. B. Schwartz. bibliog il diags Am Cer Soc J 35:325-33 D 1 '52
Titanium casting research tests shell molded refractories. J. G. Kura. il diags Iron Age 170:88-92 O 30 '52

ZONING
Problems of subdivisions, zoning and private streets; Princeton, New Jersey. I. R. Riker. il Pub Works 84:61-2+ Mr '53
Stream classification and water use zoning. J. C. Frederick. il map Pub Works 84:82-3+ Ap '53
Value and administration of a zoning plan. H. E. Smutz. Am Soc C E Proc 78 [no 138]:1-13 Jl '52; Discussion. 79 [no D-138]: 1-3 My '53
Zoning maps for airports. B. E. Beavin. diags Am Soc C E Proc 79 [no 174]:1-9 F '53

ZOOLOGY

Classification

Paper partition chromatography in taxonomic studies. A. A. Buzzati-Traverso and A. B. Rechnitzer. il Science 117:58-9 Ja 16 '53

Nomenclature

Zoological nomenclature. F. Hemming. Science 116:433, 546; 117:16-17, 112 O 17, N 14 '52, Ja 2, 30 '53

Study and teaching

Comparative anatomy, embryology, and histology synthesized; Lawrence College course. R. B. Brown. Science 116:546-7 N 14 '52

ZOYSIA grass. See Grasses

ZWORYKIN, Vladimir K. 1889-
V. K. Zworykin, Edison medalist for 1952; presentation by E. W. Engstrom; response by V. K. Zworykin. por Elec Eng 72:207-9 Mr '53
Zworykin wins Edison medal. por Elec World News ed 139:24 Ja 5 '53

ZYGADENUS venenosus
Zygadenus alkaloids; active principles of zygadenus venenosus; veratryolzygadenine and vanilloylzygadenine. S. M. Kupchan and C. V. Deliwala. bibliog Am Chem Soc J 75:1025-9 Mr 5 '53

ZYMONIC acid
Zymonic acid, a new metabolic product of some yeasts grown in aerated culture; structure studies. F. H. Stodola, O. L. Shotwell and L. B. Lockwood. bibliog Am Chem Soc J 74:5415-18 N 5 '52

3 8198 304 672 700
UNIVERSITY OF ILLINOIS AT CHICAGO

THIS BOOK IS FOR USE
ONLY IN THE LIBRARY
IT DOES NOT CIRCULATE